WIS

JANUARY 2018

PROJECT ID: 6902-00-70

WITH: 6902-01-70

COUNTY: WAUPACA

ORDER OF SHEETS

TOTAL SHEETS = 60

DESIGN DESIGNATION

A.A.D.T.	2018	= 320
A.A.D.T.	2038	= 430
D.H.V.		= < 15 (EST.)
D.D.		= 60/40 (EST.)
T.		= 10% (EST.)
DESIGN SPEED		= 40 MPH
ESALS		= 80,300

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 (300'EB')

EXISTING CULVERT

PROPOSED CULVERT (Box or Pipe)

COMBUSTIBLE FLUIDS (CAUTION)

HIGH VOLTAGE (CAUTION)

MARSH AREA

WOODED OR SHRUB AREA

PROFILE

GRADE LINE

ORIGINAL GROUND

MARSH OR ROCK PROFILE (To be noted as such) (ROCK)

SPECIAL DITCH (LABEL)

GRADE ELEVATION (95.36)

CULVERT (Profile View)

UTILITIES

ELECTRIC — E —

FIBER OPTIC — FO —

GAS — G —

SANITARY SEWER — SAN —

STORM SEWER — SS —

TELEPHONE — T —

WATER — W —

UTILITY PEDESTAL

POWER POLE

TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T LIND, SHADOW ROAD

CRYSTAL RIVER BRIDGE B-68-0141

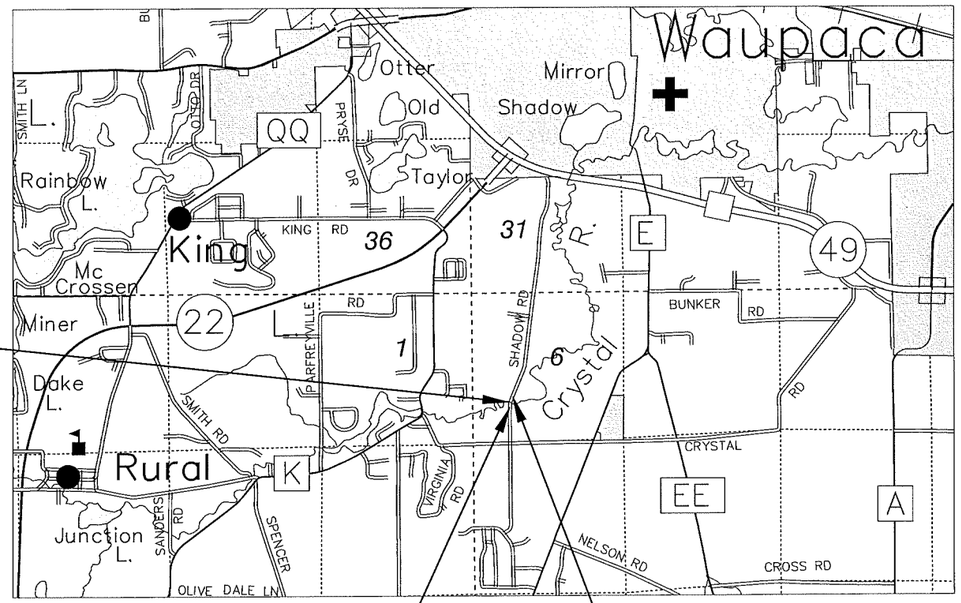
LOCAL STREET

WAUPACA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6902-00-70	WISC 2018053	1

STATE PROJECT NUMBER

6902-00-70



STRUCTURE B-68-141

BEGIN PROJECT
STA 8+30
Y = 327,784.65
X = 533,416.25

END PROJECT
STA 11+85
Y = 328,128.51
X = 533,496.68

LAYOUT

SCALE 0 — 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.067 MI

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

ACCEPTED FOR TOWN OF LIND

2/10/17 (Date) (Town Chairman)

ORIGINAL PLANS PREPARED BY

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

WISCONSIN
JOSHUA R. SWENO
E-44384
WAUNAKEE
WI
PROFESSIONAL ENGINEER

DATE: 7/5/17 (Professional Engineer)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MSA PROFESSIONAL SERVICES, INC.
Designer	MSA PROFESSIONAL SERVICES, INC.
Management Consultant	CEDAR CORPORATION

APPROVED FOR THE DEPARTMENT

DATE: 7-28-2017 (Signature)

E

STANDARD ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
<	ANGLE
ASPH	ASPHALTIC
AC	ASPHALT CEMENT
ADT	AVERAGE DAILY TRAFFIC
B & B	BALLED AND BURLAPPED
BM	BENCH MARK
CB	CATCH BASIN
` OR C/L	CENTER LINE
C-C	CENTER TO CENTER
CONC	CONCRETE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
CULV	CULVERT
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
C & G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA OR |	DIAMETER
DIST	DISTRICT
DWY	DRIVEWAY
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC
EL OR ELEV	ELEVATION
EMB	EMBANKMENT
EW	ENDWALL
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
EXP	EXPANSION
F-F	FACE TO FACE
FERT	FERTILIZER
FE	FIELD ENTRANCE
F/L	FLOW LINE
FT	FOOT
GN	GRID NORTH
HR	HANDICAP RAMP
HT	HEIGHT
CWT	HUNDREDWEIGHT
HYD	HYDRANT
IN DIA	INCH DIAMETER
INL	INLET
ID	INSIDE DIAMETER
I	INTERSECTION ANGLE
IE	INVERT ELEVATION
IP	IRON PIPE OR PIN
JCT	JUNCTION
L	LENGTH OF CURVE
LF	LINEAR FOOT
LC	LONG CHORD OF CURVE
LCB	LONG CHORD BEARING
LS	LUMP SUM
MH	MANHOLE
N	NORTH
Y	NORTH GRID COORDINATE
OE	OUTLET ELEVATION
OL	OUT LOT
OD	OUTSIDE DIAMETER
OH	OVERHEAD LINES
PAVT	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PCC	PORTLAND CEMENT CONCRETE
LB	POUND
PE	PRIVATE ENTRANCE
R OR RAD	RADIUS
RR	RAILROAD
R	RANGE
~ OR R/L	REFERENCE LINE
REQD	REQUIRED
RT	RIGHT
R/W	RIGHT-OF-WAY
RD	ROAD
SALV	SALVAGED
SAN	SANITARY SEWER
SECT	SECTION
SHLDR	SHOULDER
SW	SIDEWALK
S	SOUTH
SB	SOUTHBOUND
SPECS	SPECIFICATIONS
SQ	SQUARE
SF OR SQ FT	SQUARE FEET
SY	SQUARE YARD
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
T	TANGENT
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T	TON
TC	TOP OF CURB
TN	TOWN
TRANS	TRANSITION
T	TRUCKS (percent of)
TYP	TYPICAL
UNCL	UNCLASSIFIED
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
VERT	VERTICAL
VC	VERTICAL CURVE
VOL	VOLUME
WM	WATER MAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
YD	YARD

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ATTN: JOSH SWENO, PE
1230 SOUTH BOULEVARD
BARABOO, WI 53913
608-355-8852
JSWENO@MSA-PS.COM

TOWN CONTACT

TOWN OF LIND
ATTN: STEVEN GALL, TOWN CHAIRMAN
N2228 COUNTY ROAD A
WAUPACA, WI 54981
715-281-7678
STEVENGALL@SWIDERSKIEQUIPMENT.COM

UTILITIES

COMMUNICATION:
CHARTER COMMUNICATIONS
ATTN: RUDI RUDIGER
5024 HEFFRON STREET
STEVENS POINT, WI 54481
715-204-5339
RUDI.RUDIGER@CHARTER.COM

ELECTRIC:
WISCONSIN PUBLIC SERVICE CORPORATION
ATTN: LORI BUTRY
700 N ADAMS STREET
P.O. BOX 19001
GREEN BAY, WI 54307-9001
920-433-1703
LABUTRY@INTEGRYSGROUP.COM

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: MARC HERSHFIELD
DNR SERVICE CENTER
473 GRIFFITH DRIVE
WISCONSIN RAPIDS, WI 54494
715-421-7867
MARC.HERSHFIELD@WISCONSIN.GOV

* NOT A MEMBER OF DIGGERS HOTLINE

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

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER. OVERSOW PERMANENT SEEDING AREAS WITH TEMPORARY SEED AT 3 LBS. PER 1000 SQUARE FEET.

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

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2007 ADJUSTED). BENCHMARKS WERE LOCATED IN THE FIELD USING GPS TECHNOLOGY.

THE 4" ASPHALTIC SURFACE SHALL CONSIST OF A $1\frac{3}{4}$" UPPER LAYER, AND $2\frac{1}{4}$" LOWER LAYER. USE 12.5MM NOMINAL AGGREGATE FOR THE UPPER LAYER AND 19.0MM NOMINAL AGGREGATE FOR THE LOWER LAYER.

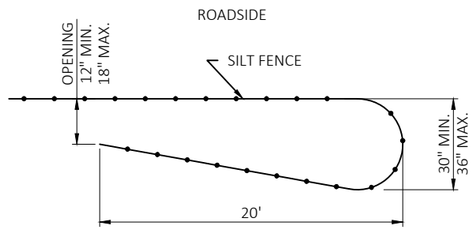
SILT FENCE AND TURBIDITY BARRIER TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO CONSTRUCTION OR BRIDGE REMOVAL.

WETLANDS ARE PRESENT OUTSIDE THE EXISTING TOE OF SLOPE. AREAS OUTSIDE THE SLOPE INTERCEPTS SHALL NOT BE DISTURBED.

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											

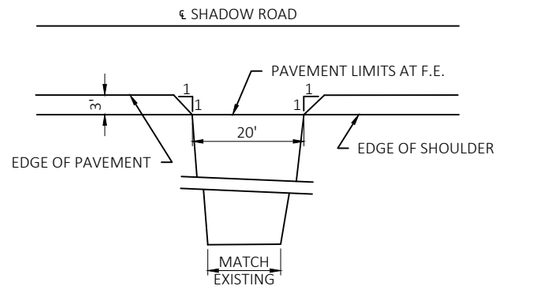
TOTAL PROJECT AREA = 0.52 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.52 ACRES



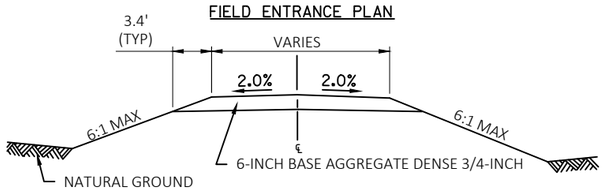
NOTE:
THE PURPOSE OF THE TURTLE TURN-AROUNDS ARE TO REDIRECT THE TURTLES AWAY FROM THE CONSTRUCTION ZONE. DESIGN SHOULD ALSO INCLUDE TRENCHED-IN SEDIMENT FENCING AND FENCING SUPPORTS ON THE UPSLOPE SIDE OF FENCE. SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND.

TEMPORARY TURTLE TURN-AROUND DETAIL

SEE PLAN & PROFILE SHEET FOR LOCATIONS

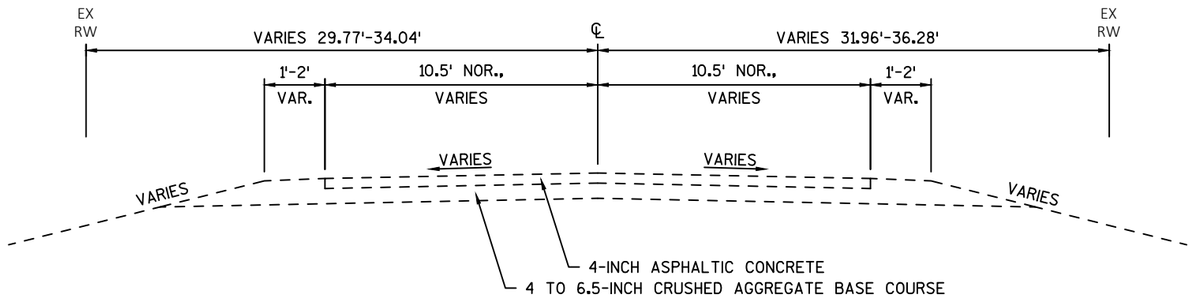


FIELD ENTRANCE PLAN



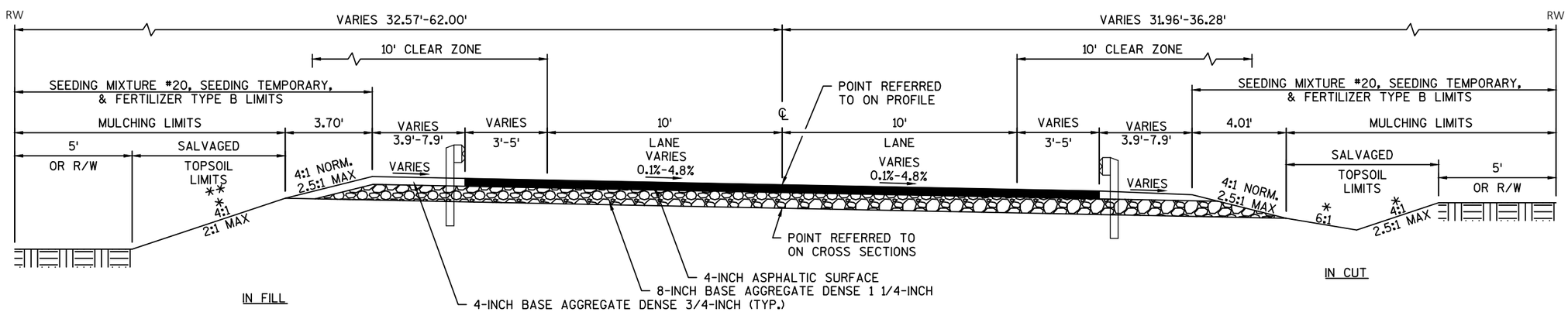
FIELD ENTRANCE TYPICAL SECTION

FIELD ENTRANCE DETAILS



EXISTING TYPICAL SECTION

STA 8+30 - STA 11+85



TYPICAL FINISHED SECTION

STA 8+30 - STA 11+85

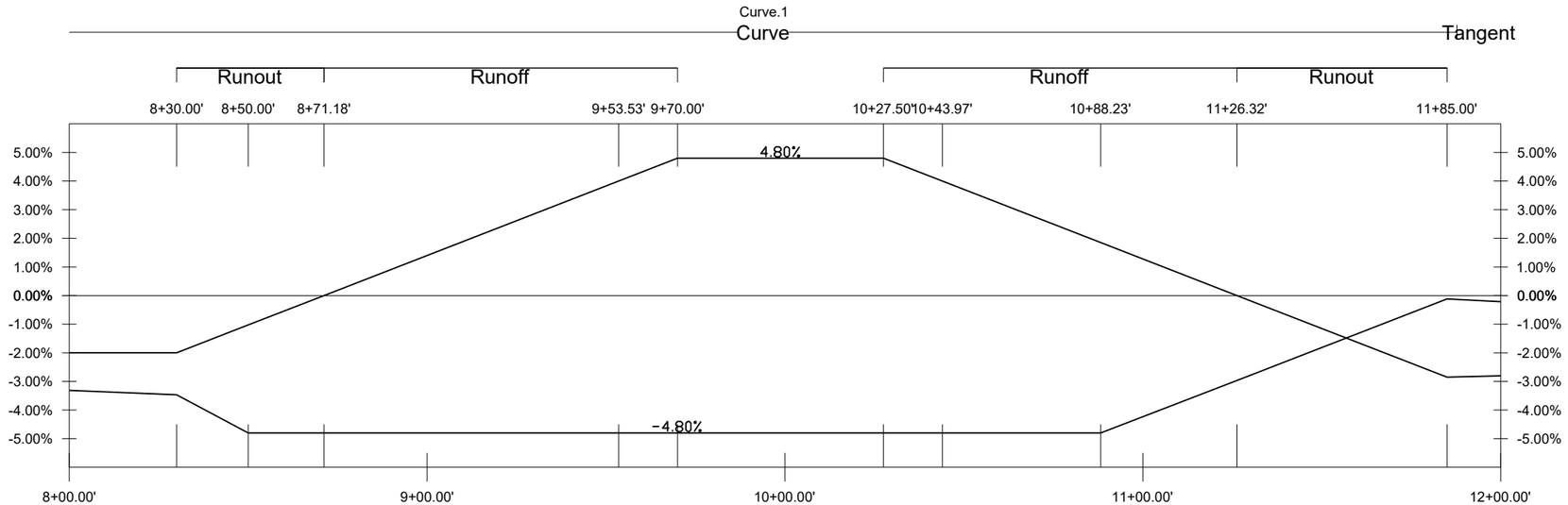
* EROSION MAT URBAN CLASS I, TYPE B IN AREAS OF 2.5:1 SLOPES. (SEE PLAN & PROFILE FOR LOCATIONS)

** SOIL STABILIZER, TYPE A IN AREAS OF 2:1 SLOPES. (SEE PLAN & PROFILE FOR LOCATIONS)

PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	TYPICAL SECTIONS	SHEET 3	E

2

Superelevation



PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	SUPERELEVATION DIAGRAM	SHEET 4	E

FILE NAME : P:\11500S\11520S\11522\11522015\CADD\DESIGN\ALIPROFS\11522015_ALIPROFS_SHADOW_RD.DWG
LAYOUT NAME - 050401_ld

PLOT DATE : 11/13/2017 8:16 AM PLOT BY : BRAD LEE PLOT NAME : PLOT SCALE : ##########

2

N

CP 1
10" NAIL
STA. 7+25.39, 12.1' LT
Y = 327,680.22
X = 533,402.12

28.1'
27.5'
89.2'

PC: 7+89.94

BM 2
2 POLE NAILS IN
36" OAK TREE

CP 2
10" NAIL
STA. 9+67.43, 12.7' LT
Y = 327,923.36
X = 533,420.37

11.6'
END OF
WING WALL
51.2'

BM 3
2 POLE NAILS
IN OAK CLUMP

19.0'
20.0'

CP 3
10" NAIL
STA. 10+37.73, 13.3' LT
Y = 327,992.91
X = 533,435.63

90.0'

BASE OF
GUY WIRE

BM 1
CHISELED SQUARE ON NW
CORNER BRIDGE ABUT.

PT: 11+87.76

7+00
8+00
9+00
℄ SHADOW ROAD
10+00
11+00
12+00

PK NAIL ℄
PK NAIL ℄

32.3'
END OF
WING WALL

CRYSTAL
RIVER

OH
SIGN
GUY

PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	PROJECT CONTROL POINTS, TIES, AND COORDINATES	SHEET 5	E

NOTES:

"TEMPORARY PEDESTRIAN PORTAGE" SHALL INCLUDE THE SIGNS AND TEMPORARY PEDESTRIAN SAFETY FENCE DETAILED IN THE PLANS AND SPECIAL PROVISIONS.

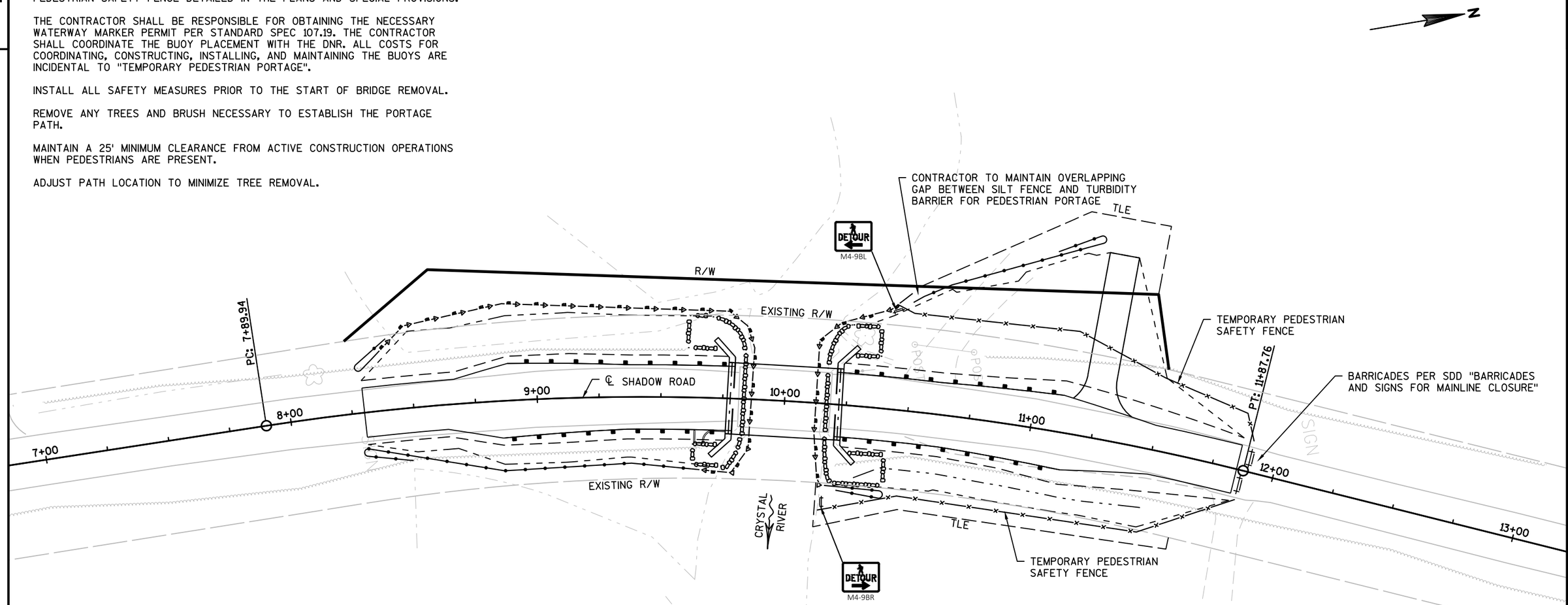
THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY WATERWAY MARKER PERMIT PER STANDARD SPEC 107.19. THE CONTRACTOR SHALL COORDINATE THE BUOY PLACEMENT WITH THE DNR. ALL COSTS FOR COORDINATING, CONSTRUCTING, INSTALLING, AND MAINTAINING THE BUOYS ARE INCIDENTAL TO "TEMPORARY PEDESTRIAN PORTAGE".

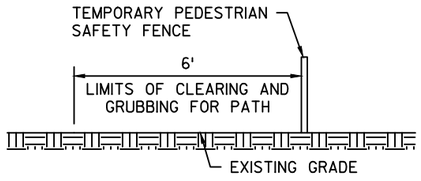
INSTALL ALL SAFETY MEASURES PRIOR TO THE START OF BRIDGE REMOVAL.

REMOVE ANY TREES AND BRUSH NECESSARY TO ESTABLISH THE PORTAGE PATH.

MAINTAIN A 25' MINIMUM CLEARANCE FROM ACTIVE CONSTRUCTION OPERATIONS WHEN PEDESTRIANS ARE PRESENT.

ADJUST PATH LOCATION TO MINIMIZE TREE REMOVAL.





TYPICAL SECTION THRU PORTAGE

GRADE PATH AT WATERWAY ENTRANCE AND EXIT POINT TO PROVIDE 3:1 MAXIMUM GRADE.

PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CONSTRUCTION DETAILS - PORTAGE DETAILS	SHEET 6	E

FILE NAME : P:\11500S\11520S\11522\11522015\CADD\SHEETSPLAN\021002_CD.DWG
LAYOUT NAME - 021001_cd
PLOT DATE : 11/13/2017 8:17 AM PLOT BY : BRAD LEE PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

6902-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	4.000	4.000
0004	201.0205	Grubbing	STA	4.000	4.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. Station 10+00 Structure P-68-104	LS	1.000	1.000
0012	204.0165	Removing Guardrail	LF	14.000	14.000
0014	205.0100	Excavation Common	CY	368.000	368.000
0016	206.1000	Excavation for Structures Bridges (structure) 01. B-68-141	LS	1.000	1.000
0020	208.0100	Borrow	CY	88.000	88.000
0022	210.1500	Backfill Structure Type A	TON	405.000	405.000
0024	213.0100	Finishing Roadway (project) 01. 6902-00-70	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	98.000	98.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	568.000	568.000
0032	455.0605	Tack Coat	GAL	43.000	43.000
0034	465.0105	Asphaltic Surface	TON	189.000	189.000
0036	465.0315	Asphaltic Flumes	SY	4.000	4.000
0038	502.0100	Concrete Masonry Bridges	CY	183.000	183.000
0040	502.3200	Protective Surface Treatment	SY	180.000	180.000
0042	502.3210	Pigmented Surface Sealer	SY	40.000	40.000
0044	505.0400	Bar Steel Reinforcement HS Structures	LB	4,600.000	4,600.000
0046	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	22,970.000	22,970.000
0050	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0052	550.0500	Pile Points	EACH	14.000	14.000
0056	550.2128	Piling CIP Concrete 12 3/4 X 0.50-Inch	LF	490.000	490.000
0058	606.0300	Riprap Heavy	CY	100.000	100.000
0060	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	140.000	140.000
0062	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0064	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0066	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0068	618.0100	Maintenance And Repair of Haul Roads (project) 01. 6902-00-70	EACH	1.000	1.000
0072	619.1000	Mobilization	EACH	0.540	0.540
0074	624.0100	Water	MGAL	45.000	45.000
0076	625.0500	Salvaged Topsoil	SY	800.000	800.000
0078	627.0200	Mulching	SY	470.000	470.000
0080	628.1504	Silt Fence	LF	345.000	345.000
0082	628.1520	Silt Fence Maintenance	LF	345.000	345.000
0084	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0086	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0088	628.2008	Erosion Mat Urban Class I Type B	SY	132.000	132.000

6902-00-70

Line	Item	Item Description	Unit	Total	Qty
0090	628.6005	Turbidity Barriers	SY	329.000	329.000
0092	628.6505	Soil Stabilizer Type A	ACRE	0.100	0.100
0094	629.0210	Fertilizer Type B	CWT	0.600	0.600
0096	630.0120	Seeding Mixture No. 20	LB	30.000	30.000
0098	630.0200	Seeding Temporary	LB	30.000	30.000
0100	633.5100	Markers Row	EACH	6.000	6.000
0102	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0104	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0106	638.2602	Removing Signs Type II	EACH	4.000	4.000
0108	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0110	642.5001	Field Office Type B	EACH	0.540	0.540
0112	643.0420	Traffic Control Barricades Type III	DAY	1,520.000	1,520.000
0114	643.0705	Traffic Control Warning Lights Type A	DAY	2,280.000	2,280.000
0116	643.0900	Traffic Control Signs	DAY	1,216.000	1,216.000
0118	643.5000	Traffic Control	EACH	1.000	1.000
0120	645.0111	Geotextile Type DF Schedule A	SY	100.000	100.000
0122	645.0120	Geotextile Type HR	SY	240.000	240.000
0124	650.4500	Construction Staking Subgrade	LF	310.000	310.000
0126	650.5000	Construction Staking Base	LF	310.000	310.000
0128	650.6500	Construction Staking Structure Layout (structure) 01. B-68-141	LS	1.000	1.000
0132	650.9910	Construction Staking Supplemental Control (project) 01. 6902-00-70	LS	1.000	1.000
0136	650.9920	Construction Staking Slope Stakes	LF	310.000	310.000
0138	690.0150	Sawing Asphalt	LF	43.000	43.000
0140	715.0502	Incentive Strength Concrete Structures	DOL	1,098.000	1,098.000
0142	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0144	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000
0146	SPV.0105	Special 01. Temporary Pedestrian Portage	LS	1.000	1.000
0148	SPV.0195	Special 01. Select Crushed Material For Travel Corridor	TON	46.000	46.000

3

3

CLEARING & GRUBBING

STATION - STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
8+00 - 10+00	LT & RT	2	2
10+00 - 12+00	LT & RT	2	2
	TOTALS:	4	4

REMOVING GUARDRAIL

STATION - STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
10+21 - 10+35	LT	14
	TOTALS:	14

EARTHWORK

STATION - STATION	205.0100 EXCAVATION COMMON CY	FILL CY (1)	EXPANDED FILL CY (2)	WASTE CY	208.0100 BORROW CY
8+30.00 - 9+76.75	106	190	248	-142	88
1023.25 - 11+85.00	262	95	124	138	---
TOTALS:	368	285	372	-4	88

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%

FINISHING ROADWAY

DESCRIPTION	213.0100 FINISHING ROADWAY EACH
PROJECT 6902-00-70	1
TOTALS:	1

BASE AGGREGATE ITEMS

STATION - STATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER (1) MGAL
8+30.00 - 9+76.75	30	263	8.8
10+23.25 - 11+85.00	42	305	10.4
11+25 FE LT	26	---	0.8
TOTALS:	98	568	20

(1) - ADDITIONAL QUANTITIES LISTED ELSEWHERE

ASPHALT PAVEMENT ITEMS

STATION - STATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
8+50.00 - 9+73.75	20.5	90
10+18.25 - 11+60.00	22.5	99
TOTALS:	43	189

FLUMES

STATION	LOCATION	465.0315 ASPHALTIC FLUMES SY
9+65	RT	4
	TOTALS:	4

GUARDRAIL ITEMS

STATION - STATION	LOCATION	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
8+85.49 - 9+78.98	RT	39.4	1
8+88.63 - 9+79.51	LT	39.4	1
10+20.49 - 11+11.37	LT	39.4	1
10+21.02 - 11+14.50	RT	39.4	1
	TOTALS:	157.6	4.0

MAINTENANCE AND REPAIR OF HAUL ROADS

DESCRIPTION	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS EACH
PROJECT 6902-00-70	1
TOTALS:	1

RESTORATION 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	624.0100 WATER (1) MGAL
8+30 - 9+60	LT	175	30	---	5	5	4.0
8+30 - 9+63	RT	40	---	---	1	1	0.9
10+30 - 11+85	LT	405	405	0.35	15	15	12.8
10+42 - 11+85	RT	120	---	0.15	7	7	5.9
UNDISTRIBUTED	---	60	35	0.10	2	2	1.0
	TOTALS:	800	470	0.60	30	30	25

(1) - ADDITIONAL QUANTITIES LISTED ELSEWHERE

3

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDITY BARRIERS SY
8+28 - 9+87	LT & RT	180	180	213
10+12 - 11+17	LT & RT	145	145	96
UNDISTRIBUTED	-	20	20	20
	TOTALS:	345	345	329

EROSION CONTROL ITEMS

STATION - STATION	LOCATION	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.6505 SOIL STABILIZER TYPE A ACRE
8+50 - 9+60	LT	—	0.05
8+67 - 9+63	RT	—	0.03
10+42 - 11+76	RT	122	—
UNDISTRIBUTED	—	10	0.02
	TOTALS:	132	0.10

MOBILIZATION EROSION CONTROL

DESCRIPTION	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH
PROJECT 6902-00-70	2	2
TOTALS:	2	2

R/W MARKERS

STATION	LOCATION	PT. NO.	633.5100 MARKERS ROW EACH
8+25.00	29.57' LT	101	1
8+60.00	55.00' LT	102	1
11+40.30	62.00' LT	103	1
11+50.00	33.10' LT	104	1
8+26.80	36.40' RT	200	1
11+64.21	33.20' RT	201	1
		TOTALS:	6

3

SIGNING ITEMS

STATION	LOCATION	SIGN CODE	SIZE	634.0612 WOOD POSTS EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
8+30	RT	-	-	-	-	-	-	WEIGHT LIMIT POSTING (REMOVED BY TOWN)
9+76	RT	W5-52R	12"x36"	1	3	-	-	OBJECT MARKER
9+81	RT	-	-	-	-	1	1	EXISTING OBJECT MARKER
9+76	LT	W5-52L	12"x36"	1	3	-	-	OBJECT MARKER
9+81	LT	-	-	-	-	1	1	EXISTING OBJECT MARKER
10+23	RT	W5-52L	12"x36"	1	3	-	-	OBJECT MARKER
10+18	RT	-	-	-	-	1	1	EXISTING OBJECT MARKER
10+23	LT	W5-52R	12"x36"	1	3	-	-	OBJECT MARKER
10+18	LT	-	-	-	-	1	1	EXISTING OBJECT MARKER
12+10	LT	-	-	-	-	-	-	WEIGHT LIMIT POSTING (REMOVED BY TOWN)
		TOTALS:		4	12	4	4	

TRAFFIC CONTROL ITEMS

LOCATION	DAYS	TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAYS
CRYSTAL RD INTERSECTION	76	2	152	4	304	3	228
BEGINNING OF PROJECT	76	7	532	10	760	4	304
END OF PROJECT	76	7	532	10	760	4	304
STH 22 INTERSECTION	76	2	152	4	304	3	228
UNDISTRUBUTED	76	2	152	2	152	2	152
TOTALS:			1,520		2,280		1,216

CONSTRUCTION STAKING

STATION - STATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 6902-00-70 LS
8+30 - 9+78	148	148	148	---
10+23 - 11+85	162	162	162	---
6902-00-70	---	---	---	1
TOTALS:	310	310	310	1

SAWING PAVEMENT ITEMS

STATION	690.0150 SAWING ASPHALT LF
8+30	21
11+85	22
TOTAL:	43

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
TO BE REMOVED
BRIDGE

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN

R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED)

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER 25
UTILITY NUMBER 40
PARALLEL OFFSETS

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTICTIVE DEVELOPMENT EASEMENT	RDE
CENTERLINE	C/L	RIGHT	RT
CERTIFIED SURVEY MAP	CSM	RIGHT OF WAY	R/W
CONCRETE	CONC	SECTION	SEC
COUNTY	CO	SEPTIC VENT	SEPV
COUNTY TRUNK HIGHWAY	CTH	SQUARE FEET	SF
DISTANCE	DIST	STATE TRUNK HIGHWAY	STH
CORNER	COR	STATION	STA
DOCUMENT NUMBER	DOC	TELEPHONE PEDESTAL	TP
EASEMENT	EASE	TEMPORARY LIMITED EASEMENT	TLE
EXISTING	EX	TRANSPORTATION PROJECT PLAT	TPP
GAS VALVE	GV	UNITED STATES HIGHWAY	USH
GRID NORTH	GN	VOLUME	V
HIGHWAY EASEMENT	HE		
IDENTIFICATION	ID		
LAND CONTRACT	LC		
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), WAUPACA 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 ¾" X 24" REBAR) AND ARE 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 OR OTHER SURVEYS OF PUBLIC RECORD.

CONVENTIONAL UTILITY SYMBOLS

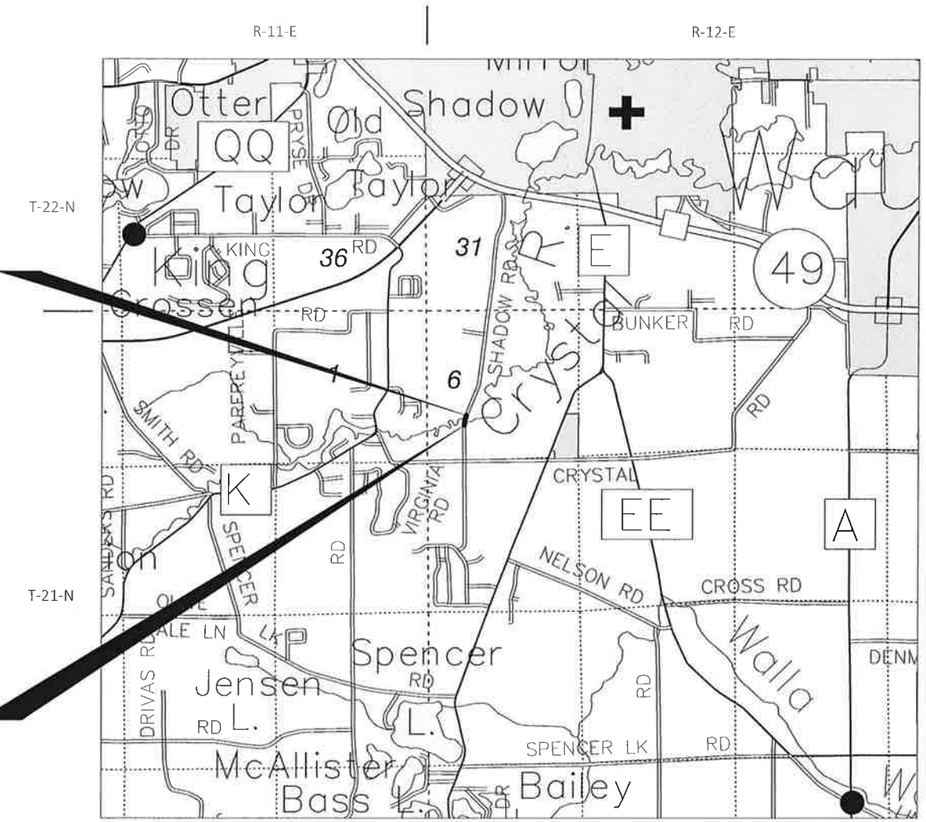
WATER	W
GAS	G
TELEPHONE	T
OVERHEAD TRANSMISSION LINES	OH
ELECTRIC	E
CABLE TELEVISION	TV
FIBER OPTIC	FO
SANITARY SEWER	SAN
STORM SEWER	SS

CAUTION
THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES.

N

END RELOCATION
ORDER STA. 11+65.63
Y = 328,110.66
X = 533,489.18
1,040.24 FEET SOUTH OF AND 1,387.46 FEET EAST OF THE WEST QUARTER CORNER OF SECTION 6, T-21-N, R-12-E, TOWN OF LIND, WAUPACA COUNTY, WI

BEGIN RELOCATION
ORDER STA. 8+25.00
Y = 327,779.66
X = 533,416.00
1,261.77 FEET NORTH OF AND 1,285.15 FEET WEST OF THE SOUTH QUARTER CORNER OF SECTION 6, T-21-N, R-12-E, TOWN OF LIND, WAUPACA COUNTY, WI



LAYOUT
SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.065 MI

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
6902-00-00		
CONSTRUCTION PROJECT NUMBER 6902-00-70	4.01	2

PLAT OF RIGHT OF WAY REQUIRED FOR

T LIND, SHADOW ROAD
CRYSTAL RIVER BRIDGE P-68-0104

TOWN ROAD — WAUPACA COUNTY

ORIGINAL PLAT PREPARED BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
1230 South Boulevard Baraboo, WI 53913
608-356-2771 1-800-362-4505 Fax: 608-356-2770
Web Address: www.msa-ps.com

WISCONSIN
GREGORY P. RHINEHART
S-1478
FRIENDSHIP, WI
LAND SURVEYOR

3/29/2017 (Date)
Gregory P. Rhinehart (Professional Land Surveyor)

REVISION DATE

APPROVED FOR TOWN OF LIND
DATE: 4/4/17 (Signature)

FILE NAME : P:\115005\115205\11522\11522015\CADD\RW\11522015 PRWAY.DWG
LAYOUT NAME - 040101_RW
PLOT DATE : 3/30/2017 3:42 PM
PLOT BY : BRAD LEE
PLOT NAME :
WISDOT/CADDS SHEET 50

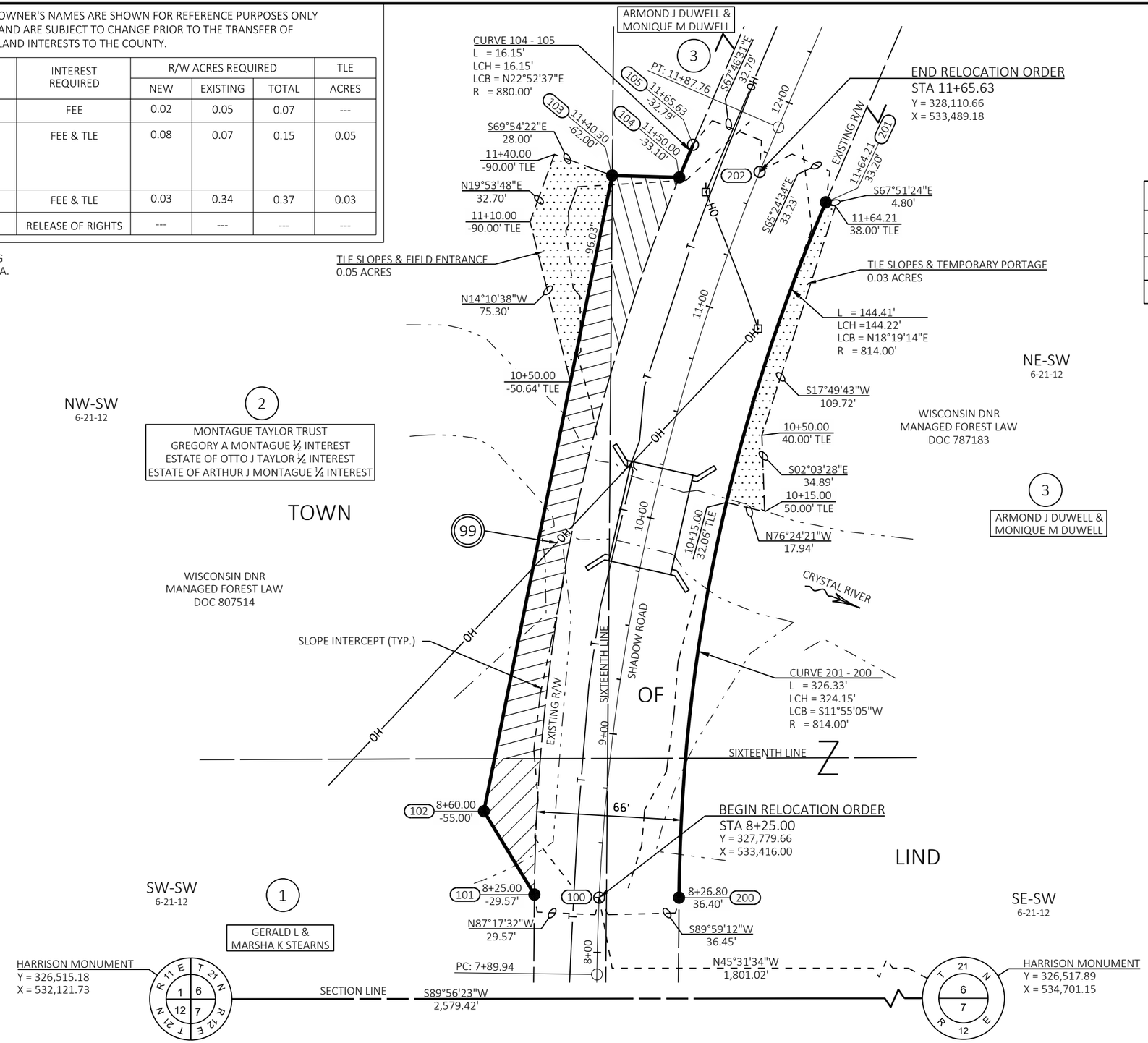
SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE
			NEW	EXISTING	TOTAL	ACRES
1	GERALD L & MARSHA K STEARNS	FEE	0.02	0.05	0.07	---
2	MONTAGUE TAYLOR TRUST GREGORY A MONTAGUE ½ INTEREST ESTATE OF OTTO J TAYLOR ¼ INTEREST ESTATE OF ARTHUR J MONTAGUE ¼ INTEREST	FEE & TLE	0.08	0.07	0.15	0.05
3	ARMOND J DUWELL & MONIQUE M DUWELL	FEE & TLE	0.03	0.34	0.37	0.03
99	WISCONSIN PUBLIC SERVICE CORPORATION	RELEASE OF RIGHTS	---	---	---	---

EXISTING HIGHWAY R/W BASED ON THE CENTERLINE OF EXISTING ROADWAY, PLATS OF SURVEY, AND RECORDED CSM'S IN THE AREA.

PI = 9+91.52
Y = 327,946.18
X = 533,417.42
Δ = 22°47'36" R
D = 05°43'46"
T = 201.58'
L = 397.82'
R = 1,000.00'
PC = 7+89.94
PT = 11+87.76



R/W COURSE TABLE

COURSE	BEARING	DISTANCE
101 - 102	N31°09'57"W	44.46'
102 - 103	N11°24'02"E	295.81'
103 - 104	S88°18'39"E	30.63'

R/W POINT COORDINATES

PT. NO.	Y	X
100	327,779.66	533,416.00
101	327,781.06	533,386.46
102	327,819.10	533,363.45
103	328,109.08	533,421.93
104	328,108.18	533,452.55
105	328,123.06	533,458.82
200	327,779.67	533,452.45
201	328,096.83	533,519.39
202	328,110.66	533,489.18

REVISION DATE	DATE MARCH 30, 2017	SCALE, FEET 0 25 50	HWY: TOWN ROAD	STATE R/W PROJECT NUMBER 6902-00-00	PLAT SHEET 4.02
	GRID FACTOR N/A		COUNTY: WAUPACA	CONSTRUCTION PROJECT NUMBER 6902-00-70	PS&E SHEET 12 E

FILE NAME : 11522015 PRWAY.DWG
LAYOUT NAME - 040102_rw
PLOT DATE : 3/30/2017 3:42 PM PLOT BY : BRAD LEE PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 75

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SOIL STABILIZER, TYPE A
- SILT FENCE
- RIP RAP
- TURBIDITY BARRIER
- SURFACE WATER FLOW

GERALD L & MARSHA K STEARNS

TAYLOR & A MONTAGUE DEC OTTO J DEC ET AL

ARMOND J & MONIQUE M DUWELL

ARMOND J & MONIQUE M DUWELL

ARMOND J & MONIQUE M DUWELL

WETLAND BOUNDARY

R/W

SLOPE INTERCEPT (TYP.)

WOODED

WETLAND BOUNDARY

EXISTING R/W

PC: 7+89.94

BM-2

+67 10'LT

+89 15'LT

9+00

+38 13'LT

SHADOW ROAD (ASPHALT)

+63 10'RT

+85 15'RT

+36 13'RT

8+00

SAWCUT

7+00 N0° 41' 57"E

MGS GUARDRAIL

ASPHALTIC FLUME

CAUTION

BM-5

BM-1

10+00

CRYSTAL RIVER

+62 13'LT

+64 13'RT

11+00

+11 15'LT

+15 15'RT

+25 F.E.

12'

BURIED TELEPHONE (CHARTER COMMUNICATIONS) (TO BE RELOCATED)

WOODED

+50 10'LT

+50 10'RT

PT: 11+87.76

SAWCUT

12+00

N23° 29' 33"E

66'

13+00

MGS GUARDRAIL

EXISTING STRUCTURE P-68-104 (TO BE REMOVED)

STRUCTURE B-68-141

TLE

WOODED

FINISHED RIGHT DITCH

OVERHEAD ELECTRIC (WISCONSIN PUBLIC SERVICE CORPORATION) (TO BE RELOCATED)

WOODED

EXISTING R/W

PI = 9+91.52
Y = 327,946.18
X = 533,417.42
Δ = 22°47'36" R
D = 05°43'46"
T = 201.58'
L = 397.82'
R = 1,000.00'
PC = 7+89.94
PT = 11+87.76

5

5

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
1	10+18.01, 12.2' LT	CHIS SQ ON NW CORNER BRIDGE ABUT	835.73
2	8+13.98, 18.0' LT	2 POLE NAILS IN 36" OAK TREE	834.81
3	10+29.74, 30.4' LT	2 POLE NAILS IN CLUMP OF OAKS	834.42

BEGIN PROJECT 6902-00-70
STA 8+30
Y = 327,784.65
X = 533,416.25

END PROJECT 6902-00-70
STA 11+85
Y = 328,128.51
X = 533,496.68

REMOVE EXISTING BRIDGE P-68-104
STA 10+00
SINGLE SPAN CONCRETE DECK GIRDER
24.2 FT CLEAR ROADWAY WIDTH
37.2 FT OVERALL LENGTH
0° SKEW

STA 10+00, STRUCTURE B-68-141
SINGLE SPAN FLAT CONCRETE SLAB
26.33 FT CLEAR ROADWAY WIDTH
46.5 FT OVERALL LENGTH
0° SKEW

VCL = 210.00
K = 144.66

2.75%

1.30%

FINISHED ℄ PROFILE

EXISTING ℄ PROFILE

FINISHED RIGHT DITCH

HIGH WATER 100
ELEV. 834.90

STA 8+30.00
EL 834.68

VPC STA 9+47.21
VPC EL 836.21

VPI STA 10+52.21
VPI EL 837.57

VPT STA 11+57.21
VPT EL 840.46

STA 11+85.00
EL 841.23

842 840 838 836 834 832 830 828

7+00 8+00 9+00 10+00 11+00 12+00 13+00

834.15		833.77		834.29		834.93	834.94	835.31	835.59	835.71	836.24	827.29	836.99	836.50	837.91	838.09	839.00	840.26	840.26	841.64		842.42	843.21

EARTHWORK SUMMARY
STA 8+30 - STA 11+85
EXC COMMON 368 CY
FILL 372 CY
FILL EXPANSION 30%
BORROW 88 CY

PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	PLAN AND PROFILE: SHADOW ROAD	SHEET 13	E

FILE NAME : P:\11500S\11520S\11522\11522015\CADD\DESIGN\ALIPROFS\11522015_ALIPROFS_SHADOW_RD.DWG
LAYOUT NAME - 050101_PP

PLOT DATE : 11/13/2017 8:17 AM PLOT BY : BRAD LEE PLOT NAME : PLOT SCALE : 1 IN:40 FT

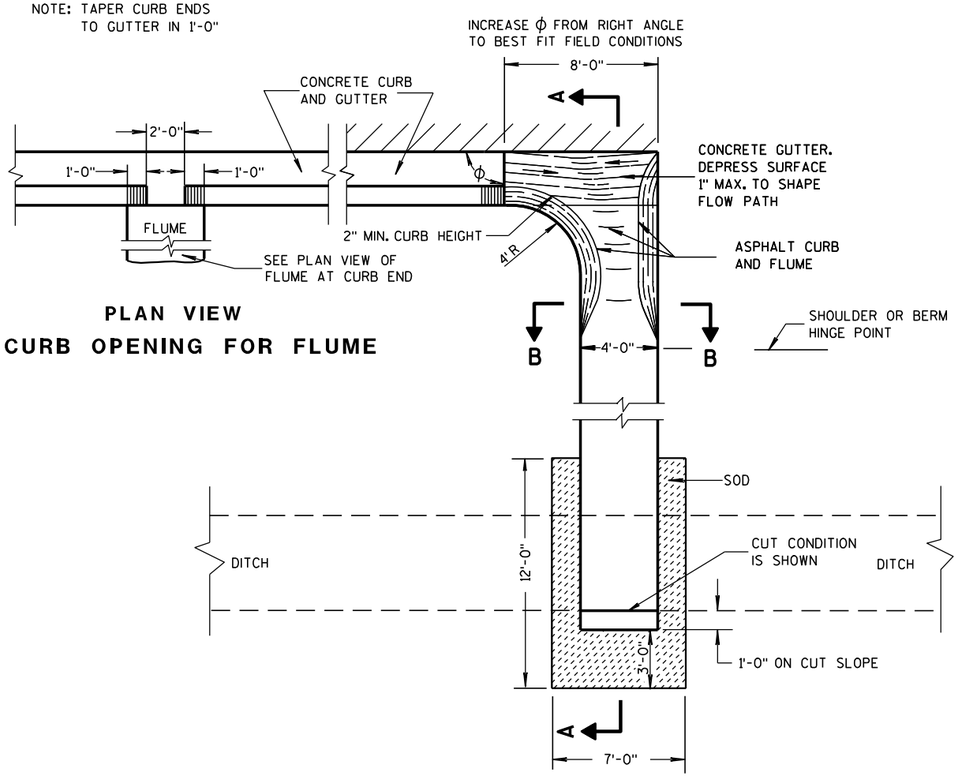
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-08	SIGNING & MARKING FOR TWO LANE BRIDGES
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS

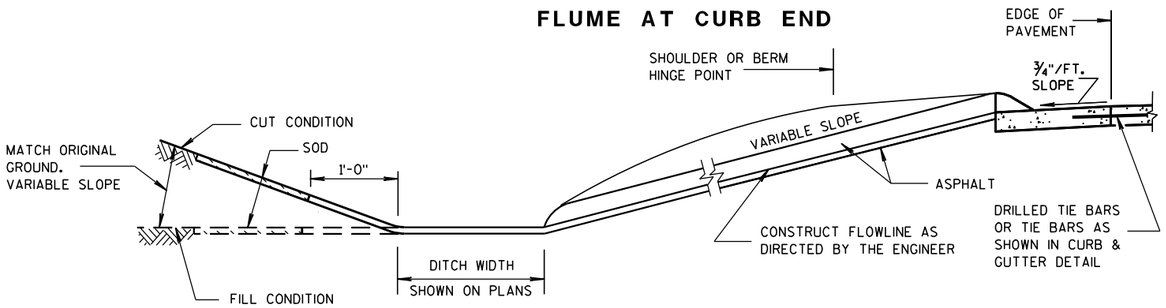
6

ASPHALTIC FLUME

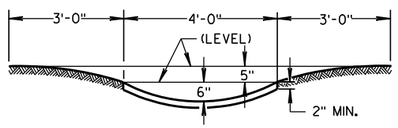


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

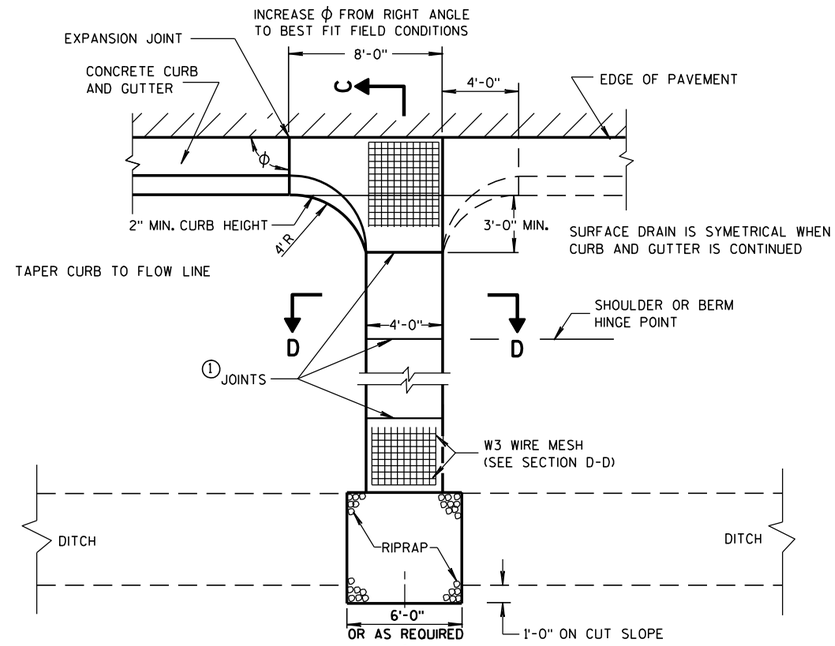
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

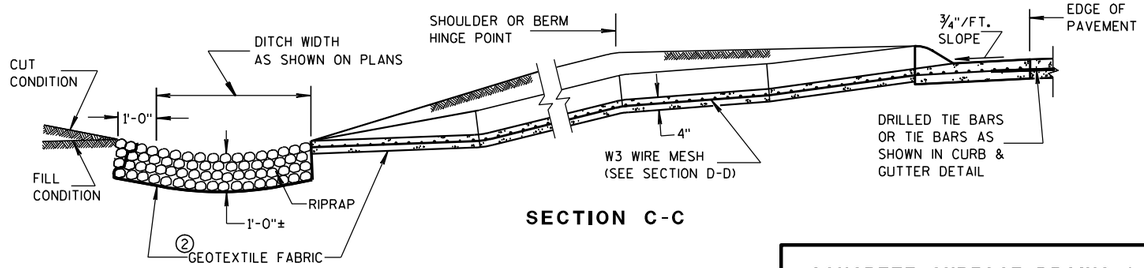
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

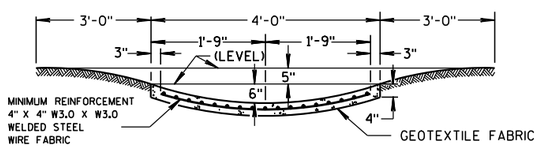
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
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MENT
FHWA

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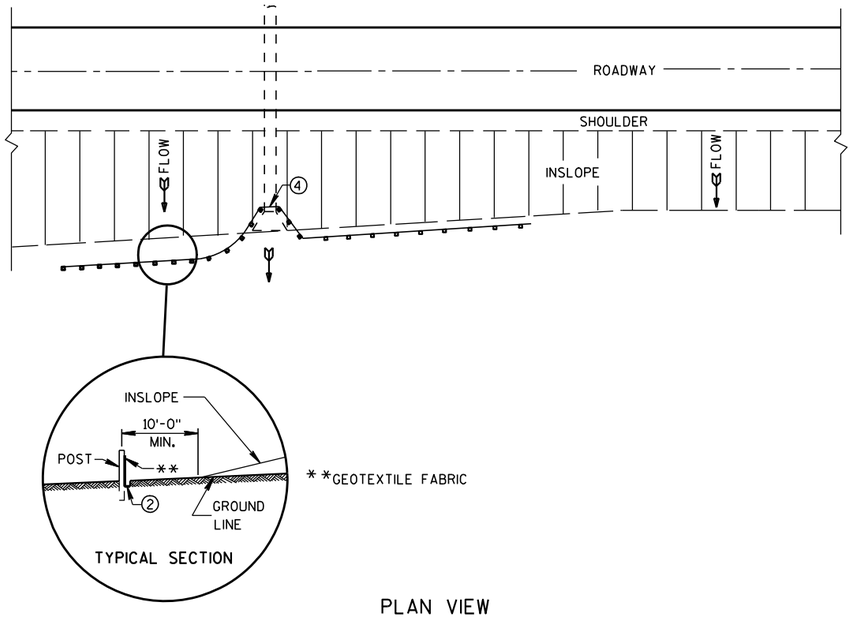
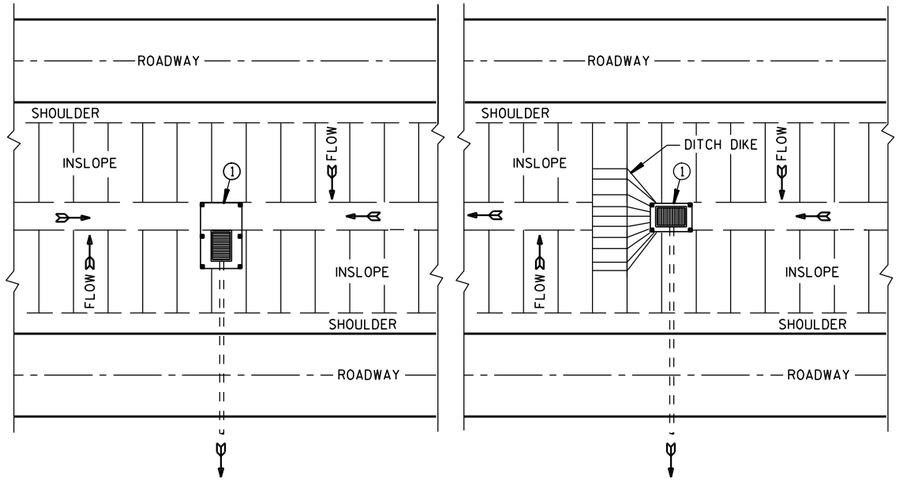


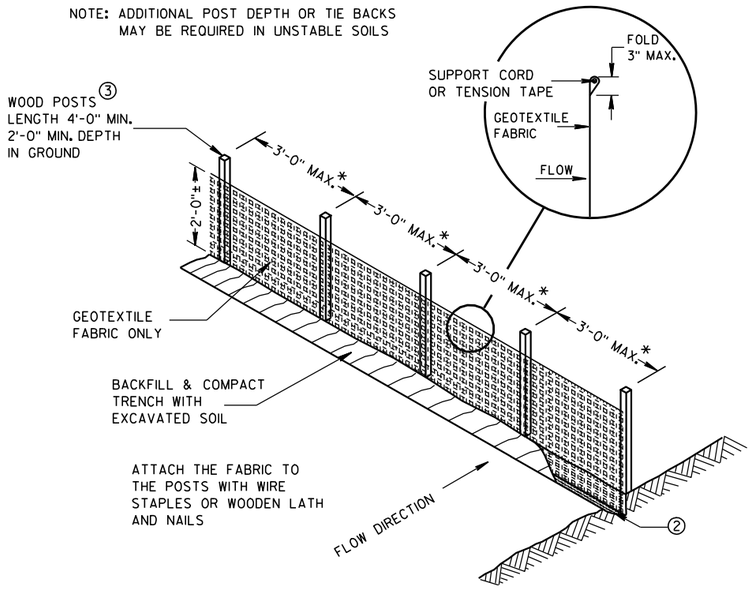
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



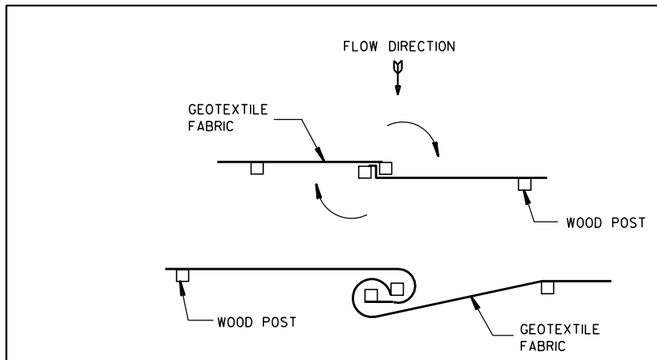
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



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

SILT FENCE

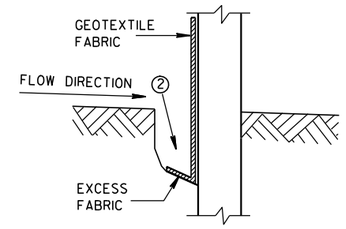


JOINING TWO LENGTHS OF SILT FENCE 5

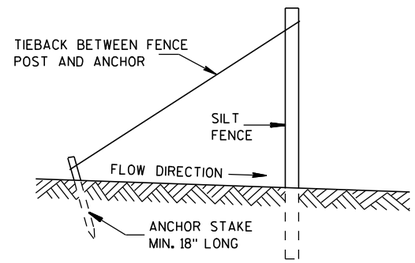
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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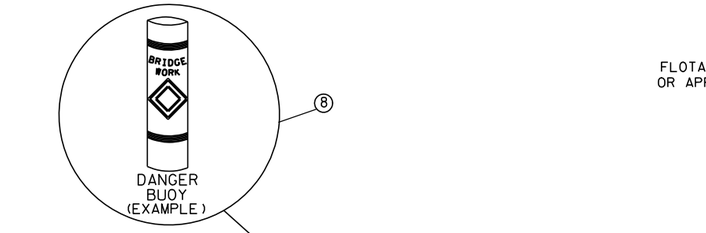
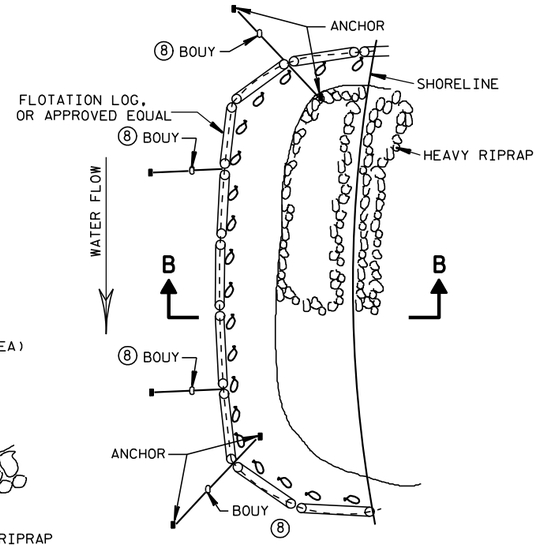
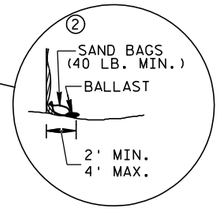
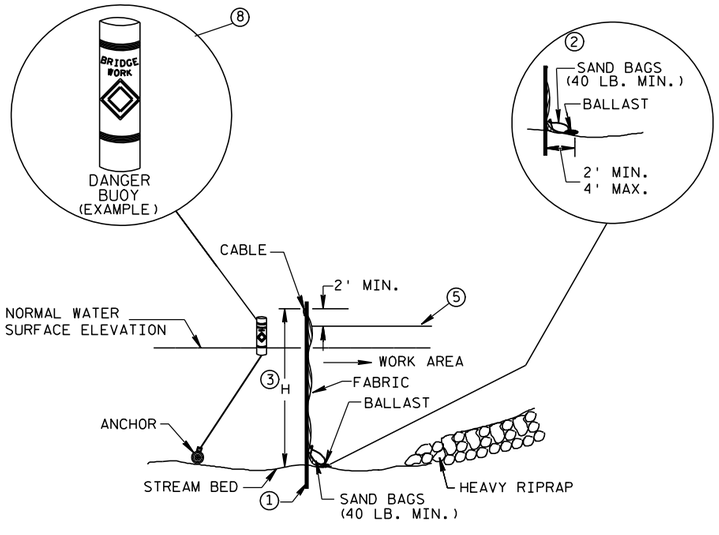


SECTION B-B

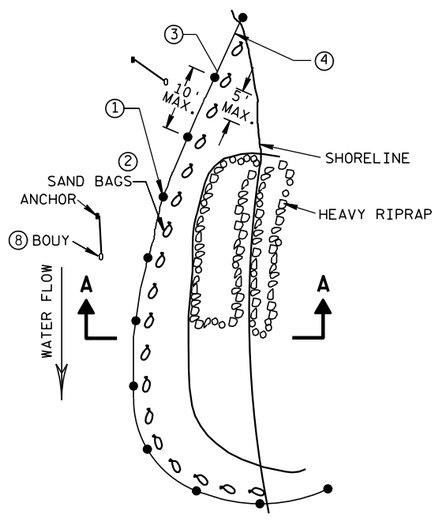




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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.

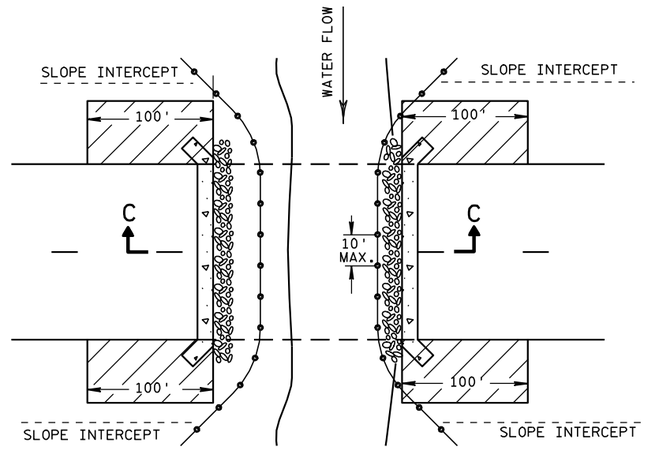
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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.

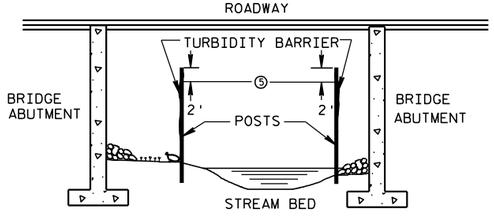
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

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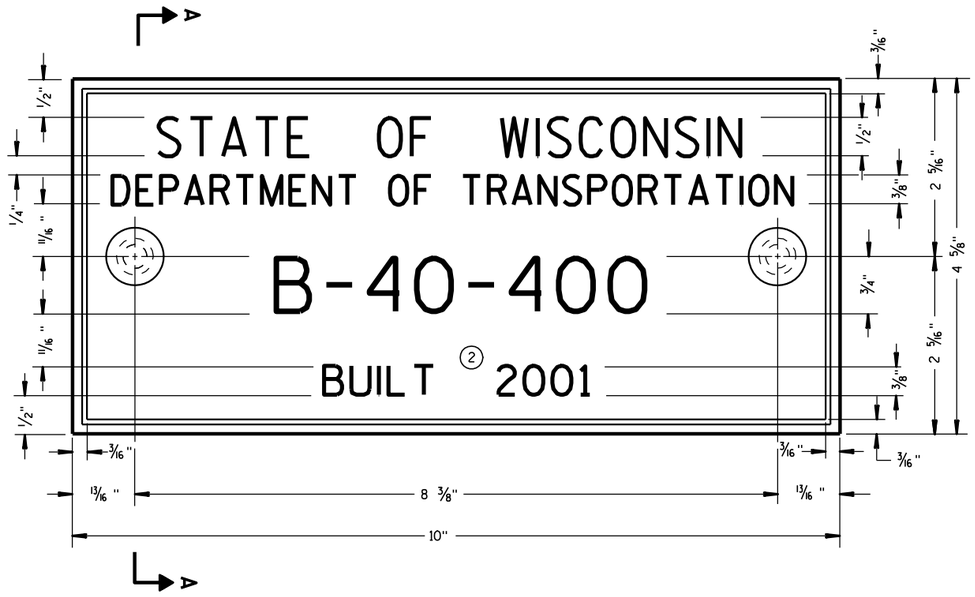


TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

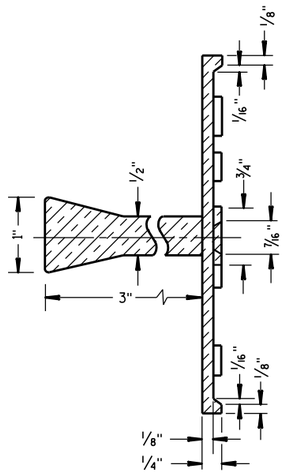
GENERAL NOTES

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

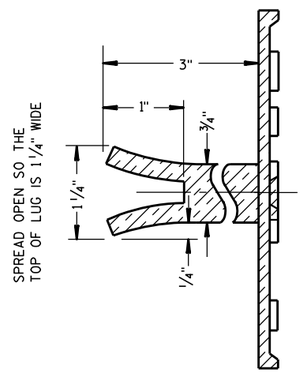
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

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



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

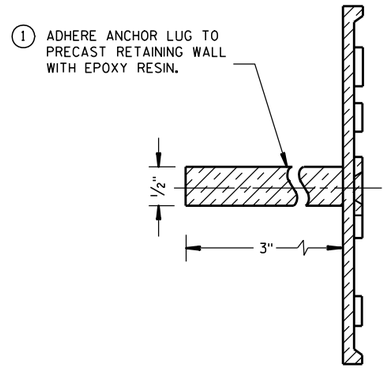
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

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S.D.D. 12 A 3-10

① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

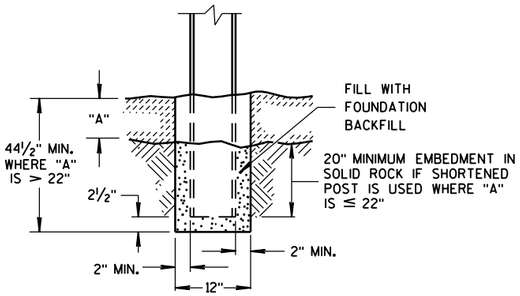
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

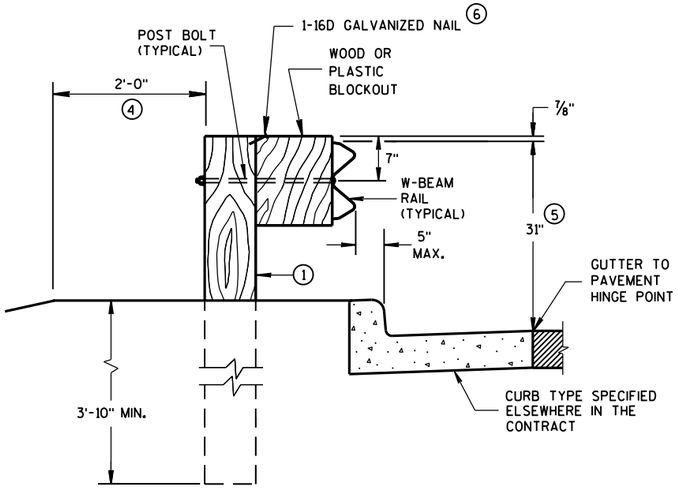
④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



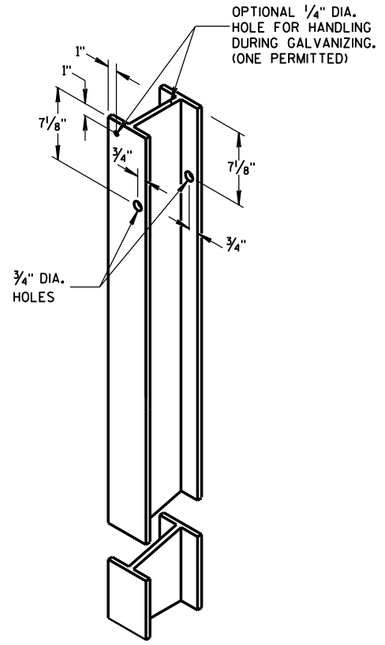
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



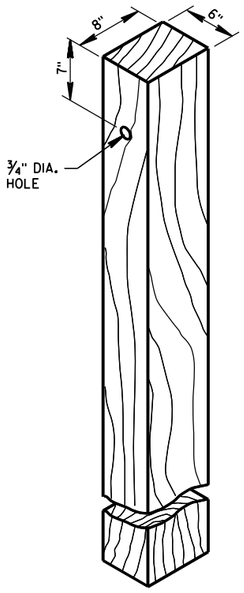
END VIEW
LOCATED ALONG A CURBED ROADWAY

END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION

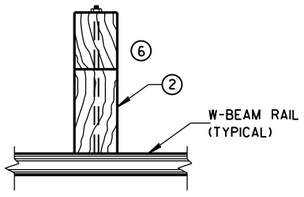
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



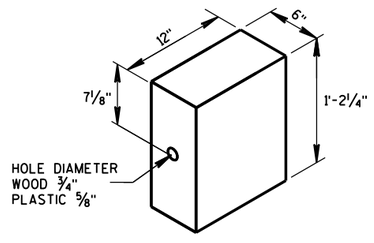
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



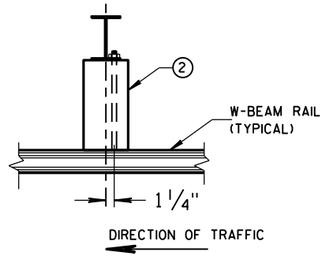
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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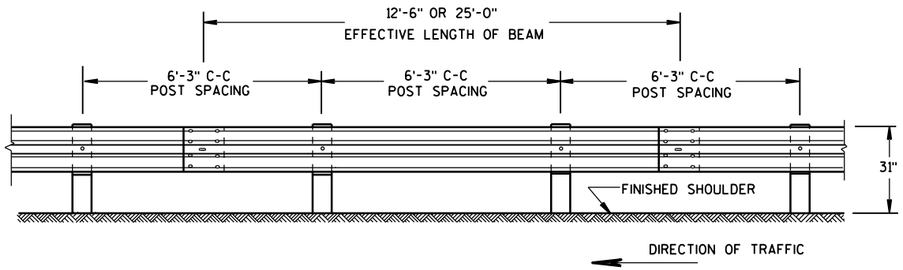
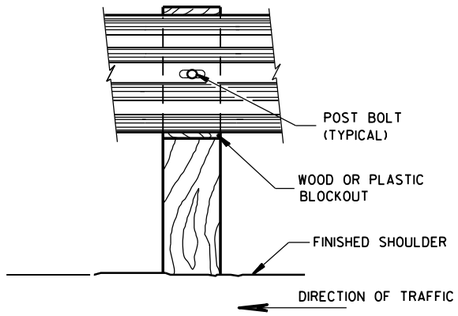


FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

7. PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

8. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

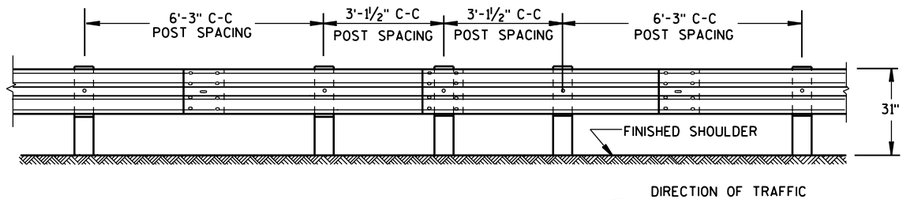
9. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

10. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

11. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

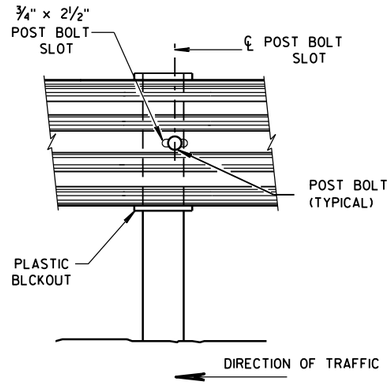
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

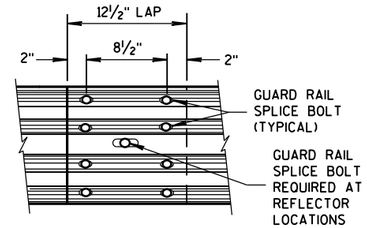


FRONT VIEW

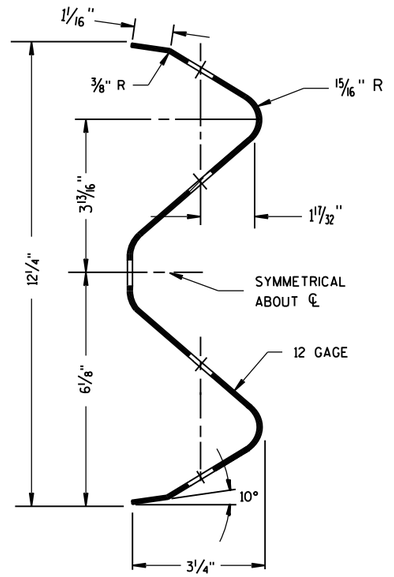
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



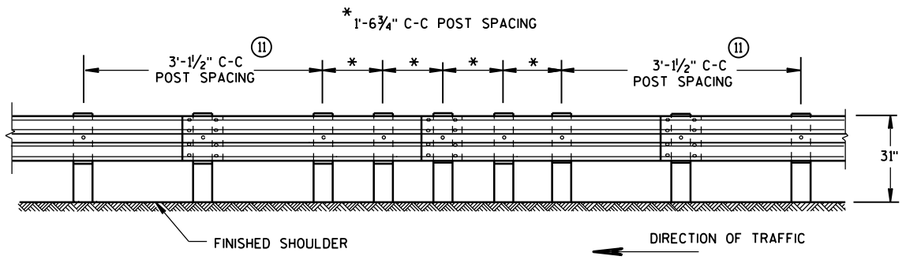
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

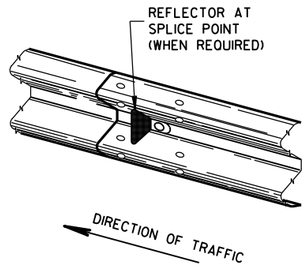


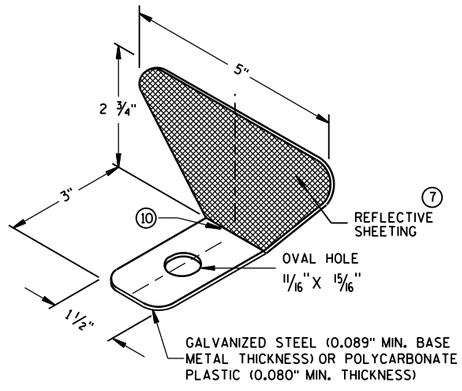
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (7)

REFLECTOR SPACING (8)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 (9)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 (10)	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 20

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S.D.D. 14 B 42-4b

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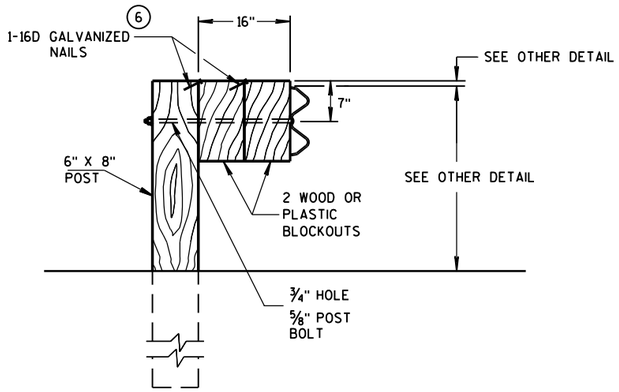
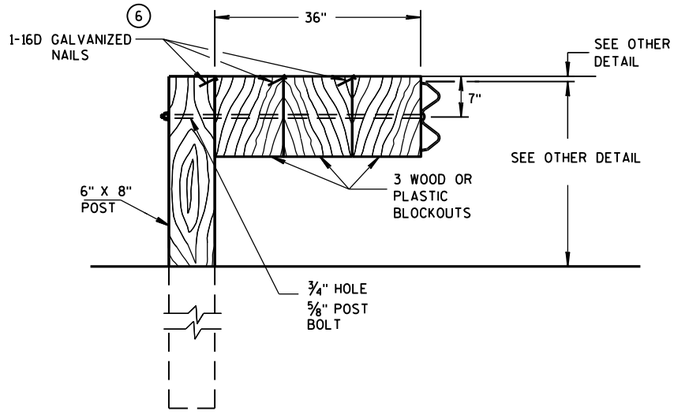
S.D.D. 14 B 42-4b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

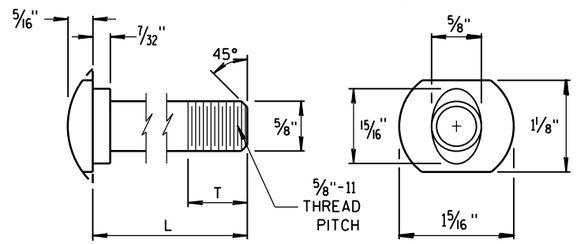


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

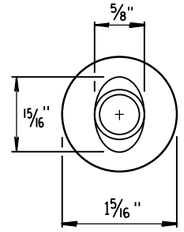
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

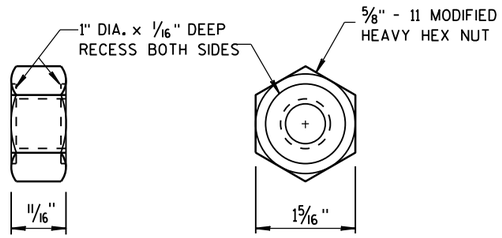


POST BOLT TABLE

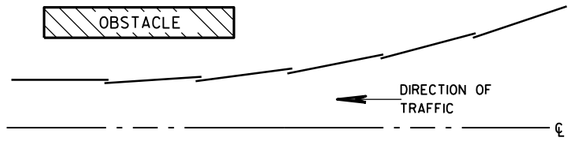
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

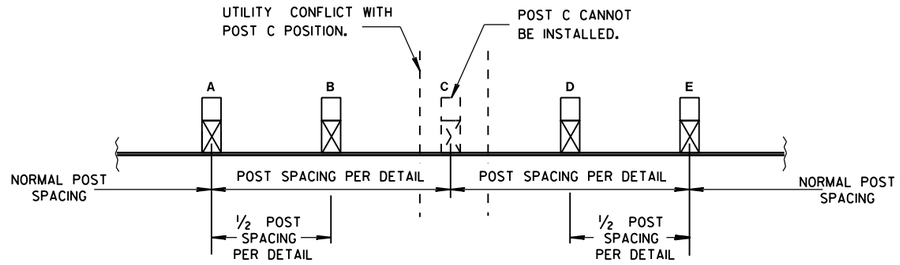


POST BOLT, SPLICE BOLT AND RECESS NUT

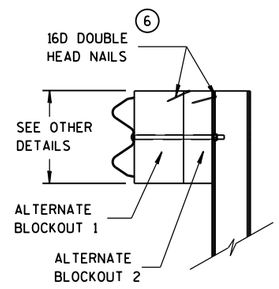


PLAN VIEW

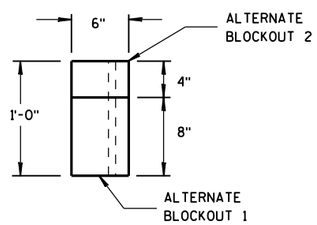
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 14 B 42-4c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

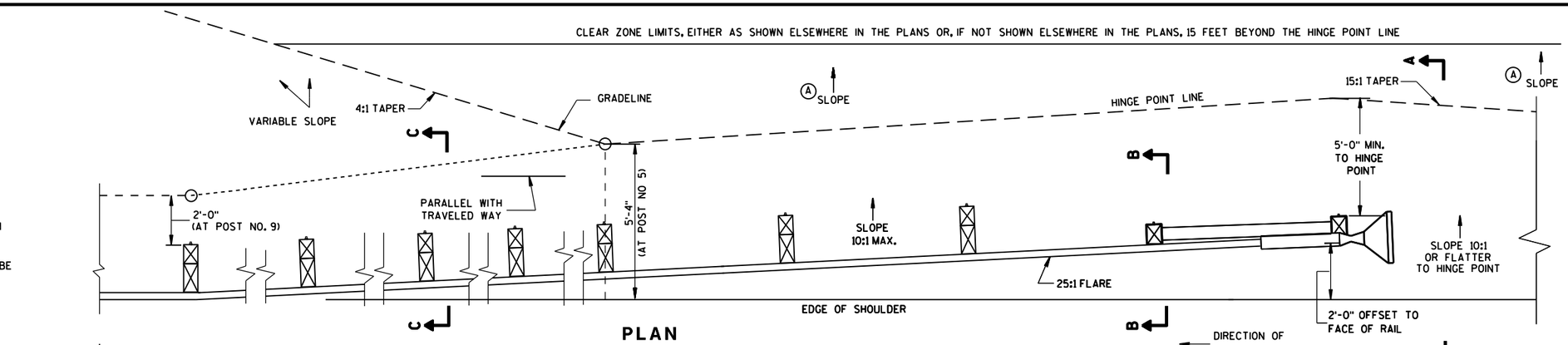
SEE SDD 14B42 FOR MORE INFORMATION.

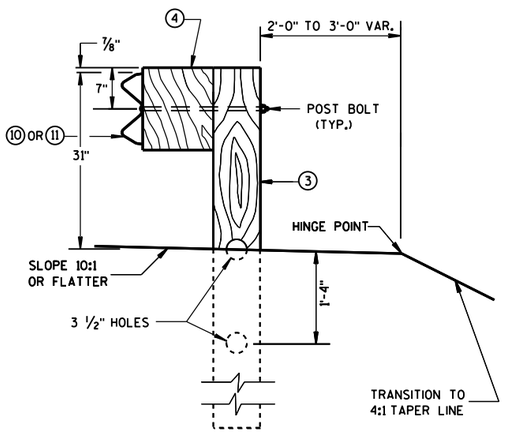
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

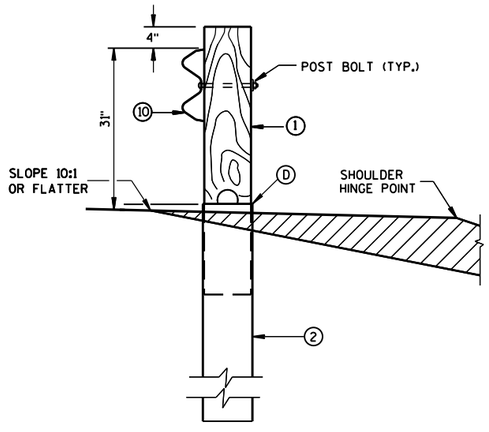
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

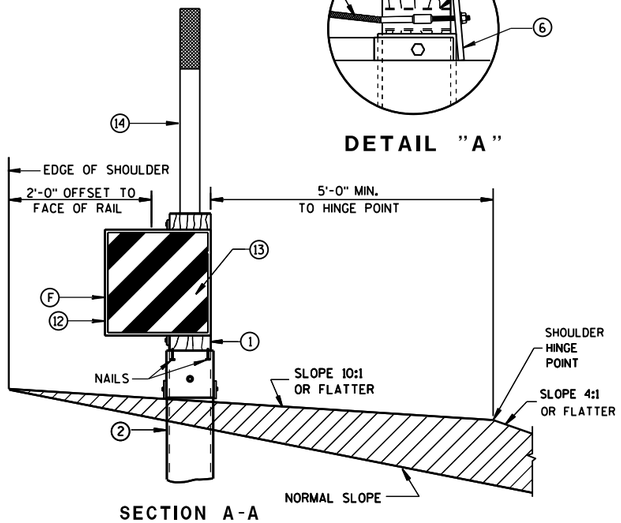




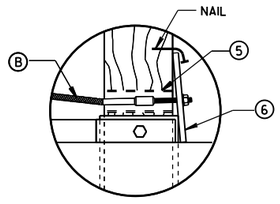
SECTION C-C
TYPICAL AT POST NOS. 3-9



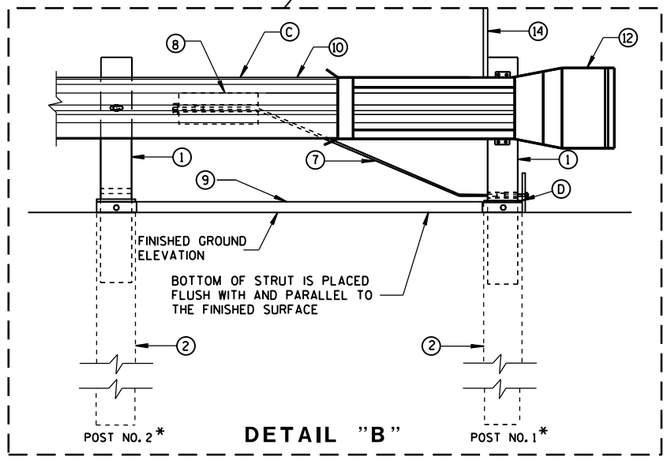
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



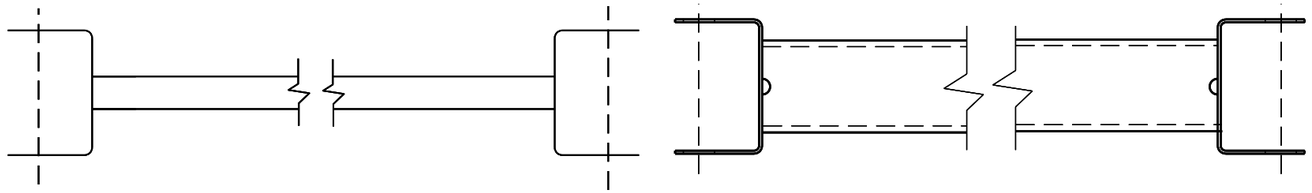
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

S.D.D. 14 B 44-2a

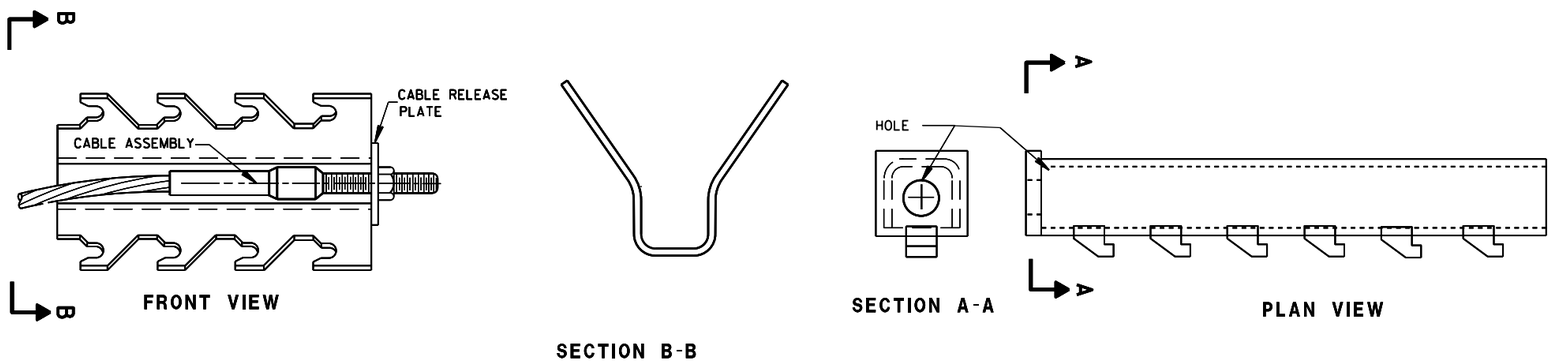
S.D.D. 14 B 44-2a



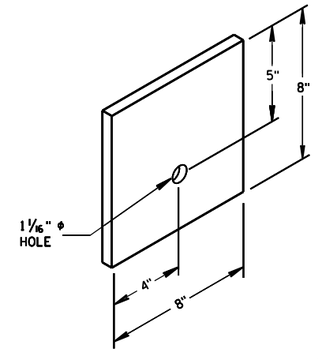
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



GENERIC ANCHOR CABLE BOX (8) (H)



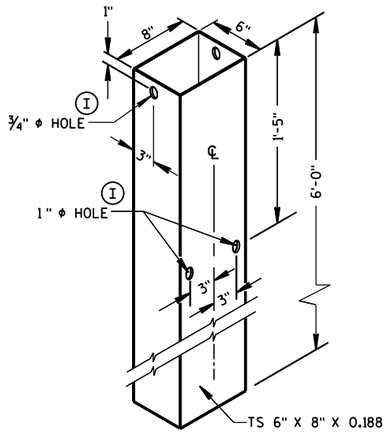
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

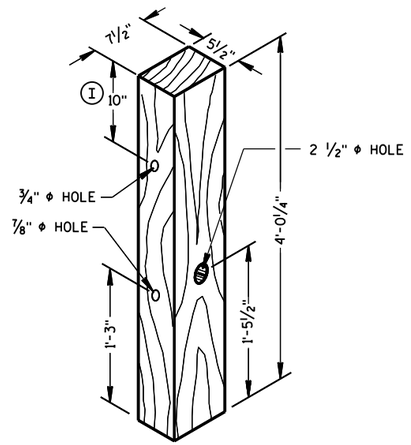
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 44-2b

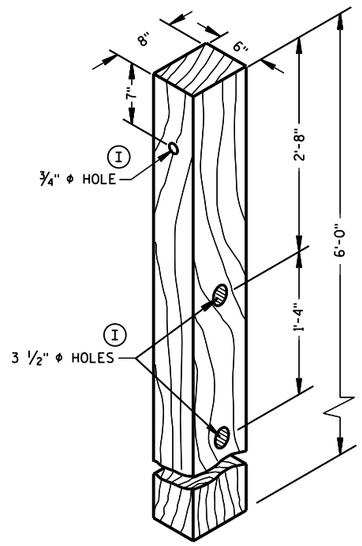


FOUNDATION TUBE (2)



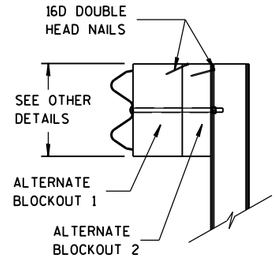
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

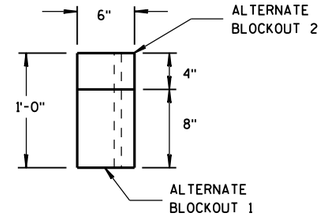


POSTS NUMBER 3-9

WOOD CRT POST (3)

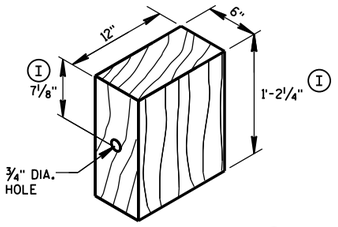


SIDE VIEW



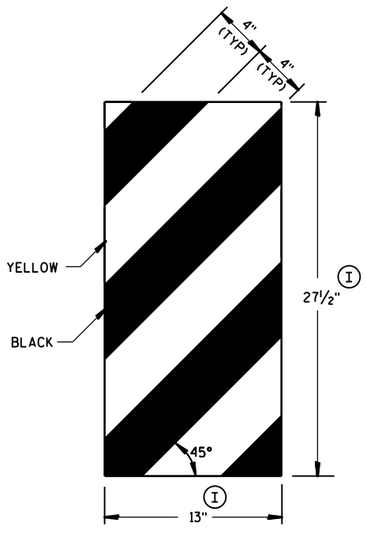
TOP VIEW

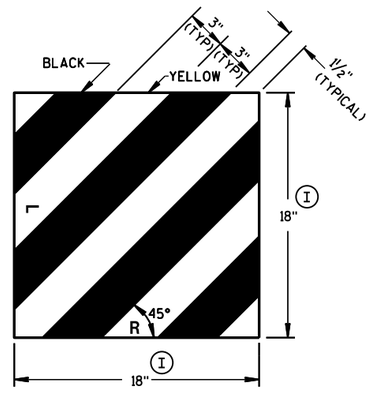
ALTERNATE WOOD BLOCKOUT DETAIL



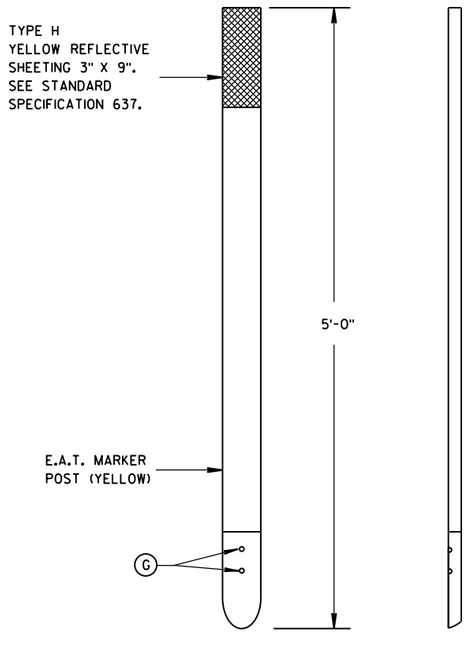
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





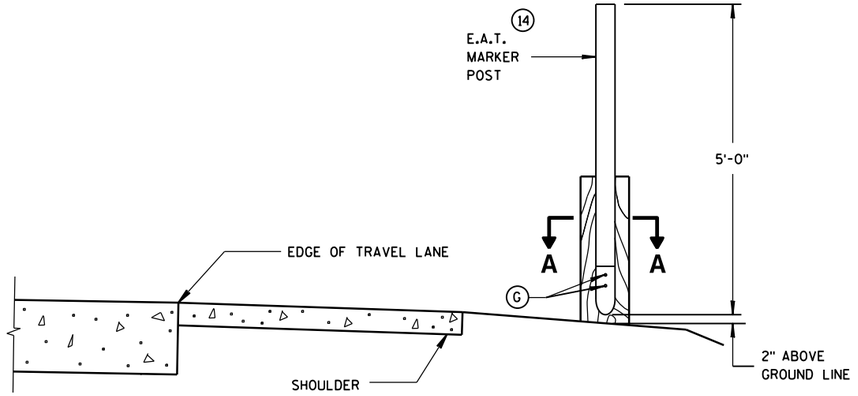
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

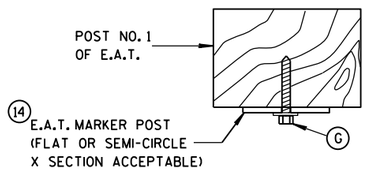
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

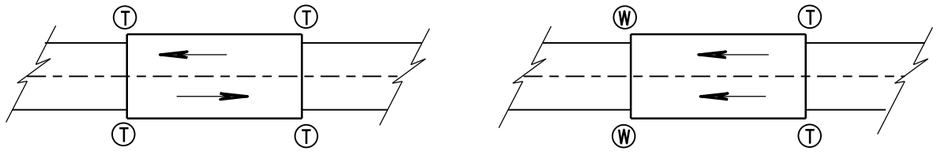
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

6

S.D.D. 14 B 44-2c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

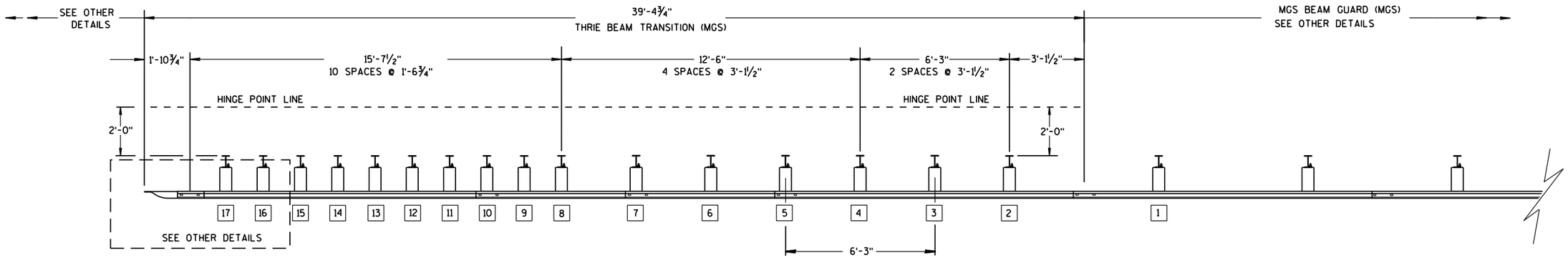
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

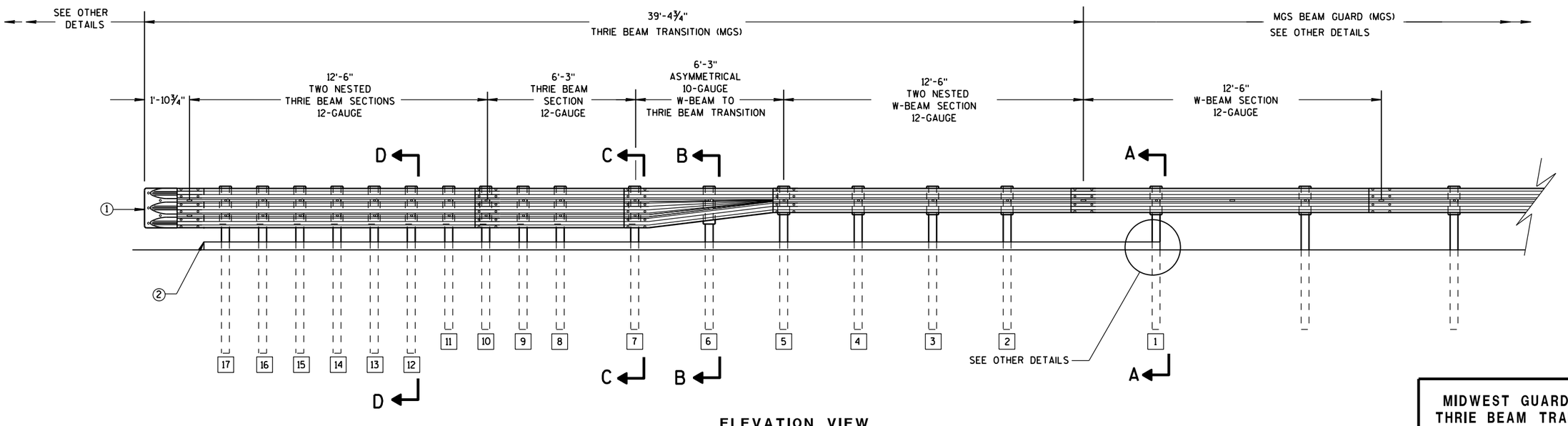
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 45-4a

6

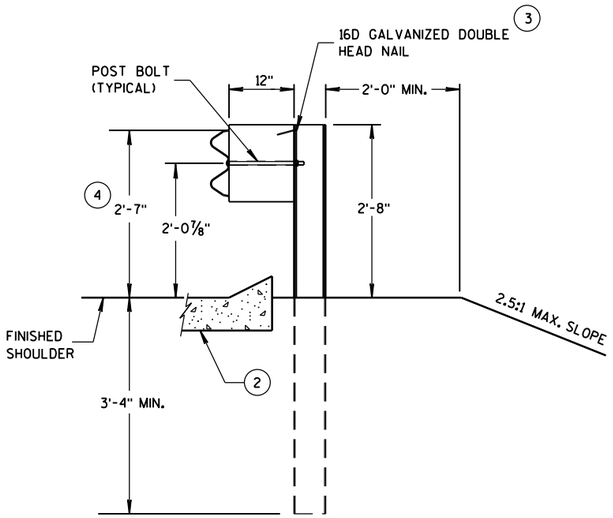
S.D.D. 14 B 45-4a

GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

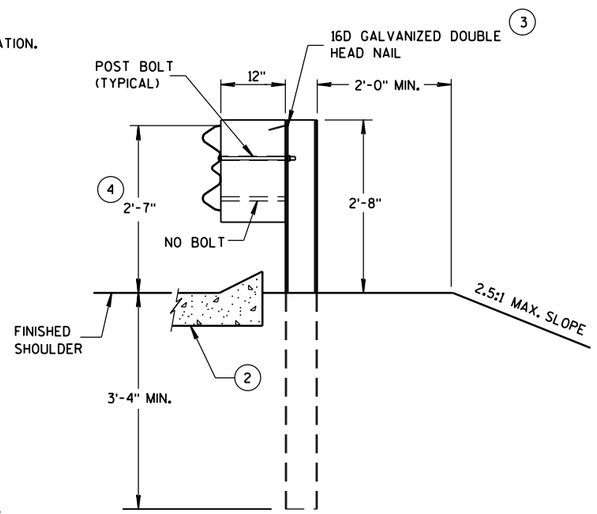
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



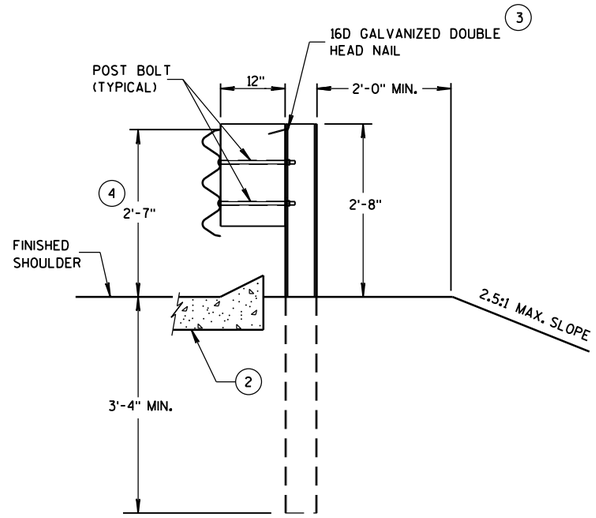
SECTION A-A

POSTS 1-5



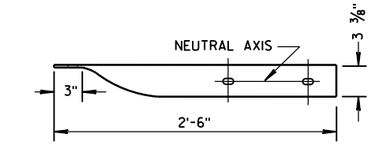
SECTION B-B

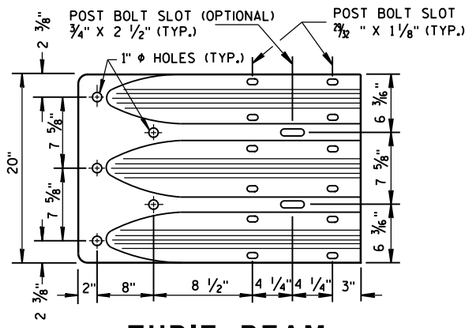
POST 6



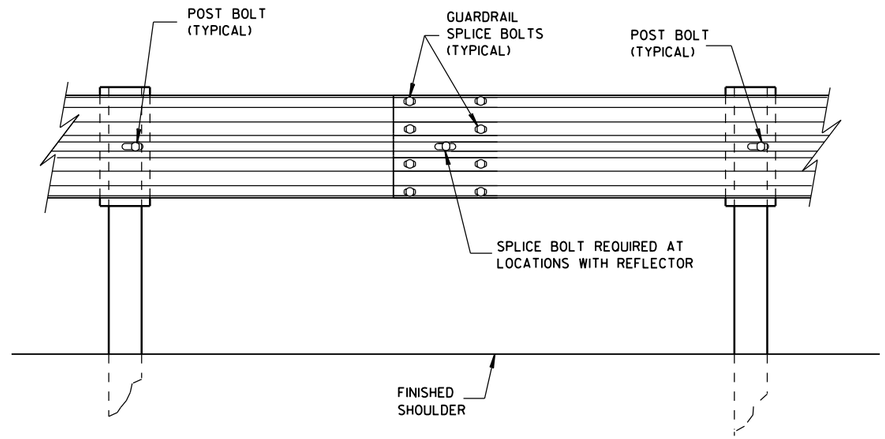
SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR



SPLICE DETAIL

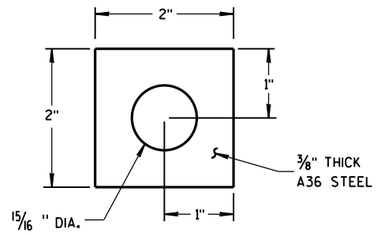
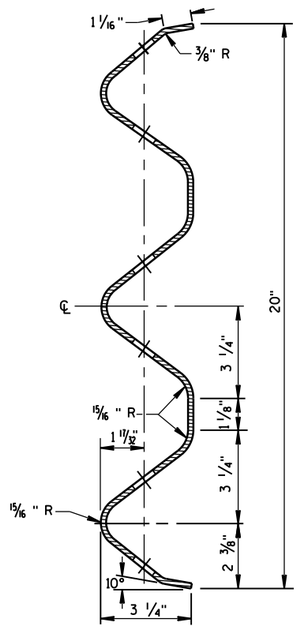
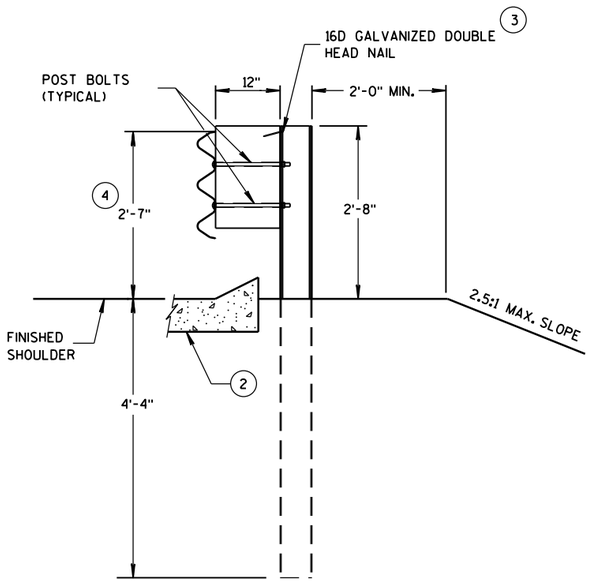


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

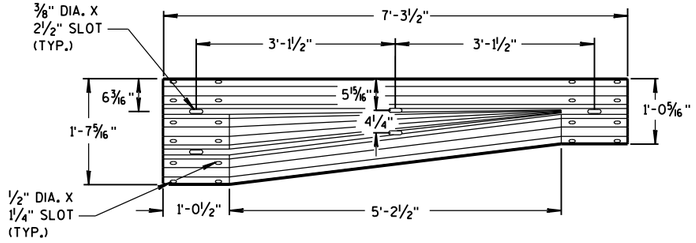
POSTS 12-17

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

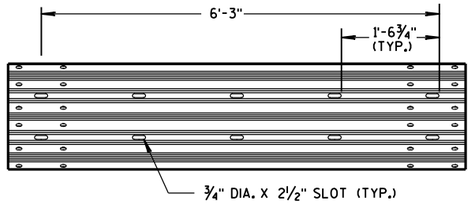
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

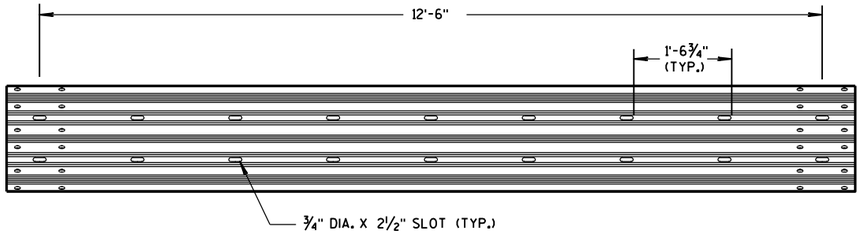
S.D.D. 14 B 45-4b



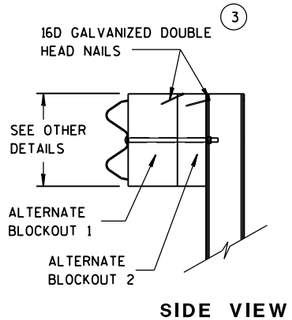
W-BEAM TO THRIE BEAM TRANSITION SECTION



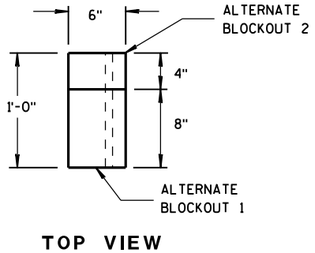
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

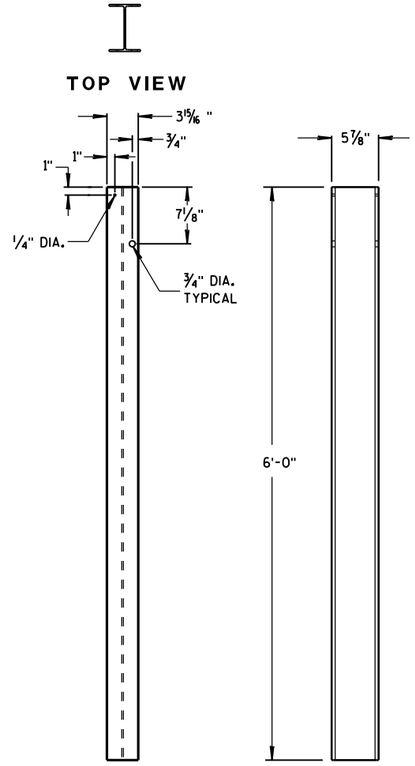


SIDE VIEW

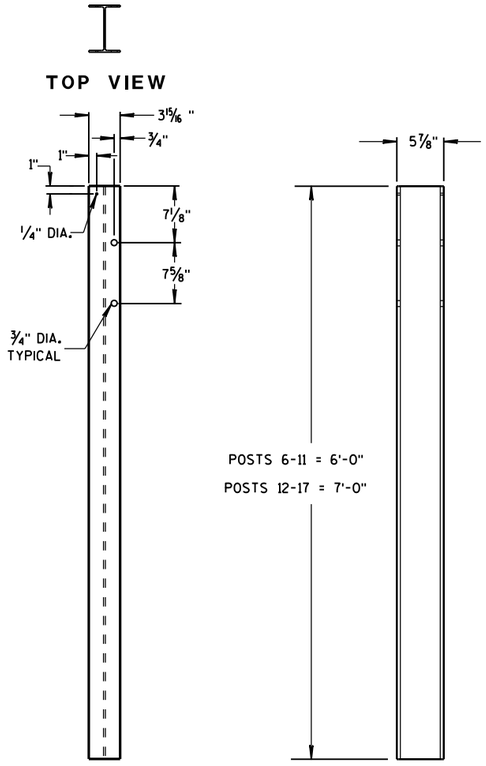


TOP VIEW

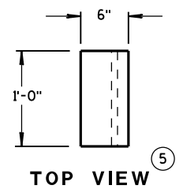
ALTERNATE WOOD BLOCKOUT DETAIL



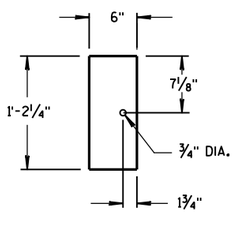
STEEL POSTS 1-5



STEEL POSTS 6-17

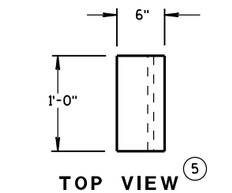


TOP VIEW

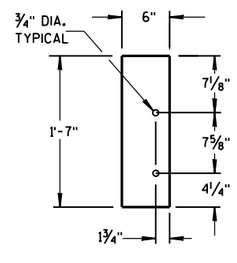


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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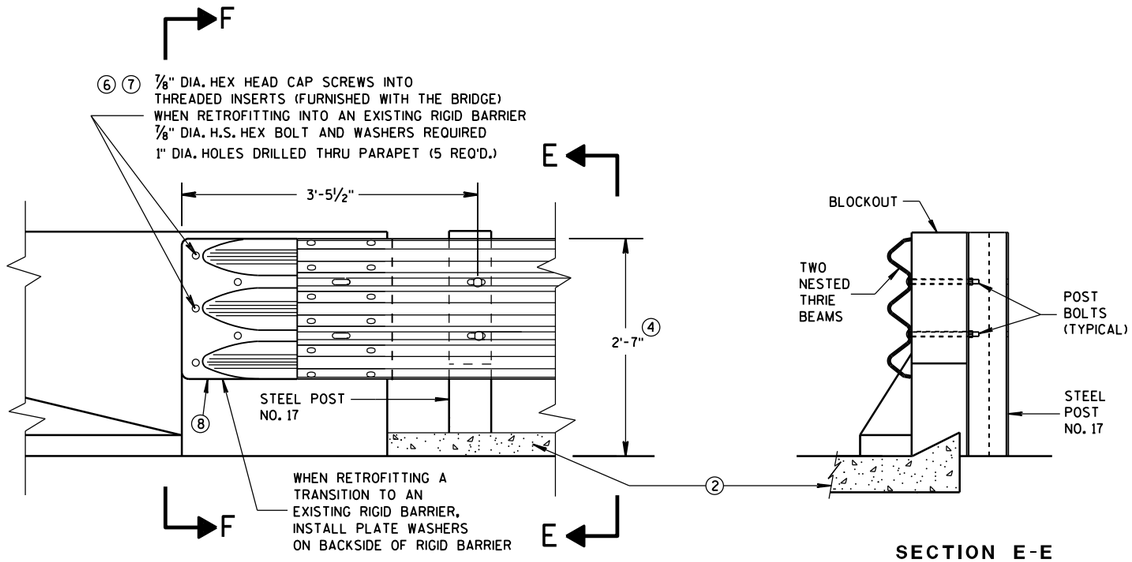
S.D.D. 14 B 45-4c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

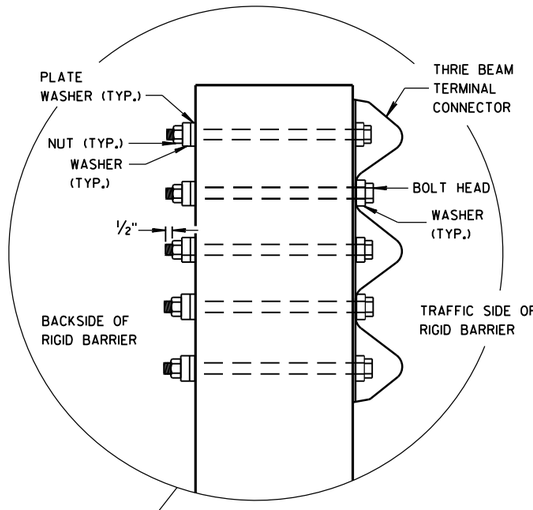
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

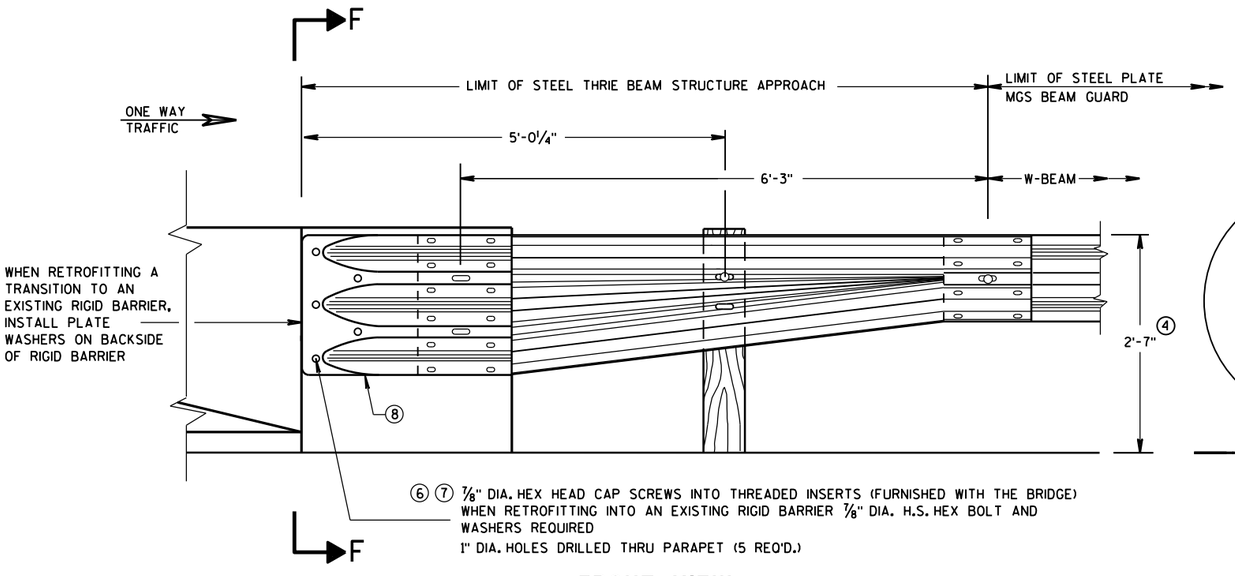
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

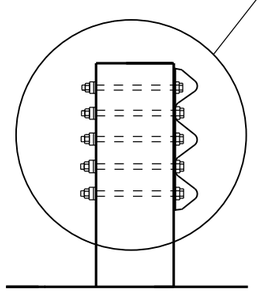
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

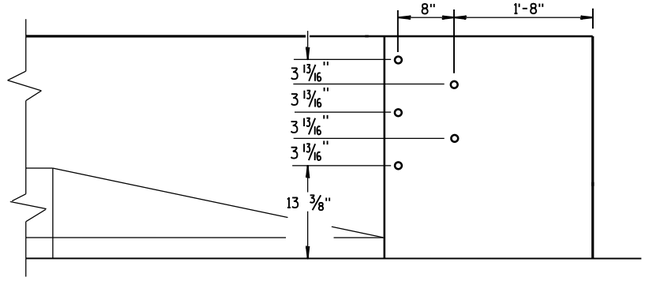




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA
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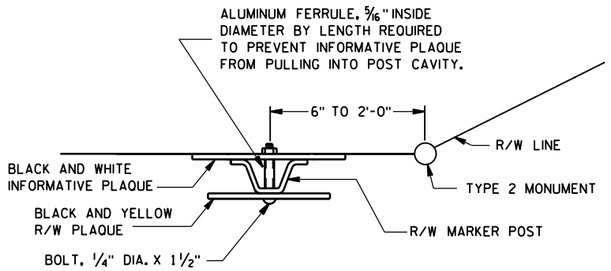
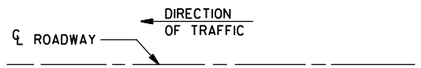
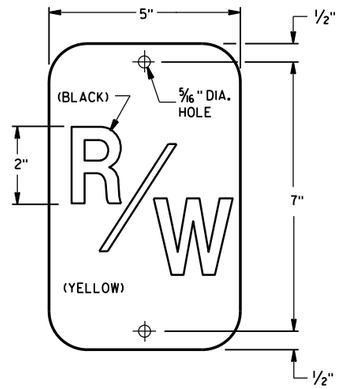
S.D.D. 14 B 45-4d



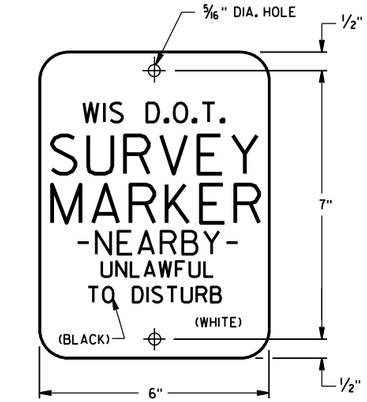


PLAN VIEW



R/W PLAQUE

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



INFORMATIVE PLAQUE

GENERAL NOTES

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

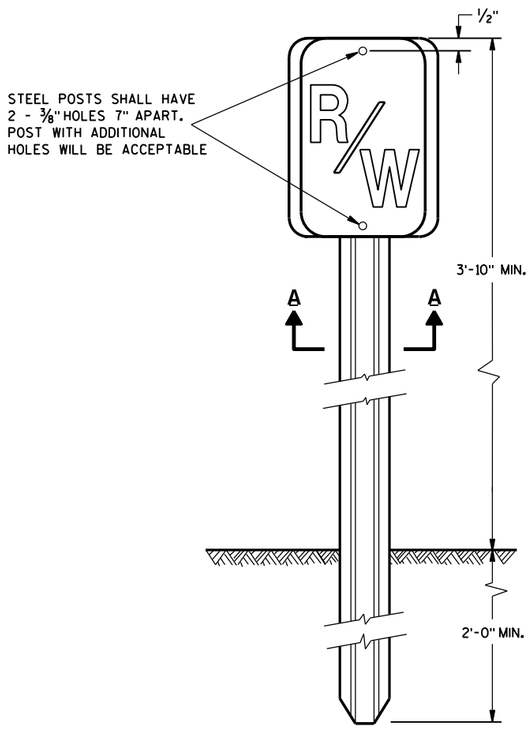
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. R/W AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE DEPARTMENT OF TRANSPORTATION.

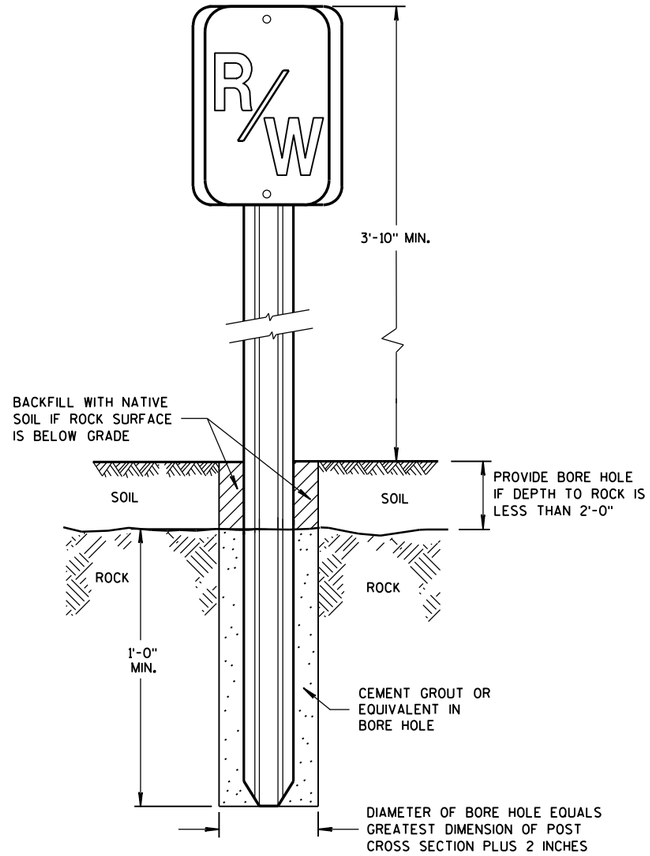
STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3'10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR.

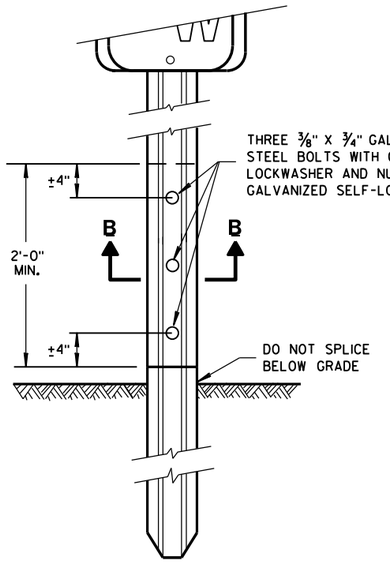
FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT. DEPENDING ON THE STABILITY OF THE ROCK.



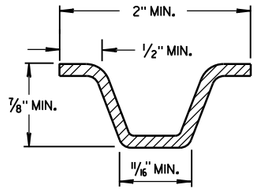
FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)

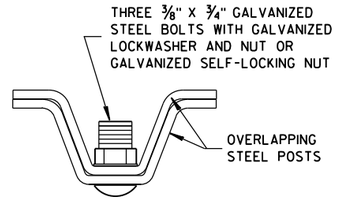


FRONT VIEW
SPLICE DETAIL



MIN. WEIGHT 1.12 LB./FT.

SECTION A-A



SECTION B-B

MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/18/2016 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MA[illegible]INEER
FHWA

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S.D.D. 15 A 1-13a

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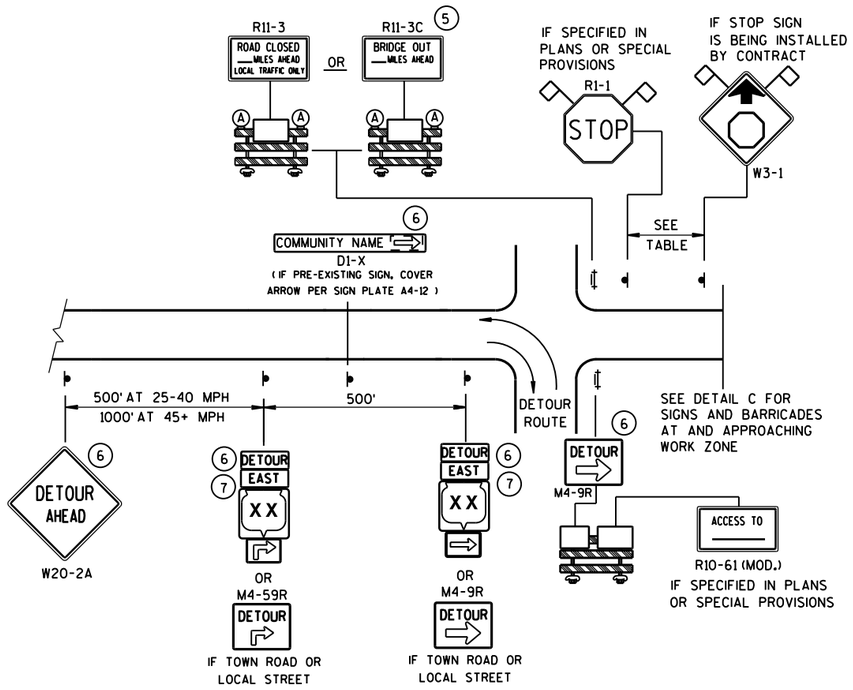
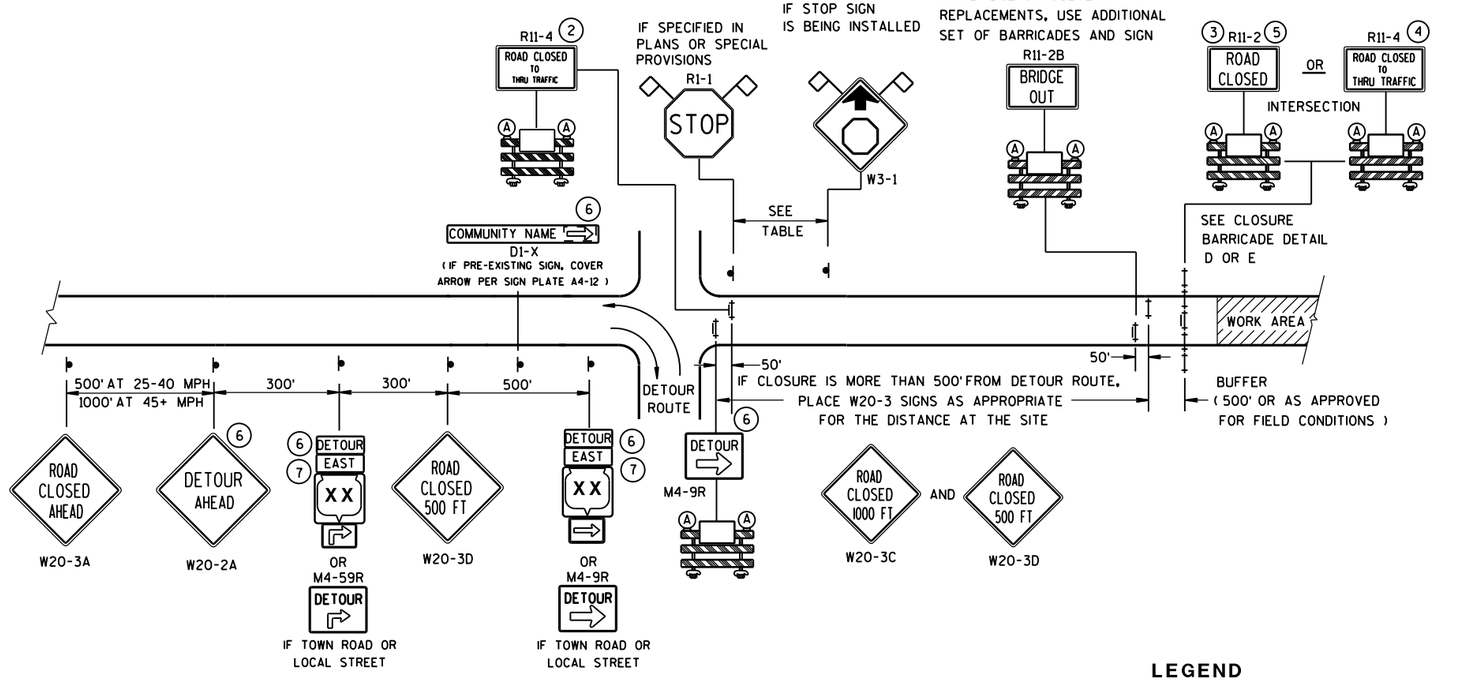
S.D.D. 15 A 1-13a



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

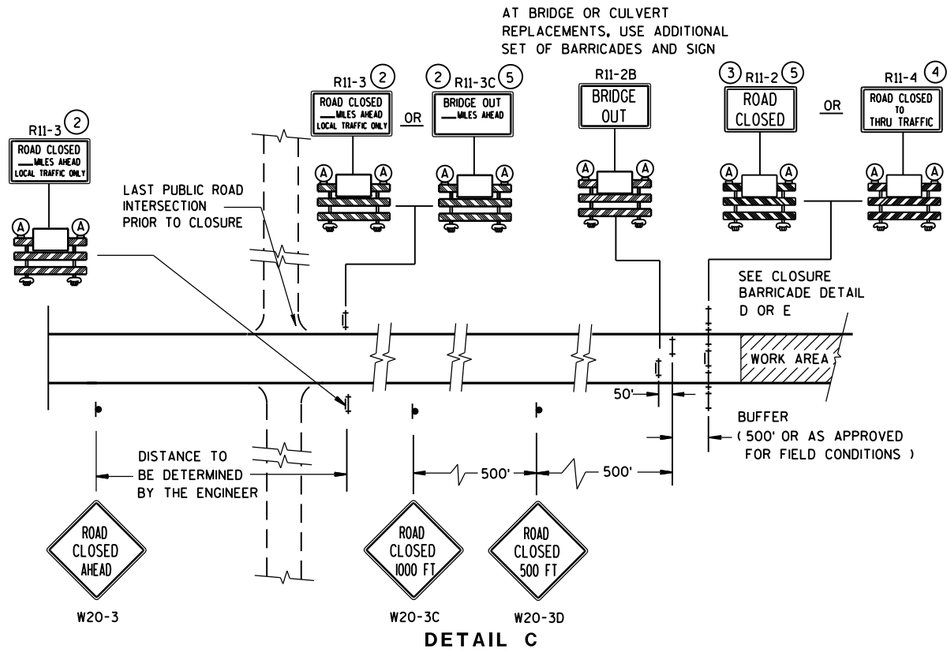
WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



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

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

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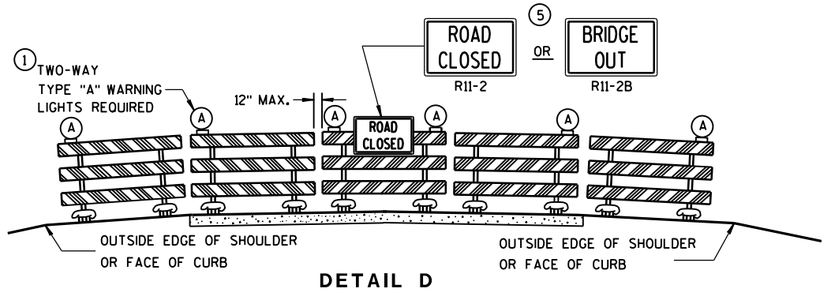
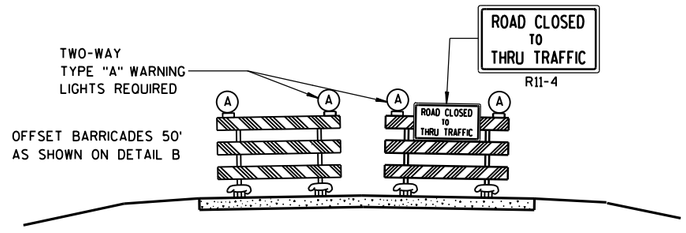
S.D.D. 15 C 2-6a



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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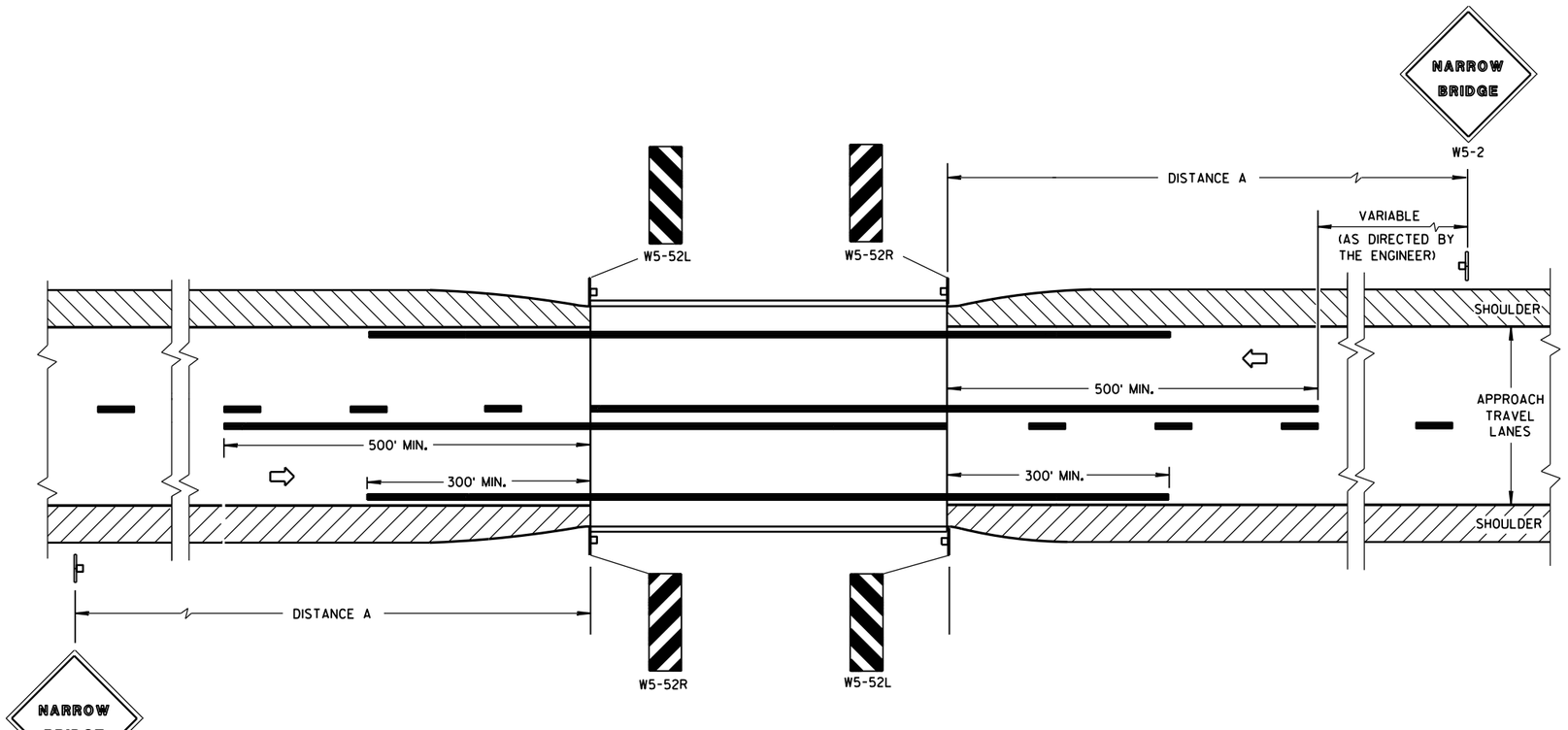


SITUATION 1

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

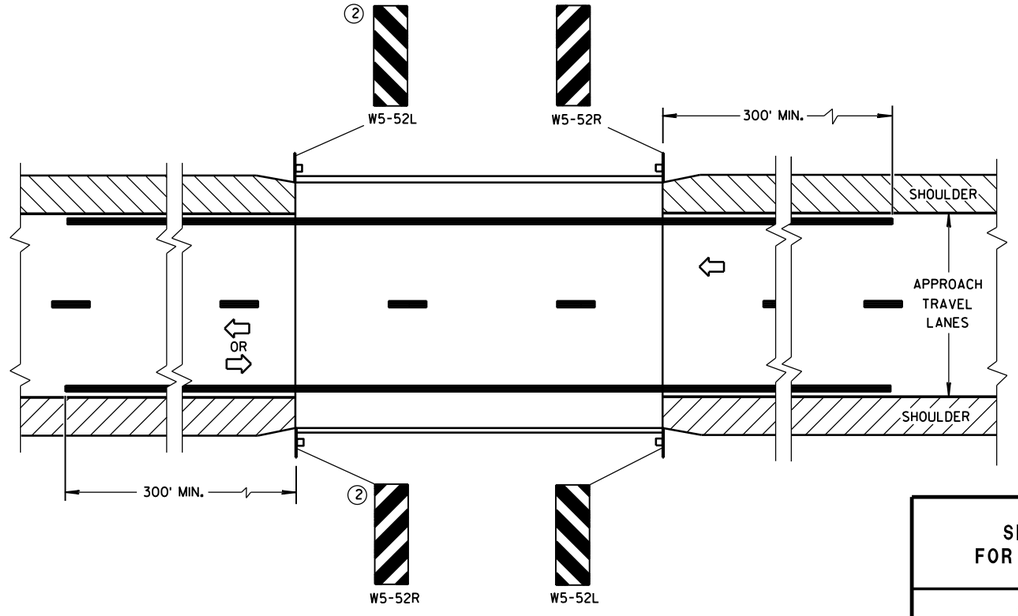
DISTANCE TABLE

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

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.



SITUATION 2

WARRANTING CRITERIA:

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

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]EER
FHWA

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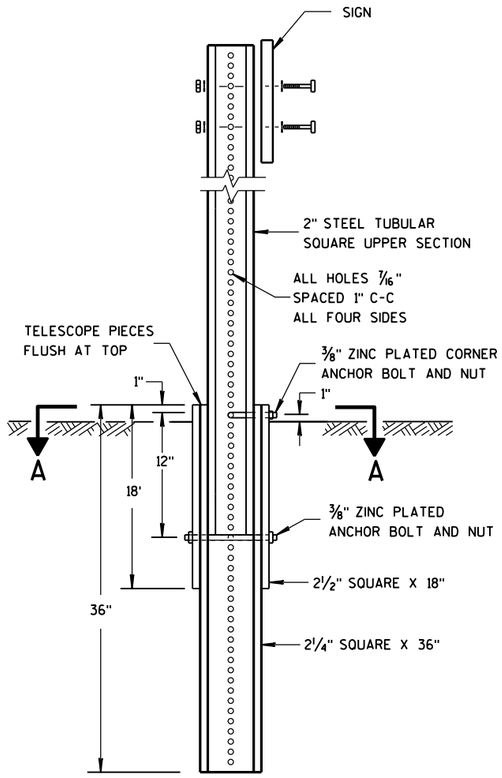
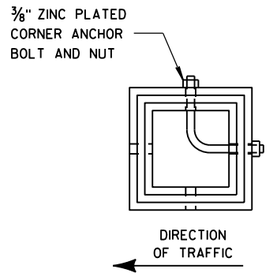
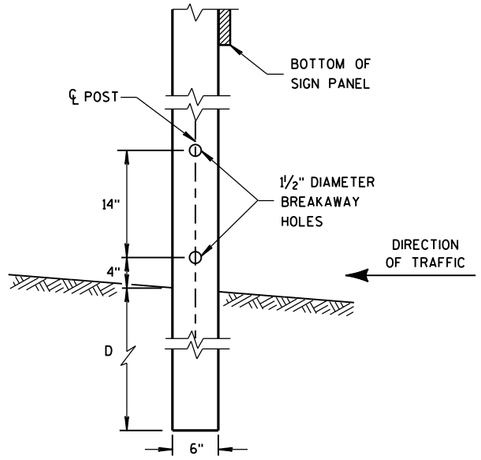
S.D.D. 15 C 6-8



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



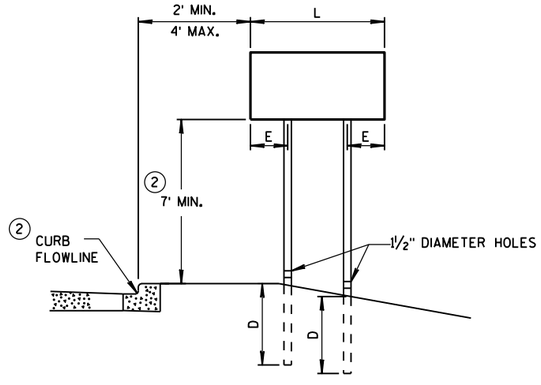
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

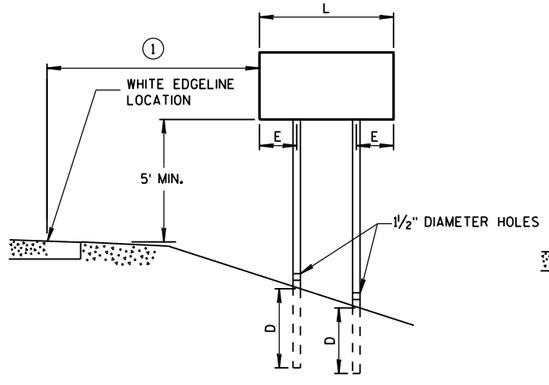
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

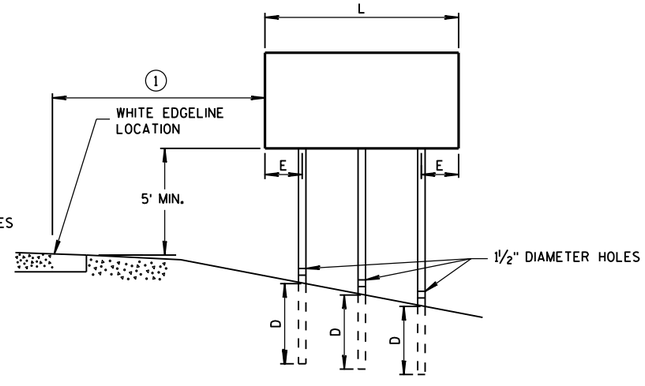
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

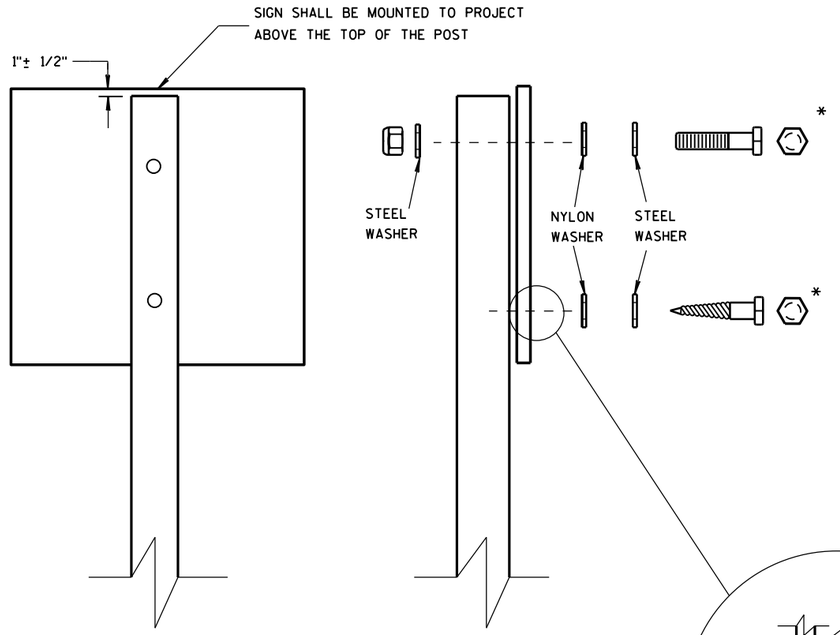
SEE NOTE (3)

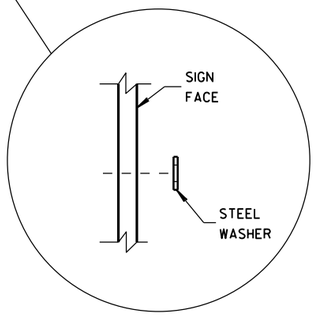
TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 38-1a





WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-1b

S.D.D. 15 D 38-1b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

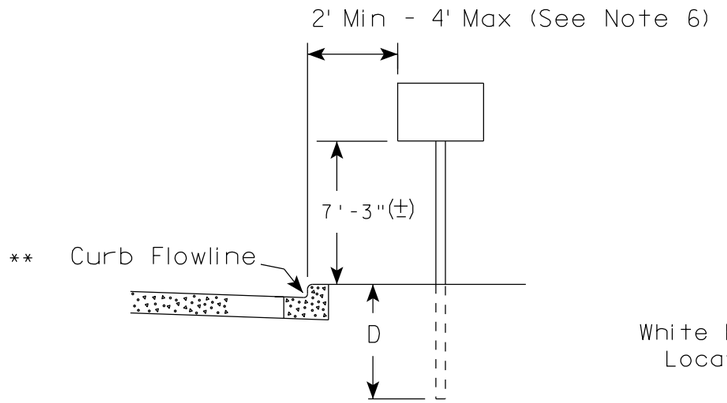
Feb. 2015 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

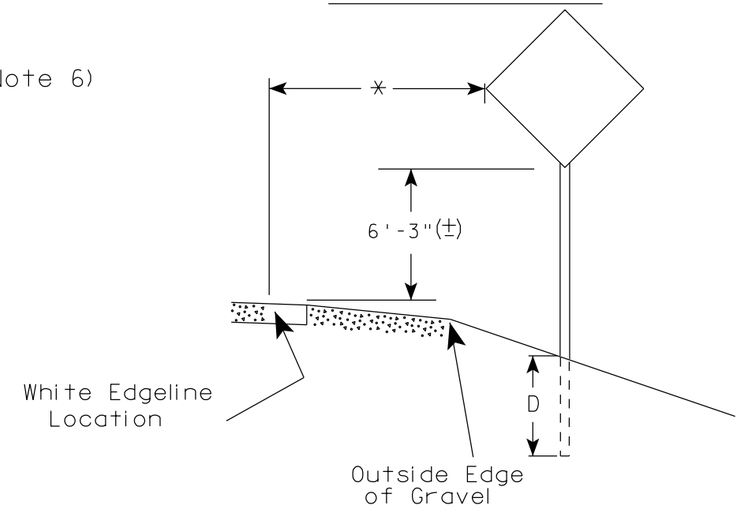
FHWA

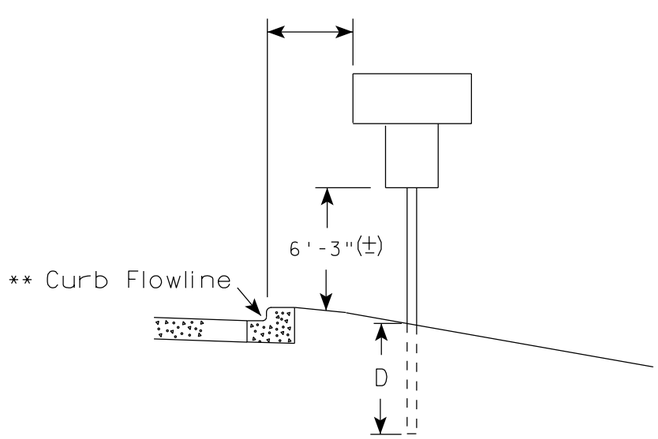
SIGN

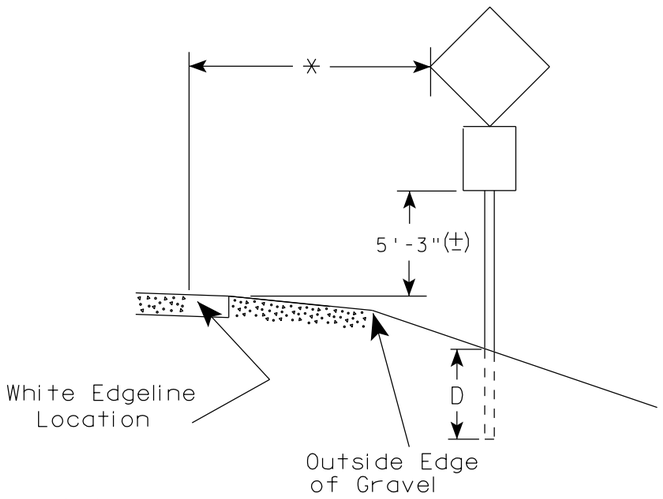
URBAN AREA



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.

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 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" (±).

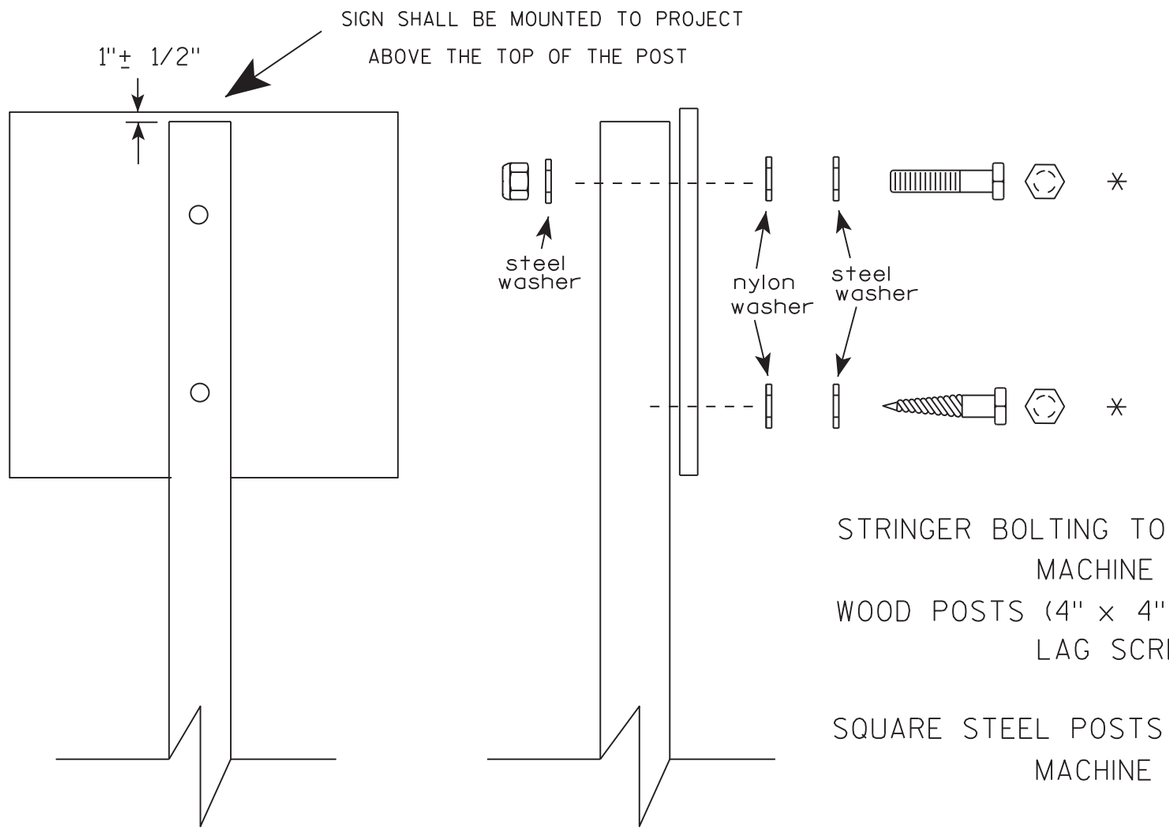
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

PROJECT NO:	HWY:	COUNTY:		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.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

* 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.

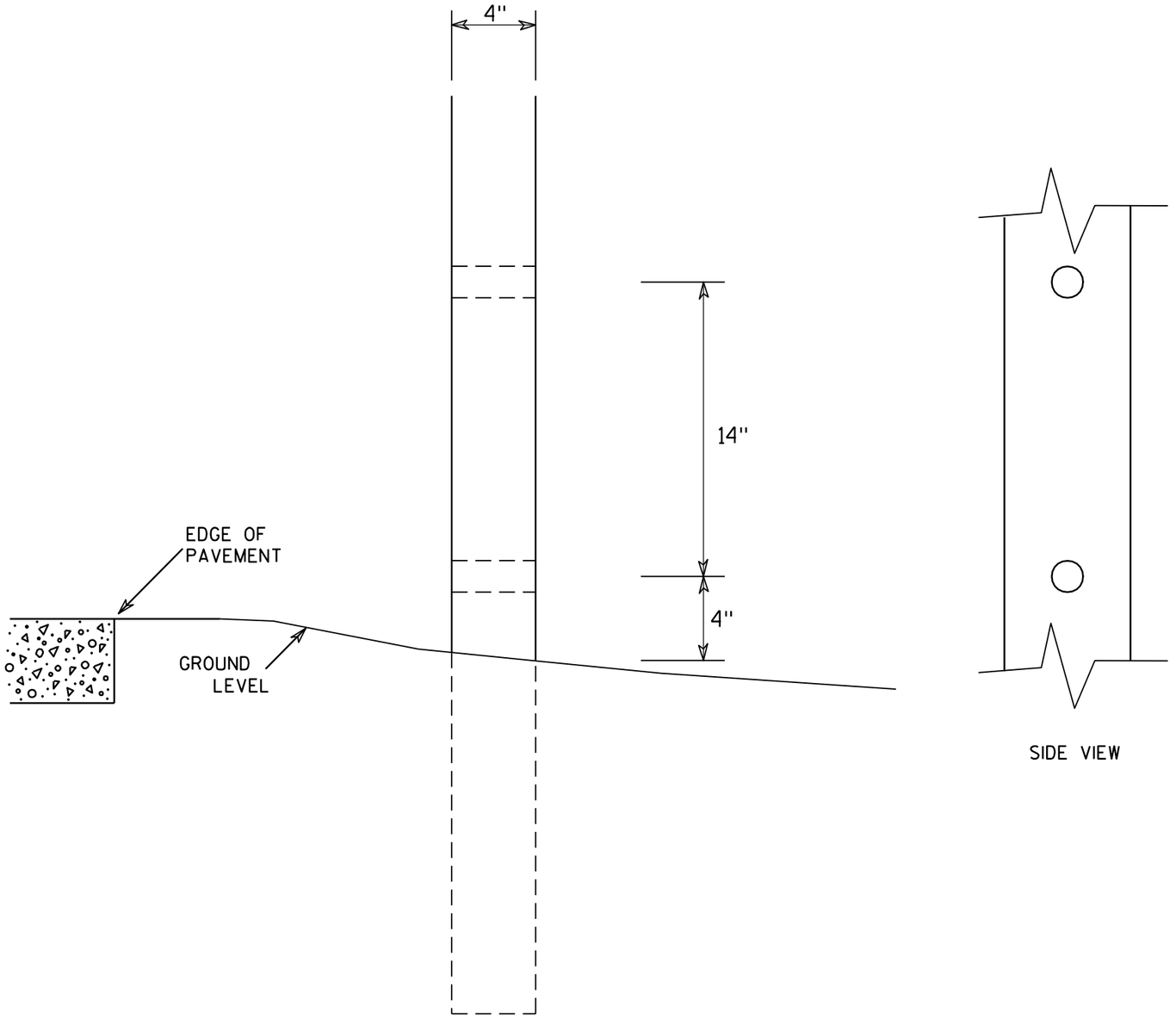
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: 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

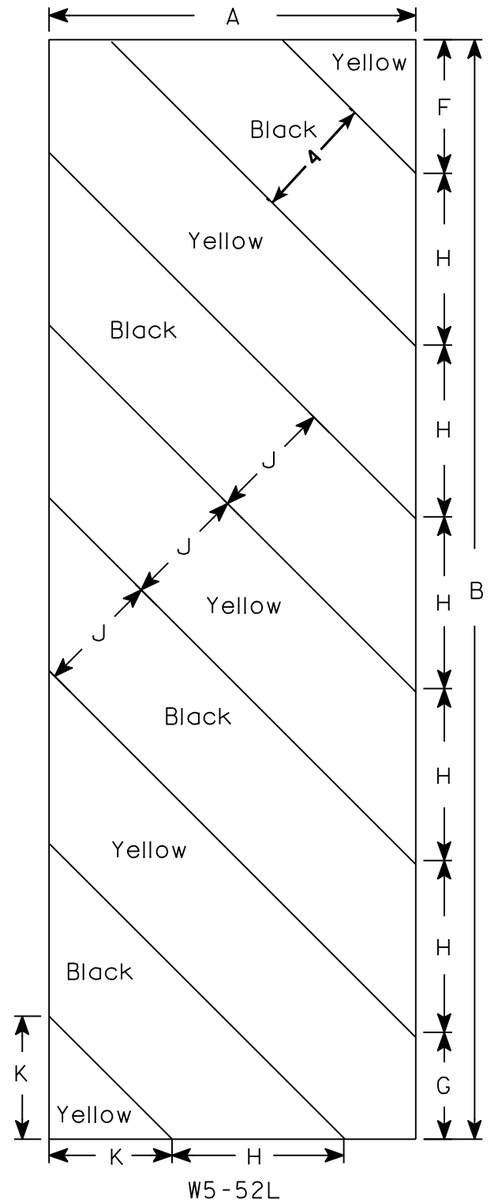
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

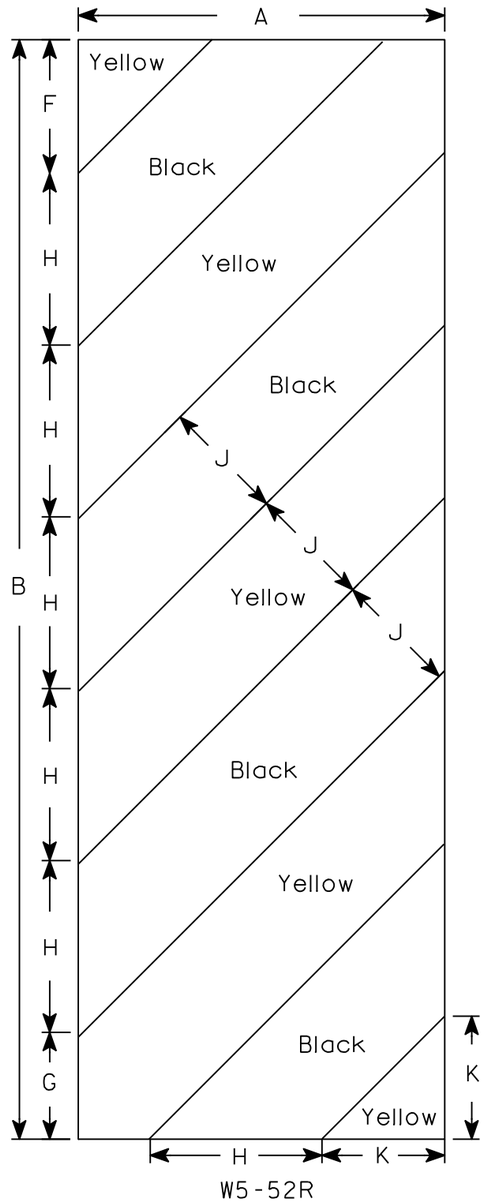
APPROVED Chester J Spang
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 37	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

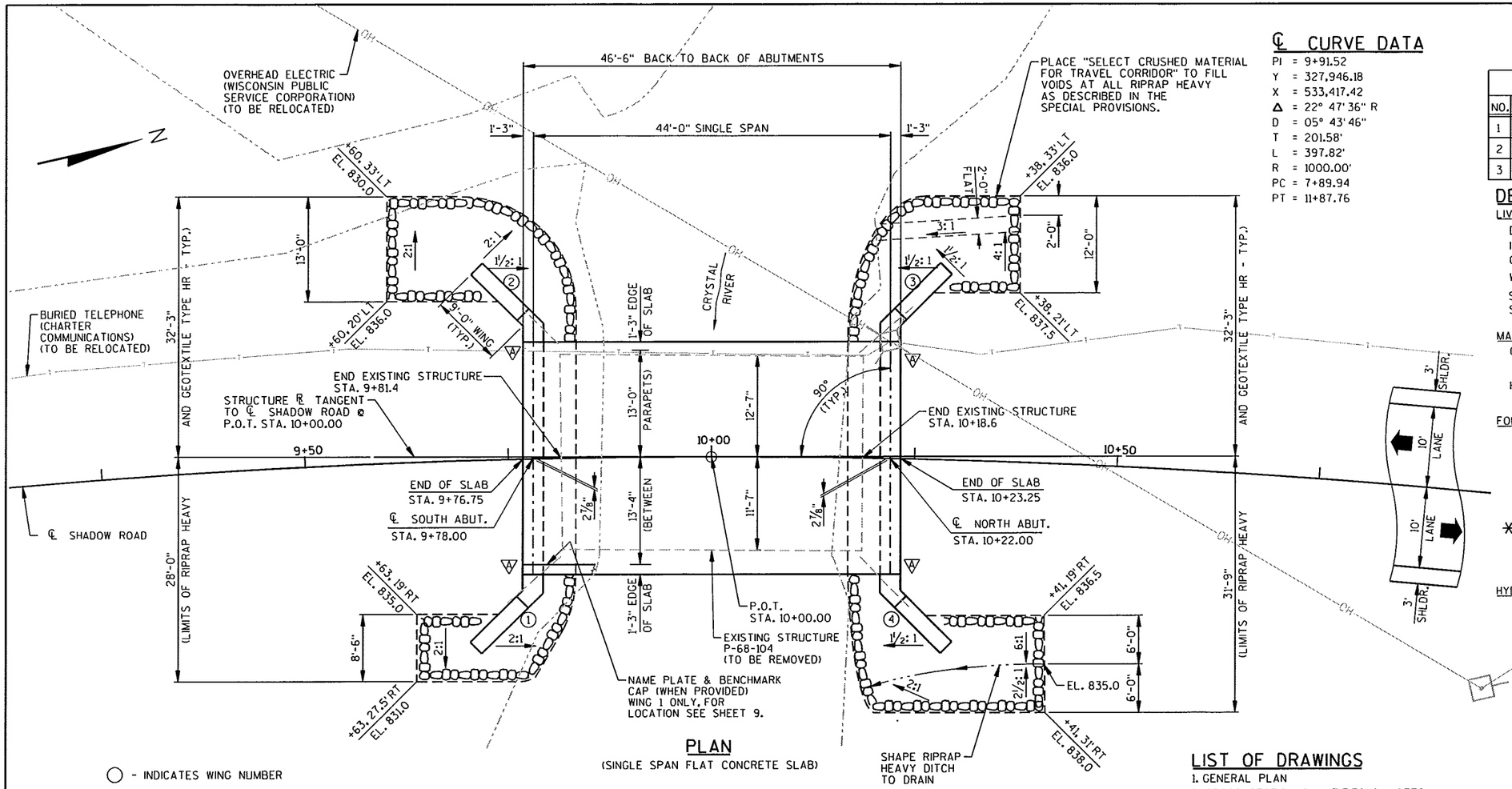
W5-52L & W5-52R

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: 38 | E



PLAN
(SINGLE SPAN FLAT CONCRETE SLAB)

○ - INDICATES WING NUMBER

▽ - INDICATES LOCATION OF PROVISION FOR THRIE BEAM GUARD ATTACHMENT.

℄ CURVE DATA

PI = 9+91.52
Y = 327,946.18
X = 533,417.42
Δ = 22° 47' 36" R
D = 05° 43' 46"
T = 201.58'
L = 397.82'
R = 1000.00'
PC = 7+89.94
PT = 11+87.76

DESIGN DATA

LIVE LOAD:
DESIGN LOADING : HL-93
INVENTORY RATING FACTOR : 1.10
OPERATIONAL RATING FACTOR : 1.43
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

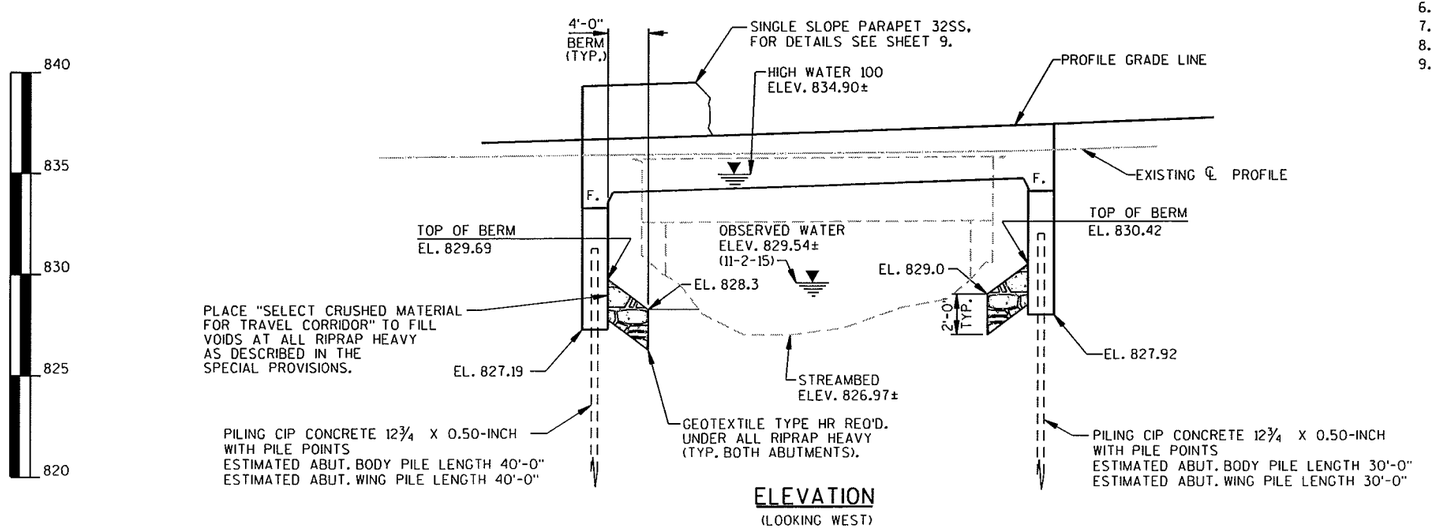
TRAFFIC DATA:
A.A.D.T. (2018) = 320
A.A.D.T. (2038) = 430
R.D.S. = 40 MPH

MATERIAL PROPERTIES:
CONCRETE MASONRY, SLAB & PARAPETS —— 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 12¾ X 0.50-INCH WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 40'-0" AT THE SOUTH ABUTMENT BODY, 40'-0" AT THE SOUTH ABUTMENT WINGS, 30'-0" AT THE NORTH ABUTMENT BODY AND 30'-0" AT THE NORTH ABUTMENT WINGS.

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

HYDRAULIC DATA:
100 YEAR FREQUENCY
DRAINAGE AREA —— 84.6 SQ. MI.
Q_{100} —— 1,180 C.F.S.
VELOCITY —— 3.7 FT./SEC.
WATERWAY AREA —— 250 SQ. FT.
SCOUR CRITICAL CODE —— 8
HIGH WATER $_{100}$ ELEVATION —— 834.90
Q_2 ELEVATION (420 C.F.S.) —— 831.35
$VELOCITY_2$ —— 4.3 FT./SEC.
ROADWAY OVERFLOW DESIGN FREQUENCY
OVERTOPPING FREQUENCY —— > 100 YEARS



ELEVATION
(LOOKING WEST)

LIST OF DRAWINGS

STATE PROJECT NUMBER
6902-00-70

BENCHMARKS — NAVD 88

NO.	STA./OFFSET	DESCRIPTION	ELEV.
1	10+18.01, 12.2' LT	CHIS SO ON NW CORNER BRIDGE ABUT.	835.73
2	8+13.98, 18.0' LT	2 POLE NAILS IN 36" OAK TREE	834.81
3	10+29.74, 30.4' LT	2 POLE NAILS IN CLUMP OF OAKS	834.42

CONSULTANT DESIGN CONTACT:
JOSHUA SWENO
(608) 355-8852

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608) 266-8489

WISCONSIN
JOSHUA R. SWENO
E-44384
WAUNAKEE
WI
PROFESSIONAL ENGINEER
6/1/2017

NO.	DATE	REVISION	BY

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 08/28/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-68-141

SHADOW ROAD OVER CRYSTAL RIVER

COUNTY	TOWN ~~CITY/VILLAGE~~
WAUPACA	LIND

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

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

GENERAL PLAN

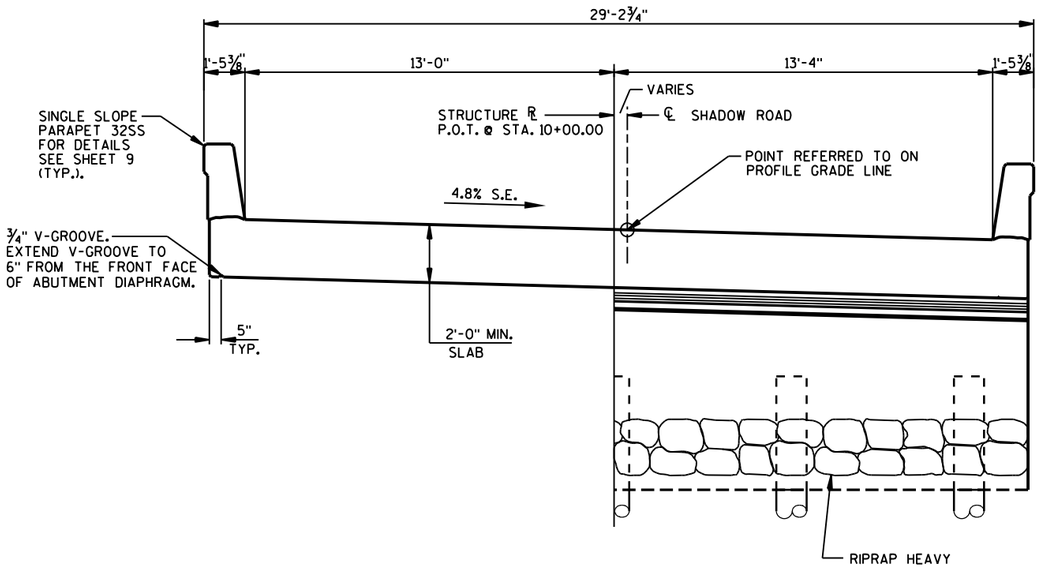
SHEET 39 OF 9

FILE= 11522015_01.DGN
DATE= 5/11/2017

11522015_01.dgn 5/11/2017 10:04:00 AM rrabska

STATE PROJECT NUMBER

6902-00-70



IN SPAN AT ABUTMENTS

CROSS SECTION THRU BRIDGE

(LOOKING NORTH)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

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

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

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

THIS STRUCTURE WILL REPLACE THE EXISTING STRUCTURE, P-68-104, A 37.2 FT. LONG, SINGLE SPAN CONCRETE DECK GIRDER ON FULL RETAINING CONCRETE ABUTMENTS WITH 24.2 FT. CLEAR ROAD WIDTH.

Ⓑ - BACKFILL PAY LIMITS, BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

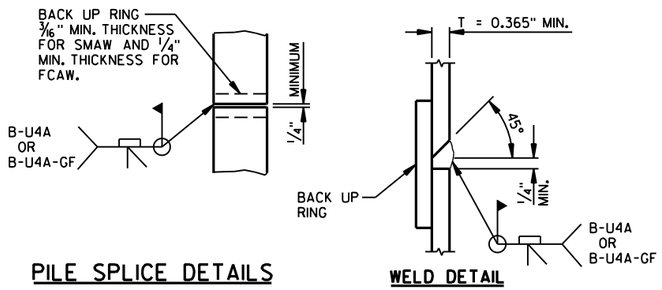
AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CAN NOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

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

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF SLAB, TO THE TOPS OF WINGS, AND TO THE EXPOSED FRONT FACES OF WINGS.

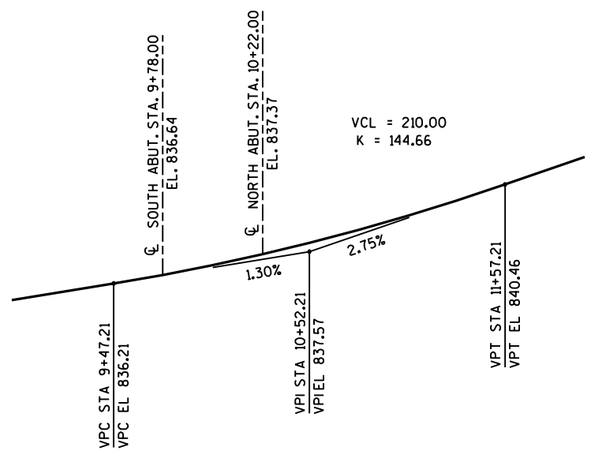
PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE FACES, THE TOP FACES, AND THE VERTICAL ENDS OF THE PARAPETS.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2007 ADJUSTED). BENCHMARK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.



PILE SPLICE DETAILS

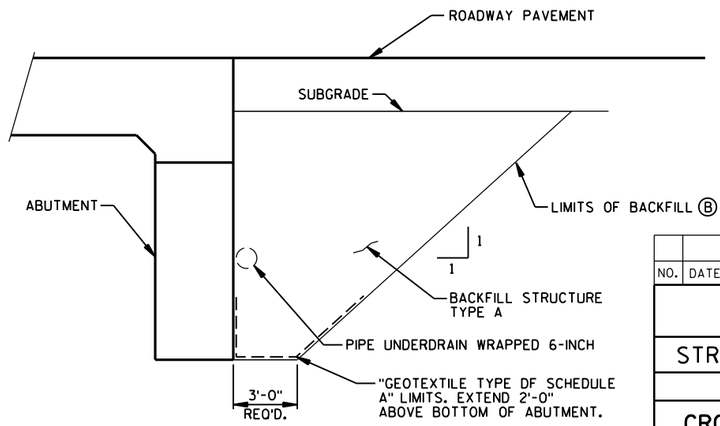
WELD DETAIL



PROFILE GRADE LINE - SHADOW ROAD

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUT.	NORTH ABUT.	SUPER	TOTAL
203.0600.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00 STRUCTURE P-68-104	LS	-	-	-	1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-68-141	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	200	205	-	405
502.0100	CONCRETE MASONRY BRIDGES	CY	34	34	115	183
502.3200	PROTECTIVE SURFACE TREATMENT	SY	20	20	140	180
502.3210	PIGMENTED SURFACE SEALER	SY	-	-	40	40
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2300	2300	-	4600
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1530	1530	19910	22970
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	6	-	12
550.0500	PILE POINTS	EACH	7	7	-	14
550.2128	PILING CIP CONCRETE 12 3/4 X 0.50-INCH	LF	280	210	-	490
606.0300	RIPRAP HEAVY	CY	45	55	-	100
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	70	70	-	140
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	-	4	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	50	50	-	100
645.0120	GEOTEXTILE TYPE HR	SY	110	130	-	240
SPV.0195.01	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	21	25	-	46
	NON-BID ITEMS					
	PREFORMED FILLER	SIZE				½" & ¾"



STRUCTURE BACKFILL DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-141

DRAWN BY RLR | PLANS CK'D. JRS

CROSS SECTION, QUANTITIES & NOTES

SHEET 2 OF 9
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FILE= 11522015_02.DGN
DATE= 5/31/2017

8

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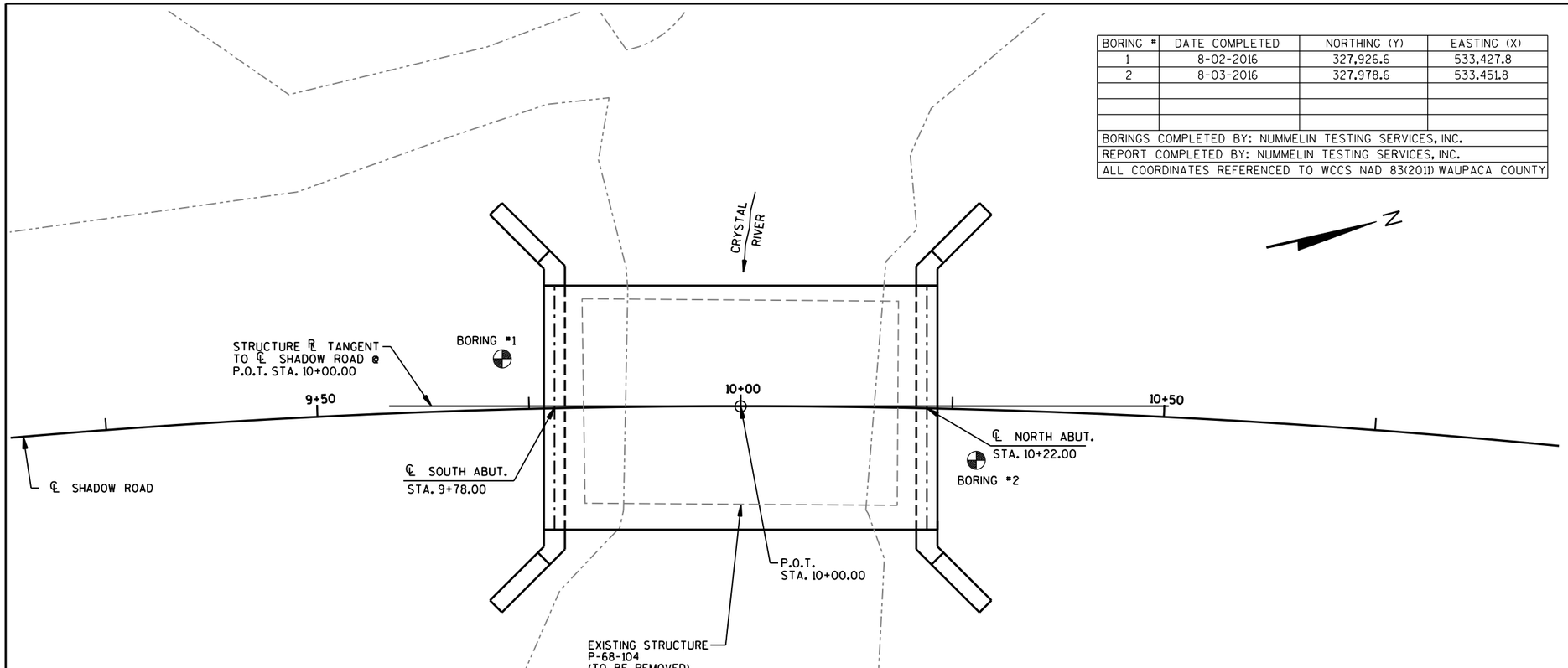
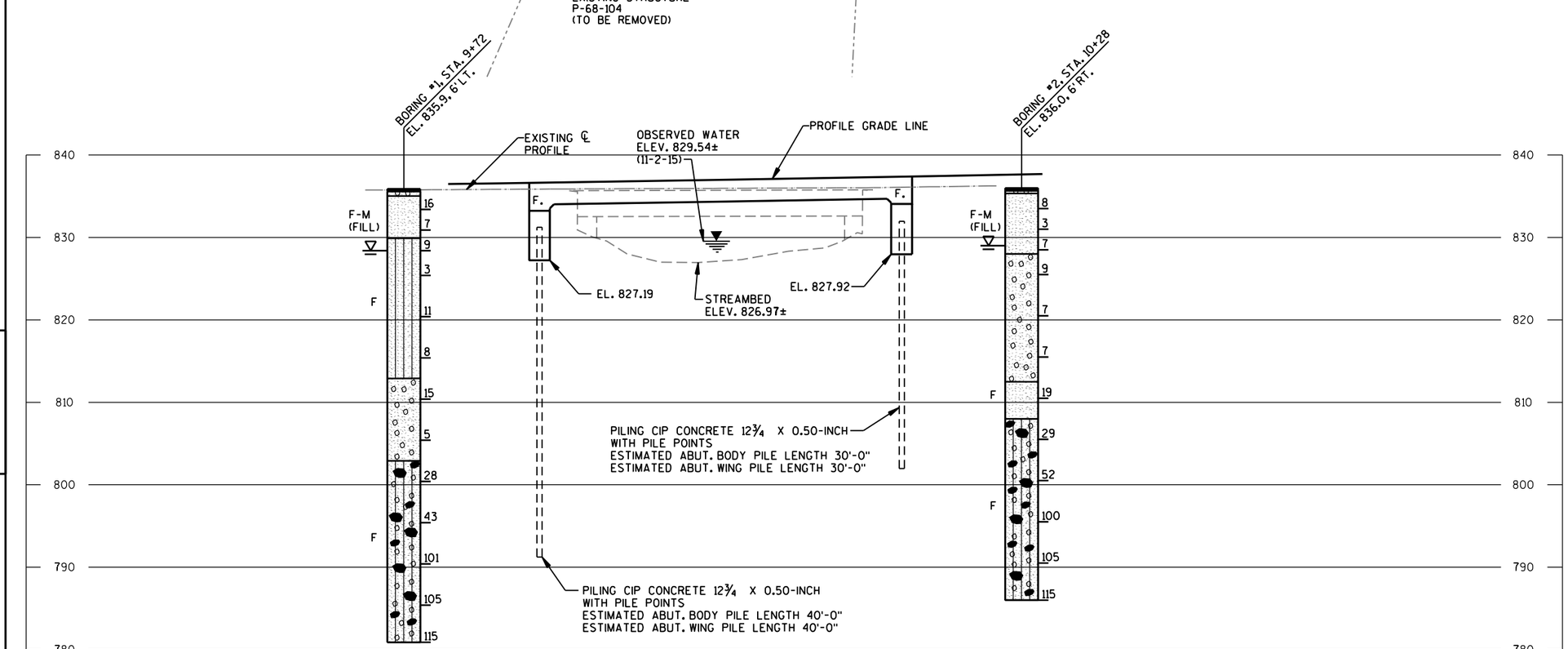
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	8-02-2016	327,926.6	533,427.8
2	8-03-2016	327,978.6	533,451.8
BORINGS COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(2011) WAUPACA COUNTY			





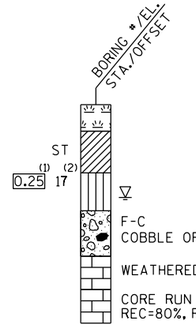
STATE PROJECT NUMBER

6902-00-70

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

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 ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE 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-68-141

DRAWN BY	RLR	PLANS CK'D.	JRS

SUBSURFACE EXPLORATION

SHEET 3 OF 9
41

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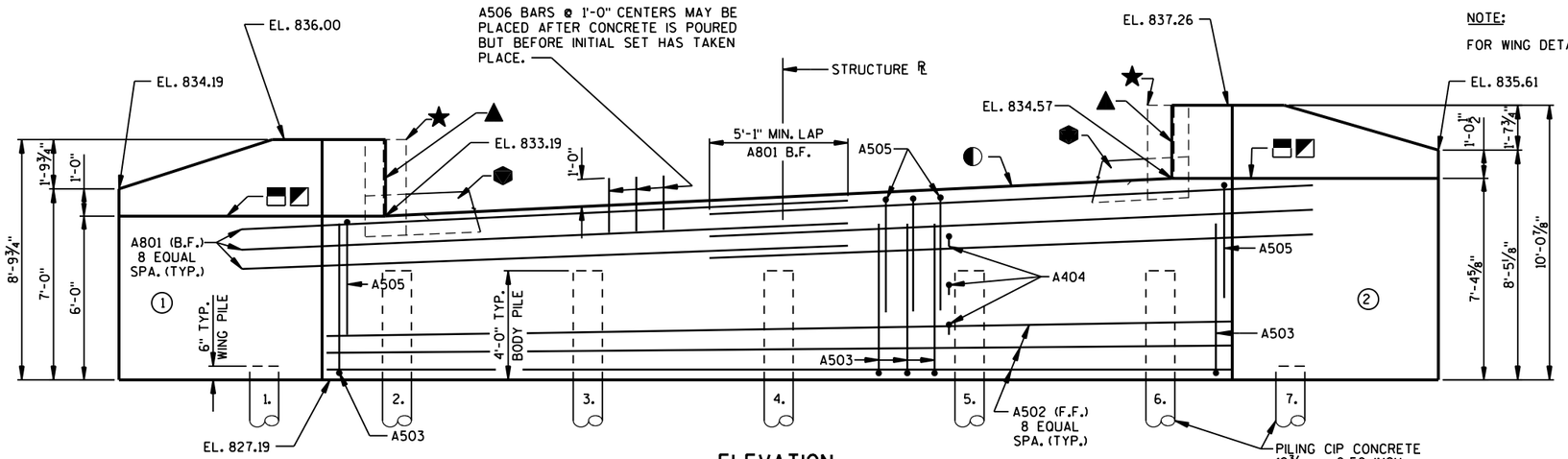
FILE= 11522015_03.DGN

11522015_03.dgn 5/11/2017 8:40:04 AM rrabska

STATE PROJECT NUMBER

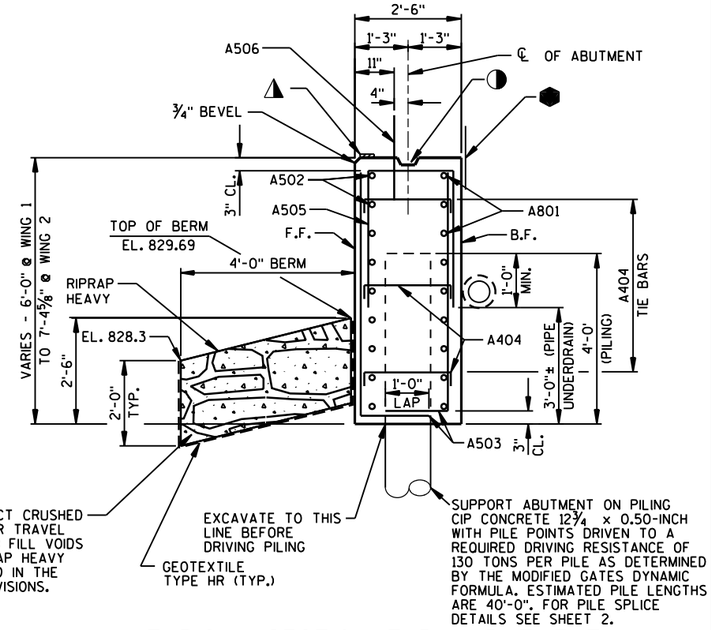
6902-00-70



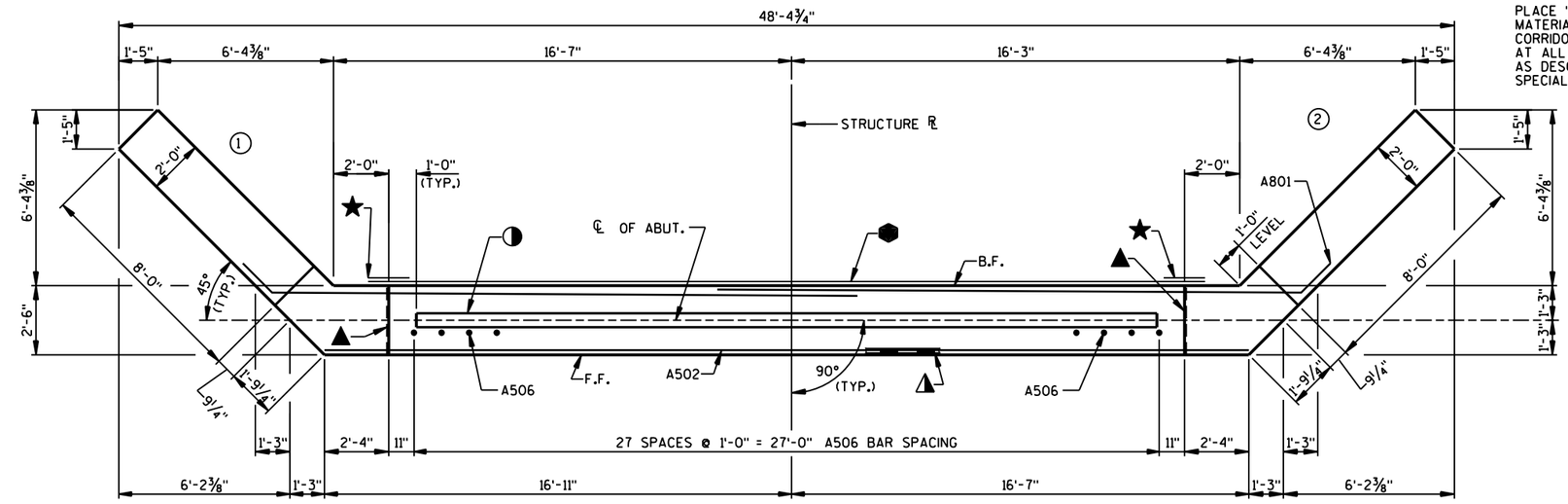
ELEVATION
(LOOKING SOUTH)

NOTE:

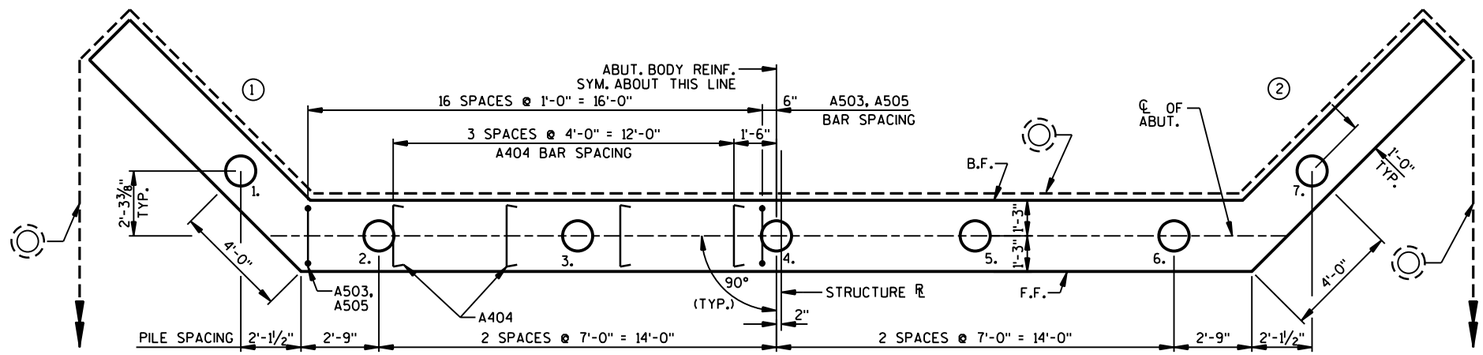
FOR WING DETAILS SEE SHEET 5.



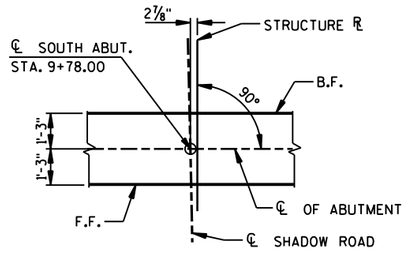
TYPICAL SECTION THRU ABUTMENT



PLAN



PILE PLAN



LAYOUT DETAIL

LEGEND

- ◯ — INDICATES WING NUMBER
- ◑ — KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ▲ — ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ◭ — 4"x ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- ★ — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO TOP OF WINGS.
- ⬢ — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS.
- ⬒ — OPTIONAL KEYED CONST. JOINT ON WING FORMED BY BEVELED 2 X 6. IF JOINT IS USED, PLACE ⬢ ON B.F. OF WING. COST OF ⬢ INCLUDED IN BID ITEM "CONCRETE MASONRY BRIDGES".
- ◹ — ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQUIRED ONLY WHERE CONSTRUCTION JOINT IS USED.
- ◎ — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS, SEE SHEET 5.

F.F. — FRONT FACE B.F. — BACK FACE CL. — CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-141

DRAWN BY RLR | PLANS CK'D. JRS

SOUTH ABUTMENT

SHEET 4 OF 9
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FILE= 11522015_04.DGN
DATE= 6/1/2017

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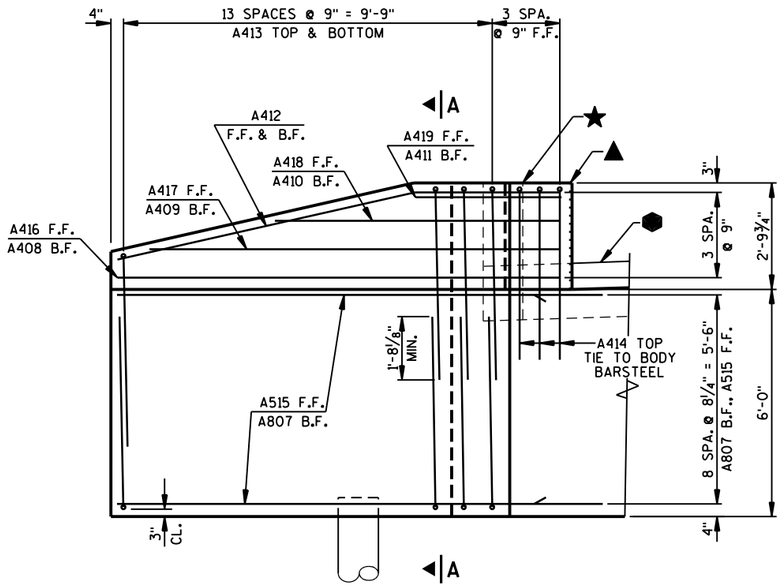
11522015_04.dgn 6/1/2017 8:58:35 AM jsweno

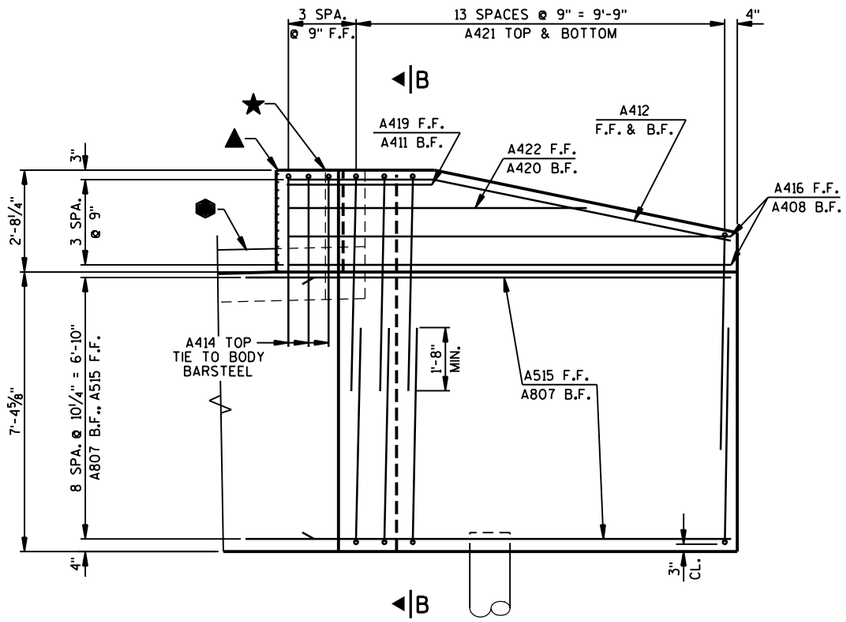
STATE PROJECT NUMBER

6902-00-70



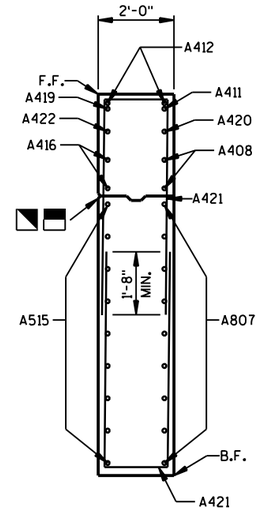
ELEVATION - WING 1

(LOOKING AT F.F. OF WING)

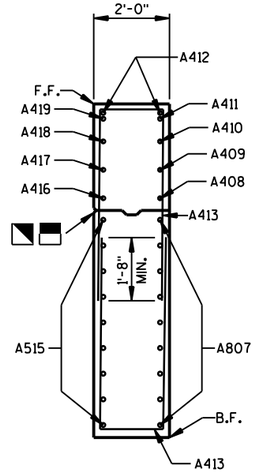


ELEVATION - WING 2

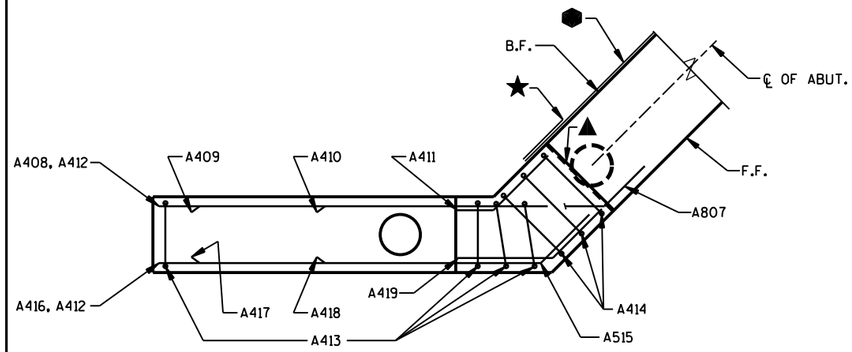
(LOOKING AT F.F. OF WING)



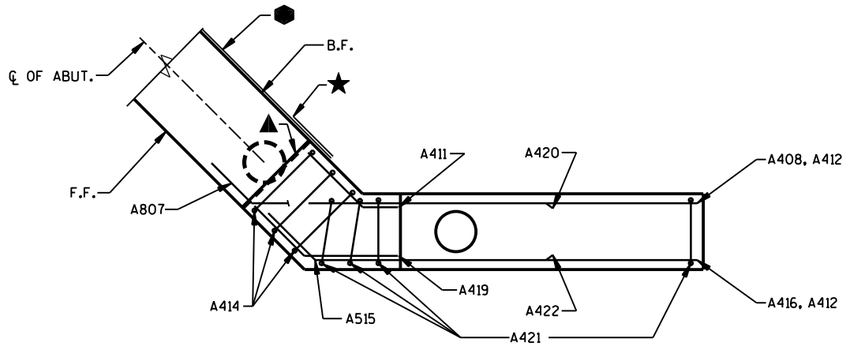
SECTION B-B
THRU WING 2



SECTION A-A
THRU WING 1



PLAN - WING 1



PLAN - WING 2

BILL OF BARS (SOUTH ABUT.)

UNCOATED 2300 LBS.
COATED 1530 LBS.

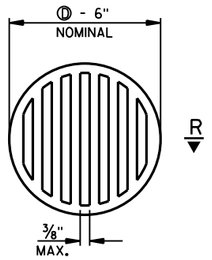
MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
A801	-	18	22'-7"	X	ABUTMENT BODY - B.F. - HORIZ.
A502	-	9	33'-5"		ABUTMENT BODY - F.F. - HORIZ.
A503	-	68	7'-0"	X	ABUTMENT BODY - F.F. & B.F. - VERT.
A404	-	24	2'-9"	X	ABUTMENT BODY - TIES - HORIZ.
A505	-	34	10'-3"	X	ABUTMENT BODY - TOP - VERT.
A506	28	-	2'-0"		ABUTMENT BODY - TOP DOWELS - VERT.
A807	18	-	13'-2"	X	WINGS - B.F. - HORIZ.
A408	3	-	10'-9"	X	WINGS - B.F. - HORIZ.
A409	1	-	9'-11"	X	WING 1 - B.F. - HORIZ.
A410	1	-	6'-7"	X	WING 1 - B.F. - HORIZ.
A411	2	-	2'-11"	X	WINGS - B.F. - TOP - HORIZ.
A412	4	-	10'-5"	X	WINGS - F.F. & B.F. - TOP - HORIZ.
A413	28	-	11'-6"	X	WING 1 - TOP & BOTTOM - VERT.
A414	6	-	11'-0"	X	WINGS - TOP - VERT.
A515	18	-	11'-8"	X	WINGS - F.F. - HORIZ.
A416	3	-	12'-3"	X	WINGS - F.F. - HORIZ.
A417	1	-	11'-5"	X	WING 1 - F.F. - HORIZ.
A418	1	-	8'-1"	X	WING 1 - F.F. - HORIZ.
A419	2	-	4'-4"	X	WINGS - F.F. - HORIZ.
A420	1	-	6'-11"	X	WING 2 - B.F. - HORIZ.
A421	28	-	12'-10"	X	WING 2 - TOP & BOTTOM - VERT.
A422	1	-	8'-5"	X	WING 2 - F.F. - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

RODENT SHIELD NOTES:

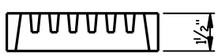
ORIENT SHIELD SO SLOTS ARE VERTICAL.

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHEMENT OF THIS SHIELD TO THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH STAINLESS STEEL SHEET METAL SCREWS. THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



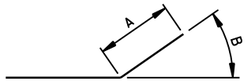
RODENT SHIELD

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

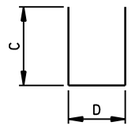


SECTION R-R

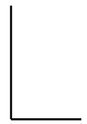
SEE LEGEND ON SHEET 4 FOR DESCRIPTION OF ★ ⬢ ◥ ▭ ▲



MARK	A	B
A801, A807, A515	1'-6"	45°
A408, A409, A410, A411, A420	1'-10"	45°
A412	2'-5"	13°
A416, A417, A418, A419, A422	2'-0"	45°



MARK	C	D
A404	4½"	2'-2"
A505	4'-2"	2'-2"
A413	5'-0"	1'-8"
A414	4'-6"	2'-2"
A421	5'-8"	1'-8"



A503

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-141

DRAWN BY RLR | PLANS CK'D. JRS

SOUTH ABUTMENT DETAILS

SHEET 5 OF 9
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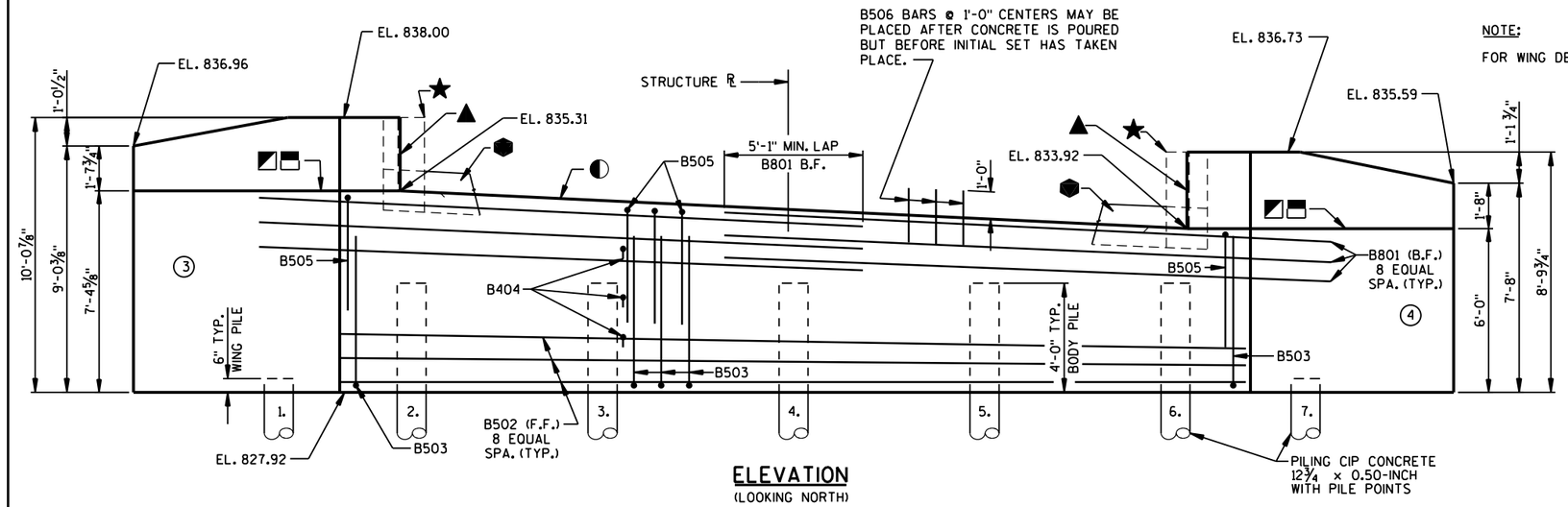
FILE= 11522015_05.DGN
DATE= 5/26/2017

11522015_05.dgn 5/26/2017 7:42:55 AM rrabska

STATE PROJECT NUMBER

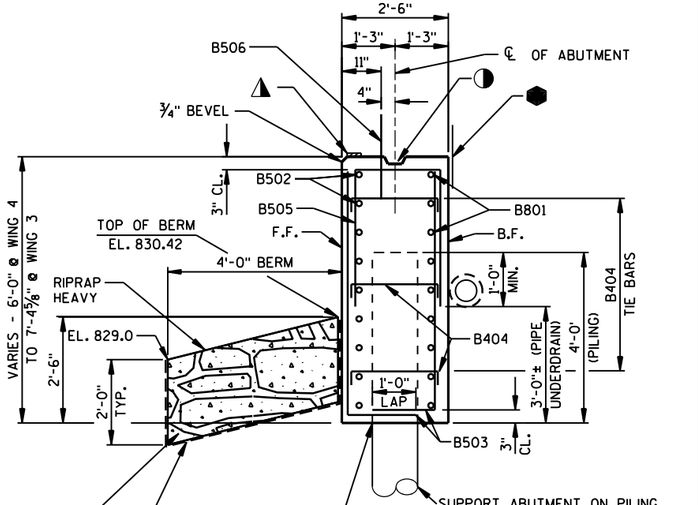
6902-00-70



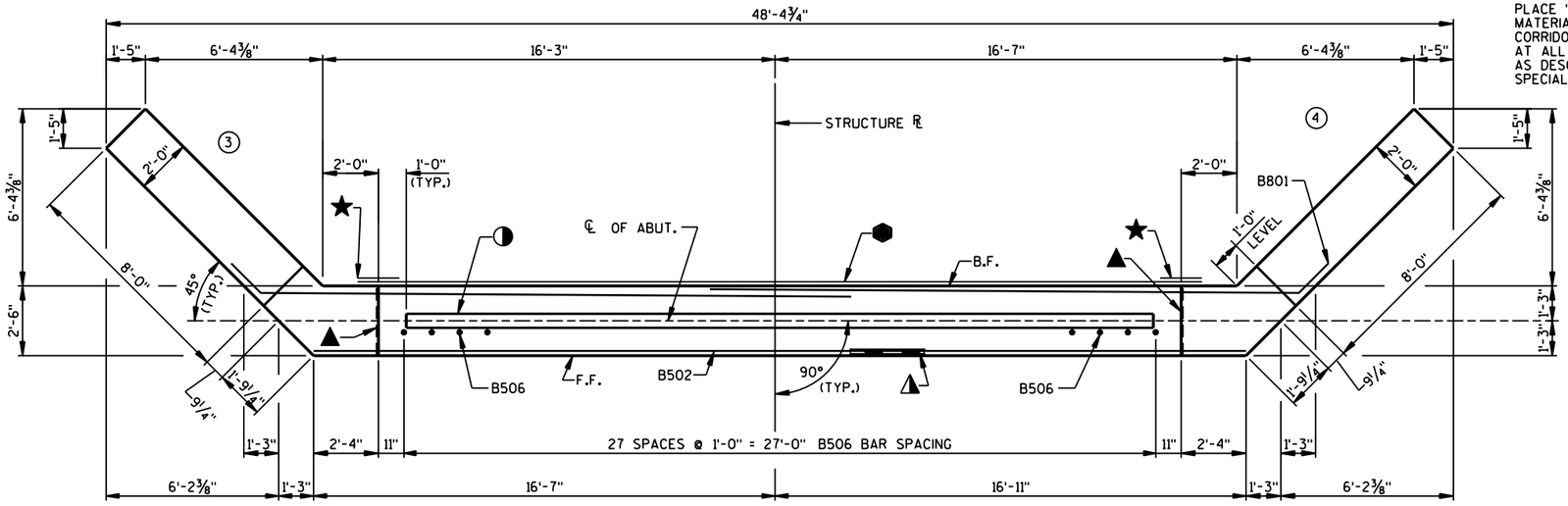
ELEVATION
(LOOKING NORTH)

NOTE:

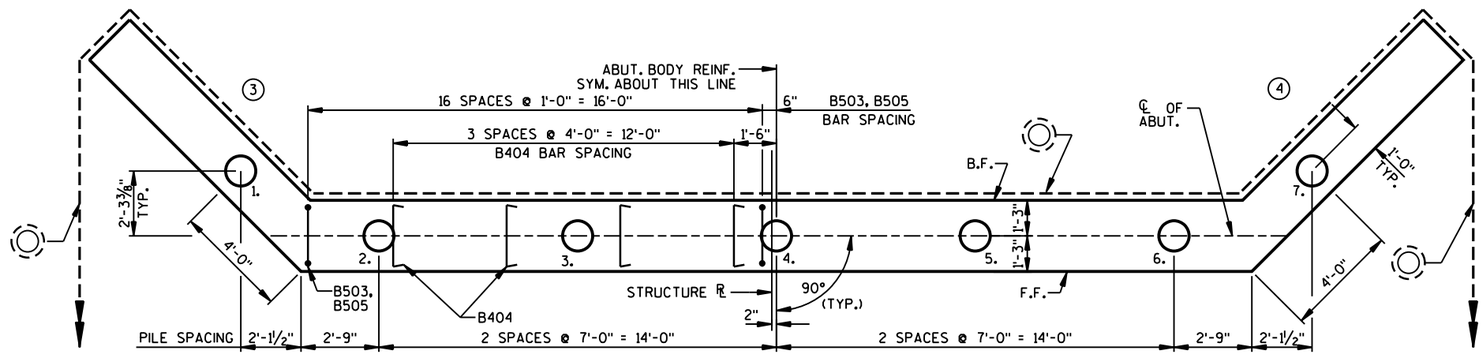
FOR WING DETAILS SEE SHEET 7.



TYPICAL SECTION THRU ABUTMENT



PLAN

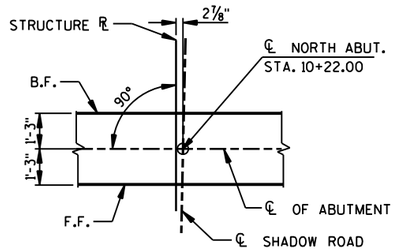


PILE PLAN

LEGEND

- ◯ — INDICATES WING NUMBER
- ◑ — KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ▲ — ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ◭ — 4"x ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- ★ — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO TOP OF WINGS.
- ⬢ — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS.
- ⬒ — OPTIONAL KEYED CONST. JOINT ON WING FORMED BY BEVELED 2 X 6. IF JOINT IS USED, PLACE ⬢ ON B.F. OF WING. COST OF ⬢ INCLUDED IN BID ITEM "CONCRETE MASONRY BRIDGES".
- ◹ — ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQUIRED ONLY WHERE CONSTRUCTION JOINT IS USED.
- ◎ — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS, SEE SHEET 5.

F.F. — FRONT FACE B.F. — BACK FACE CL. — CLEAR



LAYOUT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-141

DRAWN BY RLR | PLANS CK'D. JRS

NORTH ABUTMENT

SHEET 6 OF 9
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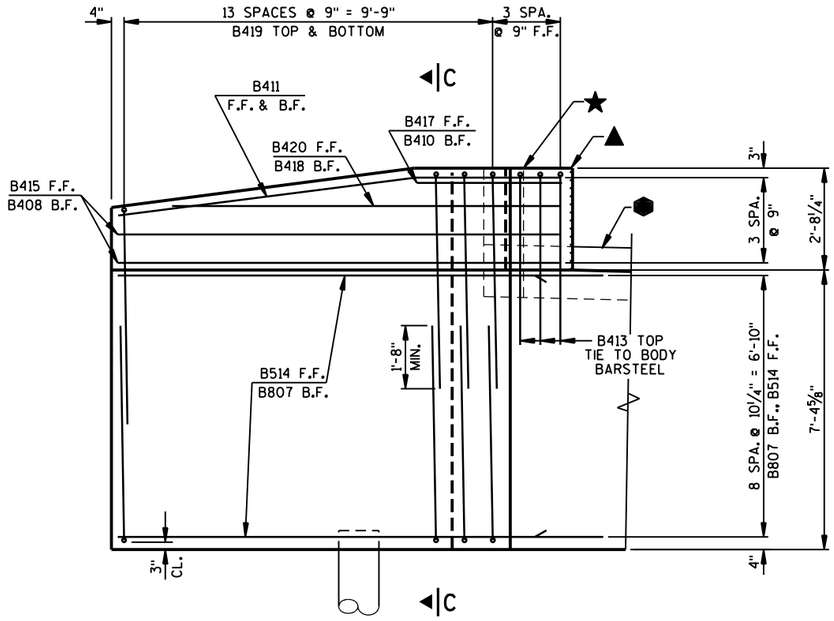
FILE= 11522015_06.DGN
DATE= 5/26/2017

11522015_06.dgn 5/26/2017 8:34:10 AM rrabska

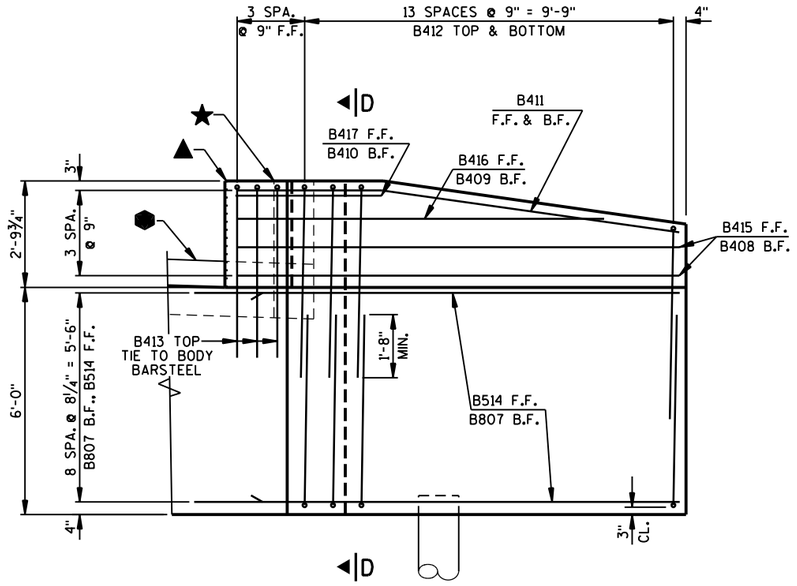
STATE PROJECT NUMBER

6902-00-70



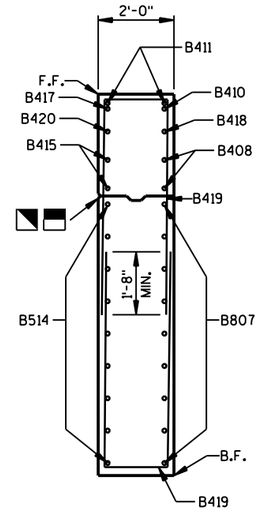
ELEVATION - WING 3

(LOOKING AT F.F. OF WING)

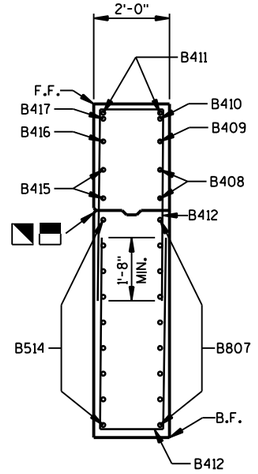


ELEVATION - WING 4

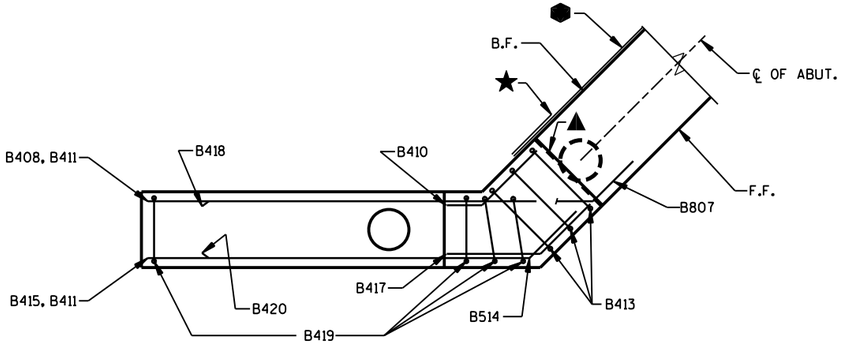
(LOOKING AT F.F. OF WING)



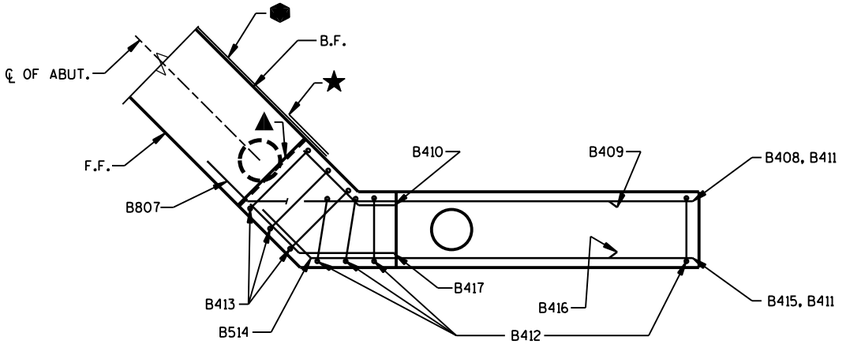
SECTION C-C
THRU WING 3



SECTION D-D
THRU WING 4



PLAN - WING 3



PLAN - WING 4

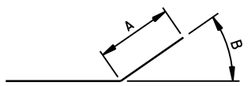
BILL OF BARS (NORTH ABUT.)

UNCOATED 2300 LBS.
COATED 1530 LBS.

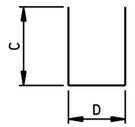
MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
B801	-	18	22'-7"	X	ABUTMENT BODY - B.F. - HORIZ.
B502	-	9	33'-5"		ABUTMENT BODY - F.F. - HORIZ.
B503	-	68	7'-0"	X	ABUTMENT BODY - F.F. & B.F. - VERT.
B404	-	24	2'-9"	X	ABUTMENT BODY - TIES - HORIZ.
B505	-	34	10'-3"	X	ABUTMENT BODY - TOP - VERT.
B506	28	-	2'-0"		ABUTMENT BODY - TOP DOWELS - VERT.
B807	18	-	13'-2"	X	WINGS - B.F. - HORIZ.
B408	4	-	10'-9"	X	WINGS - B.F. - HORIZ.
B409	1	-	8'-9"	X	WING 4 - B.F. - HORIZ.
B410	2	-	2'-11"	X	WINGS - B.F. - TOP - HORIZ.
B411	4	-	10'-5"	X	WINGS - F.F. & B.F. - TOP - HORIZ.
B412	28	-	11'-6"	X	WING 4 - TOP & BOTTOM - VERT.
B413	6	-	11'-0"	X	WINGS - TOP - VERT.
B514	18	-	11'-8"	X	WINGS - F.F. - HORIZ.
B415	4	-	12'-3"	X	WINGS - F.F. - HORIZ.
B416	1	-	10'-3"	X	WING 4 - F.F. - HORIZ.
B417	2	-	4'-4"	X	WINGS - F.F. - HORIZ.
B418	1	-	9'-3"	X	WING 3 - B.F. - HORIZ.
B419	28	-	12'-10"	X	WING 3 - TOP & BOTTOM - VERT.
B420	1	-	10'-9"	X	WING 3 - F.F. - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

SEE LEGEND ON SHEET 6 FOR DESCRIPTION OF ★ ⬢ ◥ ▬ ▲



MARK	A	B
B801 B807 B514	1'-6"	45°
B408 B409 B410 B418	1'-10"	45°
B411	2'-5"	8°
B415 B416 B417 B420	2'-0"	45°



MARK	C	D
B404	4½"	2'-2"
B505	4'-2"	2'-2"
B412	5'-0"	1'-8"
B413	4'-6"	2'-2"
B419	5'-8"	1'-8"

B503

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-141

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NORTH ABUTMENT DETAILS

SHEET 7 OF 9
45

FILE= 11522015_07.DGN
DATE= 5/26/2017

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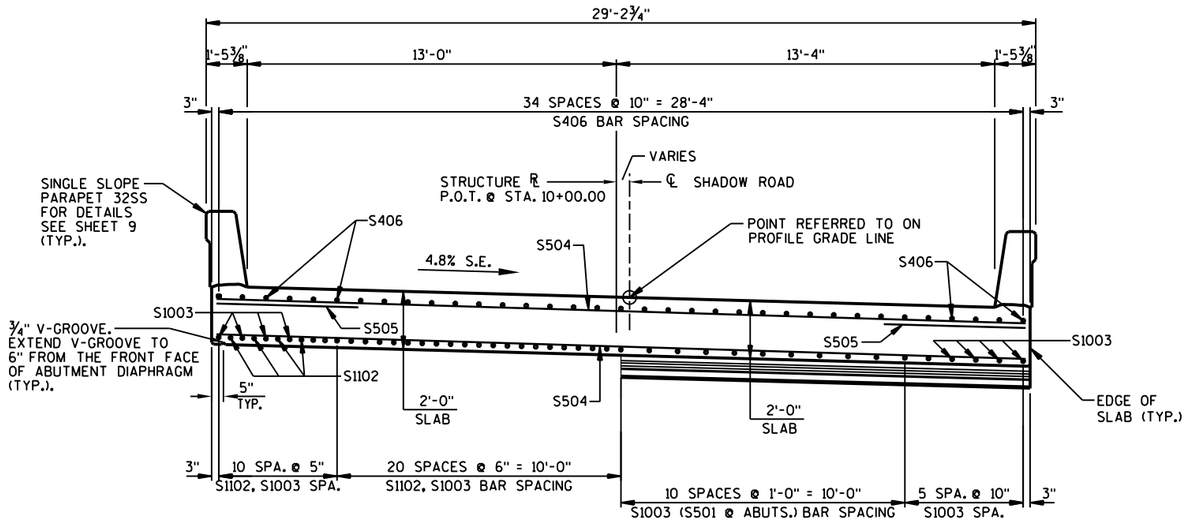
11522015_07.dgn 5/26/2017 7:52:30 AM lrabska

STATE PROJECT NUMBER

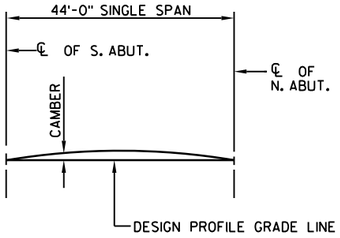
6902-00-70



IN SPAN AT ABUTMENTS

CROSS SECTION THRU BRIDGE

(LOOKING NORTH)



CAMBER DIAGRAM

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

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

TOP OF SLAB ELEVATION AT FINAL GRADE

\- SLAB THICKNESS

\+ CAMBER

\+ FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)

= TOP OF SLAB FALSEWORK ELEVATION

GENERAL NOTES

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

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

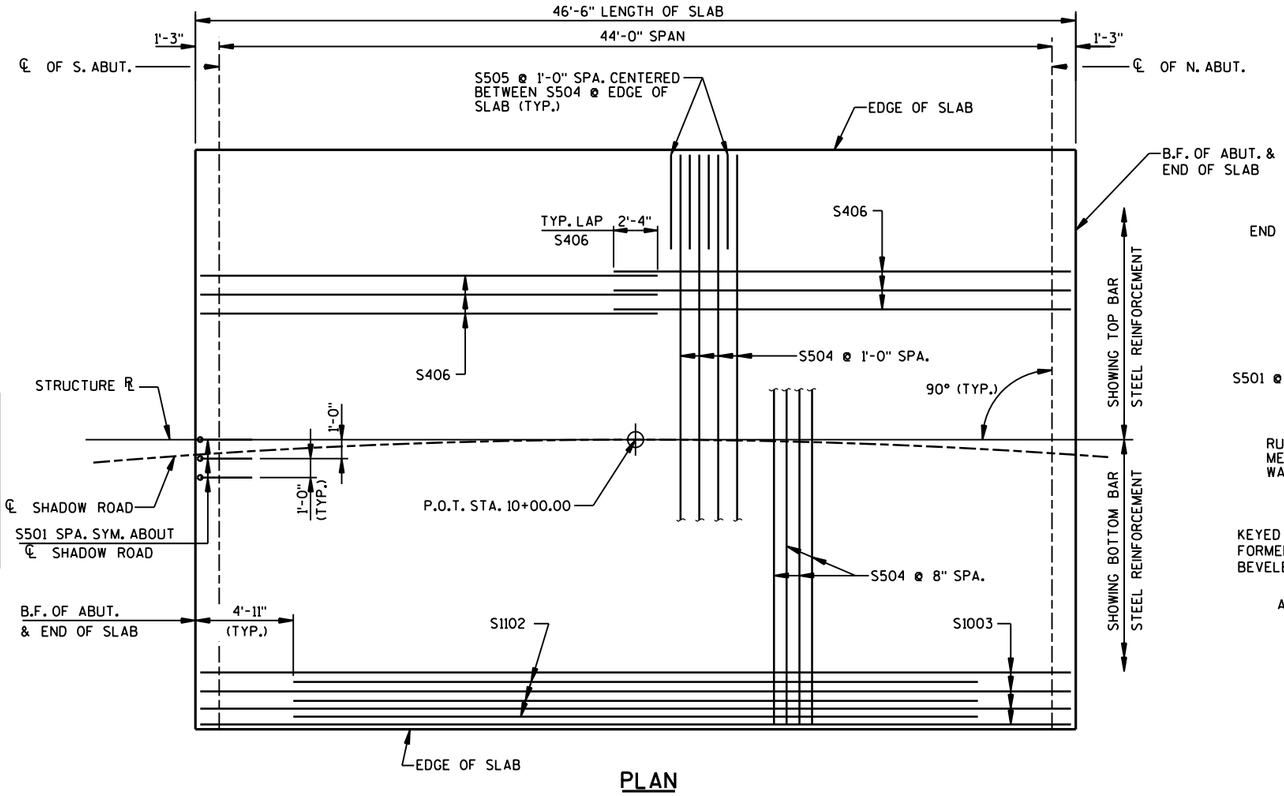
SURVEY TOP OF SLAB ELEVATIONS

LOCATION	SPAN POINT	WEST SLAB EDGE	C/L SHADOW ROAD	EAST SLAB EDGE
SOUTH ABUT.	1.0			
	1.5			
NORTH ABUT.	2.0			

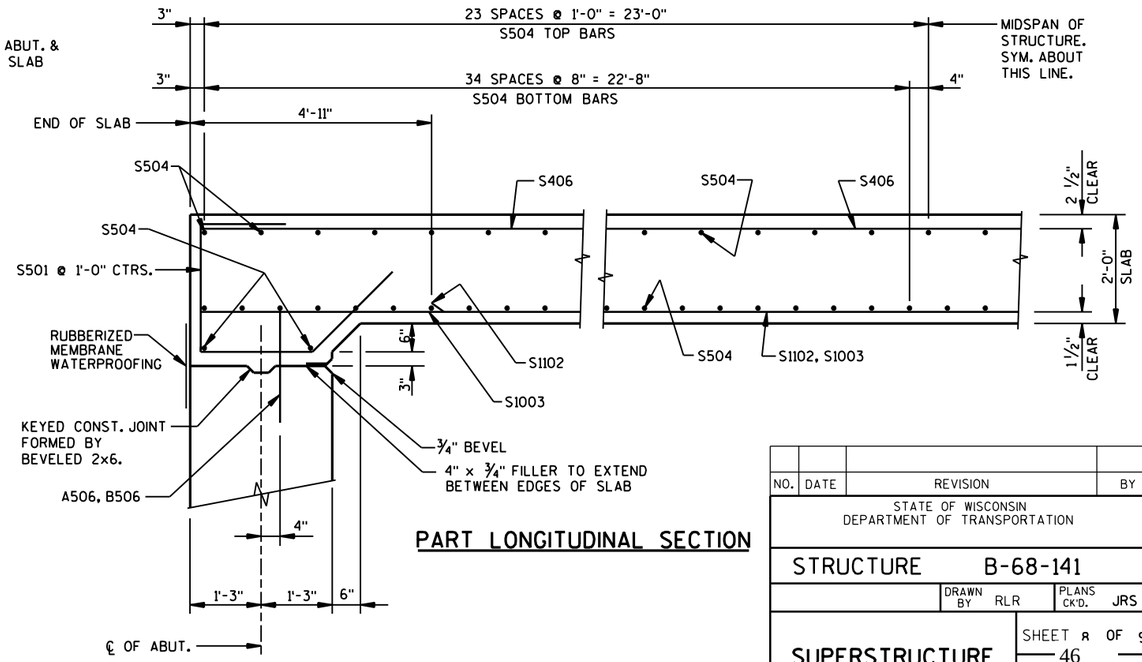
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT THE 0.5 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR ℄. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

TOP OF SLAB ELEVATIONS AND CAMBER VALUES

LOCATION	SPAN POINT	EAST SLAB EDGE	C/L SHADOW ROAD	WEST SLAB EDGE	CAMBER VALUE (INCHES)
SOUTH ABUT.	**1.0**	836.00	836.64	837.26	0.0
	1.1	836.07	836.71	837.33	0.5
	1.2	836.14	836.78	837.40	1.0
	1.3	836.21	836.85	837.47	1.4
	1.4	836.28	836.92	837.54	1.6
	1.5	836.35	836.99	837.61	1.7
	1.6	836.42	837.06	837.69	1.6
	1.7	836.50	837.14	837.76	1.4
	1.8	836.57	837.21	837.84	1.0
	1.9	836.65	837.29	837.92	0.5
NORTH ABUT.	**2.0**	836.73	837.37	838.00	0.0



PLAN



PART LONGITUDINAL SECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-141

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SUPERSTRUCTURE

SHEET 8 OF 9
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FILE= 11522015_08.DGN
DATE= 5/26/2017

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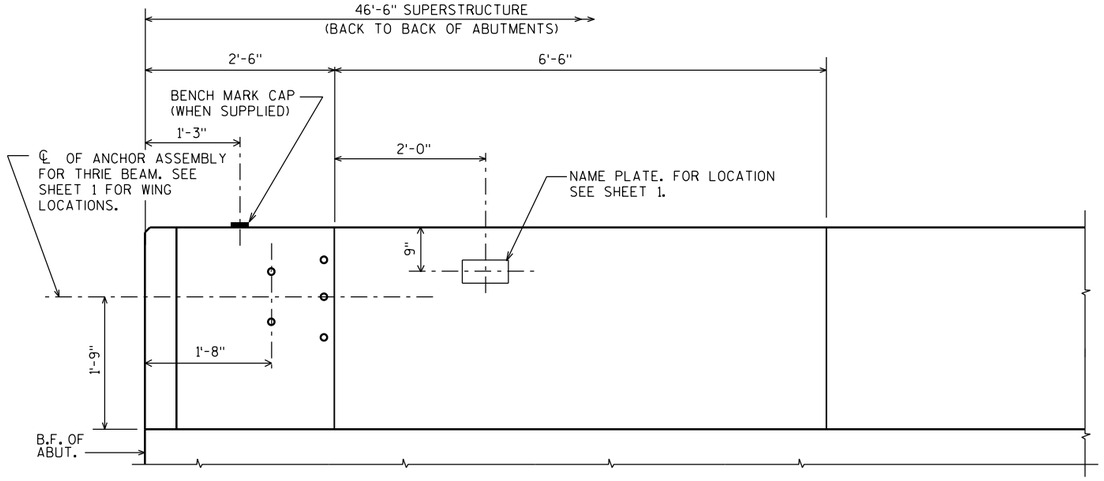
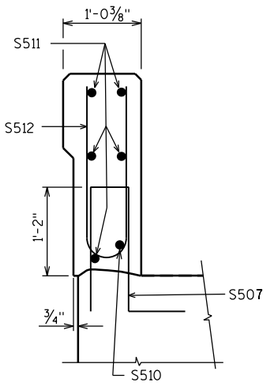
11522015_08.dgn 5/26/2017 8:05:34 AM rrabska

STATE PROJECT NUMBER

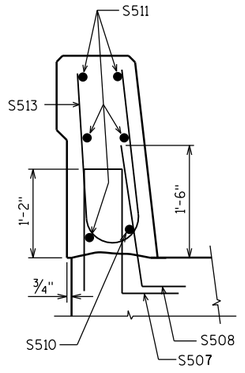
6902-00-70



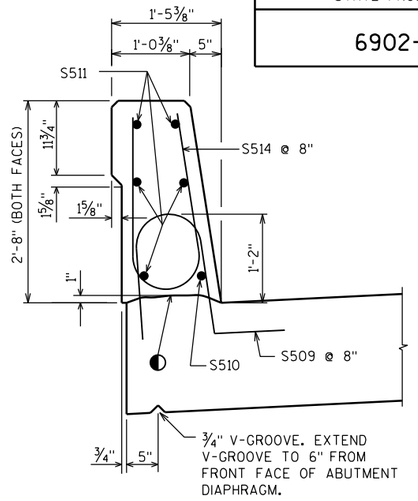
INSIDE ELEVATION



SECTION A-A
AT END OF PARAPET

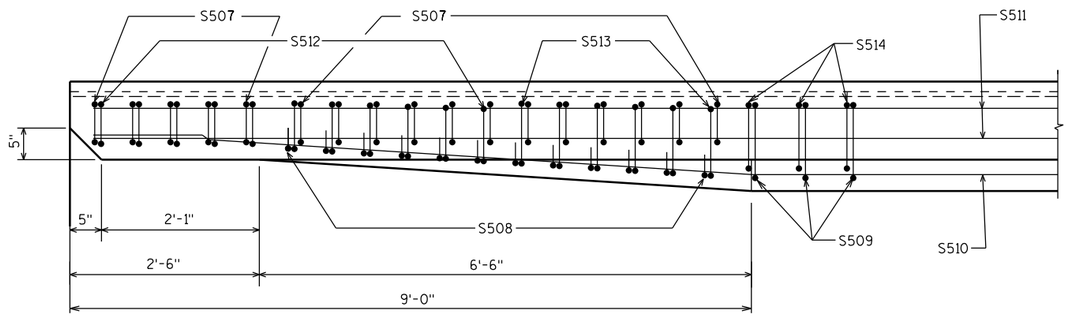


SECTION B-B
AT END OF PARAPET

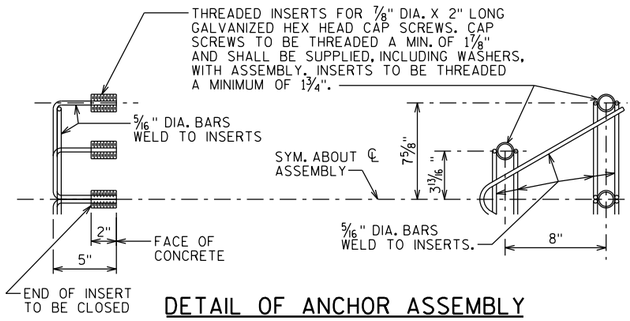


SECTION C-C THRU PARAPET

◐ CONST. JOINT - STRIKE OFF AS SHOWN.



PLAN



DETAIL OF ANCHOR ASSEMBLY

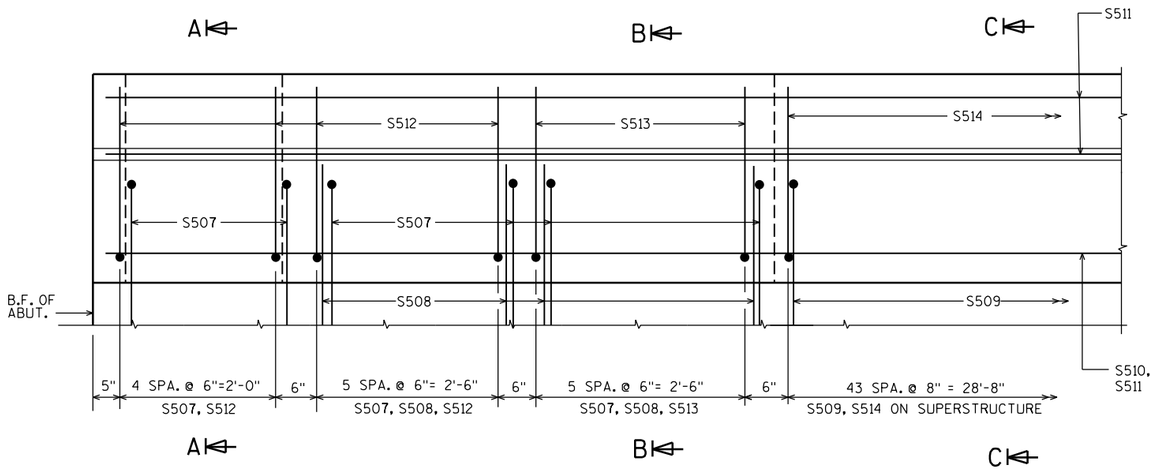
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

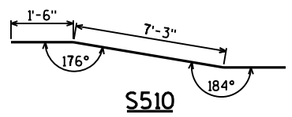
BILL OF BARS (COATED) 19,910 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	60	7'-6"	X	DIAPHRAGM @ ABUTS. - LONGIT.
S1102	30	36'-8"		SLAB BOTTOM - LONGIT.
S1003	31	46'-2"		SLAB BOTTOM - LONGIT.
S504	121	28'-6"		SLAB TOP & BOTTOM - TRANS.
S505	92	5'-0"		SLAB TOP @ EDGE OF SLAB - TRANS.
S406	70	24'-3"		SLAB TOP - LONGIT.
S507	68	4'-4"	X	SLAB & PARAPET END - STIRRUP - VERT.
S508	48	2'-9"	X	SLAB & PARAPET END - VERT.
S509	88	4'-5"	X	SLAB & PARAPET - STIRRUP - VERT.
S510	4	24'-0"	X	PARAPET - LONGIT.
S511	10	46'-2"		PARAPET - LONGIT.
S512	44	4'-9"	X	PARAPET END - STIRRUP - VERT.
S513	24	4'-10"	X	PARAPET END - STIRRUP - VERT.
S514	88	5'-0"	X	PARAPET - STIRRUP - VERT.

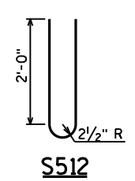
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL REINFORCEMENT.



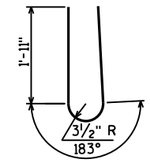
OUTSIDE ELEVATION



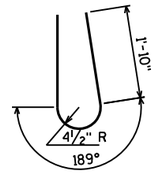
S510



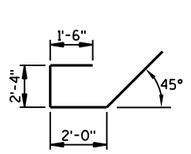
S512



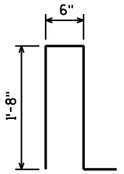
S513



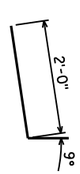
S514



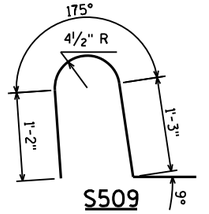
S501



S507



S508



S509

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-141

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SINGLE SLOPE
PARAPET 32SS

SHEET 9 OF 9
47

FILE= 11522015_09.DGN
DATE= 5/11/2017

11522015_09.dgn 5/11/2017 10:30:37 AM frabska

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PROJECT I.D. 6902-00-70 EARTHWORK SUMMARY

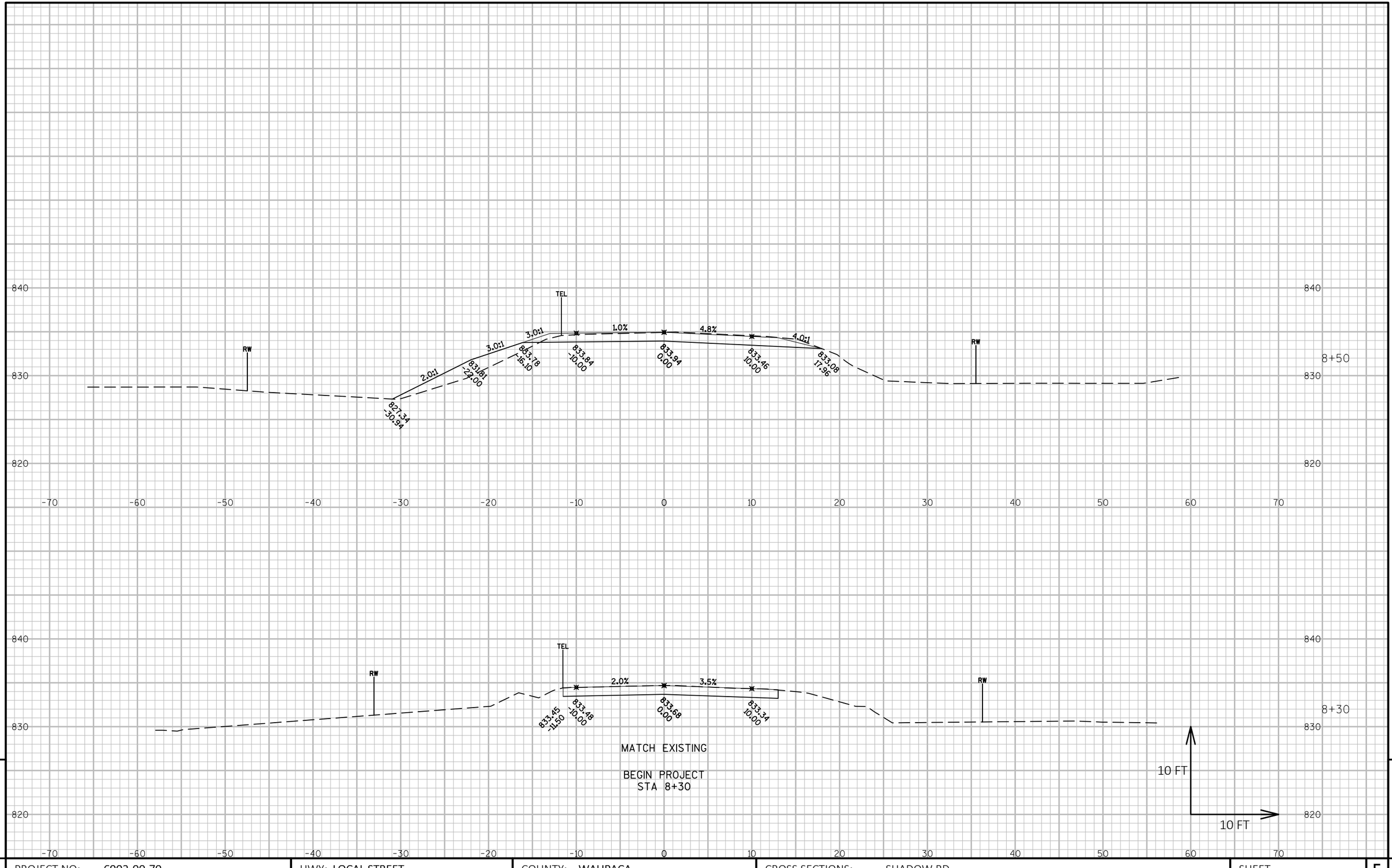
STA	EXCAVATION COMMON CY	EXCAVATION ROCK CY	FILL (1) CY	EXPANDED FILL (2) CY	WASTE CY	BORROW CY
8+30.00						
	20	0	7	9	11	-11
8+50.00						
	35	0	39	51	-16	16
8+85.49						
	3	0	5	7	-4	4
8+88.63						
	18	0	37	48	-30	30
9+10.85						
	2	0	4	5	-3	3
9+13.24						
	15	0	35	46	-31	31
9+36.18						
	1	0	2	3	-2	2
9+37.88						
	12	0	61	79	-67	67
9+76.75						
STRUCTURE B-68-0141						
10+23.25						
	8	0	43	56	-48	48
10+40.88						
	14	0	31	40	-26	26
10+62.12						
	1	0	2	3	-2	2
10+63.82						
	28	0	15	20	8	-8
10+86.76						
	5	0	1	1	4	-4
10+89.15						
	56	0	3	4	52	-52
11+11.37						
	9	0	0	0	9	-9
11+14.50						
	31	0	0	0	31	-31
11+25.00						
	60	0	0	0	60	-60
11+50.00						
	50	0	0	0	50	-50
11+85.00						
SUBTOTALS						
SOUTH APPROACH	106	0	190	248	-142	142
NORTH APPROACH	262	0	95	124	138	-138
UNUSABLE PAVEMENT (3)						84
TOTALS	**368**	**0**	**285**	**372**	**-4**	**88**

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%
(3) - EXISTING PAVEMENT BASED ON AVE THK OF 4 INCHES PER BORING LOG.

9

9

FILE NAME : P:\11500S\11520S\11522\11522015\CADD\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 090101_EW
PLOT DATE : 11/13/2017 8:17 AM PLOT BY : BRAD LEE PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



MATCH EXISTING

BEGIN PROJECT
STA 8+30

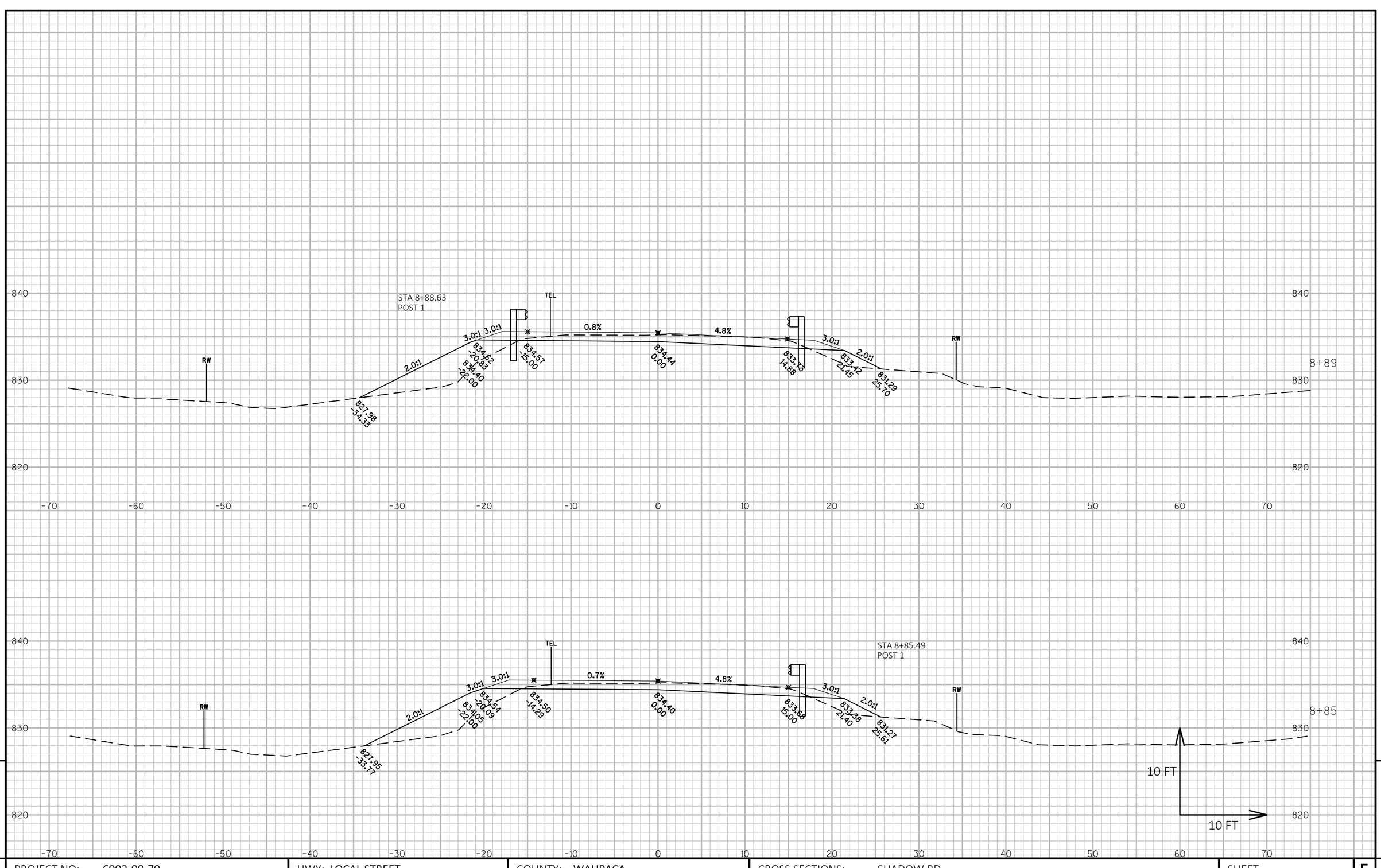
9

9

PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: SHADOW RD	SHEET 49	E

FILE NAME : P:\11500S\11520S\11522\11522015\CADD\DESIGN\CORRIDORS\CORRIDOR_SHADOW_RD.DWG
LAYOUT NAME - 090201_xs

PLOT DATE : 11/13/2017 8:19 AM PLOT BY : BRAD LEE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: SHADOW RD	SHEET 50 E

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LAYOUT NAME - 090202_xs

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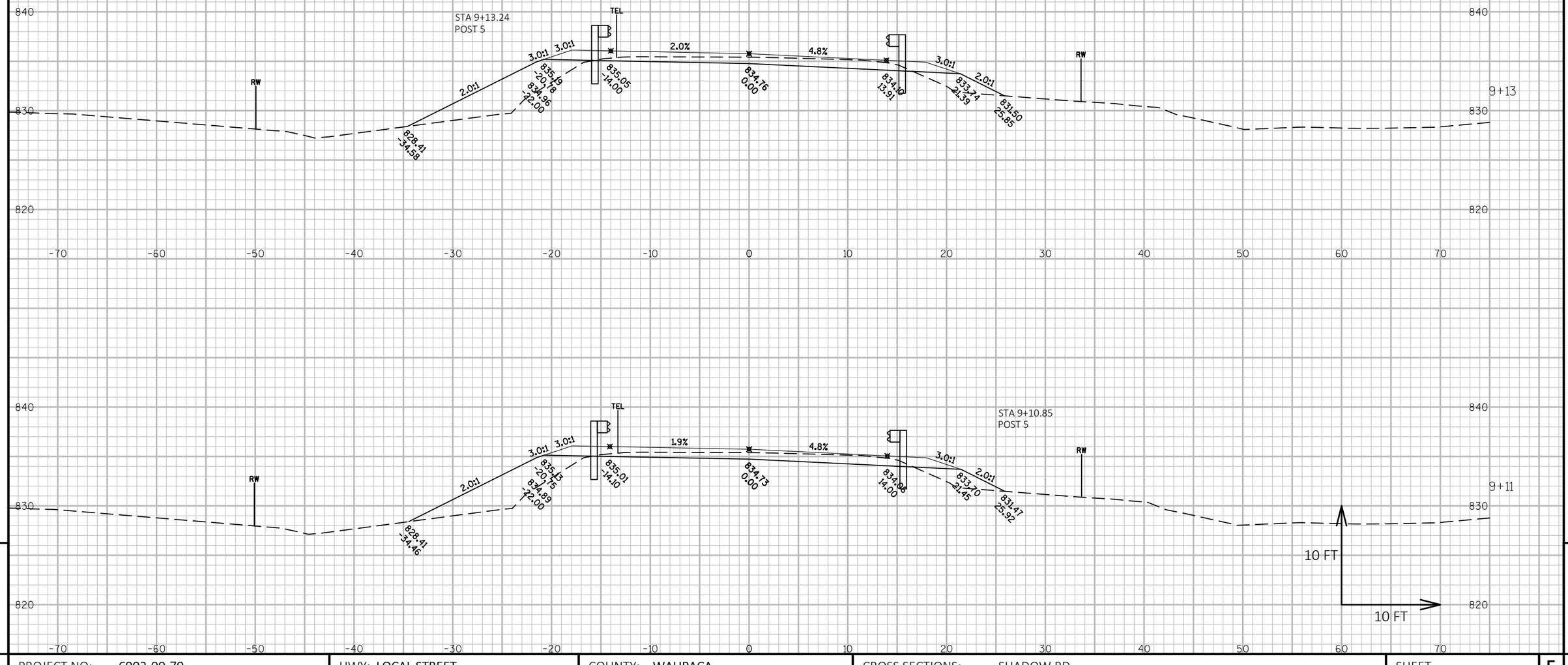
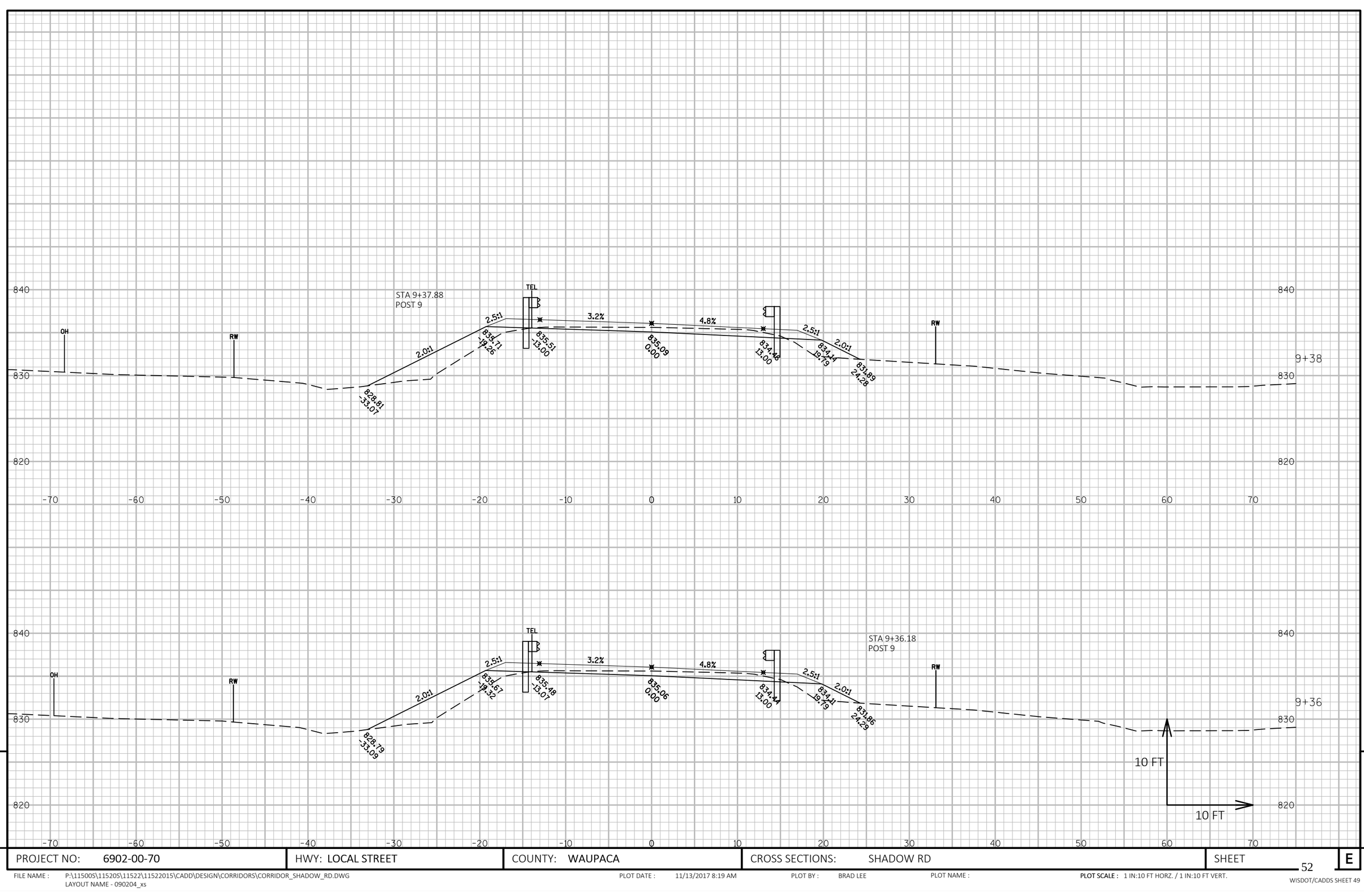


PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: SHADOW RD	SHEET 51 E

FILE NAME : P:\11500S\11520S\11522\11522015\CADD\DESIGN\CORRIDORS\CORRIDOR_SHADOW_RD.DWG
LAYOUT NAME - 090203_xs

PLOT DATE : 11/13/2017 8:19 AM PLOT BY : BRAD LEE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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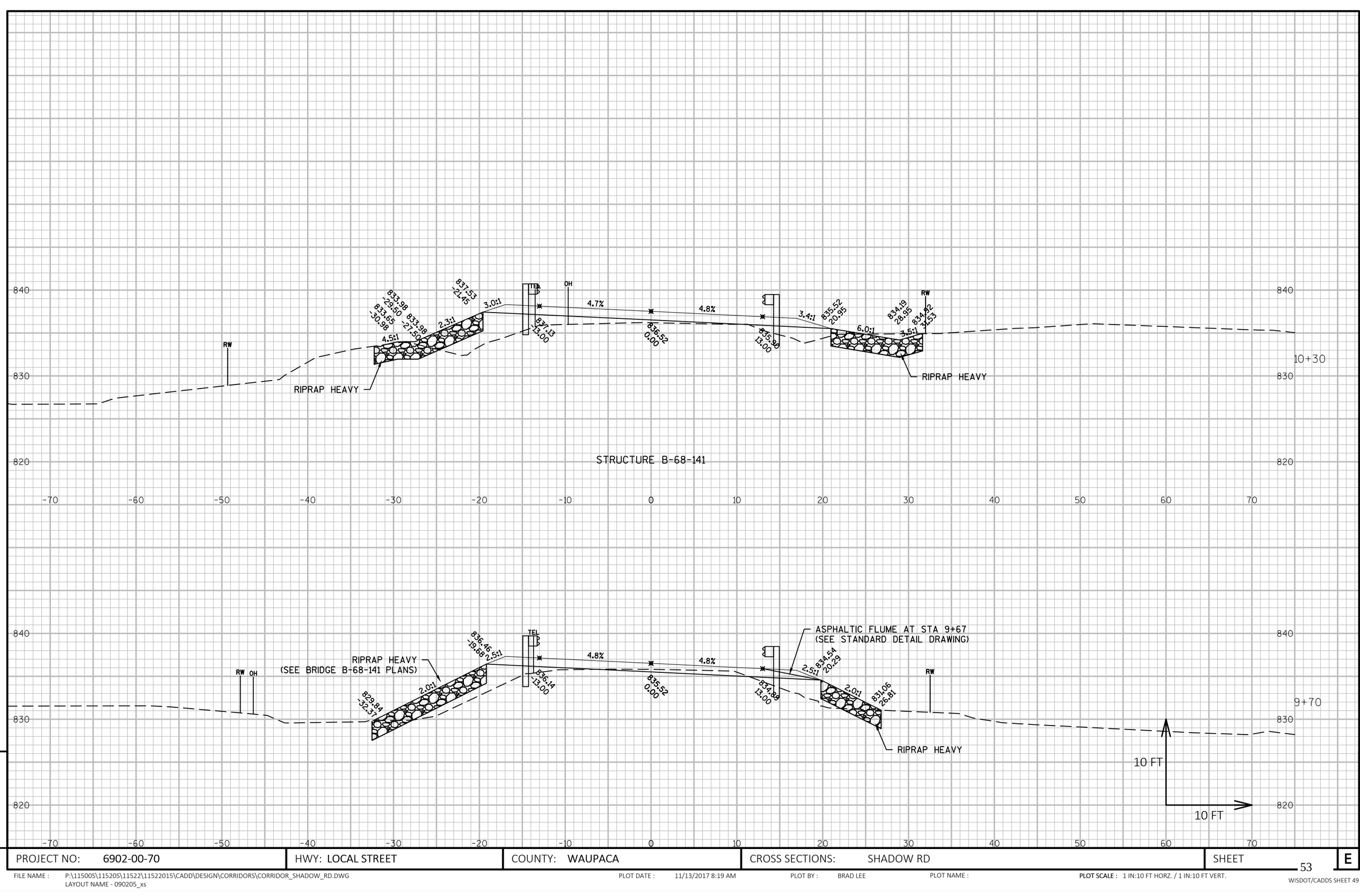
PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: SHADOW RD	SHEET	E

52

FILE NAME : P:\11500S\11520S\11522\11522015\CADD\DESIGN\CORRIDORS\CORRIDOR_SHADOW_RD.DWG
LAYOUT NAME - 090204_xs

PLOT DATE : 11/13/2017 8:19 AM PLOT BY : BRAD LEE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: SHADOW RD	SHEET 53	E

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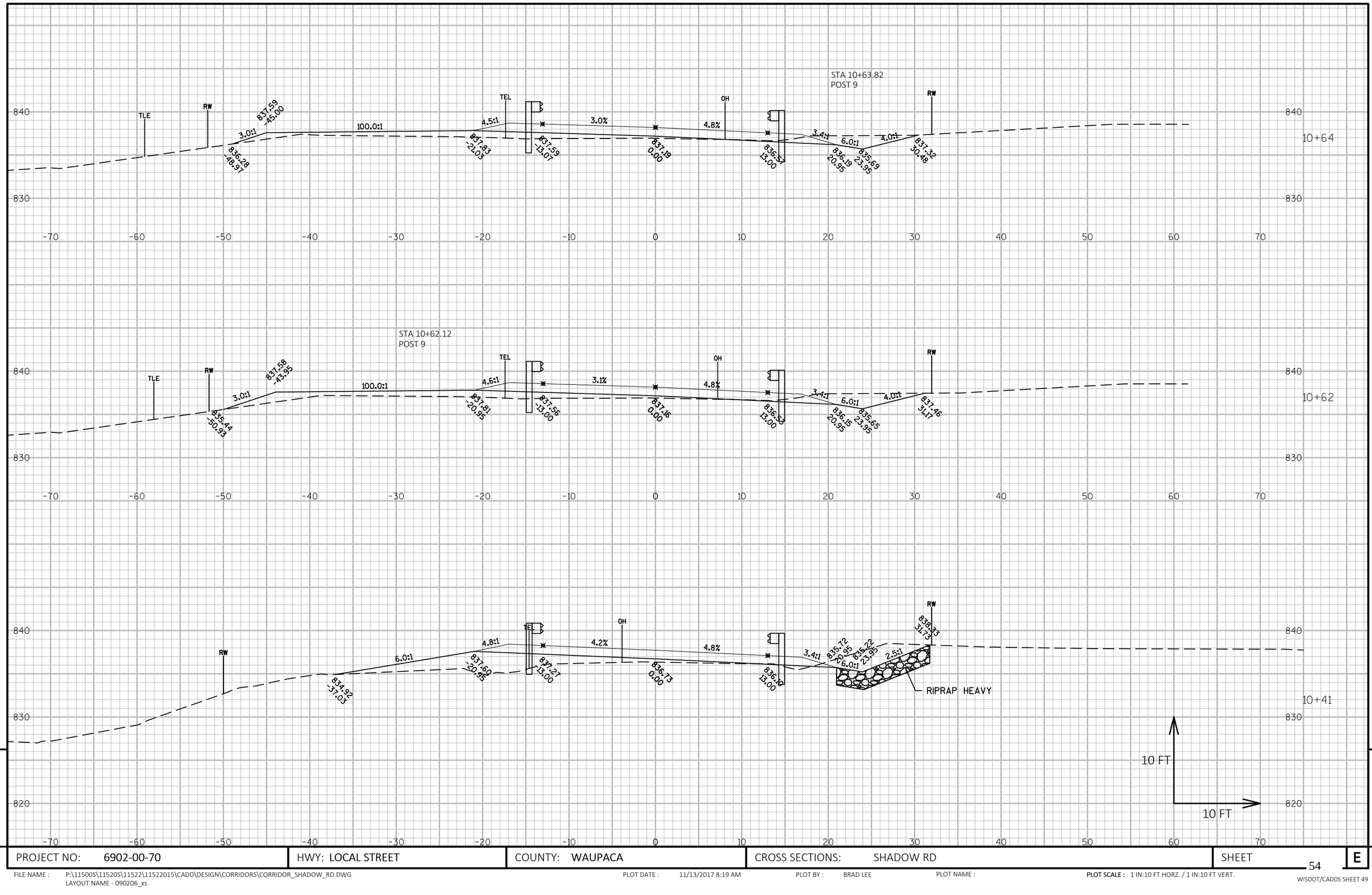

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PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: SHADOW RD	SHEET 54 E

FILE NAME : P:\11500S\11520S\11522\11522015\CADD\DESIGN\CORRIDORS\CORRIDOR_SHADOW_RD.DWG
LAYOUT NAME - 090206_xs

PLOT DATE : 11/13/2017 8:19 AM PLOT BY : BRAD LEE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

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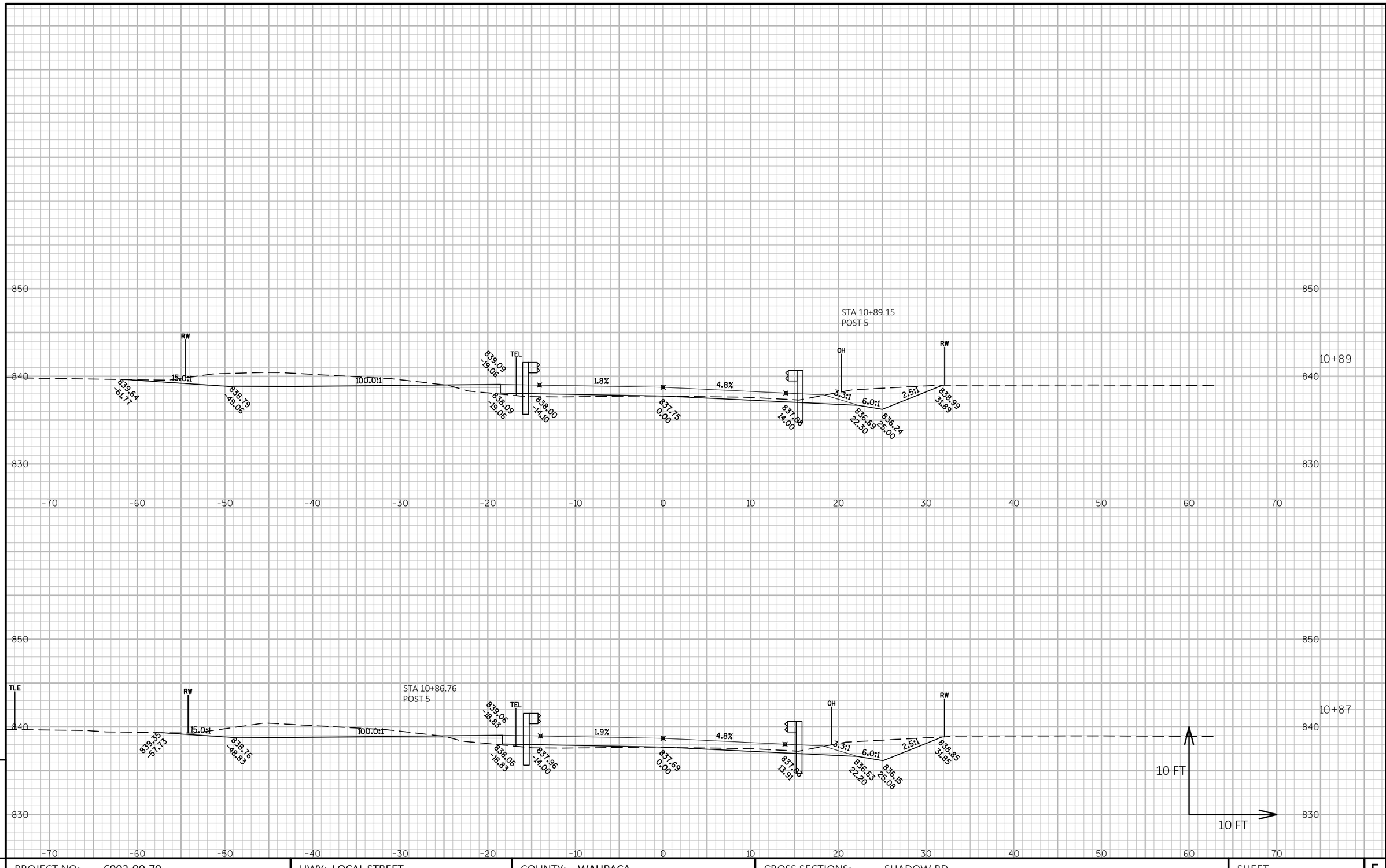

PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: SHADOW RD	SHEET 55 E

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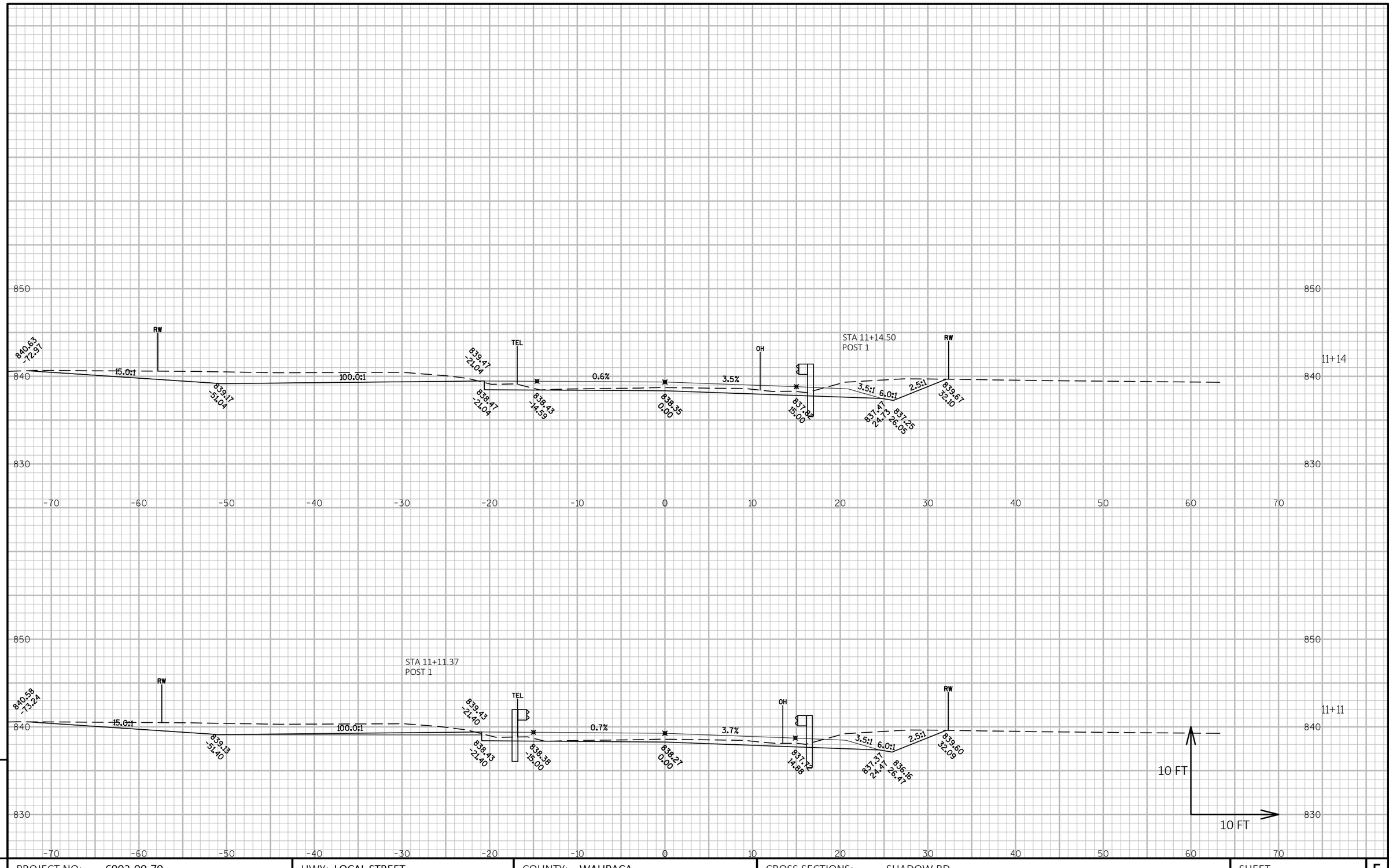
PLOT DATE : 11/13/2017 8:19 AM PLOT BY : BRAD LEE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

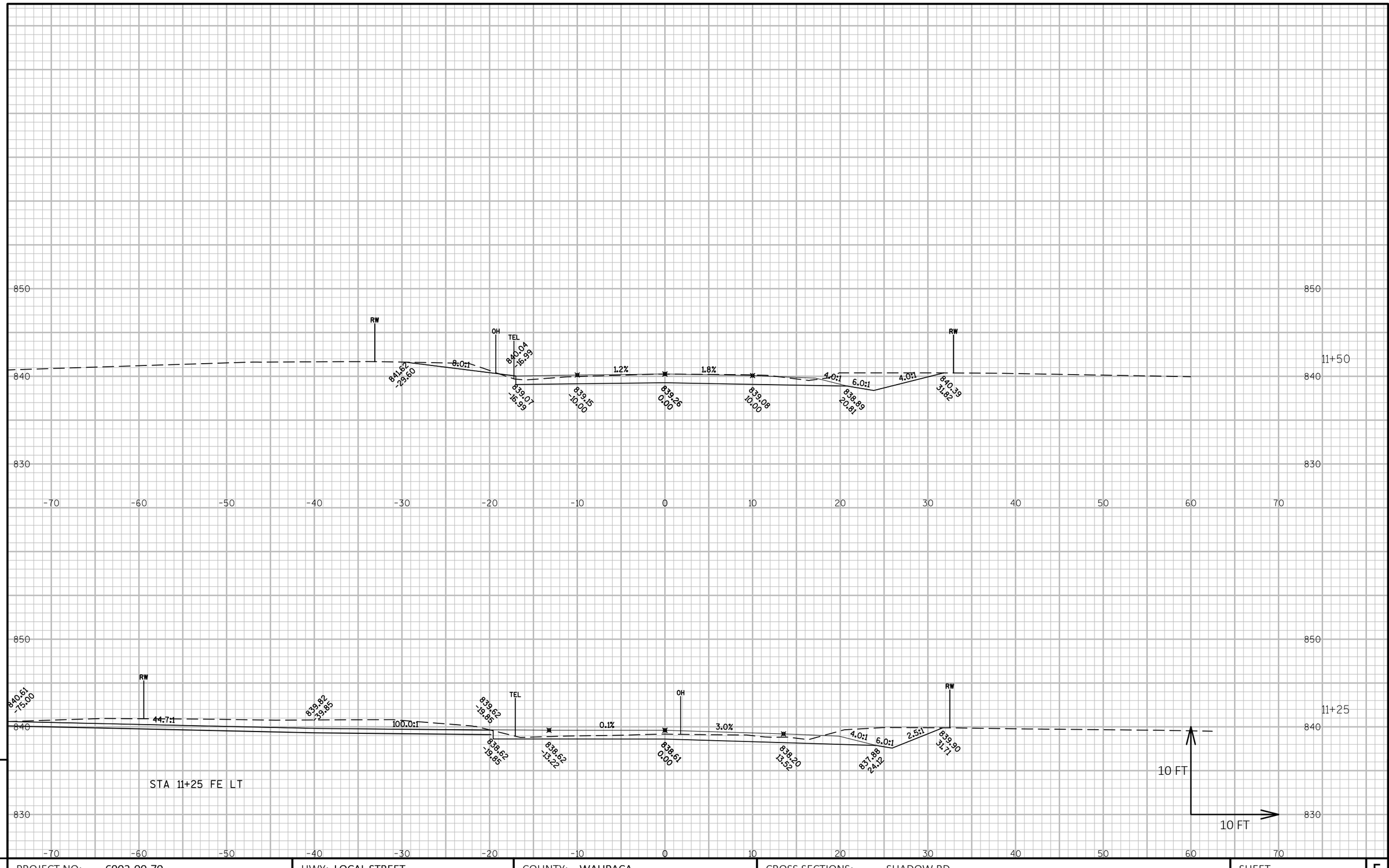


PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: SHADOW RD	SHEET 56 E

FILE NAME : P:\11500S\11520S\11522\11522015\CADD\DESIGN\CORRIDORS\CORRIDOR_SHADOW_RD.DWG
LAYOUT NAME - 090208_xs

PLOT DATE : 11/13/2017 8:19 AM PLOT BY : BRAD LEE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

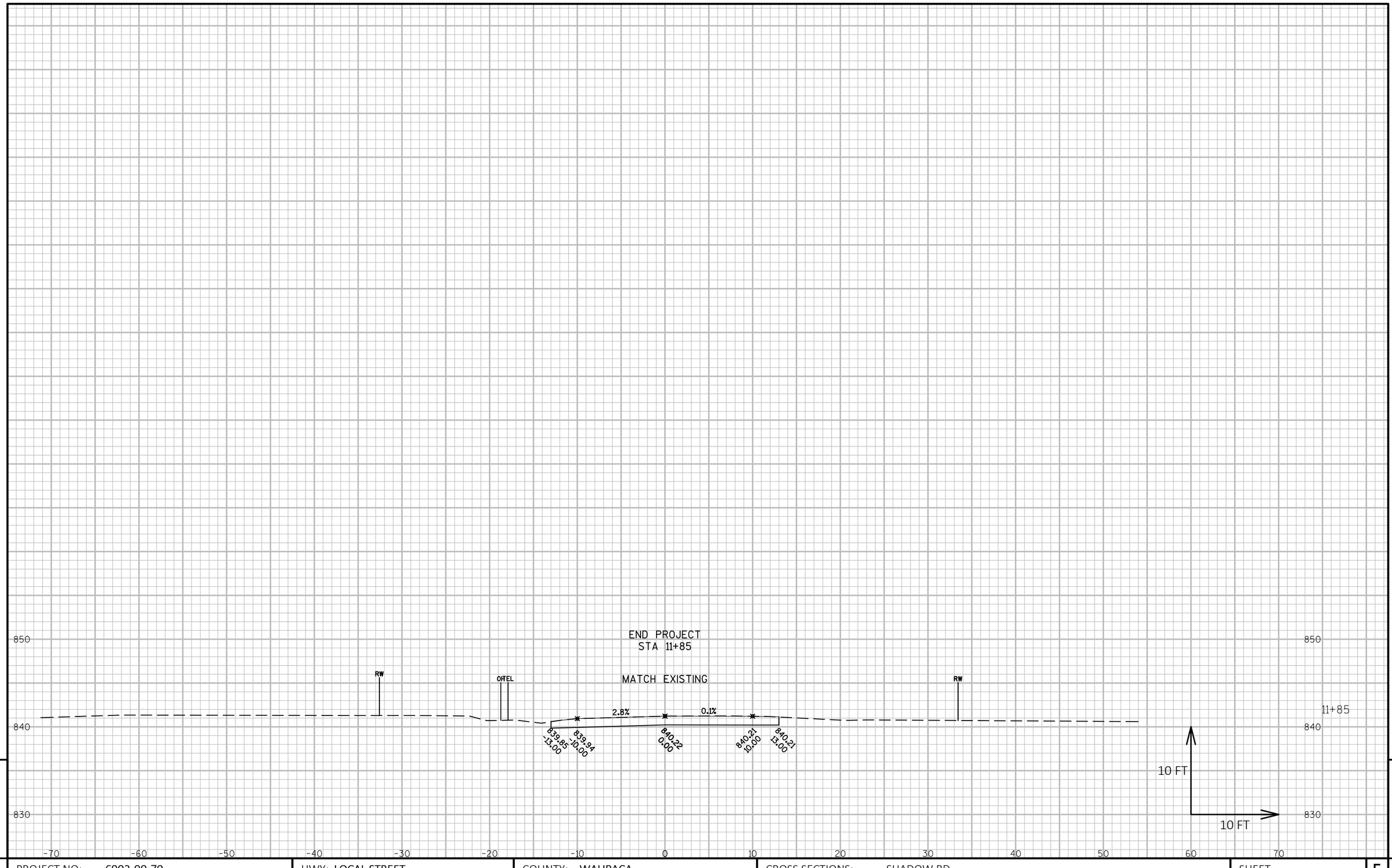
WISDOT/CADDS SHEET 49



PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: SHADOW RD	SHEET 57 E

FILE NAME : P:\11500S\11520S\11522\11522015\CADD\DESIGN\CORRIDORS\CORRIDOR_SHADOW_RD.DWG
LAYOUT NAME - 090209_xs

PLOT DATE : 11/13/2017 8:19 AM PLOT BY : BRAD LEE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 6902-00-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: SHADOW RD	SHEET 58	E

FILE NAME : P:\11500S\11520S\11522\11522015\CADD\DESIGN\CORRIDORS\CORRIDOR_SHADOW_RD.DWG
LAYOUT NAME - 090210_xs

PLOT DATE : 11/13/2017 8:19 AM PLOT BY : BRAD LEE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

WIS

JANUARY 2018

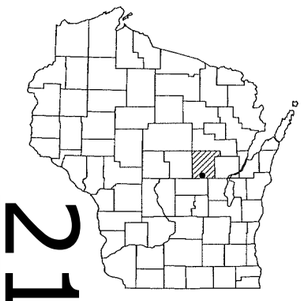
PROJECT ID: 6902-01-70

WITH: 6902-00-70

COUNTY: WAUPACA

ORDER OF SHEETS

TOTAL SHEETS = 36



21

N

DESIGN DESIGNATION

A.A.D.T.	2018	= 190
A.A.D.T.	2038	= 260
D.H.V.		= < 15 (EST.)
D.D.		= 60/40 (EST.)
T.		= 10% (EST.)
DESIGN SPEED		= 30 MPH
ESALS		= 43,800

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 (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T LIND, HATTON ROAD

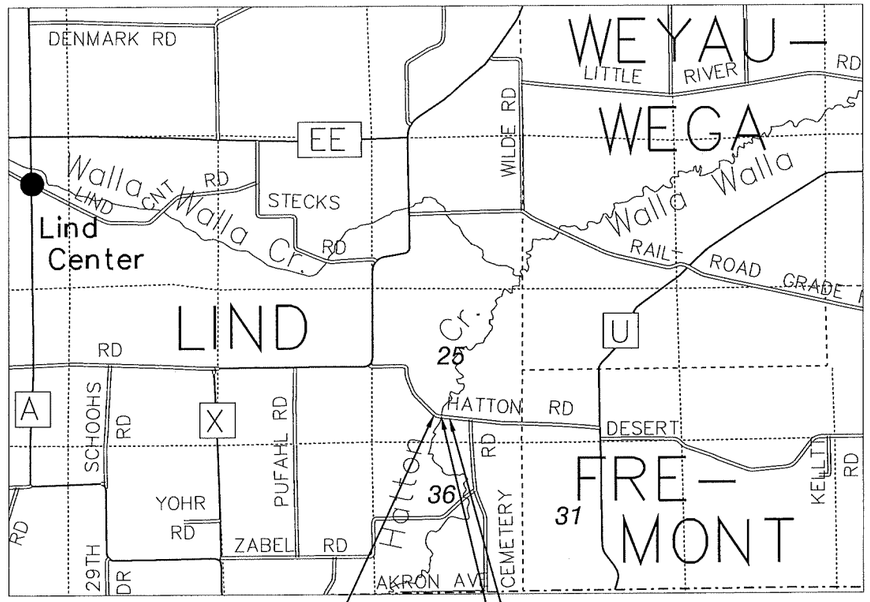
HATTON CREEK BRIDGE B-68-0142

LOCAL STREET

WAUPACA COUNTY

STATE PROJECT NUMBER
6902-01-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6902-01-70	WISC 2018054	1



BEGIN PROJECT
STA 9+25
Y = 306,079.92
X = 560,786.68

END PROJECT
STA 11+60
Y = 306,045.97
X = 561,019.22

STRUCTURE B-68-142

LAYOUT

SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.045 MI

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

ACCEPTED FOR
TOWN OF LIND

7/10/17 (Date) (TOWN CHAIRMAN)

ORIGINAL PLANS PREPARED BY

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

WISCONSIN
JOSHUA R.
SWENO
E-44384
WAUNAKEE
WI
PROFESSIONAL ENGINEER

DATE: 7/5/17 (Professional Engineer)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MSA PROFESSIONAL SERVICES, INC.
Designer	MSA PROFESSIONAL SERVICES, INC.
Management Consultant	CEDAR CORPORATION

APPROVED FOR THE DEPARTMENT

DATE: 7-28-2017 (Signature)

E

FILE NAME : P:\11500S\11520S\11522\11522016\CADD\SHEETSPLAN\010101_TI.DWG
LAYOUT NAME - 010101_TI

PLOT DATE : 5/9/2017 10:20 AM

PLOT BY : BRAD LEE

PLOT NAME :

WISDOT/CADDS SHEET 10

STANDARD ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
<	ANGLE
ASPH	ASPHALTIC
AC	ASPHALT CEMENT
ADT	AVERAGE DAILY TRAFFIC
B & B	BALLED AND BURLAPPED
BM	BENCH MARK
CB	CATCH BASIN
` OR C/L	CENTER LINE
C-C	CENTER TO CENTER
CONC	CONCRETE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
CULV	CULVERT
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
C & G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA OR |	DIAMETER
DIST	DISTRICT
DWY	DRIVEWAY
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC
EL OR ELEV	ELEVATION
EMB	EMBANKMENT
EW	ENDWALL
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
EXP	EXPANSION
F-F	FACE TO FACE
FERT	FERTILIZER
FE	FIELD ENTRANCE
F/L	FLOW LINE
FT	FOOT
GN	GRID NORTH
HR	HANDICAP RAMP
HT	HEIGHT
CWT	HUNDREDWEIGHT
HYD	HYDRANT
IN DIA	INCH DIAMETER
INL	INLET
ID	INSIDE DIAMETER
I	INTERSECTION ANGLE
IE	INVERT ELEVATION
IP	IRON PIPE OR PIN
JCT	JUNCTION
L	LENGTH OF CURVE
LF	LINEAR FOOT
LC	LONG CHORD OF CURVE
LCB	LONG CHORD BEARING
LS	LUMP SUM
MH	MANHOLE
N	NORTH
Y	NORTH GRID COORDINATE
OE	OUTLET ELEVATION
OL	OUT LOT
OD	OUTSIDE DIAMETER
OH	OVERHEAD LINES
PAVT	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PCC	PORTLAND CEMENT CONCRETE
LB	POUND
PE	PRIVATE ENTRANCE
R OR RAD	RADIUS
RR	RAILROAD
R	RANGE
~ OR R/L	REFERENCE LINE
REQD	REQUIRED
RT	RIGHT
R/W	RIGHT-OF-WAY
RD	ROAD
SALV	SALVAGED
SAN	SANITARY SEWER
SECT	SECTION
SHLDR	SHOULDER
SW	SIDEWALK
S	SOUTH
SB	SOUTHBOUND
SPECS	SPECIFICATIONS
SQ	SQUARE
SF OR SQ FT	SQUARE FEET
SY	SQUARE YARD
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
T	TANGENT
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T	TON
TC	TOP OF CURB
TN	TOWN
TRANS	TRANSITION
T	TRUCKS (percent of)
TYP	TYPICAL
UNCL	UNCLASSIFIED
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
VERT	VERTICAL
VC	VERTICAL CURVE
VOL	VOLUME
WM	WATER MAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
YD	YARD

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 = 0.22 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.22 ACRES

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ATTN: JOSH SWENO, PE
1230 SOUTH BOULEVARD
BARABOO, WI 53913
608-355-8852
JSWENO@MSA-PS.COM

TOWN CONTACT

TOWN OF LIND
ATTN: STEVEN GALL, TOWN CHAIRMAN
N2228 COUNTY ROAD A
WAUPACA, WI 54981
715-281-7678
STEVENGALL@SWIDERSKIEQUIPMENT.COM

UTILITIES

COMMUNICATION:
CENTURYLINK
ATTN: KEVIN ZICKERT
224 INDUSTRIAL DRIVE
NORTH PRAIRIE, WI 53153
262-392-5200
KEVIN.ZICKERT@CENTURYLINK.COM

ELECTRIC:
WE ENERGIES
ATTN: SHANE BRUHNKE
333 WEST EVERETT STREET, ROOM A299
MILWAUKEE, WI 53203
920-380-3450
SHANE.BRUHNKE@WE-ENERGIES.COM

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: MARC HERSHFIELD
DNR SERVICE CENTER
473 GRIFFITH DRIVE
WISCONSIN RAPIDS, WI 54494
715-421-7867
MARC.HERSHFIELD@WISCONSIN.GOV

* NOT A MEMBER OF DIGGERS HOTLINE

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

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER. OVERSOW PERMANENT SEEDING AREAS WITH TEMPORARY SEED AT 3 LBS. PER 1000 SQUARE FEET.

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

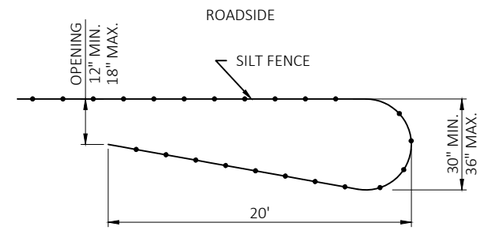
NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2007 ADJUSTED). BENCHMARKS WERE LOCATED IN THE FIELD USING GPS TECHNOLOGY.

THE 4" ASPHALTIC SURFACE SHALL CONSIST OF A $1\frac{3}{4}$" UPPER LAYER, AND $2\frac{1}{4}$" LOWER LAYER. USE 12.5MM NOMINAL AGGREGATE FOR THE UPPER LAYER AND 19.0MM NOMINAL AGGREGATE FOR THE LOWER LAYER.

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

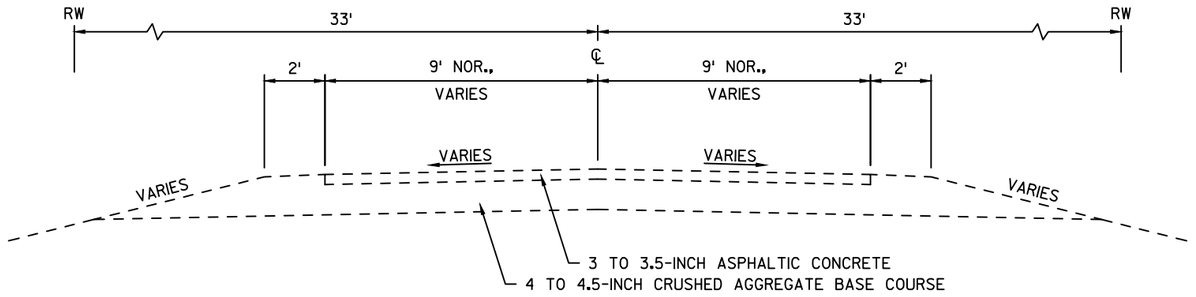
WETLANDS ARE PRESENT OUTSIDE THE EXISTING TOE OF SLOPE. AREAS OUTSIDE THE SLOPE INTERCEPTS SHALL NOT BE DISTURBED.



NOTE:
THE PURPOSE OF THE TURTLE TURN-AROUNDS ARE TO REDIRECT THE TURTLES AWAY FROM THE CONSTRUCTION ZONE. DESIGN SHOULD ALSO INCLUDE TRENCHED-IN SEDIMENT FENCING AND FENCING SUPPORTS ON THE UPSLOPE SIDE OF FENCE. SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND.

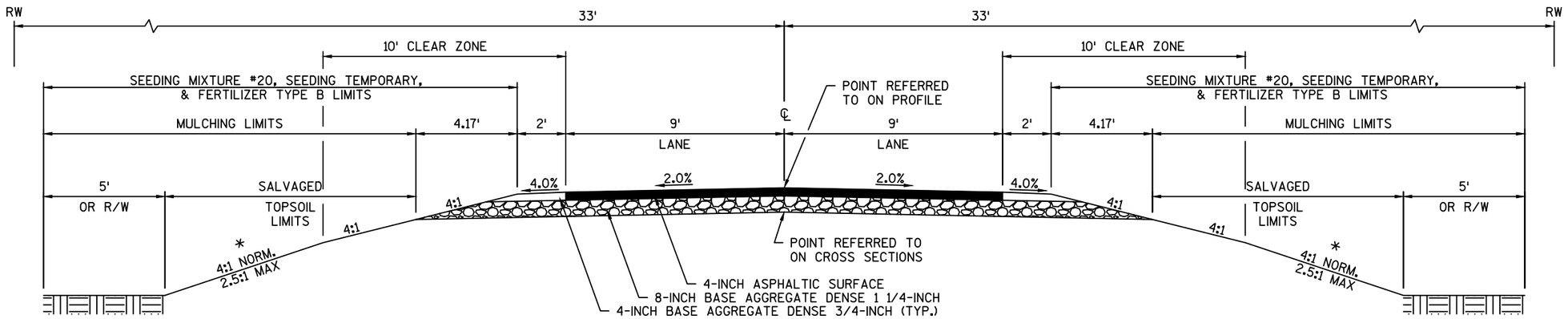
TEMPORARY TURTLE TURN-AROUND DETAIL

SEE PLAN & PROFILE SHEET FOR LOCATIONS



EXISTING TYPICAL SECTION

STA 9+25 - STA 11+60



TYPICAL FINISHED SECTION

STA 9+25 - STA 11+60

* EROSION MAT URBAN CLASS I, TYPE B IN AREAS OF 2.5:1 SLOPES. (SEE PLAN & PROFILE FOR LOCATIONS)

PROJECT NO: 6902-01-70	HWY: LOCAL STREET	COUNTY: WAUPACA	TYPICAL SECTIONS	SHEET 3	E

2

N

7+00

PC: 7+26.99

8+00

PK NAIL

21.6'

27.2'

CP 1
10" NAIL
STA 8+16.67, 12.3' RT
Y = 306,095.75
X = 560,676.99

IRON ROD

85.4'

PT: 8+92.80

9+00

PK NAIL

72.2'

CP 2
10" NAIL
STA 9+71.13, 9.9' RT
Y = 306,063.45
X = 560,830.90

63.3'

10+00

50.5'

15.2'

BM-1
CHISELED SQUARE
ON SW CORNER
BRIDGE WING

BM-2

71.8'

BASE OF GUY WIRE

BM-3

END OF WING WALL

CP 3
10" NAIL
STA 10+30.48, 12.2' LT
Y = 306,076.77
X = 560,892.82

12.6'

11+00

℄ HATTON ROAD

PI: 11+82.81

12+00

PK NAIL

22.9'

33.9'

PK NAIL

13+00

CP 4
10" NAIL
STA 12+17.41, 13.7' RT
Y = 306,024.64
X = 561,074.34

21.0'

IRON
ROD

SIGN

GUY

OH

T

IP

PROJECT NO: 6902-01-70	HWY: LOCAL STREET	COUNTY: WAUPACA	PROJECT CONTROL POINTS, TIES, AND COORDINATES	SHEET 4	E

6902-01-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	2.000	2.000
0004	201.0205	Grubbing	STA	2.000	2.000
0008	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 02. Station 10+00 Structure P-68-102	LS	1.000	1.000
0010	204.0110	Removing Asphaltic Surface	SY	150.000	150.000
0014	205.0100	Excavation Common	CY	152.000	152.000
0018	206.1000	Excavation for Structures Bridges (structure) 02. B-68-142	LS	1.000	1.000
0022	210.1500	Backfill Structure Type A	TON	370.000	370.000
0026	213.0100	Finishing Roadway (project) 02. 6902-01-70	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	23.000	23.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	268.000	268.000
0032	455.0605	Tack Coat	GAL	28.000	28.000
0034	465.0105	Asphaltic Surface	TON	124.000	124.000
0038	502.0100	Concrete Masonry Bridges	CY	152.000	152.000
0040	502.3200	Protective Surface Treatment	SY	190.000	190.000
0044	505.0400	Bar Steel Reinforcement HS Structures	LB	3,240.000	3,240.000
0046	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	18,050.000	18,050.000
0048	513.4061	Railing Tubular Type M (structure) 01. B-68-142	LF	134.000	134.000
0050	516.0500	Rubberized Membrane Waterproofing	SY	16.000	16.000
0054	550.2106	Piling CIP Concrete 10 3/4 X 0.365-Inch	LF	950.000	950.000
0058	606.0300	Riprap Heavy	CY	135.000	135.000
0060	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	180.000	180.000
0070	618.0100	Maintenance And Repair of Haul Roads (project) 02. 6902-01-70	EACH	1.000	1.000
0072	619.1000	Mobilization	EACH	0.460	0.460
0074	624.0100	Water	MGAL	20.000	20.000
0076	625.0500	Salvaged Topsoil	SY	105.000	105.000
0078	627.0200	Mulching	SY	290.000	290.000
0080	628.1504	Silt Fence	LF	500.000	500.000
0082	628.1520	Silt Fence Maintenance	LF	500.000	500.000
0084	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0086	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0088	628.2008	Erosion Mat Urban Class I Type B	SY	20.000	20.000
0090	628.6005	Turbidity Barriers	SY	200.000	200.000
0094	629.0210	Fertilizer Type B	CWT	0.400	0.400
0096	630.0120	Seeding Mixture No. 20	LB	12.000	12.000
0098	630.0200	Seeding Temporary	LB	12.000	12.000
0102	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0104	637.2230	Signs Type II Reflective F	SF	12.000	12.000

6902-01-70

Line	Item	Item Description	Unit	Total	Qty
0106	638.2602	Removing Signs Type II	EACH	4.000	4.000
0108	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0110	642.5001	Field Office Type B	EACH	0.460	0.460
0112	643.0420	Traffic Control Barricades Type III	DAY	1,420.000	1,420.000
0114	643.0705	Traffic Control Warning Lights Type A	DAY	2,130.000	2,130.000
0116	643.0900	Traffic Control Signs	DAY	1,136.000	1,136.000
0118	643.5000	Traffic Control	EACH	1.000	1.000
0120	645.0111	Geotextile Type DF Schedule A	SY	80.000	80.000
0122	645.0120	Geotextile Type HR	SY	260.000	260.000
0124	650.4500	Construction Staking Subgrade	LF	171.000	171.000
0126	650.5000	Construction Staking Base	LF	171.000	171.000
0130	650.6500	Construction Staking Structure Layout (structure) 02. B-68-142	LS	1.000	1.000
0134	650.9910	Construction Staking Supplemental Control (project) 02. 6902-01-70	LS	1.000	1.000
0136	650.9920	Construction Staking Slope Stakes	LF	171.000	171.000
0138	690.0150	Sawing Asphalt	LF	37.000	37.000
0140	715.0502	Incentive Strength Concrete Structures	DOL	912.000	912.000
0148	SPV.0195	Special 01. Select Crushed Material For Travel Corridor	TON	60.000	60.000

3

CLEARING & GRUBBING

STATION - STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
9+00 - 10+00	LT	1	1
10+00 - 11+00	LT	1	1
	TOTALS:	2	2

BASE AGGREGATE ITEMS

STATION - STATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER (1) MGAL
9+25.00 - 9+73.75	6	70	2.3
10+18.25 - 11+60.00	17	198	6.5
TOTALS:	23	268	9.0

(1) - ADDITIONAL QUANTITIES LISTED ELSEWHERE

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDITY BARRIERS SY
9+23 - 9+90	LT & RT	145	145	80
10+04 - 11+60	LT & RT	315	315	100
UNDISTRIBUTED	-	40	40	20
	TOTALS:	500	500	200

REMOVING ASPHALT

STATION - STATION	204.0110 REMOVING ASPHALTIC SURFACE SY
8+50 - 9+25	150
TOTALS:	150

ASPHALT PAVEMENT ITEMS

STATION STATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
8+50.00 - 9+73.75	13	58
10+18.25 - 11+60.00	15	66
TOTALS:	28	124

EROSION CONTROL ITEMS

STATION - STATION	LOCATION	628.2008 EROSION MAT URBAN CLASS I TYPE B SY
9+50 - 9+65	LT	7
9+50 - 9+65	RT	6
10+30 - 10+45	LT	5
UNDISTRIBUTED	—	2
	TOTALS:	20

EARTHWORK

STATION - STATION	205.0100 EXCAVATION COMMON CY	FILL CY (1)	EXPANDED FILL CY (2)	WASTE CY	208.0100 BORROW CY
9+25.00 - 9+73.75	42	0	0	42	---
10+18.25 - 11+60.00	110	2	3	107	---
TOTALS:	152	2	3	149	0

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%

FINISHING ROADWAY

DESCRIPTION	213.0100 FINISHING ROADWAY EACH
PROJECT 6902-01-70	1
TOTALS:	1

RESTORATION 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	624.0100 WATER (1) MGAL
9+25.00 - 9+63.75	LT	10	25	0.05	1	1	1.1
9+25.00 - 9+63.75	RT	10	20	0.05	1	1	1.0
10+28.25 - 11+60.00	LT	20	90	0.10	4	4	3.5
10+28.25 - 11+60.00	RT	55	130	0.10	5	5	4.3
UNDISTRIBUTED	---	10	25	0.10	1	1	1.0
	TOTALS:	105	290	0.40	12	12	11

(1) - ADDITIONAL QUANTITIES LISTED ELSEWHERE

MAINTENANCE AND REPAIR OF HAUL ROADS

DESCRIPTION	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS EACH
PROJECT 6902-01-70	1
TOTALS:	1

MOBILIZATION EROSION CONTROL

DESCRIPTION	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH
PROJECT 6902-01-70	2	2
TOTALS:	2	2

SIGNING ITEMS

STATION	LOCATION	SIGN CODE	SIZE	634.0612 WOOD POSTS EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
9+25	RT	-	-	-	-	-	-	WEIGHT LIMIT POSTING (REMOVED BY TOWN)
9+64	RT	W5-52R	12"x36"	1	3	-	-	OBJECT MARKER
9+85	RT	-	-	-	-	1	1	EXISTING OBJECT MARKER
9+64	LT	W5-52L	12"x36"	1	3	-	-	OBJECT MARKER
9+85	LT	-	-	-	-	1	1	EXISTING OBJECT MARKER
10+28	RT	W5-52L	12"x36"	1	3	-	-	OBJECT MARKER
10+15	RT	-	-	-	-	1	1	EXISTING OBJECT MARKER
10+28	LT	W5-52R	12"x36"	1	3	-	-	OBJECT MARKER
10+15	LT	-	-	-	-	1	1	EXISTING OBJECT MARKER
10+75	LT	-	-	-	-	-	-	WEIGHT LIMIT POSTING (REMOVED BY TOWN)
		TOTALS:		4	12	4	4	

TRAFFIC CONTROL ITEMS

LOCATION	DAYS	TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAYS
CTH X INTERSECTION	71	2	142	4	284	3	213
BEGINNING OF PROJECT	71	7	497	10	710	4	284
END OF PROJECT	71	7	497	10	710	4	284
CEMETERY RD INTERSECTION	71	2	142	4	284	3	213
UNDISTRUBUTED	71	2	142	2	142	2	142
TOTALS:			1,420		2,130		1,136

CONSTRUCTION STAKING

STATION - STATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 6902-01-70 LS
9+25 - 9+64	39	39	39	---
10+28 - 11+60	132	132	132	---
6902-01-70	---	---	---	1
TOTALS:	171	171	171	1

SAWING PAVEMENT ITEMS

STATION	690.0150 SAWING ASPHALT LF
8+50	18
11+60	19
TOTAL:	37

PROJECT NO: 6902-01-70	HWY: LOCAL STREET	COUNTY: WAUPACA	MISCELLANEOUS QUANTITIES	SHEET 7	E

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
1	9+86.18, 12.1' RT	CHIS SQ ON SW CORNER BRIDGE WNG	789.25
2	8+89.80, 53.5' RT	CHIS SQ CONC BR SW OF BRIDGE	794.66
3	11+03.67, 56.2' RT	2 POLE NAILS IN 15" POPPLE	790.75

LEGEND
- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- RIP RAP
- TURBIDITY BARRIER

PI = 8+13.08
Y = 306,097.02
X = 560,669.64
Δ = 38°00'07" L
D = 22°55'06"
T = 86.09'
L = 165.81'
R = 250.00'
PC = 7+26.99
PT = 8+92.80

PI = 11+82.81
Y = 306,042.67
X = 561,041.78

CULTIVATED FIELD
WOODED
DUANE STREICH
DANIEL J & ELIZABETH A LENT
HARLAND & HELEN HANDRICH
S43° 41' 23"E
S81° 41' 30"E
S82° 36' 25"E
PC: 7+26.99
PT: 8+92.80
PI: 11+82.81
66'
SAWCUT
WETLAND BOUNDARY
EXISTING R/W
SLOPE INTERCEPT (TYP.)
EXISTING STRUCTURE P-68-102 (TO BE REMOVED)
+25 8' LT
+64 11.75' RT/LT
+25 9.3' RT
+28 (ASPHALT) 11.75' RT/LT
+60 9' RT/LT
BM-1
BM-2
BM-3
HATTON CREEK
HATTON, ROAD
BURIED TELEPHONE (CENTURYLINK) (TO BE DISCONTINUED)
BURIED TELEPHONE (CENTURYLINK) (TO REMAIN IN PLACE)
STRUCTURE B-68-142
OVERHEAD ELECTRIC (WE ENERGIES) (TO BE RELOCATED AND BURIED AT SIMILAR LOCATION.)
OVERHEAD ELECTRIC (WE ENERGIES) (TO REMAIN IN PLACE. LOCATION TO BE ADJUSTED DURING CONSTRUCTION.)
GUY
SIGN
OH
T
PL
IP

BEGIN CONSTRUCTION
STA 8+50
Y = 306,094.35
X = 560,713.20

BEGIN PROJECT
6902-01-70
STA 9+25
Y = 306,079.92
X = 560,786.68

END PROJECT
6902-01-70
STA 11+60
Y = 306,045.97
X = 561,019.22

STA 8+00.00
EL 794.97

STA 12+00.00
EL 794.55

VCL = 330.00
K = 37.27

-4.67%
4.19%

EXISTING ℄ PROFILE
FINISHED ℄ PROFILE

VPI STA 9+93.83
VPI EL 785.92

VPC STA 8+28.83
VPC EL 793.62

VPT STA 11+58.83
VPT EL 792.83

STA 9+96, STRUCTURE B-68-142
SINGLE SPAN FLAT CONCRETE SLAB
24.0 FT CLEAR ROADWAY WIDTH
44.5 FT OVERALL LENGTH
0° SKEW

REMOVE EXISTING BRIDGE P-68-102
STA 10+00
SINGLE SPAN CONCRETE DECK GIRDER
19.0 FT CLEAR ROADWAY WIDTH
29.0 FT OVERALL LENGTH
0° SKEW

REPLACE ALL PAVEMENT DAMAGED BY CONSTRUCTION OPERATIONS TO MATCH EXISTING BETWEEN STA 8+50 AND STA 9+25

HIGH WATER 100
ELEV. 783.94

EARTHWORK SUMMARY
STA 9+25 - STA 11+60
EXC COMMON 152 CY
FILL 3 CY
FILL EXPANSION 30%
WASTE 149 CY

798 796 794 792 790 788 786 784 783

7+00 8+00 9+00 10+00 11+00 12+00 13+00

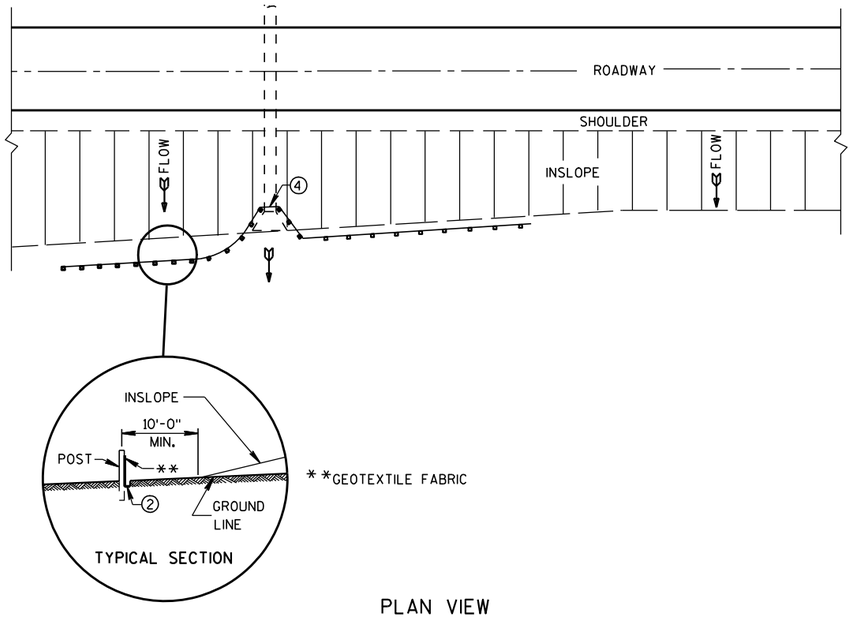
799.10 797.22 794.97 794.97 792.64 792.70 790.79 790.98 789.92 789.94 778.12 789.56 789.75 789.86 790.72 790.83 792.46 792.47 794.55 794.55 796.32 796.90

PROJECT NO: 6902-01-70	HWY: LOCAL STREET	COUNTY: WAUPACA	PLAN AND PROFILE: HATTON ROAD	SHEET 8	E

FILE NAME : P:\11500S\11520S\11522\11522016\CADD\DESIGN\ALIPROFS\11522016_ALIPROFS_HATTON_RD.DWG
LAYOUT NAME - 050101_PP
PLOT DATE : 11/13/2017 7:50 AM PLOT BY : BRAD LEE PLOT NAME : PLOT SCALE : 1 IN:40 FT

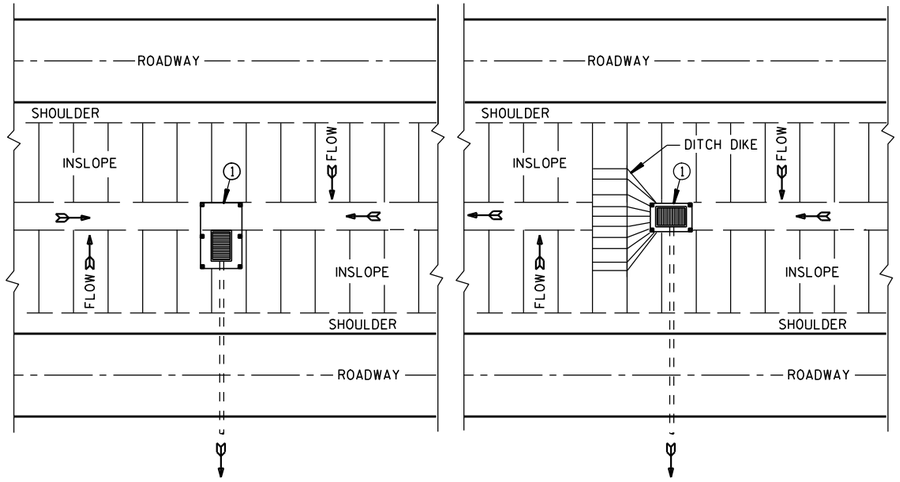
Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-08	SIGNING & MARKING FOR TWO LANE BRIDGES
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



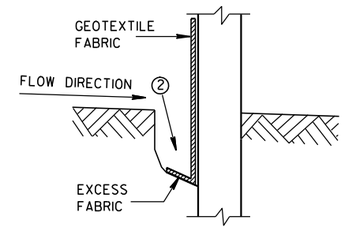
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

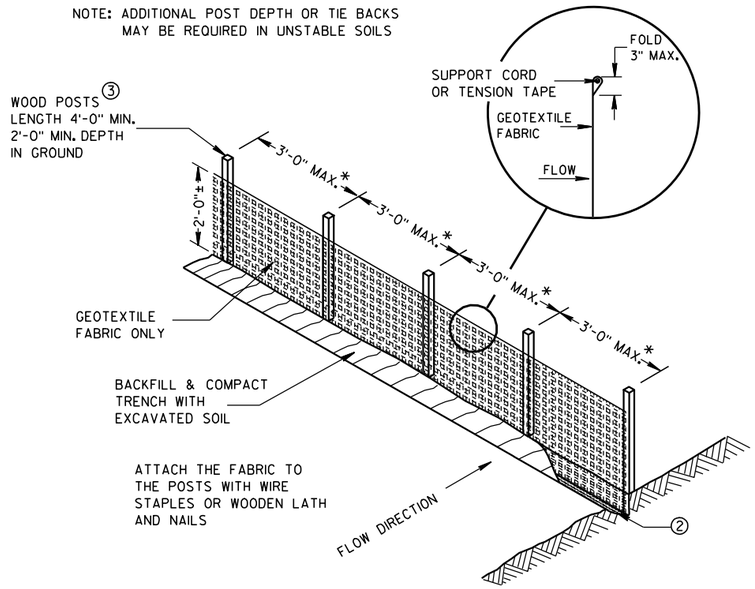
GENERAL NOTES

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.

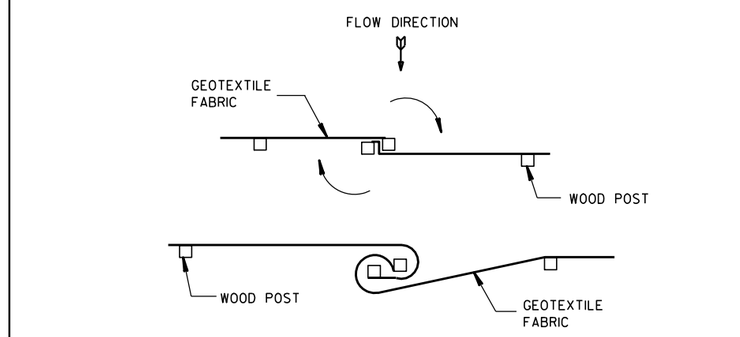


TRENCH DETAIL

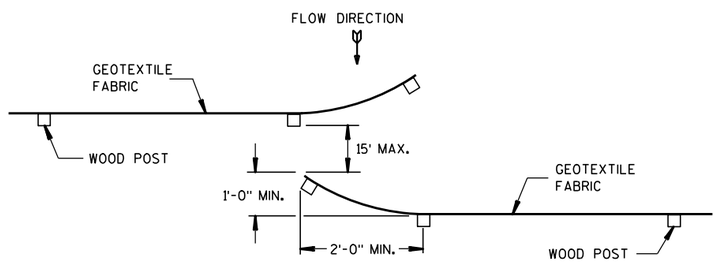


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

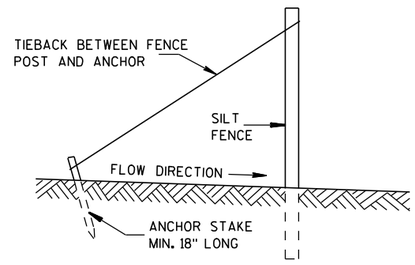


TWIST METHOD



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

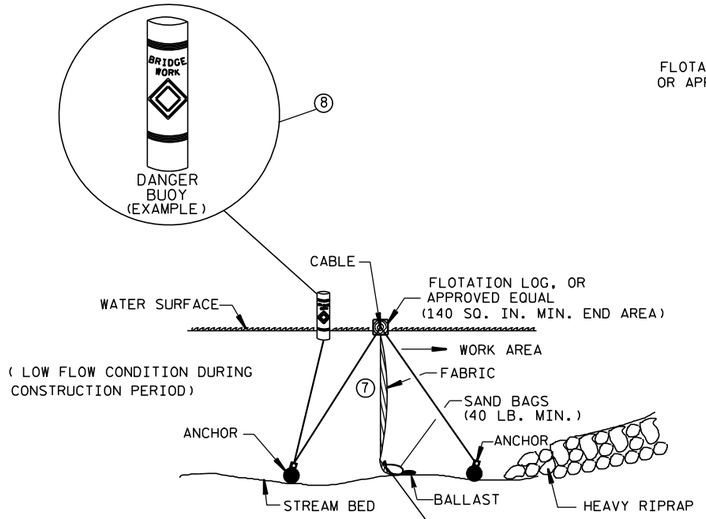
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

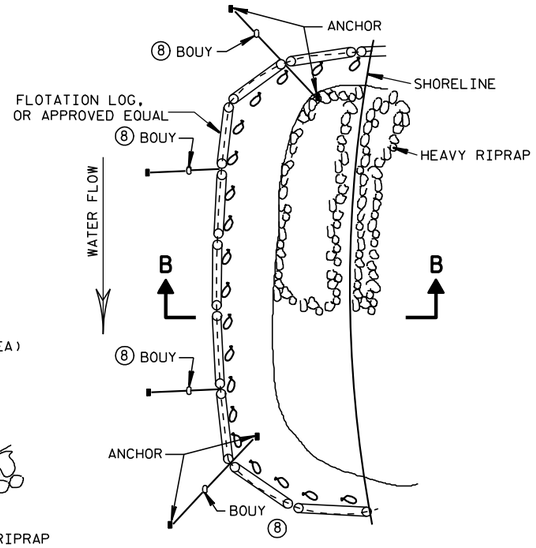
S.D.D. 8 E 9-6

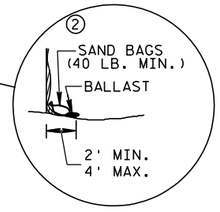
6

S.D.D. 8 E 9-6

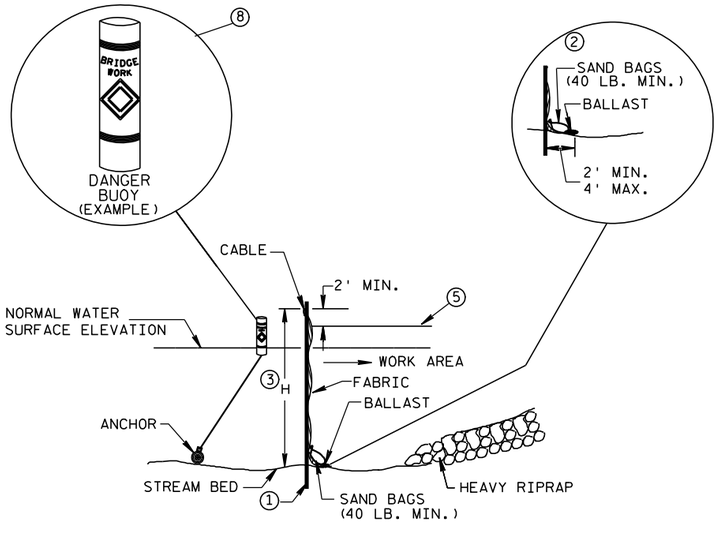


SECTION B-B

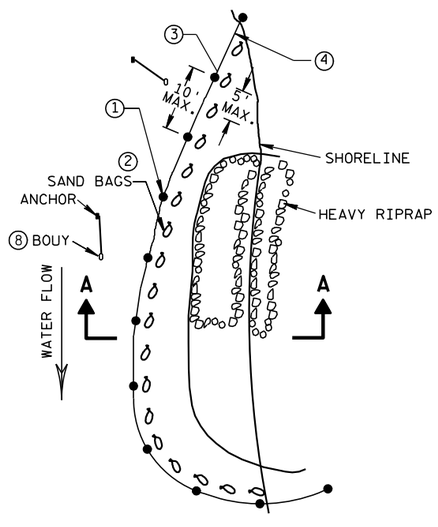




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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.

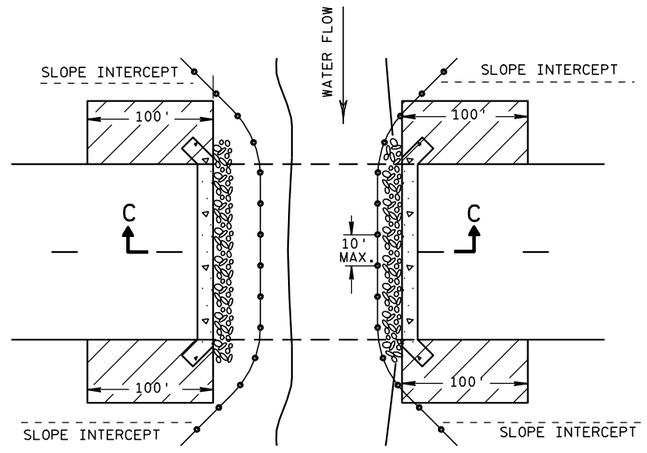
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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.

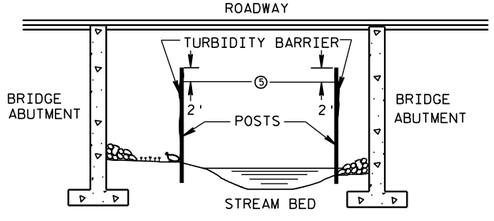
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

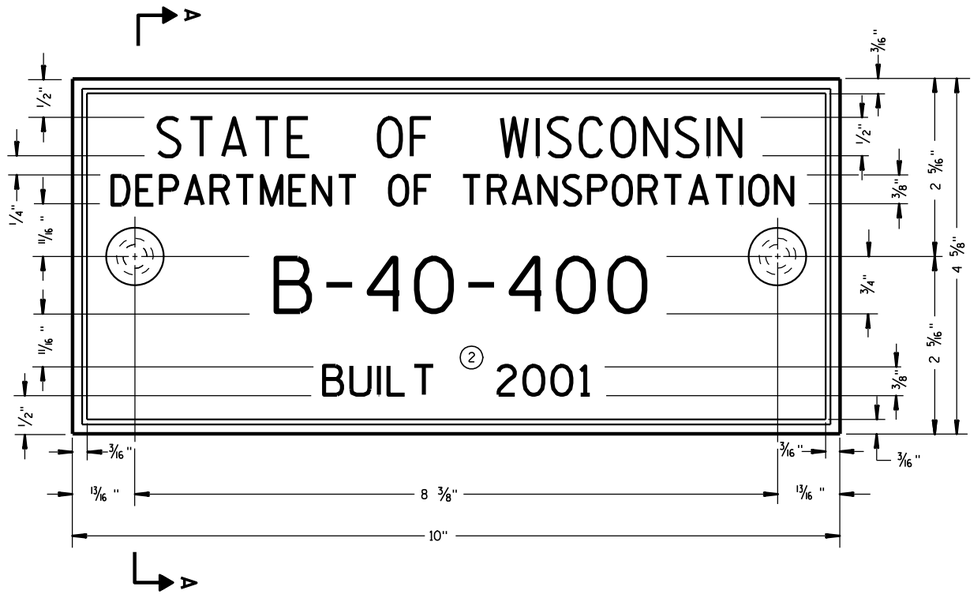
TURBIDITY BARRIER

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



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

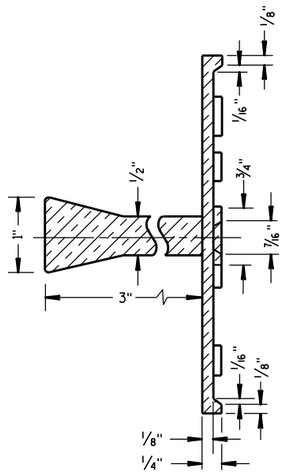
GENERAL NOTES

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

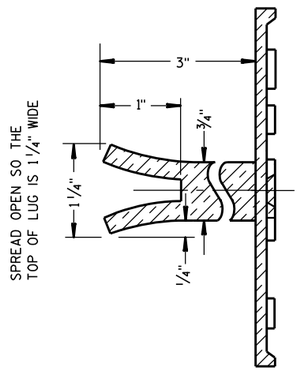
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

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



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

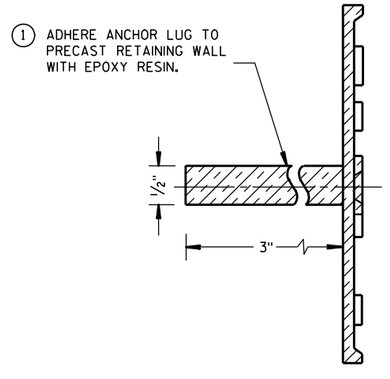
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

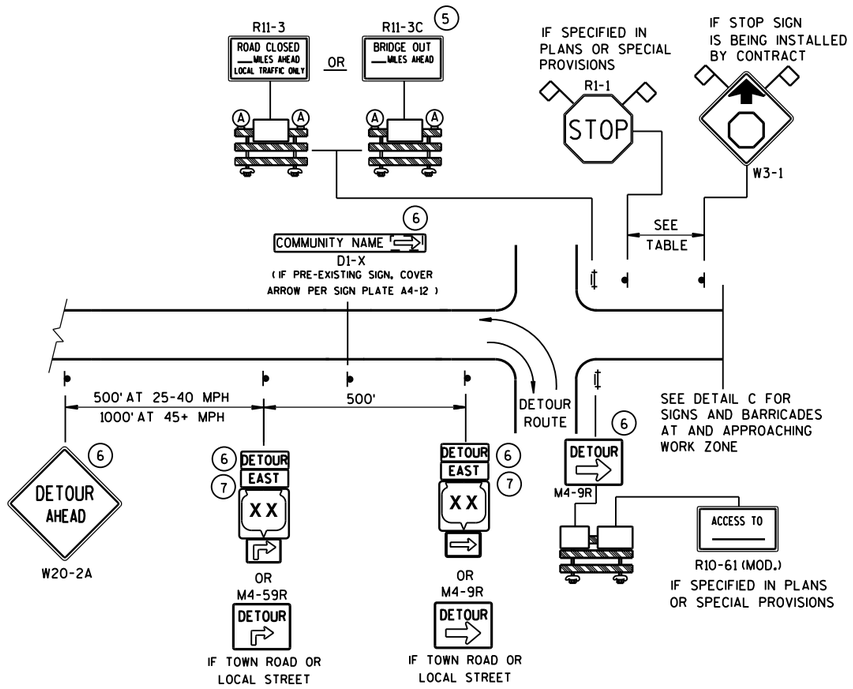
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

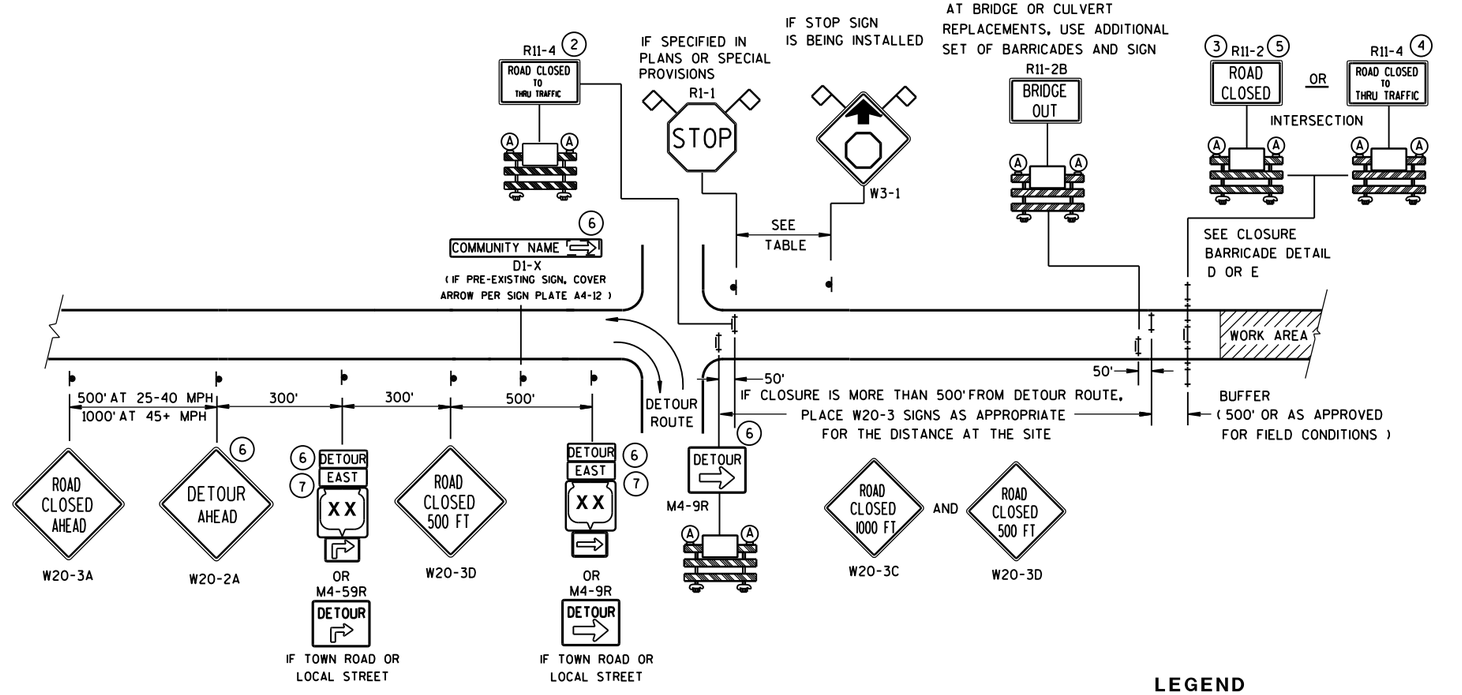
6

S.D.D. 12 A 3-10



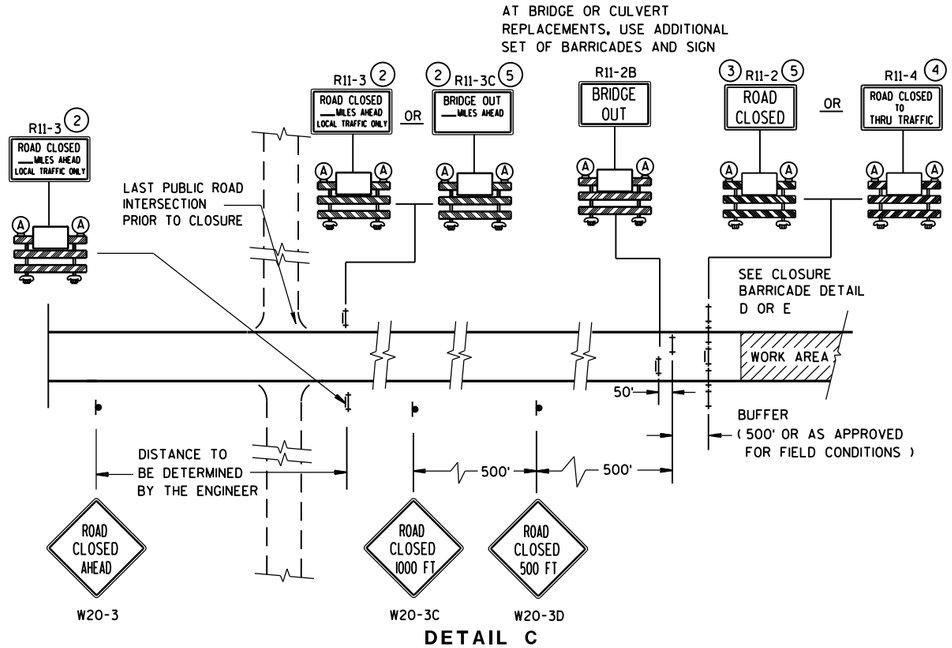
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

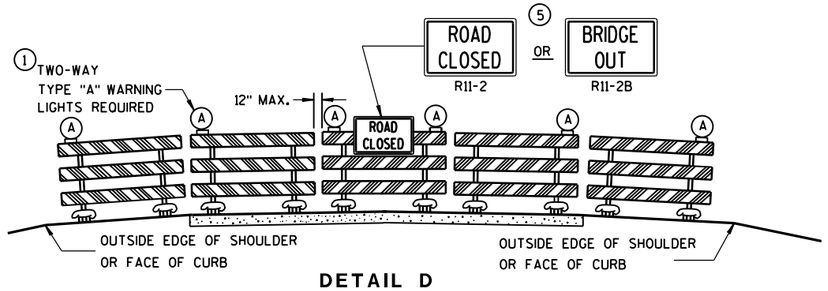
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

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

6

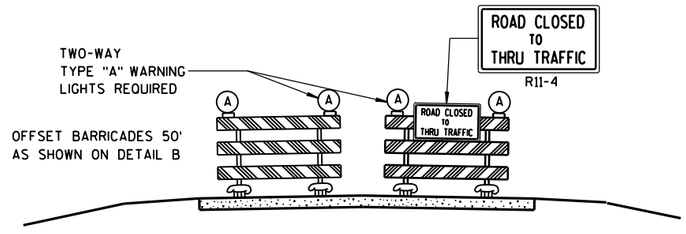
S.D.D. 15 C 2-6a



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 FIC
SAFETY ENGI
FHWA

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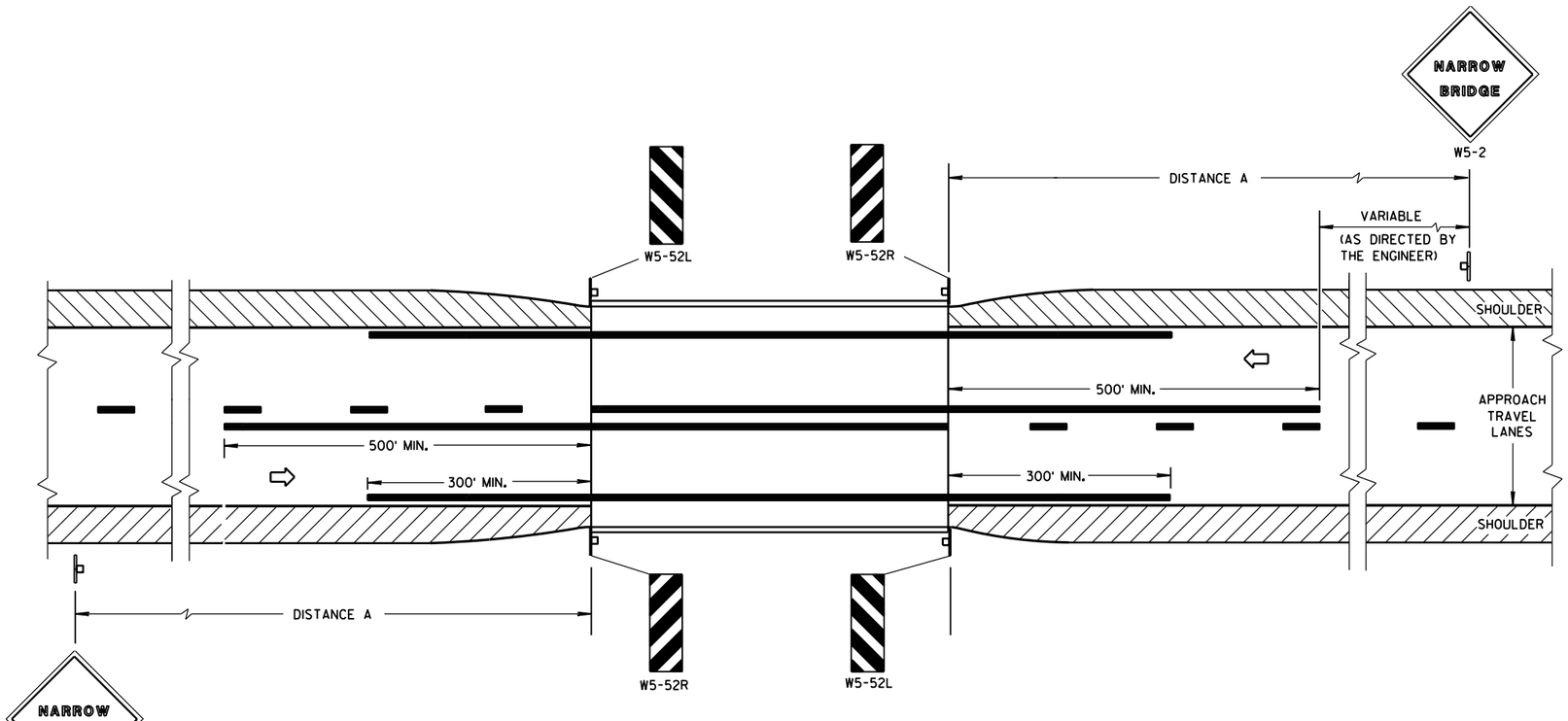
S.D.D. 15 C 2-6b

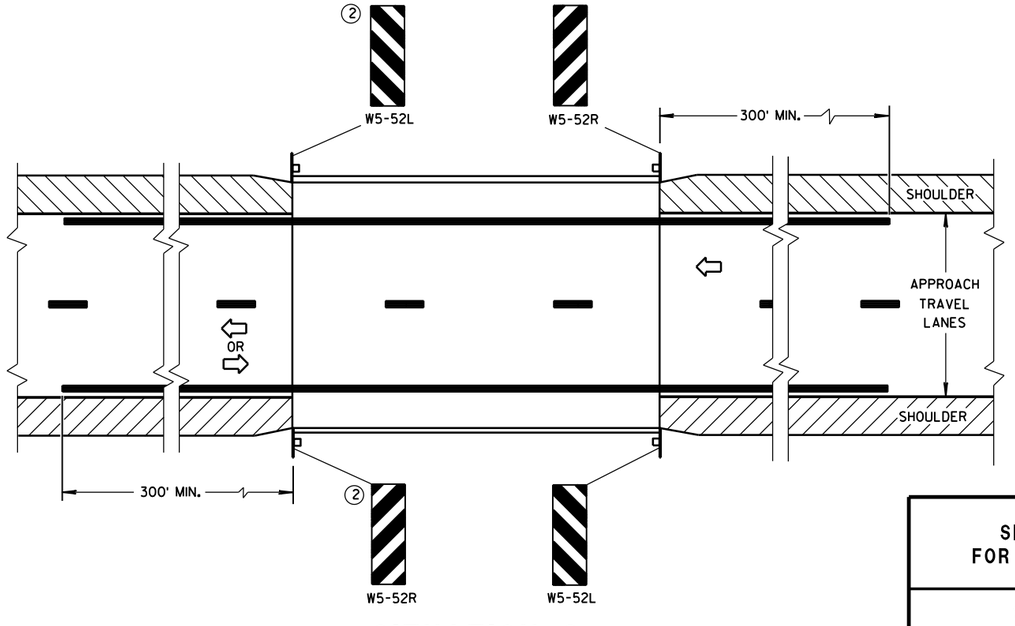


SITUATION 1

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 MAR ... ENGINEER
FHWA

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S.D.D. 15 C 6-8

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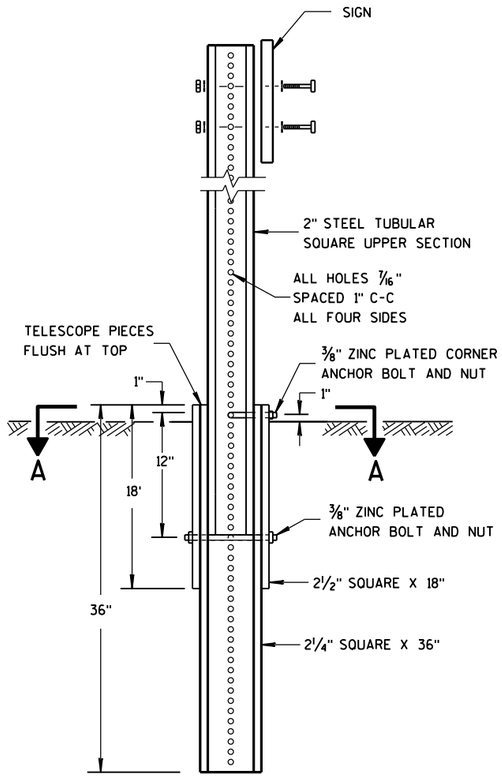
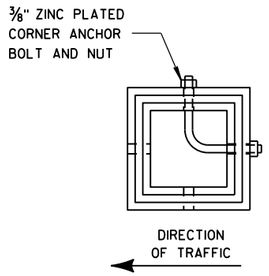
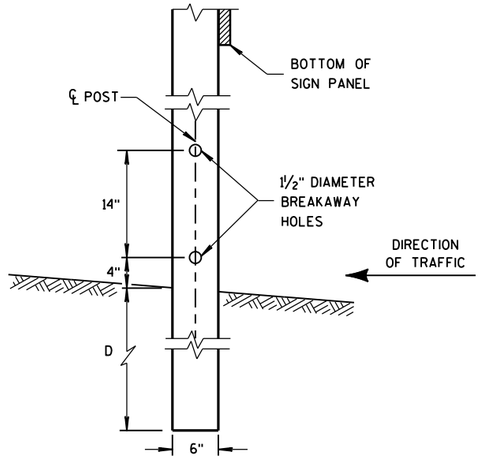
S.D.D. 15 C 6-8



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



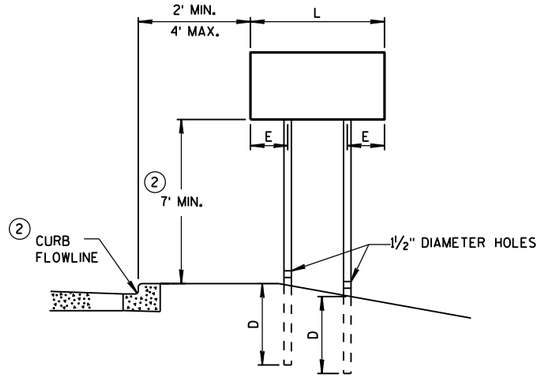
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

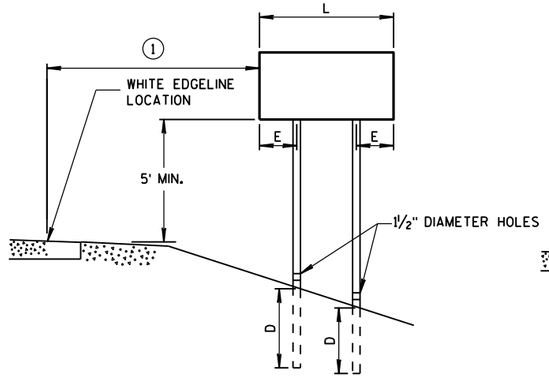
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

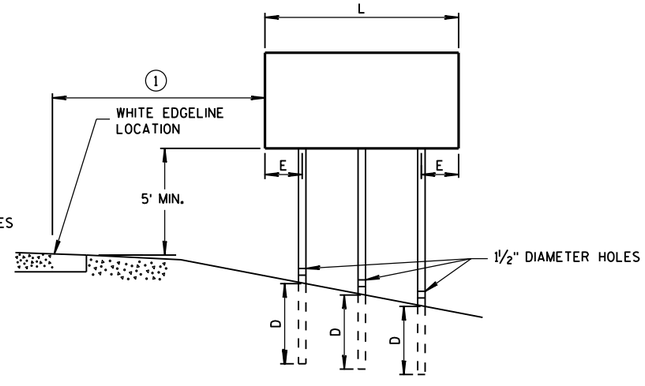
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN DEPARTMENT OF TRANSPOR

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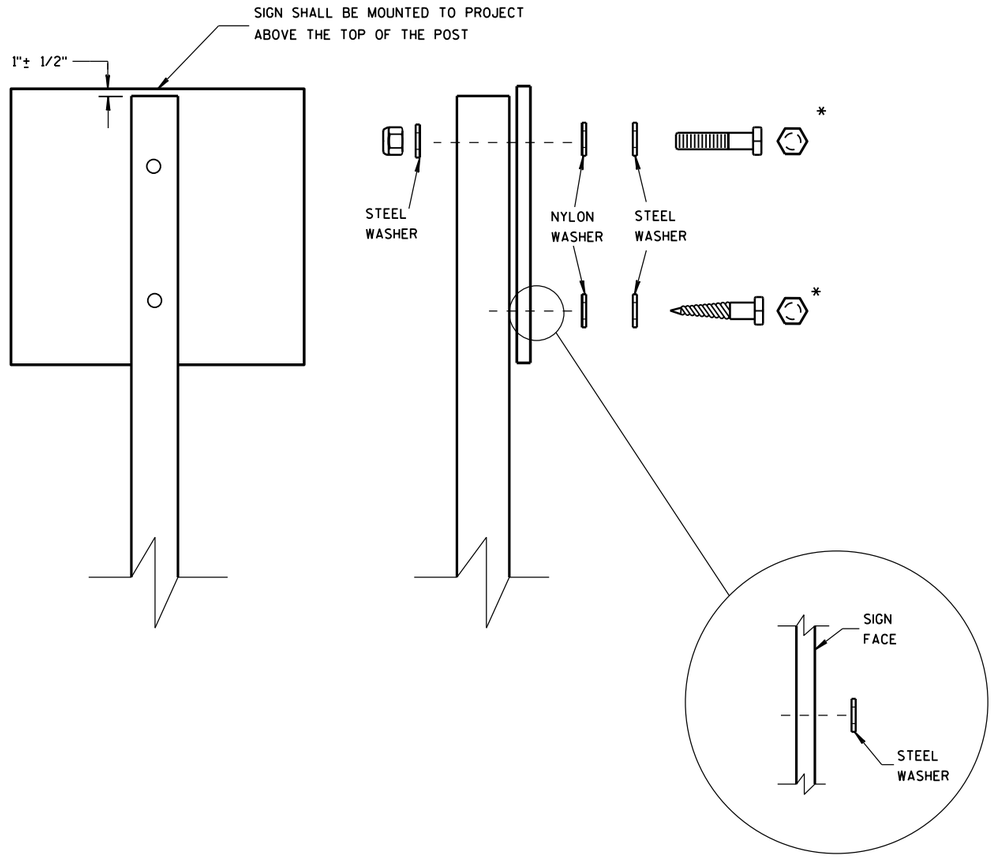
S.D.D. 15 D 38-1a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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S.D.D. 15 D 38-1b

S.D.D. 15 D 38-1b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

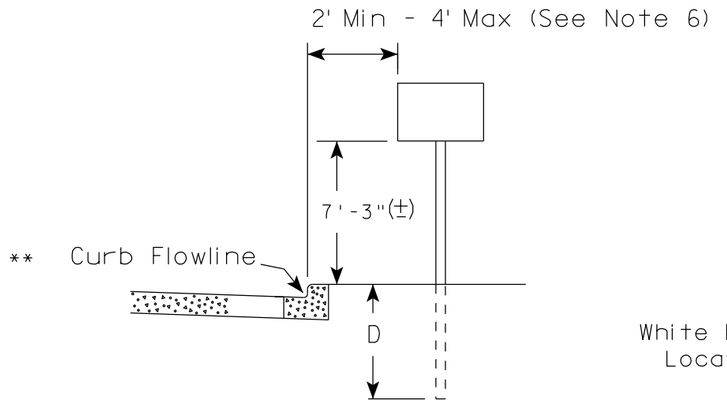
Feb. 2015 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

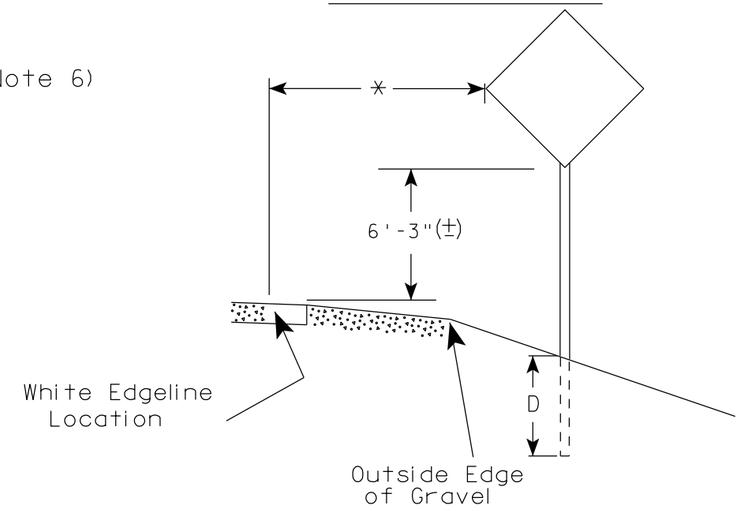
FHWA

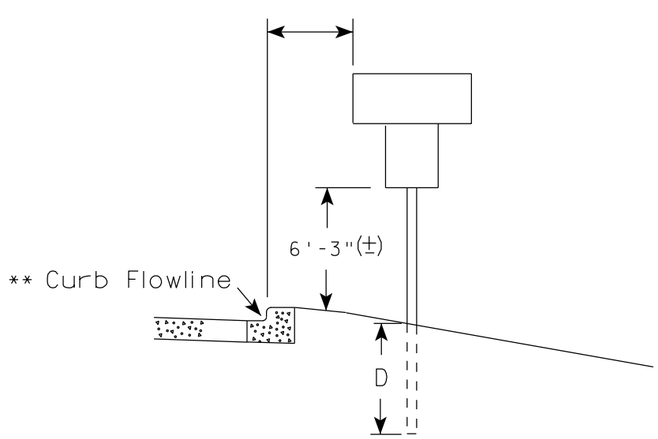
SIGN

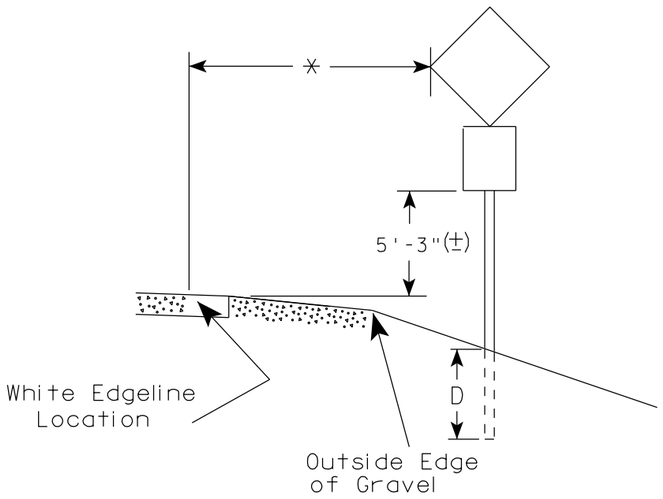
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet or 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'

** 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.

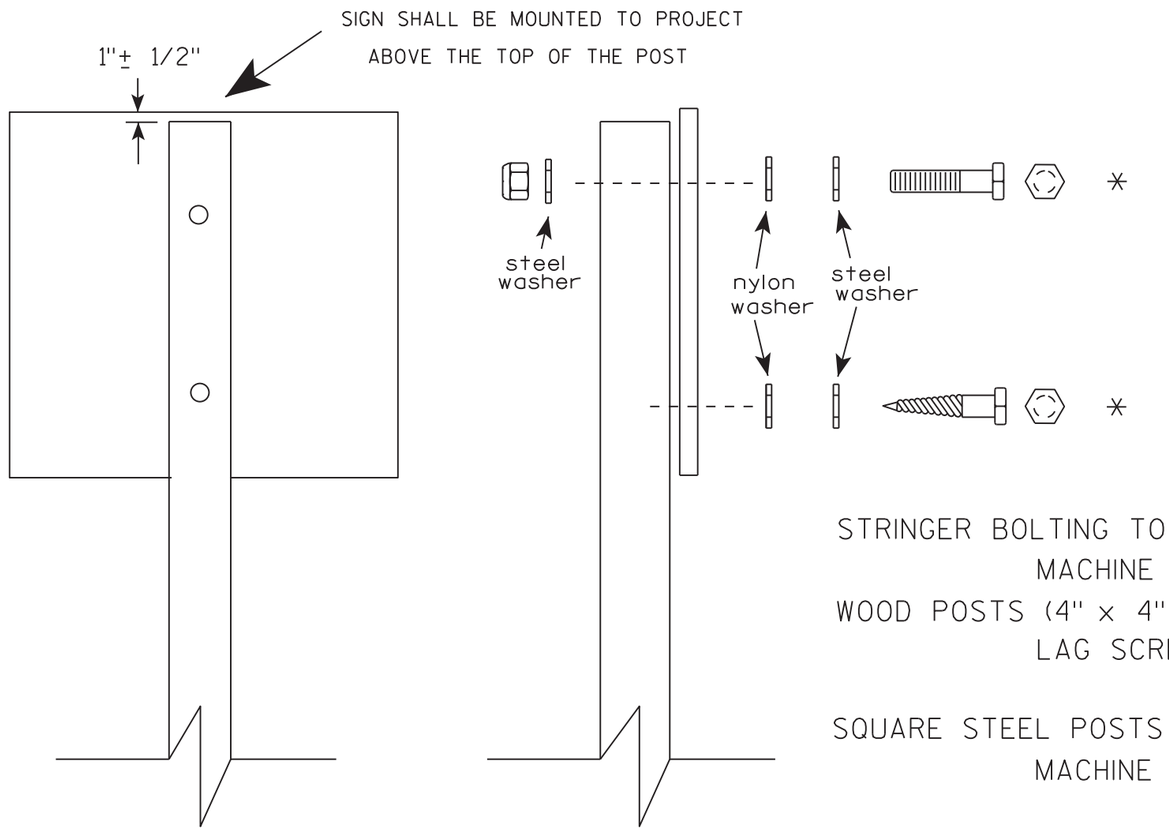
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

PROJECT NO:	HWY:	COUNTY:		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.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

* 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.

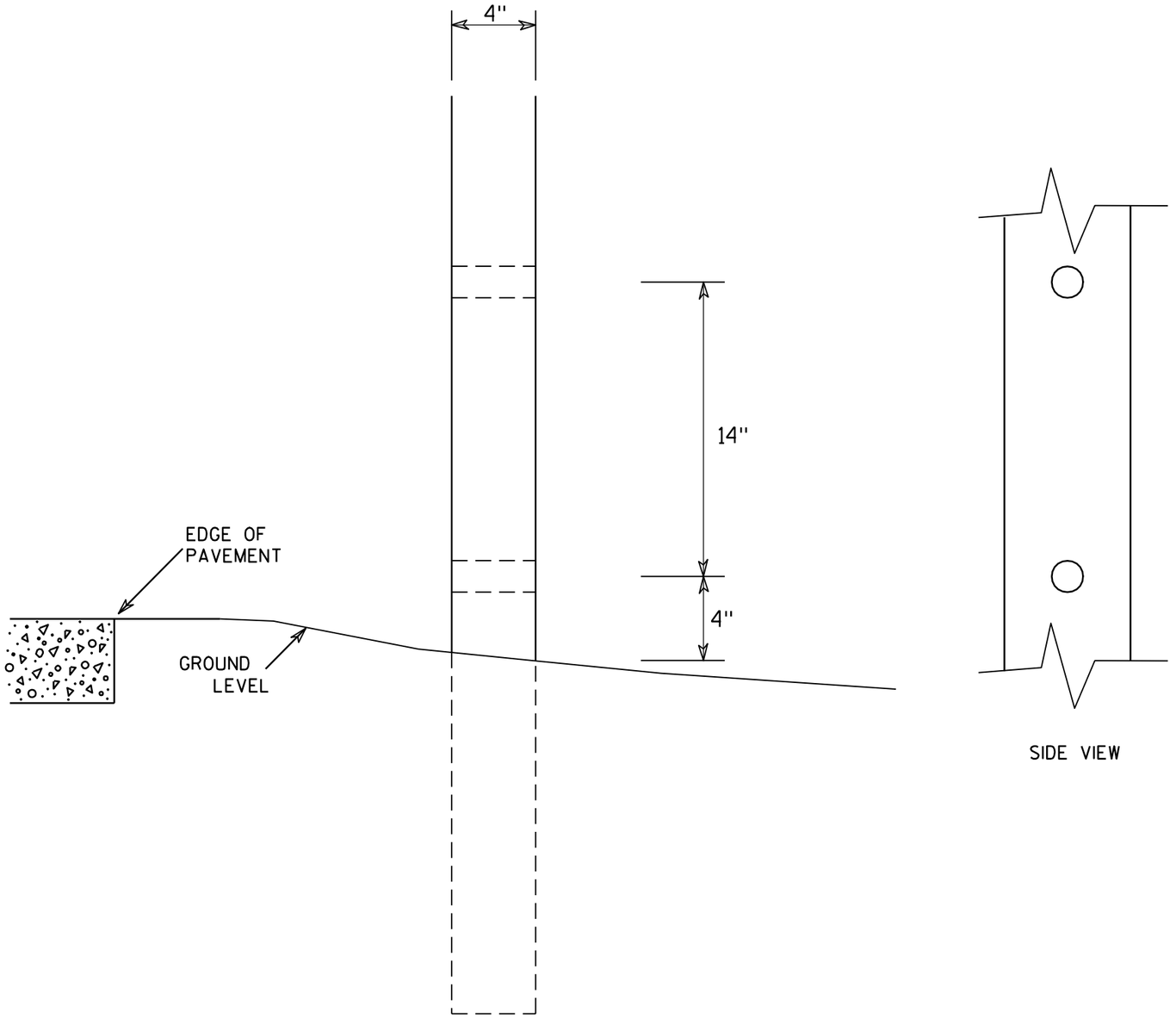
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: 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.

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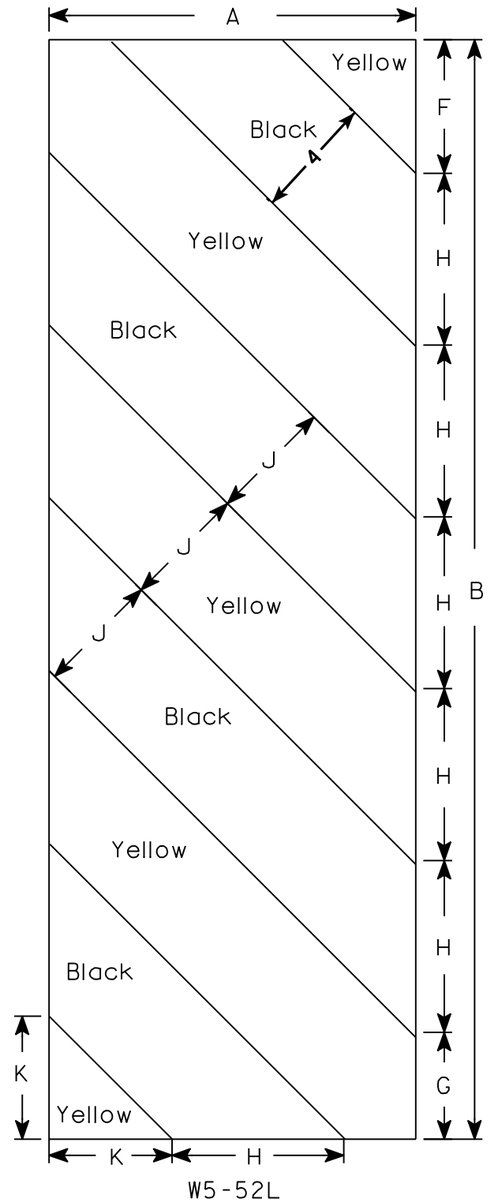
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

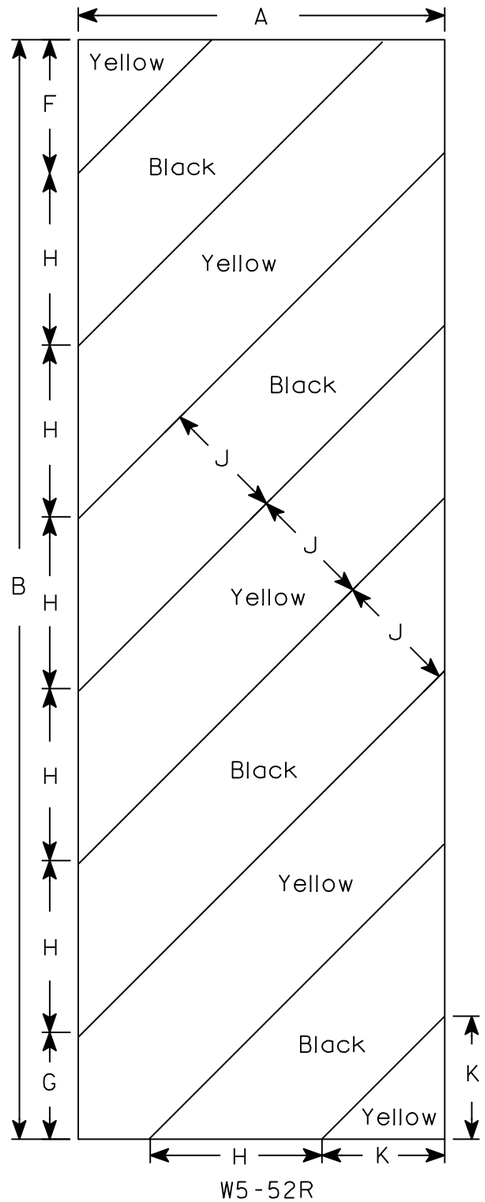
APPROVED Chester J Spang
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 20	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

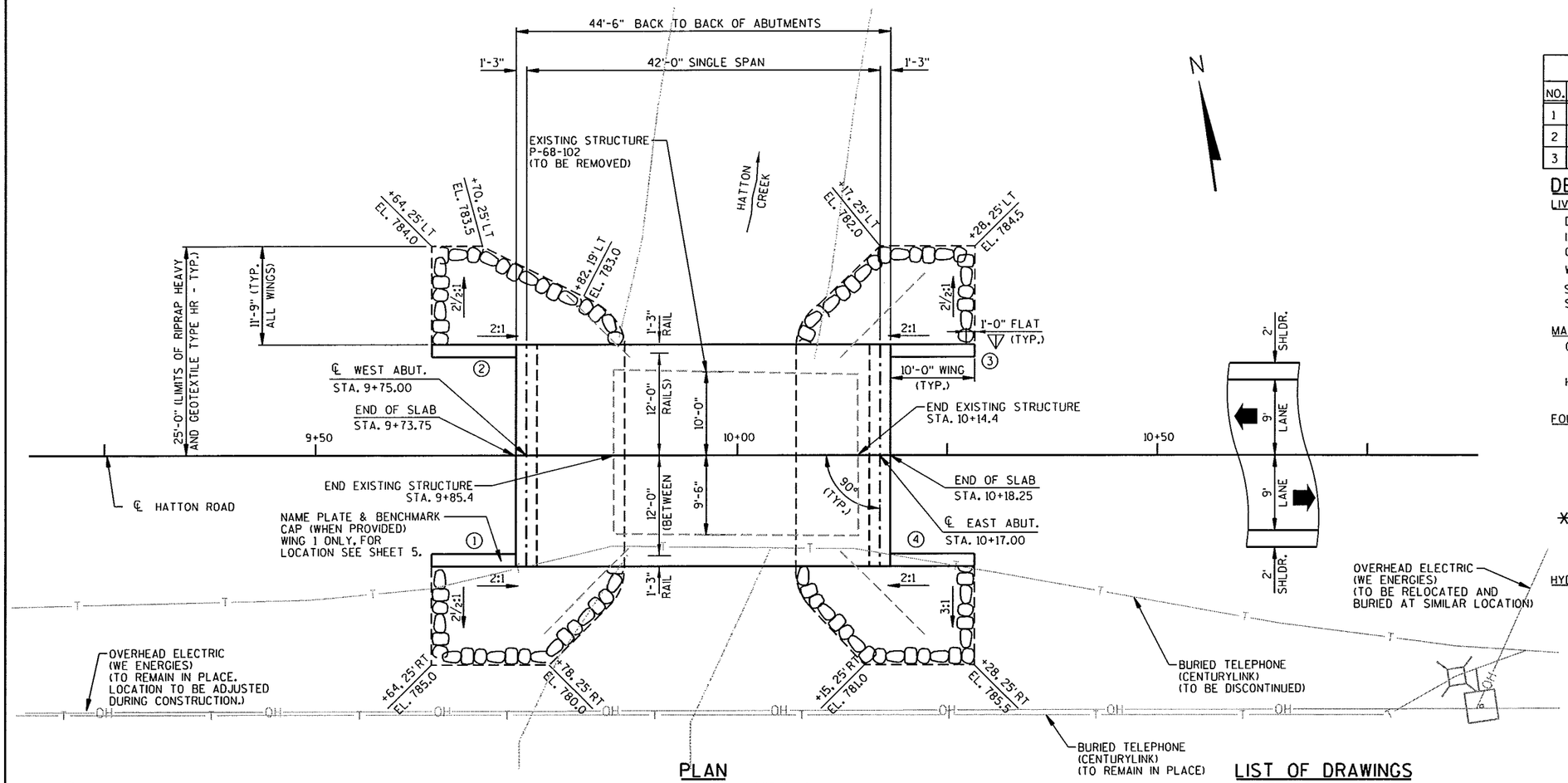
DATE 5/29/12 PLATE NO. W5-52.9

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

STATE PROJECT NUMBER
6902-01-70

BENCHMARKS — NAVD 88

NO.	STA./OFFSET	DESCRIPTION	ELEV.
1	9+86.18, 12.1' RT	CHIS SO ON SW CORNER BRIDGE WING	789.25
2	8+89.80, 53.5' RT	CHIS SO CONC BR SW OF BRIDGE	794.66
3	11+03.67, 56.2' RT	2 POLE NAILS IN 15" POPPLE	790.75

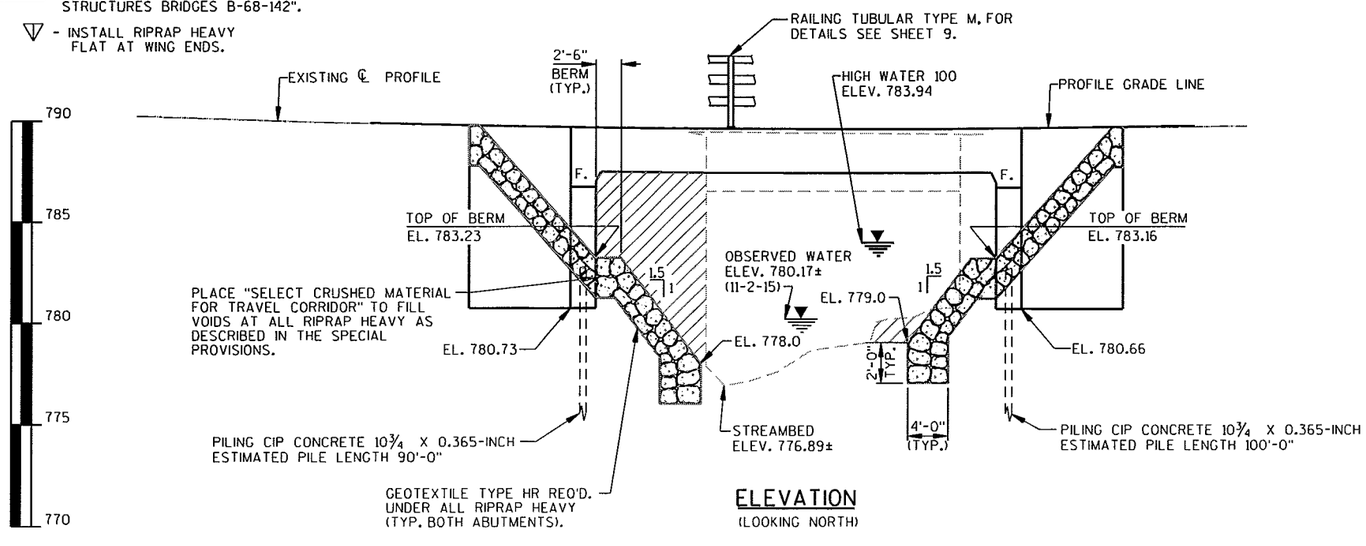


PLAN
(SINGLE SPAN FLAT CONCRETE SLAB)

○ - INDICATES WING NUMBER

▨ - REMOVAL OF THIS MATERIAL IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-68-142".

▽ - INSTALL RIPRAP HEAVY FLAT AT WING ENDS.



ELEVATION
(LOOKING NORTH)

DESIGN DATA

LIVE LOAD;
- DESIGN LOADING : HL-93
- INVENTORY RATING FACTOR : 1.05
- OPERATIONAL RATING FACTOR : 1.36

TRAFFIC DATA;
- A.A.D.T. (2018) = 190
- A.A.D.T. (2038) = 260
- R.D.S. = 30 MPH

WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.

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

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 0.365-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS ✳ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 90'-0" AT THE WEST ABUTMENT AND 100'-0" AT THE EAST 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.

HYDRAULIC DATA;

100 YEAR FREQUENCY
- DRAINAGE AREA ——— 23.1 SQ. MI.
- Q_{100} ——— 550 C.F.S.
- VELOCITY ——— 3.7 FT./SEC.
- WATERWAY AREA ——— 149 SQ. FT.
- SCOUR CRITICAL CODE ——— 8
- HIGH WATER $_{100}$ ELEVATION ——— 783.94
- Q_2 ELEVATION (200 C.F.S.) ——— 782.42
- Q_2 VELOCITY ——— 1.9 FT./SEC.

ROADWAY OVERFLOW DESIGN FREQUENCY
- OVERTOPPING FREQUENCY ——— > 100 YEARS

LIST OF DRAWINGS

CONSULTANT DESIGN CONTACT:
JOSHUA SWENO
(608) 355-8852

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608) 266-8489

WISCONSIN JOSHUA R. SWENO E-44384 WAUNAKEE WI PROFESSIONAL ENGINEER
6/1/2017

NO.	DATE	REVISION	BY

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR — 08/28/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-68-142

HATTON ROAD OVER HATTON CREEK

COUNTY	TOWN ~~CITY/VILLAGE~~
WAUPACA	LIND

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

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

GENERAL PLAN — SHEET 22 9

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STATE PROJECT NUMBER

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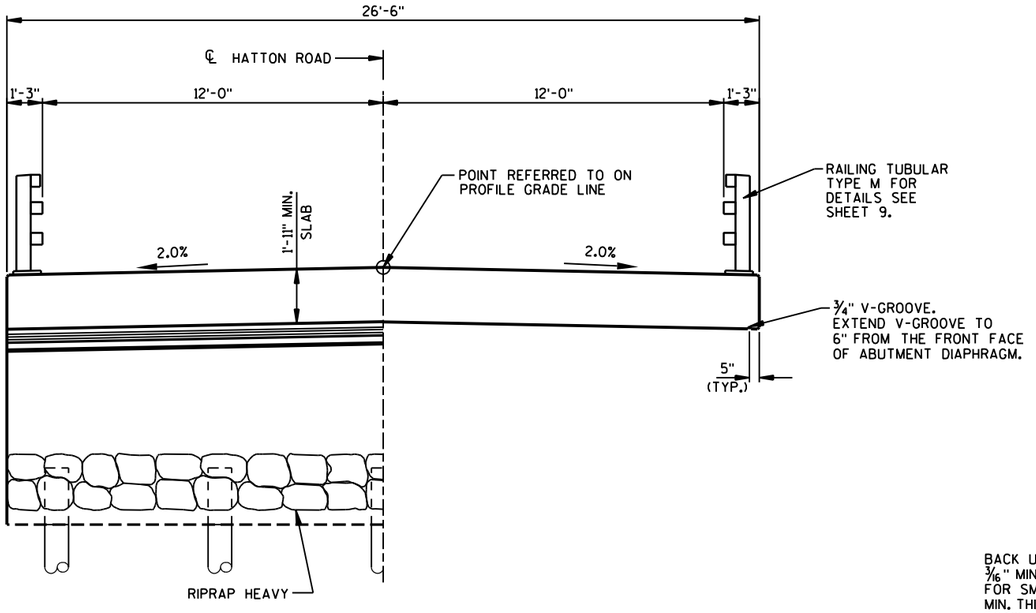


AT ABUTMENTS IN SPAN

CROSS SECTION THRU BRIDGE

(LOOKING EAST)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

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

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

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

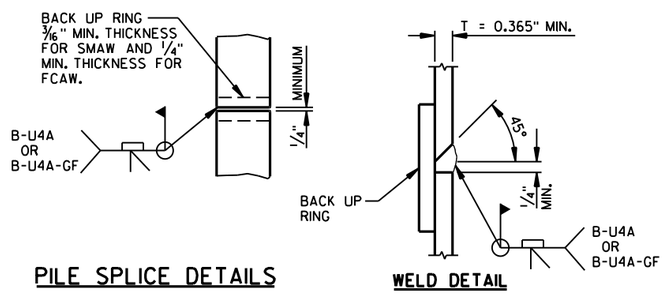
THIS STRUCTURE WILL REPLACE THE EXISTING STRUCTURE, P-68-102, A 29.0 FT. LONG, SINGLE SPAN CONCRETE DECK GIRDER ON FULL RETAINING CONCRETE ABUTMENTS WITH 19.0 FT. CLEAR ROAD WIDTH.

Ⓑ-BACKFILL PAY LIMITS, BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

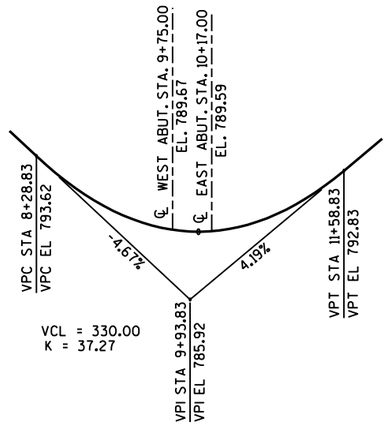
AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CAN NOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2007 ADJUSTED). BENCHMARK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.



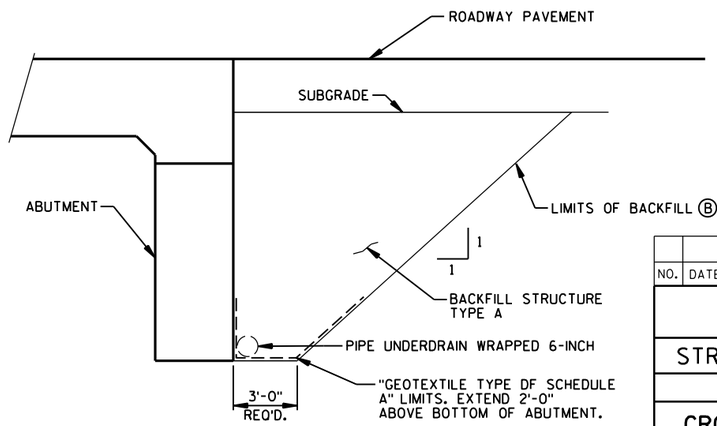
PILE SPLICE DETAILS



PROFILE GRADE LINE - HATTON ROAD

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	WEST ABUT.	EAST ABUT.	SUPER	TOTAL
203.0600.S.02	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00 STRUCTURE P-68-102	LS	-	-	-	1
206.1000.02	EXCAVATION FOR STRUCTURES BRIDGES B-68-142	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	185	185	-	370
502.0100	CONCRETE MASONRY BRIDGES	CY	32	32	88	152
502.3200	PROTECTIVE SURFACE TREATMENT	SY	15	15	160	190
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1620	1620	-	3240
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1450	1440	15160	18050
513.4061.01	RAILING TUBULAR TYPE M B-68-142	LF	-	-	134	134
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8	8	-	16
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	450	500	-	950
606.0300	RIPRAP HEAVY	CY	70	65	-	135
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	90	90	-	180
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	40	40	-	80
645.0120	GEOTEXTILE TYPE HR	SY	135	125	-	260
SPV.0195.01	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	31	29	-	60
	NON-BID ITEMS					
	PREFORMED FILLER	SIZE				½" & ¾"



STRUCTURE BACKFILL DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-142

DRAWN BY RLR | PLANS CK'D. JRS

CROSS SECTION, QUANTITIES & NOTES

SHEET 7 OF 9
23

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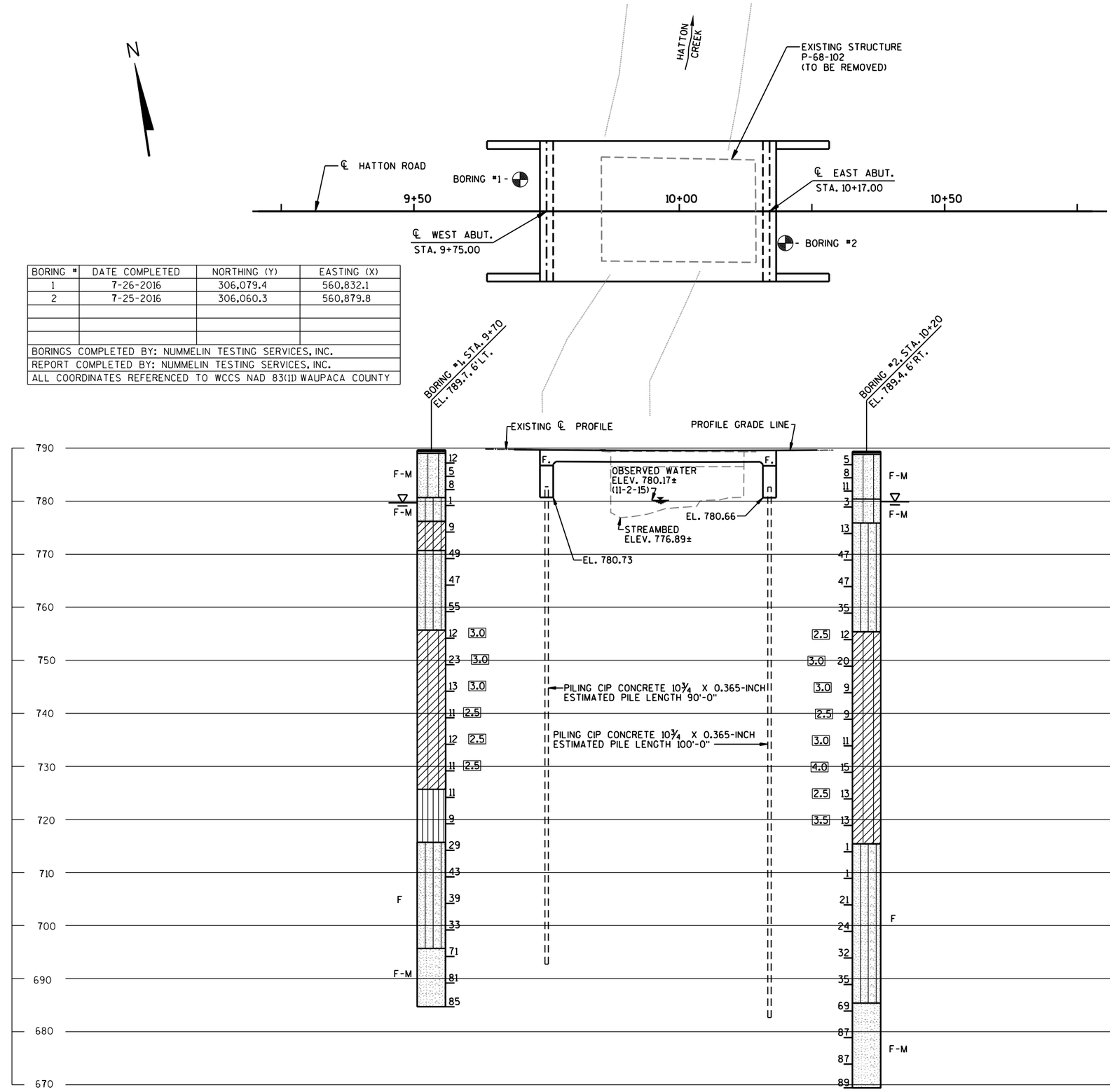


BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	7-26-2016	306,079.4	560,832.1
2	7-25-2016	306,060.3	560,879.8
BORINGS COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(11) WAUPACA COUNTY			

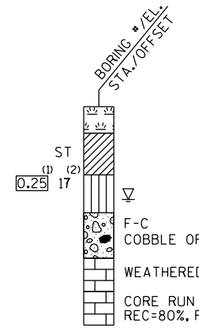
STATE PROJECT NUMBER

6902-01-70

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

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 ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE 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-68-142

DRAWN BY RLR | PLANS CK'D. JRS

SUBSURFACE EXPLORATION

SHEET 3 OF 9
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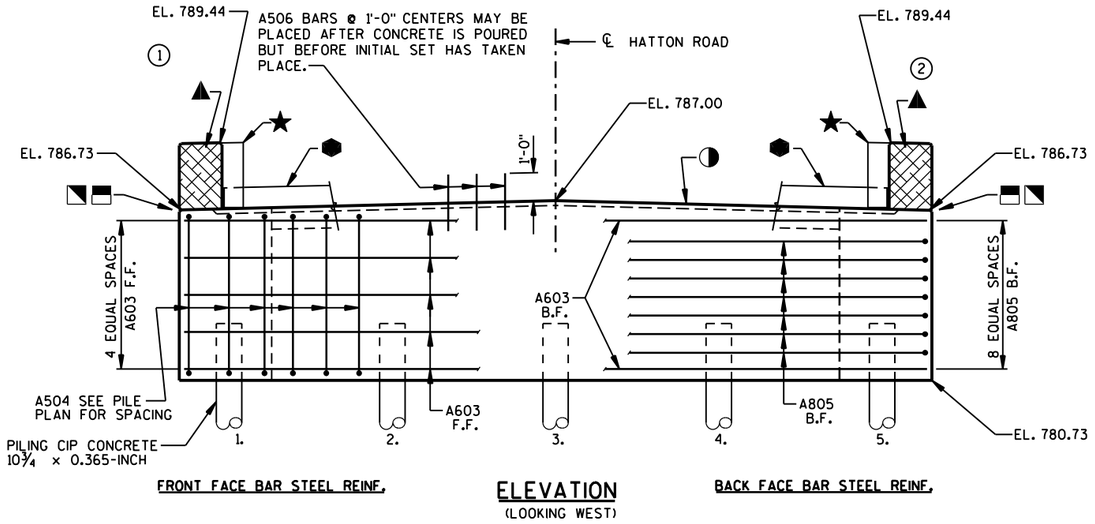
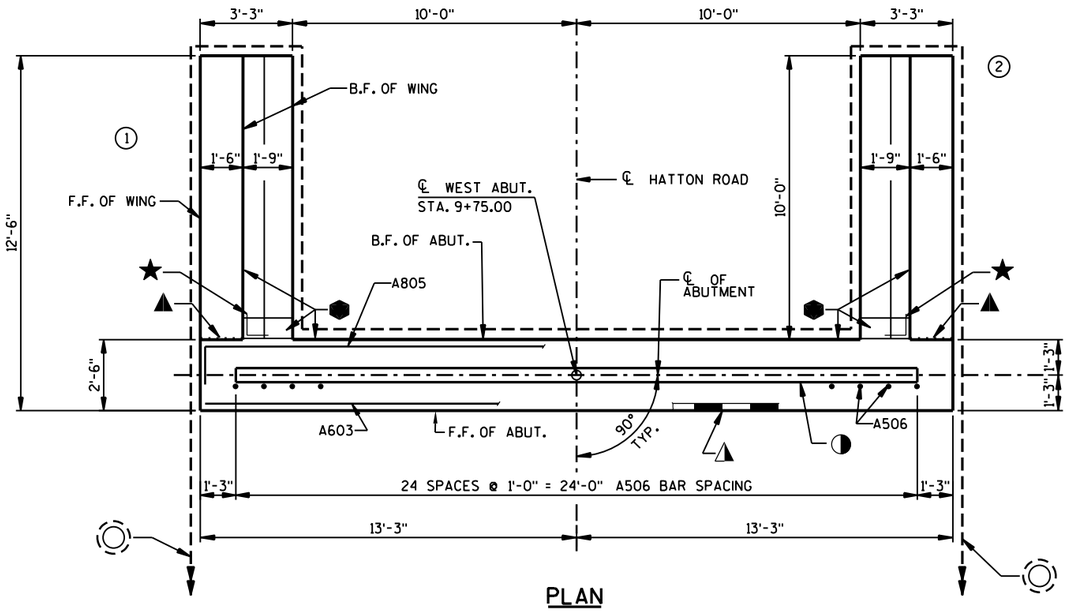
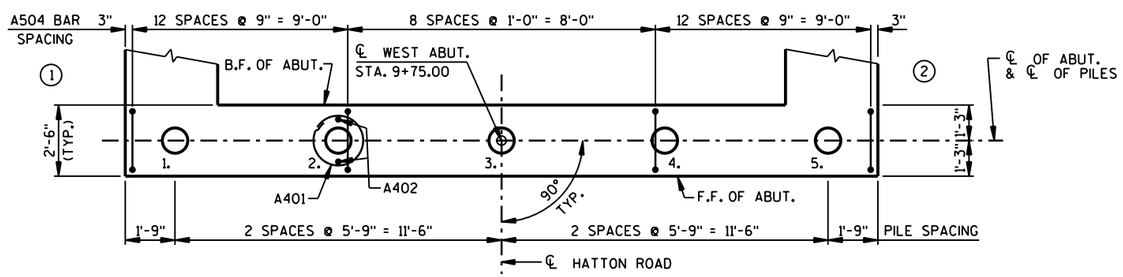


ELEVATION
(LOOKING WEST)

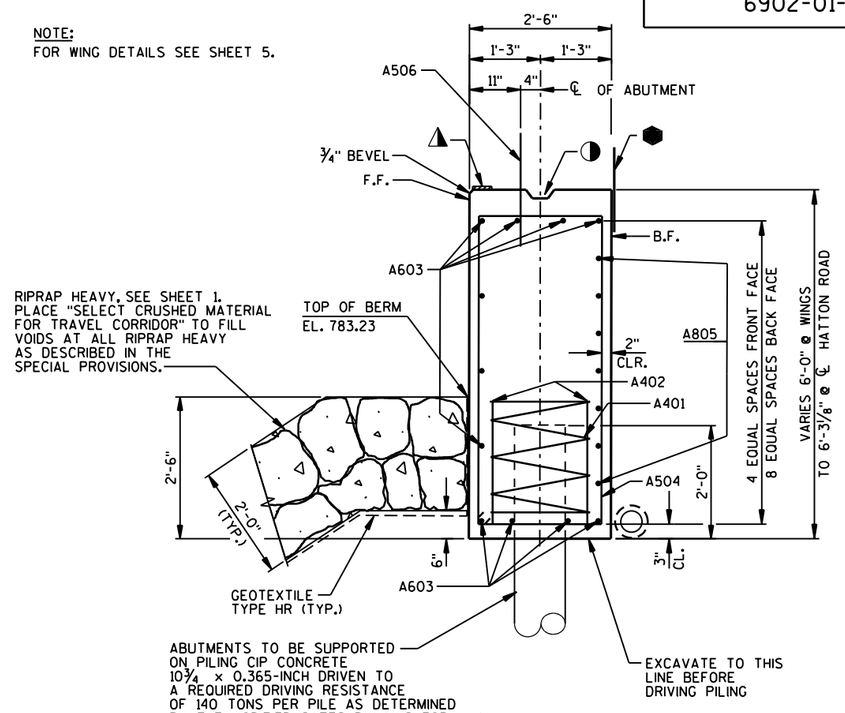


PLAN



PILE PLAN

NOTE:
FOR WING DETAILS SEE SHEET 5.



TYPICAL SECTION THRU ABUTMENT

LEGEND

- KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. IF JOINT IS USED PLACE ⬢ ON B.F. OF WING.
- ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQ'D. ONLY WHERE CONST. JOINT IS USED.
- KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- 4"× ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.
- HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS AT CONSTRUCTION JOINT.
- PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS SEE SHEET 5.
- ◯ INDICATES WING NUMBER

F.F. - FRONT FACE

B.F. - BACK FACE

CL. - CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-142

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WEST ABUTMENT

SHEET 4 OF 9
25

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DATE= 5/25/2017

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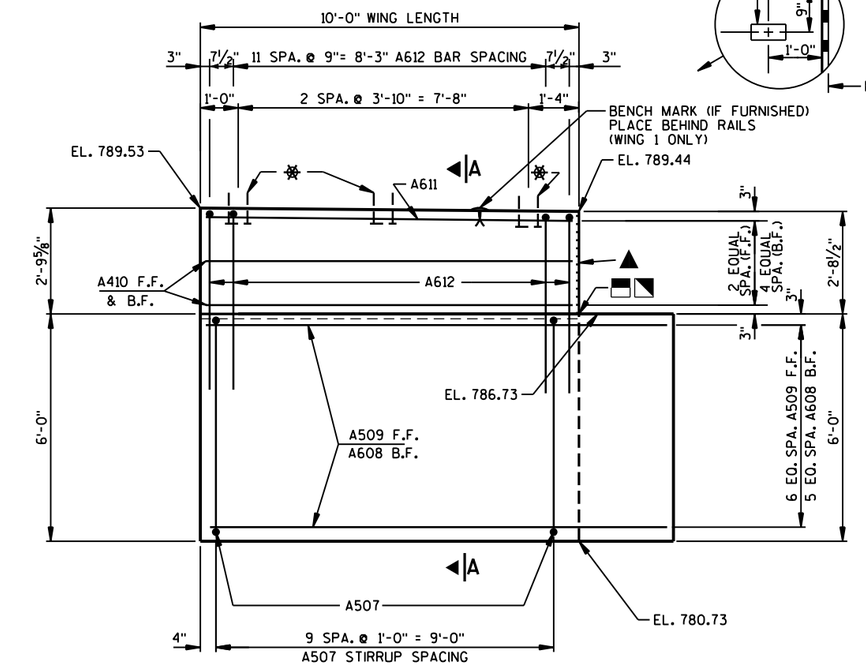
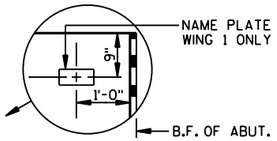
STATE PROJECT NUMBER

6902-01-70

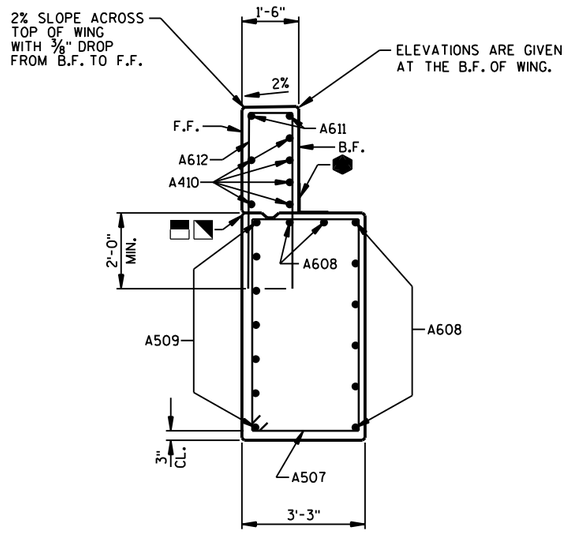
✱ — FOR RAIL POST ANCHOR DETAILS, SEE SHEET 9.



ELEVATION - WING



NOTE:
WING 1 SHOWN
WING 2 SIMILAR



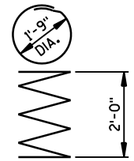
SECTION A-A THRU WING

BILL OF BARS (WEST ABUTMENT)

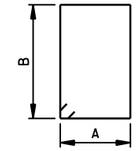
UNCOATED 1620 LBS.
COATED 1450 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
A401	-	5	28'-0"	X	ABUT. BODY - 1 SPIRAL WRAP @ EACH PILE
A402	-	10	2'-3"		ABUT. BODY - 2 PER PILE - VERT.
A603	-	11	26'-2"		ABUT. BODY - F.F., TOP & BOTTOM - HORIZ.
A504	-	33	16'-0"	X	ABUT. BODY - STIRRUPS - VERT.
A805	-	7	28'-5"	X	ABUT. BODY - B.F. - HORIZ.
A506	25	-	2'-0"		ABUT. BODY - TOP - DOWELS - VERT.
A507	20	-	17'-6"	X	WINGS - BASE - STIRRUP - VERT.
A608	16	-	12'-2"		WINGS - BASE - B.F. & TOP - HORIZ.
A509	14	-	12'-2"		WINGS - BASE - F.F. - HORIZ.
A410	12	-	9'-7"		WINGS - TOP - F.F. & B.F. - HORIZ.
A611	4	-	9'-7"		WINGS - TOP - F.F. & B.F. - HORIZ.
A612	28	-	10'-2"	X	WINGS - TOP - STIRRUP - VERT.

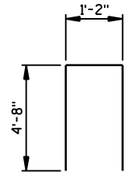
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



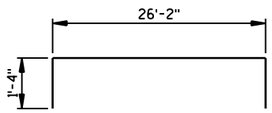
A401
(5 SPIRAL WRAPS)



MARK	A	B
A504	2'-2"	5'-6"
A507	2'-11"	5'-6"

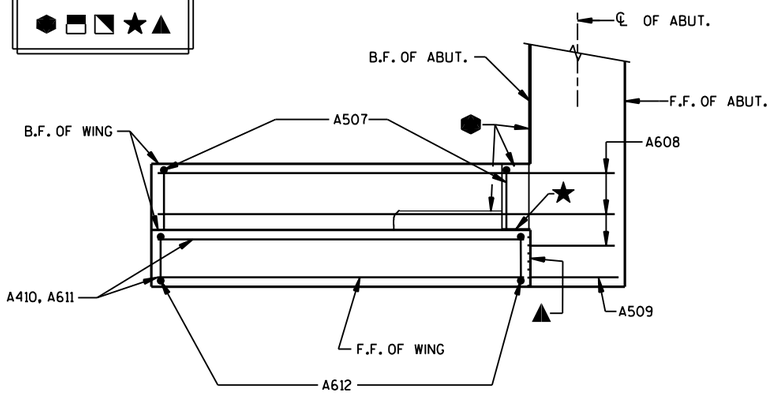


A612

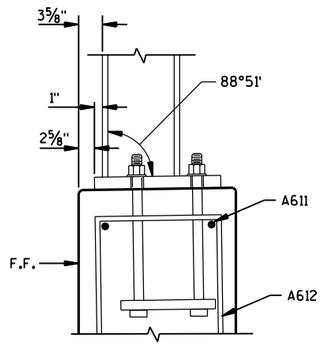


A805

SEE SHEET 4 LEGEND FOR DESCRIPTION OF



PLAN - WING

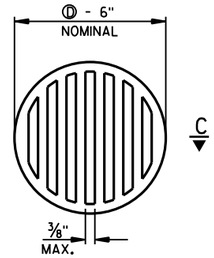


SECTION AT TOP OF WING

RODENT SHIELD NOTES:

ORIENT SHIELD SO SLOTS ARE VERTICAL.

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER.
A PIPE COUPLING IS REQUIRED FOR THE ATTACHEMENT OF THIS SHIELD TO THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH STAINLESS STEEL SHEET METAL SCREWS. THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



SECTION C-C

RODENT SHIELD

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-142

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WEST ABUTMENT DETAILS

SHEET 5 OF 9
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STATE PROJECT NUMBER

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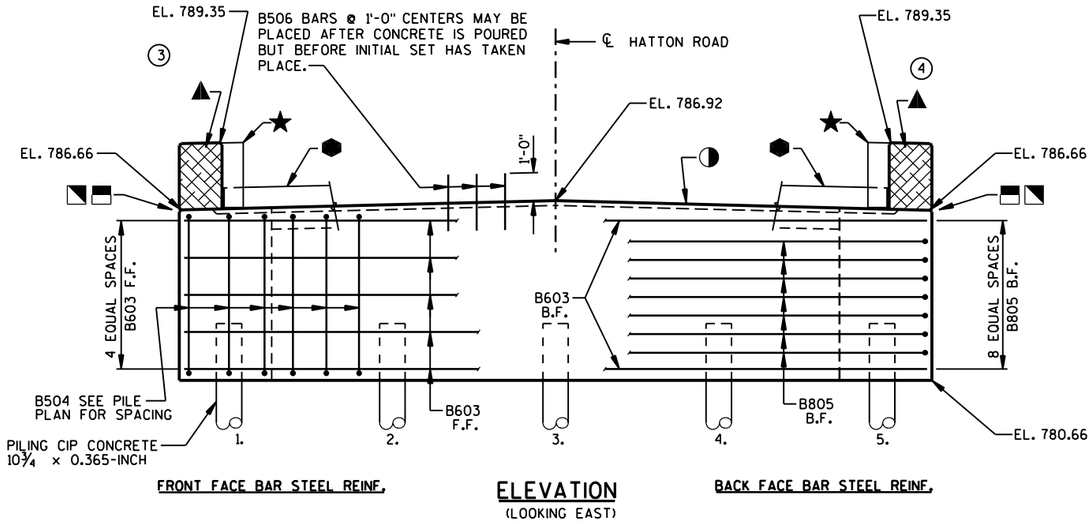
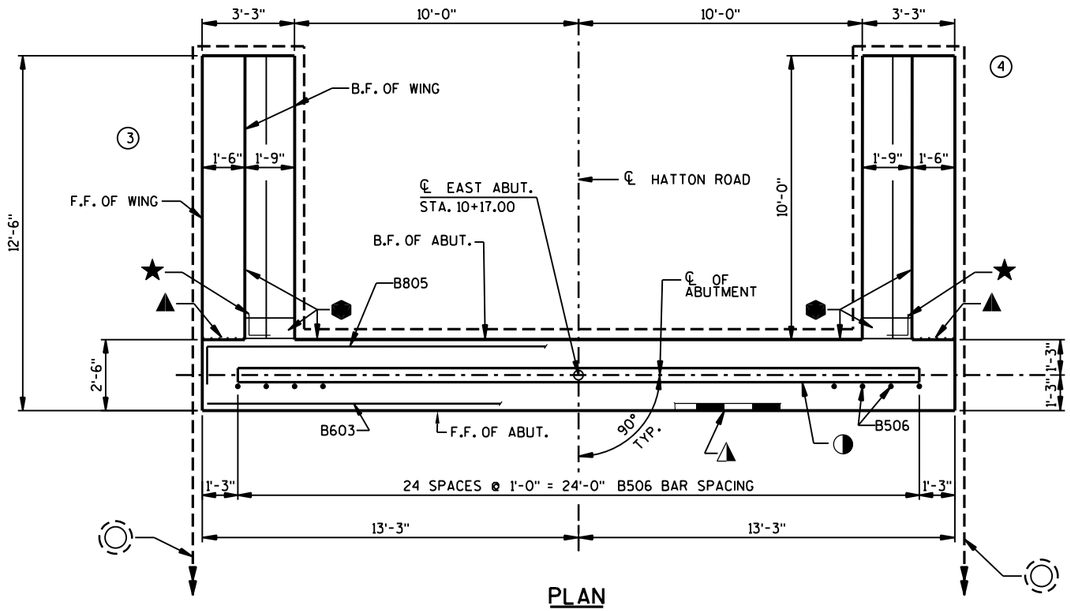
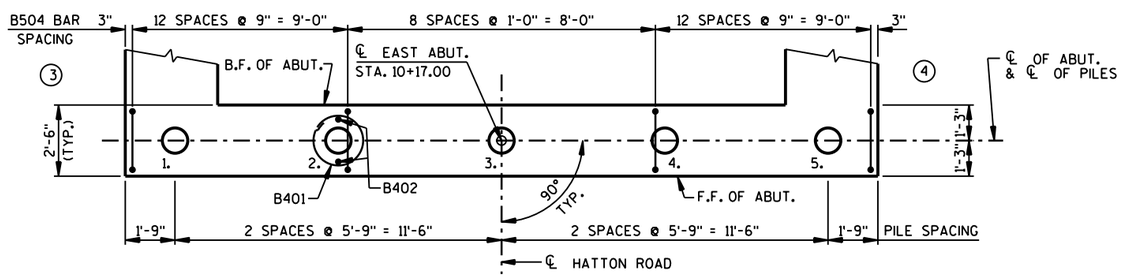


ELEVATION
(LOOKING EAST)

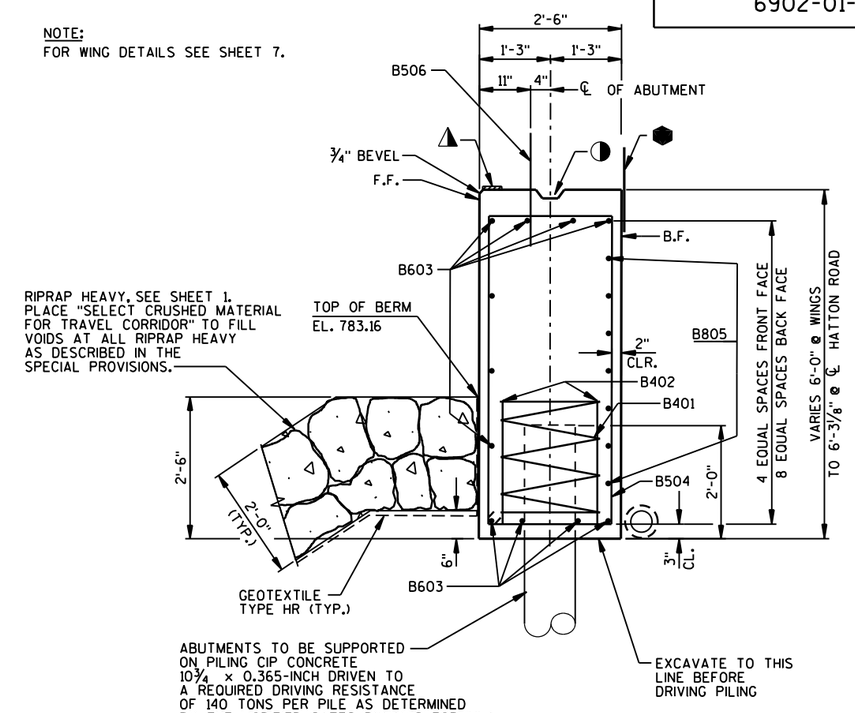


PLAN



PILE PLAN

NOTE:
FOR WING DETAILS SEE SHEET 7.



TYPICAL SECTION THRU ABUTMENT

LEGEND

- KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. IF JOINT IS USED PLACE ⬢ ON B.F. OF WING.
- 3"x4" "V" GROOVE ON FRONT FACE OF WING WALL, REQ'D. ONLY WHERE CONST. JOINT IS USED.
- KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- 1"x2" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1"x8" BELOW SURFACE OF CONCRETE).
- 4"x 3"x4" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.
- HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS AT CONSTRUCTION JOINT.
- PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS SEE SHEET 5.
- ◯ – INDICATES WING NUMBER

F.F. - FRONT FACE

B.F. - BACK FACE

CL. - CLEAR

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STATE OF WISCONSIN
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STRUCTURE B-68-142

DRAWN BY RLR | PLANS CK'D. JRS

EAST ABUTMENT

SHEET 6 OF 9
27

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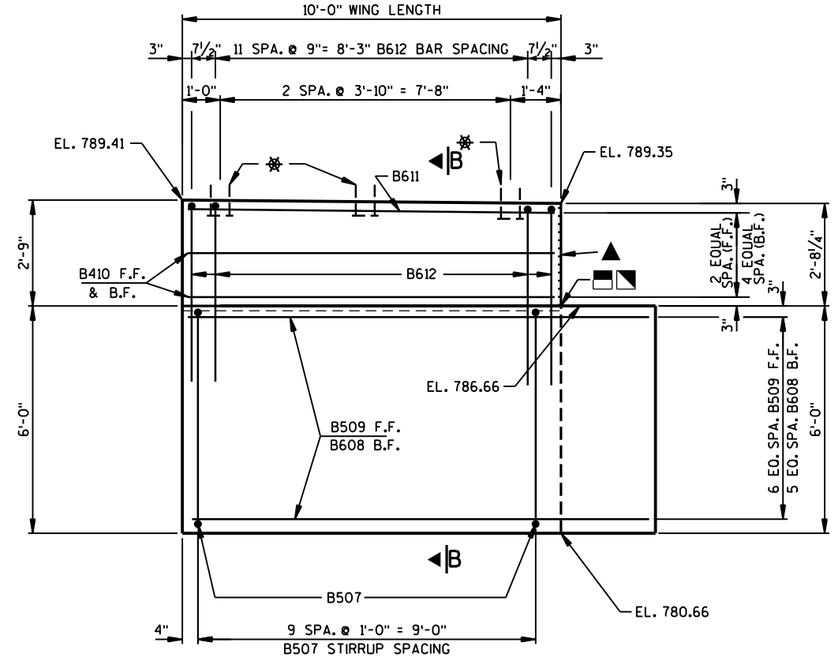
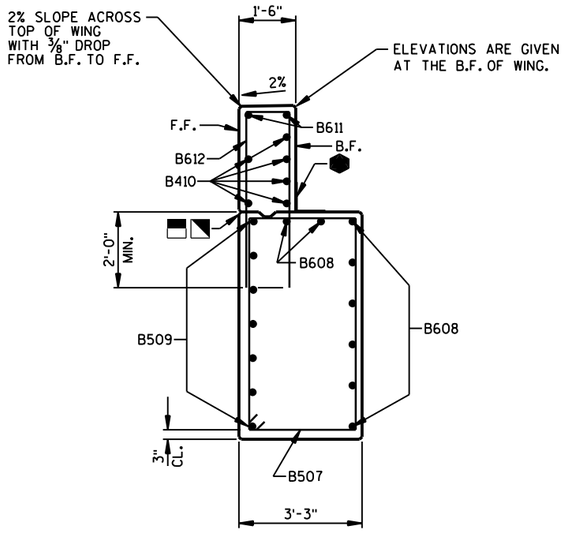
STATE PROJECT NUMBER
6902-01-70

✲ — FOR RAIL POST ANCHOR DETAILS, SEE SHEET 9.



ELEVATION - WING

NOTE:
WING 3 SHOWN
WING 4 SIMILAR



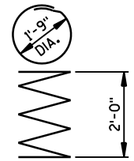
SECTION B-B THRU WING

BILL OF BARS (EAST ABUTMENT)

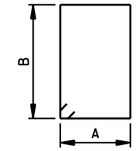
UNCOATED 1620 LBS.
COATED 1440 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
B401	-	5	28'-0"	X	ABUT. BODY - 1 SPIRAL WRAP @ EACH PILE
B402	-	10	2'-3"		ABUT. BODY - 2 PER PILE - VERT.
B603	-	11	26'-2"		ABUT. BODY - F.F., TOP & BOTTOM - HORIZ.
B504	-	33	16'-0"	X	ABUT. BODY - STIRRUPS - VERT.
B805	-	7	28'-5"	X	ABUT. BODY - B.F. - HORIZ.
B506	25	-	2'-0"		ABUT. BODY - TOP - DOWELS - VERT.
B507	20	-	17'-6"	X	WINGS - BASE - STIRRUP - VERT.
B608	16	-	12'-2"		WINGS - BASE - B.F. & TOP - HORIZ.
B509	14	-	12'-2"		WINGS - BASE - F.F. - HORIZ.
B410	12	-	9'-7"		WINGS - TOP - F.F. & B.F. - HORIZ.
B611	4	-	9'-7"		WINGS - TOP - F.F. & B.F. - HORIZ.
B612	28	-	10'-0"	X	WINGS - TOP - STIRRUP - VERT.

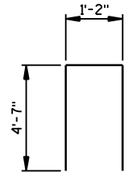
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



B401
(5 SPIRAL WRAPS)



MARK	A	B
B504	2'-2"	5'-6"
B507	2'-11"	5'-6"



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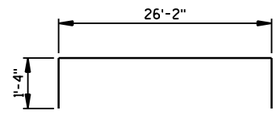
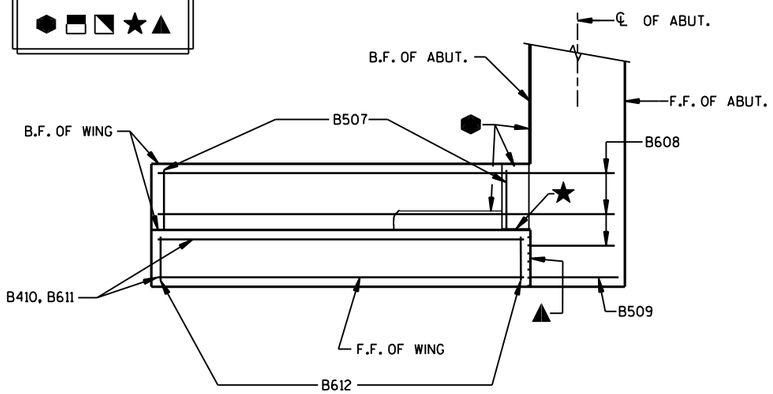
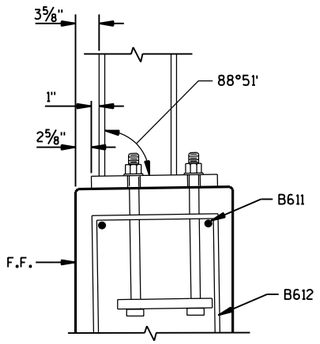


B805

SEE SHEET 6 LEGEND FOR DESCRIPTION OF



PLAN - WING



SECTION AT TOP OF WING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-142

DRAWN BY RLR | PLANS CK'D. JRS

EAST ABUTMENT DETAILS

SHEET 7 OF 9
28

FILE= 11522016_07.DGN
DATE=5/25/2017

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STATE PROJECT NUMBER

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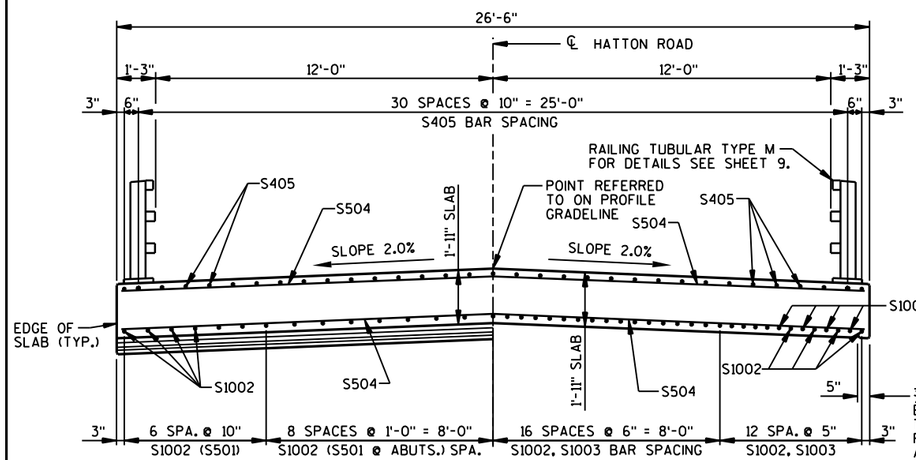


AT ABUTMENTS IN SPAN

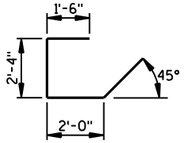
CROSS SECTION THRU BRIDGE

(LOOKING EAST)

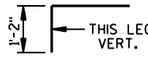
BILL OF BARS (COATED) 15,160 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	58	7'-6"	X	DIAPHRAGM @ ABUTS. - LONGIT.
S1002	29	44'-2"		SLAB BOTTOM - LONGIT.
S1003	28	34'-2"		SLAB BOTTOM - LONGIT.
S504	108	26'-2"		SLAB TOP & BOTTOM - TRANS.
S405	33	44'-2"		SLAB TOP - LONGIT.
S606	32	12'-0"	X	SLAB TOP @ RAIL POST, 2 PER POST
S607	48	6'-0"		SLAB TOP @ RAIL POST, 4 PER POST
S608	16	6'-0"	X	SLAB TOP @ RAIL END POST AS NOTED

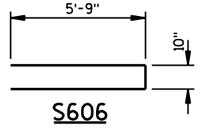
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL REINFORCEMENT.



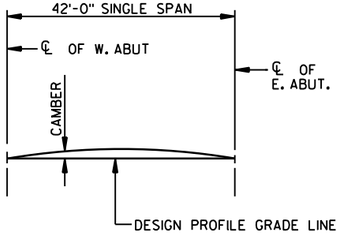
S501



S608



S606



CAMBER DIAGRAM

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

GENERAL NOTES

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

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

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	SPAN POINT	NORTH SLAB EDGE	C/L HATTON ROAD	SOUTH SLAB EDGE
WEST ABUT.	1.0			
	1.5			
EAST ABUT.	2.0			

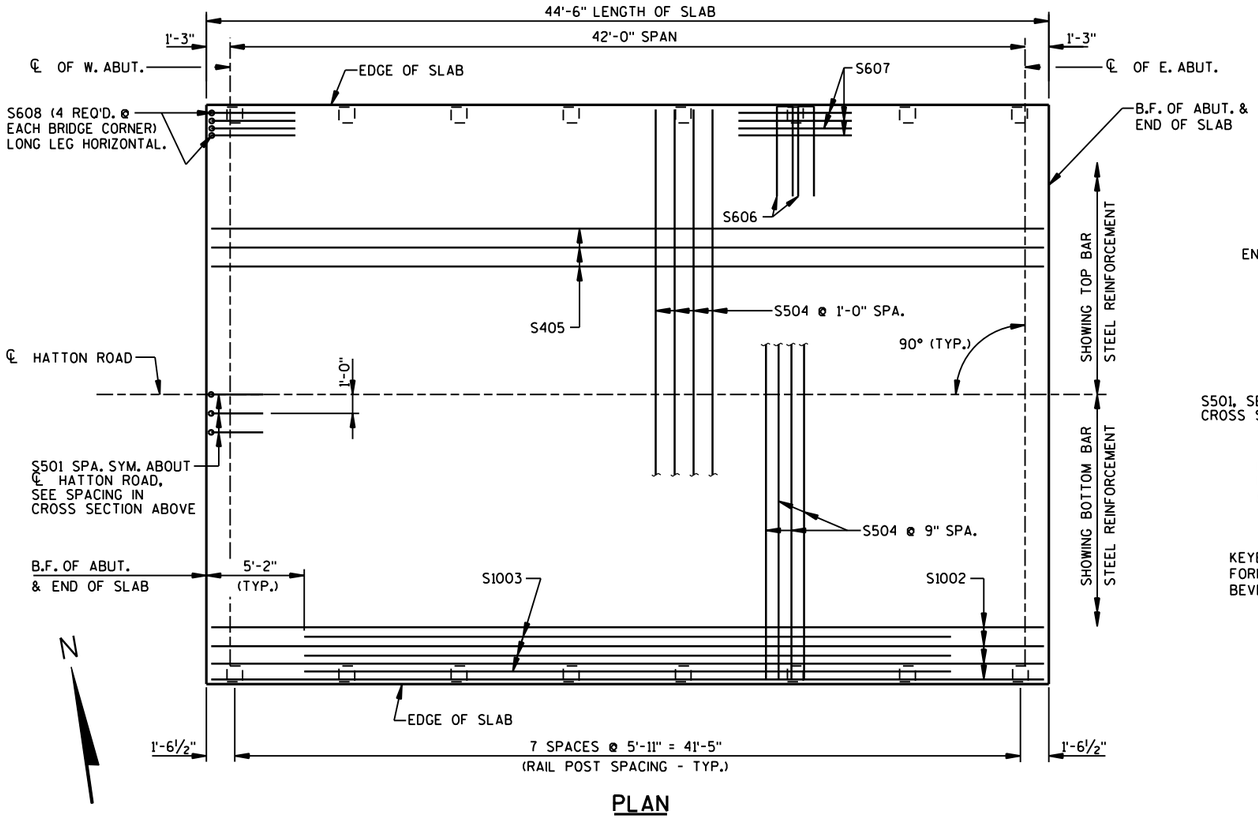
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT THE 0.5 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR ℄. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

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

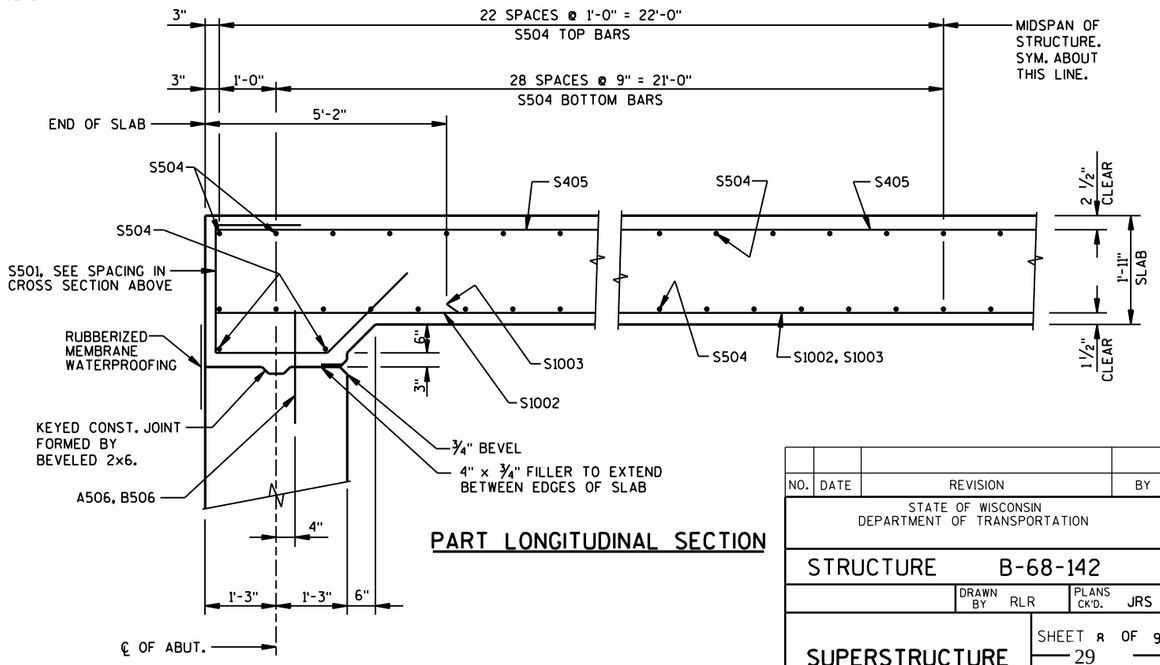
TOP OF SLAB ELEVATION AT FINAL GRADE
- SLAB THICKNESS
+ CAMBER
+ FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
= TOP OF SLAB FALSEWORK ELEVATION

TOP OF SLAB ELEVATIONS AND CAMBER VALUES

LOCATION	SPAN POINT	SOUTH SLAB EDGE	C/L HATTON ROAD	NORTH SLAB EDGE	CAMBER VALUE (INCHES)
WEST ABUT.	1.0	789.40	789.67	789.40	0.0
	1.1	789.37	789.64	789.37	0.4
	1.2	789.35	789.61	789.35	0.8
	1.3	789.33	789.59	789.33	1.2
	1.4	789.31	789.58	789.31	1.4
	1.5	789.30	789.57	789.30	1.4
	1.6	789.30	789.56	789.30	1.4
	1.7	789.30	789.56	789.30	1.2
	1.8	789.30	789.57	789.30	0.8
	1.9	789.31	789.58	789.31	0.4
EAST ABUT.	2.0	789.32	789.59	789.32	0.0



PLAN



PART LONGITUDINAL SECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-142

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SUPERSTRUCTURE

SHEET 8 OF 9
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FILE= 11522016_08.DGN
DATE= 5/25/2017

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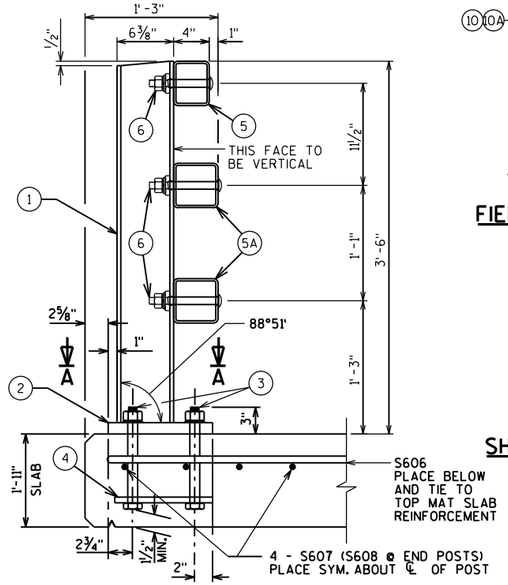
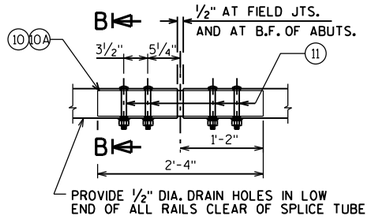
STATE PROJECT NUMBER

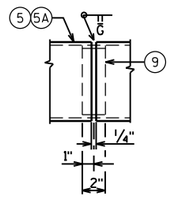
6902-01-70



SECTION THRU RAILING ON SLAB

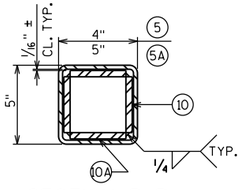


FIELD ERECTION JOINT DETAIL

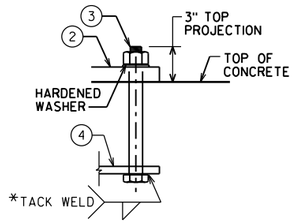


SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

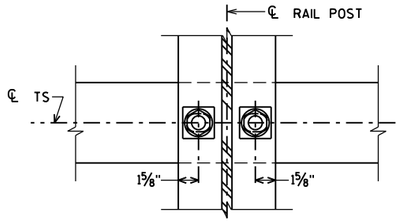


SECTION B-B

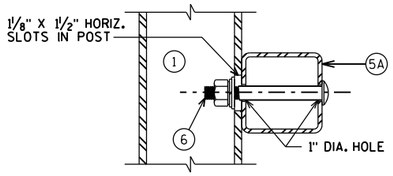


ANCHOR BOLTS

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



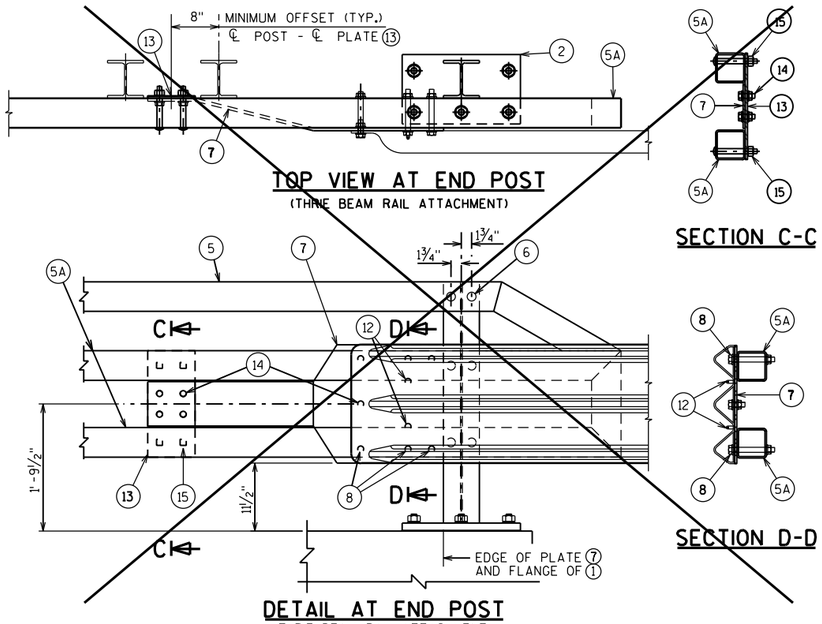
SECTION THRU POST WEB



SECTION THRU RAIL

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

TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST

(THRIE BEAM RAIL ATTACHMENT)

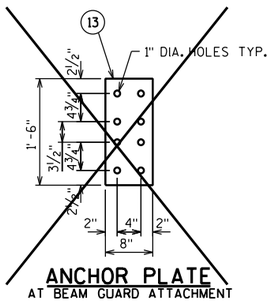
SECTION C-C

SECTION D-D

DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)

SECTION A-A



ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

ANCHOR PLATE

AT RAIL TO DECK ATTACHMENT

POST SHIM DETAIL

BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT

PART ELEVATION OF RAILING

LEGEND

(1) W6 x 25 WITH 1 1/8" X 1 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

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

(3) ASTM A449 - 1 1/8" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-3" LONG IN SLAB STRUCTURE. USE 1'-9" LONG IN ABUTMENT WINGS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY).

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

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

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

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

* (7) 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" X 1 1/2" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.

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

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

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

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

(11) 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 5/16 " X 1 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS IN PLATE NO. 10A.

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

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

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

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

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-68-142" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
10. PAINTING IS NOT REQUIRED.
11. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).
* 12. DO NOT FURNISH ITEMS 7, 8, 12, 13, 14 AND 15. THRIE BEAM RAIL ATTACHMENT IS NOT INCLUDED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-68-142

DRAWN BY RLR | PLANS CK'D. JRS

RAILING TUBULAR TYPE M

SHEET 9 OF 9

30

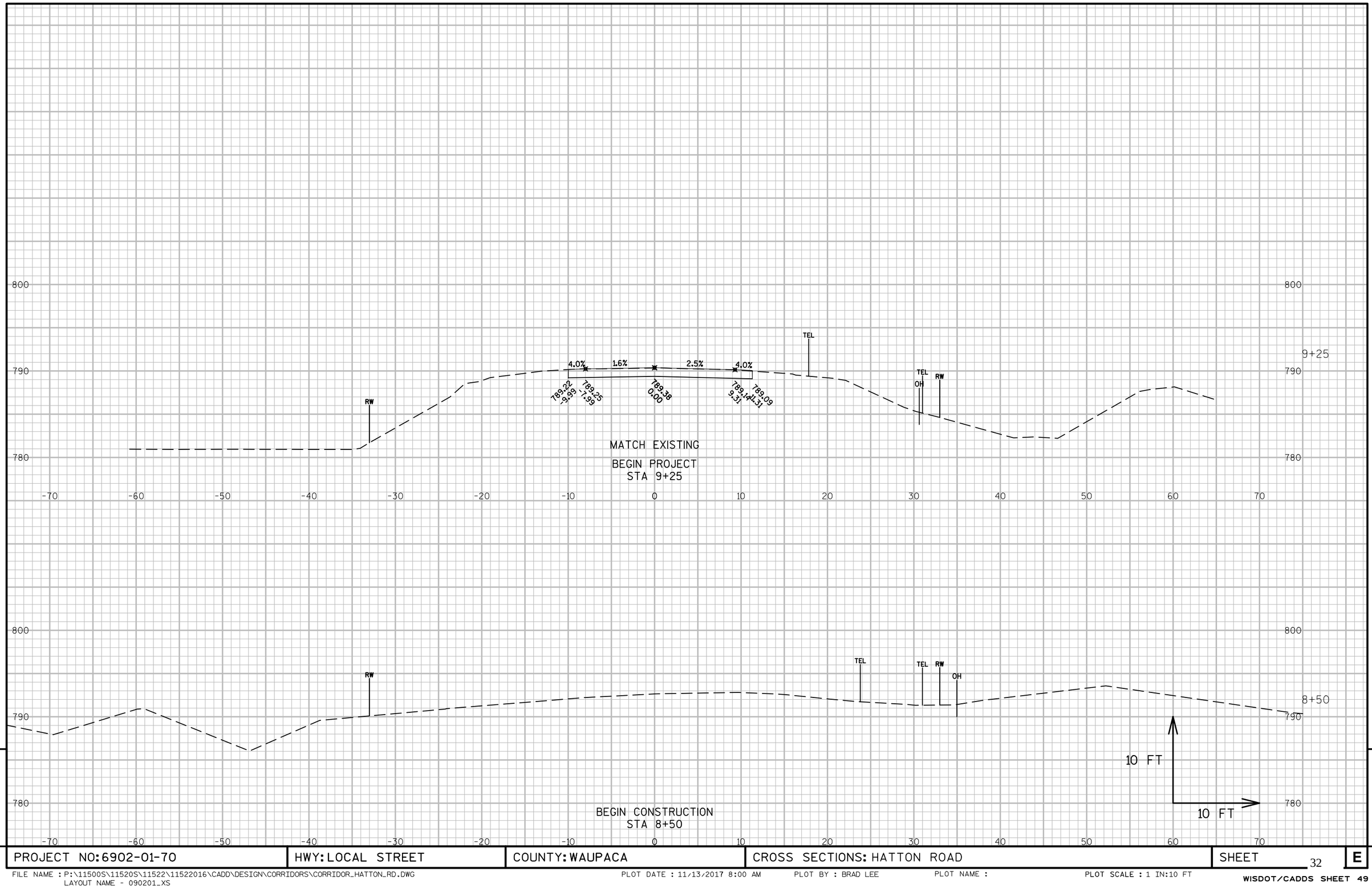
FILE= 11522016_09.DGN
DATE= 5/9/2017

11522016_09.dgn 5/9/2017 10:42:45 AM rrabska

PROJECT I.D. 6902-01-70 EARTHWORK SUMMARY

STA	EXCAVATION COMMON CY	EXCAVATION ROCK CY	FILL (1) CY	EXPANDED FILL (2) CY	WASTE CY	BORROW CY
9+25.00						
	25	0	0	0	25	-25
9+50.00						
	17	0	0	0	17	-17
9+73.75						
STRUCTURE B-68-0142						
10+18.25						
	19	0	2	3	16	-16
10+50.00						
	41	0	0	0	41	-41
11+00.00						
	50	0	0	0	50	-50
11+60.00						
SUBTOTALS						
WEST APPROACH	42	0	0	0	42	-42
EAST APPROACH	110	0	2	3	107	-107
UNUSABLE PAVEMENT (3)						31
TOTALS	**152**	**0**	**2**	**3**	**149**	**-118**

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%
(3) - EXISTING PAVEMENT BASED ON AVE THK OF 3.25 INCHES PER BORING LOG.



PROJECT NO: 6902-01-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: HATTON ROAD	SHEET 32	E

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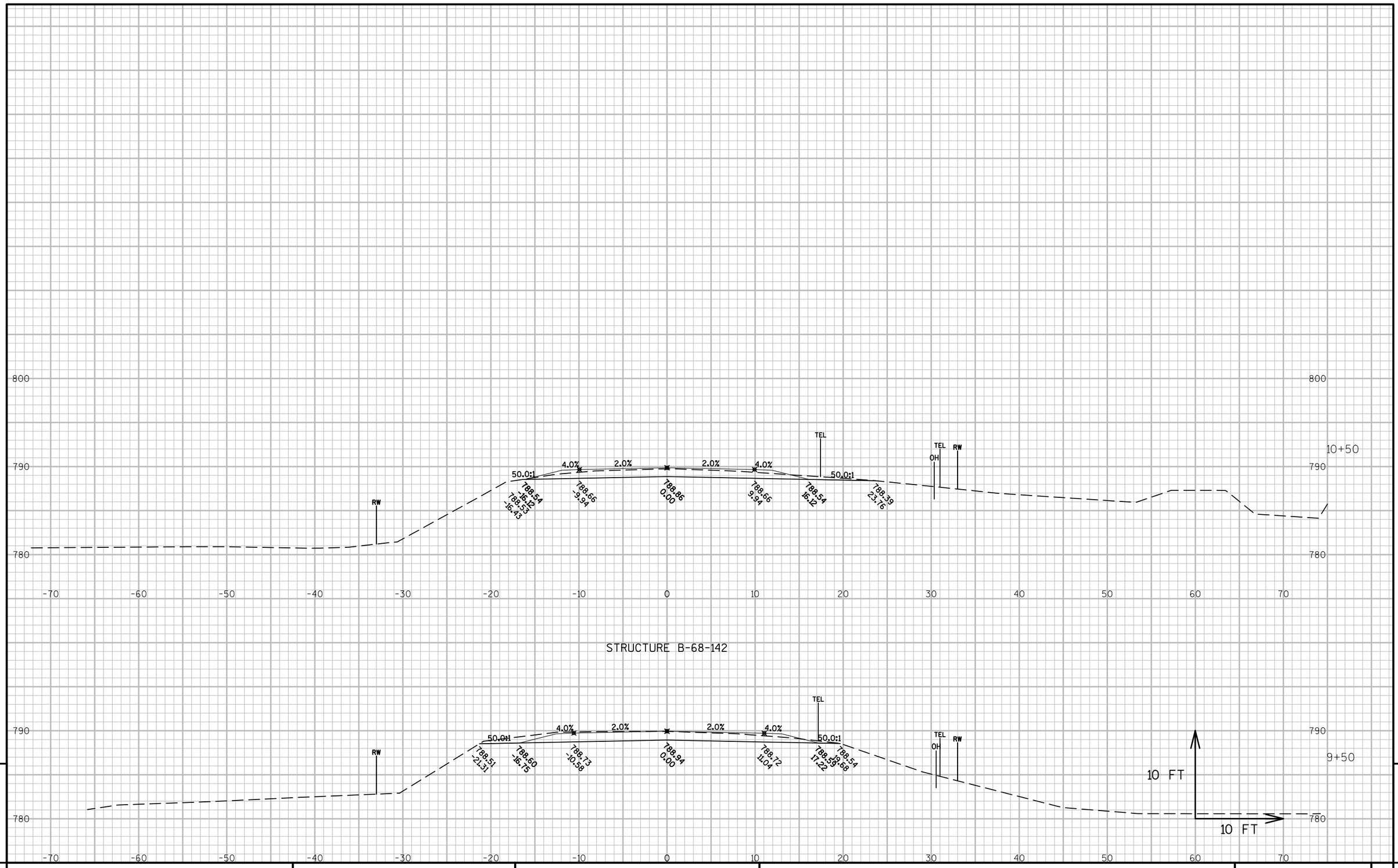
LAYOUT NAME - 090201_XS

PLOT DATE : 11/13/2017 8:00 AM PLOT BY : BRAD LEE PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 6902-01-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: HATTON ROAD	SHEET 33	E

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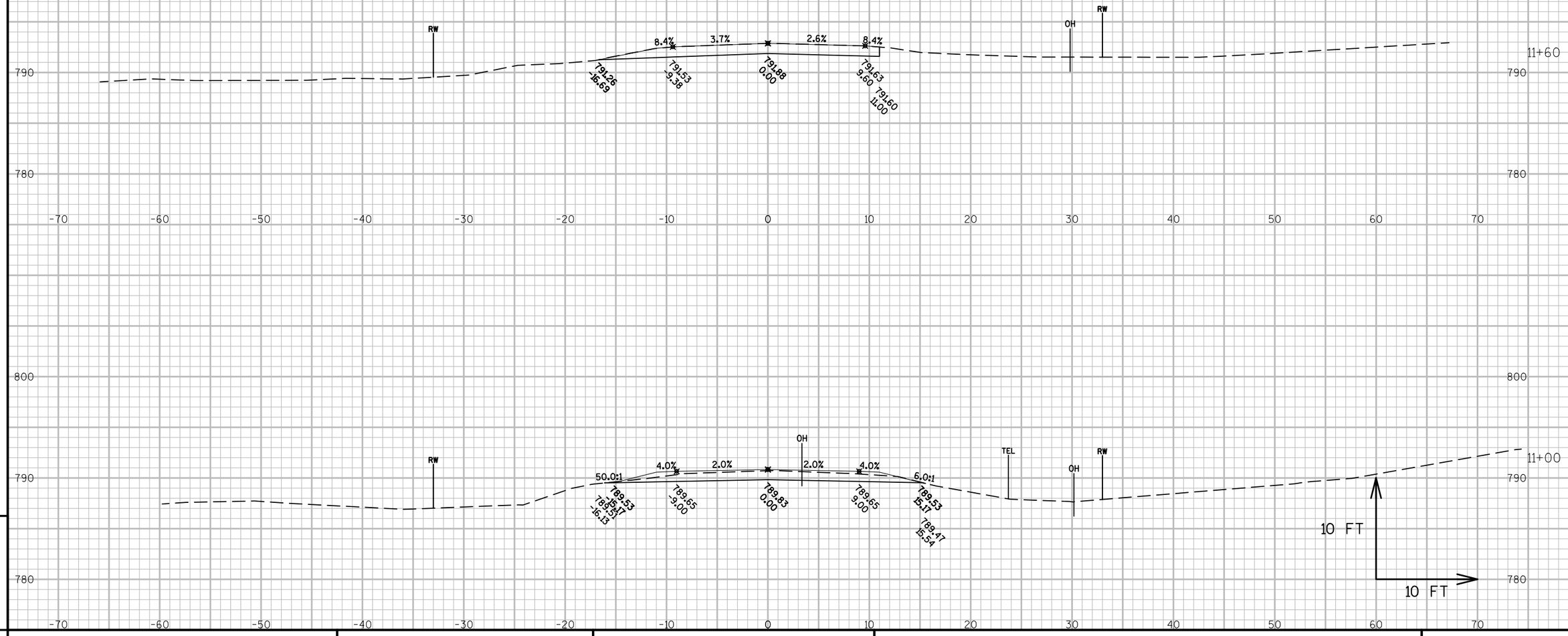
LAYOUT NAME - 090202_XS

PLOT DATE : 11/13/2017 8:01 AM PLOT BY : BRAD LEE PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

END PROJECT
STA 11+60

MATCH EXISTING



9

9

PROJECT NO: 6902-01-70	HWY: LOCAL STREET	COUNTY: WAUPACA	CROSS SECTIONS: HATTON ROAD	SHEET 34	E

FILE NAME : P:\11500S\11520S\11522\11522016\CADD\DESIGN\CORRIDORS\CORRIDOR_HATTON_RD.DWG
LAYOUT NAME - 090203_XS

PLOT DATE : 11/13/2017 8:01 AM PLOT BY : BRAD LEE PLOT NAME : PLOT SCALE : 1 IN:10 FT

Notes

Wisconsin Department of Transportation

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