NEL JULY 2017

PROJECT ID: 4313-10-71

WITH: N/A

COUNTY: MANITOWOC

ORDER OF SHEETS

TOTAL SHEETS = 44

14

DESIGN DESIGNATION

A.A.D.T.	(2017)	= 230
A.A.D.T.	(2037)	= 250
D.H.V.	(2037)	= 48
D.D.		= 60/40
T.		= 5.0%
DESIGN SPEED		= 55 MPH
ESALS		= 22,000

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 (935.36)
- 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 MEEME, COUNTY LINE RD

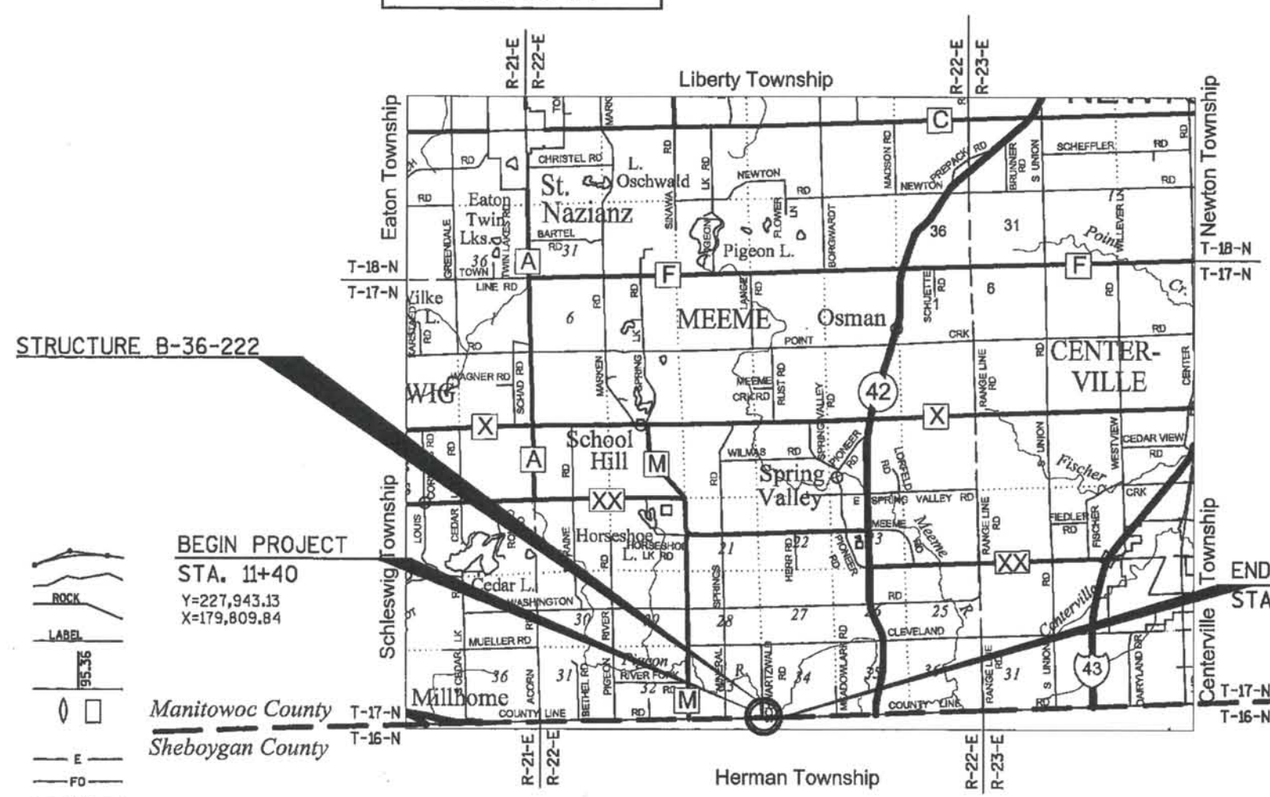
PIGEON RIVER BRIDGE & APPROACHES

LOCAL STR

MANITOWOC COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4313-10-71	WISC 2017348	1

STATE PROJECT NUMBER
4313-10-71



LAYOUT

SCALE 0 — 2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.030 MILES

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

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

ACCEPTED FOR

COUNTY of MANITOWOC

1/17/17 (Date) (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

JEWELL associates engineers, inc.

Engineers - Architects - Surveyors

WISCONSIN ELLERY A. SCHAFFER E-41742-6 SPRING GREEN, WI PROFESSIONAL ENGINEER

1/16/17 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor JEWELL ASSOCIATES ENGINEERS, INC.

Designer JEWELL ASSOCIATES ENGINEERS, INC.

Management Consultant JT ENGINEERING, INC.

APPROVED FOR THE DEPARTMENT

DATE: 1/19/17

Management Consultant Signature

E

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\SHEETSPLAN\TITLE SHEET.DWG
LAYOUT NAME - TITLE SHEET 1 IN EQ 2 MI

PLOT DATE : 12/20/2016 11:06 AM PLOT BY : JULIA ZEHNER PLOT NAME :

WISDOT/CADDS SHEET 10

2

LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment	INV	Invert	SALV	Salvaged
AC	Acre	IP	Iron Pipe or Pin	SAN S	Sanitary Sewer
AGG	Aggregate	IRS	Iron Rod Set	SEC	Section
AH	Ahead	JT	Joint	SHLDR	Shoulder
<	Angle	JCT	Junction	SHR	Shrinkage
ASPH	Asphaltic	LHF	Left–Hand Forward	SW	Sidewalk
AVG	Average	L	Length of Curve	S	South
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	SQ	Square
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SF or SQ FT	Square Feet
BK	Back	MH	Manhole	SY or SQ YD	Square Yard
BF	Back Face	MB	Mailbox	STD	Standard
BM	Bench Mark	ML or M/L	Match Line	SDD	Standard Detail Drawings
BR	Bridge	N	North	STH	State Trunk Highways
C or C/L	Center Line	Y	North Grid Coordinate	STA	Station
CC	Center to Center	O.A.L.	Overall Length	SS	Storm Sewer
CTH	County Trunk Highway	OD	Outside Diameter	SG	Subgrade
CR	Creek	PLE	Permanent Limited Easement	SE	Superelevation
CR	Crushed			SL or S/L	Survey Line
CY or CU YD	Cubic Yard	PT	Point	SV	Septic Vent
CP	Culvert Pipe	PC	Point of Curvature	T	Tangent
C & G	Curb and Gutter	PI	Point of Intersection	TEL	Telephone
D	Degree of Curve	PRC	Point of Reverse Curvature	TEMP	Temporary
DHV	Design Hour Volume	PT	Point of Tangency	TI	Temporary Interest
DIA	Diameter	POC	Point On Curve	TLE	Temporary Limited Easement
E	East	POT	Point on Tangent		
X	East Grid Coordinate	PVC	Polyvinyl Chloride	t	Ton
ELEC	Electric (al)	PCC	Portland Cement Concrete	T or TN	Town
EL or ELEV	Elevation	LB	Pound	TRANS	Transition
ESALS	Equivalent Single Axle Loads	PSI	Pounds Per Square Inch	TL or T/L	Transit Line
		PE	Private Entrance	T	Trucks (percent of)
EBS	Excavation Below Subgrade	R	Radius	TYP	Typical
ESTR	Existing Sign to Remain	RR	Railroad	UNCL	Unclassified
FF	Face to Face	R	Range	UG	Underground Cable
FE	Field Entrance	RL or R/L	Reference Line	USH	United States Highway
F	Fill	RP	Reference Point	VAR	Variable
FG	Finished Grade	RCCP	Reinforced Concrete Culvert Pipe	V	Velocity or Design Speed
FL or F/L	Flow Line			VERT	Vertical
FT	Foot	REQ'D	Required	VC	Vertical Curve
FTG	Footing	RES	Residence or Residential	VOL	Volume
GN	Grid North	RW	Retaining Wall	WM	Water Main
HT	Height	RT	Right	WV	Water Valve
CWT	Hundredweight	RHF	Right–Hand Forward	W	West
HYD	Hydrant	R/W	Right–of–Way	WB	Westbound
INL	Inlet	R	River	YD	Yard
ID	Inside Diameter	RD	Road		
		RDWY	Roadway		

	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= 0.34 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.27 ACRES

GENERAL NOTES

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

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

DISTURBED AREAS SHOWN WITHIN THE RIGHT–OF–WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER HINGE POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEED MIX NO. 20), AND EROSION MATTED AS DIRECTED BY THE ENGINEER. SEE FINISHED TYPICAL SECTIONS. ALL POST CONSTRUCTION WET AREAS SHALL BE SEEDED WITH SEEDING MIXTURE NO. 60. AVOID PLACING FERTILIZER TYPE B NEAR WET AREAS.

SILT FENCE AND TEMPORARY DITCH CHECKS SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO STRUCTURE REMOVAL. EROSION MAT ALL MAINLINE SLOPES AS DIRECTED BY THE ENGINEER IN THE FILED.

FILL EXPANSION IS VARIABLE AND IS ESTIMATED AT 25%.

ADJUST DITCH GRADING AS NECESSARY TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER.

ASPHALTIC SURFACE QUANTITIES WERE CALCULATED USING 115 LB/SY/IN. 4–INCH OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1¾–INCH UPPER LAYER AND A 2¼–INCH LOWER LAYER.

REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

THE LOCATION OF ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD PRIOR TO PLACEMENT.

WETLANDS ARE PRESENT IN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOT OPERATE OR STOCKPILE EQUIPMENT BEYOND THE EXISTING TOE OF SLOPE AT STA. 11+60 – STA. 11+92, RT., STA. 11+94 – STA. 13+00, LT., OR STA. 12+14 – STA. 13+00, RT. AVOID STORING OR STOCKPILING OF MATERIALS IN WETLANDS.

ALL RADII DIMENSIONS ON PLAN ARE LISTED TO THE EDGE OF ASPHALT.

CONTACTS

DNR LIAISON

STATE OF WISCONSIN
DNR NORTHEAST REGION HQ
2984 SHAWANO AVE.
GREEN BAY, WI 54313
ATTN: MATT SCHAEVE
PHONE: (920) 366-1544
EMAIL: matthew.schaeve@wisconsin.gov

UTILITIES

ELECTRIC

ALLIANT ENERGY
ATTN: JASON HOGAN
4902 N. BILTMORE LANE,
MADISON, WI 53718
OFFICE: (608) 458–4871
CELL: (608) 395–7395
EMAIL: jasonhogan@alliantenergy.com

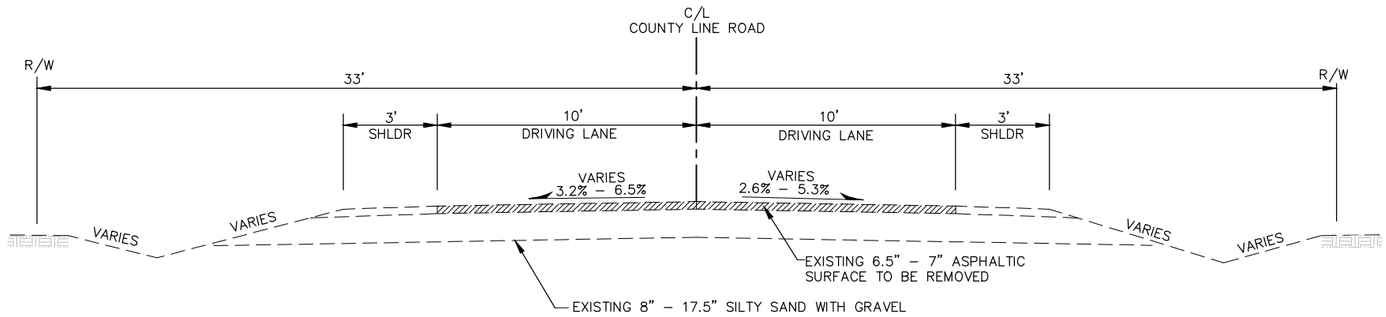
TELEPHONE

TDS TELECOM
ATTN: STEVE JAKUBIEC
10 COLLEGE AVE., SUITE 218A
APPLETON, WI 54911
PH: (920) 882–4166
EMAIL: steve.jakubiec@tdstelecom.com

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

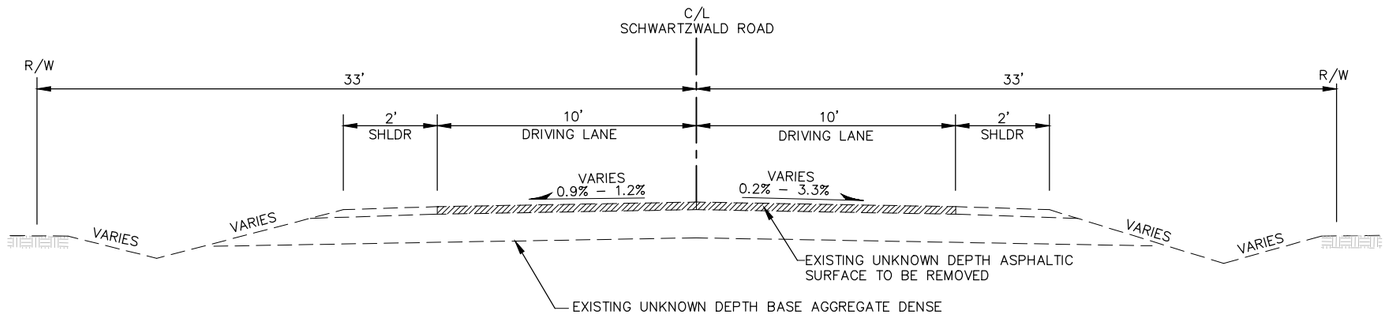
* DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE

2



TYPICAL EXISTING SECTION

COUNTY LINE ROAD
(STA. 11+40 – STA. 13+00)



TYPICAL EXISTING SECTION

SCHWARTZWALD ROAD
(STA. 50+15 – STA. 50+50)

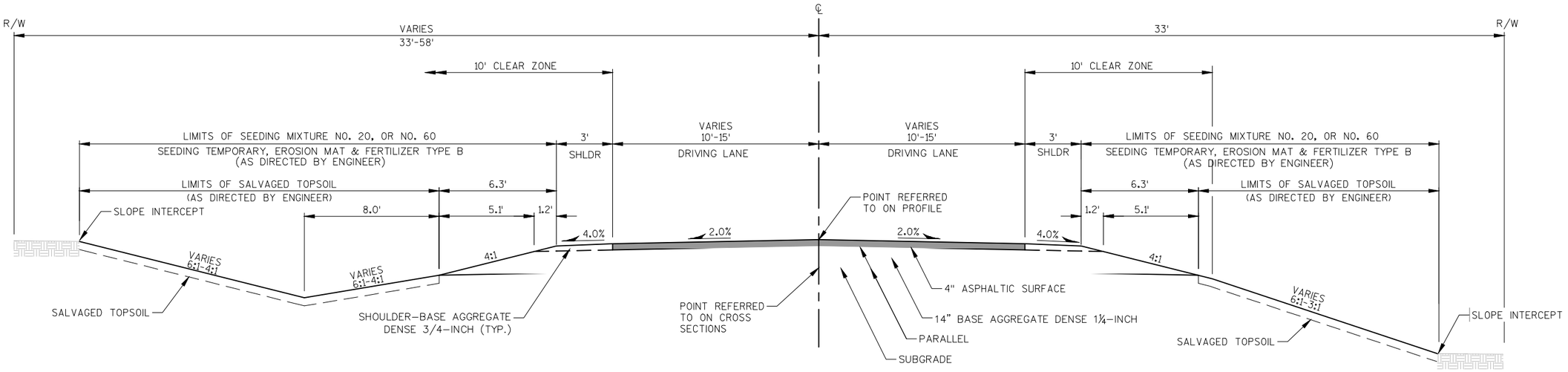
PROJECT NO: 4313-10-71	HWY: COUNTY LINE ROAD	COUNTY: MANITOWOC	TYPICAL EXISTING SECTIONS	SHEET 3	E

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\SHEETSPLAN\TYPICALS\W11551_PROPOSED & EXISTING TYPICAL.DWG
LAYOUT : TYP. EXISTING

PLOT DATE : 1/12/2017
PLOT TIME : 3:39:49 PM

PLOT BY : JULIA ZEHNER

PLOT SCALE : 1" = 1'



CUT

FILL

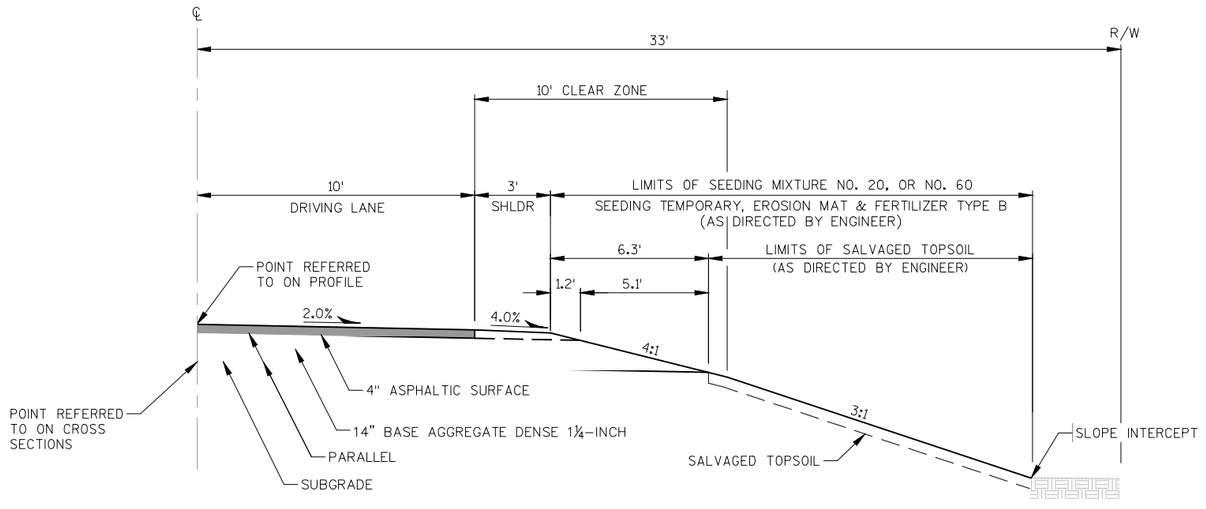
TYPICAL FINISHED SECTION

COUNTY LINE ROAD

① (STA. 11+40 - STA. 11+77)

① (STA. 12+19 - STA. 13+00)

① SEE CONSTRUCTION DETAIL FOR CONCRETE PAVEMENT APPROACH SLAB HES (REINFORCED)
(STA. 11+58 - STA. 11+77)
(STA. 12+19 - STA. 12+38)

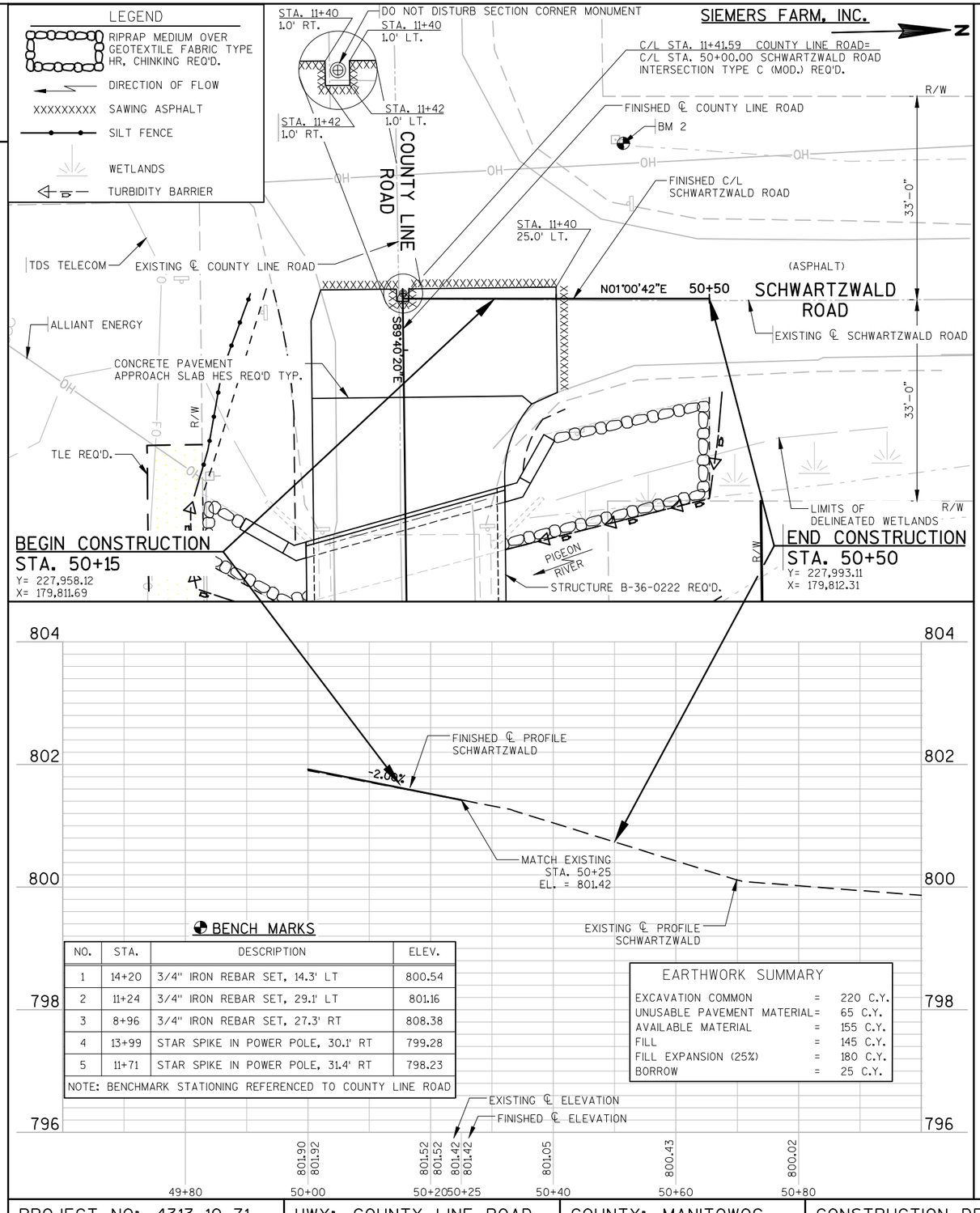


TYPICAL FINISHED HALF SECTION

SCHWARTZWALD ROAD
(STA. 50+15 - STA. 50+50)

PROJECT NO: 4313-10-71	HWY: COUNTY LINE ROAD	COUNTY: MANITOWOC	TYPICAL FINISHED SECTIONS	SHEET 4	E

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\SHEETSPLAN\TYPICALS\W11551_PROPOSED & EXISTING TYPICAL.DWG
LAYOUT : TYP. PROPOSED
PLOT DATE : 1/20/2017
PLOT TIME : 11:46:50 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'

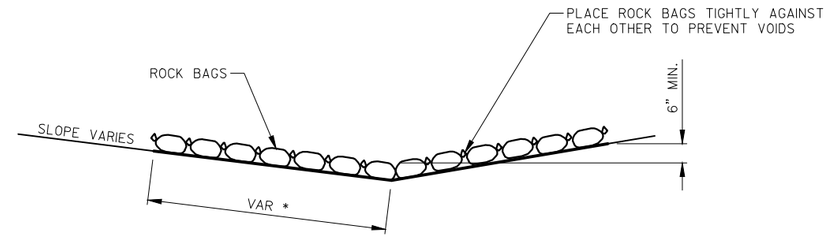


BENCH MARKS

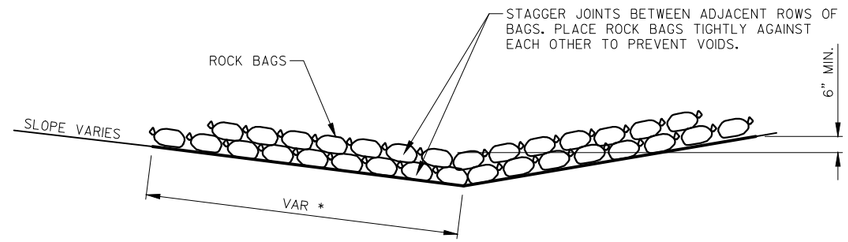
NO.	STA.	DESCRIPTION	ELEV.
1	14+20	3/4" IRON REBAR SET, 14.3' LT	800.54
2	11+24	3/4" IRON REBAR SET, 29.1' LT	801.16
3	8+96	3/4" IRON REBAR SET, 27.3' RT	808.38
4	13+99	STAR SPIKE IN POWER POLE, 30.1' RT	799.28
5	11+71	STAR SPIKE IN POWER POLE, 31.4' RT	798.23
NOTE: BENCHMARK STATIONING REFERENCED TO COUNTY LINE ROAD			

EARTHWORK SUMMARY

EXCAVATION COMMON	=	220 C.Y.
UNUSABLE PAVEMENT MATERIAL	=	65 C.Y.
AVAILABLE MATERIAL	=	155 C.Y.
FILL	=	145 C.Y.
FILL EXPANSION (25%)	=	180 C.Y.
BORROW	=	25 C.Y.



SIDE VIEW (SINGLE LAYER)



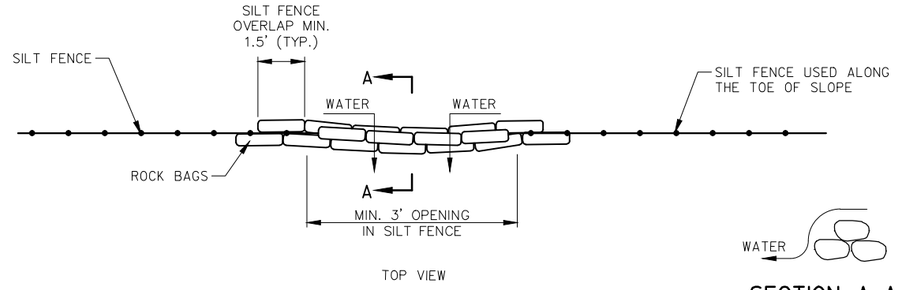
* LENGTH AND NUMBER OF BAGS MAY VARY DEPENDING ON DESIRED DEPTH OF WATER POOL.

SIDE VIEW (MULTIPLE LAYER)

ROCK BAGS DITCH CHECK

PAID AS ROCK BAGS

(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)



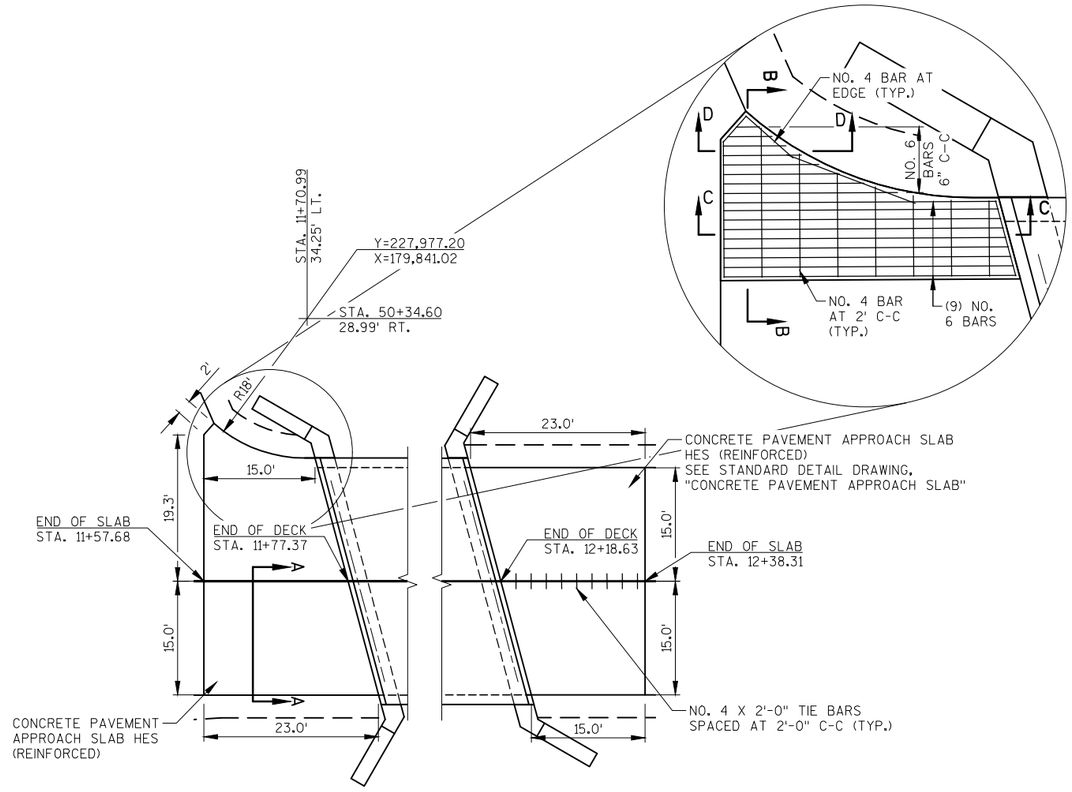
TOP VIEW

SECTION A-A

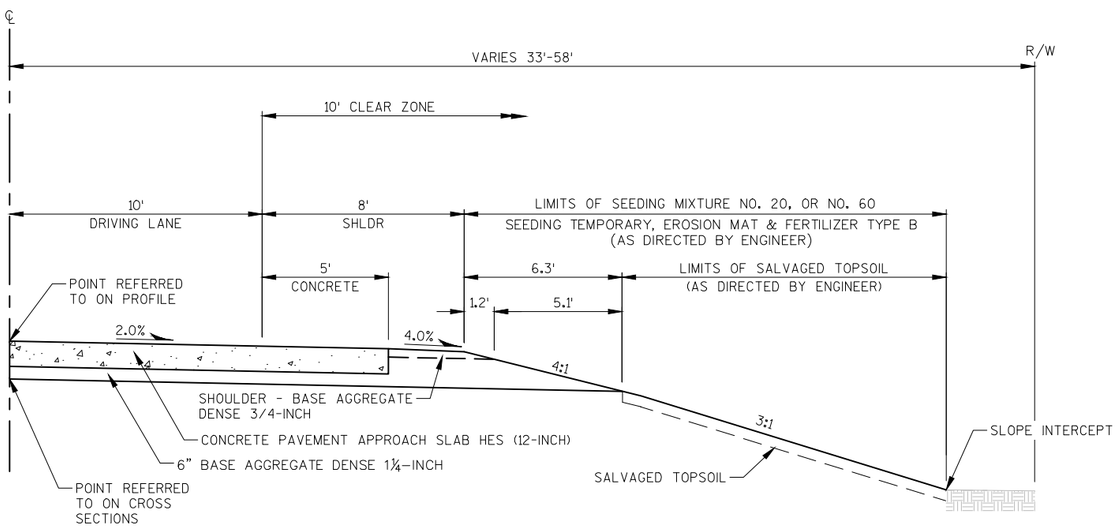
ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

PAID AS ROCK BAGS

(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)

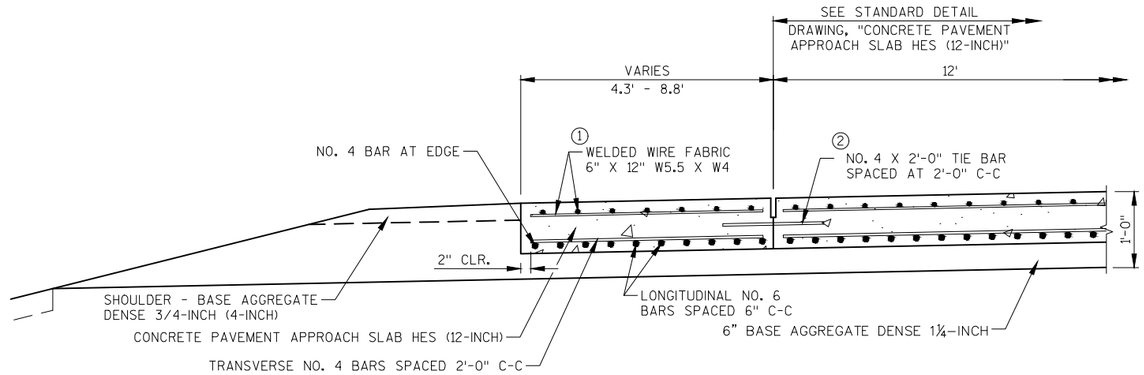


STRUCTURE APPROACH DETAILS

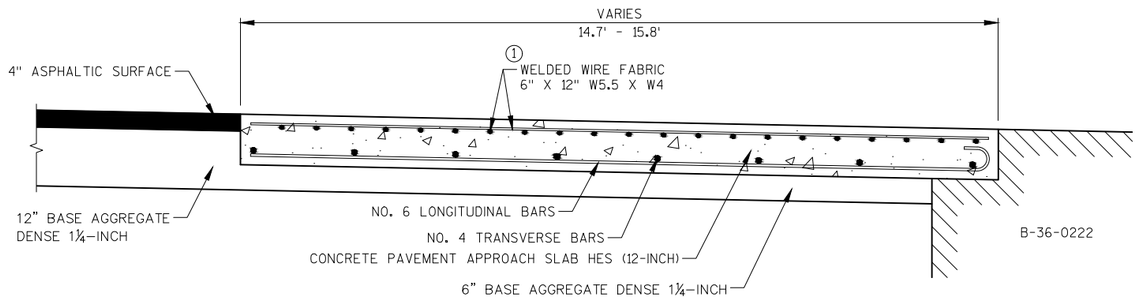


SECTION A-A

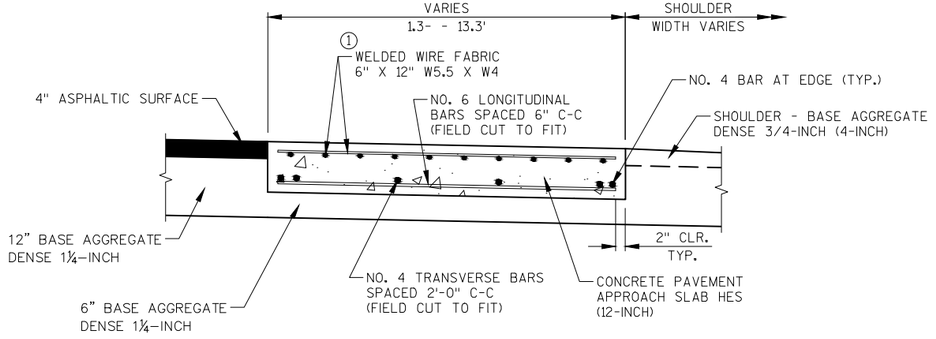
FILL



SECTION B-B



SECTION C-C

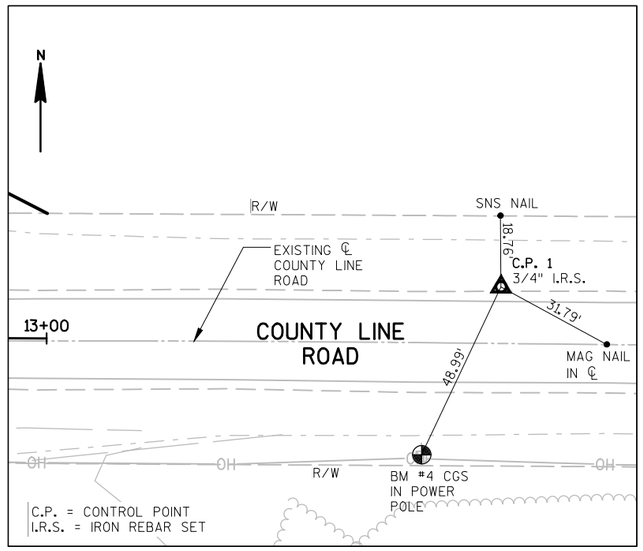


SECTION D-D

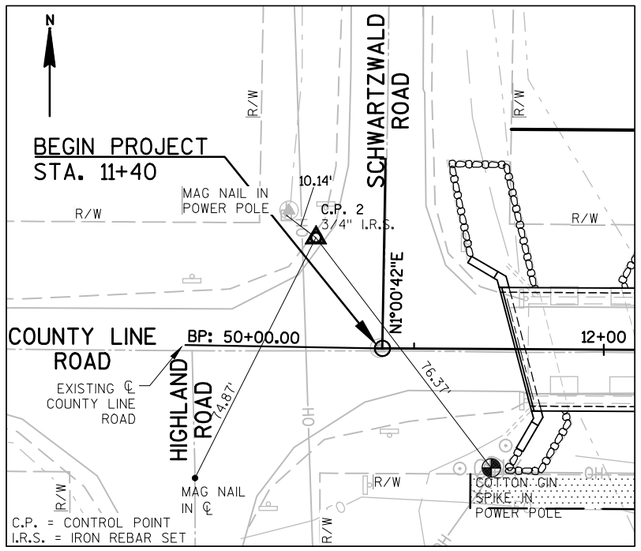
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

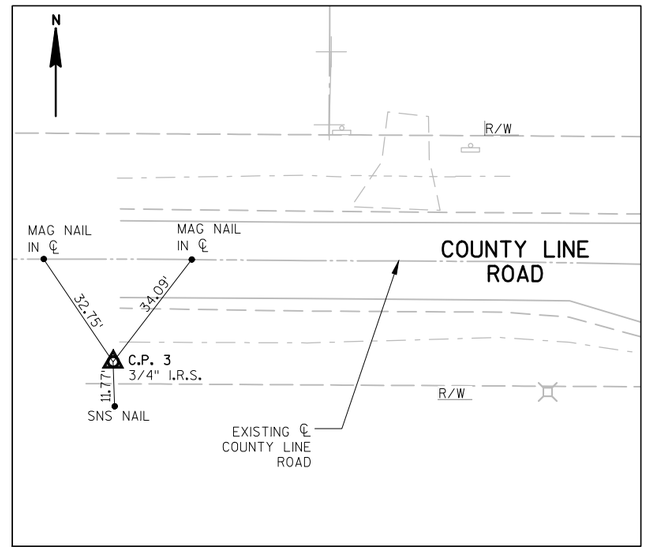
NOTE: SEE STANDARD DETAIL DRAWING "CONCRETE PAVEMENT APPROACH SLAB FOR ALL OTHER DETAILS AND WORKMANSHIP.



TIES TO C.P.#1
STA. 14+19.85; 14.27' LT.
Y = 227,955.79
X = 180,089.77



TIES TO C.P.#2
STA. 11+23.89; 29.1' LT.
Y = 227,972.31
X = 179,793.90



TIES TO C.P.#3
STA. 8+96.21; 27.27' RT.
Y = 227,917.25
X = 179,565.90

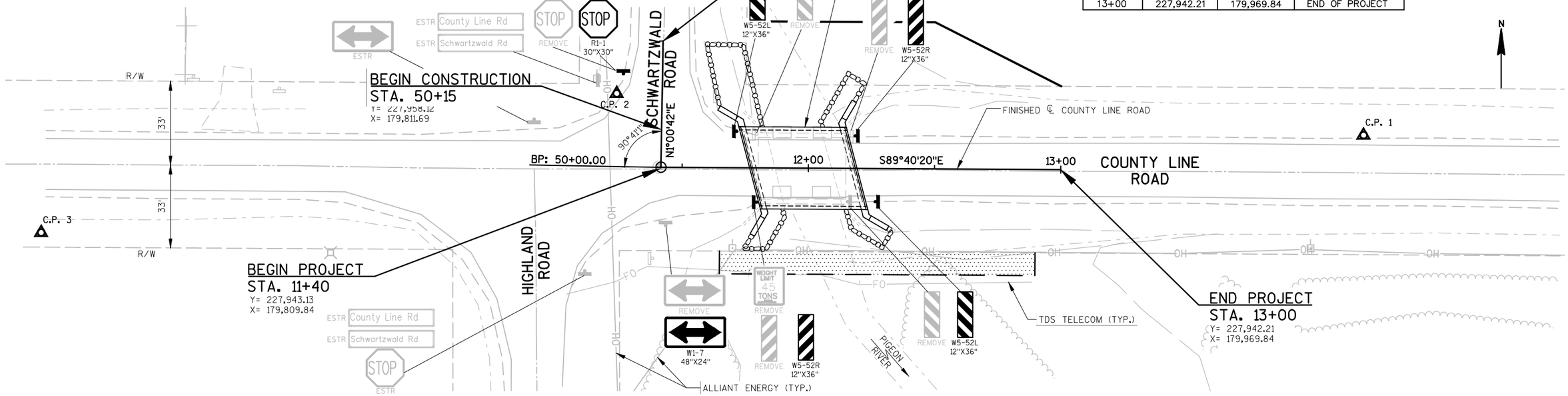
▲ CONTROL POINTS

No.	STATION	DESCRIPTION	Y	X
1	14+19.85	3/4" REBAR SET 14.27' LT.	227,955.79	180,089.77
2	11+23.89	3/4" REBAR SET 29.10' LT.	227,972.31	179,793.90
3	8+96.21	3/4" REBAR SET 27.27' RT.	227,917.25	179,565.90

END CONSTRUCTION
STA. 50+50
Y= 227,993.11
X= 179,812.31

COUNTY LINE ROAD STATION LAYOUT

STATION	Y	X	COMMENTS
11+40	227,943.13	179,809.84	BEGIN PROJECT
11+50	227,943.07	179,819.84	–
11+77.37	227,942.91	179,847.21	END OF DECK
12+00	227,942.78	179,869.84	–
12+18.63	227,942.68	179,888.47	END OF DECK
12+50	227,942.50	179,919.84	–
13+00	227,942.21	179,969.84	END OF PROJECT



PROJECT NO: 4313-10-00	HWY: COUNTY LINE ROAD	COUNTY: MANITOWOC	TIES AND ALIGNMENT PLAN	SHEET 7	E

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\SHEETSPLAN\DETAILS\TIES AND ALIGNMENT.DWG
LAYOUT : ALIGNMENT
PLOT DATE : 1/13/2017
PLOT TIME : 3:54:11 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'

Estimate Of Quantities

4313-10-71

Line	Item	Item Description	Unit	Total	Qty
0010	203.0500.S	Removing Old Structure Over Waterway (station) 01. 11+97	LS	1.000	1.000
0020	205.0100	Excavation Common **P**	CY	220.000	220.000
0030	206.1000	Excavation for Structures Bridges (structure) 01. B-36-0222	LS	1.000	1.000
0040	208.0100	Borrow **P**	CY	25.000	25.000
0050	210.1500	Backfill Structure Type A	TON	270.000	270.000
0060	213.0100	Finishing Roadway (project) 01. 4313-10-71	EACH	1.000	1.000
0070	305.0110	Base Aggregate Dense 3/4-Inch	TON	25.000	25.000
0080	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	370.000	370.000
0090	415.1410	Concrete Pavement Approach Slab HES	SY	135.000	135.000
0100	450.4000	HMA Cold Weather Paving	TON	65.000	65.000
0110	455.0605	Tack Coat	GAL	15.000	15.000
0120	465.0105	Asphaltic Surface	TON	65.000	65.000
0130	502.0100	Concrete Masonry Bridges	CY	157.000	157.000
0140	502.3200	Protective Surface Treatment	SY	170.000	170.000
0150	505.0400	Bar Steel Reinforcement HS Structures	LB	4,860.000	4,860.000
0160	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	19,670.000	19,670.000
0170	513.4061	Railing Tubular Type M (structure) 01. B-36-0222	LF	87.000	87.000
0180	516.0500	Rubberized Membrane Waterproofing	SY	14.000	14.000
0190	550.2104	Piling CIP Concrete 10 3/4 X 0.25-Inch	LF	1,120.000	1,120.000
0200	606.0200	Riprap Medium	CY	160.000	160.000
0210	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0220	619.1000	Mobilization	EACH	1.000	1.000
0230	624.0100	Water	MGAL	3.000	3.000
0240	625.0500	Salvaged Topsoil **P**	SY	460.000	460.000
0250	628.1504	Silt Fence	LF	160.000	160.000
0260	628.1520	Silt Fence Maintenance	LF	320.000	320.000
0270	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0280	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0290	628.2006	Erosion Mat Urban Class I Type A **P**	SY	780.000	780.000
0300	628.6005	Turbidity Barriers	SY	180.000	180.000
0310	628.7504	Temporary Ditch Checks	LF	40.000	40.000
0320	628.7570	Rock Bags	EACH	40.000	40.000
0330	629.0210	Fertilizer Type B **P**	CWT	1.000	1.000
0340	630.0120	Seeding Mixture No. 20 **P**	LB	18.000	18.000
0350	630.0160	Seeding Mixture No. 60	LB	2.000	2.000
0360	630.0200	Seeding Temporary **P**	LB	12.000	12.000
0370	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0380	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	2.000	2.000

4313-10-71

Line	Item	Item Description	Unit	Total	Qty
0390	637.2210	Signs Type II Reflective H	SF	5.180	5.180
0400	637.2230	Signs Type II Reflective F	SF	20.000	20.000
0410	638.2602	Removing Signs Type II	EACH	8.000	8.000
0420	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0430	642.5001	Field Office Type B	EACH	1.000	1.000
0440	643.0100	Traffic Control (project) 01. 4313-10-71	EACH	1.000	1.000
0450	643.0420	Traffic Control Barricades Type III	DAY	1,710.000	1,710.000
0460	643.0705	Traffic Control Warning Lights Type A	DAY	2,660.000	2,660.000
0470	643.0900	Traffic Control Signs	DAY	1,140.000	1,140.000
0480	645.0120	Geotextile Type HR	SY	260.000	260.000
0490	646.0106	Pavement Marking Epoxy 4-Inch	LF	330.000	330.000
0500	650.4500	Construction Staking Subgrade	LF	120.000	120.000
0510	650.5000	Construction Staking Base	LF	120.000	120.000
0520	650.6500	Construction Staking Structure Layout (structure) 01. B-36-0222	LS	1.000	1.000
0530	650.9910	Construction Staking Supplemental Control (project) 01. 4313-10-71	LS	1.000	1.000
0540	650.9920	Construction Staking Slope Stakes	LF	120.000	120.000
0550	690.0150	Sawing Asphalt	LF	80.000	80.000
0560	715.0502	Incentive Strength Concrete Structures	DOL	942.000	942.000
0570	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	150.000	150.000
0580	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000

ALL BID ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

3

EARTHWORK SUMMARY

CATEGORY	FROM/TO STA	LOCATION	**P** (1) 205.0100 COMMON EXCAVATION CUT (CY)	UNUSABLE PAVEMENT MATERIAL (CY) (2)	AVAILABLE MATERIAL (CY) (3)	UNEXPANDED FILL (CY)	EXPANDED FILL (CY) FACTOR 1.25 (4)	MASS ORDINATE +/- (CY) (5)	**P** 208.0100 BORROW (CY)
010	11+40 - 13+00	MAINLINE	220	65	155	145	180	-25	25
		TOTALS =	220	65	155	145	180	-25	25

NOTES:
1.) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
2.) UNUSABLE PAVEMENT MATERIAL = EXISTING ASPHALTIC PAVEMENT. BACKFILL ANY AREAS BELOW SUBGRADE WITH BORROW
3.) AVAILABLE MATERIAL = CUT - UNUSABLE PAVEMENT MATERIAL
4.) EXPANDED FILL FACTOR 1.25: EXPANDED FILL = (UNEXPANDED FILL) 1.25
5.) THE MASS ORDINATE+ OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY.

THE QUANTITY OF COMMON EXCAVATION FOR SCHWARTZWALD ROAD CONSTRUCTION IS INCLUDED IN MAINLINE QUANTITY.

P PAY PLAN QUANTITY

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)
11+40 - 13+00	MAINLINE	20	342
-	UNDISTRIBUTED	5	28
	TOTALS =	25	370

CONCRETE PAVEMENT APPROACH SLAB HES

STATION - STATION	LOCATION	415.1410 (SY)
11+58 - 11+77	MAINLINE	71
12+19 - 12+38	MAINLINE	64
	TOTALS =	135

ASPHALTIC SURFACE

STATION - STATION	LOCATION	450.4000 HMA COLD WEATHER PAVING (TON)	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)
11+40 - 13+00	MAINLINE	62	14	62
-	UNDISTRIBUTED	3	1	3
	TOTALS =	65	15	65

WATER

PROJECT	624.0100 (MGAL)
4313-10-71	3
	3

FINISHING ITEMS

STATION - STATION	LOCATION	**P** 625.0500 SALVAGED TOPSOIL (SY)	**P** 628.2006 EROSION MAT URBAN CLASS I TYPE A (SY)	**P** 629.0210 FERTILIZER TYPE B (CWT)	**P** 630.0120 SEEDING MIXTURE NO. 20 (LB)	#630.0160 SEEDING MIXTURE NO. 60 (LB)	**P** 630.0200 SEEDING TEMPORARY (LB)
11+40 - 13+00	MAINLINE	367	629	0.7	14	1.7	9
-	UNDISTRIBUTED	93	151	0.3	4	0.3	3
	TOTALS =	460	780	1.0	18	2.0	12

P PAY PLAN QUANTITY
STA. 11+60-STA. 11+92, RT.
STA. 11+94-STA. 13+00, LT.
STA. 12+14-STA. 13+00, RT.

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
11+40 - 11+72	MAINLINE, RT.	35	70
11+95 - 12+20	MAINLINE, LT.	25	50
12+30 - 13+00	MAINLINE, RT.	70	140
-	UNDISTRIBUTED	30	60
	TOTALS =	160	320

ALL BID ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
4313-10-71	5	2
TOTALS =	5	2

TURBIDITY BARRIER

LOCATION	628.6005 (SY)
WEST ABUTMENT	80
EAST ABUTMENT	65
UNDISTRIBUTED	35
TOTAL =	180

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF)
12+29	MAINLINE, LT.	10
12+49	MAINLINE, RT.	10
12+60	MAINLINE, LT.	10
-	UNDISTRIBUTED	10
TOTAL =		40

ROCK BAGS

LOCATION	628.7570 (EACH)
UNDISTRIBUTED	40
TOTAL =	40

3

PERMANENT SIGNING

STATION	LOCATION	DESCRIPTION	SIZE (INCH X INCH)	634.0612 POSTS WOOD 4X6 - INCH X 12-FT (EACH)	634.0616 POSTS WOOD 4X6 - INCH X 16-FT (EACH)	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)
SW QUADRANT	MAINLINE, RT.	W5-52R	12X36	1	-	-	3.00
NW QUADRANT	MAINLINE, LT	W5-52L	12X36	1	-	-	3.00
SE QUADRANT	MAINLINE, RT.	W5-52L	12X36	1	-	-	3.00
NE QUADRANT	MAINLINE, LT	W5-52R	12X36	1	-	-	3.00
11+44	MAINLINE, RT.	W1-7	48X24	-	1	-	8.00
50+38	SCHWARTZWALD RD., LT.	R1-1	30X30	-	1	5.18	-
			TOTALS =	4	2	5.18	20.00

REMOVING SIGNS TYPE II AND REMOVING SMALL SIGN SUPPORTS

STATION	LOCATION	DESCRIPTION	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
-	SW QUADRANT STRUCTURE P-36-0907	BRIDGE HASH MARKS	1	1
-	SE QUADRANT STRUCTURE P-36-0907	BRIDGE HASH MARKS	1	1
-	NW QUADRANT STRUCTURE P-36-0907	BRIDGE HASH MARKS	1	1
-	NE QUADRANT STRUCTURE P-36-0907	BRIDGE HASH MARKS	1	1
-	SW QUADRANT STRUCTURE P-36-0907	WEIGHT LIMIT 45 TONS	1	-
-	NE QUADRANT STRUCTURE P-36-0907	WEIGHT LIMIT 45 TONS	1	-
11+44	MAINLINE, RT.	W1-7	1	1
50+38	SCHWARTZWALD RD., LT.	R1-1	1	1
		TOTALS =	8	6

TRAFFIC CONTROL

LOCATION	643.0100 TRAFFIC CONTROL (4313-10-71) (LF)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAY)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)
MAINLINE	--	1140	1770	760
SCHWARTZWALD ROAD	--	570	890	380
PROJECT	1	--	--	--
	1	1710	2660	1140

PAVEMENT MARKING EPOXY 4-INCH

STATION - STATION	LOCATION	DESCRIPTION	646.0106 (LF)
11+40-13+00	MAINLINE	SKIP DASH YELLOW	40
11+40-13+00	MAINLINE, RT.	WHITE EDGELINE	160
11+70-13+00	MAINLINE, LT.	WHITE EDGELINE	130
		TOTALS =	330

CONSTRUCTION STAKING

STATION-STATION	LOCATION	650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	*650.6500 STRUCTURE LAYOUT (B-36-222) (LS)	650.9910 SUPPLEMENTAL CONTROL (01.4313-10-71) (LS)	650.9920 SLOPES STAKES (LF)
11+40 - 11+77	MAINLINE	38	38	-	-	38
12+19 - 13+00	MAINLINE	82	82	-	-	82
-	PROJECT	-	-	1	1	-
	TOTALS =	120	120	1	1	120

*CATEGORY 020

SAWING ASPHALT

STATION-STATION	LOCATION	690.0150 (LF)
11+40-11+57	MAINLINE	60
13+00	MAINLINE	20
	TOTALS =	80

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	PROPERTY LINE	PL
ACCESS RIGHTS	AR	RECORDED AS	(100')
ACRES	AC.	REFERENCE LINE	R/L
AND OTHERS	ET.AL.	RELEASE OF RIGHTS	ROR
BARN	B.	REMAINING	REM.
CENTERLINE	C/L	RIGHT-OF-WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC.
CORNER	COR.	SHED	S.
CONVEYANCE OF RIGHTS	CR	STATION	STA.
DOCUMENT	DOC.	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE.	VOLUME	V.
GARAGE	G.		
HIGHWAY EASEMENT	H.E.		
HOUSE	H.		
HOUSE TRAILER	H.T.		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND SURVEY MONUMENT (WITH POINT NUMBER) o1040

R/W MONUMENT o ● (SET)

R/W STANDARD △ ▲ (SET)

SIGN |SIGN

SECTION CORNER MONUMENT

SECTION CORNER SYMBOL

FEE (HATCH VARIES)

TEMPORARY LIMITED EASEMENT

PERMANENT LIMITED EASEMENT

R/W BOUNDARY POINT RWB2D

PARCEL NUMBER 8

UTILITY PARCEL NUMBER 32

SIGN NUMBER (OFF PREMISE) 21-0

BUILDING

PROPOSED R/W LINE

EXISTING H.E. LINE

PROPERTY LINE

LOT & TIE LINES

SLOPE INTERCEPTS

CORPORATE LIMITS

NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)

NO ACCESS (BY ACQUISTION)

NO ACCESS (BY STATUTORY AUTHORITY)

NO ACCESS (NEW HIGHWAY)

SECTION LINE

QUARTER LINE

SIXTEENTH LINE

EXISTING CENTERLINE

PROPOSED REFERENCE LINE

PARALLEL OFFSET

ENCROACHMENT E-1 TYPE

HIGHWAY EASEMENT

CONVENTIONAL UTILITY SYMBOLS

WATER	W	SANITARY SEWER	SAN
GAS	G	STORM SEWER	SS
TELEPHONE	T		
OVERHEAD TRANSMISSION LINES	OH		
ELECTRIC	E		
CABLE TELEVISION	TV		
FIBER OPTIC	FO		

	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER		

NOTES

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, MANITOWOC COUNTY, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

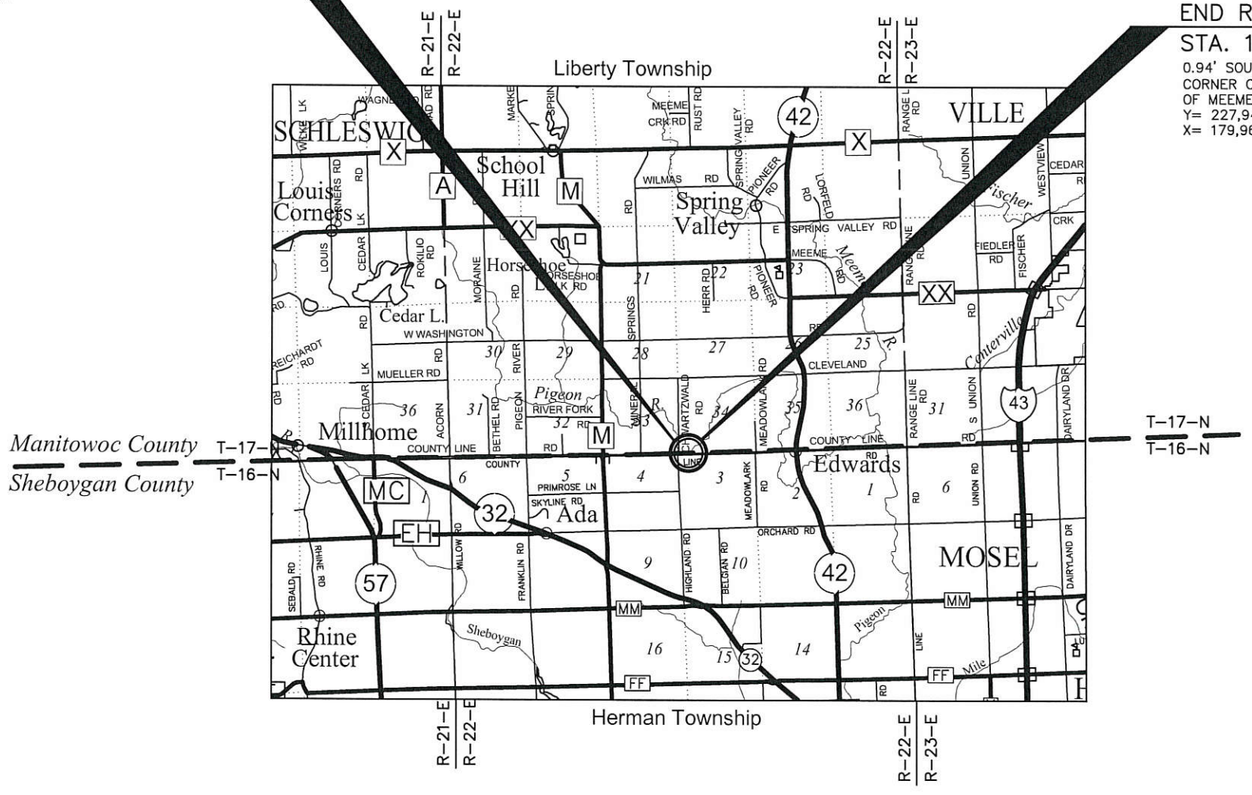
RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4" X 24" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

BEGIN RELOCATION ORDER

STA. 11+25.30

0.06' NORTH AND 15.47' WEST OF THE SW CORNER OF SECTION 34, T.17N., R.22E., TOWN OF MEEME, MANITOWOC COUNTY, WI
Y= 227,943.21
X= 179,795.14



END RELOCATION ORDER

STA. 13+00

0.94' SOUTH AND 159.23' EAST OF THE SW CORNER OF SECTION 34, T.17N., R.22E., TOWN OF MEEME, MANITOWOC COUNTY, WI
Y= 227,942.21
X= 179,969.84

N

LAYOUT
SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.03 MI.

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
4313-10-00	4.01	2
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT-OF-WAY REQUIRED FOR

T MEEME, COUNTY LINE RD

PIGEON RIVER BRIDGE & APPROACHES

COUNTY LINE ROAD — MANITOWOC COUNTY

CONSTRUCTION PROJECT NUMBER
4313-10-71

COUNTY CLERK FILED
2016 JUL 26 A 10:32
SHEBOYGAN COUNTY WISCONSIN

JEWELL
associates engineers, inc.
Engineers - Architects - Surveyors

560 SUNRISE DRIVE
SPRING GREEN, WI 53588
PHONE : 608.588.7484
FAX : 608.588.9322

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FOR THE TOWN OF MEEME, MANITOWOC COUNTY, WISCONSIN AND THE TOWN OF HERMAN, SHEBOYGAN COUNTY, WISCONSIN AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN SCOTT D. WARNER S-2524 RICHLAND CENTER, WI 07-05-2016 LAND SURVEYOR

RECEIVED
JUL 25 2016
COUNTY CLERK
MANITOWOC COUNTY, WI

REVISION DATE

APPROVED FOR MANITOWOC COUNTY
DATE: 7/26/16 Dennis Graf
MEEME TOWN CHAIRMAN
NAME/TITLE
APPROVED FOR SHEBOYGAN COUNTY
DATE: 7/25/16 Jeffrey L. Luft
HERMAN TOWN CH.
NAME/

12

E

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			
			NEW	EXISTING	TOTAL	T.L.E. ACRES REQ'D.
1	NAOMI R. LUEBKE, AS TRUSTEE OF THE NAOMI R. LUEBKE REVOCABLE LIVING TRUST, DATED DECEMBER 27, 2006	FEE	0.06	0.14	0.20	--
2	KERRY SEMPH AND RUTH SEMPH, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY	FEE, TLE	--	0.13	0.13	0.03
201	TDS TELECOM	TEMPORARY CONSTRUCTION EASEMENT				
202	ALLIANT ENERGY	TEMPORARY CONSTRUCTION EASEMENT				

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE MANITOWOC COUNTY HIGHWAY DEPARTMENT AND THE SHEBOYGAN COUNTY HIGHWAY DEPARTMENT.

R/W COURSE TABLE

PT. TO PT.	DIRECTION	DISTANCE
1 TO 2	S89°40'20"E	74.72'
2 TO 3	S63°06'25"E	55.90'
3 TO 4	S00°19'40"W	66.00
4 TO 5	N89°40'20"W	174.70'
5 TO 6	N00°19'41"E	33.06'
6 TO 7	S89°32'31"E	15.47'
7 TO 8	N01°00'34"E	57.79'
8 TO 1	N90°00'00"E	33.82'

COORDINATE TABLE – NEW R/W POINTS

PT.#	STATION	OFFSET	Y	X
1	11+75.28	58.00 LT.	228000.92	179845.45
2	12+50.00	58.00 LT.	228000.50	179920.17
3	13+00.00	33.00 LT.	227975.21	179970.02
4	13+00.00	33.00 RT.	227909.21	179969.65
5	11+25.30	33.00 RT.	227910.21	179794.95
6	11+25.30	0.06 LT.	227943.27	179795.14
7	11+40.77	0.02 LT.	227943.15	179810.61
8	11+41.46	57.81 LT.	228000.92	179811.63

TLE COURSE TABLE

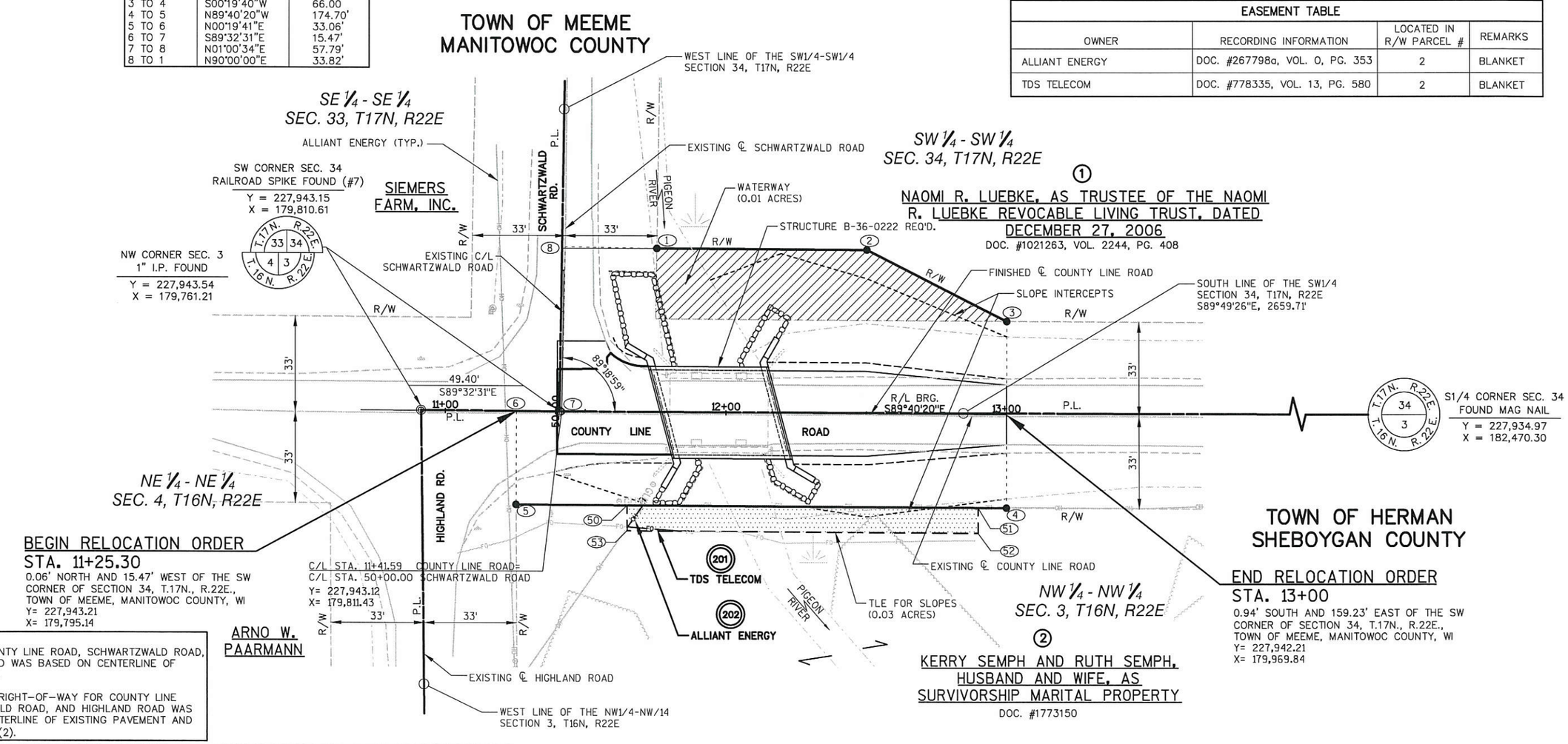
PT. TO PT.	DIRECTION	DISTANCE
51 TO 52	S00°19'40"W	9.00'
52 TO 53	N89°40'20"W	125.00'
53 TO 50	N00°19'40"E	9.00'
50 TO 51	S89°40'20"E	125.00'

COORDINATE TABLE – TEMPORARY LIMITED EASEMENT (TLE) POINTS

PT.#	STATION	OFFSET	Y	X
50	11+65.00	33.00' RT.	227909.98	179834.65
51	12+90.00	33.00' RT.	227909.27	179959.65
52	12+90.00	42.00' RT.	227900.27	179959.60
53	11+65.00	42.00' RT.	227900.98	179834.60

EASEMENT TABLE

OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
ALLIANT ENERGY	DOC. #267798a, VOL. 0, PG. 353	2	BLANKET
TDS TELECOM	DOC. #778335, VOL. 13, PG. 580	2	BLANKET



NOTE:
EXISTING ℄ OF COUNTY LINE ROAD, SCHWARTZWALD ROAD, AND HIGHLAND ROAD WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT-OF-WAY FOR COUNTY LINE ROAD, SCHWARTZWALD ROAD, AND HIGHLAND ROAD WAS BASED ON THE CENTERLINE OF EXISTING PAVEMENT AND WIS. STATUTE 82.31(2).

REVISION DATE	DATE	SCALE, FEET	HWY: COUNTY LINE ROAD	STATE R/W PROJECT NUMBER: 4313-10-00	PLAT SHEET 4.02	
	GRID FACTOR N/A	0 20 40	COUNTY: MANITOWOC	CONSTRUCTION PROJECT NUMBER: 4313-10-71	PS&E SHEET 13	E

VARISH GEORGE P & WENDY LC

SIEMERS FARM, INC.

NAOMI R. LUEBKE, AS TRUSTEE OF THE NAOMI R. LUEBKE REVOCABLE LIVING TRUST, DATED DECEMBER 27, 2006

EXISTING ℄ SCHWARTZWALD ROAD

FINISHED C/L SCHWARTZWALD ROAD

SCHWARTZWALD ROAD

P.L.

R/W

EXISTING 18" CMP TO REMAIN

EXISTING ℄ COUNTY LINE ROAD

C/L STA. 11+41.59 COUNTY LINE ROAD=
C/L STA. 50+00.00 SCHWARTZWALD ROAD
INTERSECTION TYPE C (MOD.) REQ'D

BM 2

801.60

N01°00'42"E

90°41'1"

50.00

801.46

801.54

801.84

801.89

801.53

801.40

801.59

801.39

801.45

801.74

801.69

S89°40'20"E

801.39

2.0%

REMOVING OLD STRUCTURE OVER WATERWAY (P-36-0907)
SINGLE SPAN CONCRETE DECK GIRDER STRUCTURE
24.0' CLEAR ROADWAY WIDTH
33.0' OVERALL LENGTH

REALIGNING DITCH REQ'D (SEE CROSS SECTIONS)

FEE REQ'D

FINISHED ℄ COUNTY LINE ROAD

12+50 18.0'

12+50 15.0'

13+00 12.7'

13+00 10.5'

LIMITS OF AGRICULTURAL FIELD

BM 1

9+00 (ASPHALT) 10+00 COUNTY LINE ROAD 11+00 12+00 13+00 14+00 (ASPHALT)

33'

33'

BM 3

BM 4

STA. 11+45
15.0' RT.

HIGHLAND ROAD

BEGIN PROJECT
STA. 11+40
Y= 227,943.13
X= 179,809.84

ARNO W. PAARMANN

LIMITS OF AGRICULTURAL FIELD

EXISTING ℄ HIGHLAND ROAD

STRUCTURE B-36-0222 REQ'D.

TDS TELECOM (TYP.)

ALLIANT ENERGY (TYP.)

PIGEON RIVER

CONCRETE PAVEMENT APPROACH SLAB HES REQ'D. (TYP.)

LIMITS OF DELINEATED WETLANDS

12+50 15.0'

12+50 18.0'

TLE REQ'D

13+00 10.5'

13+00 13.6'

END PROJECT
STA. 13+00
Y= 227,942.21
X= 179,969.84

KERRY SEMPH & RUTH SEMPH, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY

LEGEND

- RIPRAP MEDIUM OVER GEOTEXTILE FABRIC TYPE HR, CHINKING REQ'D
- DIRECTION OF FLOW
- XXXXXXXXX SAWING ASPHALT
- SILT FENCE
- TEMPORARY DITCH CHECK
- WETLANDS
- EDGE OF WATER
- TURBIDITY BARRIER

NOTES: SEE STRUCTURE PLANS FOR RIP RAP MEDIUM OVER GEOTEXTILE TYPE HR, CHINKING REQ'D. LAYOUT INFORMATION.

SEE STRUCTURE APPROACH DETAILS FOR FURTHER INFORMATION ON THE CONCRETE PAVEMENT APPROACH SLAB HES BID ITEM.

808 806 804 802 800 798 796 794 792

EXISTING ℄ PROFILE COUNTY LINE ROAD

FINISHED ℄ PROFILE COUNTY LINE ROAD

HIGH WATER100 EL = 799.66 -0.25%

MATCH EXISTING STA. 13+00 EL. = 801.53

MATCH EXISTING STA. 11+40 EL. = 801.92

HIGH WATER2 EL = 797.02

OBSERVED WATER EL. 794.14 (11-4-2015)

END SPECIAL DITCH STA. 13+00, LT. EL. 796.83

SLOPE = +3.11%

EXISTING ℄ ELEVATION

FINISHED ℄ ELEVATION

BEGIN SPECIAL DITCH STA. 11+97, LT. EL. 793.62

EXISTING STREAMBED EL. 792.97

808.79 808.20 807.61 807.01 806.40 805.78 805.10 804.42 803.76 803.13 802.52 802.22 801.92 801.92 801.96 801.88 802.02 801.83 802.07 801.78 801.93 801.73 801.84 801.68 801.73 801.63 801.63 801.58 801.53 801.53 801.49 801.44 801.41 801.38 801.34

9+00 9+20 9+40 9+60 9+80 10+00 10+20 10+40 10+60 10+80 11+00 11+20 11+40 11+60 11+80 12+00 12+20 12+40 12+60 12+80 13+00 13+20 13+40 13+60 13+80 14+00 14+20 14+40 14+60

STA. 11+98
STRUCTURE B-36-0222 REQ'D.
SINGLE SPAN REINFORCED CONCRETE FLAT SLAB
CLEAR ROADWAY WIDTH = 30.0'
O.A.L. = 42.58'
SKEW = 15° RHF

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	14+20	3/4" IRON REBAR SET, 14.3' LT	800.54
2	11+24	3/4" IRON REBAR SET, 29.1' LT	801.24
3	8+96	3/4" IRON REBAR SET, 27.3' RT	808.38
4	13+99	STAR SPIKE IN POWER POLE, 30.1' RT	799.39

NOTE: BENCHMARK STATIONS REFERENCED TO COUNTY LINE ROAD

EARTHWORK SUMMARY

EXCAVATION COMMON	=	220 C.Y.
UNUSABLE PAVEMENT MATERIAL	=	65 C.Y.
AVAILABLE MATERIAL	=	155 C.Y.
FILL	=	145 C.Y.
FILL EXPANSION (25%)	=	180 C.Y.
BORROW	=	25 C.Y.

PROJECT NO: 4313-10-71	HWY: COUNTY LINE ROAD	COUNTY: MANITOWOC	PLAN AND PROFILE: COUNTY LINE RD	SHEET 14	E

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\SHEETSPLAN\PLAN & PROFILE SHEETS\43131011-P&P.DWG
LAYOUT : SHEET - P&P

PLOT DATE : 1/20/2017
PLOT TIME : 1:11:55 PM

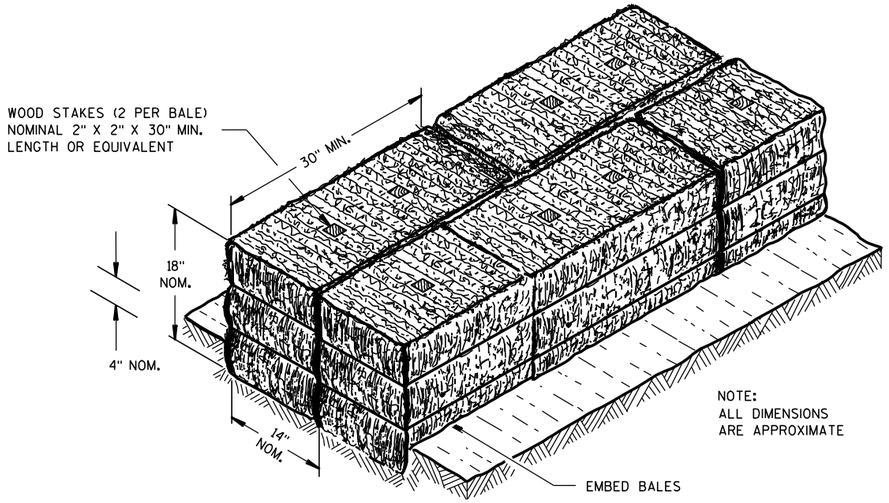
PLOT BY : JULIA ZEHNER

PLOT SCALE : 0.2500 '/ IN

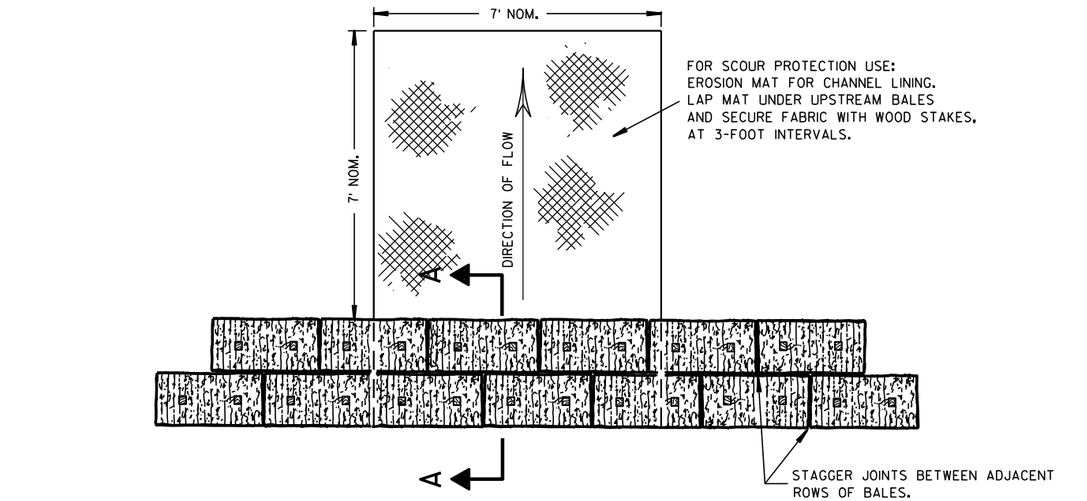
PLOT SCALE : 1 IN:40 FT

Standard Detail Drawing List

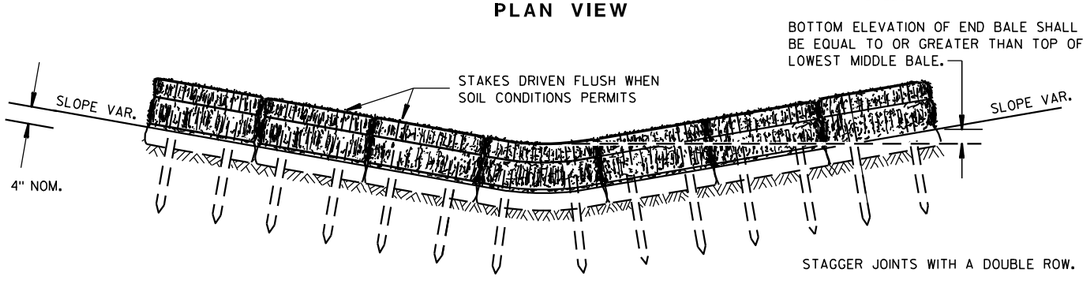
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
12A03-10	NAME PLATE (STRUCTURES)
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-08	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-17A	LONGITUDINAL MARKING (MAINLINE)



SECTION A-A



PLAN VIEW



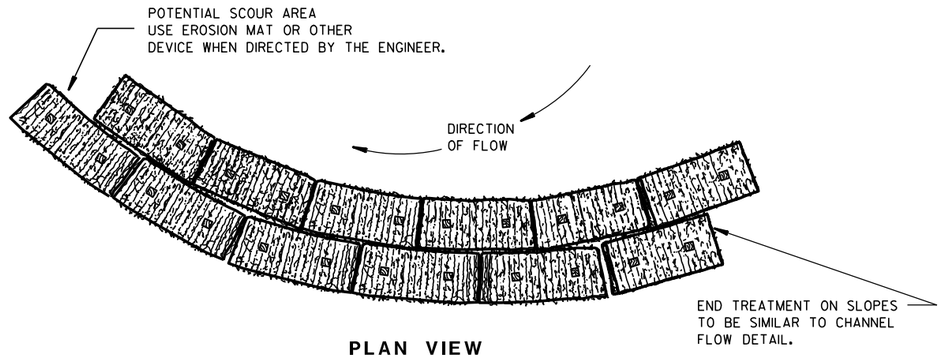
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

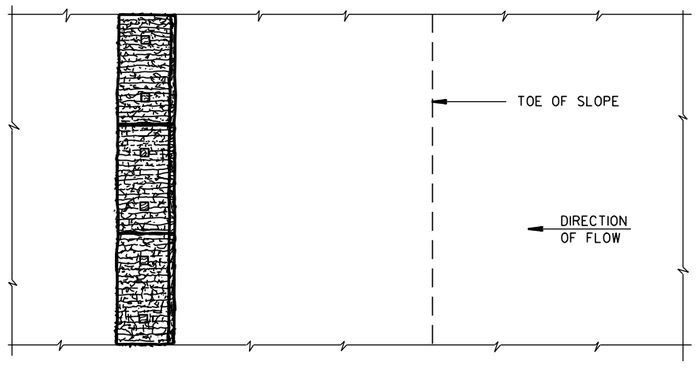
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

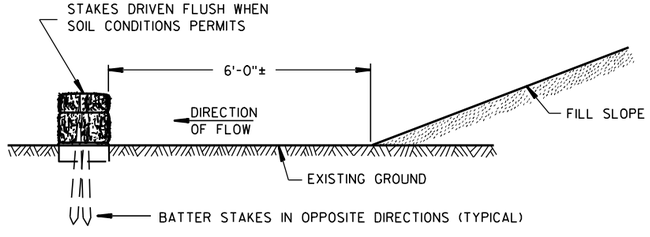


PLAN VIEW

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

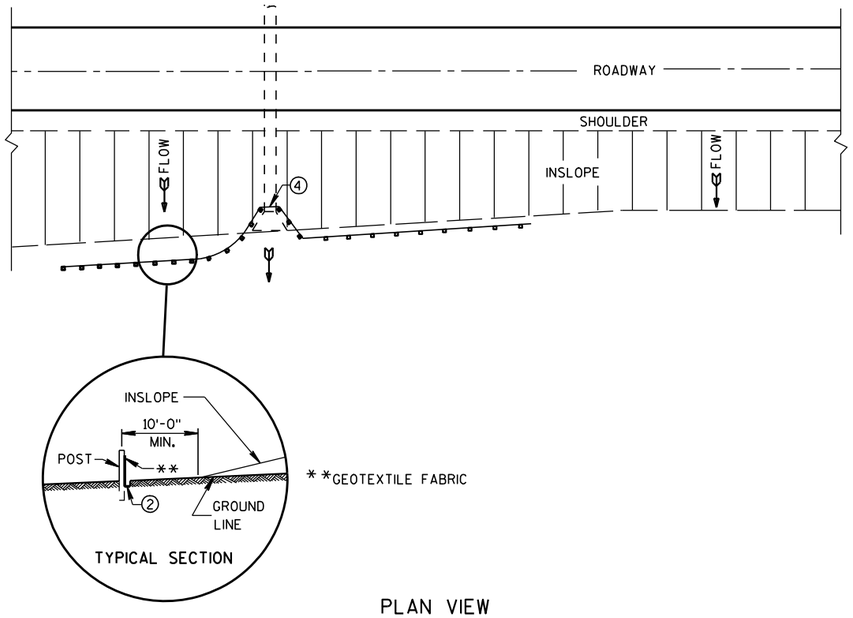
FHWA

6

S.D.D. 8 E 8-3

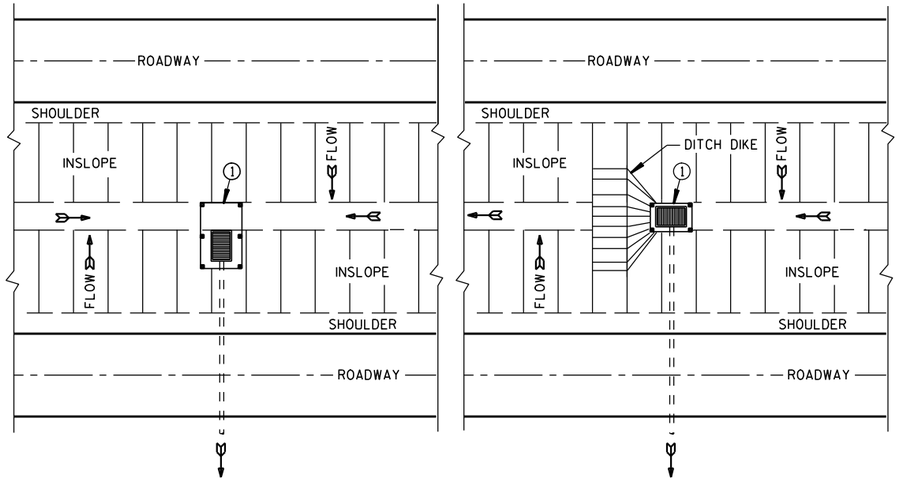
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



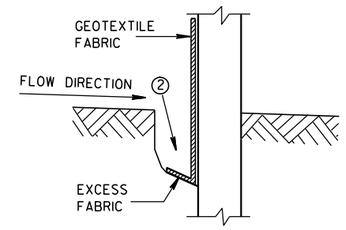
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

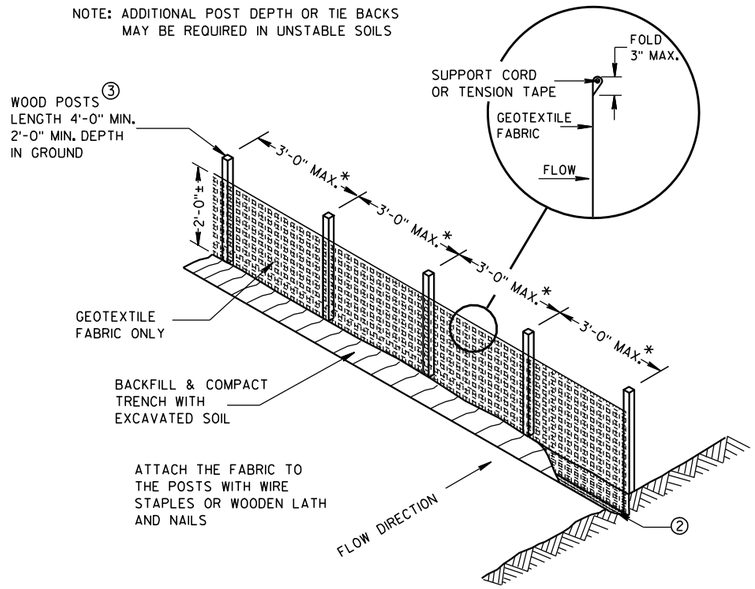
GENERAL NOTES

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

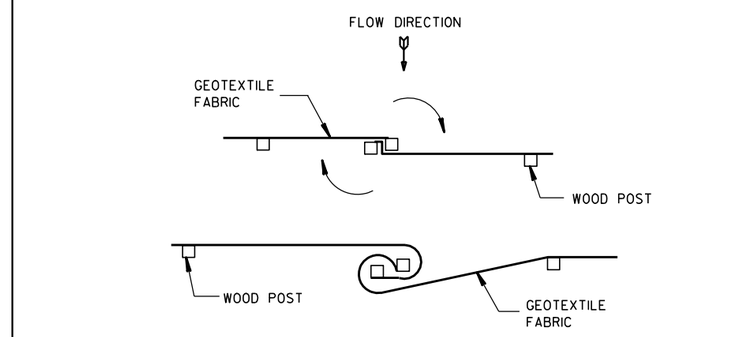
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



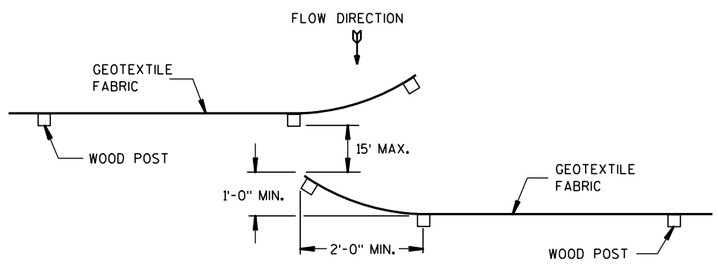
TRENCH DETAIL



SILT FENCE

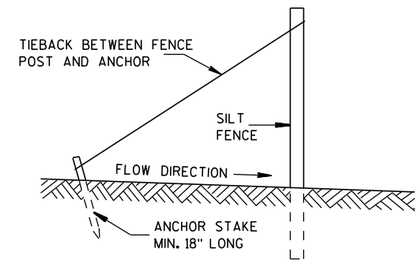


TWIST METHOD



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

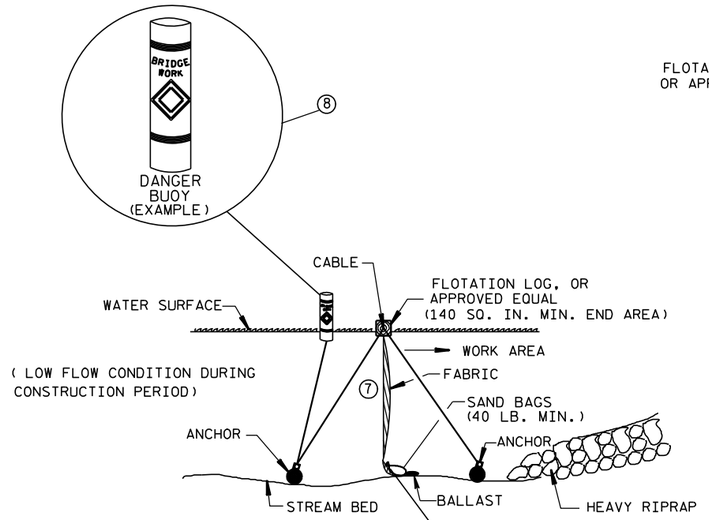
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

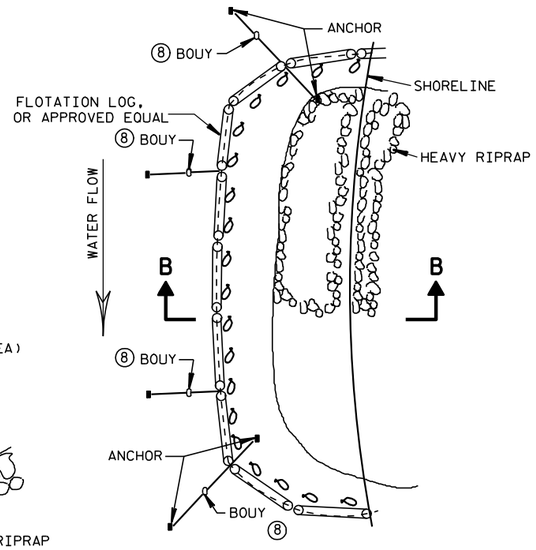
S.D.D. 8 E 9-6

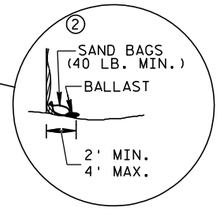
6

S.D.D. 8 E 9-6

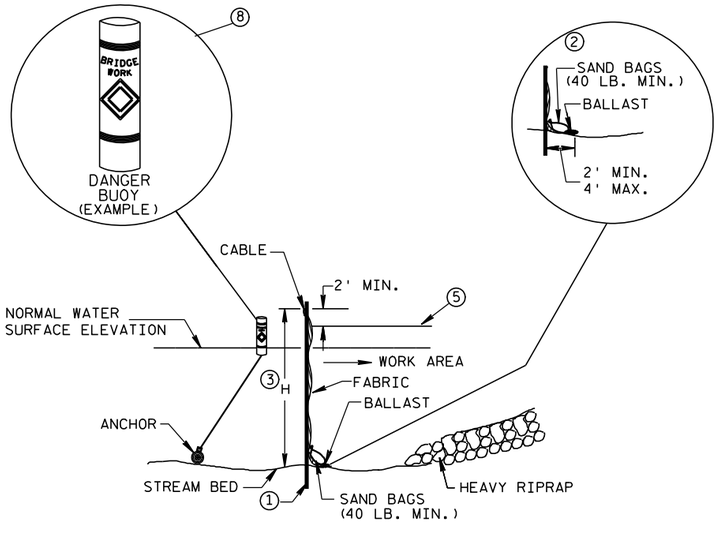


SECTION B-B

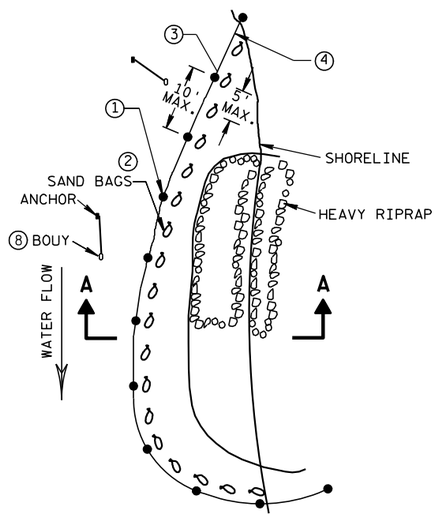




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

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

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

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

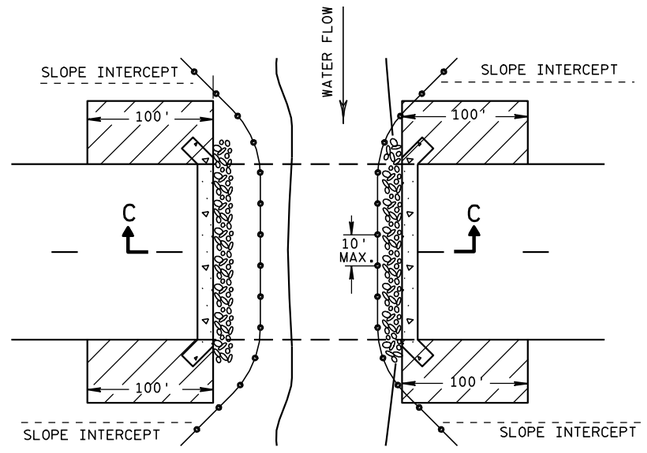
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

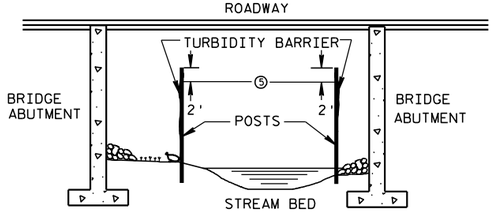
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

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



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

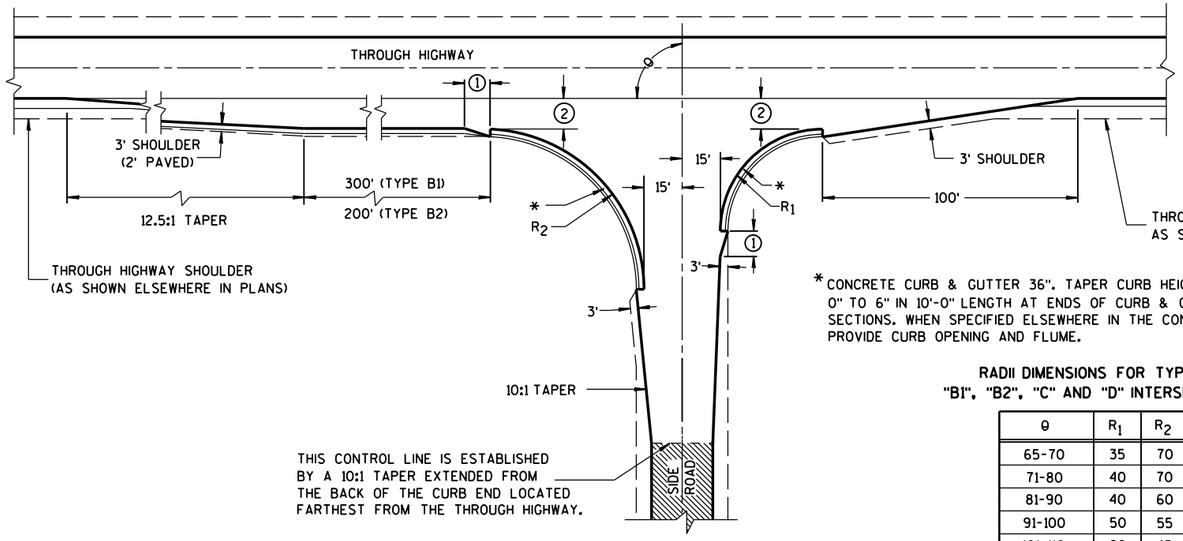
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 11-2

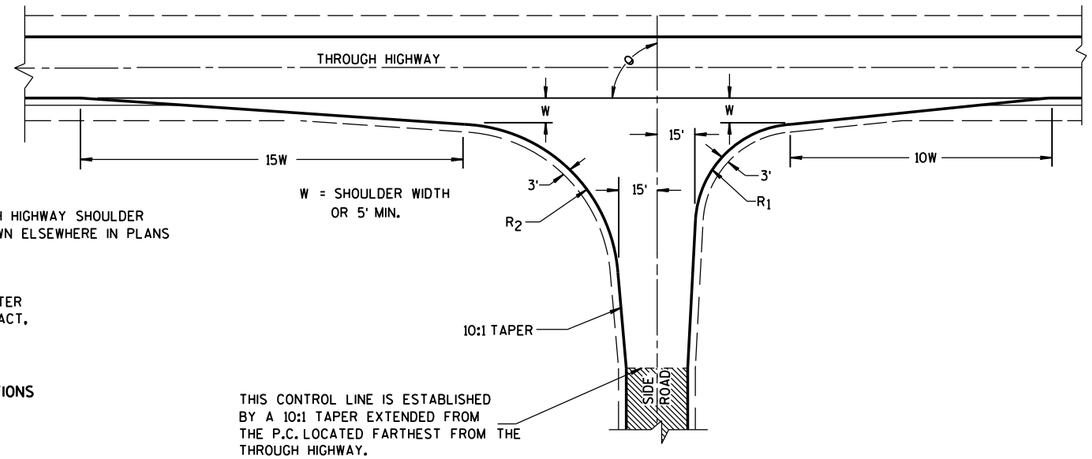


TYPE "B1" AND "B2"

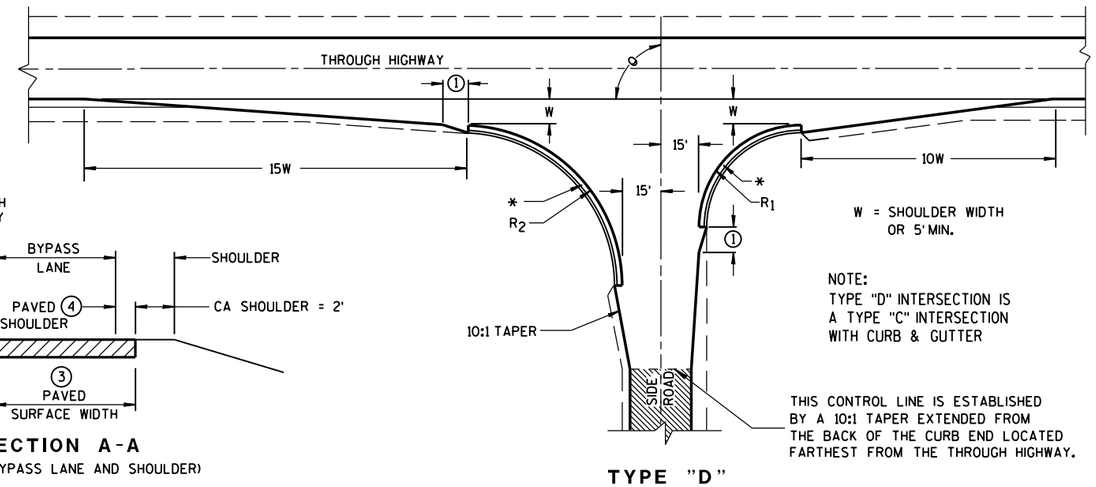
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45



TYPE "C"



TYPE "D"

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

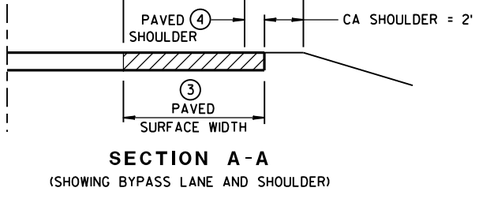
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

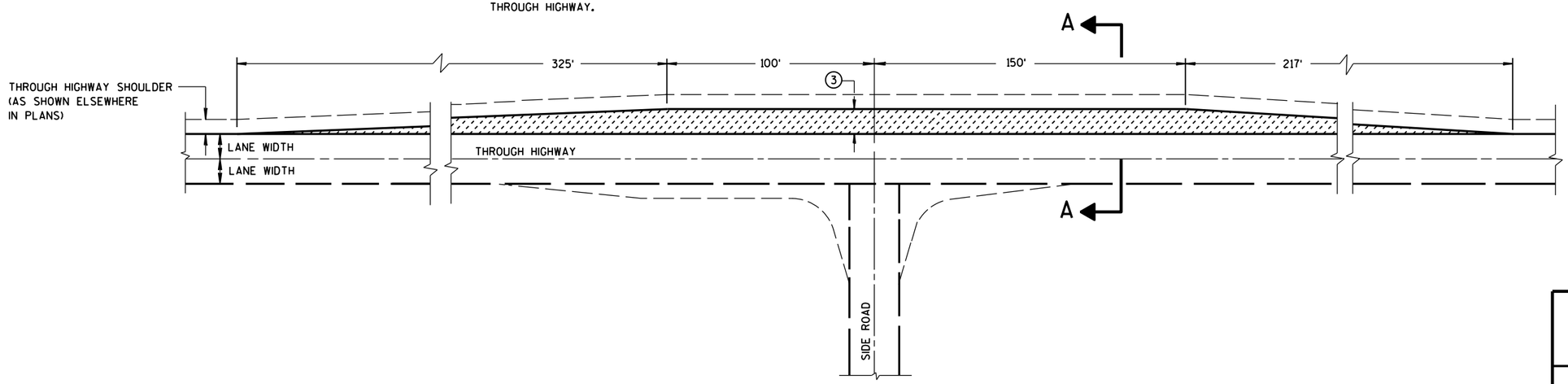
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.

(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)

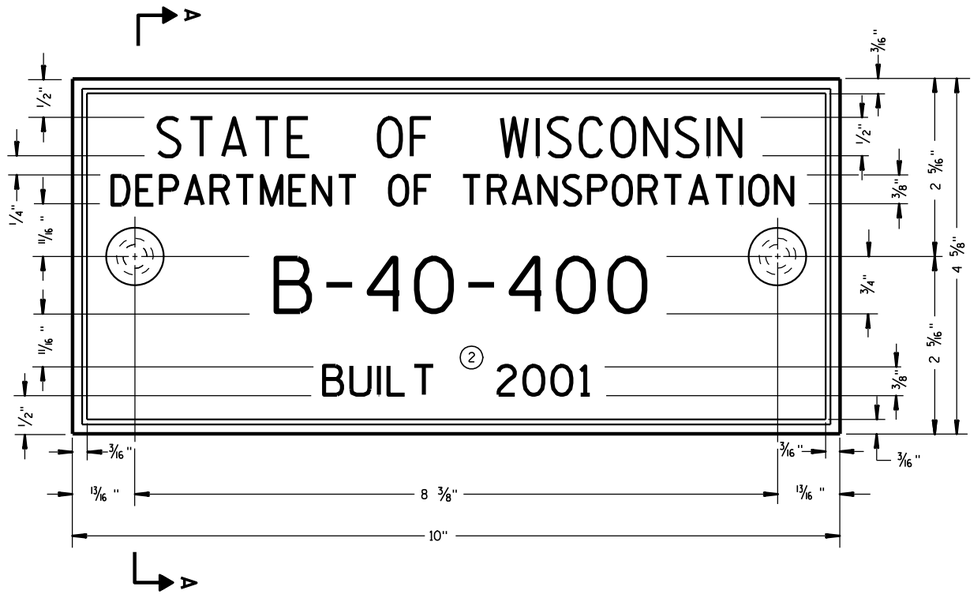


TEE INTERSECTION BYPASS LANE DETAIL

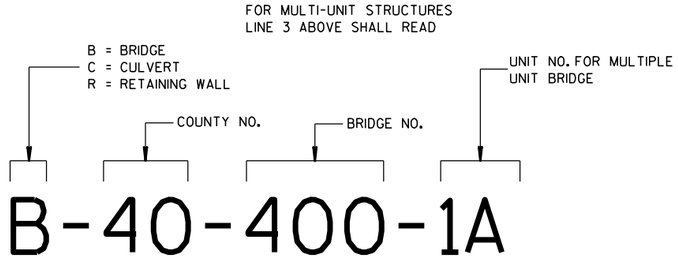
AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 9 A 1-13a



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



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

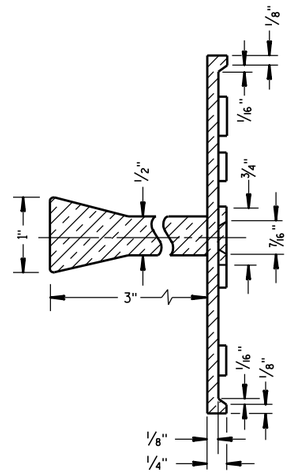
GENERAL NOTES

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.

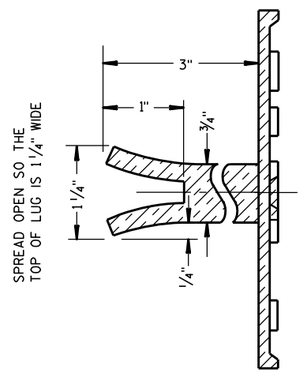
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

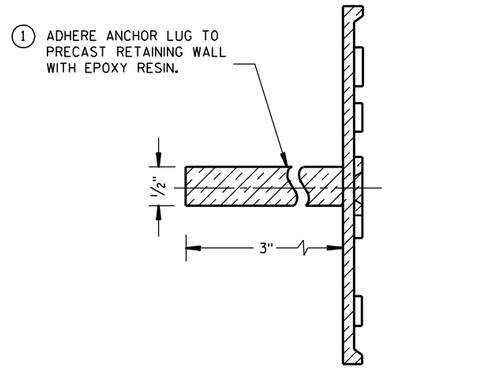
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

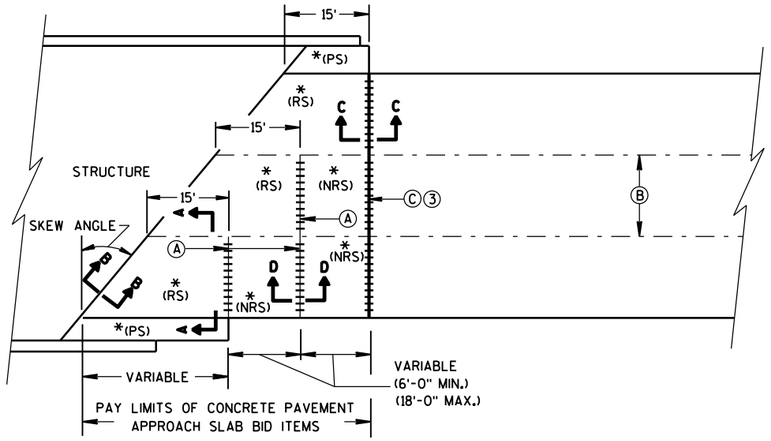
APPROVED

3/26/10 — DATE

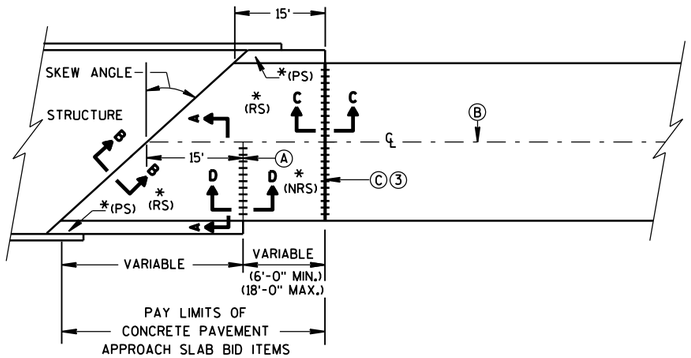
/S/ Scot Beck — CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

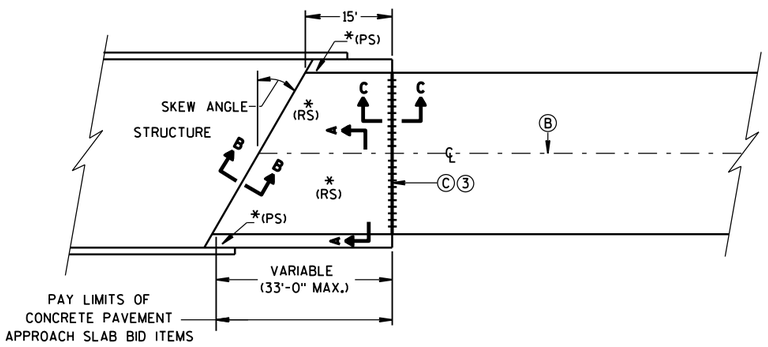
6
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

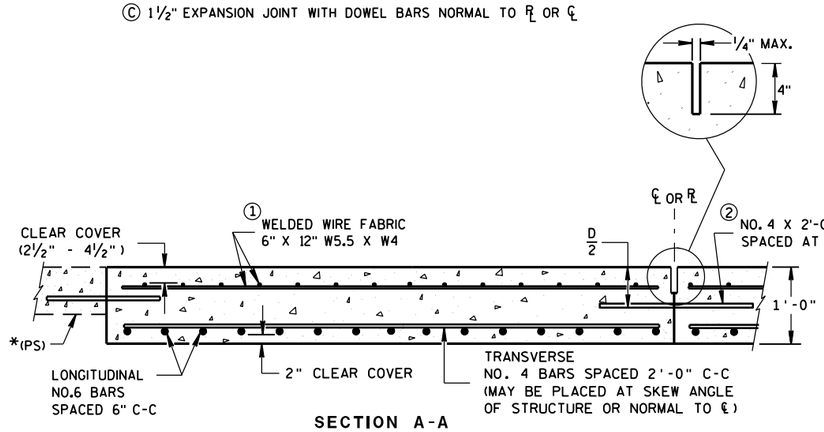
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

***STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

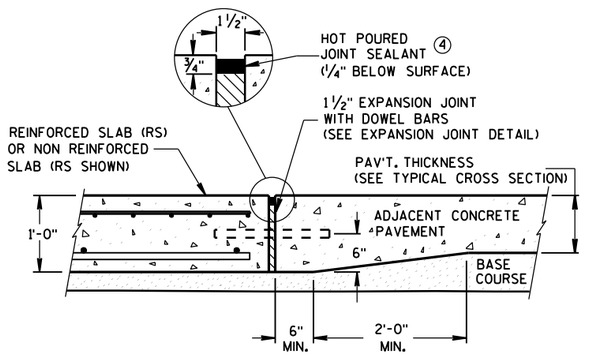
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

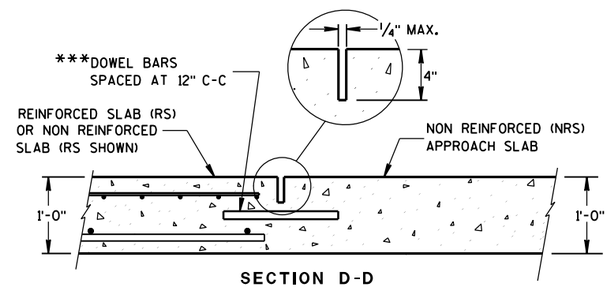
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

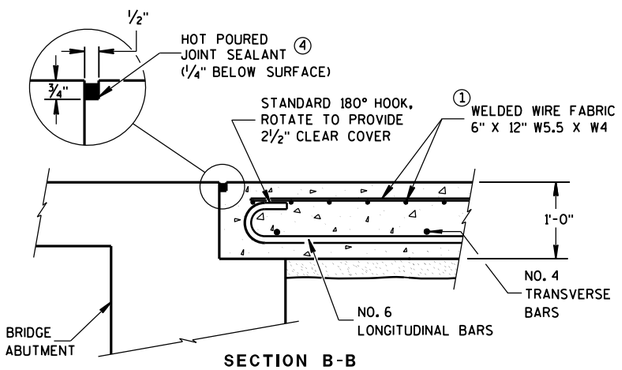
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

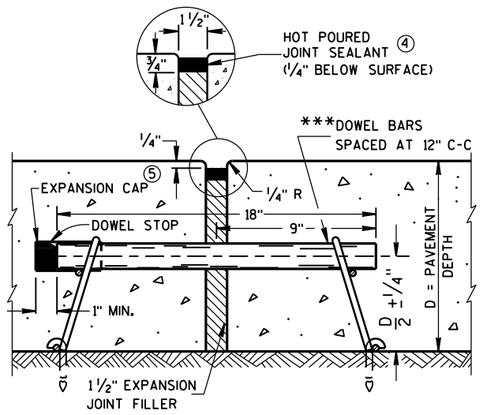
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

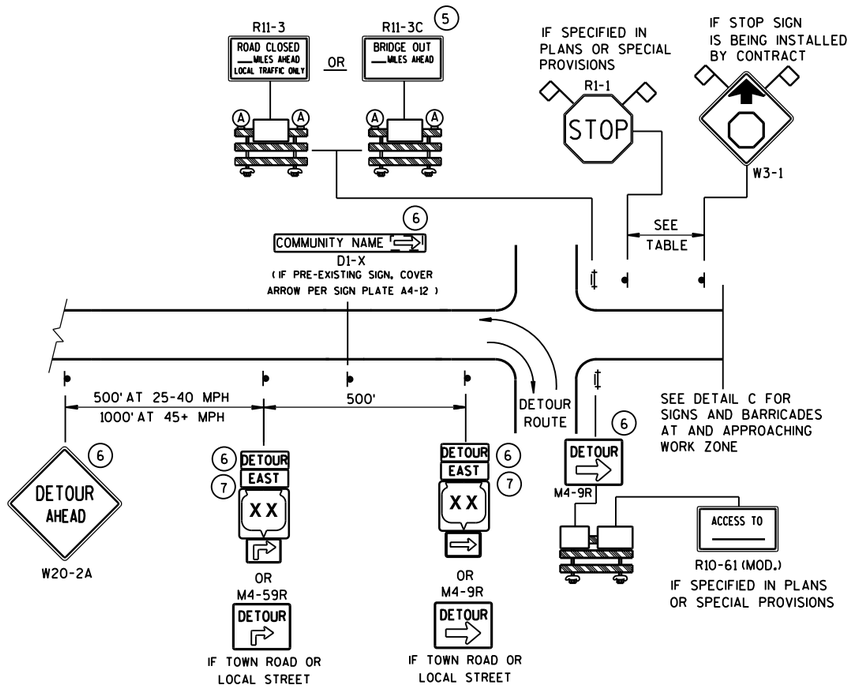
APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

6

S.D.D. 13 B 2-8a

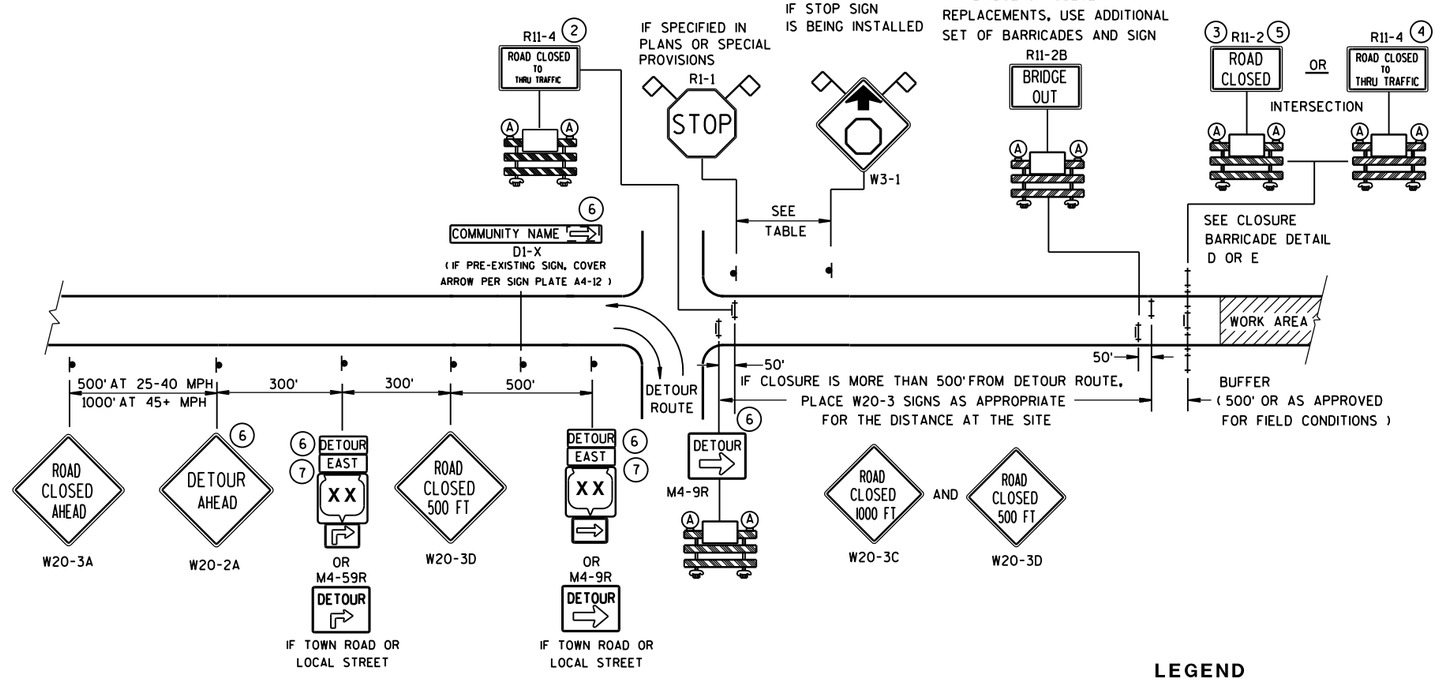
6

S.D.D. 13 B 2-8a



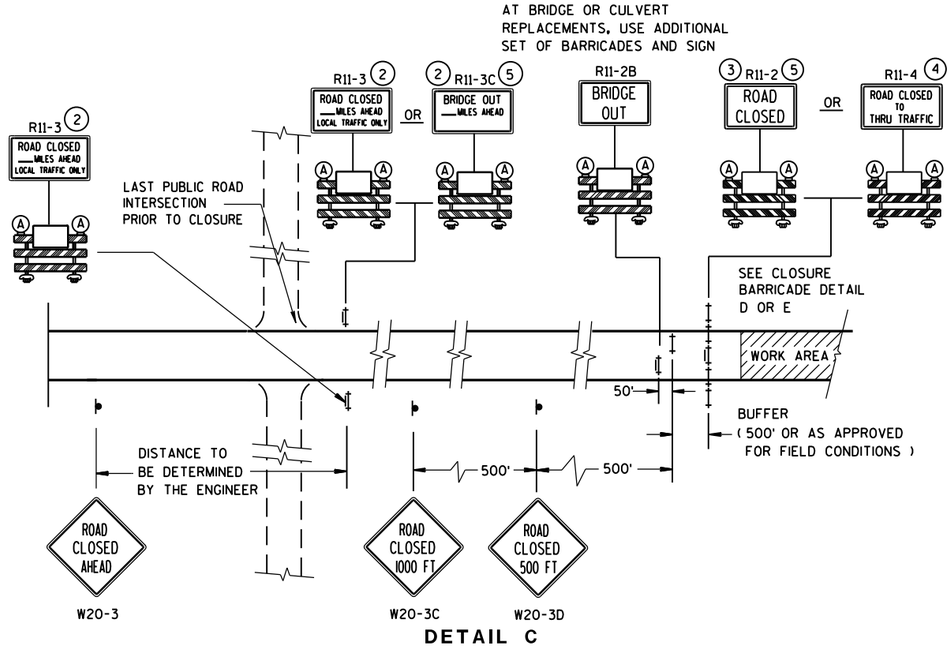
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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)

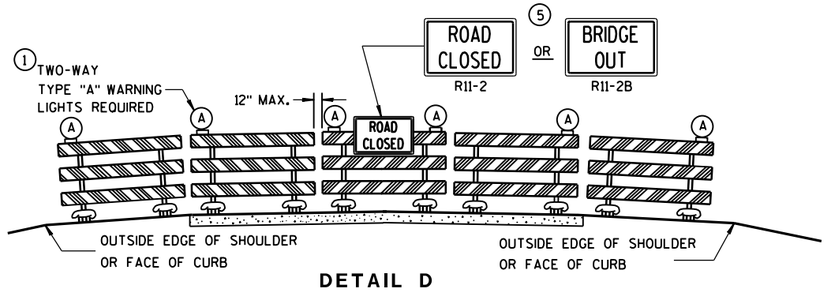
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

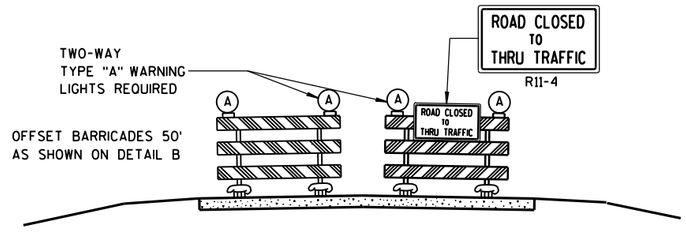
S.D.D. 15 C 2-6a



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

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FIC
FHWA

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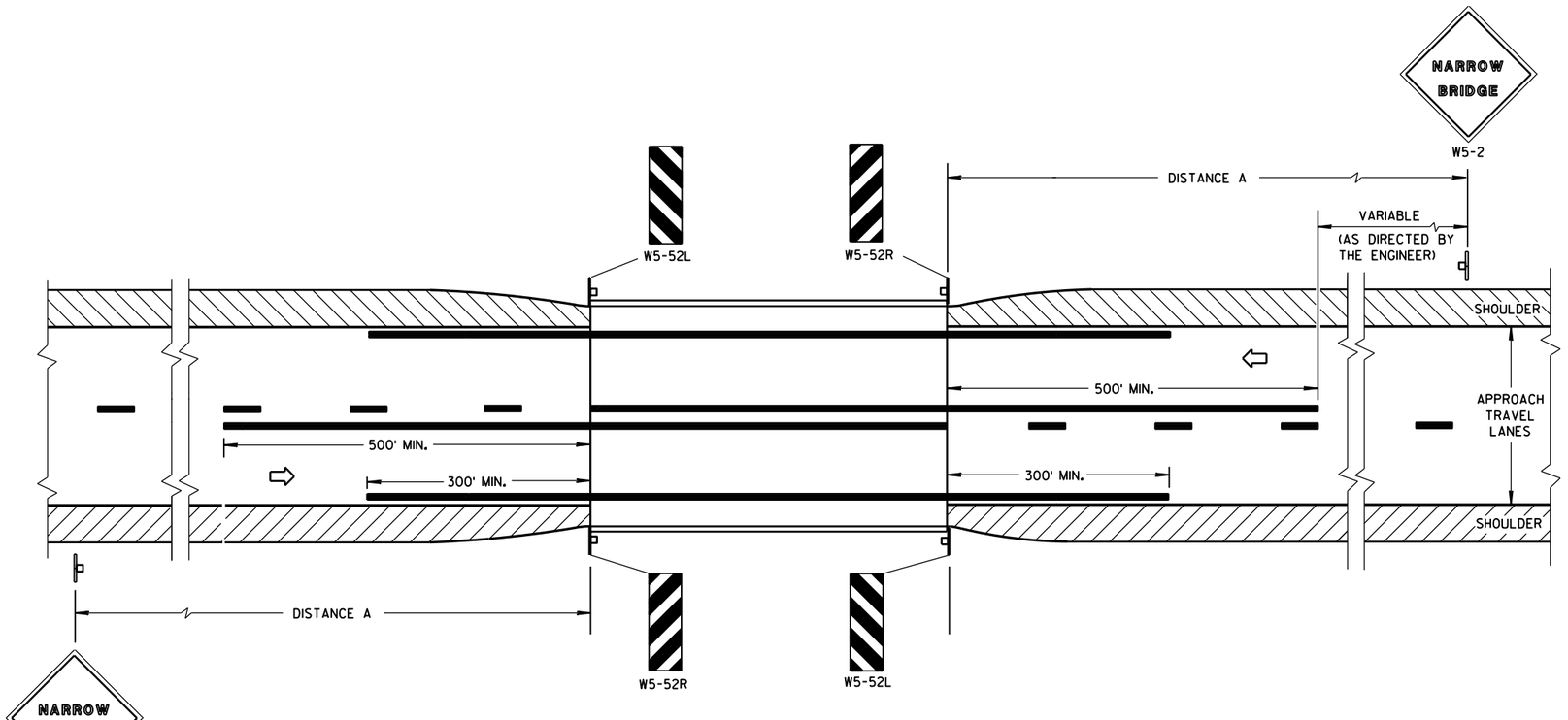
S.D.D. 15 C 2-6b

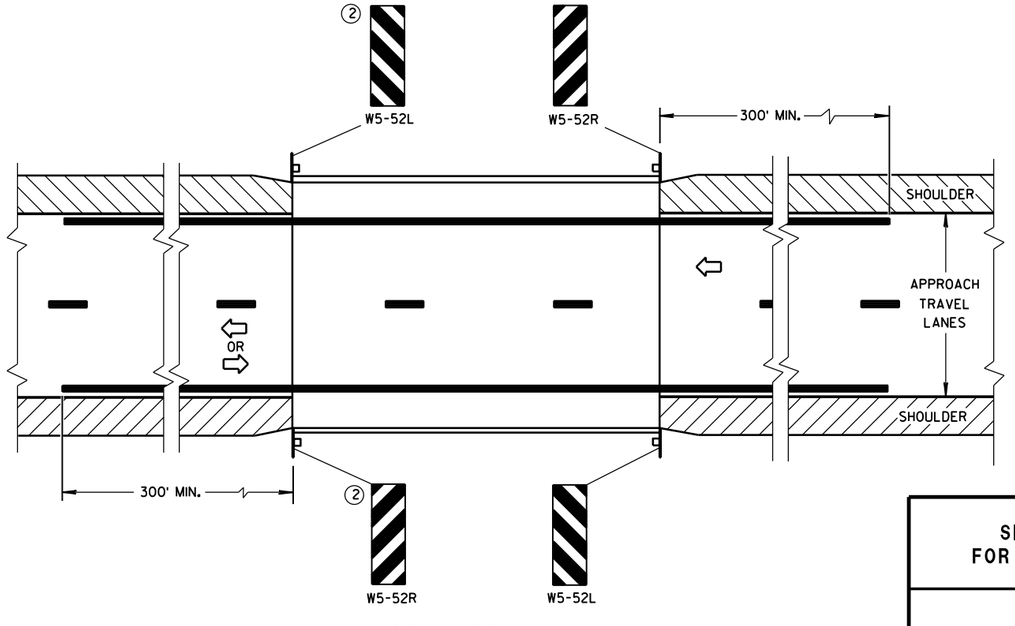


SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

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.

① LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

② OMIT ON ONE-WAY TRAVELLED WAYS.

③ EDGE OF W5-52 SIGN SHALL BE PLACED IN LINE WITH FACE OF CURB OR PARAPET.

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

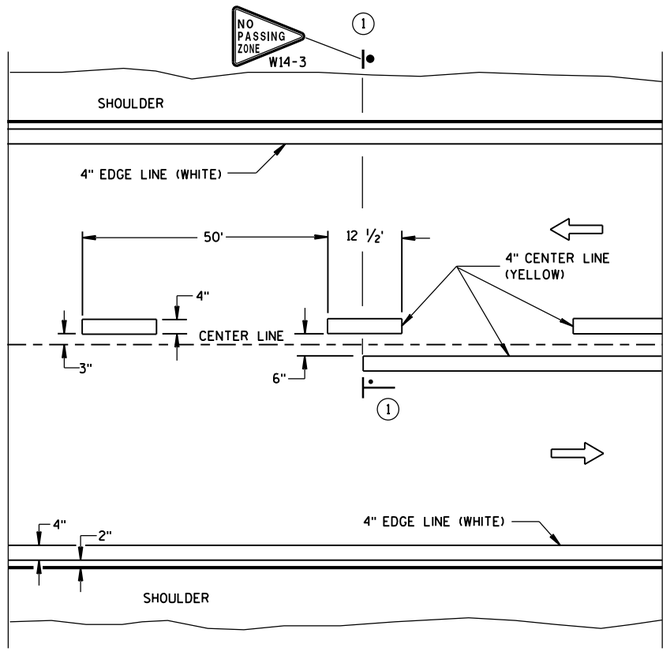
APPROVED
4-18-16 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

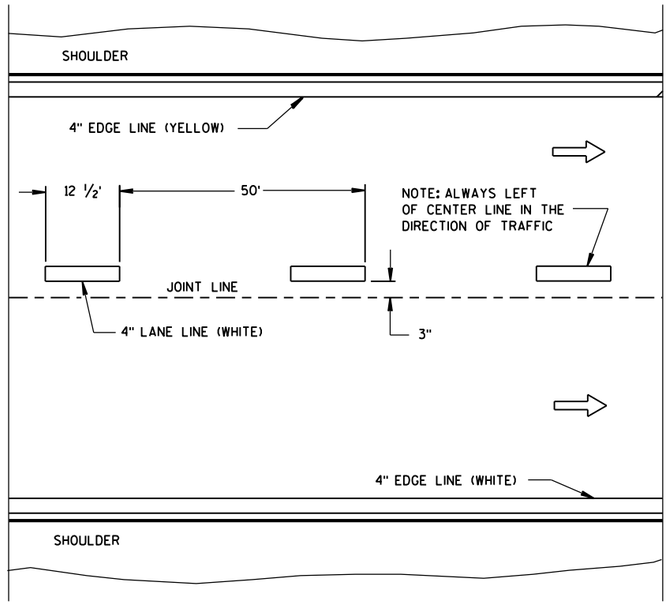
S.D.D. 15 C 6-8

6

S.D.D. 15 C 6-8



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

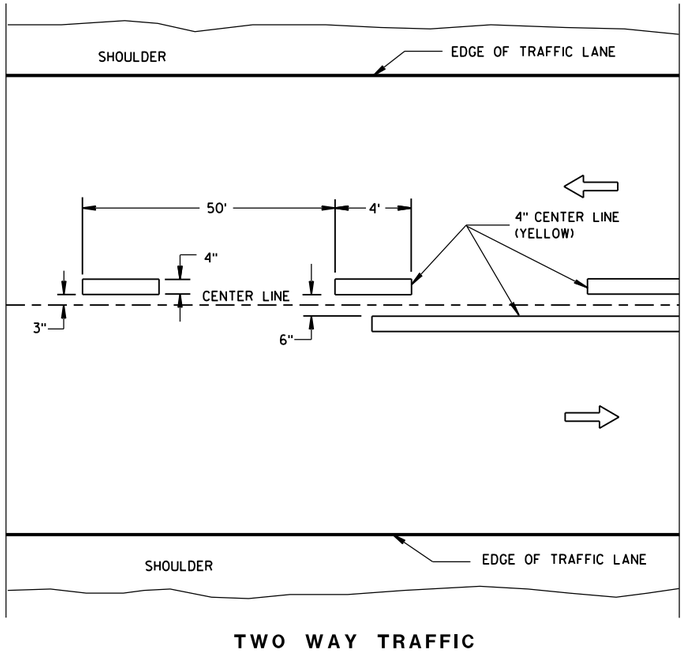
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

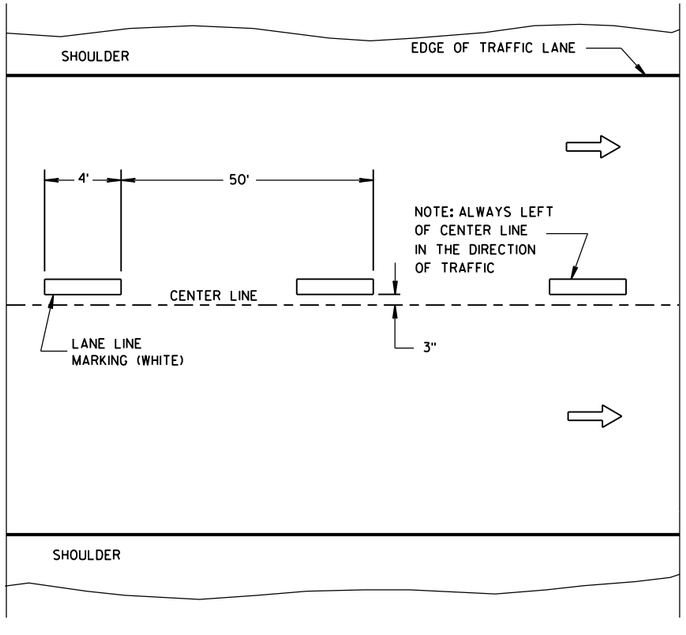
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

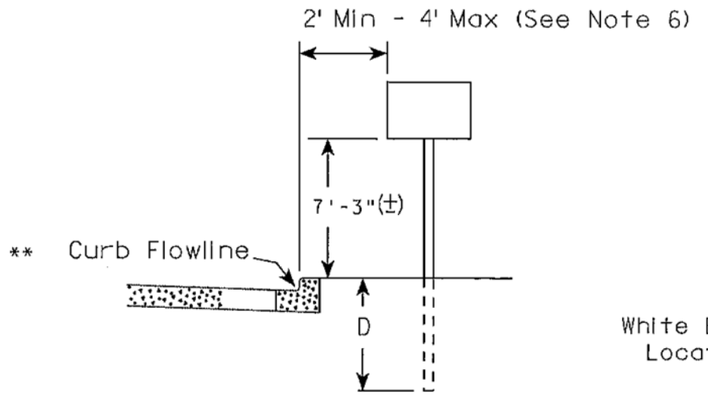
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — /S/ Matthew R. Rauch
DATE — STATE SIGNING AND MAR[illegible]INEER
FHWA

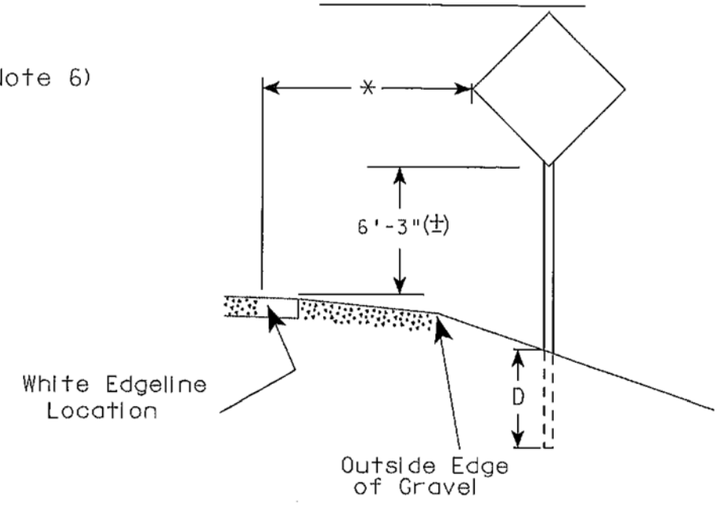
6

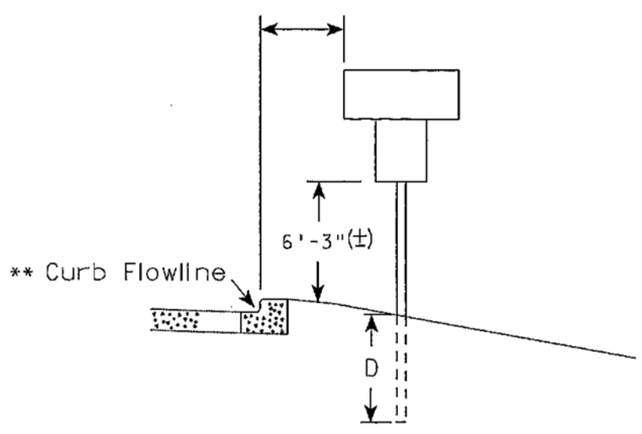
S.D.D. 15 C 8-17a

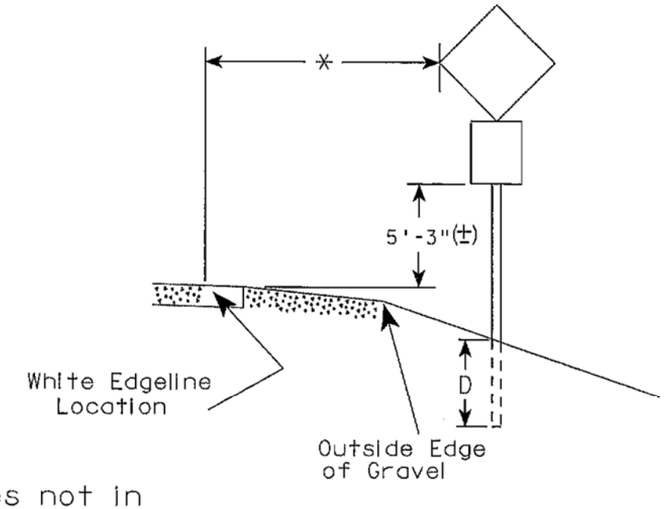
URBAN AREA



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 (A2-1S) 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 signs shall be mounted at a height of 5'-3" (±) or as directd 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), In Road Object Markers (W5-54) & End of Road Markers (W5-56) 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

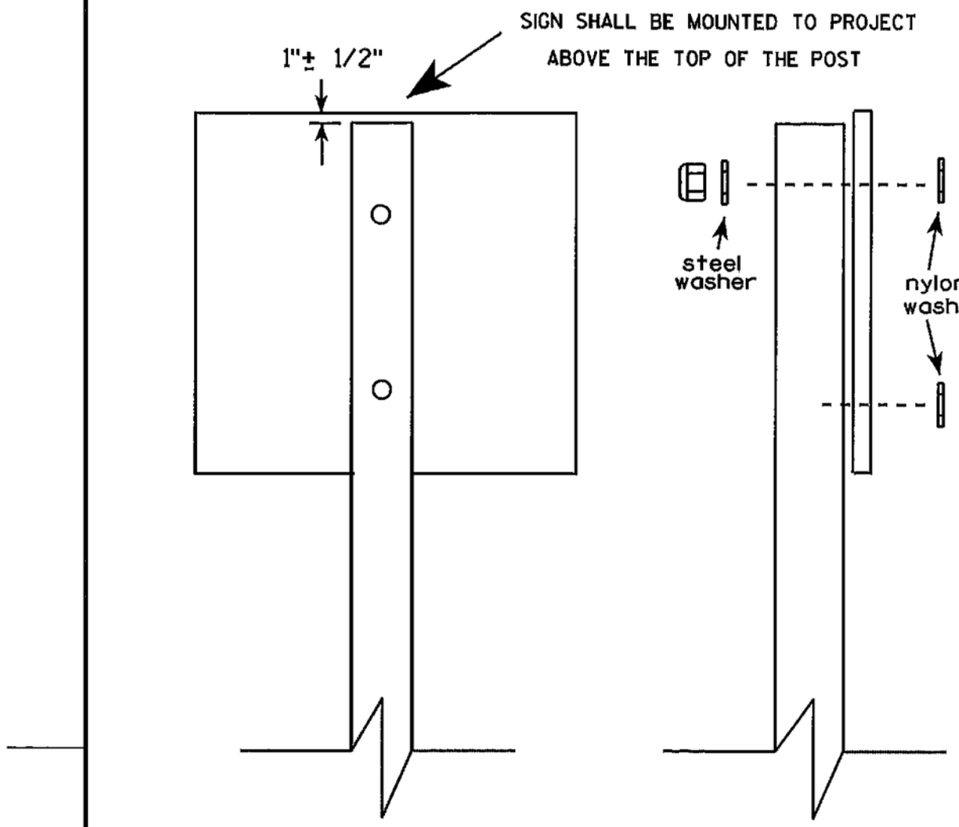
WISCONSIN DEPT OF TRANSPORTATION

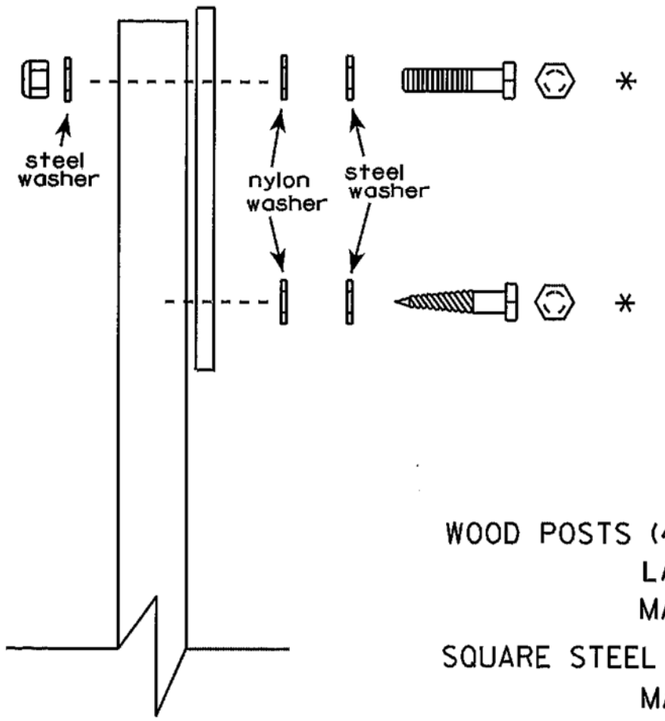
APPROVED Matthew L Rauch for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-3.19

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 12-NOV-2014 14:03 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42





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

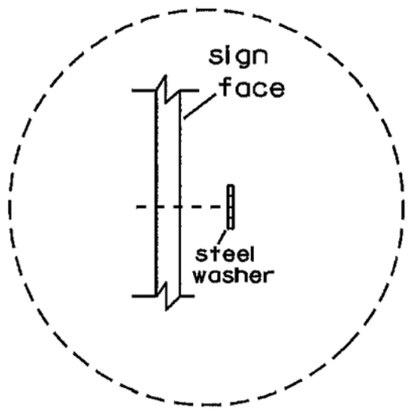
a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

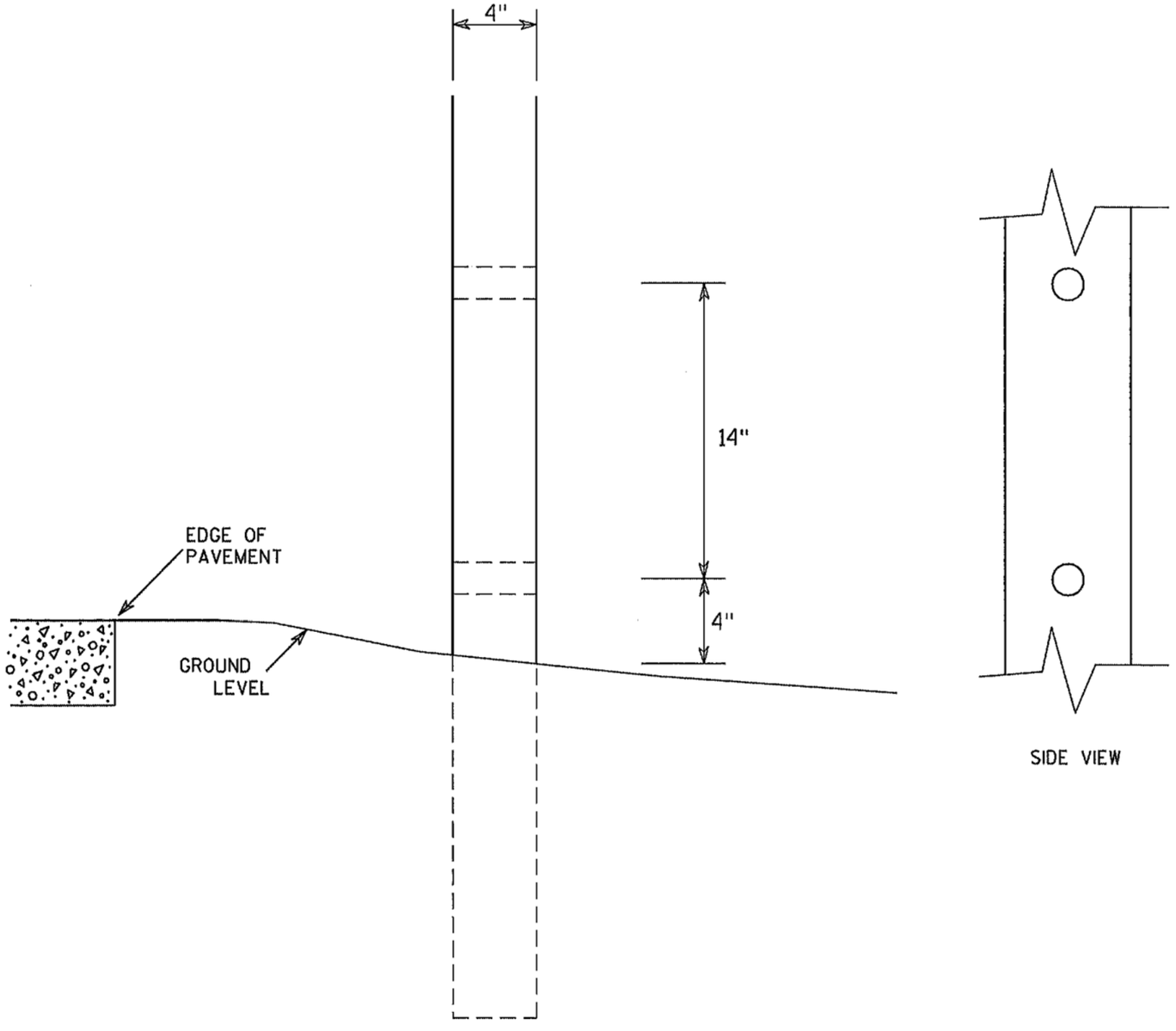
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 27 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

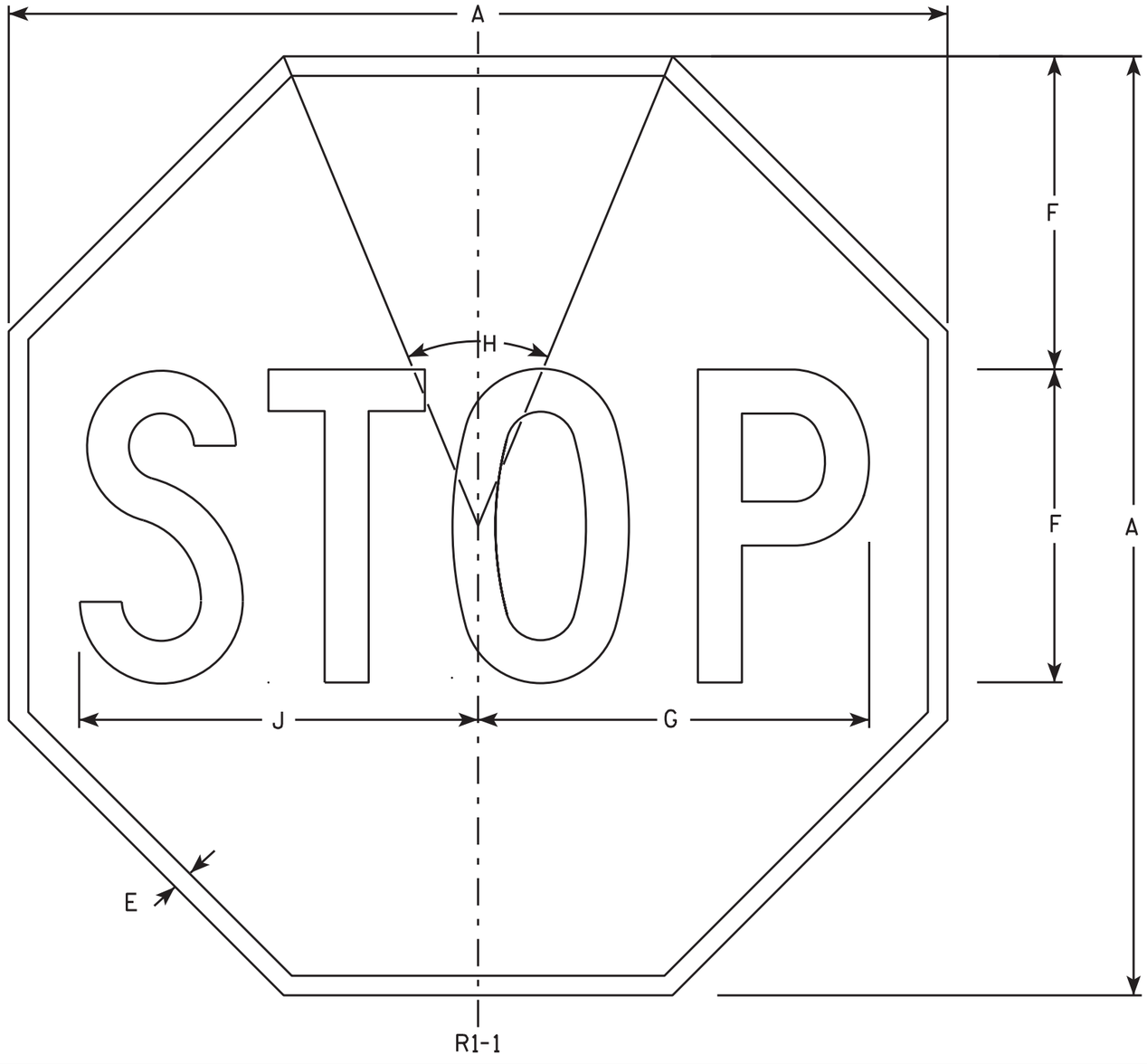
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\Users\Projects\tr_stdplate\A411.DGN PLOT DATE : 10-NOV-2005 10:09 PLOT BY : DOTSJA PLOT NAME : PLOT SCALE : 6.207338:1.000000 WISDOT/CADDS SHEET 42



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

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	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

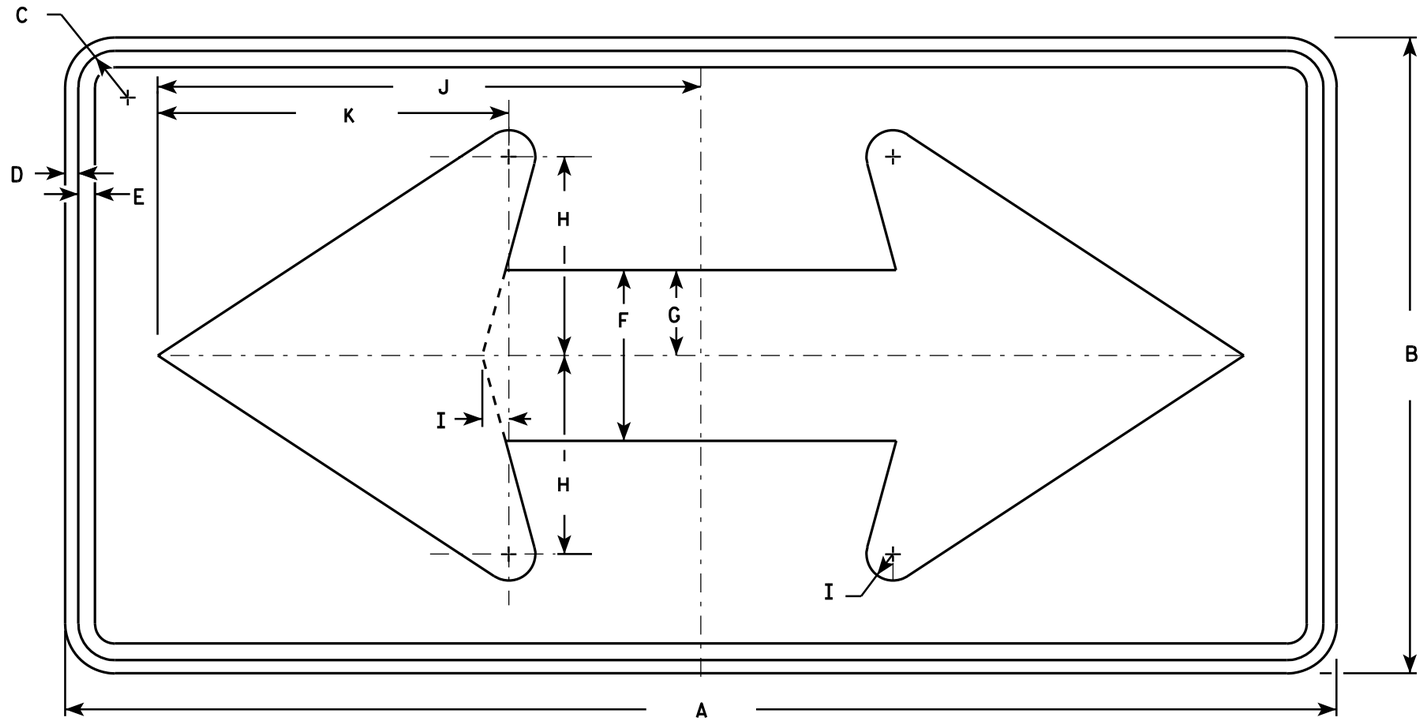
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO. 29	E



W1-7

NOTES

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

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 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

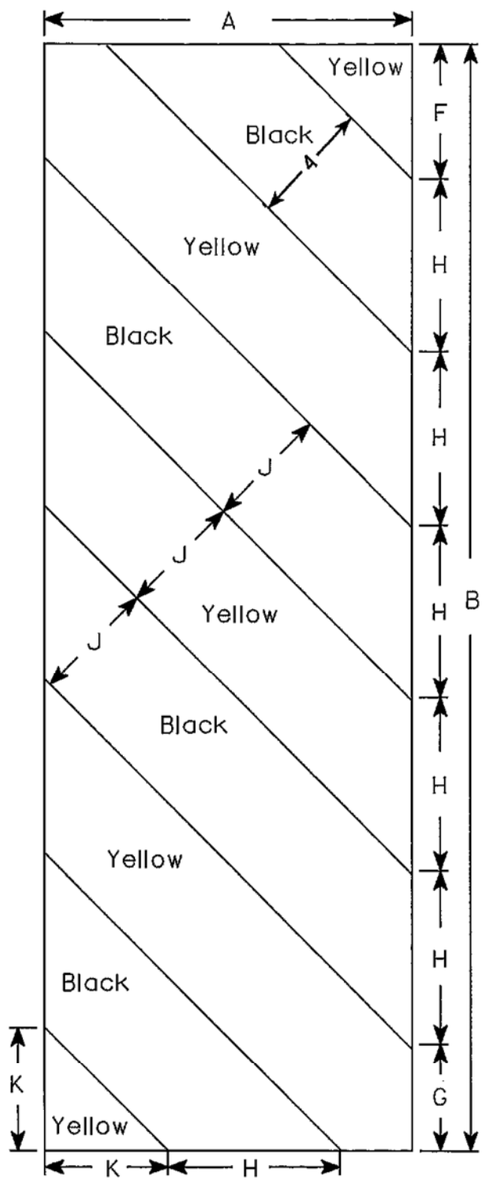
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

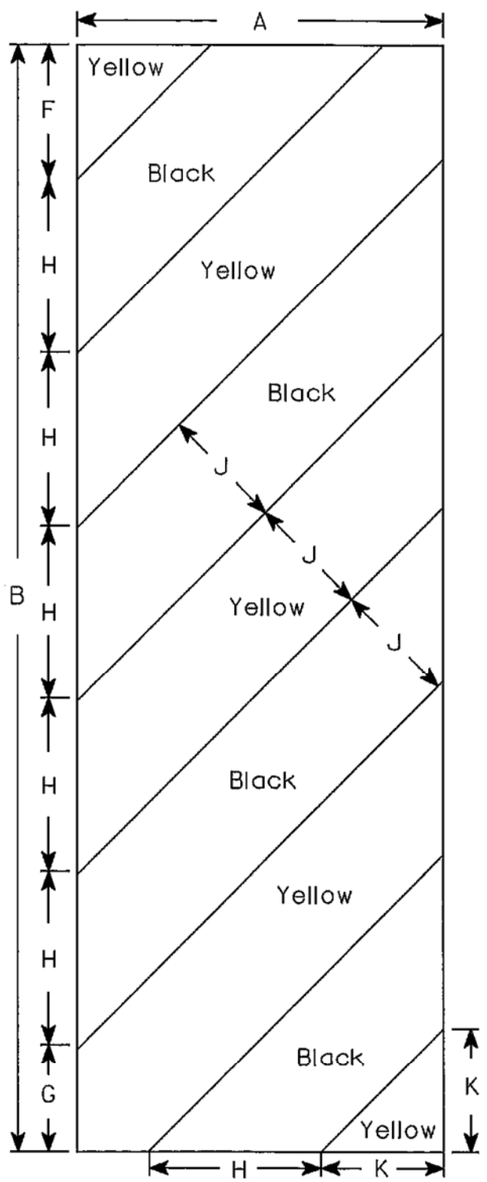
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 30 | 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

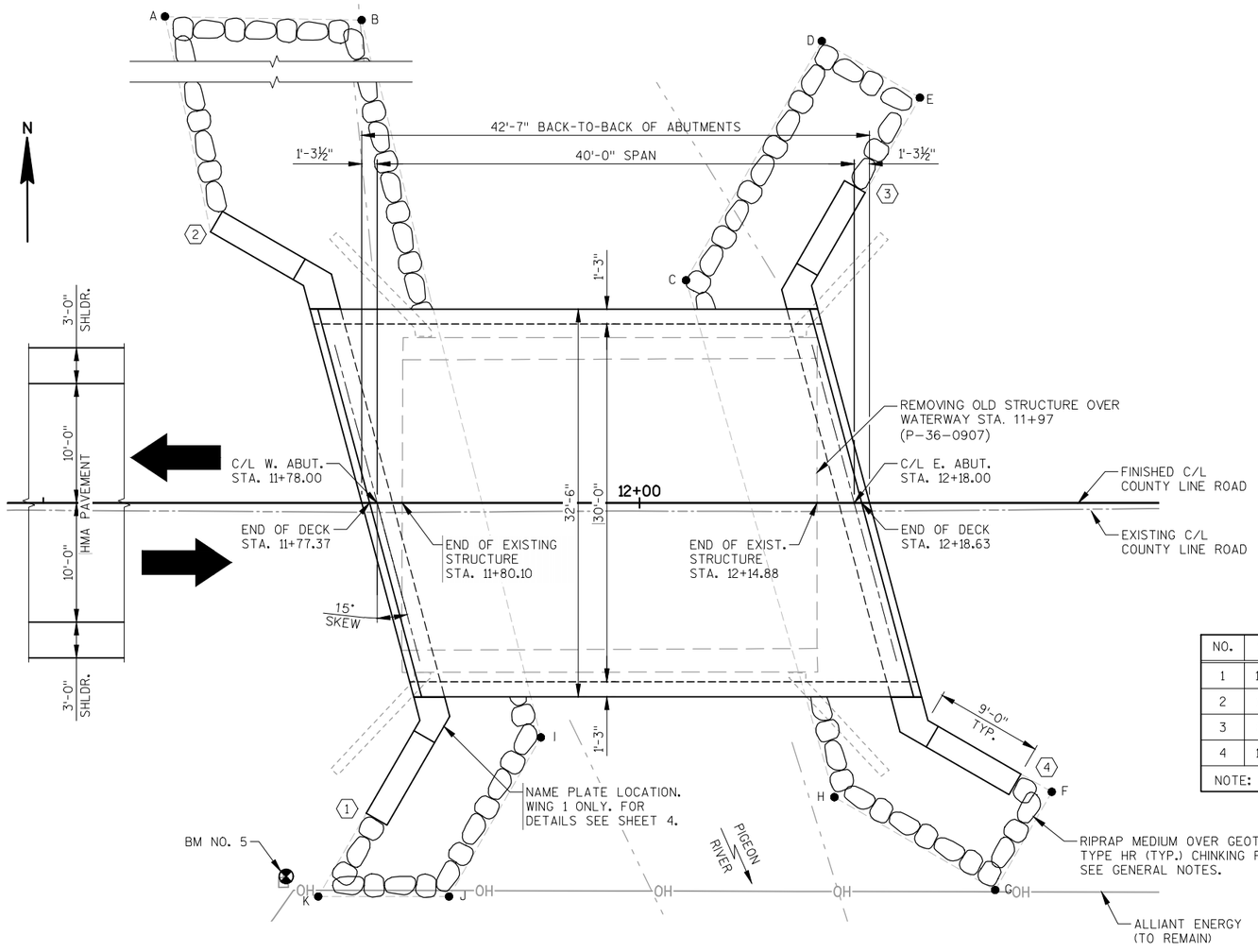
DATE 5/29/12 PLATE NO. W5-52.9

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W552.DGN PLOT DATE : 29-MAY-2012 13:03 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.961899:1.000000 WISDOT/CADDS SHEET 42

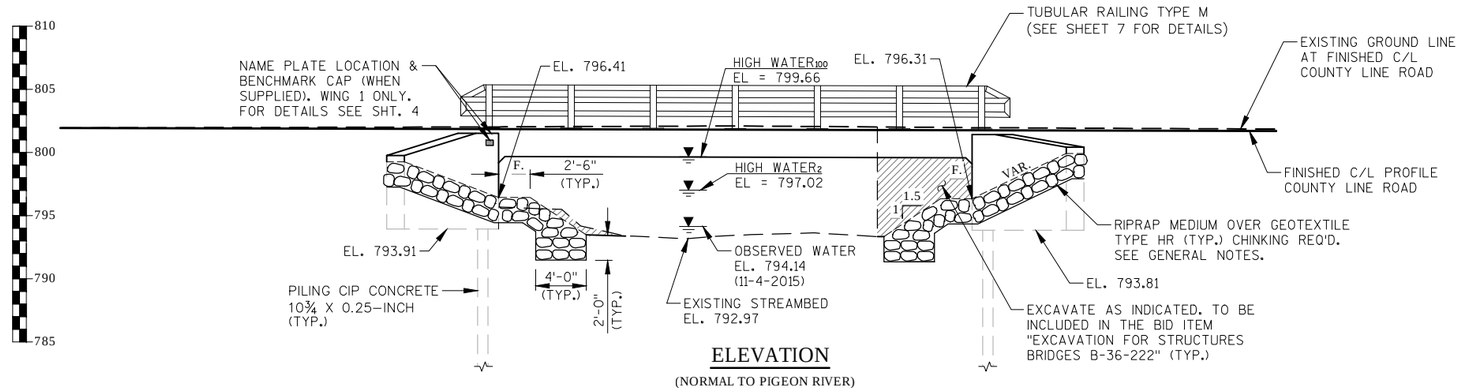
STATE PROJECT NUMBER

4313-10-71



PLAN B-36-222

(SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB)



ELEVATION

(NORMAL TO PIGEON RIVER)

⬡ INDICATES WING NUMBER

RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	11+58	49.7' LT.
B	11+75	49.7' LT.
C	12+04	18.7' LT.
D	12+15	38.7' LT.
E	12+24	33.9' LT.
F	12+35	24.3' RT.
G	12+30	32.4' RT.
H	12+16	24.7' RT.
I	11+92	19.7' RT
J	11+84	33.0' RT
K	11+73	33.0' RT

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	14+20	3/4" IRON REBAR SET, 14.3' LT	800.54
2	11+24	3/4" IRON REBAR SET, 29.1' LT	801.24
3	8+96	3/4" IRON REBAR SET, 27.3' RT	808.38
4	13+99	STAR SPIKE IN POWER POLE, 30.1' RT	799.39
NOTE: BENCHMARK STATIONS REFERENCED TO COUNTY LINE ROAD			

DESIGN DATA

LIVE LOAD:

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.14
OPERATING RATING FACTOR — RF=1.48
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) — 250 KIPS

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

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 10¾ X 0.25-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 70 FT. PILE LENGTHS AT BOTH ABUTMENTS.

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

TRAFFIC DATA

A.D.T. (2017) — 230
A.D.T. (2037) — 250
DESIGN SPEED — 55 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY
DRAINAGE AREA — 12.2 SQ. MI.
Q_{100} TOTAL — 1,040 C.F.S.
THROUGH STRUCTURE — 1,040 C.F.S.
OVERTOPPING ROADWAY — N/A
VELOCITY - THROUGH STRUCTURE — 6.35 F.P.S.
WATERWAY AREA - THROUGH STRUCTURE — 163.8 SQ. FT.
HIGH $WATER_{100}$ ELEVATION — 799.66
SCOUR CRITICAL CODE — 5

EROSION CONTROL
Q_2 — 270 C.F.S.
HIGH $WATER_2$ ELEVATION — 797.02

LIST OF DRAWINGS

WISCONSIN PROFESSIONAL ENGINEER
PATRICK T. BOLAND
E-36303
SPRING GREEN, WIS.
2-24-17

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Surveyors - Architects
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
PHONE: (608) 588-7484
FAX: (608) 588-9322

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR — CHIEF STRUCTURES DESIGN ENGINEER — 02/24/17 DATE

STRUCTURE B-36-222

COUNTY LINE ROAD OVER PIGEON RIVER

COUNTY	MANITOWOC	TOWN/~~CITY/VILLAGE~~	MEEME

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	RBH	DESIGN CK'D.	PTB	DRAWN BY	RBH	PLANS CK'D.	PTB

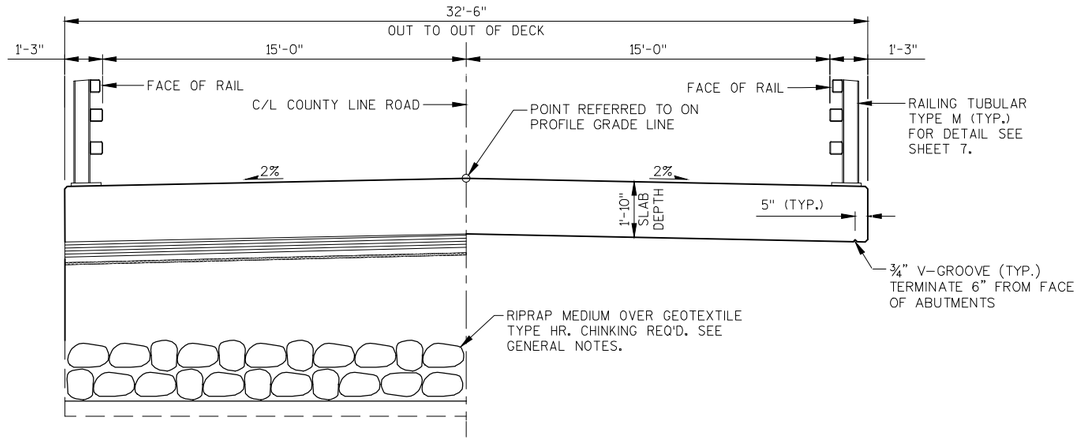
GENERAL PLAN

SHEET 1 OF 7

DESIGN CONSULTANT
PATRICK BOLAND, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

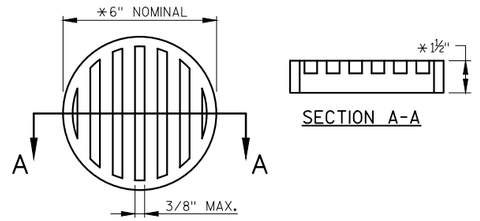
FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\STRUCTURE\CAD FILES\FINALS\01 GENERAL PLAN.DWG
LAYOUT : LAYOUT1
PLOT DATE : 2/24/2017
PLOT TIME : 7:58:47 AM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1" = 1'



AT ABUTMENT IN SPAN

PROPOSED CROSS-SECTION THROUGH ROADWAY

(LOOKING EAST)



SECTION A-A

RODENT SCREEN

NOTES:

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

ORIENT SCREEN SO SLOTS ARE VERTICAL.

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

THE RODENT SCREEN 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 SCREEN TO THE EXPOSED ENDS OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

STATE PROJECT NUMBER

4313-10-71

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD 88).

JOINT FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION M153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP MEDIUM AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS, OR AS DIRECTED BY THE ENGINEER IN THE FIELD. LAY RIPRAP MEDIUM WITH CLOSE BROKEN JOINTS MAKING THE FINISHED SURFACE EVEN AND TIGHT BY CHINKING SPACES BETWEEN STONES ACCORDING TO SECTION 606.3.2(1) OF THE STANDARD SPECIFICATIONS.

AT THE BACK FACE OF ABUTMENTS, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A. SEE THIS SHEET FOR DETAIL.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK, THE SIDES OF THE DECK AND EXTERIOR 12" OF THE UNDERSIDE OF THE DECK (CONCRETE MATERIAL ONLY).

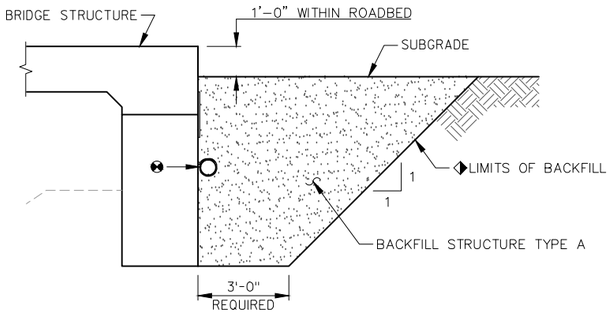
THE EXISTING STRUCTURE (P-36-0907) IS A SINGLE SPAN CONCRETE DECK GIRDER STRUCTURE, SUPPORTED ON CONCRETE ABUTMENTS. THE STRUCTURE HAS A 24.0' CLEAR ROADWAY WIDTH AND A 33.0" OVERALL LENGTH AND SHALL BE REMOVED.

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

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

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

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

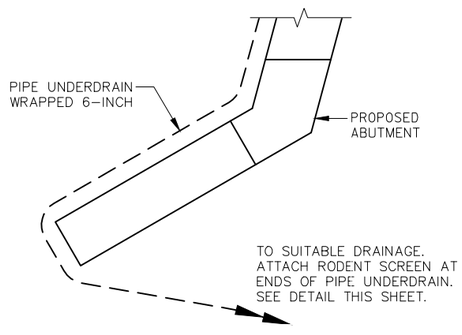


BACKFILL STRUCTURE DETAIL

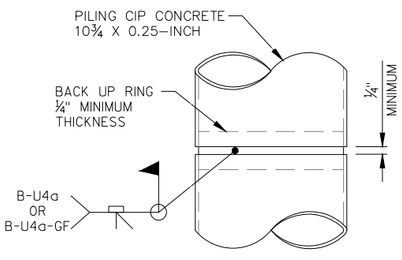
(TYPICAL AT BOTH ABUTMENTS)

◆ BACKFILL STRUCTURE TYPE A PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES B-36-222". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

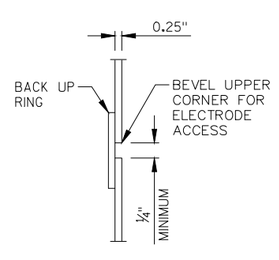
◓ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."



PIPE UNDERDRAIN DETAIL



CAST-IN-PLACE CONCRETE PILE



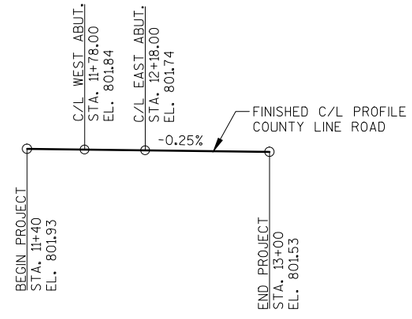
C.I.P. PILE WELD DETAIL

NOTES:

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	W. ABUT.	SUPER	E. ABUT.	TOTALS
203.0500.S	REMOVING OLD STRUCTURE OVER WATERWAY STA. 11+97	LS	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-36-222	LS	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	135	--	135	270
502.0100	CONCRETE MASONRY BRIDGES	CY	29	99	29	157
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	170	--	170
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,430	--	2,430	4,860
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,375	16,920	1,375	19,670
513.4061	RAILING TUBULAR TYPE M B-36-222	LF	--	87	--	87
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	7	--	7	14
550.2104	PILING CIP CONCRETE 10¾ X 0.25-INCH	LF	560	--	560	1,120
606.0200	RIPRAP MEDIUM	CY	95	--	65	160
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	--	75	150
645.0120	GEOTEXTILE TYPE HR	SY	155	--	105	260
	NON-BID ITEMS					
	FILLER	SIZE	--	--	--	½" & ¾"



COUNTY LINE ROAD - PROFILE GRADE LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-222

DRAWN BY RBH | PLANS CK'D. PTB

CROSS SECTION AND QUANTITIES

SHEET 2 OF 7

8

8

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\STRUCTURE\CAD FILES\FINALS\02 CROSS SECTION AND QUANTITIES.DWG
LAYOUT : LAYOUT1

PLOT DATE : 12/20/2016
PLOT TIME : 3:34:48 PM

PLOT BY : JULIA ZEHNER

PLOT SCALE : 1" = 1'

SOIL BORINGS

BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	01/27/16	227,953.5	179,831.7
2	01/28/16	227,934.0	179,903.2

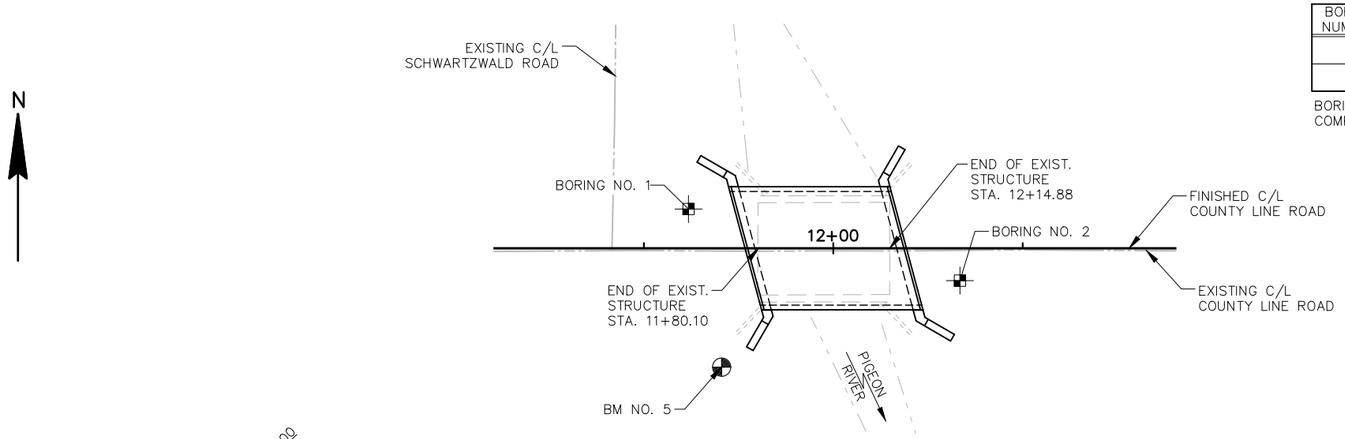
BORINGS & REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.
3194 MARKET ST, SUITE C
GREEN BAY, WI 53704

STATE PROJECT NUMBER

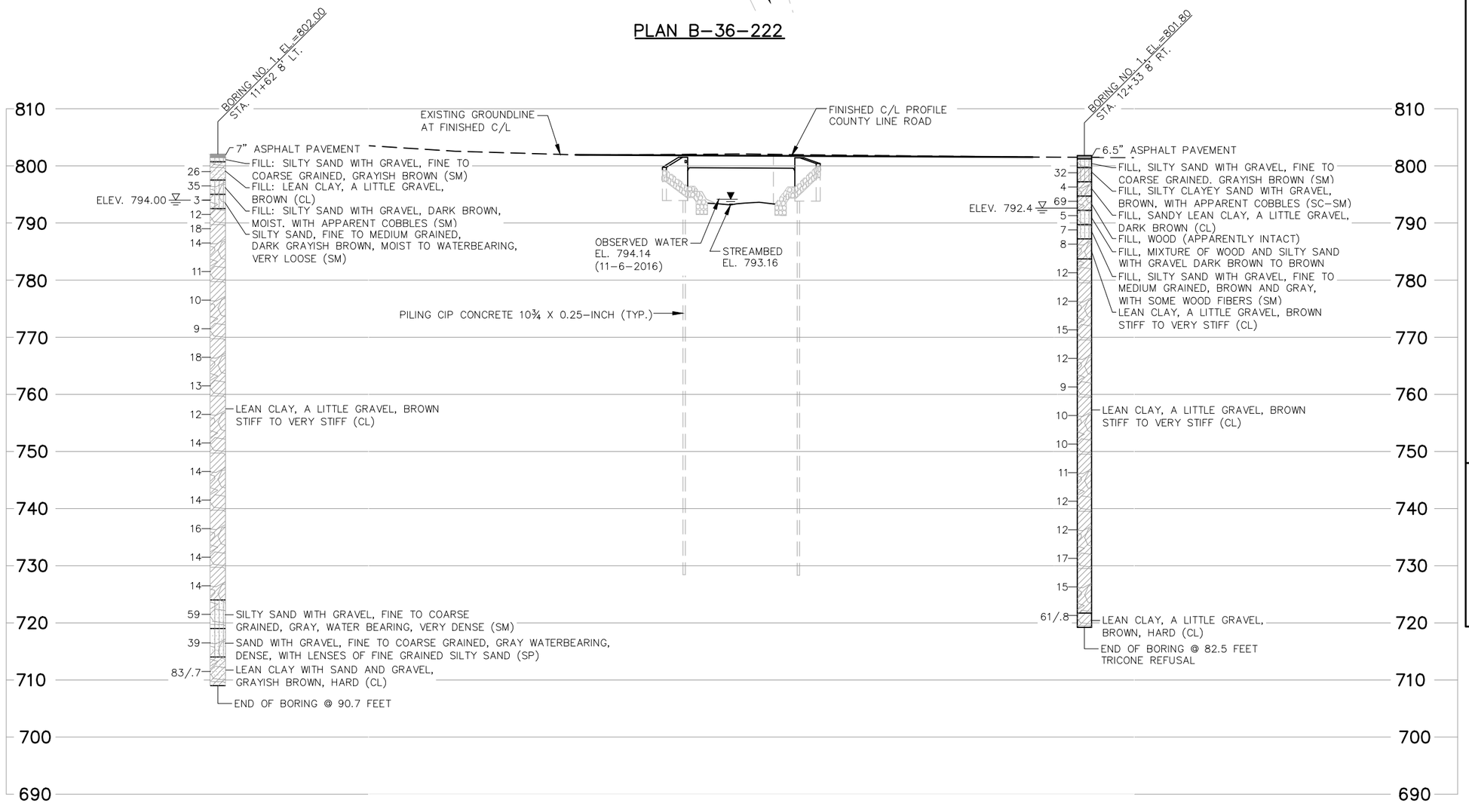
4313-10-71

MATERIAL SYMBOLS

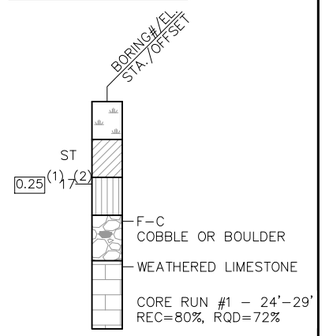
Asphalt, Topsoil, Peat, Concrete, Fill, Gravel, Sand, Clay, Silt, Boulders or Cobbles, Limestone, Bedrock (unknown), Shale, Sandstone, Igneous/meta



PLAN B-36-222



LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206 STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATIONS

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COURSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-222

DRAWN BY JZ | PLANS CK'D. PTB

SUBSURFACE EXPLORATION

SHEET 3 OF 7

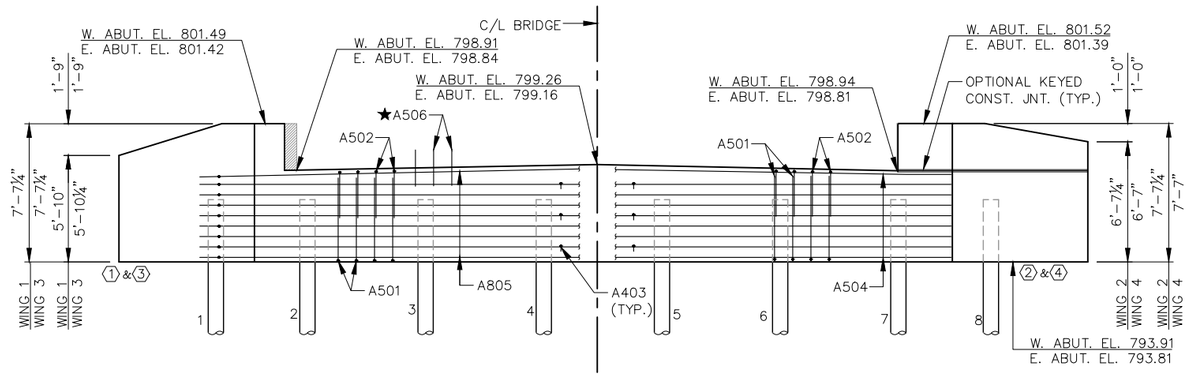
34

8

8

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\STRUCTURE\CAD FILES\FINALS\03 SOIL BORING.DWG PLOT DATE : 10/18/2016 4:19:32 PM PLOT BY : BOLAND, PATRICK PLOT SCALE : 1" = 1' LAYOUT : BORING

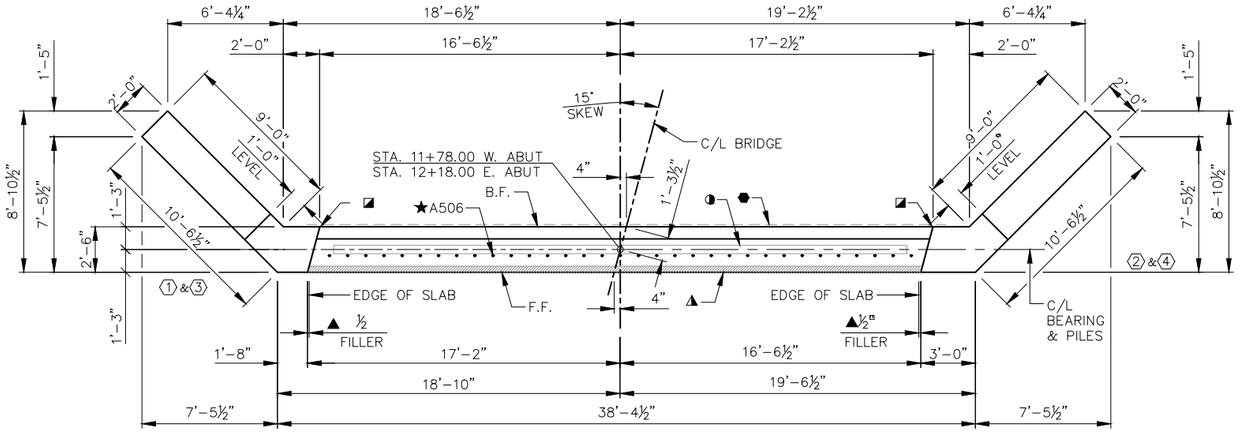
STATE PROJECT NUMBER
4313–10–71



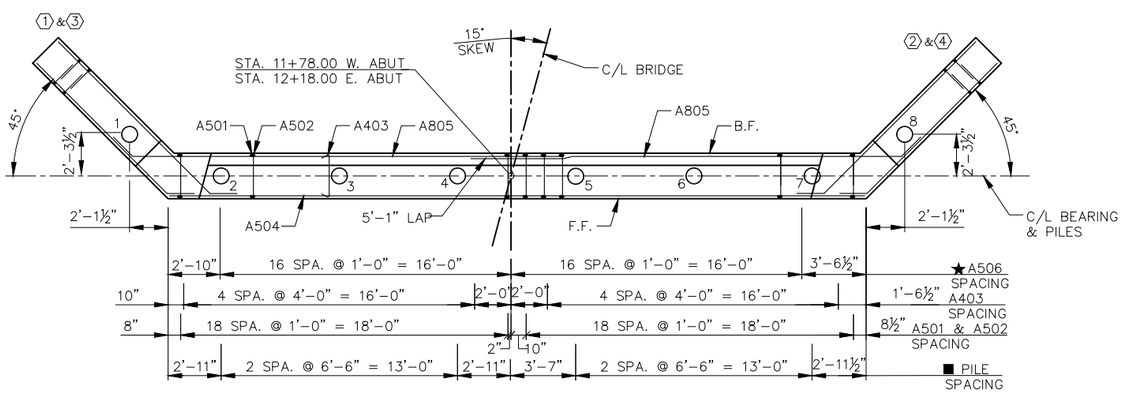
BACK FACE BAR STEEL REINF. FRONT FACE BAR STEEL REINF.

ELEVATION

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



PLAN



LAYOUT

NOTES

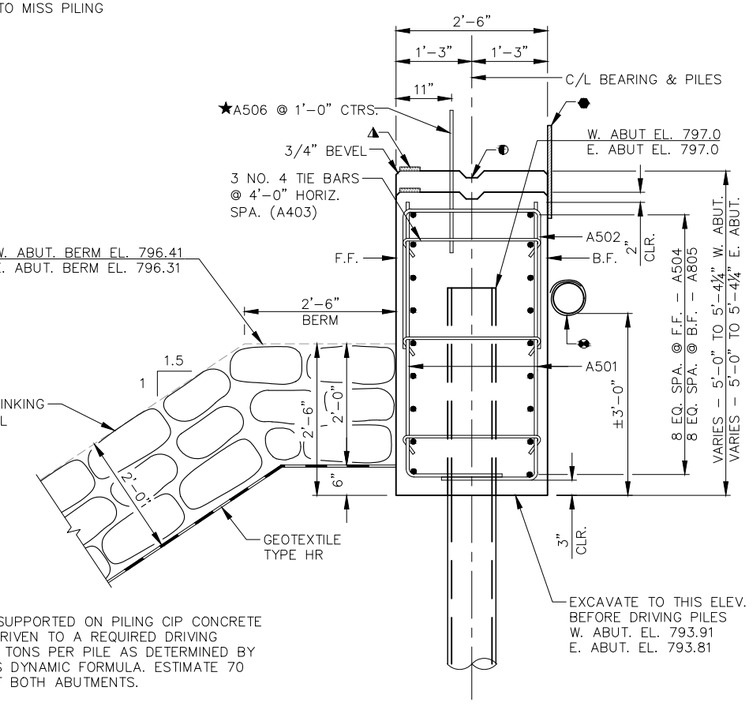
SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 5 FOR BILL OF BARS.

DO NOT PLACE FILL HIGHER THAN 3 FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

SPACE REINFORCEMENT TO MISS PILING

F.F. – FRONT FACE

B.F. – BACK FACE

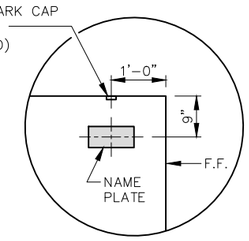


ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 10¾ X 0.25–INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 70 FT PILE LENGTHS AT BOTH ABUTMENTS.

TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

- ◑ KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- ◪ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- ● 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON–STAINING GRAY, NON–BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ▲ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ★ A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'–0".
- ■ PILE SPACING MEASURED AT BASE OF SHAFT.
- ◓ PIPE UNDERDRAIN WRAPPED (6–INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 2. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6–INCH."



NAME PLATE AND BENCHMARK CAP DETAIL

WING 1 ONLY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–36–222

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ABUTMENTS

SHEET 4 OF 7
35

8

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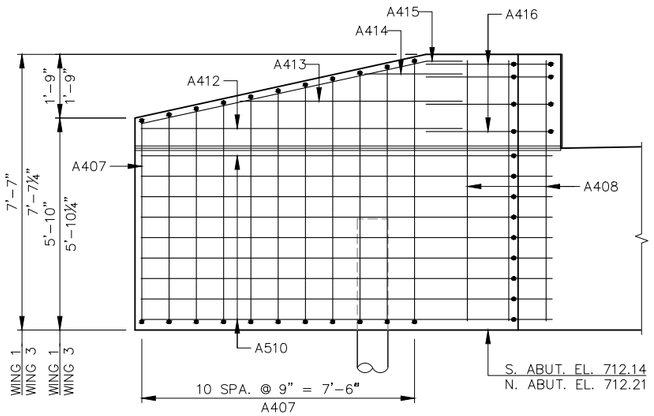
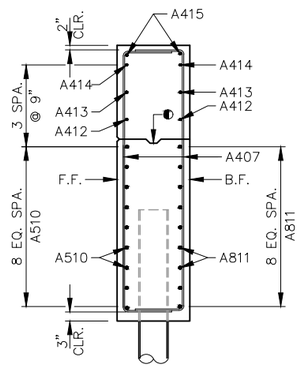
FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\STRUCTURE\CAD FILES\FINALS\04 ABUTMENTS.DWG PLOT DATE : 10/18/2016 4:19:45 PM PLOT BY : BOLAND, PATRICK PLOT SCALE : 1" = 1' LAYOUT : LAYOUT1

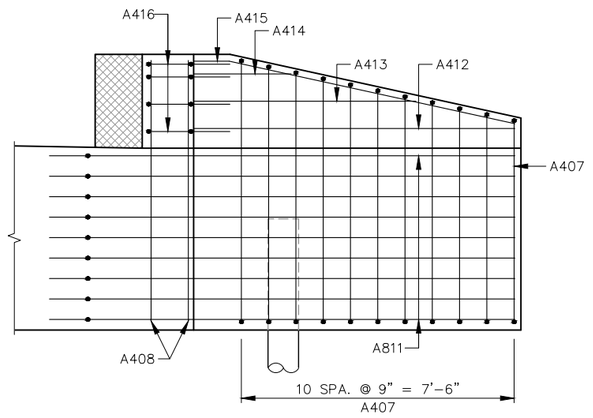
STATE PROJECT NUMBER
4313-10-71



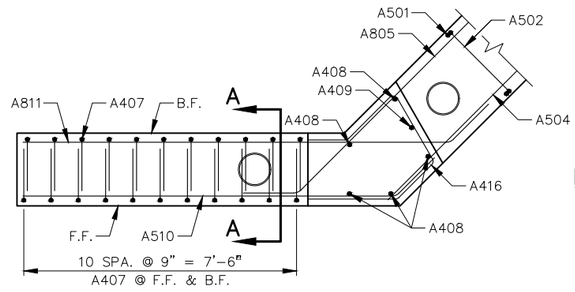
F.F. ELEVATION – WING 1 & 3



SECTION A–A



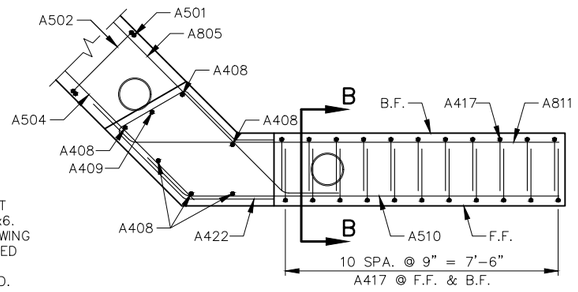
B.F. ELEVATION – WING 1 & 3



PLAN VIEW – WING 1 & 3

LEGEND

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾" "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".



PLAN VIEW – WING 2 & 4

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

BILL OF BARS
TWO ABUTMENTS SHOWN

2,750 LB (COATED)
4,860 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
A501	152	6-0	X			BODY – VERT. – F.F & B.F.
A502	76	8-3	X			BODY – VERT. – TOP
A403	60	2-8	X			TIE BARS
A504	18	38-3				BODY – HORIZ. – F.F.
A805	36	25-3	X			BODY – HORIZ. – B.F.
A506	66	2-0		X		BODY – TOP – DOWELS
A407	44	8-9	X	X	*	WING 1 & 3 – VERT. – F.F. & B.F.
A408	22	7-2		X		WINGS – VERT.
A409	4	3-6		X		WINGS – VERT. – TOP
A510	36	11-9	X	X		WINGS – HORIZ. – F.F.
A811	36	13-3	X	X		WINGS – HORIZ. – B.F.
A412	4	8-10		X		WING 1 & 3 – HORIZ. – F.F. & B.F.
A413	4	6-2		X		WING 1 & 3 – HORIZ. – F.F. & B.F.
A414	4	2-8		X		WING 1 & 3 – HORIZ. – F.F. & B.F.
A415	4	9-0	X	X		WING 1 & 3 – HORIZ. – F.F. & B.F.
A416	8	8-10	X	X		WING 1 & 3 – HORIZ. – TOP
A417	44	9-2	X	X	*	WING 2 & 4 – VERT. – F.F. & B.F.
A418	4	8-10		X		WING 2 & 4 – HORIZ. – F.F. & B.F.
A419	4	8-10		X		WING 2 & 4 – HORIZ. – F.F. & B.F.
A420	4	4-2		X		WING 2 & 4 – HORIZ. – F.F. & B.F.
A421	4	8-10	X	X		WING 2 & 4 – HORIZ. – F.F. & B.F.
A422	8	10-2	X	X		WING 2 & 4 – HORIZ. – TOP

NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

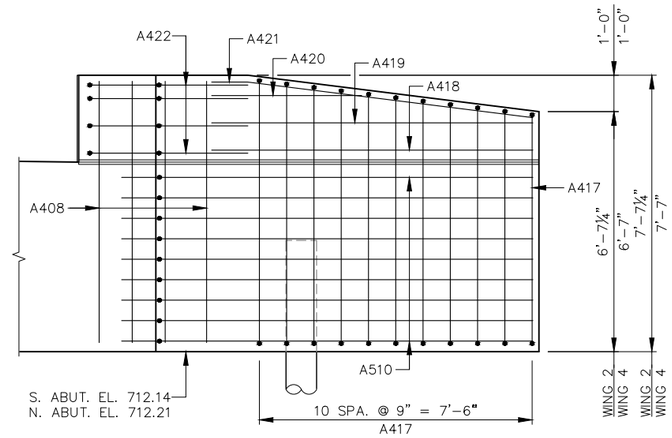
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

* LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

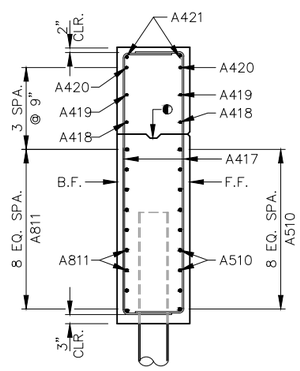
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A407	4 SERIES OF 11	9-7 TO 7-11
A417	4 SERIES OF 11	9-7 TO 8-9

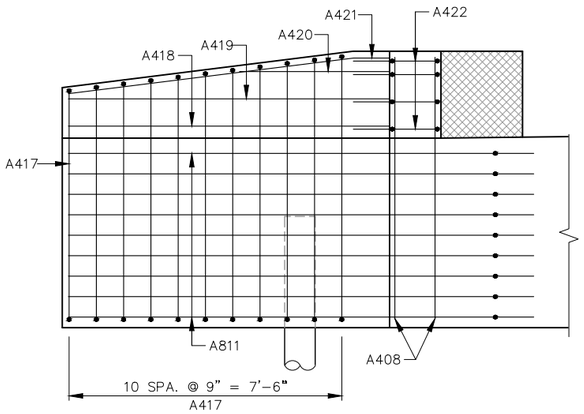
BUNDLE AND TAG EACH SERIES SEPARATELY.



F.F. ELEVATION – WING 2 & 4

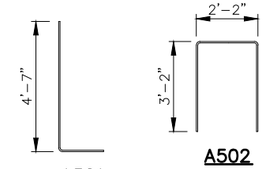


SECTION B–B



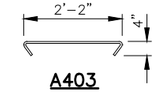
B.F. ELEVATION – WING 2 & 4

MARK	'A'
A415	167°39'
A421	172°52'



A501

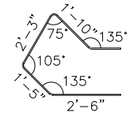
A502



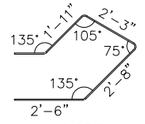
A403

A407 & A417

A805, A510 & A811



A416



A422

A415 & A421

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-222

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ABUTMENT DETAILS

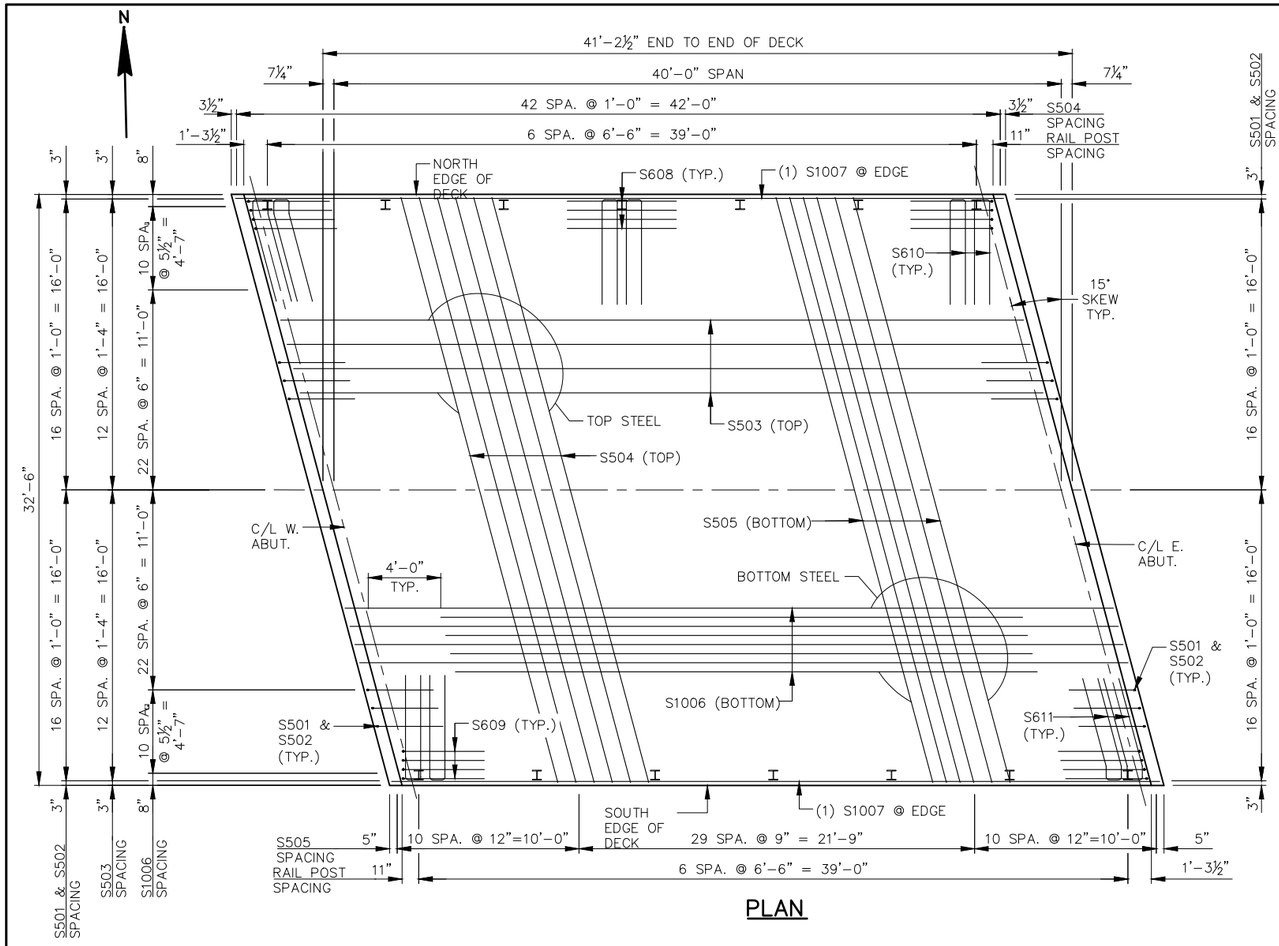
SHEET 5 OF 7
36

8

8

STATE PROJECT NUMBER

4313–10–71



PLAN

TOP OF DECK ELEVATIONS

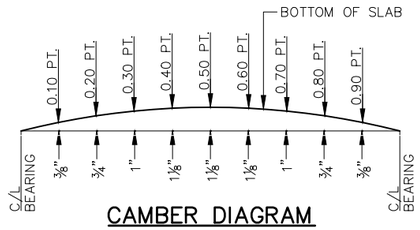
	C/L S. ABUT.	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L N. ABUT.
W. EDGE	801.52	801.51	801.50	801.49	801.48	801.47	801.46	801.45	801.44	801.43	801.42
C/L	801.84	801.83	801.82	801.81	801.80	801.79	801.78	801.77	801.76	801.75	801.74
E. EDGE	801.49	801.48	801.47	801.46	801.45	801.44	801.43	801.42	801.41	801.40	801.39

NOTES

SUPPORT ALTERNATE TOP TRANSVERSE BARS IN SLAB BY INDIVIDUAL BAR CHAIRS AT APPROX. 3'–0" CENTERS. SUPPORT BOTTOM LONGITUDINAL BARS BY CONTINUOUS BAR CHAIRS AT APPROX. 4'–0" CENTERS.

PLACE TRANSVERSE BARS PARALLEL TO THE CENTERLINE OF SUBSTRUCTURE UNITS.

THE SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).



CAMBER DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR THEORETICAL DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB OR CENTER LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
−SLAB THICKNESS
+CAMBER
+FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (COMPUTED BY CONTRACTOR)
=TOP OF SLAB FALSEWORK ELEVATION.

SURVEY TOP OF DECK ELEVATIONS

	S. ABUT.	0.50 PT.	N. ABUT.
W. EDGE OF DECK			
CENTER LINE			
E. EDGE OF DECK			

PRIOR TO RELEASING SLAB FASLEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF THE ABUTMENTS AND AT 0.50 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG THE EDGE OF DECK AND CENTER LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

BILL OF BARS SUPERSTRUCTURE

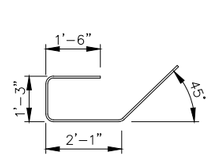
16,920 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	66	6–9	X	X	END OF DECK
S502	66	3–3	X	X	END OF DECK
S503	25	40–10		X	SLAB – TOP – LONGIT.
S504	48	33–3		X	SLAB – TOP – TRANS.
S505	50	33–3		X	SLAB – BOTTOM – TRANS.
S1006	65	37–2		X	SLAB – BOTTOM – LONGIT.
S1007	2	42–3		X	SLAB – BOTTOM – LONGIT. – EDGES
S608	40	6–0		X	RAIL POSTS – INTERIOR
S609	16	6–0	X	X	RAIL POSTS – ENDS
S610	24	12–0	X	X	RAIL POSTS – INTERIOR
S611	4	12–0	X	X	RAIL POSTS – CORNERS

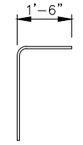
NOTES: THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

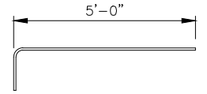
SOME BARS HAVE BEEN OMITTED FOR CLARITY.



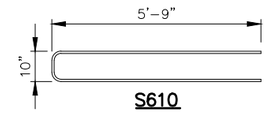
S501



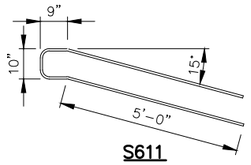
S502



S609



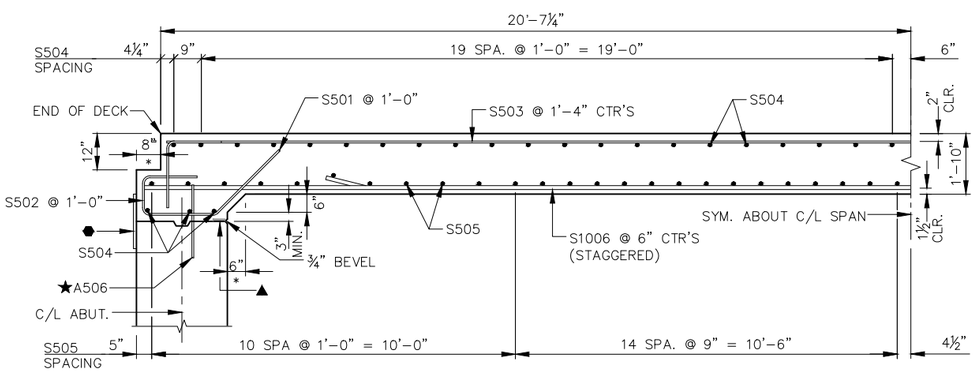
S610



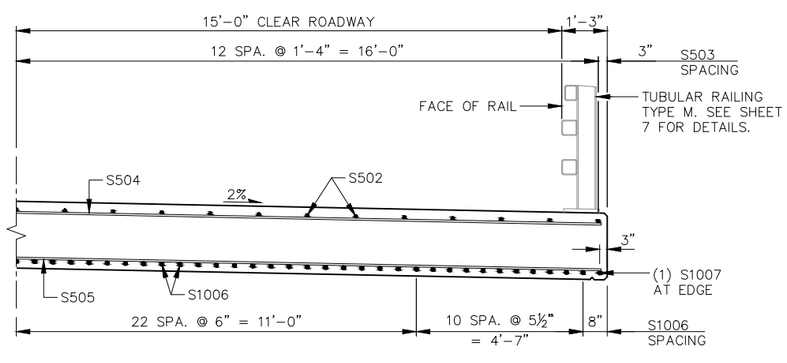
S611

LEGEND

- ⬢ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- * DIMENSION IS NORMAL TO THE C/L OF SUBSTRUCTURE UNITS.
- ★ SEE SHEET 4 FOR PLACEMENT OF A506 BARS.



PARTIAL LONGITUDINAL SECTION THROUGH ROADWAY



PARTIAL CROSS SECTION THROUGH ROADWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–36–222

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SUPERSTRUCTURE

SHEET 6 OF 7

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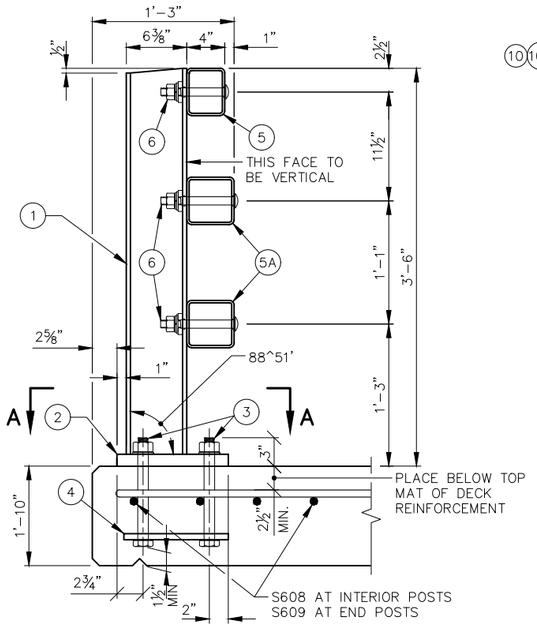
8

8

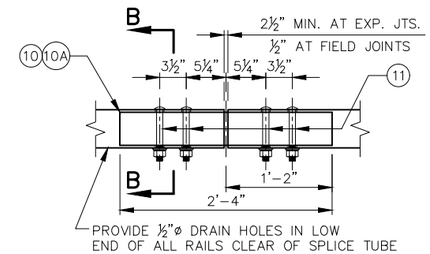
FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\STRUCTURE\CAD FILES\FINALS\06 SUPERSTRUCTURE.DWG
LAYOUT : LAYOUT1
PLOT DATE : 10/14/2016
PLOT TIME : 2:22:19 PM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1" = 1'

STATE PROJECT NUMBER

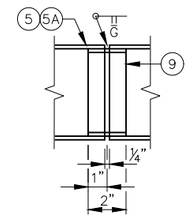
4313-10-71



SECTION THROUGH RAILING ON DECK

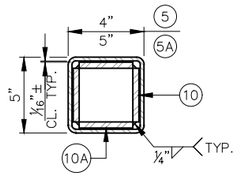


FIELD ERECTION JOINT DETAIL

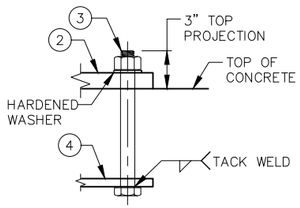


SHOP RAIL SPLICE DETAIL

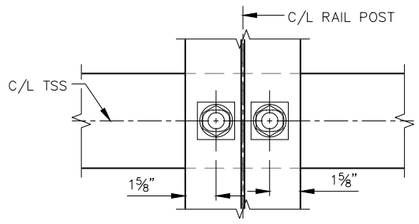
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



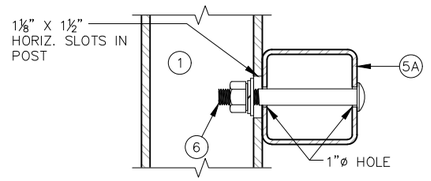
SECTION B-B



ANCHOR BOLTS



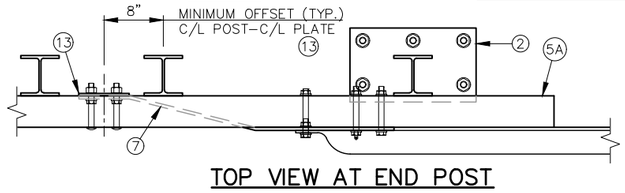
SECTION THROUGH POST WEB



SECTION THROUGH RAIL

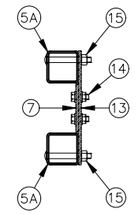
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

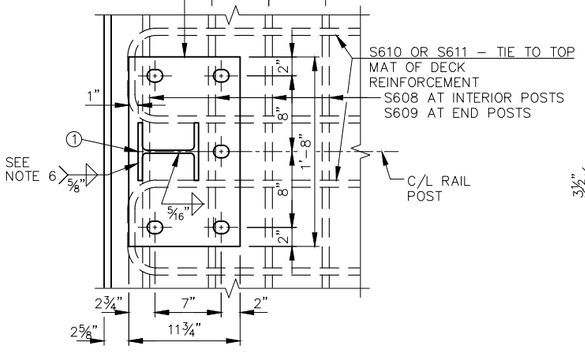


TOP VIEW AT END POST

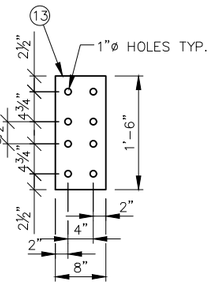
(THRIE BEAM RAIL ATTACHMENT)



SECTION C-C

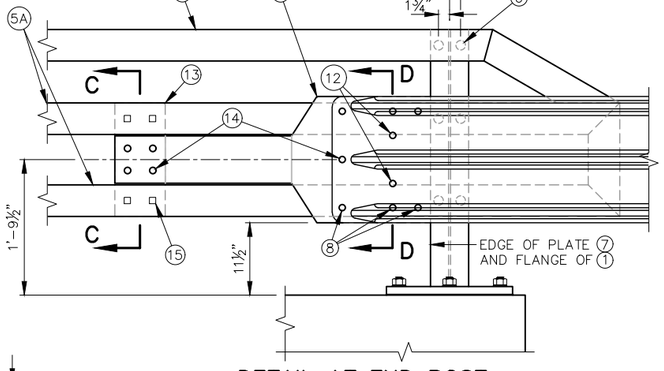


SECTION A-A



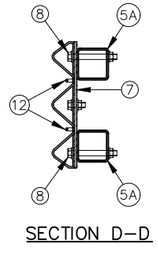
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

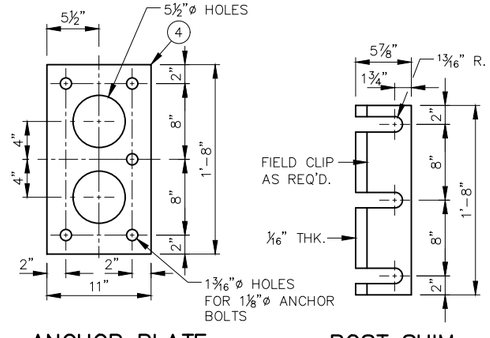


DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)



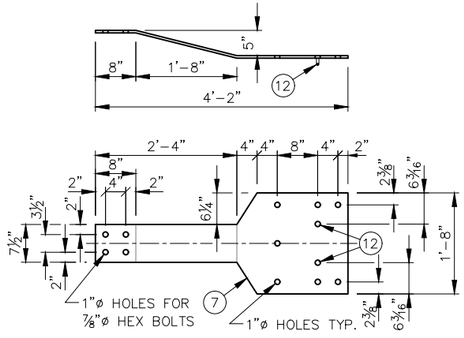
SECTION D-D



ANCHOR PLATE

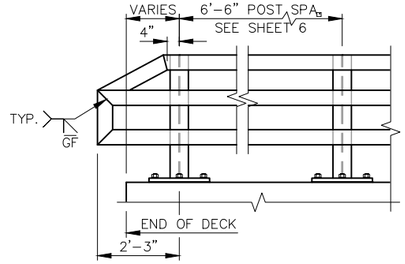
AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



BACK-UP PLATE

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

LEGEND

① W6x25 WITH 1⅛" x 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

② PLATE 1¼"x11¾"x1'-8" WITH 1⅝"x1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

③ ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS.

④ ⅝"x11"x1'-8" ANCHOR PLATE (GALVANIZED) WITH 1³16" DIA. HOLES FOR ANCHOR BOLTS NO. 3

⑤ TSS 5x4x¼ STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

⑤A TSS 5x5x¼ STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

⑥ ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, ³16"x1⅝"x1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION).

⑦ ½" THK. BACK-UP PLATE WITH 2 -⅞"x1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.

⑧ 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.

⑨ SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".

⑩ ⅜"x3⅝"x2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

⑩A ⅜"x2⅝"x2'-4" PLATE USED IN NO. 5, ⅜"x3⅝"x2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

⑪ ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE ¹³16"x1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND ¹⁵16"x2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.

⑫ ⅞" DIA. BY 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).

⑬ ⅜"x8"x1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

⑭ ⅞" DIA. x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).

⑮ 1" DIA. HOLES IN TUBES NO. 5A FOR ⅞" 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-36-222" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY=50 KSI. ANCHOR PLATES AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-36-222

DRAWN BY JZ | PLANS CK'D. PTB

TUBULAR RAILING TYPE M

SHEET 7 OF 7

38

8

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\STRUCTURE\CAD FILES\FINALS\07 TUBULAR RAILING TYPE M.DWG
PLOT DATE : 10/18/2016 4:20:19 PM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1" = 1'
LAYOUT : LAYOUT1

EARTHWORK-MAINLINE

STATION	AREA (SF) CUT	SALVAGED/ UNUSABLE PAV'T MATERIAL	FILL	INCREMENTAL VOL (CY) CUT NOTE 1	SALVAGED/ UNUSABLE PAV'T MATERIAL NOTE 2	AVAILABLE MATERIAL	FILL NOTE 3	FILL (25%)	CUMMULATIVE VOLUME (CY) CUT 1.00 NOTE 1	SALVAGED/ UNUSABLE PAV'T MATERIAL NOTE 2	AVAILABLE MATERIAL	FILL	FILL (25%) NOTE 4	MASS ORDINATE NOTE 5
11+40	47	18	0	0	0	0	0	0	0	0	0	0	0	0
11+50	47	18	1	20	7	13	0	0	20	7	13	0	0	13
11+77	47	18	1	48	20	28	1	1	68	27	41	1	1	40
11+77	0	0	0	0	0	0	0	0	68	27	41	1	1	40
12+19	0	0	0	0	0	0	0	0	68	27	41	1	1	40
12+19	49	12	70	0	0	0	0	0	68	27	41	1	1	40
12+50	49	12	70	59	16	43	80	100	127	43	84	81	101	-17
13+00	49	12	0	93	22	71	64	79	220	65	155	145	180	-25
				220	65	155	145	180						
		COLUMN SUBTOTALS =		220	65	155	145	180	220	65	155	145	180	-25

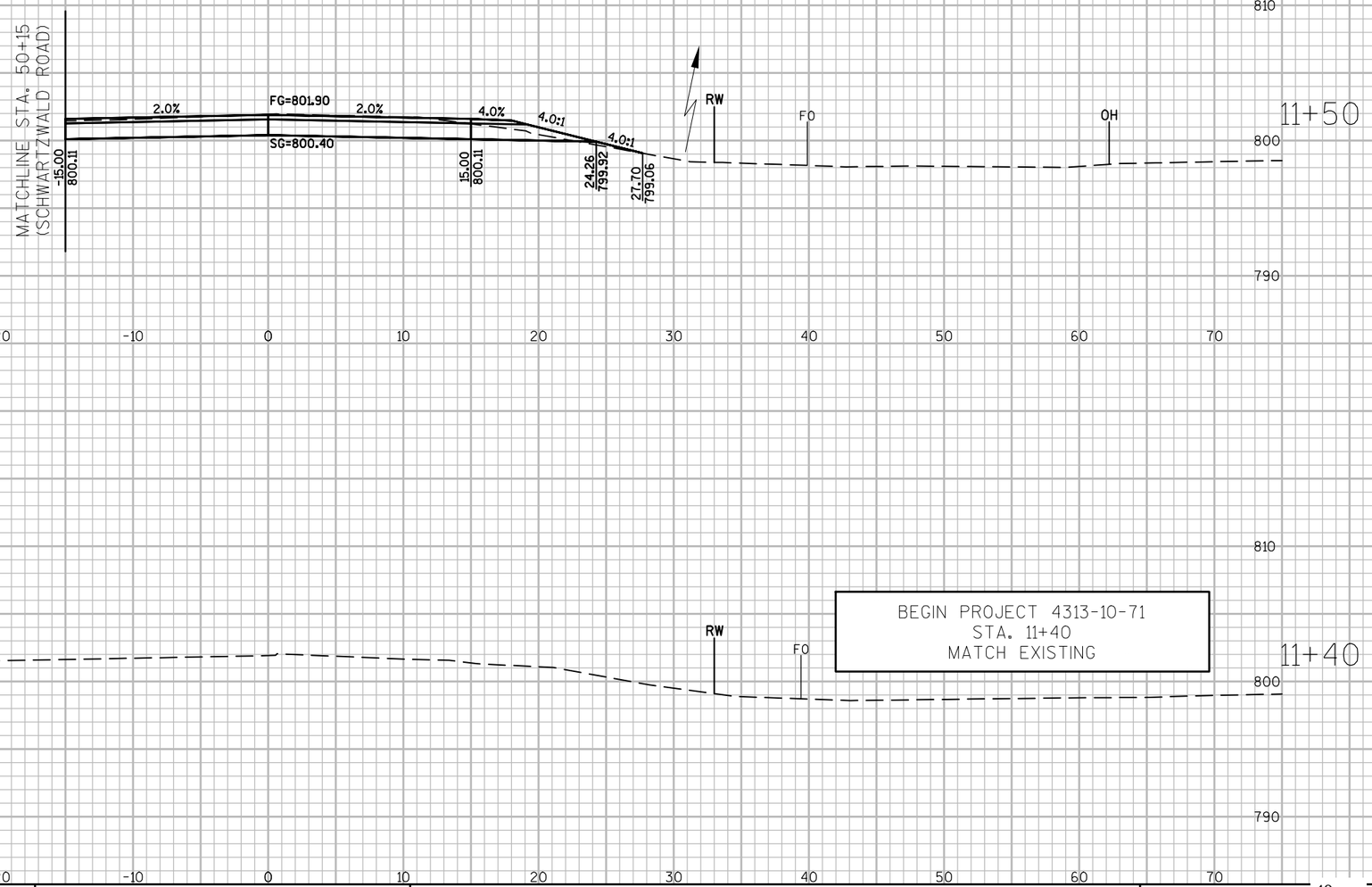
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - FILL (25%)	FILL 25%· (FILL -REDUCED MARSH IN FILL)*1.25
5- MASS ORDINATE	(CUT - FILL (25%))

9

9

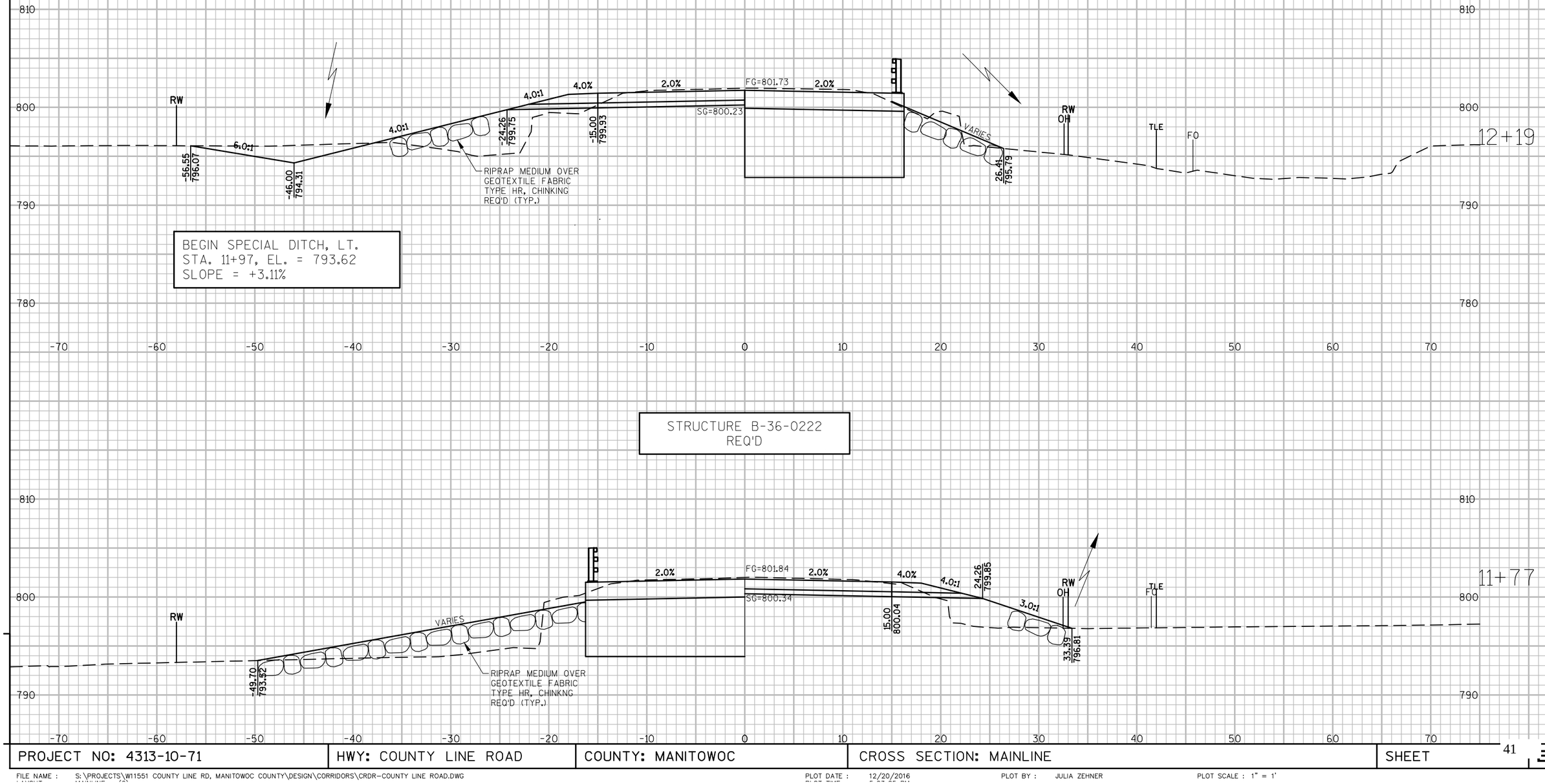
PROJECT NO: 4313-10-71	HWY: COUNTY LINE ROAD	COUNTY: MANITOWOC	EARTHWORK	SHEET 39	E

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\SHEETSPLAN\DETAILS\EARTHWORK
LAYOUT : EARTHWORK.DWG
PLOT DATE : 1/13/2017
PLOT TIME : 8:38:01 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'



PROJECT NO: 4313-10-71	HWY: COUNTY LINE ROAD	COUNTY: MANITOWOC	CROSS SECTION: MAINLINE	SHEET 40

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\DESIGN\CORRIDORS\CRDR-COUNTY LINE ROAD.DWG
PLOT DATE : 12/9/2016 PLOT BY : JULIA ZEHNER PLOT SCALE : 1" = 1'



PROJECT NO: 4313-10-71	HWY: COUNTY LINE ROAD	COUNTY: MANITOWOC	CROSS SECTION: MAINLINE	SHEET 41

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\DESIGN\CORRIDORS\CRDR-COUNTY LINE ROAD.DWG

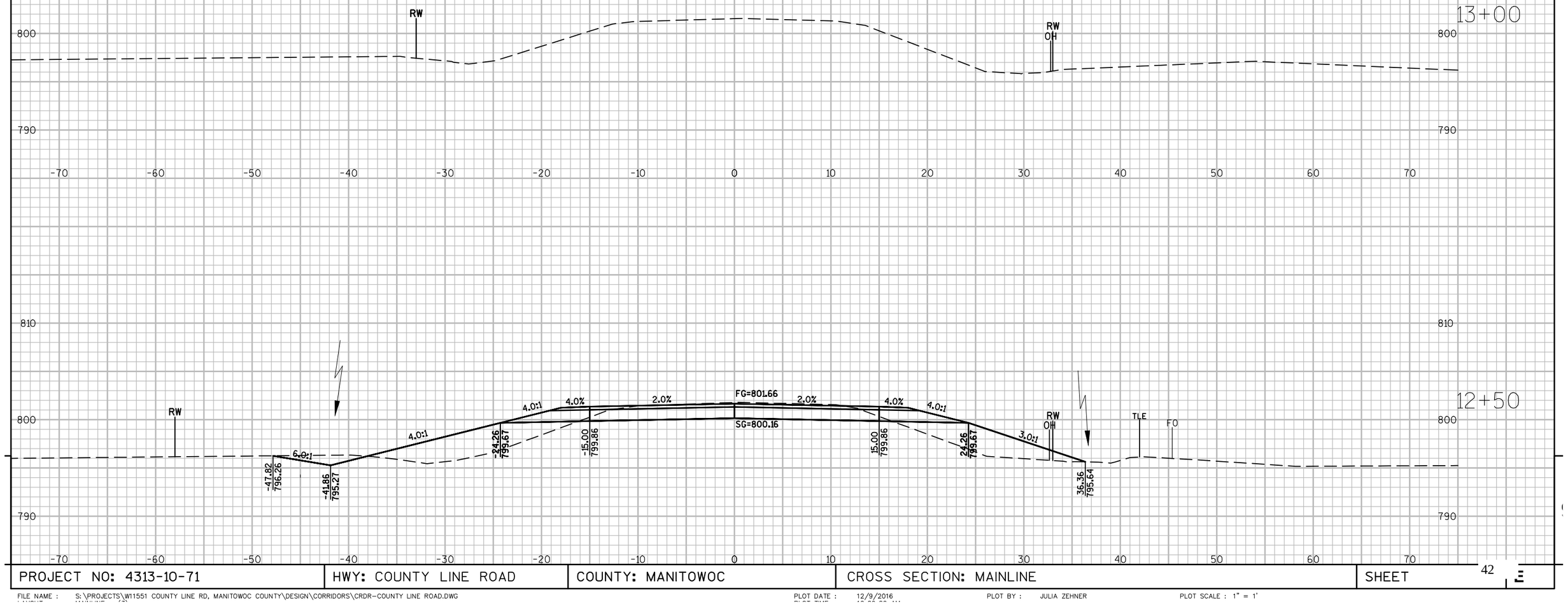
PLOT DATE : 12/20/2016 PLOT BY : JULIA ZEHNER PLOT SCALE : 1" = 1'

END SPECIAL DITCH, LT.
STA. 13+00, EL. = 796.83

END PROJECT 4313-10-71
STA. 13+00
MATCH EXISTING

13+00

12+50

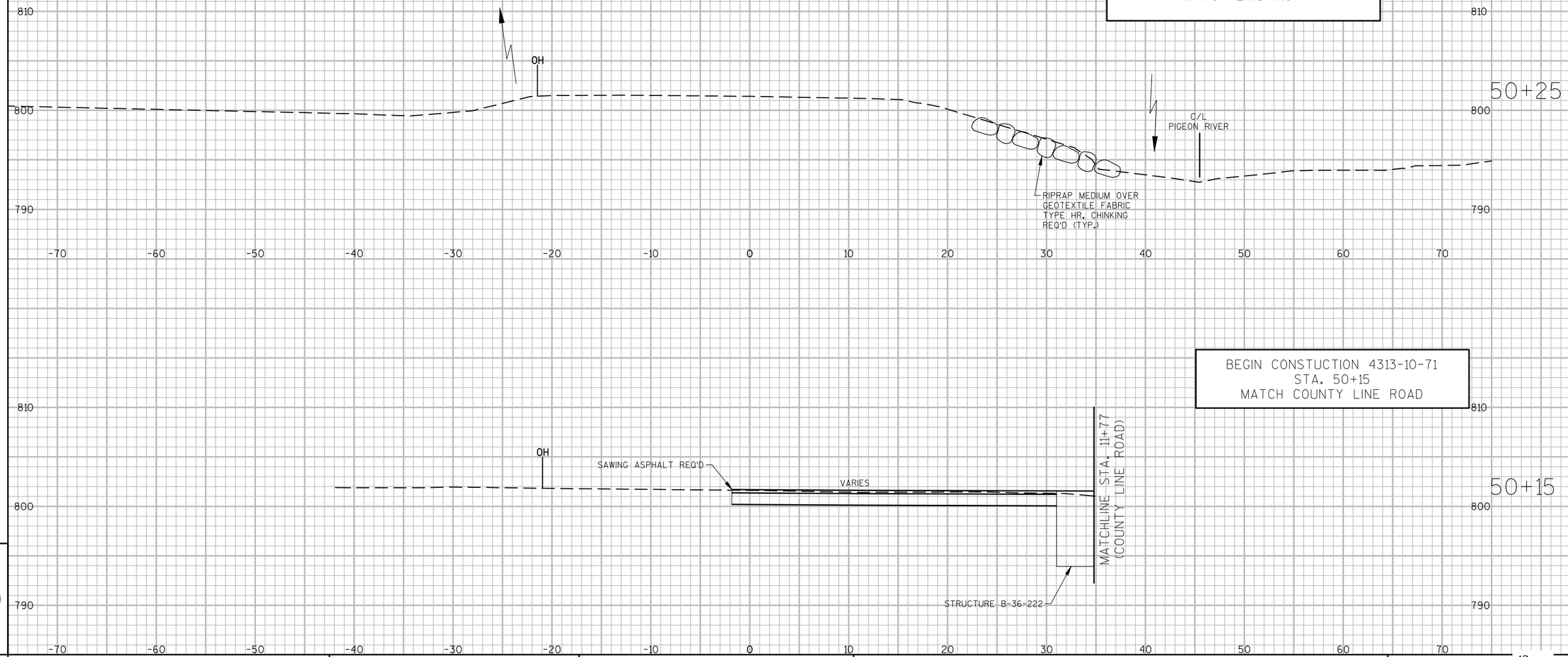


PROJECT NO: 4313-10-71	HWY: COUNTY LINE ROAD	COUNTY: MANITOWOC	CROSS SECTION: MAINLINE	SHEET 42

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\DESIGN\CORRIDORS\CRDR-COUNTY LINE ROAD.DWG
PLOT DATE : 12/9/2016
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'

END CONSTRUCTION 4313-10-71
STA. 50+50

STA. 50+25
MATCH EXISTING



BEGIN CONSTUCTION 4313-10-71
STA. 50+15
MATCH COUNTY LINE ROAD

9

9

PROJECT NO: 4313-10-71	HWY: COUNTY LINE ROAD	COUNTY: MANITOWOC	CROSS SECTIONS: SCHWARTZWALD ROAD	SHEET 43

FILE NAME : S:\PROJECTS\W11551 COUNTY LINE RD, MANITOWOC COUNTY\DESIGN\CORRIDORS\CRDR-COUNTY LINE ROAD.DWG
LAYOUT : SIDEROAD - (1)

PLOT DATE : 1/13/2017
PLOT TIME : 8:43:21 AM

PLOT BY : JULIA ZEHNER

PLOT SCALE : 1" = 1'

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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