SWL DECEMBER 2013

PROJECT ID: 5638-00-70

WITH:

COUNTY: GREEN

ORDER OF SHEETS

TOTAL SHEETS = 30

04

N

DESIGN DESIGNATION

A.A.D.T. 2014	=	130
A.A.D.T. 2034	=	180
D.H.V. 2034	=	180
D.D.	=	60/40
T.	=	5.0%
DESIGN SPEED	=	50
ESALS	=	14,600

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 (955.36)
- 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

TWIN GROVE - OAKLEY

(SPRING CREEK BRIDGE B-23-0172)

CTH K

GREEN COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5638-00-70	WISC 2013510	1

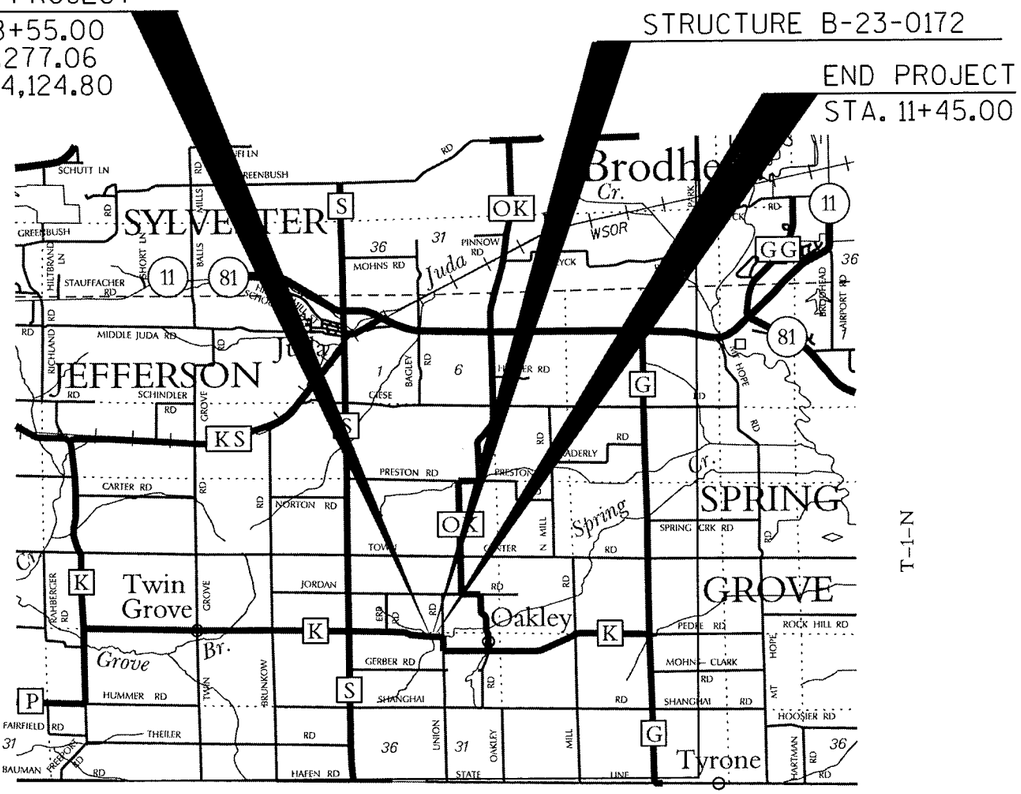
STATE PROJECT NUMBER

5638-00-70

BEGIN PROJECT
STA. 8+55.00
Y= 111,277.06
X= 654,124.80

STRUCTURE B-23-0172

END PROJECT
STA. 11+45.00



LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE =0.055 MI.

-"COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), GREEN COUNTY."

ACCEPTED FOR

COUNTY of GREEN

7/10/2013 (Date) Jeff Wunsch (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL • REMEDIATION
DEVELOPMENT • ENVIRONMENTAL

2901 International Lane, Suite 300 Madison, WI 53704-3133

608-242-7779 1-800-446-0679 Fax 608-242-5664

WISCONSIN
MICHAEL J.
STATZ
E-31249
MADISON
WI
PROFESSIONAL ENGINEER

7-8-13 (Date) Michael J. Statz (Professional Engineer)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

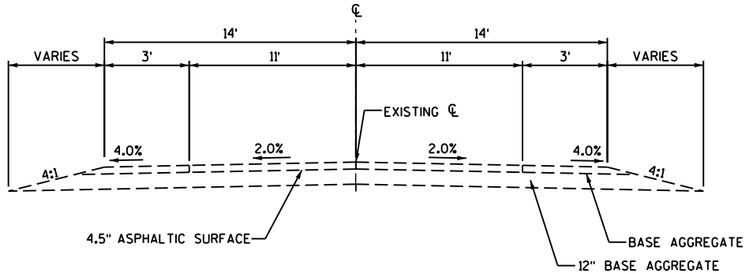
PREPARED BY

Surveyor	MSA PROFESSIONAL SERVICES
Designer	MSA PROFESSIONAL SERVICES
Management Consultant	KJOHNSON ENGINEERS, INC.
C.O. Examiner	

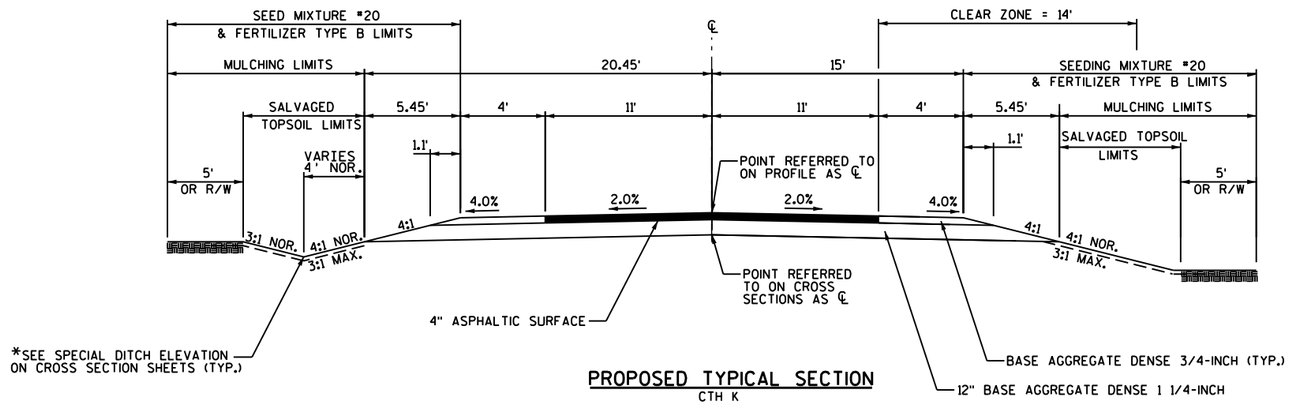
APPROVED FOR DEPARTMENT

DATE: 7/22/13 Kinsey A. Johnson (Management Consultant Signature)

E



EXISTING TYPICAL SECTION
CTH K



PROPOSED TYPICAL SECTION
CTH K

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 0.44 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.37 ACRES

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS SHALL BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.

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

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD88 BENCHMARK LOCATED APPROXIMATELY 1.25 MILES NORTHWEST OF THE EXISTING BRIDGE. A BRONZE WISDOT GEODETIC SURVEY CONTROL STATION "1GO7", ELEVATION 966.72.

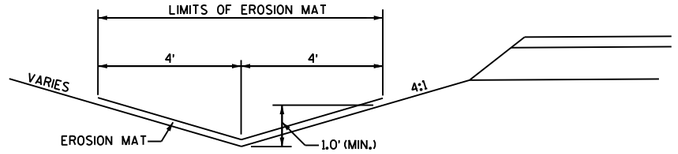
THE DEPARTMENT OF TRANSPORTATION WILL FURNISH A BENCHMARK MONUMENT TO BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

THE 4" ASPHALTIC SURFACE SHALL BE CONSTRUCTED USING A 2 ½" LOWER LAYER OF 19 MM NOMINAL SIZE AGGREGATE AND A 1 ¾" UPPER LAYER OF 12.5 MM NOMINAL SIZE AGGREGATE.

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

TEMPORARY DITCH CHECKS, IF NEEDED, SHALL BE PLACED AS DIRECTED BY THE ENGINEER.

THE ASPHALT SURFACE SHALL TAPER FROM 32.5 FEET AT THE END OF THE BRIDGE TO 22.0 FEET AT ±30 FEET FROM THE BRIDGE ENDS.



EROSION MAT DITCH DETAIL

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ATTN: MICHAEL J. STATZ, P.E.
2901 INTERNATIONAL LANE, SUITE 300
MADISON, WI 53704-3133
PHONE: (608) 242-7779
EMAIL: MSTATZ@MSA-PS.COM

GREEN COUNTY
ATTN: JEFF WUNSCHEL, COMMISSIONER
2813 6TH STREET
P.O. BOX 259
MONROE, WI 53566
PHONE: (608) 328-9411
EMAIL: JWUNSCHEL@GREENCOUNTYWI.ORG

DNR LIAISON

DEPARTMENT OF NATURAL RESOURCES
ATTN.: AMANDA CUSHMAN
ENVIRONMENTAL REVIEW AND ANALYSIS SPECIALIST
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711-5397
PHONE: (608) 275-3485
EMAIL: AMANDA.CUSHMAN@WISCONSIN.GOV

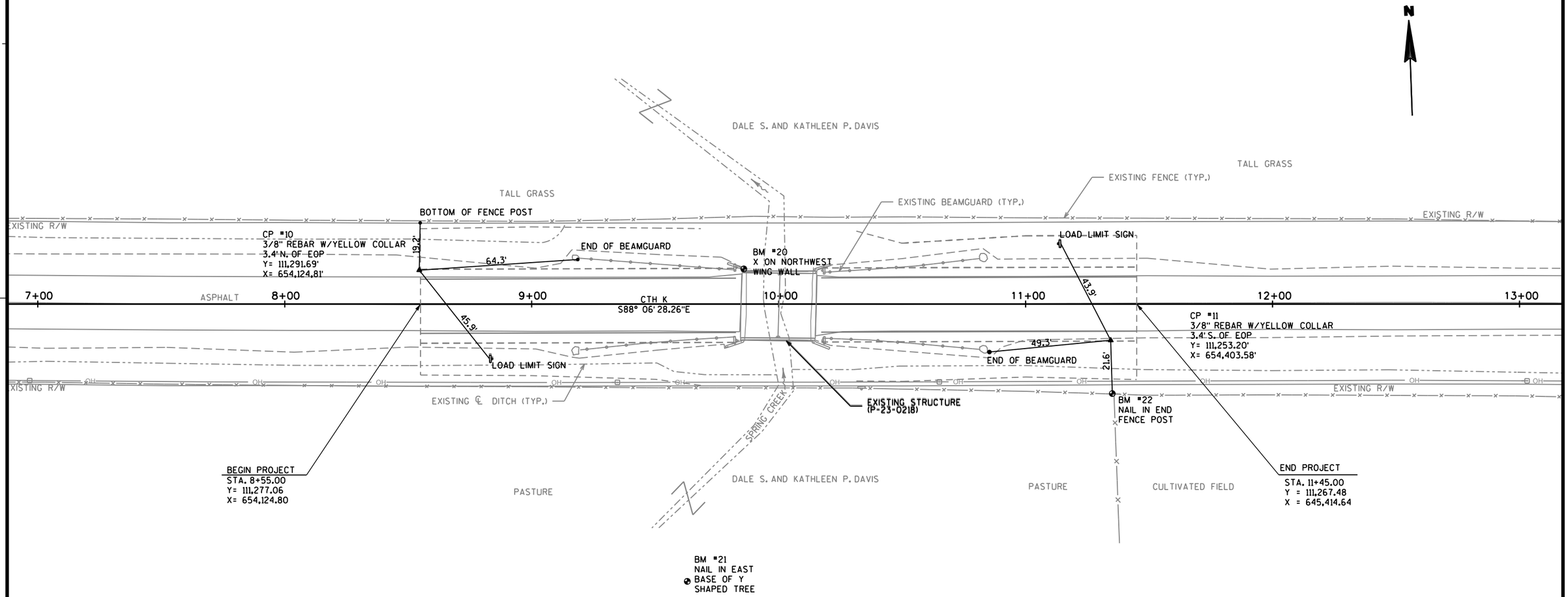
UTILITIES

ELECTRIC:
ALLIANT ENERGY
ATTN: STEVE LARSON
1915 STH 69
MONROE, WI 53818
PHONE: (608) 328-5339
EMAIL: STEVELARSON@ALLIANTENERGY.COM

**-DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

DIGGERS HOTLINE
Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

2



PROJECT NO: 5638-00-70	HWY: CTH K	COUNTY: GREEN	CONTROL POINT TIES AND ALIGNMENT DIAGRAM	SHEET 3	E

FILE NAME : P:\230s\239\00239026\CADD\Plansheets\Control Points and Alignment.dgn PLOT DATE : 7/10/2013 PLOT BY : jmcadams PLOT NAME : PLOT SCALE : 1:40

DATE 15OCT13 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	5638-00-70 QUANTITY
0010	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. STATION 10+00	LS	1.000	1.000
0020	205.0100	EXCAVATION COMMON	CY	550.000	550.000
0030	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-23-0172	LS	1.000	1.000
0040	210.0100	BACKFILL STRUCTURE	CY	280.000	280.000
0050	213.0100	FINISHING ROADWAY (PROJECT) 01. 5638-00-70	EACH	1.000	1.000
0060	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	50.000	50.000
0070	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	700.000	700.000
0080	311.0110	BREAKER RUN	TON	160.000	160.000
0090	455.0605	TACK COAT	GAL	20.000	20.000
0100	465.0105	ASPHALTIC SURFACE	TON	150.000	150.000
0110	502.0100	CONCRETE MASONRY BRIDGES	CY	137.000	137.000
0120	502.3200	PROTECTIVE SURFACE TREATMENT	SY	185.000	185.000
0130	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	4,660.000	4,660.000
0140	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	14,550.000	14,550.000
0150	513.4060	RAILING TUBULAR TYPE M (STRUCTURE) 01. B-23-0172	LS	1.000	1.000
0160	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	13.000	13.000
0170	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	870.000	870.000
0180	606.0300	RIPRAP HEAVY	CY	85.000	85.000
0190	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	140.000	140.000
0200	614.0920	SALVAGED RAIL	LF	260.000	260.000
0210	619.1000	MOBILIZATION	EACH	1.000	1.000
0220	625.0500	SALVAGED TOPSOIL **P**	SY	510.000	510.000
0230	627.0200	MULCHING **P**	SY	390.000	390.000
0240	628.1504	SILT FENCE	LF	500.000	500.000
0250	628.1520	SILT FENCE MAINTENANCE	LF	1,000.000	1,000.000
0260	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	2.000	2.000
0270	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0280	628.2004	EROSION MAT CLASS I TYPE B	SY	300.000	300.000
0290	628.2006	EROSION MAT URBAN CLASS I TYPE A	SY	50.000	50.000
0300	628.7504	TEMPORARY DITCH CHECKS	LF	50.000	50.000
0310	629.0210	FERTILIZER TYPE B **P**	CWT	0.800	0.800
0320	630.0120	SEEDING MIXTURE NO. 20 **P**	LB	30.000	30.000
0330	630.0200	SEEDING TEMPORARY	LB	25.000	25.000
0340	631.1100	SOD EROSION CONTROL	SY	50.000	50.000
0350	634.0612	POSTS WOOD 4X6-INCH X 12-FT	EACH	4.000	4.000
0360	637.2210	SIGNS TYPE II REFLECTIVE H	SF	12.000	12.000
0370	638.2602	REMOVING SIGNS TYPE II	EACH	4.000	4.000
0380	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	4.000	4.000
0390	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0400	643.0100	TRAFFIC CONTROL (PROJECT) 01. 5638-00-70	EACH	1.000	1.000
0410	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	220.000	220.000
0420	646.0103	PAVEMENT MARKING PAINT 4-INCH	LF	943.000	943.000
0430	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	255.000	255.000
0440	650.5000	CONSTRUCTION STAKING BASE	LF	255.000	255.000
0450	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-23-0172	LS	1.000	1.000
0460	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 5638-00-70	LS	1.000	1.000
0470	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	255.000	255.000

3

DATE 15OCT13 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	5638-00-70 QUANTITY
0480	690.0150	SAWING ASPHALT	LF	44.000	44.000
0490	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	900.000	900.000

3

EARTHWORK PROJECT I.D. 5638-00-70

Division	From/To Station	Location	Common Excavation (1) (item # 205.0100)		Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Borrow	Comment:
			Cut (2)	EBS Excavation (3)				Factor 1.25				
1	8+55 - 9+83	West CTH K	190	0	0	190	33	42	149	149	-149	
2	10+18 - 11+45	East CTH K	268	0	0	268	2	3	265	265	-265	
	STRUCTURE B-23-172		0	0	0	0	0	0	0	0	0	
	UNDISTRIBUTED EBS		-	92	0	0	0	0	0	0	0	
Grand Total			458	92	0	460	35	45	410	410	-410	
			550									

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Breaker Run material.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
6) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

BASE AGGREGATE DENSE

CATEGORY	STATION	TO STATION	LOCATION	(305.0110) 3/4-INCH TON	(305.0120) 1 1/4-INCH TON
0010	8+55	9+83	RT & LT	25	350
	10+17	11+45	RT & LT	25	350
	PROJECT TOTALS			**50**	**700**

BREAKER RUN

CATEGORY	STATION	TO STATION	(311.0110) TON
0010	UNDISTRIBUTED		160
	PROJECT TOTAL		**160**

ASPHALTIC SURFACE

CATEGORY	STATION	TO STATION	(455.0605) TACK COAT GAL	(465.0105) TON
0010	8+55	9+83	10	75
	10+17	11+45	10	75
	PROJECT TOTALS		**20**	**150**

SALVAGED RAIL

CATEGORY	STATION	TO STATION	LOCATION	(614.0920) LF
0010	9+20	9+85	LT	65
	9+20	9+85	RT	65
	10+14	10+79	LT	65
	10+14	10+79	RT	65
	PROJECT TOTAL			**260**

SILT FENCE

CATEGORY	STATION	STATION	LOCATION	(628.1504) LF	(628.1520) MAINTENANCE LF
0010	9+46	9+91	RT	80	160
	9+17	9+91	LT	110	220
	10+10	10+50	RT	75	150
	10+10	11+45	LT	170	340
	UNDISTRIBUTED			65	130
	PROJECT TOTALS			**500**	**1,000**

EROSION MAT

CATEGORY	STATION	STATION	LOCATION	(628.2004) CLASS I TYPE B SY	(628.2006) URBAN CLASS I TYPE A SY
0010	8+55	9+66	RT	100	0
	8+55	9+13	LT	60	0
	10+34	11+45	RT	100	0
	UNDISTRIBUTED			40	50
	PROJECT TOTALS			**300**	**50**

PERMANENT SIGNING

CATEGORY	CODE	STATION	LOCATION	(637.2210) SIGNS TYPE II REFLECTIVE H SF	(634.0612) POSTS WOOD 4x6-INCH 12-FT EACH
	W5-52R	9+83	RT	3.0	1
	W5-52L	9+83	LT	3.0	1
	W5-52L	10+17	RT	3.0	1
	W5-52R	10+17	LT	3.0	1
	PROJECT TOTALS			**12.0**	**4**

MOBILIZATIONS EROSION CONTROL

CATEGORY	DESCRIPTION	(628.1905) EACH	(628.1910) EMERGENCY EACH
0010	PROJECT 5638-00-72	2	2
	PROJECT TOTALS	**2**	**2**

TEMPORARY DITCH CHECKS

CATEGORY	STATION	LOCATION	(628.7504) LF
0010	Sta. 9+17, LT		10
	UNDISTRIBUTED		40
	PROJECT TOTAL		**50**

FINISHING ITEMS

				p (625.0500) SALVAGED TOPSOIL	**p** (627.0200) MULCHING	**p** (629.0210) FERTILIZER TYPE B	**p** (630.0120) SEEDING MIXTURE NO. 20	(630.0200) SEEDING TEMPORARY	(631.1100) SOD EROSION CONTROL
p pay plan quantity									
CATEGORY	STATION	TO STATION	LOCATION	SY	SY	CWT	LB	LB	SY
0010	8+55	9+70	LT	160	100	0.2	8	-	-
	8+55	9+70	RT	120	70	0.2	8	-	-
	10+17	11+45	LT	90	150	0.2	6	-	-
	10+17	11+45	RT	140	70	0.2	8	-	-
		UNDISTRIBUTED		0	0	0.0	0	25	50
		PROJECT TOTALS		**510**	**390**	**0.8**	**30**	**25**	**50**

CONSTRUCTION STAKING

CATEGORY	STATION	TO STATION	LOCATION	(650.4500) SUBGRADE LF	(650.5000) BASE LF	(650.6500) STRUCTURE LAYOUT LS	(650.9910) SUPPLEMENTAL CONTROL LS	(650.9920) SLOPE STAKES LF
0010	8+55	9+83	LT & RT	128	128	-	-	128
	10+18	11+45	LT & RT	127	127	-	-	127
		PROJECT 5605-00-72		-	-	-	1	-
		CATEGORY 0010 SUBTOTALS		**255**	**255**	**0**	**1**	**255**
0020		STRUCTURE B-23-170		-	-	1	-	-
		CATEGORY 0020 SUBTOTALS		**0**	**0**	**1**	**0**	**0**
		PROJECT TOTALS		**255**	**255**	**1**	**1**	**255**

PAVEMENT MARKING PAINT 4-INCH

CATEGORY	STATION	STATION	LOCATION	(646.0103) YELLOW LF	(646.0103) WHITE LF	NOTES
0010	8+55	11+45	LT	-	290	SOLID WHITE EDGE LINE
	8+55	11+45	LT CENTERLINE	73	-	DASHED YELLOW CENTERLINE
	8+55	11+45	RT CENTERLINE	290	-	SOLID YELLOW CENTERLINE
	8+55	11+45	RT	-	290	SOILD WHITE EDGE LINE
		PROJECT SUBTOTALS		**363**	**580**	
		PROJECT TOTAL		**943**		

REMOVING SIGNS TYPE II & REMOVING SMALL SIGN SUPPORTS

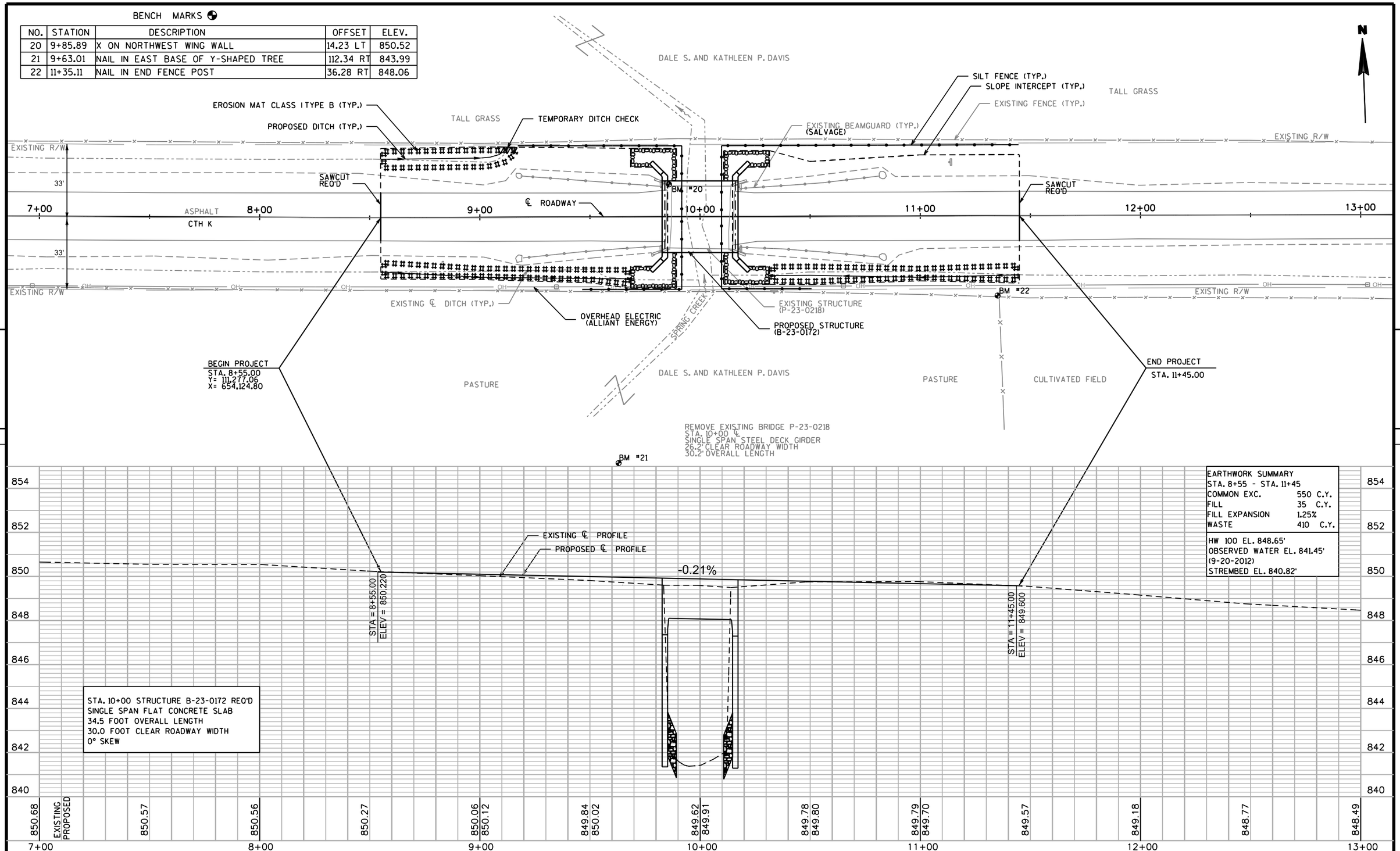
CATEGORY	STATION	LOCATION	(638.2602) REMOVING SIGNS TYPE II EACH	(638.3000) REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	9+83	RT	1	1	BRIDGE MARKERS
	8+83	LT	1	1	BRIDGE MARKERS
	10+14	RT	1	1	BRIDGE MARKERS
	10+14	LT	1	1	BRIDGE MARKERS
		PROJECT TOTALS	**4**	**4**	

SAWING ASPHALT

CATEGORY	STATION	TO STATION	LOCATION	(690.0150) LF
0010	8+55		LT & RT	22
	11+45		LT & RT	22
		PROJECT TOTAL		**44**

BENCH MARKS

NO.	STATION	DESCRIPTION	OFFSET	ELEV.
20	9+85.89	X ON NORTHWEST WING WALL	14.23 LT	850.52
21	9+63.01	NAIL IN EAST BASE OF Y-SHAPED TREE	112.34 RT	843.99
22	11+35.11	NAIL IN END FENCE POST	36.28 RT	848.06



PROJECT NO: 5638-00-70	HWY: CTH K	COUNTY: GREEN	PLAN AND PROFILE	SHEET 8	E

FILE NAME : P:\230s\239\00239026\CADD\Plansheets\Plan and Profile.dgn PLOT DATE : 7/10/2013 PLOT BY : jmcadams PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 40

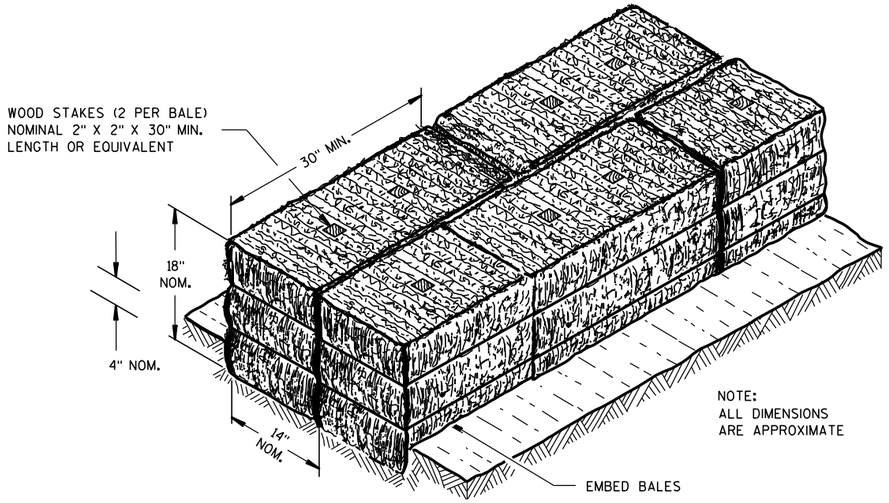
Plan and Profile.dgn 7/10/2013 3:01:19 PM jmcadams

Standard Detail Drawing List

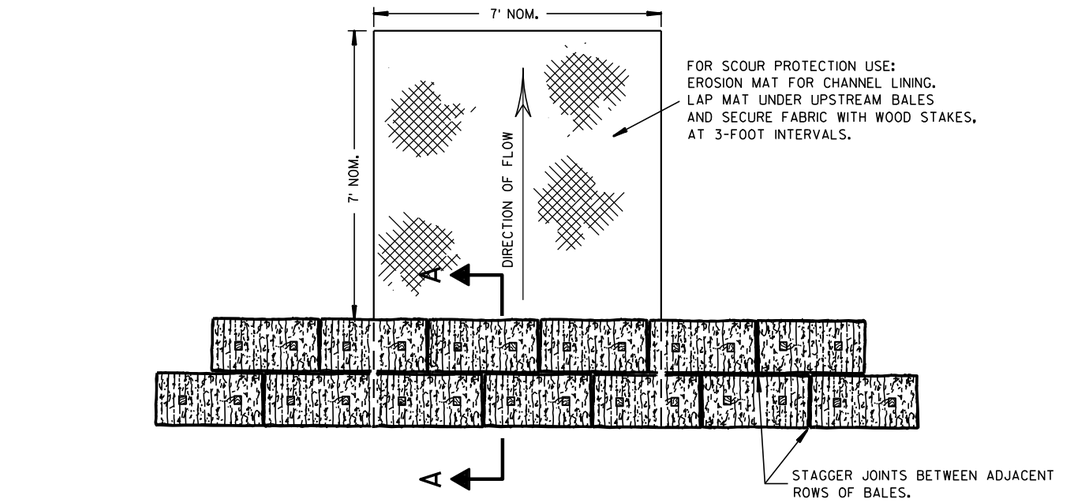
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-06	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-16A	PAVEMENT MARKING (MAINLINE)

6

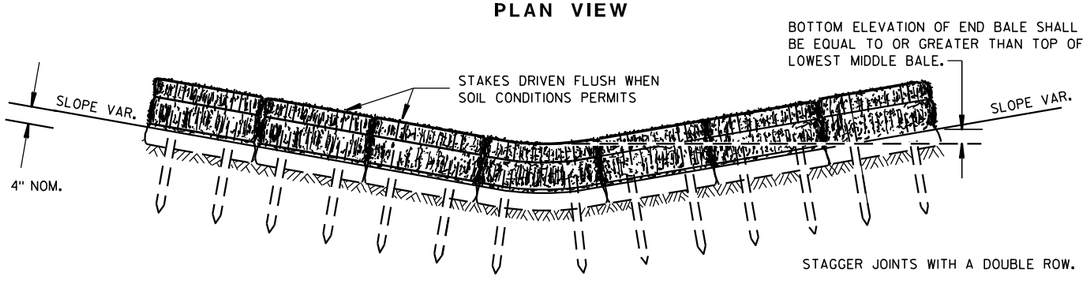
6



SECTION A-A



PLAN VIEW



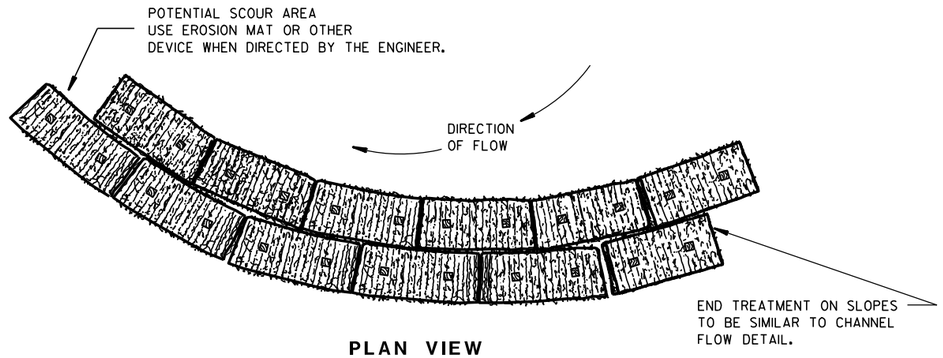
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

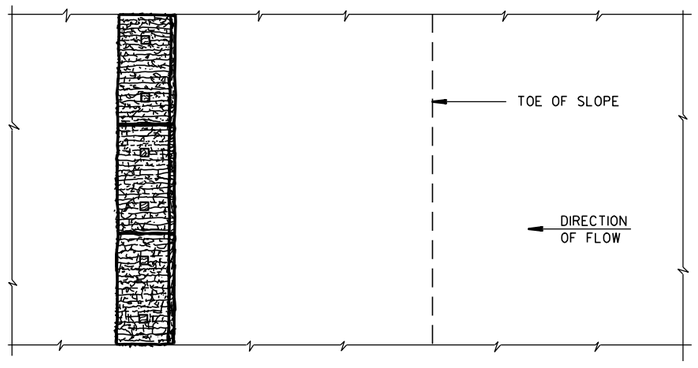
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

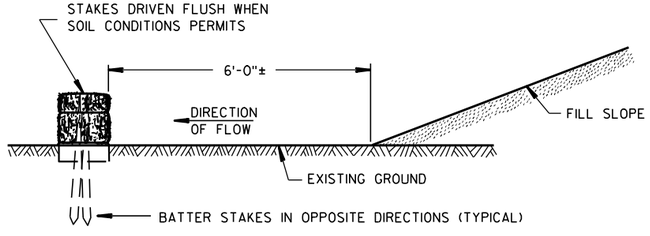


PLAN VIEW

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

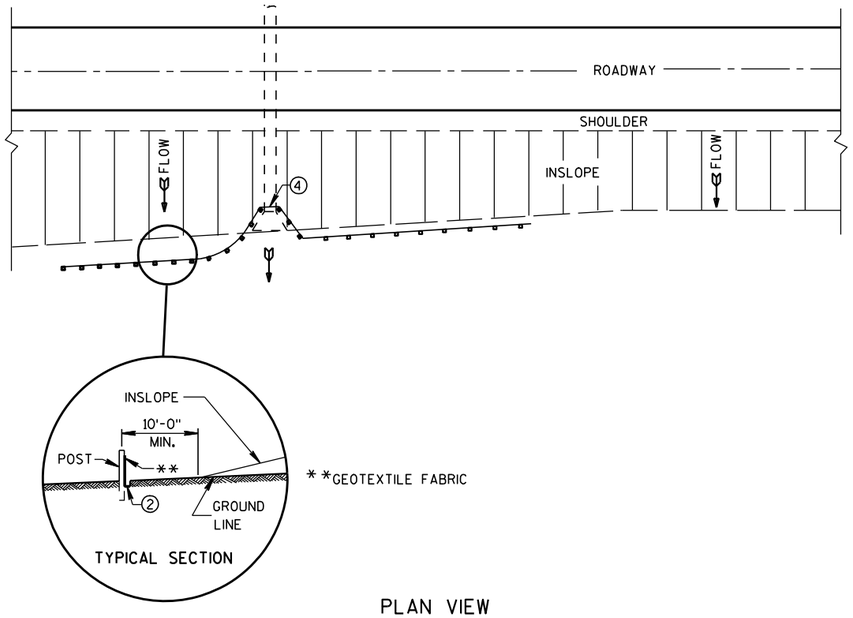
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

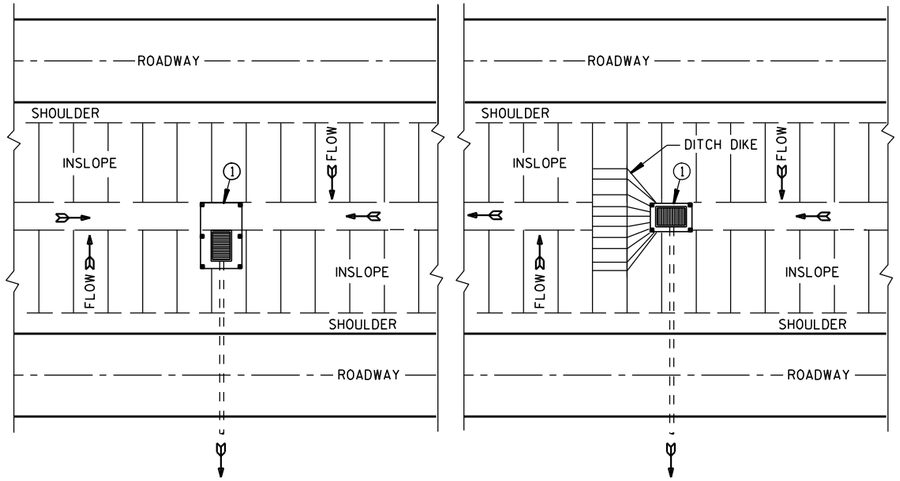
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

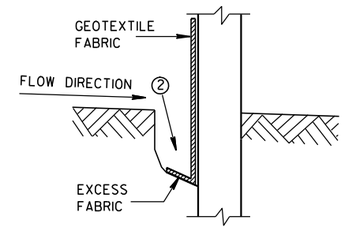
(1) HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

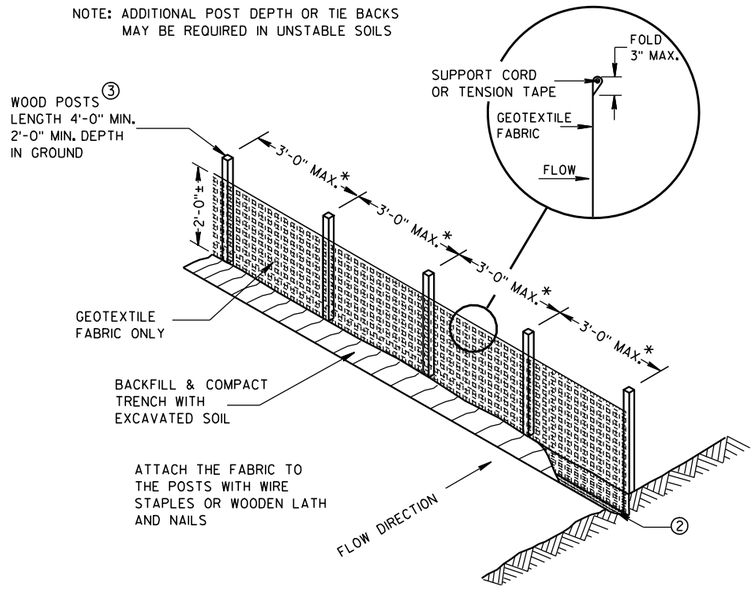
(3) WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

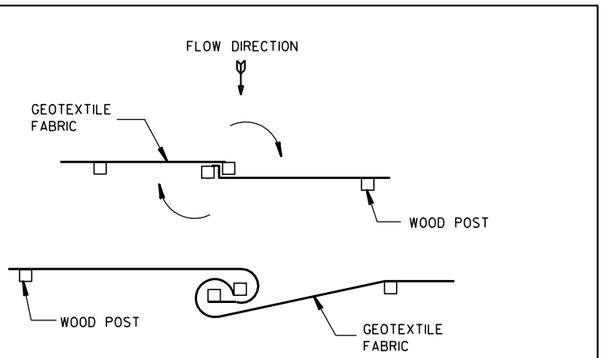
(5) CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



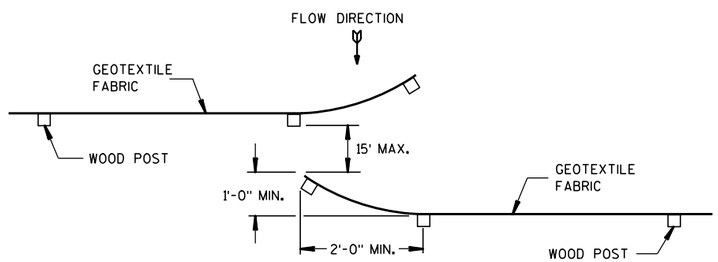
TRENCH DETAIL



SILT FENCE

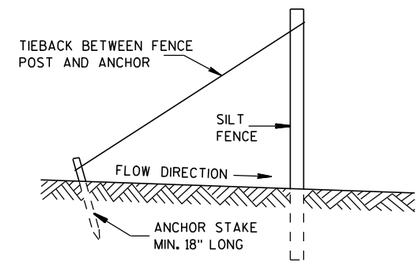


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE (5)



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

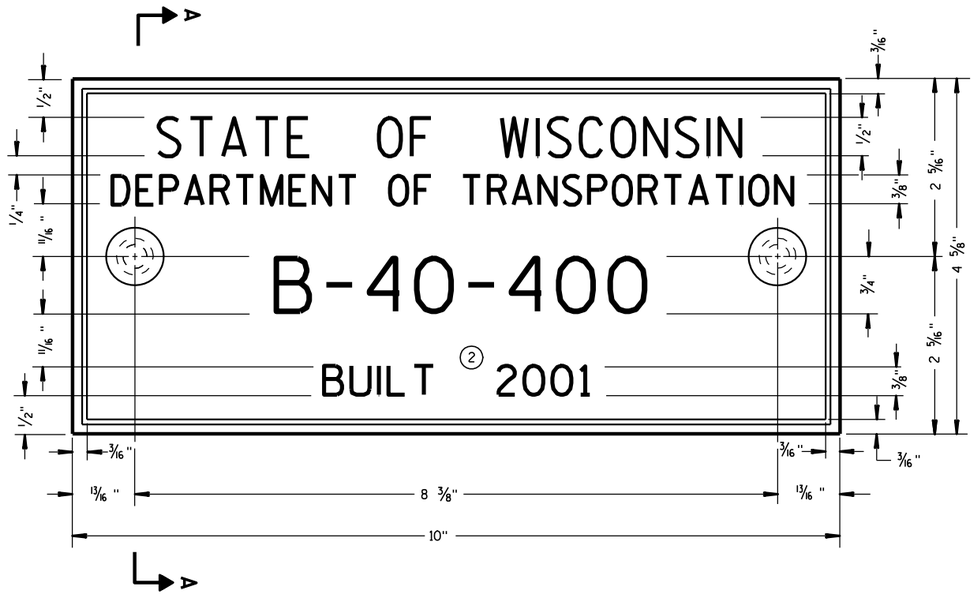
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 9-6

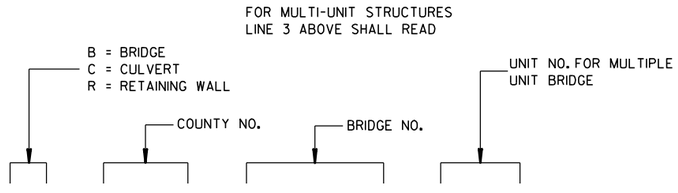
6

S.D.D. 8 E 9-6



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

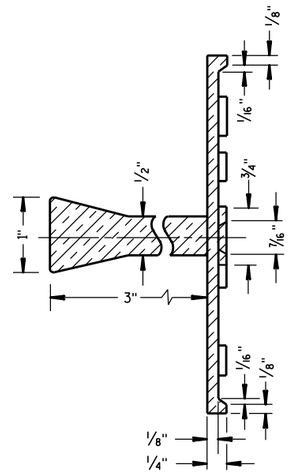
GENERAL NOTES

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.

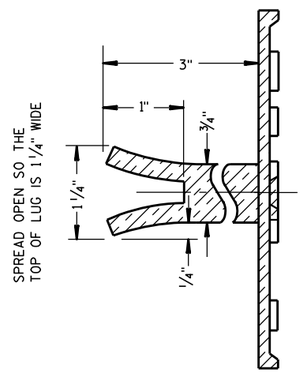
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

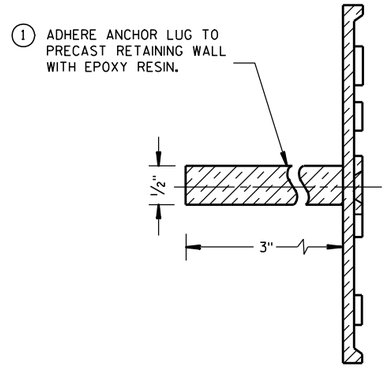
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



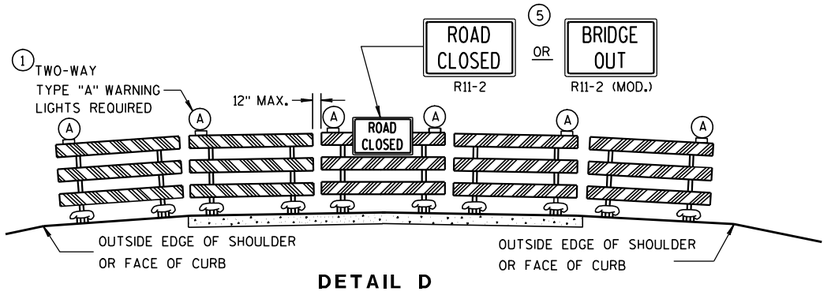
ALTERNATE LUG

(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

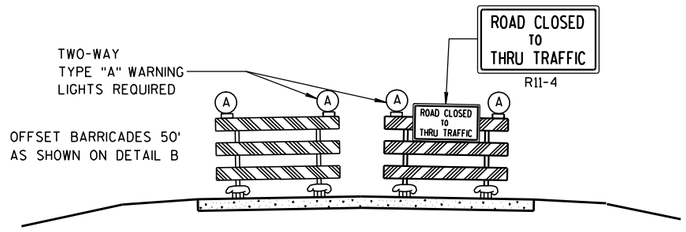
S.D.D. 12 A 3-10



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/16/03
DATE

/S/ Thomas N. N[illegible]
CHIEF SIGNS AND MARKINGS ENGINEER

FHWA

6

S.D.D. 15 C 2-4b

GENERAL NOTES

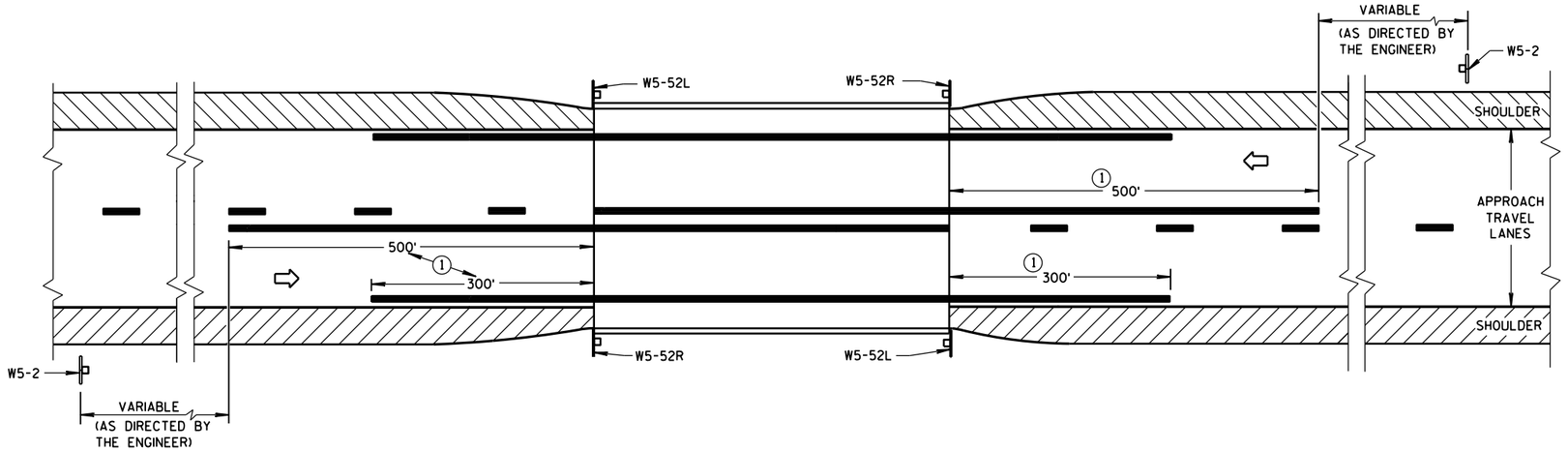
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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.

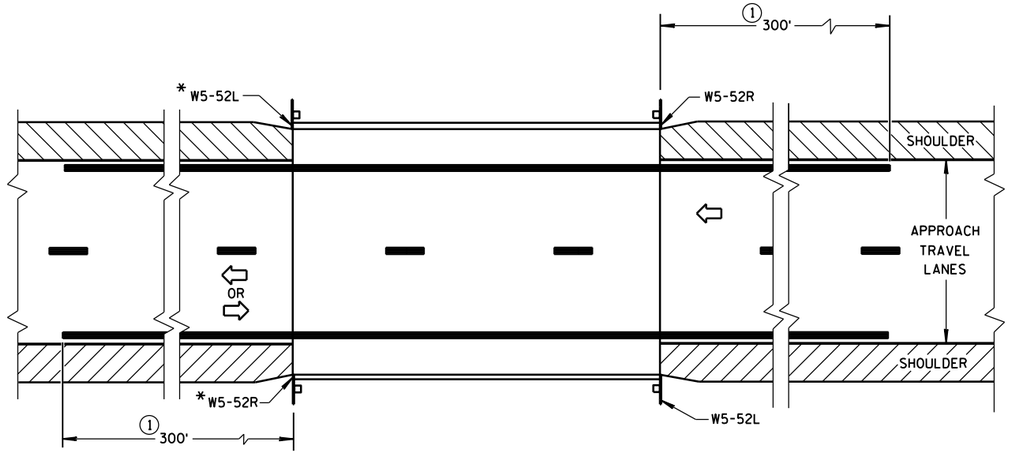
(3) LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.



SITUATION 1

WARRANTING CRITERIA:

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

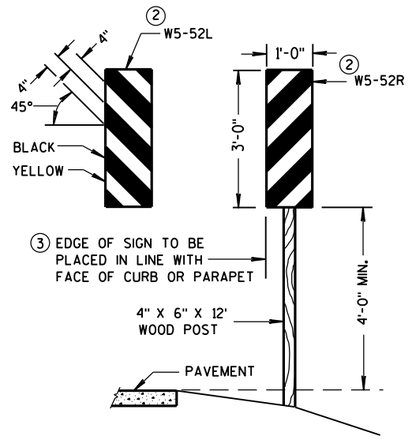


*OMIT ON ONE-WAY TRAVELLED WAYS

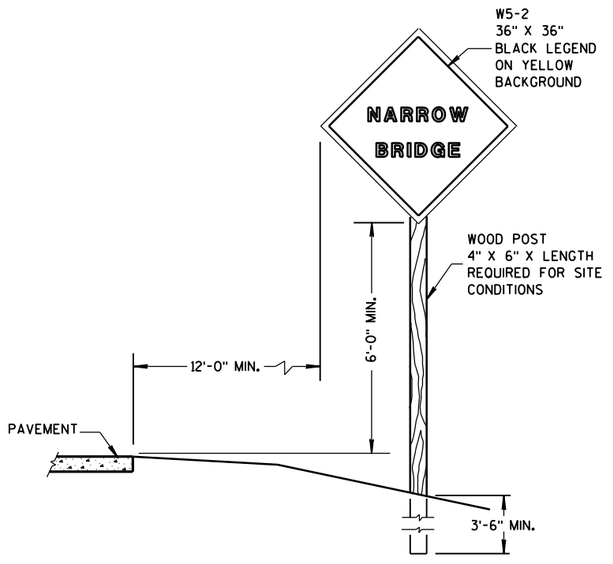
SITUATION 2

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.



OBJECT MARKER PLACEMENT



SIGN PLACEMENT

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

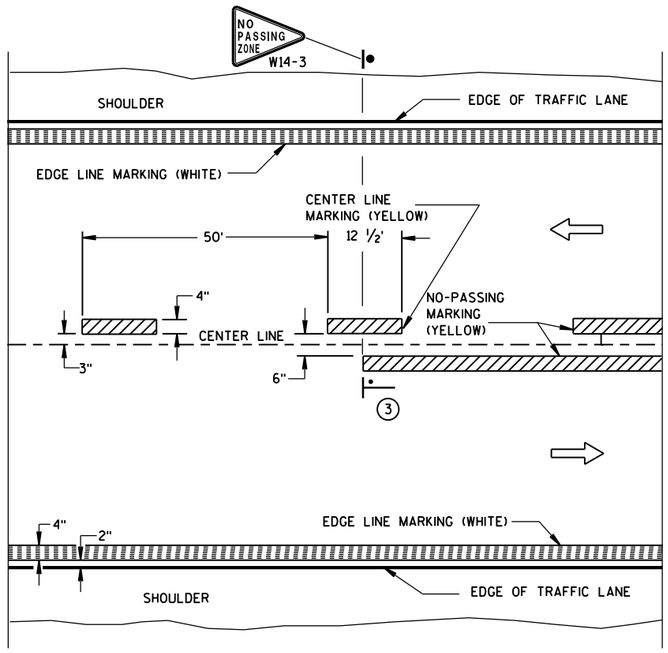
3/4/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

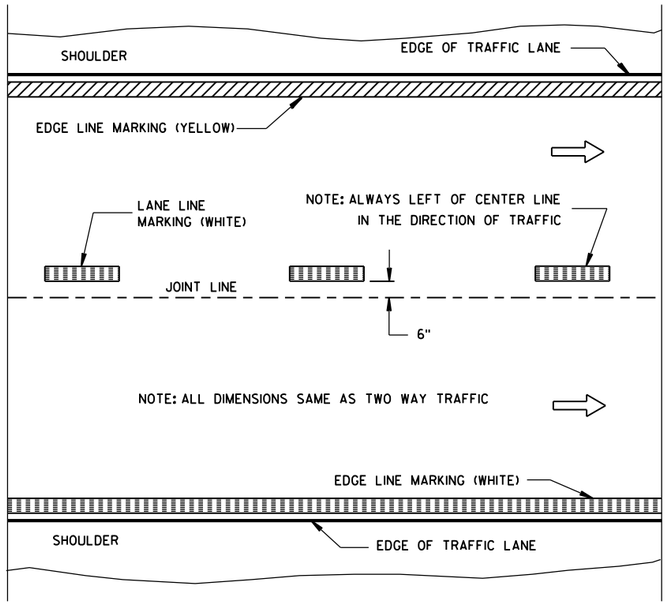
FHWA

6

S.D.D. 15 C 6-6

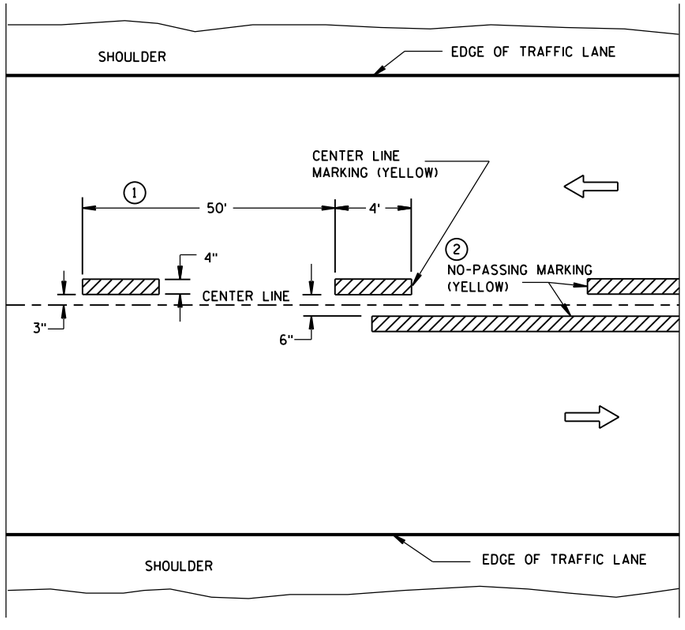


TWO WAY TRAFFIC

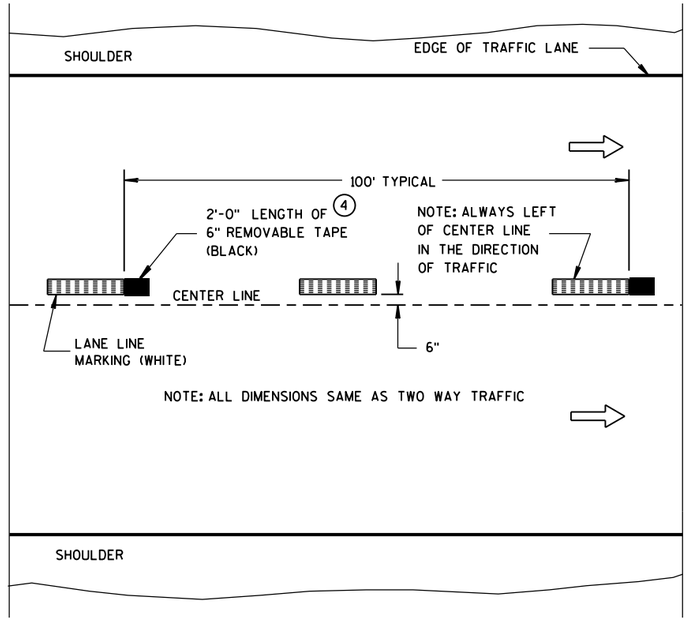


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

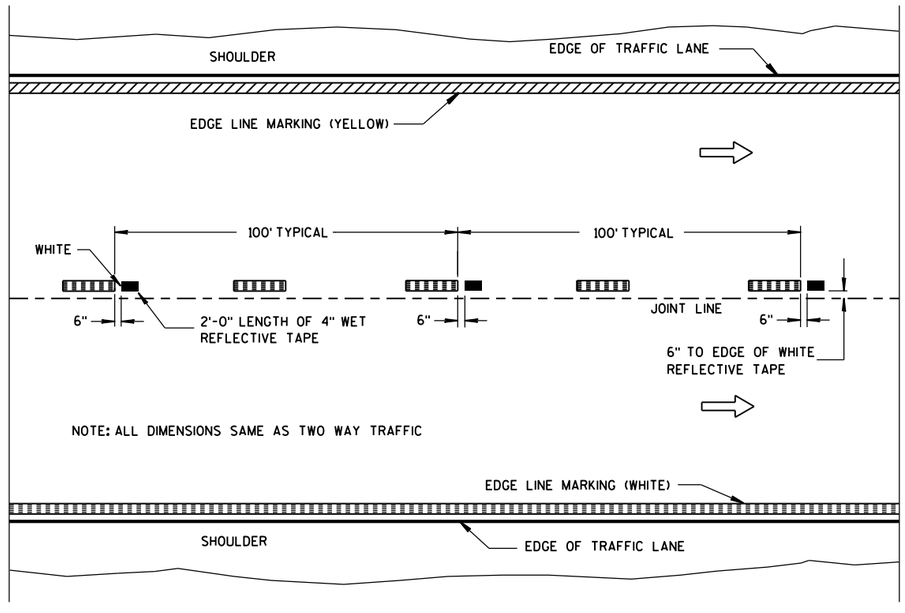
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC E

FHWA

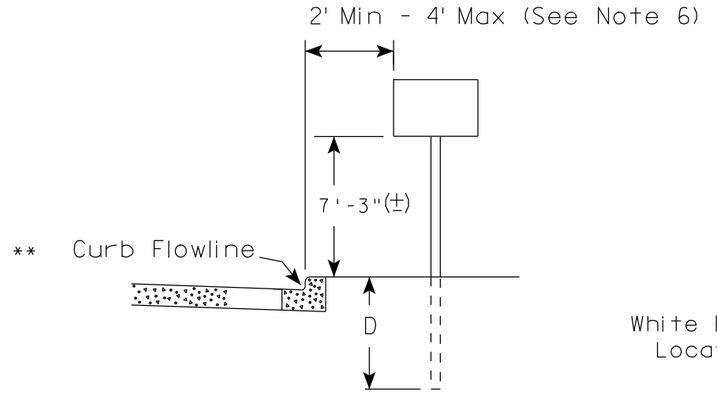
6

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

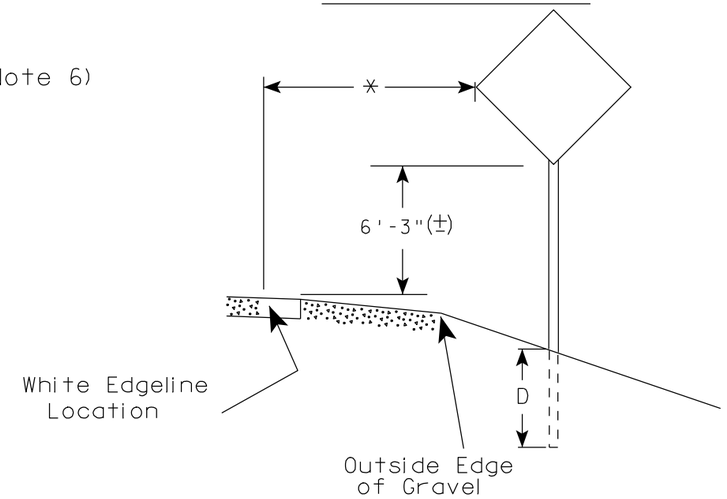
6

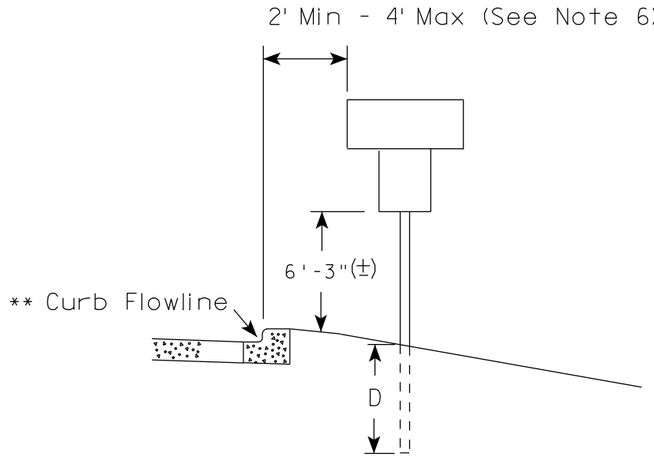
S.D.D. 15 C 8-16a

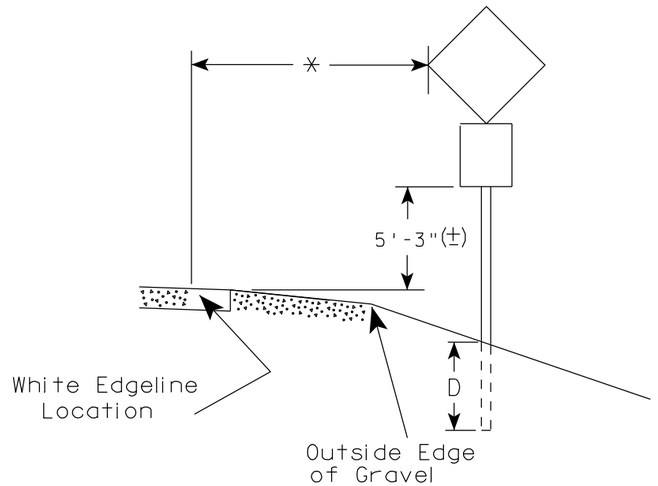
URBAN AREA



RURAL AREA (See Note 2)







** 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), 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'

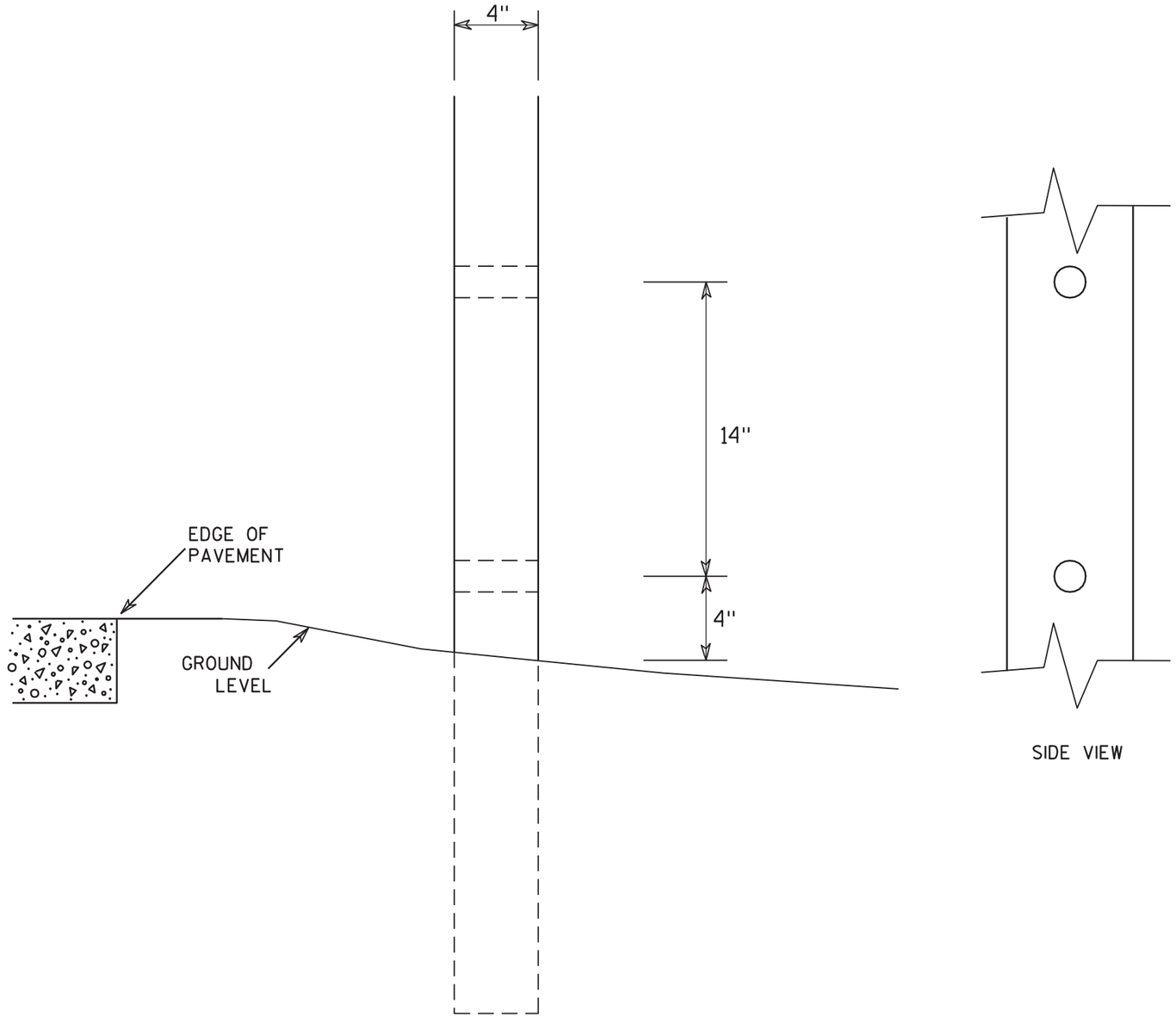
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/24/2013 PLATE NO. A4-3.17

PROJECT NO: 5638-00-70	HWY: CTH K	COUNTY: GREEN	PERMANENT SIGNING	SHEET NO: 16	E



SIDE VIEW

GENERAL NOTES

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

7

7

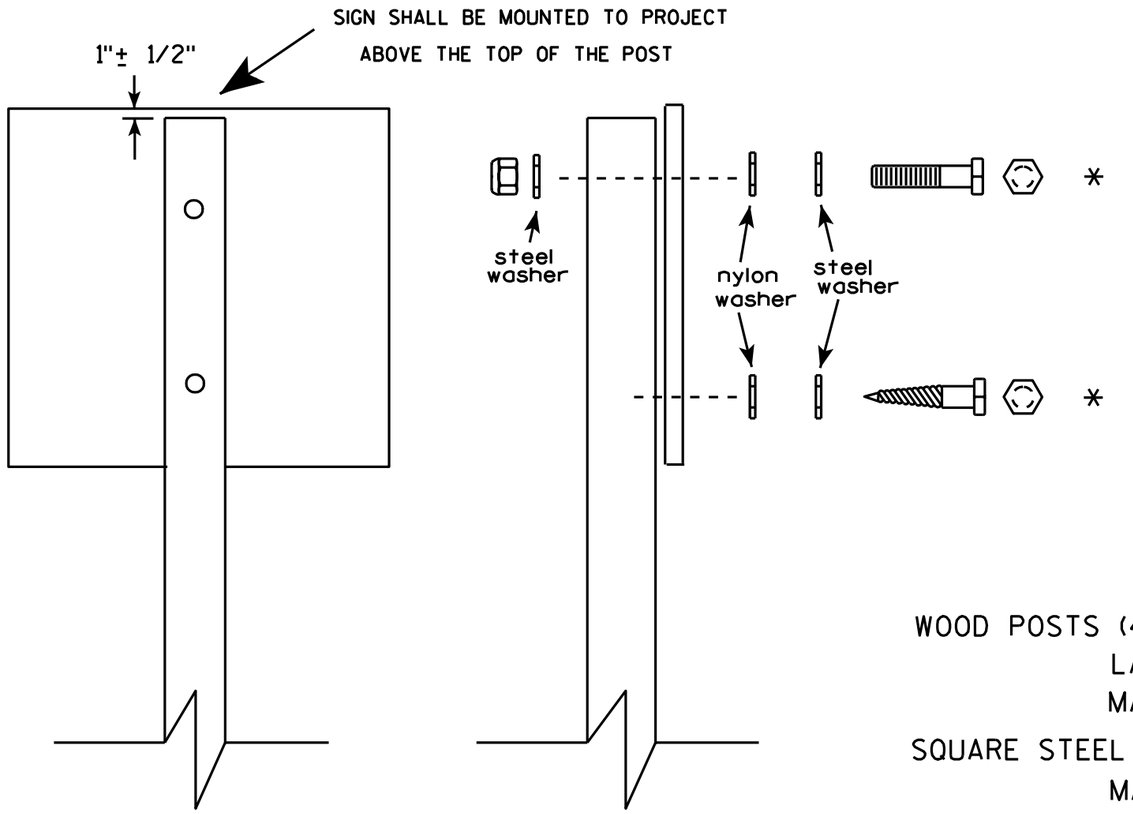
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO: 5638-00-70	HWY: CTH K	COUNTY: GREEN	PERMANENT SIGNING	SHEET NO: 17	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

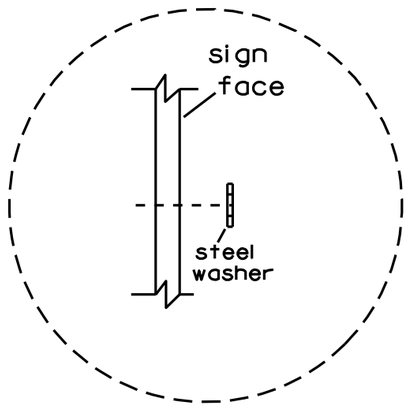
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

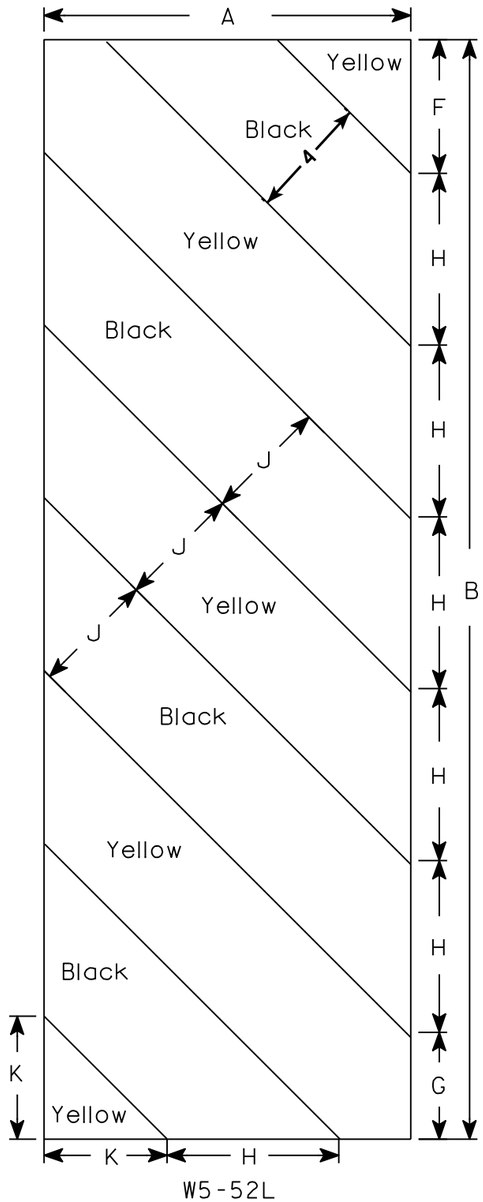
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

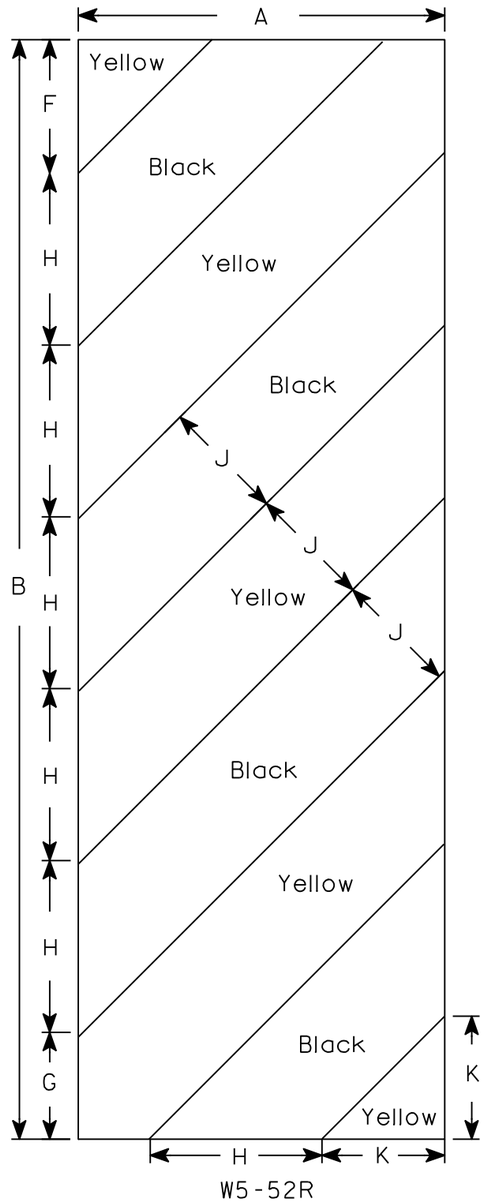
DATE 3/23/10 PLATE NO. A4-8.7

PROJECT NO: 5638-00-70	CTH K	GREEN	PERMANENT SIGNING	SHEET NO: 18	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A48.DGN PLOT DATE : 23-MAR-2010 10:15 PLOT BY : ditjph
WISDOT/CADDS SHEET 42



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

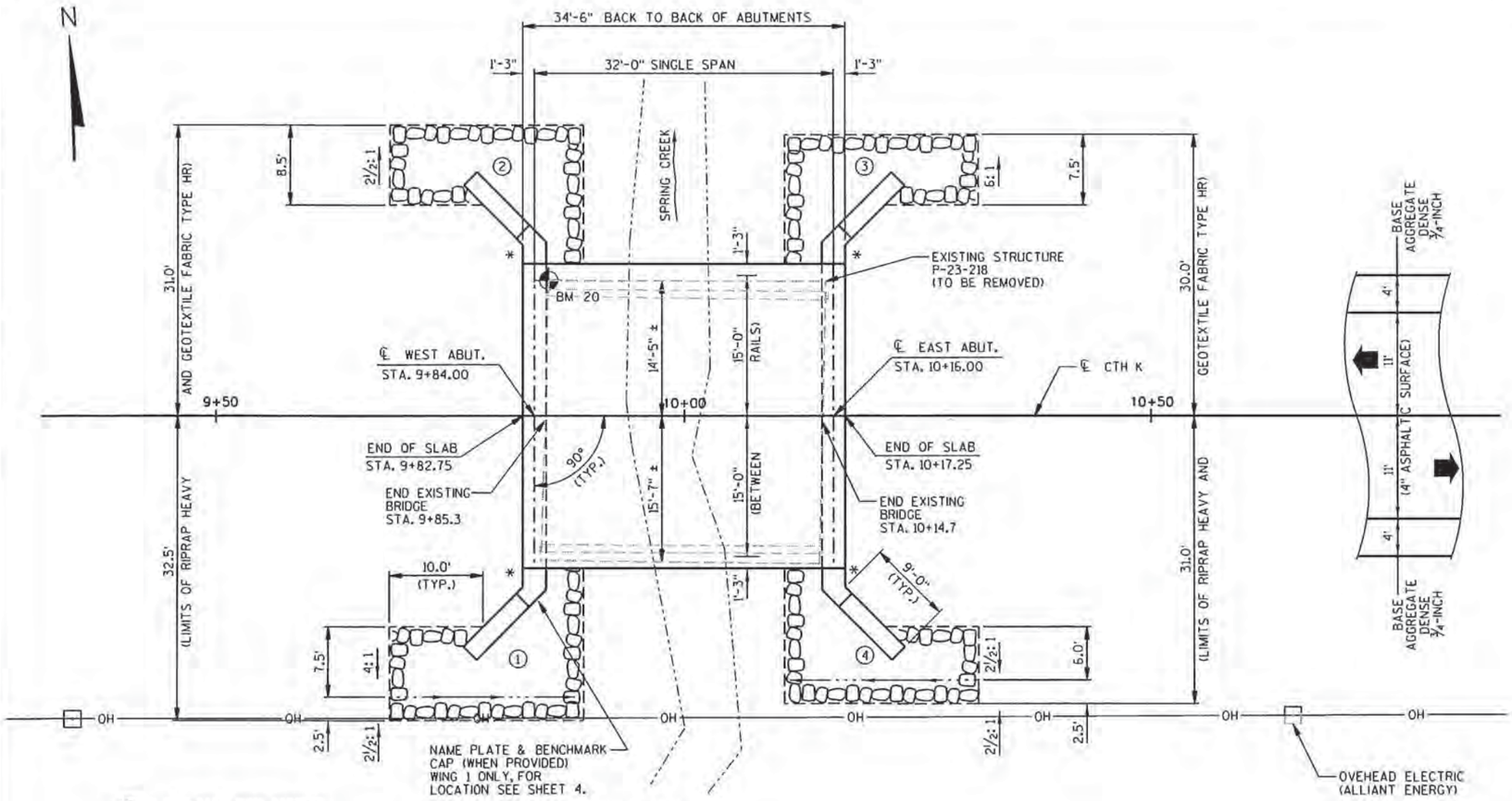
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: 5638-00-70 | HWY: CTH K | COUNTY: GREEN | PERMANENT SIGNING | SHEET NO: 19 | E

STATE PROJECT NUMBER
5638-00-70

BENCHMARKS ⌖ NAVD 88			
NO.	STA./OFFSET	DESCRIPTION	ELEV.
20	9+85.89, 14.23' LT.	X ON NORTHWEST WING WALL	850.52
21	9+63.01, 112.34' RT.	NAIL IN EAST FACE BASE OF Y-SHAPED TREE	843.99
22	11+35.11, 36.28' RT.	NAIL IN END FENCE POST	848.06



① - INDICATES WING NUMBER

* - INDICATES LOCATION OF PROVISION FOR FUTURE THRIE BEAM GUARD ATTACHMENT AT WINGS.

PLAN
(SINGLE SPAN FLAT CONCRETE SLAB)

DESIGN DATA

LIVE LOAD:
- DESIGN LOADING : HL-93
- INVENTORY RATING FACTOR : 1.09
- OPERATIONAL RATING FACTOR : 1.41
- STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.
- WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

TRAFFIC DATA:
- A.A.D.T. (2014) = 130
- A.A.D.T. (2034) = 180
- R.D.S. = 50 MPH

ULTIMATE DESIGN STRESSES:
- CONCRETE MASONRY - SLAB — f'c = 4,000 P.S.I.
- CONCRETE MASONRY - ALL OTHER — f'c = 3,500 P.S.I.
- BAR STEEL REINFORCEMENT HS BRIDGES AND BAR STEEL REINFORCEMENT HS COATED BRIDGES — fy = 60,000 P.S.I.
- HP PILING — fy = 50,000 P.S.I.

FOUNDATION DATA:

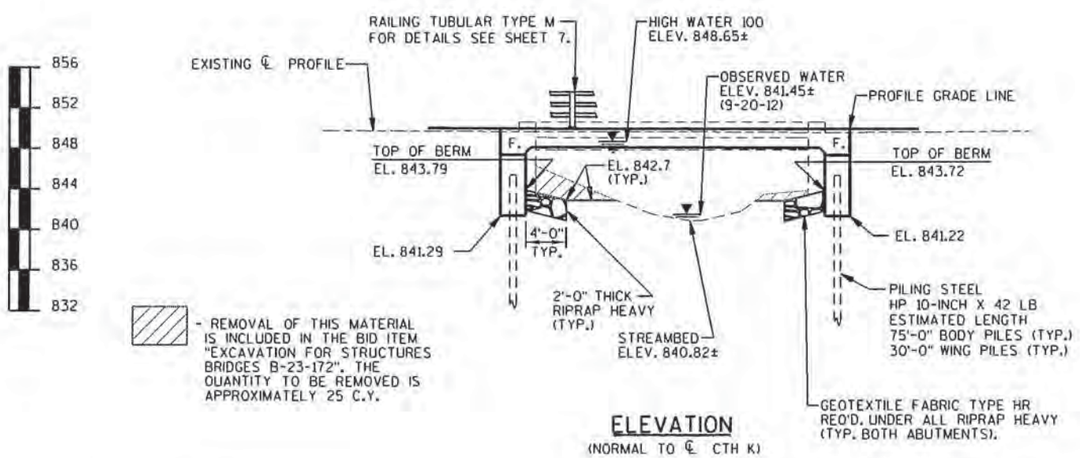
ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB. PILES TO BE DRIVEN TO A REQUIRED DRIVING RESISTANCE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. REQUIRED DRIVING RESISTANCE IS 110 TONS PER ABUTMENT BODY PILE AND 40 TONS PER WING PILE. ESTIMATED PILE LENGTHS ARE 75'-0" AT BOTH ABUTMENT BODIES AND 30'-0" AT ALL WINGS.

HYDRAULIC DATA:

100 YEAR FREQUENCY
- DRAINAGE AREA — 4.8 SQ. MI.
- Q_{100} — 1000 C.F.S.
- VELOCITY — 7.31 FT./SEC.
- WATERWAY AREA — 137 SQ. FT.
- SCOUR CRITICAL CODE — 8
- HIGH WATER $_{100}$ ELEVATION — 848.65 ±
- Q_2 ELEVATION (190 C.F.S.) — 845.20 ±

ROADWAY OVERFLOW DESIGN FREQUENCY
- OVERTOPPING FREQUENCY — > 100 YEARS

LIST OF DRAWINGS



ELEVATION
(NORMAL TO ℄ CTH K)

WISCONSIN
LEAH J. RHODES
E-41726
BARABOO
WI
PROFESSIONAL ENGINEER

Leah J. Rhodes
8-28-2013

DESIGN CONTACT:	BRIDGE OFFICE CONTACT:
LEAH RHODES	WILLIAM DREHER
(608) 355-8945	(608) 266-8489

NO.	DATE	REVISION	BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
1230 South Boulevard Baraboo, WI 53913
608-356-2771 1-800-362-4505 Fax: 608-356-2770

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR — 09/16/13
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-23-172

CTH K OVER SPRING CREEK

COUNTY	TOWN/~~CITY~~/~~VILLAGE~~
GREEN	SPRING GROVE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
LJR	DHW	RLR	LJR

GENERAL PLAN

SHEET 1 OF 7
20

8

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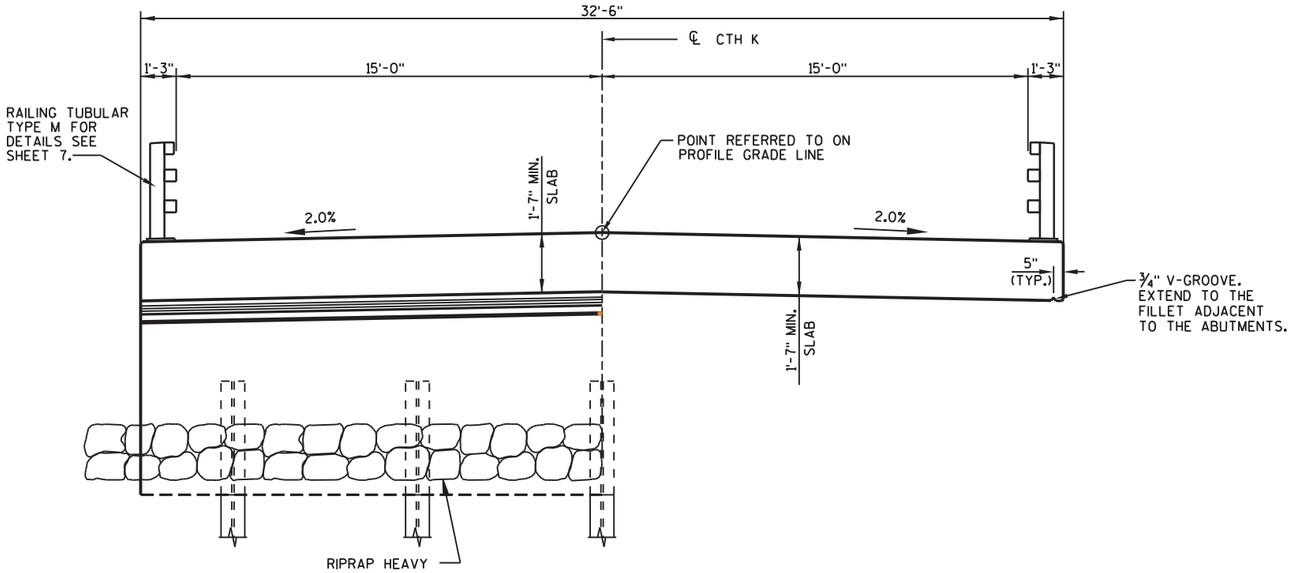
DATE= 8/26/2013

STATE PROJECT NUMBER

5638-00-70



AT ABUTMENTS IN SPAN

CROSS SECTION THRU BRIDGE

(LOOKING EAST)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE FABRIC TYPE HR TO THE LIMITS SHOWN ON SHEET 1 AND ON THE ABUTMENT SHEETS OR AS DIRECTED BY THE ENGINEER.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" FOR THE ABUTMENTS.

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

THIS STRUCTURE WILL REPLACE EXISTING BRIDGE, P-23-218, A 29.6 FT. LONG SINGLE SPAN STEEL DECK GIRDER BRIDGE ON FULL RETAINING CONCRETE ABUTMENTS.

AT THE ABUTMENTS ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE. THE BACKFILL STRUCTURE ESTIMATED QUANTITIES ASSUMED A 1½:1 EXCAVATION SLOPE AT THE ABUTMENTS.

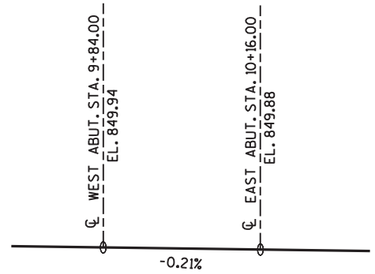
DO NOT PLACE FILL ABOVE 3'-0" FROM THE BOTTOM OF ABUTMENT UNTIL THE SUPERSTRUCTURE IS IN PLACE.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND EDGES OF SLAB, TO THE OUTSIDE 1'-0" OF THE UNDERSIDE OF SLAB, TO THE TOPS OF WINGS AND TO THE EXPOSED FRONT FACES OF WINGS.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 88 BENCHMARK LOCATED APPROXIMATELY 1.25 MILES NORTHWEST OF THE EXISTING BRIDGE SITE. THE STATION IS A BRONZE WISDOT GEODETIC SURVEY CONTROL STATION 1G07, ELEVATION 966.72 .

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	WEST ABUT.	EAST ABUT.	SUPER	TOTAL
203.0600.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-	-	-	1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES (B-23-172)	LS	-	-	-	1
210.0100	BACKFILL STRUCTURE	CY	140	140	-	280
502.0100	CONCRETE MASONRY BRIDGES	CY	33	33	71	137
502.3200	PROTECTIVE SURFACE TREATMENT	SY	20	20	145	185
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	2330	2330	-	4660
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1475	1475	11600	14550
513.4060.01	RAILING TUBULAR TYPE M (B-23-172)	LS	-	-	-	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6.5	6.5	-	13
550.1100	PILING STEEL HP (10-INCH x 42 LB)	LF	435	435	-	870
606.0300	RIPRAP HEAVY	CY	45	40	-	85
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	70	70	-	140
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	115	105	-	220
	NON-BID ITEMS					
	PREFORMED FILLER	SIZE	-	-	-	½", ¾"



PROFILE GRADE LINE - CTH K

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-23-172

DRAWN BY RLR | PLANS CK'D. LJR

CROSS SECTION, QUANTITIES & NOTES

SHEET 2 OF 7
21

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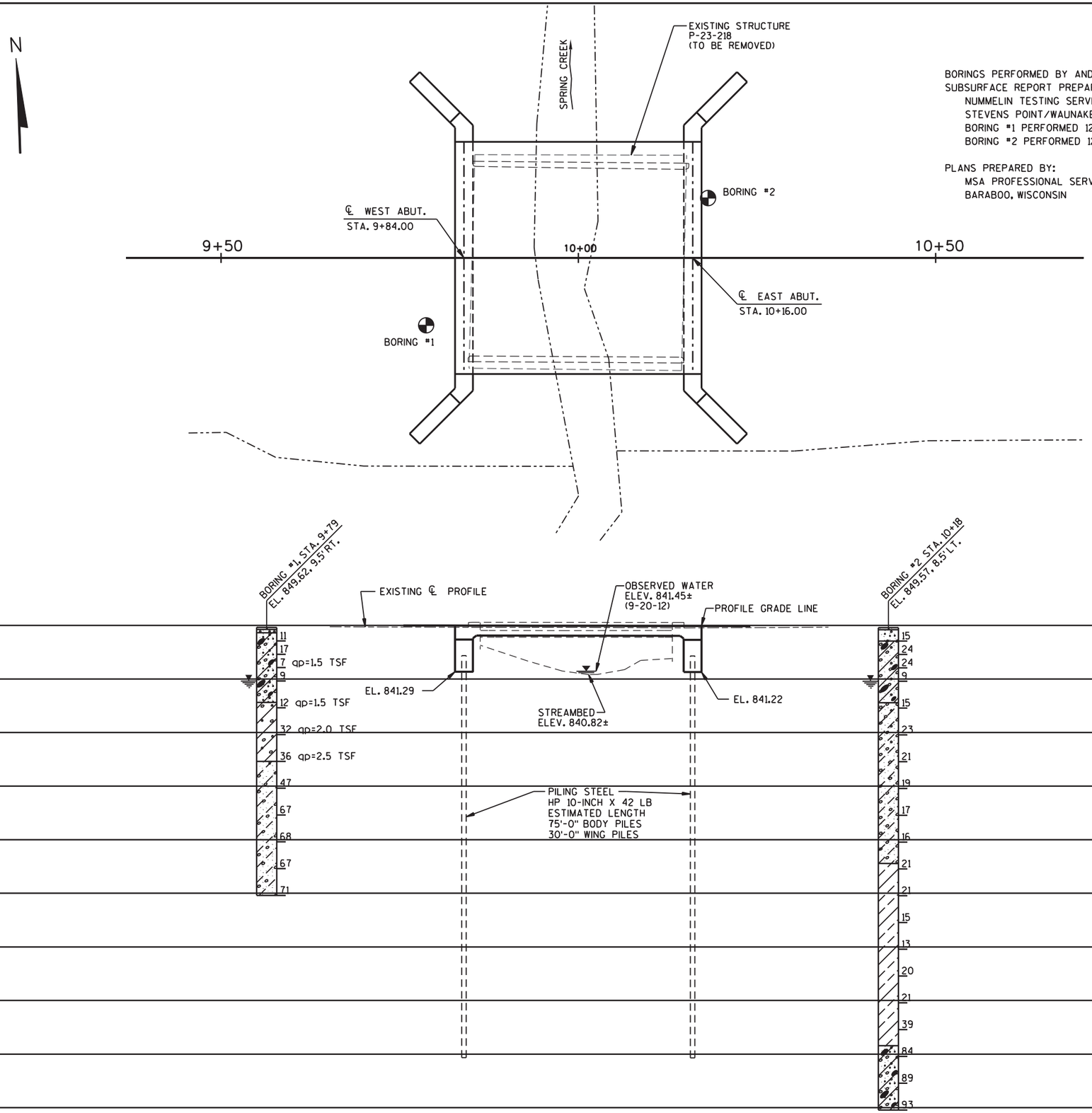


BORINGS PERFORMED BY AND
SUBSURFACE REPORT PREPARED BY:
NUMMELIN TESTING SERVICES, INC.
STEVENS POINT/WAUNAKEE, WISCONSIN
BORING #1 PERFORMED 12-03-12
BORING #2 PERFORMED 12-04-12

PLANS PREPARED BY:
MSA PROFESSIONAL SERVICES, INC.
BARABOO, WISCONSIN

STATE PROJECT NUMBER

5638-00-70

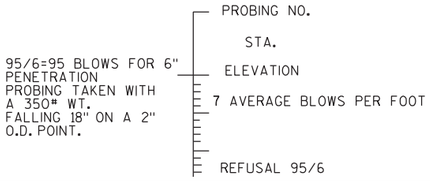
ABBREVIATIONS

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

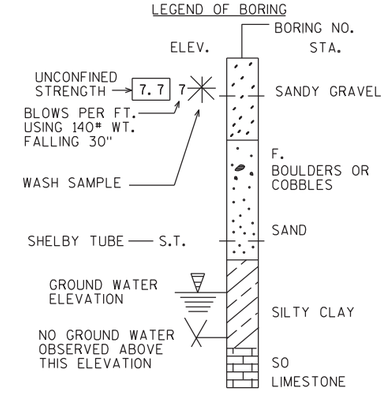
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



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-23-172

DRAWN BY RLR | PLANS CK'D. LJR

SUBSURFACE EXPLORATION

SHEET 3 OF 7
22

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STATE PROJECT NUMBER

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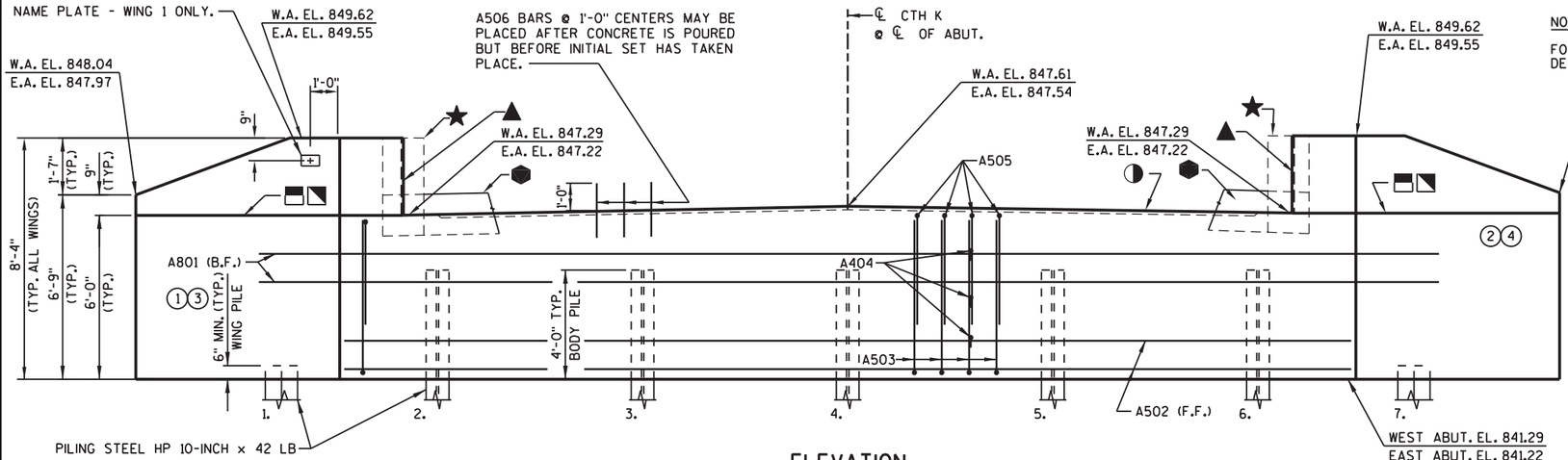
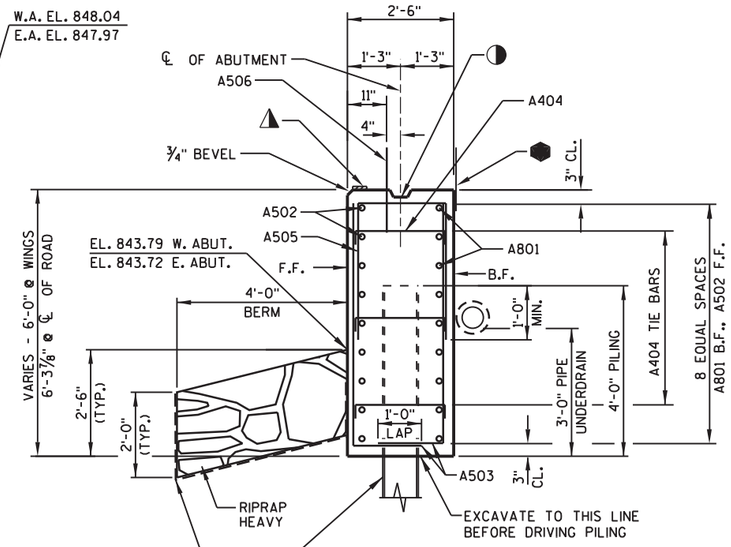


ELEVATION

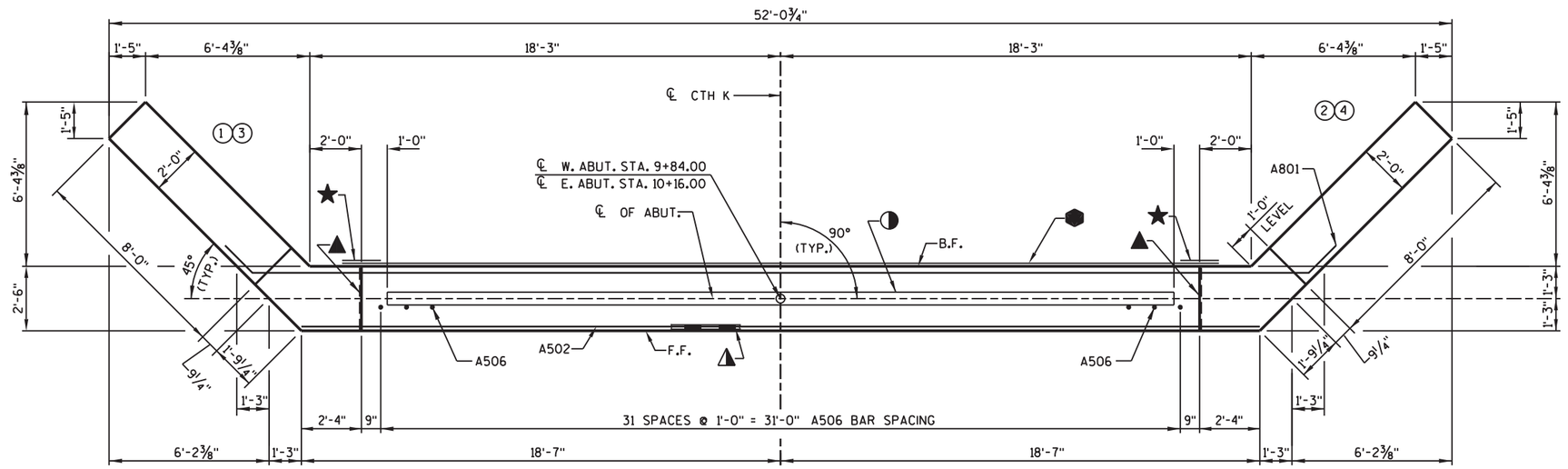
(WEST ABUTMENT LOOKING WEST)
(EAST ABUTMENT LOOKING EAST)

NOTE:

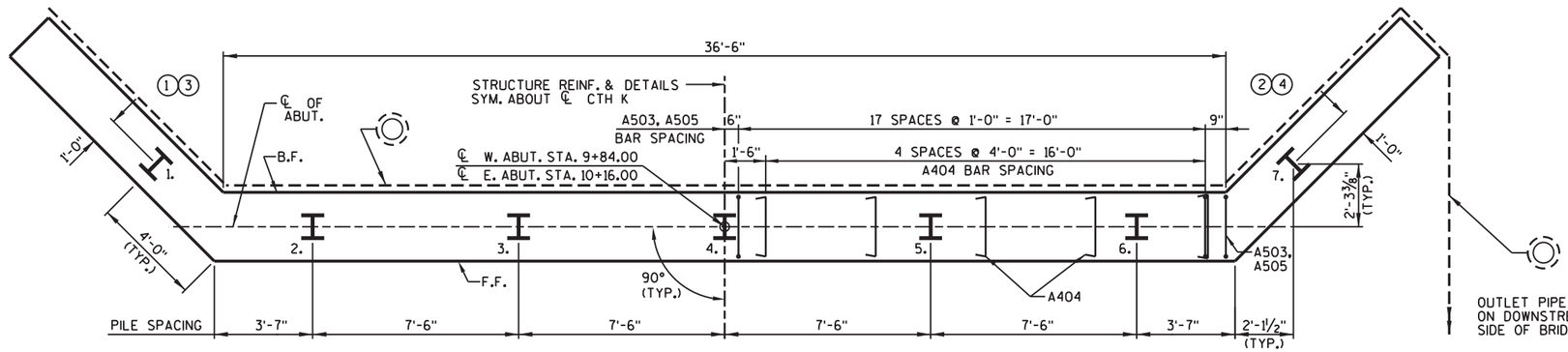
FOR WING DETAILS AND PILE SPLICE DETAILS, SEE SHEET 5.



TYPICAL SECTION THRU ABUTMENT



PLAN



PILE PLAN

OUTLET PIPE UNDERDRAIN ON DOWNSTREAM (NORTH) SIDE OF BRIDGE.

LEGEND

- ◑ — KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ▲ — 1/2" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
- ◭ — 4"x 3/4" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- ★ — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO TOP OF WINGS.
- ⬢ — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS.
- ◨ — OPTIONAL KEYED CONST. JOINT ON WING FORMED BY BEVELED 2 X 6. IF JOINT IS USED, POUR CONCRETE ABOVE JOINT AFTER DECK IS IN PLACE AND PLACE ⬢ ON B.F. OF WING. COST OF ⬢ INCLUDED IN BID ITEM "CONCRETE MASONRY BRIDGES".
- ◥ — 3/4" "V" GROOVE ON FRONT FACE OF WING WALL, REQUIRED ONLY WHERE CONST. JOINT IS USED.
- ◯ — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE.
- ◯ — INDICATES WING NUMBER
- F.F. — FRONT FACE
- B.F. — BACK FACE
- CL. — CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-23-172

DRAWN BY RLR | PLANS CK'D. LJR

ABUTMENTS

SHEET 4 OF 7
23

8

8

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DATE= 8/26/2013

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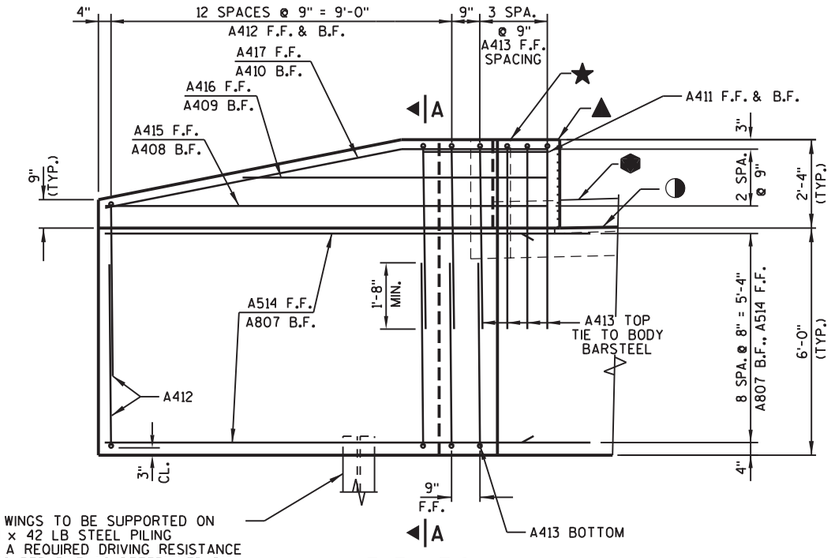
STATE PROJECT NUMBER

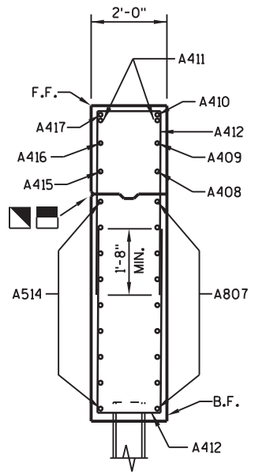
5638-00-70



ABUTMENT WINGS TO BE SUPPORTED ON HP 10-INCH x 42 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 40 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 30'-0" LONG.

ELEVATION

(LOOKING AT F.F. OF WINGS)



SECTION A-A THRU WING

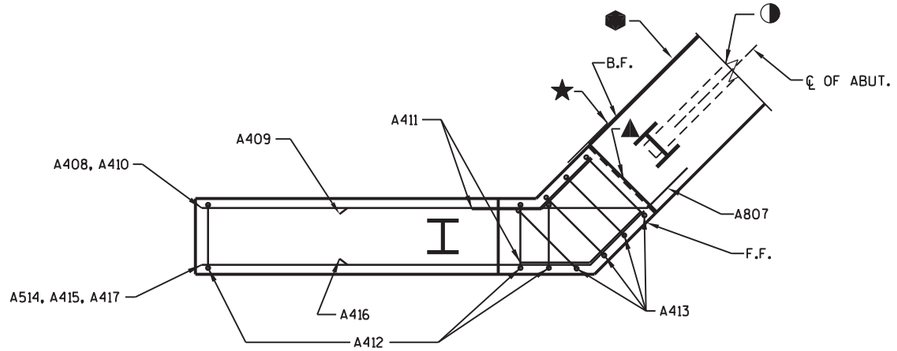
BILL OF BARS (1 ABUTMENT)

UNCOATED 2330 LBS.
COATED 1475 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
A801	-	9	43'-8"	X	ABUTMENT BODY - B.F. - HORIZ.
A502	-	9	37'-0"		" " - F.F. - "
A503	-	76	7'-0"	X	" " - F.F. & B.F. - VERT.
A404	-	30	2'-8"	X	" " - TIES - HORIZ.
A505	-	38	8'-3"	X	" " - TOP - VERT.
A506	32	-	2'-0"		" " - TOP DOWELS - "
A807	18	-	13'-2"	X	WINGS - B.F. - HORIZ.
A408	2	-	10'-9"	X	" - " - "
A409	2	-	7'-1"	X	" - " - "
A410	2	-	11'-5"	X	" - " - TOP - "
A411	4	-	3'-4"	X	" - F.F. & B.F. - TOP - "
A412	52	-	11'-2"	X	" - " " " - VERT.
A413	10	-	11'-8"	X	" - " " " - "
A514	18	-	11'-8"	X	" - F.F. - HORIZ.
A415	2	-	12'-2"	X	" - " - "
A416	2	-	8'-7"	X	" - " - "
A417	2	-	10'-4"	X	" - " - TOP - "

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

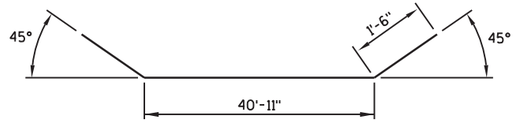
BAR MARKS FOR WEST ABUTMENT ARE SHOWN.
LABEL AND BUNDLE EAST ABUTMENT BARS WITH B MARK (B801 THRU B417).



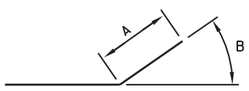
PLAN

SEE LEGEND ON SHEET 4 FOR DESCRIPTION OF ★ ⬢ ◪ ▬ ▲ ◑

NOTE:
WINGS 1 & 3 SHOWN,
WINGS 2 & 4 SIMILAR.

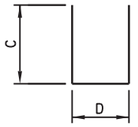


A801



MARK	A	B
A807 A514	1'-6"	45°
A408 A409 A411	1'-10"	45°
A410	3'-6"	11°
A415 A416	2'-0"	45°
A417	2'-5"	11°

A503

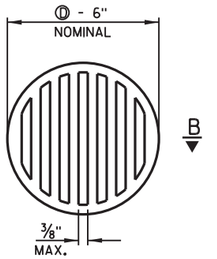


MARK	C	D
A404	4½"	2'-1"
A505	3'-2"	2'-2"
A412	4'-10"	1'-8"
A413	4'-10"	2'-2"

RODENT SHIELD NOTES:

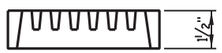
ORIENT SHIELD SO SLOTS ARE VERTICAL.

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 ATTACHEMENT OF THIS SHIELD TO THE PIPE UNDERDRAIN. 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 INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

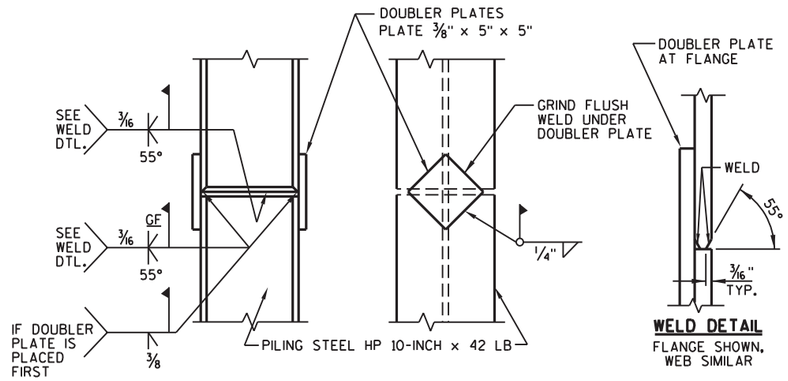


RODENT SHIELD

Ⓓ - DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



SECTION B-B



PILE SPLICE DETAILS

WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-23-172

DRAWN BY RLR | PLANS CK'D. LJR

ABUTMENT DETAILS

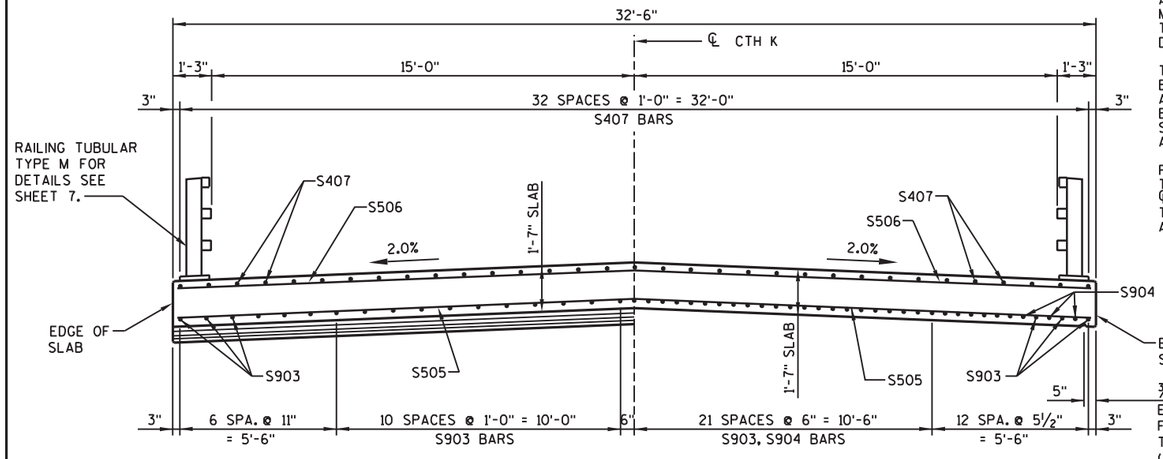
SHEET 5 OF 7
24

FILE= 239026_05.DGN
DATE= 8/26/2013

8

8

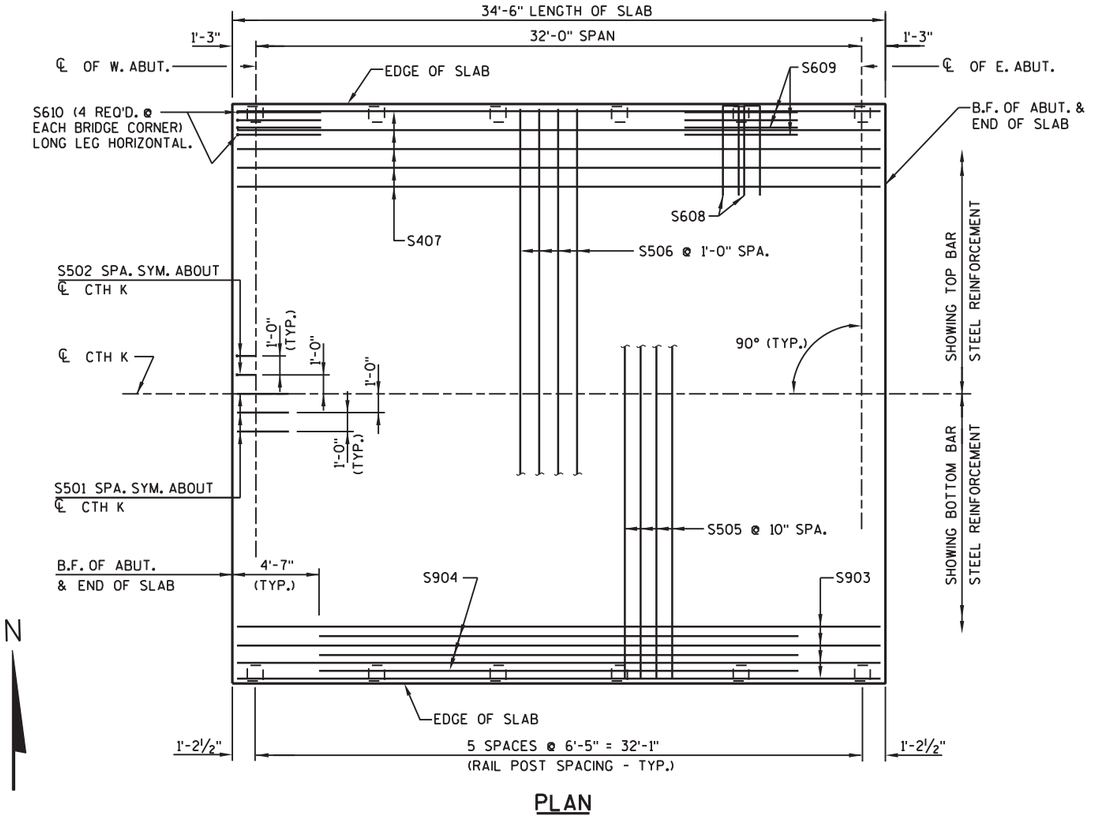
STATE PROJECT NUMBER
5638-00-70



AT ABUTMENTS IN SPAN

CROSS SECTION THRU BRIDGE

(LOOKING EAST)



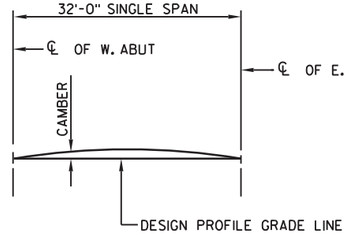
PLAN

GENERAL 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.

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



CAMBER DIAGRAM

CAMBER SPANS AS SHOWN ABOVE AND IN THE TABLE OF VALUES TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTION APPROXIMATES 1/3 OF CAMBER VALUES SHOWN.

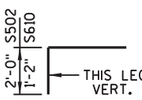
BILL OF BARS (COATED) 11,600 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	66	4'-0"	X	DIAPHRAGM @ ABUTS. - LONGIT.
S502	66	3'-5"	X	" " " - VERT.
S903	34	34'-2"		SLAB BOTTOM - LONGIT.
S904	33	25'-4"		" " "
S505	45	32'-2"		" " - TRANS.
S506	35	32'-2"		" TOP "
S407	33	34'-2"		" " - LONGIT.
S608	24	12'-0"	X	" @ RAIL POST, TWO PER POST
S609	32	6'-0"		" " " " , FOUR " "
S610	16	6'-0"	X	" " " END POSTS AS NOTED

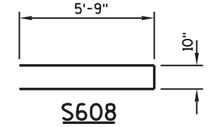
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL REINFORCEMENT.

TOP OF SLAB ELEVATIONS AND CAMBER VALUES

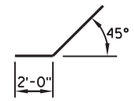
LOCATION	SPAN POINT	NORTH EDGE OF SLAB	C/L CTH K	SOUTH EDGE SLAB	CAMBER VALUE (INCHES)
WEST ABUT.	1.0	849.62	849.94	849.62	0.0
	1.1	849.61	849.94	849.61	0.2
	1.2	849.61	849.93	849.61	0.4
	1.3	849.60	849.92	849.60	0.5
	1.4	849.59	849.92	849.59	0.6
	1.5	849.59	849.91	849.59	0.7
	1.6	849.58	849.90	849.58	0.6
	1.7	849.57	849.90	849.57	0.5
	1.8	849.56	849.89	849.56	0.4
	1.9	849.56	849.88	849.56	0.2
EAST ABUT.	2.0	849.55	849.88	849.55	0.0



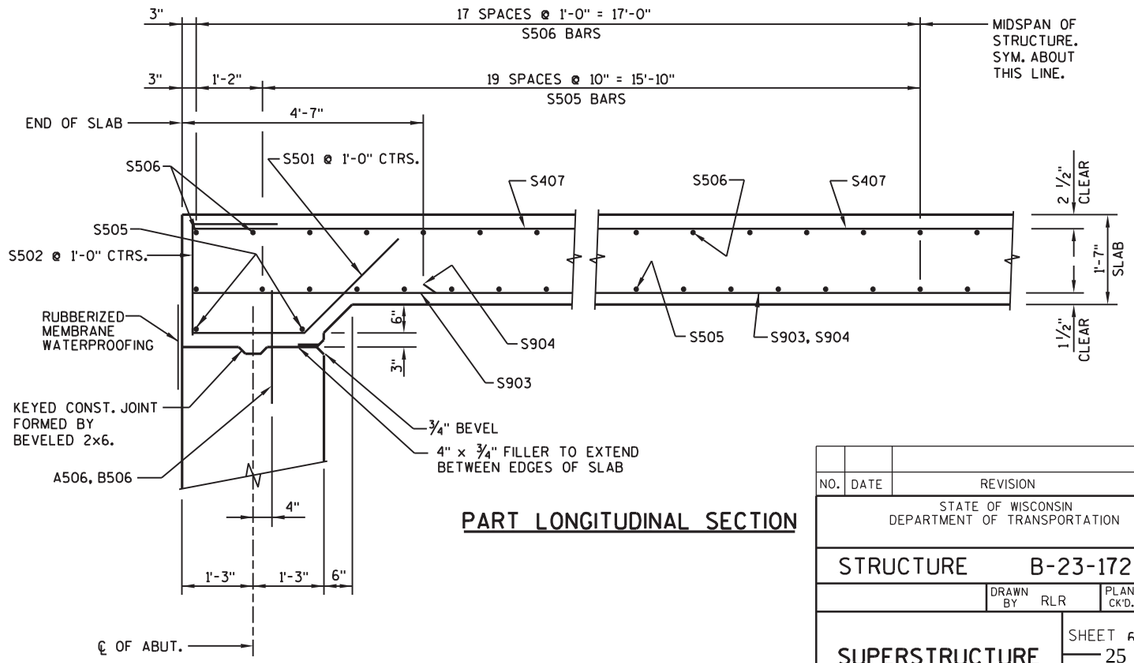
S502, S610



S608



S501



PART LONGITUDINAL SECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-23-172

DRAWN BY RLR | PLANS CK'D. LJR

SUPERSTRUCTURE

SHEET 6 OF 7
25

FILE= 239026_06.DGN
DATE= 8/26/2013

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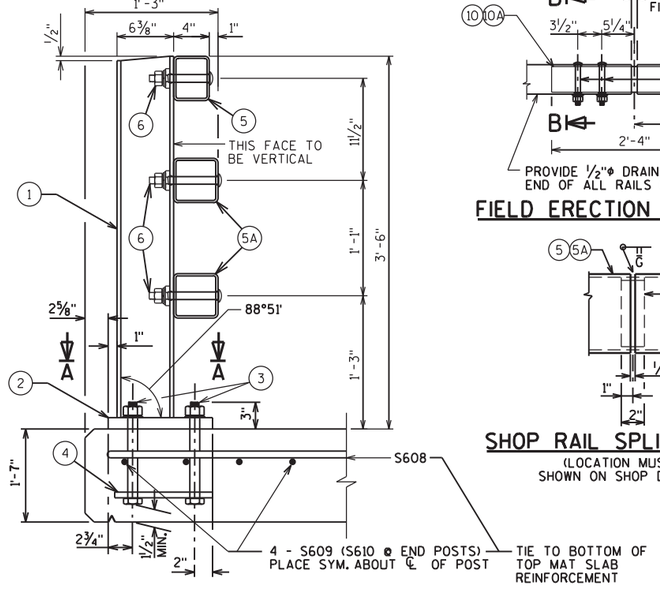
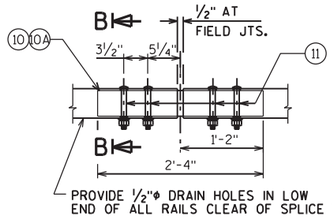
STATE PROJECT NUMBER

5638-00-70

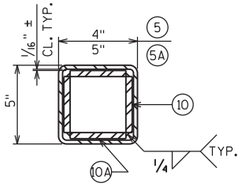


SECTION THRU RAILING ON DECK

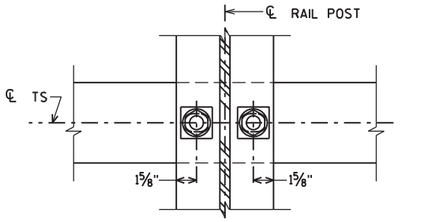


PROVIDE 1/2"Φ DRAIN HOLES IN LOW END OF ALL RAILS CLEAR OF SPLICE TUBE

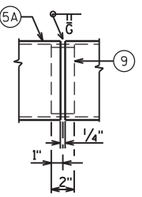
FIELD ERECTION JOINT DETAIL



SECTION B-B

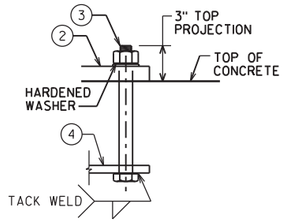


SECTION THRU POST WEB

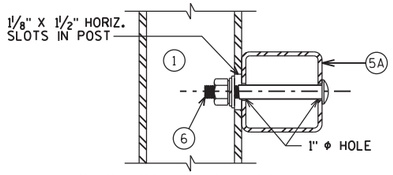


SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



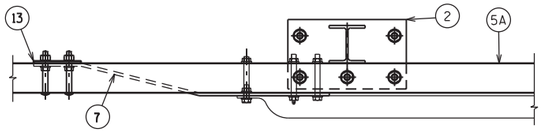
ANCHOR BOLTS



SECTION THRU RAIL

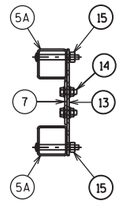
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST

(THRIE BEAM RAIL ATTACHMENT)



SECTION C-C

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. USE 1'-3" LONG.

(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 5/8 " X 1 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS IN PLATE NO. 10A.

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

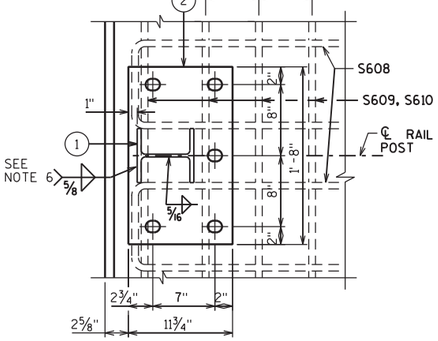
(13) 3/8" X 8" X 1'-6" ANCHOR PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

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

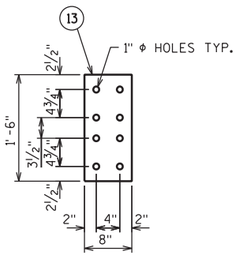
(15) 1" Φ HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-23-172" 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 S.S.P.C. SPECIFICATIONS.
10. PAINTING IS NOT REQUIRED.
11. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).
12. DO NOT INSTALL BACK-UP PLATES (7) OR ANCHOR PLATES (13) FOR BEAM GUARD ATTACHMENT. FURNISH PLATES AND ATTACHMENT HARDWARE TO GREEN COUNTY FOR FUTURE INSTALLATION. CONTACT JEFF WUNSCHEL AT 608-328-9411.

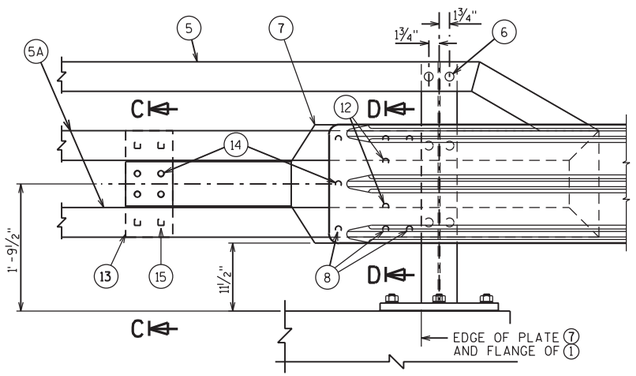


SECTION A-A



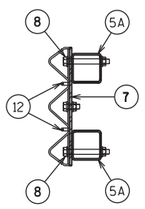
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

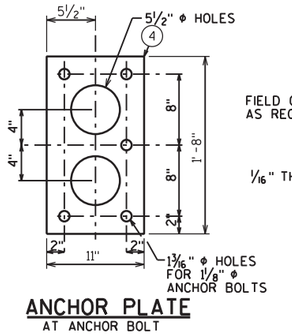


DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)

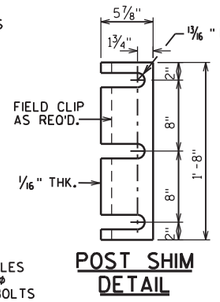


SECTION D-D

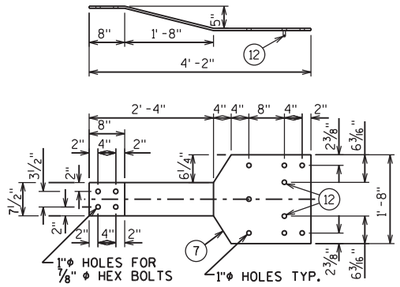


ANCHOR PLATE

AT ANCHOR BOLT

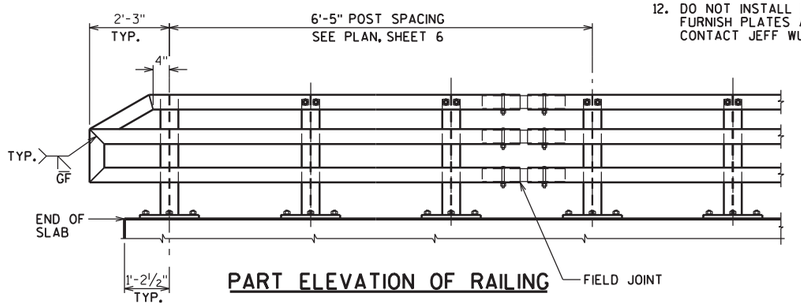


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-23-172

DRAWN BY RLR | PLANS CK'D. LJR

RAILING TUBULAR TYPE M

SHEET 7 OF 26

FILE= 239026_07.DGN
DATE=5/28/2013

239026_07.dgn 5/28/2013 10:10:57 AM RRABSKA

EARTHWORK PROJECT I.D. 5638-00-70

STATION	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
8+55		44	0	0	0	0	0	0	0	0
9+00	45	41	0	6	70	0	5	70	7	64
9+50	50	38	0	10	73	0	15	144	26	118
9+82.75	33	38	0	10	47	0	12	190	42	149
B-23-0172										
					190	0	33			

EARTHWORK PROJECT I.D. 5638-00-70

STATION	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
B-23-0172										
10+17.25		56	0	0	0	0	0	0	0	0
10+50	33	56	0	0	68	0	0	68	0	68
11+00	50	59	0	1	106	0	1	174	1	172
11+45	45	54	0	0	94	0	1	268	3	265
					268	0	2			

9

9

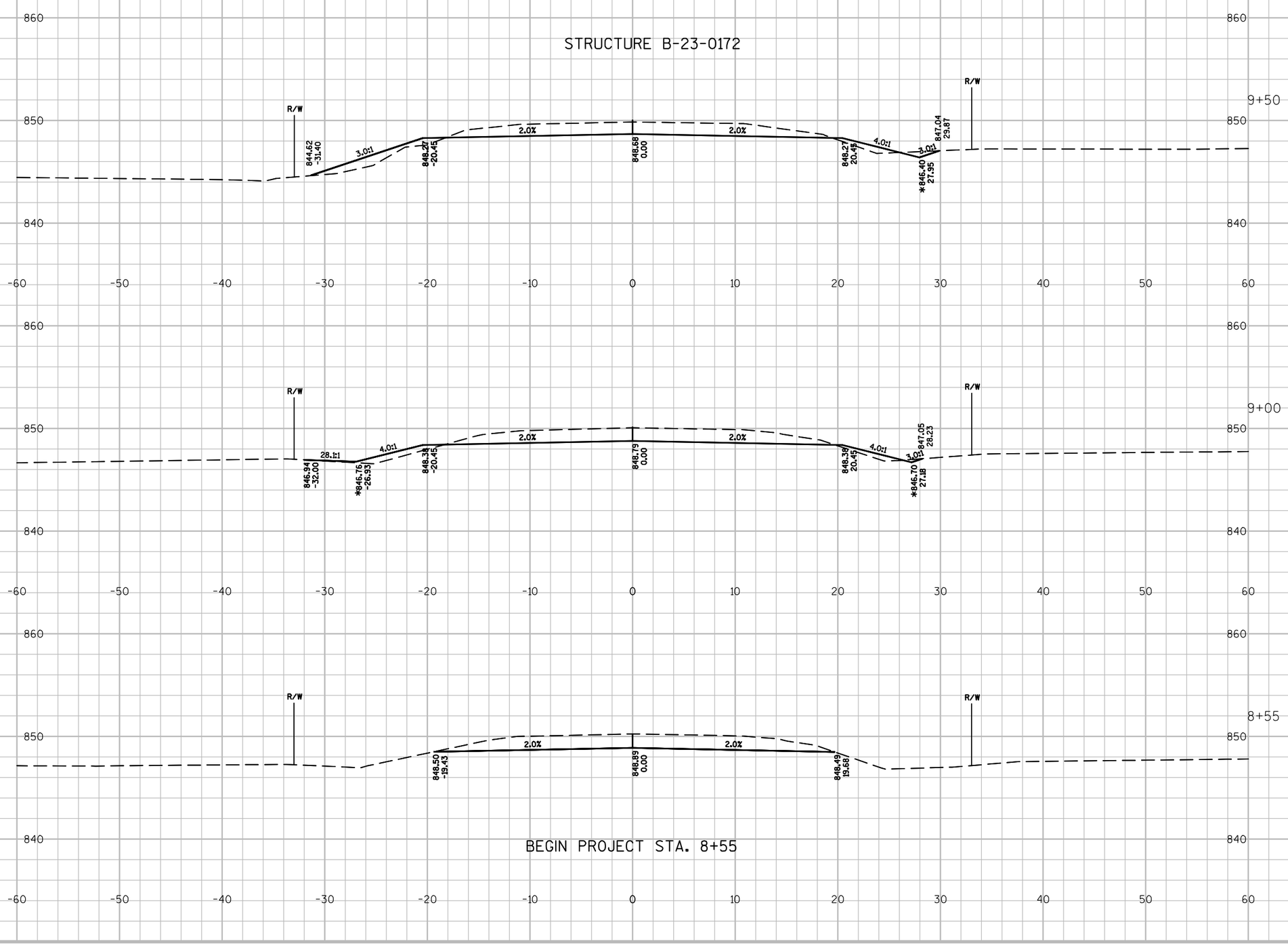
PROJECT NO:5638-00-70 | HWY:CTH K | COUNTY:GREEN | EARTHWORK | SHEET E

FILE NAME : P:\230s\239\00239026\CADD\Plansheets\Typical Section.dgn PLOT DATE : 4/30/2013 PLOT BY : jmcadams PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 49

* SPECIAL DITCH ELEVATION

STRUCTURE B-23-0172



BEGIN PROJECT STA. 8+55

5 FT

5 FT

9

9

PROJECT NO: 5638-00-70	HWY: CTH K	COUNTY: GREEN	CROSS SECTIONS: MAINLINE	SHEET	E

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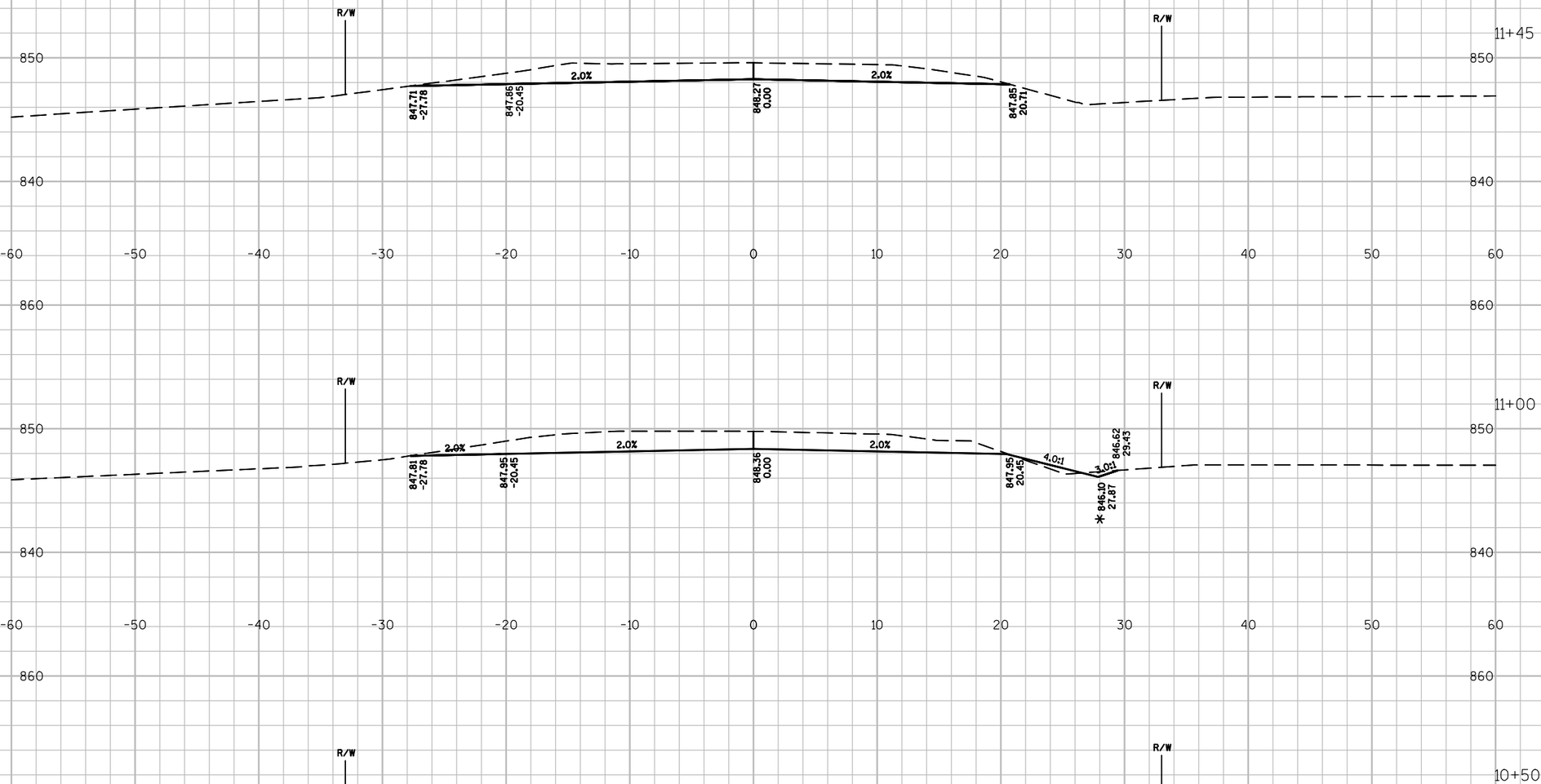
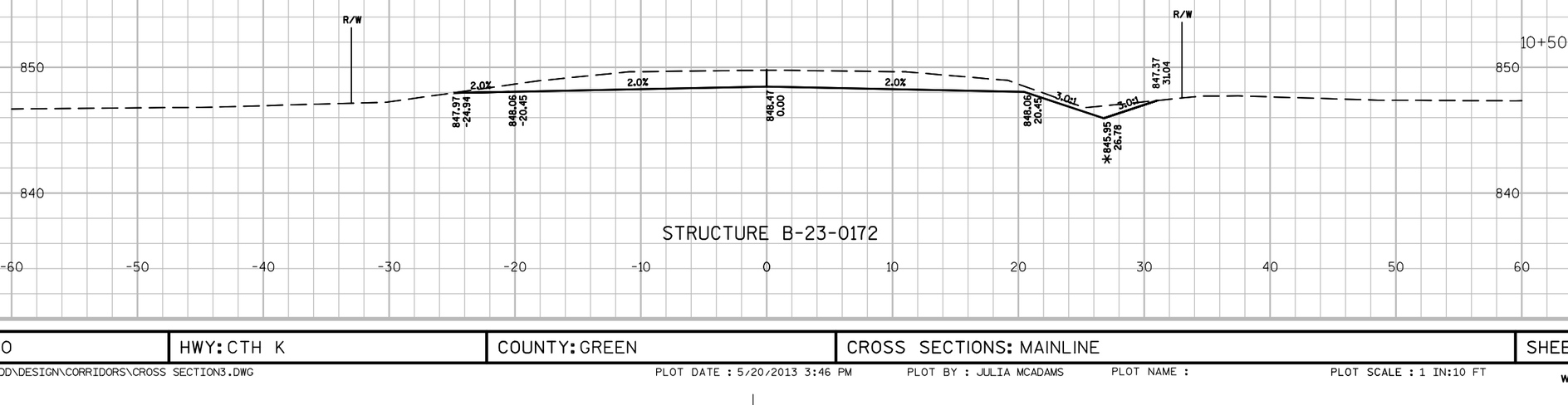
* SPECIAL DITCH ELEVATION

END PROJECT STA. 11+45





STRUCTURE B-23-0172

PROJECT NO: 5638-00-70	HWY: CTH K	COUNTY: GREEN	CROSS SECTIONS: MAINLINE	SHEET	E

FILE NAME : P:\230S\239\00239026\CADD\DESIGN\CORRIDORS\CROSS SECTION3.DWG PLOT DATE : 5/20/2013 3:46 PM PLOT BY : JULIA MCADAMS PLOT NAME : PLOT SCALE : 1 IN:10 FT

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