NWL

Nov 2015

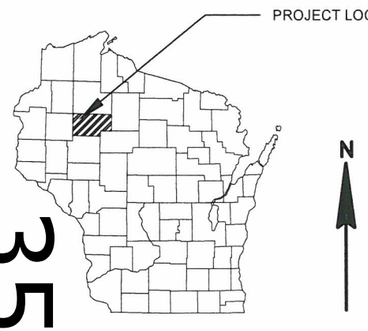
PROJECT ID: 8797-00-71

WITH: N/A

COUNTY: RUSK

ORDER OF SHEETS

TOTAL SHEETS = 52



35

DESIGN DESIGNATION

A.A.D.T.	2015	=	350
A.A.D.T.	2035	=	475
D.H.V.		=	48
D.D.		=	50/50
T.		=	4.0%
DESIGN SPEED		=	60 MPH
ESALS		=	36,500

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CTH W - USH 8

SOFT MAPLE CREEK BRIDGE - B-54-0117

CTH F

RUSK COUNTY

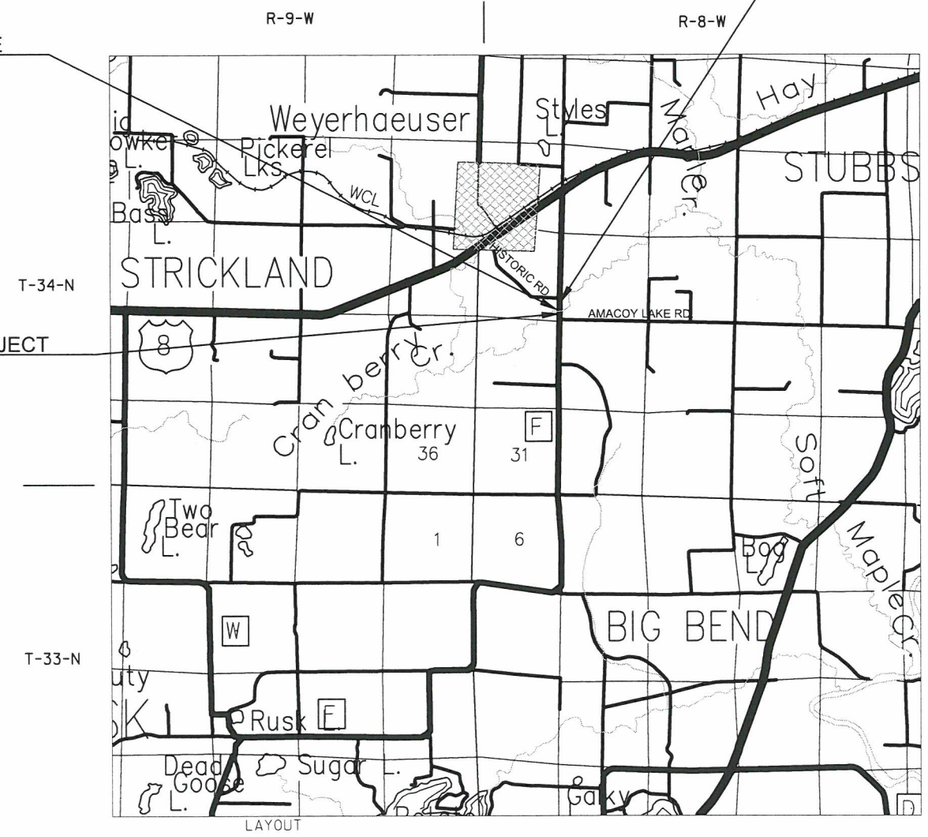
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8797-00-71	WISC 2015590	1

STATE PROJECT NUMBER
8797-00-71

STRUCTURE
B-54-0117

END PROJECT
8797-00-71
STA. 11+50

BEGIN PROJECT
8797-00-71
STA. 8+50
Y=542872.56
X=736406.09



LAYOUT

SCALE 0 2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.057 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, RUSK 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
COUNTY of RUSK

4-1-2015 Joni A. Mertes
(Date) HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
1835 N.Stevens St. Rhinelander, WI 54501
715-362-3244 1-800-844-7854 Fax: 715-362-4116
Web Address: www.msa-ps.com
© MSA Professional Services, Inc.

WISCONSIN
JAMES W. BOLLMANN JR.
33508-006
THREE LAKES, WI
PROFESSIONAL ENGINEER

4-1-2015 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MSA Professional Services, Inc.
Designer	MSA Professional Services, Inc.
Management Consultant	KNIGHT E/A INC.
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 4/27/15 Ryan B McKane
(Management Consultant 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 ϕ	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
I.E.	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
O.E.	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

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 1.5 LBS. PER 1000 SQUARE FEET.

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

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO "WEYERHAUSER GPS", A NGS SURVEY MONUMENT, ELEV. 1210.86, NAVD 88 DATUM.

THE 4" ASPHALTIC SURFACE SHALL CONSIST OF A 1 3/4" UPPER LAYER AND A 2 1/4" LOWER LAYER.

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

WHEN THE QUANTITY OF THE ITEM OF BASE LAYER IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTURAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

SHRINKAGE IS ESTIMATED AT 30%

THE WISCONSIN DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR A MONUMENT WHICH SHALL BE SET IN THE STRUCTURE AS DESIGNATED BY THE ENGINEER.

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ATTN.: CHAD SCHROEDER
1835 N. STEVENS STREET
RHINELANDER, WI 54501-2163
PHONE: 715-362-3244
cschroeder@msa-ps.com

DNR LIAISON

DEPARTMENT OF NATURAL RESOURCES
ATTN.: AMY CRONK
810 WEST MAPLE STREET
SPOONER, WI 54801
PHONE: 715-635-4229
amy.cronk@wisconsin.gov

UTILITIES

TELEPHONE: BEVCOMM TELEPHONE COMPANY
ATTN.: RANDY MONNIER
N3774 4TH ST.
WEYERHAEUSER, WI 54895
PHONE: 715-353-2434
rmonnier@bevcomm.com

ELECTRIC: BARRON ELECTRIC COOPERTIVE
ATTN.: JEFF NELSON
P.O. BOX 40
BARRON WI 54812
PHONE: 715-537-3171
jnelson@barronelectric.com

RUSK COUNTY HIGHWAY DEPARTMENT

COUNTY HIGHWAY COMMISSIONER
ATTN.: NANCI MERTES
N4711 HWY 27
LADYSMITH, WI 54848
PHONE: 715-532-2633
nanci@ruskcountywi.us

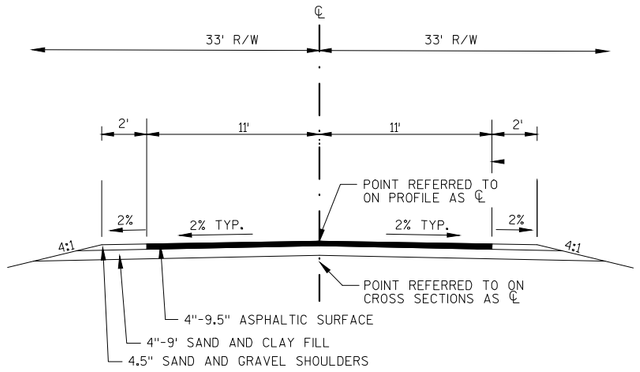
* - NOT A MEMBER OF DIGGERS HOTLINE.

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

RUNOFF COEFFICIENT TABLE

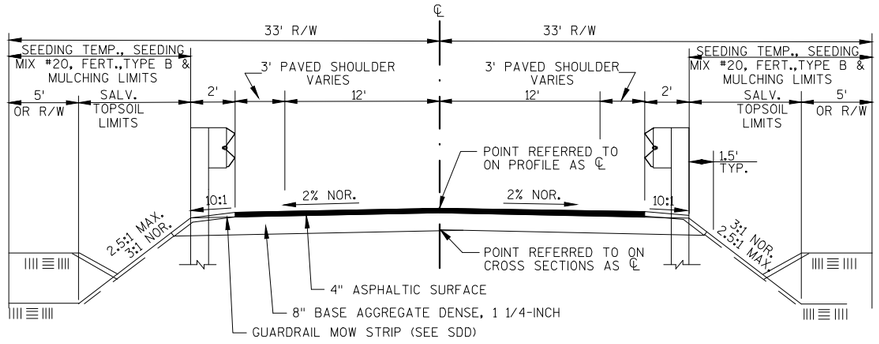
	HYDROLOGIC SOIL TABLE			
	A	B	C	D
	SLOPE RANGE %	SLOPE RANGE %	SLOPE RANGE %	SLOPE RANGE %
LAND USE:	6 & OVER	6 & OVER	6 & OVER	6 & OVER
SIDE SLOPE-TURF	.25 .32	.27 .34	.28 .36	.30 .38
PAVEMENT:				
ASPHALT	.70 - .95			
CONCRETE	.80 - .95			
GRAVEL ROADS, SHOULDERS	.40 - .60			

THE RUNOFF COEFFICIENTS OF SURFACE DRAINAGE AT THE PROJECT SITES WILL NOT BE CHANGED FROM BEFORE TO AFTER CONSTRUCTION. THE TOTAL AREA OF THE PROJECT IS 0.50 ACRES. THE TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES IS 0.42 ACRES.



TYPICAL EXISTING SECTION

STA. 8+50 TO STA. 11+50



TYPICAL FINISHED SECTION

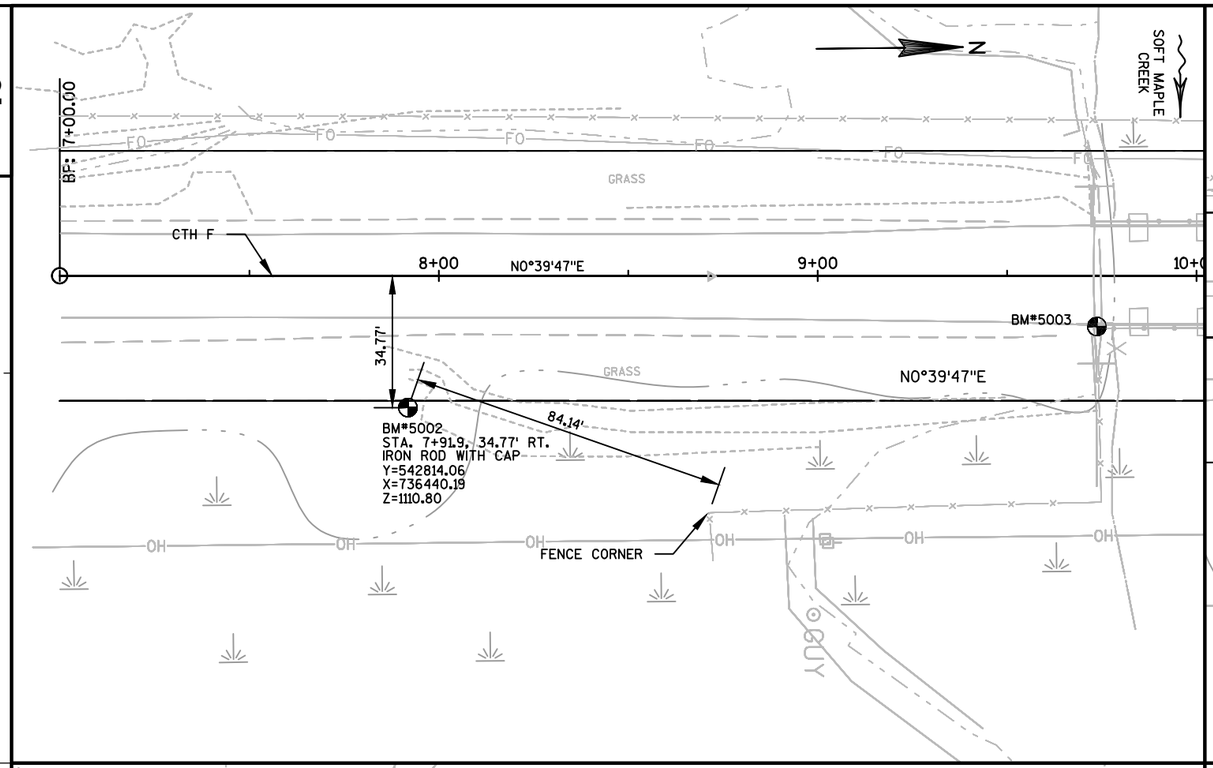
STA. 8+50 TO STA. 11+50

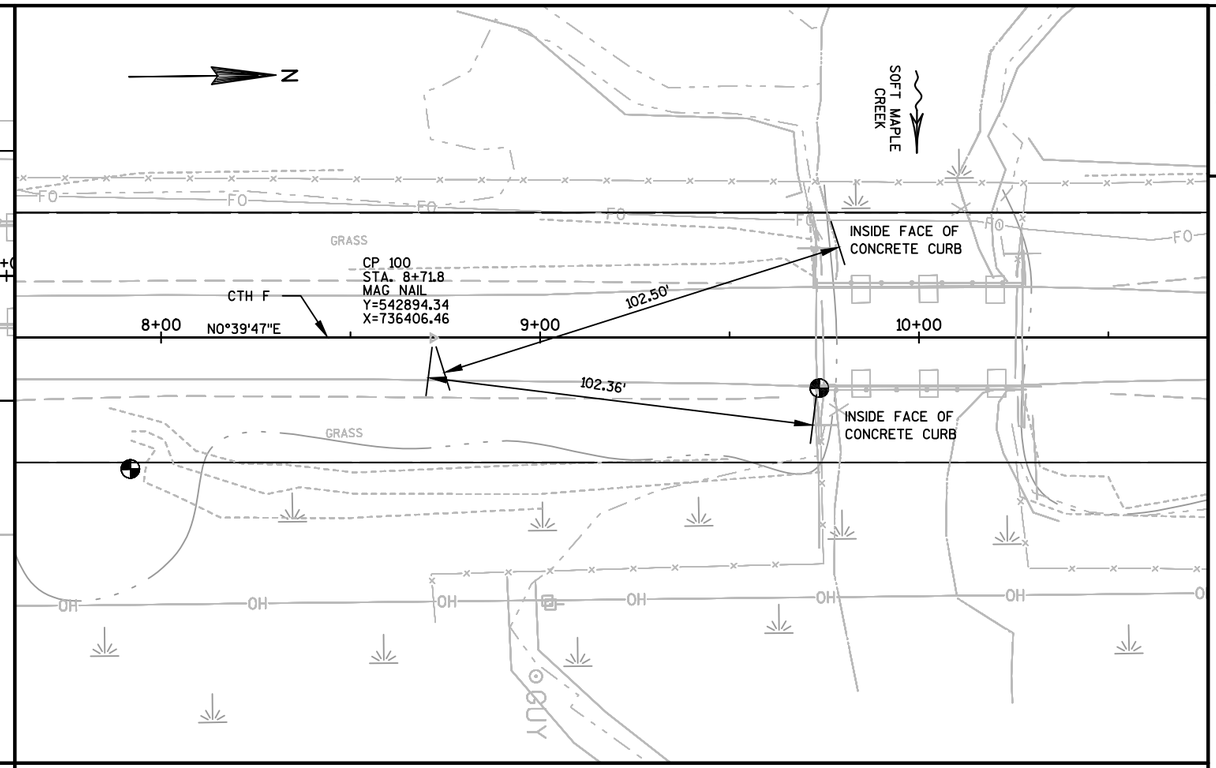
PROJECT NO: 8797-00-71	HWY: CTH F	COUNTY: RUSK	TYPICAL SECTIONS	SHEET 3	E

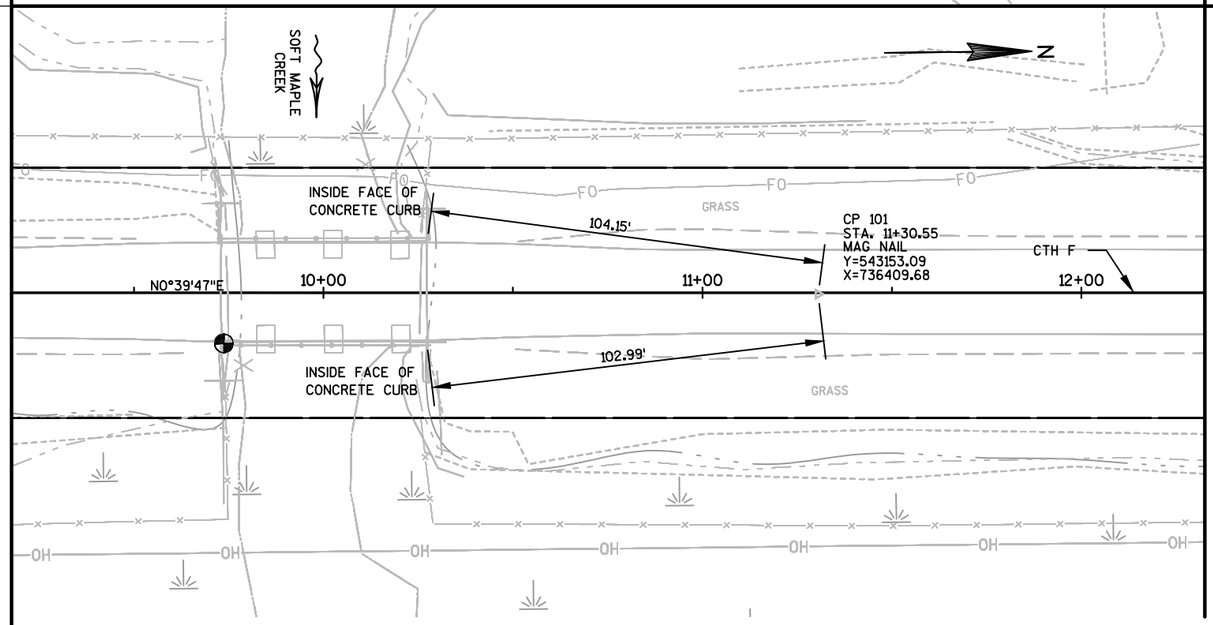
FILE NAME : P:\6700S\6740S\6747\06747008\CADD\TYPICAL XS.DWG
LAYOUT NAME - TYPICAL XS - TYPICAL SECTIONS

PLOT DATE : 3/5/2015 9:18 AM PLOT BY : ALEX PASSOW PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42







CONTROL POINT TIES

PROJECT NO: 8797-00-71	HWY: CTH F	COUNTY: RUSK	PROJECT TIES	SHEET 4	E

DATE 30JUL15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	8797-00-71 QUANTITY
0010	201.0105	Clearing	STA	2.000	2.000
0020	201.0205	Grubbing	STA	2.000	2.000
0030	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0040	205.0100	Excavation Common	CY	285.000	285.000
0050	206.1000	Excavation for Structures Bridges (structure) 01. B-54-0117	LS	1.000	1.000
0060	210.0100	Backfill Structure	CY	260.000	260.000
0070	213.0100	Finishing Roadway (project) 01. 8797-00-71	EACH	1.000	1.000
0080	305.0110	Base Aggregate Dense 3/4-Inch	TON	15.000	15.000
0090	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	465.000	465.000
0100	455.0605	Tack Coat	GAL	45.000	45.000
0110	465.0105	Asphaltic Surface	TON	200.000	200.000
0120	502.0100	Concrete Masonry Bridges	CY	217.000	217.000
0130	502.3200	Protective Surface Treatment	SY	294.000	294.000
0140	505.0405	Bar Steel Reinforcement HS Bridges	LB	6,150.000	6,150.000
0150	505.0605	Bar Steel Reinforcement HS Coated Bridges	LB	26,225.000	26,225.000
0160	516.0500	Rubberized Membrane Waterproofing	SY	13.000	13.000
0170	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	1,400.000	1,400.000
0180	606.0300	Riprap Heavy	CY	140.000	140.000
0190	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	170.000	170.000
0200	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0210	614.2300	MGS Guardrail 3	LF	50.000	50.000
0220	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0230	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0240	619.1000	Mobilization	EACH	1.000	1.000
0250	625.0100	Topsoil	SY	670.000	670.000
0260	627.0200	Mulching	SY	150.000	150.000
0270	628.1504	Silt Fence	LF	770.000	770.000
0280	628.1520	Silt Fence Maintenance	LF	770.000	770.000
0290	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0300	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0310	628.2008	Erosion Mat Urban Class I Type B	SY	650.000	650.000
0320	628.6005	Turbidity Barriers	SY	140.000	140.000
0330	628.7570	Rock Bags	EACH	30.000	30.000
0340	629.0210	Fertilizer Type B	CWT	0.600	0.600
0350	630.0120	Seeding Mixture No. 20	LB	22.000	22.000
0360	630.0200	Seeding Temporary	LB	12.000	12.000
0370	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0380	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0390	638.2602	Removing Signs Type II	EACH	4.000	4.000
0400	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0410	642.5001	Field Office Type B	EACH	1.000	1.000
0420	643.0100	Traffic Control (project) 01. 8797-00-71	EACH	1.000	1.000
0430	643.0420	Traffic Control Barricades Type III	DAY	1,720.000	1,720.000
0440	643.0705	Traffic Control Warning Lights Type A	DAY	2,750.000	2,750.000
0450	643.0900	Traffic Control Signs	DAY	1,550.000	1,550.000
0460	645.0120	Geotextile Fabric Type HR	SY	265.000	265.000
0470	646.0106	Pavement Marking Epoxy 4-Inch	LF	975.000	975.000
0480	650.4500	Construction Staking Subgrade	LF	238.000	238.000
0490	650.5000	Construction Staking Base	LF	238.000	238.000

3

DATE 30JUL15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	8797-00-71 QUANTITY
0500	650.6500	Construction Staking Structure Layout (structure) 01. B-54-0117	LS	1.000	1.000
0510	650.9910	Construction Staking Supplemental Control (project) 01. 8797-00-71	LS	1.000	1.000
0520	650.9920	Construction Staking Slope Stakes	LF	300.000	300.000
0530	690.0150	Sawing Asphalt	LF	154.000	154.000
0540	715.0502	Incentive Strength Concrete Structures	DOL	1,302.000	1,302.000
0550	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0560	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,200.000	1,200.000

3

201.0105 CLEARING
201.0205 GRUBBING

STATION	-	STATION	CLEARING STA	GRUBBING STA
9+00	-	11+00	2	2
		TOTALS:	2	2

205.0100 EXCAVATION COMMON

STATION	-	STATION	EX. COMMON C.Y.	FILL C.Y. (1)	EXP. FILL C.Y. (1,2)	WASTE C.Y. (1)
7+42.2	-	11+50	285	46	60	225
		TOTALS:	285	46	60	225

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

305.0110 BASE AGGREGATE DENSE 3/4-INCH
305.0120 BASE AGGREGATE DENSE 1 1/4-INCH

STATION	-	STATION	3/4-INCH TON	1 1/4-INCH TON
7+42.2	-	9+68.8	10	245
10+31.3	-	11+50	5	220
		TOTALS:	15	465

455.0605 TACK COAT
465.0105 ASPHALTIC SURFACE

STATION	-	STATION	TACK GAL	ASPHALT TON
7+42.2	-	9+68.8	25	105
10+31.3	-	11+50	20	95
		TOTALS:	45	200

625.0100 TOPSOIL
627.0200 MULCHING
629.0210 FERTILIZER TYPE B
630.0120 SEEDING MIXTURE NO. 20
630.0200 SEEDING TEMPORARY

STATION	-	STATION	TOPSOIL SY	MULCHING SY	FERTILIZER CWT	SEEDING #20 LB	SEEDING TEMPORARY LB
7+42.2	-	9+68.8	410	--	0.3	11	6
10+31.3	-	11+50	200	--	0.1	5	3
WASTE AREA			--	140	0.1	4	2
UNDISTRIBUTED			60	10	0.1	2	1
		TOTALS	670	150	0.6	22	12

614.2300 MGS GUARDRAIL 3
614.2500 MGS THRIE BEAM TRANSITION
614.2610 MGS GUARDRAIL TERMINAL EAT

STATION	-	STATION	LOCATION	GUARDRAIL 3 LF	THRIE BEAM LF	EAT EACH
7+66	-	9+70	LT	12.5	39.4	1
8+66	-	9+70	RT	12.5	39.4	1
10+30	-	11+36	LT	12.5	39.4	1
10+30	-	11+36	RT	12.5	39.4	1
		TOTALS:		50	157.6	4

628.1504 SILT FENCE
628.1520 SILT FENCE MAINTENANCE

STATION	-	STATION	LOCATION	FENCE LF	MAINT. LF
7+42.2	-	9+70	RT	255	255
8+50	-	9+70	LT	165	165
10+30	-	11+50	RT	150	150
10+30	-	11+50	LT	150	150
UNDISTRIBUTED				50	50
			TOTALS:	770	770

628.2008 EROSION MAT URBAN CLASS I TYPE B

STATION	-	STATION	SY
7+42.2	-	9+68.8	410
10+31.3	-	11+50	200
UNDISTRIBUTED			40
		TOTAL:	650

628.1905 MOBILIZATION EROSION CONTROL
628.1910 MOBILIZATION EMERGENCY EROSION CONTROL

LOCATION	MOBILIZATION	EMERGENCY MOB.
PROJECT LIMITS	4	2
TOTALS:	4	2

628.7570 ROCK BAGS

STATION	LOCATION	EACH
	UNDISTRUBUTED	30
	TOTAL:	30

USE FOR SILT FENCE WEEPS IF NEEDED

NOTE: ALL ITEMS LISTED ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

628.6005 TURBIDITY BARRIERS

LOCATION	SY
SOUTH ABUTMENT	70
NORTH ABUTMENT	70
TOTAL:	140

634.0614 POSTS WOOD 4x6-INCH x 14-FT
637.2230 SIGNS TYPE II REFLECTIVE F

STATION	LOCATION	SIGN CODE	SIGNS REFECTIVE SF	WOOD POSTS EACH	COMMENTS
9+68.8	RT	W5-52R	3	1	OBJECT MARKER
9+68.8	LT	W5-52L	3	1	OBJECT MARKER
10+31.3	RT	W5-52L	3	1	OBJECT MARKER
10+31.3	LT	W5-52R	3	1	OBJECT MARKER
		TOTALS:	12	4	

638.2602 REMOVING SIGNS TYPE II
638.3000 REMOVING SMALL SIGN SUPPORTS

STATION	LOCATION	REMOVING SIGNS EACH	REMOVING POSTS EACH	COMMENTS
9+70	RT	1	1	OBJECT MARKER
9+70	LT	1	1	OBJECT MARKER
10+30	RT	1	1	OBJECT MARKER
10+30	LT	1	1	OBJECT MARKER
	TOTALS:	4	4	

642.5001 FIELD OFFICE TYPE B

LOCATION	EACH
8797-00-71	1
TOTAL:	1

643.0100 TRAFFIC CONTROL 8797-00-71
643.0420 TRAFFIC CONTROL BARRICADES TYPE III
643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A
643.0900 TRAFFIC CONTROL SIGNS

STATION	-	STATION	TRAFFIC CONTROL EACH	BARRICADES DAYS	LIGHTS DAYS	SIGNS DAYS
8+50	-	11+50	1	1720	2750	1550
TOTALS:			1	1720	2750	1550

646.0106 PAVEMENT MARKING EPOXY 4-INCH

STATION	-	STATION	LF	COMMENTS
8+50	-	11+50	375	YELLOW CL
8+50	-	11+50	600	WHITE EDGELINE
		TOTAL:	975	

650.4500 CONSTRUCTION STAKING SUBGRADE
650.5000 CONSTRUCTION STAKING BASE
650.9920 CONSTRUCTION STAKING SLOPE STAKES

STATION	-	STATION	SUBGRADE LF	BASE LF	SLOPE STAKES LF
8+50	-	9+68.8	119	119	119
9+68.8	-	10+31.3	--	--	62
10+31.3	-	11+50	119	119	119
		TOTALS:	238	238	300

650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

STATION	-	STATION	LS
8+50	-	11+50	1
		TOTAL:	1

650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT B-54-0117

LOCATION	LS
B-54-0117	1
TOTAL:	1

NOTE: CATEGORY 0020 ITEM

690.0150 SAWING ASPHALT

STATION	LOCATION	L.F.
7+42.2 - 8+50	RT PAVEMENT EDGE	110
8+50	CENTERLINE	22
11+50	CENTERLINE	22
TOTAL:		154

ASP-1TOA TRANS APPRENTICE
ASP-1TOG TRANS GRADUATE

LOCATION	APPRENTICE EACH	APPRENTICE HOURS	GRADUATE EACH	GRADUATE HOURS
PROJECT	1	1200	1	300
TOTALS:		1200		300

NOTE: ALL ITEMS LISTED ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
5002	7+91.9	IRON ROD WITH CAP	1110.80
5003	9+73.7	CHISELED SQUARE	1111.64
5001	12+43.2	IRON ROD WITH CAP	1102.50

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	TLE ACRES
1	IRENE AND DAVID SWIERSZ	TLE	0.016

NOTE: POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, RUSK COUNTY, NAD83 (2011) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARING AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

IRENE AND DAVID SWIERSZ ①

SE-SE 19-34-8

SOFT MAPLE CREEK

TOWN

N

EXISTING WIRE FENCE

SILT FENCE (TYP)

N89°20'13"W 7.00'

STA. 9+50.00 33.00' TLE 40' TLE

TURBIDITY BARRIER (TYP)

STRUCTURE B-54-0117

STA. 10+50.00 33.00' TLE 40' TLE

S89°20'13"E 7.00'

BURIED FIBER OPTIC BEVCOMM TELEPHONE CO.

SLOPE INTERCEPT (TYP)

EXISTING RIGHT-OF-WAY OF CTH F DETERMINED BY COUNTY RECORDS.

EDGE OF EXISTING SHOULDER (TYP)

EDGE OF EXISTING ASPHALTIC SURFACE (TYP)

EXISTING R/W

BP: 7+00.00

EP: 12+99.86

N0°39'47"E 100.00'

S0°39'47"W 100.00'

N89°20'13"W 33.00'

SAW EDGE, PREP SHLDR & PAVE

8+00 9+00 N0°39'47"E 10+00 11+00 12+00

℄ OF CTH F

SAWCUT REQ'D

66'

EXISTING R/W

WETLAND IMPACTS (TYP)

BM*5003

BEGIN CONSTRUCTION STA 7+42.2

BM*5002

OVERHEAD ELECTRIC BARRON ELECTRIC COOPERTIVE

RIPRAP HEAVY OVER GEOTEXTILE FABRIC TYPE HR (SEE STRUCTURE PLANS)

EXISTING STRUCTURE B-54-0188

MGS GUARDRAIL AND MOW STRIP REQ'D (TYP)

EDGE OF PROPOSED ASPHALTIC SURFACE (TYP)

BM*5001

WETLAND EDGE (TYP)

END PROJECT STA 11+50

Y=543172.54

X=736409.56

BEGIN PROJECT STA 8+50

Y=542872.56

X=736406.09

SW-SW 20-34-8

STUBBS

BONCZYK SOFT MAPLE VALLEY DIARY FARM INC.

NOTE: OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LANDS TO THE COUNTY.

ERISION CONTROL LEGEND

TURBIDITY BARRIER

SILT FENCE

EROSION MAT URBAN CL I TYPE B

5

5

PROPOSED CL PROFILE

VCL = 100.00

K = 136.09

VCL = 190.00

K = 159.48

EXISTING SURFACE

-4.29%

-0.56%

0.64%

PROPOSED HW_{100} ELEV. 1108.55

OBSERVED WATER ELEV. 1105.0± (05-09-14)

STREAMBED ELEV. 1100.58±

VPC STA 8+50.00 VPC EL 1112.30

VPI STA 9+00.00 VPI EL 1111.65

VPT STA 9+50.00 VPT EL 1111.37

VPC STA 9+76.11 VPC EL 1111.23

VPI STA 10+71.11 VPI EL 1110.70

VPT STA 11+66.11 VPT EL 1111.30

1115.00

1110.00

1105.00

1100.00

7 8 9 10 11 12 13

1115.42 1114.10 1112.95 1112.30 1112.30 1111.66 1111.74 1111.20 1111.37 1101.36 1111.11 1110.67 1110.99 1111.02 1111.02 1111.21 1111.21 1111.52 1111.74 1112.17

EARTHWORK SUMMARY
STA. 8+50 - STA. 11+50

COMMON EXC.	285 C.Y.
FILL	46 C.Y.
FILL EXPANSION	30%
EXPANDED FILL	60 C.Y.
WASTE	225 C.Y.

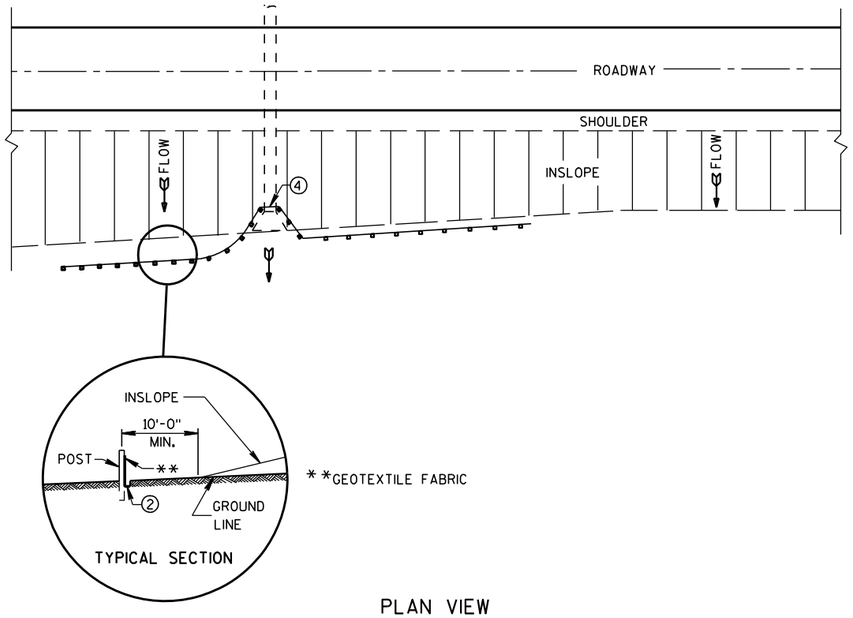
REMOVE EXISTING STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS
STA. 10+00 CL (STRUCTURE B-54-0188)
3 SPAN STEEL DECK GIRDER BRIDGE
26.1' CLEAR ROADWAY WIDTH
56' OVERALL LENGTH
0.0 DEG SKEW

STA. 10+00 STRUCTURE B-54-0117 REQ'D.
TWO SPAN FLAT CONCRETE SLAB BRIDGE
30' CLEAR ROADWAY WIDTH
62.5' OVERALL LENGTH
0.0 DEG SKEW

PROJECT NO: 8797-00-71	HWY: CTH F	COUNTY: RUSK	PLAN AND PROFILE: CTH F	SHEET 9	E

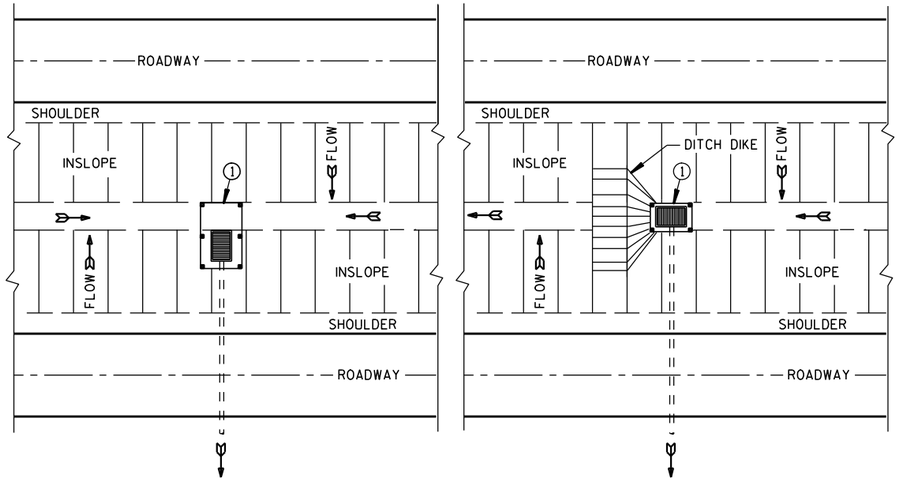
Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	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)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-07	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-16A	PAVEMENT MARKING (MAINLINE)



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



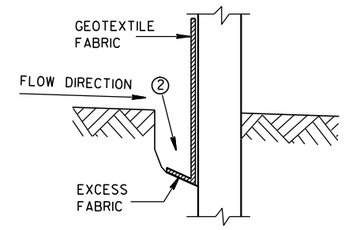
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

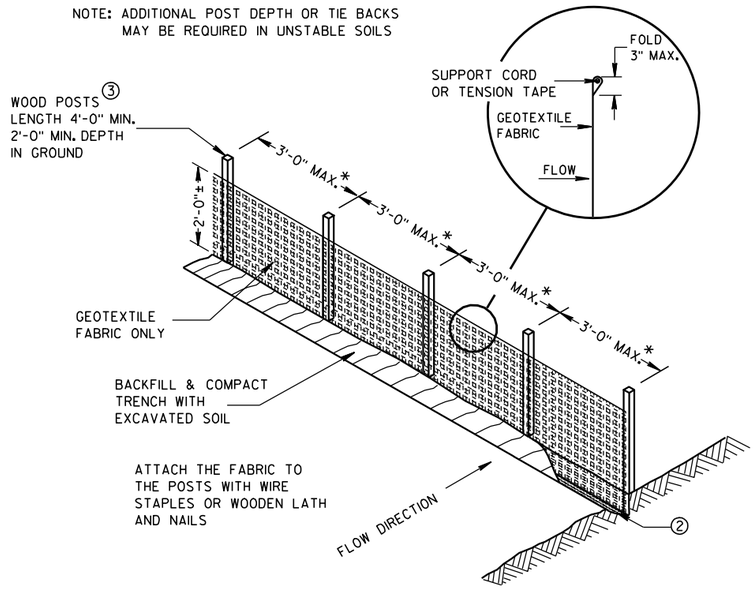
GENERAL NOTES

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.

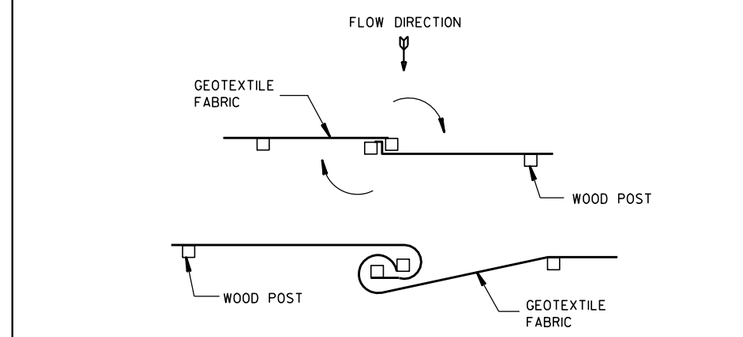


TRENCH DETAIL

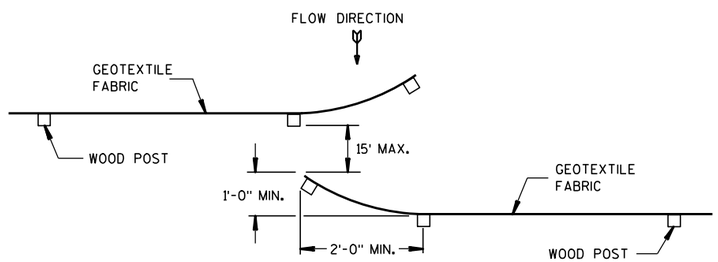


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

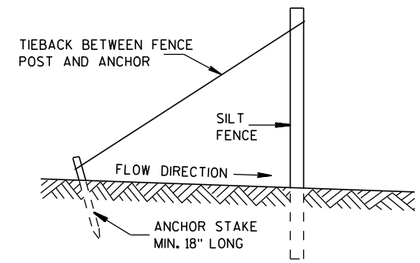


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

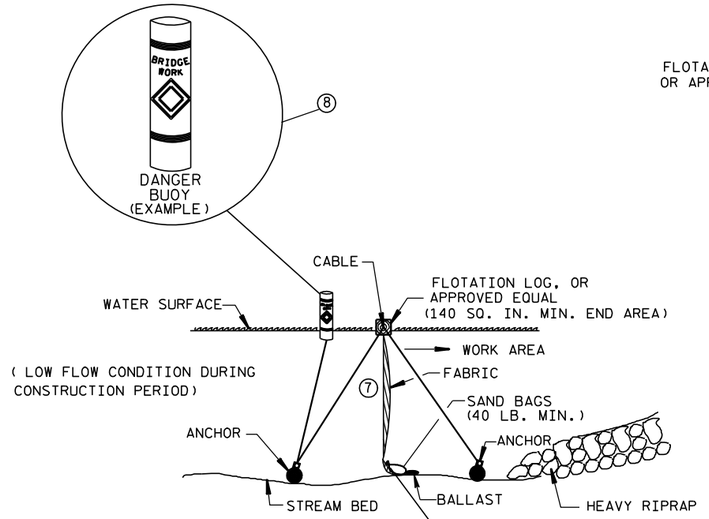
SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

6

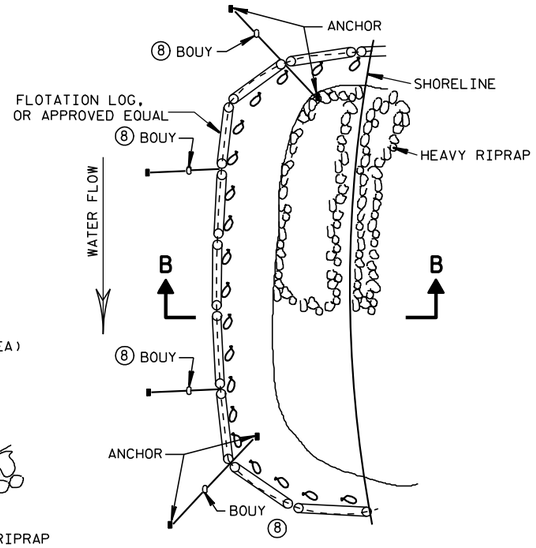
S.D.D. 8 E 9-6

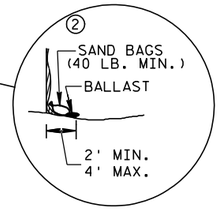
6

S.D.D. 8 E 9-6

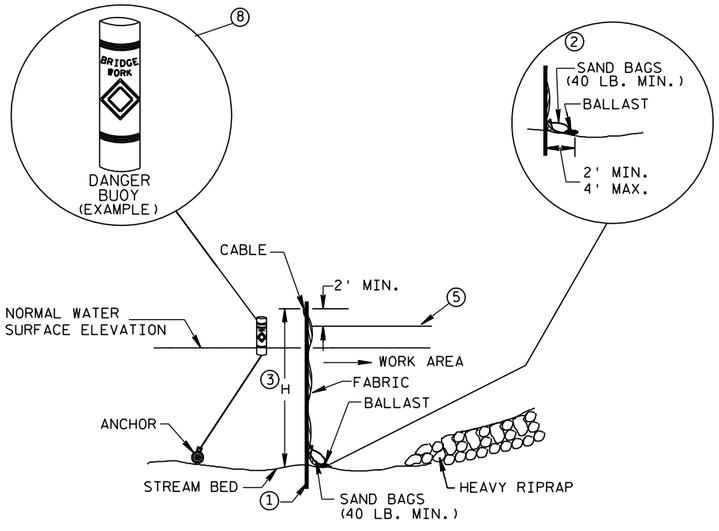


SECTION B-B

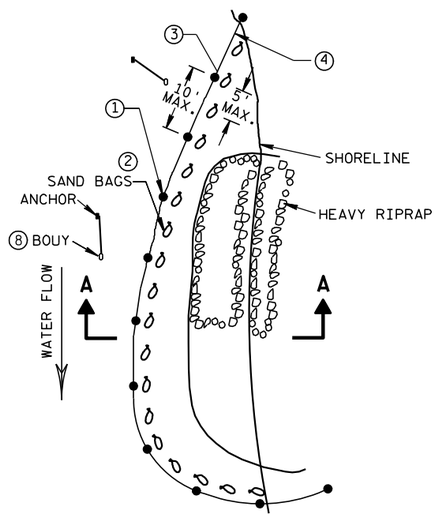




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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.

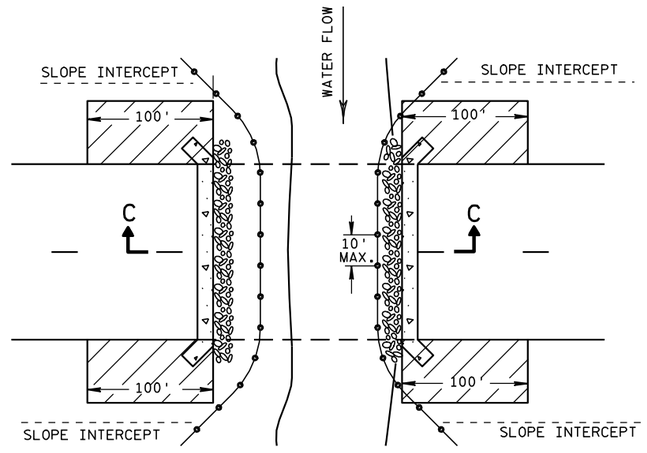
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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.

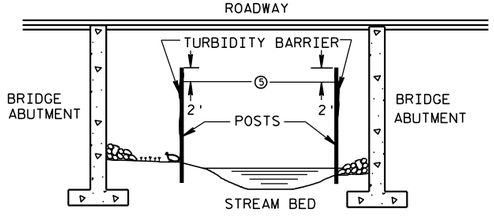
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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



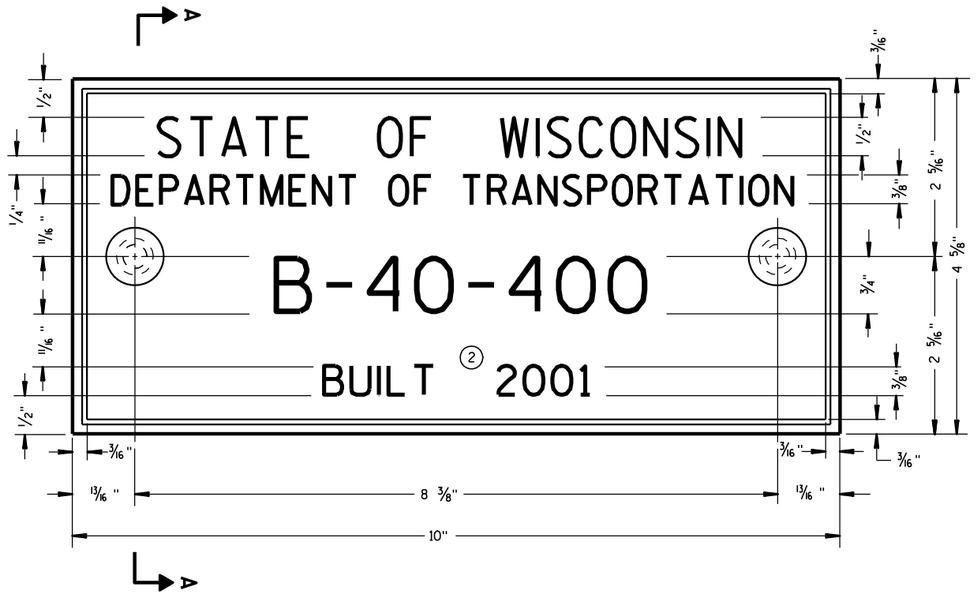
SECTION C-C

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	

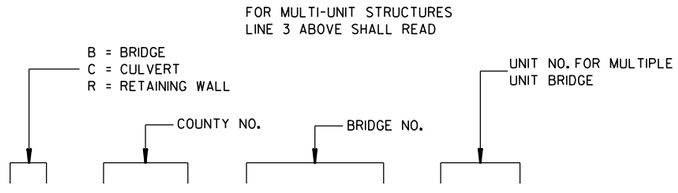
6

S.D.D. 8 E 11-2



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

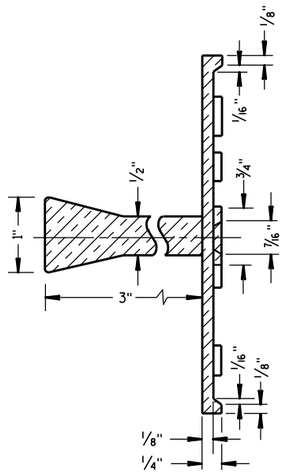
GENERAL NOTES

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

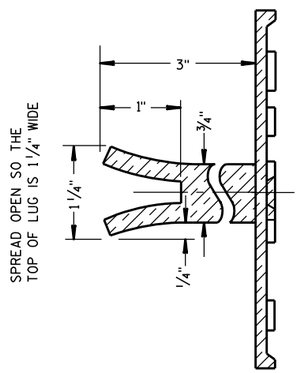
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

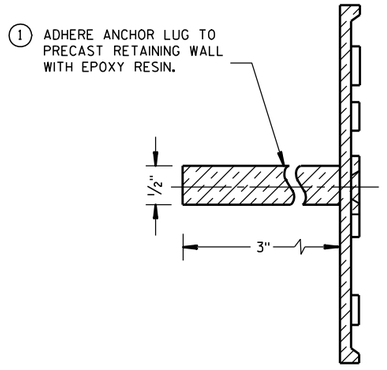
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

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

6

S.D.D. 12 A 3-10

GENERAL NOTES

(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.

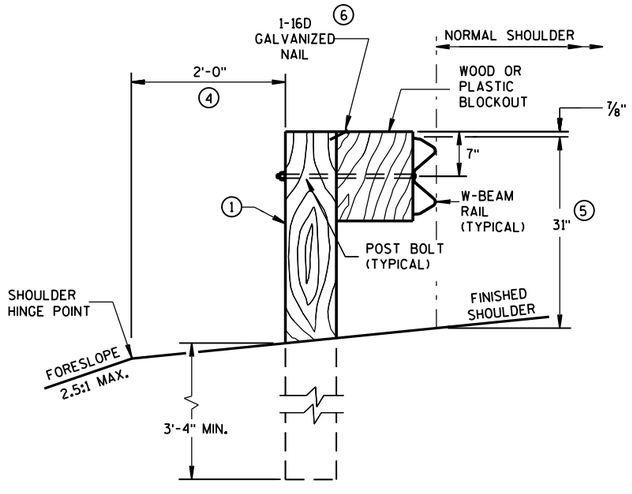
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(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).

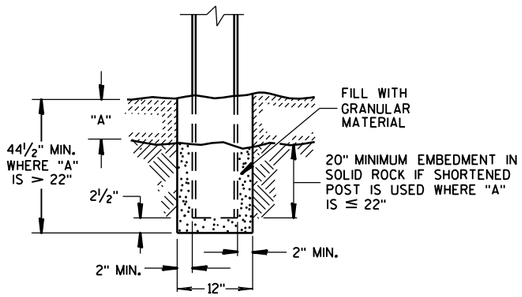
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

(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.



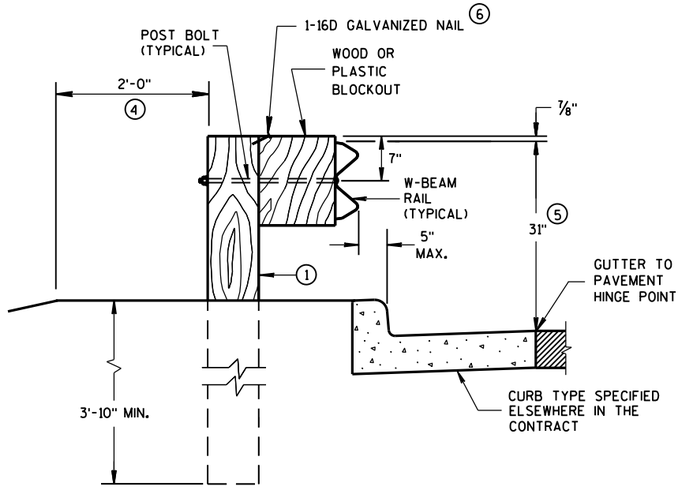
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



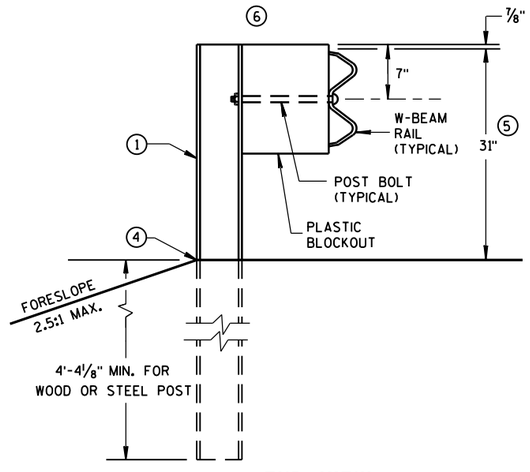
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



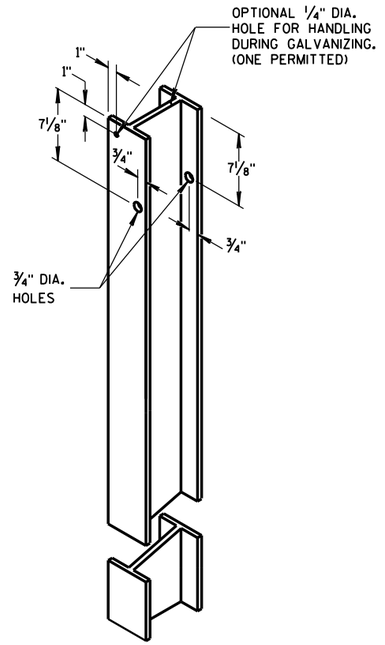
END VIEW

LOCATED ALONG A CURBED ROADWAY

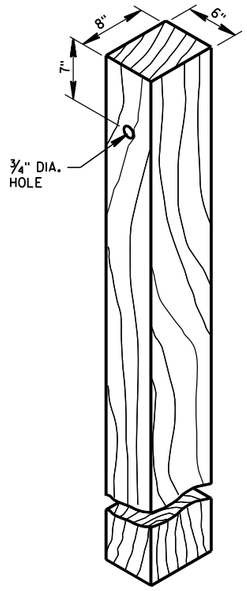


END VIEW

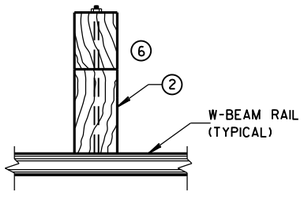
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



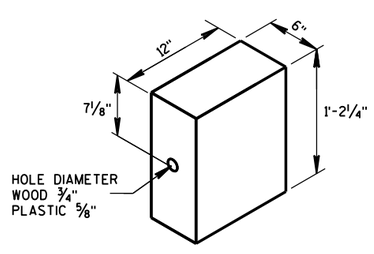
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



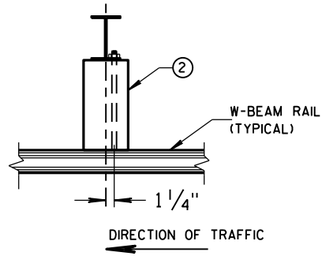
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)

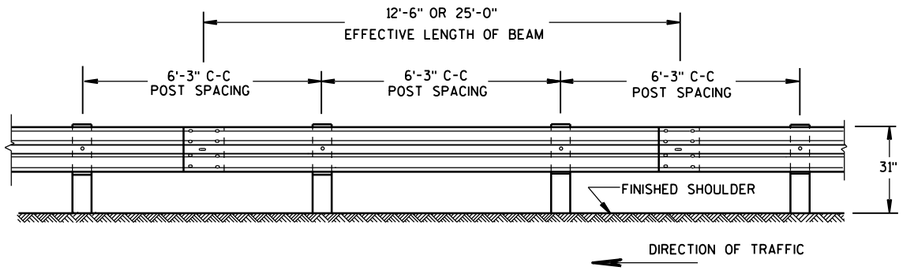


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

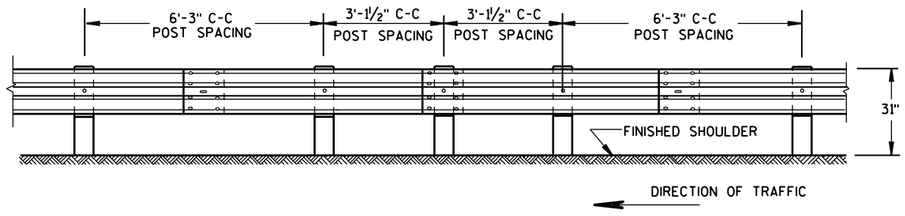
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 42-3a



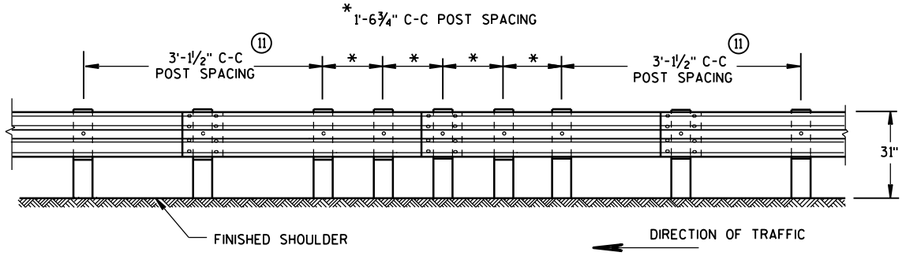
FRONT VIEW

POST SPACING STANDARD INSTALLATION



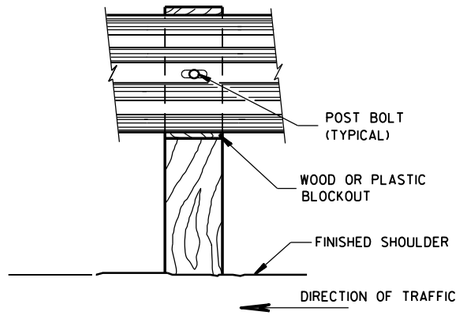
FRONT VIEW

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

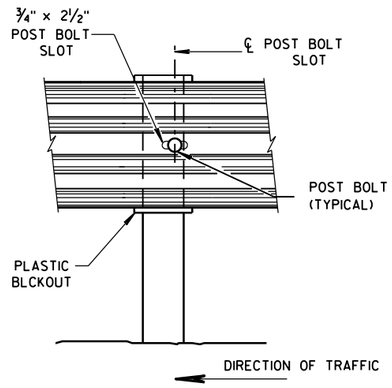


FRONT VIEW

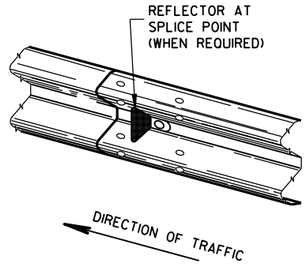
QUARTER POST SPACING (QS)

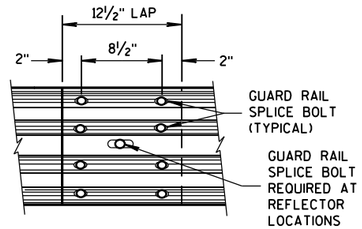


FRONT VIEW AT WOOD POST



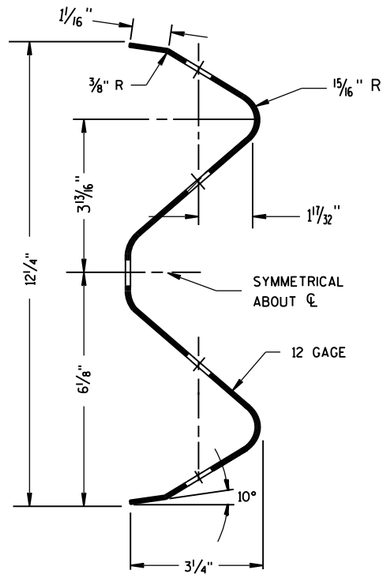
FRONT VIEW AT STEEL POST



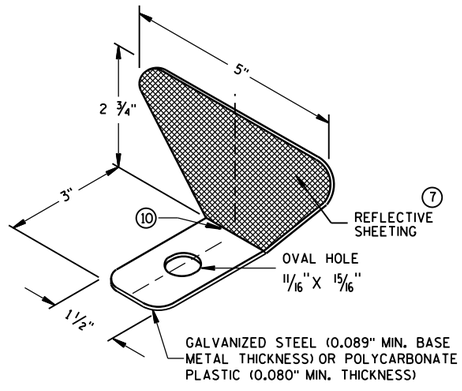


FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

GENERAL NOTES

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 ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING ⑧

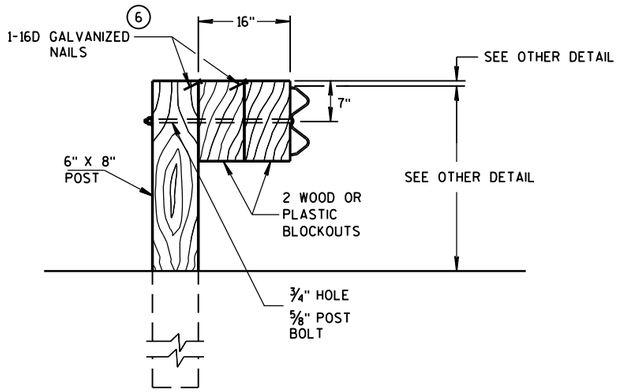
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ⑨	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 ⑩	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

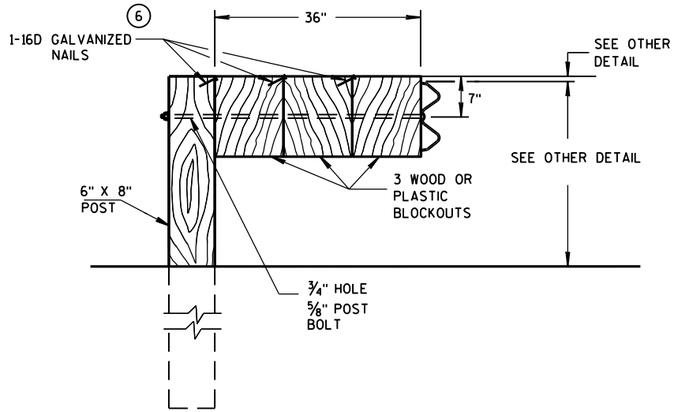
6

S.D.D. 14 B 42-3b



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.

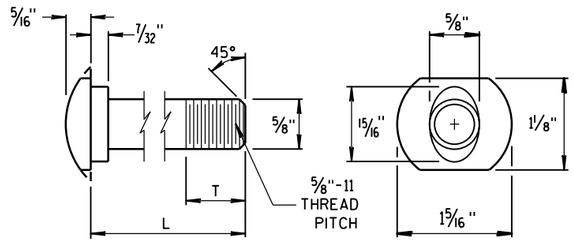


DETAIL FOR 36" BLOCKOUT DEPTH

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.

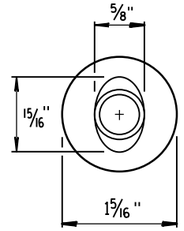
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

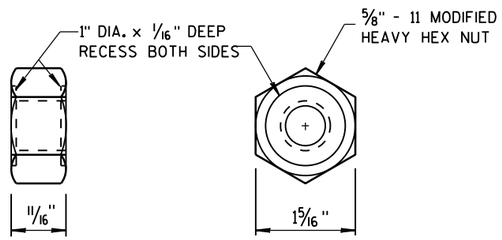


POST BOLT TABLE

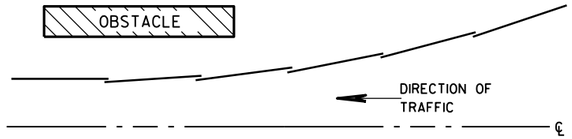
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

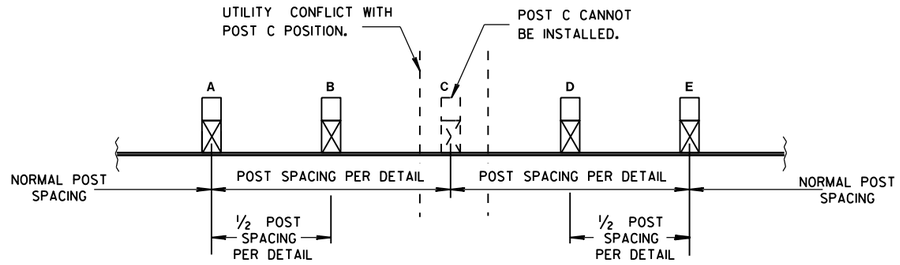


POST BOLT AND RECESS NUT

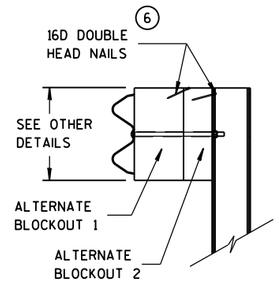


PLAN VIEW

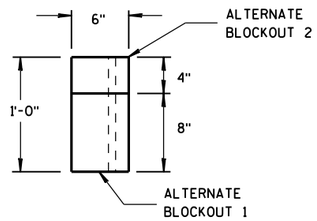
BEAM LAPPING DETAIL



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 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 14 B 42-3c

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.

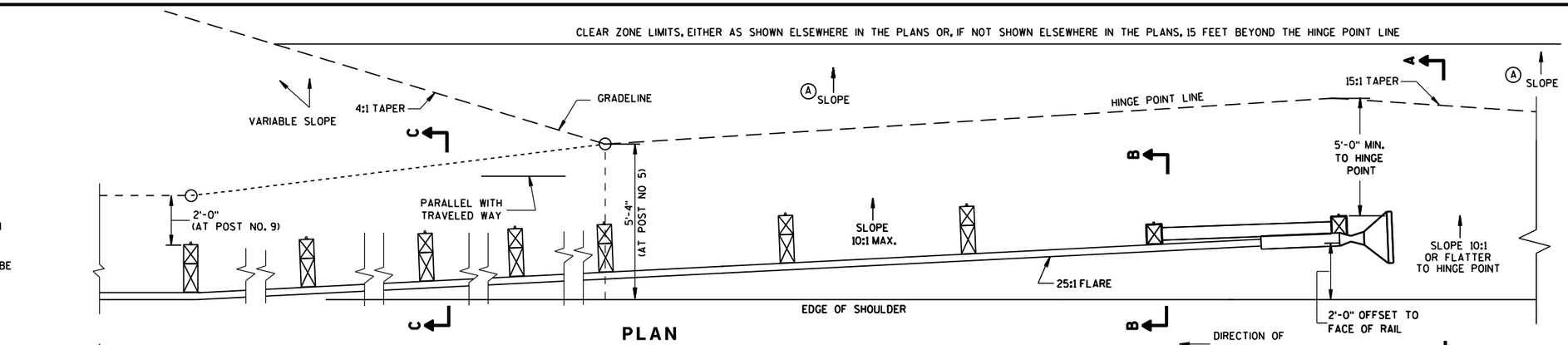
SEE SDD 14B42 FOR MORE INFORMATION.

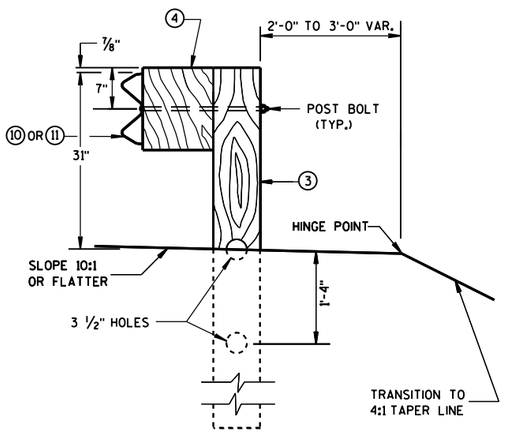
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

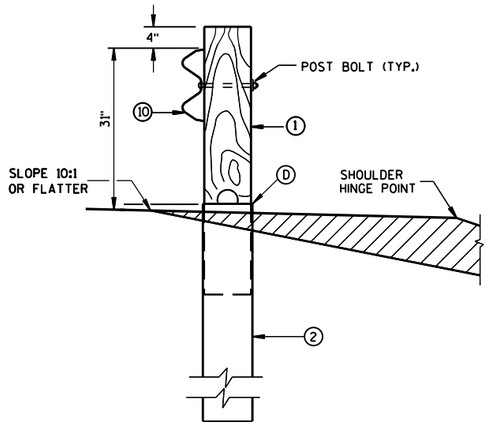
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

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.

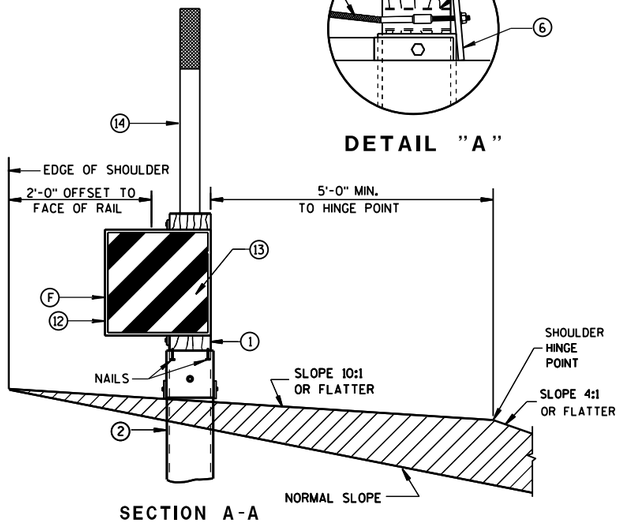




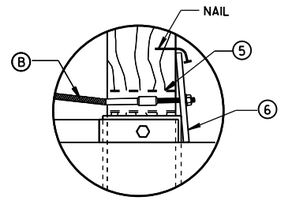
SECTION C-C
TYPICAL AT POST NOS. 3-9



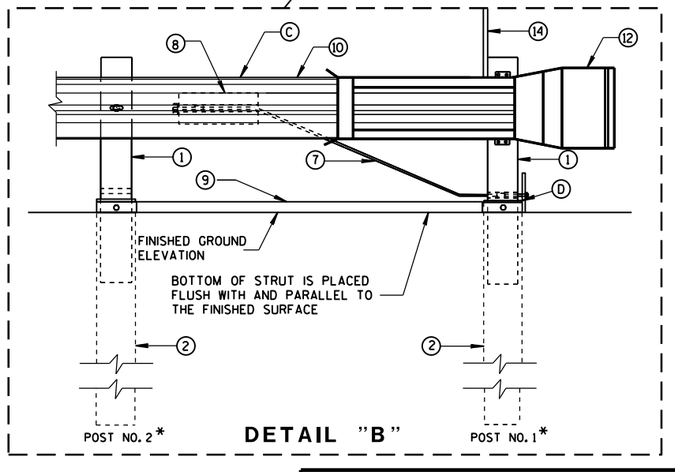
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



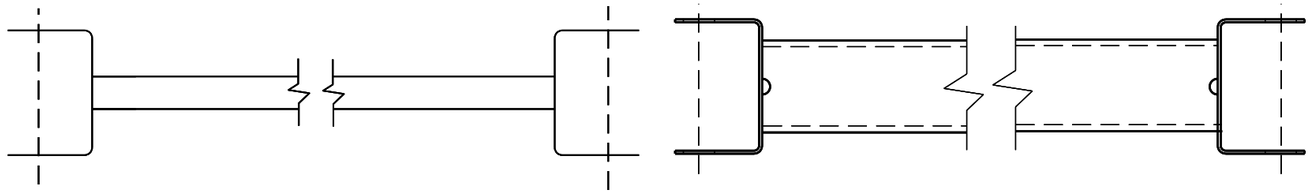
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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

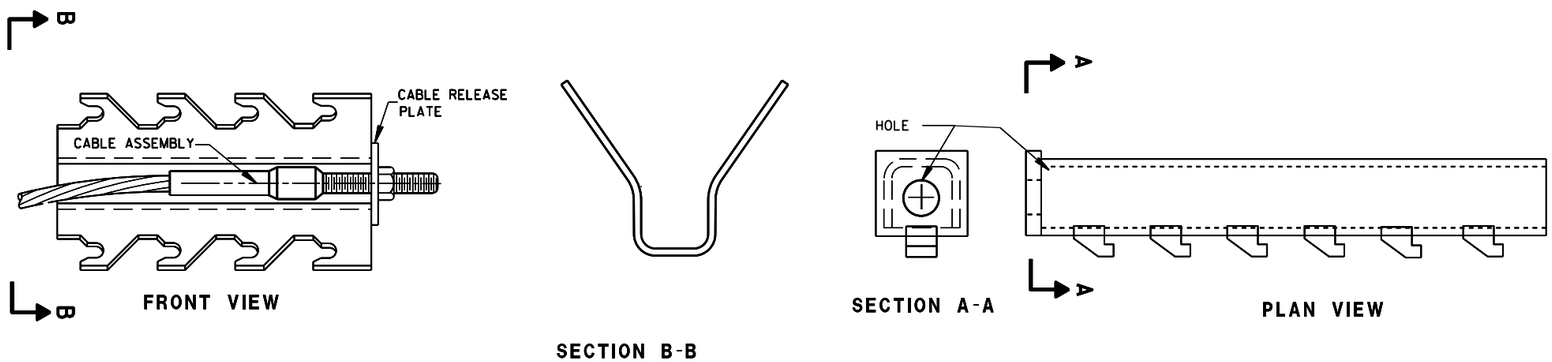
S.D.D. 14 B 44-2a



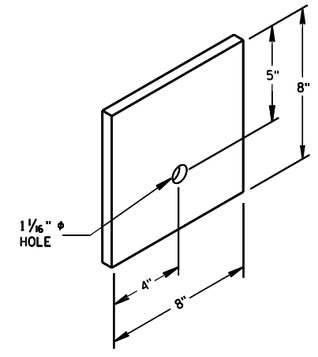
GENERIC GROUND STRUT (9) (H)

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)



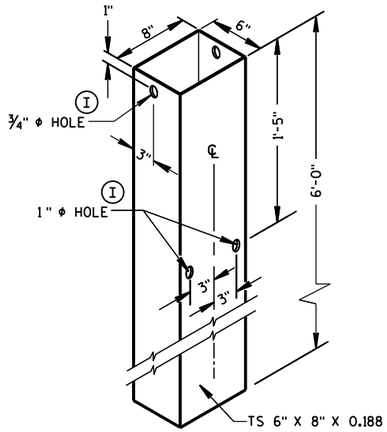
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

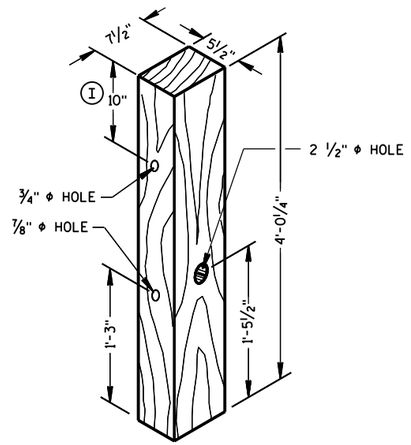
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

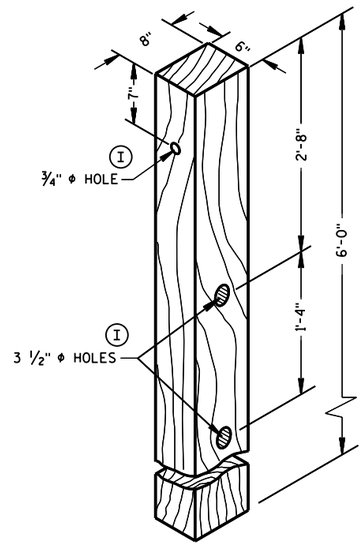


FOUNDATION TUBE (2)



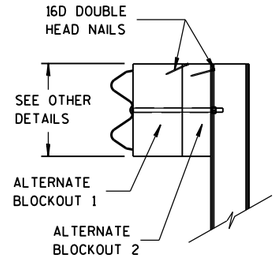
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

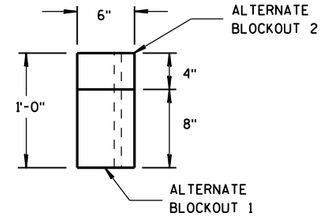


POSTS NUMBER 3-9

WOOD CRT POST (3)

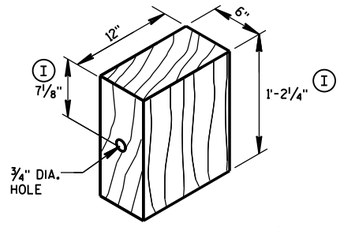


SIDE VIEW



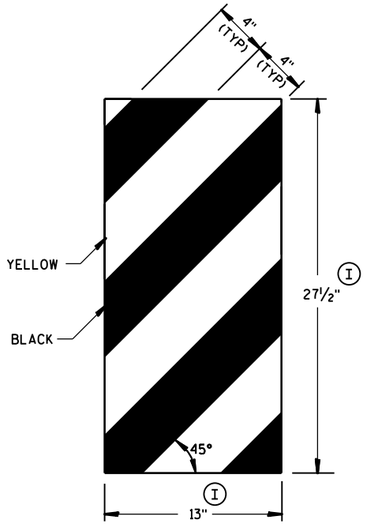
TOP VIEW

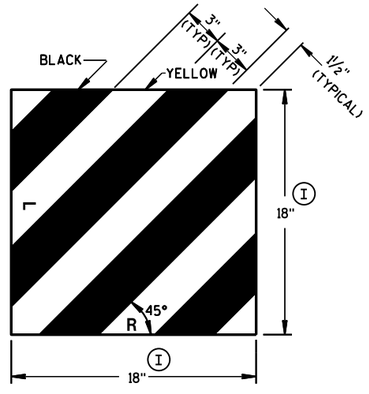
ALTERNATE WOOD BLOCKOUT DETAIL



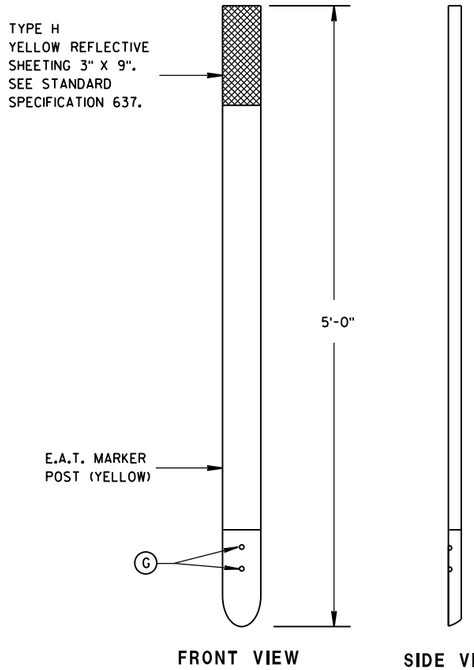
WOOD BLOCKOUT (4)

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





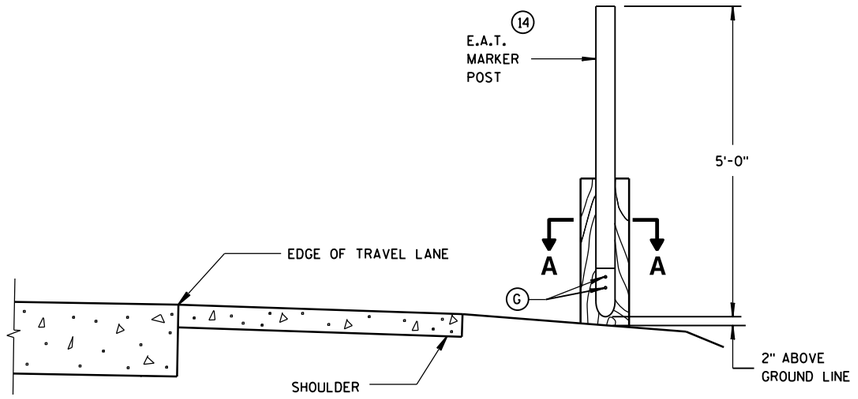
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

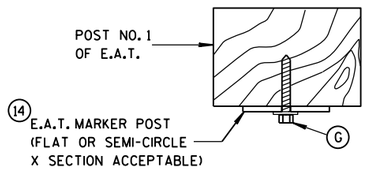
SIDE VIEW

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)

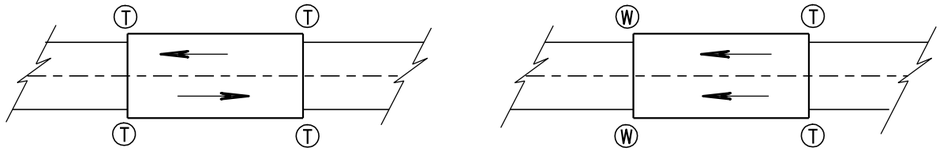
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

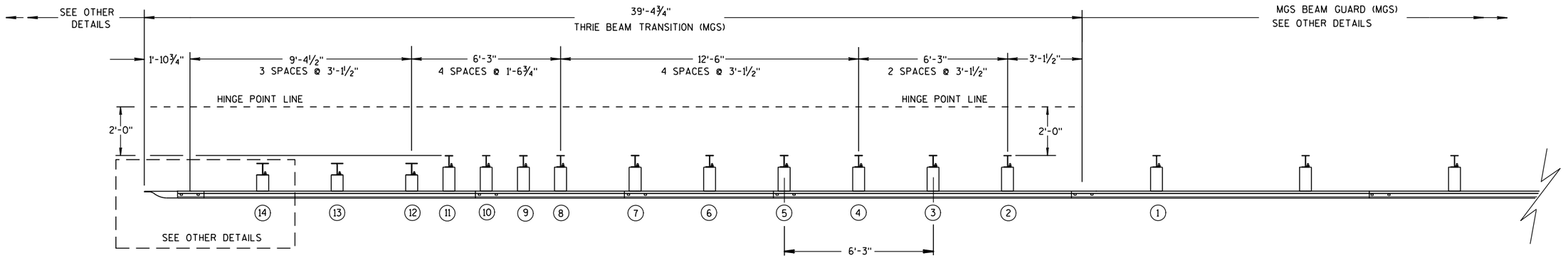
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

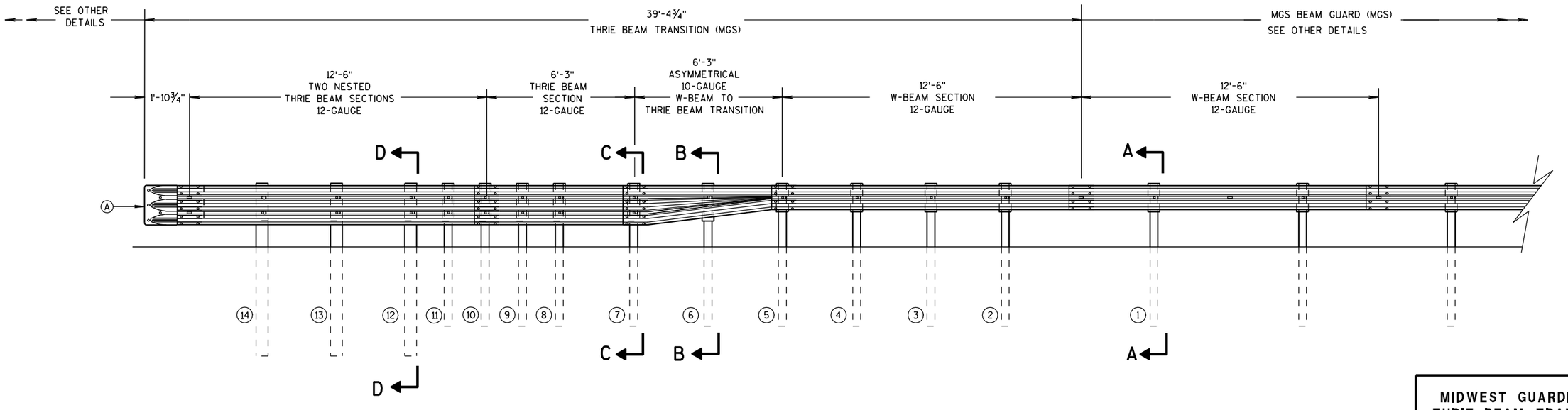
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	20

6

S.D.D. 14 B 45-3a

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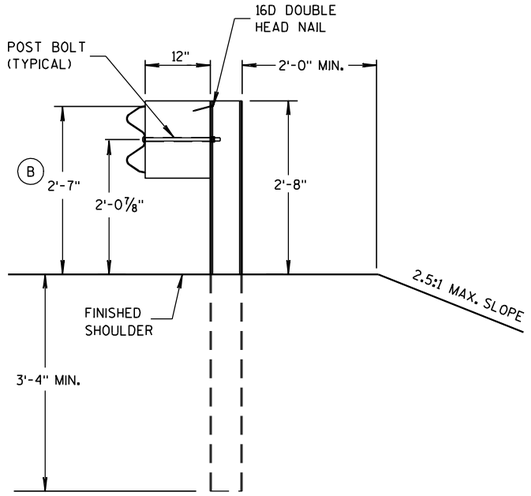
S.D.D. 14 B 45-3a

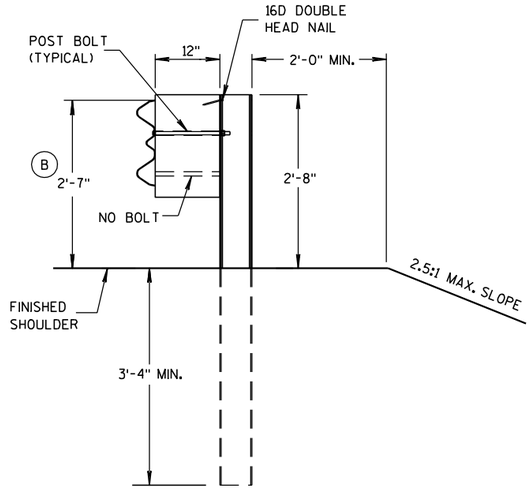
GENERAL NOTES

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



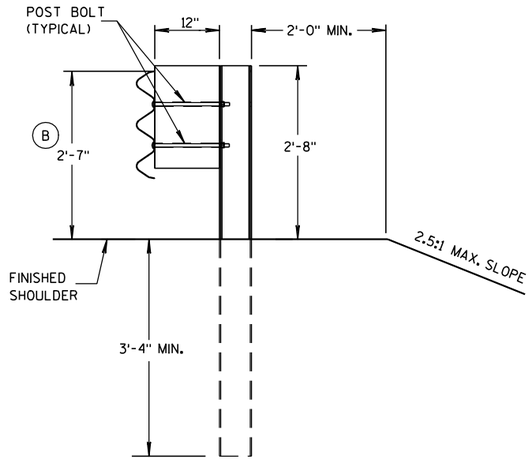
SECTION A-A

POSTS 1-5



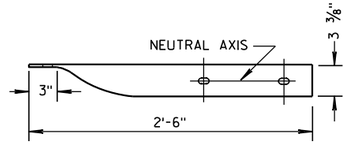
SECTION B-B

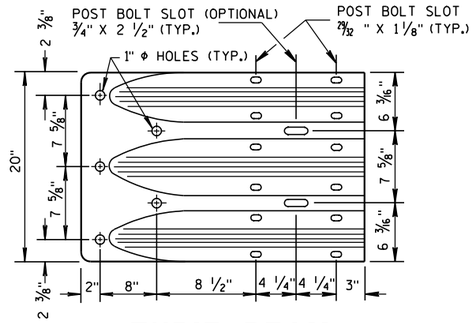
POST 6



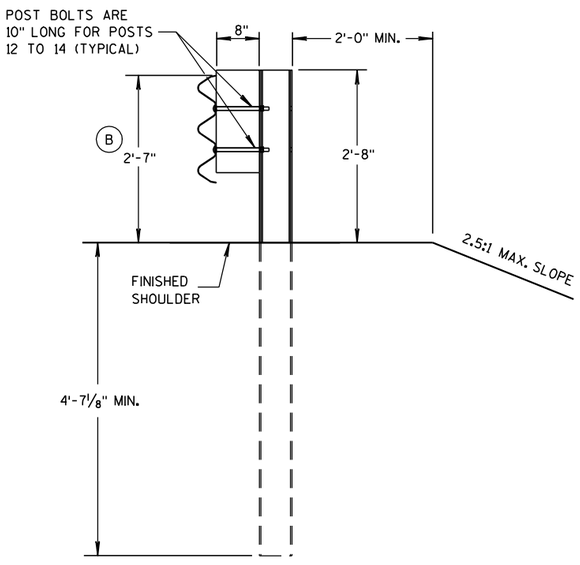
SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14

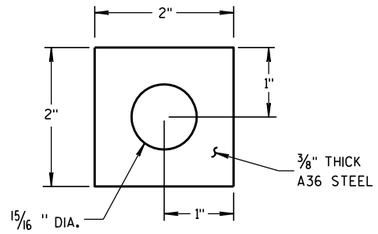
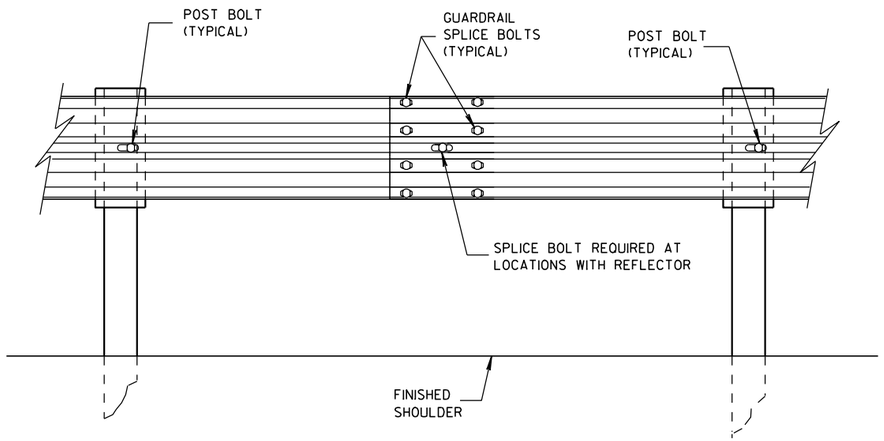
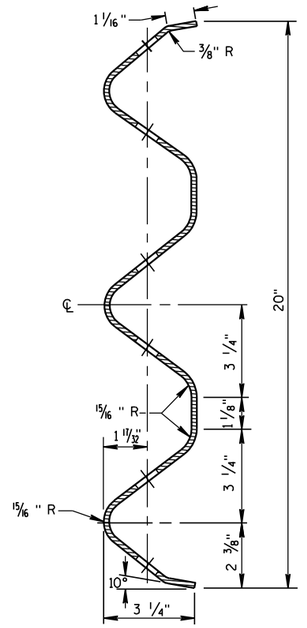


PLATE WASHER DETAIL



SPLICE DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 45-3b

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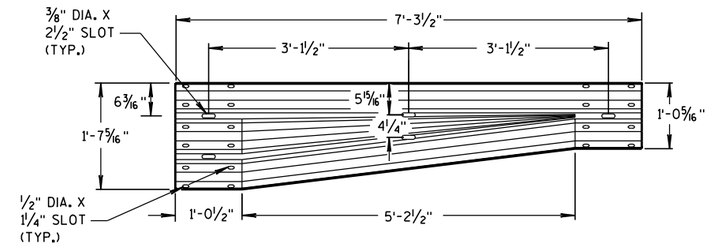
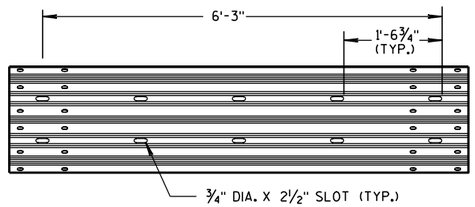
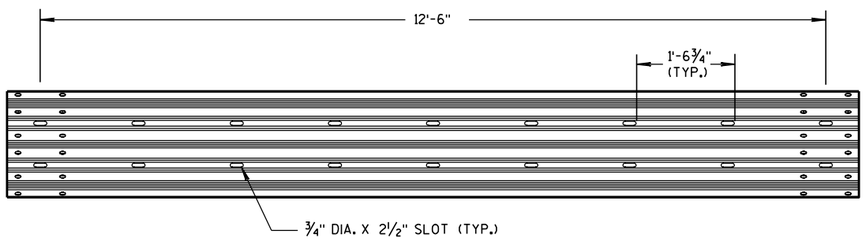
S.D.D. 14 B 45-3b



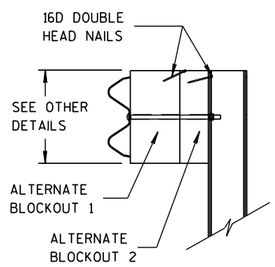
W-BEAM TO THRIE BEAM TRANSITION SECTION



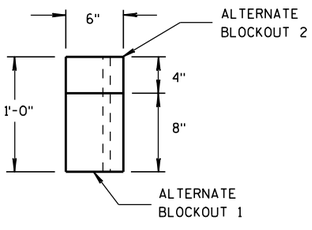
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

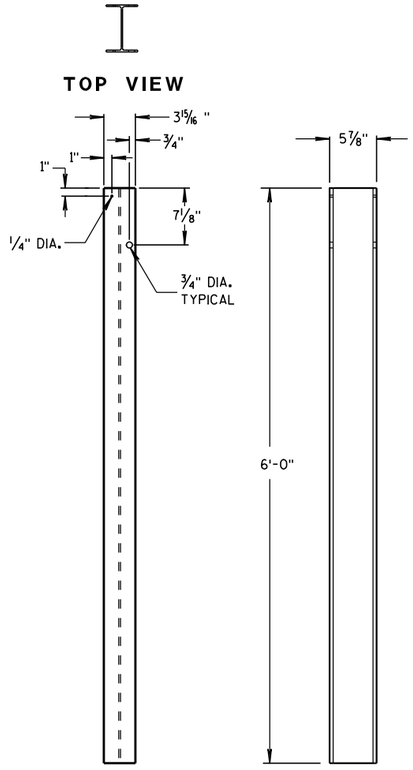


SIDE VIEW



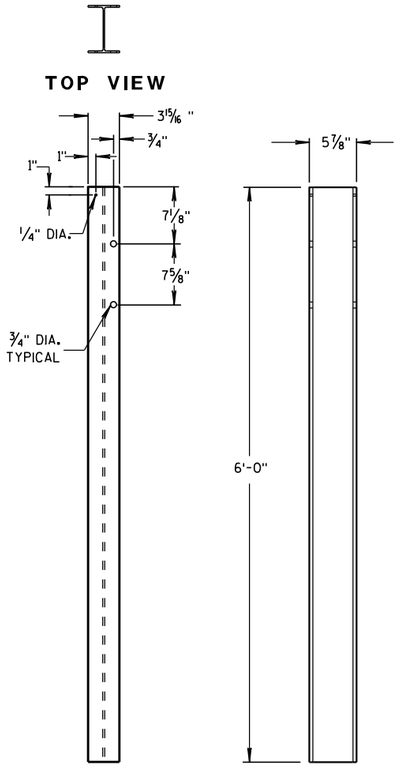
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



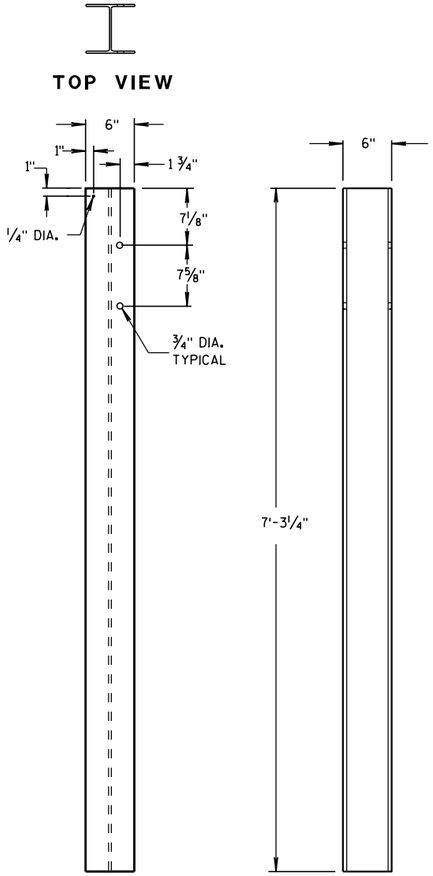
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5



FRONT VIEW SIDE VIEW

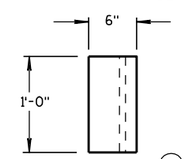
STEEL POSTS 6-11



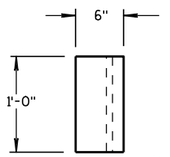
FRONT VIEW SIDE VIEW

STEEL POSTS 12-14

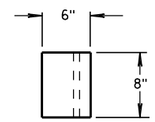
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



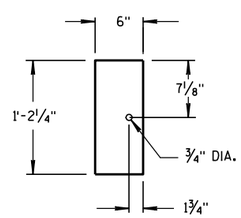
TOP VIEW (1)



TOP VIEW (1)

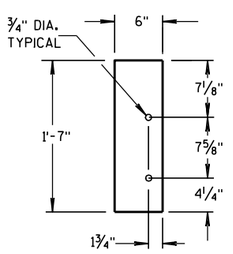


TOP VIEW



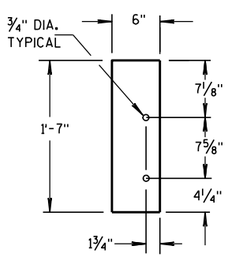
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

STEEL POST SIZES

POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

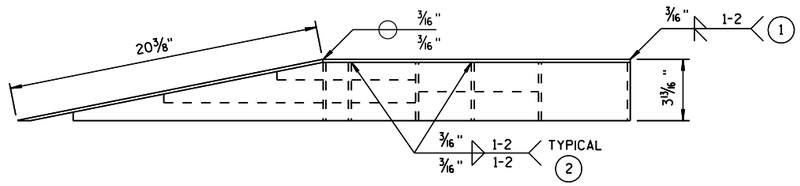
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

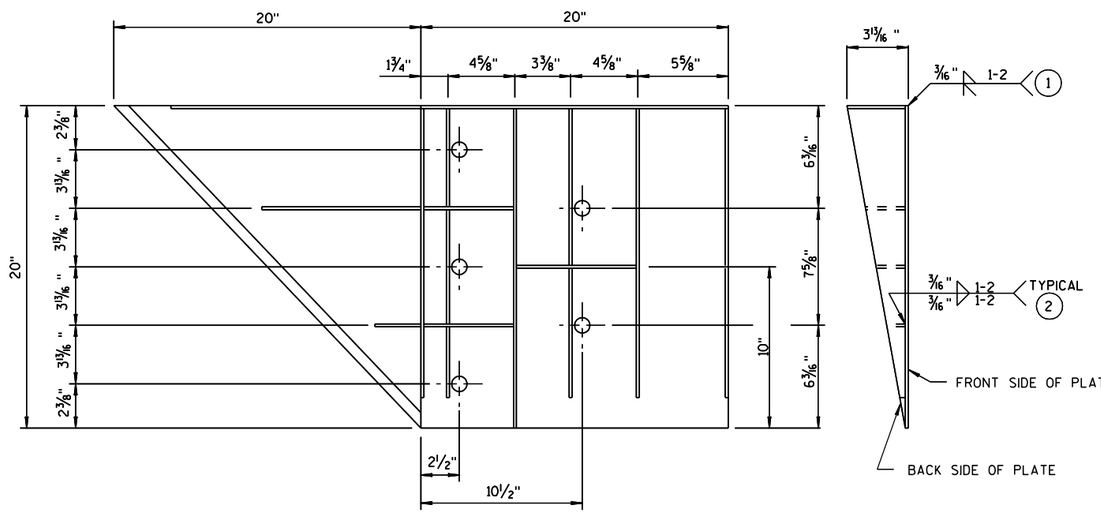
6

S.D.D. 14 B 45-3c

6

S.D.D. 14 B 45-3c





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

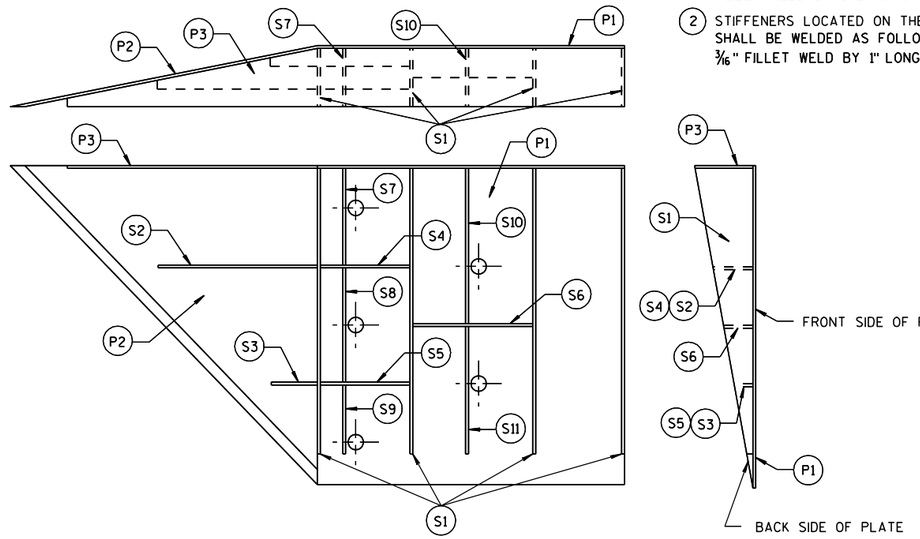


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012
DATE
/S/ Jerry H ...
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 45-3i

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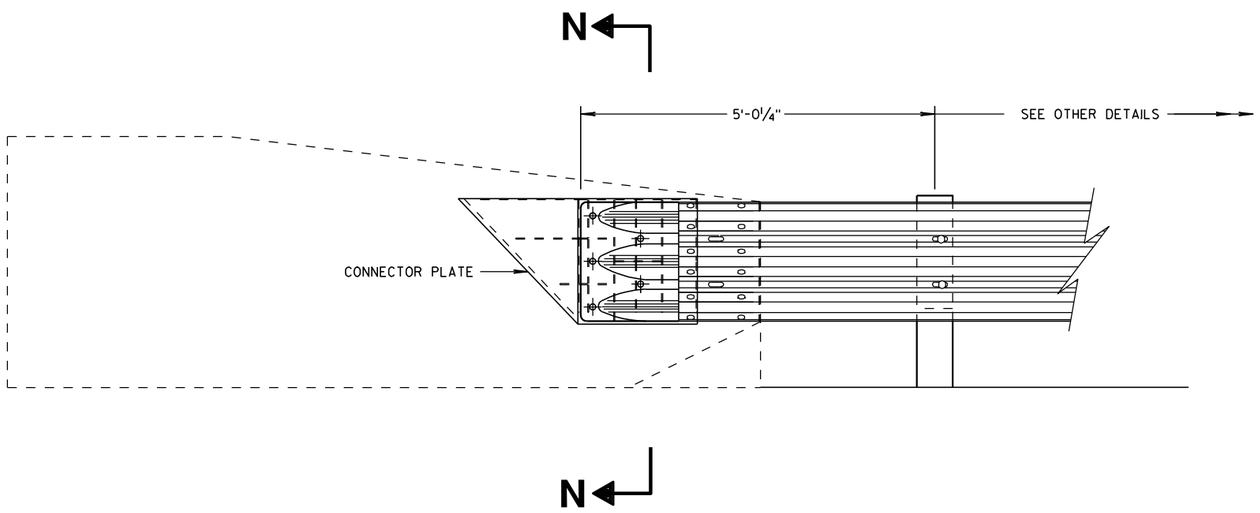
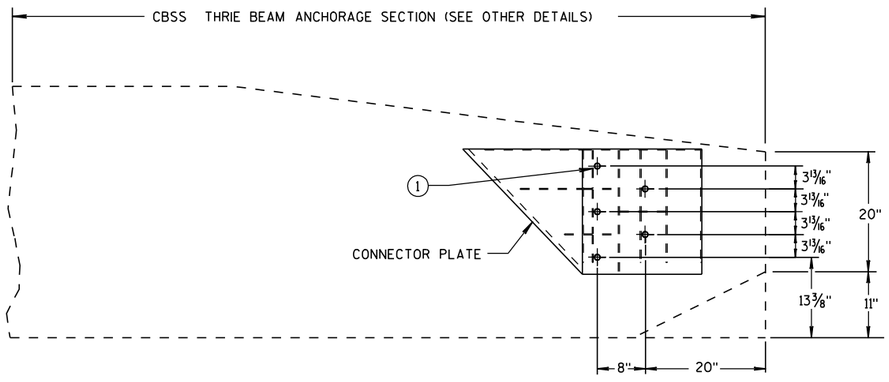
S.D.D. 14 B 45-3i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

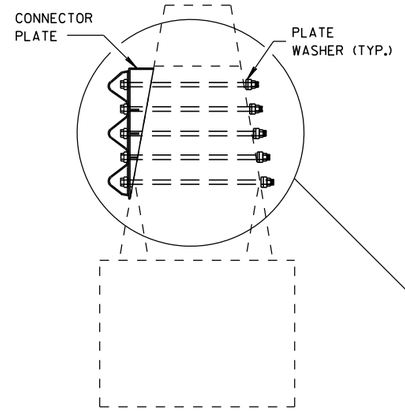


SINGLE SLOPE CONNECTION PLATE PLACEMENT

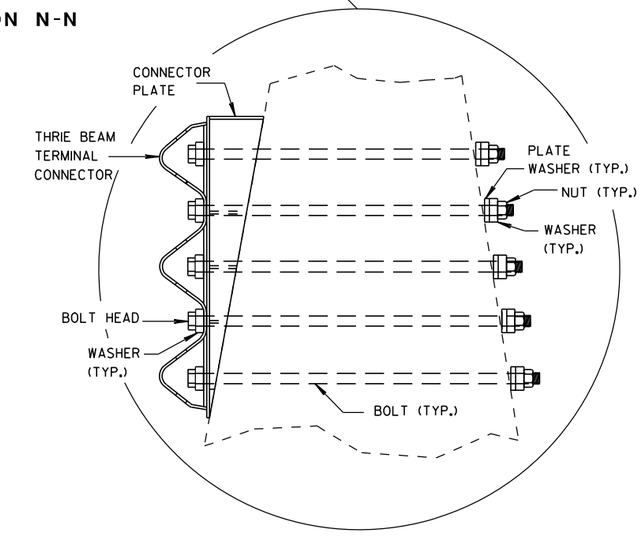
GENERAL NOTES

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

(1) 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.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

6

S.D.D. 14 B 45-3j

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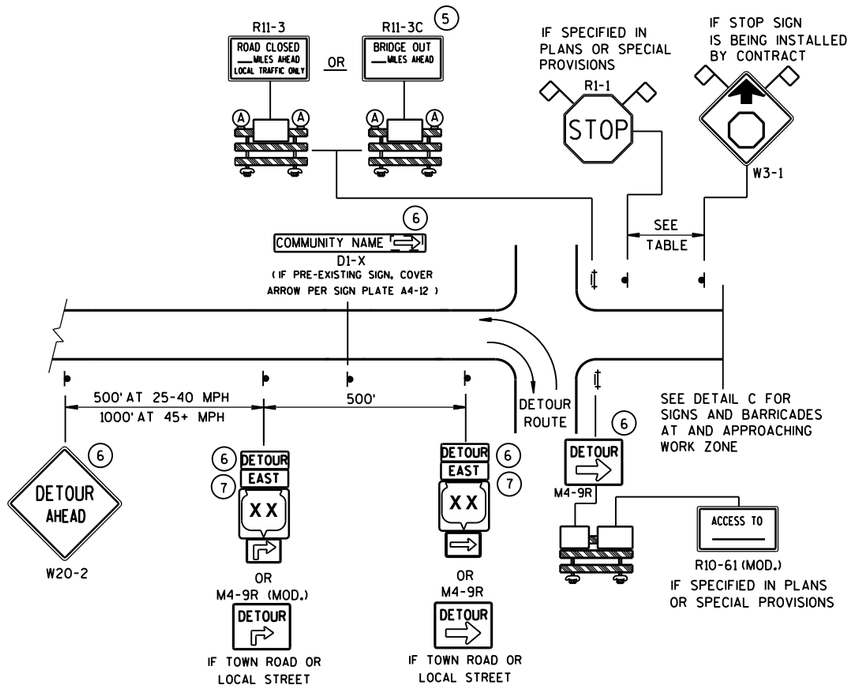
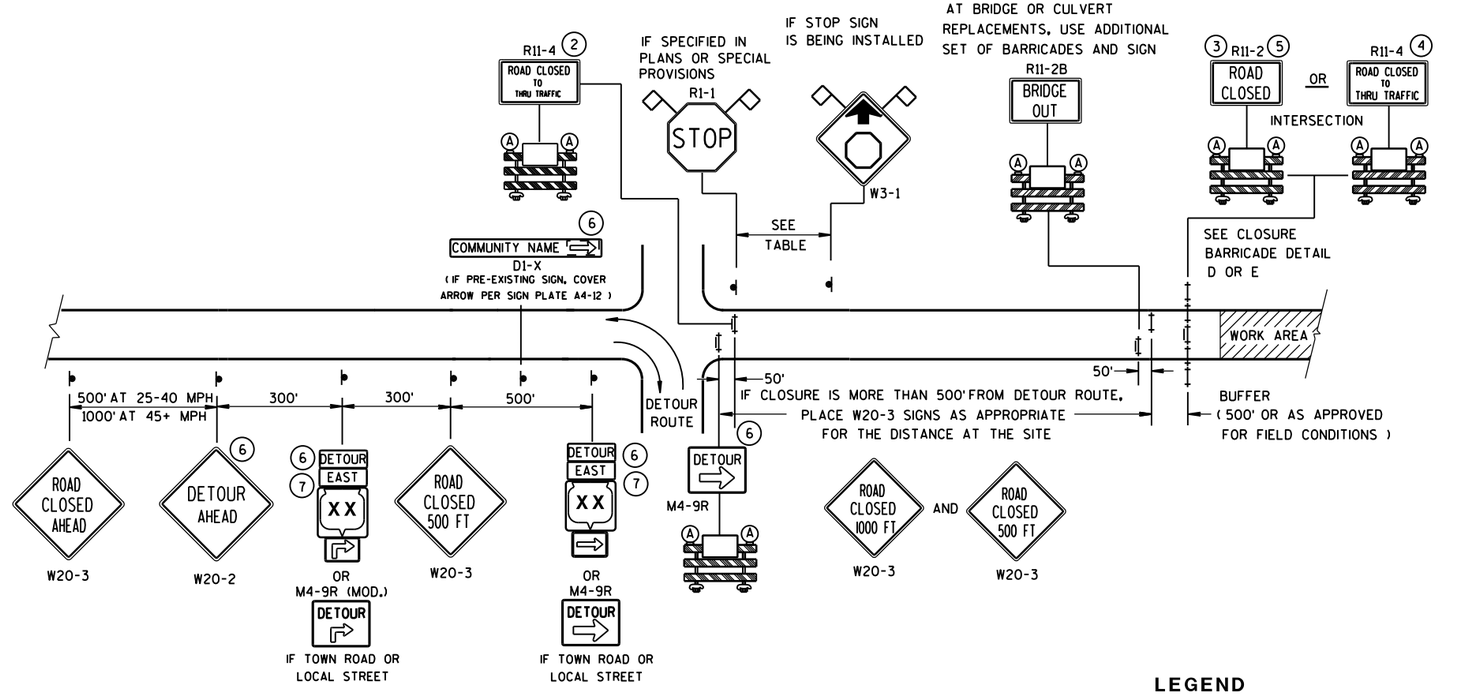
S.D.D. 14 B 45-3j



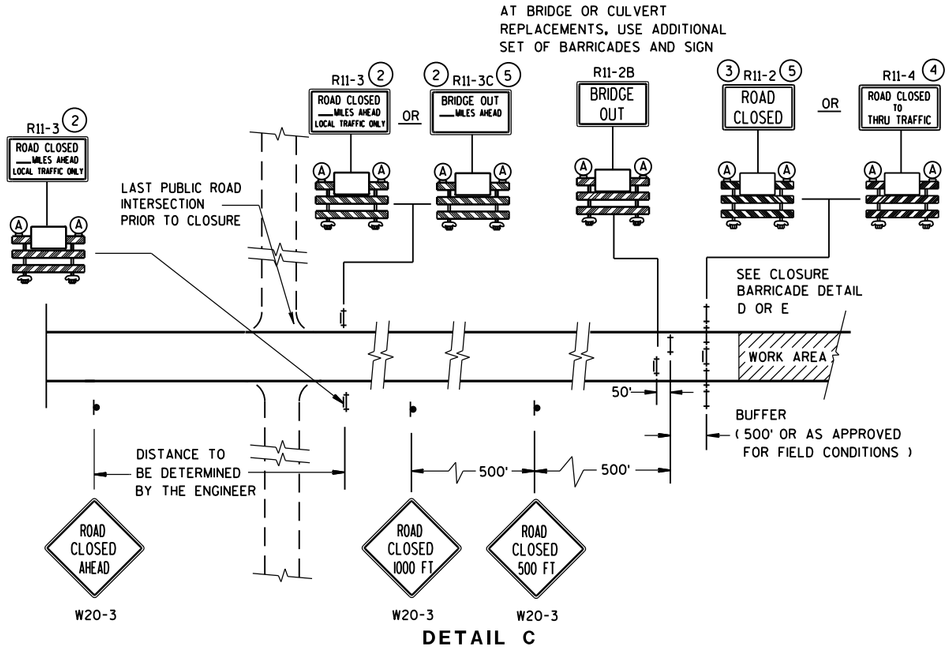
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

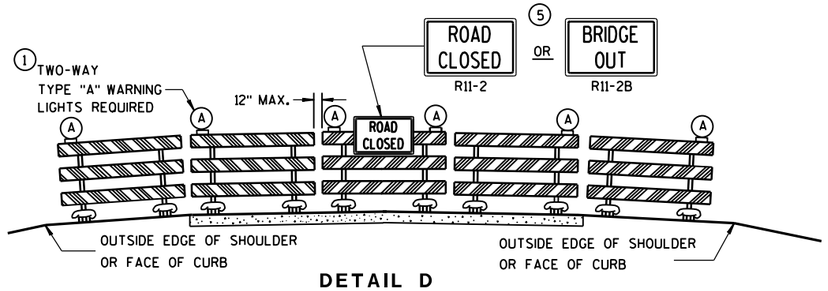
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

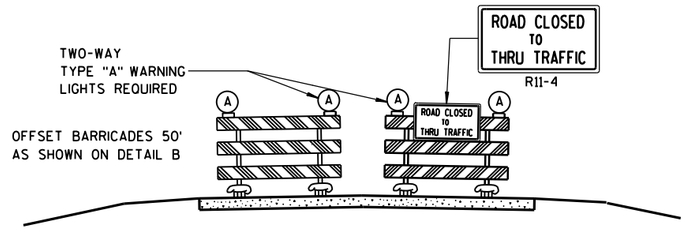
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

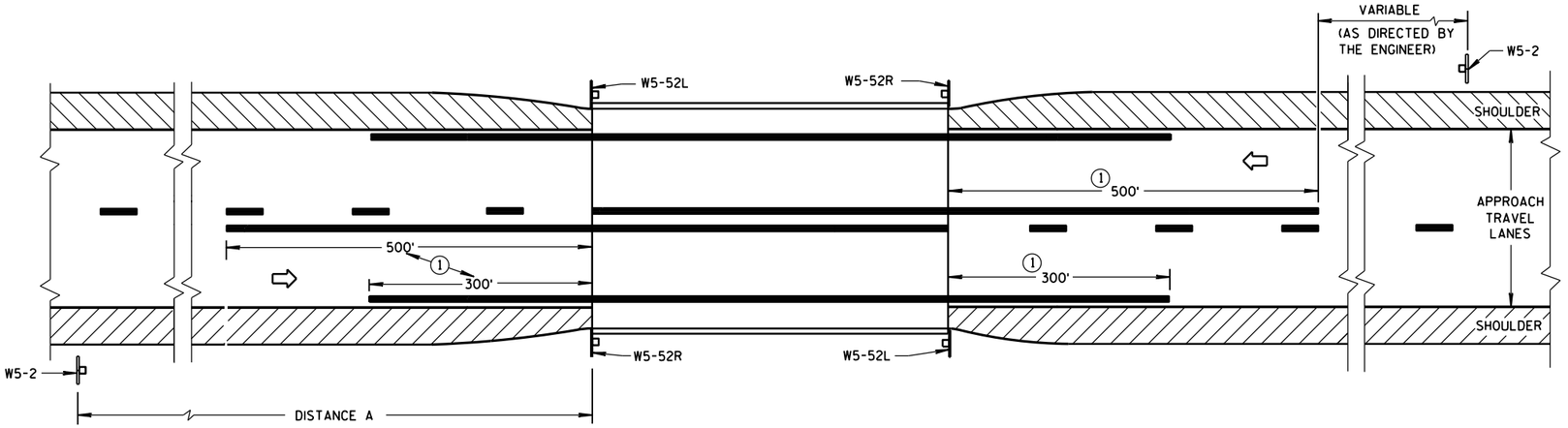
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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



GENERAL NOTES

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

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

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

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

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

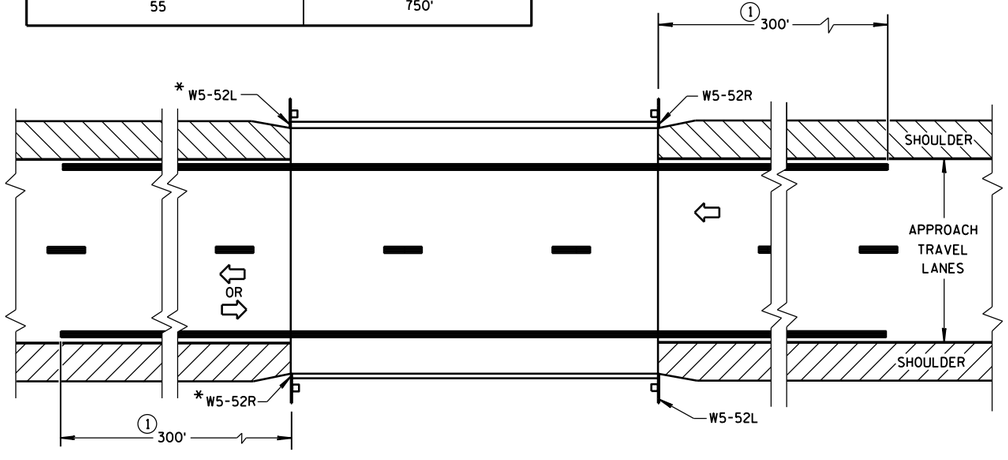
DISTANCE TABLE

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

SITUATION 1

WARRANTING CRITERIA:

BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET

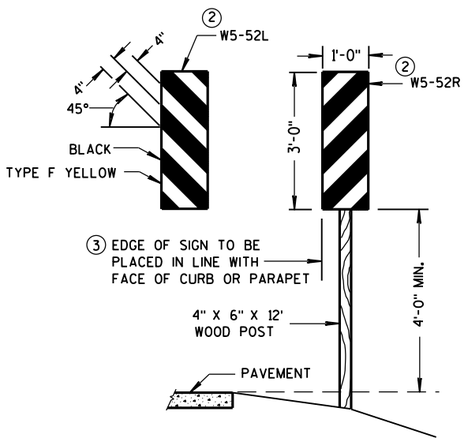


*OMIT ON ONE-WAY TRAVELLED WAYS

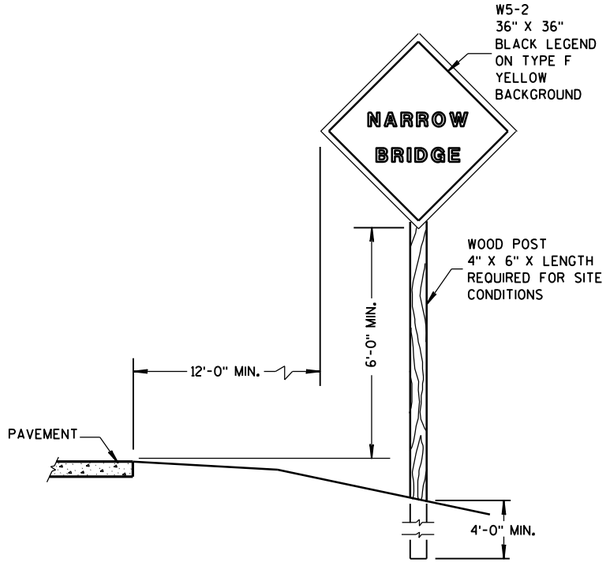
SITUATION 2

WARRANTING CRITERIA:

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



OBJECT MARKER PLACEMENT



SIGN PLACEMENT

SIGNING & MARKING
FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

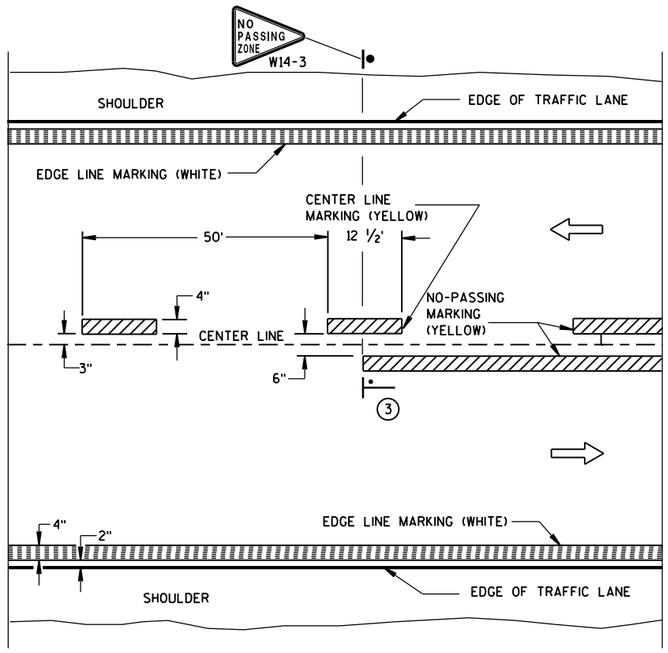
3-2014 DATE

/S/ Travis Feltes STATE TRAFFIC ENGINEER

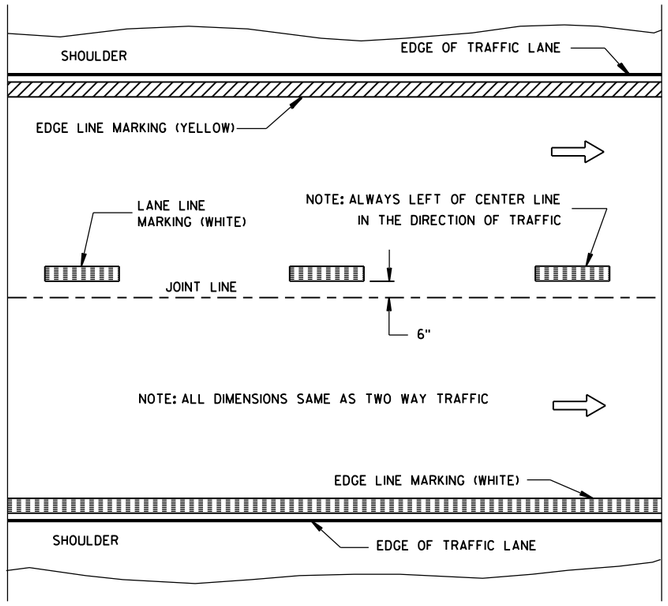
FHWA

6

S.D.D. 15 C 6-7

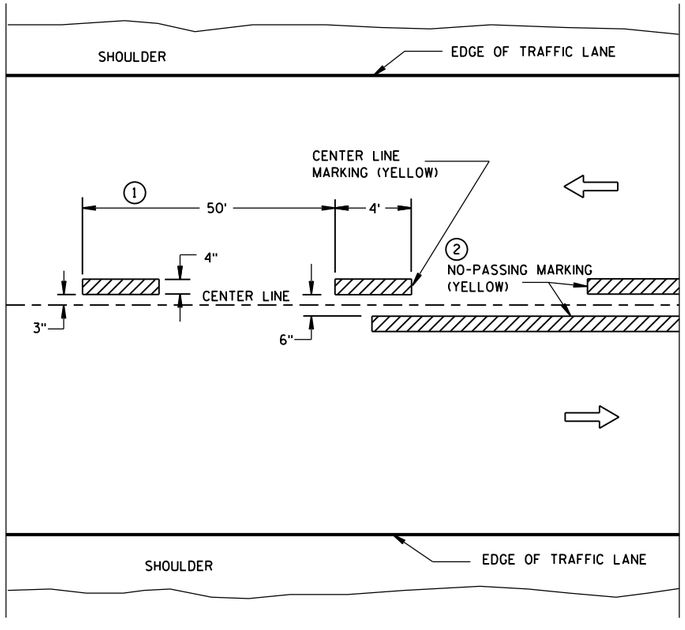


TWO WAY TRAFFIC

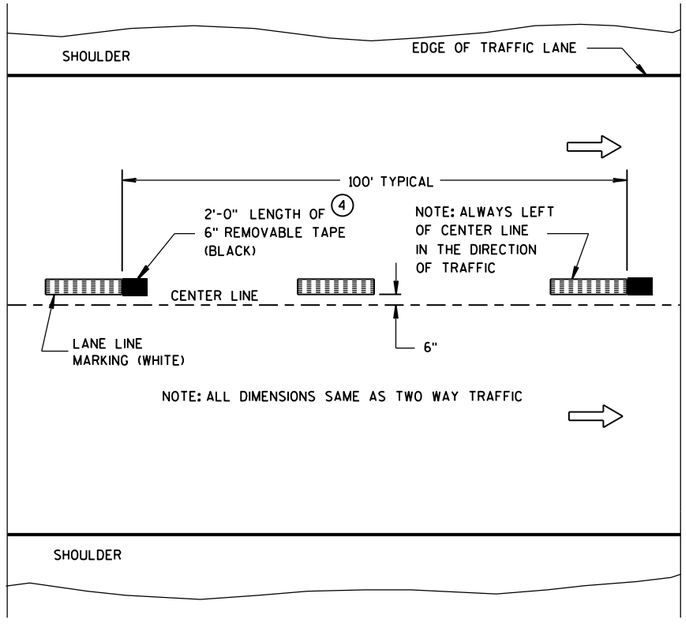


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

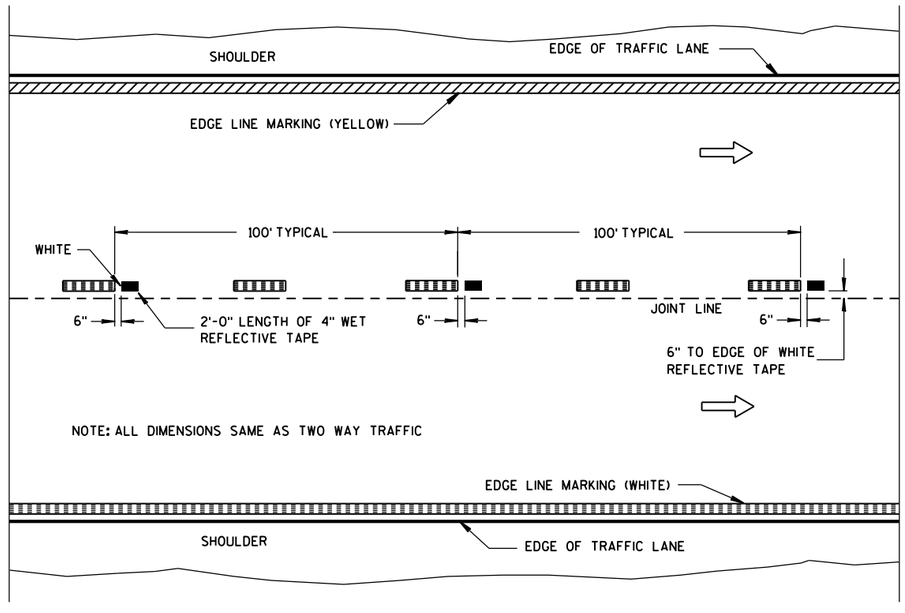
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

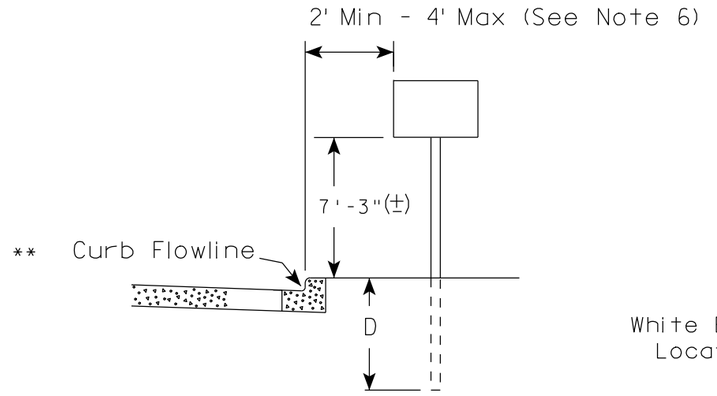
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

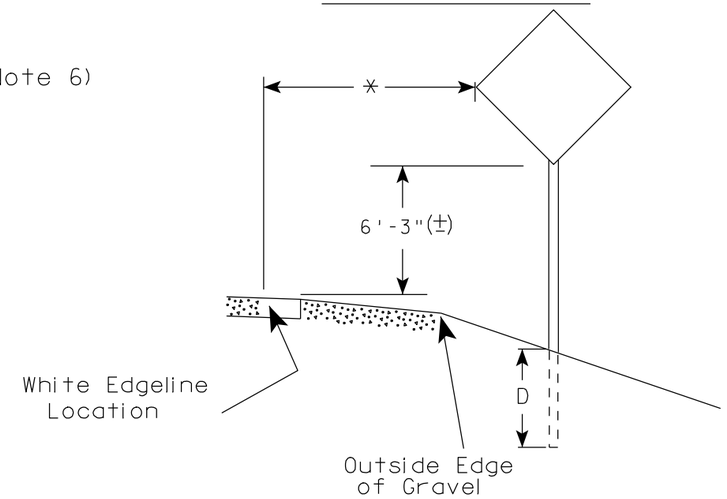
6

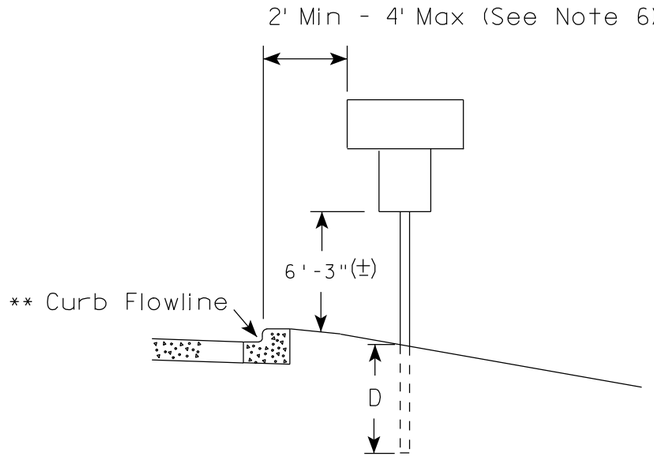
S.D.D. 15 C 8-16a

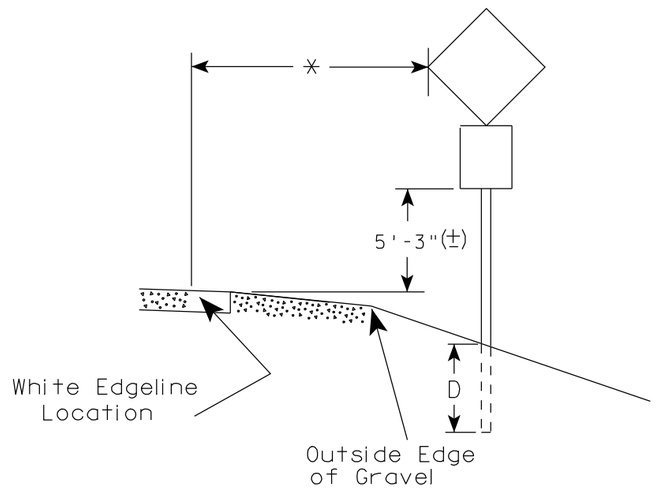
URBAN AREA



RURAL AREA (See Note 2)







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

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

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

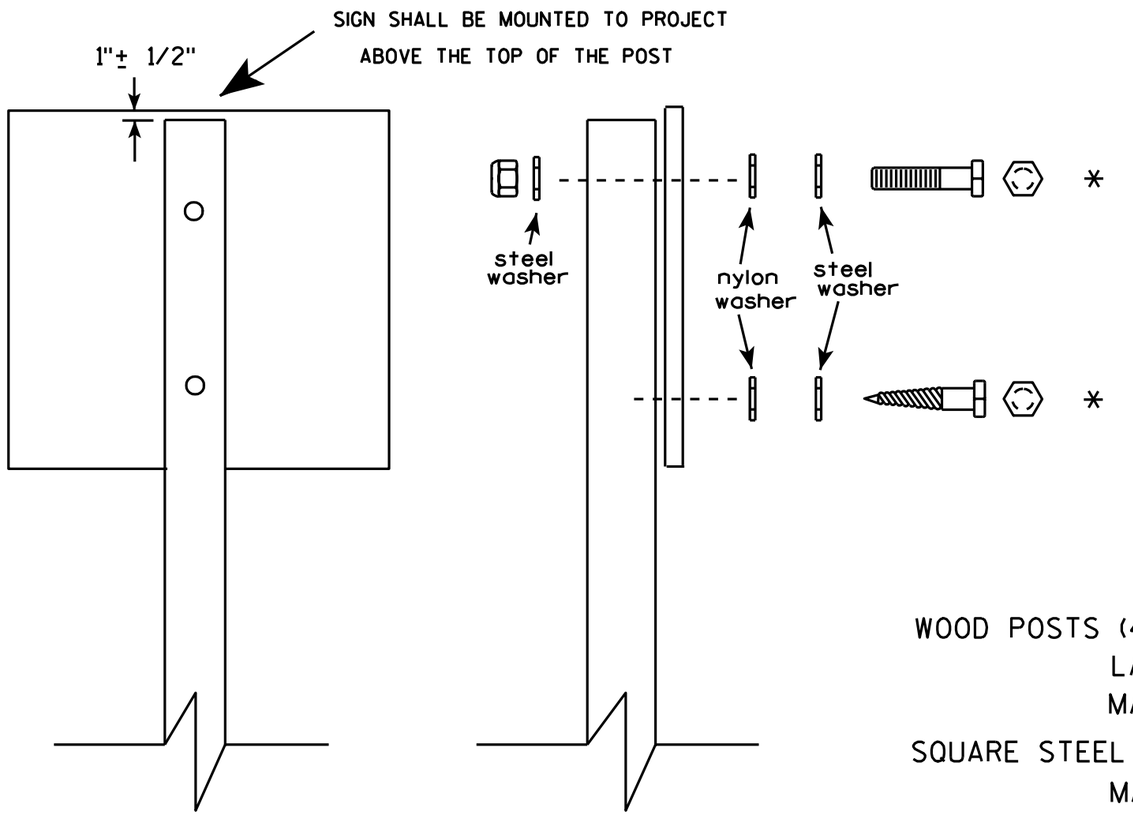
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

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



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

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

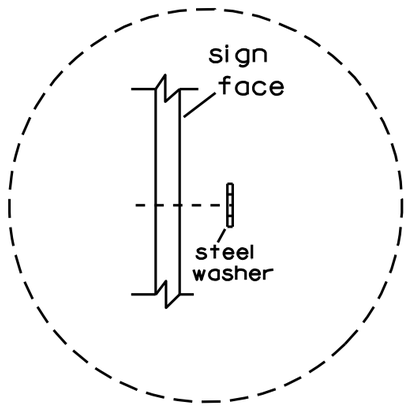
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

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



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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

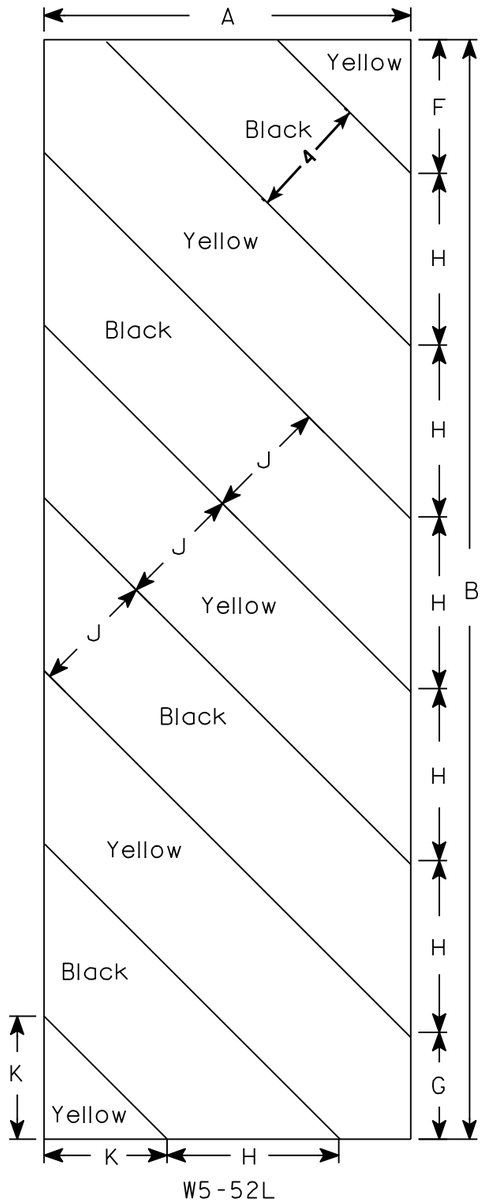
DATE 3/23/10 PLATE NO. A4-8.7

7

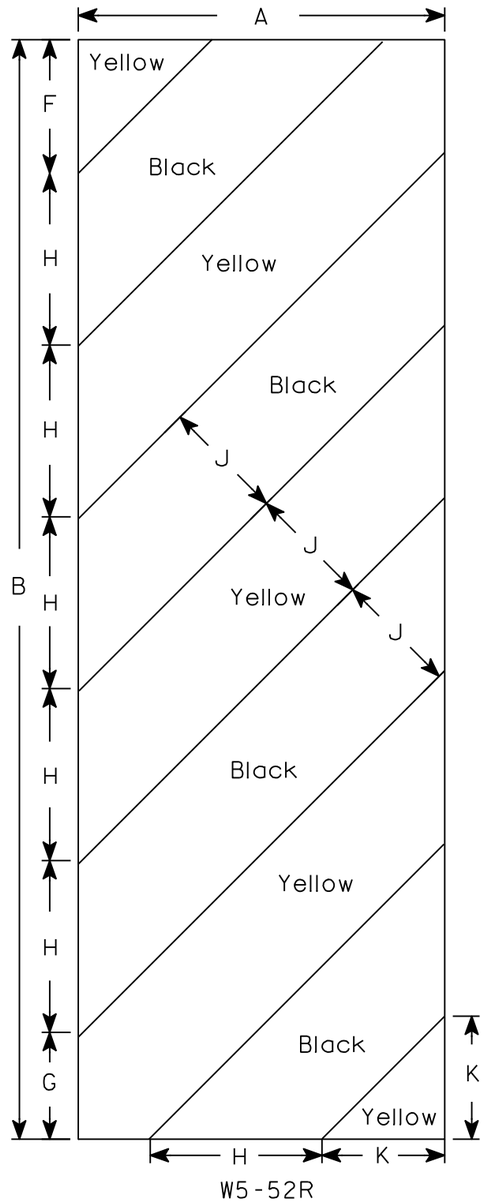
7

PROJECT NO:

SHEET NO: 30 E



W5-52L



W5-52R

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

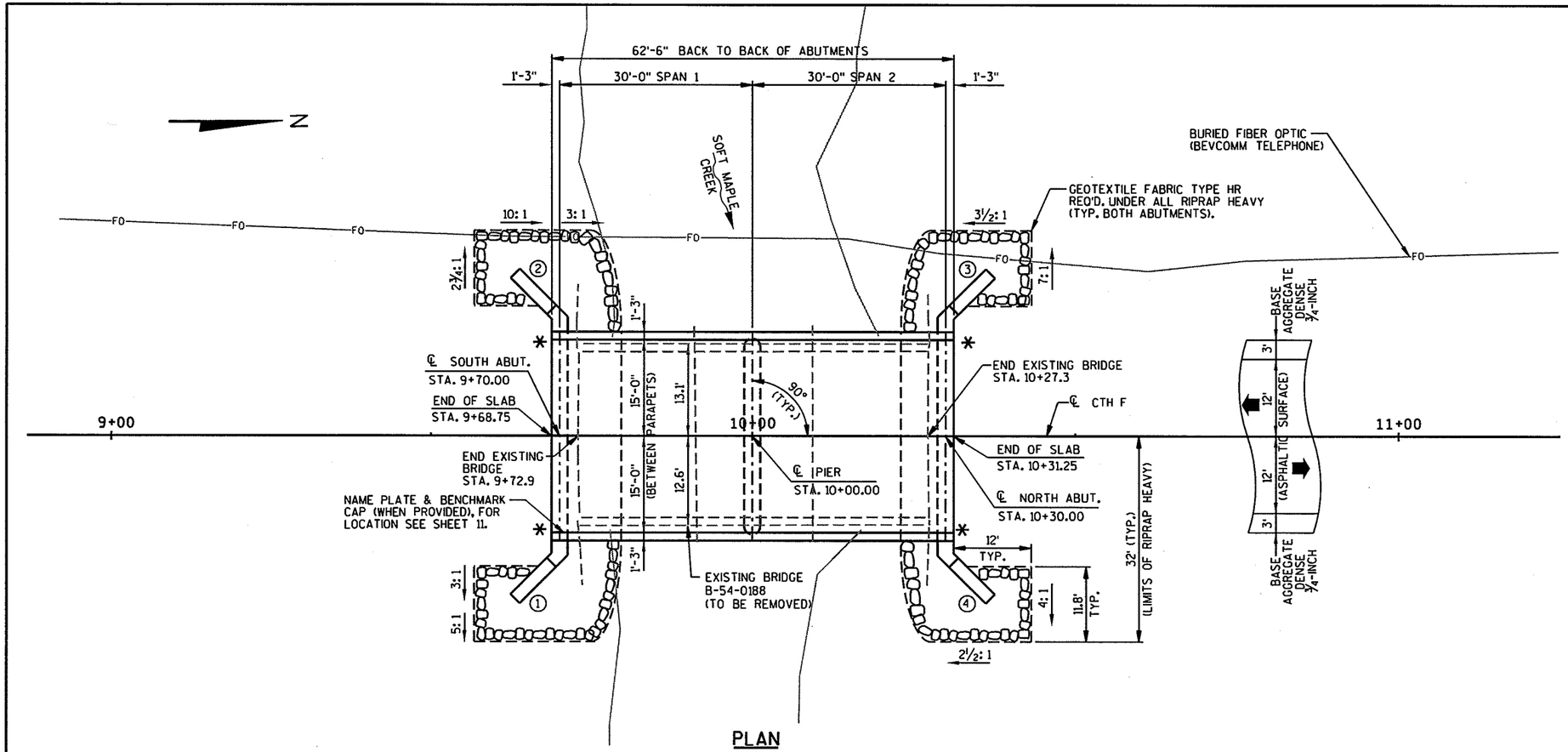
DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 31 | E

STATE PROJECT NUMBER

8797-00-71

BENCHMARKS ⊕ NAVD 88			
NO.	STA./OFFSET	DESCRIPTION	ELEV.
5002	7+91.9, 34.8' RT.	IRON ROD WITH CAP	1110.80
5003	9+73.7, 13.4' RT.	CHISELED SQUARE	1111.64
5001	12+43.2, 58.5' RT.	IRON ROD WITH CAP	1102.50

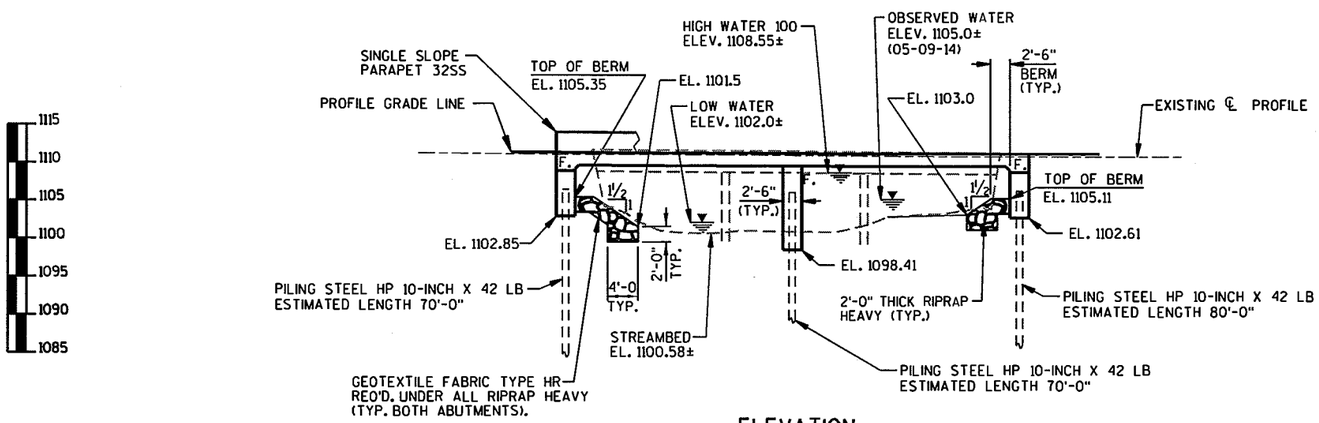


PLAN

(TWO SPAN FLAT CONCRETE SLAB)

◯ - INDICATES WING NUMBER

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



ELEVATION

NORMAL TO ℄ CTH F

DESIGN DATA

LIVE LOAD:

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

TRAFFIC DATA:

A.A.D.T. (2015) = 350
A.A.D.T. (2035) = 475
R.D.S. = 60 MPH

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

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

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY, SLAB ——— f'_c = 4,000 P.S.I.
ALL OTHER ——— f'_c = 3,500 P.S.I.

HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— f_y = 60,000 P.S.I.

PILING STEEL HP ——— f_y = 50,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS AND PIER TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB. DRIVE PILES TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER ABUTMENT BODY AND PIER PILE AND 130 TONS PER ABUTMENT WING PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 70'-0" AT THE SOUTH ABUTMENT, 70'-0" AT THE PIER, AND 80'-0" AT THE NORTH ABUTMENT.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

HYDRAULIC DATA:

100 YEAR FREQUENCY

DRAINAGE AREA ——— 15.4 SQ. MI.
Q_{100} ——— 2,700 C.F.S.
VELOCITY ——— 11.19 F.P.S.
WATERWAY AREA ——— 241 SQ. FT.
HIGH WATER$_{100}$ ELEVATION ——— 1108.55
ROADWAY OVERFLOW DESIGN FREQUENCY ——— N/A
SCOUR CRITICAL CODE ——— 5
Q_2 HIGH WATER ELEVATION (600 C.F.S.) ——— 1105.19

LIST OF DRAWINGS

WISCONSIN
DANIEL H. WAGNER
E-19220
BARABOO, WI
PROFESSIONAL ENGINEER
2-27-2015

CONSULTANT DESIGN CONTACT:
DANIEL WAGNER
(608) 355-8952

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

NO.	DATE	REVISION	BY

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher NK 07/01/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-54-0117

CTH F OVER SOFT MAPLE CREEK

COUNTY	TOWN ~~CITY/VILLAGE~~
RUSK	STUBBS

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

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

GENERAL PLAN

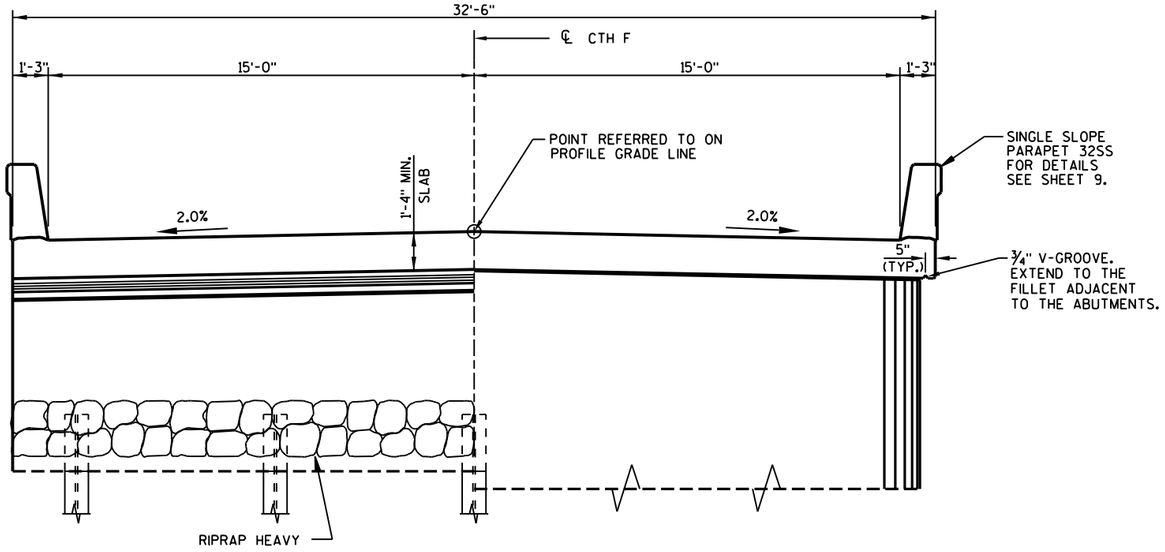
SHEET 1 OF 11
32

FILE= 6747008_01.DGN
DATE= 2/26/2015

6/47008_01.dgn 2/26/2015 9:58:14 AM bhalley

STATE PROJECT NUMBER

8797-00-71



AT ABUTMENTS AT PIER

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 SIGNIFIES THE BAR SIZE.

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

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

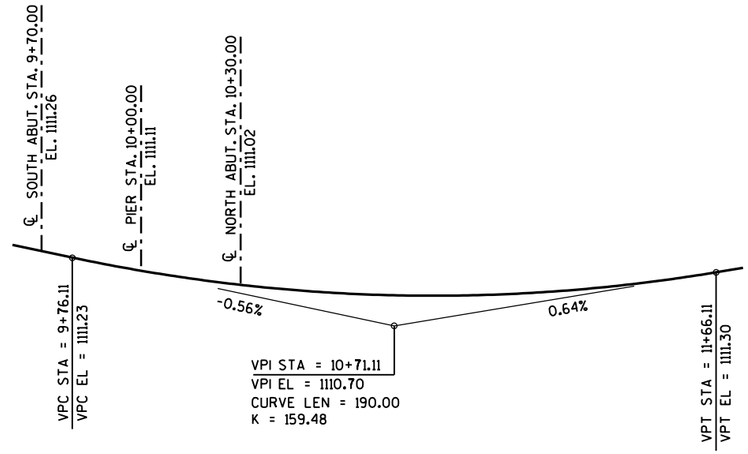
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THIS STRUCTURE WILL REPLACE EXISTING BRIDGE, B-54-0188, A 54.4 FT. LONG, THREE SPAN, STEEL DECK GIRDER BRIDGE ON TIMBER PILE/TIMBER BACKED ABUTMENTS AND TIMBER PILE BENT PIERS.

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

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO WEYERHAUSER GPS BENCHMARK NAVD 88 DATUM, ELEV. 1210.86.



PROFILE GRADE LINE - CTH F

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUT.	PIER 1	NORTH ABUT.	SUPER	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURE BRIDGES (B-54-0117)	LS	-	-	-	-	1
210.0100	BACKFILL STRUCTURE	CY	130	-	130	-	260
502.0100	CONCRETE MASONRY BRIDGES	CY	33	31	33	120	217
502.3200	PROTECTIVE SURFACE TREATMENT	SY	17	-	17	260	294
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	2330	1490	2330	-	6150
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1460	60	1460	23245	26225
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6.5	-	6.5	-	13
550.1100	PILING STEEL HP (10-INCH X 42 LB)	LF	490	350	560	-	1400
606.0300	RIPRAP HEAVY	CY	75	-	65	-	140
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	85	-	85	-	170
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	-	-	4	4
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	145	-	120	-	265
	NON-BID ITEMS						
	PREFORMED FILLER	SIZE					½" & ¾"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-0117

DRAWN BY RLR | PLANS CK'D. JRS

CROSS SECTION, QUANTITIES & NOTES

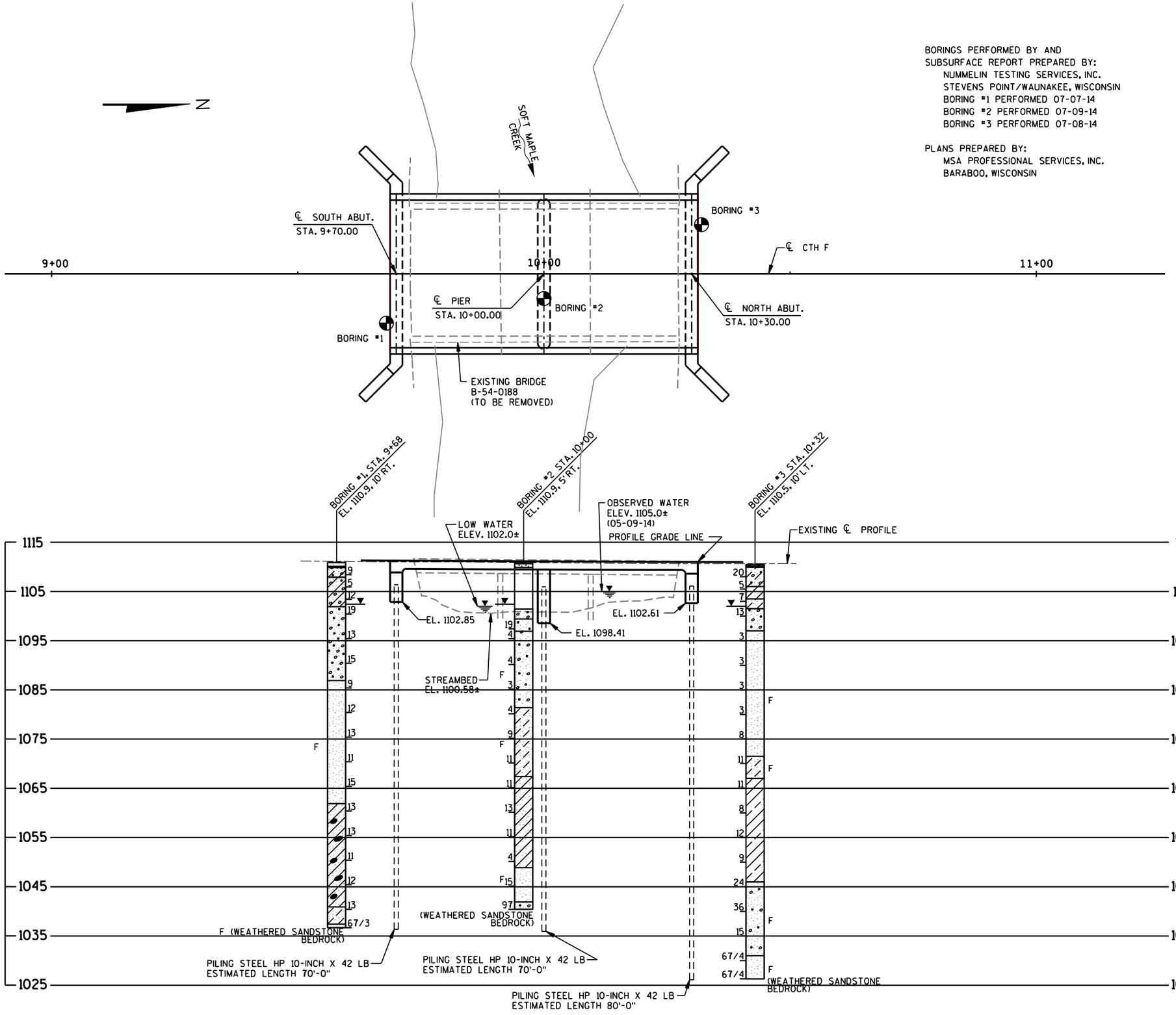
SHEET 2 OF 11
33

FILE= 6747008_02.DGN
DATE= 2/27/2015

6747008_02.dgn 2/27/2015 9:26:35 AM bhalley

BORINGS PERFORMED BY AND
SUBSURFACE REPORT PREPARED BY:
NUMMELIN TESTING SERVICES, INC.
STEVENS POINT/WAUNAKEE, WISCONSIN
BORING #1 PERFORMED 07-07-14
BORING #2 PERFORMED 07-09-14
BORING #3 PERFORMED 07-08-14

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



STATE PROJECT NUMBER

8797-00-71

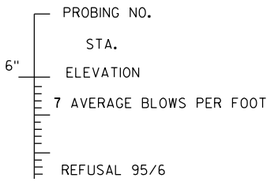
ABBREVIATIONS

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

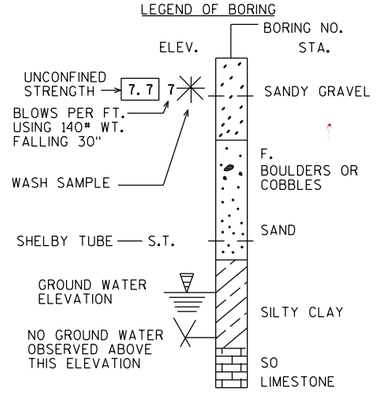
MATERIAL SYMBOLS

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

LEGEND OF PROBING



LEGEND OF BORING



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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-0117

DRAWN BY RLR | PLANS CK'D. JRS

SUBSURFACE EXPLORATION

SHEET 3 OF 11
34

8

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FILE=6747008_03.dgn
DATE=2/26/2015

STATE PROJECT NUMBER

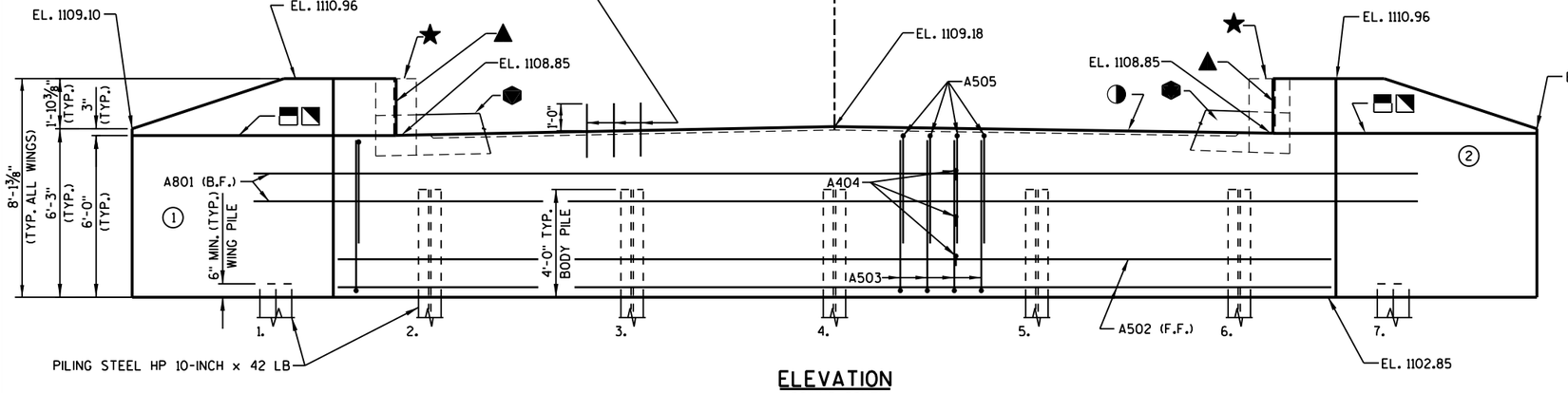
8797-00-71

A506 BARS @ 1'-0" CENTERS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

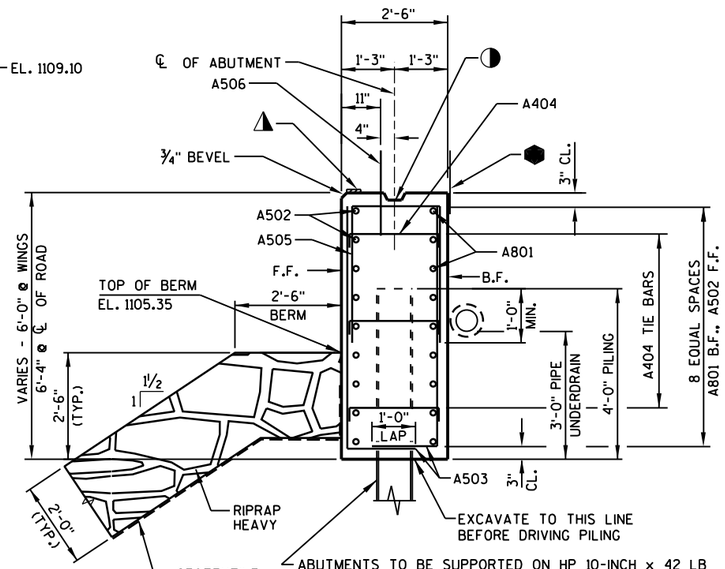
℄ CTH F
@ ℄ OF ABUT.

NOTE:

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

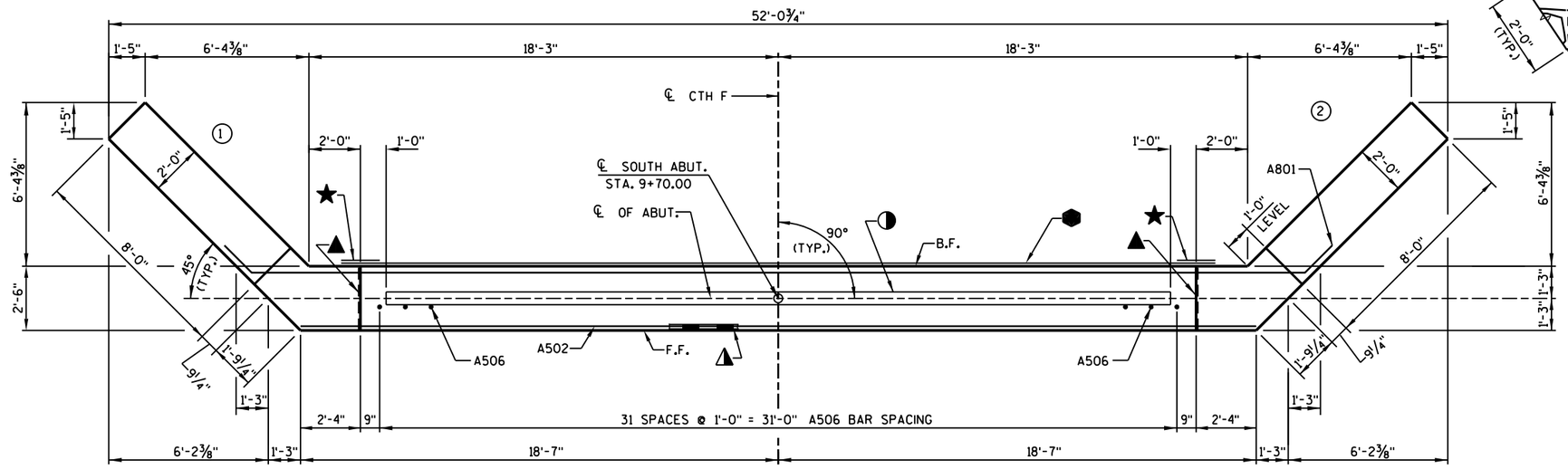


ELEVATION
(LOOKING SOUTH)



ABUTMENTS TO BE SUPPORTED ON HP 10-INCH x 42 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 70'-0" LONG. SEE PILE SPLICE DETAIL, SHEET 5.

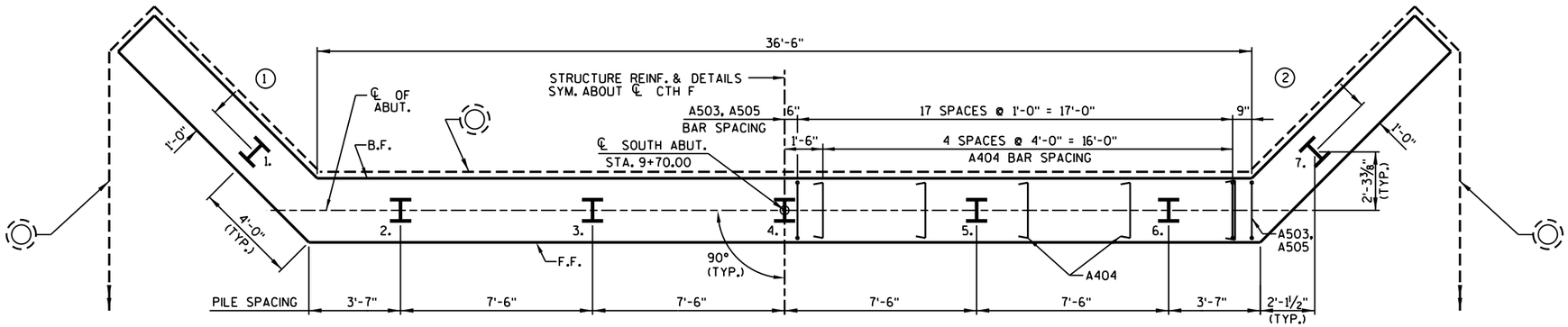
TYPICAL SECTION THRU ABUTMENT



PLAN

LEGEND

- ◑ — 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, POUR CONCRETE ABOVE JOINT AFTER DECK IS IN PLACE AND PLACE ⬢ ON B.F. OF WING. COST OF ⬢ INCLUDED IN BID ITEM "CONCRETE MASONRY BRIDGES".
- ◹ — ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQUIRED ONLY WHERE CONST. JOINT IS USED.
- ◎ — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. SEE DETAIL, SHEET 7.
- ◯ — INDICATES WING NUMBER
- F.F. — FRONT FACE
- B.F. — BACK FACE
- CL. — CLEAR



PILE PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-0117

DRAWN BY RLR | PLANS CK'D. JAS

SOUTH ABUTMENT

SHEET 4 OF 11
35

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DATE= 2/26/2015

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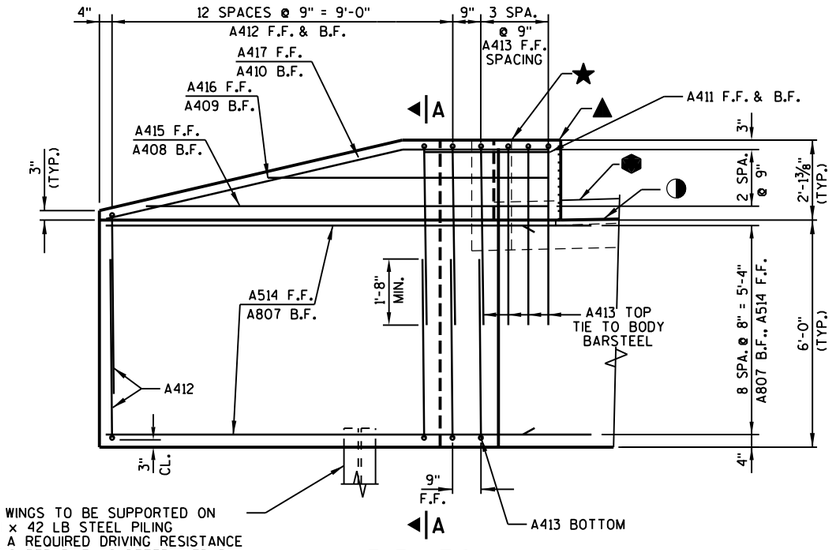
8

STATE PROJECT NUMBER

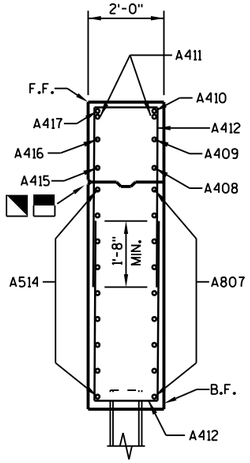
8797-00-71



ABUTMENT WINGS TO BE SUPPORTED ON HP 10-INCH x 42 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 70'-0" LONG.

ELEVATION

(LOOKING AT F.F. OF WINGS)



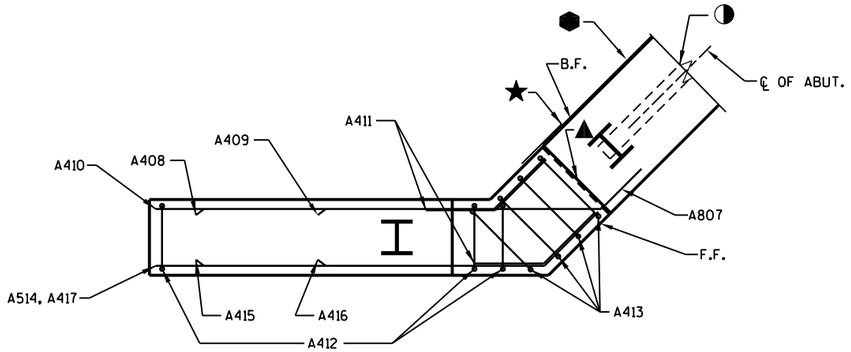
SECTION A-A THRU WING

BILL OF BARS (1 ABUTMENT)

UNCOATED 2330 LBS.
COATED 1460 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
A801	-	9	43'-8"	X	ABUT. BODY - B.F. - TRANS.
A502	-	9	37'-0"		ABUT. BODY - F.F. - TRANS.
A503	-	76	7'-0"	X	ABUT. BODY - BOTTOM - STIRRUP - VERT.
A404	-	30	2'-8"	X	ABUT. BODY - TIE - HORIZ.
A505	-	38	8'-3"	X	ABUT. BODY - TOP - STIRRUP - VERT.
A506	32	-	2'-0"		ABUT. BODY - TOP - DOWEL - VERT.
A807	18	-	13'-2"	X	WINGS - BOTTOM - B.F. - HORIZ.
A408	2	-	9'-8"	X	WINGS - TOP - B.F. - HORIZ.
A409	2	-	6'-6"	X	WINGS - TOP - B.F. - HORIZ.
A410	2	-	11'-5"	X	WINGS - TOP - B.F. - HORIZ.
A411	4	-	3'-4"	X	WINGS - TOP - F.F. & B.F. - HORIZ.
A412	52	-	11'-0"	X	WINGS - STIRRUP - F.F. & B.F. - VERT.
A413	10	-	11'-6"	X	WINGS - STIRRUP - F.F. & B.F. - VERT.
A514	18	-	11'-8"	X	WINGS - BOTTOM - F.F. - HORIZ.
A415	2	-	11'-1"	X	WINGS - TOP - F.F. - HORIZ.
A416	2	-	7'-11"	X	WINGS - TOP - F.F. - HORIZ.
A417	2	-	10'-4"	X	WINGS - TOP - F.F. - HORIZ.

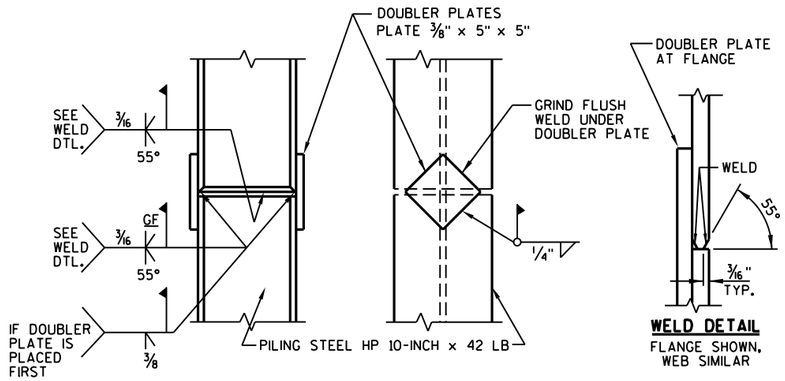
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



PLAN

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

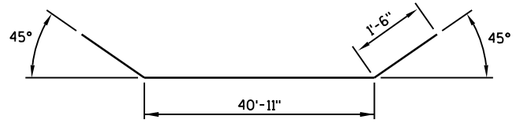
NOTE:
WING 1 SHOWN,
WING 2 SIMILAR.



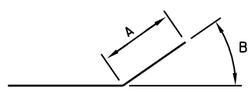
PILE SPLICE DETAILS

WELD DETAIL

FLANGE SHOWN,
WEB SIMILAR

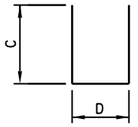


A801



MARK	A	B
A807 A514	1'-6"	45°
A408 A409 A411	1'-10"	45°
A410	3'-6"	13°
A415 A416	2'-0"	45°
A417	2'-5"	13°

A503



MARK	C	D
A404	4½"	2'-1"
A505	3'-2"	2'-2"
A412	4'-9"	1'-8"
A413	4'-9"	2'-2"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-0117

DRAWN BY RLR | PLANS CK'D. JAS

SOUTH ABUTMENT DETAILS

SHEET 5 OF 11
36

FILE= 6747008_05.DGN
DATE= 2/26/2015

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STATE PROJECT NUMBER

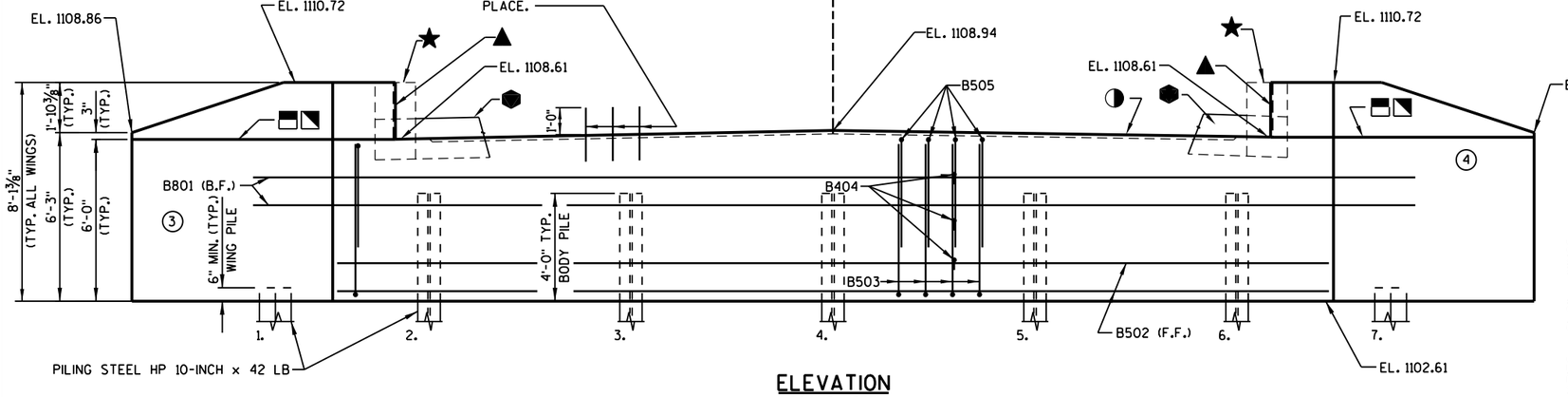
8797-00-71

B506 BARS @ 1'-0" CENTERS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

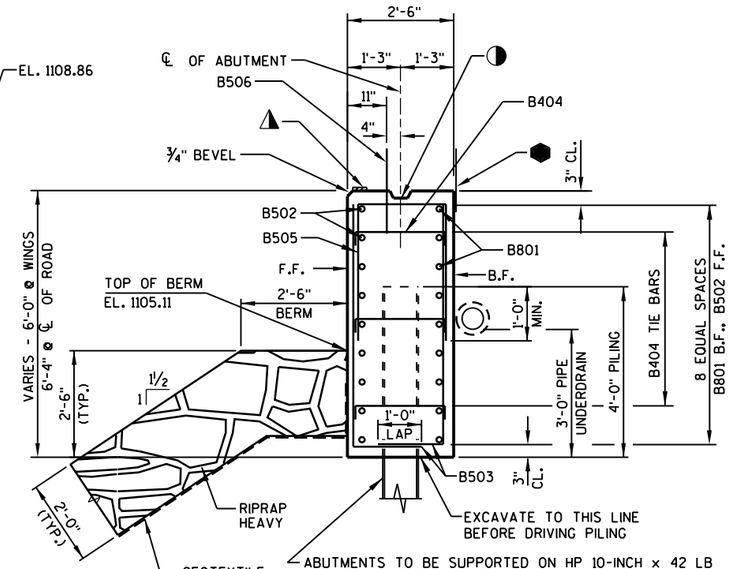
℄ CTH F
@ ℄ OF ABUT.

NOTE:

FOR WING DETAILS AND PILE SPLICE DETAILS, SEE SHEET 7.

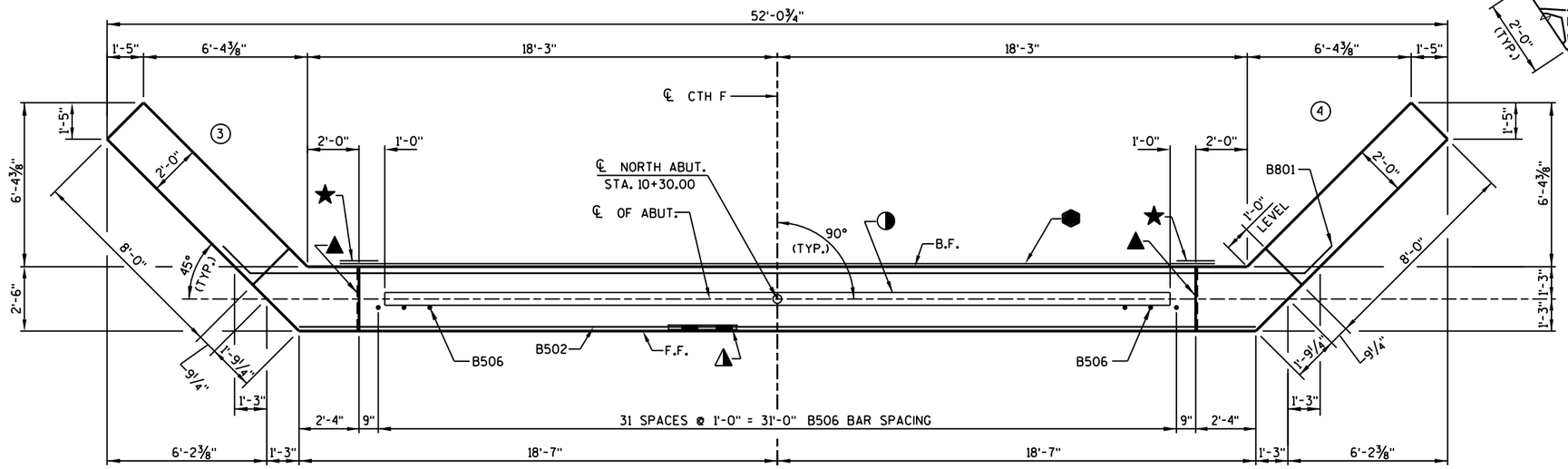


ELEVATION
(LOOKING NORTH)

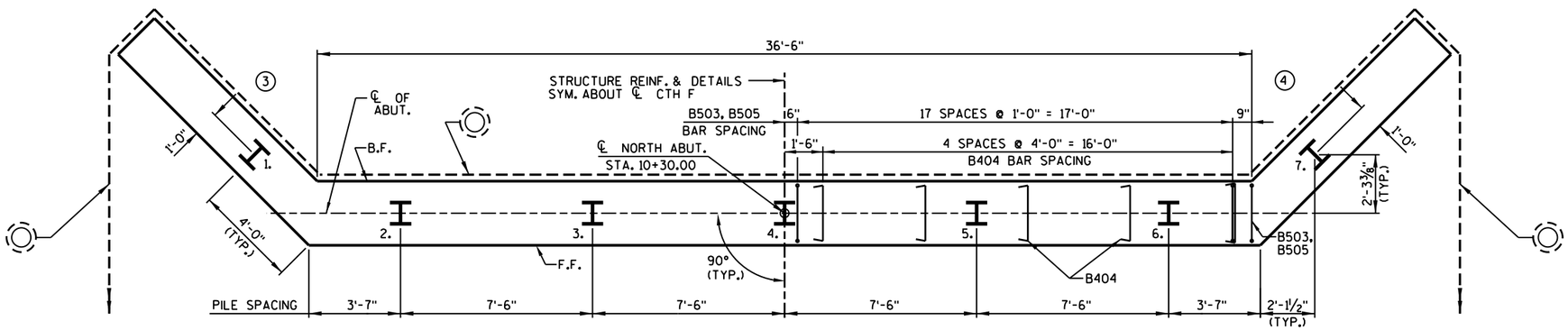


ABUTMENTS TO BE SUPPORTED ON HP 10-INCH x 42 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 80'-0" LONG. SEE PILE SPLICE DETAIL, SHEET 5.

TYPICAL SECTION THRU ABUTMENT



PLAN



PILE PLAN

LEGEND

- ◑ — 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, POUR CONCRETE ABOVE JOINT AFTER DECK IS IN PLACE AND PLACE ⬢ ON B.F. OF WING. COST OF ⬢ INCLUDED IN BID ITEM "CONCRETE MASONRY BRIDGES".
- ◹ — ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQUIRED ONLY WHERE CONST. JOINT IS USED.
- ◎ — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. SEE DETAIL, SHEET 7.
- ◯ — 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-54-0117

DRAWN BY RLR | PLANS CK'D. JAS

NORTH ABUTMENT

SHEET 6 OF 11
37

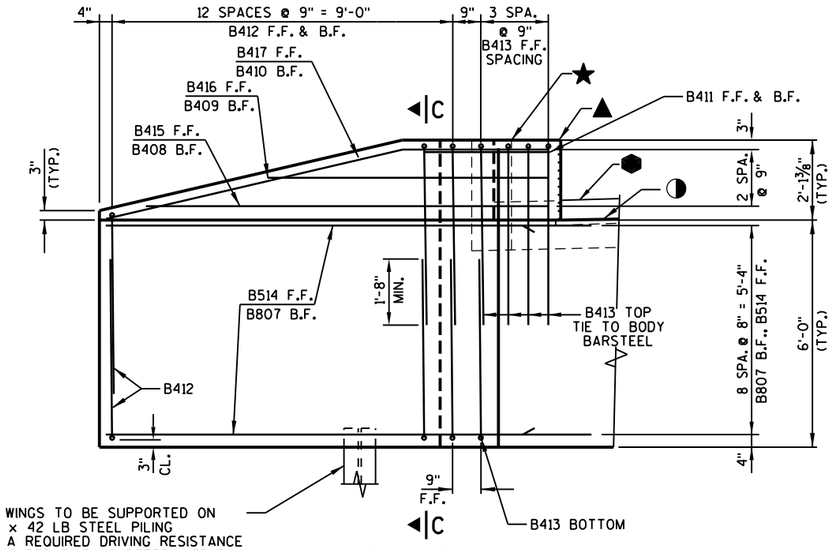
8

8

FILE= 6747008_06.DGN
DATE= 2/26/2015

STATE PROJECT NUMBER

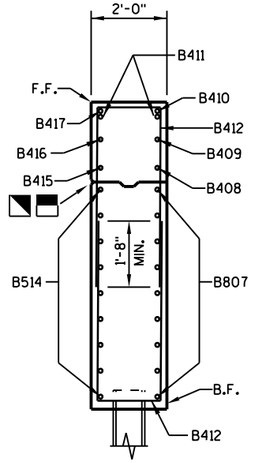
8797-00-71



ABUTMENT WINGS TO BE SUPPORTED ON HP 10-INCH x 42 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 80'-0" LONG.

ELEVATION

(LOOKING AT F.F. OF WINGS)



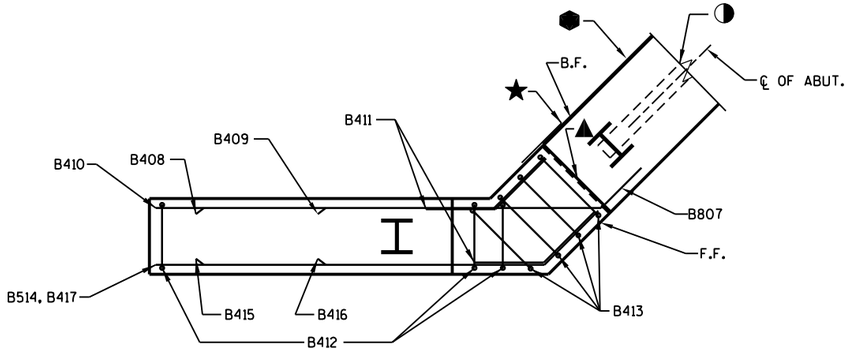
SECTION C-C THRU WING

BILL OF BARS (1 ABUTMENT)

UNCOATED 2330 LBS.
COATED 1460 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
B801	-	9	43'-8"	X	ABUT. BODY - B.F. - TRANS.
B502	-	9	37'-0"		ABUT. BODY - F.F. - TRANS.
B503	-	76	7'-0"	X	ABUT. BODY - BOTTOM - STIRRUP - VERT.
B404	-	30	2'-8"	X	ABUT. BODY - TIE - HORIZ.
B505	-	38	8'-3"	X	ABUT. BODY - TOP - STIRRUP - VERT.
B506	32	-	2'-0"		ABUT. BODY - TOP - DOWEL - VERT.
B807	18	-	13'-2"	X	WINGS - BOTTOM - B.F. - HORIZ.
B408	2	-	9'-8"	X	WINGS - TOP - B.F. - HORIZ.
B409	2	-	6'-6"	X	WINGS - TOP - B.F. - HORIZ.
B410	2	-	11'-5"	X	WINGS - TOP - B.F. - HORIZ.
B411	4	-	3'-4"	X	WINGS - TOP - F.F. & B.F. - HORIZ.
B412	52	-	11'-0"	X	WINGS - STIRRUP - F.F. & B.F. - VERT.
B413	10	-	11'-6"	X	WINGS - STIRRUP - F.F. & B.F. - VERT.
B514	18	-	11'-8"	X	WINGS - BOTTOM - F.F. - HORIZ.
B415	2	-	11'-1"	X	WINGS - TOP - F.F. - HORIZ.
B416	2	-	7'-11"	X	WINGS - TOP - F.F. - HORIZ.
B417	2	-	10'-4"	X	WINGS - TOP - F.F. - HORIZ.

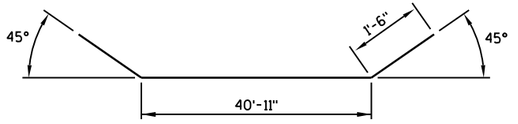
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



PLAN

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

NOTE:
WING 3 SHOWN,
WING 4 SIMILAR.



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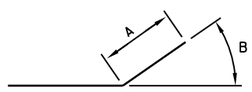
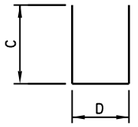


MARK	A	B
B807 B514	1'-6"	45°
B408 B409 B411	1'-10"	45°
B410	3'-6"	13°
B415 B416	2'-0"	45°
B417	2'-5"	13°

B503

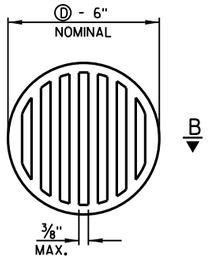


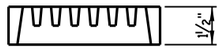
MARK	C	D
B404	4½"	2'-1"
B505	3'-2"	2'-2"
B412	4'-9"	1'-8"
B413	4'-9"	2'-2"

RODENT SHIELD NOTES:

ORIENT SHIELD SO SLOTS ARE VERTICAL.

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





SECTION B-B

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-54-0117

DRAWN BY RLR | PLANS CK'D. JAS

NORTH ABUTMENT DETAILS

SHEET 7 OF 11
38

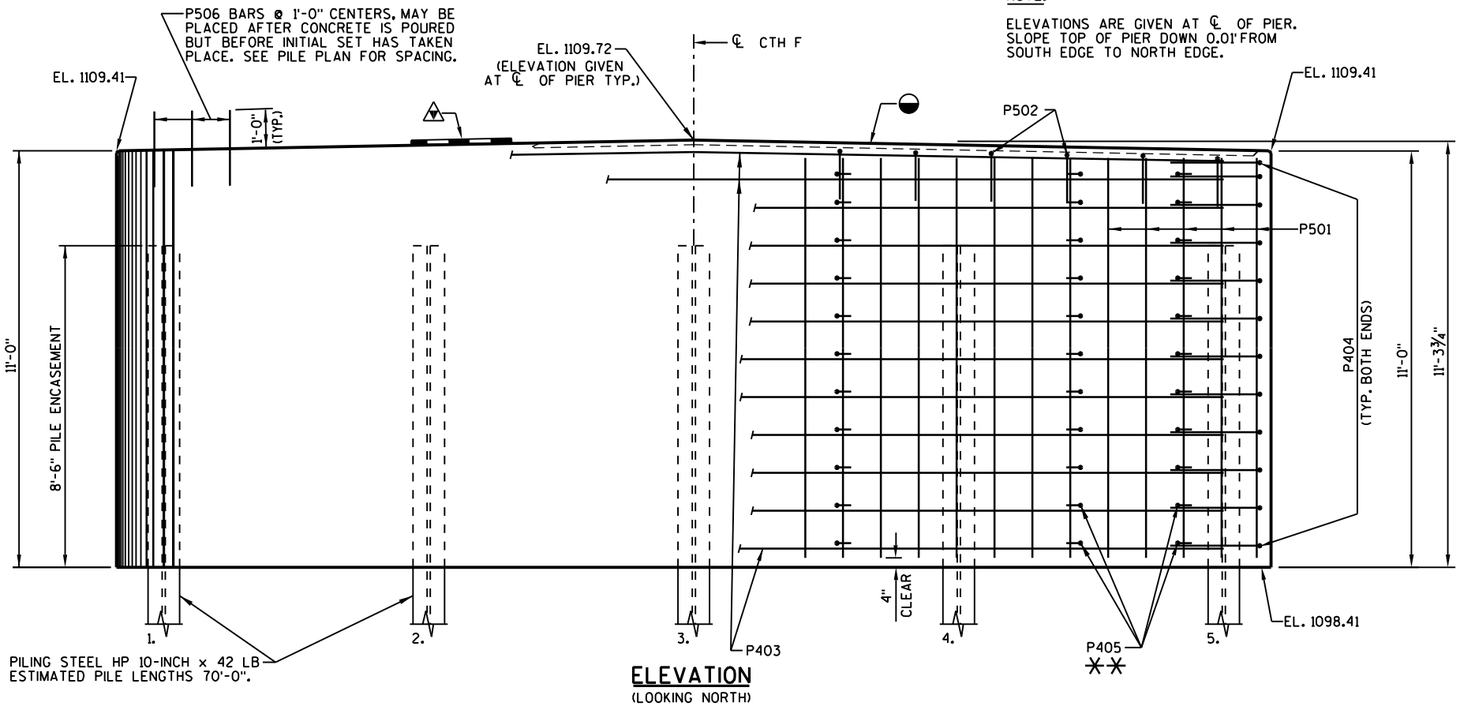
FILE= 6747008_07.DGN
DATE= 2/26/2015

6747008_07.dgn 2/26/2015 9:54:01 AM bhalley

STATE PROJECT NUMBER
8797-00-71

NOTE:

ELEVATIONS ARE GIVEN AT ℄ OF PIER. SLOPE TOP OF PIER DOWN 0.01' FROM SOUTH EDGE TO NORTH EDGE.



ELEVATION
(LOOKING NORTH)

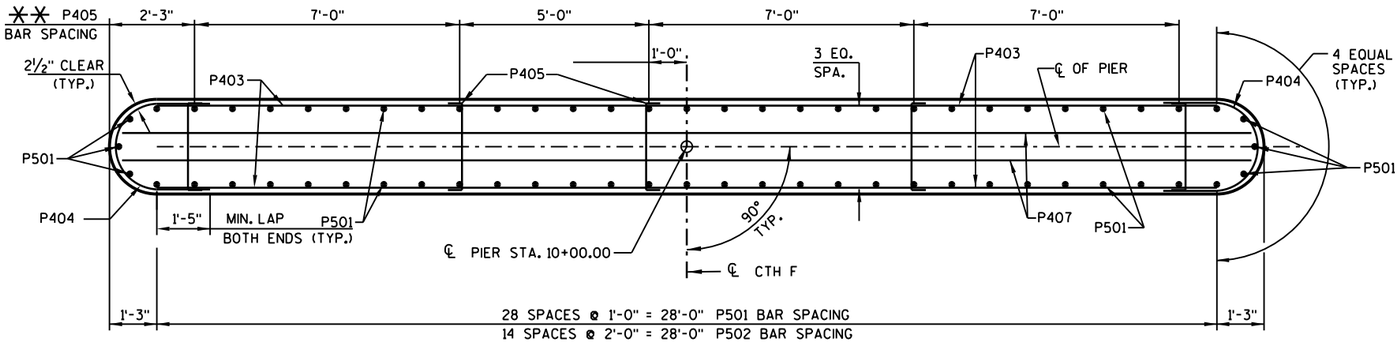
BILL OF BARS

UNCOATED 1490 LBS.
COATED 60 LBS.

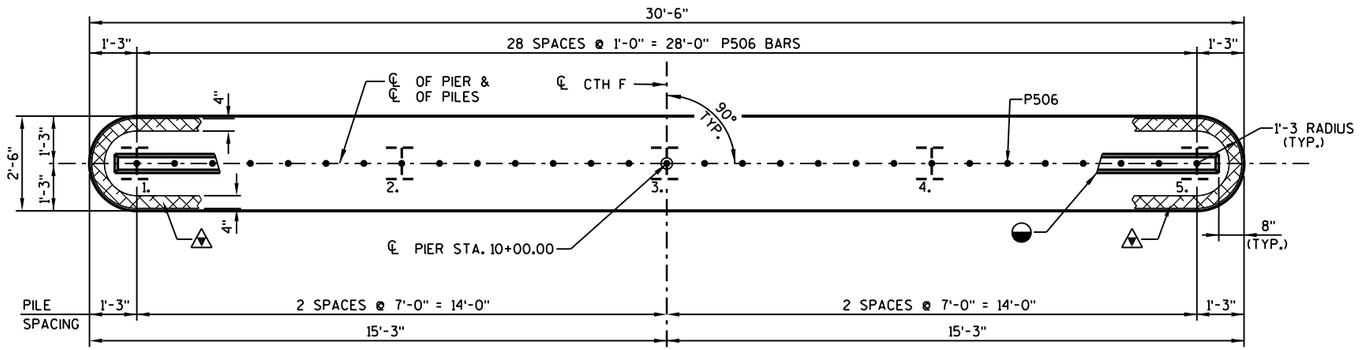
	MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
	P501	64	10'-6"		PIER SHAFT - VERT.
	P502	15	4'-5"	X	PIER SHAFT - STIRRUPS TOP - VERT.
	P403	26	28'-0"		PIER SHAFT - TOP & SIDES - HORIZ.
	P404	24	6'-1"	X	PIER SHAFT - AT ENDS - HORIZ.
	P405	55	2'-8"	X	PIER SHAFT - TIES - HORIZ.
Ⓒ	P506	29	2'-0"		PIER SHAFT - DOWELS @ TOP - VERT.
	P407	2	29'-10"		PIER SHAFT - TOP - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

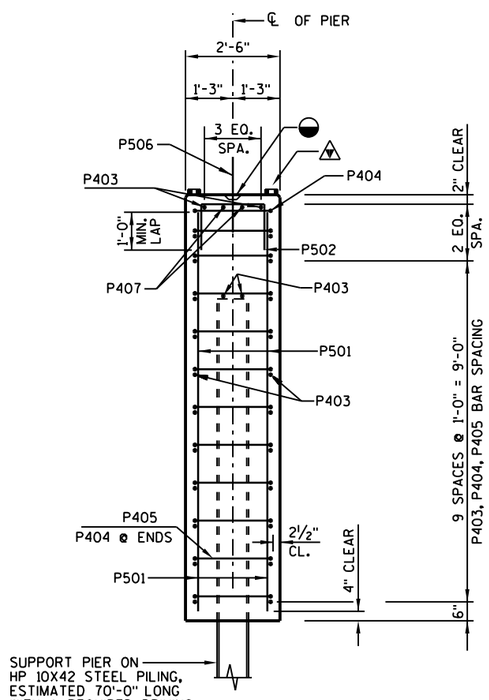
Ⓒ - THESE BARS SHALL BE EPOXY COATED.



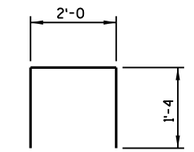
PLAN



PILE PLAN

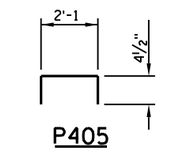


TYPICAL SECTION THRU PIER



P502

P404



P405

LEGEND

- 4"x 3/4" FILLER, TYPICAL ALL AROUND TOP EDGES OF PIER.
- 2"x 6" BEVELED KEYWAY.
** - ADJACENT TO EACH PILE ONE SIDE ONLY.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-0117

DRAWN BY	RLR	PLANS CK'D.	JAS

PIER

SHEET 8 OF 11
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FILE= 6747008_08.DGN
DATE= 2/26/2015

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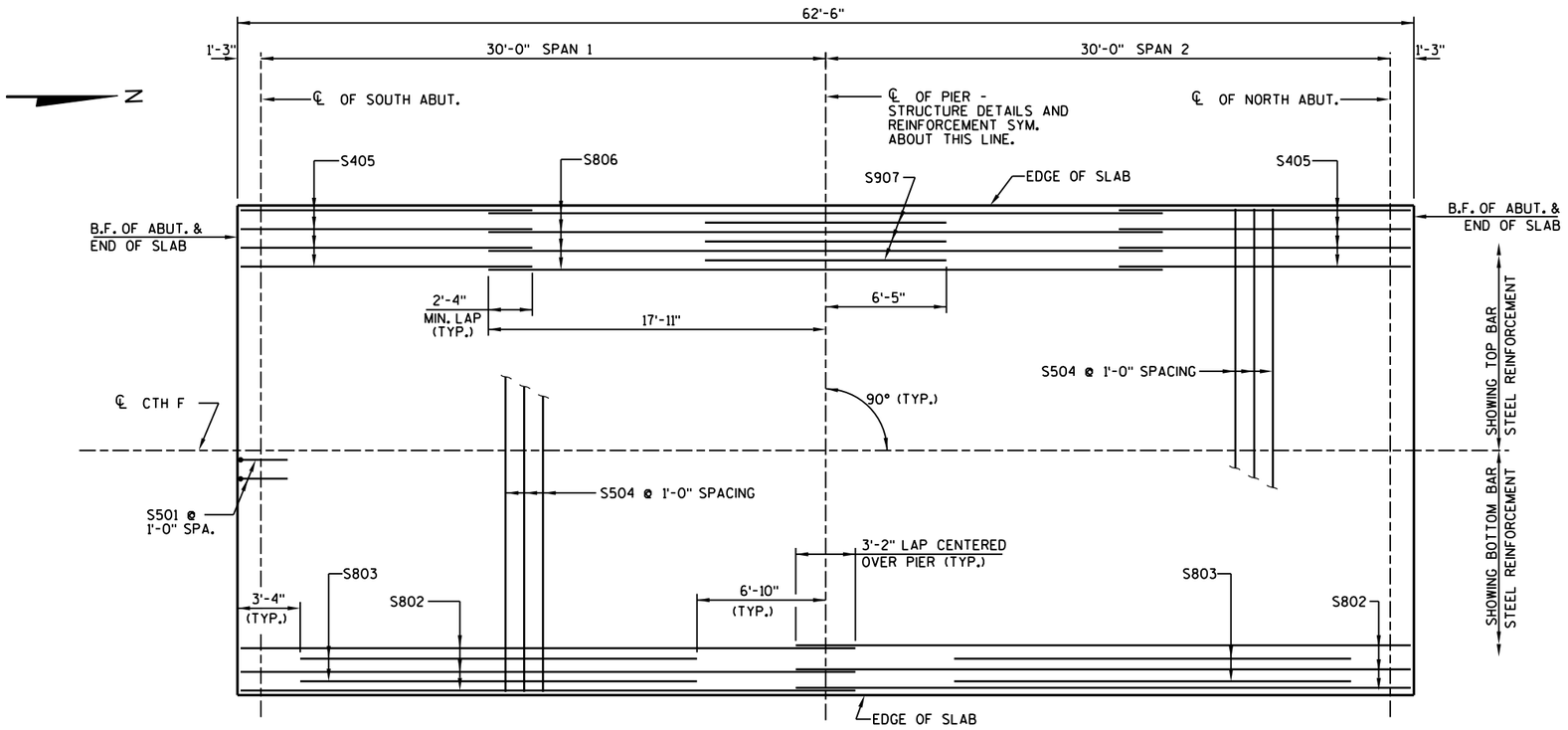
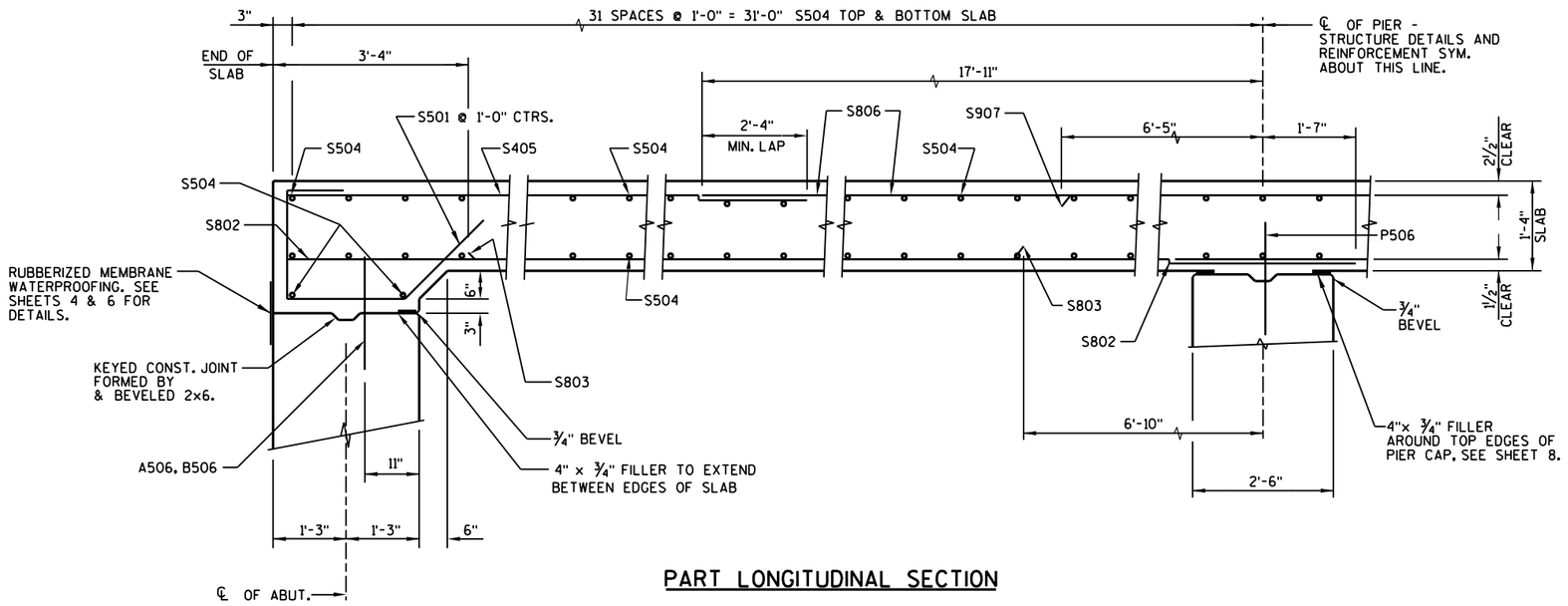
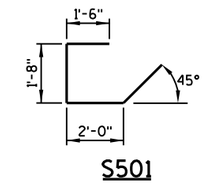
8797-00-71



PLAN
(TWO SPAN FLAT CONCRETE SLAB)



PART LONGITUDINAL SECTION



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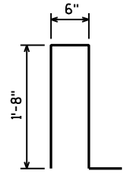

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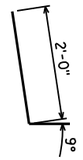

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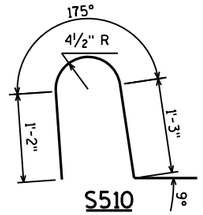

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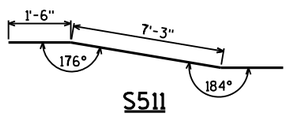

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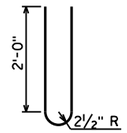

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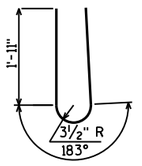

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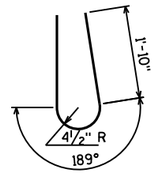

S515

BILL OF BARS (COATED) 23,245 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	70	6'-6"	X	DIAPHRAGM @ ABUTS. - LONGIT.
S802	70	32'-8"		SLAB BOTTOM - LONGIT.
S803	68	21'-1"		SLAB BOTTOM - IN SPAN - LONGIT.
S504	130	32'-2"		SLAB TOP & BOTTOM - TRANS.
S405	70	15'-6"		SLAB TOP - @ ABUT. - LONGIT.
S806	35	35'-10"		SLAB TOP - IN SPAN AND OVER PIER - LONGIT.
S907	34	12'-10"		SLAB TOP - OVER PIER - LONGIT.
S508	68	4'-4"	X	SLAB & PARAPET END - STIRRUP - VERT.
S509	48	2'-9"	X	SLAB & PARAPET END - VERT.
S510	136	4'-5"	X	SLAB & PARAPET - STIRRUP - VERT.
S511	4	32'-0"	X	PARAPET - LONGIT.
S512	20	32'-0"		PARAPET - LONGIT.
S513	44	4'-9"	X	PARAPET END - STIRRUP - VERT.
S514	24	4'-10"	X	PARAPET END - STIRRUP - VERT.
S515	136	5'-0"	X	PARAPET - STIRRUP - VERT.

EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-0117

DRAWN BY RLR | PLANS CK'D. JAS

SUPERSTRUCTURE

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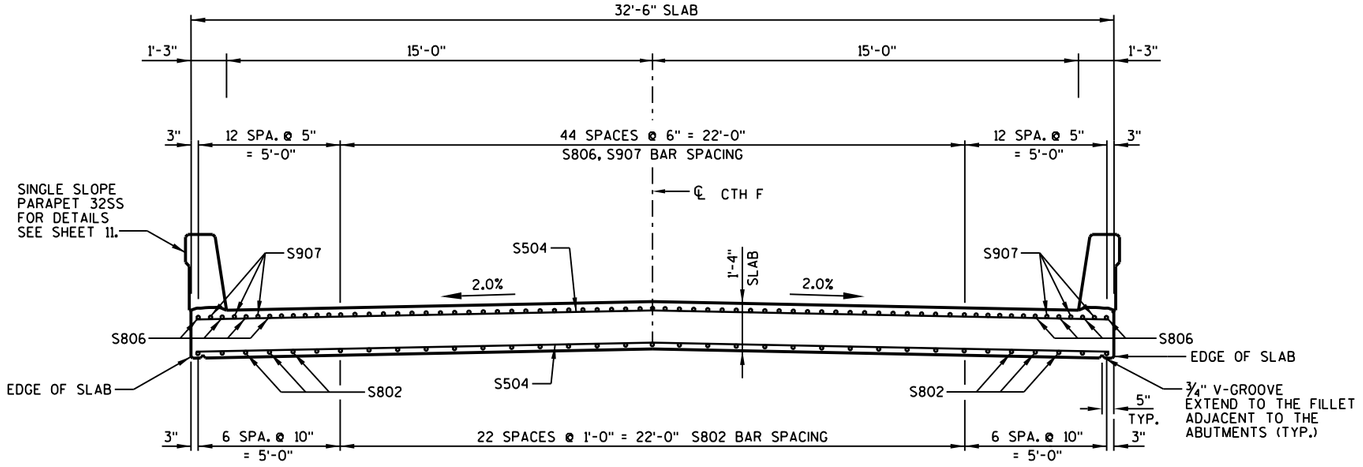
DATE= 2/26/2015

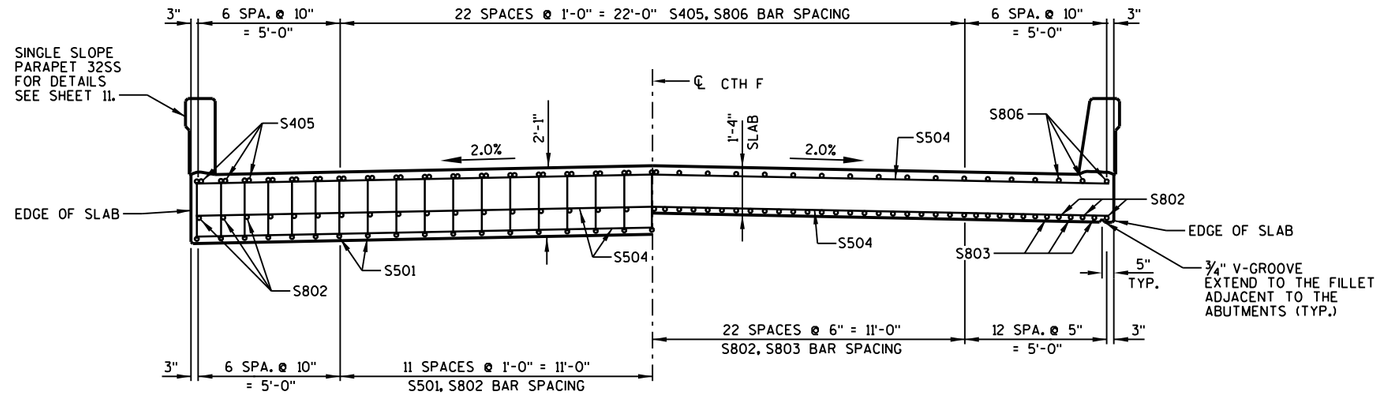
STATE PROJECT NUMBER

8797-00-71



SECTION THRU BRIDGE AT PIER

(LOOKING NORTH)



AT ABUTMENTS IN SPAN

CROSS SECTION THRU BRIDGE - SPANS 1 & 2

(LOOKING NORTH)

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.

CAMBER SPANS AS SHOWN 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.

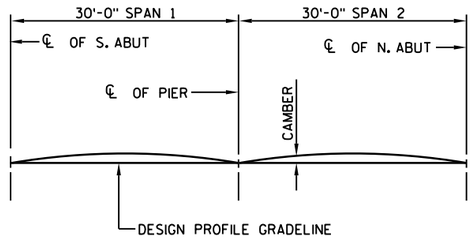
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, THE ℄ OF PIER AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGES OF SLAB AND CROWN OR ℄.

PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TOP OF SLAB ELEVATIONS AND CAMBER VALUES

LOCATION	SPAN POINT	EAST SLAB EDGE	C/L CTH F	WEST SLAB EDGE	CAMBER VALUE (INCHES)
SOUTH ABUT.	1.0	1110.96	1111.26	1110.96	0
	1.1	1110.94	1111.24	1110.94	1/8
	1.2	1110.93	1111.23	1110.93	1/4
	1.3	1110.91	1111.21	1110.91	3/8
	1.4	1110.90	1111.20	1110.90	3/8
	1.5	1110.88	1111.18	1110.88	3/8
	1.6	1110.87	1111.17	1110.87	1/4
	1.7	1110.85	1111.15	1110.85	1/4
	1.8	1110.84	1111.14	1110.84	1/8
	1.9	1110.83	1111.13	1110.83	0
PIER 1	2.0	1110.81	1111.11	1110.81	0
	2.1	1110.80	1111.10	1110.80	0
	2.2	1110.79	1111.09	1110.79	1/8
	2.3	1110.78	1111.08	1110.78	1/4
	2.4	1110.77	1111.07	1110.77	1/4
	2.5	1110.76	1111.06	1110.76	3/8
	2.6	1110.75	1111.05	1110.75	3/8
	2.7	1110.74	1111.04	1110.74	3/8
	2.8	1110.73	1111.03	1110.73	1/4
	2.9	1110.73	1111.03	1110.73	1/8
NORTH ABUT.	3.0	1110.72	1111.02	1110.72	0

NOTE:
TOP OF SLAB ELEVATION AT TRAFFIC FACE OF PARAPET MATCHES EDGE OF SLAB ELEVATION.



CAMBER DIAGRAM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-0117

DRAWN BY RLR | PLANS CK'D. JAS

SUPERSTRUCTURE SECTIONS & DETAILS

SHEET 10 OF 11
41

FILE= 6747008_10.DGN
DATE= 2/26/2015

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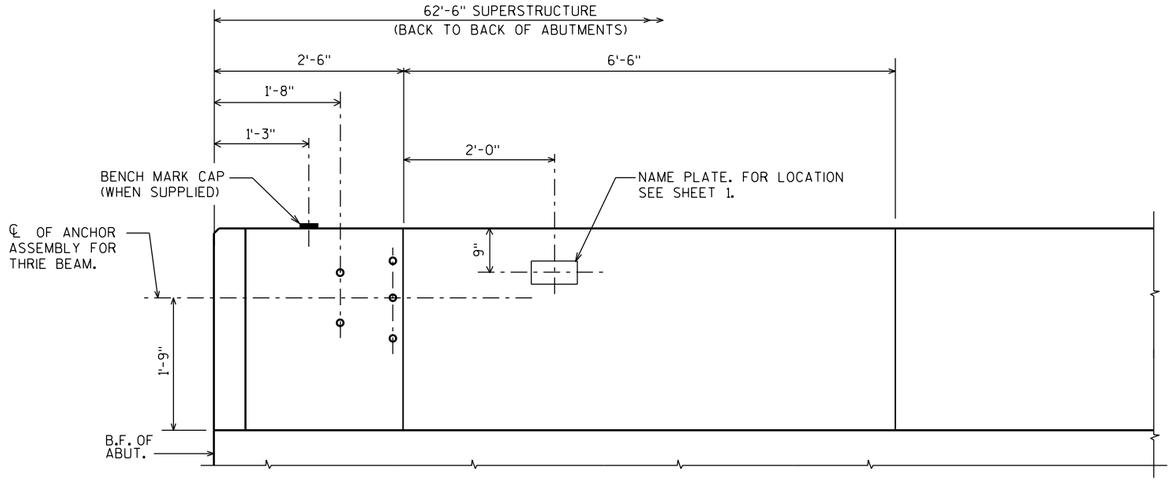
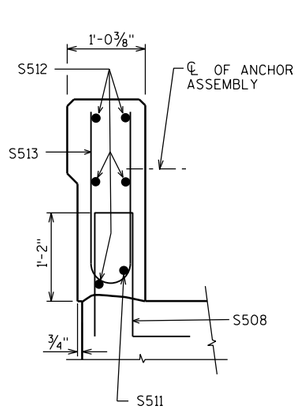
6747008_10.dgn 2/26/2015 9:56:07 AM bhalley

STATE PROJECT NUMBER

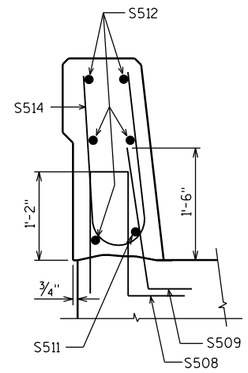
8797-00-71



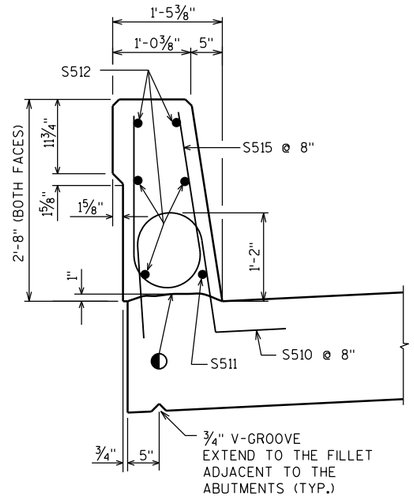
INSIDE ELEVATION



SECTION A-A
AT END OF PARAPET

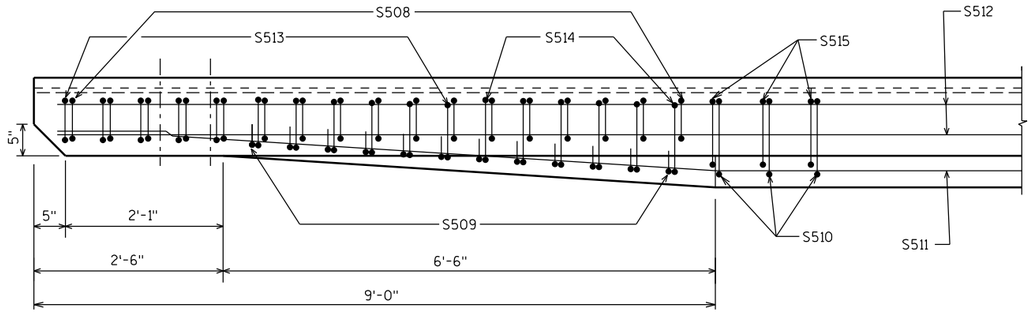


SECTION B-B
AT END OF PARAPET

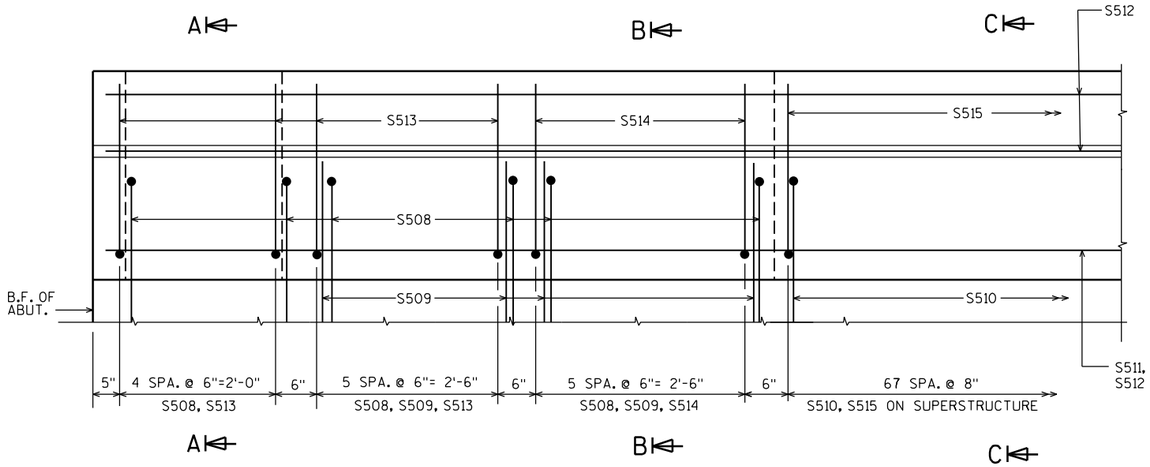


SECTION C-C THRU
PARAPET ON BRIDGE

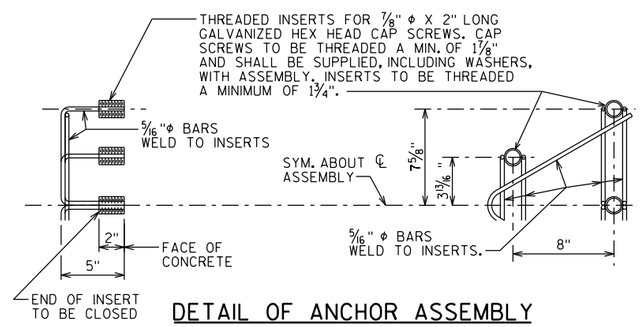
◐ CONST. JOINT - STRIKE OFF AS SHOWN.



PLAN



OUTSIDE ELEVATION



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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-0117

DRAWN BY RLR | PLANS CK'D. JAS

SINGLE SLOPE
PARAPET 32SS

SHEET 11 OF 11
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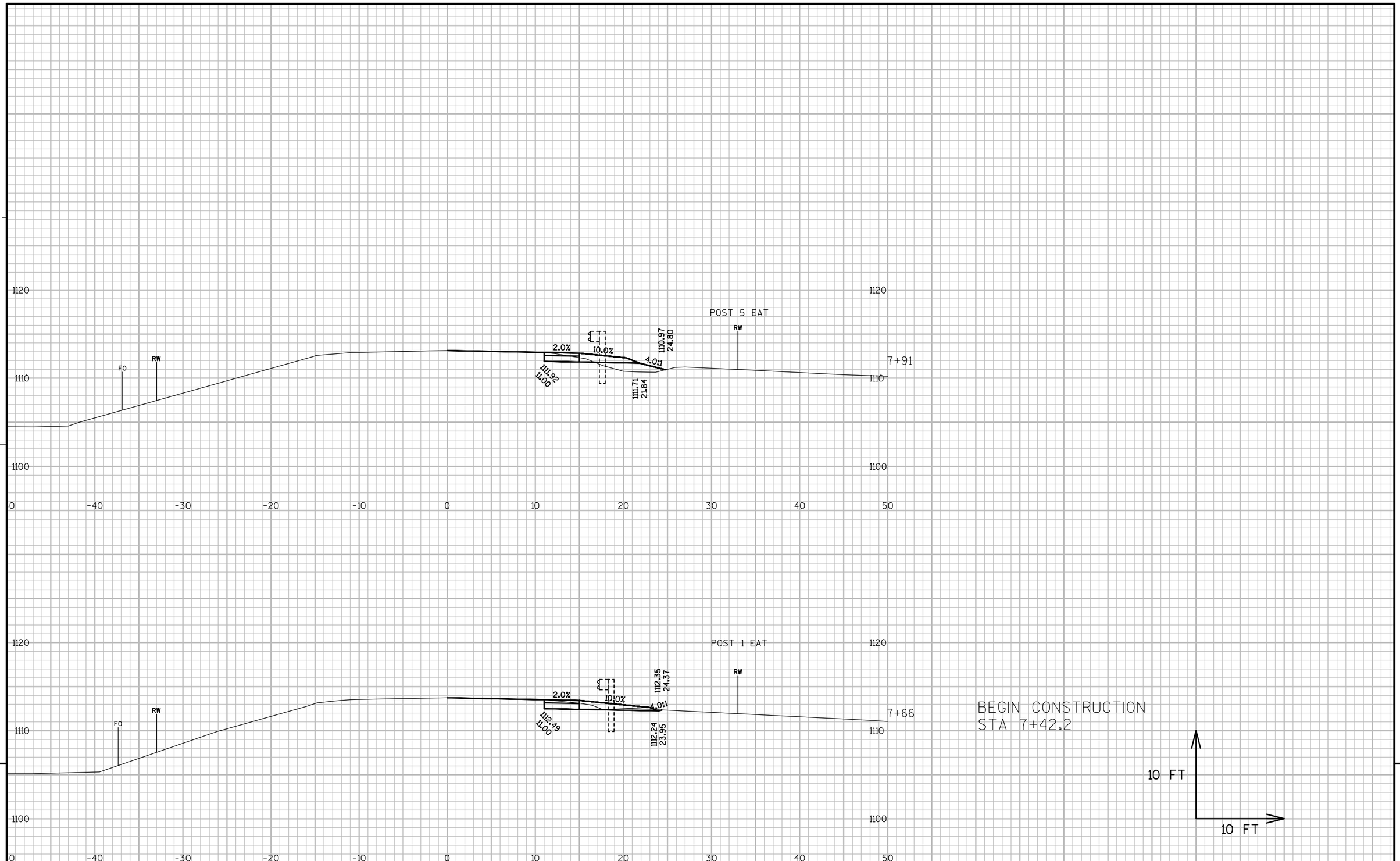
EARTHWORK									
	AREA (SF)			INCREMENTAL VOL. (CY) (UNADJUSTED)			CUMULATIVE VOL. (CY)		
STATION	CUT	SALVAGED, UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED, UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.30	MASS ORDINATE
7+42.2	5.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7+66	5.50	0.00	0.00	4.80	0.00	0.00	4.80	0.00	4.80
7+91	3.40	0.00	5.20	4.10	0.00	2.40	8.90	3.12	5.78
8+16	3.30	0.00	4.80	3.10	0.00	4.60	12.00	9.10	2.90
8+50	24.60	0.00	2.70	17.60	0.00	4.70	29.60	15.21	14.39
8+66	29.60	0.00	13.30	16.10	0.00	4.70	45.70	21.32	24.38
8+91	29.20	0.00	8.70	27.20	0.00	10.20	72.90	34.58	38.32
9+00	28.60	0.00	8.60	9.60	0.00	2.90	82.50	38.35	44.15
9+16	28.80	0.00	5.60	17.00	0.00	4.20	99.50	43.81	55.69
9+50	26.90	0.00	2.60	35.10	0.00	5.20	134.60	50.57	84.03
9+68.8	26.90	0.00	2.60	19.90	0.00	1.90	154.50	53.04	101.46
10+31.3	22.70	0.00	0.00	0.00	0.00	0.00	154.50	0.00	154.50
10+50	22.70	0.00	0.00	16.80	0.00	0.00	171.30	0.00	171.30
10+84	31.90	0.00	0.20	34.40	0.00	0.10	205.70	0.23	205.47
11+00	33.30	0.00	0.20	19.30	0.00	0.10	225.00	0.23	224.77
11+09	35.80	0.00	0.60	11.50	0.00	0.10	236.50	0.23	236.27
11+34	34.40	0.00	6.00	32.50	0.00	3.10	269.00	7.13	261.87
11+50	22.10	0.00	0.00	16.70	0.00	1.80	285.70	4.14	281.56
			COLUMN TOTAL	285.70	0.00	46.00			

NOTE: NO EBS OR MARSH EXCAVATION ANTICIPATED



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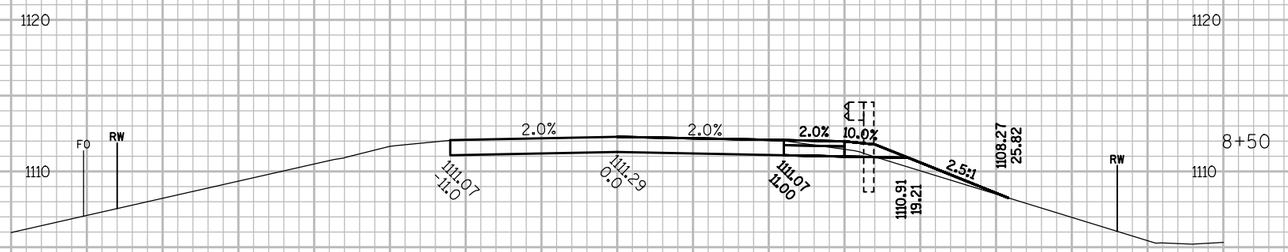
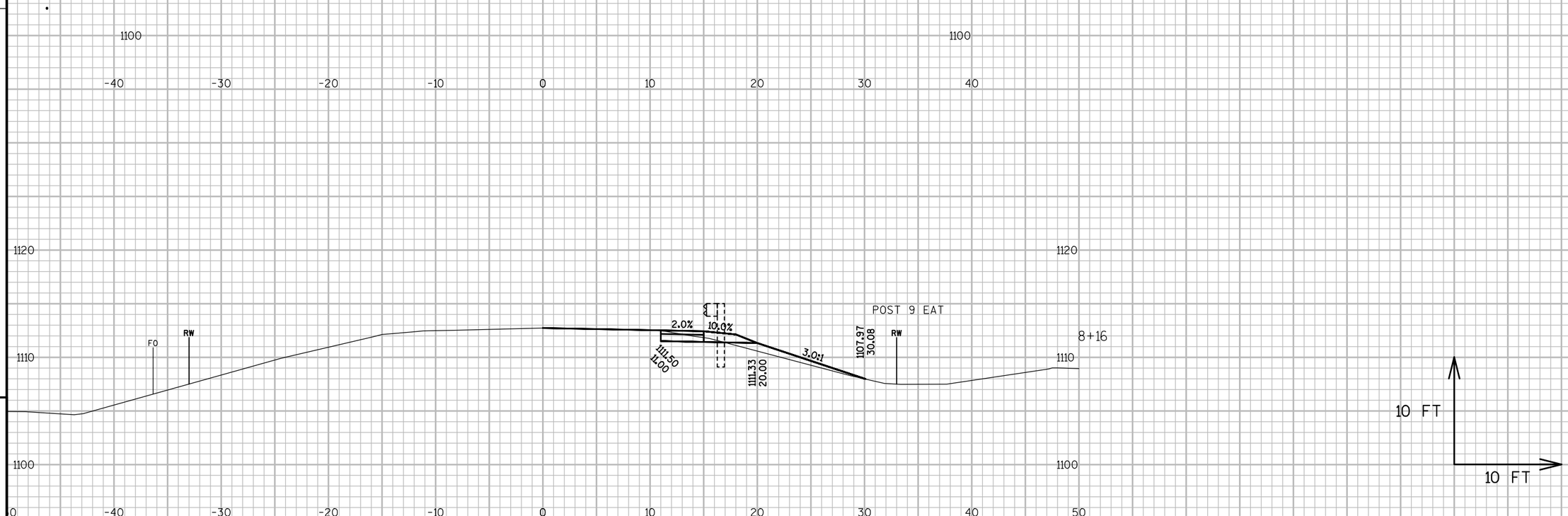
LAYOUT NAME - ALIPROFSCTHFDWG - 01

PLOT DATE : 3/30/2015 2:44 PM PLOT BY : PHIL KRIESEL PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



BEGIN PROJECT
STA 8+50



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PROJECT NO: 8797-00-71	HWY: CTH F	COUNTY: RUSK	CROSS SECTIONS:	SHEET 45	E

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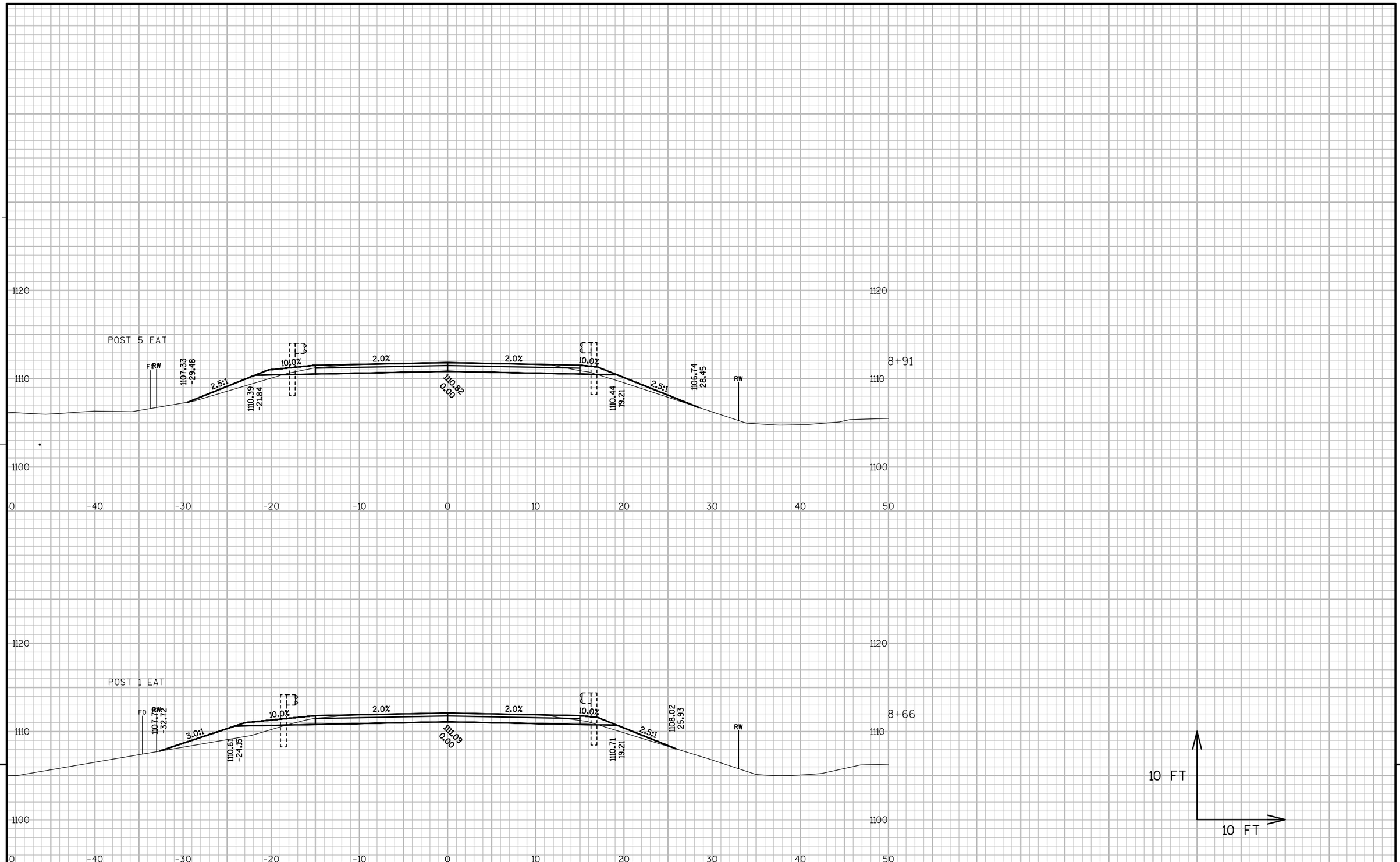
WISDOT/CADDS SHEET 49



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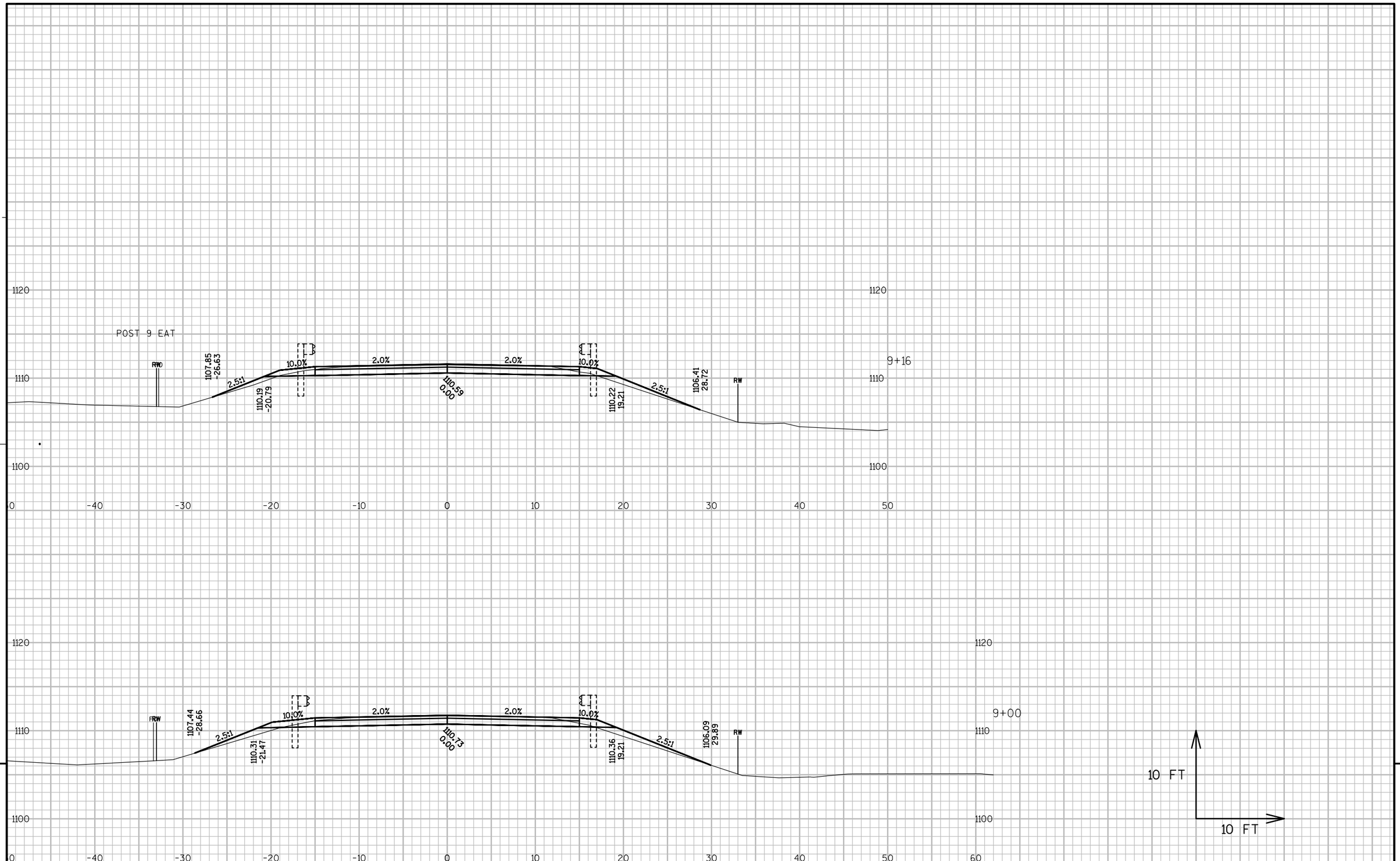

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PROJECT NO: 8797-00-71	HWY: CTH F	COUNTY: RUSK	CROSS SECTIONS:	SHEET 47	E

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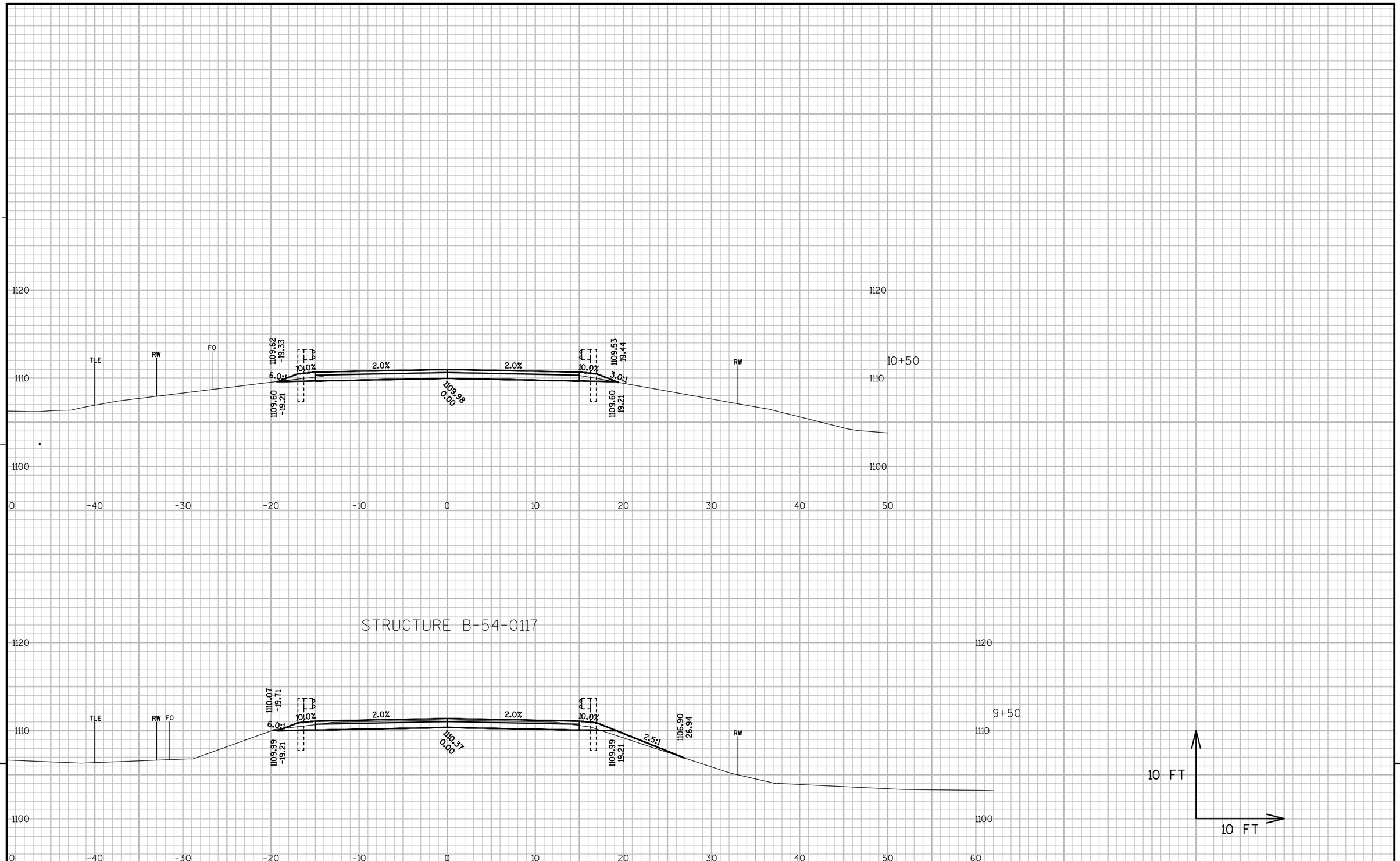

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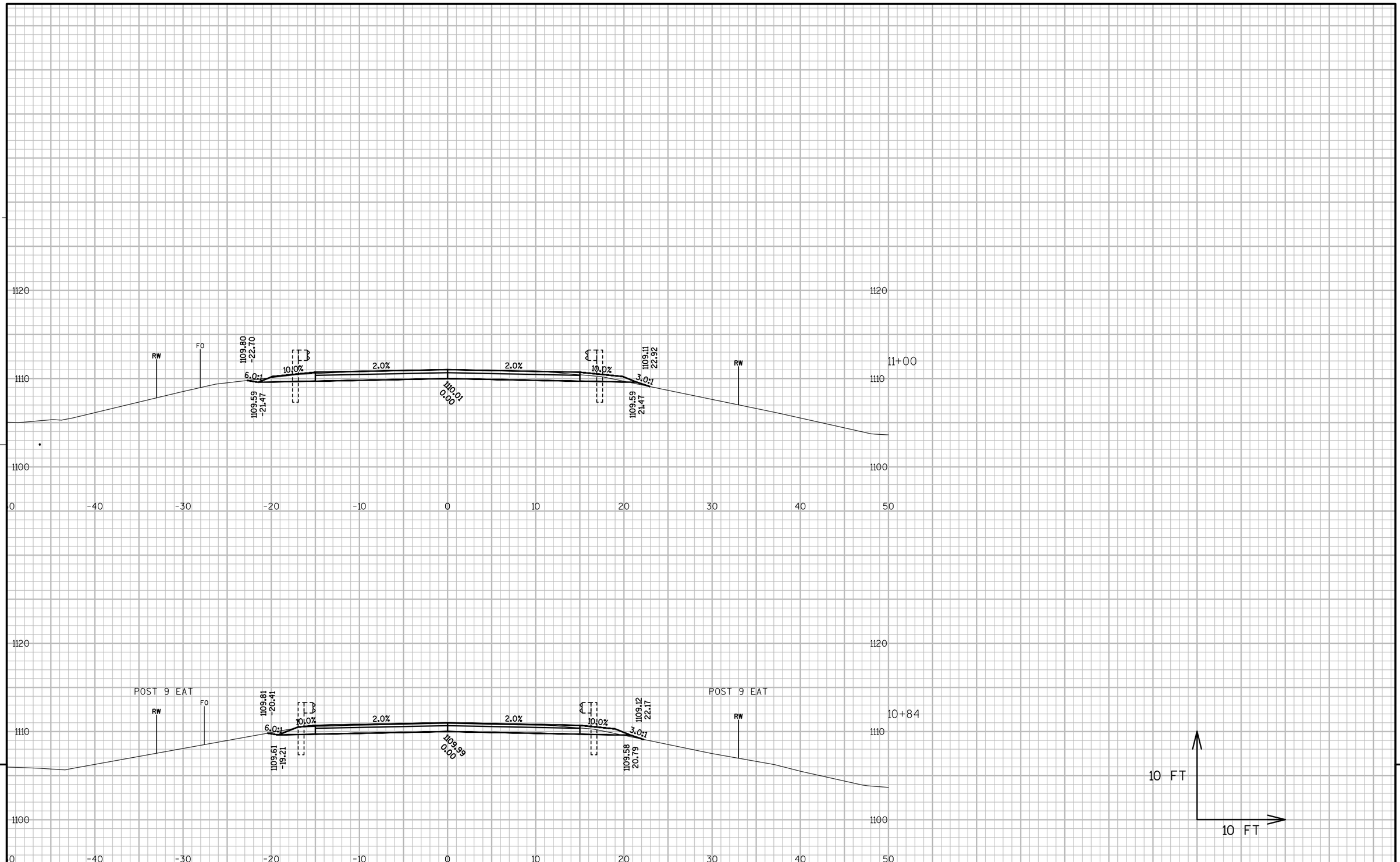
PLOT DATE : 3/30/2015 2:44 PM PLOT BY : PHIL KRIESEL PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

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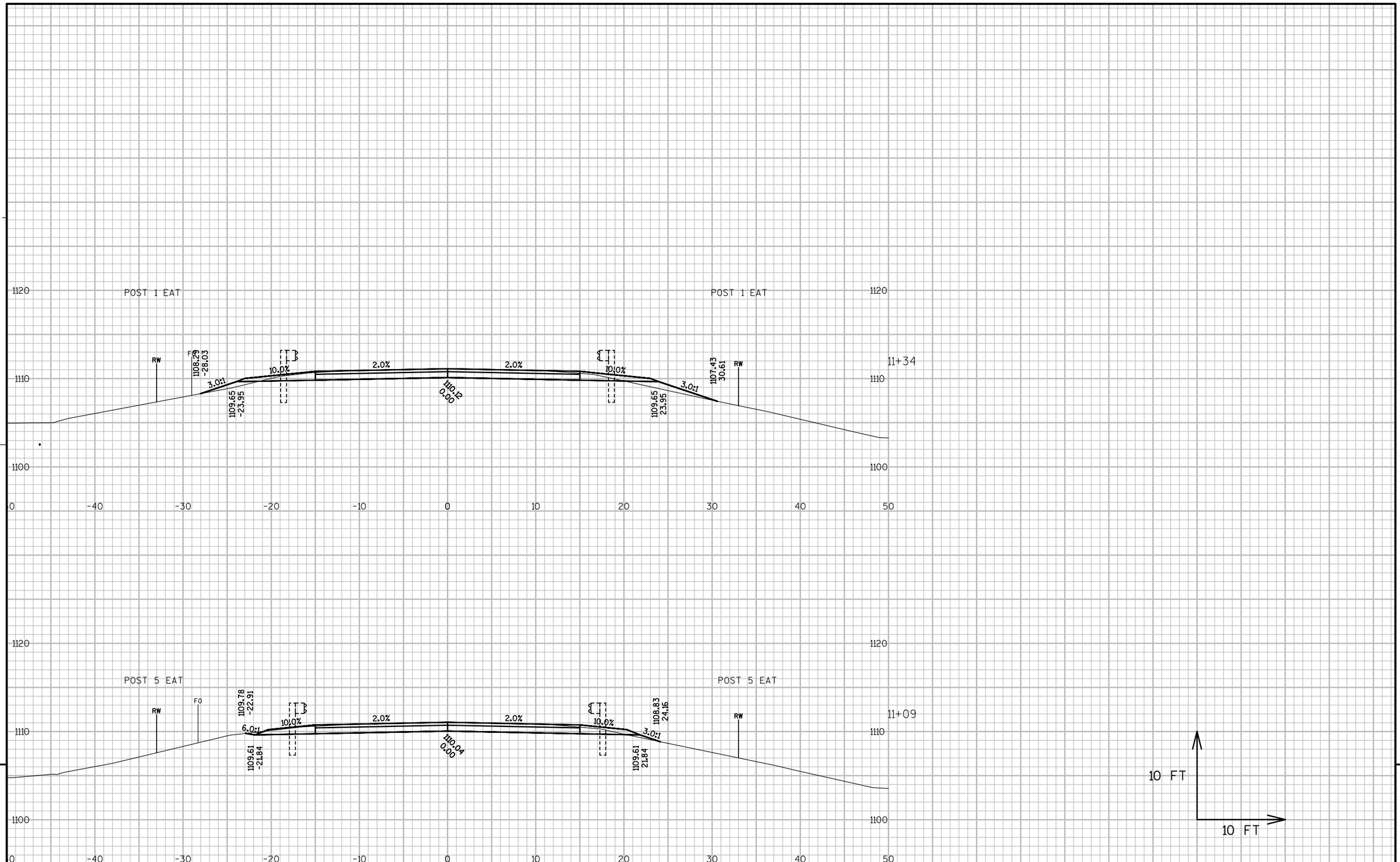
PROJECT NO: 8797-00-71	HWY: CTH F	COUNTY: RUSK	CROSS SECTIONS:	SHEET 49	E

FILE NAME : P:\6700S\6740S\6747\06747008\DESIGN\ALIGNMENTS\ALIPROFSCTHFDWG.DWG
LAYOUT NAME - ALIPROFSCTHFDWG - 06

PLOT DATE : 3/30/2015 2:44 PM PLOT BY : PHIL KRIESEL PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 8797-00-71	HWY: CTH F	COUNTY: RUSK	CROSS SECTIONS:	SHEET 50	E

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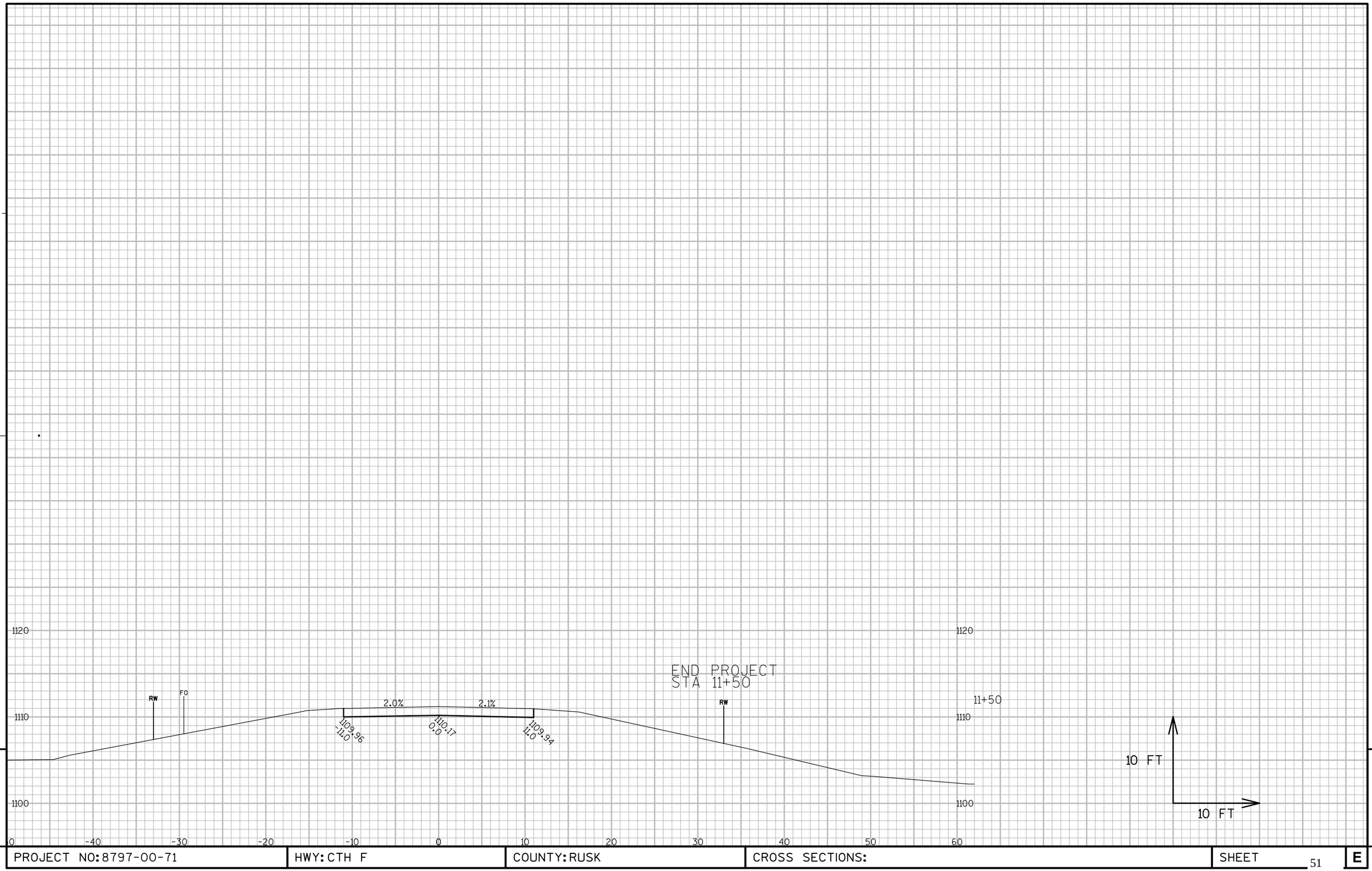
LAYOUT NAME - ALIPROFSCTHFDWG - 07

PLOT DATE : 3/30/2015 2:44 PM PLOT BY : PHIL KRIESEL PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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PROJECT NO: 8797-00-71	HWY: CTH F	COUNTY: RUSK	CROSS SECTIONS:	SHEET 51	E

FILE NAME : P:\6700S\6740S\6747\06747008\DESIGN\ALIGNMENTS\ALIPROFSCTHFDWG.DWG
LAYOUT NAME - ALIPROFSCTHFDWG - 08

PLOT DATE : 3/30/2015 2:44 PM PLOT BY : PHIL KRIESEL PLOT NAME : PLOT SCALE : 1 IN:10 FT

Wisconsin Department of Transportation

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