NWL MAY 2014

PROJECT ID: 7260-00-70

WITH: N/A

COUNTY: JACKSON

ORDER OF SHEETS

TOTAL SHEETS = 42

46

N

DESIGN DESIGNATION

A.A.D.T.	(2014)	= 35
A.A.D.T.	(2034)	= 50
D.H.V.		= N/A
D.D.		= N/A
T.		= N/A
DESIGN SPEED		= 40 MPH
ESALS		= N/A

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T MELROSE, CUT OFF ROAD

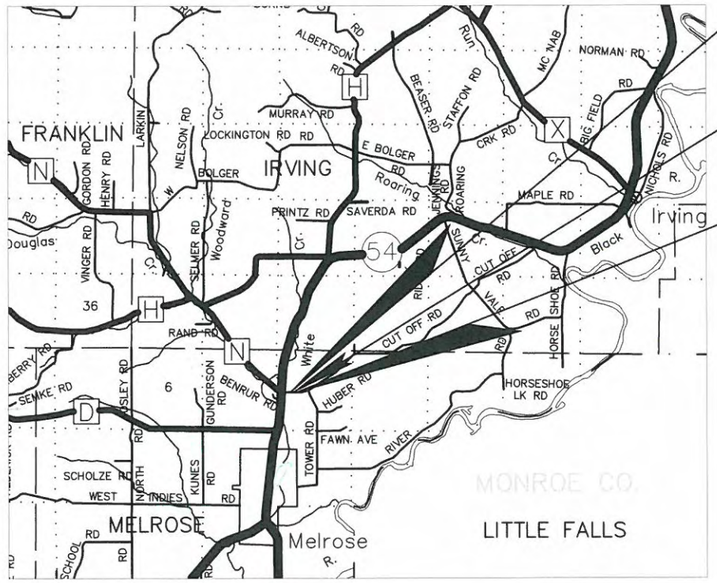
BR DOUGLAS CREEK BRIDGE B-27-0159

LOCAL STREET

JACKSON COUNTY

STATE PROJECT NUMBER
7260-00-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7260-00-70	WISC 2014209	1



BEGIN PROJECT 7260-00-70
STA. 8+50.00
Y = 44,611.689
X = 50,103.916

STRUCTURE B-27-0159
STA. 10+04.00

END PROJECT 7260-00-70
STA. 11+50.00
Y = 44,622.930
X = 50,403.700

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.049 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, JACKSON COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ACCEPTED FOR

TOWN of MELROSE

DATE: 12/16/13 (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

Mead & Hunt

WISCONSIN JAMES WHEATON E-25778 LA CROSSE, WI PROFESSIONAL ENGINEER

DATE: 1/10/14 (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MEAD & HUNT
Designer	MEAD & HUNT
Management Consultant	KNIGHT E/A, INC.
C.O. Examiner	N/A

APPROVED FOR THE DEPARTMENT

DATE: 1/24/14 (Management Consultant Signature)

E

GENERAL NOTES

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

WHEN THE QUANTITY OF BASE AGGREGATE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, 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.

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

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

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH SALVAGED TOPSOILED, FERTILIZED, SEEDED AND MULCHED.

BEARINGS SHOWN ON THE PLANS ARE GRID BEARINGS TO THE NEAREST SECOND.

THE LOCATION OF ALL DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS AND PAVEMENTS AT REMOVAL LIMITS.

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

SILT FENCE IS TO BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, AND IN PLACE PRIOR TO BRIDGE REMOVAL.

EXISTING PIPE CULVERT SIZES SHOWN ARE APPROXIMATE AND THE CONTRACTOR SHALL BASE ITS BID ON ACTUAL FIELD CONDITIONS.

SHRINKAGE IS ESTIMATED AT 25%.

CONSULTANT CONTACT
MEAD & HUNT, INC.
750 NORTH THIRD STREET
LA CROSSE, WI 54601
ATTN: JAY WHEATON, P.E.
TELEPHONE: 608-784-6040
E-MAIL: JAY.WHEATON@MEADHUNT.COM

DNR LIAISON
DEPARTMENT OF NATURAL RESOURCES
DNR SERVICE CENTER
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
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TELEPHONE: 608-785-9115
E-MAIL: KAREN.KALVELAGE@WISCONSIN.GOV

JACKSON COUNTY
JACKSON COUNTY HIGHWAY DEPARTMENT
119 HARRISON STREET
BLACK RIVER FALLS, WI 54615
ATTN: RANDY ANDERSON
TELEPHONE: 715-284-0233
E-MAIL: RANDY.ANDERSON@CO.JACKSON.WI.US

UTILITY CONTACTS

*JACKSON ELECTRIC COOPERATIVE
ELECTRIC
ATTN: KEVIN BABCOCK
BLACK RIVER FALLS, WI 54615
TELEPHONE: 715-284-5385
MOBILE: 715-896-2700
E-MAIL: KEVINB@JACKELEC.COM

*CENTRYLINK
TELEPHONE
ATTN: DONNA SMOTHERS
835 RED IRON ROAD
BLACK RIVER FALLS, WI 54615
TELEPHONE: 715-284-4375
E-MAIL: DONNA.SMOTHERS@CENTURYLINK.COM

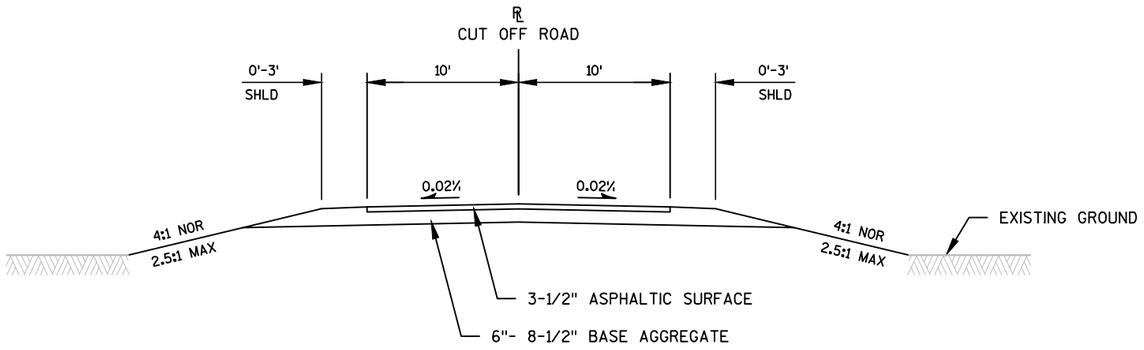
* Denotes Diggers Hotline Member

ORDER OF SECTION 2 SHEETS

TYPICAL SECTIONS
CONSTRUCTION DETAILS
ALIGNMENTS

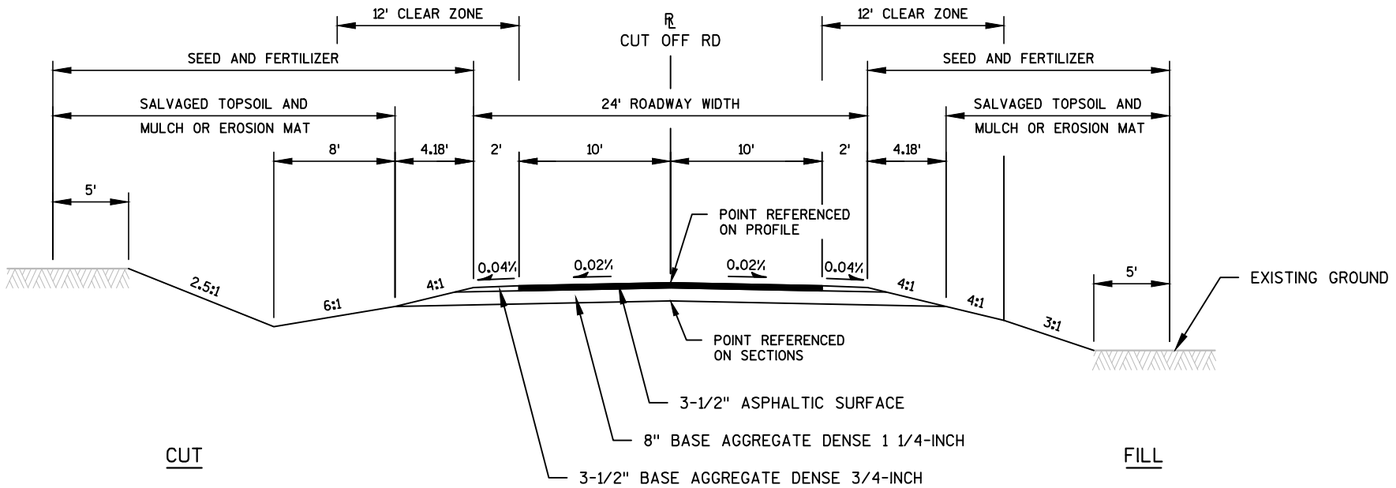
STANDARD ABBREVIATIONS

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



EXISTING TYPICAL SECTION

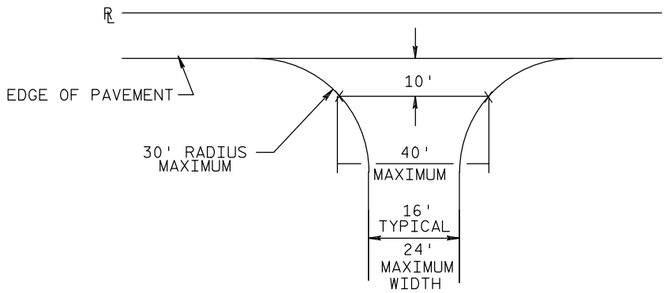
STA 8+50 TO STA 9+86
STA 10+15 TO STA 11+50



PROPOSED TYPICAL SECTION

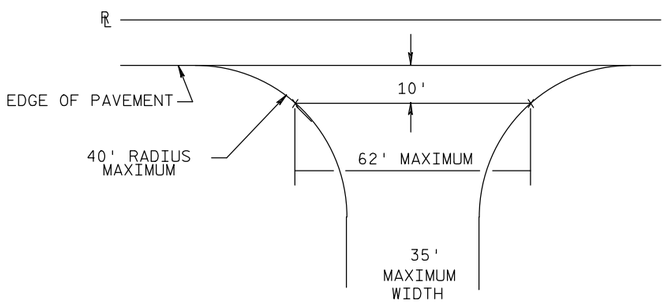
STA 8+50.00 TO STA 9+83.00
STA 10+25.00 TO STA 11+50.00

PROJECT NO: 7260-00-70	HWY: CUT OFF ROAD	COUNTY: JACKSON	PLAN: TYPICAL SECTIONS	SHEET 3	E



TYPICAL DRIVEWAY DETAIL

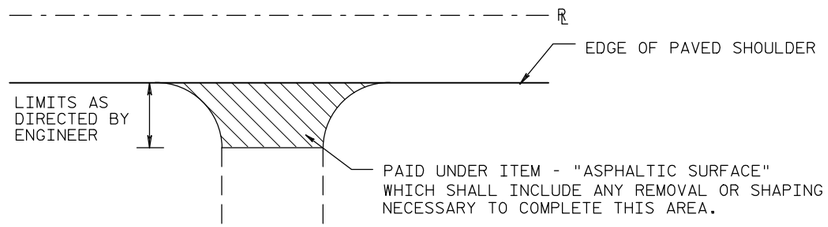
(NON-COMMERCIAL RURAL)



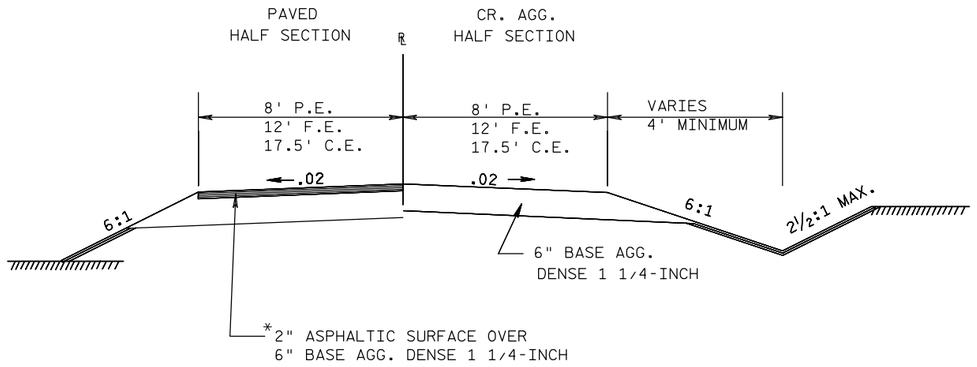
TYPICAL DRIVEWAY DETAIL

(COMMERCIAL RURAL)

RURAL DRIVEWAY DETAIL - ASPHALT



ANY ADDITIONAL BASE AGG. DENSE REQ'D. SHALL BE PAID UNDER ITEM - "BASE AGGREGATE DENSE 1 1/4-INCH"

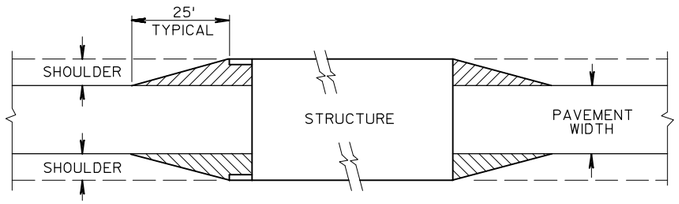


*OR MATCH EXIST.
ASPH. DEPTH

TYPICAL SECTION
FOR PRIVATE ENTRANCES

NOTE:
DRIVEWAY PROFILES NOT EXPECTED TO EXCEED 10%. PLACE LOW POINT OF DRIVEWAY PROFILE OVER DITCH FLOW LINE.

2



DETAIL FOR ASPHALTIC SURFACE TAPERS AT STRUCTURE

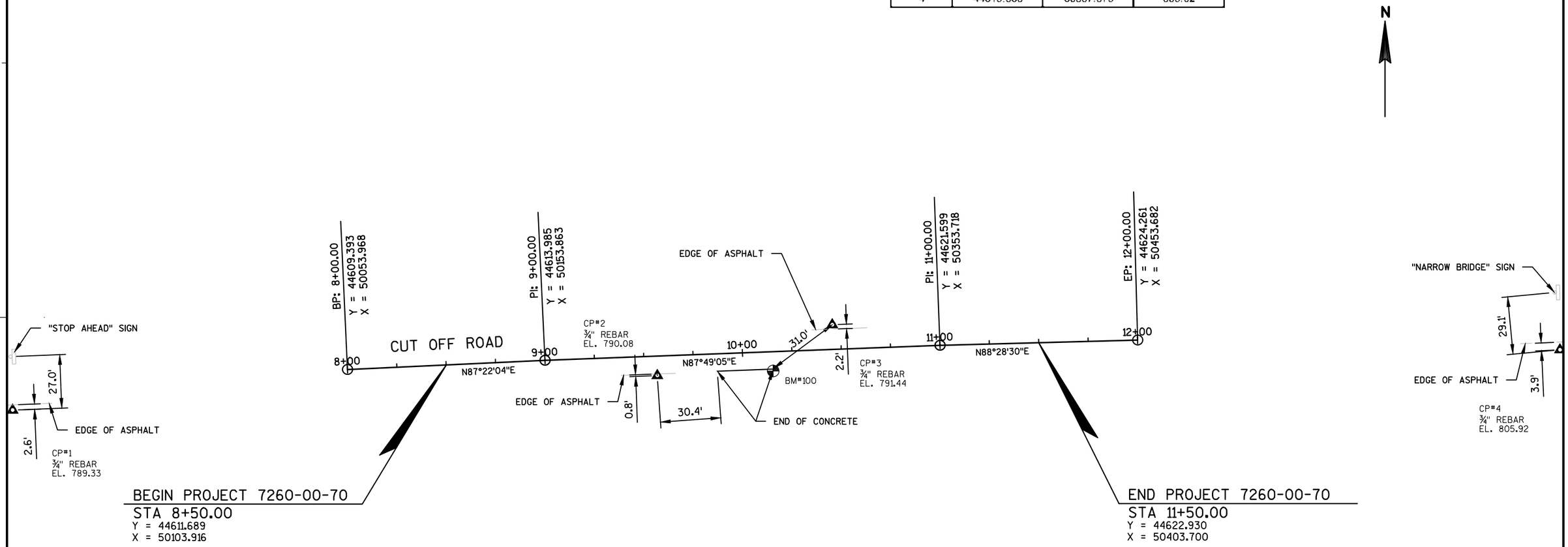
PROJECT NO: 7260-00-70	HWY: CUT OFF ROAD	COUNTY: JACKSON	CONSTRUCTION DETAILS	SHEET 5	E

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
100	10+15	PAINTED CONCRETE RAILING SE CORNER OF BRIDGE	792.58

CONTROL POINTS

POINT NUMBER	(Y)	(X)	POINT ELEVATION
1	44588.823	49884.543	789.33
2	44606.324	50210.695	790.08
3	44632.037	50299.193	791.44
4	44619.363	50667.375	805.92



PROJECT NO: 7260-00-70	HWY: CUT OFF ROAD	COUNTY: JACKSON	ALIGNMENTS	SHEET 6	E

DATE 01APR14 — 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	7260-00-70 QUANTITY
0010	201.0105	CLEARING	STA	4.000	4.000
0020	201.0205	GRUBBING	STA	4.000	4.000
0030	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. 10+03.70	LS	1.000	1.000
0040	205.0100	EXCAVATION COMMON	CY	306.000	306.000
0050	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-27-159	LS	1.000	1.000
0060	210.0100	BACKFILL STRUCTURE	CY	160.000	160.000
0070	213.0100	FINISHING ROADWAY (PROJECT) 01. 7260-00-70	EACH	1.000	1.000
0080	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	25.000	25.000
0090	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	430.000	430.000
0100	455.0605	TACK COAT	GAL	20.000	20.000
0110	465.0105	ASPHALTIC SURFACE	TON	140.000	140.000
0120	502.0100	CONCRETE MASONRY BRIDGES	CY	140.000	140.000
0130	502.3200	PROTECTIVE SURFACE TREATMENT	SY	147.000	147.000
0140	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	3,710.000	3,710.000
0150	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	17,250.000	17,250.000
0160	513.4060	RAILING TUBULAR TYPE M (STRUCTURE) 01. B-27-159	LS	1.000	1.000
0170	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18.000	18.000
0180	550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	425.000	425.000
0190	606.0300	RIPRAP HEAVY	CY	125.000	125.000
0200	612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	50.000	50.000
0210	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	88.000	88.000
0220	619.1000	MOBILIZATION	EACH	1.000	1.000
0230	625.0500	SALVAGED TOPSOIL	SY	940.000	940.000
0240	627.0200	MULCHING	SY	860.000	860.000
0250	628.1504	SILT FENCE	LF	500.000	500.000
0260	628.1520	SILT FENCE MAINTENANCE	LF	1,000.000	1,000.000
0270	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	3.000	3.000
0280	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0290	628.2004	EROSION MAT CLASS I TYPE B	SY	90.000	90.000
0300	628.7504	TEMPORARY DITCH CHECKS	LF	50.000	50.000
0310	629.0210	FERTILIZER TYPE B	CWT	0.600	0.600
0320	630.0120	SEEDING MIXTURE NO. 20	LB	25.000	25.000
0330	630.0200	SEEDING TEMPORARY	LB	25.000	25.000
0340	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	4.000	4.000
0350	637.2230	SIGNS TYPE II REFLECTIVE F	SF	12.000	12.000
0360	638.2602	REMOVING SIGNS TYPE II	EACH	4.000	4.000
0370	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	4.000	4.000
0380	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0390	643.0100	TRAFFIC CONTROL (PROJECT) 01. 7260-00-70	EACH	1.000	1.000
0400	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	980.000	980.000
0410	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	1,400.000	1,400.000
0420	643.0900	TRAFFIC CONTROL SIGNS	DAY	630.000	630.000
0430	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	260.000	260.000
0440	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	262.000	262.000
0450	650.5000	CONSTRUCTION STAKING BASE	LF	262.000	262.000
0460	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-27-159	LS	1.000	1.000
0470	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 7260-00-70	LS	1.000	1.000

3

DATE 01APR14 — 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	7260-00-70 QUANTITY
0480	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	262.000	262.000

0490	690.0150	SAWING ASPHALT	LF	40.000	40.000
0500	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	960.000	960.000
0510	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	HRS	1,200.000	1,200.000
0520	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	300.000	300.000

3

3

3

CLEARING AND GRUBBING

STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
8+00	-	12+00	CUT OFF RD	4	4
			TOTAL	**4**	**4**

EARTHWORK SUMMARY

FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION CUT (1)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL (2)	UNEXPANDED FILL	EXPANDED FILL (FACTOR 1.25)	MASS ORDINATE +/- (3)	WASTE
8+50 - 11+50	CUT OFF RD	306	47	259	30	38	+222	222
TOTAL COMMON EX		**306**						

(1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED
(2) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
(3) THE MASS ORDINATE + OR - QUANTITY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AS EXCESS OF MATERIAL WITHIN THE DIVISION, MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

BASE AGGREGATE DENSE

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4 INCH TON	305.0120 BASE AGGREGATE DENSE 1-1/4 INCH TON
8+50	-	9+80	CUT OFF RD	13	205
10+25	-	11+50	CUT OFF RD	12	225
			TOTAL	**25**	**430**

ASPHALT SUMMARY

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
8+50	-	9+80	CUT OFF RD	10	65
10+25	-	11+50	CUT OFF RD	10	75
			TOTAL	**20**	**140**

MOBILIZATION

CATEGORY	STATION	TO	STATION	LOCATION	619.1000 MOBILIZATION EACH
0010	PROJECT			CUT OFF RD	0.26
0020	PROJECT			CUT OFF RD	0.74
				TOTAL	**1.00**

LANDSCAPING ITEMS

STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	628.2004 EROSION MAT CLASS I TYPE B SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB
8+50	-	9+90	CUT OFF RD, LT	300	-	310	0.2	8	8
8+50	-	9+64	CUT OFF RD, RT	220	90	130	0.1	6	6
10+20	-	11+50	CUT OFF RD, LT	190	-	190	0.1	5	5
10+15	-	11+50	CUT OFF RD, RT	230	-	230	0.1	6	6
			TOTAL	**940**	**90**	**860**	**0.6**	**25**	**25**

NOTE: ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED AS 0020.

3

SILT FENCE

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
8+50	-	10+10	CUT OFF RD	230	460
10+00	-	11+50	CUT OFF RD	210	420
10+90	-	11+50	CUT OFF RD, RT	60	120
			TOTAL	**500**	**1,000**

EROSION CONTROL SUMMARY

STATION	TO	STATION	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7504 TEMPORARY DITCH CHECKS LF
8+75	-	9+75	CUT OFF RD, LT	-	-	40
10+25	-	10+30	CUT OFF RD, RT	-	-	10
8+50	-	11+50	CUT OFF RD	3	2	-
			TOTAL	**3**	**2**	**50**

3

SIGNING

STATION	LOCATION	634.0614 POSTS WOOD 4x6-INCH x 14-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
10+04	BRIDGE CORNERS	-	-	4	4	
9+75	CUT OFF RD, RT	1	3	-	-	W5-52R
9+85	CUT OFF RD, LT	1	3	-	-	W5-52L
10+25	CUT OFF RD, RT	1	3	-	-	W5-52L
10+25	CUT OFF RD, LT	1	3	-	-	W5-52R
	TOTAL	**4**	**12**	**4**	**4**	

TRAFFIC CONTROL ITEMS

LOCATION	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	643.0900 TRAFFIC CONTROL SIGNS DAYS
WEST OF BRIDGE	490	700	280
EAST OF BRIDGE	490	700	350
TOTAL	**980**	**1,400**	**630**

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.6500 STRUCTURE LAYOUT (STRUCTURE) LS	650.9920 SLOPE STAKES LF
0010	8+50	-	9+85	CUT OFF RD	135	135	-	135
0020		10+04		STRUCTURE B-27-159	-	-	1	-
0010	10+23	-	11+50	CUT OFF RD	127	127	-	127
				TOTAL	**262**	**262**	**1**	**262**

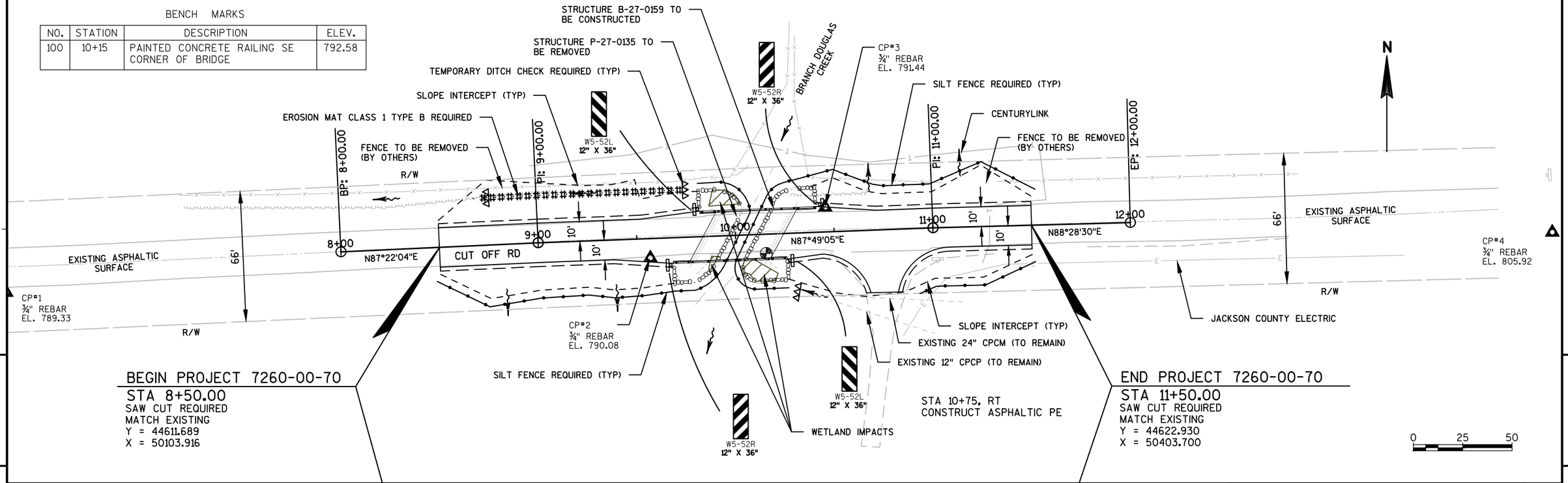
SAWING ASPHALT

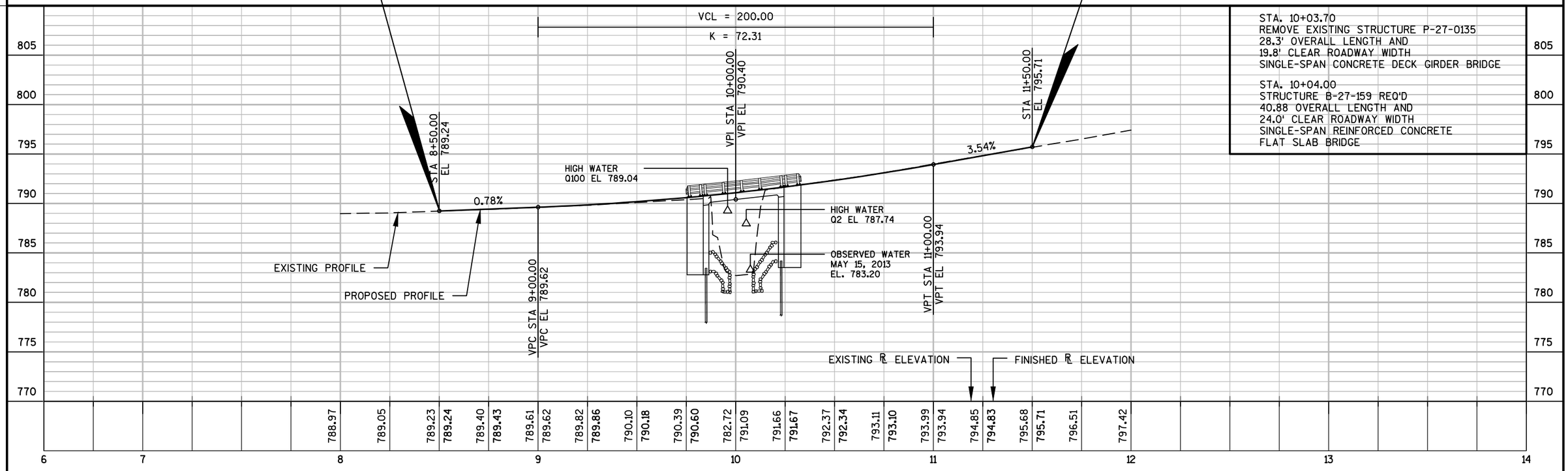
STATION	LOCATION	690.0150 SAWING ASPHALT LF
8+50	CUT OFF RD	20
11+50	CUT OFF RD	20
	TOTAL	**40**

NOTE: ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED AS 0020.

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
100	10+15	PAINTED CONCRETE RAILING SE CORNER OF BRIDGE	792.58





PROJECT NO: 7260-00-70	HWY: CUT OFF ROAD	COUNTY: JACKSON	PLAN AND PROFILE: CUT OFF ROAD	SHEET 11	E

FILE NAME : X:\3223700\122246.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\050101_PP.DWG PLOT DATE : 1/20/2014 8:00 AM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1:50_XREF

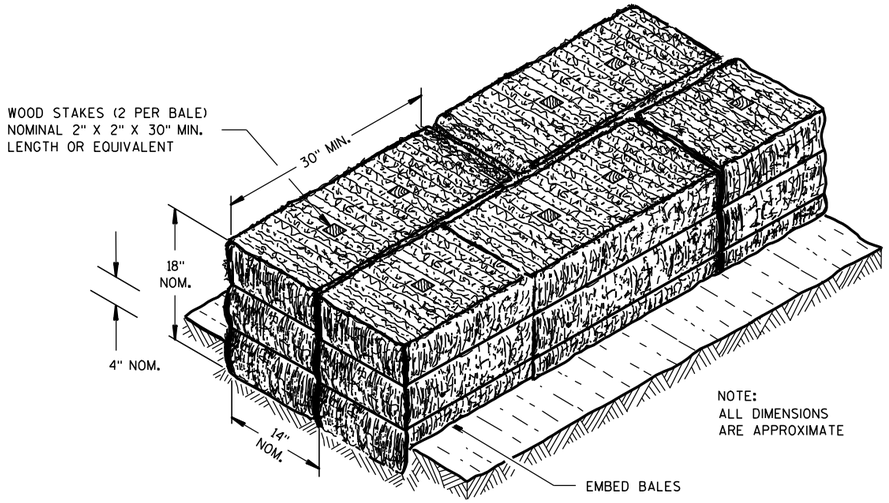
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

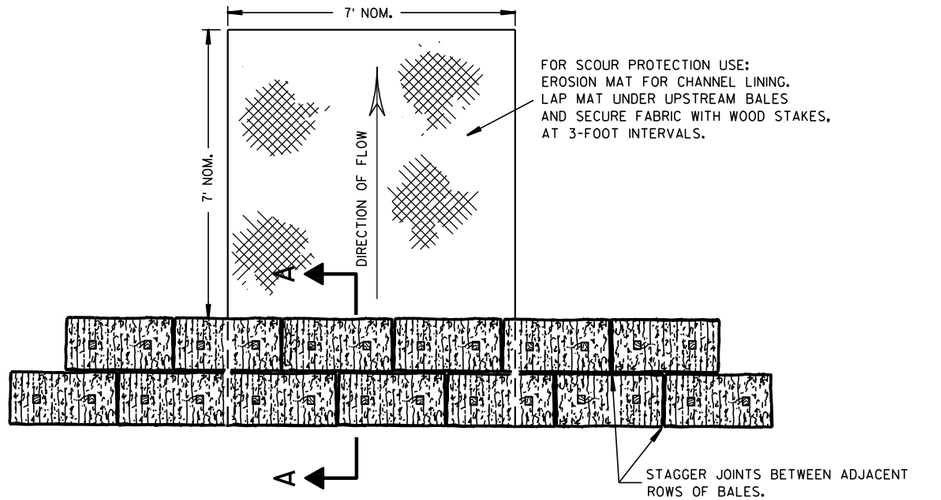
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-06	SIGNING & MARKING FOR TWO LANE BRIDGES

6

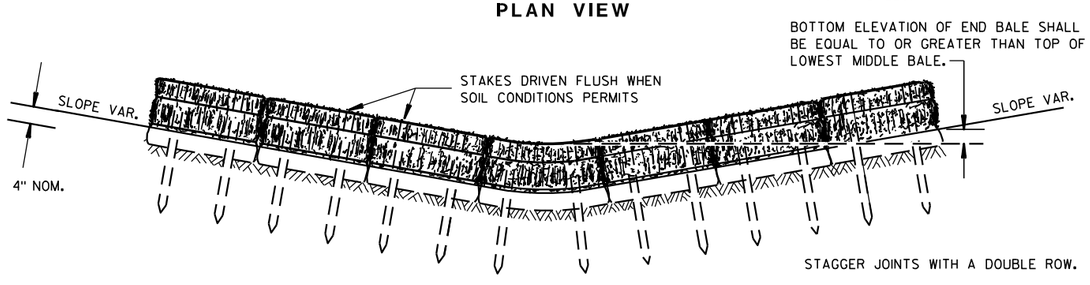
6



SECTION A-A



PLAN VIEW



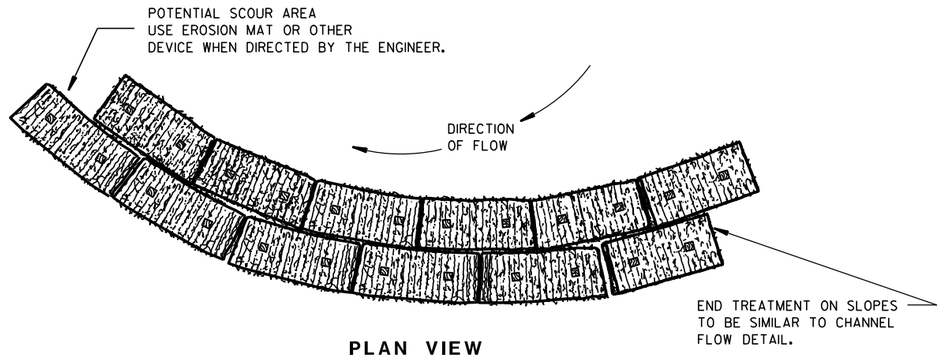
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

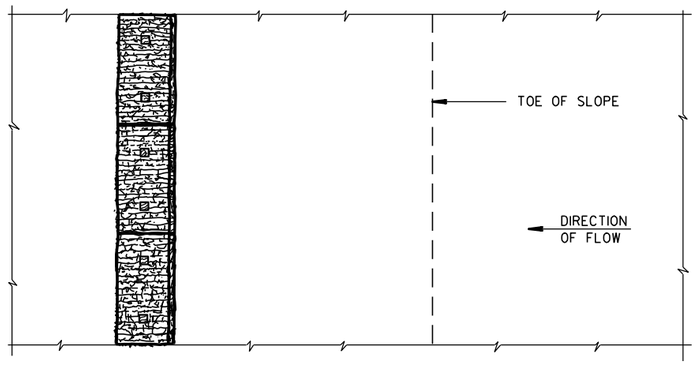
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

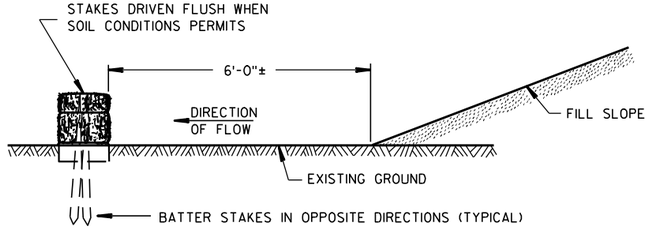


PLAN VIEW

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

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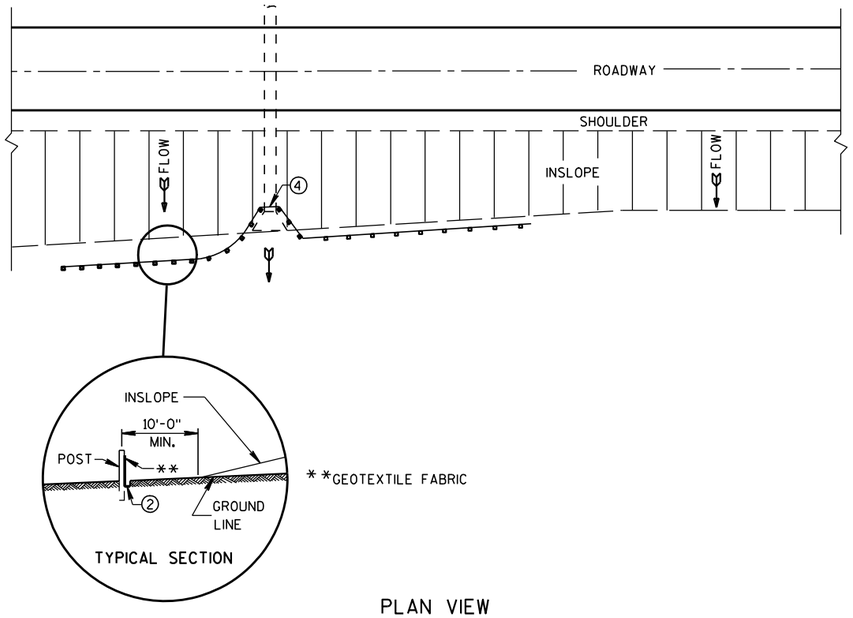
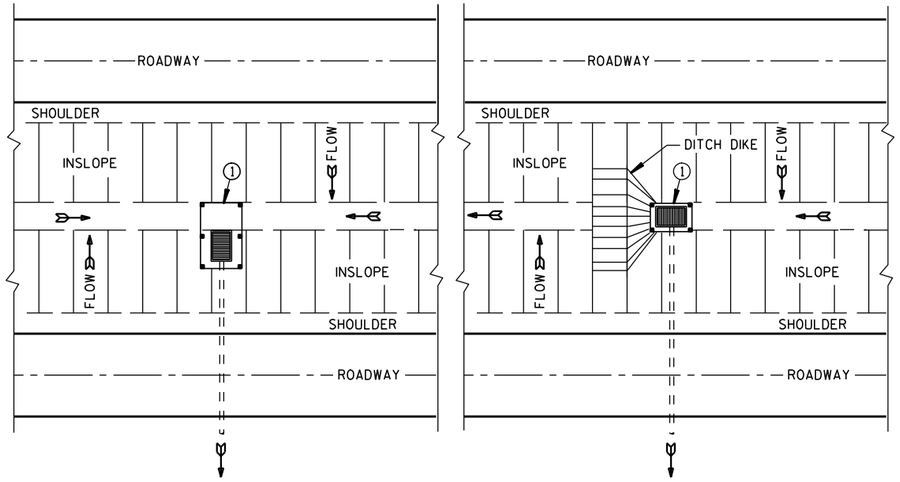
S.D.D. 8 E 8-3



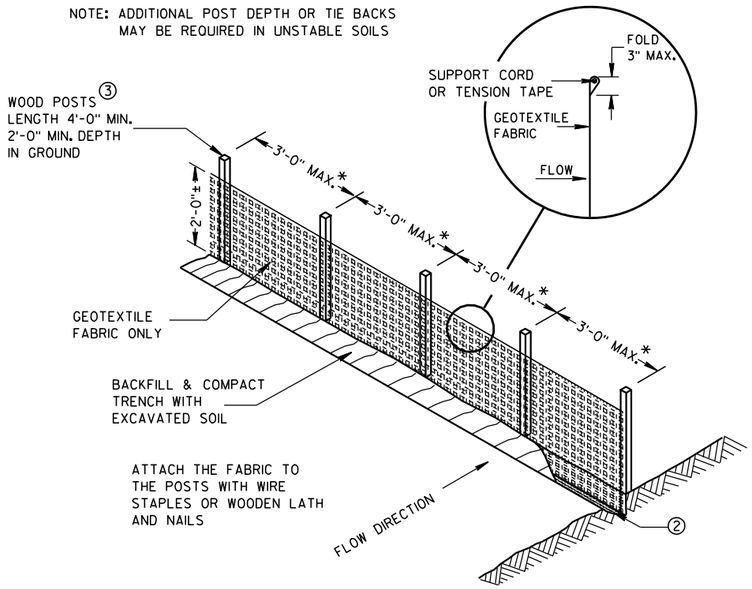
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



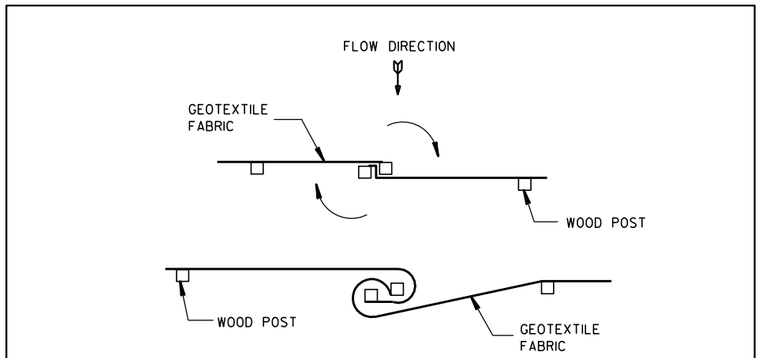
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



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

SILT FENCE

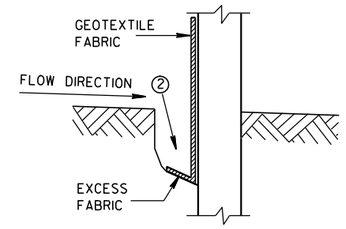


JOINING TWO LENGTHS OF SILT FENCE 5

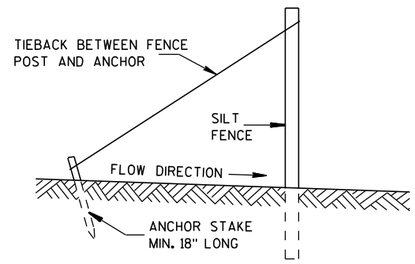
GENERAL NOTES

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 TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

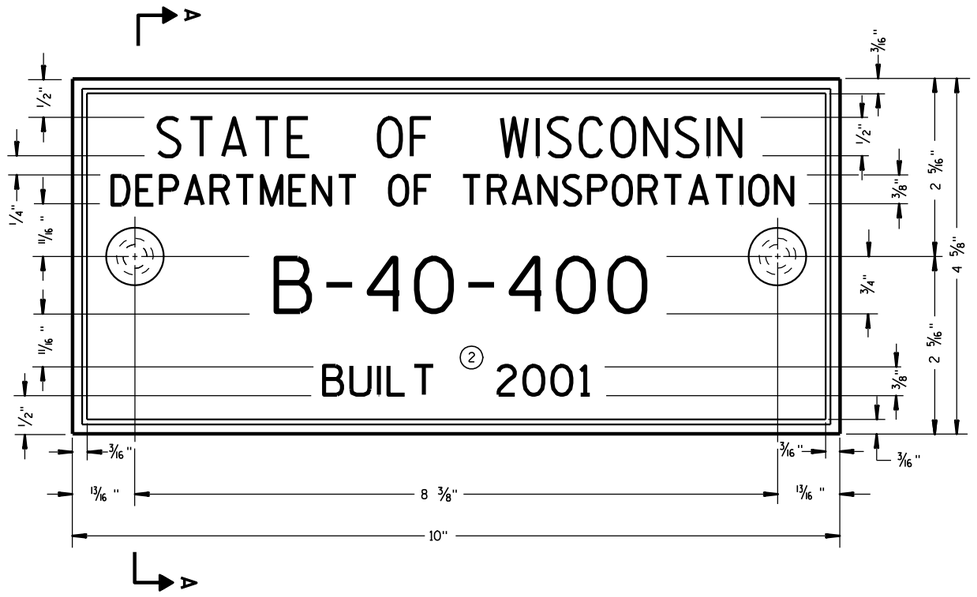
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

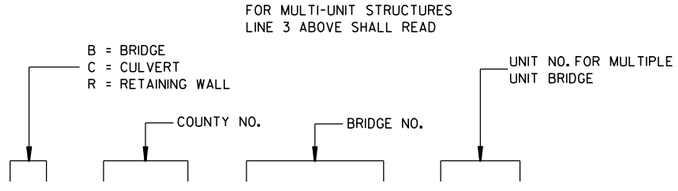
S.D.D. 8 E 9-6

S.D.D. 8 E 9-6



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

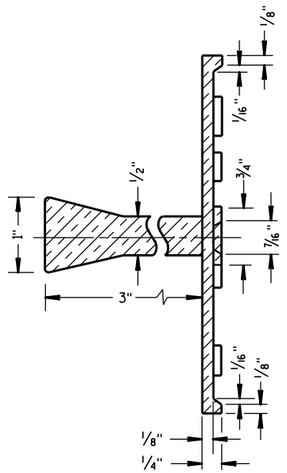
GENERAL NOTES

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

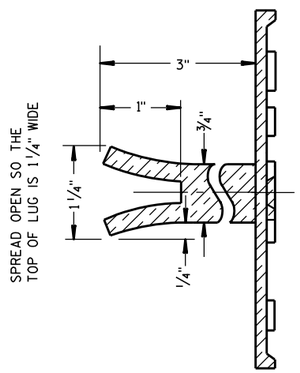
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

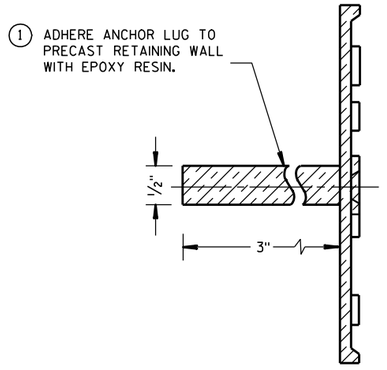
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER
FHWA	

6

S.D.D. 12 A 3-10

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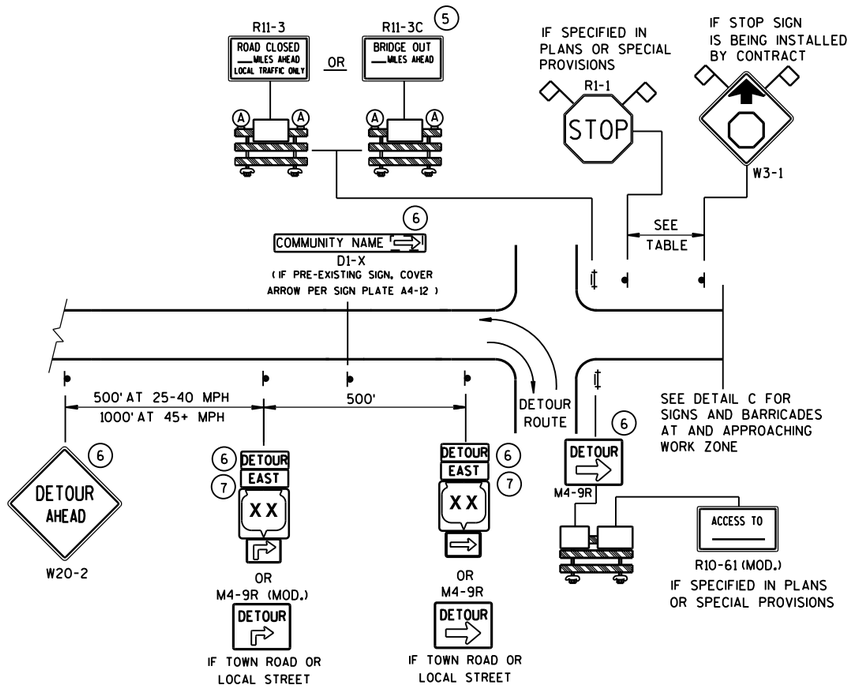
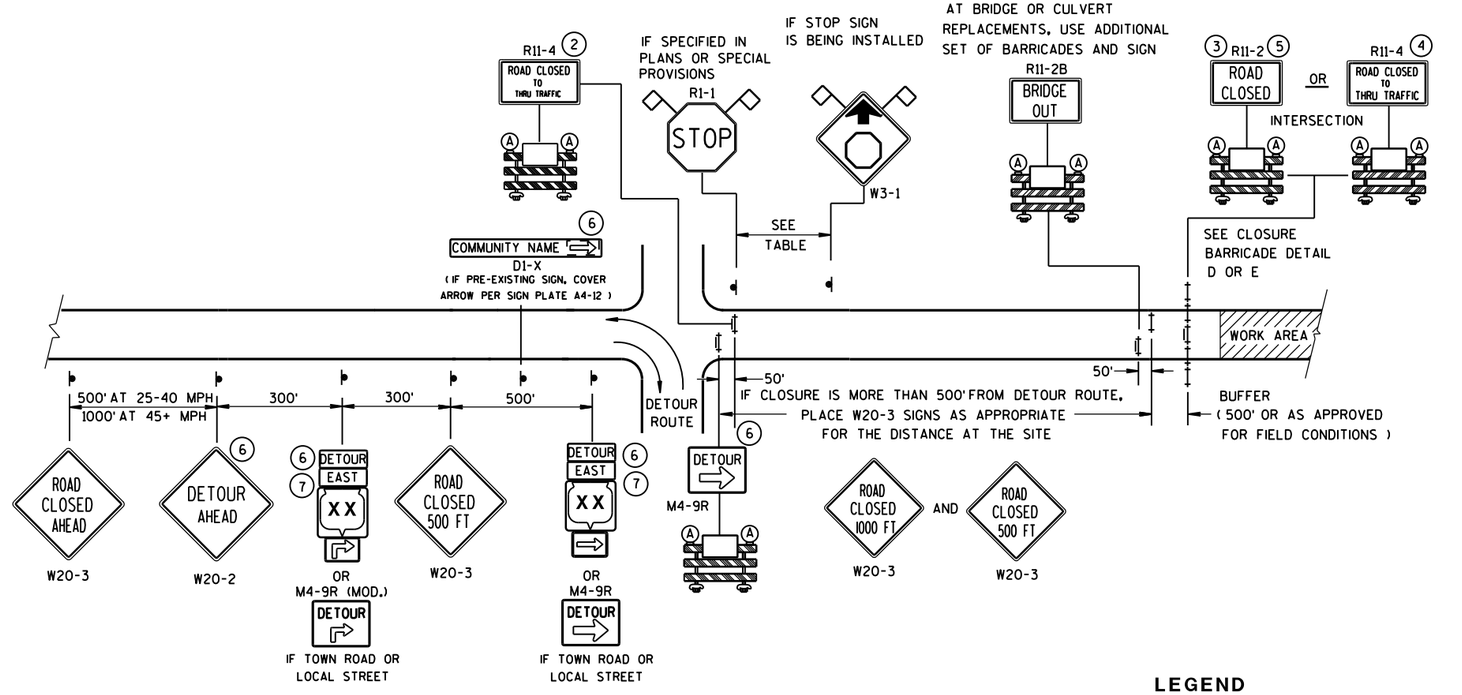
S.D.D. 12 A 3-10



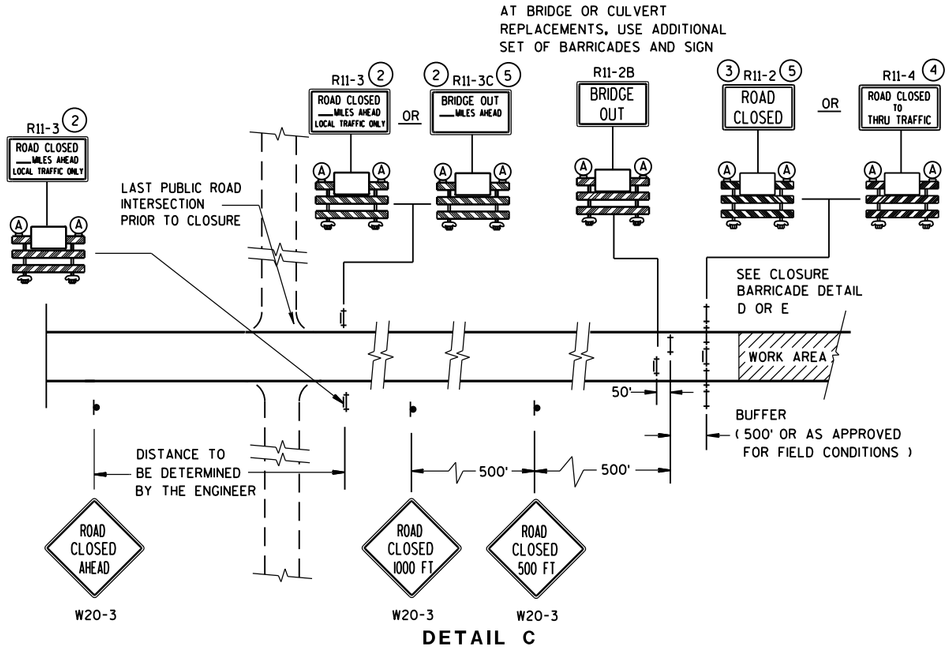
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

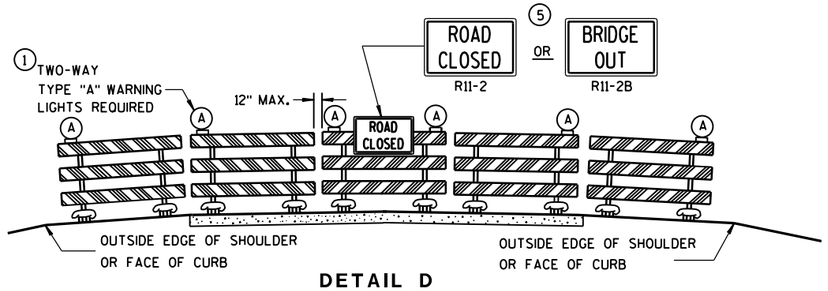
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

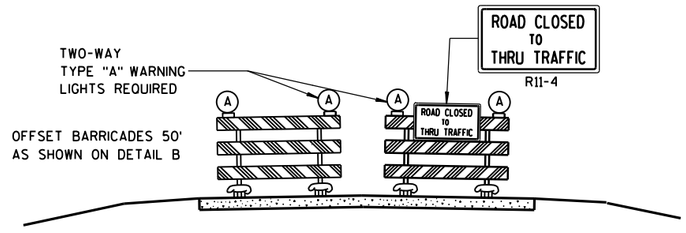
S.D.D. 15 C 2-5a



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.

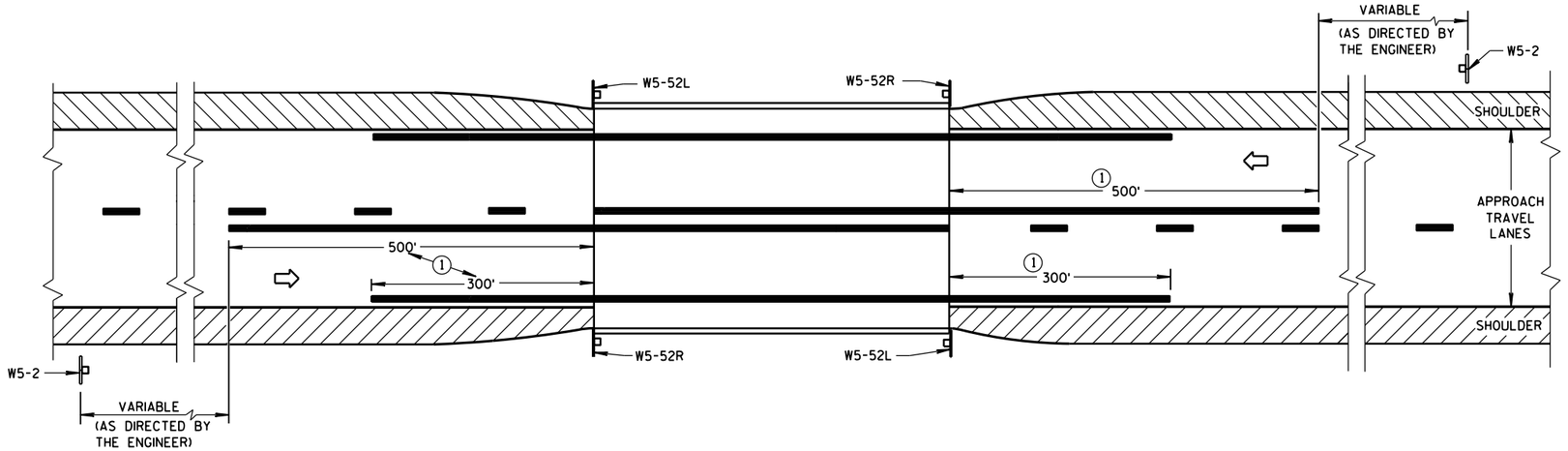
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

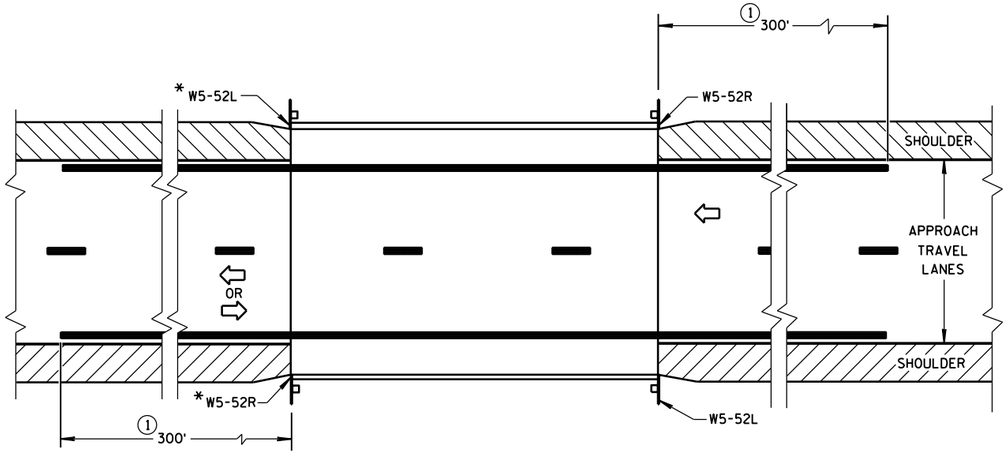
S.D.D. 15 C 2-5b



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

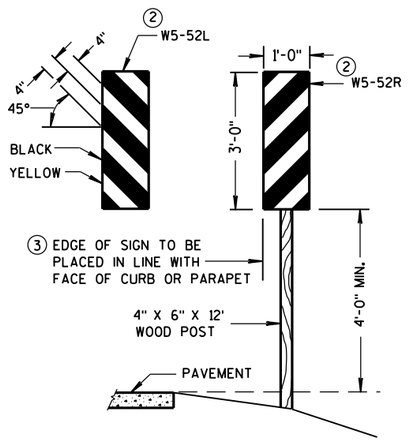
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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.

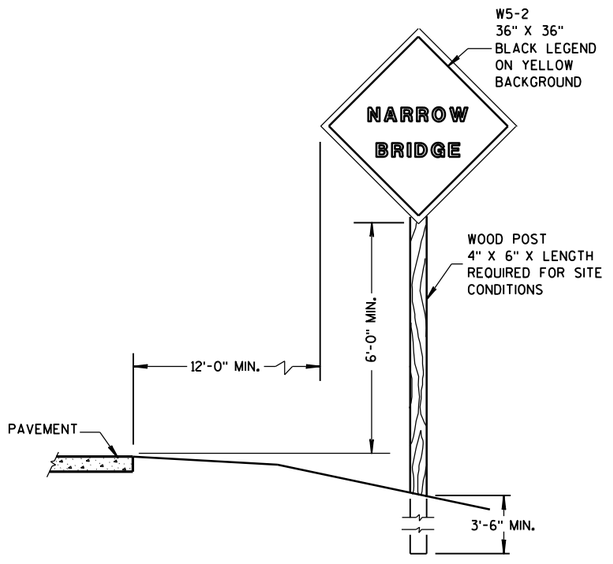
(1) MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.

(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

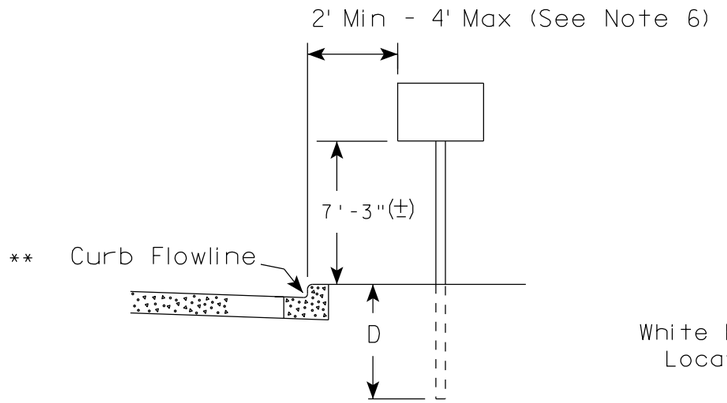
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

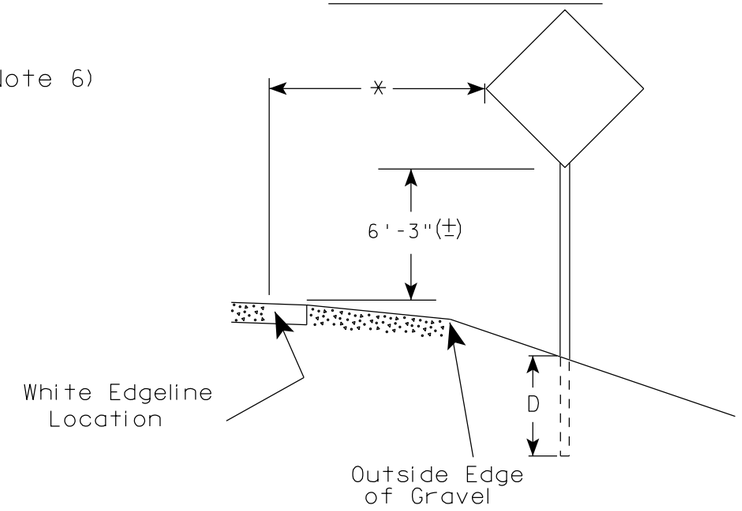
6

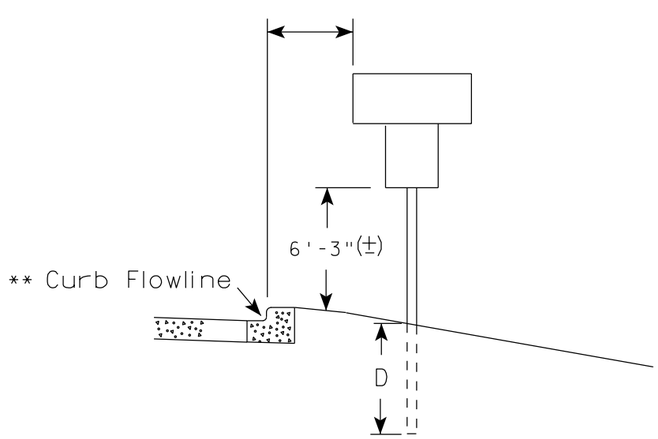
S.D.D. 15 C 6-6

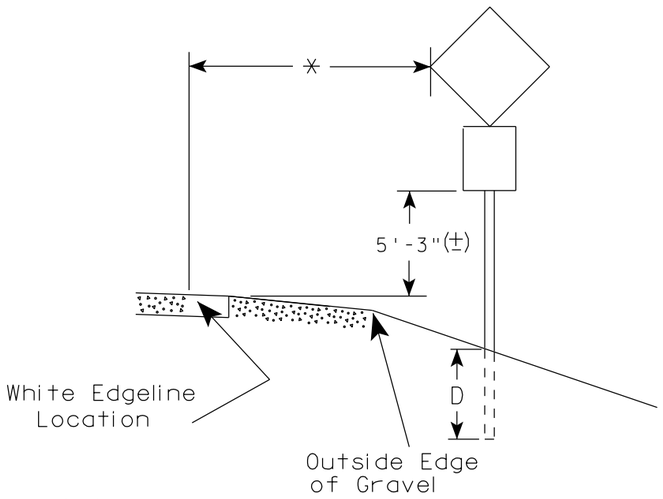
URBAN AREA



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, 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'

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

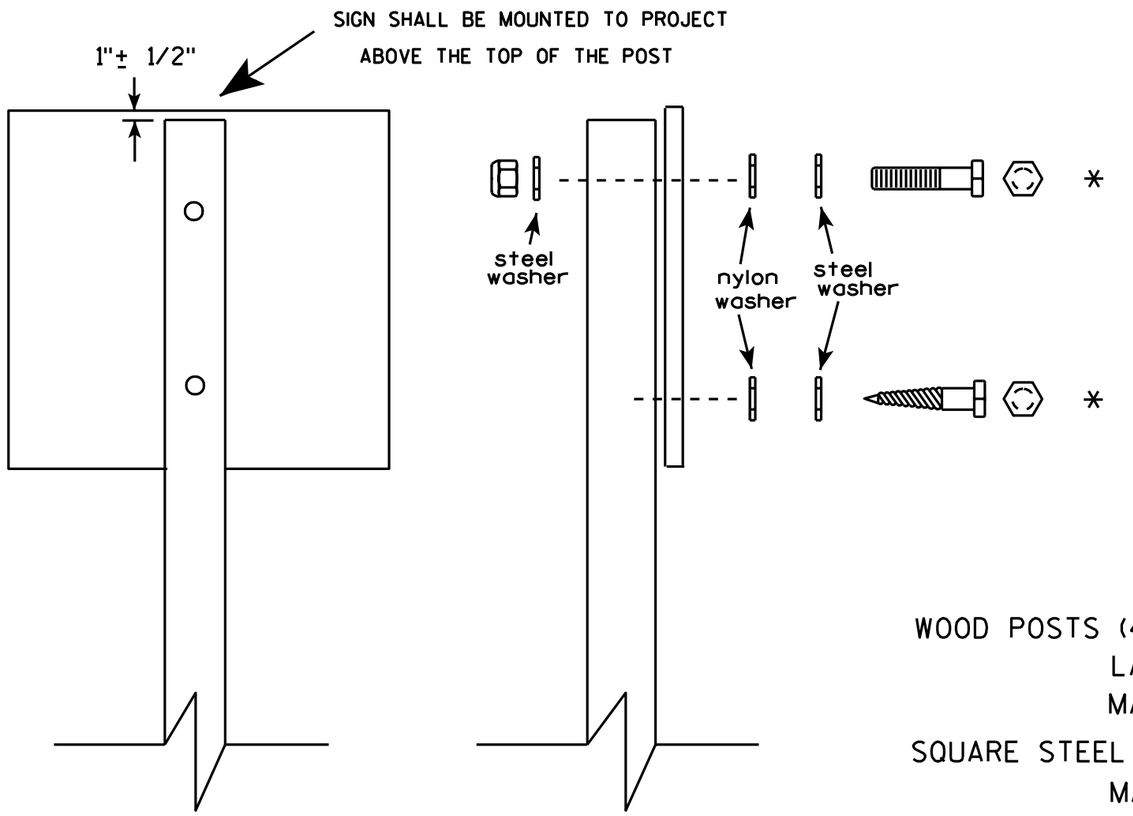
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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

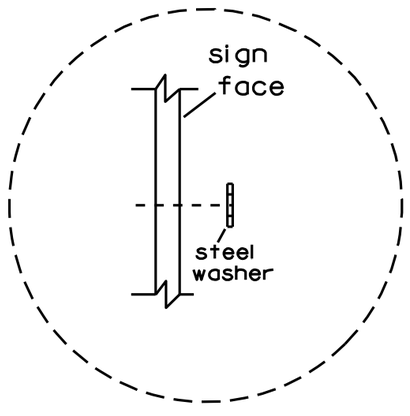
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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 - 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

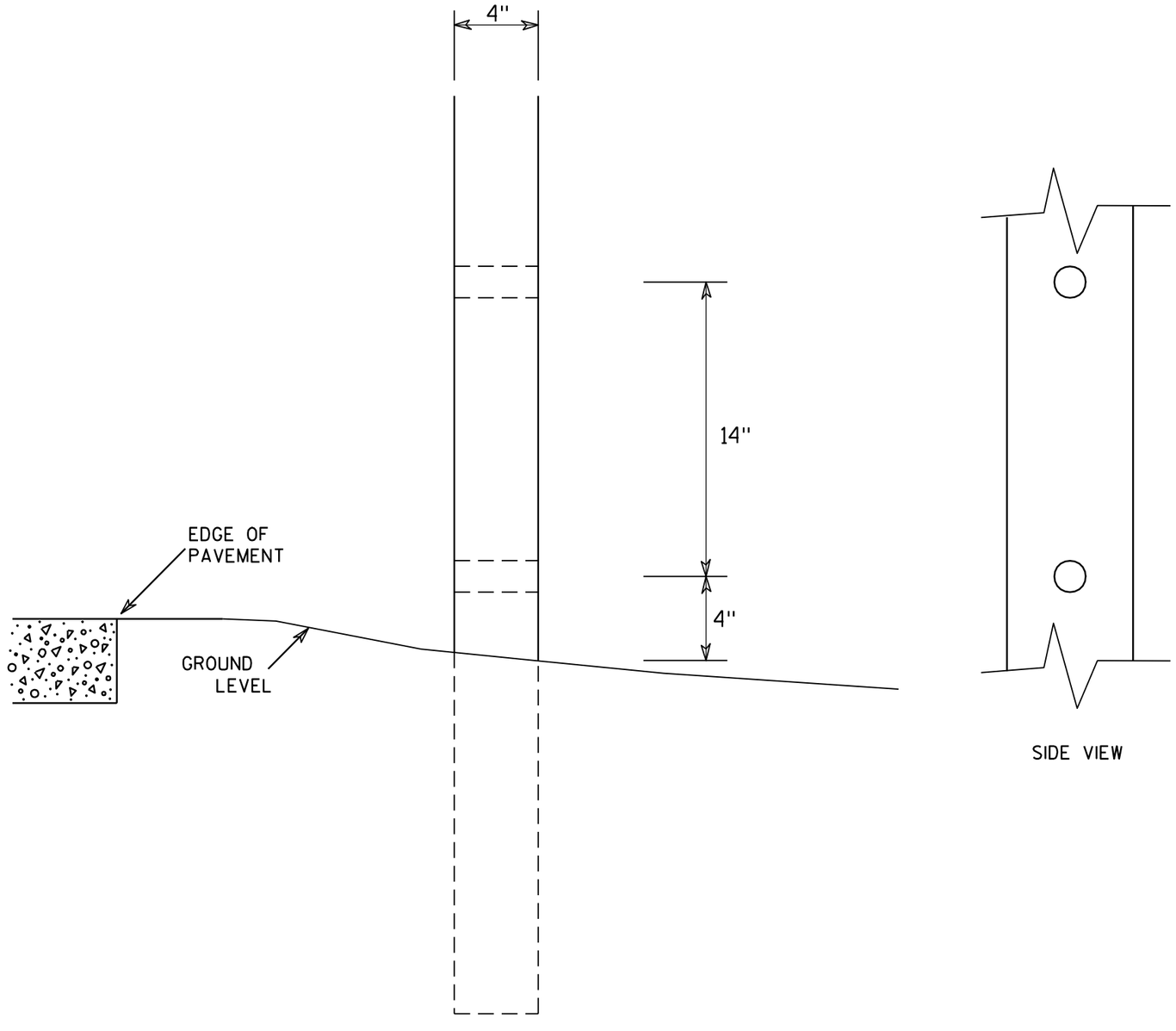
DATE 3/23/10 PLATE NO. A4-8.7

PROJECT NO:

SHEET NO: 20 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A48.DGN PLOT DATE : 23-MAR-2010 10:15 PLOT BY : ditjph

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

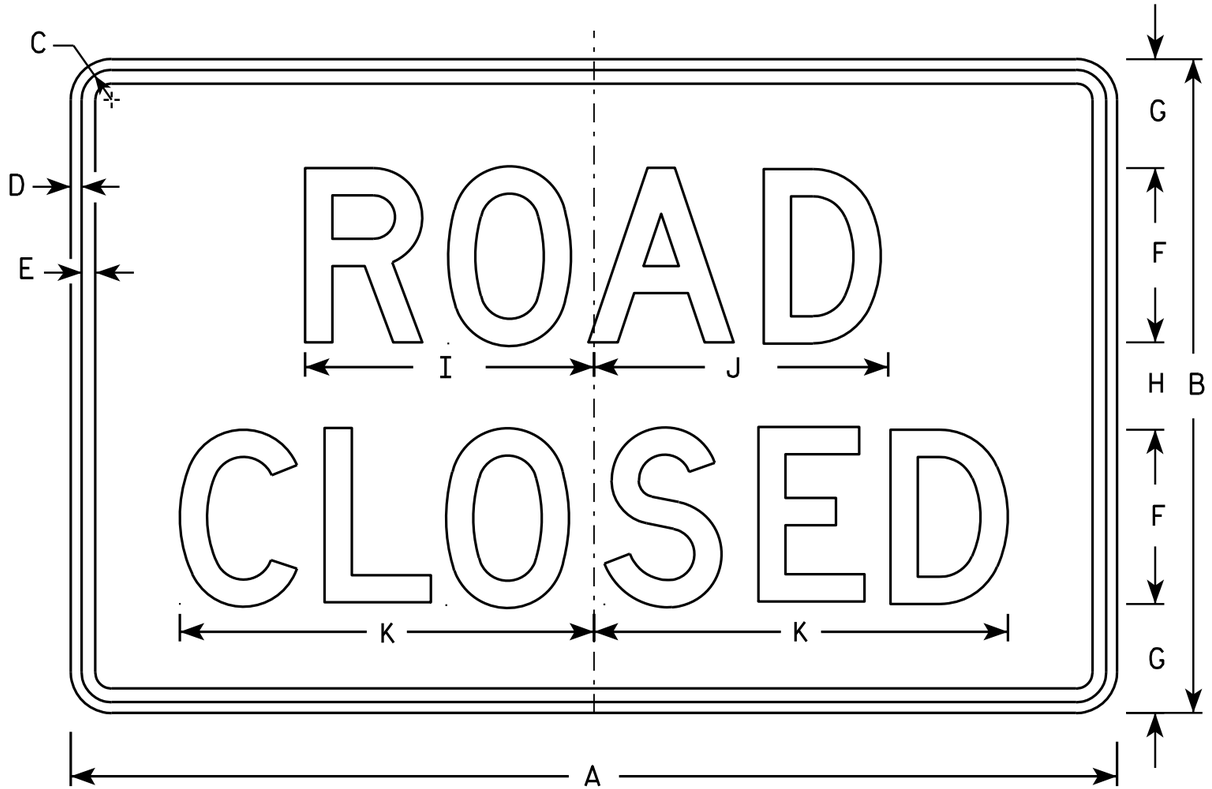
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

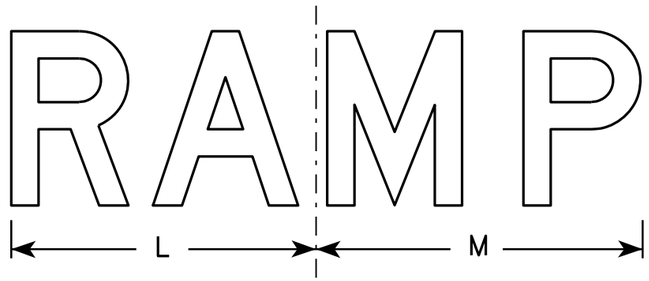
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 21	E



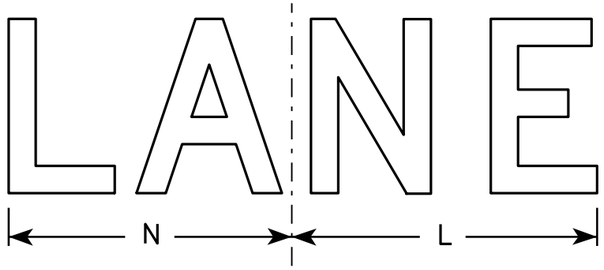
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   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.
5. Modify the message as required.



R11-2R



R11-2L

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	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

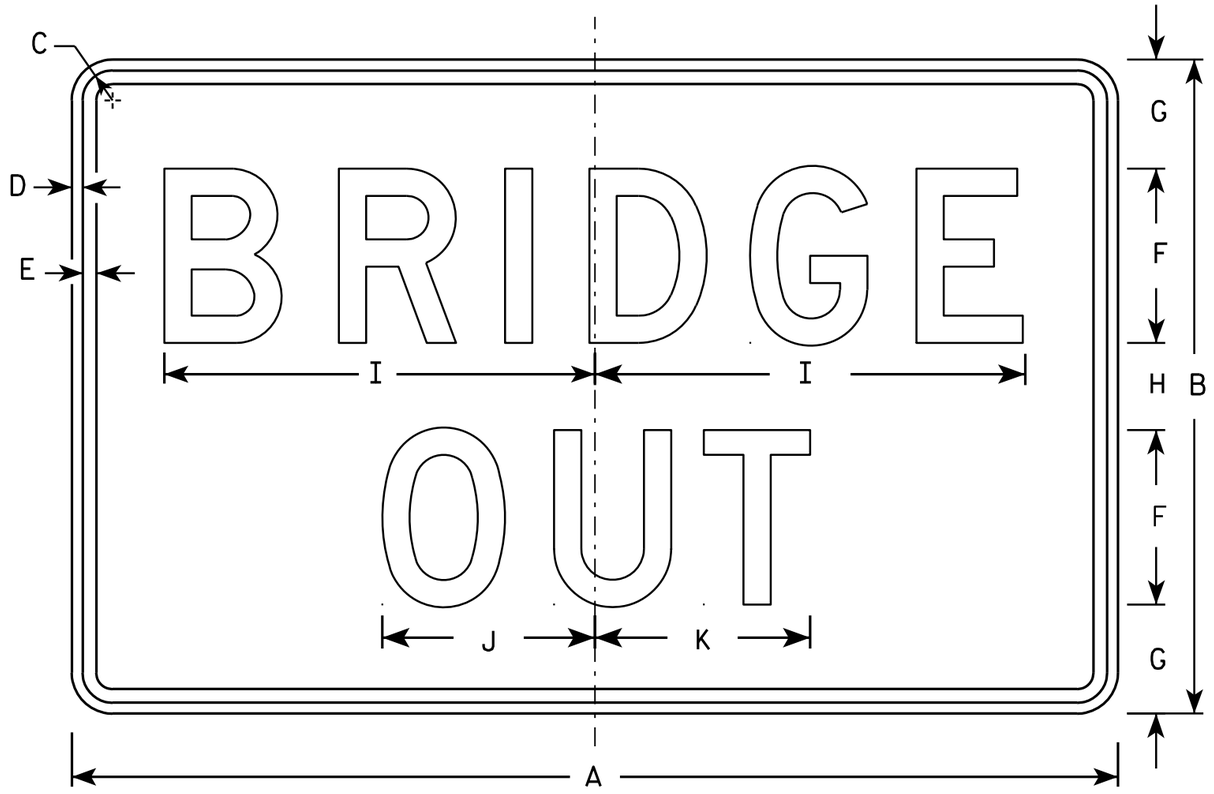
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 22	E



R11-2B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   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																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

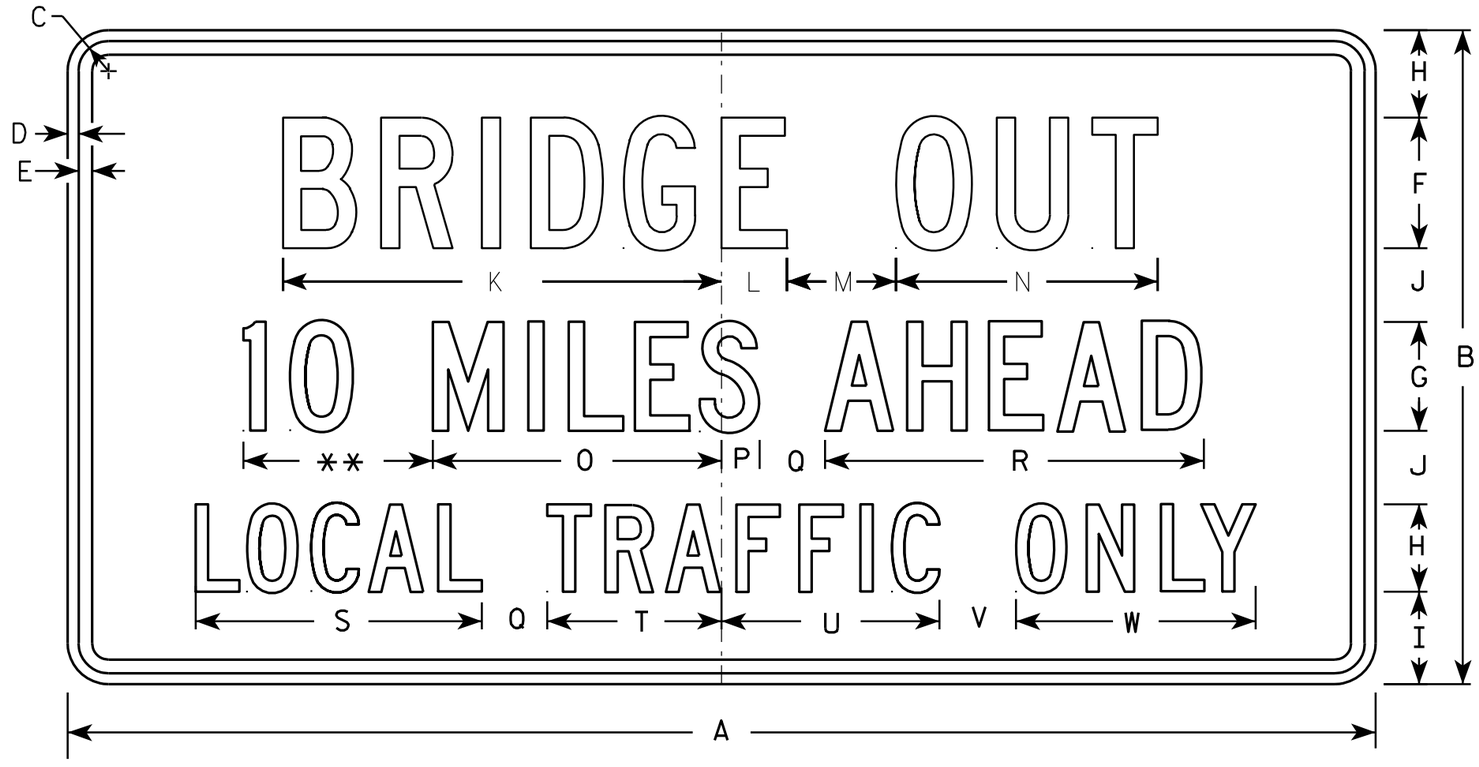
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO:

SHEET NO: 23 E



R11-3B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
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 adjust spacing to achieve proper balance.

** See Note 5

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	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4				4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
3																											
4																											
5																											

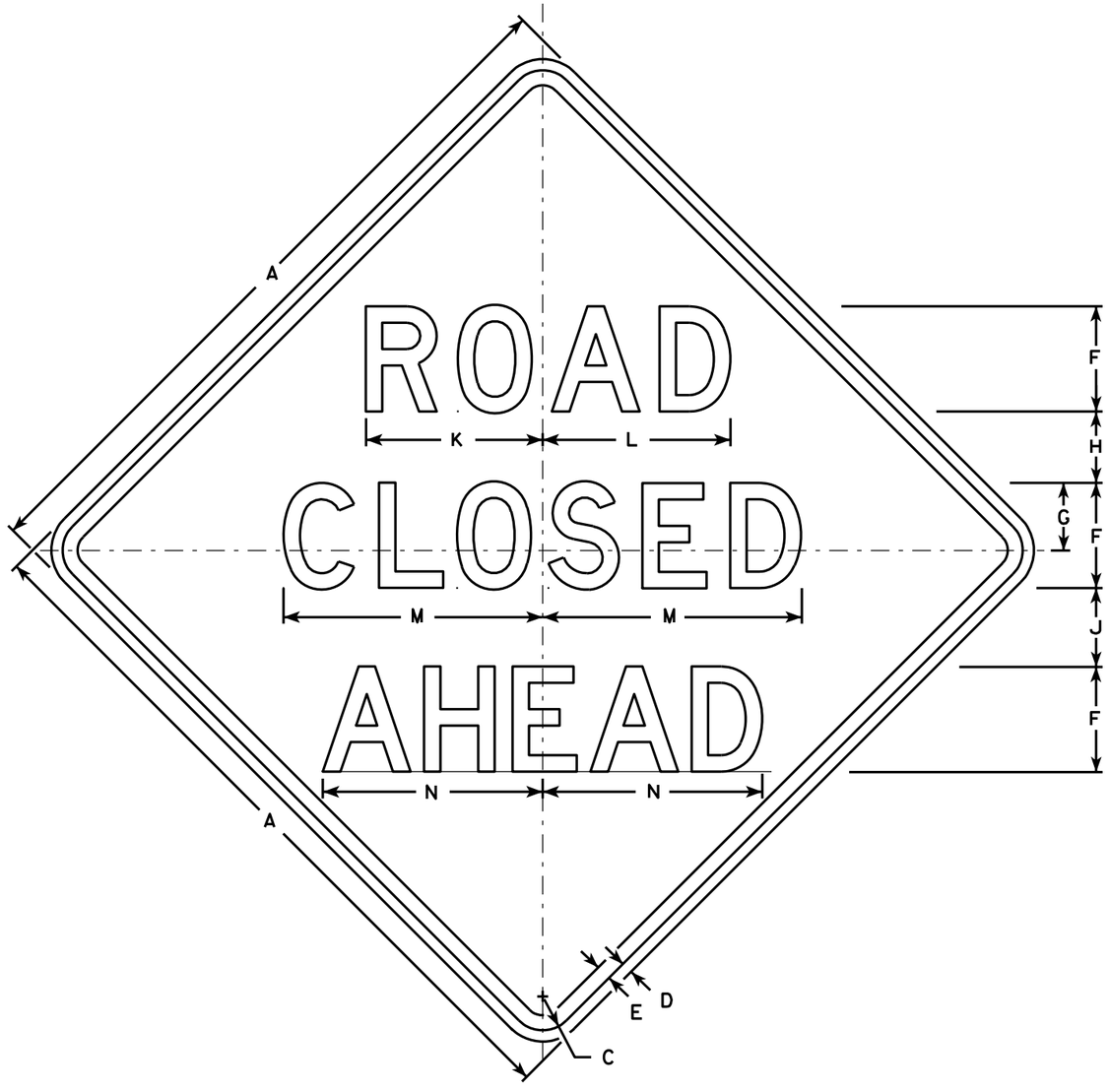
STANDARD SIGN
R11-3B

WISCONSIN DEPT OF TRANSPORTATION

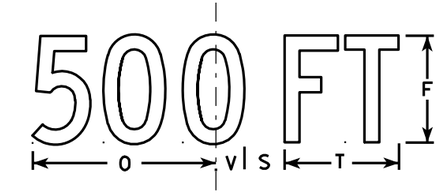
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-3B.2

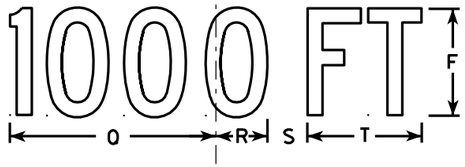
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 24 | E



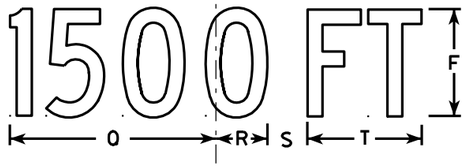
W20-3A



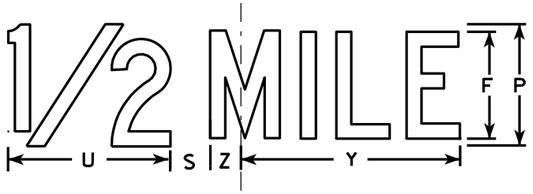
W20-3D



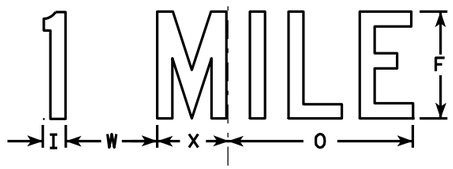
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
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. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

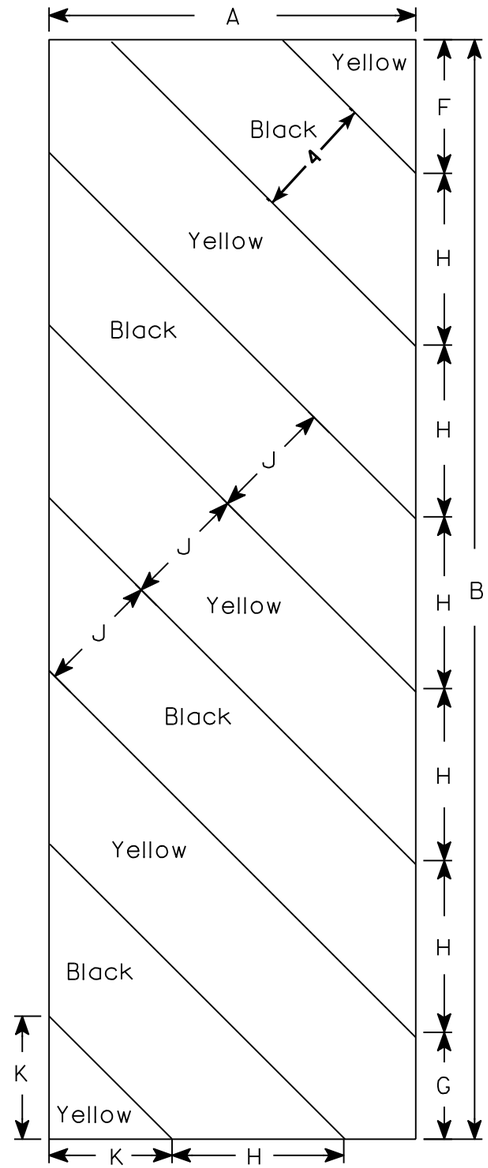
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

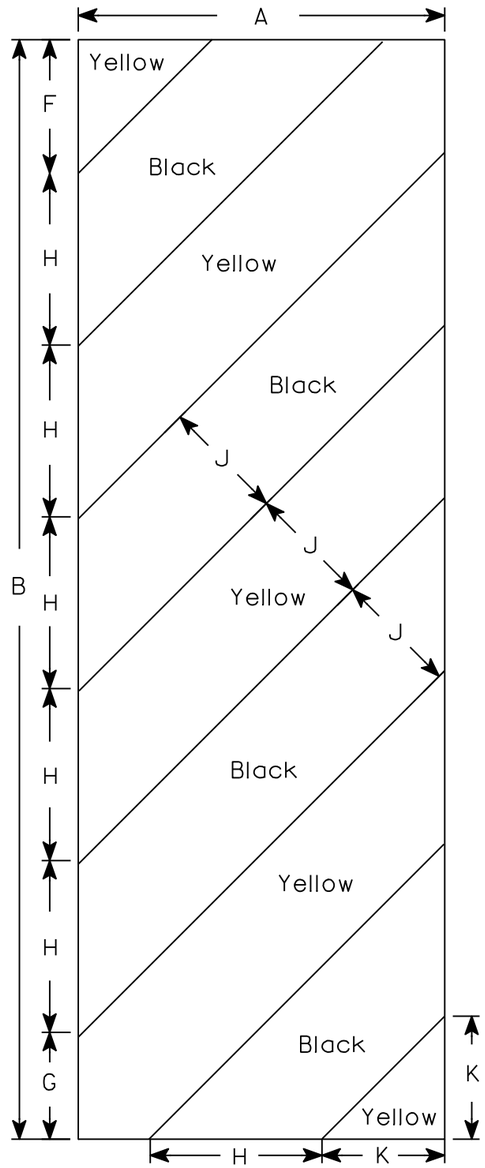
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 25 | 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

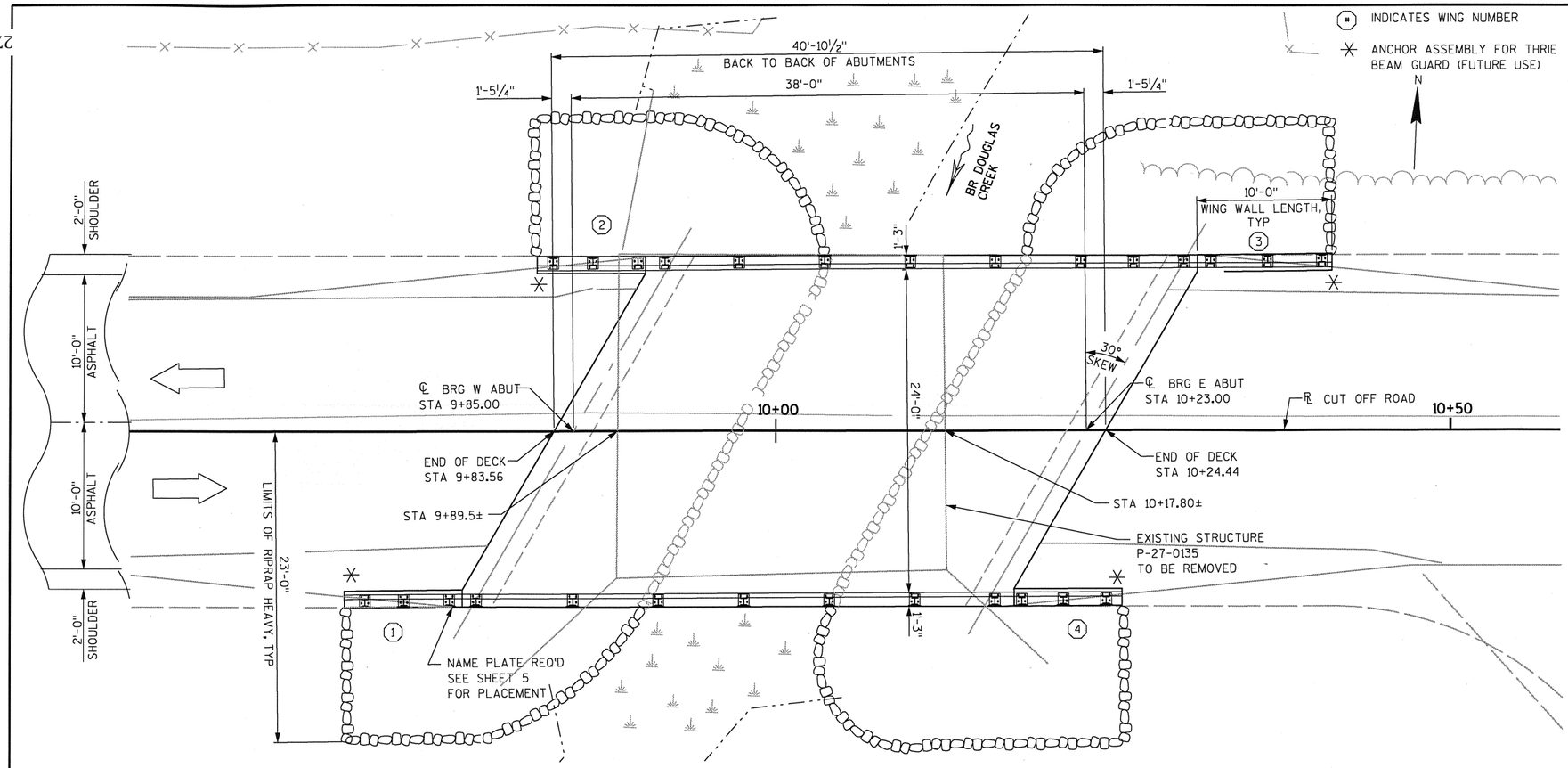
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 26 | E

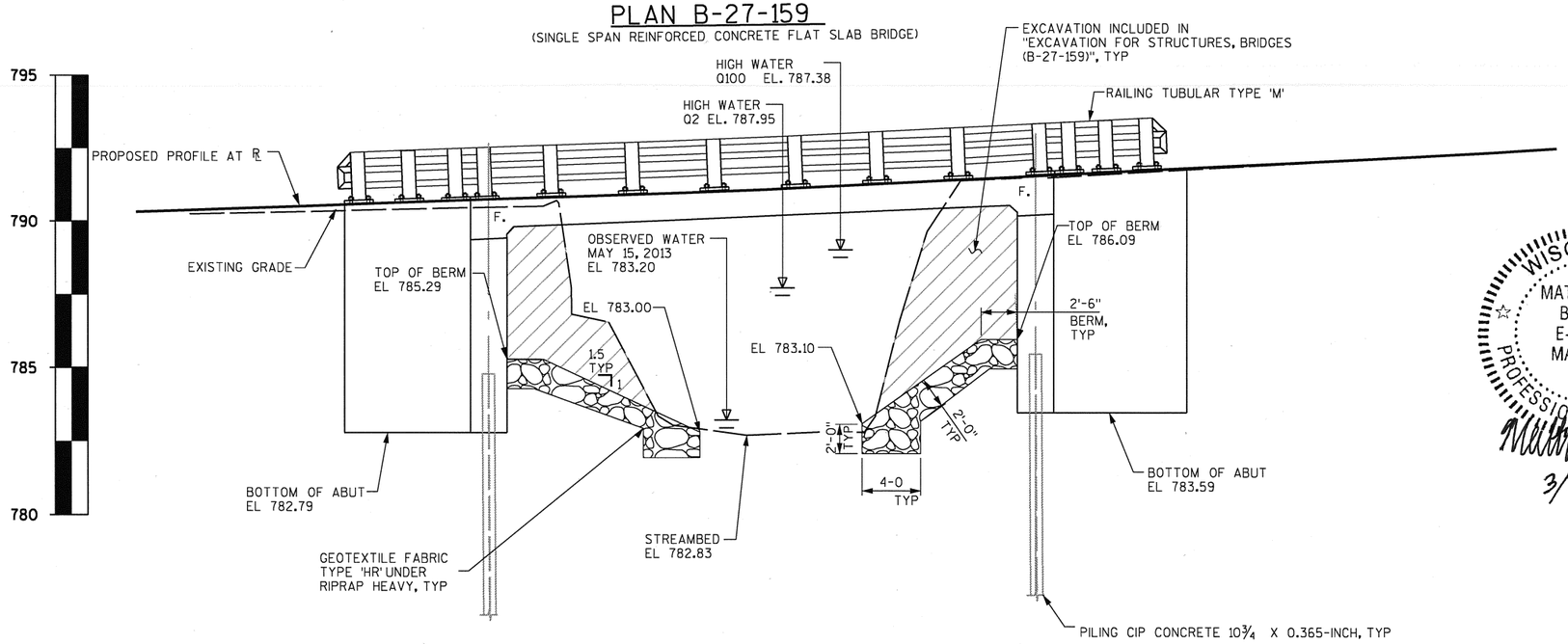
STATE PROJECT NUMBER

7260-00-70



PLAN B-27-159

(SINGLE SPAN REINFORCED CONCRETE FLAT SLAB BRIDGE)



ELEVATION

(NORMAL TO ℄ OF STREAM)

LIVE LOAD:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	1.10
OPERATING RATING FACTOR	1.43
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 ksi

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 10¾ X 0.365-INCH WITH A REQUIRED DRIVING RESISTANCE OF 120 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 40'-0" LONG AT THE WEST ABUTMENT AND 45'-0" LONG AT THE EAST ABUTMENT.

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

HYDRAULIC DATA:

100 YEAR FREQUENCY

Q_{100}	300 cfs
Q_{100} BRIDGE	300 cfs
VELOCITY	2.68 ft/s
HIGH WATER	EL. 787.38
WATERWAY AREA	112 ft²
DRAINAGE AREA	0.83 mi²
SCOUR CRITICAL CODE	8
OVER TOPPING FREQUENCY	N/A

2 YEAR FREQUENCY

Q_2	78 cfs
HIGH WATER	EL. 785.95

TRAFFIC DATA:

ADT (2014) = 35
ADT (2034) = 50
ROADWAY DESIGN SPEED = 40 mph

LIST OF DRAWINGS:

WISCONSIN
MATTHEW J. BUCKLI
E-39849
MADISON
WI
PROFESSIONAL ENGINEER

3/31/14

NO.	DATE	REVISION	BY

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 03/31/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-27-159

CUT OFF ROAD OVER BR DOUGLAS CREEK

COUNTY: JACKSON	TOWN/~~CITY/VILLAGE~~: MELROSE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

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

GENERAL PLAN

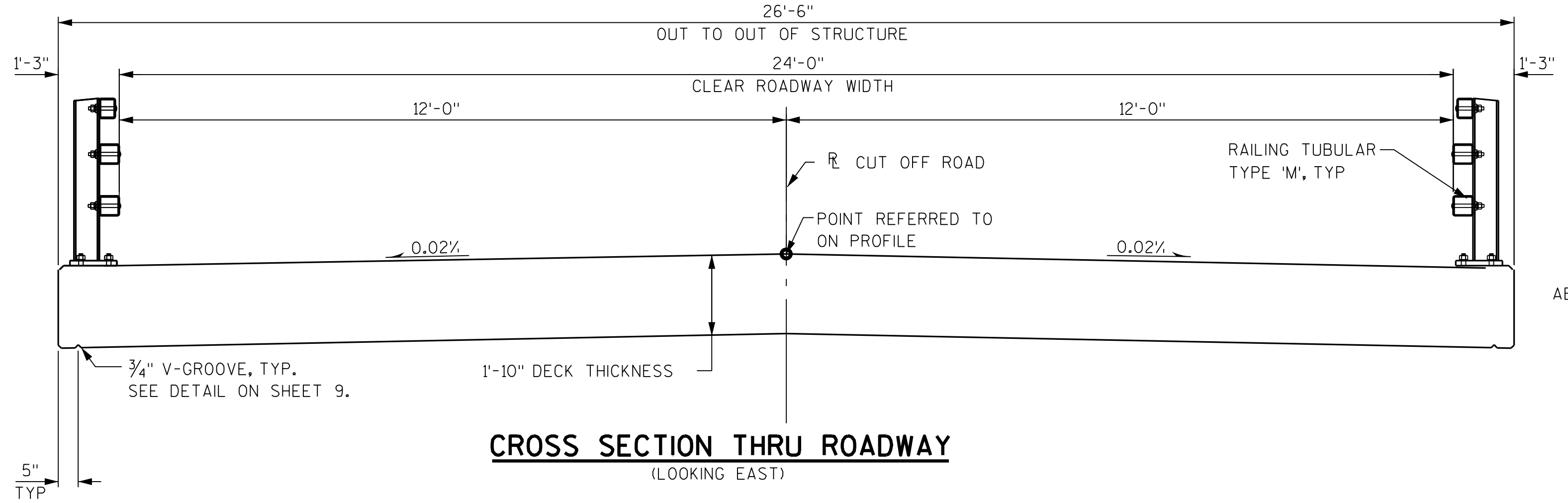
SHEET 1 OF 10

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

CONSULTANT CONTACT
MATTHEW BUCKLI, P.E.
TELEPHONE: (608) 273-6380

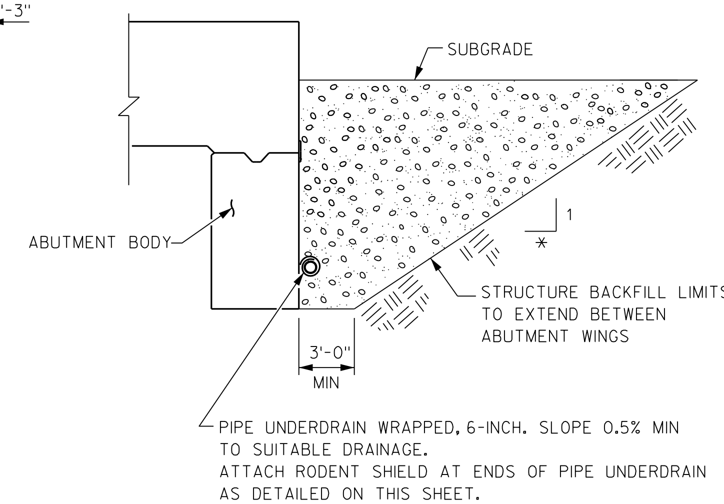
STATE PROJECT NUMBER

7260-00-70



CROSS SECTION THRU ROADWAY

(LOOKING EAST)



STRUCTURE BACKFILL & PIPE UNDERDRAIN DETAIL

(TYPICAL AT BOTH ABUTMENTS)

* OSHA SLOPE.
1.5 : 1 USED FOR STRUCTURAL BACKFILL QUANTITY CALCULATIONS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

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

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

THE EXISTING STRUCTURE, TO BE REMOVED, IS A 28.3' LONG BY 19.8' CLEAR ROADWAY WIDTH, SINGLE SPAN CONCRETE DECK GIRDER BRIDGE (P-27-135).

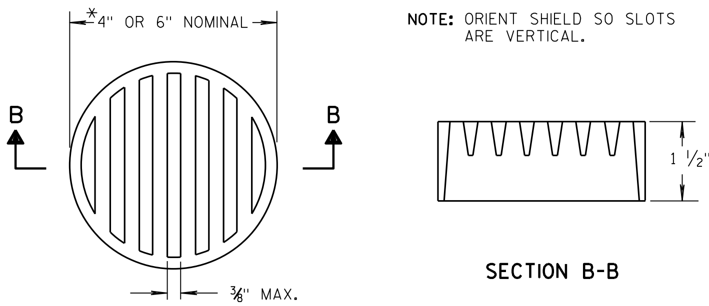
THE EXISTING GROUND LINE SHALL BE THE UPPER LIMIT FOR "EXCAVATION OF STRUCTURES, BRIDGES (B-27-0159)".

ALL STATIONS AND ELEVATIONS ARE IN FEET.

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

PROTECTIVE SURFACE TREATMENT TO BE PLACED FULL WIDTH ON TOP SURFACE, SIDES AND OUTSIDE 1'-0" ON BOTTOM OF CONCRETE SLAB DECK. SEE DETAIL ON SHEET 9.

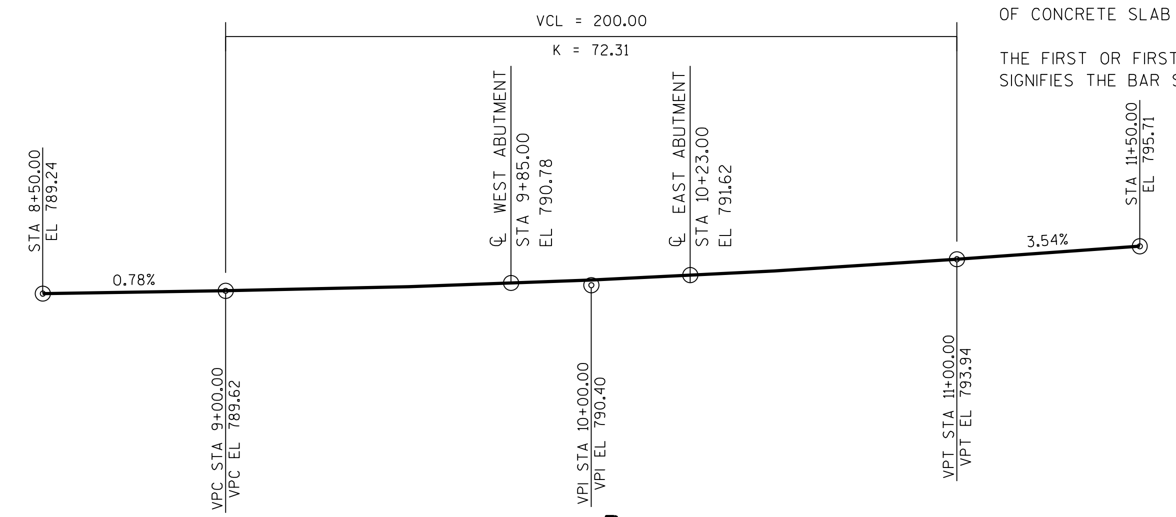
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.



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.



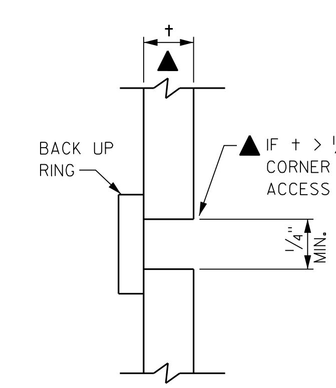
PROFILE GRADE LINE, ℄ CUT OFF ROAD

BENCH MARKS ★

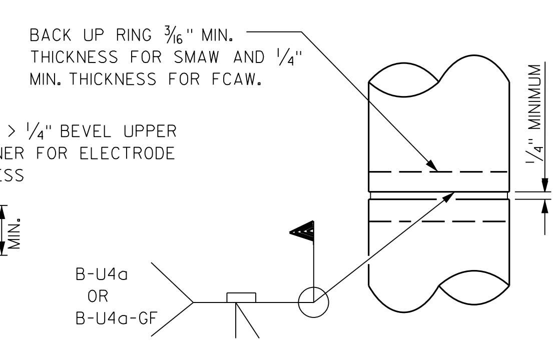
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
100	10+15	9.8' RT	PAINTED CONCRETE RAILING SE CORNER OF BRIDGE	792.58
101	6+30	12.8' RT	3/4" REBAR, CP #1	789.33
102	14+14	10.6' RT	3/4" REBAR, CP #4	805.92

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 10+03.70	LS	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES, BRIDGES (B-27-159)	LS	---	---	---	1
210.0100	BACKFILL STRUCTURE	CY	80	80	---	160
502.0100	CONCRETE MASONRY BRIDGE	CY	30	31	79	140
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	147	147
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	1840	1870	---	3710
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1410	1440	14400	17250
513.4060	RAILING TUBULAR TYPE M (B-27-159)	LS	---	---	---	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	---	18
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	200	225	---	425
606.0300	RIPRAP HEAVY	CY	60	65	---	125
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	25	25	---	50
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	44	44	---	88
645.0120	GEOTEXTILE FABRIC TYPE 'HR'	SY	130	130	---	260
NON BID ITEMS						
	FILLER	SIZE				1/2" & 3/4"



CIP PILE WELD DETAIL



CAST-IN-PLACE 'PIPE PILE'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-159

DRAWN BY TAV | PLANS CK'D. GAR

CROSS SECTIONS GENERAL NOTES & QUANTITIES

SHEET 2 OF 10

STATE PROJECT NUMBER

7260-00-70

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

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

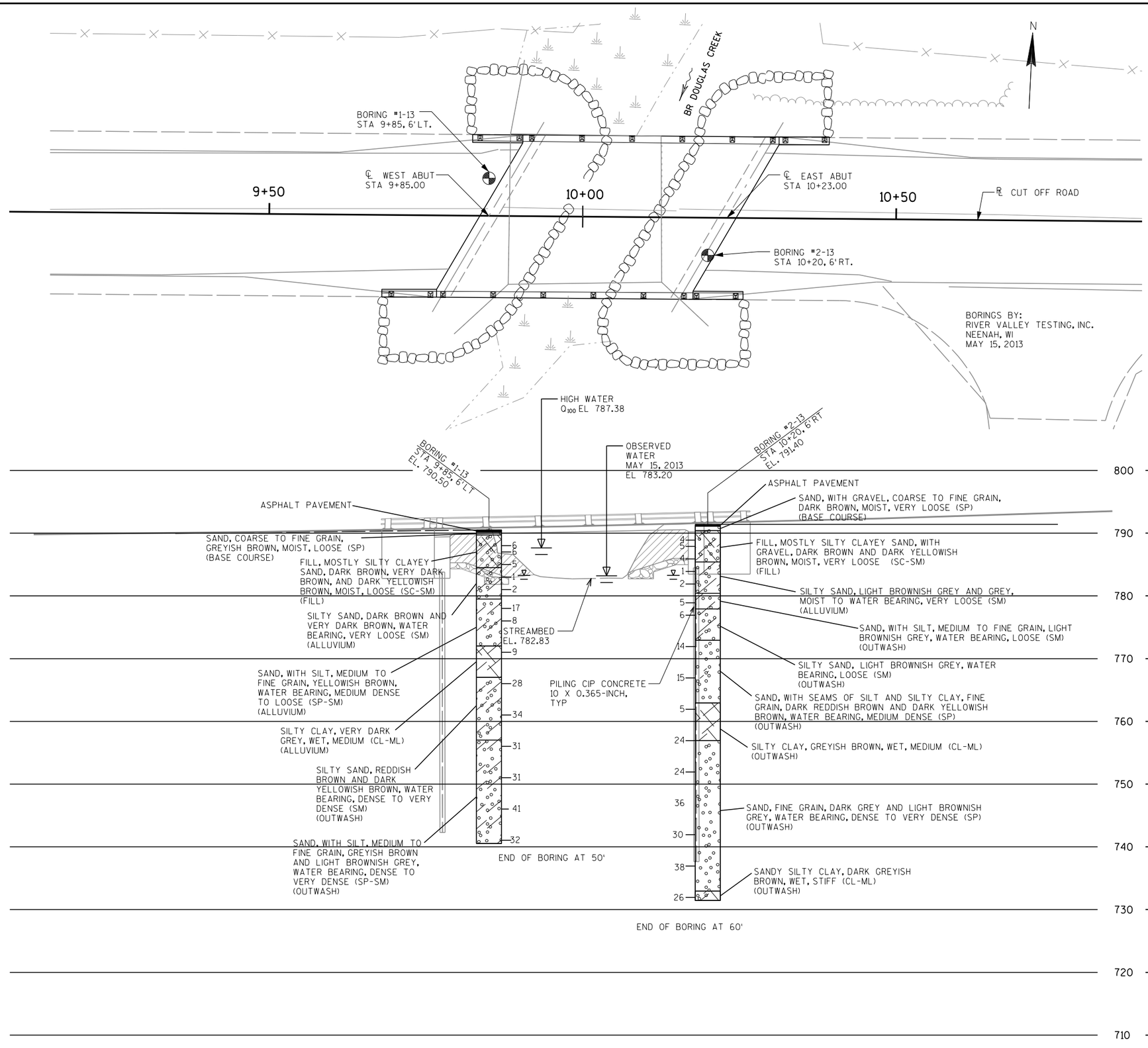
LEGEND OF BORING

BORING NO.
STA.
ELEV.
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.



NO.	DATE	REVISION	BY

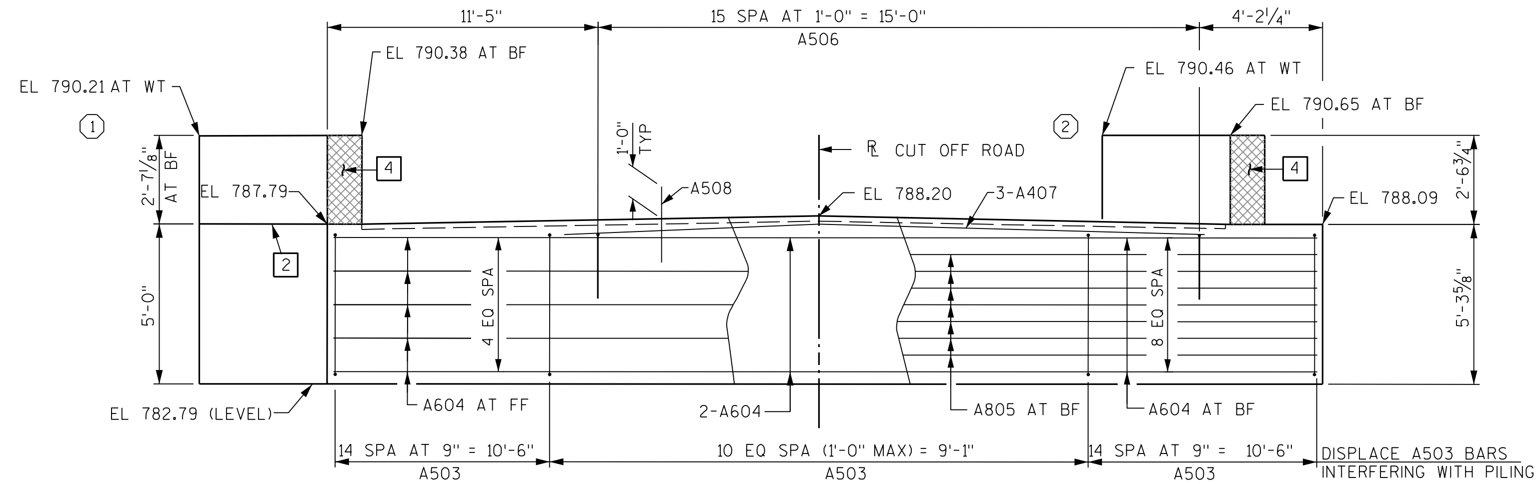
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-159

DRAWN BY TAV | PLANS CK'D. GAR

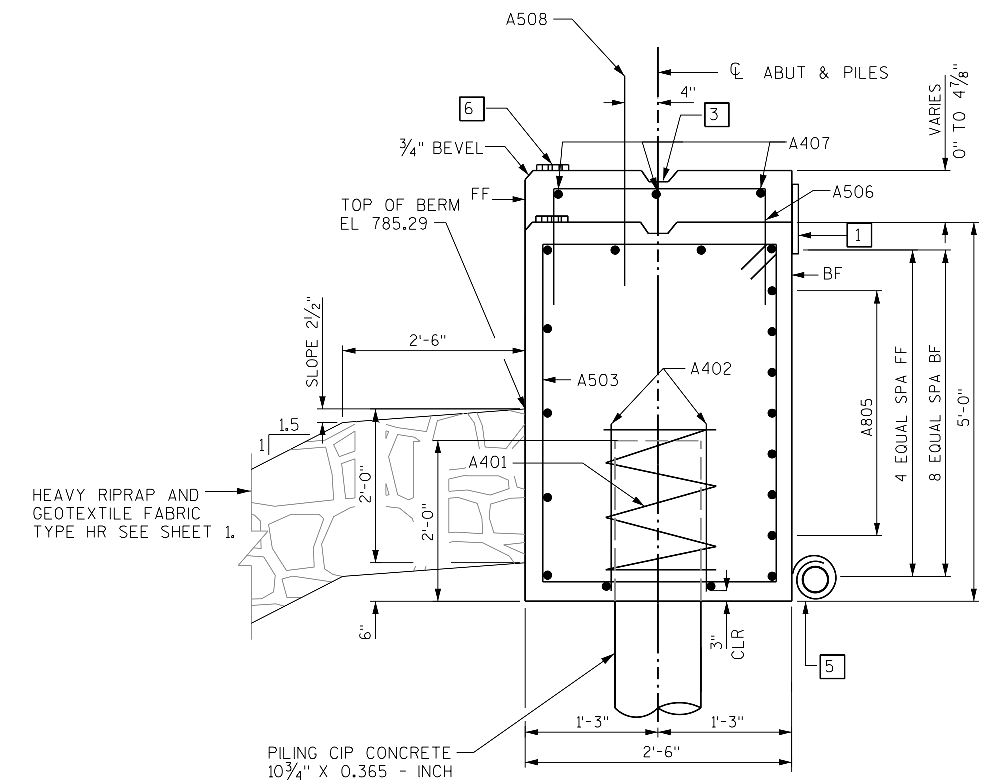
SUBSURFACE EXPLORATION

SHEET 3 OF 10
29



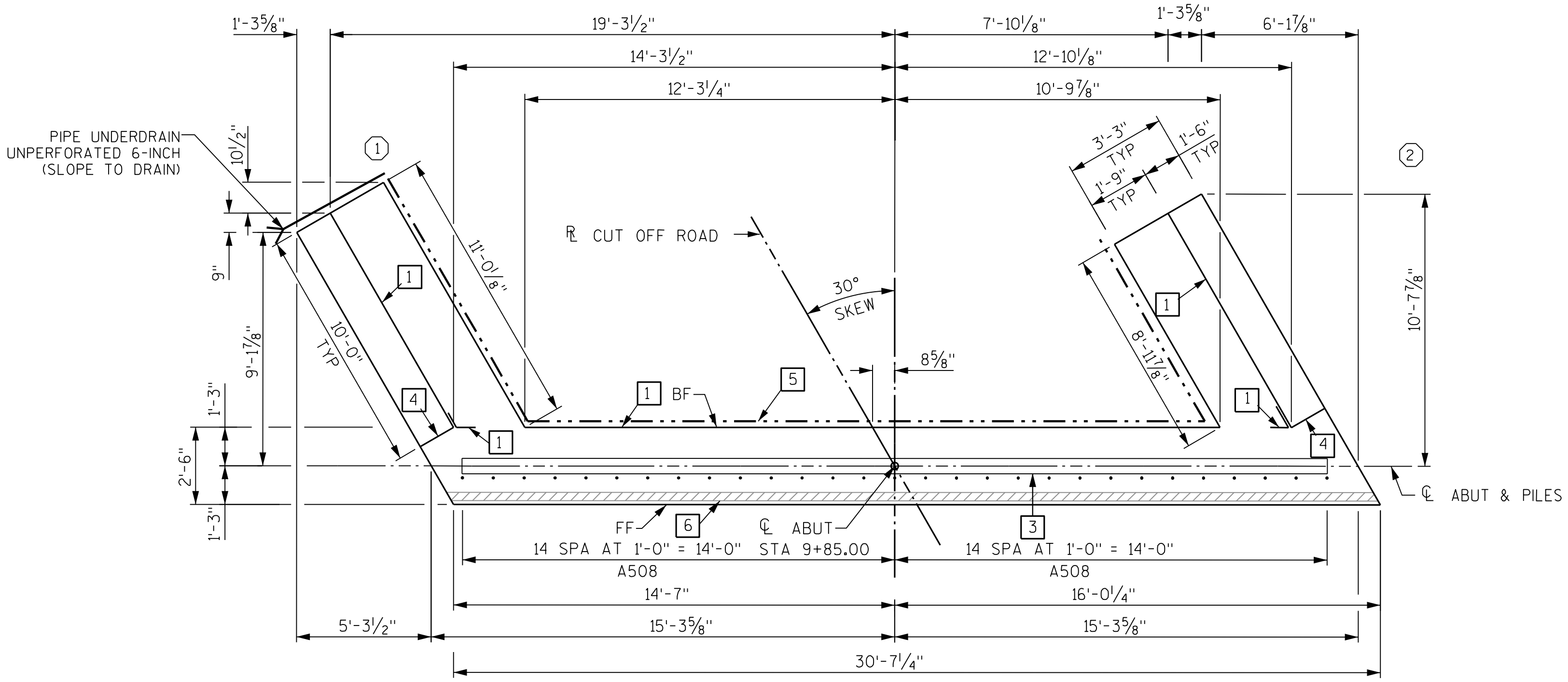
ELEVATION

(WEST ABUTMENT LOOKING WEST)
(PILES NOT SHOWN)

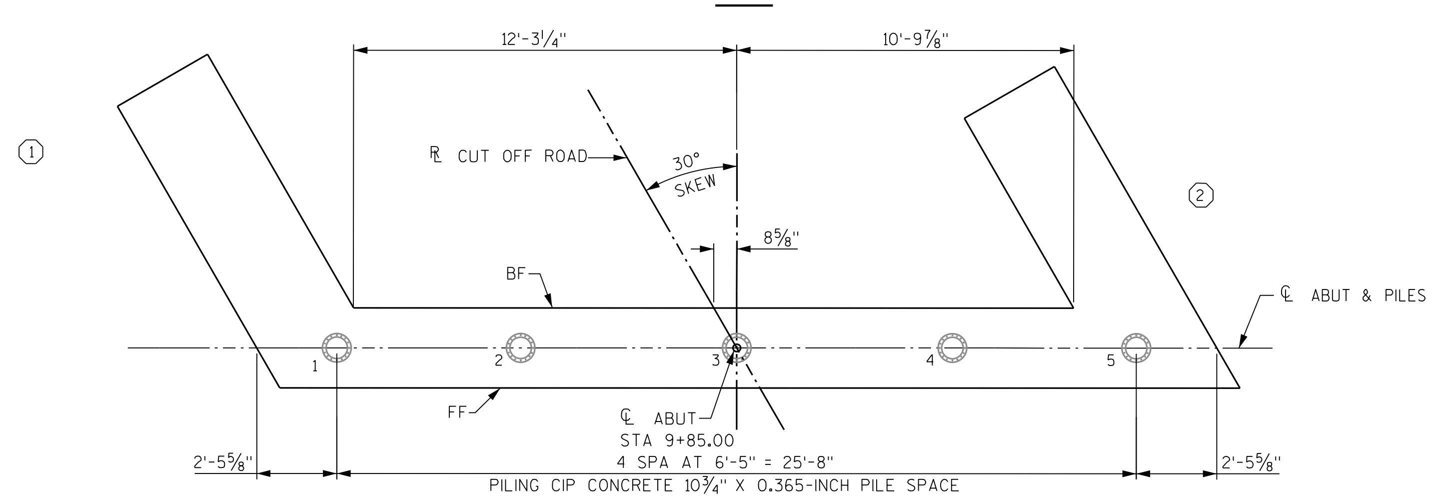


SECTION THRU ABUTMENT BODY

ALL HORIZONTAL BARS NOT LABELED ARE A604 BARS



PLAN



PILE PLAN

NOTES

FOR PILE SPLICE DETAILS SEE SHEET 2

A508 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INTIAL SET HAS TAKEN PLACE.

FILL / EXCAVATE TO BOTTOM OF ABUTMENT EL 782.79 BEFORE DRIVING PILING.

SEE SHEET 2 FOR STRUCTURE BACKFILL AND PIPE UNDERDRAIN DETAIL.

ABUTMENT TO BE SUPPORTED ON PILING CIP CONCRETE 10¾" X 0.365-INCH WITH A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 40'-0" LONG AT THE WEST ABUTMENT.

[1] 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE. EXTEND FROM BRIDGE SEAT TO TOP OF WING.

[2] OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6" KEYWAY, WITH 18" RUBBERIZED WATERPROOFING ON BF.

[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, 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.

[5] PIPE UNDERDRAIN WRAPPED, (6-INCH). SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS SHOWN ON SHEET 2.

[6] 4" x ¾" FILLER LENGTH OF ABUTMENT

(#) INDICATES WING NUMBER

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-159

DRAWN BY TAV | PLANS CK'D. GAR

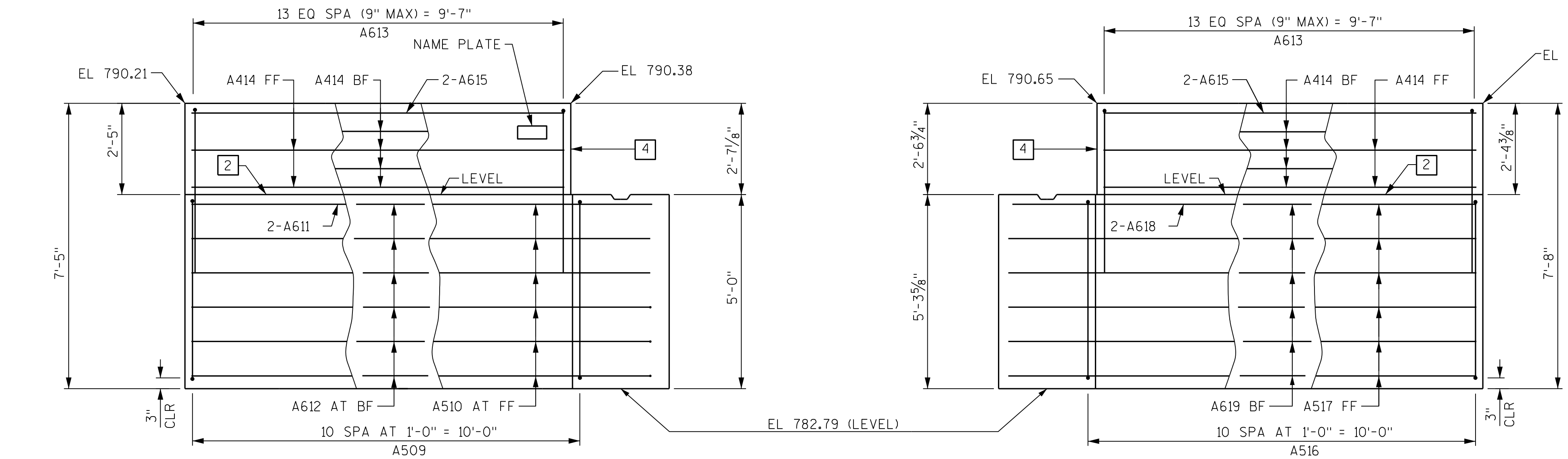
WEST ABUTMENT

SHEET 4 OF 10

FILE NAME : X:±3223700±122246.01±TECH±CAD±72600070±Design±STRUCTURE±080104±.dgn PLOT DATE : 3/31/2014 PLOT BY : 1258MJB PLOT SCALE : 6.0000 sf / in.

STATE PROJECT NUMBER

7260-00-70



WING 1 ELEVATION

WING 2 ELEVATION

BILL OF BARS
WEST ABUTMENT

COATED= 1410 LBS.
UNCOATED= 1840 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT. - IN.	BENT	BAR SERIES	LOCATION	
A 4 01		5	28 - 0	X		ABUTMENT BODY - 1 PER PILE	SPIRAL
A 4 02		10	2 - 3			ABUTMENT BODY - 2 PER PILE	VERT
A 5 03		39	13 - 7	X		ABUTMENT BODY	VERT
A 6 04		11	30 - 2			ABUTMENT BODY - FF, TOP, BTM	HORI
A 8 05		7	30 - 2			ABUTMENT BODY - BF	HORI
A 5 06		16	4 - 9	X		ABUTMENT BODY - TOP	VERT
A 4 07		3	15 - 4			ABUTMENT BODY - TOP	HORI
A 5 08	29		2 - 0			ABUTMENT BODY - DOWELS	VERT
A 5 09	11		15 - 3	X		WING 1 BODY	VERT
A 5 10	6		11 - 9			WING 1 BODY - FF	HORI
A 6 11	2		12 - 4			WING 1 BODY - TOP	HORI
A 6 12	6		12 - 10			WING 1 BODY - BF	HORI
A 6 13	28		9 - 8	X		WINGS 1 & 2 - TOP	VERT
A 4 14	12		9 - 7			WINGS 1 & 2 - TOP	HORI
A 6 15	4		9 - 7			WINGS 1 & 2 - TOP	HORI
A 5 16	11		15 - 9	X		WING 2 BODY	VERT
A 5 17	6		13 - 2			WING 2 BODY - FF	HORI
A 6 18	2		12 - 3			WING 2 BODY - TOP	HORI
A 6 19	6		11 - 3			WING 2 BODY - BF	HORI

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

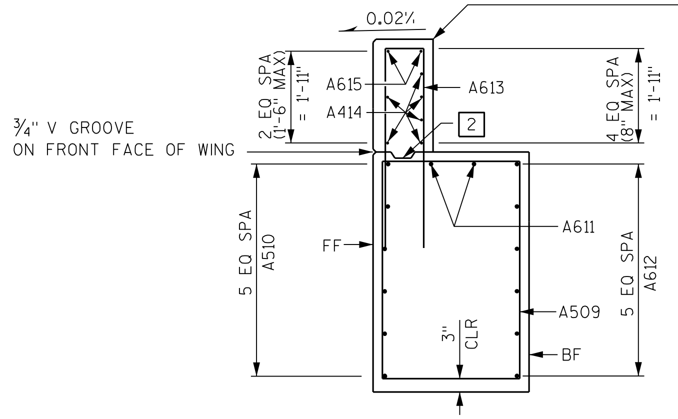
ALL REINFORCING BARS ARE ENGLISH.

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

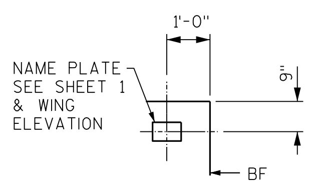
[2] OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" × 6" KEYWAY. PROVIDE 18" RUBBERIZED WATERPROOFING ON BF IF OPTIONAL CONSTRUCTION JOINT USED.

[4] ½" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE. EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

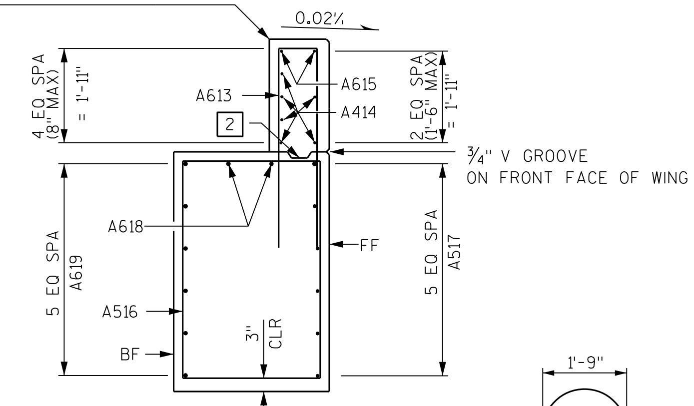
ELEVATIONS AND DIMENSIONS ARE TO THIS LOCATION
SLOPE TOP OF WINGS AS SHOWN



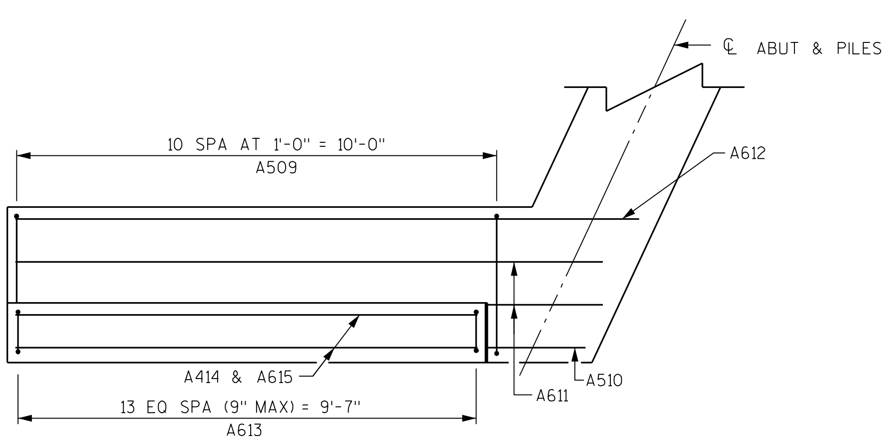
WING 1 SECTION



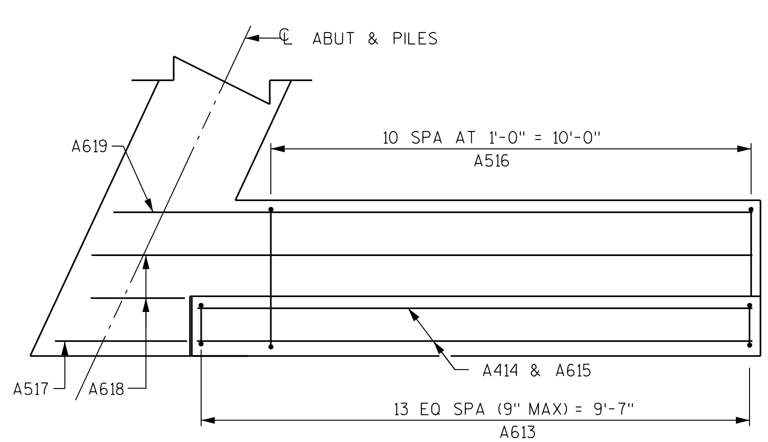
NAME PLATE LOCATION
ON WING 1



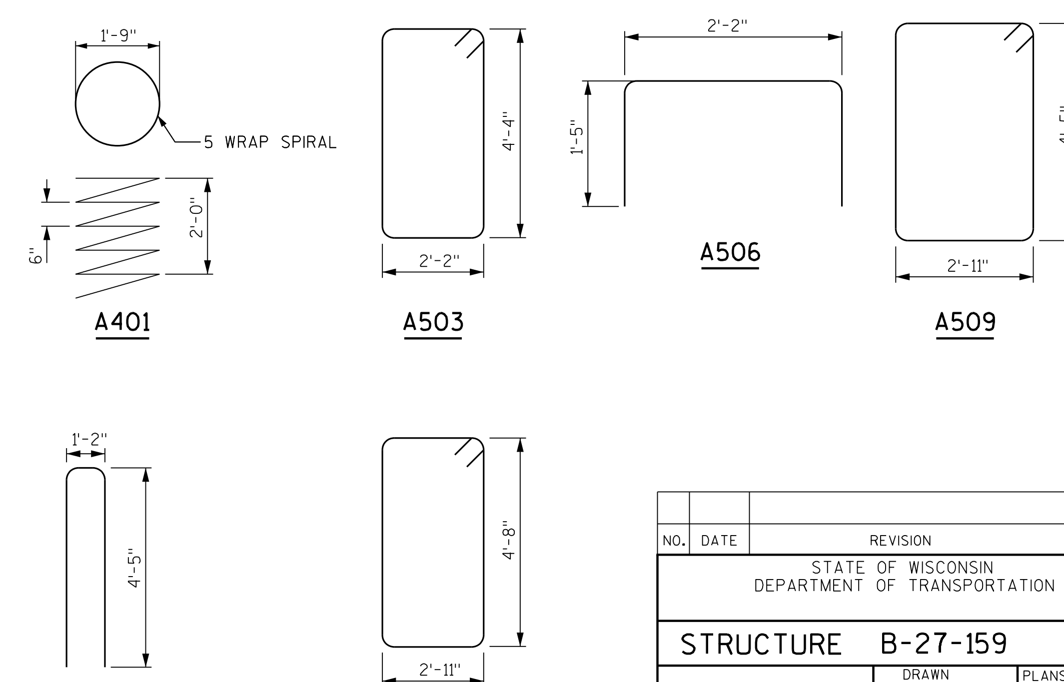
WING 2 SECTION



WING 1 PLAN



WING 2 PLAN



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

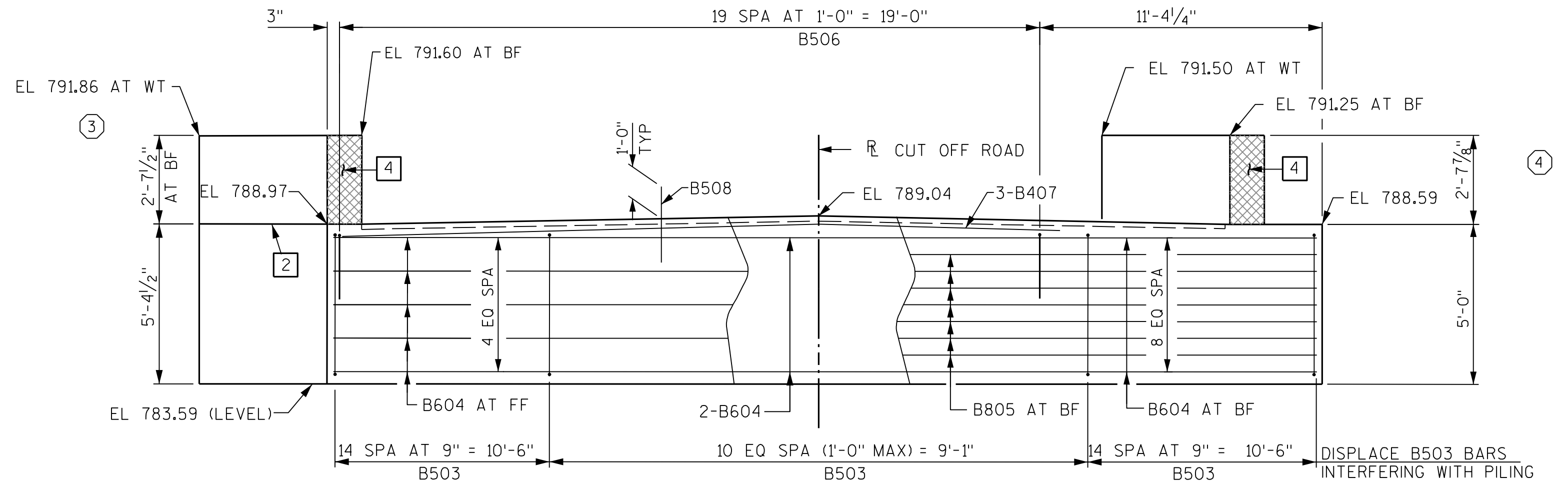
STRUCTURE B-27-159

DRAWN BY TAV | PLANS CK'D. GAR

WEST ABUTMENT DETAILS

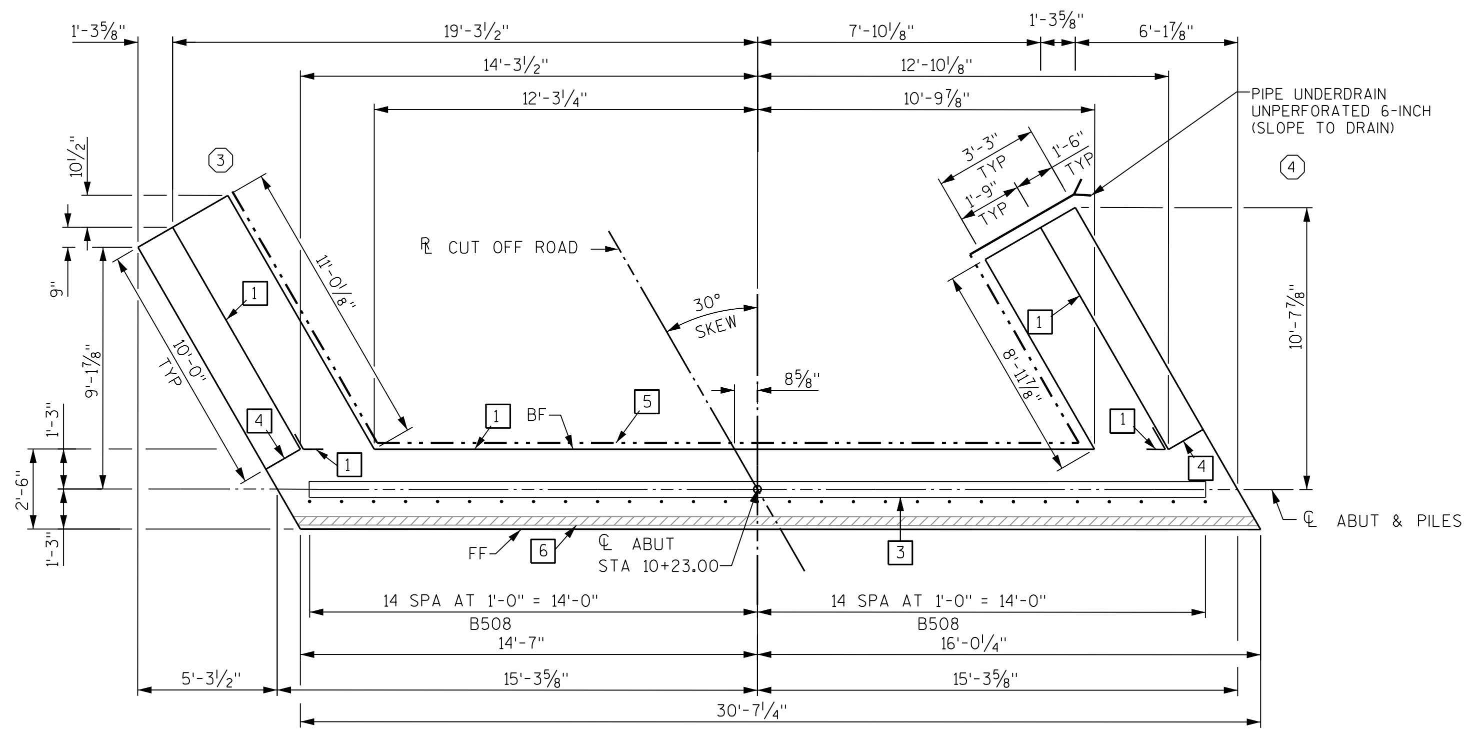
SHEET 5 OF 10

8

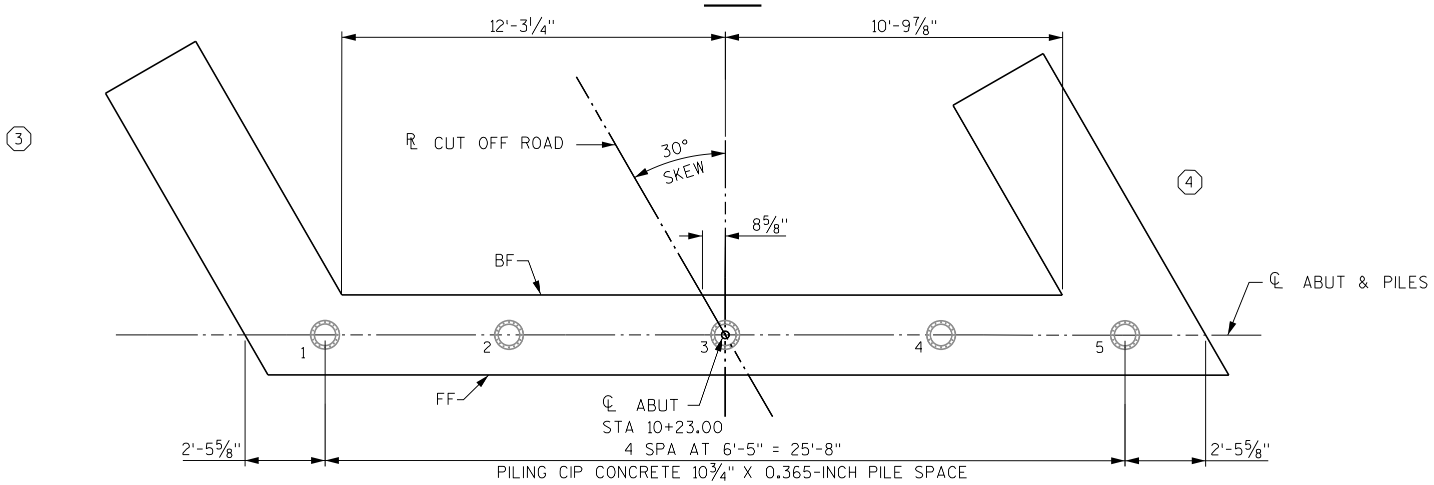


ELEVATION

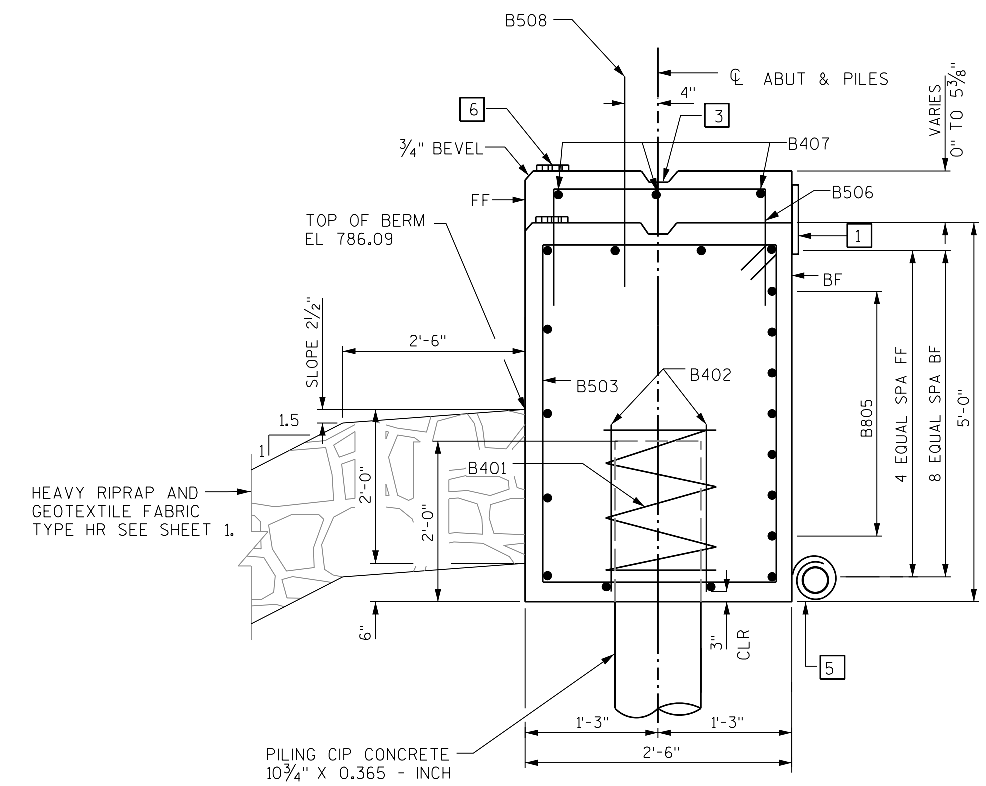
(EAST ABUTMENT LOOKING EAST)
(PILES NOT SHOWN)



PLAN



PILE PLAN



SECTION THRU ABUTMENT BODY

ALL HORIZONTAL BARS NOT LABELED ARE B604 BARS

NOTES

FOR PILE SPLICE DETAILS SEE SHEET 2

B508 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INTIAL SET HAS TAKEN PLACE.

FILL / EXCAVATE TO BOTTOM OF ABUTMENT EL 783.59 BEFORE DRIVING PILING.

SEE SHEET 2 FOR STRUCTURE BACKFILL AND PIPE UNDERDRAIN DETAIL.

ABUTMENT TO BE SUPPORTED ON PILING CIP CONCRETE 10¾" X 0.365-INCH WITH A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 50'-0" LONG AT THE EAST ABUTMENT.

1. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE. EXTEND FROM BRIDGE SEAT TO TOP OF WING.

2. OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6" KEYWAY, WITH 18" RUBBERIZED WATERPROOFING ON BF.

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, 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.

5. PIPE UNDERDRAIN WRAPPED, (6-INCH). SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS SHOWN ON SHEET 2.

6. 4" x ¾" FILLER LENGTH OF ABUTMENT

(#) INDICATES WING NUMBER

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

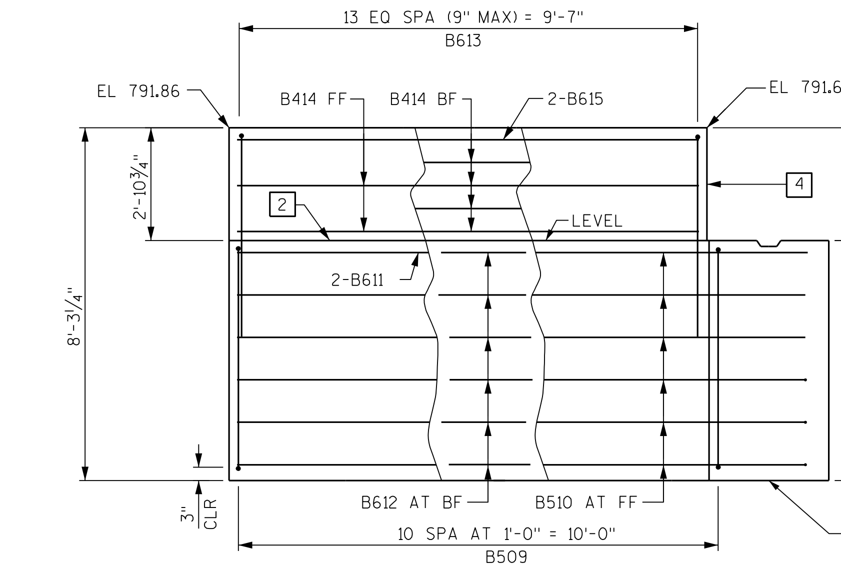
STRUCTURE B-27-159

DRAWN BY TAV | PLANS CK'D. GAR

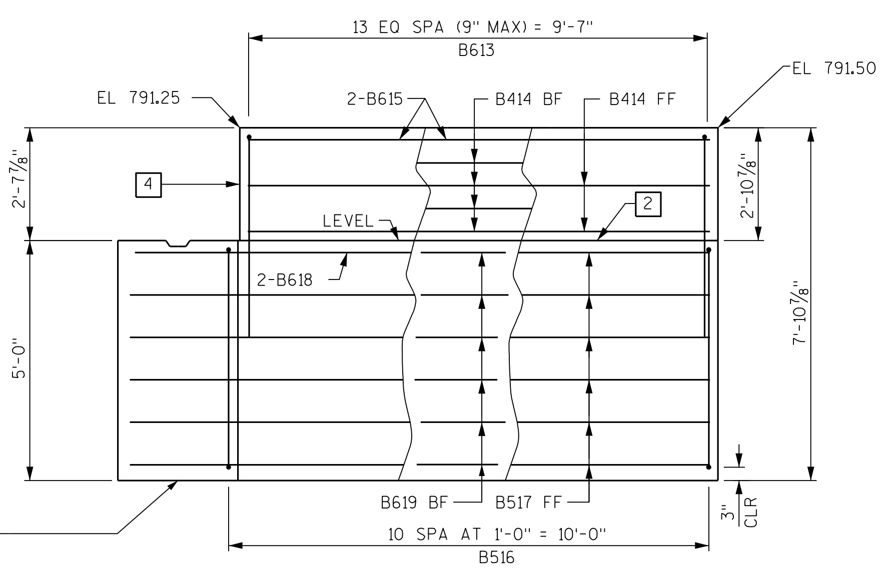
EAST ABUTMENT

SHEET 6 OF 10

FILE NAME : X:±3223700±122246.01±TECH±CAD±72600070±Design±STRUCTURE±B0010.dgn PLOT DATE : 12/31/2014 PLOT BY : 1258MJB PLOT SCALE : 6.0000 sf / in.



WING 3 ELEVATION



WING 4 ELEVATION

BILL OF BARS
EAST ABUTMENT

COATED= 1440 LBS.
UNCOATED= 1870 LBS.

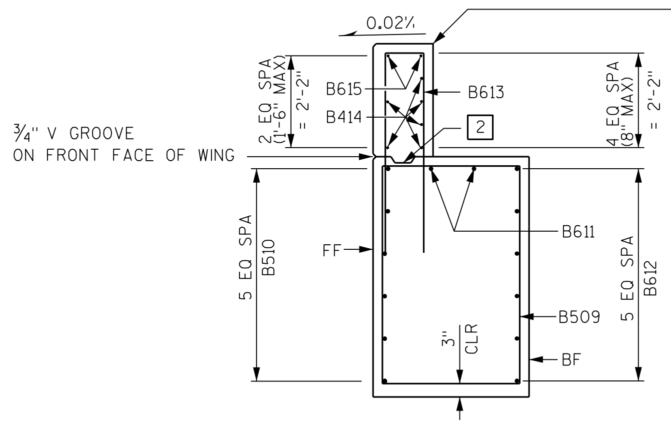
MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT. - IN.	BENT	BAR SERIES	LOCATION	
B 4 01		5	28 - 0	X		ABUTMENT BODY - 1 PER PILE	SPIRAL
B 4 02		10	2 - 3			ABUTMENT BODY - 2 PER PILE	VERT
B 5 03		39	13 - 7	X		ABUTMENT BODY	VERT
B 6 04		11	30 - 2			ABUTMENT BODY - FF, TOP, BTM	HORI
B 8 05		7	30 - 2			ABUTMENT BODY - BF	HORI
B 5 06		20	4 - 9	X		ABUTMENT BODY - TOP	VERT
B 4 07		3	19 - 4			ABUTMENT BODY - TOP	HORI
B 5 08	29		2 - 0			ABUTMENT BODY - DOWELS	VERT
B 5 09	11		15 - 11	X		WING 3 BODY	VERT
B 5 10	6		11 - 9			WING 3 BODY - FF	HORI
B 6 11	2		12 - 4			WING 3 BODY - TOP	HORI
B 6 12	6		12 - 10			WING 3 BODY - BF	HORI
B 6 13	28		10 - 4	X		WINGS 3 & 4 - TOP	VERT
B 4 14	12		9 - 7			WINGS 3 & 4 - TOP	HORI
B 6 15	4		9 - 7			WINGS 3 & 4 - TOP	HORI
B 5 16	11		15 - 3	X		WING 4 BODY	VERT
B 5 17	6		13 - 2			WING 4 BODY - FF	HORI
B 6 18	2		12 - 3			WING 4 BODY - TOP	HORI
B 6 19	6		11 - 3			WING 4 BODY - BF	HORI

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

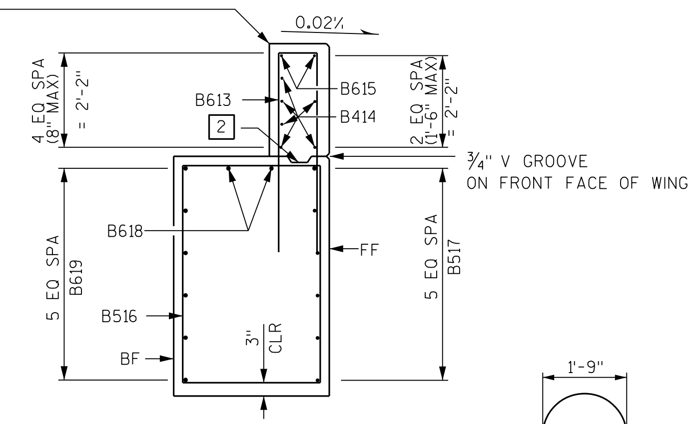
ALL REINFORCING BARS ARE ENGLISH.

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

ELEVATIONS AND DIMENSIONS ARE TO THIS LOCATION
SLOPE TOP OF WINGS AS SHOWN



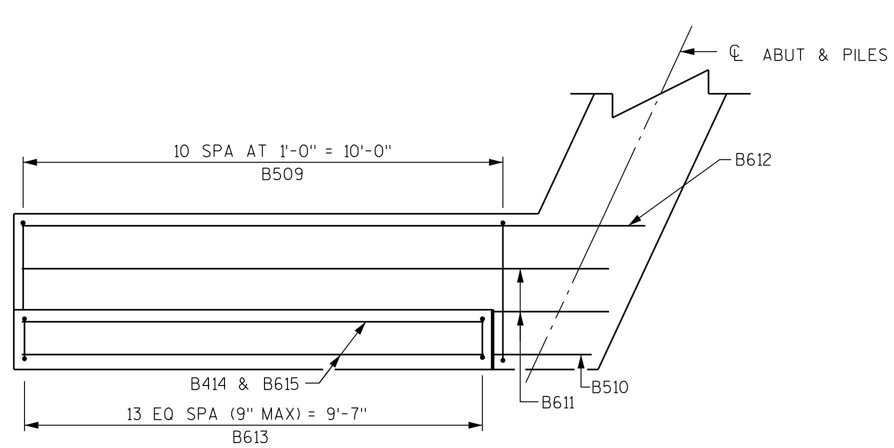
WING 3 SECTION



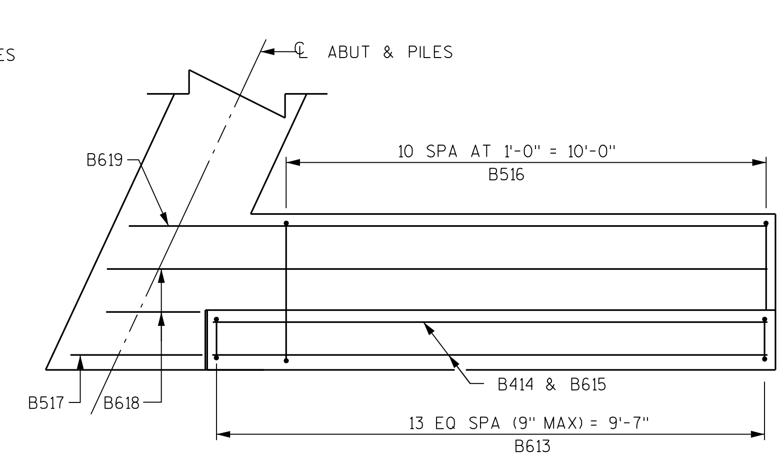
WING 4 SECTION

[2] OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6" KEYWAY, PROVIDE 18" RUBBERIZED WATERPROOFING ON BF IF OPTIONAL CONSTRUCTION JOINT USED.

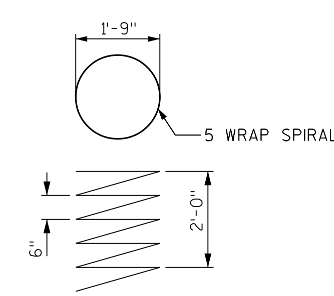
[4] ½" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF WING, INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTIAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE. EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.



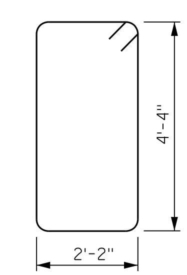
WING 3 PLAN



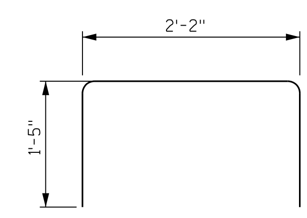
WING 4 PLAN



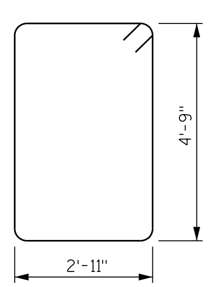
B401



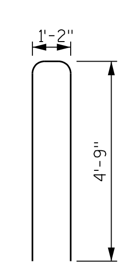
B503



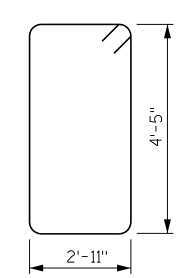
B506



B509



B613



B516

NO.	DATE	REVISION	BY

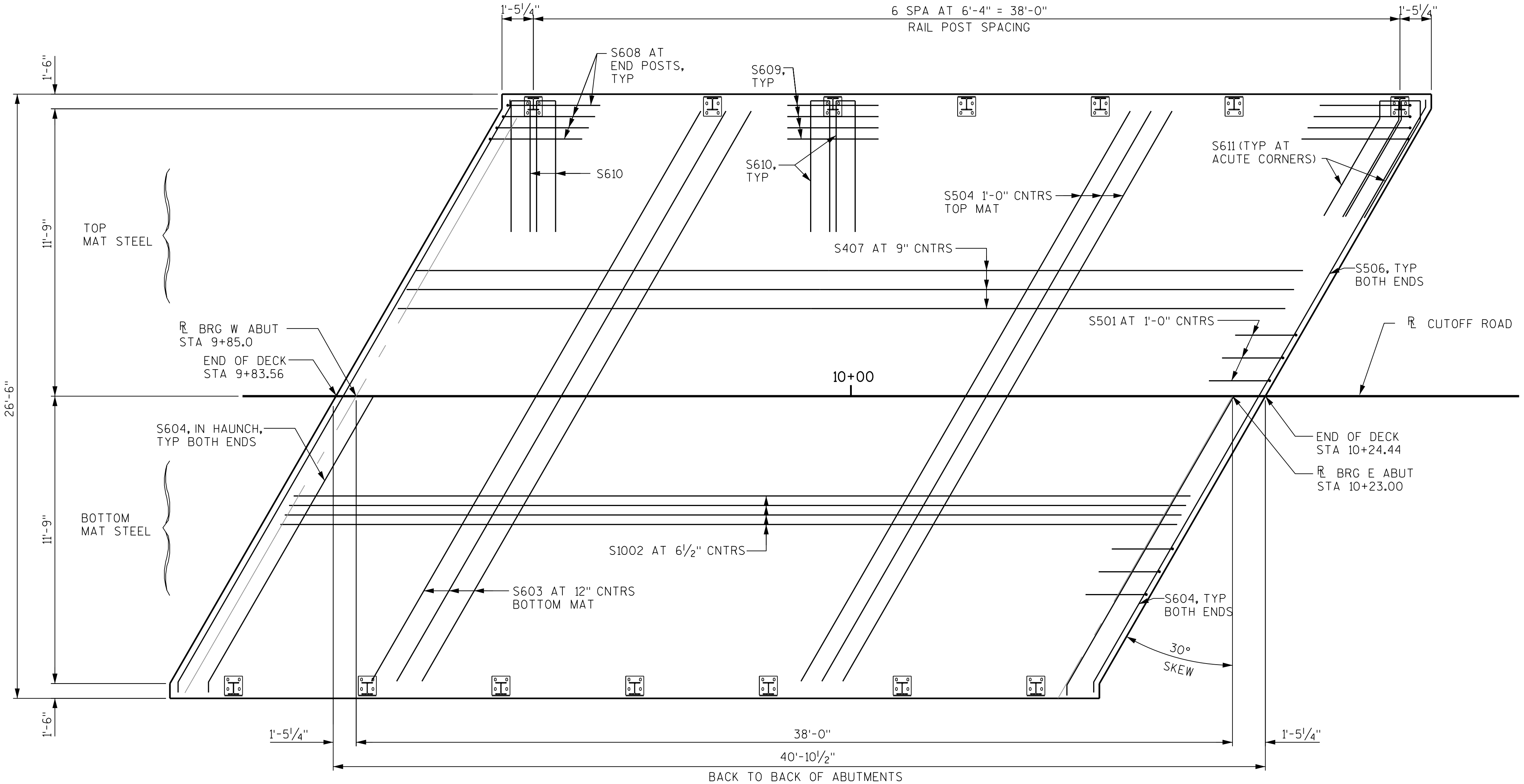
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-159

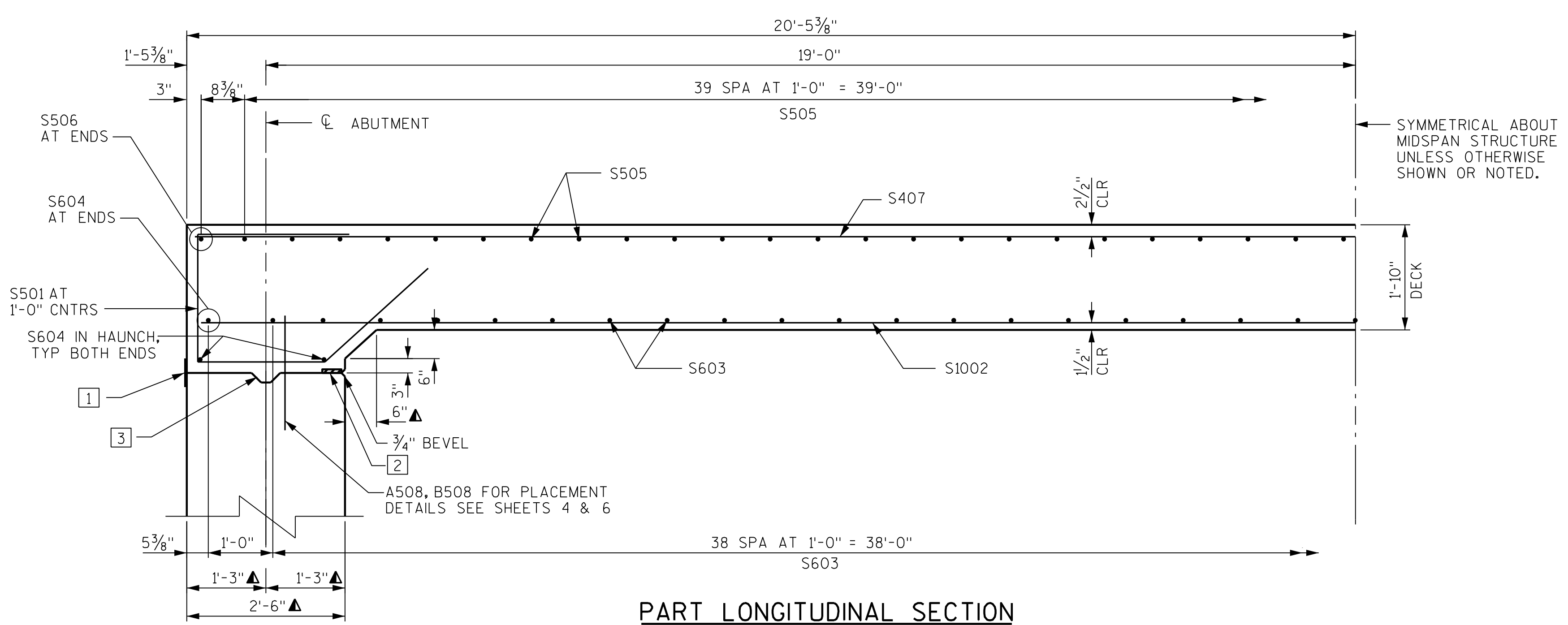
DRAWN BY TAV | PLANS CK'D. GAR

EAST ABUTMENT DETAILS

SHEET 7 OF 10



REINFORCEMENT PLAN



PART LONGITUDINAL SECTION

NOTES

1. 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.
2. 4" × ¾" FILLER LENGTH OF ABUTMENT.
3. KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"X6" KEYWAY.

▲ DIMENSIONS SHOWN ARE NORMAL TO ABUTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-159

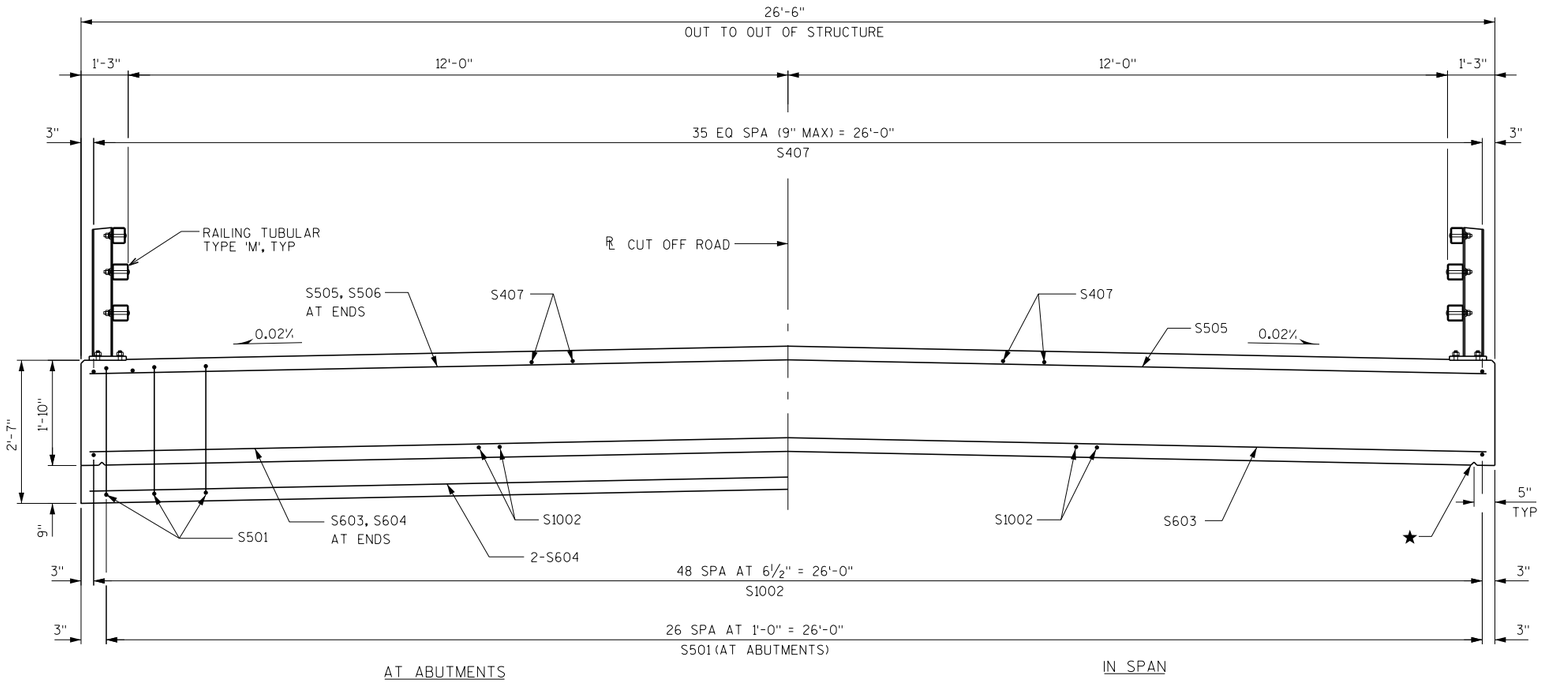
DRAWN BY TAV | PLANS CK'D. GAR

SUPERSTRUCTURE

SHEET 8 OF 10

STATE PROJECT NUMBER

7260-00-70



BILL OF BARS
SUPERSTRUCTURE

COATED= 14400 LBS.
UNCOATED= 0 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT. - IN.	BENT	BAR SERIES	LOCATION	
S 5 01	54		9 - 2	X		SLAB - ABUTMENT - TIES	LONGIT
S 10 02	49		40 - 6			SLAB - BOTTOM	LONGIT
S 6 03	39		30 - 2			SLAB - BOTTOM	TRANS
S 6 04	6		29 - 9	X		SLAB - BOTTOM AT ENDS & ABUT HAUNCH	TRANS
S 5 05	40		30 - 2			SLAB - TOP	TRANS
S 5 06	2		29 - 9	X		SLAB - TOP AT ENDS	TRANS
S 4 07	36		40 - 6			SLAB - TOP	LONGIT
S 6 08	16		6 - 0	X		RAILING ANCHORS AT CORNERS	LONGIT
S 6 09	40		6 - 0			RAILING ANCHORS	LONGIT
S 6 10	24		12 - 0	X		RAILING ANCHORS	TRANS
S 6 11	4		12 - 0	X		RAILING ANCHORS AT ACUTE CORNERS	TRANS

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

ALL REINFORCING BARS ARE ENGLISH.

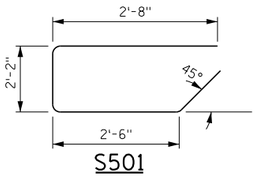
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

EDGE OF DECK ELEVATIONS

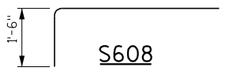
SPAN PT.	NORTH EDGE STATION	NORTH EDGE ELEVATION	CENTERLINE/CROWN STATION	CENTERLINE/CROWN ELEVATION	SOUTH EDGE STATION	SOUTH EDGE ELEVATION
W. ABUT.	9 + 92.65	790.67	9 + 85.00	790.78	9 + 77.35	790.37
0.1	9 + 96.45	790.75	9 + 88.80	790.86	9 + 81.15	790.44
0.2	10 + 00.25	790.83	9 + 92.60	790.93	9 + 84.95	790.52
0.3	10 + 04.05	790.91	9 + 96.40	791.01	9 + 88.75	790.59
0.4	10 + 07.85	791.00	10 + 00.20	791.09	9 + 92.55	790.67
0.5	10 + 11.65	791.09	10 + 04.00	791.18	9 + 96.35	790.75
0.6	10 + 15.45	791.18	10 + 07.80	791.26	10 + 00.15	790.83
0.7	10 + 19.25	791.27	10 + 11.60	791.35	10 + 03.95	790.91
0.8	10 + 23.05	791.36	10 + 15.40	791.44	10 + 07.75	791.00
0.9	10 + 26.85	791.45	10 + 19.20	791.53	10 + 11.55	791.08
E. ABUT.	10 + 30.65	791.55	10 + 23.00	791.62	10 + 15.35	791.17

CROSS SECTION THRU ROADWAY

(LOOKING EAST)



S501



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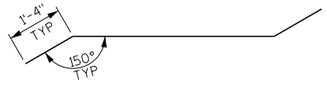
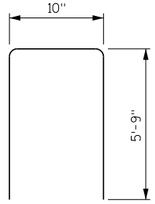


S604
S506



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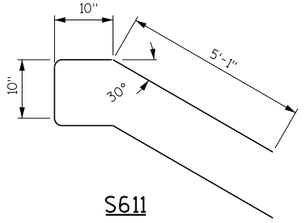

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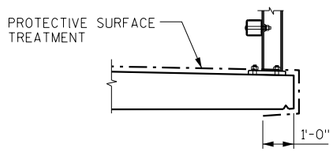
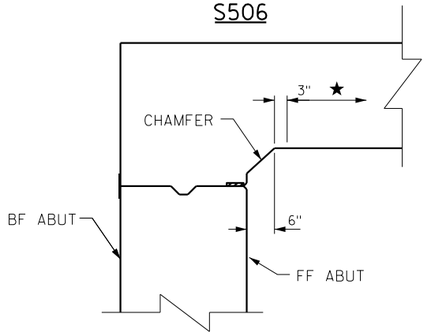
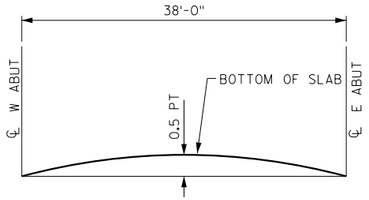


PROTECTIVE SURFACE TREATMENT DETAIL



DRIP GROOVE DETAIL AT ABUTMENT



CAMBER DIAGRAM

SPAN (PT)	CAMBER (IN)
℄ W ABUT	0
0.1	3/8
0.2	5/8
0.3	7/8
0.4	1
0.5	1 1/8
0.6	1
0.7	7/8
0.8	5/8
0.9	3/8
℄ E ABUT	0

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.

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, TYP. SEE DETAIL 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 ℄.

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STRUCTURE B-27-159

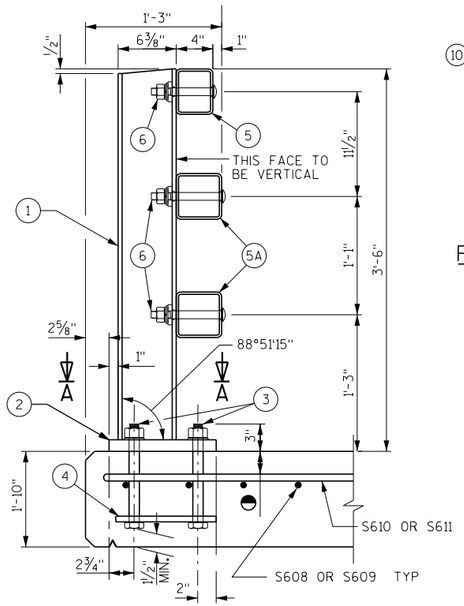
DRAWN BY TAV | PLANS CK'D. GAR

SUPERSTRUCTURE DETAILS

SHEET 9 OF 10
35

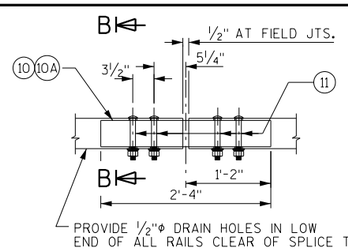
8

8

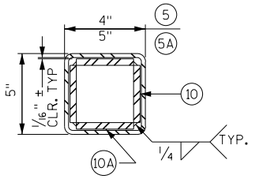


SECTION THRU RAILING ON DECK

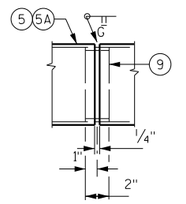
◓ PLACE BELOW TOP MAT OF SLAB REINF.



FIELD ERECTION JOINT DETAIL

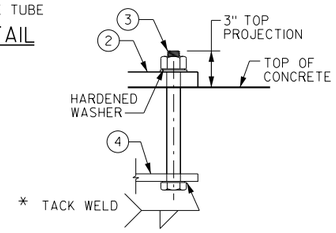


SECTION B-B



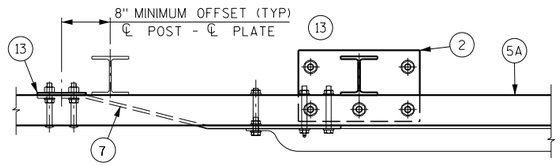
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



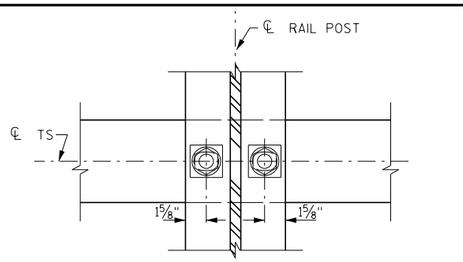
ANCHOR BOLTS

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

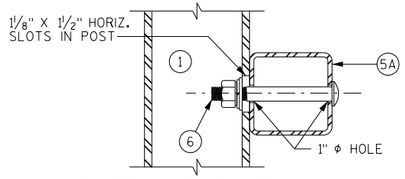


TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT



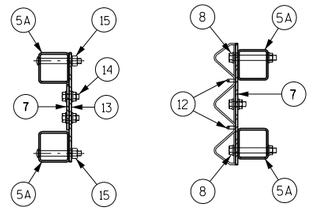
SECTION THRU POST WEB



SECTION THRU RAIL

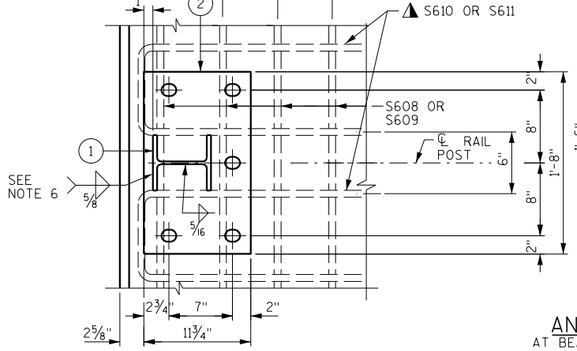
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



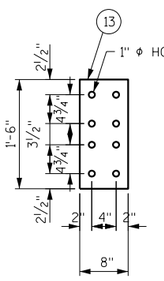
SECTION C-C

SECTION D-D



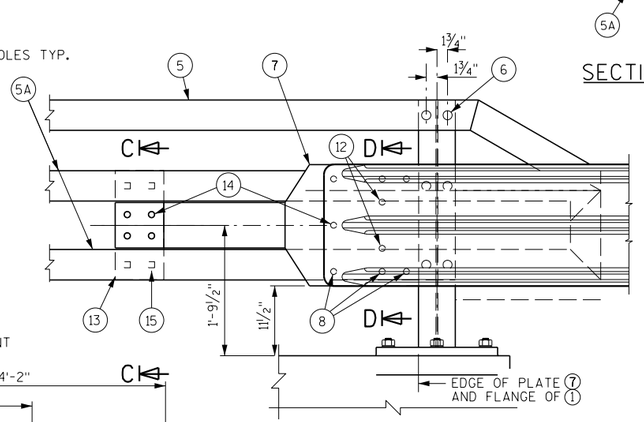
SECTION A-A

▲ TIE TO TOP MAT OF STEEL.



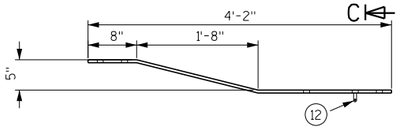
ANCHOR PLATE

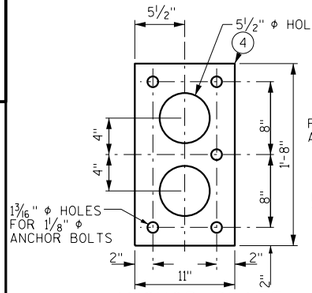
AT BEAM GUARD ATTACHMENT



DETAIL AT END POST

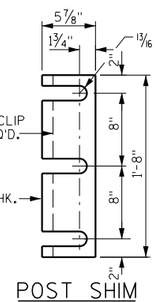
THRIE BEAM RAIL ATTACHMENT



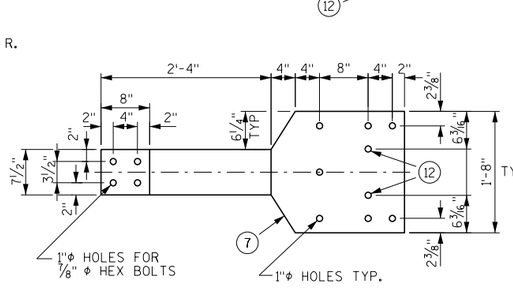


ANCHOR PLATE

AT RAIL TO DECK CONNECTION

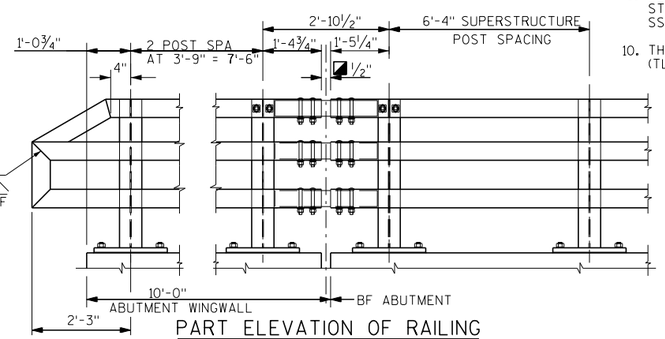


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

◪ 1/2" JOINT FILLER

LEGEND

(1) W6 x 25 WITH 1 1/8" X 1 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.

(2) PLATE 1 1/4" x 11 3/4" x 1'-8" WITH 1 5/16" X 1 5/8" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

(3) ASTM A449 - 1 1/8" 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. 1'-3" LONG IN SLAB AND 1'-9" IN ABUTMENT WINGS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)

(4) 5/8" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3

(5) TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(5A) TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(6) 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1 5/8" X 1 5/8" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)

(7) 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" X 1 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.

(8) 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.

(9) SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".

(10) 3/8" X 3 5/8" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

(10A) 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.

(11) 7/8" Φ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15/16" X 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.

(12) 7/8" DIA. X 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).

(13) 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.

(14) 7/8" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).

(15) 1" Φ 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.

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M (B-27-159)" 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 1/8 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).

STATE PROJECT NUMBER

7260-00-70

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-159

DRAWN BY TAV | PLANS CK'D. GAR

RAILING TUBULAR TYPE 'M'

SHEET 10 OF 10
36

8

8

STATION	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate
8+50	21	5	0	0	0	0	0	0	0
9+00	30	5	3	47	6	3	47	4	38
9+50	29	5	8	54	5	10	102	17	74
9+84	30	5	0	37	6	5	139	23	99
9+85	0	0	0	1	0	0	139	23	100
10+23	0	0	0	0	0	0	139	23	100
10+24	35	5	0	1	3	0	140	23	97
10+50	43	5	12	37	8	6	177	30	120
10+75	52	5	0	44	10	5	221	37	147
11+00	30	5	1	38	6	0	259	37	179
11+50	21	5	0	47	4	0	306	38	222
			Column Total	306	47	30			

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement Material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement volume

9

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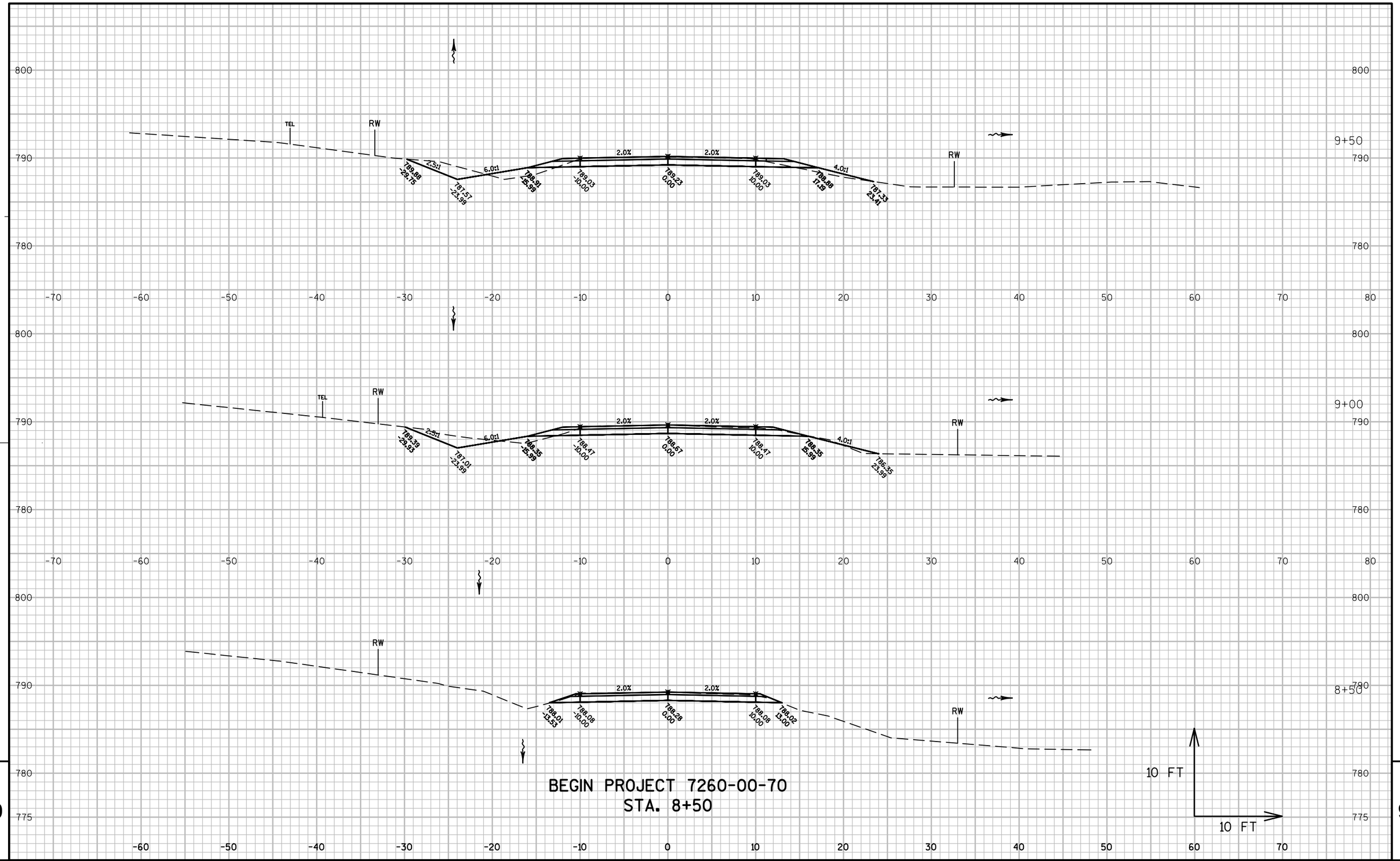
PROJECT NO: 7260-00-70	HWY: CUT OFF ROAD	COUNTY: JACKSON	EARTHWORK SUMMARY	SHEET NO:	E

FILE NE : PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ ORG DATE : ORIGINATOR : PLOT SCALE :



BEGIN PROJECT 7260-00-70
STA. 8+50

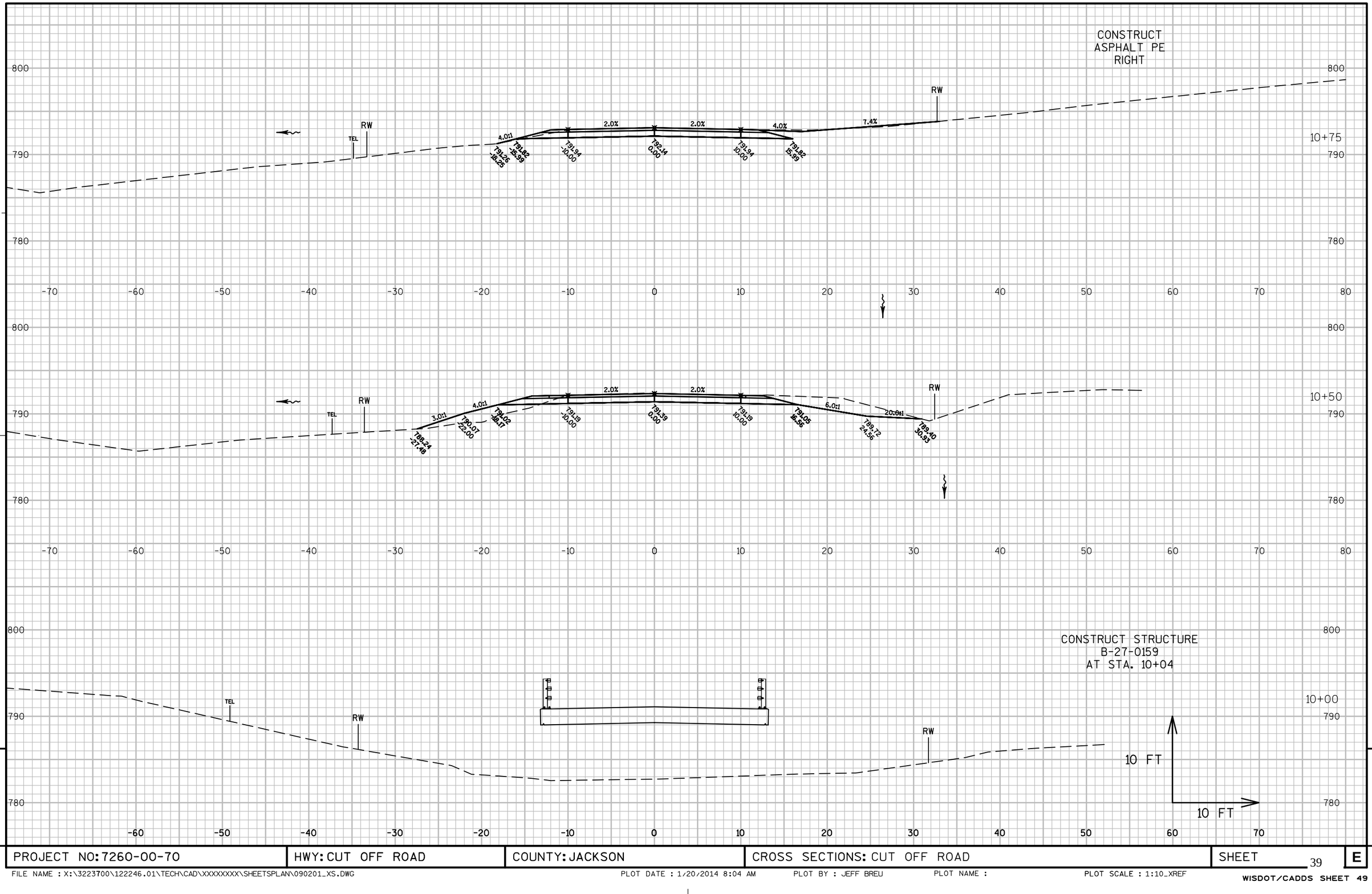
9

9

PROJECT NO: 7260-00-70	HWY: CUT OFF ROAD	COUNTY: JACKSON	CROSS SECTIONS: CUT OFF ROAD	SHEET 38	E

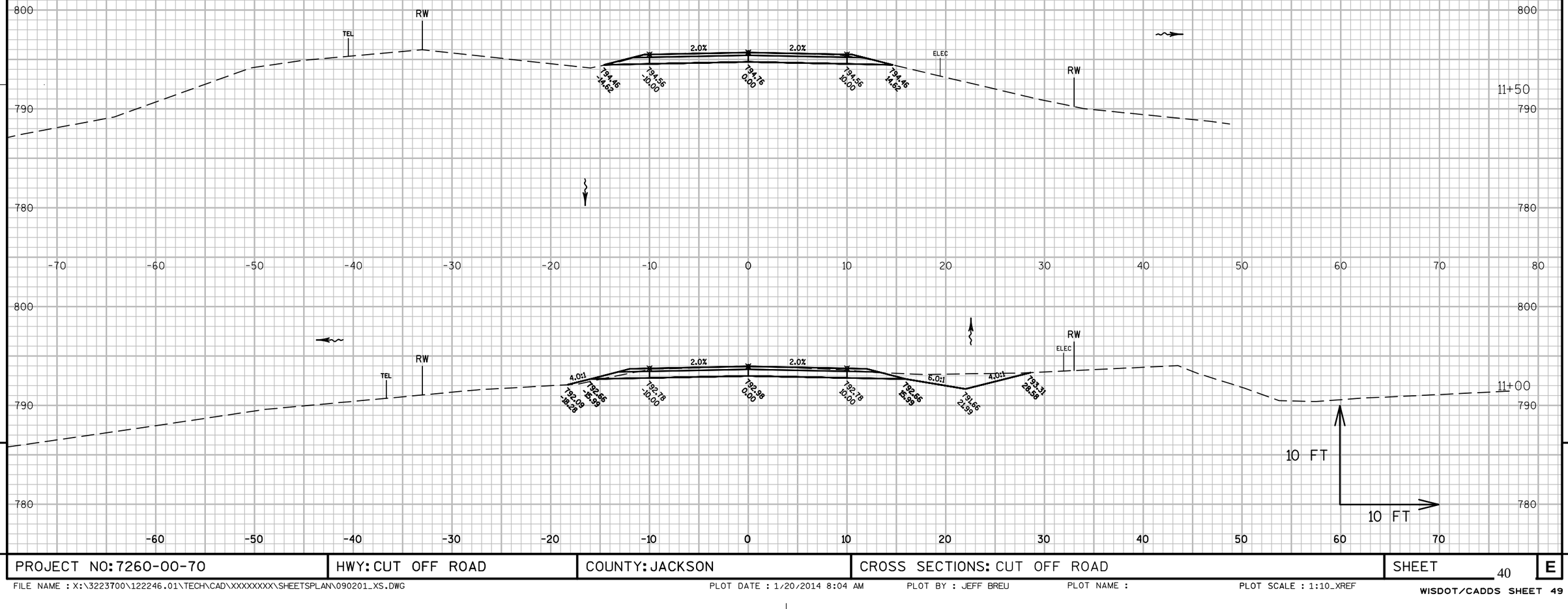
FILE NAME : X:\3223700\122246.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\090201_XS.DWG PLOT DATE : 1/20/2014 8:03 AM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1:10_XREF

CONSTRUCT
ASPHALT PE
RIGHT



PROJECT NO: 7260-00-70	HWY: CUT OFF ROAD	COUNTY: JACKSON	CROSS SECTIONS: CUT OFF ROAD	SHEET 39 E

END PROJECT 7260-00-70
STA. 11+50



PROJECT NO: 7260-00-70	HWY: CUT OFF ROAD	COUNTY: JACKSON	CROSS SECTIONS: CUT OFF ROAD	SHEET 40 E

Notes

Wisconsin Department of Transportation

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