SWL FEB 2014

PROJECT ID: 5985-00-76
WITH: N/A

COUNTY: GRANT

ORDER OF SHEETS

TOTAL SHEETS = 32

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

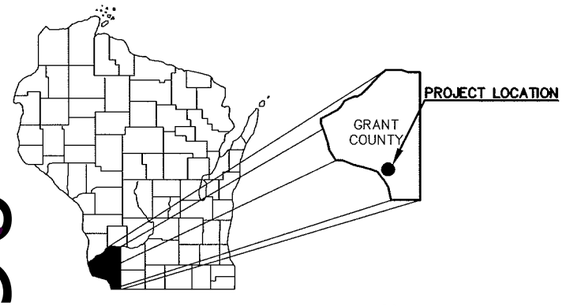
TOWN OF POTOSI, RIVER LANE ROAD

(REGAN BRANCH BRIDGE B-22-0281)

TOWN ROAD
GRANT COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5985-00-76	WISC2014053	1

STATE PROJECT NUMBER
5985-00-76



90

N

DESIGN DESIGNATION

A.A.D.T.	(2014)	=	110
A.A.D.T.	(2034)	=	130
D.H.V.		=	10
D.D.		=	60/40
T.		=	5.1%
DESIGN SPEED		=	40 MPH
ESALS		=	14,600

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE (PL + 58.1)
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

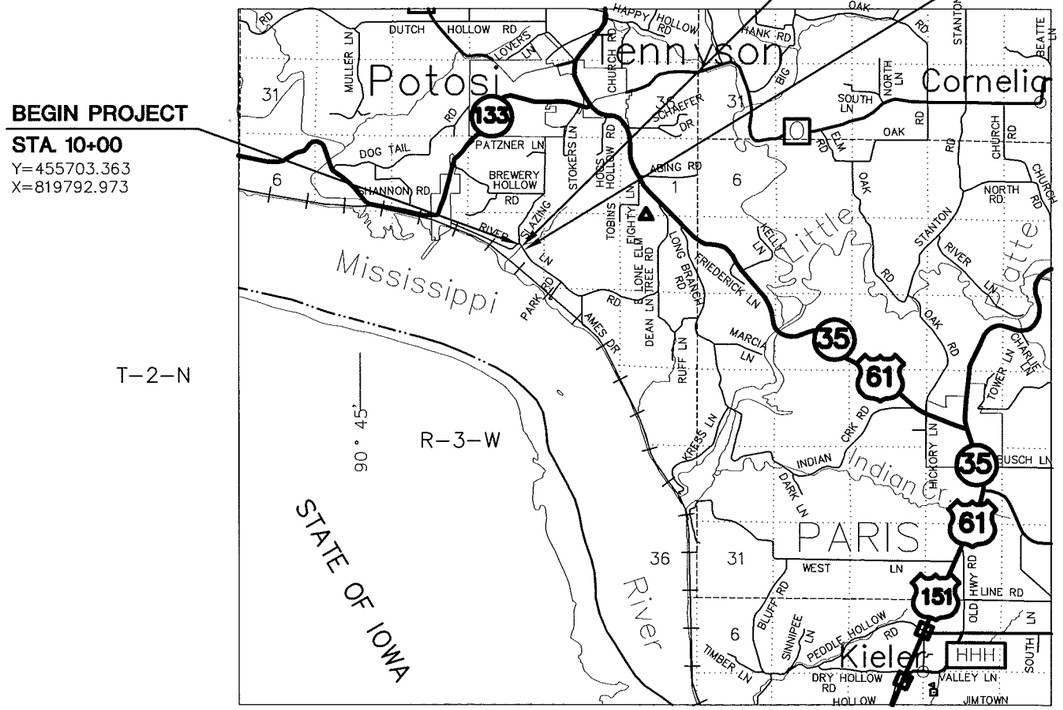
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

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

R-3-W **STRUCTURE B-22-0281** R-2-W **END PROJECT STA. 13+00**

BEGIN PROJECT
STA. 10+00
Y=455703.363
X=819792.973



T-2-N T-2-N

R-3-W R-2-W

LAYOUT
SCALE 0 1 MILES

TOTAL NET LENGTH OF CENTERLINE = 0.057 MILES

NOTE:
ALL COORDINATES SHOWN ON THIS PLAN ARE BASED ON THE WISCONSIN COUNTY COORDINATE SYSTEM, GRANT COUNTY.

ACCEPTED FOR
TOWN of POTOSI
10-24-13 (Date) (Town Chairman)

ACCEPTED FOR
COUNTY of GRANT
10/24/13 (Date) (Highway Commissioner)

ORIGINAL PLANS PREPARED BY
WESTBROOK
Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WISCONSIN 53588
PHONE (608) 588-7866
FAX (608) 588-7954

WISCONSIN
AARON B. PALMER
E-35695
RICHLAND CENTER, WI
PROFESSIONAL ENGINEER

10/24/13 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor: WESTBROOK
Designer: WESTBROOK
Management Consultant: KJOHNSON ENGINEERS, INC.
C.O. Examiner:

APPROVED FOR THE DEPARTMENT
DATE: 10/29/2013 (Management Consultant Signature)

E

FILE NAME: G:\00-PROJECT FILES\2012\12170 River Lane Road Grant Co\01-CAD\Road\12170_100 ti.dwg PLOT DATE: Oct 23, 2013 PLOT BY: MikeCO PLOT SCALE: ROTATION:

** DENOTES UTILITY IS NOT
MEMBER OF DIGGERS HOTLINE

UTILITIES

SCENIC RIVERS ENERGY COOPERATIVE
231 N. SHERIDAN STREET
LANCASTER, WI 53813

ATTN: JEFF FARREY
(608) 723-2121
srec@stec.net

TDS TELECOM
140 N. MONROE STREET
LANCASTER, WI 53581

ATTN: KEN KLASS
(608) 723-3633
kenneth.klass@tdstelecom.com

GENERAL NOTES

SILT FENCE TO BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SILT FENCE SHALL BE IN PLACE PRIOR TO CONSTRUCTION.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE DRIVING LANES AND THE SHOULDERS, ARE TO BE FERTILIZED, SEEDED, TEMPORARY SEEDED AND MULCHED, OR AS DIRECTED BY THE ENGINEER.

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

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

D.O.T. MONUMENT IS TO BE FURNISHED BY THE STATE AND PLACED BY THE CONTRACTOR IN THE SAME WING THAT THE PROPOSED NAME PLATE WILL BE PLACED, AS DIRECTED BY THE ENGINEER.

EROSION MAT SHALL BE PLACED ON SLOPES STEEPER THAN 3:1 AND SHALL EXTEND 5.0' BEYOND THE SLOPE INTERCEPT WITH THE ORIGINAL GROUND AND AS DIRECTED BY THE ENGINEER.

WETLANDS EXIST IN THE PROJECT AREA. DO NOT DISTURB WETLAND AREAS SHOWN OUTSIDE THE CONSTRUCTION LIMITS. NOTHING IS TO BE STORED WITHIN WETLAND BOUNDARY.

THE ASPHALTIC SURFACE SHALL BE PLACED IN TWO LIFTS CONSISTING OF A 2¼" LOWER LAYER AND A 1¾" UPPER LAYER.

TIED TO HMP SURVEY STATIONS "POTOSI GPS", "HARRISON S GPS", DICKEYVILLE GPS" AND "JAMESTOWN GPS" VIA GPS/VRS SURVEY FOR HORIZONTAL AND VERTICAL POSITIONS.
HORIZONTAL LATITUDES AND LONGITUDES ARE CONVERTED TO GRANT COUNTY COORDINATES NAD 83 (2001). ELEVATIONS ARE REFERENCED TO NAVD88 DATUM.

TOWN LIAISON

TOWN OF POTOSI
5230 COUNTY ROAD O
POTOSI, WI 53820

ATTN: CURTIS FETZEK, CHAIRMAN
(608) 763-2841

COUNTY LIAISON

GRANT COUNTY HIGHWAY DEPARTMENT
1011 N. ADAMS STREET
LANCASTER, WI 53813

ATTN: DAVID LAMBERT, P.E., HIGHWAY COMMISSIONER
(608) 723-2595
dlambert@co.grant.wi.gov

WisDNR LIAISON

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711

ATTN: CATHY BLESER
(608) 275-3308
Catherine.Bleser@Wisconsin.gov

CONSULTANT LIAISON

WESTBROOK ASSOCIATED ENGINEERS, INC.
619 E. HOXIE STREET
SPRING GREEN, WI 53588

ATTN: AARON PALMER, P.E.
(608) 588-7866
apalmer@westbrookeng.com

STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	L.F.	LINEAR FEET	REQ'D.	REQUIRED
AGG.	AGGREGATE	L.H.F.	LEFT HAND FORWARD	RT.	RIGHT
B.M.	BENCH MARK	L.S.	LUMP SUM	R/W	RIGHT-OF-WAY
$\overset{\mathbb{C}}{\mathbb{L}}$ OR CL	CENTERLINE	LT.	LEFT	RD.	ROAD
CR.	CRUSHED	MAX.	MAXIMUM	RDWY.	ROADWAY
C.T.H.	COUNTY TRUNK HIGHWAY	MIN.	MINIMUM	S.	SOUTH
CWT.	HUNDREDWEIGHT	N.	NORTH	SE	SOUTHEAST
C.Y.	CUBIC YARD	NOR.	NORMAL	SHRK.	SHRINKAGE
D.H.	DOUBLE HEADED	PAV'T.	PAVEMENT	S.R.	SIDE ROAD
D.H.V.	DESIGN HOURLY VOLUME	P.C.	POINT OF CURVE	STD.	STANDARD
DIR.	DIRECTED	P.I.	POINT OF INTERSECTION	S.T.H.	STATE TRUNK HIGHWAY
E.	EAST	P.E.	PRIVATE ENTRANCE	STA.	STATION
COR.	CORNER	P.K.	PARKER-KALON NAIL	S.Y.	SQUARE YARD
EL. OR ELEV.	ELEVATION	$\overset{\mathbb{P}}{\mathbb{L}}$ OR PL	PROPERTY LINE	T	TANGENT LENGTH OF CURVE
F.E.	FIELD ENTRANCE	P.P.	POWER POLE	$\overset{\mathbb{T}}{\mathbb{L}}$	TRANSIT LINE
FT.	FOOT (FEET)	PROJ.	PROJECT	UNCL.	UNCLASSIFIED EXCAVATION
GAL.	GALLON	P.T.	POINT OF TANGENCY	V	DESIGN SPEED
H.W.	HIGH WATER	PVMT.	PAVEMENT	V.C.	VERTICAL CURVE
IN.	INCHES	R.	RADIUS	VAR.	VARIABLE
K	SIGHT DISTANCE	R.R.	RAILROAD	W.	WEST
L.	LENGTH OF CURVE	REINF.	REINFORCED		

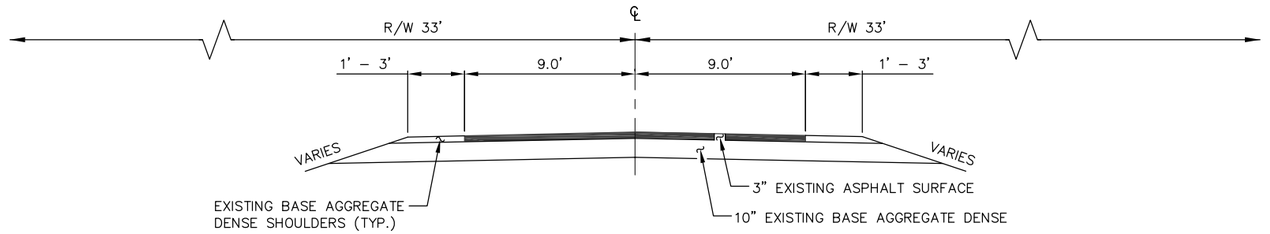
RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 0.45 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.34 ACRES

PROJECT NO: 5985-00-76	HWY: RIVER LANE ROAD	COUNTY: GRANT	UTILITIES, CONTACTS, AND GENERAL NOTES	SHEET 2	E

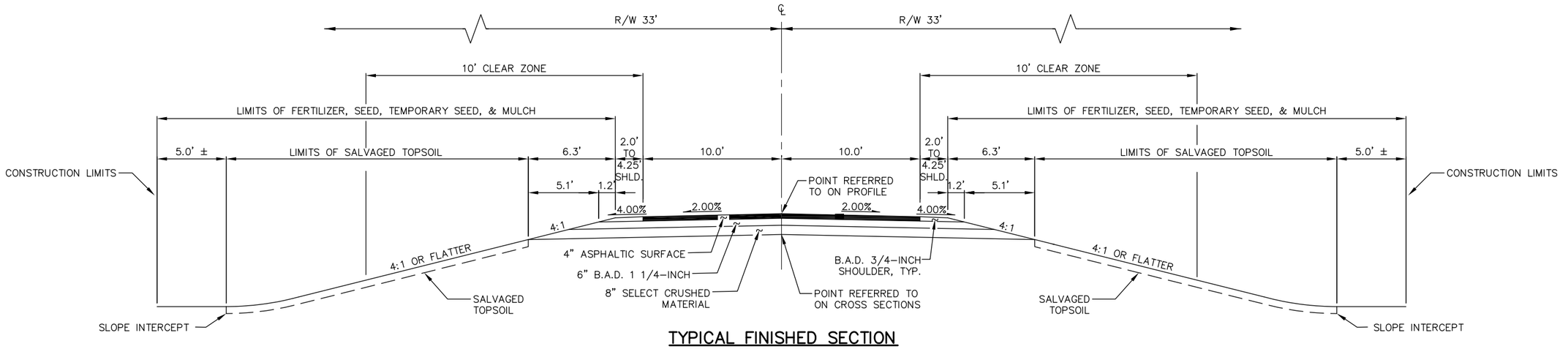
FILE NAME: G:\00-PROJECT FILES\2012\12170 River Lane Road Grant Co\01-CAD\Road\12170_200.dwg
PLOT DATE: Oct 24, 2013
PLOT BY: MikeCO
PLOT SCALE: 1:2
ROTATION: N/A



TYPICAL EXISTING SECTION

STA. 10+00 TO STA. 13+00

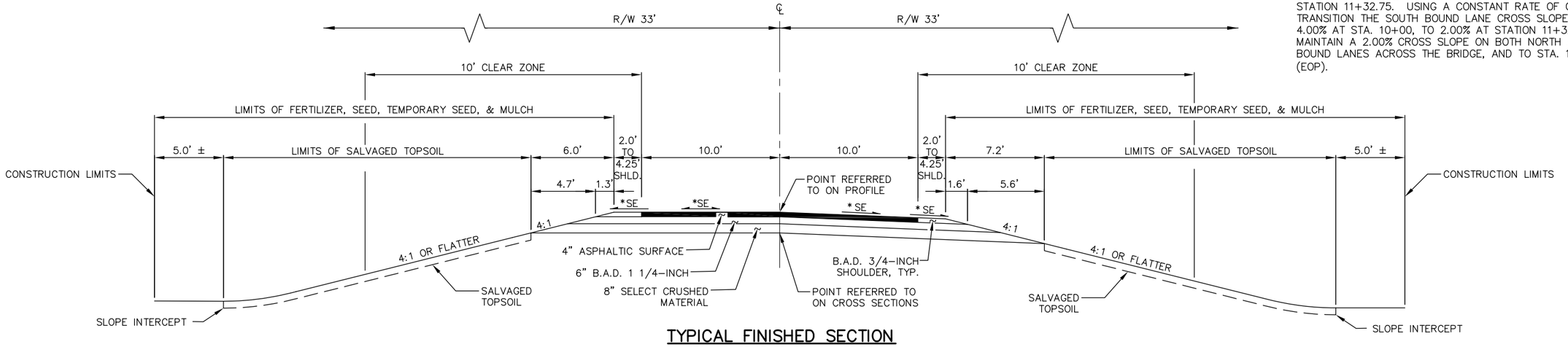
NOTE: NEW CENTERLINE DOES NOT MATCH EXISTING CENTERLINE EXACTLY.



TYPICAL FINISHED SECTION

STA. 11+67.25 TO STA. 13+00.00

*MATCH EXISTING CROSS SLOPE AT STA. 10+00. USING A CONSTANT RATE OF CHANGE, TRANSITION THE NORTH BOUND LANE CROSS SLOPE FROM 1.00% AT STA. 10+00, TO 2.00% AT STATION 11+32.75. USING A CONSTANT RATE OF CHANGE, TRANSITION THE SOUTH BOUND LANE CROSS SLOPE FROM 4.00% AT STA. 10+00, TO 2.00% AT STATION 11+32.75. MAINTAIN A 2.00% CROSS SLOPE ON BOTH NORTH AND SOUTH BOUND LANES ACROSS THE BRIDGE, AND TO STA. 13+00 (EOP).



TYPICAL FINISHED SECTION

STA. 10+00.00 TO STA. 11+32.75

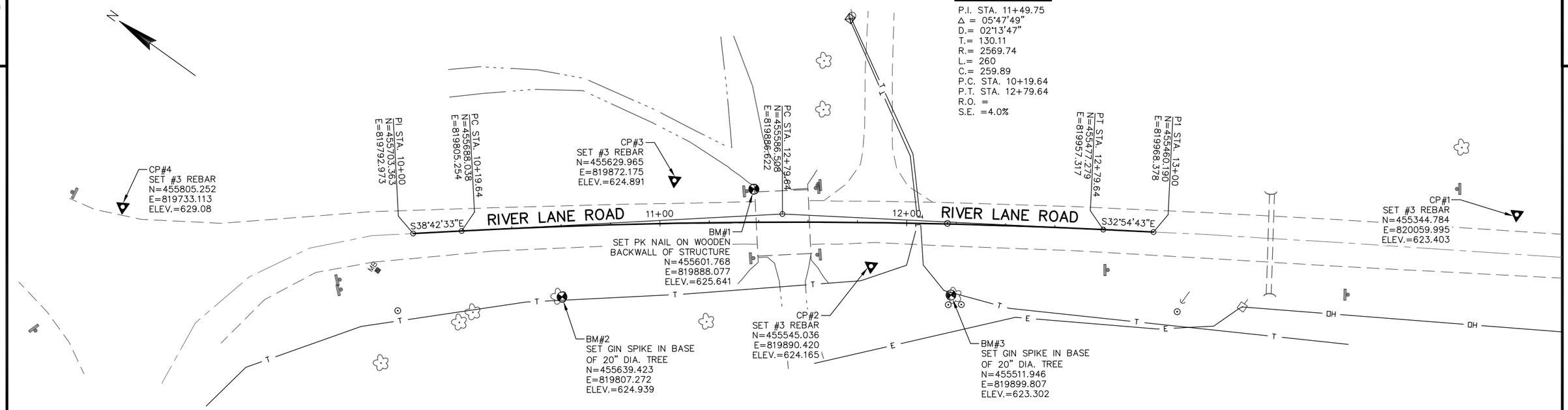
PROJECT NO: 5985-00-76	HWY: RIVER LANE ROAD	COUNTY: GRANT	TYPICAL SECTIONS	SHEET 3	E

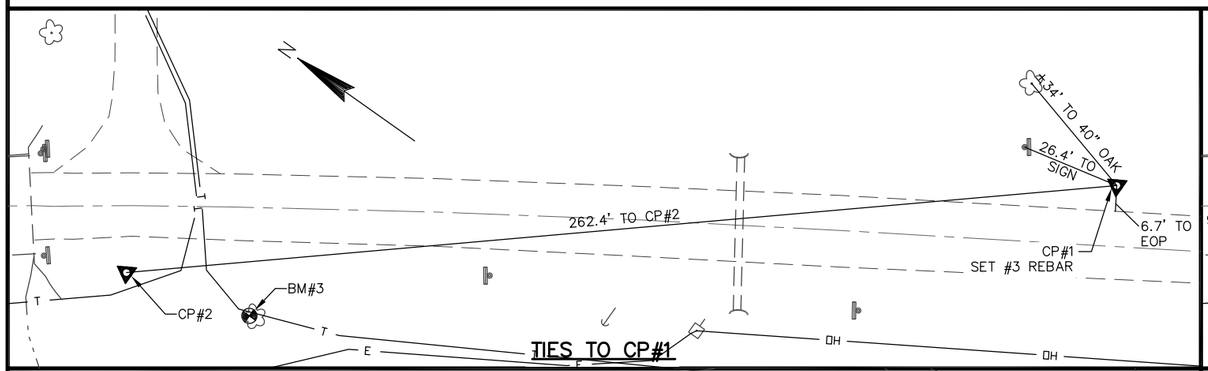
FILE NAME: G:\00-PROJECT FILES\2012\12170 River Lane Road Grant Co\01-CAD\Road\12170_201.dwg PLOT DATE: Oct 23, 2013 PLOT BY: MikeCO PLOT SCALE: ROTATION:

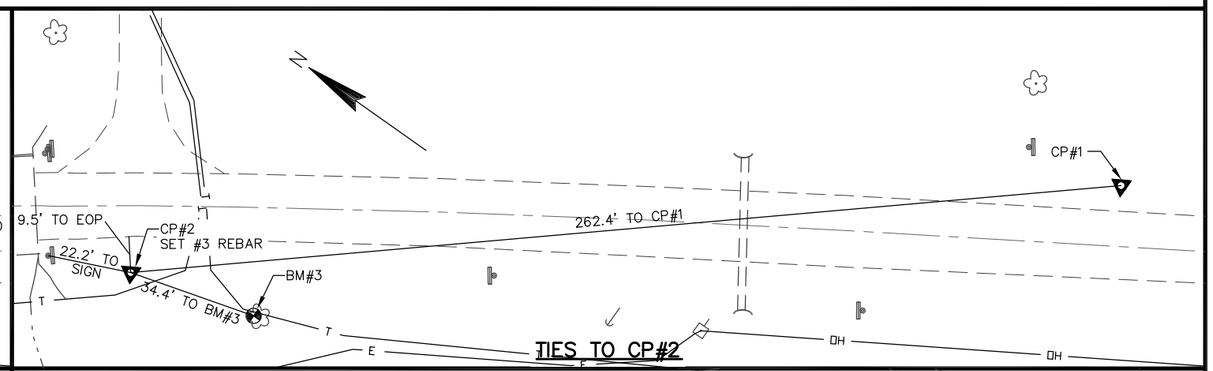
2

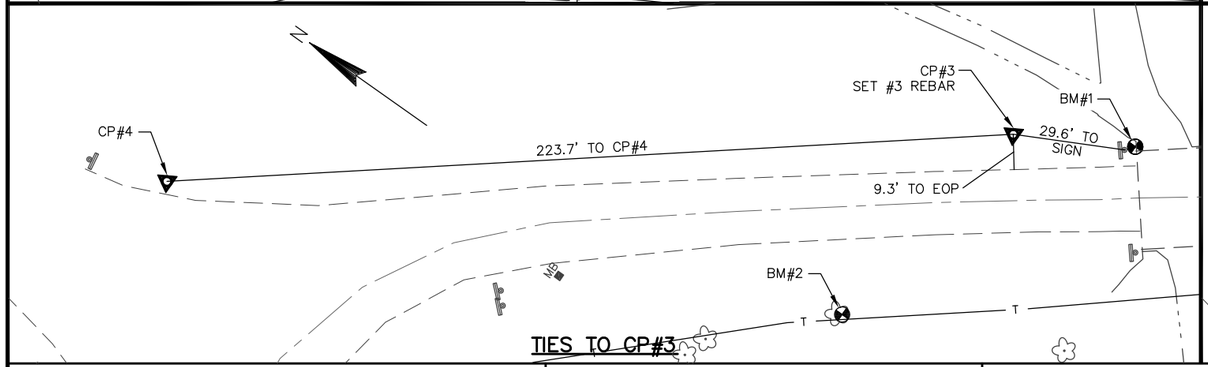
CURVE DATA

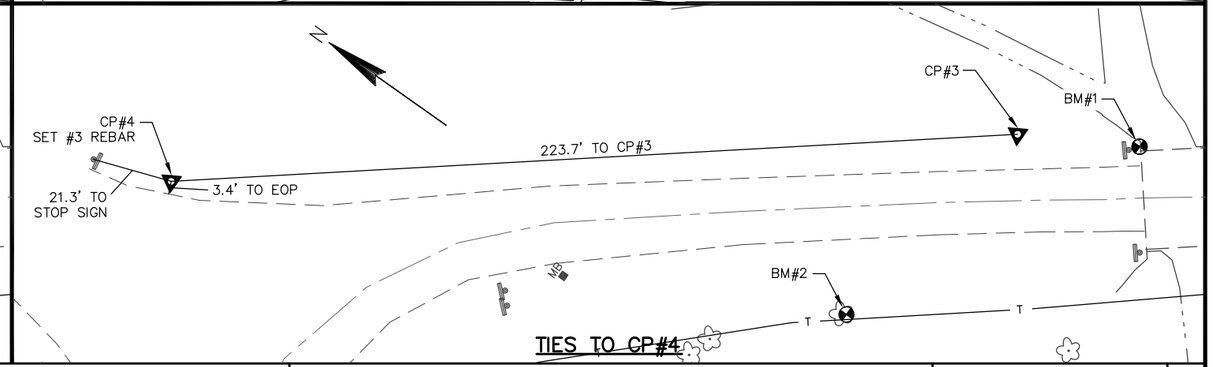
P.I. STA. 11+49.75
Δ = 05°47'49"
D.= 02°13'47"
T.= 130.11
R.= 2569.74
L.= 260
C.= 259.89
P.C. STA. 10+19.64
P.T. STA. 12+79.64
R.O. =
S.E. =4.0%











PROJECT NO: 5985-00-76	HWY: RIVER LANE ROAD	COUNTY: GRANT	ALIGNMENT DETAILS	SHEET 4	E

FILE NAME: G:\00-PROJECT FILES\2012\12170 River Lane Road Grant Co\01-CAD\Road\12170_230.dwg PLOT DATE: Oct 23, 2013 PLOT BY: MikeCO PLOT SCALE: ROTATION:

DATE 05DEC13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5985-00-76 QUANTITY
0010	201.0105	CLEARING	STA	2.000	2.000
0020	201.0205	GRUBBING	STA	2.000	2.000
0030	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. 11+50	LS	1.000	1.000
0040	205.0100	EXCAVATION COMMON **P**	CY	483.000	483.000
0050	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-22-0281	LS	1.000	1.000
0060	210.0100	BACKFILL STRUCTURE	CY	440.000	440.000
0070	213.0100	FINISHING ROADWAY (PROJECT) 01. 5985-00-76	EACH	1.000	1.000
0080	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	36.000	36.000
0090	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	301.000	301.000
0100	312.0110	SELECT CRUSHED MATERIAL	TON	463.000	463.000
0110	455.0605	TACK COAT	GAL	20.000	20.000
0120	465.0105	ASPHALTIC SURFACE	TON	155.000	155.000
0130	502.0100	CONCRETE MASONRY BRIDGES	CY	152.000	152.000
0140	502.3200	PROTECTIVE SURFACE TREATMENT	SY	130.000	130.000
0150	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	4,750.000	4,750.000
0160	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	14,450.000	14,450.000
0170	513.4060	RAILING TUBULAR TYPE M (STRUCTURE) 01. B-22-0281	LS	1.000	1.000
0180	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	22.000	22.000
0190	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	805.000	805.000
0200	606.0700	GROUTED RIPRAP HEAVY	CY	40.000	40.000
0210	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	120.000	120.000
0220	619.1000	MOBILIZATION	EACH	1.000	1.000
0230	625.0500	SALVAGED TOPSOIL	SY	256.000	256.000
0240	627.0200	MULCHING	SY	1,150.000	1,150.000
0250	628.1504	SILT FENCE	LF	600.000	600.000
0260	628.1520	SILT FENCE MAINTENANCE	LF	1,200.000	1,200.000
0270	628.2039	EROSION MAT CLASS III TYPE D	SY	100.000	100.000
0280	628.7504	TEMPORARY DITCH CHECKS	LF	75.000	75.000
0290	629.0210	FERTILIZER TYPE B	CWT	0.750	0.750
0300	630.0120	SEEDING MIXTURE NO. 20	LB	31.500	31.500
0310	630.0200	SEEDING TEMPORARY	LB	31.500	31.500
0320	634.0612	POSTS WOOD 4X6-INCH X 12-FT	EACH	4.000	4.000
0330	637.2230	SIGNS TYPE II REFLECTIVE F	SF	12.000	12.000
0340	638.2602	REMOVING SIGNS TYPE II	EACH	5.000	5.000
0350	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	4.000	4.000
0360	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0370	643.0100	TRAFFIC CONTROL (PROJECT) 01. 5985-00-76	EACH	1.000	1.000
0380	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	120.000	120.000
0390	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	265.000	265.000
0400	650.5000	CONSTRUCTION STAKING BASE	LF	265.000	265.000
0410	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-22-0281	LS	1.000	1.000
0420	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 5985-00-76	LS	1.000	1.000
0430	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	265.000	265.000
0440	690.0150	SAWING ASPHALT	LF	36.000	36.000
0450	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	912.000	912.000

3

CLEARING AND GRUBBING

STATION – STATION	LOCATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
10+50 – 11+50	MAINLINE	1	1
11+50 – 13+00	MAINLINE	1	1
	TOTALS	2	2

BASE AGGREGATE DENSE

STATION _ STATION	LOCATION	305.0110 ¾–INCH BASE (TON)	305.0120 1¼–INCH BASE (TON)
10+00.00 _ 11+32.75	MAINLINE	20	148
11+67.25 _ 13+00.00	MAINLINE	16	153
	TOTAL	36	301

SELECT CRUSHED MATERIAL

STATION – STATION	LOCATION	312.0110 SELECT CRUSHED (TON)
10+00.00 – 11+32.75	MAINLINE	228
11+67.25 – 13+00.00	MAINLINE	235
	TOTAL	463

ASPHALTIC ITEMS

STATION – STATION	LOCATION	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)
10+00.00 – 11+32.75	MAINLINE	9	71
11+67.25 – 13+00.00	MAINLINE	11	84
	TOTALS	20	155

FINISHING ITEMS

STATION – STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0200 SEEDING TEMPORARY (LB)
10+00.00 – 11+32.75	MAINLINE	133	475	0.30	12.8	12.8
11+67.25 – 13+00.00	MAINLINE	123	457	0.29	12.3	12.3
--- – ---	UNDISTRIBUTED	--	218	0.16	6.4	6.4
	TOTALS	256	1150	0.75	31.5	31.5

EROSION CONTROL ITEMS

STATION – STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.2039 EROSION MAT CLASS III TYPE D (SY)	628.7504 TEMPORARY DITCH CHECKS (LF)
10+00.00 – 11+32.75	MAINLINE, LT & RT	250	500	--	--
11+67.25 – 13+00.00	MAINLINE, LT & RT	250	500	--	--
--- – ---	UNDISTRIBUTED	100	200	100	75
	TOTALS	600	1200	100	75

SIGNS REFLECTIVE TYPE II F & POSTS WOOD 4x6–INCH 12–FT

STATION	LOCATION	CODE	DESCRIPTION	634.0612 (EACH)	637.2230 (SF)
11+32	MAINLINE, RT	W5–52R	CLEARENCE STRIPER	1	3
11+32	MAINLINE, LT	W5–52L	CLEARENCE STRIPER	1	3
11+67	MAINLINE, RT	W5–52R	CLEARANCE STRIPER	1	3
11+67	MAINLINE, LT	W5–52L	CLEARANCE STRIPER	1	3
			TOTALS	4	12

REMOVING SIGNS TYPE II & REMOVING SMALL SIGNS SUPPORTS

STATION	LOCATION	CODE	DESCRIPTION	638.2602 (EACH)	638.3000 (EACH)
11+32	MAINLINE, RT	W5–52R	CLEARENCE STRIPER	1	1
11+32	MAINLINE, LT	W5–52L	CLEARENCE STRIPER	1	1
11+67	MAINLINE, RT	W5–52R	CLEARANCE STRIPER	1	1
11+67	MAINLINE, LT	W5–52L	CLEARANCE STRIPER	1	1
11+67	MAINLINE, LT	R12–1	WEIGHT LIMIT	1	--
			TOTALS	5	4

LAYOUT ITEMS

STATION – STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE (LF)	650.5000 CONSTRUCTION STAKING BASE (LF)	650.9920 CONSTRUCTION STAKING SLOPE STAKES (LF)
10+00 – 13+00	MAINLINE	265	265	265
	TOTALS	265	265	265

SAWING ASPHALT

STATION	LOCATION	690.0150 (LF)
10+00.00	MAINLINE	18
13+00.00	MAINLINE	18
	TOTAL	36

NOTE: UNLESS NOTED, ALL ITEMS ARE IN CATEGORY 0010.

PROJECT NO: 5985–00–76	HWY: RIVER LANE ROAD	COUNTY: GRANT	MISCELLANEOUS QUANTITIES (1 OF 2)	SHEET 6	E

Division	From/To Station	Location	Common Excavation (1)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste
			Cut (2)			Factor 1.25		
1	10+00 to 11+32.75	Mainline stage 1	248	248	2	3	245	
				0		0	0	
				0		0	0	
				0		0	0	
Division 1 Subtotal			248	248	2	3	245	
2	11+67.25 to 13+00	Mainline stage 1	236	236	0	0	236	
				0		0	0	
				0		0	0	
				0		0	0	
				0		0	0	
Division 2 Subtotal			236	236	0	0	236	481
Grand Total			483	483	2	3	481	481
			Total Common Exc					

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
5) Available Material = Cut - Salvaged/Unusable Pavement Material
13) Expanded Fill. Factor = 1.30
Depending on selections:

14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

NOTE: UNLESS NOTED, ALL ITEMS ARE IN CATEGORY 0010.

PROJECT NO: 5985-00-76	HWY: RIVER LANE ROAD	COUNTY: GRANT	MISCELLANEOUS QUANTITIES (2 OF 2)	SHEET 7	E

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEVATION
1	11+38.12	PK NAIL ON WOODEN BACKWALL OF STRUCTURE, NEAR NE WING, 13.41' LT.	625.64
2	10+59.28	GIN SPIKE IN BASE OF 20" DIA. TREE, 28.53' RT.	624.94
3	12+18.23	GIN SPIKE IN BASE OF 20" DIA. TREE, 28.61' RT.	623.30

LEGEND

- SILT FENCE
- XXXXXXXX SAW EXISTING PAVEMENT
- FLOW ARROW
- HEAVY RIPRAP (SEE STRUCTURE PLANS FOR QUANTITIES)

KEVIN & JEANNIE UDELHOFEN

DRY RUN

PROPOSED C/L RIVER LANE ROAD

PC STA = 10+19.64

PI STA = 11+49.75

PT STA = 12+79.64

STA. 11+50
REMOVE EXISTING STRUCTURE P-22-0242
SINGLE SPAN STEEL DECK GIRDER
20.8' O.A.L., 26.6' O.A.W.

TDS TELECOM

33 FT R/W

CP#1

RIVER LANE ROAD
(ASPHALT)

CP#3

BM#1

SILT FENCE (TYP)

CP#4

EXISTING C/L RIVER LANE ROAD

11+00

12+00

BM#3

CP#2

STRUCTURE B-22-281 REQUIRED

BEGIN PROJECT
STA. 10+00
MATCH EXISTING

BM#2

THOMAS AND MARY DROSSLER

CURVE DATA

P.I. STA. 11+49.75
Δ = 05°47'49"
D.= 02°13'47"
T.= 130.11
R.= 2569.74
L.= 260
C.= 259.89
P.C. STA. 10+19.64
P.T. STA. 12+79.64
R.O. =
S.E. =4.0%

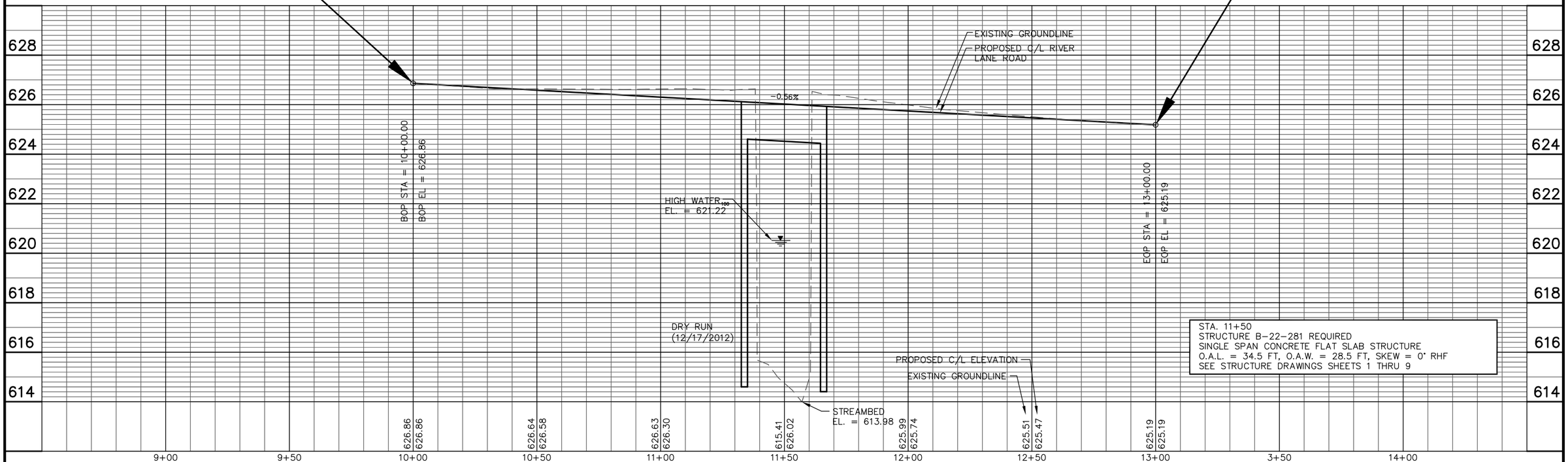
SCENIC RIVERS ENERGY COOPERATIVE

REGAN BRANCH DRY RUN

END PROJECT
STA. 13+00
MATCH EXISTING

33 FT R/W

BARD MATERIALS



PROJECT NO: 5985-00-76	HWY: RIVER LANE ROAD	COUNTY: GRANT	PLAN & PROFILE (MAINLINE)	SHEET	E

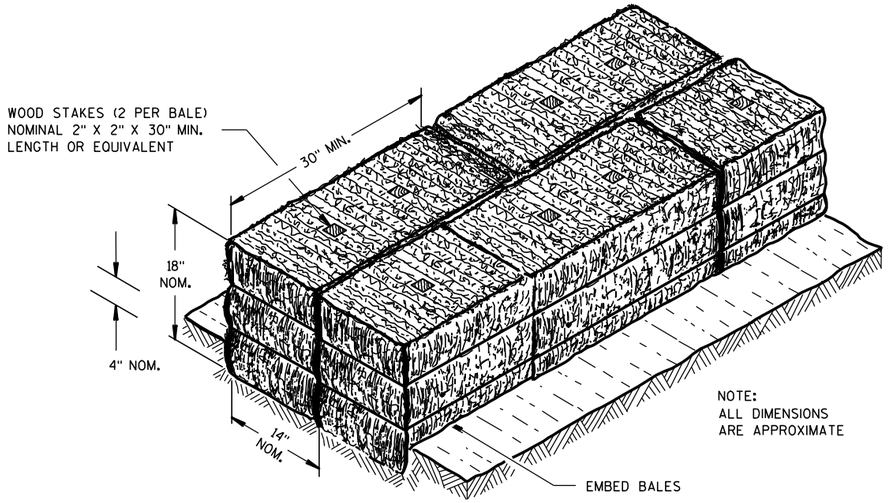
FILE NAME: G:\00-PROJECT FILES\2012\12170 River Lane Road Grant Co\01-CAD\Road\12170_500.dwg PLOT DATE: Oct 24, 2013 PLOT BY: MikeCO PLOT SCALE: ROTATION:

Standard Detail Drawing List

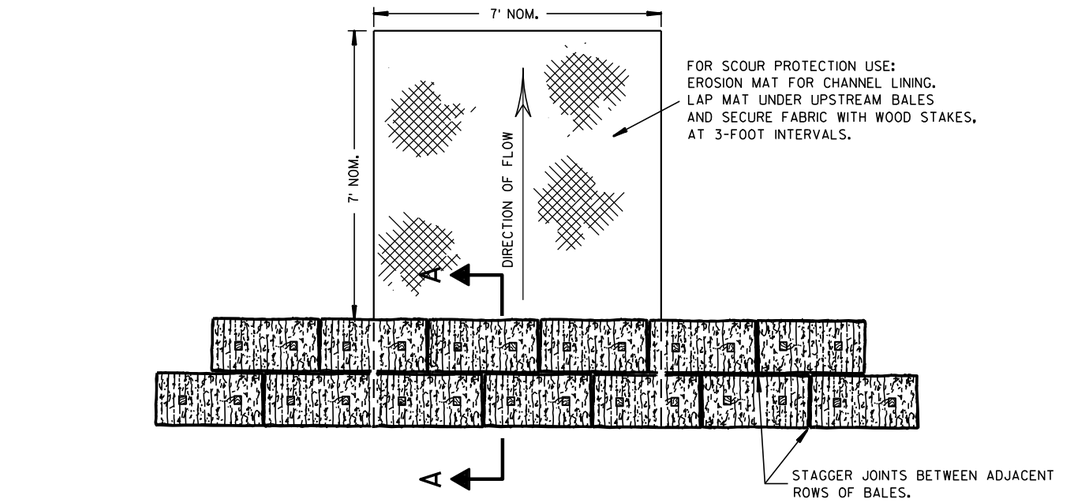
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-06	SIGNING & MARKING FOR TWO LANE BRIDGES

6

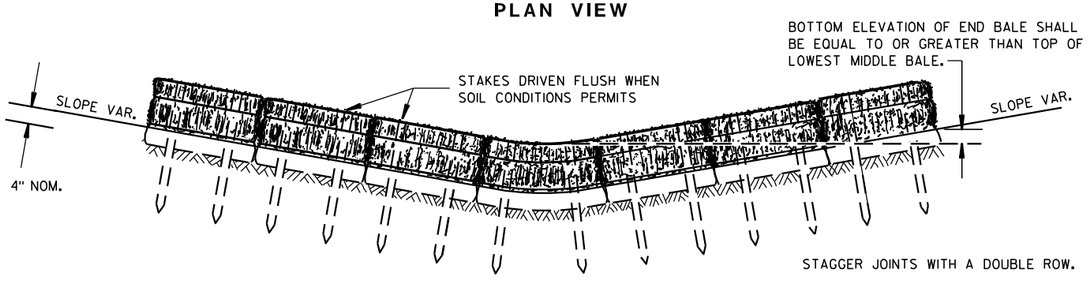
6



SECTION A-A



PLAN VIEW



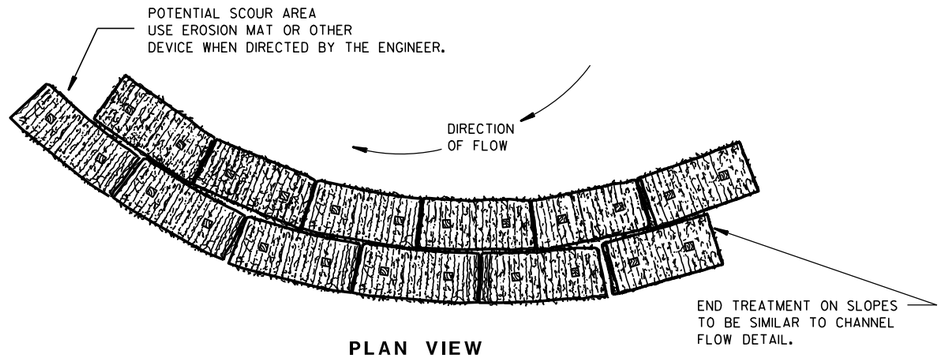
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

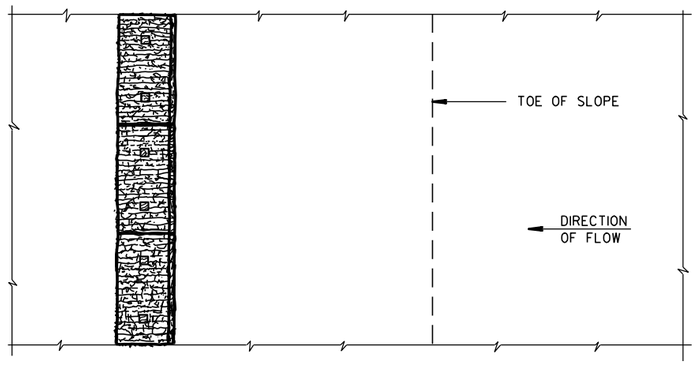
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

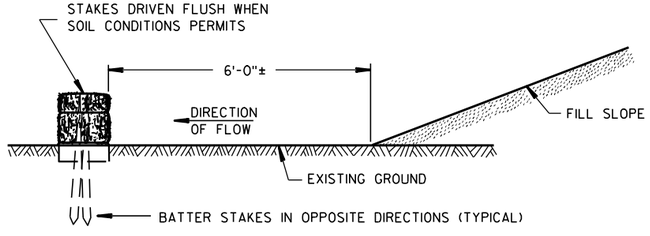


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

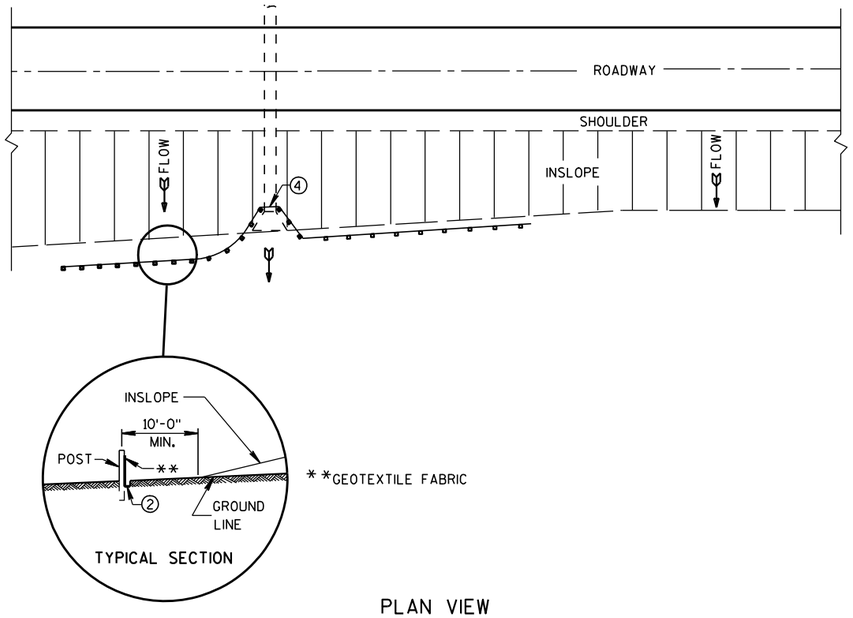
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

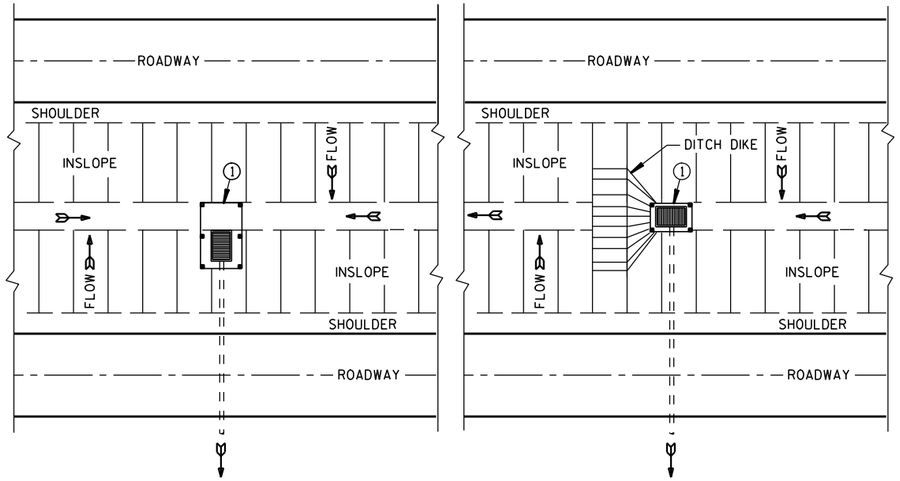
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

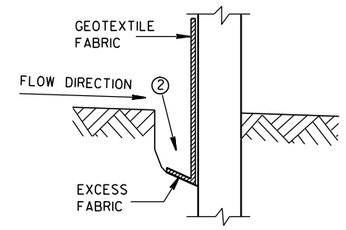
(1) HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

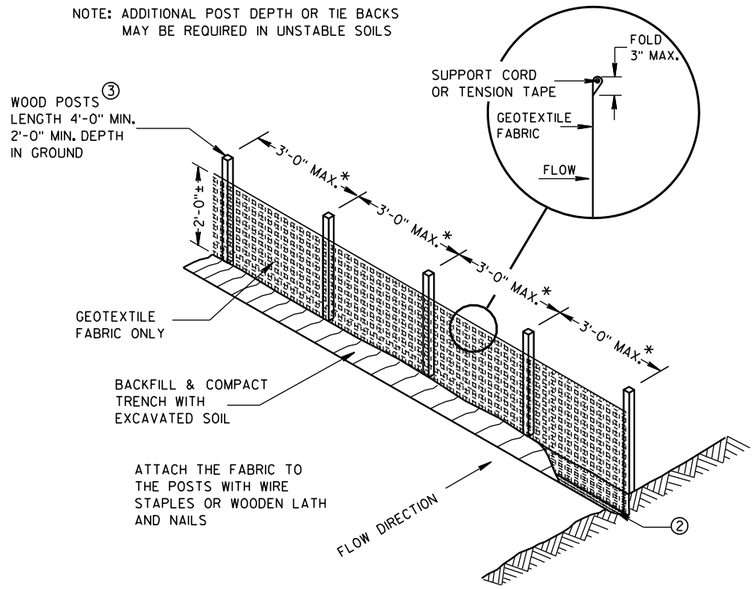
(3) WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

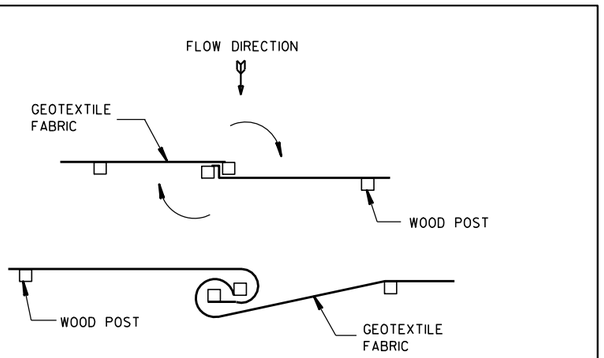
(5) CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



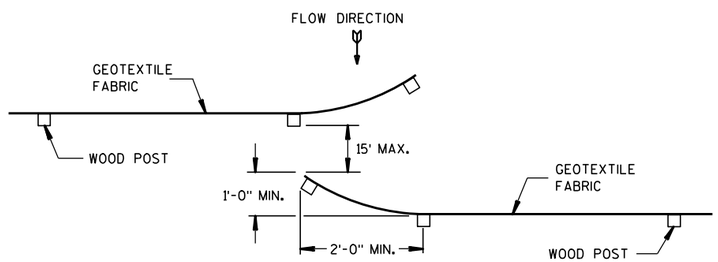
TRENCH DETAIL



SILT FENCE

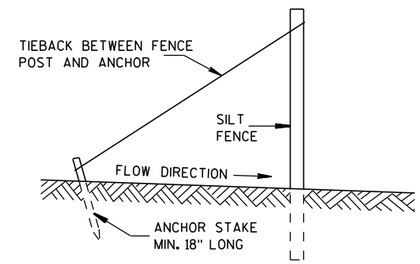


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE (5)



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

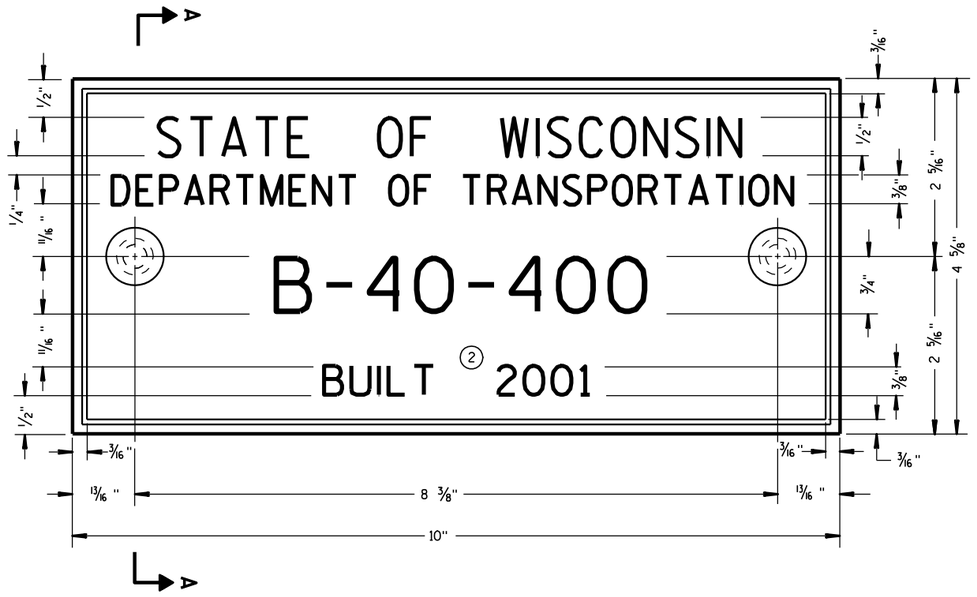
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 9-6

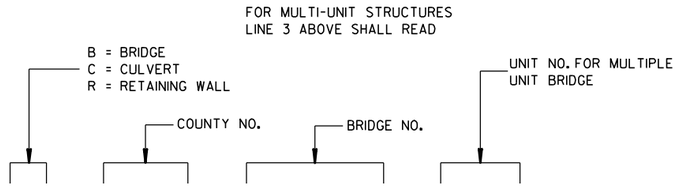
6

S.D.D. 8 E 9-6



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

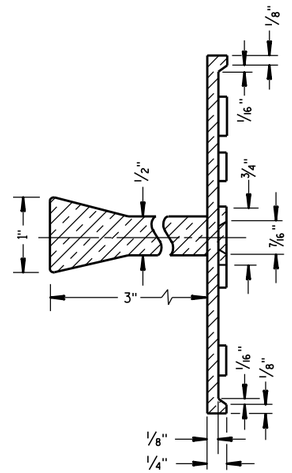
GENERAL NOTES

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

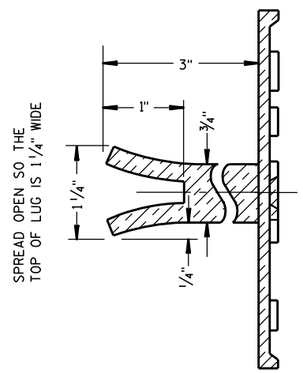
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

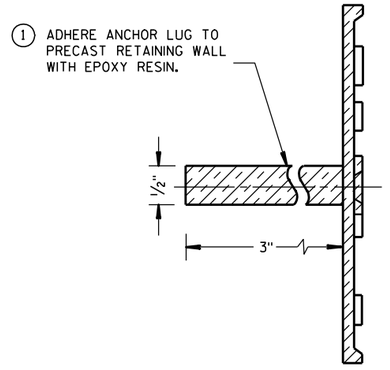
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



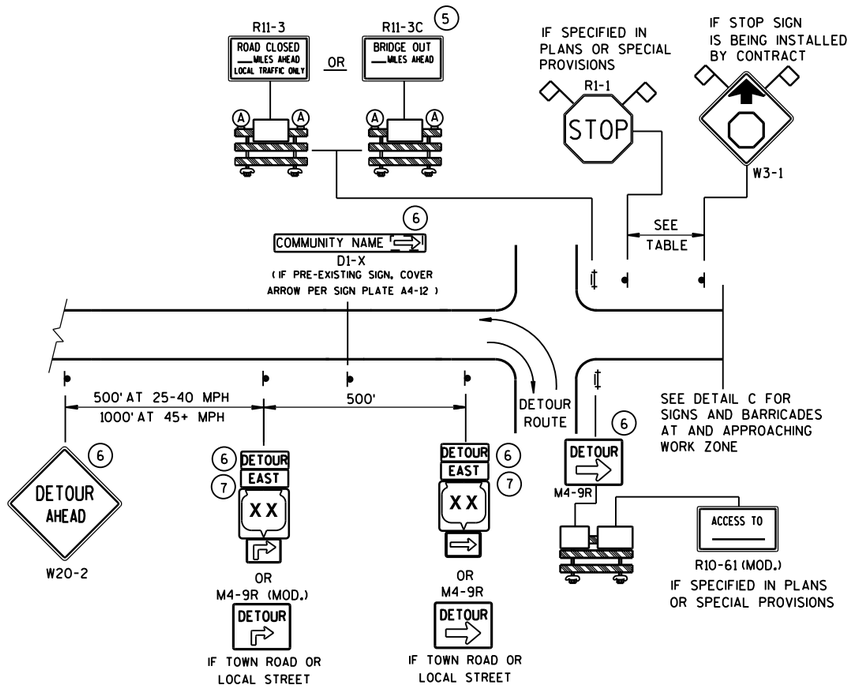
ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

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

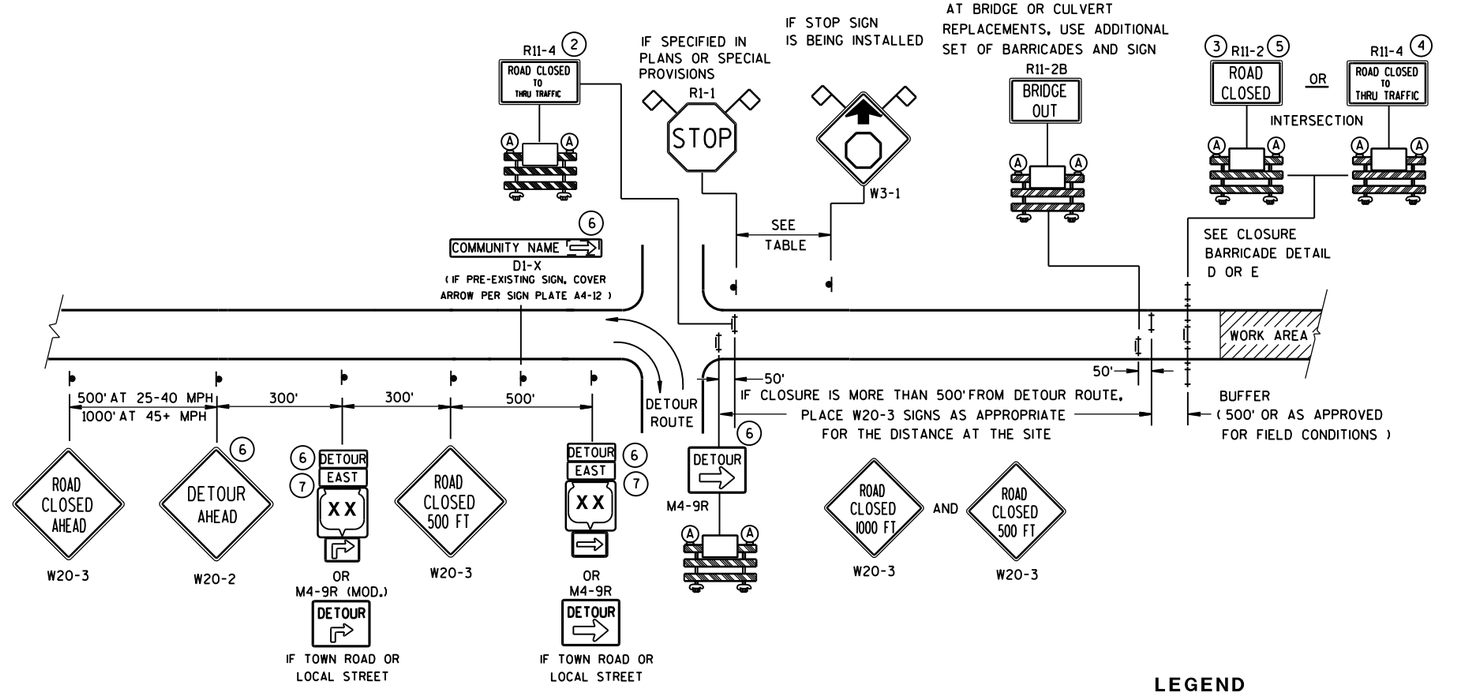
6

S.D.D. 12 A 3-10



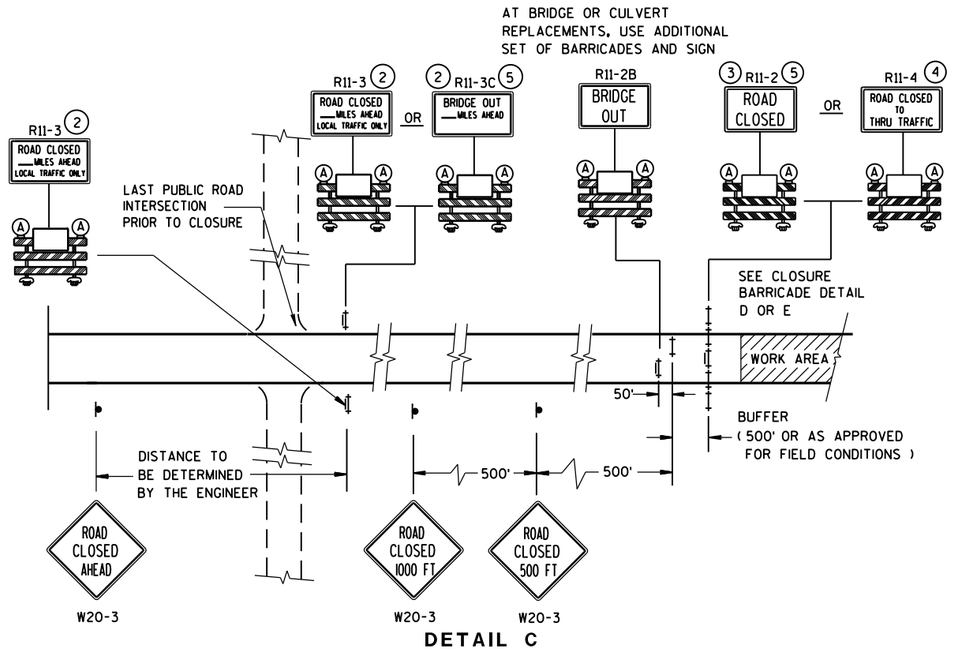
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

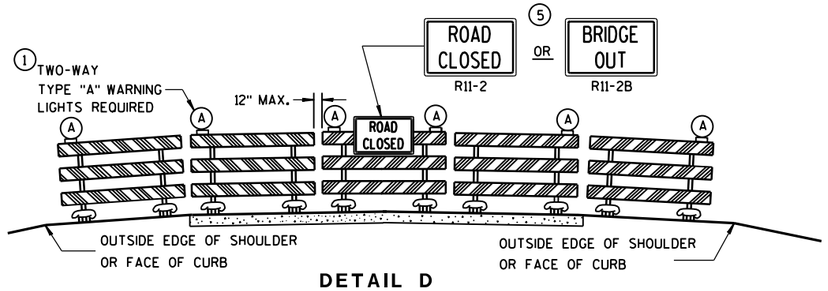
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

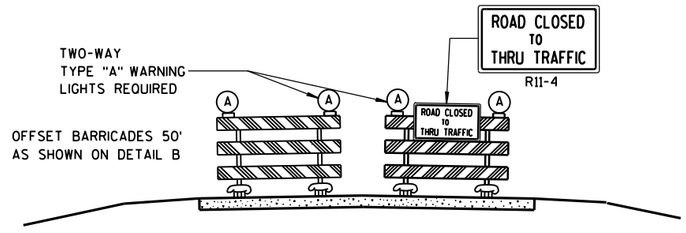
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

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

GENERAL NOTES

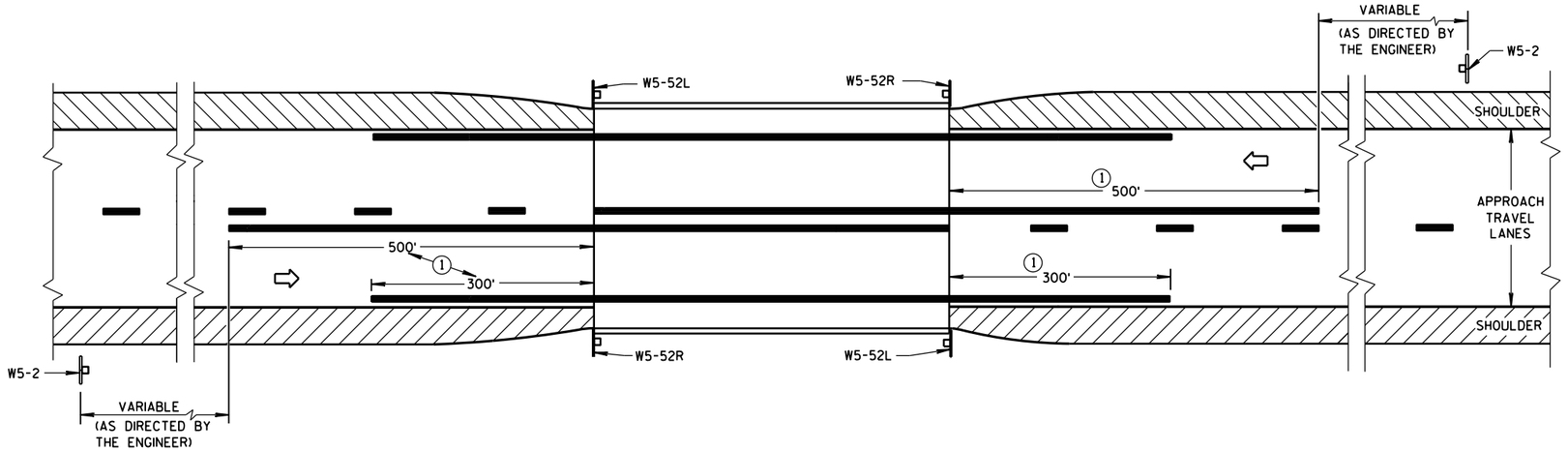
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

PAVEMENT MARKING SHOWN ON THIS DRAWING IS NOT REQUIRED UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. WHEN SPECIFIED, PAVEMENT MARKING SHALL CONFORM TO THIS DRAWING AND OTHER CONTRACT REQUIREMENTS.

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

(2) FACE OF OBJECT MARKERS W5-52R, AND W5-52L SHALL BE COVERED WITH TYPE F REFLECTIVE SHEETING.

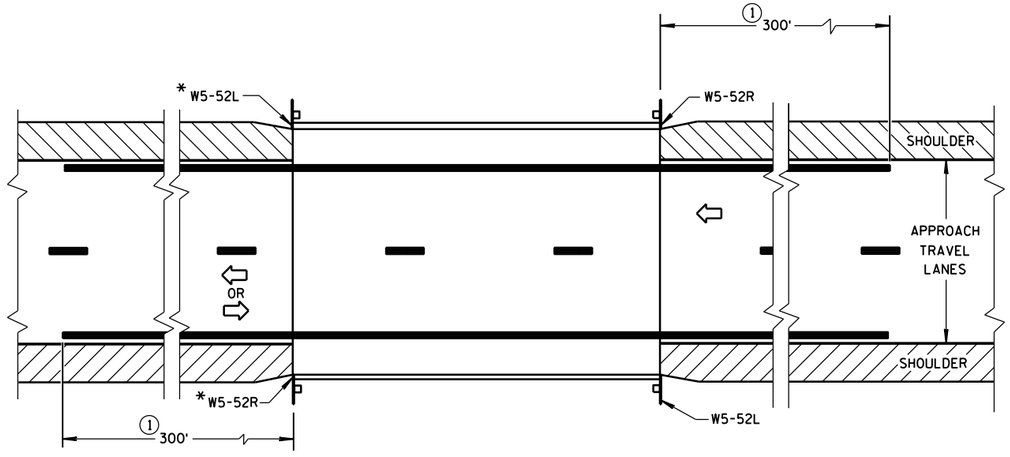
(3) LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.



SITUATION 1

WARRANTING CRITERIA:

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

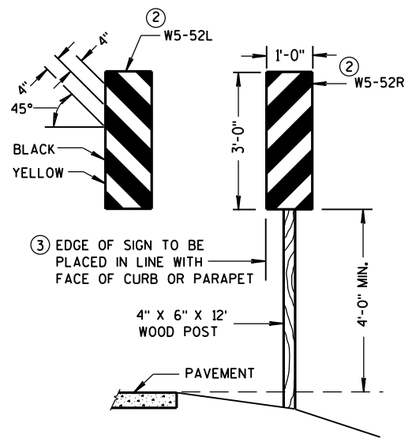


*OMIT ON ONE-WAY TRAVELLED WAYS

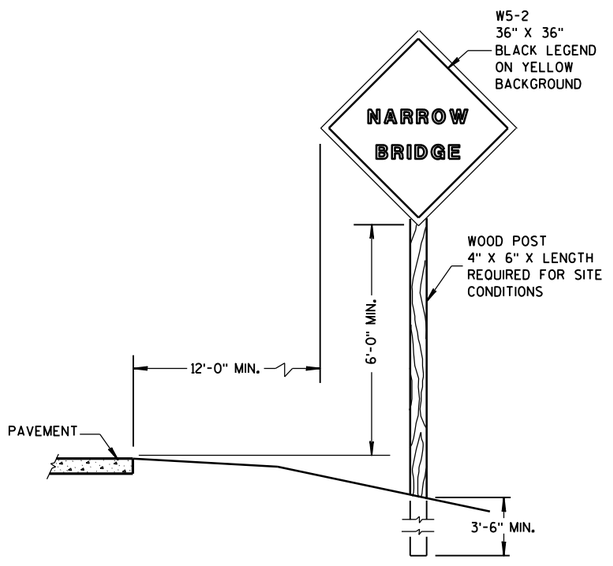
SITUATION 2

WARRANTING CRITERIA:

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



OBJECT MARKER PLACEMENT



SIGN PLACEMENT

SIGNING & MARKING
FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

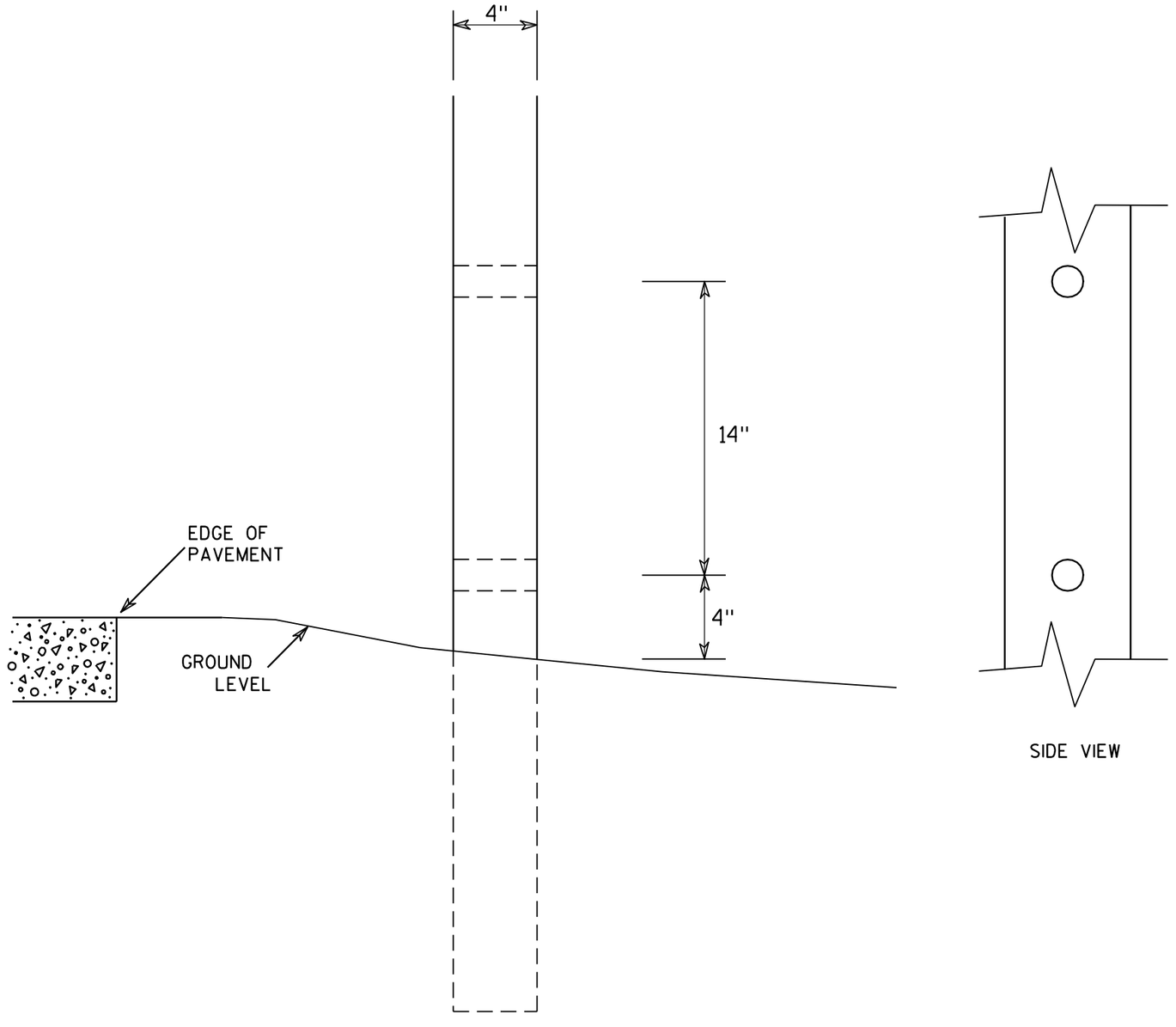
3/4/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 6-6



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

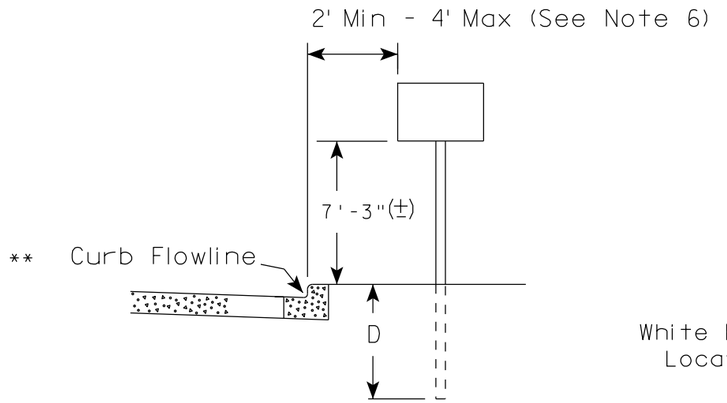
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

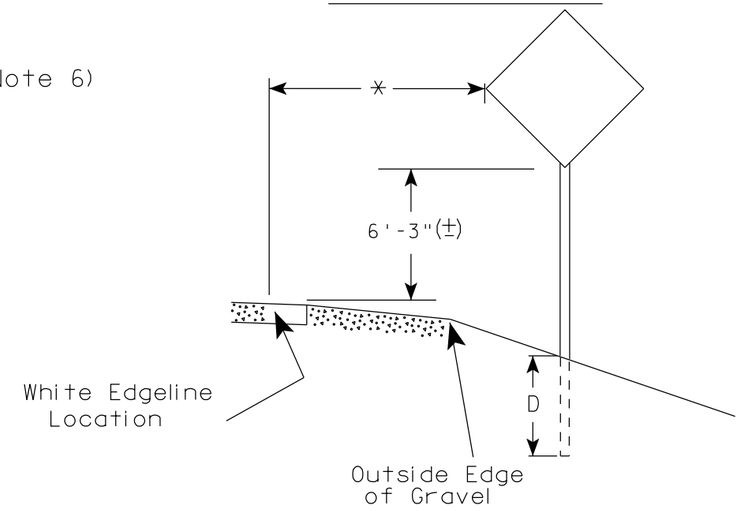
DATE 3/27/97 PLATE NO. A4-11.2

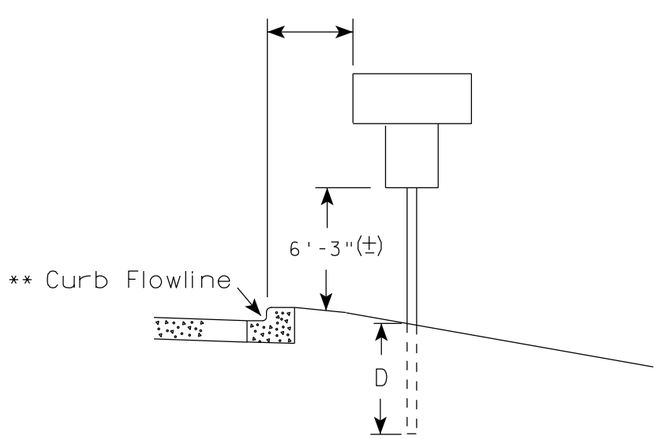
PROJECT NO: 5985-00-76	HWY: RIVER LANE	COUNTY: GRANT	PERMANENT SIGNING	SHEET NO: 16	E

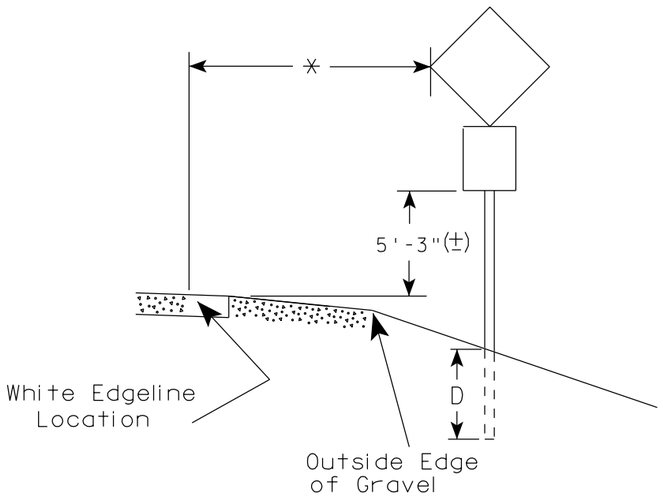
URBAN AREA



RURAL AREA (See Note 2)







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

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

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

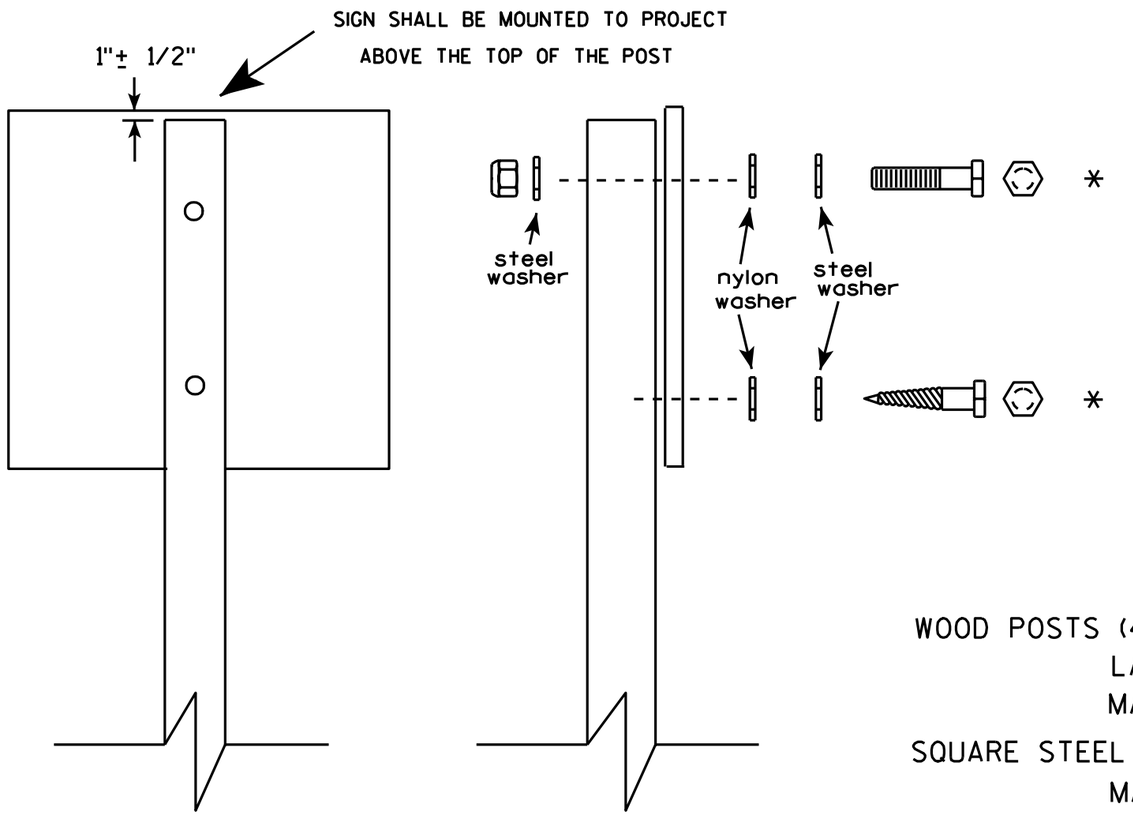
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

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

PROJECT NO: 5985-00-76	HWY: RIVER LANE	COUNTY: GRANT	PERMANAENT SIGNING	SHEET NO:	E



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

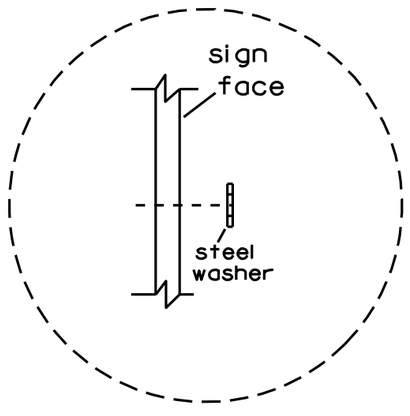
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

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



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

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

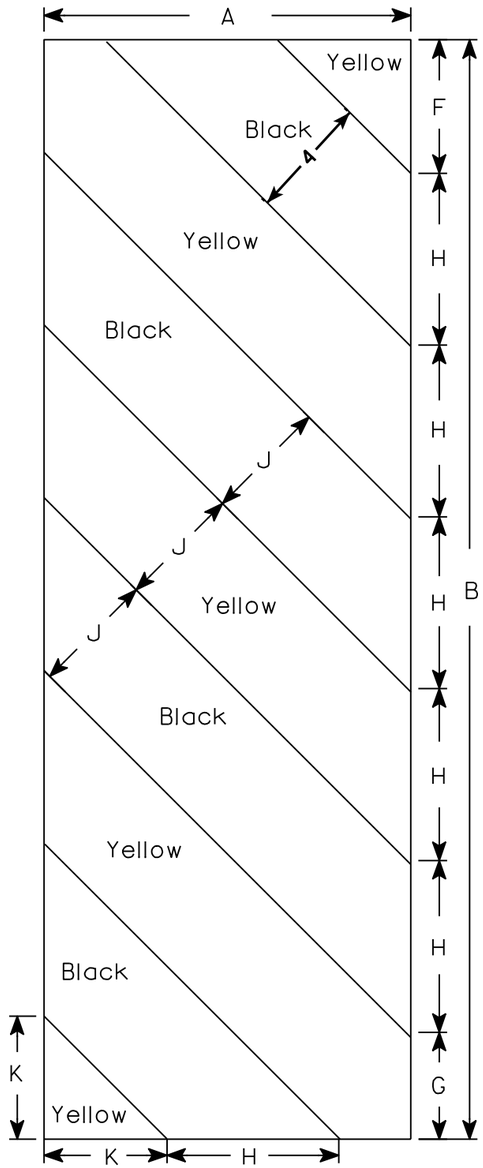
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

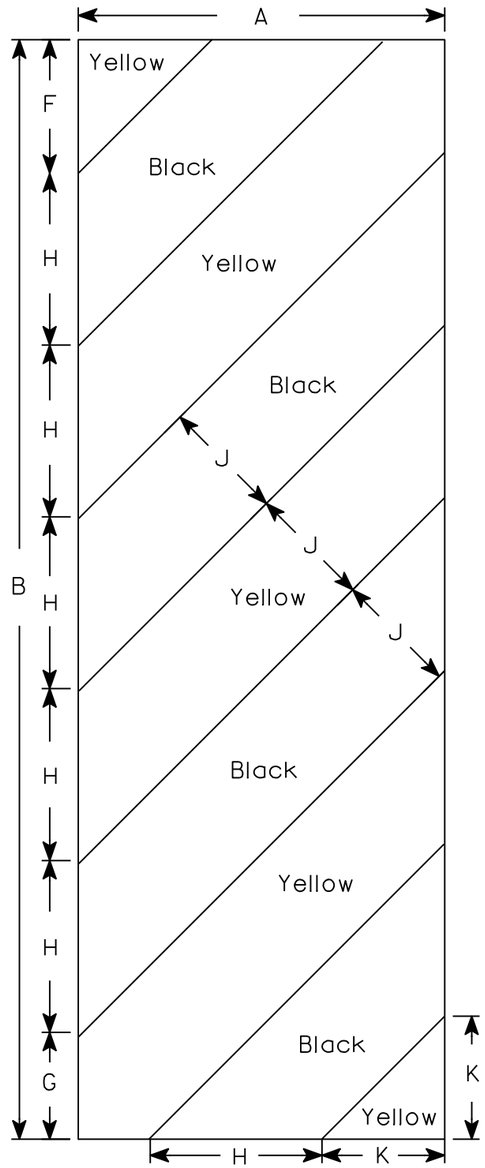
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: 5985-00-76	HWY: RIVER LANE	COUNTY: GRANT	PERMANENT SIGNING	SHEET NO: 18	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

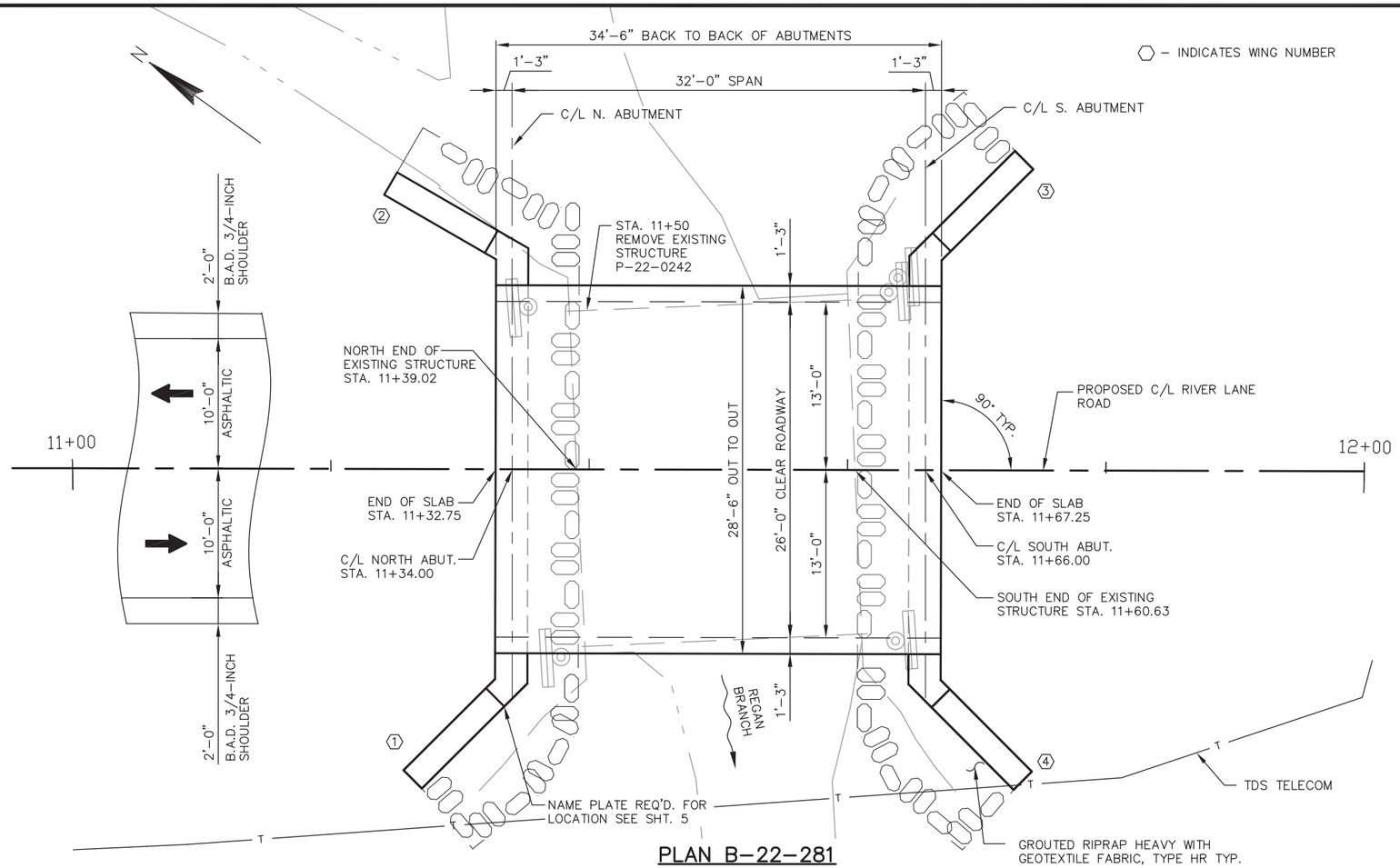
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: 5985-00-76 | HWY: RIVER LANE | COUNTY: GRANT | PERMANENT SIGNING | SHEET NO: 19 | E

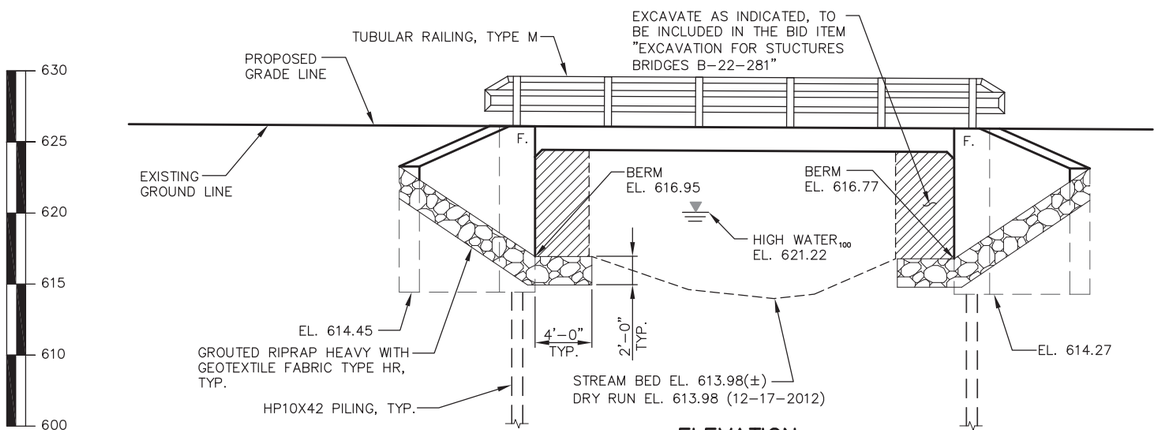
STATE PROJECT NUMBER

5985-00-76



PLAN B-22-281

(SINGLE SPAN REINFORCED CONCRETE FLAT SLAB)



ELEVATION

(NORMAL TO C/L RIVER LANE ROAD)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	1.15
OPERATING RATING FACTOR	1.49
WISCONSIN STANDARD PERMIT VEHICLE RATING (WIS.-SPV)	250 KIPS

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

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY, SLAB	$f'c$ = 4,000 p.s.i.
ALL OTHER	$f'c$ = 3,500 p.s.i.
HIGH-STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 p.s.i.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP10x42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE 140 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATE 60 FT PILE LENGTHS AT SOUTH ABUTMENT AND 55 FT PILE LENGTHS AT NORTH ABUTMENT.

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.A.D.T.(2014)	110
A.A.D.T.(2034)	130
DESIGN SPEED	50 M.P.H.

HYDRAULIC DATA:

Q_{100}	1,010 c.f.s.
Q_{100} (THRU BRIDGE)	1,010 c.f.s.
Q_{100} (ROAD)	N/A c.f.s.
DRAINAGE AREA	2.3 SQ. MI.
WATERWAY AREA @ Q_{100}	158 SQ. FT.
VELOCITY	6.37 f.p.s.
HIGH WATER$_{100}$ ELEVATION	621.22 ft
SCOUR CRITICAL CODE	8
Q_2	140 c.f.s.
Q_2 ELEVATION	617.00 ft

LIST OF DRAWINGS

BRIDGE OFFICE CONTACT
BILL DREHER, P.E.
(608) 266-8489

CONSULTANT CONTACT
ANDY KNUTSON, P.E., S.E.
(608) 588-7866

WISCONSIN
ANDREW C. KNUTSON
E-34662
SPRING GREEN, WI
PROFESSIONAL ENGINEER

12-2-13

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEVATION
1	11+38.12	PK NAIL ON WOODEN BACKWALL OF STRUCTURE, NEAR NE WING, 13.41' LT.	625.64
2	10+59.28	GIN SPIKE IN BASE OF 20" DIA. TREE, 28.53' RT.	624.94
3	12+18.23	GIN SPIKE IN BASE OF 20" DIA. TREE, 28.61' RT.	623.30

NO.	DATE	REVISION	BY

WESTBROOK Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WI 53588
PHONE (608) 588-7866
FAX (608) 588-7954

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 12/02/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-22-281

RIVER LANE ROAD OVER REGAN BRANCH

COUNTY: GRANT	TOWN/~~CITY/VILLAGE~~: POTOSI
DESIGN SPEC.: AASHTO LRFD DESIGN SPEC.	
DESIGNED BY: JAP	DESIGN CK'D.: ACK
DRAWN BY: JAP	PLANS CK'D.: CDS

GENERAL PLAN

SHEET 1 OF 8

20

8

8

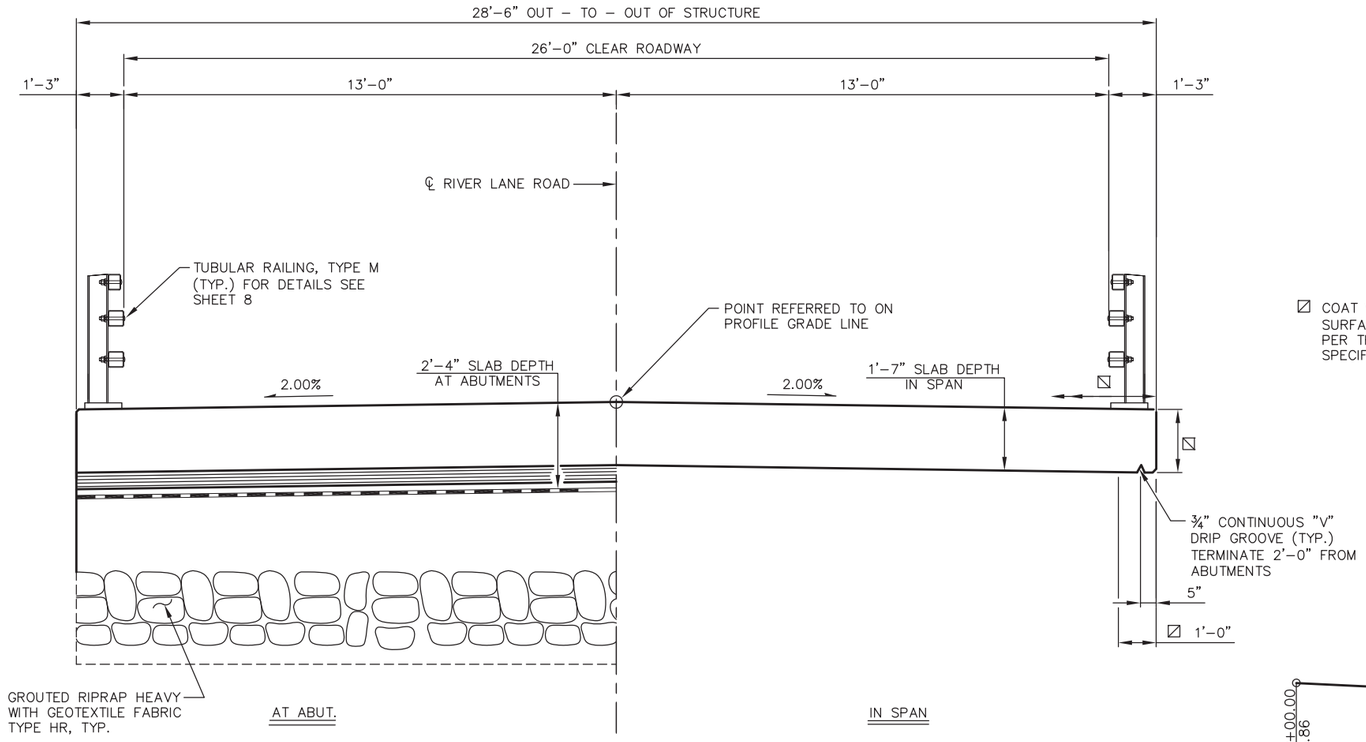
FILE: 01-12170_fsh.dwg
PLOT SCALE:

I.D. 5985-00-76

PLOT DATE: Dec 02, 2013

STATE PROJECT NUMBER

5985-00-76



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

THE STREAM BED IN FRONT OF THE ABUTMENT SHALL BE COVERED WITH GROUTED RIPRAP AS SHOWN ON SHEET 1 AND IN THE "ABUTMENTS" SHEET.

THE FINISHED GRADED SECTION SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

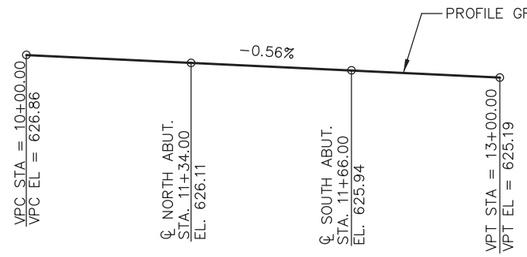
AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

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

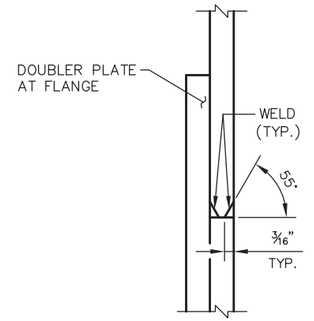
AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE GRADATION OF THE STRUCTURAL BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

THE EXISTING STRUCTURE (P-22-0242) IS A SINGLE SPAN STEEL GIRDER STRUCTURE WITH AN OVERALL LENGTH OF 22.5' AND A CLEAR ROADWAY WIDTH OF 26.0' TO BE REMOVED.



PROFILE GRADE LINE, RIVER LANE ROAD

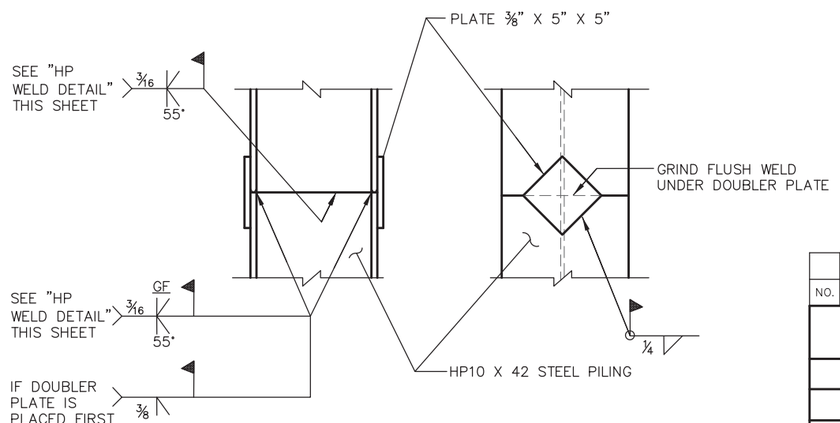


HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

TOTAL ESTIMATED QUANTITIES

	BID ITEMS	UNIT	S. ABUT.	N. ABUT.	SLAB	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 11+50	LS	___	___	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-22-281	LS	---	---	---	1
210.0100	BACKFILL STRUCTURE	CY	220	220	---	440
502.0100	CONCRETE MASONRY BRIDGES	CY	45	45	62	152
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	130	130
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	2375	2375	---	4750
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1475	1475	11500	14450
513.4060	RAILING TUBULAR TYPE M STRUCTURE B-22-281	LS	---	---	---	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	11	11	---	22
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	420	385	---	805
606.0700	GROUTED RIPRAP HEAVY	CY	20	20	---	40
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	60	60	---	120
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	60	60	---	120
(NON-BID ITEM)	FILLER	SIZE	---	---	---	½" & ¾"



PILE SPLICE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-22-281

DRAWN BY JAP | PLANS CK'D CDS

CROSS SECTION AND QUANTITIES

SHEET 2 OF 8

21

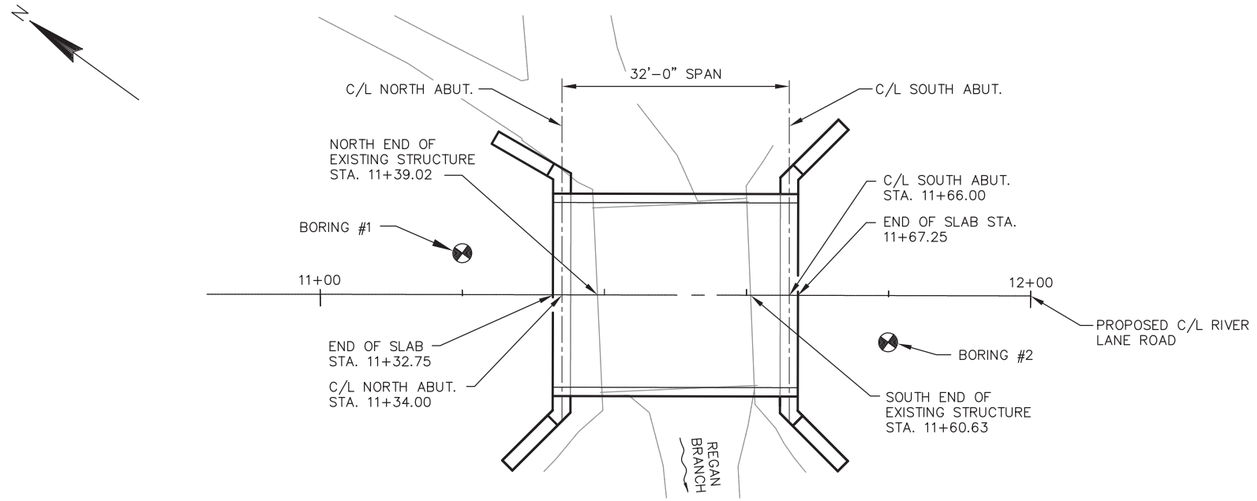
8

8

I.D. 5985-00-76

PLOT DATE: Nov 26, 2013

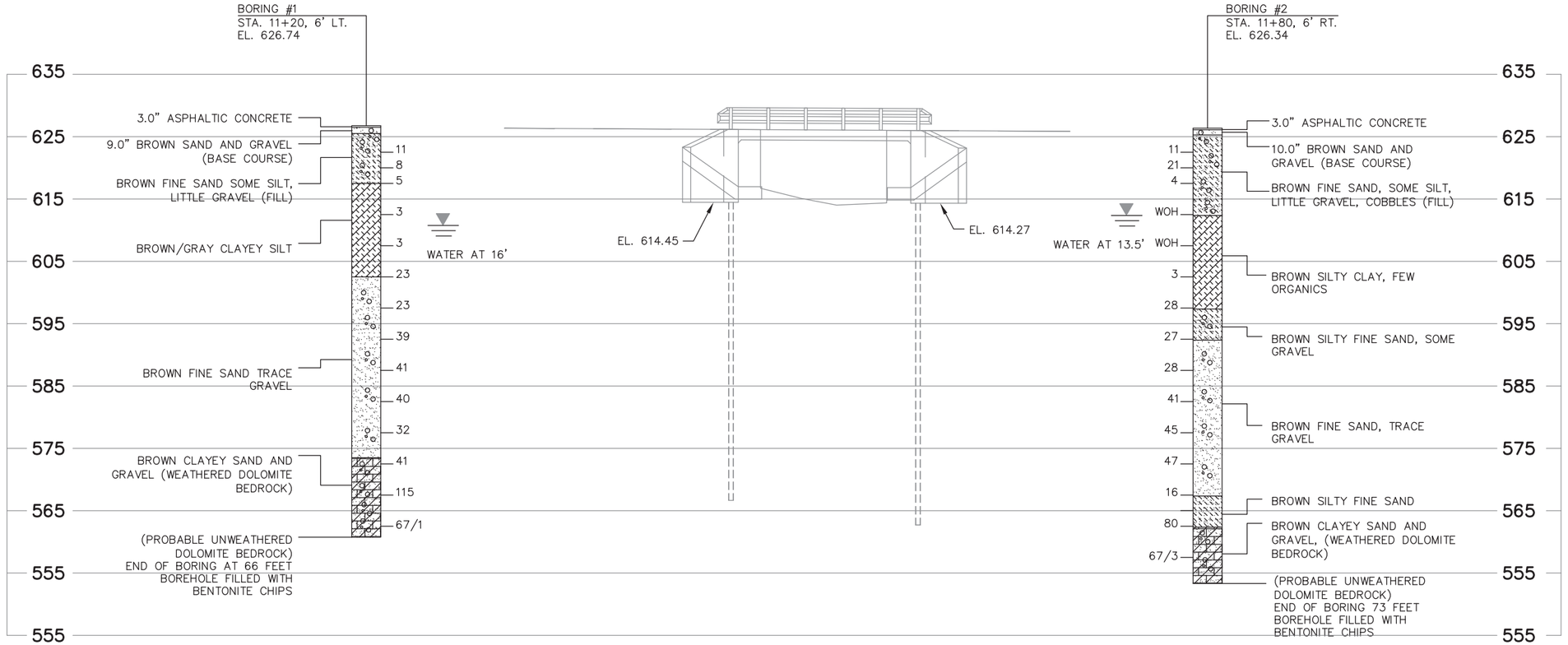
FILE: 02-12170_qnt.dwg
PLOT SCALE: 1/8" = 1'-0"



PLAN B-22-281

SOIL BORINGS
BY: NUMMELIN TESTING SERVICES, INC.
STEVENS POINT/WAUNAKEE, WI
ON: MARCH 1 AND 4, 2013

SUBSURFACE INVESTIGATION REPORT
BY: NUMMELIN TESTING SERVICES, INC.
STEVENS POINT/WAUNAKEE, WI
ON: MARCH 13, 2013



STATE PROJECT NUMBER

5985-00-76

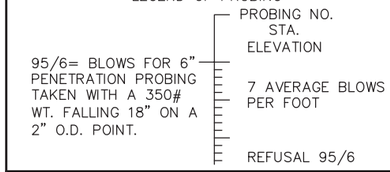
ABBREVIATIONS

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

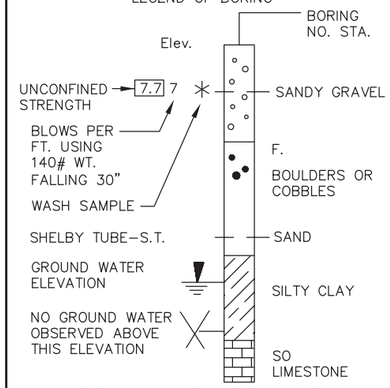
MATERIAL SYMBOLS

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

LEGEND OF PROBING



LEGEND OF BORING



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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-22-281

DRAWN BY RBV | PLANS CK'D CDS

SUBSURFACE EXPLORATION

SHEET 3 OF 8

22

8

8

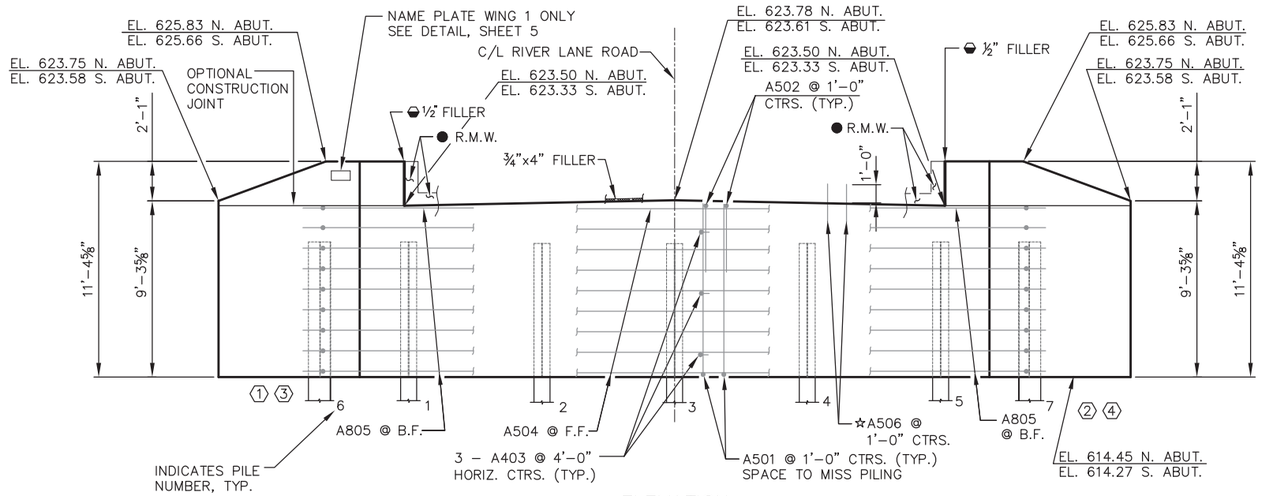
FILE: 03-12170_bor.dwg
PLOT SCALE: 1/8" = 1'-0"

I.D. 5985-00-76

PLOT DATE: Nov 26, 2013

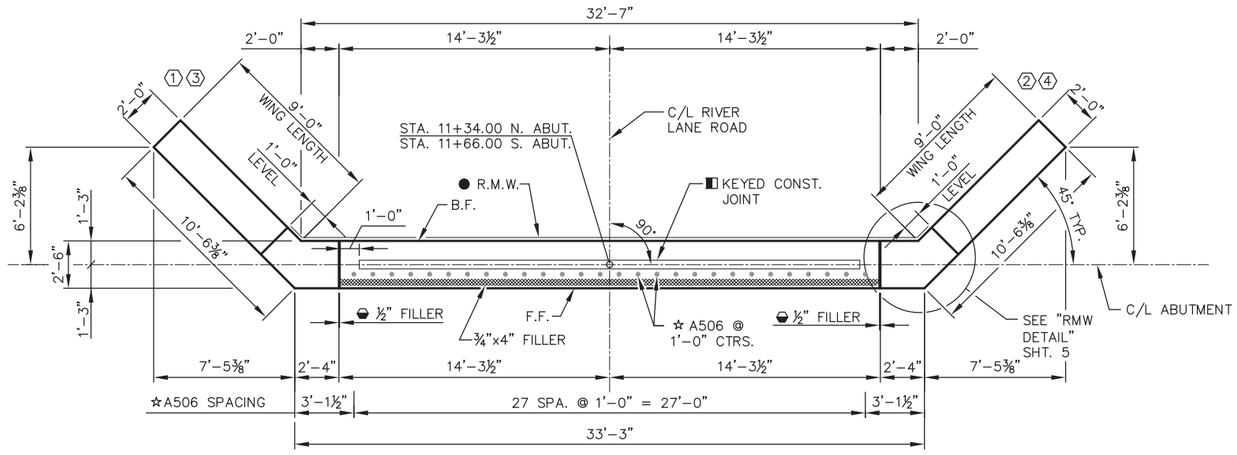
STATE PROJECT NUMBER

5985-00-76

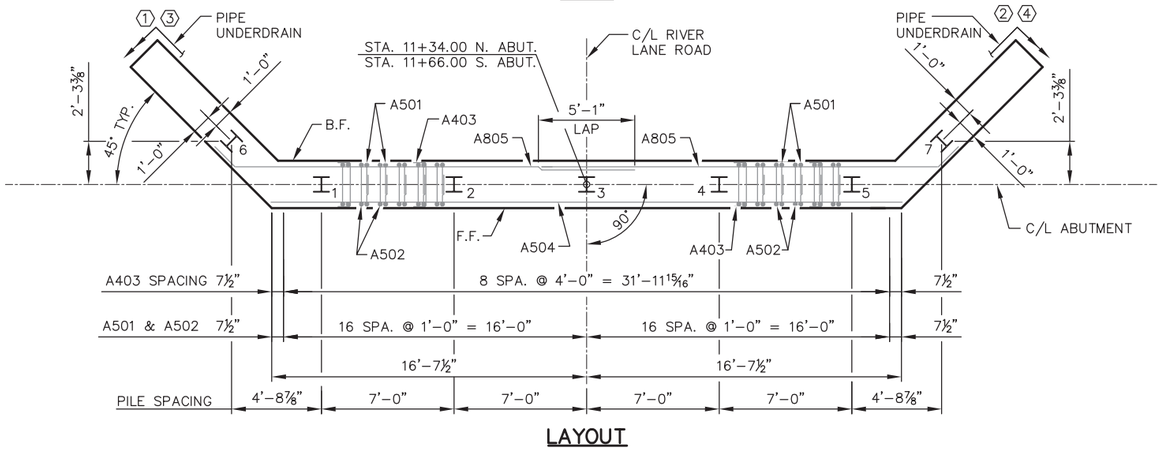


ELEVATION

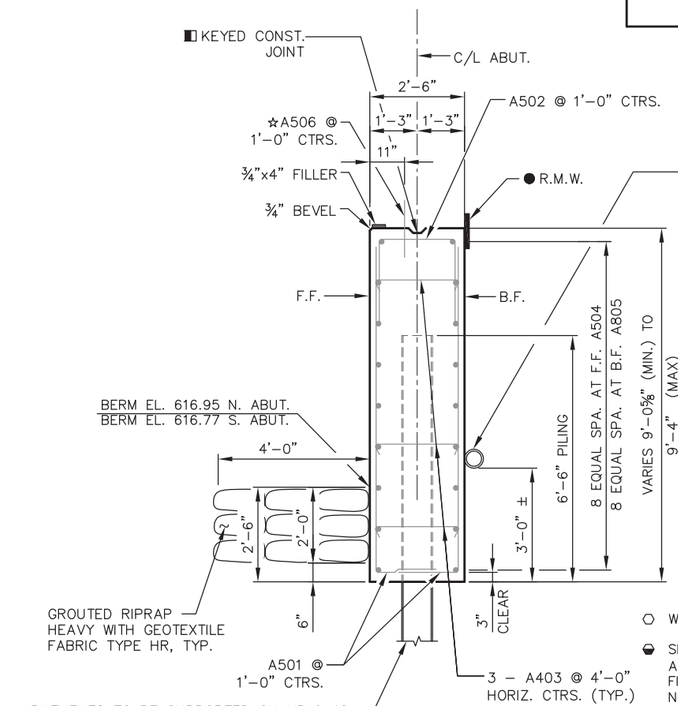
(N. ABUT. - LOOKING NORTH)
(S. ABUT. - LOOKING SOUTH)



PLAN



LAYOUT



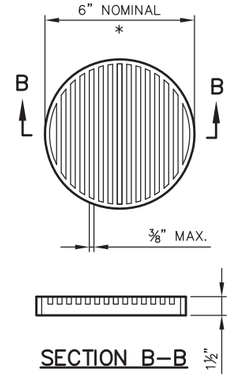
FOR PILE SPLICE DETAIL SEE SHEET 2.

F.F. - FRONT FACE
B.F. - BACK FACE

TYPICAL SECTION THRU ABUTMENT

- ⬡ WING NUMBER
- ◒ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)
- ◧ KEYED CONSTRUCTION JOINT FORMED BY A SURFACED, BEVELED 2"x 6".
- ● 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.)
- ☆ A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".

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



SECTION B-B

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

RODENT SCREEN DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-22-281

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ABUTMENTS

SHEET 4 OF 8

23

8

8

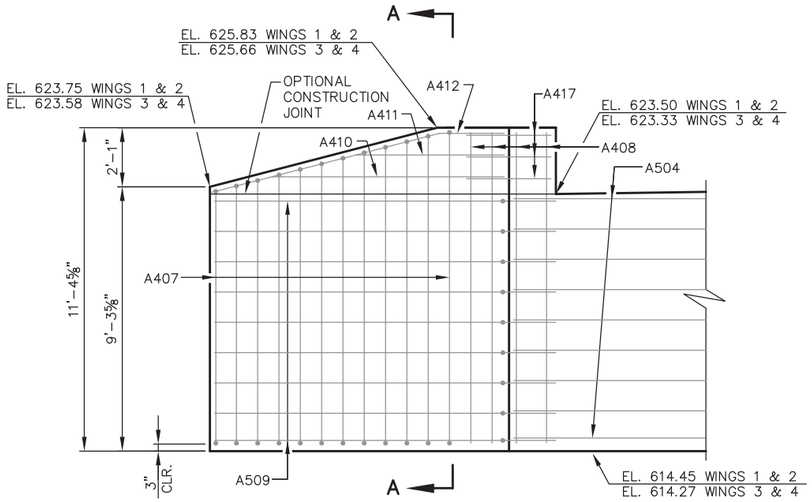
I.D. 5985-00-76

PLOT DATE: Nov 26, 2013

FILE: 04-12170 abut.dwg
PLOT SCALE: 1/8" = 1'-0"

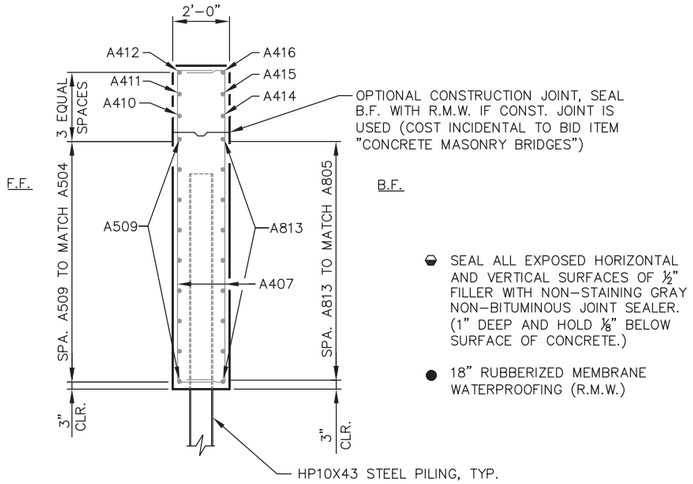
STATE PROJECT NUMBER

5985-00-76



F.F. ELEVATION – WINGS 1 & 3

(WING 2 & 4 SIMILAR)
(PILING NOT SHOWN FOR CLARITY)



SECTION A–A

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

● 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.)

F.F. – FRONT FACE
B.F. – BACK FACE

BILL OF BARS
(BOTH ABUTMENTS)

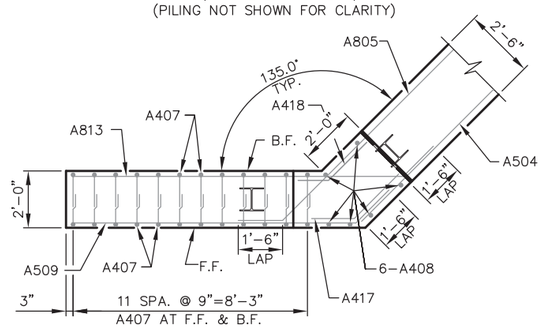
COATED = 2950 LBS.
UNCOATED = 4750 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
A501		132	10–1	X		BODY – F.F. & B.F.	VERT.
A502		66	6–10	X		BODY – TIES @ TOP	VERT.
A403		54	2–9	X		BODY – TIES.	HORIZ.
A504		18	33–3			BODY – F.F.	HORIZ.
A805		36	22–6	X		BODY – B.F.	HORIZ.
A506	56		2–0			BODY – DOWELS	VERT.
▲ A407	96		12–5	X	X	WINGS 1 THRU 4 – F.F. & B.F.	VERT.
A408	24		10–10			WINGS 1 THRU 4 – F.F. & B.F.	VERT.
A509	36		11–6	X		WINGS 1 THRU 4 – F.F.	HORIZ.
A410	4		8–2			WINGS 1 THRU 4 – F.F.	HORIZ.
A411	4		5–2			WINGS 1 THRU 4 – F.F.	HORIZ.
A412	4		10–6	X		WINGS 1 THRU 4 – F.F. – TOP	HORIZ.
A813	36		13–1	X		WINGS 1 THRU 4 – B.F.	HORIZ.
A414	4		6–6			WINGS 1 THRU 4 – B.F.	HORIZ.
A415	4		3–7			WINGS 1 THRU 4 – B.F.	HORIZ.
A416	4		8–11	X		WINGS 1 THRU 4 – B.F. – TOP	HORIZ.
A417	12		3–8	X		WINGS 1 THRU 4 – F.F. CORNER	HORIZ.
A418	12		2–9	X		WINGS 1 THRU 4 – B.F. CORNER	HORIZ.

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

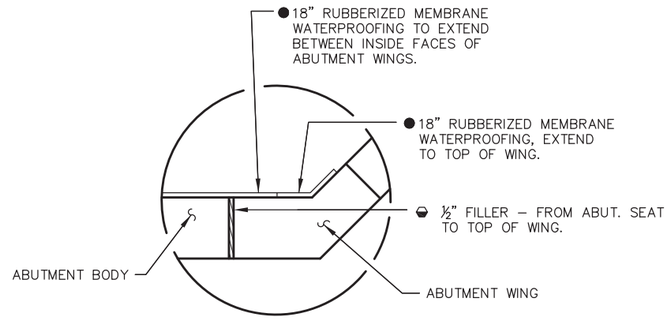
THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

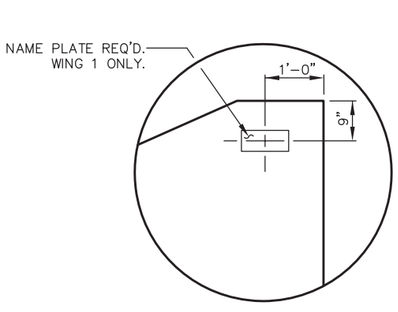


PLAN – WINGS 1 & 3

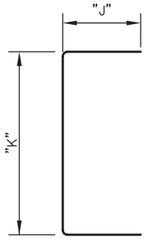
(WING 2 & 4 SIMILAR)



R.M.W. DETAIL



NAME PLATE DETAIL



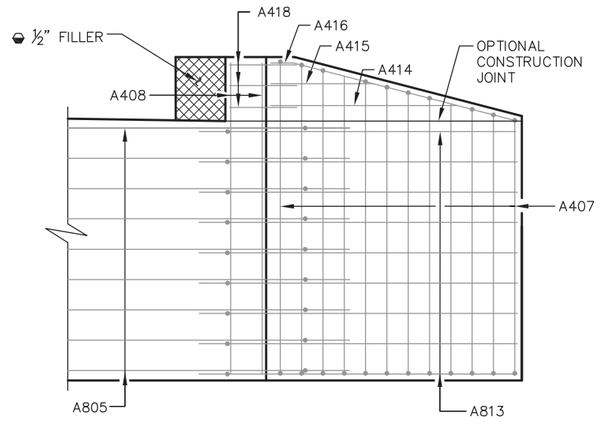
A407

MARK	"J"	"K"
A407	1–4	8–10
		9–1
		9–3
		9–5
		9–8
		9–10
		10–0
		10–3
		10–5
		10–7
		10–10
		10–11

BAR SERIES TABLE

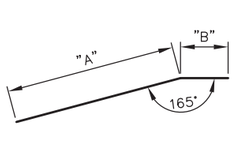
MARK	No. REQ'D.	LENGTH
A407	8 SERIES OF 12	11–4 TO 13–5

BUNDLE AND TAG EACH SERIES SEPARATELY



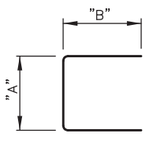
B.F. ELEVATION – WINGS 1 & 3

(WING 2 & 4 SIMILAR)
(PILING NOT SHOWN FOR CLARITY)



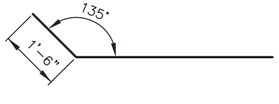
MARK	"A"	"B"
A412	8–3	2–3
A416	8–2	0–9

A412 & A416

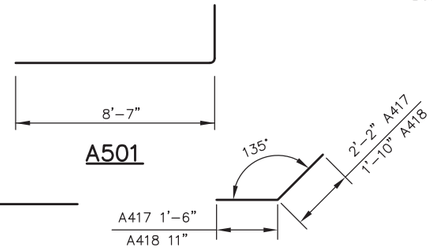


MARK	"A"	"B"
A502	2–1	2–6
A403	2–2	0–4½

A502 & A403



A805, A509, & A813



A417 & A418

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-22-281

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ABUTMENT DETAILS

SHEET 5 OF 8

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8

8

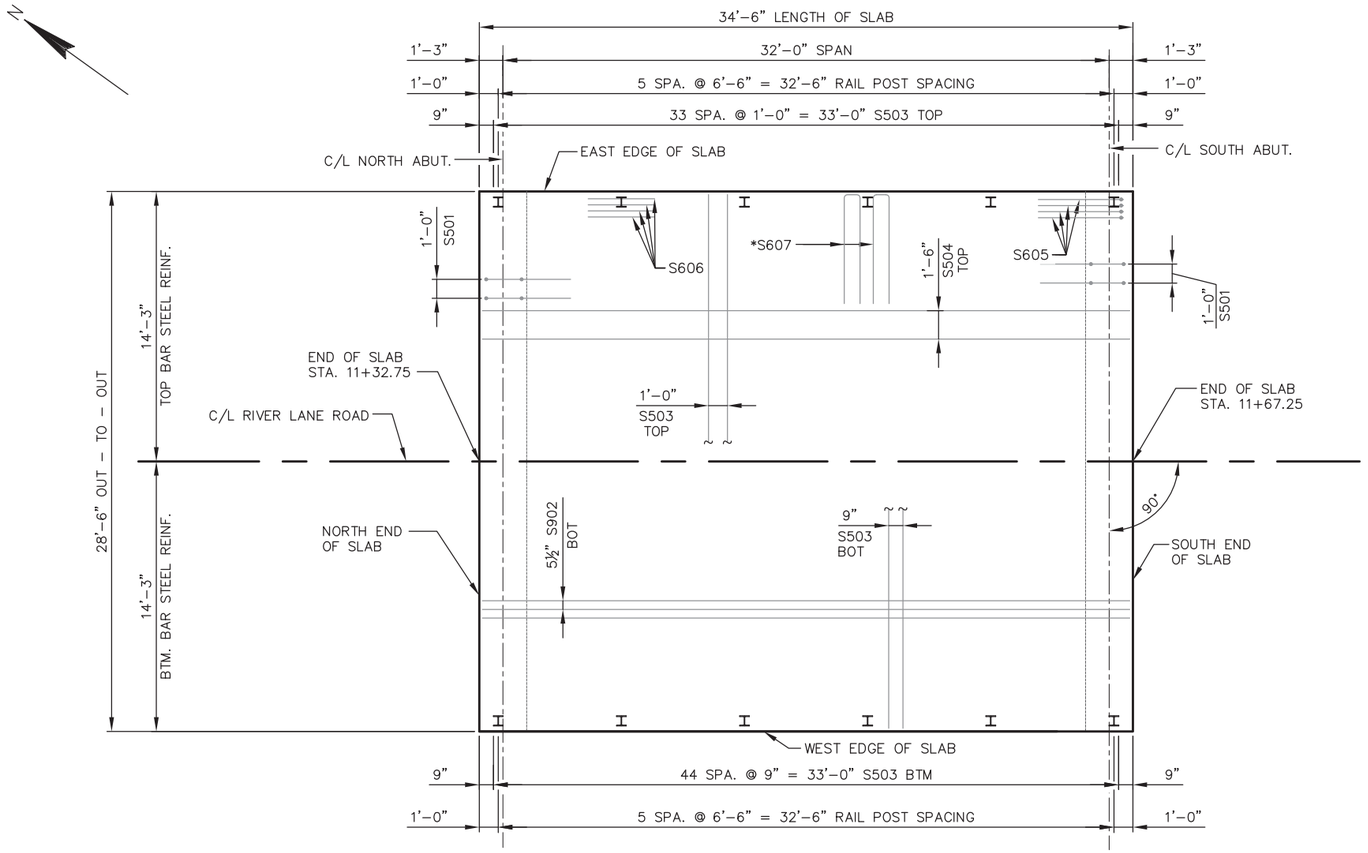
I.D. 5985-00-76

PLOT DATE: Nov 26, 2013

FILE: 05-12170 abut_det.dwg
PLOT SCALE: 1/8" = 1'-0"

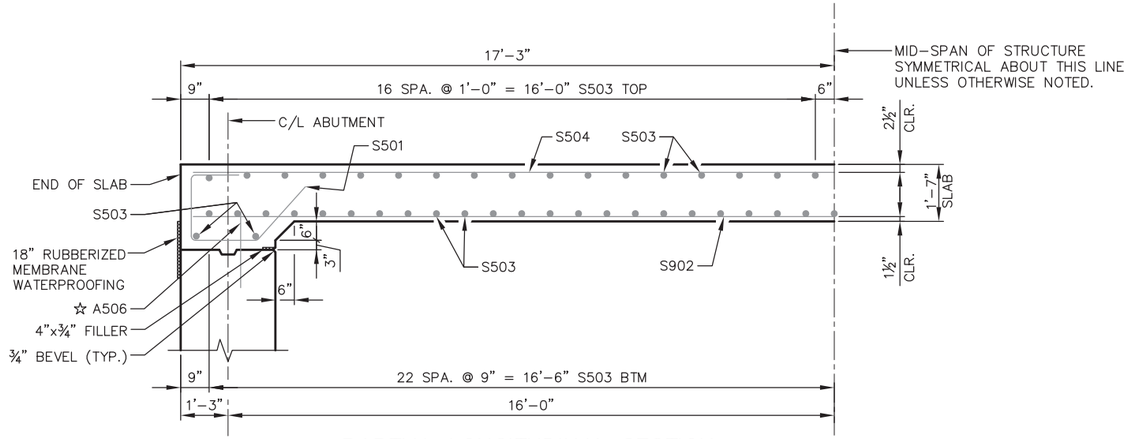
STATE PROJECT NUMBER

5985–00–76



* – TIP S607 BAR AT END POSTS TO CLEAR END OF DECK

PLAN



PARTIAL LONGITUDINAL SECTION

NOTES:

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'–0" CENTERS EACH WAY.

BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'–0" CENTERS.

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

TOP OF DECK ELEVATIONS

STA.	SPAN PT.	℄ RIVER LANE RD.	W. DECK EDGE	E. DECK EDGE
11+34.00	0.0	626.11	625.83	625.83
11+37.20	0.1	626.10	625.82	625.82
11+40.40	0.2	626.08	625.80	625.80
11+43.60	0.3	626.06	625.78	625.78
11+46.80	0.4	626.04	625.76	625.76
11+50.00	0.5	626.03	625.75	625.75
11+53.20	0.6	626.01	625.73	625.73
11+56.40	0.7	625.99	625.71	625.71
11+59.60	0.8	625.97	625.69	625.69
11+62.80	0.9	625.95	625.67	625.67
11+66.00	1.0	625.94	625.66	625.66

☆ SEE SHEET 4 FOR PLACEMENT OF A506 BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–22–281

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SUPERSTRUCTURE

SHEET 6 OF 8

25

8

8

I.D. 5985–00–76

PLOT DATE: Nov 26, 2013

FILE: 06–12170_ss.dwg
PLOT SCALE: 1/8" = 1'–0"

STATE PROJECT NUMBER

5985–00–76

BILL OF BARS
SUPERSTRUCTURE

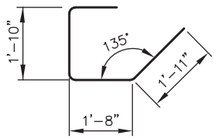
COATED = 11500 LBS.

MARK	NUMBER RQD. COATED	NUMBER RQD. UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
S501	58		6–5	X		SLAB AT ABUTMENT – TIES	LONGIT.
S902	61		34–2			SLAB – BOTTOM	LONGIT.
S503	83		28–2			SLAB – TOP & BOTTOM	TRANS.
S504	20		34–2			SLAB – TOP	LONGIT.
◑ S605	16		6–0	X		SLAB AT EXTERIOR RAIL POSTS	LONGIT.
◑ S606	32		6–0			SLAB AT INTERIOR RAIL POSTS	LONGIT.
◑ S607	24		12–0	X		SLAB AT ALL RAIL POSTS	TRANS.

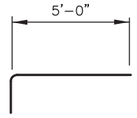
◑ SEE SHEETS 6 & 8 FOR PLACEMENT.

THE FIRST DIGIT OF A 3 DIGIT MARK OR THE FIRST TWO DIGITS OF A 4 DIGIT MARK SIGNIFIES THE BAR SIZE.

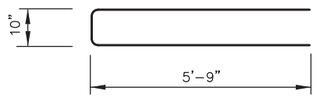
ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.



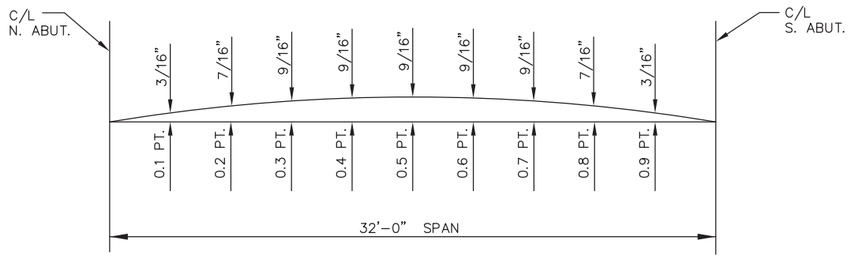
S501



S605

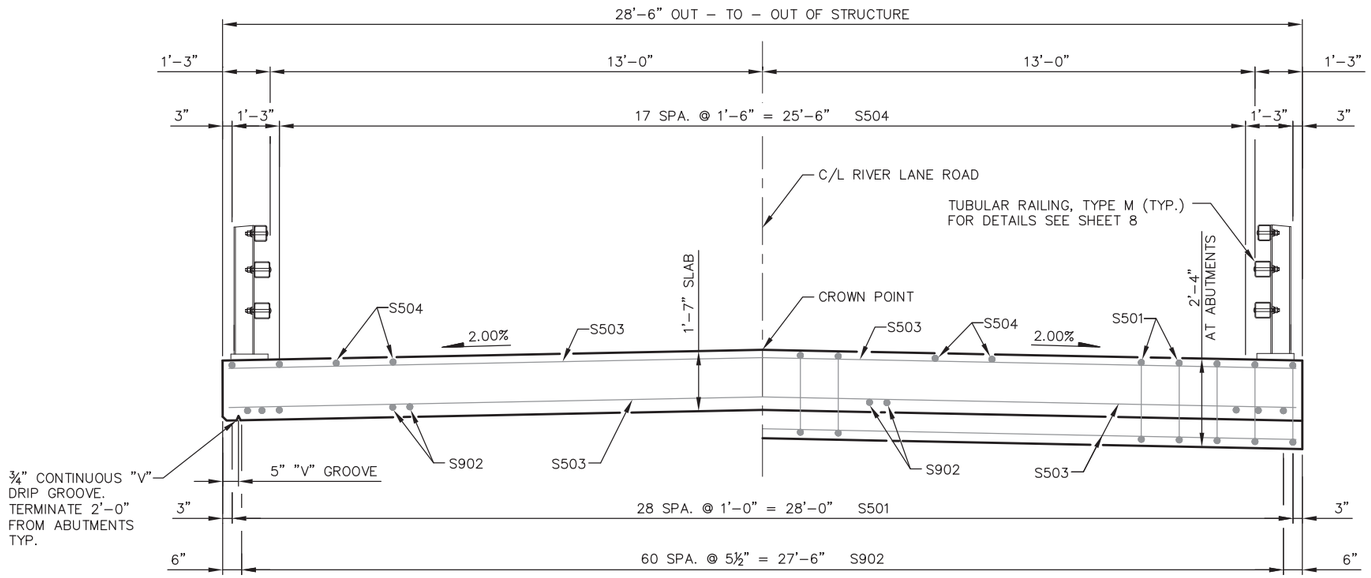


S607



SLAB CAMBER DIAGRAM

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



IN SPAN AT ABUTMENT

SECTION THROUGH DECK

SURVEY TOP OF SLAB ELEVATIONS

	NORTH ABUTMENT	5/10 PT.	SOUTH ABUTMENT
WEST EDGE OF SLAB			
℄ RIVER LANE RD			
EAST EDGE OF SLAB			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT 5/10 POINT TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

TO DETERMINE FALSWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

	TOP OF SLAB ELEVATION AT FINAL GRADE
LESS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–22–281

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SUPERSTRUCTURE DETAILS

SHEET 7 OF 8

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8

8

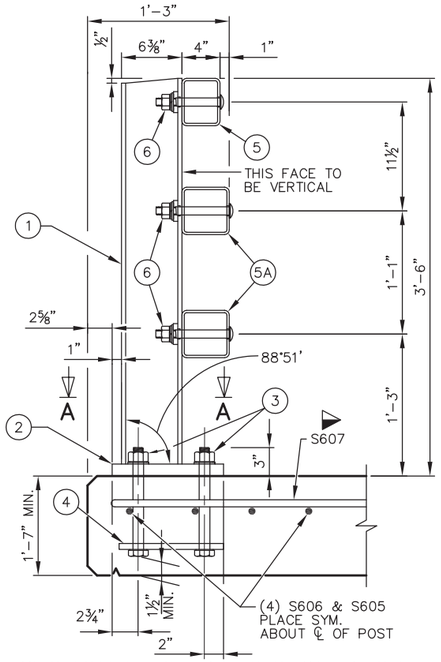
FILE: 07–12170_ssdet.dwg
PLOT SCALE: 1/8" = 1'–0"

I.D. 5985–00–76

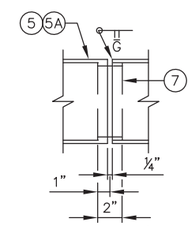
PLOT DATE: Nov 26, 2013

STATE PROJECT NUMBER

5985-00-76

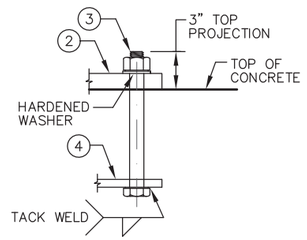


SECTION THRU RAILING ON DECK

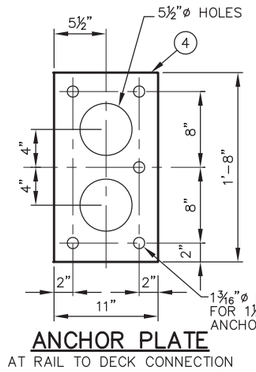


SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

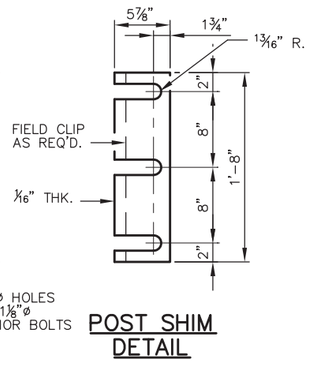


ANCHOR BOLTS

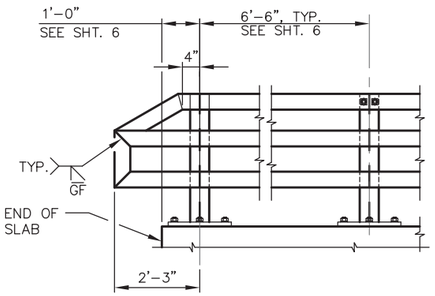


ANCHOR PLATE

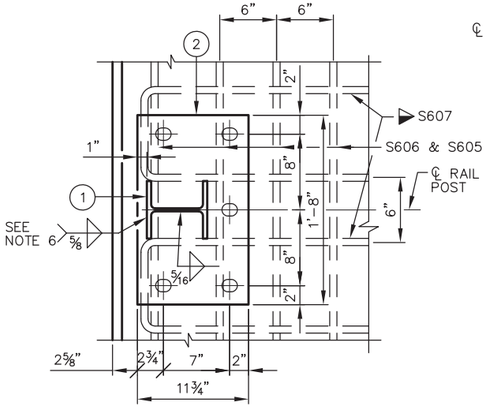
AT RAIL TO DECK CONNECTION



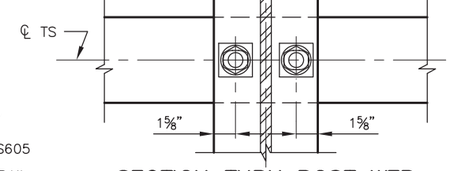
POST SHIM DETAIL



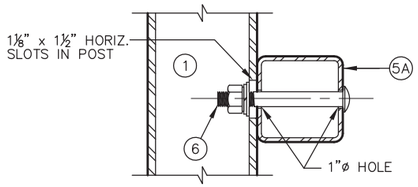
PART ELEVATION OF RAILING



SECTION A-A



SECTION THRU POST WEB



SECTION THRU RAIL

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

TYPICAL RAIL TO POST CONNECTIONS

LEGEND

1. W6 x 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼" x 11¾" x 1'-8" WITH 1⅝6" X 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
3. ASTM A449 – 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)
4. ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1⅜6" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, ⅜6" X 1⅝" X 1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
7. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-22-281" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 ksi. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN additional 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).
11. PLACE FIRST BOTTOM LONGITUDINAL BAR CLEAR OF DRIP GROOVE.

▶ TIE TO TOP MAT OF STEEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-22-281

DRAWN BY JAP | PLANS CK'D CDS

TUBULAR STEEL RAILING, TYPE M

SHEET 8 OF 8

27

I.D. 5985-00-76

PLOT DATE: Nov 26, 2013

FILE: 08-12170_mrail.dwg
PLOT SCALE:

8

8

DIVISION 1 MAINLINE APPROACH 1

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadju Cumulative Vol (CY) Cut Note 1	Incremental Vol (CY) (Unadju Cumulative Vol (CY) Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.3	Mass Ordinate
10+00.00	1000		42	0	0	0	0	0	0
10+50.00	1050	50	53	1	88	1	88	1	87
11+00.00	1100	50	57	0	101	1	189	3	186
11+32.75	1133	33	40	0	59	0	248	3	245
			Column totals		248	2			

DIVISION 1 MAINLINE APPROACH 2

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadju Cumulative Vol (CY) Cut Note 1	Incremental Vol (CY) (Unadju Cumulative Vol (CY) Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.3	Mass Ordinate
11+67.25	1167		39.5	0.0	0	0	0	0	0
12+00.00	1200	33	56.7	0.0	58	0	58	0	58
12+50.00	1250	50	45.5	0.0	95	0	153	0	153
13+00.00	1300	50	44.2	0.0	83	0	236	0	236
			Column totals		236	0			

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
3 - Fill	Does not include Unusable Pavement Exc volume

9

9

PROJECT NO: 5985-00-76	HWY: RIVER LANE ROAD	COUNTY: GRANT	EARTHWORK	SHEET 28	E

FILE NAME: G:\00-PROJECT FILES\2012\12170 River Lane Road Grant Co\01-CAD\Road\12170_900 earthwork table.dwg PLOT DATE: Dec 02, 2013 PLOT BY: Jim0 PLOT SCALE: 1:2 ROTATION:

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60 65 70

R/W R/W

13.0' 13.0'

2.00% 2.00%

STATION 11+50
STRUCTURE B-22-281
REQUIRED

625 620 615

11 + 50

R/W R/W

630 625 620

11 + 00

17.40
624.84

4:1

1.00%

624.80

3.00%

18.00
624.24

4:1

3.00%

19.69
624.84

24.20
624.08

R/W R/W

630 625 620

10 + 50

17.99
625.09

0.00%

625.08

4.00%

20.20
624.28

1.00%

18.88
624.86

31.88
624.16

R/W R/W

630 625 620

10 + 00

22.04
625.36

625.36

12.00
625.18

BEGIN PROJECT
STA. 10+00
MATCH EXISTING

SCALE (FEET)
5'
5'

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60 65 70

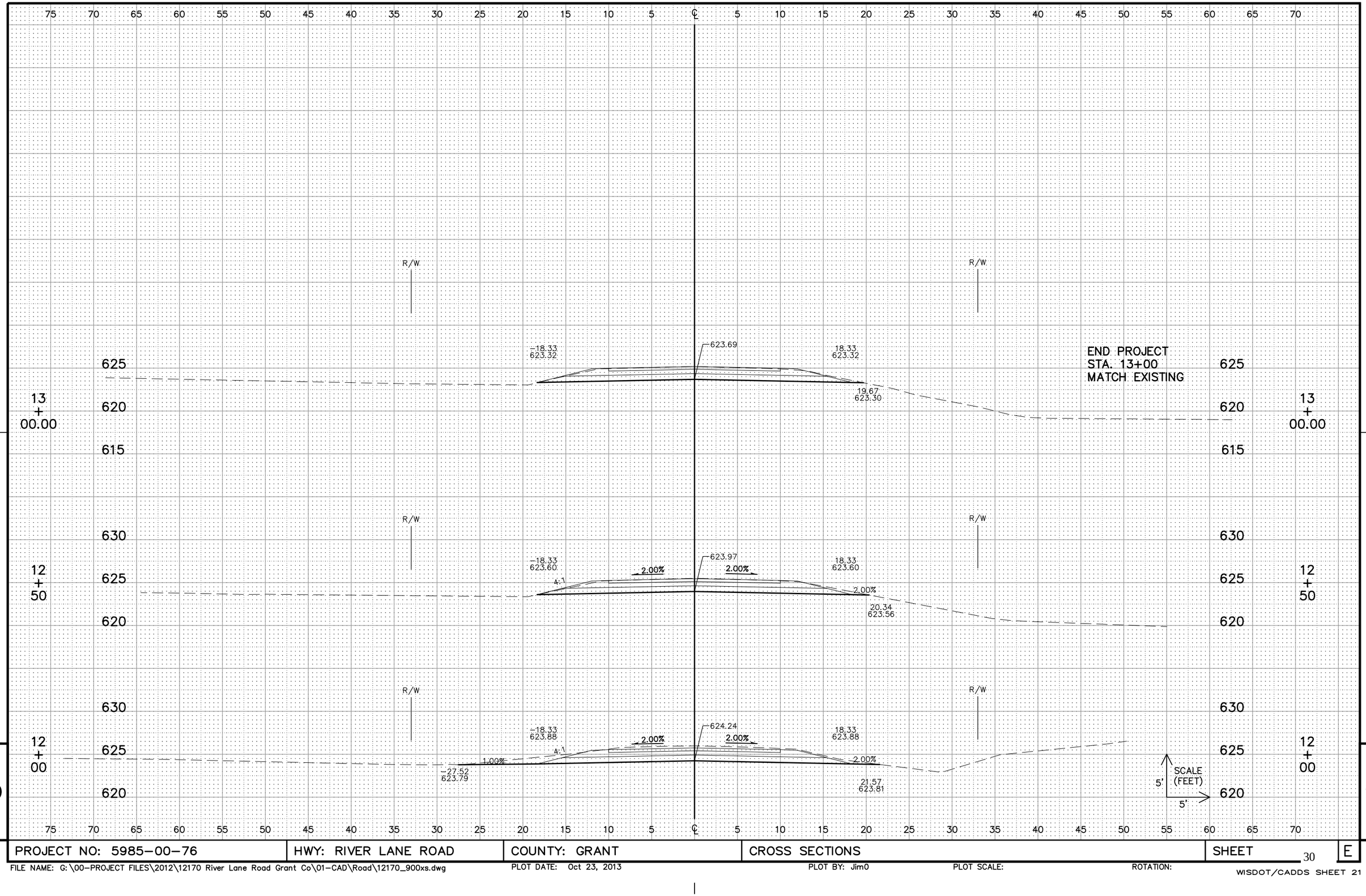
9

9

PROJECT NO: 5985-00-76	HWY: RIVER LANE ROAD	COUNTY: GRANT	CROSS SECTIONS	SHEET	E

FILE NAME: G:\00-PROJECT FILES\2012\12170 River Lane Road Grant Co\01-CAD\Road\12170_900xs.dwg
PLOT DATE: Oct 23, 2013
PLOT BY: Jim0
PLOT SCALE:
ROTATION:

WISDOT/CADDS SHEET 21



PROJECT NO: 5985-00-76	HWY: RIVER LANE ROAD	COUNTY: GRANT	CROSS SECTIONS	SHEET 30	E

FILE NAME: G:\00-PROJECT FILES\2012\12170 River Lane Road Grant Co\01-CAD\Road\12170_900xs.dwg PLOT DATE: Oct 23, 2013 PLOT BY: Jim0 PLOT SCALE: ROTATION:

WISDOT/CADDS SHEET 21

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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