SWL APRIL 2014

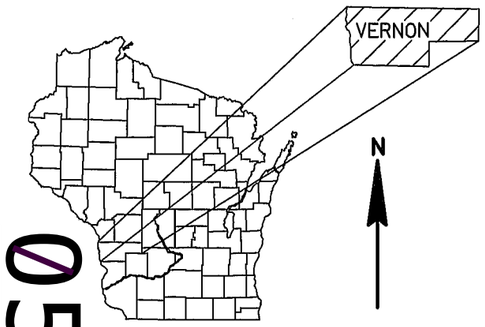
PROJECT ID: 5387-00-70

COUNTY: VERNON

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Erosion Control Plan)
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 = 36



05

DESIGN DESIGNATION

A.A.D.T.	2014	=	100
A.A.D.T.	2034	=	180
D.H.V.		=	31
D.D.		=	50/50
T.		=	10%
DESIGN SPEED		=	55 MPH
ESALS		=	29,200

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
MARSH AREA		TELEPHONE	T
		WATER	W
		UTILITY PEDESTAL	
WOODED OR SHRUB AREA		POWER POLE	
		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5387-00-70	WISC 2014098	1

TOWN OF GREENWOOD, KOUBA VALLEY ROAD

(SOUTH BRANCH BARABOO RIVER BRIDGE B-62-0039)

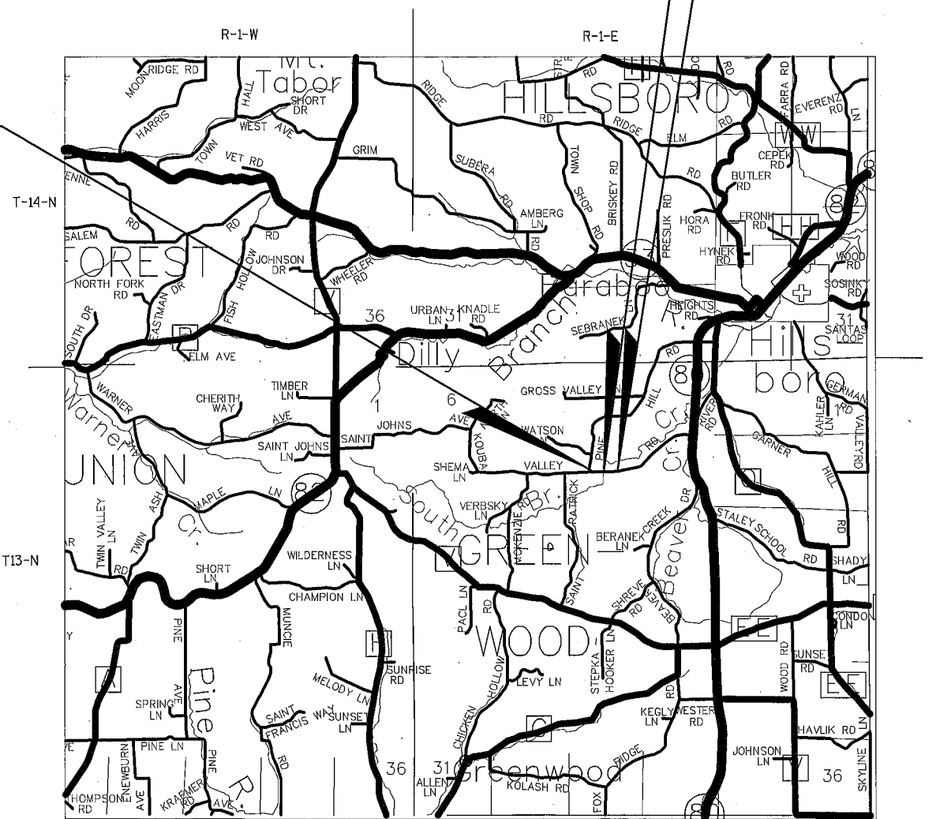
TOWN ROAD
VERNON COUNTY

STATE PROJECT NUMBER
5387-00-70

BEGIN PROJECT 5387-00-70
STA 12+50
Y= 172195.303
X= 836196.269

STRUCTURE B-62-0039
STA 14+14.10

END PROJECT 5387-00-70
STA 15+50
Y = 172205.681
X = 836496.089



LAYOUT
SCALE 0 1mi.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, VERNON COUNTY. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES.

TOTAL NET LENGTH OF CENTERLINE = 0.057 MI

ACCEPTED FOR

TOWN of GREENWOOD

12/16/13 (Date) (SIGNATURE TOWN CHAIRMAN)

ACCEPTED FOR

COUNTY of VERNON

12/16/13 (Date) (SIGNATURE COMMISSIONER)

ORIGINAL PLANS PREPARED BY

Mead & Hunt
Mead & Hunt, Inc.
6501 Watts Road
Madison, WI 53719
608.273.6380
fax: 608.273.6391
www.meadhunt.com

WISCONSIN PROFESSIONAL ENGINEER
GARY A. RUCHTI
E-30936
MADISON
WI
12/16/13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

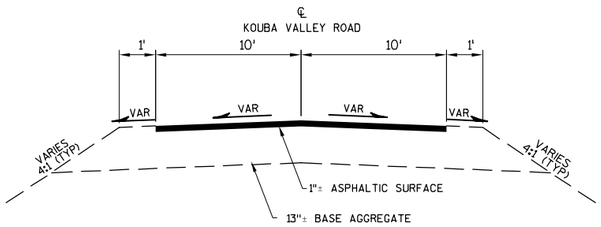
PREPARED BY

Surveyor	MEAD & HUNT
Designer	MEAD & HUNT
Managment Consultant	KJOHNSON ENGINEERS
C.O. Examiner	

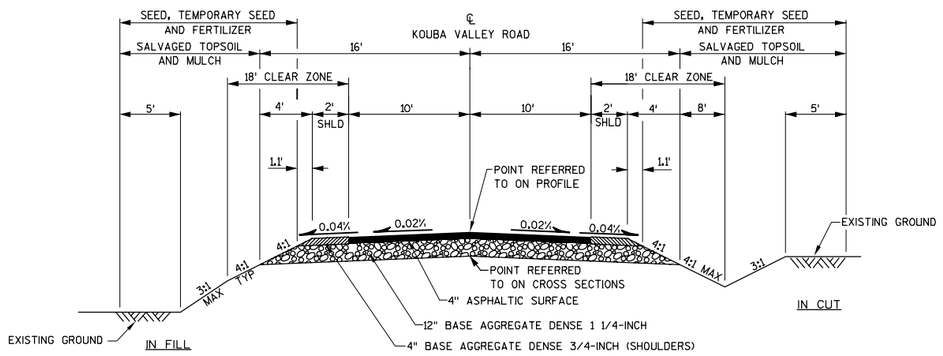
APPROVED FOR THE DEPARTMENT
DATE: 12/16/13 Kinbrf A. Johnson
Management Consultant Signature

E

FILE NAME : X:\2202700\121778.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\010101_TI.DWG PLOT DATE : 12/9/2013 3:37 PM PLOT BY : DANA LADZINSKI PLOT NAME :



EXISTING TYPICAL SECTION



TYPICAL FINISHED SECTION

STA 12+50 - STA 15+50

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGED TOPSOILED, FERTILIZED, SEEDED AND MULCHED.

4-INCH ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH AN 1 3/4-INCH UPPER LAYER AND A 2 1/4-INCH LOWER LAYER.

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

WETLANDS MAY EXIST IN LOCATIONS THAT ARE NOT SHOWN ON THE PLANS. STAGING AND OTHER WORK ACTIVITIES CANNOT EXTEND BEYOND THE SLOPE INTERCEPTS IN ORDER TO MINIMIZE WETLAND IMPACTS. KEEP ALL EQUIPMENT AND MATERIALS OUT OF ADJACENT WETLANDS.

ASPHALTIC PAVEMENT REMOVAL IS INCLUDED IN BID ITEM "COMMON EXCAVATION".

STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC
ASPH	ASPHALTIC
BM	BENCH MARK
℄	CENTERLINE
CWT	HUNDREDWEIGHT
CY	CUBIC YARD
DHV	DESIGN HOURLY VOLUME
DWY	DRIVEWAY
EL	ELEVATION
EXC	EXCAVATION
FT	FOOT
FTG	FOOTING
LB	POUND
LF	LINEAR FOOT
LHF	LEFT-HAND FORWARD
LS	LUMP SUM
LT	LEFT
NO	NUMBER
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
RHF	RIGHT-HAND FORWARD
RT	RIGHT
R/W	RIGHT-OF-WAY
SF	SQUARE FOOT
SHLDR	SHOULDER
STA	STATION
SY	SQUARE YARD
T	TRUCKS (PERCENT OF)
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
VAR	VARIABLE
VC	VERTICAL CURVE
VPC	VERTICAL POINT OF CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY

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

UTILITIES

HILLSBORO TELEPHONE COMPANY, INC.
121 MILL STREET
P.O. BOX 427
HILLSBORO, WI 54634
ATTN: CHAD SCHMIDT
TELEPHONE: (608) 489-4415
EMAIL: CSCHMIDT@HILLSBOROTEL.COM

VERNON ELECTRIC COOPERATIVE
110 SAUGSTAD ROAD
WESTBY, WI 54667
ATTN: CRAIG BUROS
TELEPHONE: (608) 634-3121
OR 1-800-447-5051 (608 AREA CODE ONLY)
EMAIL: CBUROS@VERNONELECTRIC.COM

** DENOTES UTILITIES THAT ARE NOT A MEMBER OF DIGGERS HOTLINE

TOWN

TOWN OF GREENWOOD
E17052 KOLASH ROAD
HILLSBORO, WI 54634
ATTN: JERRY TUCKER (TOWN CHAIRMAN)
TELEPHONE: (608) 489-4276
EMAIL: jtucker@MWT.net

COUNTY

VERNON COUNTY
PO BOX 232
VIROQUA, WI 54665
ATTN: PHIL HEWITT (COMMISSIONER)
TELEPHONE: (608) 637-5452
EMAIL: phil.hewitt@vernoncounty.org

DNR LIASON

WISCONSIN DEPARTMENT OF NATURUAL RESOURCES
WEST CENTRAL REGION
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
ATTN: KAREN KALVELAGE
TELEPHONE: (608) 785-9115
EMAIL: karen.kalvelage@wisconsin.gov

DESIGN CONSULTANT

MEAD & HUNT
6501 WATTS ROAD
MADISON, WI. 53719-2700
ATTN: GARY RUCHTI, P.E.
TELEPHONE: (608) 273-6380
EMAIL: gary.ruchti@meadhunt.com

2

2

N

LEGEND

- EROSION MAT
- RIPRAP
- SLOPE INTERCEPTS
- SURFACE WATER FLOW
- TEMPORARY DITCH CHECKS
- SILT FENCE
- TURBIDITY BARRIER

VERNON ELECTRIC

SOUTH BRANCH BARABOO RIVER

SLOPE INTERCEPTS

END PROJECT 5387-00-70
STA 15+50

R/W

11+00 12+00 ASPHALT 13+00 14+00 15+00 16+00 ASPHALT 17+00

KOUBA VALLEY ROAD

PROPOSED ℄

SIGN

R/W

SLOPE INTERCEPTS

BEGIN PROJECT 5387-00-70
STA 12+50

HILLSBORO TELEPHONE

PROJECT NO: 5387-00-70	HWY: KOUBA VALLEY RD	COUNTY: VERNON	EROSION CONTROL	SHEET 3	E

FILE NAME : X:\2202700\121778.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\022001_EC.DWG PLOT DATE : 12/9/2013 3:39 PM PLOT BY : DANA LADZINSKI PLOT NAME : PLOT SCALE : 1" = 40'_XREF

2

2

CP 1 - *6 REBAR
STA 12+55.30, 18.00', LT
NORTHING = 172213.473
EASTING = 836200.946

N

"+" ON CORNER
FENCE POST

PK IN SECOND
FENCE POST

6.85'

CP 1
1011.666

31.32'

18.17'

IP

12+00

13+00

SIGN

CP 3 - *6 REBAR
STA 15+19.56, 16.83', LT
NORTHING = 172221.448
EASTING = 836465.088

N

BM3

15.58'

CP 3
1011.765

16.35'

"+" ON
SIGN POST

6.40'

15+00

PROJECT NO:5387-00-70	HWY:KOUBA VALLEY RD	COUNTY:VERNON	CONSTRUCTION TIES	SHEET 4	E

DATE 03FEB14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5387-00-70 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. STA 14+15	LS	1.000	1.000
0040	205.0100	EXCAVATION COMMON ** P **	CY	1,350.000	1,350.000
0050	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-62-0039	LS	1.000	1.000
0060	210.0100	BACKFILL STRUCTURE	CY	120.000	120.000
0070	213.0100	FINISHING ROADWAY (PROJECT) 01. 5387-00-70	EACH	1.000	1.000
0080	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	30.000	30.000
0090	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	570.000	570.000
0100	455.0605	TACK COAT	GAL	15.000	15.000
0110	465.0105	ASPHALTIC SURFACE	TON	130.000	130.000
0120	502.0100	CONCRETE MASONRY BRIDGES	CY	144.000	144.000
0130	502.3200	PROTECTIVE SURFACE TREATMENT	SY	160.000	160.000
0140	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	2,960.000	2,960.000
0150	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	19,660.000	19,660.000
0160	513.4060	RAILING TUBULAR TYPE M (STRUCTURE) 01. B-62-0039	LS	1.000	1.000
0170	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18.000	18.000
0180	550.0500	PILE POINTS	EACH	8.000	8.000
0190	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	160.000	160.000
0200	606.0300	RIPRAP HEAVY	CY	150.000	150.000
0210	612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	40.000	40.000
0220	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	88.000	88.000
0230	619.1000	MOBILIZATION	EACH	1.000	1.000
0240	625.0500	SALVAGED TOPSOIL ** P **	SY	860.000	860.000
0250	627.0200	MULCHING ** P **	SY	860.000	860.000
0260	628.1504	SILT FENCE	LF	495.000	495.000
0270	628.1520	SILT FENCE MAINTENANCE	LF	495.000	495.000
0280	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	1.000	1.000
0290	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0300	628.2006	EROSION MAT URBAN CLASS I TYPE A	SY	90.000	90.000
0310	628.6005	TURBIDITY BARRIERS	SY	140.000	140.000
0320	628.7504	TEMPORARY DITCH CHECKS	LF	48.000	48.000
0330	629.0210	FERTILIZER TYPE B	CWT	0.500	0.500
0340	630.0120	SEEDING MIXTURE NO. 20 ** P **	LB	25.000	25.000
0350	630.0200	SEEDING TEMPORARY **P**	LB	25.000	25.000
0360	634.0612	POSTS WOOD 4X6-INCH X 12-FT	EACH	4.000	4.000
0370	637.2230	SIGNS TYPE II REFLECTIVE F	SF	12.000	12.000
0380	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0390	643.0100	TRAFFIC CONTROL (PROJECT) 01. 5387-00-70	EACH	1.000	1.000
0400	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	300.000	300.000
0410	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	260.000	260.000
0420	650.5000	CONSTRUCTION STAKING BASE	LF	260.000	260.000
0430	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-62-0039	LS	1.000	1.000
0440	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 5387-00-70	LS	1.000	1.000
0450	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	260.000	260.000
0460	690.0150	SAWING ASPHALT	LF	42.000	42.000
0470	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	864.000	864.000

3

3

CLEARING & GRUBBING

STATION	-	STATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
12+50	-	15+50	3	3
TOTAL			3	3

ASPHALT ITEMS

STATION	-	STATION	LOCATION	465.0105 ASPHALTIC SURFACE (TON)	455.0605 TACK COAT (GAL)
12+50	-	13+92	KOUBA MAINLINE	70	8
14+36	-	15+50	KOUBA MAINLINE	55	6
	-		FOUR SHOULDERS AT WINGS	3	1
			TOTAL	130	15

MOBILIZATION EROSION CONTROL

LOCATION	628.1905 (EACH)
KOUBA	1
TOTAL	1

MOBILIZATION EMERGENCY EROSION CONTROL

LOCATION	628.1910 (EACH)
KOUBA	2
TOTAL	2

EARTHWORK SUMMARY

STATION	-	STATION	LOCATION	205.0100 COMMON EXCAVATION (CY) **P**	UNEXPANDED FILL (CY)	EXPANDED FILL* (CY)	WASTE (CY)
12+50	-	13+92	KOUBA VALLEY RD	651	144	199	451
14+36	-	15+50	KOUBA VALLEY RD	676	137	179	497
			TOTAL	1350		378	948

*** 30% EXPANSION FACTOR**

BASE AGGREGATE

STATION	-	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1-1/4-INCH (TON)
12+50	-	13+92	SHOULDER LT	8	
14+36	-	15+50	SHOULDER LT	6	
12+50	-	13+92	SHOULDER RT	8	
14+36	-	15+50	SHOULDER RT	6	
12+50	-	13+92	MAINLINE		314
14+36	-	15+50	MAINLINE		252
		TOTAL		30	570

SILT FENCE

STATION	-	STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
12+50	-	14+08	LT	160	160
12+50	-	14+08	RT	170	170
14+23	-	15+50	LT	130	130
14+19	-	15+50	RT	35	35
			TOTAL	495	495

EROSION MAT

STATION	-	STATION	LOCATION	628.2006 EROSION MAT URBAN CLASS 1 - TYPE A (SY)
13+70	-	13+83	KOUBA LT	19
13+68	-	13+85	KOUBA RT	25
14+40	-	14+60	KOUBA LT	22
14+42	-	14+58	KOUBA RT	25
			TOTAL	90

ALL QUANTITIES SHOWN ARE ASSOCIATED WITH CATEGORY 0010 – ROADWAY ITEMS

TURF ESTABLISHMENT

STATION	-	STATION	LOCATION	625.0500 SALVAGED TOPSOIL **P** (SY)	627.0200 MULCHING **P** (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIX NO. 20 **P** (LB)	630.0200 TEMPORARY SEEDING **P** (LB)
12+50	-	13+91.85	LT	160	160	0.1	4	4
12+50	-	13+91.85	RT	280	280	0.2	7	7
14+36.37	-	15+50	RT	240	240	0.1	6	6
14+36.37	-	15+50	LT	180	180	0.1	6	6
			TOTAL	860	860	0.5	25	25

TURBIDITY BARRIER

STATION	LOCATION	628.6005 TURBIDITY BARRIER (SY)
14+09.75	WEST ABUTMENT	65
14+19.50	EAST ABUTMENT	75
	TOTAL	140

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 TEMPORARY DITCH CHECKS (LF)
13+70	RT	12
13+92	RT	12
14+58	LT	12
14+79	RT	12
	TOTAL	48

TRAFFIC CONTROL

LOCATION	643.0100 TRAFFIC CONTROL (PROJECT) (EACH)
PROJECT	1
TOTAL	1

SIGNING ITEMS

STATION	LOCATION	MESSAGE	SIGN CODE	SIZE	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	634.0612 POSTS WOOD 4X6-INCH X 12-FT (EACH)
13+81.70	KOUBA LT	BRIDGE MARKER	W5-52L	12" X 36"	3	1
13+81.70	KOUBA RT	BRIDGE MARKER	W5-52R	12" X 36"	3	1
14+46.61	KOUBA LT	BRIDGE MARKER	W5-52L	12" X 36"	3	1
14+46.56	KOUBA RT	BRIDGE MARKER	W5-52R	12" X 36"	3	1
				TOTAL	12	4

CONSTRUCTION STAKING

STATION	-	STATION	LOCATION	650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	650.9920 SLOPE STAKES (LF)
12+50	-	13+92	MAINLINE	142	142	142
14+36	-	15+50	MAINLINE	114	114	114
			TOTAL	260	260	260

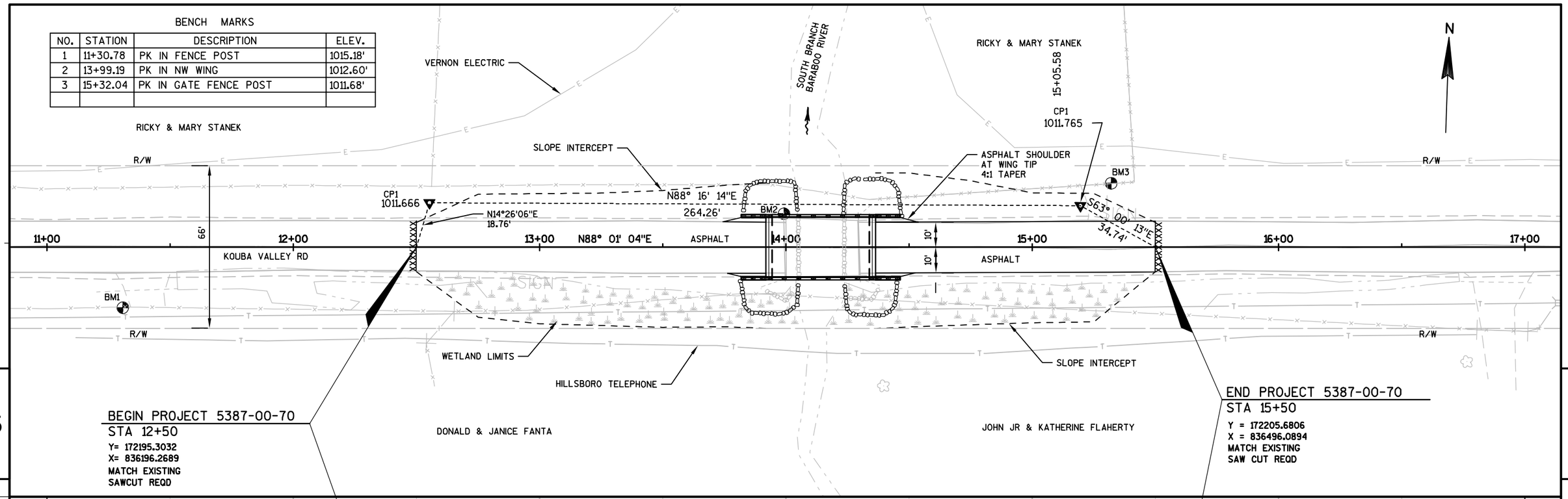
SAWING ASPHALT

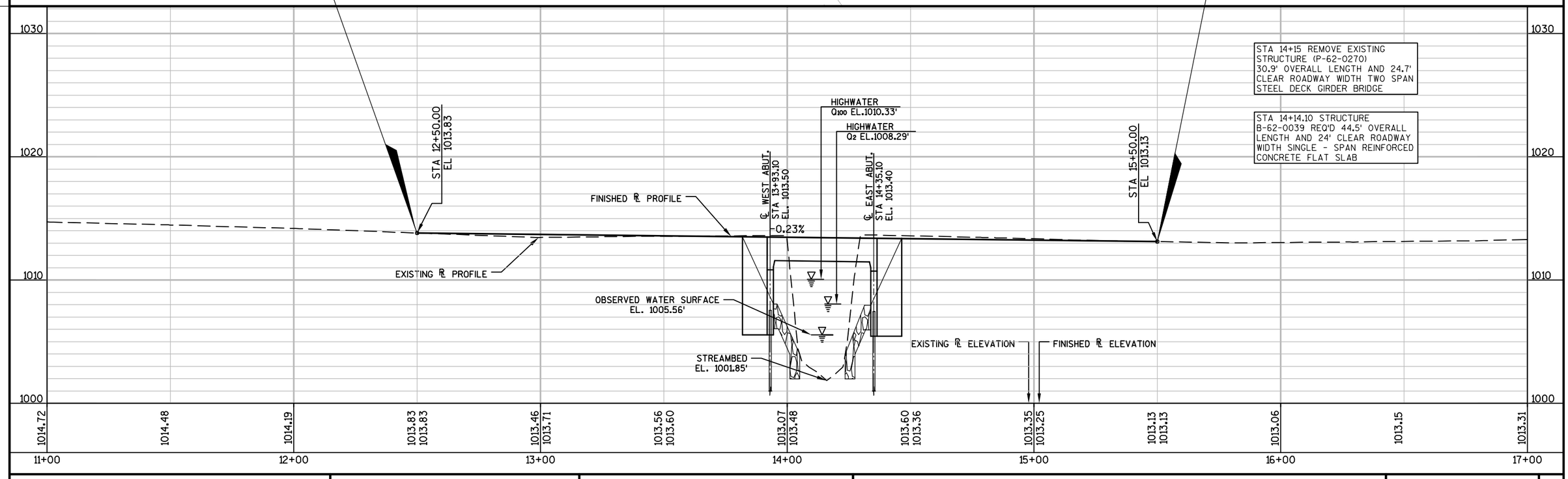
STATION	LOCATION	690.0150 SAWING ASPHALT (LF)
12+50	KOUBA VALLEY RD	21
15+50	KOUBA VALLEY RD	21
	TOTAL	42

ALL QUANTITIES SHOWN ARE ASSOCIATED WITH CATEGORY 0010 – ROADWAY ITEMS

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
1	11+30.78	PK IN FENCE POST	1015.18'
2	13+99.19	PK IN NW WING	1012.60'
3	15+32.04	PK IN GATE FENCE POST	1011.68'

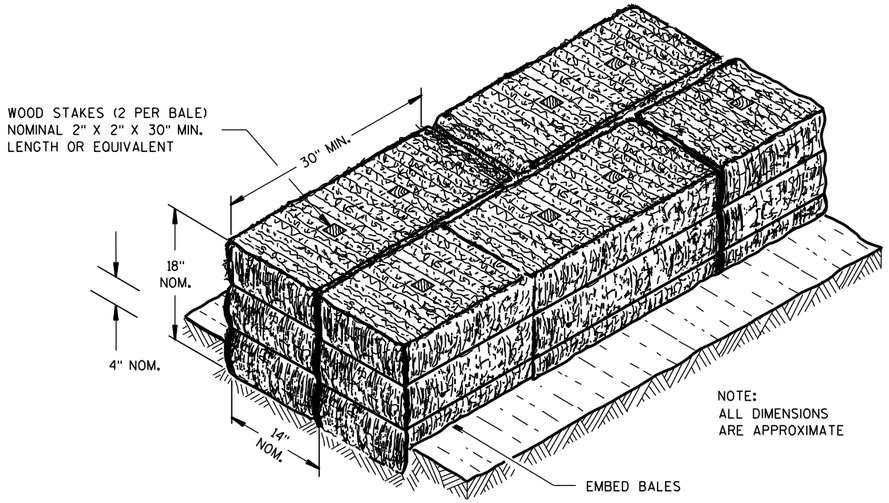




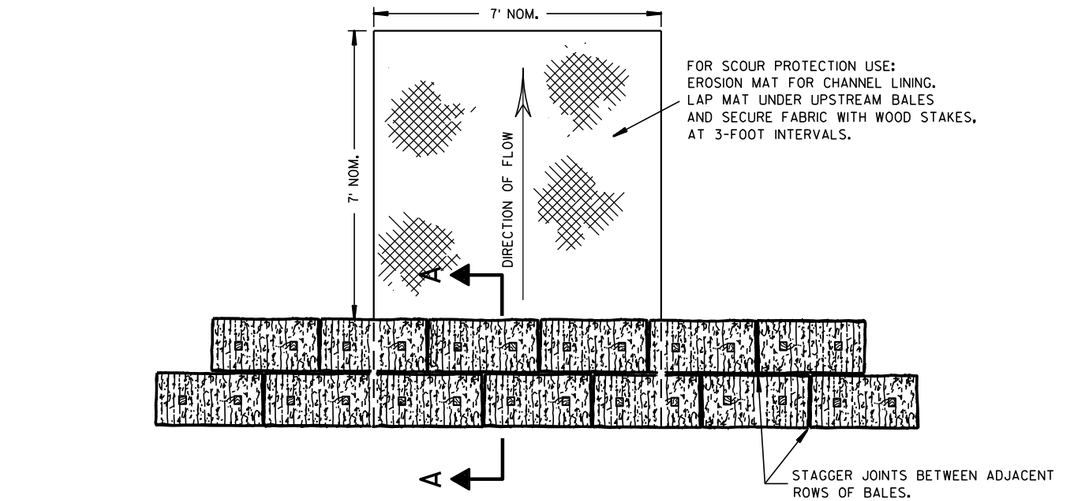
PROJECT NO: 5387-00-70	HWY: KOUBA VALLEY RD	COUNTY: VERNON	PLAN AND PROFILE	SHEET	E

Standard Detail Drawing List

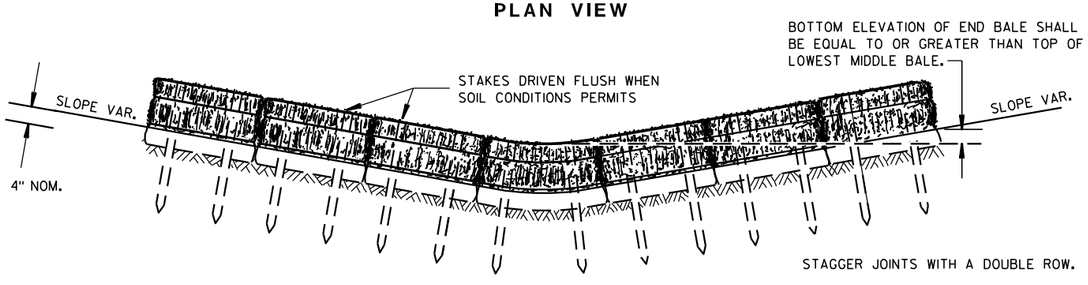
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-06	SIGNING & MARKING FOR TWO LANE BRIDGES



SECTION A-A



PLAN VIEW



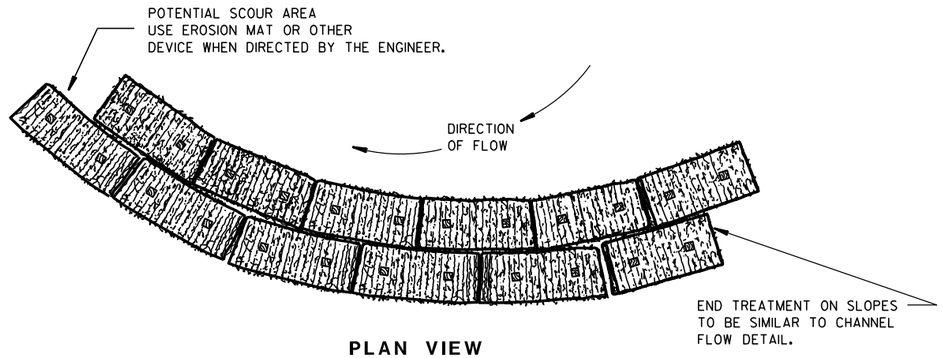
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

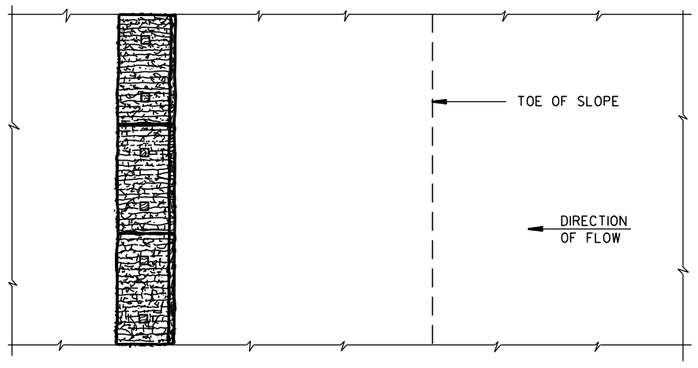
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

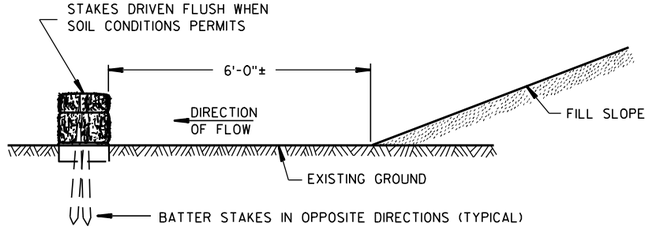


PLAN VIEW

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

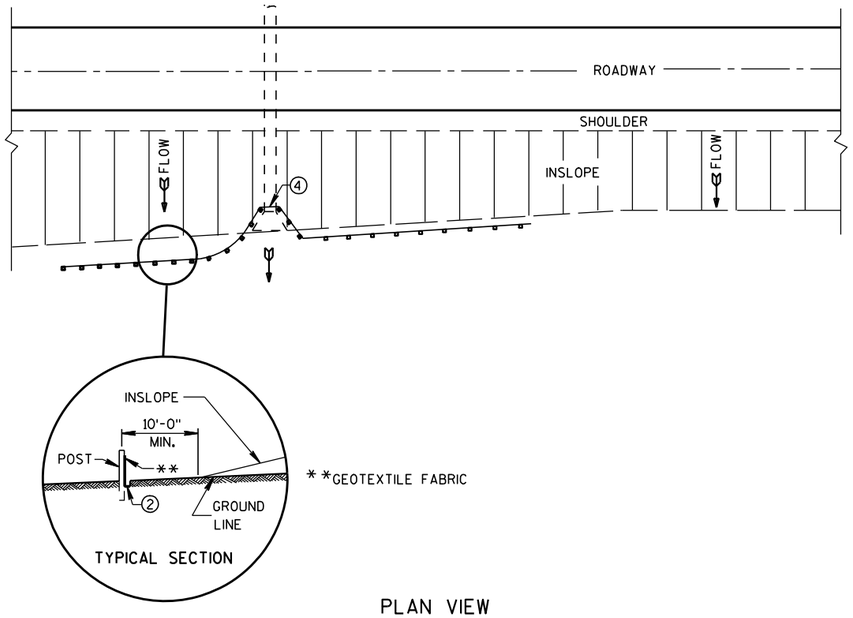
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

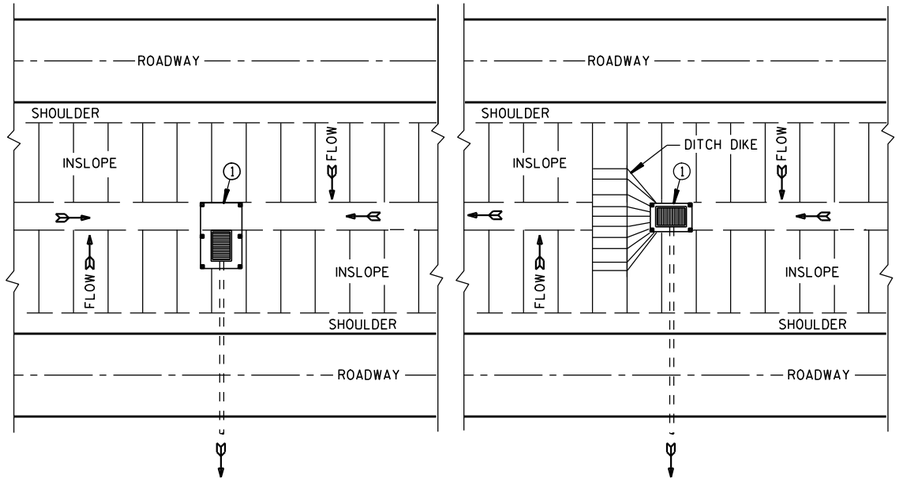
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

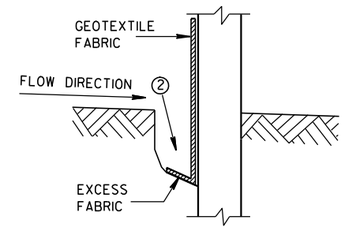
(1) HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

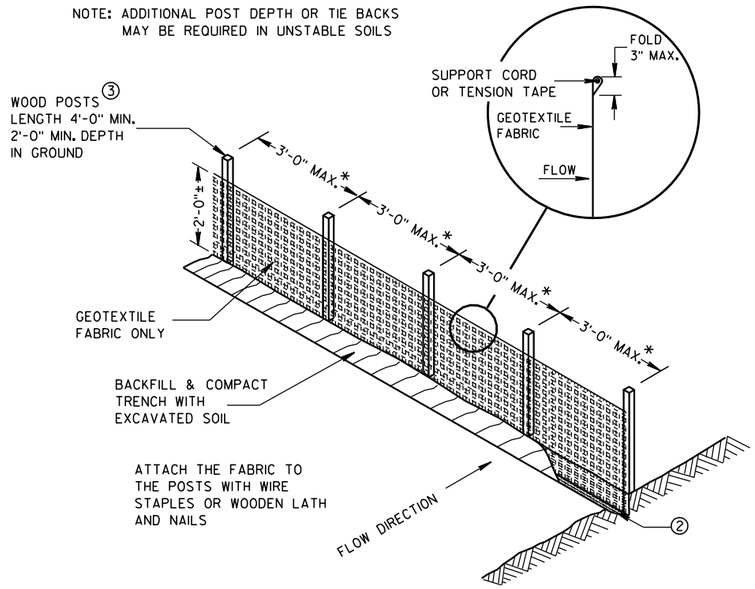
(3) WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

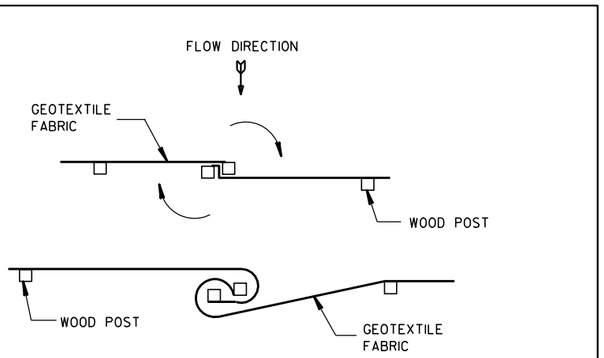
(5) CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



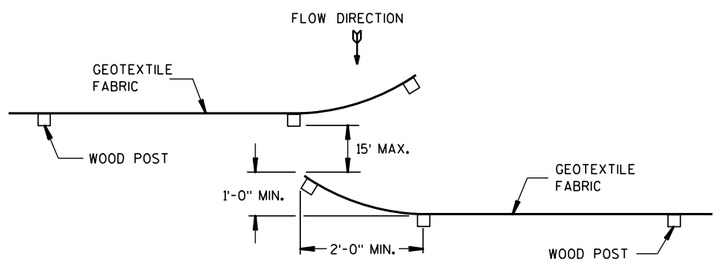
TRENCH DETAIL



SILT FENCE

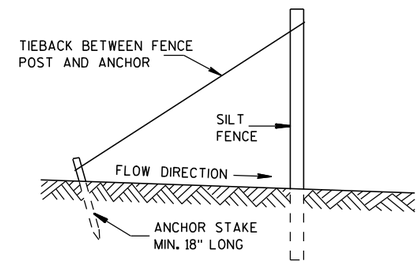


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE (5)



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

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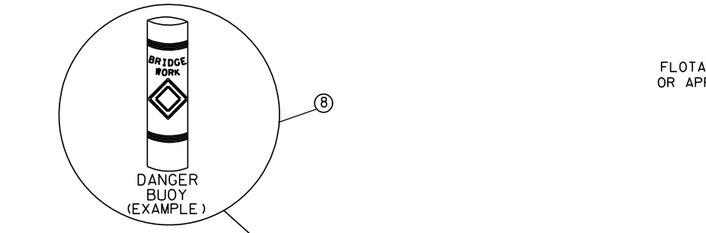
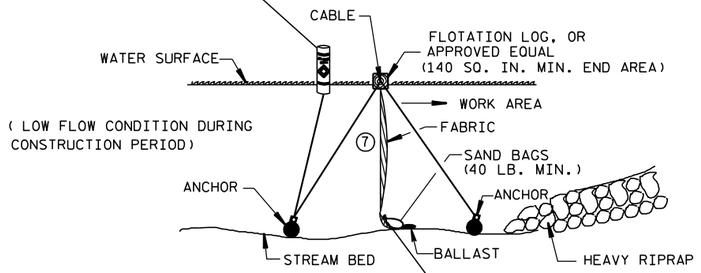
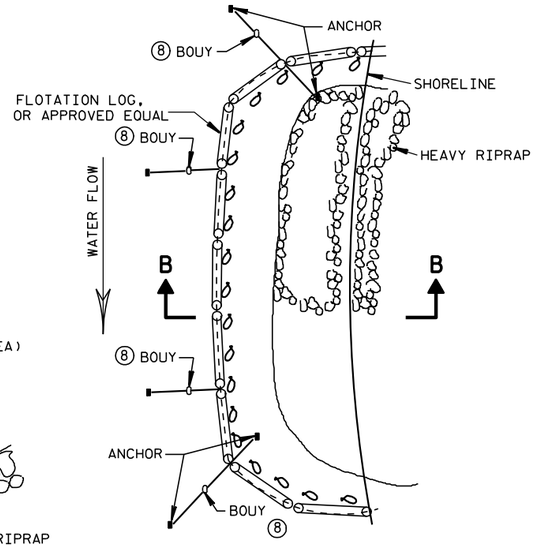
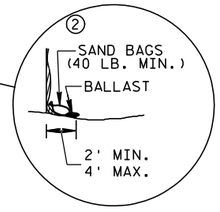
S.D.D. 8 E 9-6



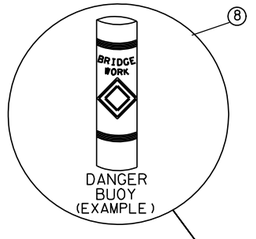


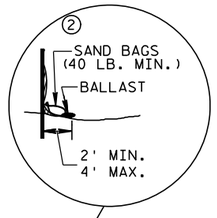


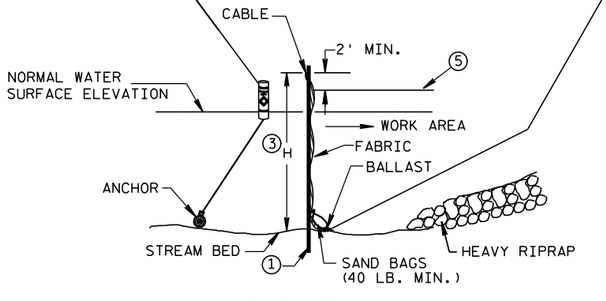
SECTION B-B



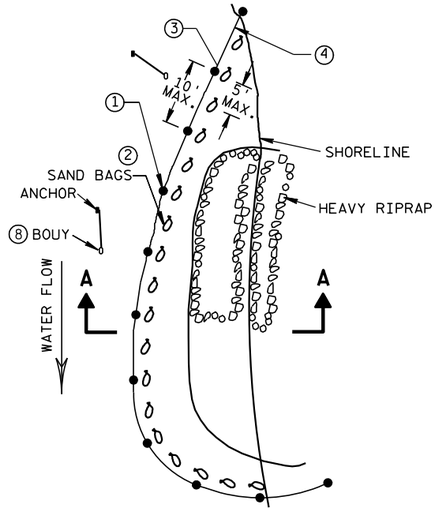
TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6







SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

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

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

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

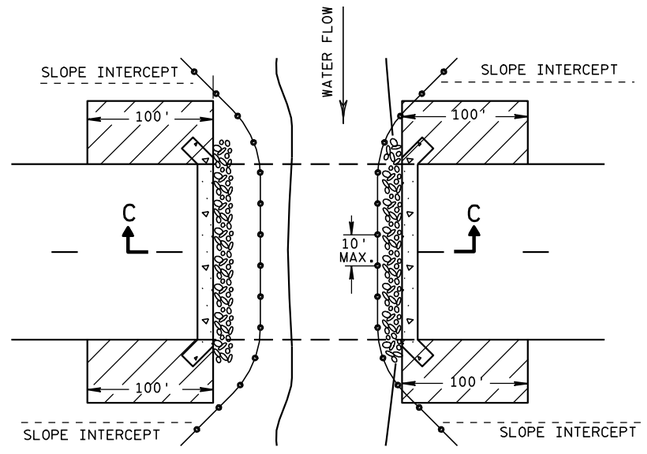
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

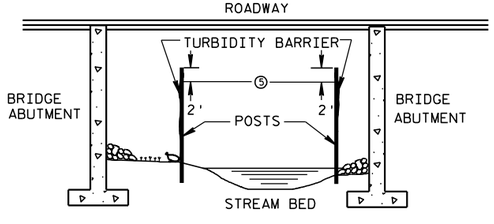
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

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



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

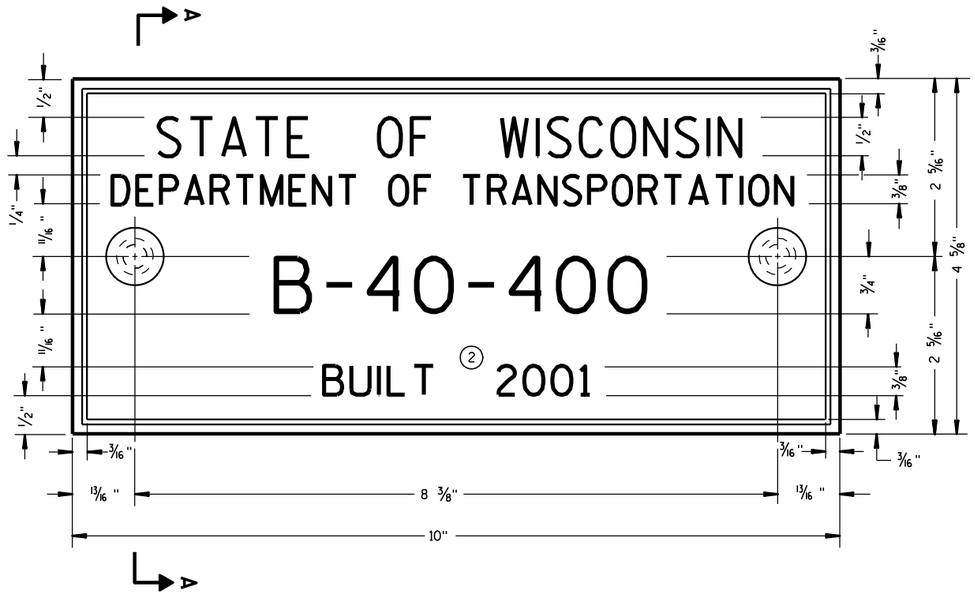
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 11-2



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

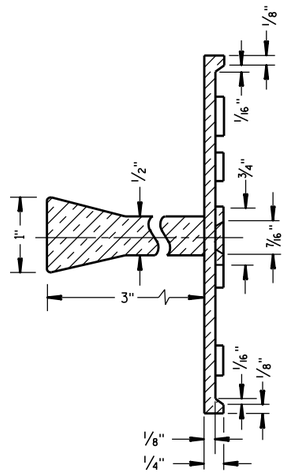
GENERAL NOTES

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.

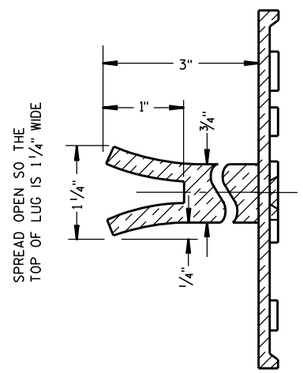
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

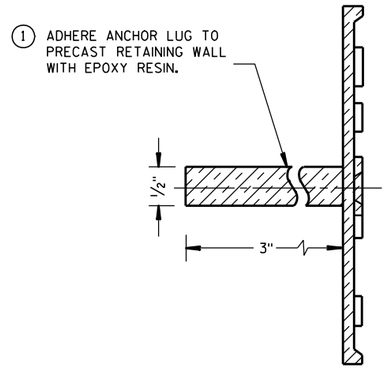
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

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S.D.D. 12 A 3-10

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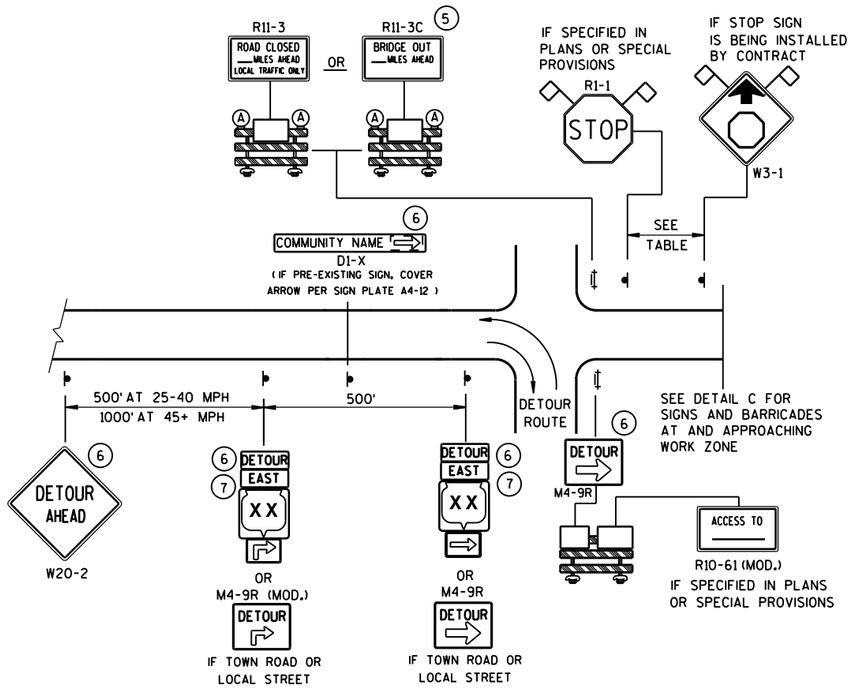
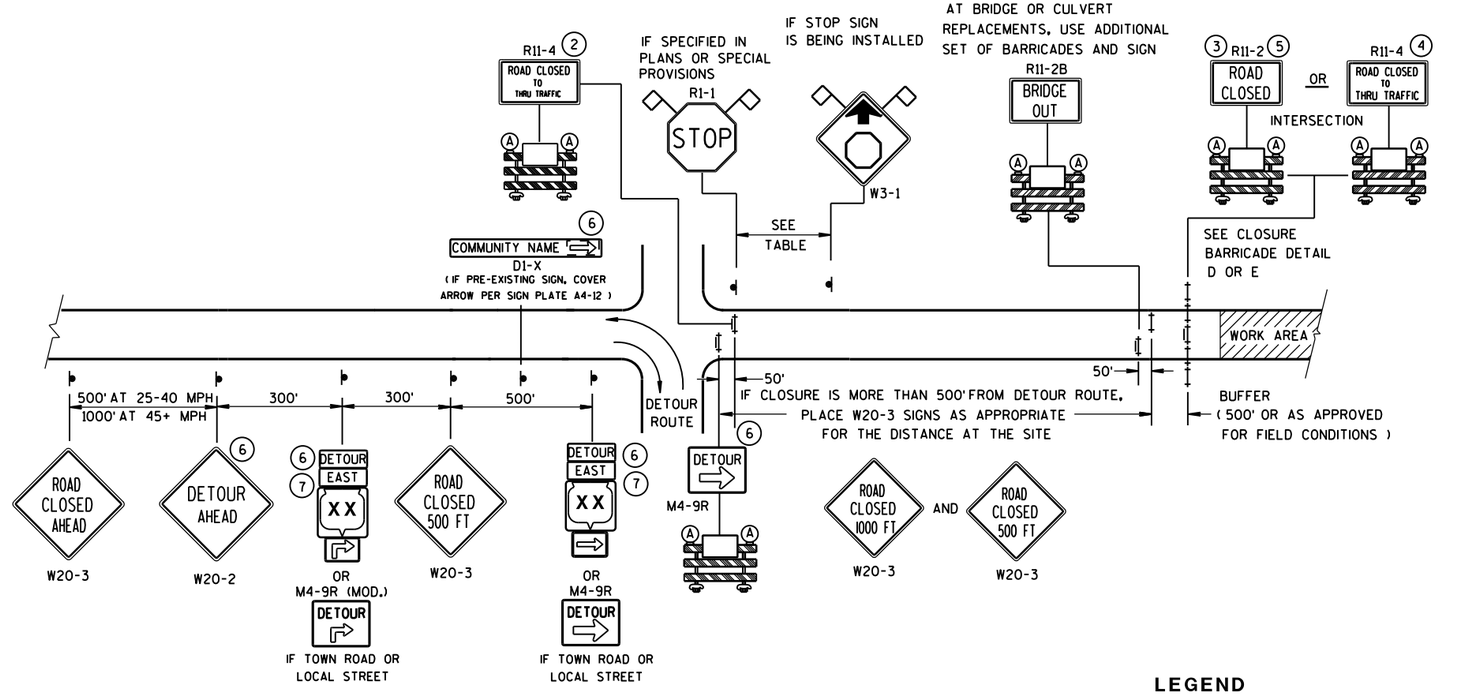
S.D.D. 12 A 3-10



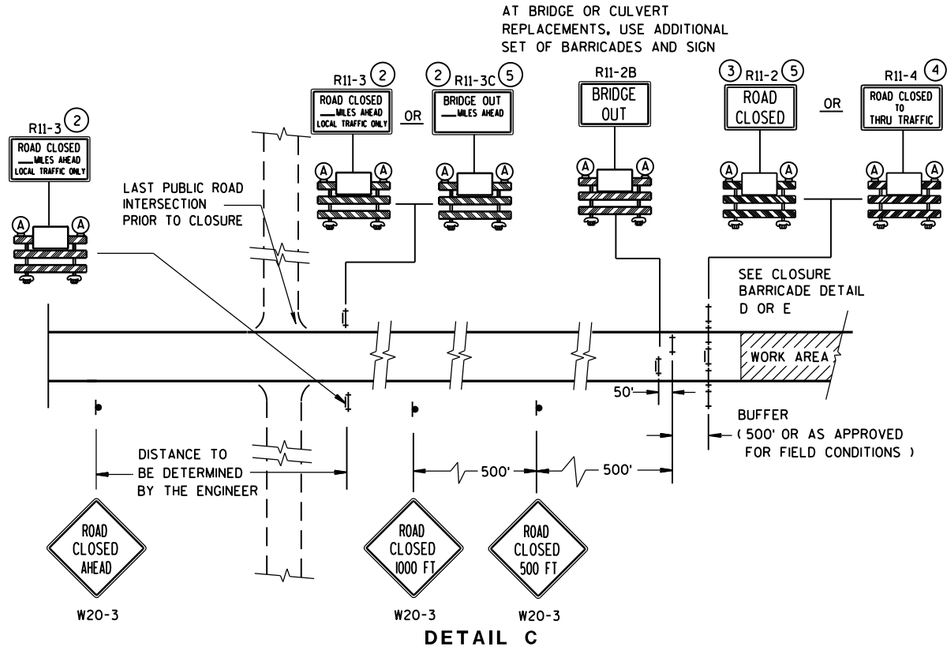
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

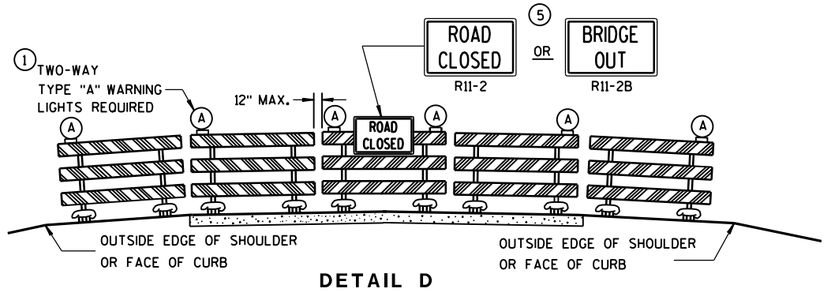
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

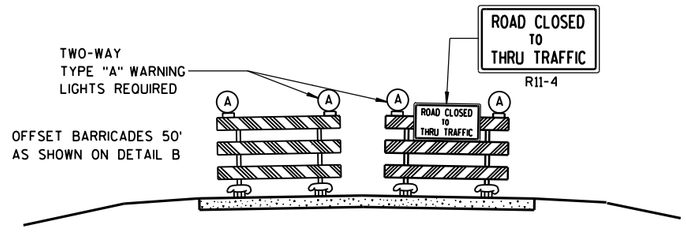
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

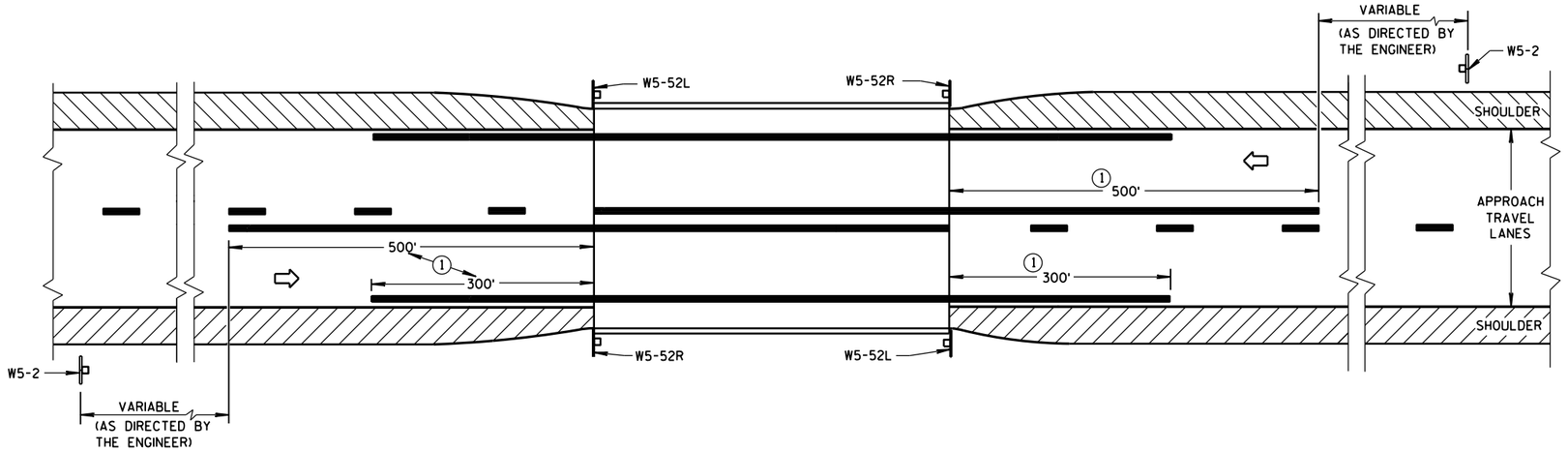
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

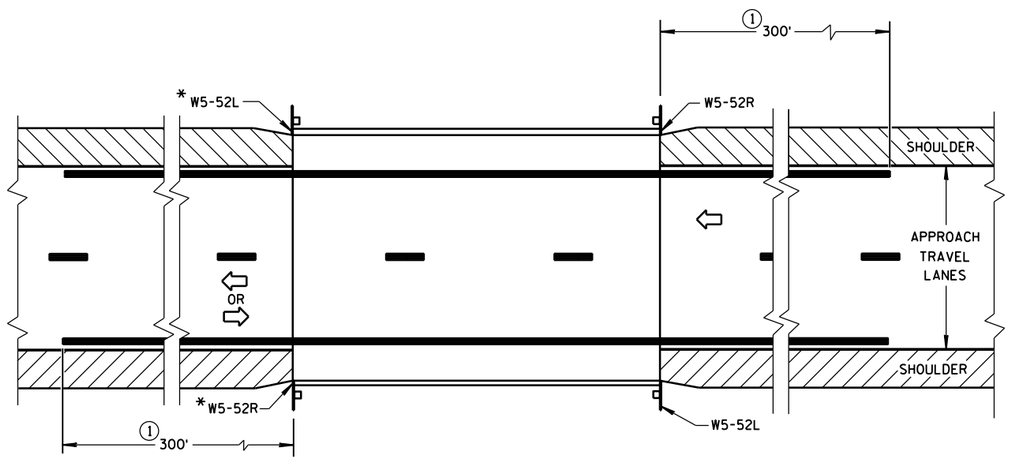
S.D.D. 15 C 2-5b



SITUATION 1

WARRANTING CRITERIA:

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



*OMIT ON ONE-WAY TRAVELLED WAYS

SITUATION 2

WARRANTING CRITERIA:

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

GENERAL NOTES

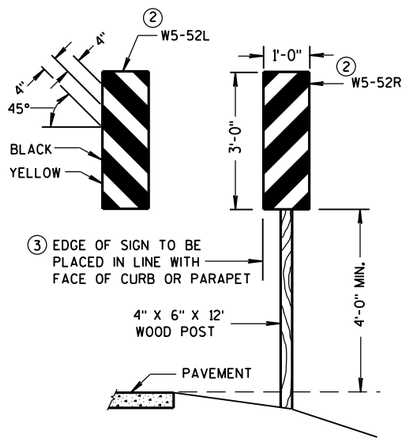
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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.

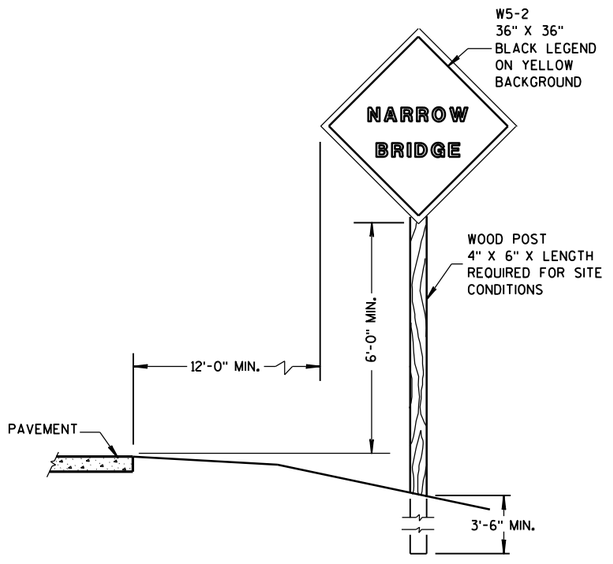
(1) MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.

(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.



OBJECT MARKER PLACEMENT



SIGN PLACEMENT

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

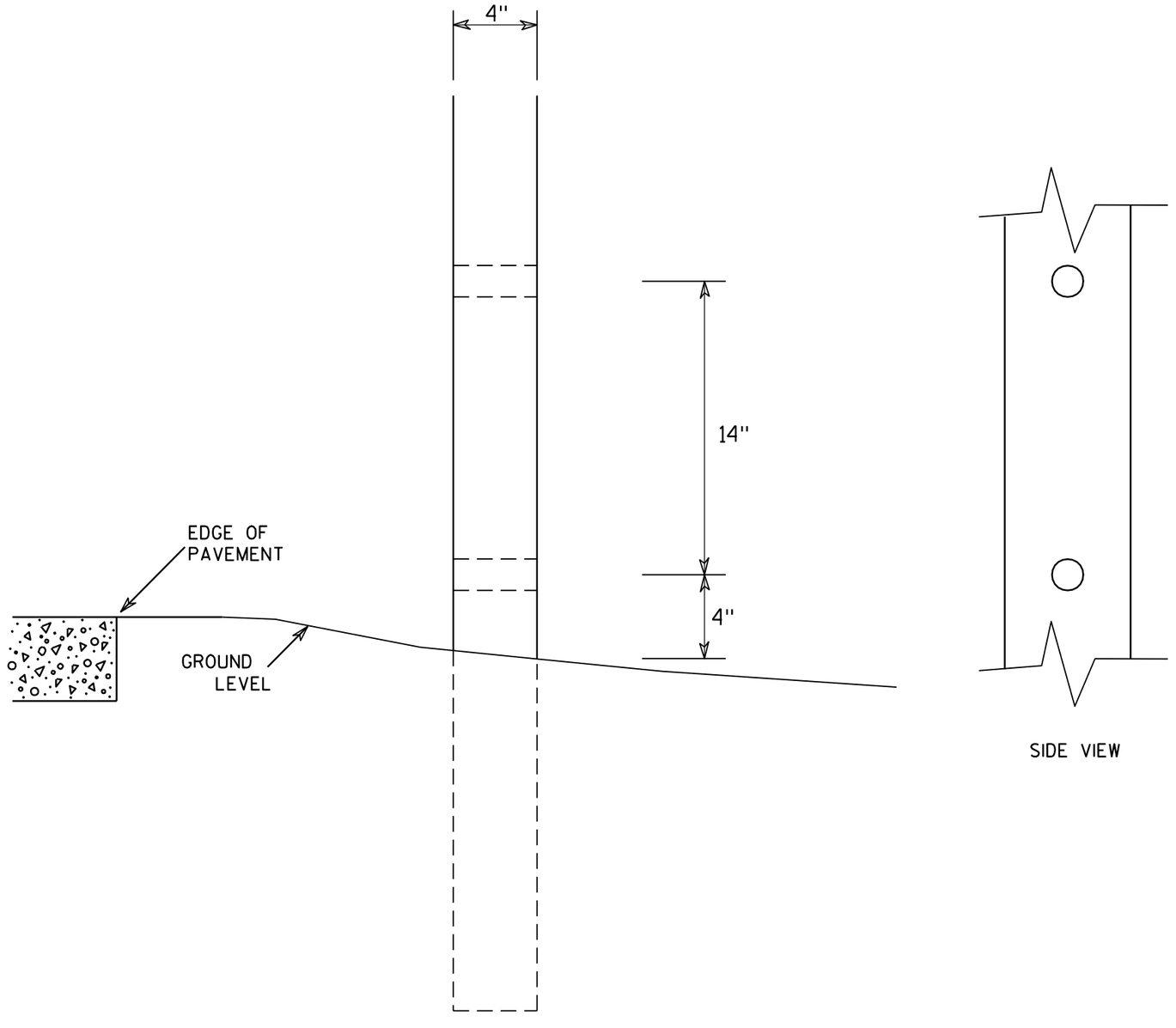
3/4/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 6-6



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.

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4 X 6 WOOD POST MODIFICATIONS

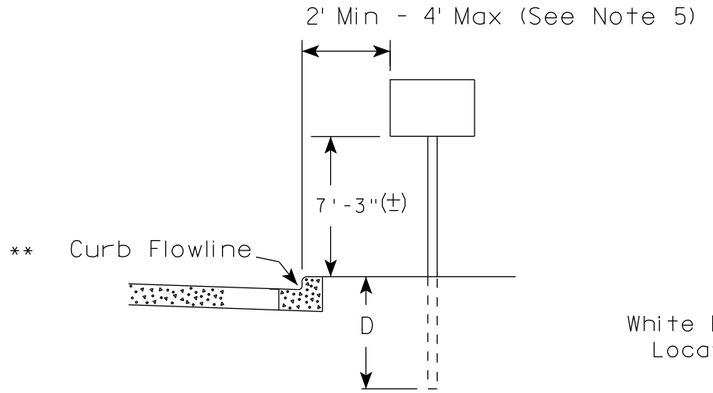
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

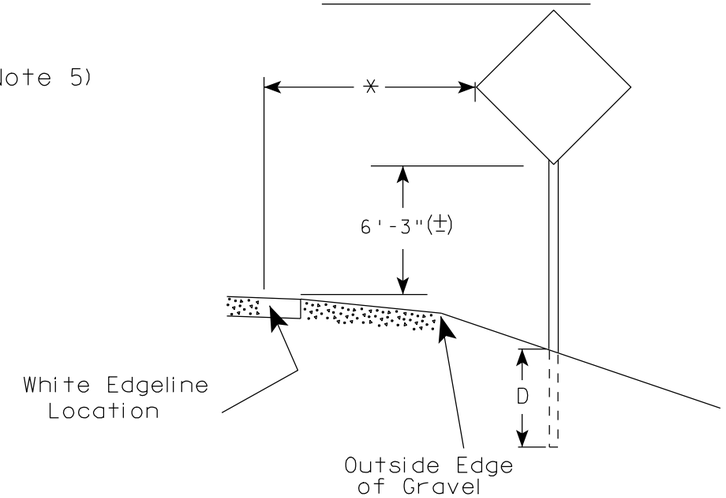
DATE 3/27/97 PLATE NO. A4-11.2

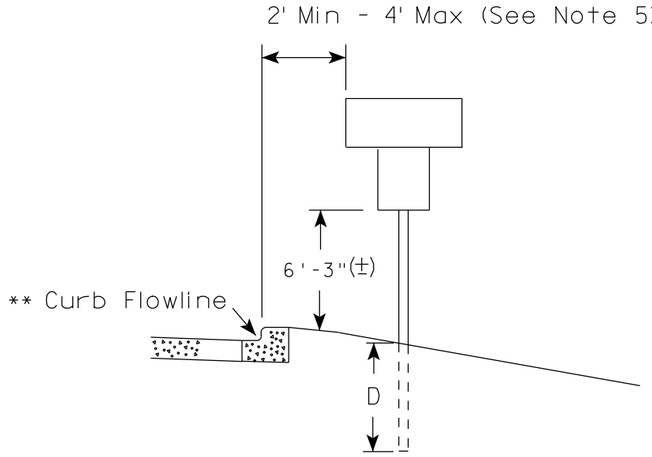
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 17	E

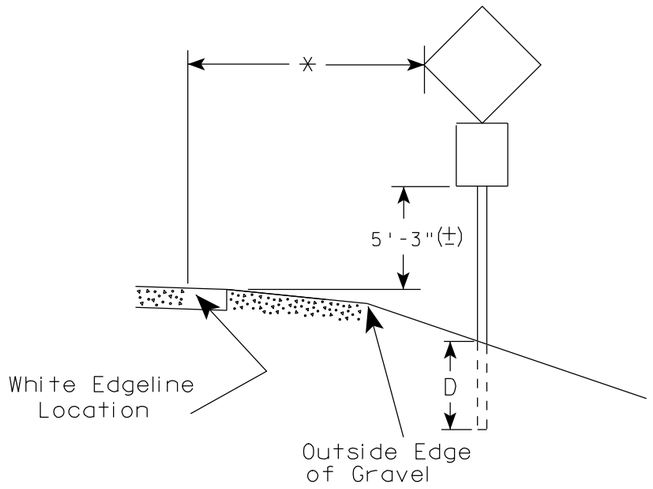
URBAN AREA



RURAL AREA (See Note 2)







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

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" (±).

POST EMBEDMENT DEPTH

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

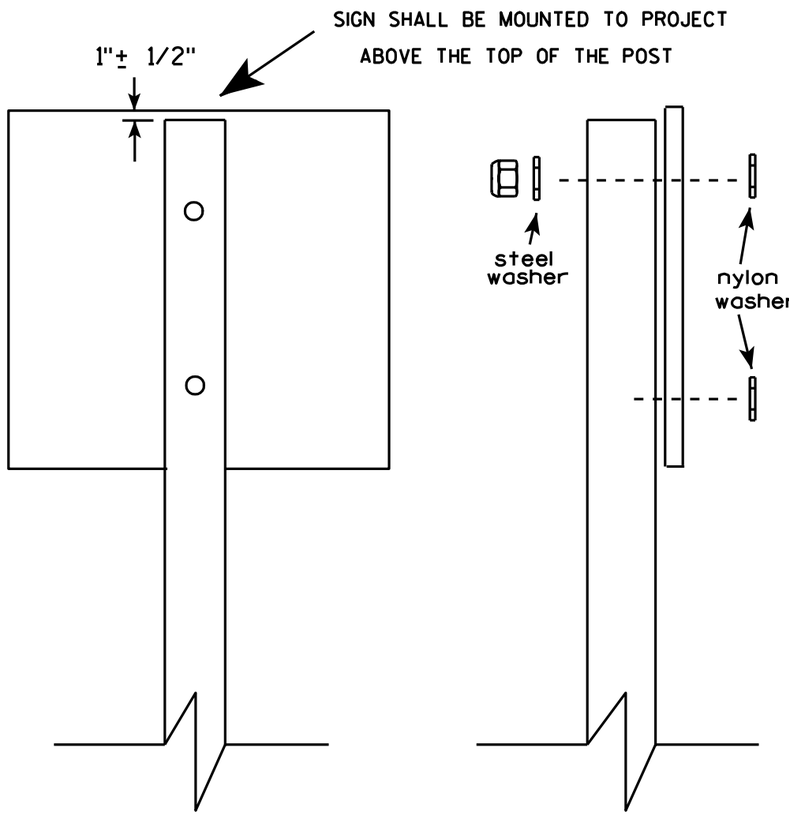
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

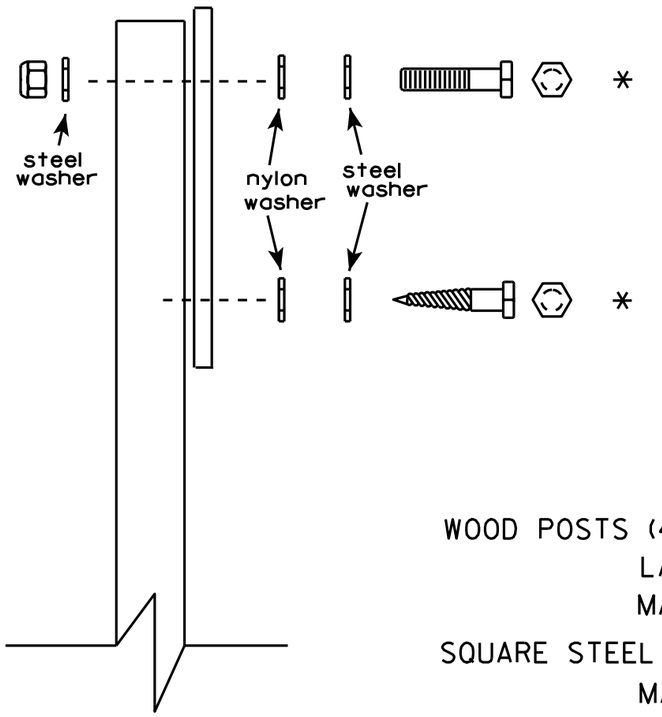
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 18	E





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

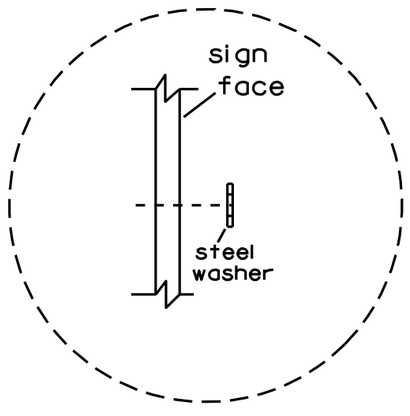
a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

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

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

7

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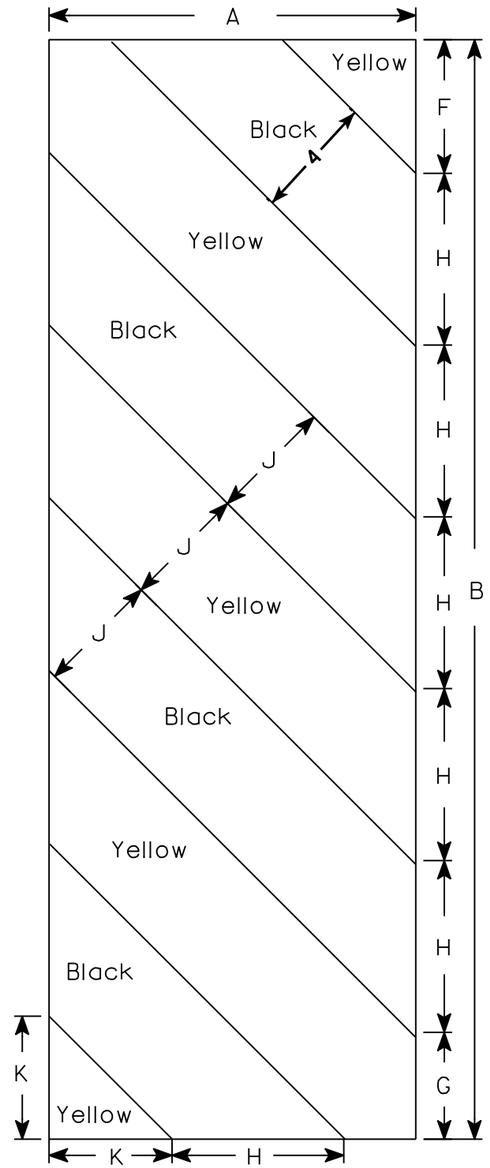
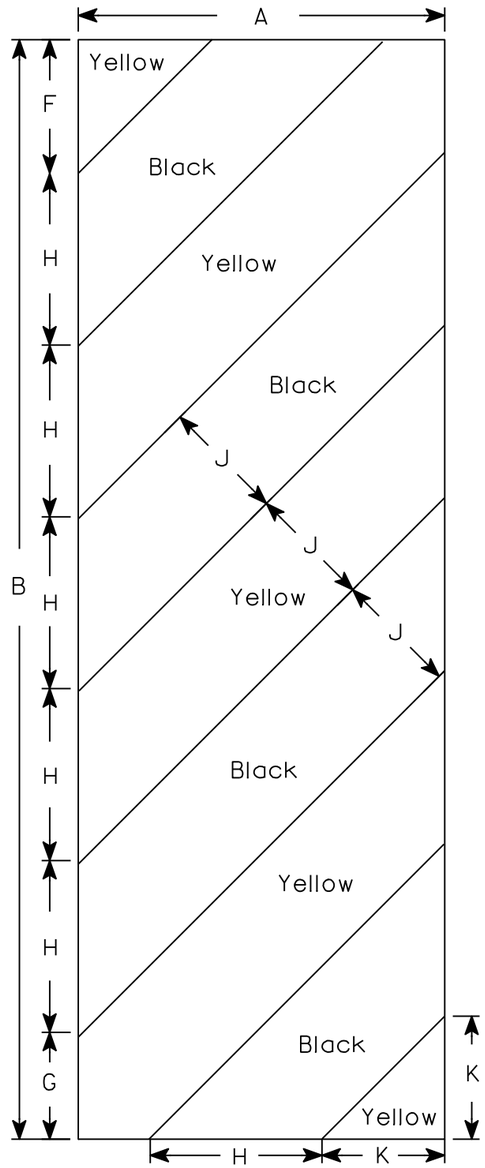
PROJECT NO:

SHEET NO: 19 E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

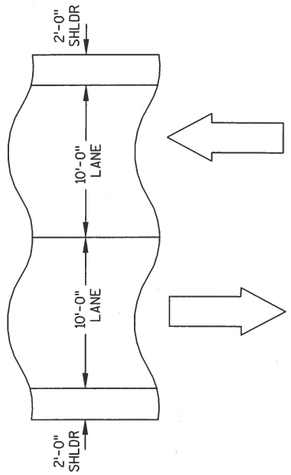
APPROVED Matthew R Rauch
for State Traffic Engineer

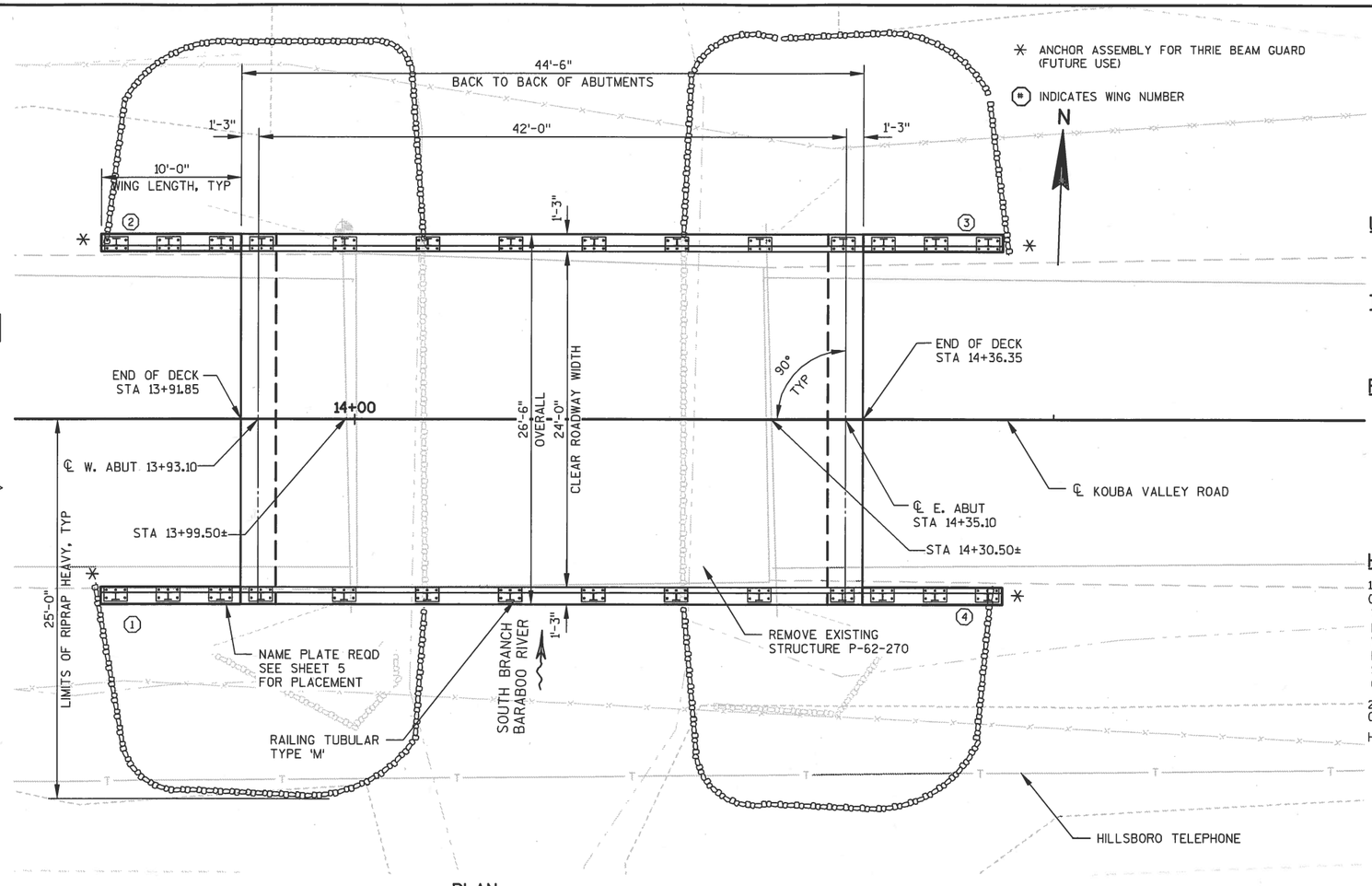
DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 20 | E

STATE PROJECT NUMBER

5387-00-70





PLAN

(SINGLE SPAN REINFORCED CONCRETE FLAT SLAB BRIDGE)

DESIGN DATA:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	1.19
OPERATING RATING FACTOR	1.54
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY, SLAB	f'c = 4000 psi
ALL OTHER	f'c = 3500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

TRAFFIC DATA:

ADT (2014) = 100

ADT (2034) = 180

DESIGN SPEED = 55 MPH

FOUNDATION DATA:

ABUTMENTS SUPPORTED ON HP10X42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 160* TONS PER PILE AS REQUIRED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 20' LONG AT THE ABUTMENTS. PILE POINTS REQUIRED.

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

HYDRAULIC DATA:

100 YEAR FREQUENCY

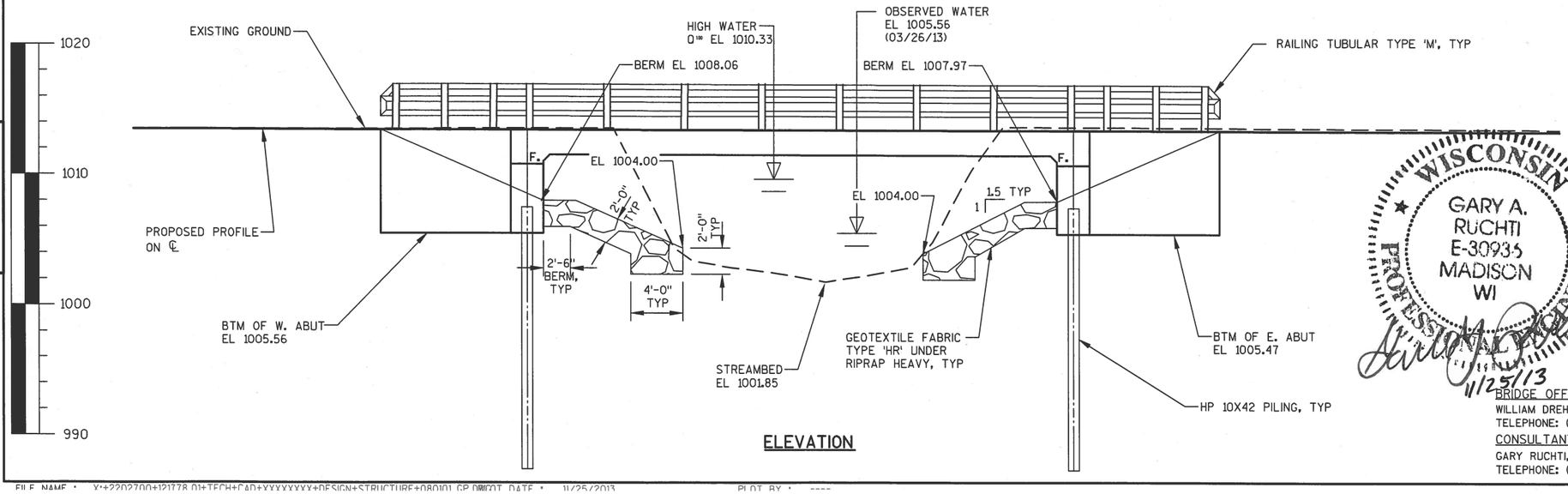
Q_{100}	560 cfs
VELOCITY	2.72 fps
HIGH WATER	EL. 1010.33
WATERWAY AREA	206 ft²
DRAINAGE AREA	6.4 mi²
SCOUR CRITICAL CODE	8
OVERTOPPING FREQUENCY	N/A

2 YEAR FREQUENCY

Q_2	192 cfs
HIGH WATER	EL. 1008.29

LIST OF DRAWINGS

1 GENERAL PLAN
2 TYPICAL SECTION GENERAL NOTES & QUANTITIES
3 SUBSURFACE EXPLORATION
4 WEST ABUTMENT
5 WEST ABUTMENT DETAILS
6 EAST ABUTMENT
7 EAST ABUTMENT DETAILS
8 SUPERSTRUCTURE
9 SUPERSTRUCTURE DETAILS
10 RAILING TUBULAR TYPE "M"



ELEVATION

WISCONSIN
GARY A. RUCHTI
E-30936
MADISON
WI
PROFESSIONAL ENGINEER
11/25/13

BRIDGE OFFICE CONTACT
WILLIAM DREHER, P.E.
TELEPHONE: (608) 266-8489

CONSULTANT CONTACT
GARY RUCHTI, P.E.
TELEPHONE: (608) 273-6380

NO.	DATE	REVISION	BY

Mead & Hunt, Inc.
6501 Watts Road
Madison, WI 53719
608.273.6380
www.meadhunt.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 12/20/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-62-39

KOUBA VALLEY ROAD OVER S. BR. BARABOO RIVER

COUNTY: VERNON	TOWN/~~CITY/VILLAGE~~: GREENWOOD

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
RCP	MJB	TAV	GAR

GENERAL PLAN

SHEET 1 OF 10
21

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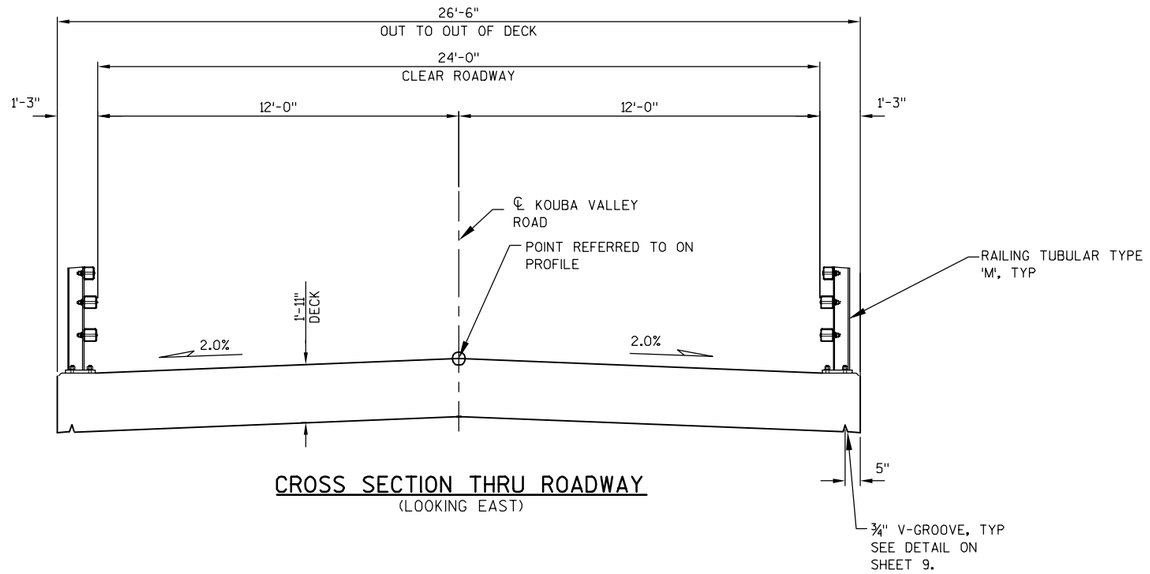
STATE PROJECT NUMBER

5387-00-70



CROSS SECTION THRU ROADWAY
(LOOKING EAST)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

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

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

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

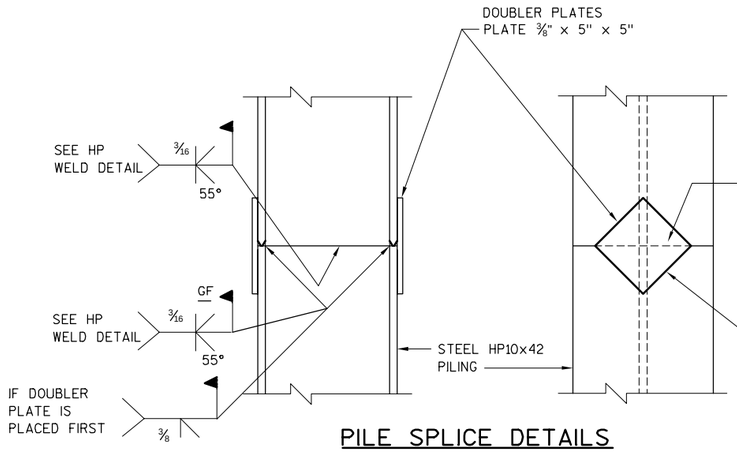
AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE EXISTING STRUCTURE IS A TWO SPAN 30.9' LONG BY 24.7' CLEAR ROADWAY WIDTH, STEEL GIRDER BRIDGE (P-62-270).

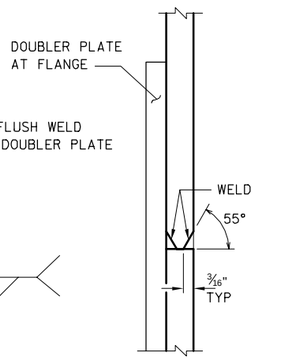
SEE SHEET 9 FOR LIMITS OF PROTECTIVE SURFACE TREATMENT.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

◓ ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO NAVD88.

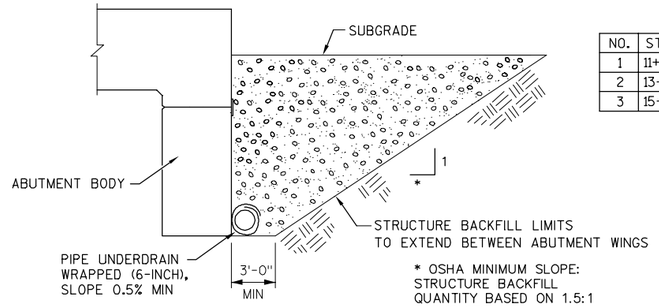


PILE SPLICE DETAILS



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

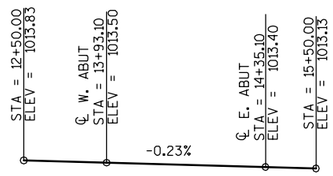


STRUCTURE BACKFILL DETAIL & PIPE UNDERDRAIN DETAIL

(TYPICAL AT BOTH ABUTMENTS)

BENCH MARKS ◓

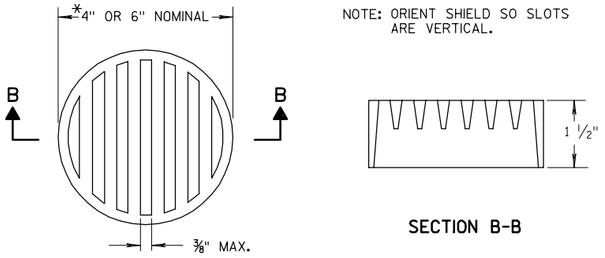
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
1	11+30.78	24.6' RT	PK NAIL IN FENCE POST	1015.18
2	13+99.19	13.5' LT	PK NAIL IN NW WING	1012.60
3	15+32.04	25.9' LT	PK NAIL IN GATE FENCE POST	1011.68



PROFILE GRADE LINE,
℄ KOUBA VALLEY ROAD

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	W ABUT	E ABUT	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA 14+15	LS	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES (B-62-0039)	LS	---	---	---	1
210.0100	BACKFILL STRUCTURE	CY	60	60	---	120
502.0100	CONCRETE MASONRY BRIDGES	CY	28	28	88	144
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	160	160
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	1480	1480	---	2960
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1390	1390	16880	19660
513.4060	RAILING TUBULAR TYPE M (B-62-0039)	LS	---	---	1	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	---	18
550.0500	PILE POINTS	EA	4	4	---	8
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	80	80	---	160
606.0300	RIPRAP HEAVY	CY	75	75	---	150
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	20	20	---	40
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	44	44	---	88
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	150	150	---	300
	NON BID ITEMS					
	FILLER	SIZE				1/2" & 3/4"



② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS. THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-39

DRAWN BY TAV | PLANS CK'D. GAR

TYPICAL SECTION GENERAL NOTES & QUANTITIES

SHEET 2 OF 10
22

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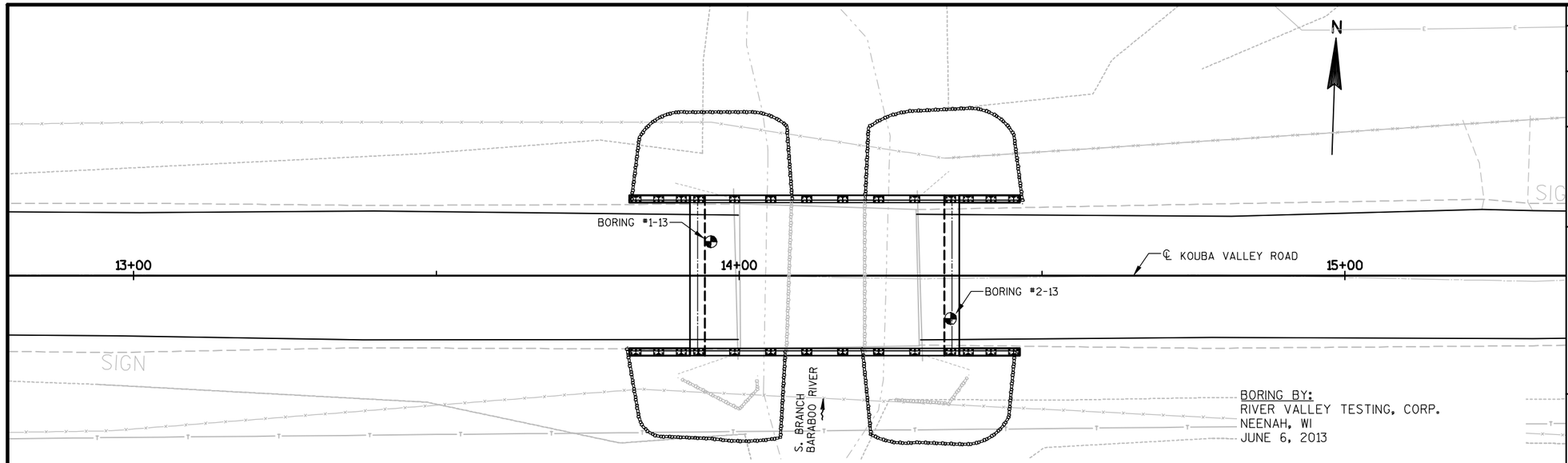
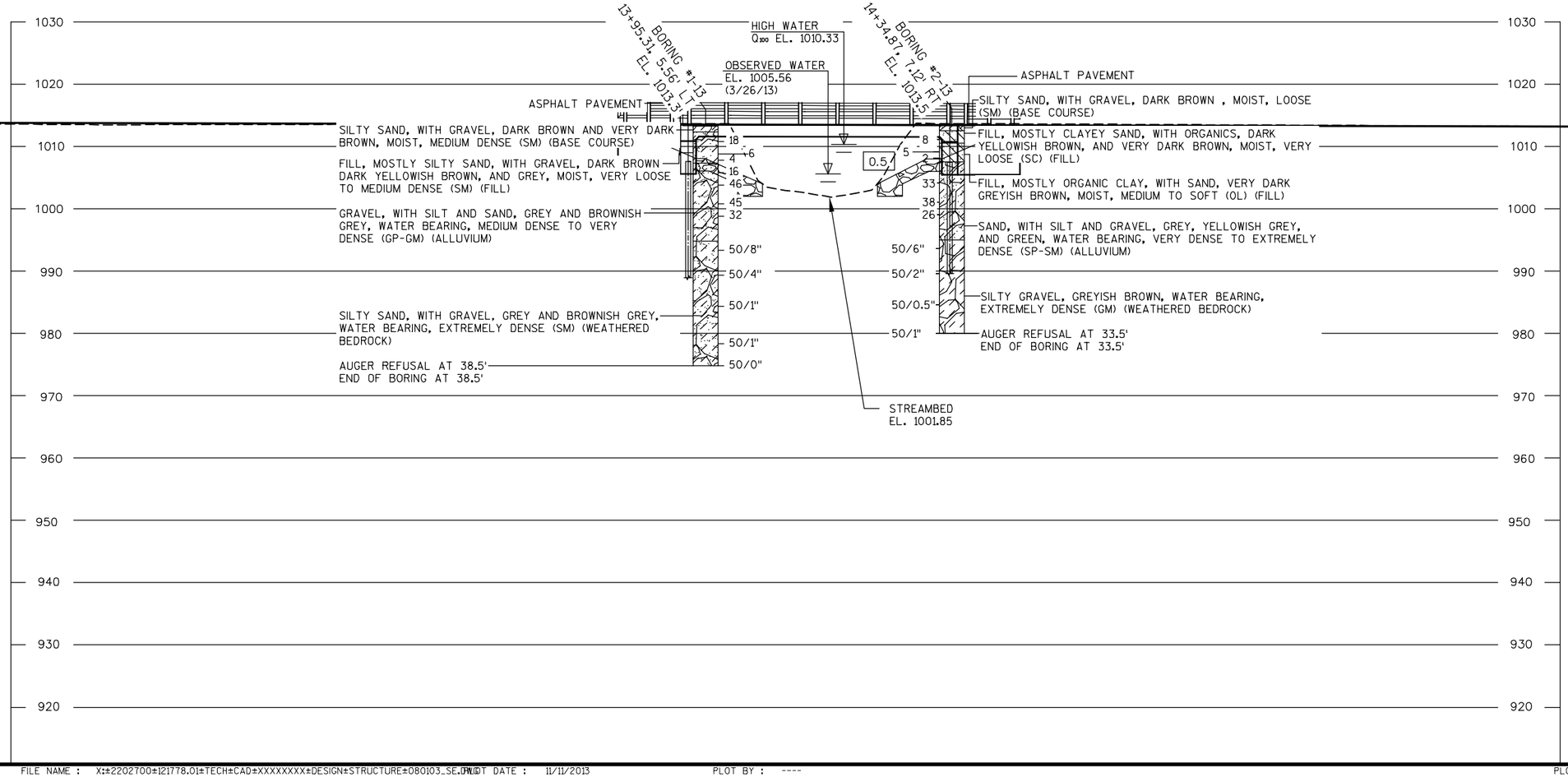
8

FILE NAME : X:±2202700±121778.01±TECH±CAD±XXXXXXXX±DESIGN±STRUCTURE±080102_GN.DWG PLOT DATE : 11/25/2013 PLOT BY : ---- PLOT SCALE : 1" = 1'





STATE PROJECT NUMBER

5387-00-70

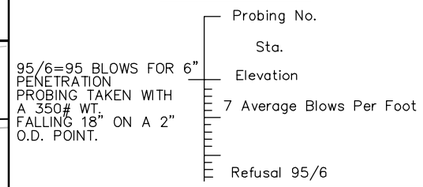
ABBREVIATIONS

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

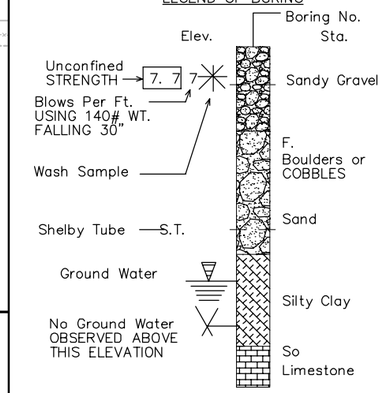
MATERIAL SYMBOLS

Asphalt, Concrete, Gravel, Silt, Organic Soil, Clay, Sand, Air, Water

LEGEND OF PROBING



LEGEND OF BORING



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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-39

DRAWN BY TAV | PLANS CK'D. GAR

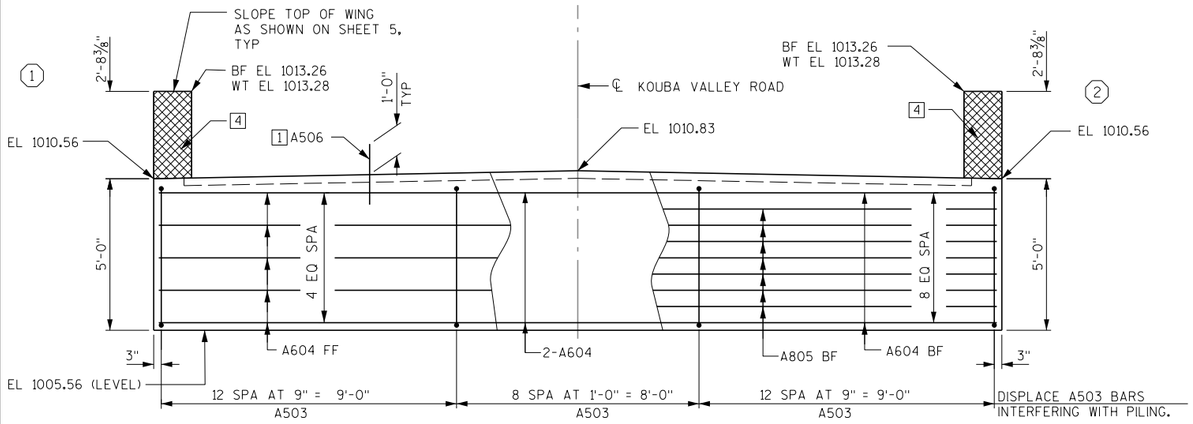
SUBSURFACE EXPLORATION

SHEET 3 OF 10
23

8

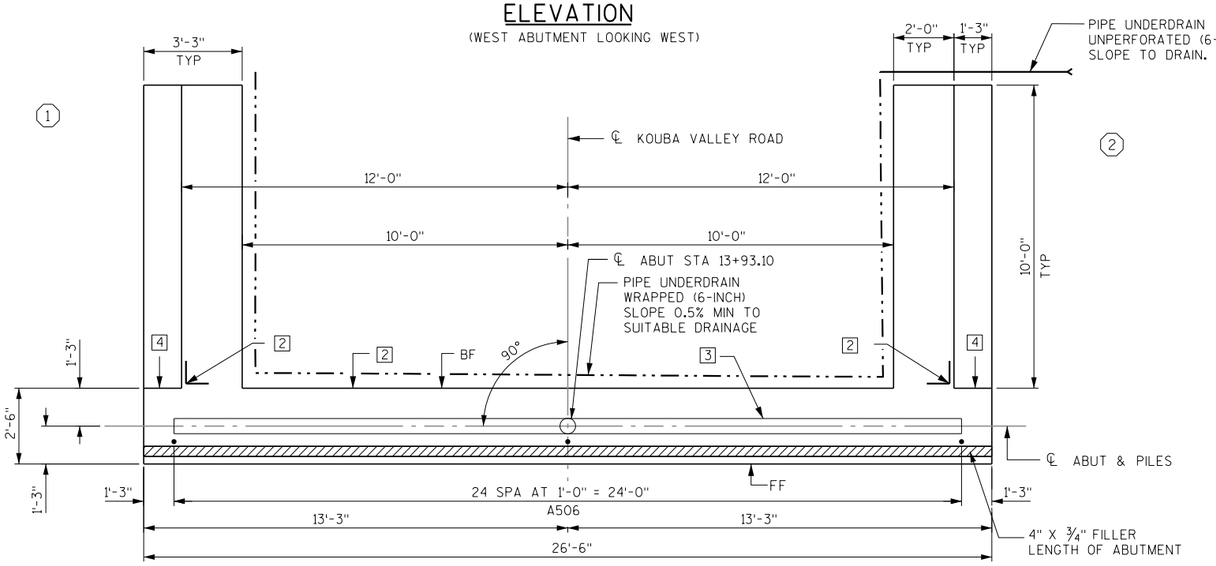
8

STATE PROJECT NUMBER
5387-00-70

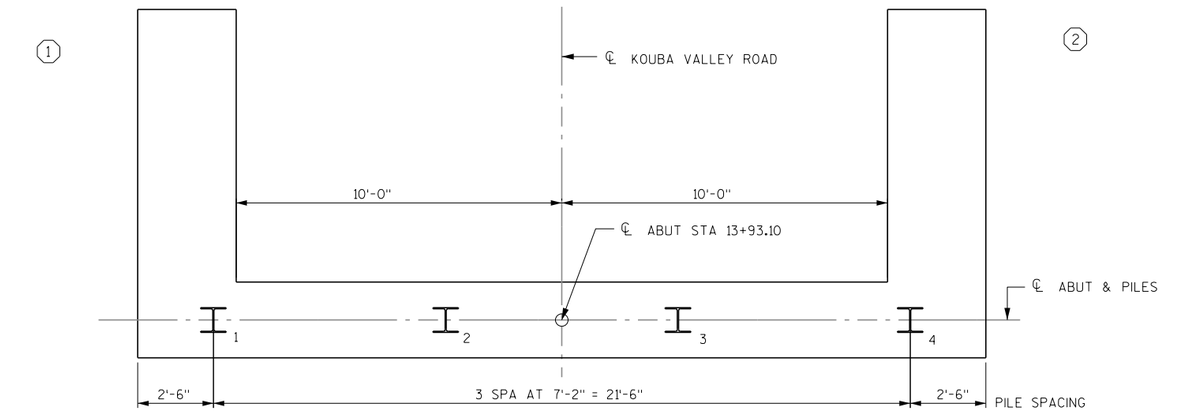


ELEVATION

(WEST ABUTMENT LOOKING WEST)



PLAN



PILE PLAN

NOTES

FOR PILE SPLICE SEE SHEET 2

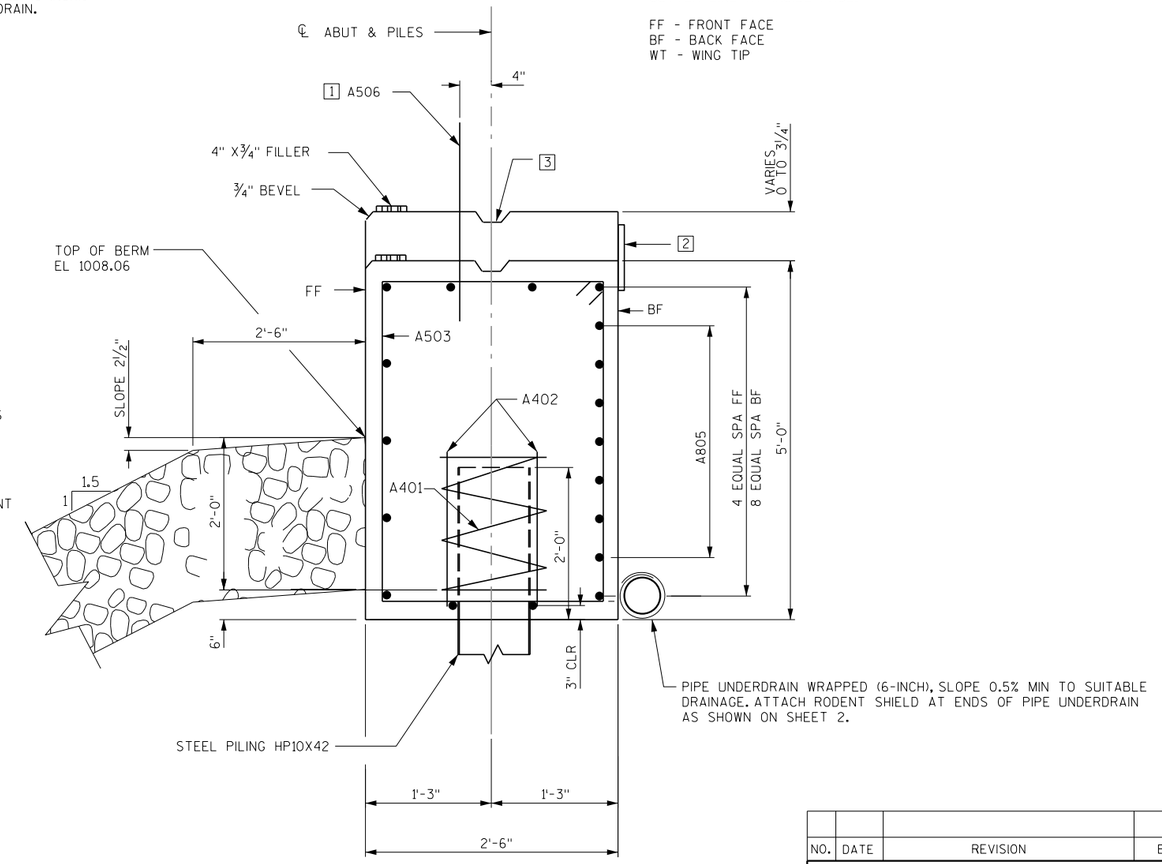
FILL/EXCAVATE TO BOTTOM OF ABUTMENT EL 1005.56 BEFORE DRIVING PILING.

SEE SHEET 2 FOR STRUCTURE BACKFILL AND PIPE UNDERDRAIN DETAIL.

ABUTMENTS SUPPORTED ON HP10X42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 160 TONS PER PILE AS REROUIRED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 20'LONG AT THE ABUTMENT. PILE POINTS REQUIRED.

1. A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INTIAL SETTING HAS TAKEN PLACE.
2. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE. EXTEND FROM BRIDGE SEAT TO TOP OF WING.
3. KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6" KEYWAY. TERMINATE 1'-0" FROM ABUTMENT ENDS.
4. 1/2" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. FILLER INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTIAL 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). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

FF - FRONT FACE
BF - BACK FACE
WT - WING TIP



SECTION THRU ABUTMENT BODY

ALL HORIZONTAL BARS NOT LABELED ARE A604 BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-39

DRAWN BY TAV | PLANS CK'D. GAR

WEST ABUTMENT

SHEET 4 OF 10
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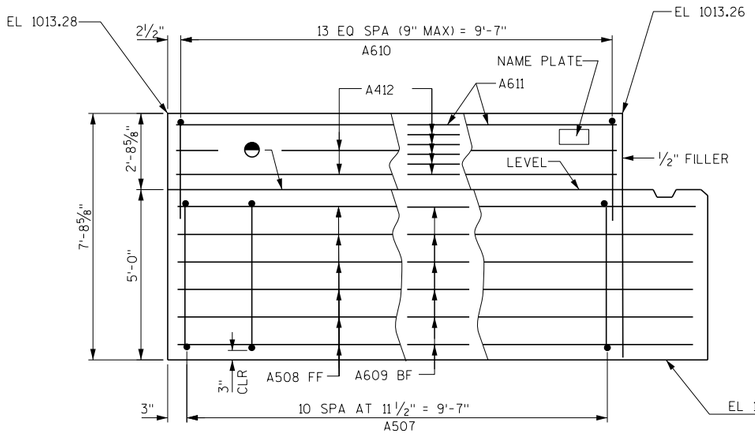
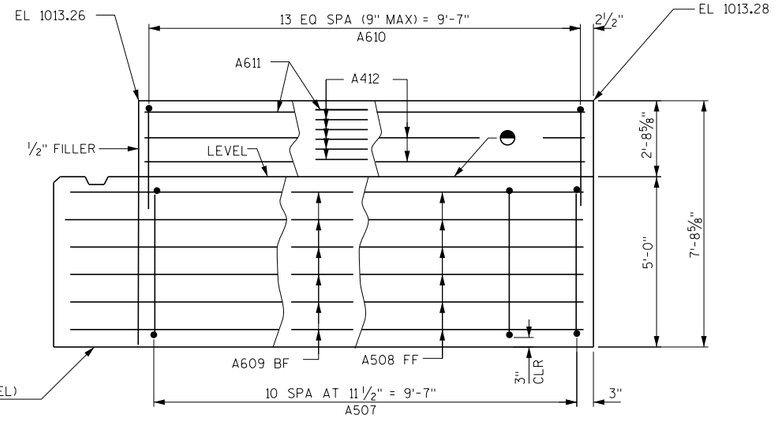


WING 1 ELEVATION



WING 2 ELEVATION

BILL OF BARS
WEST ABUTMENT

COATED= 1390 LBS.
UNCOATED= 1480 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT. - IN.	BENT	BAR SERIES	LOCATION	
A 4 01		4	28 - 0	X		ABUTMENT BODY - 1 PER PILE	SPIRAL
A 4 02		8	2 - 3			ABUTMENT BODY - 2 PER PILE	VERT
A 5 03		33	13 - 7	X		ABUTMENT BODY	VERT
A 6 04		11	26 - 2			ABUTMENT BODY - FF, TOP, BTM	HORI
A 8 05		7	26 - 2			ABUTMENT BODY - BF	HORI
A 5 06	25		2 - 0			ABUTMENT BODY - DOWELS	VERT
A 5 07	22		15 - 3	X		WING WALL - BODY	VERT
A 5 08	12		12 - 2			WING WALL - FF OF BODY	HORI
A 6 09	16		11 - 11			WING WALL - BODY	HORI
A 6 10	28		9 - 9	X		WING WALL - TOP	VERT
A 6 11	4		9 - 7			WING WALL - TOP	HORI
A 4 12	12		9 - 7			WING WALL - TOP	HORI

ALL REINFORCING BARS ARE ENGLISH.

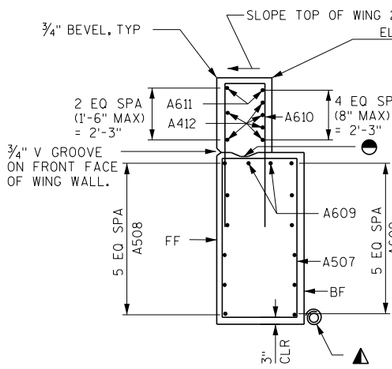
BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

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

FF - FRONT FACE
BF - BACK FACE

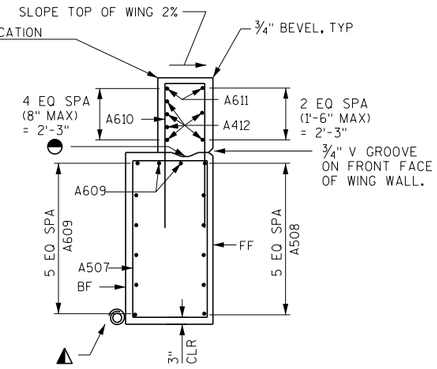
◓ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY, WITH MEMBRANE ON BACKFACE.

⚠ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN TO SUITABLE DRAINAGE.



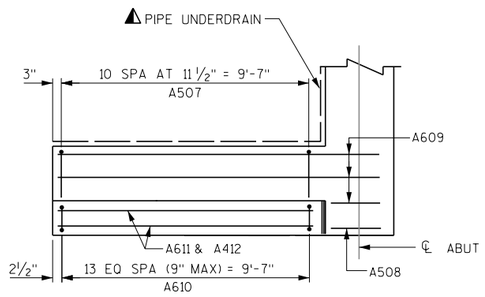
WING 1 SECTION

SEE SHEET 10 FOR RAIL POST ANCHORS.



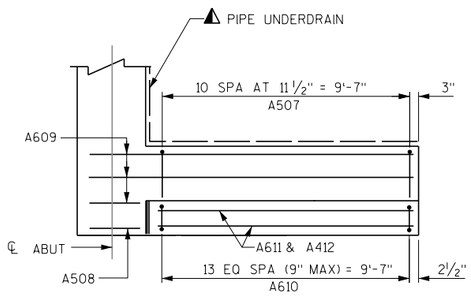
WING 2 SECTION

SEE SHEET 10 FOR RAIL POST ANCHORS.



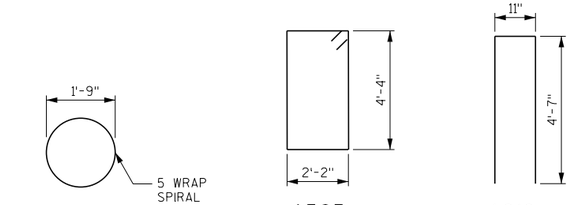
WING 1 PLAN

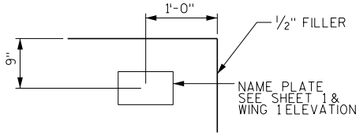
SPACE A610 TO MISS ANCHORS FOR RAIL POSTS.



WING 2 PLAN

SPACE A610 TO MISS ANCHORS FOR RAIL POSTS.





NAME PLATE LOCATION

ON WING 1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-39

DRAWN BY TAV | PLANS CK'D. GAR

WEST ABUTMENT DETAILS

SHEET 5 OF 10
25

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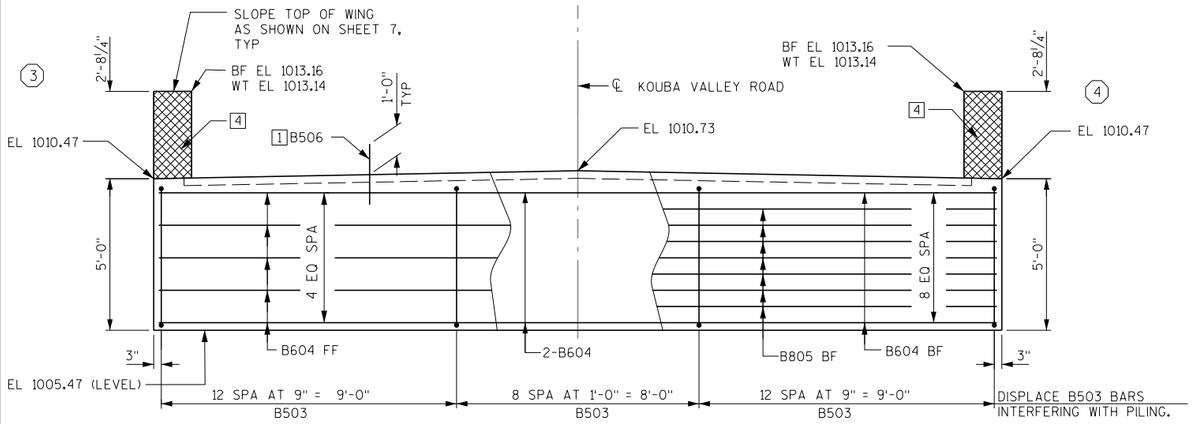
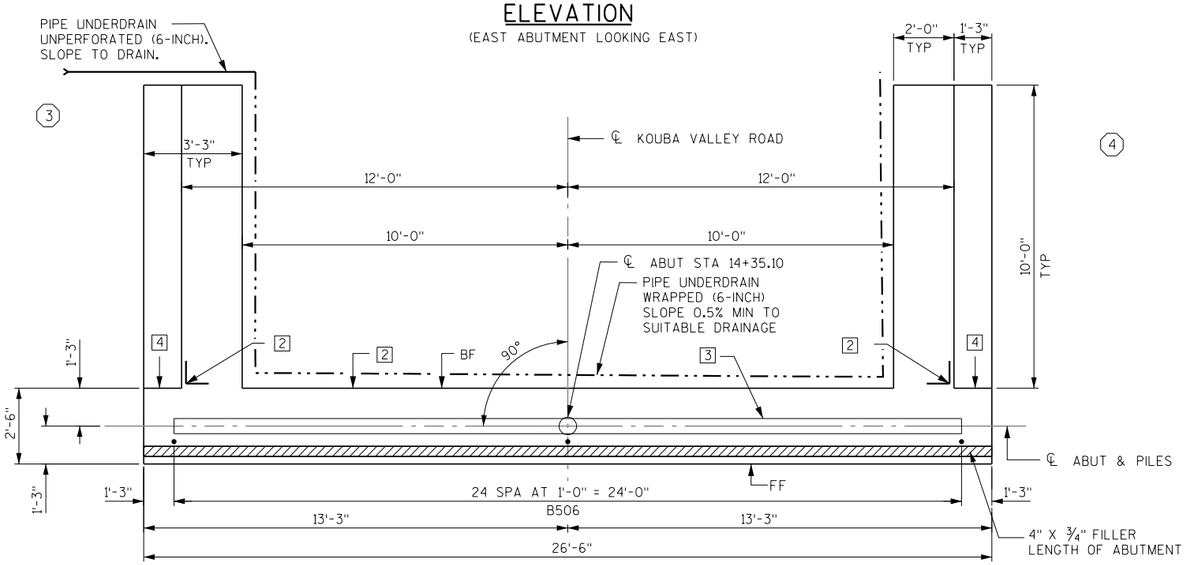
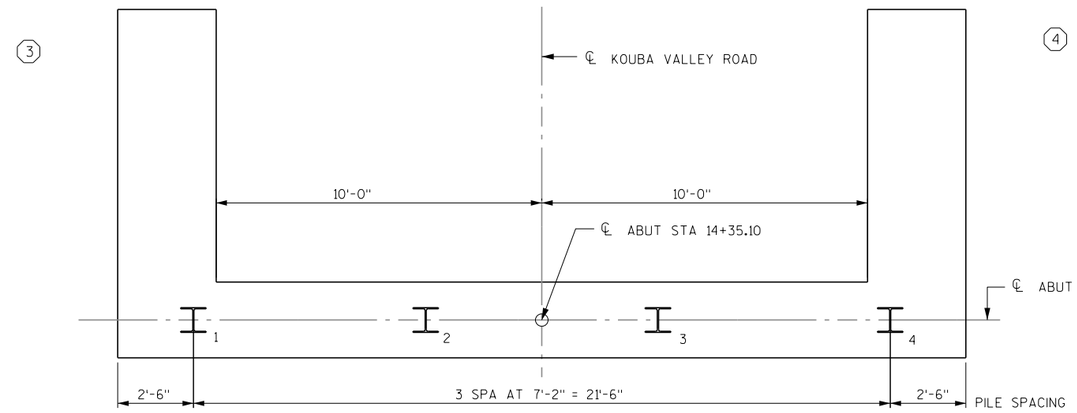


ELEVATION

(EAST ABUTMENT LOOKING EAST)



PLAN



PILE PLAN

NOTES

FOR PILE SPLICE SEE SHEET 2

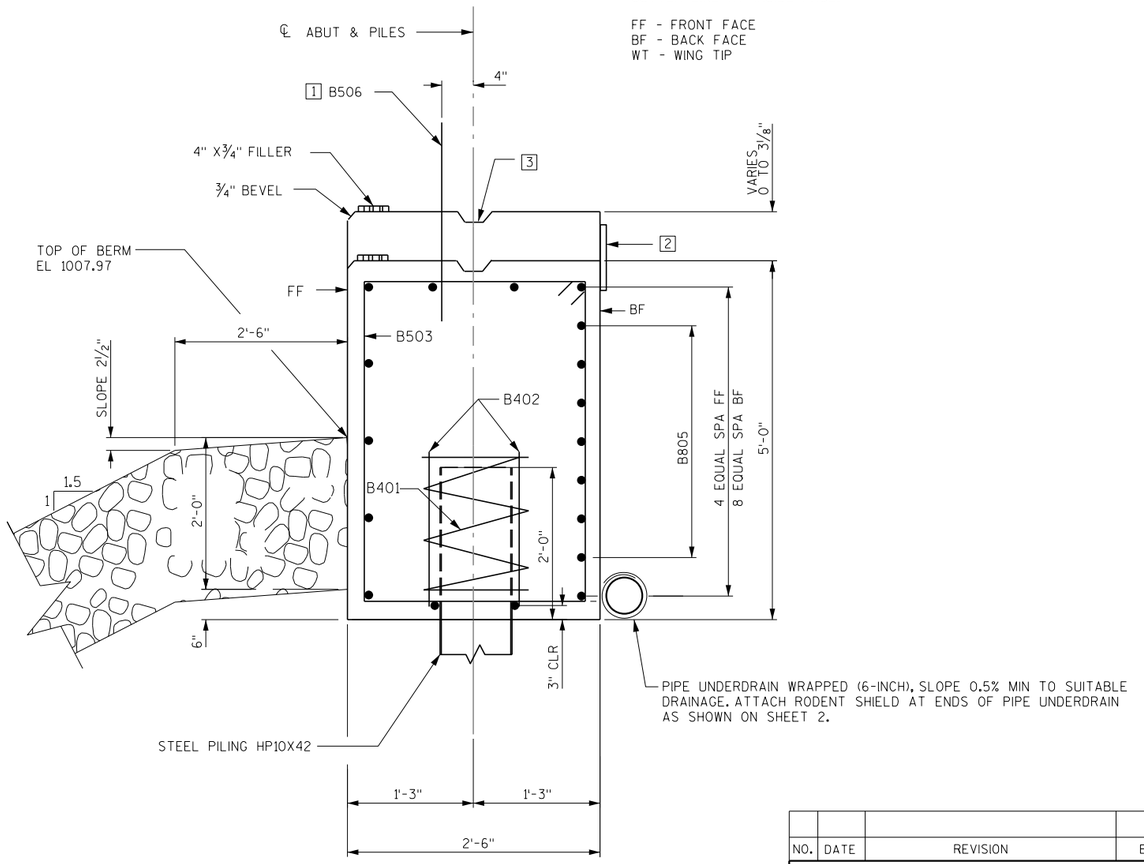
FILL/EXCAVATE TO BOTTOM OF ABUTMENT EL 1005.47 BEFORE DRIVING PILING.

SEE SHEET 2 FOR STRUCTURE BACKFILL AND PIPE UNDERDRAIN DETAIL.

ABUTMENTS SUPPORTED ON HP10X42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 160 TONS PER PILE AS REROUIRED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 20'LONG AT THE ABUTMENT. PILE POINTS REQUIRED.

1. B506 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INTIAL SETTING HAS TAKEN PLACE.
2. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE. EXTEND FROM BRIDGE SEAT TO TOP OF WING.
3. KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6" KEYWAY. TERMINATE 1'-0" FROM ABUTMENT ENDS.
4. ½" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. FILLER INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTIAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

FF - FRONT FACE
BF - BACK FACE
WT - WING TIP



SECTION THRU ABUTMENT BODY

ALL HORIZONTAL BARS NOT LABELED ARE B604 BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-39

DRAWN BY TAV | PLANS CK'D. GAR

EAST ABUTMENT

SHEET 6 OF 10

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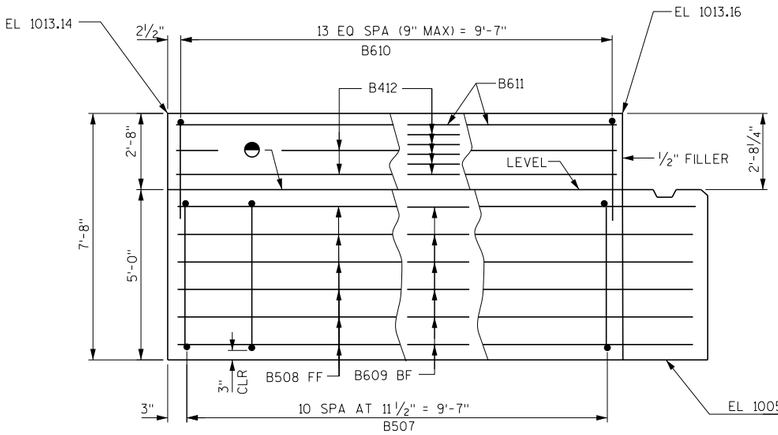
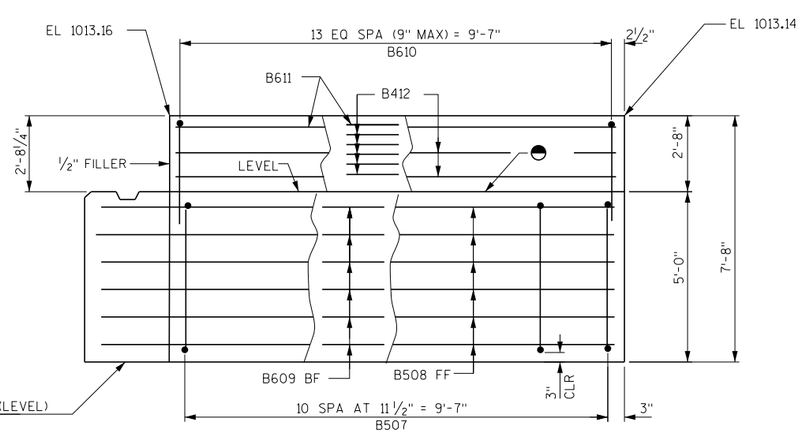


WING 3 ELEVATION



WING 4 ELEVATION

BILL OF BARS
EAST ABUTMENT

COATED= 1390 LBS.
UNCOATED= 1480 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT. - IN.	BENT	BAR SERIES	LOCATION	
B 4 01		4	28 - 0	X		ABUTMENT BODY - 1 PER PILE	SPIRAL
B 4 02		8	2 - 3			ABUTMENT BODY - 2 PER PILE	VERT
B 5 03		33	13 - 7	X		ABUTMENT BODY	VERT
B 6 04		11	26 - 2			ABUTMENT BODY - FF, TOP, BTM	HORI
B 8 05		7	26 - 2			ABUTMENT BODY - BF	HORI
B 5 06	25		2 - 0			ABUTMENT BODY - DOWELS	VERT
B 5 07	22		15 - 3	X		WING WALL - BODY	VERT
B 5 08	12		12 - 2			WING WALL - FF OF BODY	HORI
B 6 09	16		11 - 11			WING WALL - BODY	HORI
B 6 10	28		9 - 9	X		WING WALL - TOP	VERT
B 6 11	4		9 - 7			WING WALL - TOP	HORI
B 4 12	12		9 - 7			WING WALL - TOP	HORI

ALL REINFORCING BARS ARE ENGLISH.

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

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

FF - FRONT FACE
BF - BACK FACE

◓ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY, WITH MEMBRANE ON BACKFACE.

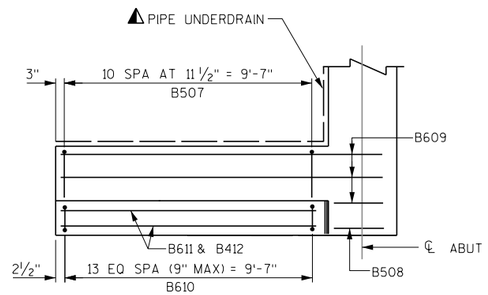
⚠ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN TO SUITABLE DRAINAGE.

WING 3 SECTION

SEE SHEET 10 FOR RAIL POST ANCHORS.

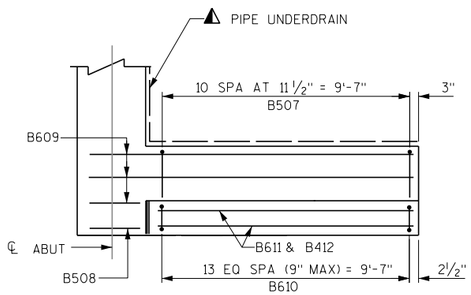
WING 4 SECTION

SEE SHEET 10 FOR RAIL POST ANCHORS.



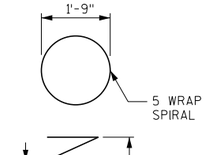
WING 3 PLAN

SPACE B610 TO MISS ANCHORS FOR RAIL POSTS.

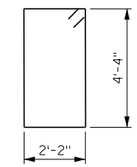


WING 4 PLAN

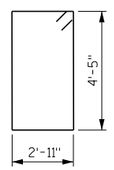
SPACE B610 TO MISS ANCHORS FOR RAIL POSTS.



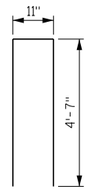
B401



B503



B507



B610

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-39

DRAWN BY TAV | PLANS CK'D. GAR

EAST ABUTMENT DETAILS

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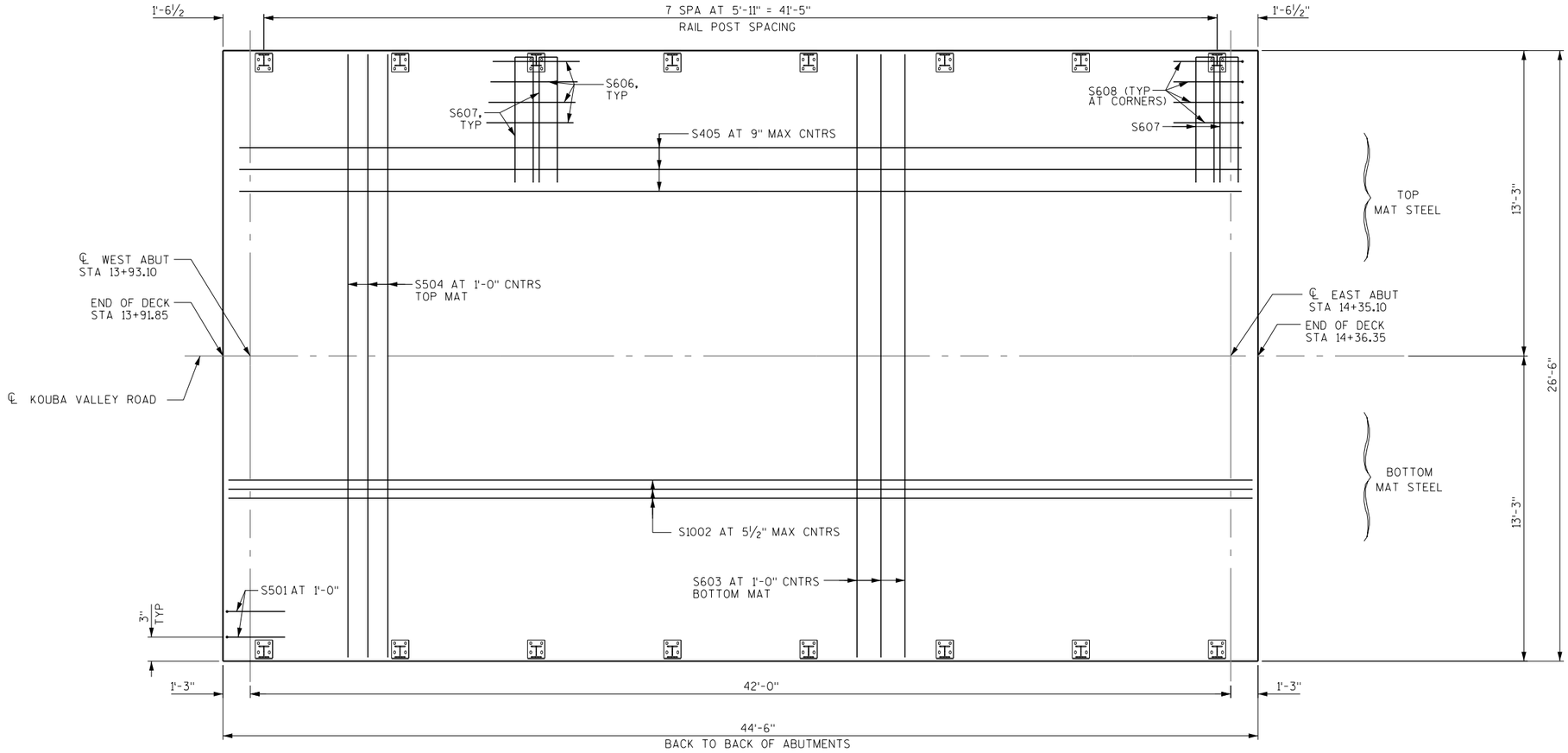
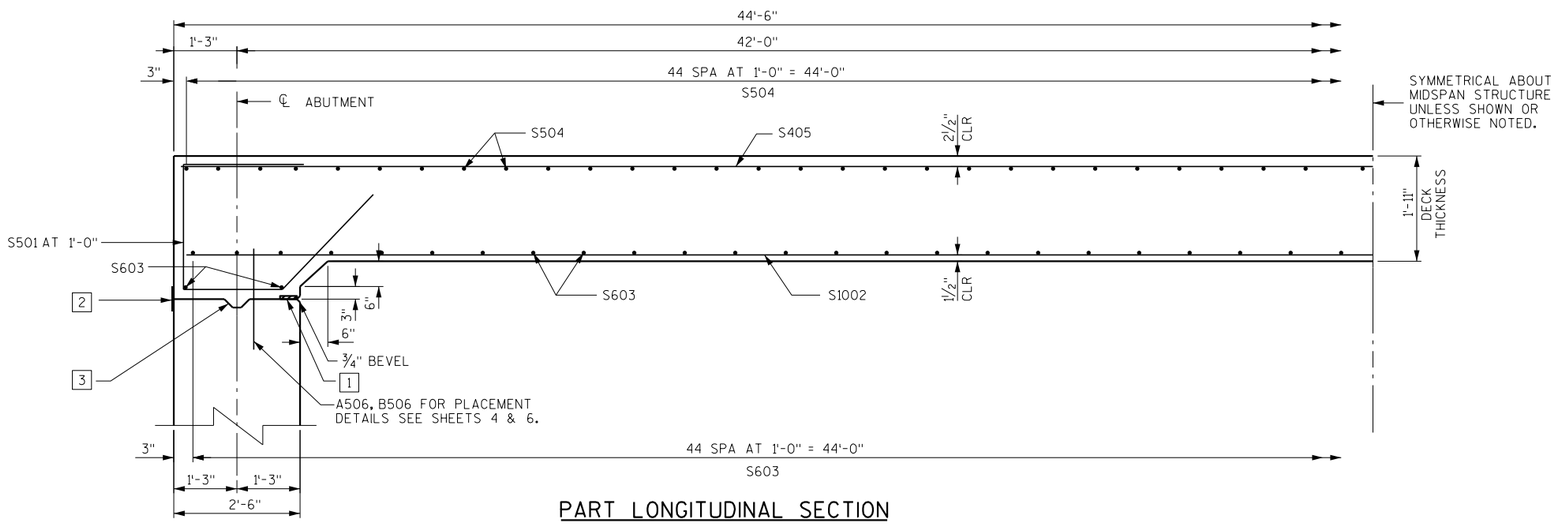


REINFORCEMENT PLAN



PART LONGITUDINAL SECTION

NOTES

1. 4" × ¾" FILLER LENGTH OF ABUTMENT.
2. 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW) TO EXTEND FROM BRIDGE SEAT TO TOP OF WING AND BETWEEN INSIDE FACES OF WINGS. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
3. KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"X6" KEYWAY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-62-39

DRAWN BY TAV | PLANS CK'D. GAR

SUPERSTRUCTURE

SHEET 8 OF 10
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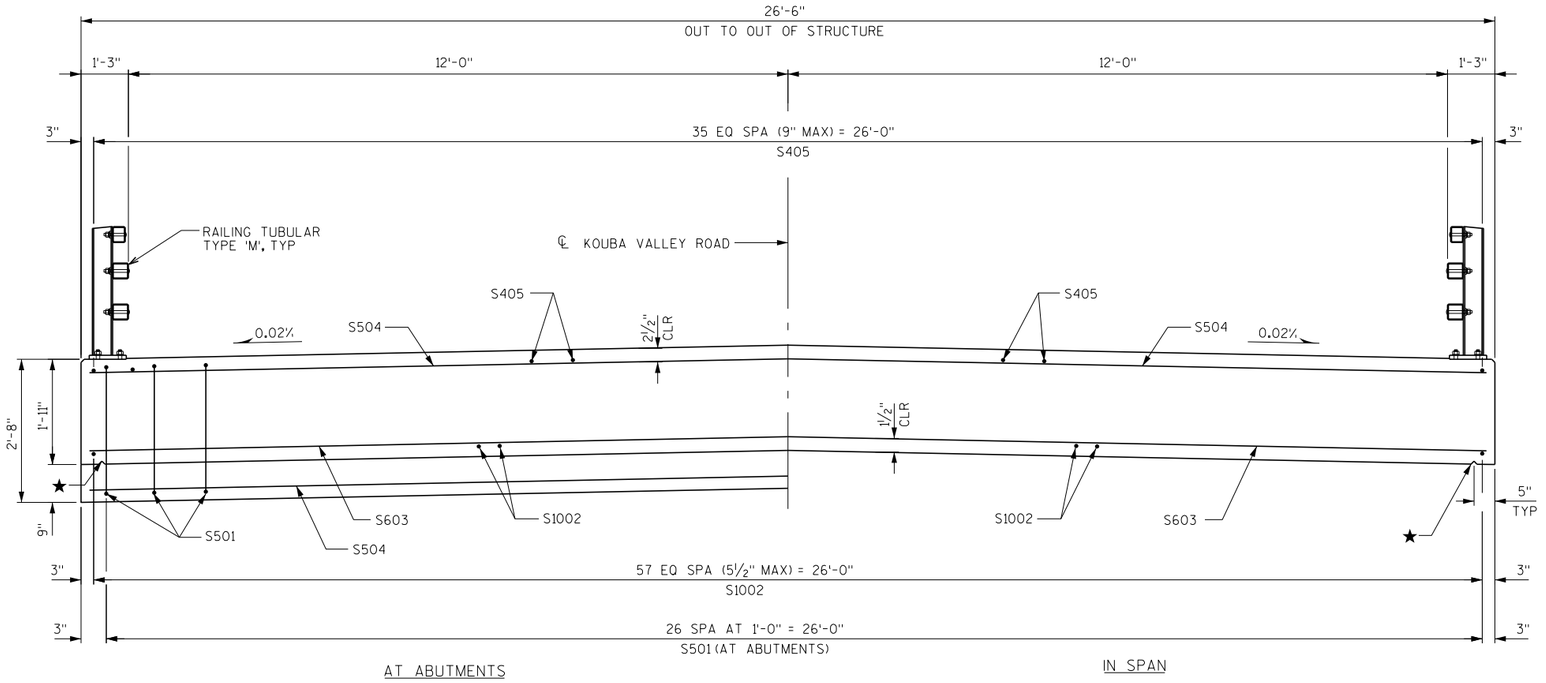
5387-00-70



BILL OF BARS
SUPERSTRUCTURE

COATED= 16880 LBS.
UNCOATED= 0 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
S 5 01	54		8 - 7	X		SLAB - ABUTMENT - TIES	LONGIT
S 10 02	58		44 - 2			SLAB - BOTTOM	LONGIT
S 6 03	49		26 - 2			SLAB - BOTTOM	TRANS
S 5 04	45		26 - 2			SLAB - TOP	TRANS
S 4 05	36		44 - 2			SLAB - TOP	LONGIT
S 6 06	48		6 - 0			RAILING ANCHORS	LONGIT
S 6 07	32		12 - 0	X		RAILING ANCHORS	TRANS
S 6 08	16		6 - 0	X		RAILING ANCHORS	LONGIT

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

ALL REINFORCING BARS ARE ENGLISH.

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

EDGE OF DECK ELEVATIONS

SPAN PT.	NORTH EDGE STATION	NORTH EDGE ELEVATION	CENTERLINE/CROWN STATION	CENTERLINE/CROWN ELEVATION	SOUTH EDGE STATION	SOUTH EDGE ELEVATION
W. ABUT.	13 + 93.10	1013.24	13 + 93.10	1013.50	13 + 93.10	1013.24
0.1	13 + 97.30	1013.23	13 + 97.30	1013.49	13 + 97.30	1013.23
0.2	14 + 01.50	1013.22	14 + 01.50	1013.48	14 + 01.50	1013.22
0.3	14 + 05.70	1013.21	14 + 05.70	1013.47	14 + 05.70	1013.21
0.4	14 + 09.90	1013.20	14 + 09.90	1013.46	14 + 09.90	1013.20
0.5	14 + 14.10	1013.19	14 + 14.10	1013.45	14 + 14.10	1013.19
0.6	14 + 18.30	1013.18	14 + 18.30	1013.44	14 + 18.30	1013.18
0.7	14 + 22.50	1013.17	14 + 22.50	1013.43	14 + 22.50	1013.17
0.8	14 + 26.70	1013.16	14 + 26.70	1013.42	14 + 26.70	1013.16
0.9	14 + 30.90	1013.15	14 + 30.90	1013.41	14 + 30.90	1013.15
E. ABUT.	14 + 35.10	1013.14	14 + 35.10	1013.40	14 + 35.10	1013.14

NOTES

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

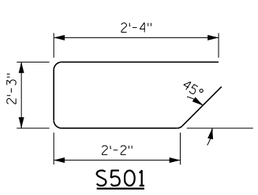
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

★ ¾" V-GROOVE. TERMINATE 3" CHAMFER AT ABUTMENTS. SEE DETAIL ON THIS SHEET.

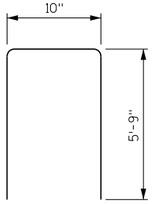
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF DECK AND AT ℄.

CROSS SECTION THRU ROADWAY

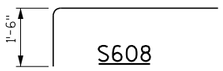
(LOOKING EAST)



S501

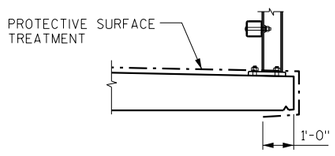


S607

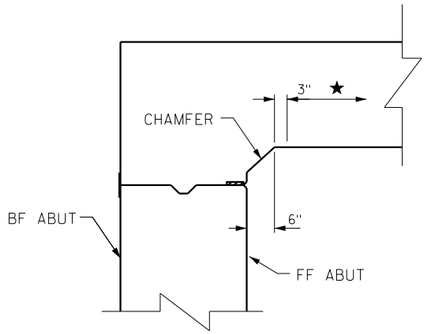


S608

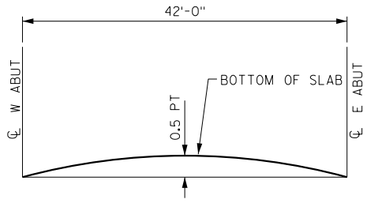
SPAN (PT)	CAMBER (IN)
℄ W ABUT	0
0.1	½
0.2	⅞
0.3	1¼
0.4	1½
0.5	1½
0.6	1½
0.7	1¼
0.8	⅞
0.9	½
℄ E ABUT	0



PROTECTIVE SURFACE TREATMENT DETAIL



DRIP GROOVE DETAIL AT ABUTMENT



CAMBER DIAGRAM

CAMBER SPAN AS SHOWN (USING VALUES IN TABLE) TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

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NO.	DATE	REVISION	BY

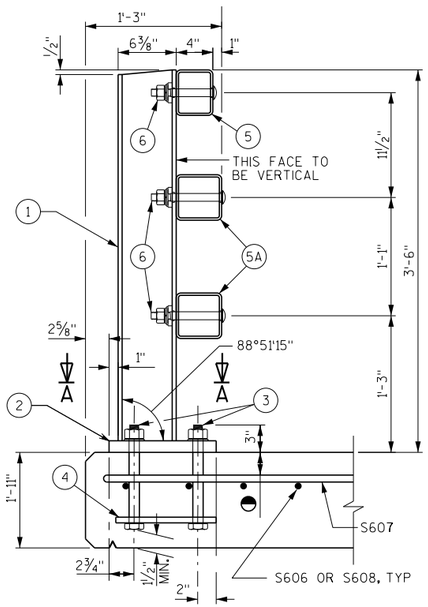
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-39

DRAWN BY TAV | PLANS CK'D. GAR

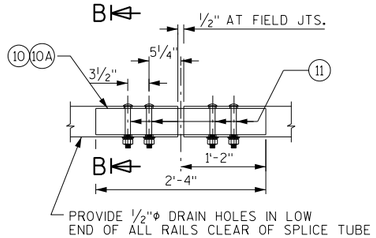
SUPERSTRUCTURE DETAILS

SHEET 9 OF 10

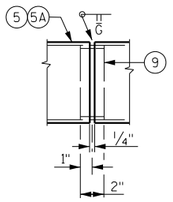


SECTION THRU RAILING ON DECK

◓ PLACE BELOW TOP MAT OF SLAB REINF.

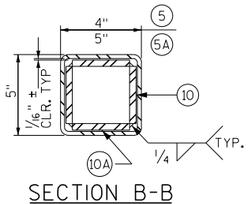


FIELD ERECTION JOINT DETAIL

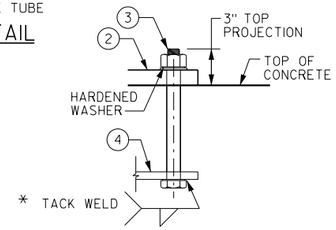


SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

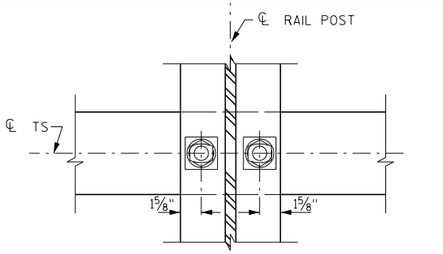


SECTION B-B

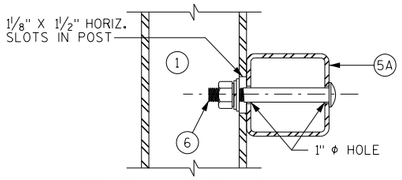


ANCHOR BOLTS

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



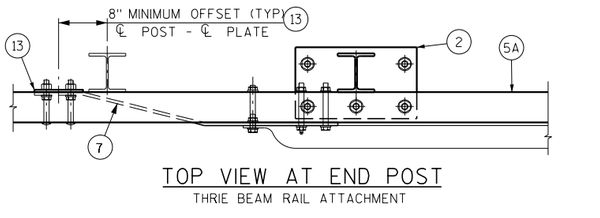
SECTION THRU POST WEB



SECTION THRU RAIL

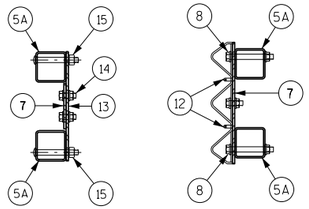
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT



SECTION C-C

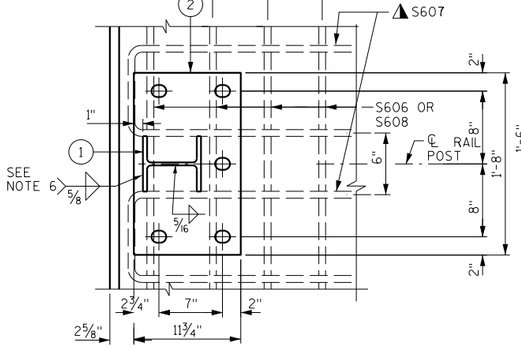
SECTION D-D

LEGEND

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

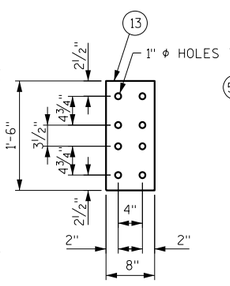
GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M (B-62-39)" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).



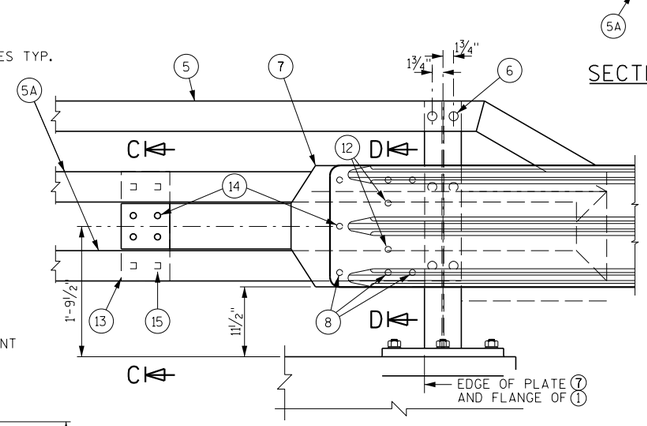
SECTION A-A

◭ TIE TO TOP MAT OF STEEL.



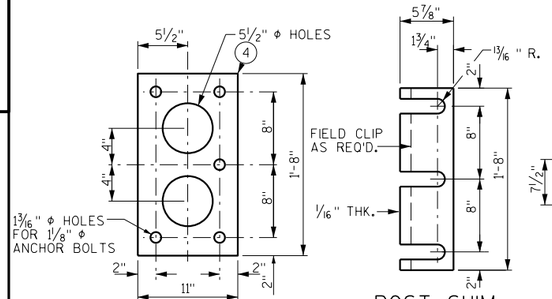
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT



DETAIL AT END POST

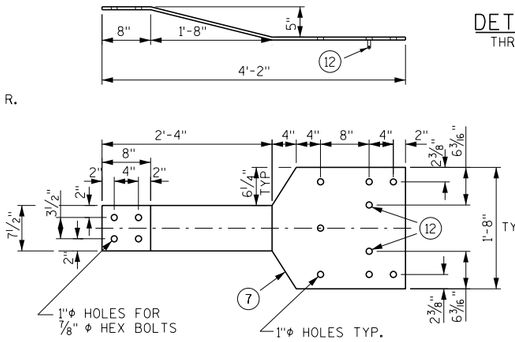
THRIE BEAM RAIL ATTACHMENT



ANCHOR PLATE

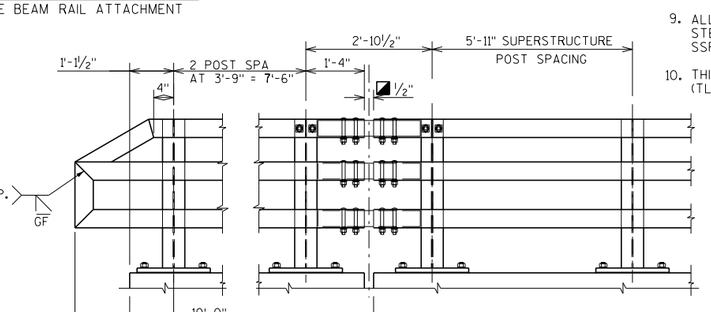
AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

◪ ½" JOINT FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-39

DRAWN BY TAV | PLANS CK'D. GAR

RAILING TUBULAR TYPE 'M'

SHEET 10 OF 10
30

STATE PROJECT NUMBER
5387-00-70

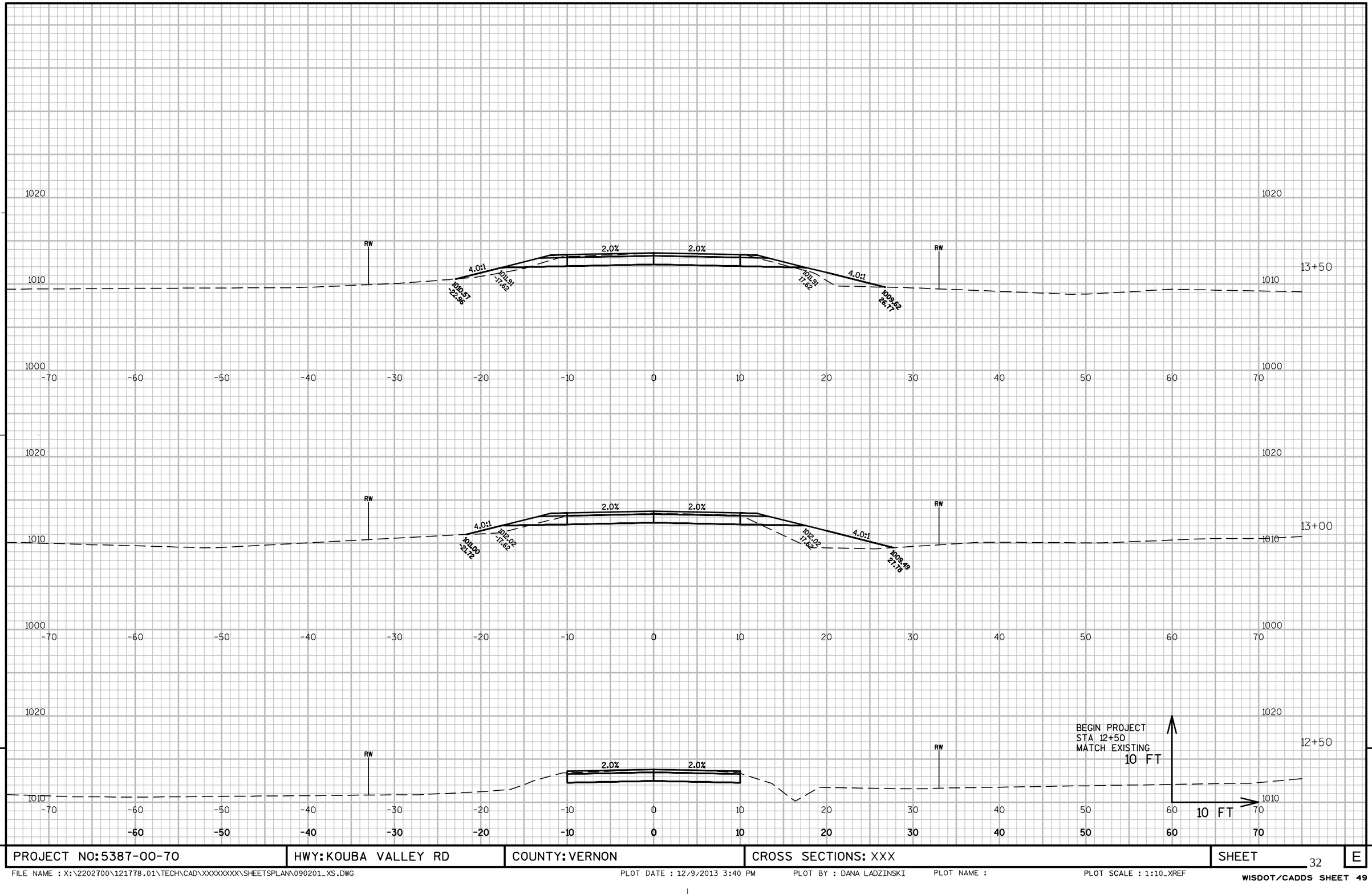
8

LV = 1 2 3 4 5 6 7 8 9 10

8

EARTHWORK - KOUBA VALLEY ROAD EXPANSION FACTOR = 1.3

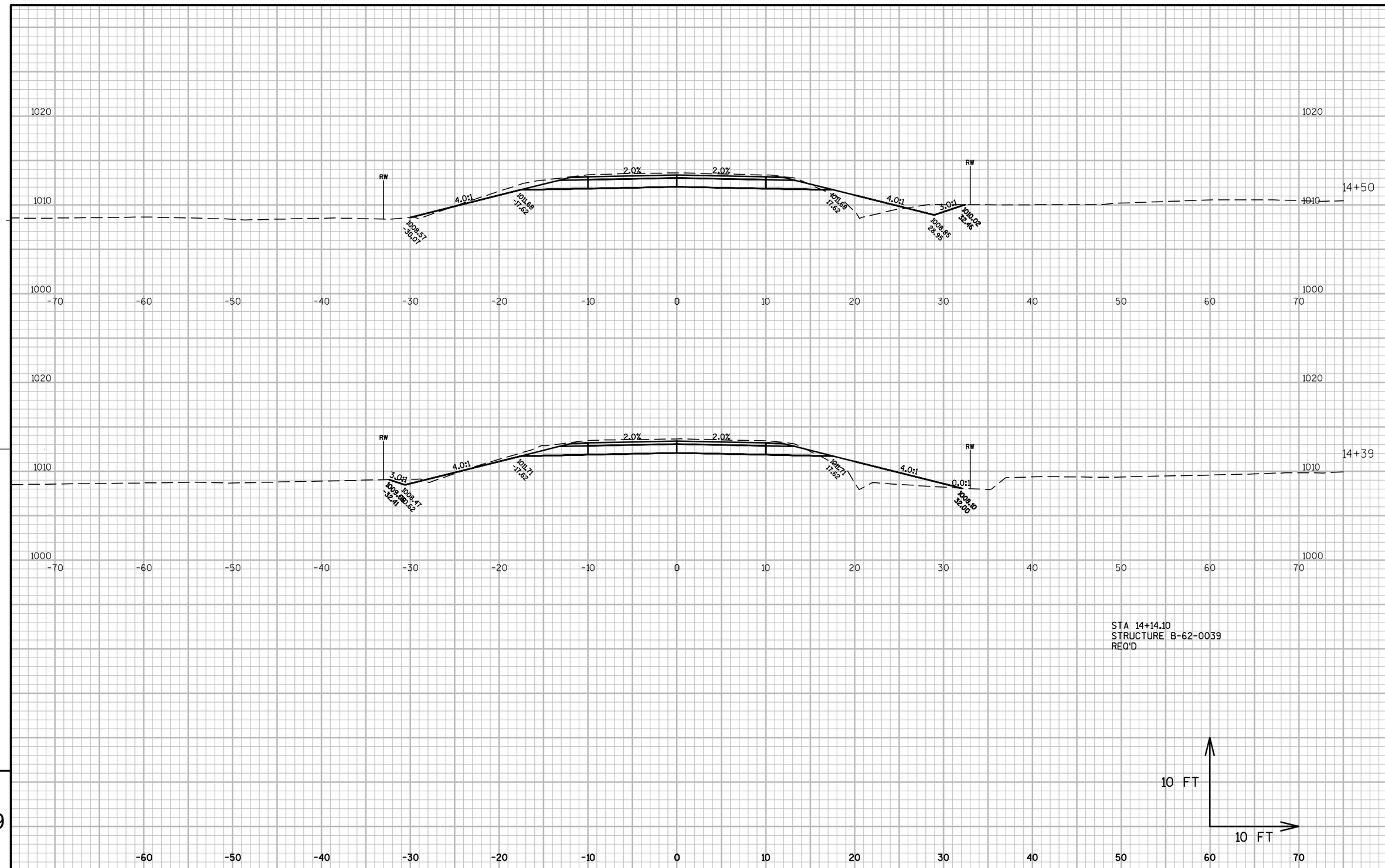
	END AREA		INCREMENTAL VOLUME		CUMMULATIVE VOLUME		MASS ORDINATE
STATION	CUT (SF)	FILL (SF)	CUT (CY)	EXP FILL (CY)	CUT (CY)	EXP FILL (CY)	(CY)
12+50	118	17	0	0	0	0	0
12+75	119	25	110	26	110	26	84
13+00	118	45	110	42	220	68	152
13+25	116	33	108	47	328	115	213
13+50	119	20	109	32	437	146	290
13+75	143	28	121	29	558	175	383
13+92	150	31	92	24	651	199	451
14+36	210	46	0	0	651	199	451
14+50	191	31	104	26	754	225	529
14+75	169	32	167	38	921	263	658
15+00	149	38	147	42	1068	305	763
15+25	140	32	134	42	1202	347	855
15+50	132	21	126	31	1327	378	949
		TOTAL	1327	378			



PROJECT NO: 5387-00-70	HWY: KOUBA VALLEY RD	COUNTY: VERNON	CROSS SECTIONS: XXX	SHEET 32	E

FILE NAME : X:\2202700\121778.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\090201_XS.DWG PLOT DATE : 12/9/2013 3:40 PM PLOT BY : DANA LADZINSKI PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



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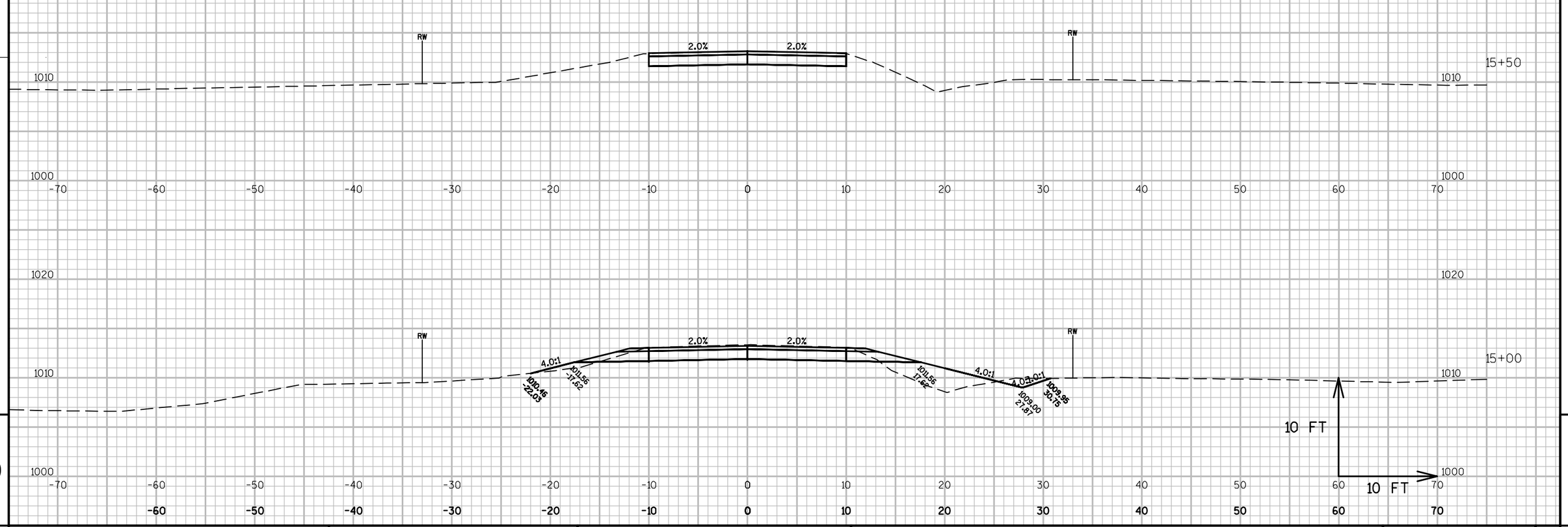
END PROJECT
STA 15+50
MATCH EXISTING



PROJECT NO: 5387-00-70	HWY: KOUBA VALLEY RD	COUNTY: VERNON	CROSS SECTIONS: XXX	SHEET 34	E

FILE NAME : X:\2202700\121778.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\090201_XS.DWG PLOT DATE : 12/9/2013 3:41 PM PLOT BY : DANA LADZINSKI PLOT NAME : PLOT SCALE : 1:10_XREF

Notes

Wisconsin Department of Transportation

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