SUP

PROJECT ID: 8160-00-70

WITH: 8160-03-61

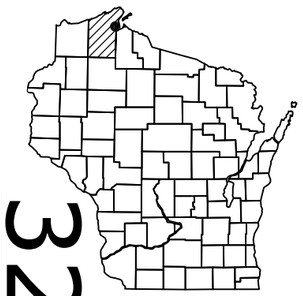
COUNTY: BAYFIELD

APRIL 2015

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right of Way Plat~~
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
~~Section No.~~	~~8~~	~~Structure Plans~~
~~Section No.~~	~~9~~	~~Computer Earthwork Data~~
Section No.	9	Cross Sections

TOTAL SHEETS = 134



32

N

DESIGN DESIGNATION

A.A.D.T.	2018	=	9050
A.A.D.T.	2028	=	10,150
D.H.V.		=	1320
D.D.		=	61/39
T.		=	13
DESIGN SPEED		=	55 MPH
ESALS		=	3,401,800

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- 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

ASHLAND - BAYFIELD

USH 2 - THOMPSON CREEK

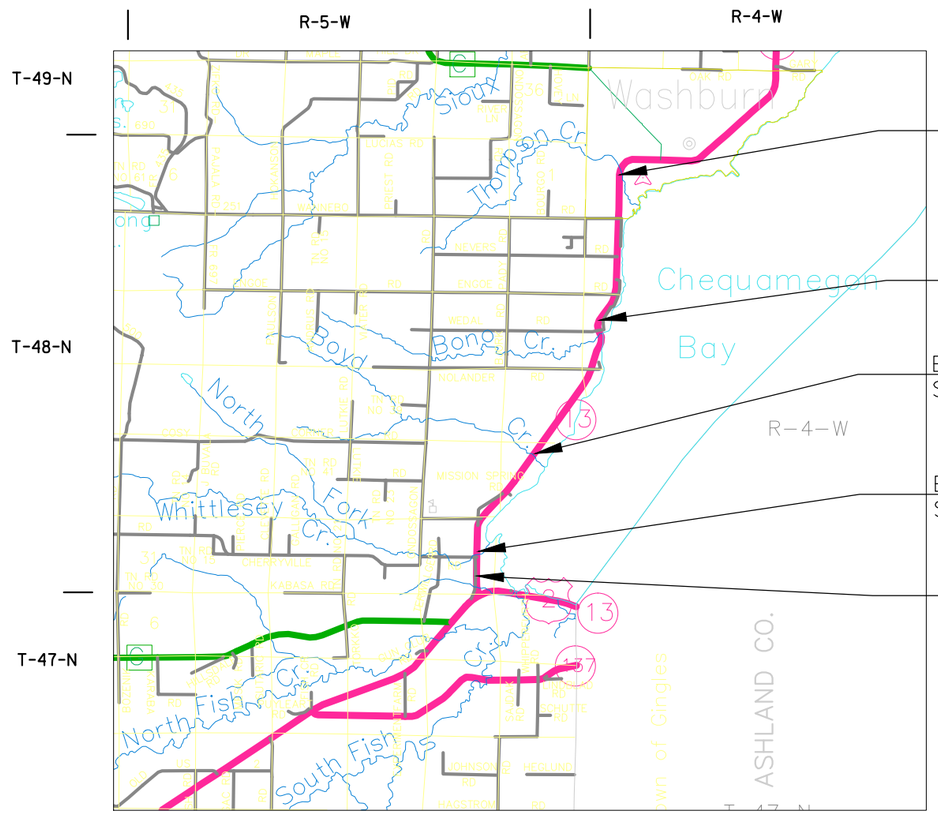
STH 13

BAYFIELD

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8160-00-70	WISC 2015198	1

STATE PROJECT NUMBER

8160-00-70



END PROJECT
STA 328+55.6

X 809337.7436
Y 487044.8352

EQ 220+94.27 BK
= 221+98.03 AHD

EXCEPTION TO NET CL LENGTH
STA 112+73 - 112+95

EXCEPTION TO NET CL LENGTH
STA 29+50 - 30+32

BEGIN PROJECT
STA 8+00

X 799716.772
Y 458000.2161

LAYOUT SCALE 0 1"=2 MI

TOTAL NET LENGTH OF CENTERLINE = 6.05 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, BAYFIELD COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NWBE
Designer	BARBARA KERBER
Project Manager	PHIL KEPPERS
Regional Examiner	DAN OJIBWAY
Regional Supervisor	DAVE OSTROWSKI

APPROVED FOR THE DEPARTMENT

DATE: 10-29-2014 Philip L Keppers (Signature)

E

GENERAL NOTES

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT FOR AREAS WITHIN FINISHED SHOULDER POINT, SHALL BE FERTILIZED SEEDED AND MULCHED.

THE LOCATION OF DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.

THE LOCATIONS OF UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA.

CULVERT LOCATIONS HAVE BEEN NOTED ON THE PLAN LAYOUT SHEETS FOR INFORMATION PURPOSES ONLY. ANY CULVERT WORK AT THESE LOCATIONS IS NOTED IN THE TIED CULVERT PROJECT, 8160-03-61.

UTILITY CONTACT INFO

Century Link
Communication Lines
PO Box 369
Minong, WI 54859
Alan Nickell
alan.nickell@centurylink.com
715-378-2131 Office
715-566-3879 Mobile

Charter Communications
Communication Lines
2304 South Main Street
Rice Lake, WI 54868
Tom Haase
tom.haase@chartercom.com
715-234-5341 Office
715-370-1601 Mobile

City of Washburn
Municipal Water & Sewer Utility
PO Box 638
119 Washington Avenue
Washburn, WI 54891-0638
Gayla Salmi, Public Works Director
715-373-6171 Office
715-292-1325 Mobile

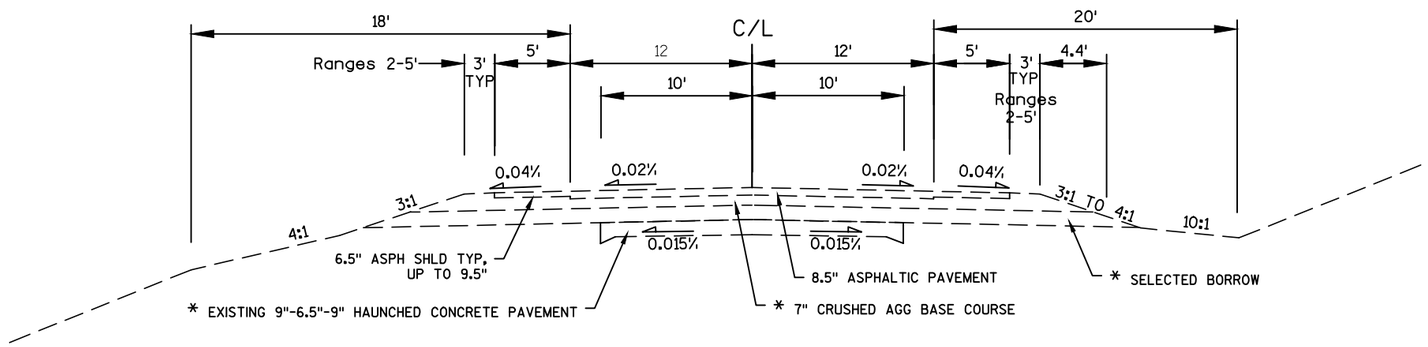
Xcel Energy
Gas/Petro; Electric; Transmission
2400 Farm Road
Ashland, WI 54806
Murray Smerer, Senior Designer
715-682-6928

Norvado
Communication Lines
43750 USH 63
PO Box 67
Cable, WI 54821
Guy Folsom, Field Engineer
gfolsom@norvado.com
715-798-7123 Office
715-580-8123 Mobile

Northern Natural Gas
Gas/Petroleum Facilities
1995 Northern Natural Gas Road
Carlton, MN 55719
Jeff Telker
Jeff.telker@nngco.com
402-530-3466 Office
218-348-3470 Mobile

WisDNR
810 West Maple Street
Spooner, WI 54801
Shawn Haseleu, Environmental Analysis and Review Specilist
shawn.haseleu@wisconsin.gov
715-635-4228

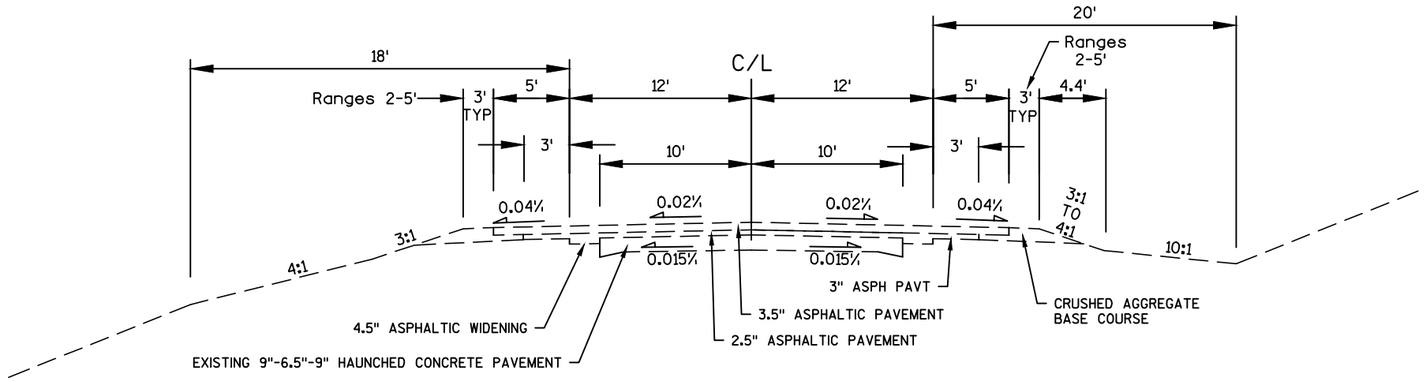
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com



STH 13 TYPICAL EXISTING SECTION

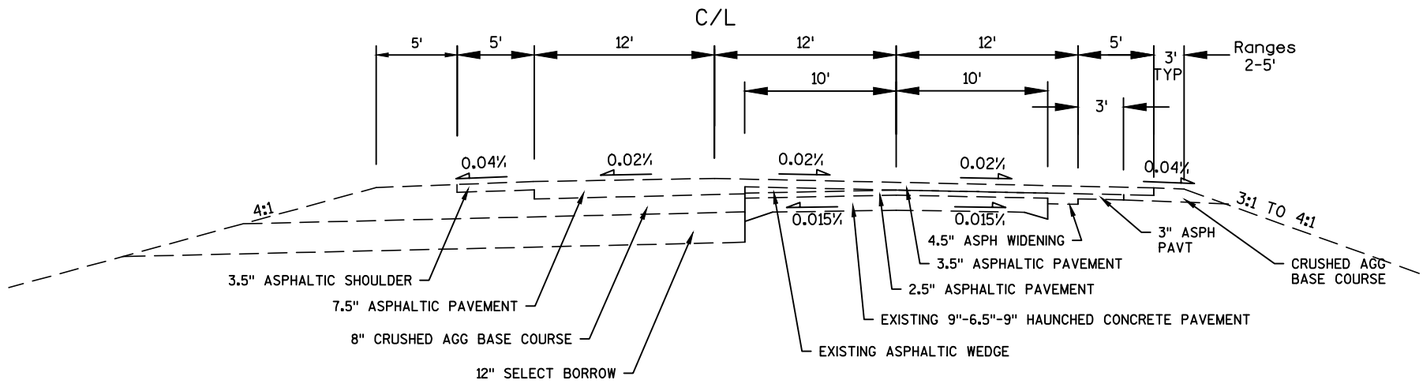
STA 8+00 TO STA 40+00
* STA 195+00 TO STA 208+30 10" CRUSHED AGG, NO SEL BOR OR CONC LAYER
* STA 216+30 TO STA 223+00 10" CRUSHED AGG, NO SEL BOR OR CONC LAYER
* STA 321+00 TO STA 328+00 10" CRUSHED AGG, NO SEL BOR OR CONC LAYER

PROJECT NO: 8160-00-70	HWY: 13	COUNTY: BAYFIELD	TYPICAL SECTIONS	SHEET 1 OF 4	SHEET 2	E



STH 13 TYPICAL EXISTING SECTION

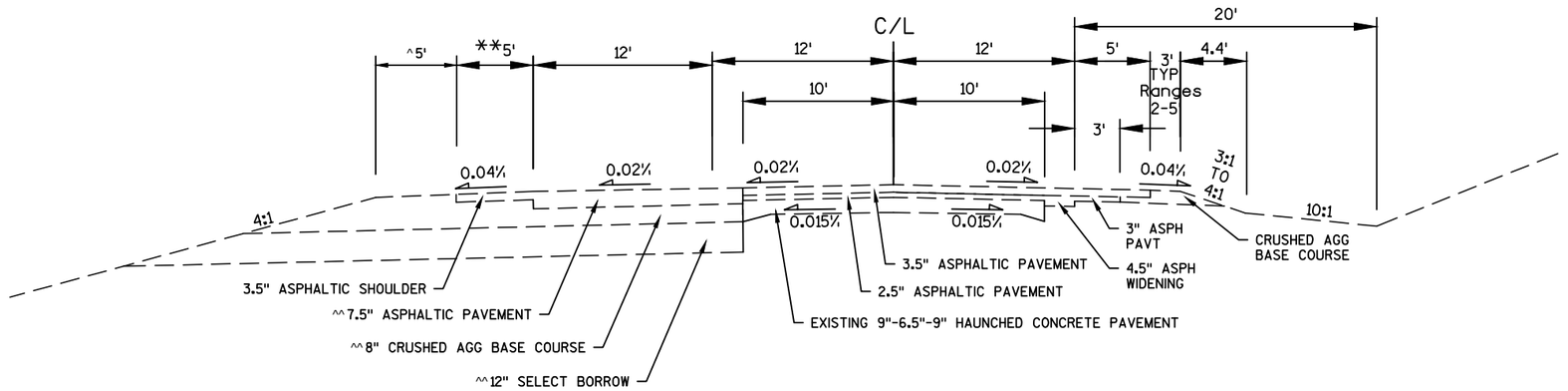
STA 40+00 TO STA 51+00
STA 60+00 TO STA 120+50
STA 182+00 TO STA 185+60
STA 187+60 TO STA 195+00
STA 223+00 TO STA 249+50
STA 251+80 TO STA 264+80
STA 272+40 TO STA 278+70
STA 284+50 TO STA 318+00
STA 320+20 TO STA 321+00



STH 13 TYPICAL EXISTING SECTION
IN PASSING LANE AREA

STA 120+50 TO STA 182+00 RT

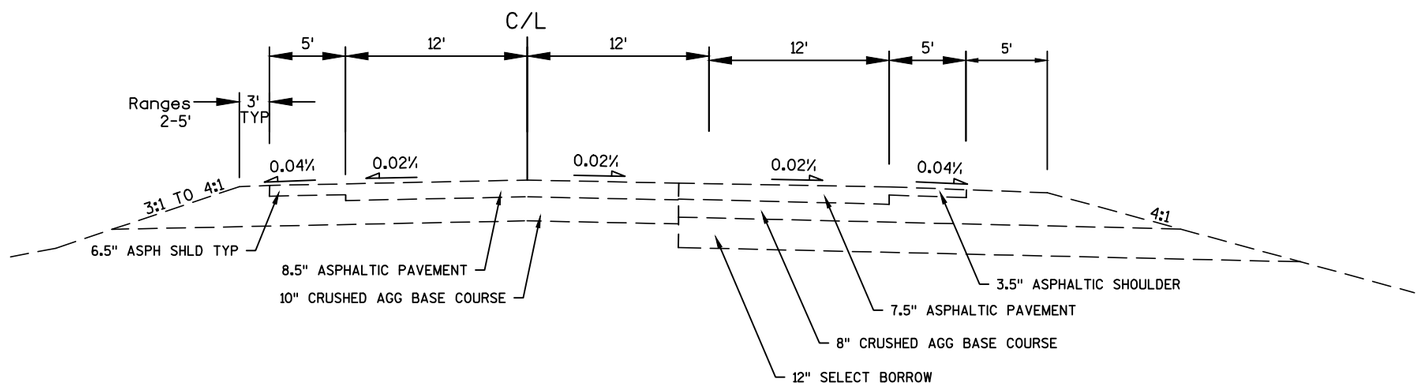
PROJECT NO: 8160-00-70	HWY: 13	COUNTY: BAYFIELD	TYPICAL SECTIONS SHEET 2 OF 4	SHEET 3	E



^ 2' IN BYPASS AND RIGHT TURN LANE LOCATIONS
** 0' IN RIGHT TURN LANE LOCATIONS
^^ 5" ASPH PAVT, 7" CRUSHED AGG, NO SEL BOR

STH 13 TYPICAL EXISTING SECTION IN BYPASS LANE AND RIGHT TURN LANE AREAS

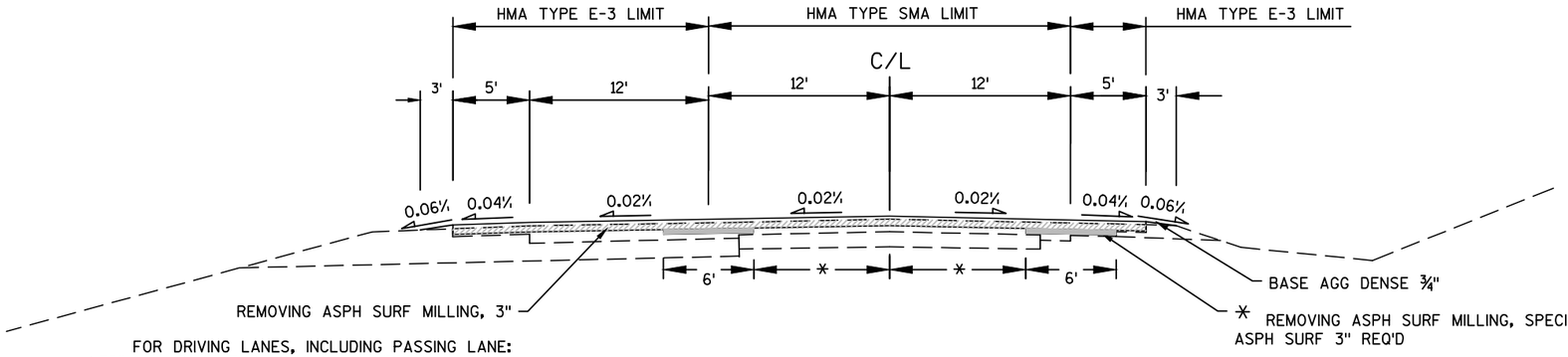
^^STA 51+00 TO STA 60+00	BYPASS LANE RT; RIGHT TURN LANE LT
STA 185+60 TO STA 187+60	RIGHT TURN LANE LT
STA 208+30 TO STA 216+30	BYPASS LANE RT
STA 249+50 TO STA 251+80	RIGHT TURN LANE RT
STA 264+80 TO STA 272+40	BYPASS LANE RT
STA 278+70 TO STA 284+50	BYPASS LANE LT
STA 318+00 TO STA 320+20	RIGHT TURN LANE LT



STH 13 TYPICAL EXISTING SECTION IN BYPASS LANE AREA

STA 208+30 TO STA 216+30 BYPASS LANE RT

PROJECT NO: 8160-00-70	HWY: 13	COUNTY: BAYFIELD	TYPICAL SECTIONS SHEET 3 OF 4	SHEET 4	E



FOR DRIVING LANES, INCLUDING PASSING LANE:
1.75" HMA PAVT TYPE SMA SPEC (UPPER LAYER) +
2.25" HMA PAVT TYPE E-3 SPEC (LOWER LAYER) REQ'D

FOR TURN & BYPASS LANES AND SHLDS:
4" HMA PAVT TYPE E-3 SPEC REQ'D, PLACED
IN A 1.75" UPPER LAYER) + 2.25" LOWER LAYER

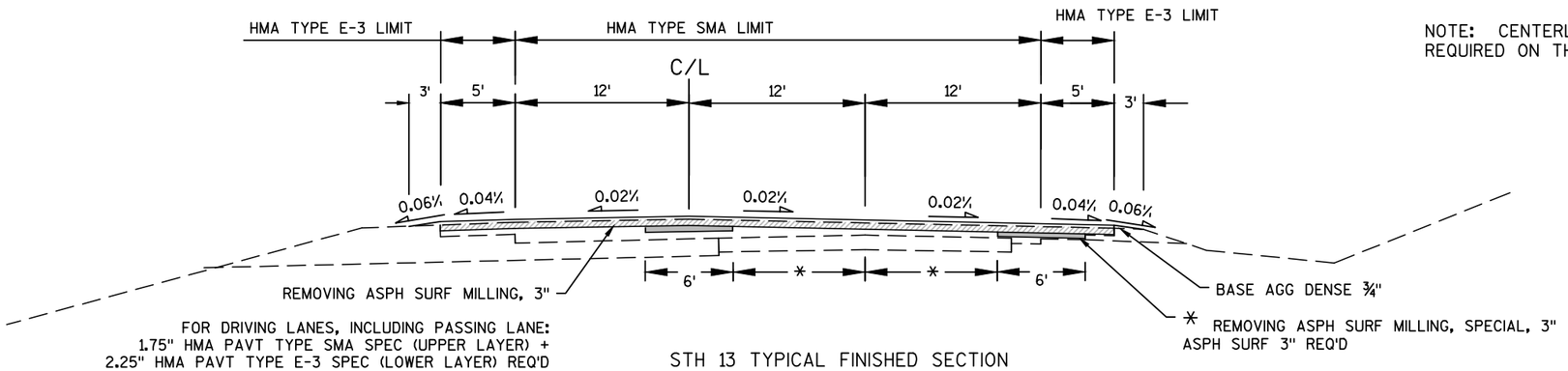
STH 13 TYPICAL FINISHED SECTION

STA 8+00 - 120+50
STA 182+00 - 328+56

* OFFSET FROM CL AS SPECIFIED BY ENGINEER IN THE FIELD, NORM 7-9'

LENGTHS GIVEN BELOW ARE UNDISTRIBUTED WITHIN THE GIVEN STATION RANGES
EXACT LOCATIONS TO BE MARKED IN THE FIELD BY ENGINEER

STA 8+00-29+50 AND 30+32-61+62	SB 2350 FT	NB 3500 FT
STA 61+62-112+73 AND 112+95-114+65	SB 3650 FT	NB 2650 FT
STA 114+65-167+45	SB 1875 FT	NB 2000 FT
STA 167+45-220+25	SB 1100 FT	NB 1100 FT
STA 220+25-220+94 AND 221+98-274+09	SB 1350 FT	NB 650 FT
STA 274+09-328+56	SB 675 FT	NB 100 FT



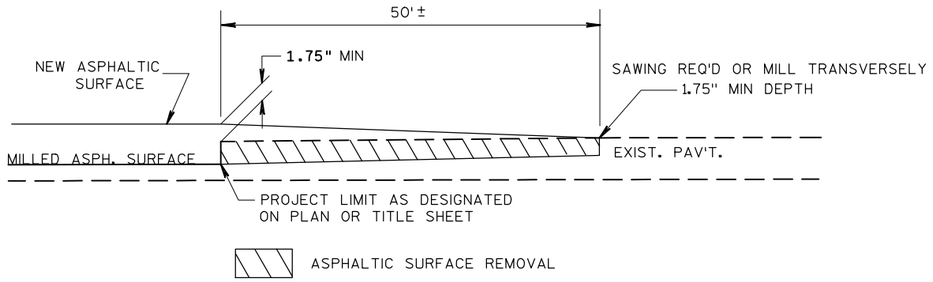
FOR DRIVING LANES, INCLUDING PASSING LANE:
1.75" HMA PAVT TYPE SMA SPEC (UPPER LAYER) +
2.25" HMA PAVT TYPE E-3 SPEC (LOWER LAYER) REQ'D

FOR TURN & BYPASS LANES AND SHLDS:
4" HMA PAVT TYPE E-3 SPEC REQ'D, PLACED
IN A 1.75" UPPER LAYER) + 2.25" LOWER LAYER

STH 13 TYPICAL FINISHED SECTION
IN PASSING LANE AREA

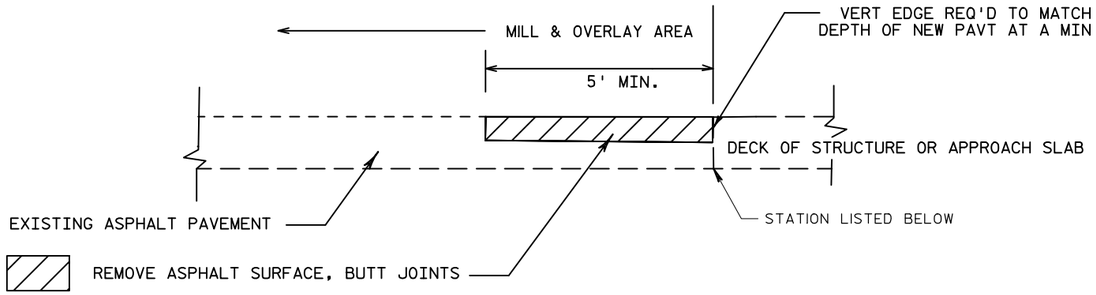
STA 120+50 - 182+00

NOTE: CENTERLINE AND TYPE 1 SHOULDER RUMBLE STRIPS ARE REQUIRED ON THE FINISHED SURFACE



OVERLAP JOINT, BUTTED DETAIL

STA 8+00



DETAIL FOR BUTT JOINTS AT ENDS OF WORK AREAS AND STRUCTURE LOCATIONS

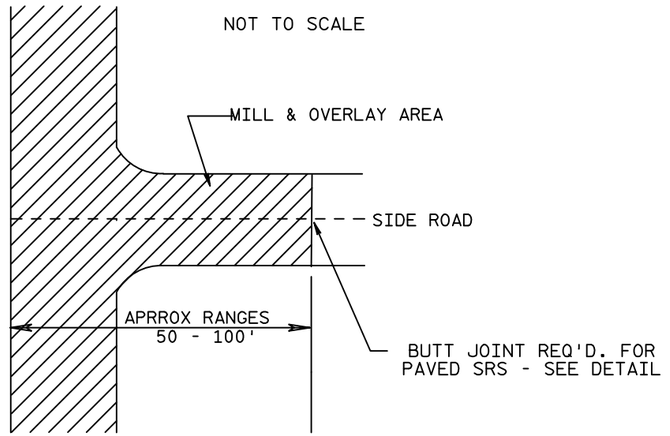
STA 29+50
STA 112+73
STA 328+36
STA 30+32
STA 112+95

SIDE ROAD LOCATION'S REQUIRING BUTT JOINTS

CHERRYVILLE ROAD STA. 27+54.6 LT
MISSION SPRINGS RD STA. 78+93.7 RT
NOLANDER ROAD STA. 184+83.4 LT
WEDAL ROAD STA. 211+75.7 LT
LAKE SHORE DRIVE STA. 233+32.2 RT
LAKE SHORE DRIVE STA. 252+24.5 RT
LAKE SHORE DRIVE STA. 281+76.9 RT
SUMMIT AVENUE STA. 294+99.2 RT
THOMPSON ROAD STA. 320+89.6 LT
FUR FARM ROAD STA. 327+18.8 LT
ONDOSSAGON ROAD STA. 54+78.8 LT
BIRCH GROVE ROAD STA. 184+76.8 RT
BONO CREEK ROAD STA. 199+75.7 RT
OLSEN ROAD STA. 222+77.5 RT
ENGOE ROAD STA. 242+06.8 LT
NEVERS ROAD STA. 268+44.1 LT
WANNEBO ROAD STA. 294+90.4 LT
FAULKNER ROAD STA. 305+70.0 LT
BIGLOW STREET STA. 320+83.0 RT

STH 13
℄

NOT TO SCALE

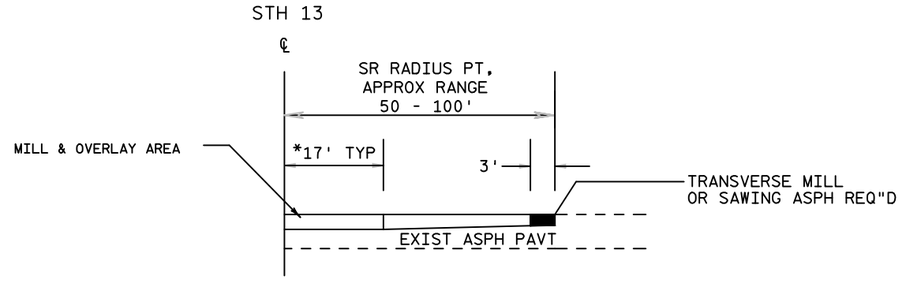


SIDE ROAD DETAIL - NO CURB & GUTTER

NOTE: IF THE EXISTING SIDEROAD CONSISTS OF A BASE COURSE SURFACE, THE NEW ASPHALT SHALL BE PLACED TO THE END OF THE FARTHER EXISTING SIDEROAD RADIUS.

NOT TO SCALE

STH 13
℄

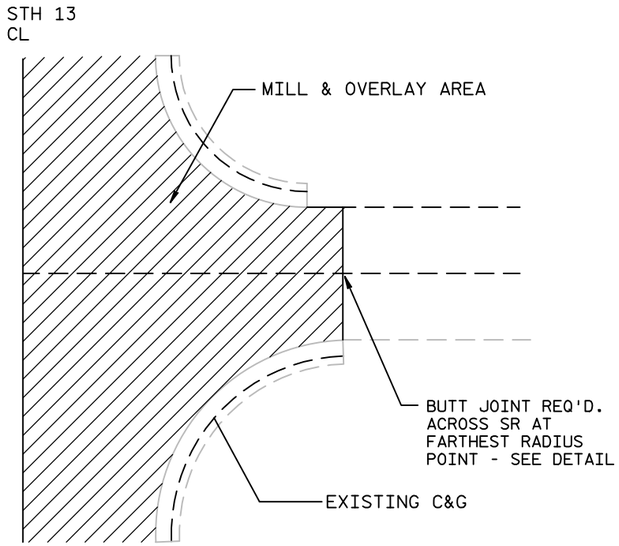


SIDE ROAD BUTT JOINT DETAIL

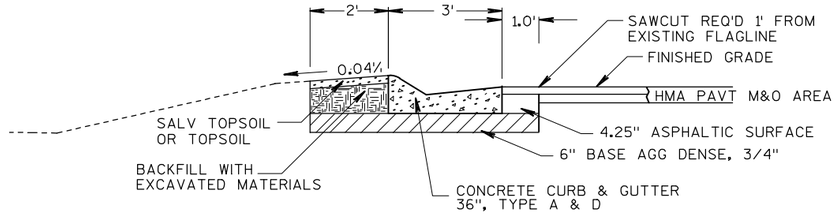
REMOVE MATERIAL UNDER ITEM 'REMOVING ASPHALT SURFACE, BUTT JOINTS' MATERIAL SHALL NOT BE REMOVED UNDER THIS ITEM UNTIL 24 HOURS BEFORE SIDEROAD PAVING.

SIDEROAD PAVEMENT DEPTH SHALL MATCH AT MAINLINE PAVEMENT EDGE AND BE TAPERED TO 2" MINIMUM AT JOINT

*EDGE OF PAVED SHOULDER ALONG ML

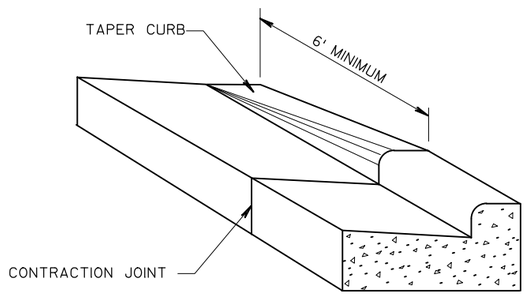


SIDEROAD DETAIL, URBAN & RURAL - CURB & GUTTER

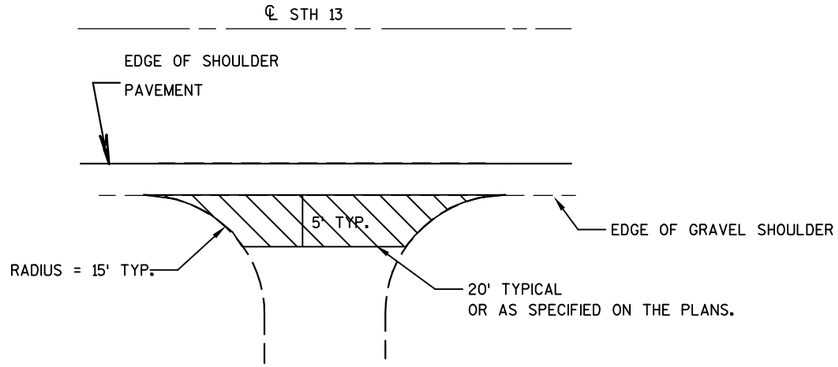


DETAIL FOR CURB & GUTTER REPLACEMENT AREAS

NOTE: EXCAVTION, FILL AND GARDENING ITEMS NECESSARY FOR THIS WORK ARE INCIDENTAL TO C&G ITEM.



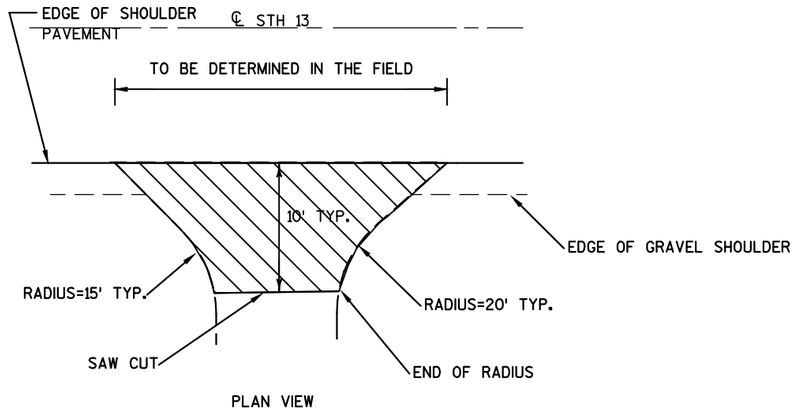
DETAIL OF CURB & GUTTER TERMINI



RURAL AGGREGATE DRIVEWAY DETAIL

EACH ENTRANCE SHALL RECEIVE ADEQUATE 3/4-INCH BASE AGG. DENSE AFTER MAINLINE PAVING TO BRING ENTRANCE UP TO SHOULDER PAVEMENT GRADE. MATCH EXISTING DRIVEWAY WIDTHS AND RADII.

72+85	75+00	79+18	82+44	84+90	86+26	87+20	89+48
103+50	135+25	148+40	152+36	153+58	161+30	168+10	170+05
172+00	191+75	193+45	194+78	196+68	211+22	216+50	219+48
229+60	231+80	278+34	280+08	282+00	284+85	285+52	
296+75	298+25	306+82	323+44				

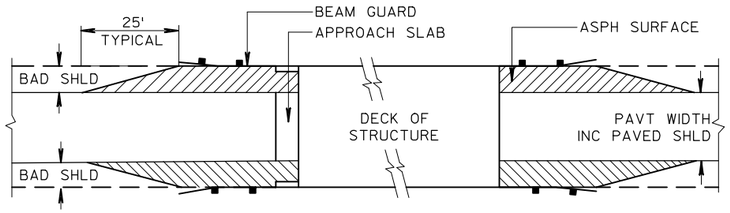


PLAN VIEW

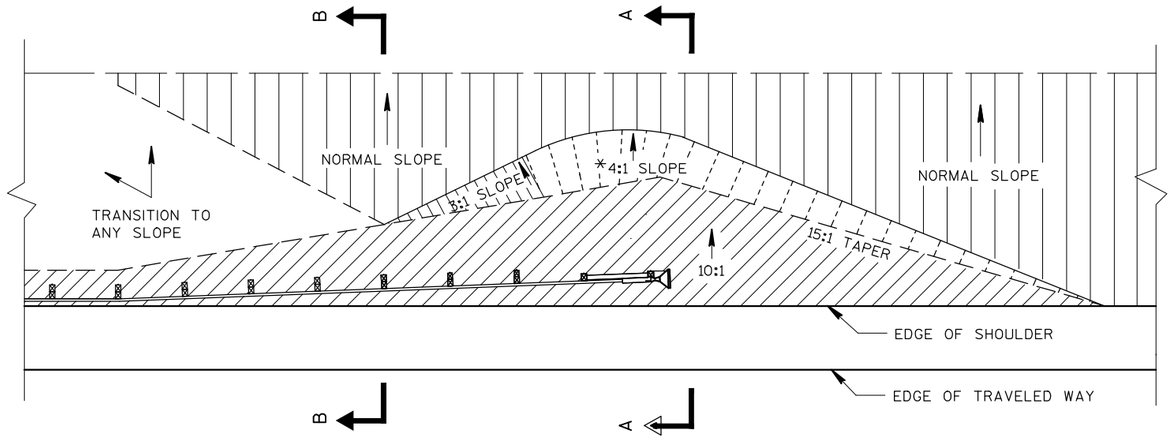
RURAL PAVED DRIVEWAY DETAIL

REMOVE EXISTING ASPHALTIC SURFACE, REPLACE WITH ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. MATCH EXISTING WIDTH AND RADII OF DRIVEWAY. PREPARE SUBSURFACE FOR PAVING WITH BASE AGG DENSE 3/4-INCH AS NECESSARY.

SEE MISCELLANEOUS TABLES FOR LIST OF STA/LOC

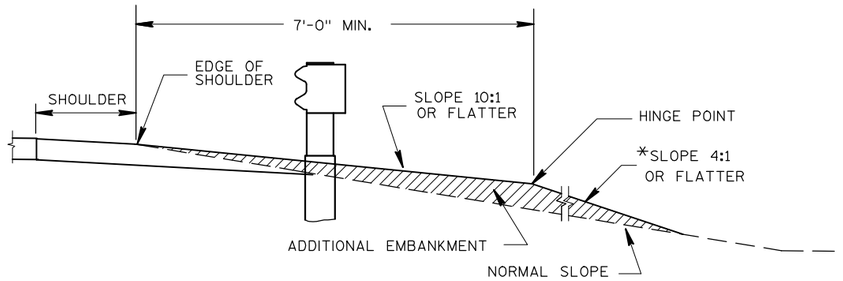


DETAIL FOR ASPHALTIC
SHOULDERS AT STRUCTURES

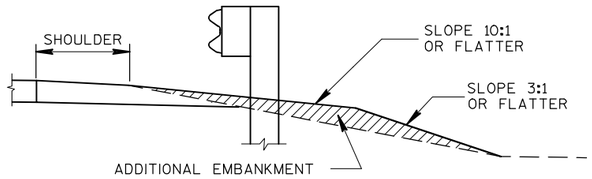


PLAN VIEW

*A 3:1 MAXIMUM SLOPE MAY BE USED FOR INSTALLATIONS ON EXISTING HIGHWAYS.

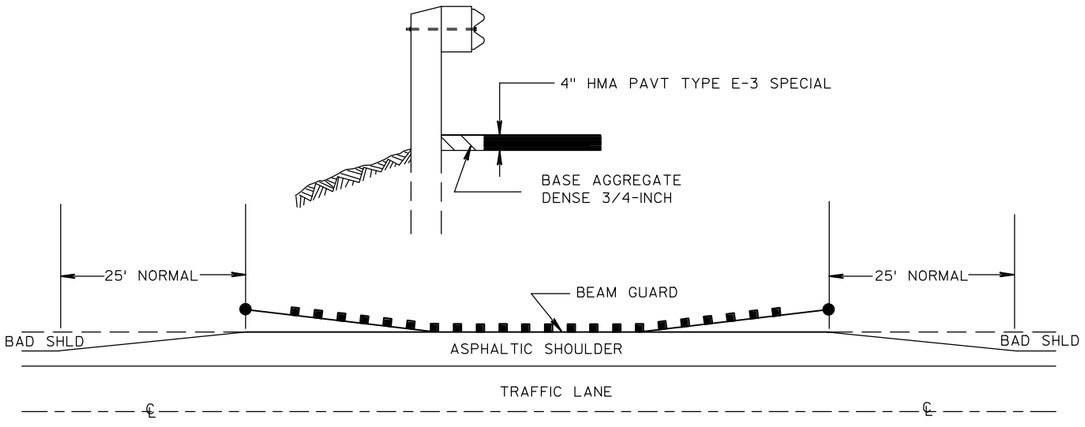


SECTION A-A

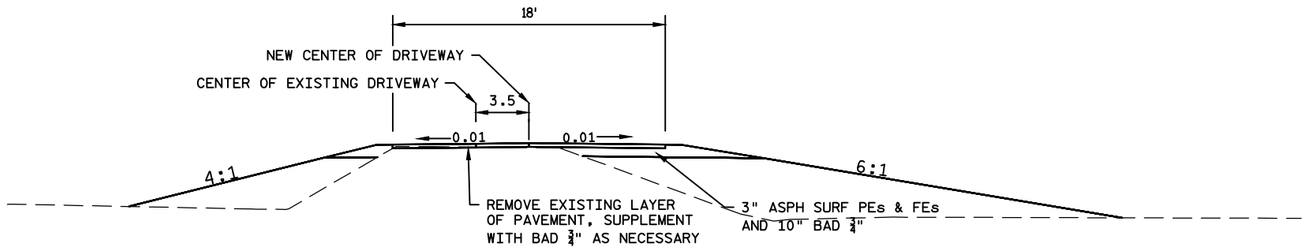


SECTION B-B

FILL AREA AT BEAM GUARD

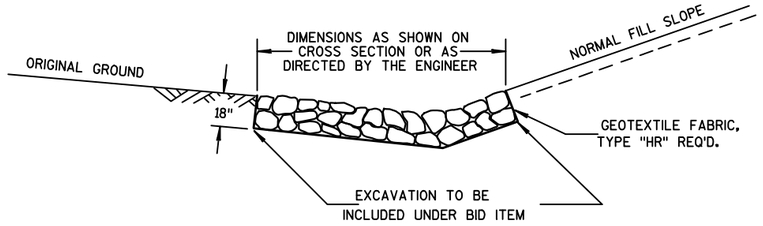


DETAIL FOR ASPHALTIC SHOULDER TAPERS AT BEAM GUARD

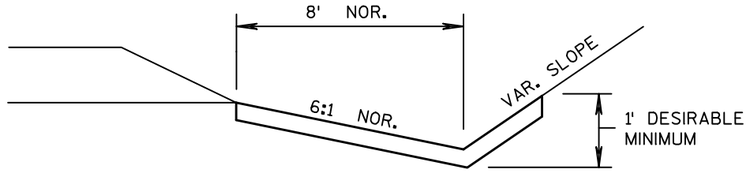


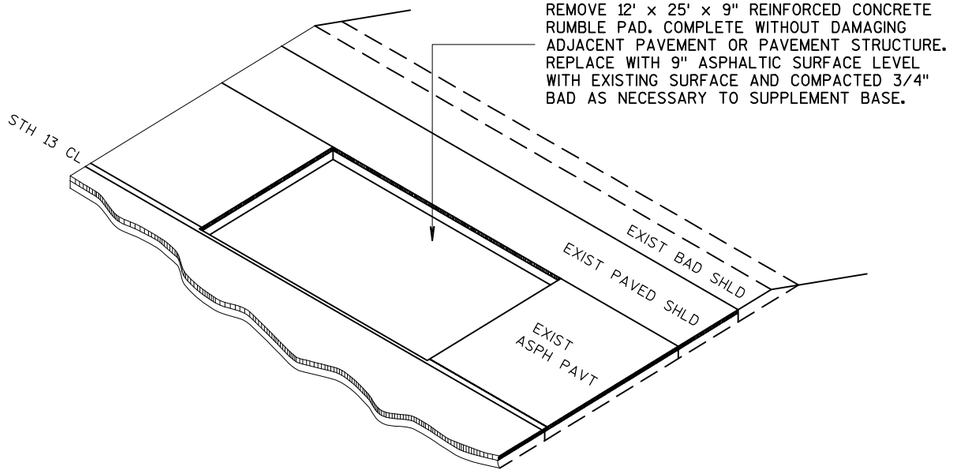
DETAIL FOR DRIVEWAY WIDENING

STA 256+75 LT



DETAIL FOR MEDIUM RIPRAP IN DITCHES





DETAIL FOR REMOVAL OF CONC RUMBLE PAD

APPROX STA 13+00

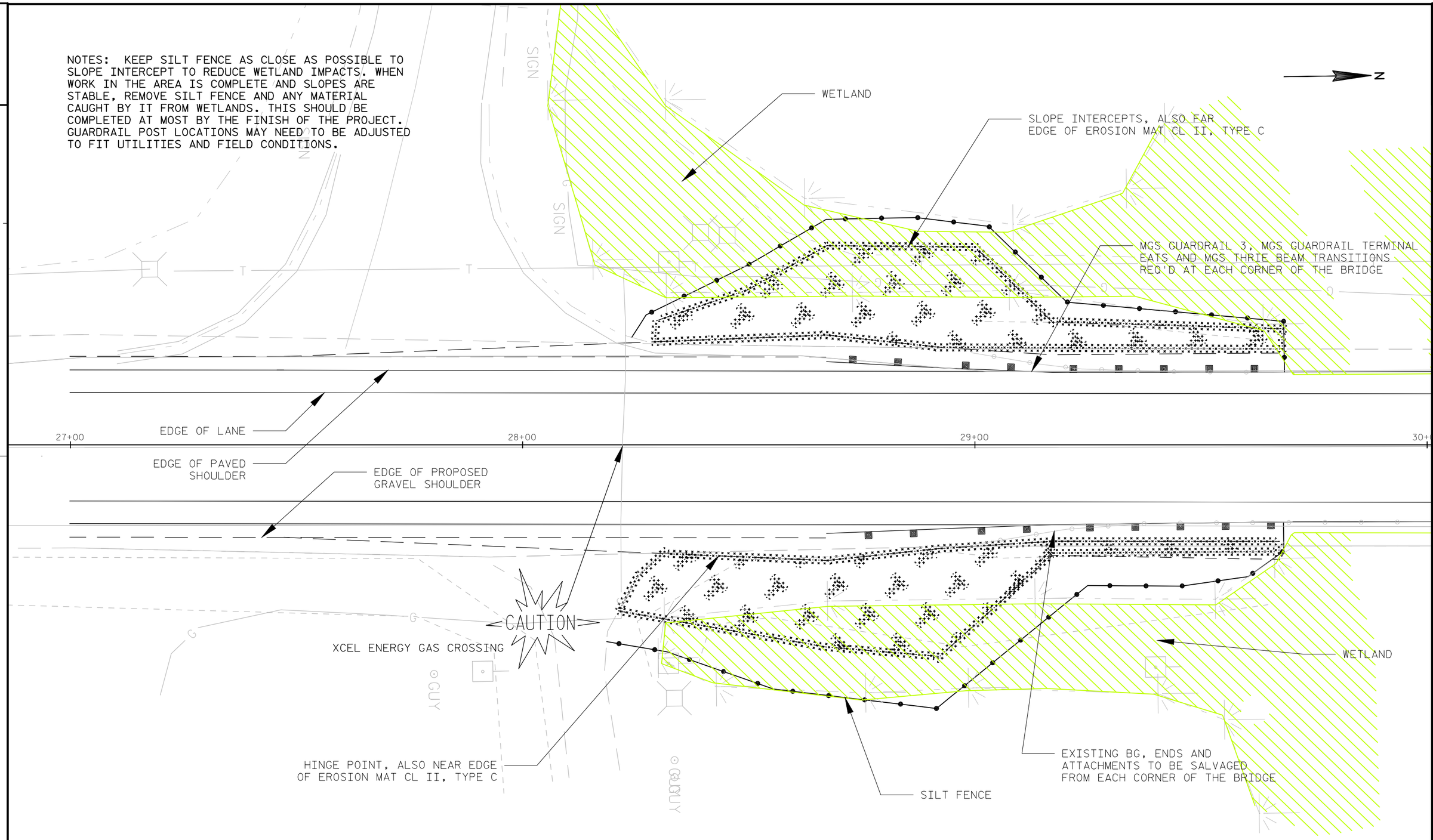
EROSION MAT DETAIL FOR DITCHES

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 88 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.2 ACRES

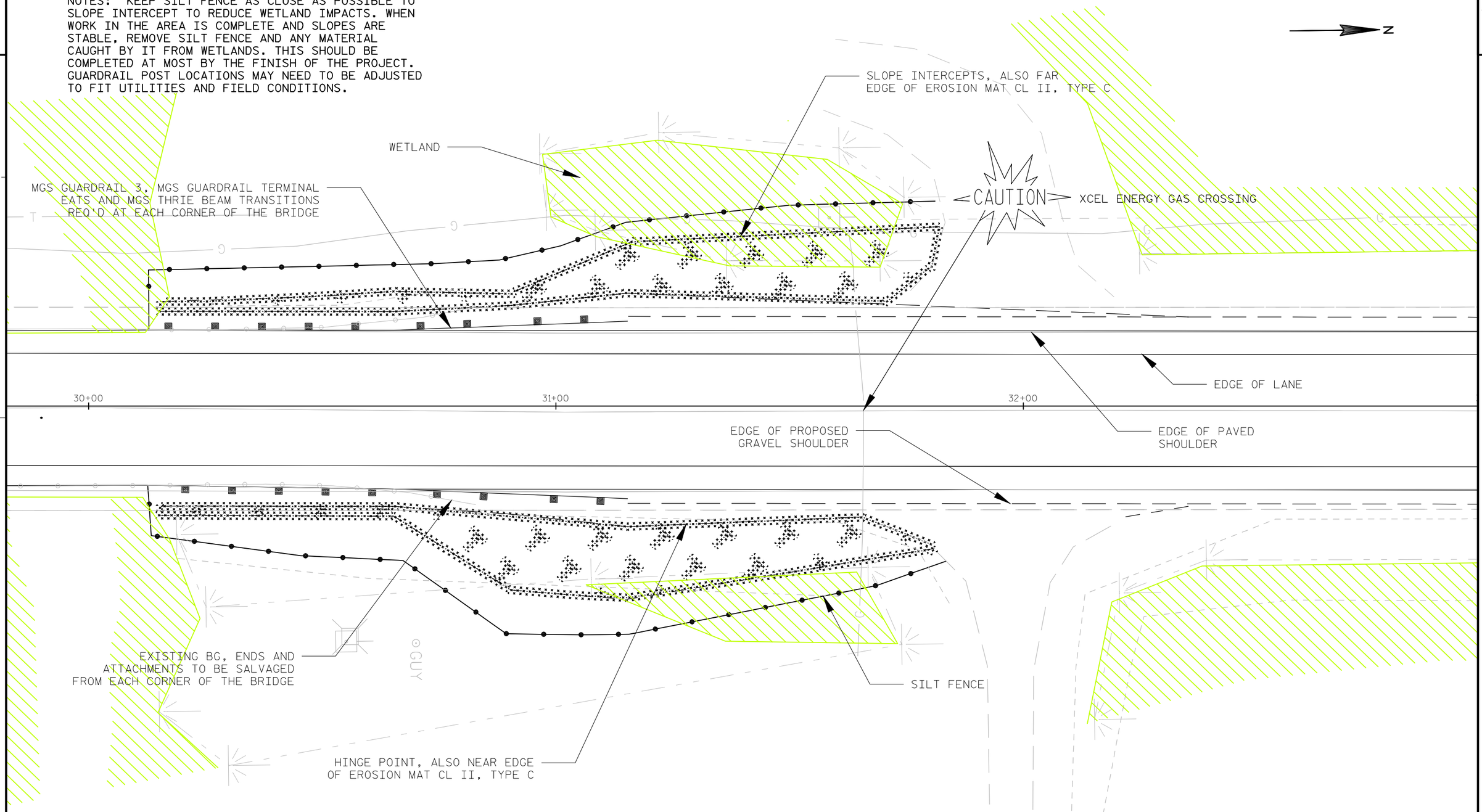
NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.



GUARDRAIL, STATION 27+47-32+35, WHITTLESEY CREEK BRIDGE SHEET 1 OF 2

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS SHEET 1 OF 2	SHEET 10	E

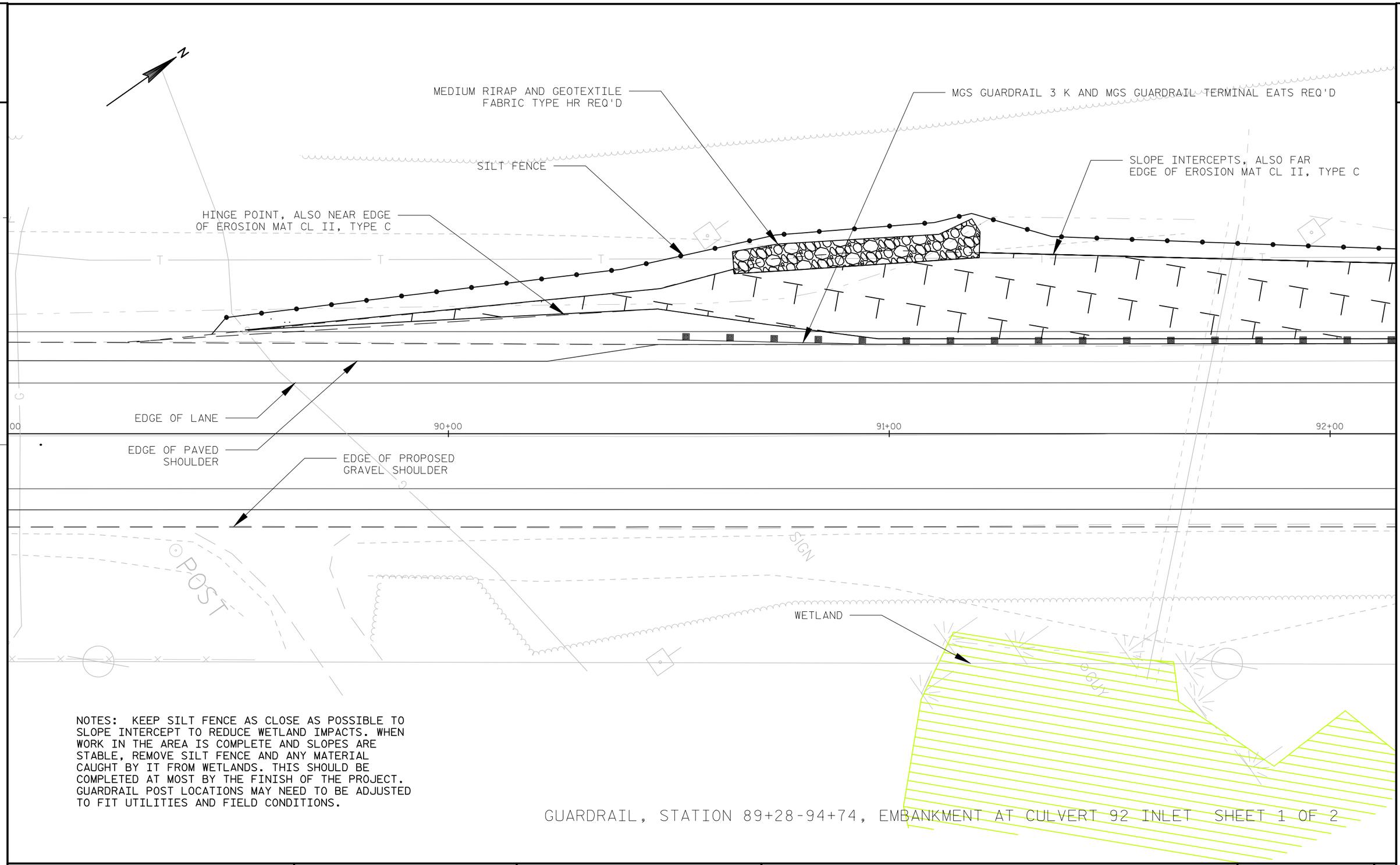
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GUARDRAIL, STATION 27+47-32+35, WHITTLESEY CREEK BRIDGE SHEET 2 OF 2

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 11	E

2

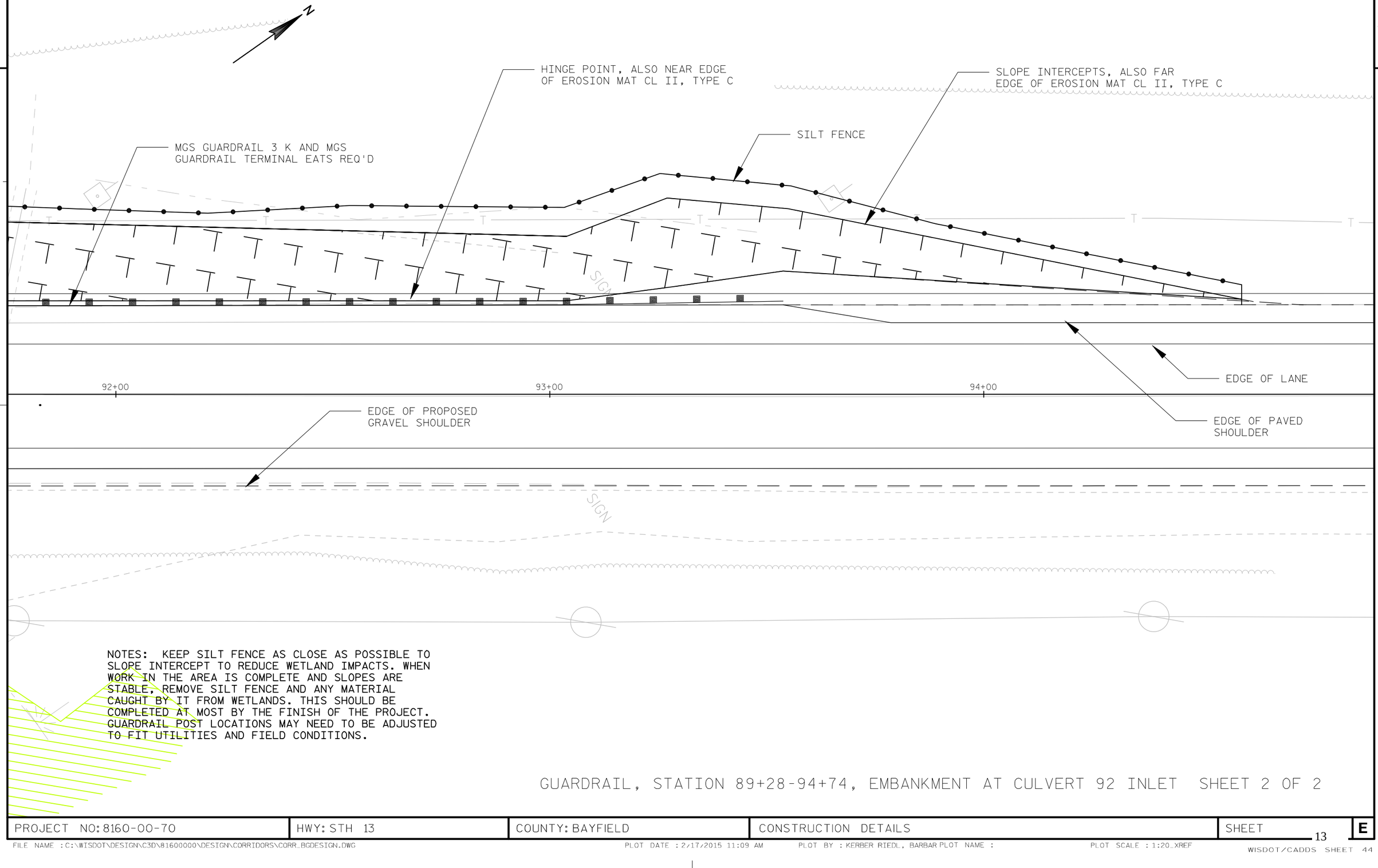


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GUARDRAIL, STATION 89+28-94+74, EMBANKMENT AT CULVERT 92 INLET SHEET 1 OF 2

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 12	E

2

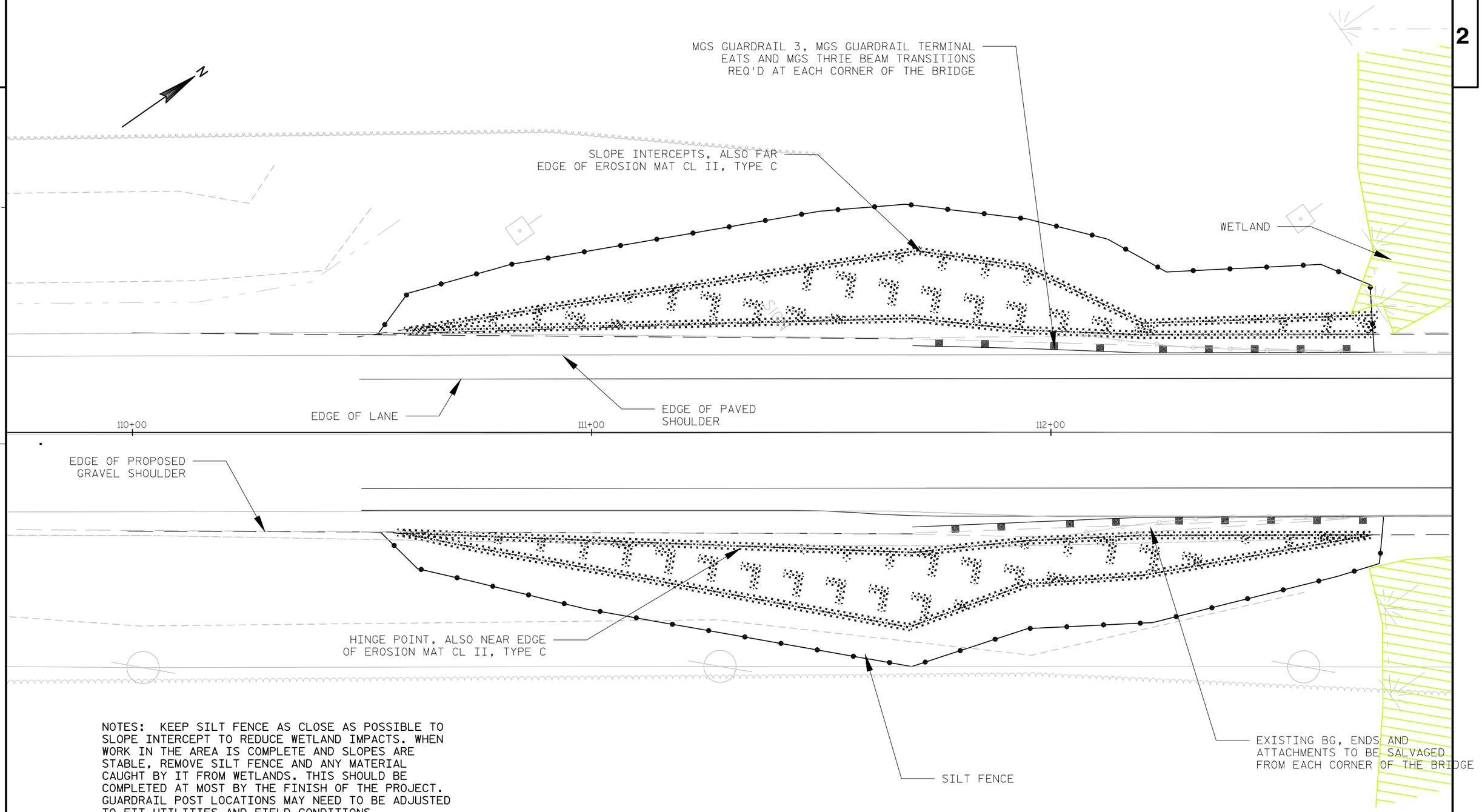


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GUARDRAIL, STATION 89+28-94+74, EMBANKMENT AT CULVERT 92 INLET SHEET 2 OF 2

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 13	E

2

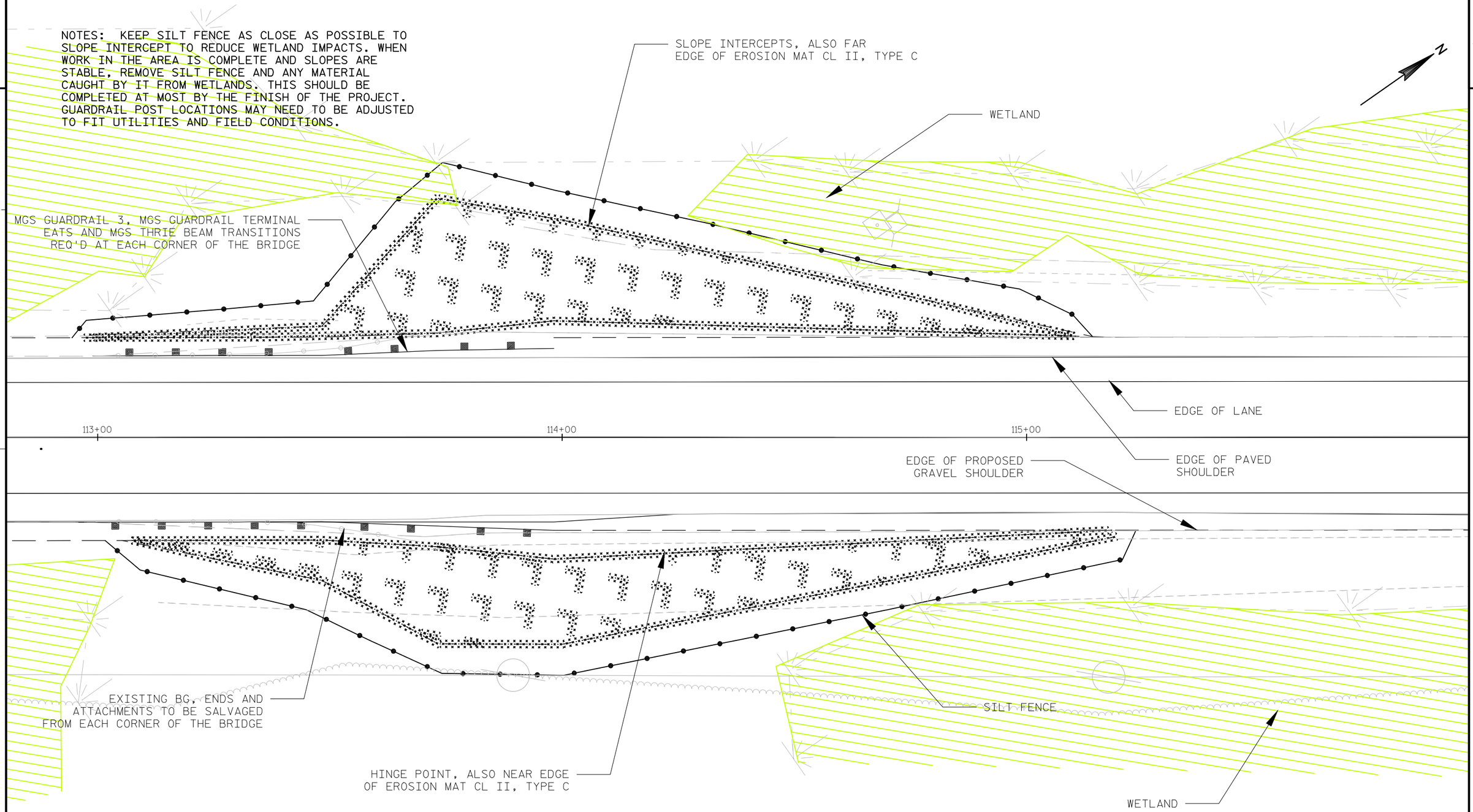


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GUARDRAIL, STATION 110+50-115+18, BOYD CREEK BRIDGE SHEET 1 OF 2

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 14	E

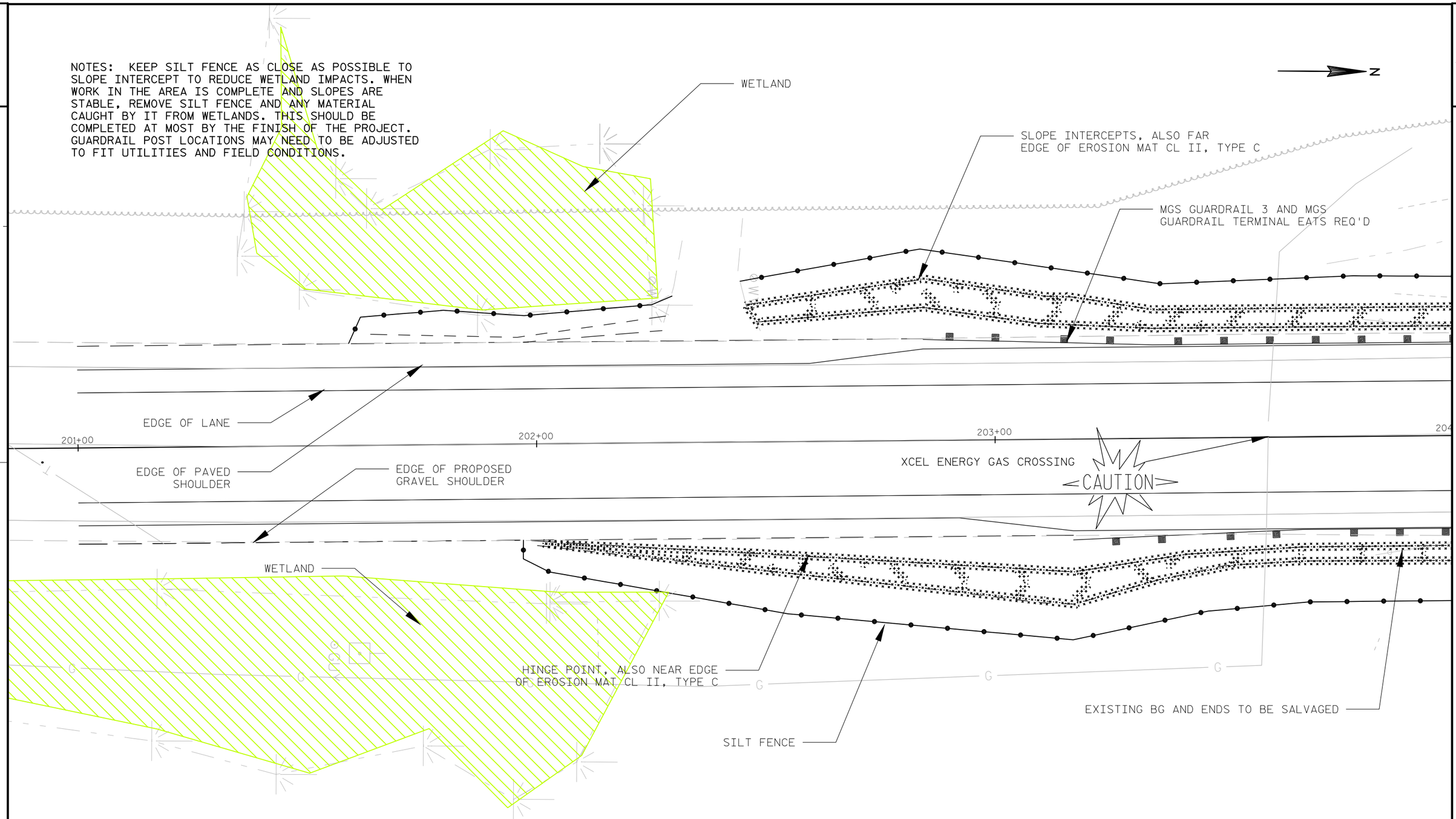
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GUARDRAIL, STATION 110+50-115+18, BOYD CREEK BRIDGE SHEET 2 OF 2

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 15	E

NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.

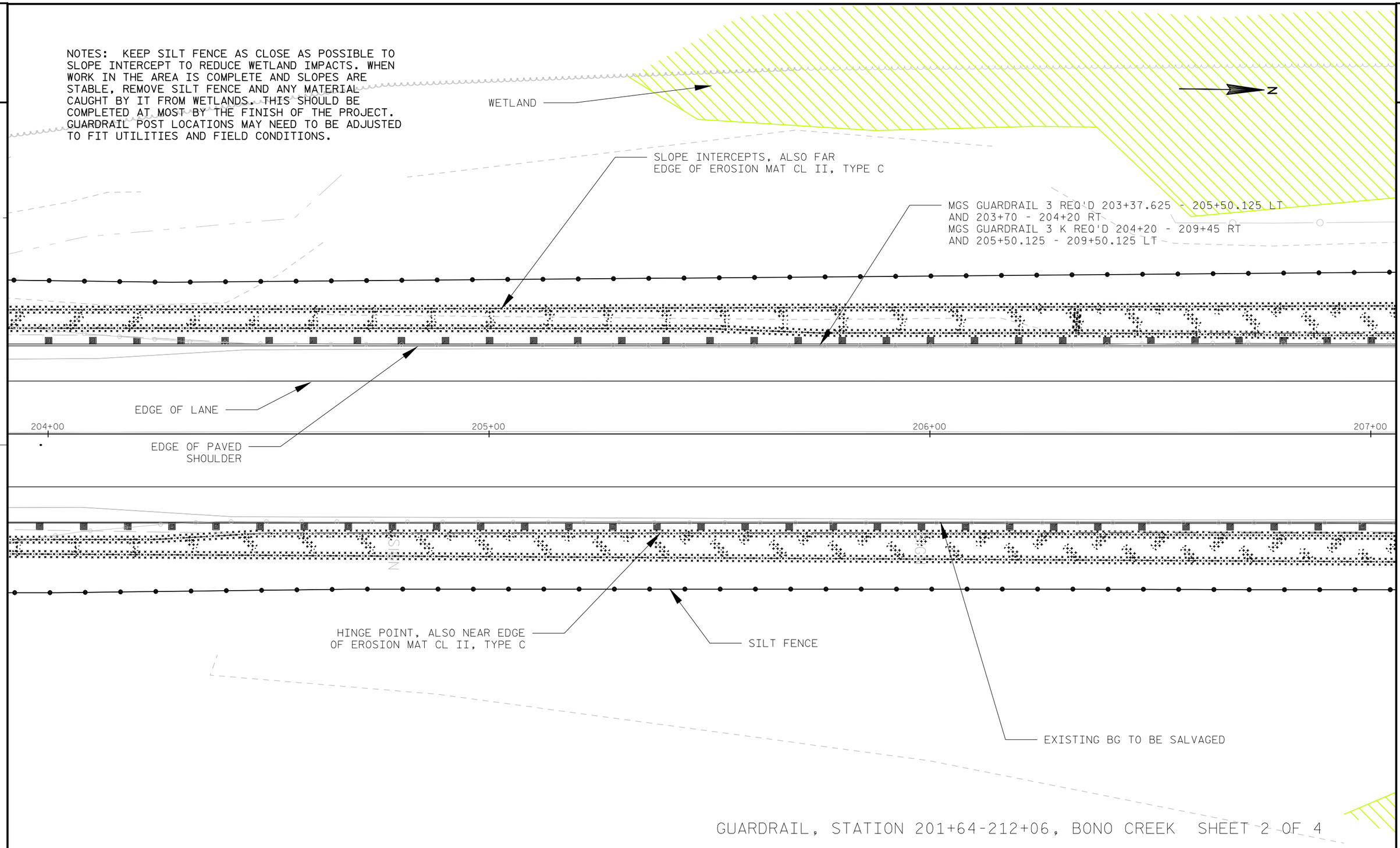


GUARDRAIL, STATION 201+64-212+06, BONO CREEK SHEET 1 OF 4

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 16	E

2

NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.



GUARDRAIL, STATION 201+64-212+06, BONO CREEK SHEET 2 OF 4

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 17	E

2

NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.

WETLAND

N

SLOPE INTERCEPTS, ALSO FAR EDGE OF EROSION MAT CL II, TYPE C

MGS GUARDRAIL 3 REQ'D 209+45 - 210+32.5 RT AND 209+50.125 - 209 = 75.125; AND MGS GUARDRAIL TERMINAL ENDS REQ'D

EDGE OF LANE

EDGE OF PAVED SHOULDER

207+00 208+00 209+00 210+00

HINGE POINT, ALSO NEAR EDGE OF EROSION MAT CL II, TYPE C

SILT FENCE

EXISTING BG TO BE SALVAGED

GUARDRAIL, STATION 201+64-212+06, BONO CREEK SHEET 3 OF 4

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 2/17/2015 11:11 AM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 44

2

N

MGS GUARDRAIL 3 AND MGS GUARDRAIL TERMINAL EATS REQ'D

SLOPE INTERCEPTS, ALSO FAR EDGE OF EROSION MAT CL II, TYPE C

XCEL ENERGY GAS CROSSING

<CAUTION>

NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.

EDGE OF PAVED SHOULDER

EDGE OF LANE

210+00

211+00

212+00

213+00

EDGE OF PROPOSED GRAVEL SHOULDER

EDGE OF BYPASS LANE

EXISTING BG AND ENDS TO BE SALVAGED

SILT FENCE

HINGE POINT, ALSO NEAR EDGE OF EROSION MAT CL II, TYPE C

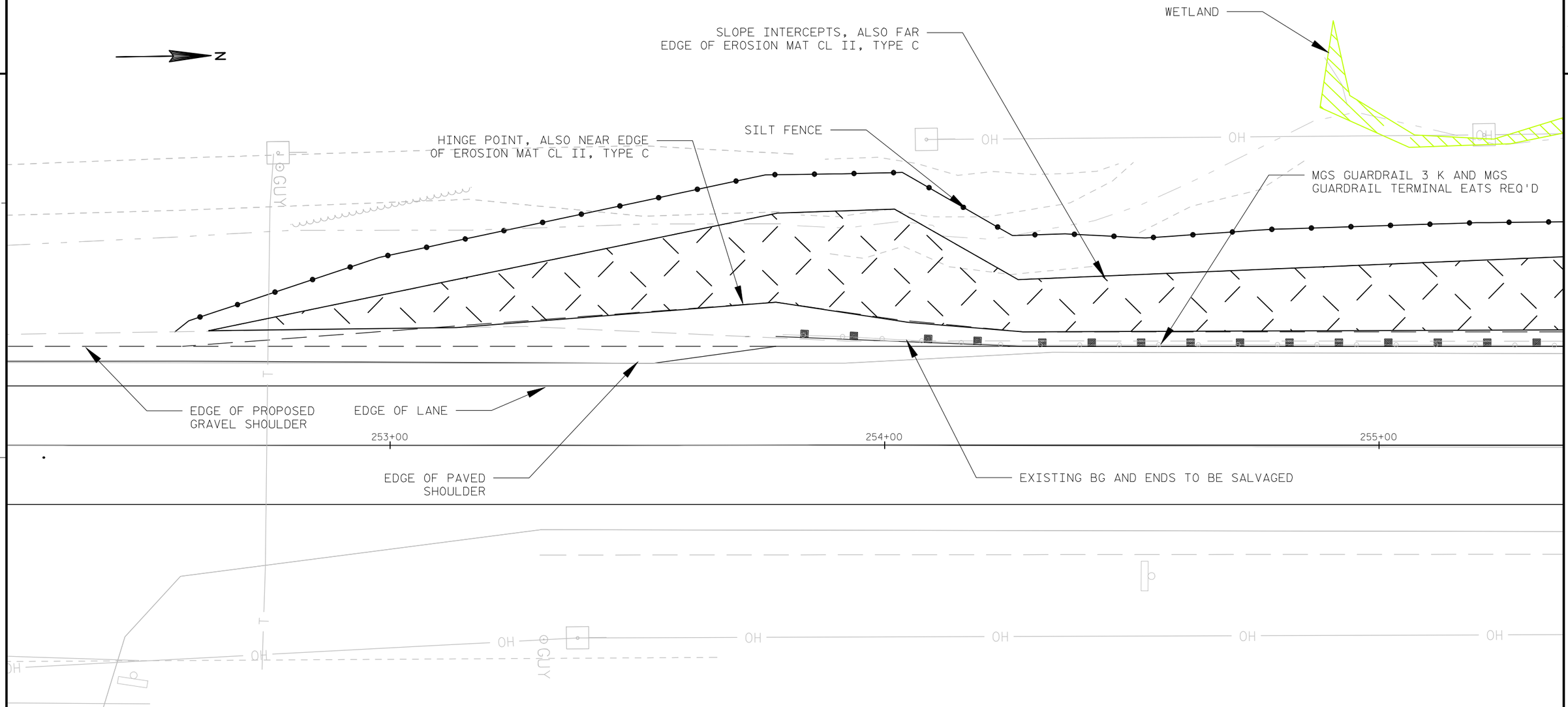
GUARDRAIL, STATION 201+64-212+06, BONO CREEK SHEET 4 OF 4

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 2/17/2015 11:11 AM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 44

2

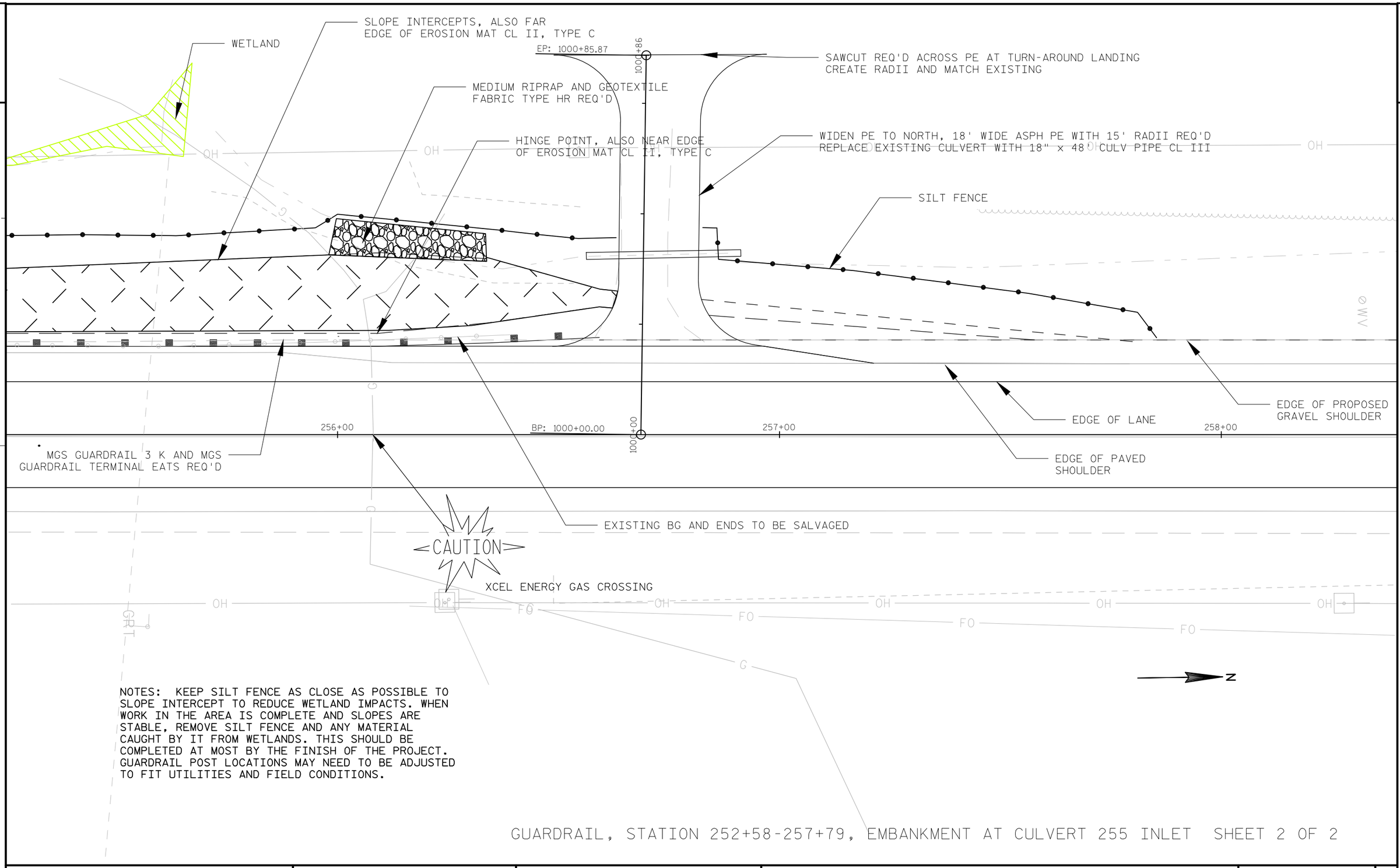


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GUARDRAIL, STATION 252+58-257+79, EMBANKMENT AT CULVERT 255 INLET SHEET 1 OF 2

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 20	E

2



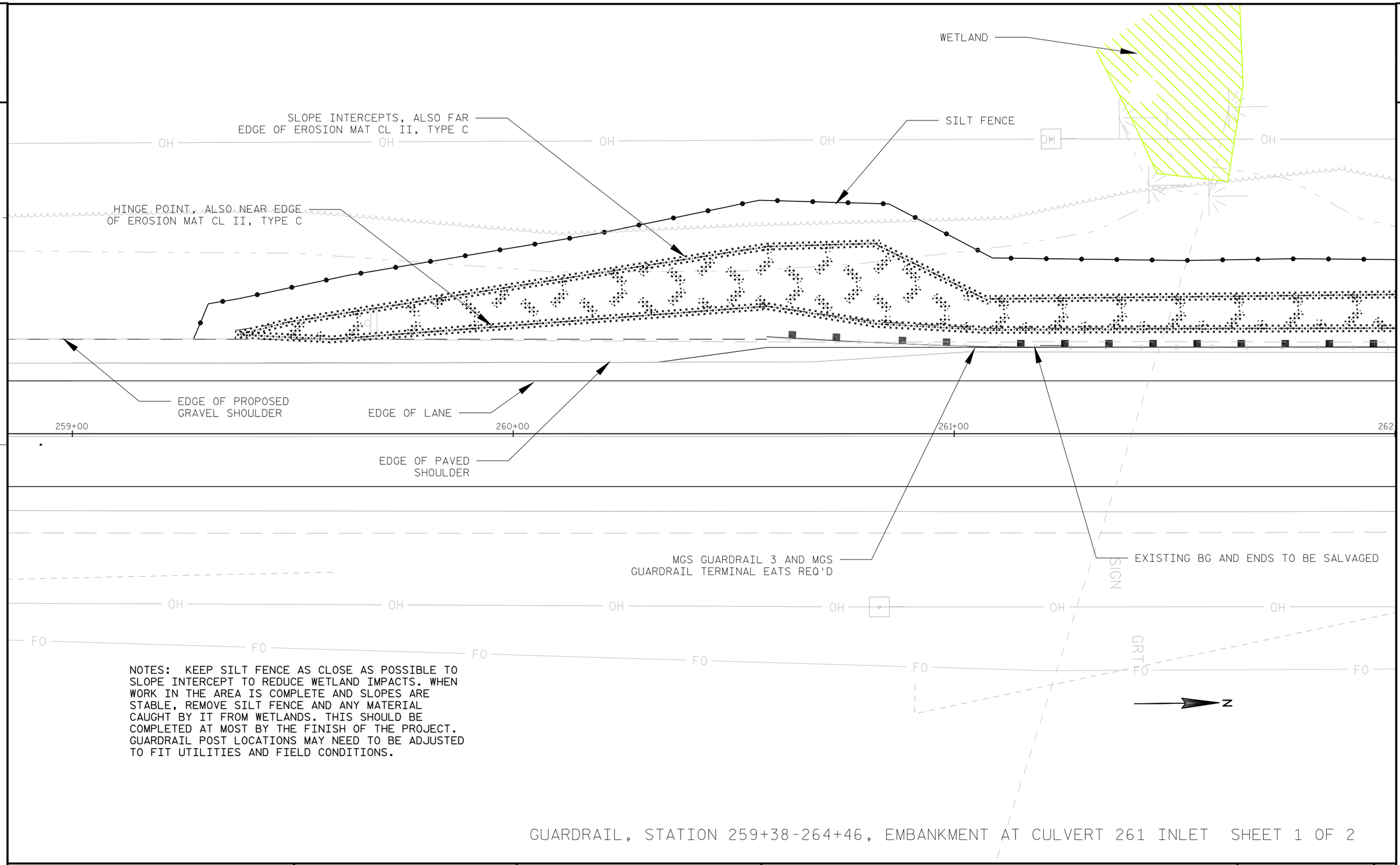
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GUARDRAIL, STATION 252+58-257+79, EMBANKMENT AT CULVERT 255 INLET SHEET 2 OF 2

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 2/17/2015 11:11 AM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 44

2



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GUARDRAIL, STATION 259+38-264+46, EMBANKMENT AT CULVERT 261 INLET SHEET 1 OF 2

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 22	E

2

2

SLOPE INTERCEPTS, ALSO FAR EDGE OF EROSION MAT CL II, TYPE C

HINGE POINT, ALSO NEAR EDGE OF EROSION MAT CL II, TYPE C

SILT FENCE

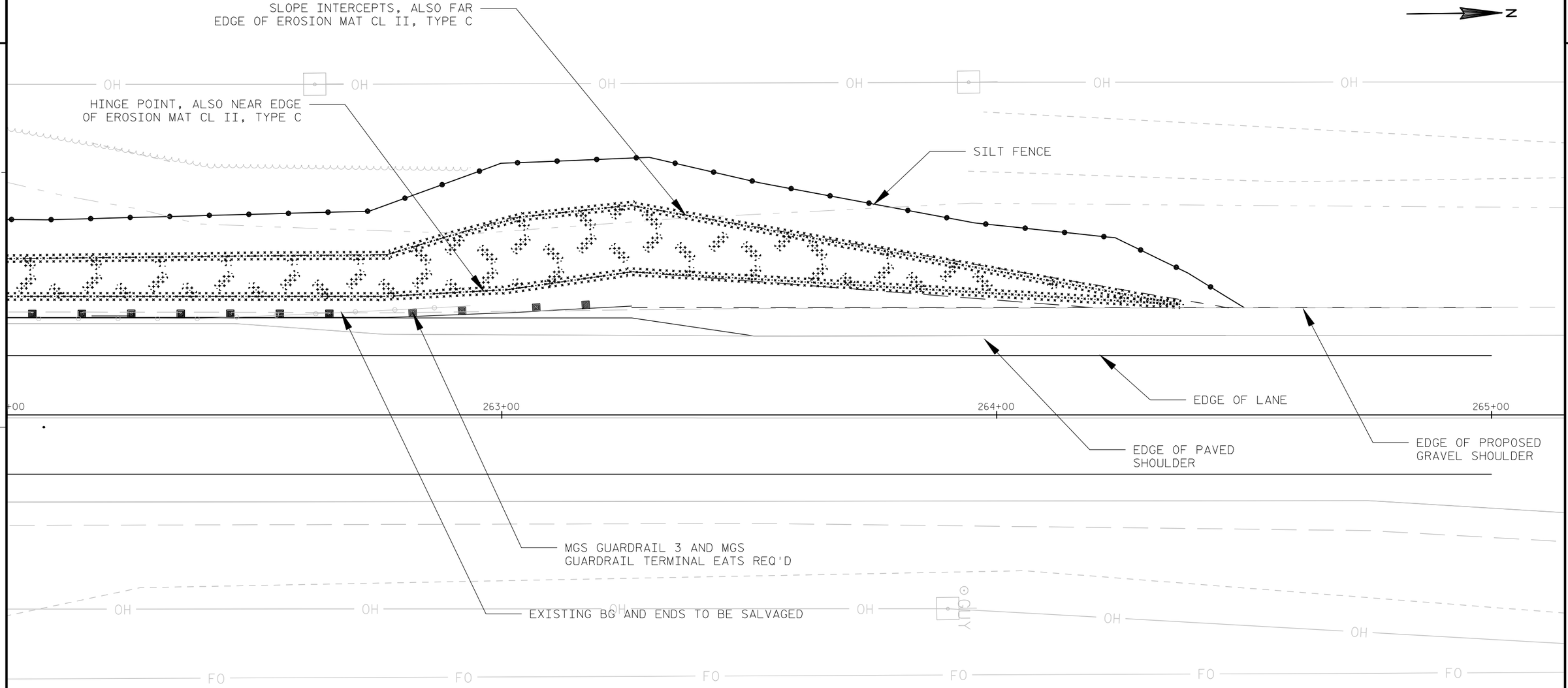
EDGE OF LANE

EDGE OF PAVED SHOULDER

EDGE OF PROPOSED GRAVEL SHOULDER

MGS GUARDRAIL 3 AND MGS GUARDRAIL TERMINAL EATS REQ'D

EXISTING BG AND ENDS TO BE SALVAGED



NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.

GUARDRAIL, STATION 259+38-264+46, EMBANKMENT AT CULVERT 261 INLET SHEET 2 OF 2

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 23	E

2

SLOPE INTERCEPTS, ALSO FAR EDGE OF EROSION MAT CL II, TYPE C

MEDIUM RIPRAP AND GEOTEXTILE FABRIC TYPE HR REQ'D

HINGE POINT, ALSO NEAR EDGE OF EROSION MAT CL II, TYPE C

WETLAND

OH

30" CPCS, EXTENDED LINER REQ'D, 8' LT AND 1 AEW REQ'D TO BE PAID FOR IN PROJECT 8160-03-61 SEE CROSS SECTIONS AT THE END OF THIS PLAN.

SILT FENCE

EDGE OF PROPOSED GRAVEL SHOULDER

EDGE OF LANE

270+00

271+00

272+00

EDGE OF PAVED SHOULDER

MGS GUARDRAIL 3 AND MGS GUARDRAIL TERMINAL EATS REQ'D

EXISTING BG AND ENDS TO BE SALVAGED

FO

OH

NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.

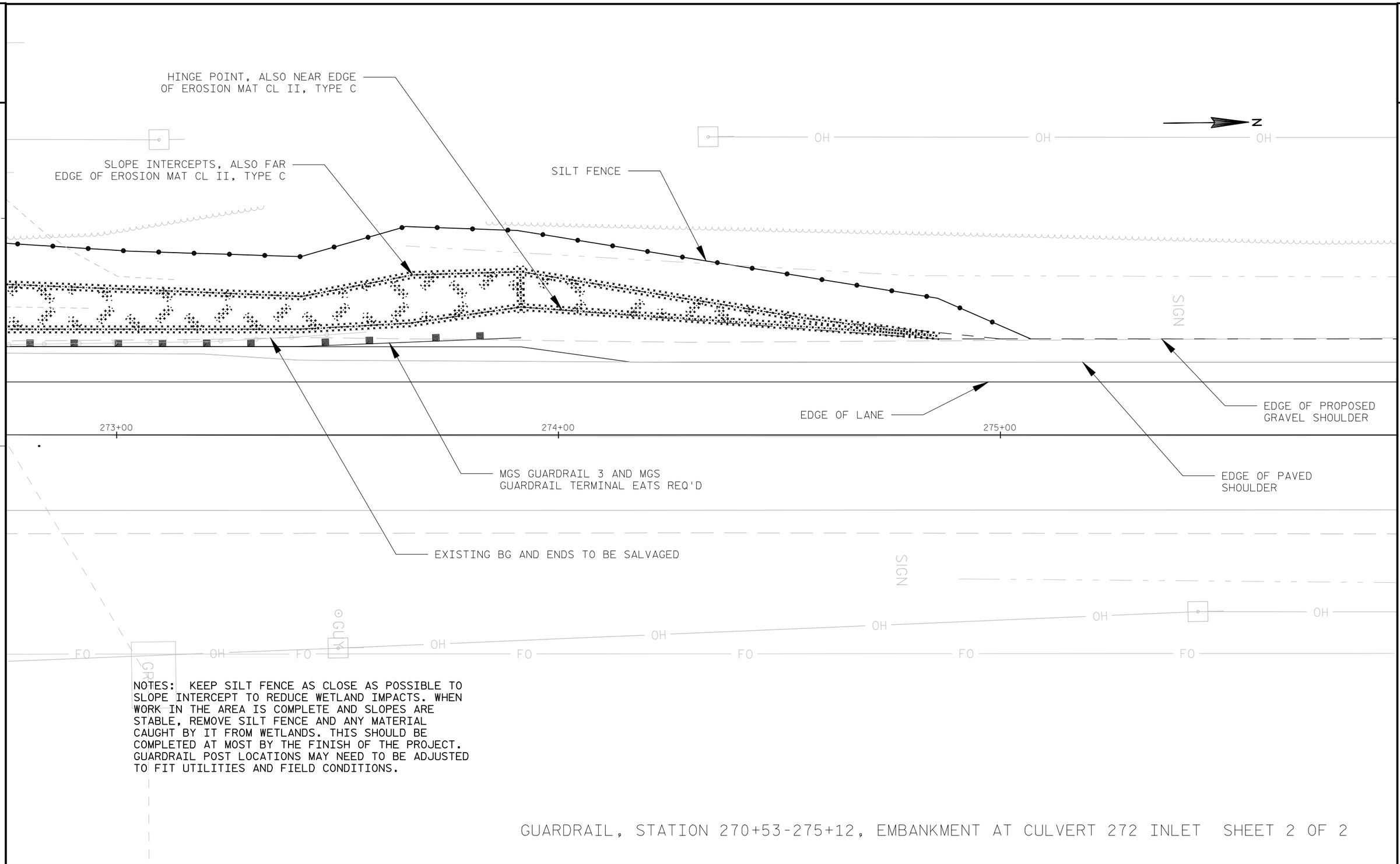
GUY

N

GUARDRAIL, STATION 270+53-275+12, EMBANKMENT AT CULVERT 272 INLET SHEET 1 OF 2

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 24	E

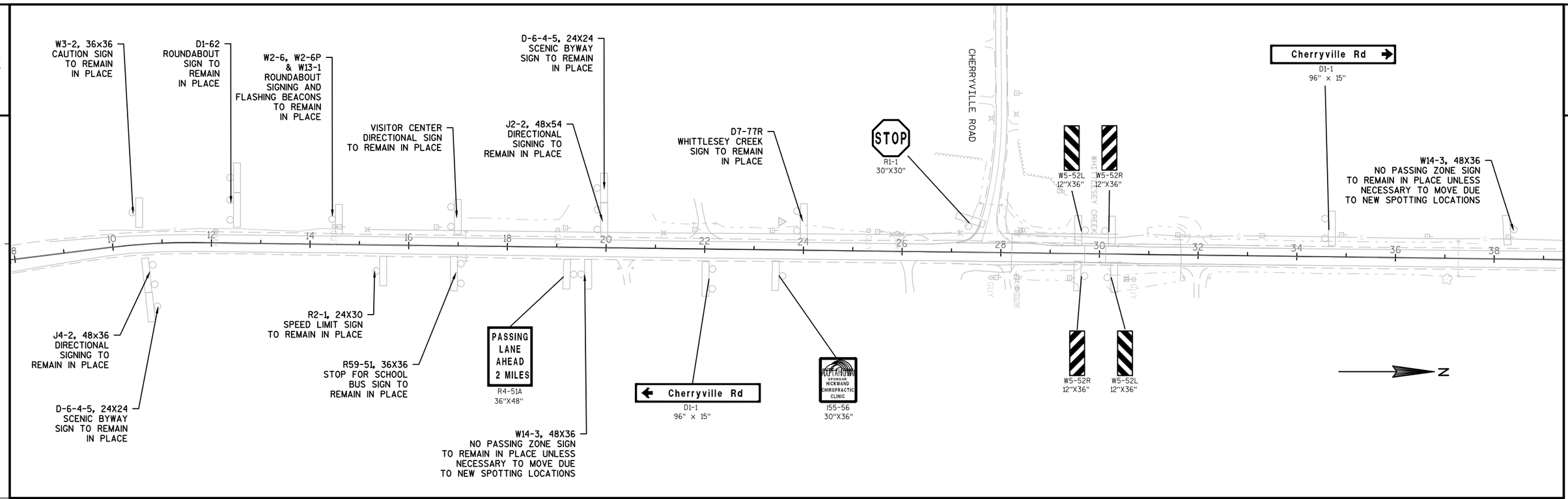
2



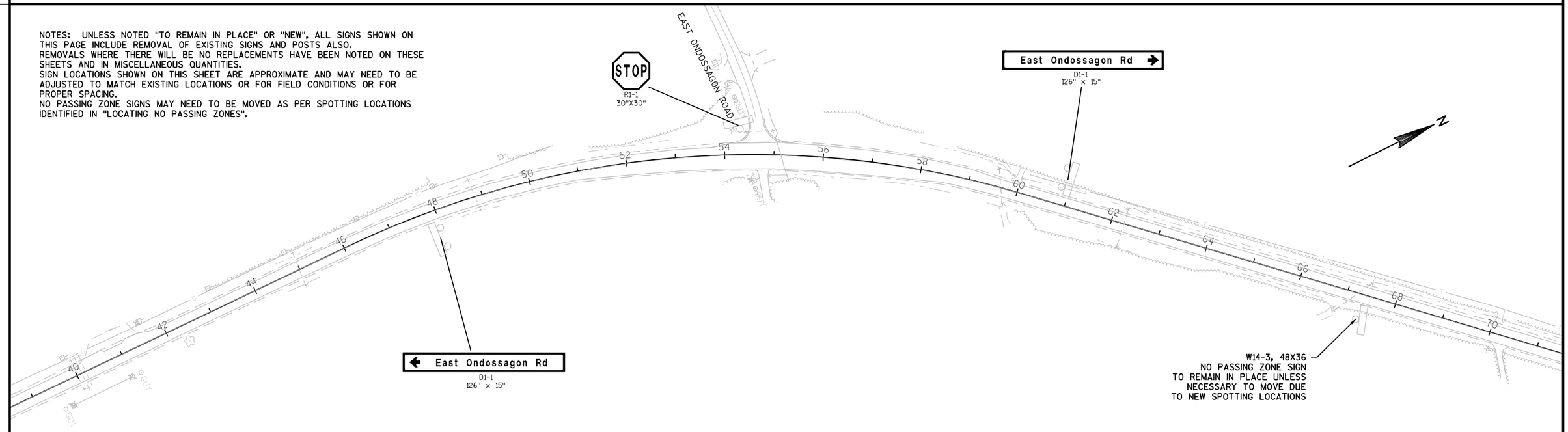
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GUARDRAIL, STATION 270+53-275+12, EMBANKMENT AT CULVERT 272 INLET SHEET 2 OF 2

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 25	E



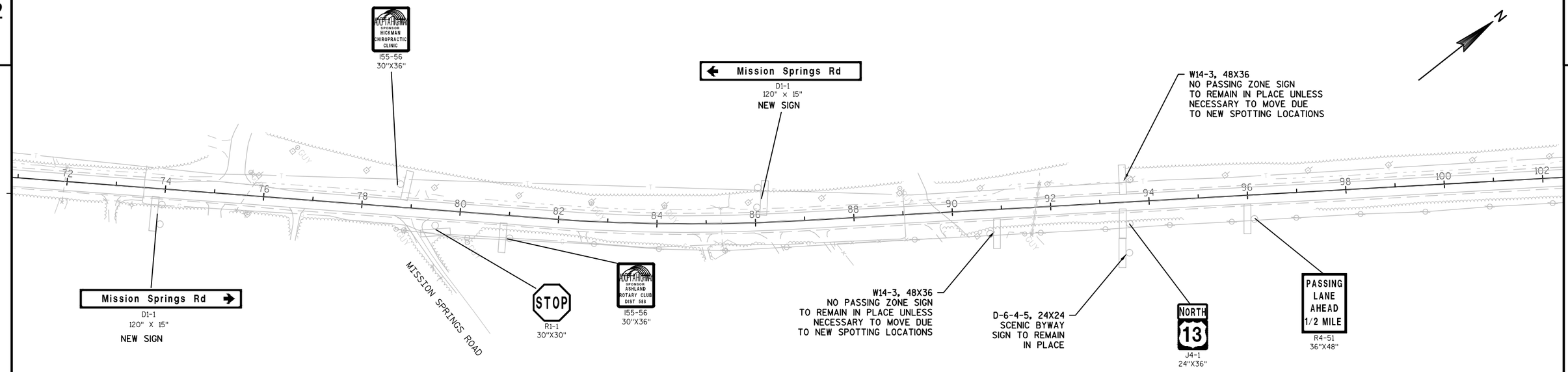
NOTES: UNLESS NOTED "TO REMAIN IN PLACE" OR "NEW", ALL SIGNS SHOWN ON THIS PAGE INCLUDE REMOVAL OF EXISTING SIGNS AND POSTS ALSO.
REMOVALS WHERE THERE WILL BE NO REPLACEMENTS HAVE BEEN NOTED ON THESE SHEETS AND IN MISCELLANEOUS QUANTITIES.
SIGN LOCATIONS SHOWN ON THIS SHEET ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED TO MATCH EXISTING LOCATIONS OR FOR FIELD CONDITIONS OR FOR PROPER SPACING.
NO PASSING ZONE SIGNS MAY NEED TO BE MOVED AS PER SPOTTING LOCATIONS IDENTIFIED IN "LOCATING NO PASSING ZONES".



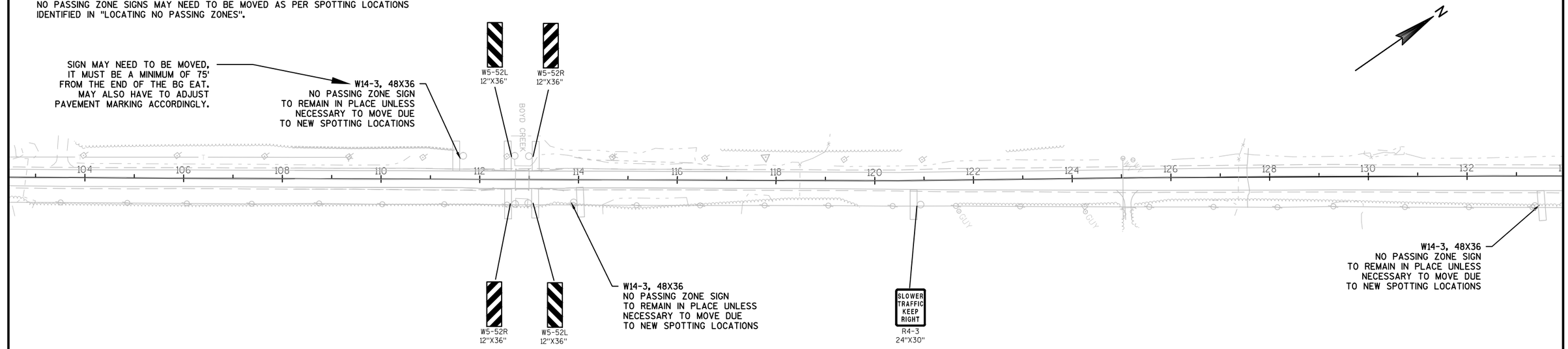
SHEET 1 OF 6

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS: PERMANENT SIGNING	SHEET	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\SHEETSOTHER\023201_PS.DWG PLOT DATE : 1/27/2015 8:08 AM PLOT BY : BJKR PLOT NAME : PLOT SCALE : 1" = 200'_XREF



NOTES: UNLESS NOTED "TO REMAIN IN PLACE" OR "NEW", ALL SIGNS SHOWN ON THIS PAGE INCLUDE REMOVAL OF EXISTING SIGNS AND POSTS ALSO.
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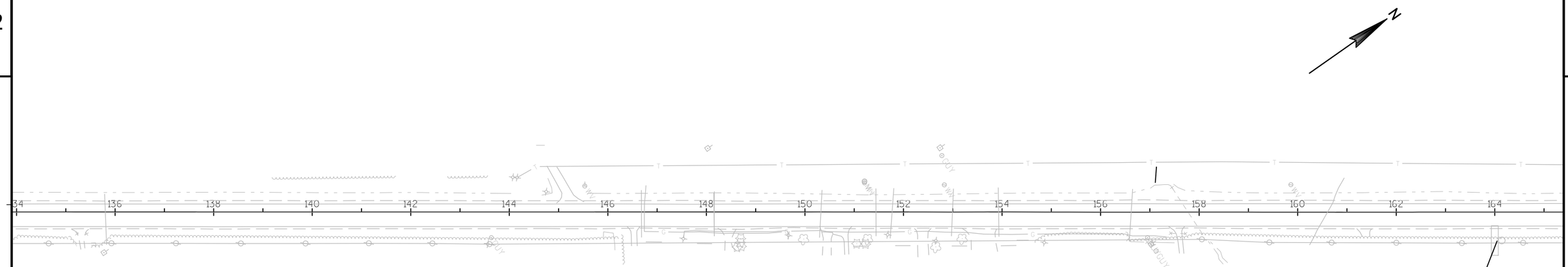


SHEET 2 OF 6

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS: PERMANENT SIGNING	SHEET	E

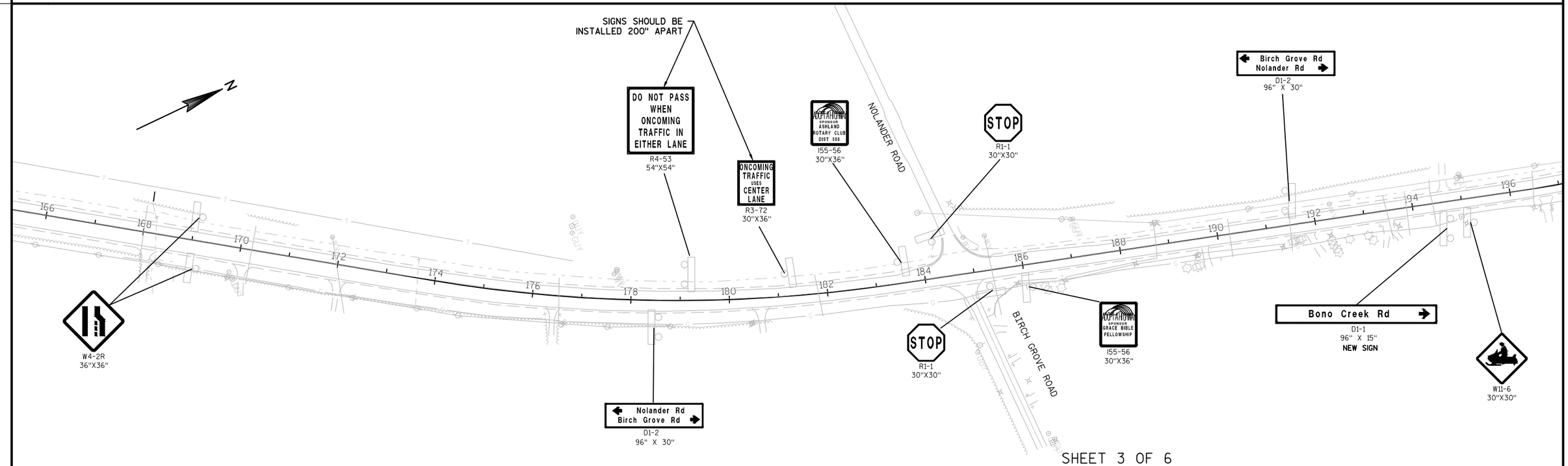
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2



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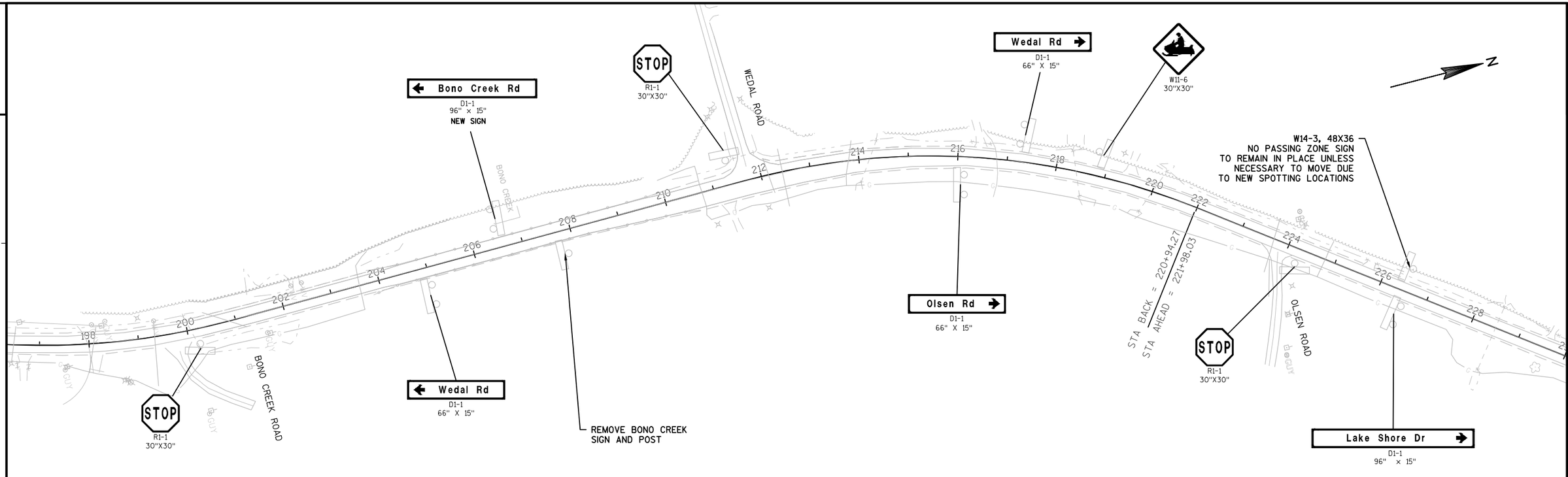
RIGHT LANE ENDS
W9-1R
36" X 36"



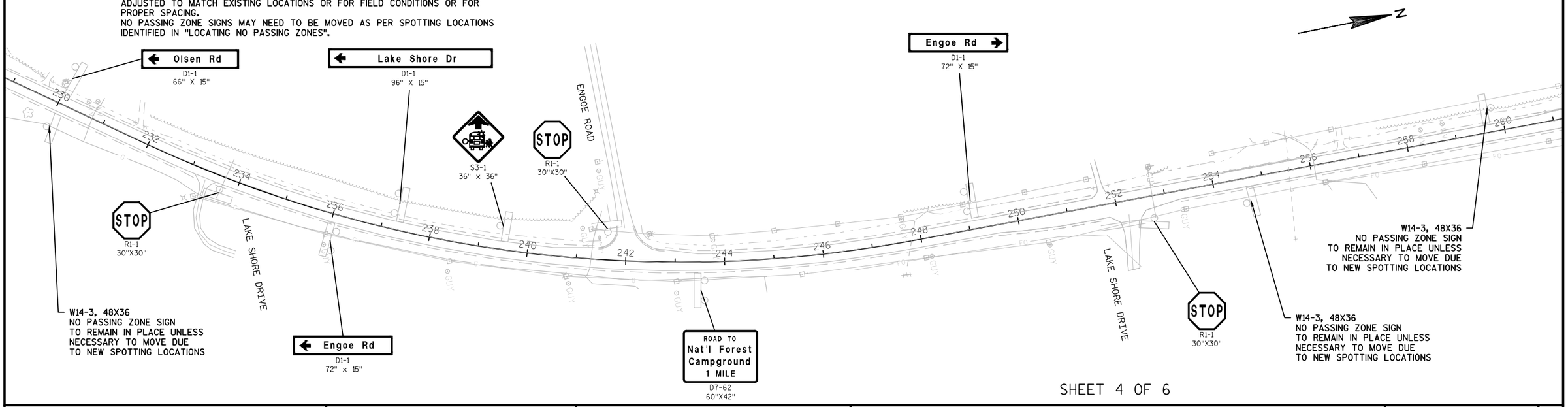
SHEET 3 OF 6

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS: PERMANENT SIGNING	SHEET 28	E

2



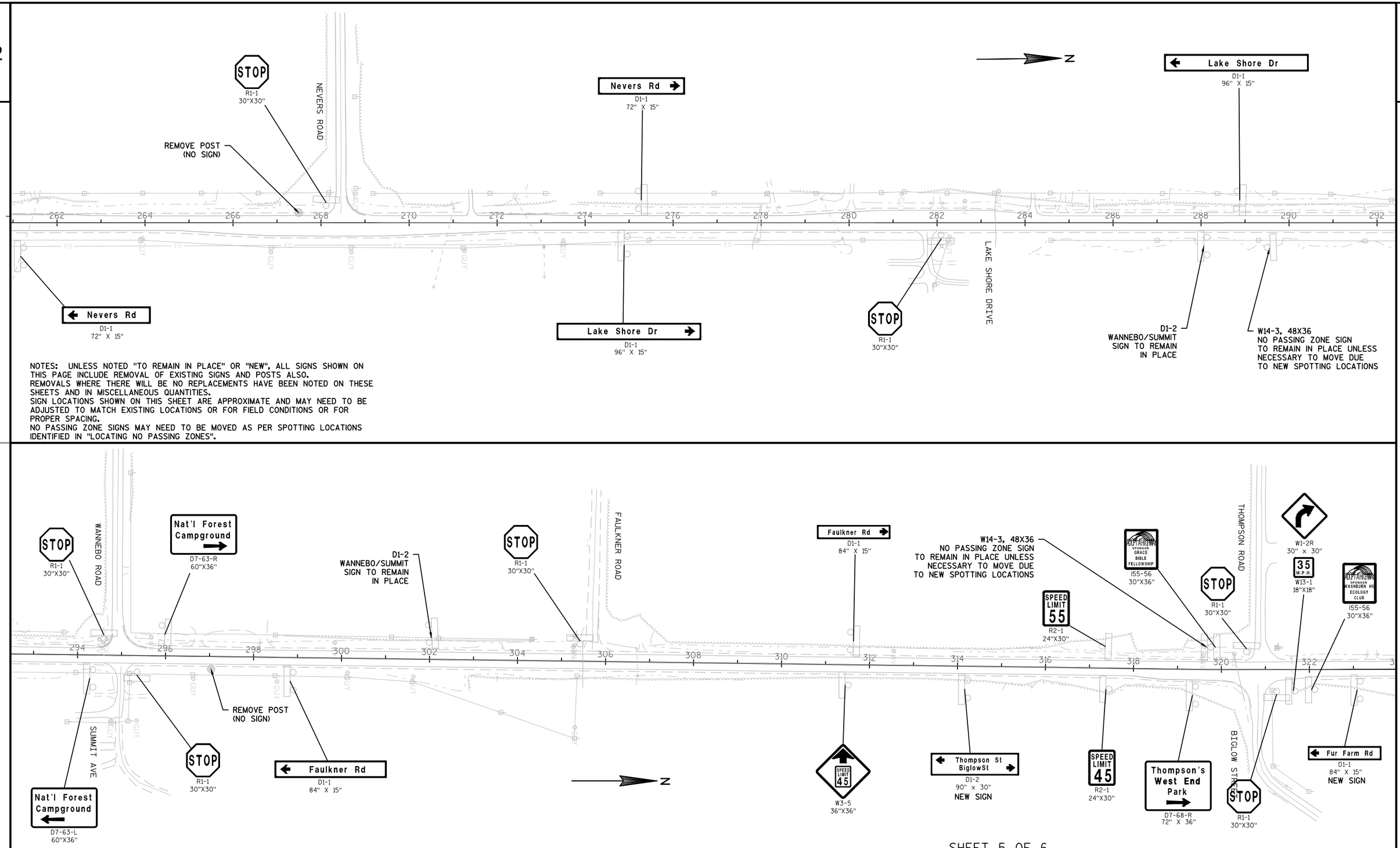
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SIGN LOCATIONS SHOWN ON THIS SHEET ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED TO MATCH EXISTING LOCATIONS OR FOR FIELD CONDITIONS OR FOR PROPER SPACING.
NO PASSING ZONE SIGNS MAY NEED TO BE MOVED AS PER SPOTTING LOCATIONS IDENTIFIED IN "LOCATING NO PASSING ZONES".



SHEET 4 OF 6

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS: PERMANENT SIGNING	SHEET	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\SHEETSOTHER\023201_PS.DWG PLOT DATE : 1/27/2015 8:08 AM PLOT BY : BJKR PLOT NAME : PLOT SCALE : 1" = 200'_XREF

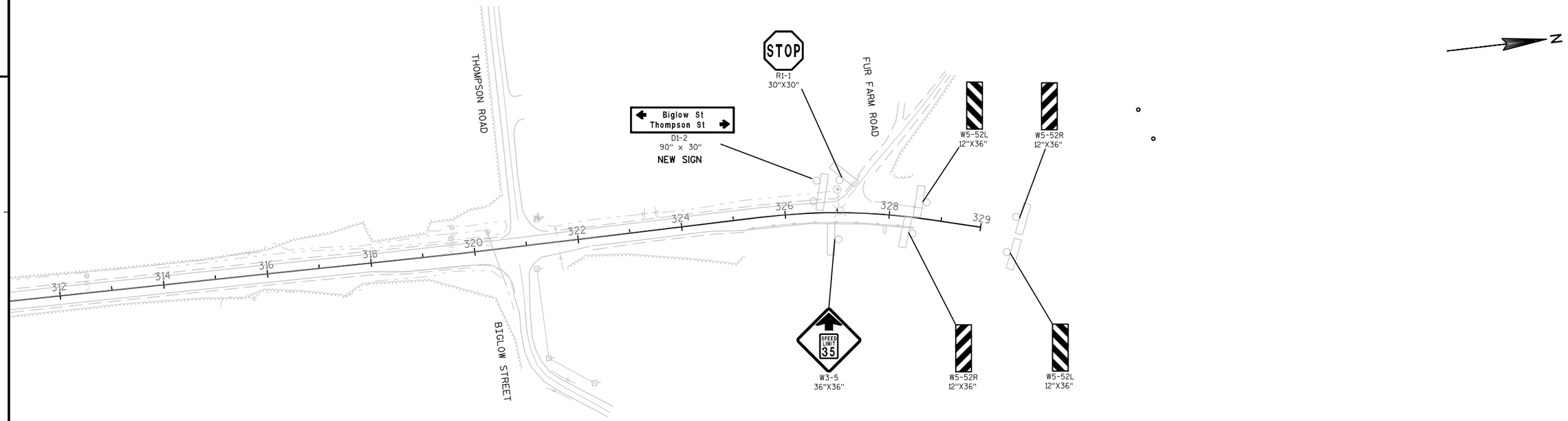


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SHEET 5 OF 6

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS: PERMANENT SIGNING	SHEET	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\SHEETSOTHER\023201_PS.DWG PLOT DATE : 1/27/2015 8:09 AM PLOT BY : BJKR PLOT NAME : PLOT SCALE : 1" = 200'_XREF
WISDOT/CADDS SHEET 44



NOTES: UNLESS NOTED "TO REMAIN IN PLACE" OR "NEW", ALL SIGNS SHOWN ON THIS PAGE INCLUDE REMOVAL OF EXISTING SIGNS AND POSTS ALSO.
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SHEET 6 OF 6

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS: PERMANENT SIGNING	SHEET 31	E

DATE 18FEB15 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	8160-00-70 QUANTITY
0030	202.0105	Roadside Clearing	STA	102.000	102.000
0050	204.0100	Removing Pavement	SY	33.000	33.000
0060	204.0115	Removing Asphaltic Surface Butt Joints	SY	451.000	451.000
0070	204.0120	Removing Asphaltic Surface Milling	SY	140,768.000	140,768.000
0080	204.0150	Removing Curb & Gutter	LF	286.000	286.000
0130	205.9015.S	Grading Shaping and Finishing Intersection (location) 01. PE 256+75 Lt	LS	1.000	1.000
0140	208.0100	Borrow	CY	2,000.000	2,000.000
0160	213.0100	Finishing Roadway (project) 01. 8160-00-70	EACH	1.000	1.000
0180	305.0110	Base Aggregate Dense 3/4-Inch	TON	10,668.000	10,668.000
0200	305.0500	Shaping Shoulders	STA	319.000	319.000
0220	440.4410.S	Incentive IRI Ride	DOL	26,487.000	26,487.000
0230	455.0605	Tack Coat	GAL	16,319.000	16,319.000
0240	465.0105	Asphaltic Surface	TON	2,357.000	2,357.000
0250	465.0110	Asphaltic Surface Patching	TON	1,600.000	1,600.000
0260	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	204.000	204.000
0270	465.0425	Asphaltic Shoulder Rumble Strips 2-Lane Rural	LF	58,998.000	58,998.000
0280	465.0475	Asphalt Center Line Rumble Strips 2-Lane Rural	LF	25,296.000	25,296.000
0290	520.0118	Culvert Pipe Class III 18-Inch	LF	48.000	48.000
0520	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	286.000	286.000
0530	606.0200	Riprap Medium	CY	34.000	34.000
0570	614.0010	Barrier System Grading Shaping Finishing	EACH	20.000	20.000
0580	614.0920	Salvaged Rail	LF	2,554.000	2,554.000
0590	614.2300	MGS Guardrail 3	LF	750.000	750.000
0600	614.2330	MGS Guardrail 3 K	LF	1,300.000	1,300.000
0610	614.2500	MGS Thrie Beam Transition	LF	313.000	313.000
0620	614.2610	MGS Guardrail Terminal EAT	EACH	20.000	20.000
0630	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8160-00-70	EACH	1.000	1.000
0650	619.1000	Mobilization	EACH	0.850	0.850
0680	628.1104	Erosion Bales	EACH	50.000	50.000
0690	628.1504	Silt Fence	LF	5,830.000	5,830.000
0700	628.1520	Silt Fence Maintenance	LF	5,830.000	5,830.000
0710	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0720	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0740	628.2027	Erosion Mat Class II Type C	SY	5,234.000	5,234.000
0820	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	132.000	132.000
0830	637.2210	Signs Type II Reflective H	SF	602.000	602.000
0840	637.2230	Signs Type II Reflective F	SF	111.000	111.000
0850	638.2102	Moving Signs Type II	EACH	14.000	14.000
0860	638.2602	Removing Signs Type II	EACH	78.000	78.000
0870	638.3000	Removing Small Sign Supports	EACH	115.000	115.000
0880	642.5201	Field Office Type C	EACH	1.000	1.000
0890	643.0200	Traffic Control Surveillance and Maintenance (project) 01. 8160-00-70	DAY	48.000	48.000
0910	643.0300	Traffic Control Drums	DAY	200.000	200.000
0920	643.0420	Traffic Control Barricades Type III	DAY	50.000	50.000
0930	643.0715	Traffic Control Warning Lights Type C	DAY	250.000	250.000
0940	643.0900	Traffic Control Signs	DAY	1,056.000	1,056.000
0960	645.0120	Geotextile Fabric Type HR	SY	103.000	103.000

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DATE 18FEB15 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	8160-00-70 QUANTITY
0980	646.0106	Pavement Marking Epoxy 4-Inch	LF	103,962.000	103,962.000
0990	646.0126	Pavement Marking Epoxy 8-Inch	LF	650.000	650.000
1000	648.0100	Locating No-Passing Zones	MI	6.000	6.000
1010	649.0200	Temporary Pavement Marking Reflective Paint 4-Inch	LF	109,398.000	109,398.000
1040	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	286.000	286.000
1050	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
1060	650.8000	Construction Staking Resurfacing Reference	LF	32,208.000	32,208.000
1070	650.9910	Construction Staking Supplemental Control (project) 01. 8160-00-70	LS	1.000	1.000
1100	690.0150	Sawing Asphalt	LF	522.000	522.000
1120	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	2,000.000
1130	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	630.000	630.000
1150	SPV.0090	Special 02. Concrete Curb And Gutter Cure And Seal Treatment	LF	286.000	286.000
1160	SPV.0105	Special 01. Milling And Removing Temporary Wedge Joint	LS	1.000	1.000
1170	SPV.0105	Special 02. Prepare Foundation For Asphaltic Paving, Special	LS	1.000	1.000
1180	SPV.0105	Special 03. Material Vehicle Transfer	LS	1.000	1.000
1190	SPV.0170	Special 01. Reheating Hma Pavment Longitudinal Joints Special	STA	319.000	319.000
1200	SPV.0180	Special 01. Removing Asphaltic Surface 6-Foot Milling, Special	SY	14,000.000	14,000.000
1210	SPV.0195	Special 01. Hma Pavement Type E-3 Special	TON	21,606.000	21,606.000
1220	SPV.0195	Special 02. Hma Pavement Type Sma Special	TON	9,067.000	9,067.000
1230	SPV.0195	Special 03. Sma Pavement Compaction Acceptance	TON	9,067.000	9,067.000

ROADSIDE CLEARING

CATEGORY	STATION	TO	STATION	LOCATION	202.0105 STA	DIST FROM CL
0010	61+00	-	64+00	LT	3	45'
0010	64+00	-	70+00	LT & RT	6	45'
0010	70+00	-	74+00	LT	4	45'
0010	80+00	-	84+00	RT	4	45'
0010	90+00	-	95+00	RT	5	45'
0010	97+00	-	103+00	RT*	6	45'
0010	117+00	-	120+00	RT	3	45'
0010	155+00	-	157+00	RT	2	45'
0010	158+00	-	159+00	RT	1	45'
0010	214+00	-	230+00	LT	16	55'
0010	247+50	-	249+59	LT	2	60'
0010	252+00	-	253+00	LT	1	60'
0010	257+00	-	263+00	LT	6	65'
0010	266+00	-	267+00	LT	1	65'
0010	270+00	-	274+00	LT	4	65'
0010	274+00		278+00	LT	4	45'
0010	283+00	-	294+00	LT	11	65'
0010	299+00	-	303+00	LT	4	45'
0010	302+00	-	309+00	LT & RT	7	45' LT, 55' RT
0010	309+00	-	316+00	LT & RT	7	100' LT, 55' RT
0010	316+00	-	319+00	LT & RT	3	55'
0010	321+50	-	323+50	RT	2	45'
				TOTAL 0010	102	

*FOR CULVERT WORK, EXTEND CLEARING LIMITS AT 102+65 - 102+95 RT TO 50'

REMOVING PAVEMENT

CATEGORY	STATION	LOC	204.0100 SY	REMARKS
0010	13+00	LT	33	CONCRETE RUMBLE PAD
		TOTAL 0010	33	

REMOVING ASPHALTIC SURFACE BUTT JOINTS

CATEGORY	STATION	LOCATION	204.0115 SY
0010	8+00	CL	189
0010	27+54.6	SR Lt, Cherryville Rd	8
0010	29+50	CL, Whittlesey Creek	22
0010	30+32	CL, Whittlesey Creek	22
0010	54+78.8	SR Lt, Ondossagon Rd	8
0010	78+93.7	SR Rt, Mission Springs Rd	8
0010	84+76.8	SR Rt, Birch Grove Rd	8
0010	84+83.4	SR Lt, Nolander Rd	8
0010	112+73	CL, Boyd Creek	22
0010	112+95	CL, Boyd Creek	22
0010	199+75.7	SR Rt, Bono Creek Rd	8
0010	211+75.7	SR Lt, Wedal Rd	8
0010	222+77.5	SR Rt, Olsen Rd	8
0010	233+32.2	SR Rt, Lake Shore Drive	8
0010	242+06.8	SR Lt, Engoe Rd	8
0010	252+24.5	SR Rt, Lake Shore Drive	8
0010	268+44.1	Sr Lt, Nevers Rd	8
0010	281+76.9	SR Rt, Lake Shore Drive	8
0010	204+90.4	SR Lt, Wannebo Rd	8
0010	204+99.2	SR Rt, Summit Ave	8
0010	305+70.0	SR Lt, Faulkner Rd	8
0010	320+83.0	SR Rt, Biglow Street	8
0010	320+89.6	SR Lt, Thompson Rd	8
0010	327+18.8	SR Lt, Fur Farm Rd	8
0010	328+36	CL, Thompson Creek	22
		TOTAL 0010	451

3

REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	STATION	TO	STATION	LOC	204.0120 SY	REMARKS
0010	8+00	-	29+50	ML	8122	
0010	27+55			SR	412	Cherryville Road
0010	30+32	-	51+00	ML	7812	
0010	51+00	-	55+00	ML	2044	Bypass lane inc.
0010	54+79			SR	325	Ondossagon Road
0010	55+00	-	60+00	ML	2944	Rt turn and bypass lane inc.
0010	60+00	-	112+73	ML	19920	
0010	78+94			SR	141	Mission Springs Road
0010	112+95	-	121+00	ML	3041	
0010	120+50	-	182+00	ML	31433	Passing lane inc.
0010	182+00	-	185+60	ML	1360	
0010	184+77			SR	211	Birch Grove Road
0010	184+83			SR	599	Nolander Road
0010	185+60	-	187+60	ML	911	Rt turn lane inc.
0010	187+60	-	208+30	ML	7820	
0010	199+76			SR	223	Bono Creek Road
0010	208+30	-	216+30	ML	4089	Bypass lane inc.
0010	211+76			SR	273	Wedal Road
0010	216+30	-	220+94	ML	1753	
0010	221+98	-	249+50	ML	10396	
0010	222+78			SR	388	Olsen Road
0010	233+32			SR	61	Lake Shore Drive
0010	242+07			SR	372	Engoe Road
0010	249+50	-	251+80	ML	1048	Right turn lane inc.
0010	251+80	-	264+80	ML	4911	
0010	252+24			SR	191	Lake Shore Drive
0010	264+80	-	272+40	ML	3884	Bypass lane inc.
0010	268+44			SR	258	Nevers Road
0010	272+40	-	278+70	ML	2380	
0010	278+70	-	284+50	ML	2964	Bypass lane inc.
0010	281+77			SR	90	Lake Shore Drive
0010	284+50	-	318+00	ML	12656	
0010	294+90			SR	240	Wannebo Road
0010	294+99			SR	120	Summit Avenue
0010	305+70			SR	163	Faulkner Road
0010	318+00	-	320+20	ML	1002	Right turn lane inc.
0010	320+20	-	328+56	ML	3158	
0010	320+83			SR	620	Biglow Street
0010	320+90			SR	278	Thompson Road
0010	327+19			SR	152	Fur Farm Road
0010	*SHOULDERS			ML	2000	
				TOTAL 0010	140768	

*NOTE: FOR LOCATIONS ON SHOULDERS WHERE REAMINING PAVEMENT IS LESS THAN 2". EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD

REMOVING CURB & GUTTER

CATEGORY	STATION	LOC	204.0150 LF	REMARKS
0010	54+50	LT	50	ONDOSSAGON RD
0010	55+00	LT	80	ONDOSSAGON RD
0010	241+70	LT	70	ENGOE ROAD
0010	242+50	LT	86	ENGOE ROAD
		TOTAL 0010	286	

SALVAGED RAIL

CATEGORY	STATION	TO	STATION	LOC	614.0920 LF	REMARKS
0010	29+00	-	29+70	LT	70	WHITTLESEY CREEK
0010	29+00	-	29+70	RT	70	WHITTLESEY CREEK
0010	30+10	-	30+80	LT	70	WHITTLESEY CREEK
0010	30+10	-	30+80	RT	70	WHITTLESEY CREEK
0010	112+00	-	112+70	LT	70	BOYD CREEK
0010	112+00	-	112+70	RT	70	BOYD CREEK
0010	113+00	-	113+70	LT	70	BOYD CREEK
0010	113+00	-	113+70	RT	70	BOYD CREEK
0010	203+80	-	210+08	LT	628	BONO CREEK
0010	203+84	-	210+66	RT	682	BONO CREEK
0010	253+80	-	256+40	LT	260	GULLEY @ CULV INLET
0010	260+60	-	262+94	LT	234	GULLEY @ CULV INLET
0010	271+66	-	273+56	LT	190	GULLEY @ CULV INLET
			TOTAL 0010		2554	

3

BARRIER SYSTEM GRADING SHAPING FINISHING

CAT	STATION	TO	STATION	LOCATION	614.0010 EACH	REMARKS
0010	27+47		28+92	LT & RT	2	WHITTLESEY CREEK
0010	30+90		32+35	LT & RT	2	WHITTLESEY CREEK
0010	89+48		90+92	LT	1	EMBANKMENT
0010	92+74		94+18	LT	1	EMBANKMENT
0010	110+50		111+95	LT & RT	2	BOYD CREEK
0010	113+73		115+18	LT & RT	2	BOYD CREEK
0010	201+64		203+10	LT	1	BONO CREEK
0010	201+97		203+42	RT	1	BONO CREEK
0010	210+04		211+49	LT	1	BONO CREEK
0010	210+60		212+06	RT	1	BONO CREEK
0010	252+58		254+03	LT	1	GULLEY AT CULV INLET
0010	256+34		257+79	LT	1	GULLEY AT CULV INLET
0010	259+38		260+82	LT	1	GULLEY AT CULV INLET
0010	263+01		264+46	LT	1	GULLEY AT CULV INLET
0010	270+53		271+98	LT	1	GULLEY AT CULV INLET
0010	273+66		275+12	LT	1	GULLEY AT CULV INLET
			TOTAL 0010		20	

STATION	TO	STATION	LOC	*FILL CY	*CUT CY	*FERTILIZER TYPE B CWT	*SEED NO. 10 LB	*TOPSOIL SY	*MULCH TYPE B SY	REMARKS
27+47		28+92	LT & RT	124	0	0.23	5.0	369	400	WHITTLESEY CREEK
30+90		32+35	LT & RT	54	0	0.19	4.0	294	350	WHITTLESEY CREEK
89+48		94+19	LT	375	0	0.44	9.4	696	700	EMBANKMENT
110+50		111+95	LT & RT	59	0	0.23	5.0	372	400	BOYD CREEK
113+73		115+18	LT & RT	140	0	0.33	7.1	526	550	BOYD CREEK
201+64		212+06	LT & RT	224	0	0.83	17.7	1315	1350	BONO CREEK
252+58		257+79	LT	198	0	0.37	8.0	591	650	GULLEY AT CULV INLET
259+38		264+46	LT	238	0	0.31	6.7	495	550	GULLEY AT CULV INLET
270+53		275+12	LT	100	10	0.28	5.9	438	450	GULLEY AT CULV INLET
			TOTAL	1510	10	3.21	68.8	5097	5400	

*NOTE: THESE QUANTITIES ARE INCLUDED FOR BIDDING PURPOSES ONLY AND ARE PAID FOR UNDER THE GRADING SHAPING & FINISHING FOR BARRIER TERMINALS BID ITEM.

BORROW

CATEGORY	STATION	208.0100 CY	REMARKS
0010	Misc Areas	2000	For use in BG, C&G Replacement or Intersection locations where there is insufficient suitable cut material.
	TOTAL 0010	2000	

GRADING SHAPING & FINISHING INTERSECTION (PE STA 256+75 LT)

CATEGORY	STATION LOC	205.9015.S LS	REMARKS
0010	256+75 LT	1	DRIVEWAY
	TOTAL 0010	1	

STATION	LOC	^FILL CY	^CUT CY	^FERT TYPE B CWT	^SEED NO. 10 LB	^TOPSOIL OR SALV SY	^MULCH TYPE B SY
256+75	LT	60	12	0.07	1.5	100	110

^NOTE: THESE QUANTITIES ARE INCLUDED FOR BIDDING PURPOSES ONLY AND ARE PAID FOR UNDER THE GRADING SHAPING & FINISHING FOR INTERSECTION (PE STA 256+75 LT)

BASE AGGREGATE DENSE 3/4-INCH

CATEGORY	STATION	TO	STATION	305.0110 TON	REMARKS
0010	8+00	-	328+56	8900	SHLDs
0010				400	SIDE ROADS
0010				200	DRIVEWAYS
0010				1100	BG AREAS
0010	13+00		LT	4	RUMBLE REMOVAL
0010	54+50		LT	11	C&G replacement
0010	55+00		LT	18	C&G replacement
0010	241+70		LT	16	C&G replacement
0010	242+50		LT	19	C&G replacement
			TOTAL 0010	10,668	

3

SHAPING SHOULDERS

CATEGORY	STATION		STATION	LOCATION	305.0500 STA
0010	8+00	-	29+70	ML	22
0010	30+12	-	112+73	ML	83
0010	112+95	-	220+94	ML	108
0010	221+98	-	328+56	ML	107
				TOTAL 0010	319

INCENTIVE IRI RIDE

CATEGORY	STATION		STATION	LOC	440.4410.S DOL	REMARKS
0010	8+00	-	29+70	ML	1643.94	NB & SB LANES
0010	30+12	-	112+73	ML	6258.33	NB & SB LANES
0010	112+95	-	220+94	ML	8181.29	NB & SB LANES
0010	120+50		182+00	ML	2329.55	PASSING LANE
0010	221+98	-	328+56	ML	8074.24	NB & SB LANES
				TOTAL 0010	26,487	

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

CATEGORY	STATION	LOC	465.0120 TON	APPROX WIDTH (FT)
0010	21+96	L	9	12.6
0010	70+15	R	7	10.7
0010	75+38	L	24	34.4
0010	76+66	R	7	10
0010	125+10	R	8	12
0010	145+30	L	13	18
0010	146+48	R	8	11.4
0010	150+40	R	11	16
0010	150+76	R	6	8
0010	157+52	R	7	10
0010	176+42	R	7	10.5
0010	180+60	R	9	12.5
0010	189+70	R	8	12
0010	198+12	R	10	14
0010	225+70	L	11	16
0010	251+75	L	7	10
0010	256+75	L	40	18
0010	271+44	L	6	8.2
0010	284+18	L	6	9.3
		TOTAL 0010	204	

ASPHALTIC SURFACE PATCHING

CATEGORY	STATION	465.0110 TON	REMARKS
0010	Misc Areas 1	1500	*SEE NOTE BELOW
0010	Misc Areas 2	100	
	TOTAL 0010	1600	

*NOTE: 1 - Wedging and leveling, spot lane failures and edge reapirs; 2 - minor repairs such as filling pot holes, traffic pop-outs and ramping at butt joints.

ASPHALTIC SHOULDER RUMBLE STRIP 2-LANE RURAL

CATEGORY	STATION		STATION	LOC	465.0425 LF
0010	8+00	-	26+00	LT	1800
0010	8+00	-	29+50	RT	2150
0010	28+25	-	29+50	LT	125
0010	30+32	-	53+25	LT	2293
0010	30+32	-	78+00	RT	4768
0010	59+50	-	74+00	LT	1450
0010	76+75	-	112+73	LT	3598
0010	80+00	-	112+73	RT	3273
0010	112+95	-	183+00	LT	7005
0010	112+95	-	184+25	RT	7130
0010	185+75		199+25	RT	1350
0010	187+50		210+75	LT	2325
0010	200+50		223+50	RT	2300
0010	212+50		240+00	LT	2750
0010	224+75		233+00	RT	825
0010	234+00		249+50	RT	1550
0010	243+50		267+50	LT	2400
0010	254+00		281+00	RT	2700
0010	269+25		294+00	LT	2475
0010	282+50		294+50	RT	1200
0010	295+75		304+75	LT	900
0010	295+75		318+00	RT	2225
0010	306+50		320+00	LT	1350
0010	321+50		326+25	LT	475
0010	322+75		328+56	RT	581
			TOTAL 0010		58,998

CATEGORY	STATION	TO	STATION	LOC	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	SPV.0195.01 LOWER LAY; ALL LANES & SHLDS HMA PAVEMENT TYPE E-3 SPECIAL TON	SPV.0195.01 UPPER LAY; AUX LANES & SHLDS HMA PAVEMENT TYPE E-3 SPECIAL TON	SPV.0195.02 UPPER LAY; THRU & PASS LANES HMA PAVEMENT TYPE SMA SPECIAL TON	SPV.0195.03 SMA PAVT COMPACTION ACCEPTANCE TON	REMARKS
0010	8+00	-	29+50	ML	975		1015	232	557	557	
0010	27+55			SR	37			69			Cherryville Road
0010	30+32	-	51+00	ML	937		977	223	536	536	
0010	51+00	-	55+00	ML	181		256	95	104	104	Bypass lane inc in E-3
0010	54+79			SR	29			54			Ondossagon Road
0010	55+00	-	60+00	ML	227		368	157	130	130	Rt turn & bypass lane inc in E-3
0010	60+00	-	112+73	ML	2390		2490	570	1367	1367	
0010	78+94			SR	13			34			Mission Springs Road inc tapers
0010	112+95	-	121+00	ML	365		380	87	209	209	
0010	120+50	-	182+00	ML	2788		3929	664	2392	2392	Passing lane inc in E-3 & SMA
0010	182+00	-	185+60	ML	163		170	39	93	93	
0010	184+77			SR	19			45			Birch Grove Road inc tapers
0010	184+83			SR	54			100			Nolander Road
0010	185+60	-	187+60	ML	91		114	37	52	52	Rt turn lane inc in E-3
0010	187+60	-	208+30	ML	938		978	224	537	537	
0010	199+76			SR	20			47			Bono Creek Road inc tapers
0010	208+30	-	216+30	ML	491		511	190	207	207	Bypass lane inc in E-3
0010	211+76			SR	25			56			Wedal Road inc tapers
0010	216+30	-	220+94	ML	210		219	50	120	120	
0010	221+98	-	249+50	ML	1248		1300	297	713	713	
0010	223+78			SR	35			75			Olsen Road inc tapers
0010	233+32			SR	5			20			Lake Shore Drive inc tapers
0010	242+07			SR	33			62			Engoe Road
0010	249+50	-	251+80	ML	104		131	42	60	60	Right turn lane inc in E-3
0010	251+80	-	264+80	ML	589		614	140	337	337	
0010	252+24			SR	17			32			Lake Shore Drive
0010	264+80	-	272+40	ML	345		486	181	197	197	Bypass lane inc in E-3
0010	268+44			SR	23			53			Nevers Road inc tapers
0010	272+40	-	278+70	ML	286		298	68	163	163	
0010	278+70	-	284+50	ML	263		371	138	150	150	Bypass lane inc in E-3
0010	281+77			SR	8			25			Lake Shore Drive inc tapers
0010	284+50	-	318+00	ML	1519		1582	362	869	869	
0010	294+90			SR	22			50			Wannebo Road inc tapers
0010	294+99			SR	11			30			Summit Avenue inc tapers
0010	305+70			SR	15			37			Faulkner Road inc tapers
0010	318+00	-	320+20	ML	100		125	40	57	57	Right turn lane inc in E-3
0010	320+20	-	328+56	ML	379		395	90	217	217	
0010	320+83			SR	56			103			Biglow Street
0010	320+90			SR	25			56			Thompson Road inc tapers
0010	327+19			SR	14			25			Fur Farm Road
0010	8+00	-	328+56	ML	1,269	2333					6' wide mill areas
0010	54+50			LT		1					C&G replacement-lower layer
0010	55+00			LT		2					C&G replacement-lower layer
0010	241+70			LT		2					C&G replacement-lower layer
0010	242+50			LT		2					C&G replacement-lower layer
0010	13+00			ML		17					Rumble pad replacement
			TOTAL 0010		16,319	2357	21,606		9067	9067	

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ASPHALT CENTER LINE RUMBLE STRIP 2-LANE RURAL

CATEGORY	STATION	TO	STATION	465.0475 LF	REMARKS
0010	8+00	-	25+60	1760	SR Lt, Cherryville Rd & Whittlesey Creek Bridge
0010	30+57	-	52+80	2223	SR Lt, Ondossagon Rd
0010	56+80	-	74+20	1740	CE Lt
0010	76+80	-	77+00	20	SR Rt, Mission Springs Rd
0010	81+00	-	112+48	3148	Boyd Creek Bridge
0010	113+20		182+80	6960	SR Lt & Rt, Nolander Rd & Birch Grove Rd
0010	186+80	-	197+90	1110	SR Rt, Bono Creek Rd
0010	201+90	-	209+80	790	SR Lt, Wedal Rd
0010	213+80	-	220+90	710	SR Rt, Olsen Rd
0010	224+90	-	231+25	635	SR Rt, Lake Shore Drive
0010	235+25	-	240+00	475	SR Lt, Engoe Rd
0010	244+00	-	250+20	620	SR Rt, Lake Shore Drive
0010	254+20	-	266+40	1220	SR Lt, Nevers Rd
0010	270+40	-	279+80	940	SR Rt, Lake Shore Drive
0010	283+80	-	293+00	920	SR Lt & Rt, Wannebo Rd & Summit Ave
0010	297+00	-	303+80	680	SR Lt, Faulkner Rd
0010	307+80	-	318+90	1110	SR Lt & Rt, Thompson Rd & Biglow St
0010	322+90	-	325+25	235	SR Lt, Fur Farm Rd
		TOTAL 0010		25,296	

CULVERT PIPE CLASS III 18-INCH

CATEGORY	STATION	LOC	520.0118 LF	MIN THICKNESS STEEL	MIN THICKNESS ALUMINUM
0010	256+75	PE LT	48	0.064	0.060
		TOTAL 0010	48		

NOTES: SET SOUTH FLOW LINE ELEVATION AT 637.2 AND NORTH AT 636.7; DUE TO CORROSIVE SOILS, IF A STEEL PIPE IS CHOSEN, IT MUST BE ALUMINUM COATED; AN ALUMINUM PIPE IS ALSO AN ALLOWABLE ALTERNATIVE.

RIPRAP MEDIUM

CATEGORY	STATION	TO	STATION	LOC	606.0200 CY	REMARKS
0010	90+70	-	91+20	LT	13	AVG WIDTH = 4.5'
0010	256+00	-	256+34	LT	9	AVG WIDTH = 5'
0010	270+80	-	271+25	LT	13	AVG WIDTH = 5'
			TOTAL 0010		34	

CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D

CATEGORY	STATION	LOC	601.0557 LF	REMARKS
0010	54+50	LT	50	ONDOSSAGON RD
0010	55+00	LT	80	ONDOSSAGON RD
0010	241+70	LT	70	ENGOE ROAD
0010	242+50	LT	86	ENGOE ROAD
	TOTAL 0010		286	

STATION	LOC	*FILL CY	*FERT TYPE B CWT	*SEED NO. 10 LB	*TOPSOIL OR SALV SY	*MULCH TYPE B SY
54+50	LT	2	0.03	0.6	17	44
55+00	LT	3	0.04	1.0	27	71
241+70	LT	3	0.04	0.8	23	62
242+50	LT	3	0.05	1.0	29	76
			0.16	3.4	95	254

*NOTE: THESE QUANTITIES ARE INCLUDED FOR BIDDING PURPOSES ONLY AND ARE PAID FOR UNDER THIS CONCRETE CURB & GUTTER ITEM

MGS GUARDRAIL 3

CATEGORY	STATION	TO	STATION	LOCATION	614.2300 LF	REMARKS
0010	29+20.32	-	29+32.82	LT & RT	25	Whittlesey Creek
0010	30+49.70	-	30+62.20	LT & RT	25	Whittlesey Creek
0010	112+23.01	-	112+35.51	LT & RT	25	Boyd Creek
0010	113+32.61	-	113+45.11	LT & RT	25	Boyd Creek
0010	203+37.63	-	205+50.13	LT	212.5	Bono Creek
0010	203+70.00	-	204+20.00	RT	50	Bono Creek
0010	209+45.00		210+32.50	RT	87.5	Bono Creek
0010	209+50.13		209+75.13	LT	25	Bono Creek
0010	261+10.63	-	262+73.13	LT	162.5	Gulley @ culv inlet
0010	272+25.88	-	273+38.38	LT	112.5	Gulley @ culv inlet
			TOTAL 0010		750.0	

MGS GUARDRAIL 3 K

CATEGORY	STATION	TO	STATION	LOC	614.2330 LF	REMARKS
0010	91+00.63	-	93+00.63	LT	200	EMBANKMENT
0010	204+20.00	-	209+45.00	RT	525	BONO CREEK
0010	205+50.13	-	209+50.13	LT	400	BONO CREEK
0010	254+31.13	-	256+06.13	LT	175	GULLEY @ CULV INLET
			TOTAL 0010		1300	

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MGS THRIE BEAM TRANSITION

CATEGORY	STATION	TO	STATION	LOCATION	614.2500 LF	REMARKS
0010	29+32.82	-	29+71.90	LT & RT	78.17	Whittlesey Creek
0010	30+10.61	-	30+49.70	LT & RT	78.17	Whittlesey Creek
0010	112+35.51	-	112+74.60	LT & RT	78.17	Boyd Creek
0010	112+93.53	-	113+32.61	LT & RT	78.17	Boyd Creek
				TOTAL 0010	313	

MGS GUARDRAIL TERMINAL EAT

CATEGORY	STATION	TO	STATION	LOC	614.2610 EACH	REMARKS
0010	28+67.19	-	29+20.32	LT & RT	2	Whittlesey Creek
0010	30+62.20	-	31+15.32	LT & RT	2	Whittlesey Creek
0010	90+47.50		91+00.63	LT	1	Embankment
0010	93+00.63		93+53.75	LT	1	Embankment
0010	111+69.89	-	112+23.01	LT & RT	2	Boyd Creek
0010	113+45.11	-	113+98.24	LT & RT	2	Boyd Creek
0010	202+84.50	-	203+37.63	LT	1	Bono Creek
0010	203+16.88	-	203+70.00	RT	1	Bono Creek
0010	209+75.13	-	210+28.25	LT	1	Bono Creek
0010	210+32.50	-	210+85.63	RT	1	Bono Creek
0010	253+78.00	-	254+31.13	LT	1	Gulley @ culv inlet
0010	256+06.13	-	256+59.25	LT	1	Gulley @ culv inlet
0010	260+57.50	-	261+10.63	LT	1	Gulley @ culv inlet
0010	262+73.13	-	263+26.25	LT	1	Gulley @ culv inlet
0010	271+72.75	-	272+25.88	LT	1	Gulley @ culv inlet
0010	273+38.38	-	273+91.50	LT	1	Gulley @ culv inlet
				TOTAL 0010	20	

EROSION BALES

CATEGORY	LOCATION	628.1104 EACH
0010	UNDISTRIBUTED	50
	TOTAL 0010	50

SILT FENCE

CATEGORY	STATION	TO	STATION	LOC	SILT FENCE 628.1504 LF	SILT FENCE MAINT 628.1520 LF
0010	28+28	-	29+68	LT	170	170
0010	28+30	-	29+68	RT	170	170
0010	30+15	-	31+82	LT	180	180
0010	30+15	-	31+82	RT	190	190
0010	89+52	-	94+58	LT	530	530
0010	110+60	-	112+72	LT	240	240
0010	110+60	-	112+72	RT	240	240
0010	113+00	-	115+16	LT	240	240
0010	113+00	-	115+16	RT	240	240
0010	202+00	-	211+10	RT	930	930
0010	202+45	-	211+54	LT	920	920
0010	211+30	-	212+15	RT	90	90
0010	252+64	-	256+60	LT	420	420
0010	259+35	-	264+35	LT	540	540
0010	270+70	-	271+36	LT	110	110
0010	271+46	-	274+84	LT	370	370
0010	UNDISTRIBUTED				250	250
				TOTAL 0010	5830	5830

EROSION MAT CLASS II TYPE C

CATEGORY	STATION	TO	STATION	LOC	628.2027 SY
0010	28+28	-	29+68	LT	180
0010	28+30	-	29+68	RT	186
0010	30+15	-	31+82	LT	138
0010	30+15	-	31+82	RT	153
0010	89+52	-	94+58	LT	684
0010	110+60		112+72	LT	171
0010	110+60	-	112+72	RT	187
0010	113+00		115+16	LT	260
0010	113+00		115+16	RT	251
0010	202+00		211+10	RT	551
0010	202+45		211+54	LT	729
0010	252+64		256+60	LT	582
0010	259+35		264+35	LT	485
0010	270+70		271+36	LT	113
0010	271+46		274+84	LT	314
0010	UNDISTRIBUTED				250
			TOTAL 0010		5234

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CAT.	STA.	NB LOC	CODE	CODE DESCRIPTION	MESSAGE LINE 1	LINE 2	LINE 3	SHEETING	W	H	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	19+45	Rt	R4-51-A	Passing Lane Ahead	2 Miles			H	36	48	1	12.00					
0010	22+15	Rt	D1-1	Crossroad Name	[LA] Cherryville Rd			H	96	15	2	10.00			1	2	
0010	23+55	Rt	I55-56	Adopt-A-Highway [Sponsor]	Hickman	Chiropractic	Clinic	H	30	36	1	7.50			1	1	
0010	29+70	Lt	W5-52-L	Clearance Striper Down Right				F	12	36	1		3.00		1	1	
0010	29+70	Rt	W5-52-R	Clearance Striper Down Left				F	12	36	1		3.00		1	1	
0010	38+40	Lt		No Passing Zone							1			1		1	
0010	47+90	Rt	D1-1	Crossroad Name	[LA] East Ondossagon Rd			H	126	15	2	13.13			1	1	
0010	73+90	Rt	D1-1	One Destination (Arrow)	Mission Springs Road [RA]			H	120	15	2	12.50					New sign
0010	79+55	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	80+95	Rt	I-55-56	Adopt-A-Highway [Sponsor]	Ashland Rotary Club	District 588		H	30	36	1	7.50			1	1	
0010	93+55	Lt		No Passing Zone							1			1		1	
0010	93+55	Rt	J4-1	M1-6 State Route Marker	13			H	24	36	1	6.00			1	1	
0010	93+55	Rt		M3-1 NORTH Cardinal Route Marker				H									
0010	96+00	Rt	R4-51	Passing Lane Ahead	1/2 Mile			H	36	48	1	12.00					
0010	111+60	Lt		No Passing Zone							1			1		1	
0010	112+70	Lt	W5-52-L	Clearance Striper Down Right				F	12	36	1		3.00		1	1	
0010	112+70	Rt	W5-52-R	Clearance Striper Down Left				F	12	36	1		3.00		1	1	
0010	120+85	Rt	R4-3	Slower Traffic Keep Right				H	24	30	1	5.00			1	1	
0010	164+10	Rt	W9-1-R	Right Lane Ends				F	36	36	1		9.00		1	1	
0010	169+10	Lt	W4-2-R	Lane Reduction Transition Symbol - RIGHT				F	36	36	1		9.00		1	1	
0010	169+10	Rt	W4-2-R	Lane Reduction Transition Symbol - RIGHT				F	36	36	1		9.00		1	1	
0010	178+50	Rt	D1-2	Crossroad Name	[LA] Nolander Road	Birch Grove Road [RA]		H	96	30	2	20.00			1	2	
0010	185+30	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	186+10	Rt	I-55-56	Adopt-A-Highway [Sponsor]	Grace	Bible	Fellowship	H	30	36	1	7.50			1	1	
0010	194+65	Rt	D1-1	One Destination (Arrow)	Bono Creek Road [RA]			H	96	15	2	10.00					New sign
0010	195+20	Rt	W11-6	Snowmobile Crossing Symbol				F	30	30	1		6.25		1	1	
0010	200+25	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	204+95	Rt	D1-1	Crossroad Name	[LA] Wedal Rd			H	66	15	2	6.88			1	1	
0010	207+80	Rt		Lake or River Name - Stencil Message	Bono Creek										1	1	
0010	216+15	Rt	D1-1	Crossroad Name	Olsen Rd [RA]			H	66	15	2	6.88			1	2	
0010	224+25	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	226+50	Lt		No Passing Zone							1			1		1	
0010	226+50	Rt	D1-1	Crossroad Name	Lake Shore Dr [RA]			H	96	15	2	10.00			1	2	
0010	233+70	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	236+10	Rt	D1-1	Crossroad Name	[LA] Engoe Rd			H	72	15	2	7.50			1	2	
0010	243+50	Rt	D7-62	Road To Nat'l Forest Campground [1] Mile				H	60	42	2	17.50			1	2	
0010	252+75	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	259+75	Lt		No Passing Zone							1			1		1	
0010	261+20	Rt	D1-1	Crossroad Name	[LA] Nevers Rd			H	72	15	2	7.50			1	2	
0010	274+90	Rt	D1-1	Crossroad Name	Lakeshore Dr [RA]			H	96	15	2	10.00			1	2	
0010	282+10	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	294+30	Rt	D7-63-L	Nat'l Forest Campground/Arrow Left				H	60	36	2	15.00			1	2	
0010	295+35	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	295+05	Rt														1	
0010	298+80	Rt	D1-1	Crossroad Name	[LA] Faulkner Rd			H	84	15	2	8.75			1	2	
0010	311+50	Rt	W3-5	Speed Limit 45 Ahead [Arrow]				F	36	36	1		9.00		1	1	
0010	314+15	Rt	D1-2	Two Destinations (Arrows)	[LA] Thompson Street	Bigelow Street [RA]		H	90	30	2	18.75					New sign
0010	317+45	Rt	R2-1	Speed Limit _ MPH	45			H	24	30	1	5.00			1	1	
0010	319+40	Rt	D7-68-R	[Name County Park]/Arrow Right	Thompsons	West End [RA]	Park	H	72	36	2	18.00			1	2	
0010	319+80	Lt		No Passing Zone							1			1			
0010	321+25	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	321+70	Rt	W1-2-R	Right Curve				F	36	36	1		9.00		1	1	
0010	321+70	Rt	W13-1	Advisory Speed Plate (Yellow Back)	35			F	18	18			2.25				
0010	322+10	Rt	I-55-56	Adopt-A-Highway [Sponsor]	Washburn HS	Ecology Club		H	30	36	1	7.50			1	1	
0010	323+10	Rt	D1-1	One Destination (Arrow)	[LA] Fur Farm Road			H	84	15	2	8.75					New sign
0010	327+05	Rt	W3-5	Speed Limit _ Ahead [Arrow]	35			F	36	36	1		9.00		1	1	
0010	328+50	Lt	W5-52-L	Clearance Striper Down Right				F	12	36	1		3.00		1	1	
0010	328+50	Rt	W5-52-R	Clearance Striper Down Left				F	12	36	1		3.00		1	1	

CAT.	STA.	SB LOC	CODE	CODE DESC	MESSAGE LINE 1	MESSAGE LINE 2	MESSAGE LINE 3	SHEETING	W	H	634.0616 POSTS WOOD 4X6X16 EACH	637.2210 SIGNS REFL TYPE H SF	637.2230 SIGNS REFL TYPE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REM SIGN TYPE II EACH	638.3000 REM SMALL SIGN SUPPORTS EACH	REMARKS
0010	330+	Lt	W5-52-L	Clearance Striper Down Right				F	12	36	1		3.00		1	1	
0010	330+	Rt	W5-52-R	Clearance Striper Down Left				F	12	36	1		3.00		1	1	
0010	327+05	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	326+55	Rt	D1-2	Two Destinations (Arrows)	[LA] Bigelow Street	Thompson Street [RA]		H	90	30	2	18.75					New sign
0010	320+55	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	319+80	Rt	I-55-56	Adopt-A-Highway [Sponsor]	Grace	Bible	Fellowship	H	30	36	1	7.50			1	1	
0010	317+45	Rt	R2-1	Speed Limit _ MPH	55			H	24	30	1	5.00			1	1	
0010	311+50	Rt	D1-1	Crossroad Name	Faulkner Rd [RA]			H	84	15	2	8.75			1	2	
0010	305+50	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	295+90	Rt	D7-63-R	Nat'l Forest Campground/Arrow Right				H	60	36	2	15.00			1	2	
0010	294+50	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	289+55	Lt		No Passing Zone							1			1		1	
0010	288+90	Rt	D1-1	Crossroad Name	[LA] Lake Shore Dr			H	96	15	2	10.00			1	2	
0010	275+25	Rt	D1-1	Crossroad Name	Nevers Rd [RA]			H	72	15	2	7.50			1	2	
0010	268+20	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	267+55	Rt														1	
0010	254+60	Lt		No Passing Zone							1			1		1	
0010	249+10	Rt	D1-1	Crossroad Name	Engoe Rd [RA]			H	72	15	2	7.50			1	2	
0010	241+60	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	239+35	Rt	S3-1	School Bus Stop Ahead				F	36	36	1		9.00		1	1	
0010	237+15	Rt	D1-1	Crossroad Name	[LA] Lake Shore Dr			H	96	15	2	10.00			1	2	
0010	230+10	Lt		No Passing Zone							1			1		1	
0010	230+10	Rt	D1-1	Crossroad Name	[LA] Olsen Rd			H	66	15	2	6.88			1	2	
0010	218+80	Rt	W11-6	Snowmobile Crossing Symbol				F	30	30	1		6.25		1	1	
0010	217+20	Rt	D1-1	Crossroad Name	Wedal Rd [RA]			H	66	15	2	6.88			1	2	
0010	211+35	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	206+50	Rt	D1-1	One Destination (Arrow)	[LA] Bono Creek Rd			H	96	15	2	10.00					New sign
0010	191+55	Rt	D1-1	Crossroad Name	[LA] Birch Grove Rd	Nolander Rd [RA]		H	96	30	2	20.00			1	2	
0010	184+30	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	183+55	Rt	I-55-56	Adopt-A-Highway [Sponsor]	Ashland Rotary Club	District 588		H	30	36	1	7.50			1	1	
0010	181+50	Rt	R3-72	Oncoming Traffic Uses Center Lane				H	30	36	1	7.50					
0010	179+50	Rt	R4-53	Do Not Pass When Oncoming Traffic in Either Lane				H	54	54	2	20.25			1	2	
0010	133+45	Lt		No Passing Zone							1			1		1	
0010	113+85	Lt		No Passing Zone							1			1		1	
0010	113+00	Lt	W5-52-L	Clearance Striper Down Right				F	12	36	1		3.00		1	1	
0010	113+00	Rt	W5-52-R	Clearance Striper Down Left				F	12	36	1		3.00		1	1	
0010	90+80	Lt		No Passing Zone							1			1		1	
0010	86+10	Rt	D1-1	One Destination (Arrow)	[LA] Mission Springs Road			H	120	15	2	12.50			1		New sign
0010	78+65	Rt	I-55-56	Adopt-A-Highway [Sponsor]	Hickman	Chiropractic	Clinic	H	30	36	1	7.50			1	1	
0010	67+20	Lt		No Passing Zone							1			1		1	
0010	60+85	Rt	D1-1	Crossroad Name	East Ondossagon Rd [RA]			H	126	15	2	13.13			1	2	
0010	54+35	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	34+65	Rt	D1-1	Crossroad Name	Cherryville Rd [RA]			H	96	15	2	10.00			1	2	
0010	30+10	Lt	W5-52-L	Clearance Striper Down Right				F	12	36	1		3.00		1	1	
0010	30+10	Rt	W5-52-R	Clearance Striper Down Left				F	12	36	1		3.00		1	1	
0010	27+35	Rt	R1-1	Stop				H	30	30	1	6.25			1	1	
0010	19+45	Lt		No Passing Zone							1			1		1	
											132	602	111	14	78	115	

3

TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE 8160-00-70

CATEGORY	LOCATION	643.0200 DAY
0010	PROJECT AREA	48
	TOTAL 0010	48

TRAFFIC CONTROL ITEMS

CATEGORY	STATION	643.0300 DRUMS DAY	643.0420 BARRICADES TYPE III DAY	643.0715 WARN LIGHTS TYPE C DAY
0010	UNDISTRIBUTED	200	50	250
	TOTAL 0010	200	50	250

TRAFFIC CONTROL SIGNS

CATEGORY	LOCATION	643.0900 DAY	REMARKS
0010	Each end of Project on ML	480	10 SIGNS - ADV WARNING*
0010	Cherryville Rd	48	1 SIGN - SR ADV WARNING
0010	E Ondossagon Rd	48	1 SIGN - SR ADV WARNING
0010	Nolander Rd	48	1 SIGN - SR ADV WARNING
0010	Wedal Road	48	1 SIGN - SR ADV WARNING
0010	Engoe Road	48	1 SIGN - SR ADV WARNING
0010	Nevers Rd	48	1 SIGN - SR ADV WARNING
0010	Summit Av	48	1 SIGN - SR ADV WARNING
0010	Wannebo Rd	48	1 SIGN - SR ADV WARNING
0010	Faulkner Road	48	1 SIGN - SR ADV WARNING
0010	Thompson Road	48	1 SIGN - SR ADV WARNING
0010	Biglow Street	48	1 SIGN - SR ADV WARNING
0010	Fur Farm Road	48	1 SIGN - SR ADV WARNING
	TOTAL 0010	1056	

*NOTE: Ensure project advanced warning signing is placed to include tied project 8160-03-61 limits also.

GEOTEXTILE FABRIC TYPE HR

CATEGORY	STATION		TO STATION	LOC	645.0120 SY	REMARKS
0010	90+70	-	91+20	LT	43	AVG WIDTH = 4.5'
0010	256+00	-	256+34	LT	32	AVG WIDTH = 5'
0010	270+90	-	271+20	LT	28	AVG WIDTH = 5'
			TOTAL 0010		103	

PAVEMENT MARKING EPOXY 4-INCH

CATEGORY	STATION		TO STATION	LOCATION	646.0106 YELLOW DASHED LF	YELLOW DBL SOLID LF	YELLOW DASH/SOLID LF	WHITE DASHED LF	WHITE SOLID LF	REMARKS
0010	8+00	-	328+56	LT					30806	EDGELINE
0010	8+00	-	328+56	RT					31331	EDGELINE
0010	8+00	-	13+00	CENTERLINE		1000				
0010	13+00	-	20+00	CENTERLINE			875			
0010	19+00	-	37+50	CENTERLINE	462					
0010	37+50	-	47+00	CENTERLINE			1188			
0010	47+00	-	67+00	CENTERLINE		4000				
0010	53+00	-	56+00					75		
0010	67+00	-	75+00	CENTERLINE			1000			
0010	75+00	-	80+00	CENTERLINE		1000				
0010	80+00	-	91+00	CENTERLINE			1375			
0010	91+00	-	93+50	CENTERLINE	63					
0010	93+50	-	103+50	CENTERLINE			1250			
0010	103+50	-	104+50	CENTERLINE	25					
0010	104+50	-	112+00	CENTERLINE			938			
0010	112+00	-	113+50	CENTERLINE		300				
0010	113+50	-	123+00	CENTERLINE			1188			
0010	123+00	-	133+50	CENTERLINE		2100				
0010	126+00	-	175+00					1225		
0010	133+50	-	179+50	CENTERLINE			5750			
0010	179+50	-	218+00	CENTERLINE		7700				
0010	210+50	-	213+00					63		
0010	218+00	-	226+00	CENTERLINE			1000			
0010	226+00	-	230+00	CENTERLINE		800				
0010	230+00	-	237+00	CENTERLINE			875			
0010	237+00	-	244+00	CENTERLINE		1400				
0010	244+00	-	254+50	CENTERLINE			1313			
0010	254+50	-	261+00	CENTERLINE	163					
0010	261+00	-	272+50	CENTERLINE			1438			
0010	267+00	-	271+00					100		
0010	272+50	-	285+00	CENTERLINE	312					
0010	280+50	-	283+00					63		
0010	285+00	-	289+50	CENTERLINE			563			
0010	289+50	-	319+50	CENTERLINE	750					
0010	319+50	-	324+00	CENTERLINE			563			
0010	324+00	-	328+56	CENTERLINE		912				
				SUBTOTALS	1775	19212	19313	1525	62137	
				TOTAL 0010			103,962			

3

3

PAVEMENT MARKING EPOXY 8-INCH

CATEGORY	STATION	TO	STATION	LOC	646.0126 LF	REMARKS
0010	55+50	-	58+00	LT	250	RIGHT TURN LANE
0010	185+50	-	186+50	LT	100	RIGHT TURN LANE
0010	250+75	-	251+75	RT	100	RIGHT TURN LANE
0010	318+50	-	320+50	RT	200	RIGHT TURN LANE
			TOTAL 0010		650	

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH

NOTE: 1/3 of the quantity given for each location in the table below has been allowed for each surface-- the milled surface, the lower layer and the upper layer.

CATEGORY	STATION	TO	STATION	LOCATION	649.0200 DASHED LF	YELLOW DOUBLE SOLID LF	YELLOW DASHED/SOLID LF
0010	8+00	-	13+00	CENTERLINE		3000	
0010	13+00	-	20+00	CENTERLINE			2268
0010	19+00	-	37+50	CENTERLINE	444		
0010	37+50	-	47+00	CENTERLINE			3078
0010	47+00	-	67+00	CENTERLINE		12000	
0010	67+00	-	75+00	CENTERLINE			2592
0010	75+00	-	80+00	CENTERLINE		3000	
0010	80+00	-	91+00	CENTERLINE			3564
0010	91+00	-	93+50	CENTERLINE	60		
0010	93+50	-	103+50	CENTERLINE			3240
0010	103+50	-	104+50	CENTERLINE	24		
0010	104+50	-	112+00	CENTERLINE			2430
0010	112+00	-	113+50	CENTERLINE		900	
0010	113+50	-	123+00	CENTERLINE			3078
0010	123+00	-	133+50	CENTERLINE		6300	
0010	133+50	-	179+50	CENTERLINE			14904
0010	179+50	-	218+00	CENTERLINE		23100	
0010	218+00	-	226+00	CENTERLINE			2592
0010	226+00	-	230+00	CENTERLINE		2400	
0010	230+00	-	237+00	CENTERLINE			2268
0010	237+00	-	244+00	CENTERLINE		4200	
0010	244+00	-	254+50	CENTERLINE			3402
0010	254+50	-	261+00	CENTERLINE	156		
0010	261+00	-	272+50	CENTERLINE			3726
0010	272+50	-	285+00	CENTERLINE	300		
0010	285+00	-	289+50	CENTERLINE			1458
0010	289+50	-	319+50	CENTERLINE	720		
0010	319+50	-	324+00	CENTERLINE			1458
0010	324+00	-	328+56	CENTERLINE		2736	
				SUBTOTALS	1704	57636	50058
				TOTAL 0010		109,398	

LOCATING NO-PASSING ZONES

CATEGORY	STATION	TO	STATION	LOCATION	648.0100 MI
0010	8+00	-	328+56	ML	6
				TOTAL 0010	6

CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER

CATEGORY	STATION	LOC	650.5500 LF	REMARKS
0010	54+50	LT	50	ONDOSSAGON RD
0010	55+00	LT	80	ONDOSSAGON RD
0010	241+70	LT	70	ENGOE ROAD
0010	242+50	LT	86	ENGOE ROAD
		TOTAL 0010	286	

CONSTRUCTION STAKING PIPE CULVERTS

CATEGORY	STATION	LOC	650.6000 EACH
0010	256+75	PE LT	1
		TOTAL 0010	1

CONSTRUCTION STAKING RESURFACING REFERENCE

CATEGORY	LOCATION	650.8000 LF
0010	PROJECT AREA	32208
	TOTAL 0010	32,208

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CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 8160-00-70

CATEGORY	LOCATION	650.9910 LS
0010	PROJECT AREA	1
	TOTAL 0010	1

SAWING ASPHALT

CATEGORY	STATION	LOC	690.0150 LF	REMARKS
0010	21+96	LT	12.6	PE
0010	54+50	LT	50	C&G
0010	55+00	LT	80	C&G
0010	241+70	LT	70	C&G
0010	242+50	LT	86	C&G
0010	70+15	RT	10.7	PE
0010	75+38	LT	34.4	CE
0010	76+66	RT	10	PE
0010	125+10	RT	12	PE
0010	145+30	LT	18	PE
0010	146+48	RT	11.4	PE
0010	150+40	RT	16	PE
0010	150+76	RT	8	PE
0010	157+52	RT	10	PE
0010	176+42	RT	10.5	PE
0010	180+60	RT	12.5	PE
0010	189+70	RT	12	PE
0010	198+12	RT	14	PE
0010	225+70	LT	16	PE
0010	251+75	LT	10	PE
0010	271+44	LT	8.2	PE
0010	284+18	LT	9.3	PE
	TOTAL 0010		522	

CONCRETE CURB AND GUTTER CURE AND SEAL TREATMENT

CATEGORY	STATION	LOC	SPV.0090.02 LF	REMARKS
0010	54+50	LT	50	ONDOSSAGON RD
0010	55+00	LT	80	ONDOSSAGON RD
0010	241+70	LT	70	ENGOE ROAD
0010	242+50	LT	86	ENGOE ROAD
	TOTAL 0010		286	

REHEATING HMA PAVMENT LONGITUDINAL JOINTS SPECIAL

CATEGORY	STATION TO	STATION	LOC	SPV.0170.01 STA
0010	8+00 -	29+70	ML	22
0010	30+12 -	112+73	ML	83
0010	112+95 -	220+94	ML	108
0010	221+98 -	328+56	ML	107
		TOTAL 0010		319

REMOVING ASPHALTIC SURFACE 6-FOOT MILLING, SPECIAL

CATEGORY	STATION TO	STATION	LOC	SPV.0180.01 SY	REMARKS
0010	8+00 -	328+56	ML	14000	Additional 6' wide mill
		TOTAL 0010		14,000	

PI STA = 10+78.72
Y = 458276.84
X = 799682.64
DELTA = 7°47'16"
D = 4°33'44"
T = 85.48
L = 170.70
R = 1255.90
PC STA = 9+93.23
PT STA = 11+63.94
SE = NC

ML STA 27+54.6 LT
= SR STA 10+00
CHERRYVILLE ROAD
TYPE D INTERSECTION
MATCH EXISTING
BUTT JOINT REQ'D

STA 17+16
EXISTING CULVERT

BP: 7+90.44
PC: 9+93.23
PT: 11+63.94

CHERRYVILLE ROAD

SALVAGE EXISTING GUARDRAIL FROM EACH QUADRANT AT STRUCTURE.
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITIONS AND MGS
GUARDRAIL TERMINAL EATS REQ'D
SEE CONSTRUCTION DETAILS AND CROSS SECTIONS

STH 13
N0° 45' 12.57"E

BEGIN PROJECT 8160-00-70
STA 8+00
BUTT JOINT REQ'D

APPROXIMATELY STA 13+00 RT
REMOVE CONCRETE RUMBLE PAD,
PATCH WITH ASPHALTIC SURFACE
SEE CONSTRUCTION DETAILS

CAUTION
XCEL ENERGY
GAS CROSSING

CAUTION
XCEL ENERGY
GAS CROSSING

STA 37+29
EXISTING CULVERT

EXCEPTION TO NET CL
LENGTH 29+50 - 30+32
EXISTING STRUCTURE TO
REMAIN IN PLACE
BUTT JOINTS REQ'D AT
ENDS OF APPROACH SLABS

ML STA 54+78.8 LT
= SR STA 20+00
ONDOSSAGON ROAD
TYPE B1 MODIFIED INTERSECTION
REPLACE C&G, BOTH QUADRANTS
MATCH EXISTING
BUTT JOINT REQ'D

EAST ONDOSSAGON ROAD

EXISTING RIGHT TURN LANE

PC: 46+08.74
PT: 60+08.45

STA 40+12
EXISTING STRUCTURE

STH 13
N0° 45' 12.57"E

EXISTING BYPASS LANE

STA 48+87
EXISTING CULVERT

STA 45+00
EXISTING CULVERT

STA 58+62
EXISTING CULVERT

STA 62+26
EXISTING CULVERT

STA 67+30
EXISTING CULVERT

SUPERELEVATION TRANSITION TABLE		
	CROSS SLOPE	
	LEFT	RIGHT
STA. 44+55.74	-0.020	-0.020
STA. 45+06.74	0.000	-0.020
STA. 45+57.74	0.020	-0.020
STA. 46+59.74	0.060	-0.060
STA. 59+57.45	0.060	-0.060
STA. 60+59.45	0.020	-0.020
STA. 61+10.45	0.000	-0.020
STA. 61+61.45	-0.020	-0.020

PI STA = 53+41.65
Y = 462539.66
X = 799738.71
DELTA = 41°57'38"
D = 2°59'52"
T = 732.91
L = 1399.71
R = 1911.26
PC STA = 46+08.74
PT STA = 60+08.45
SE = 6%

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	PLAN LAYOUT SHEET 1 OF 6	SHEET E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\SHEETSPLAN\PLANLAYOUT.DWG PLOT DATE : 2/17/2015 11:21 AM PLOT BY : KERBER RIEDL, BARBARPLOT NAME : PLOT SCALE : 1" = 200'_XREF
WISDOT/CADDS SHEET 44

SUPERELEVATION TRANSITION TABLE			
		CROSS SLOPE	
		LEFT	RIGHT
STA.	80+57.78	-0.020	-0.020
STA.	81+08.89	-0.020	0.000
STA.	81+60.00	-0.020	0.020
STA.	82+00.89	-0.036	0.036
STA.	86+49.43	-0.036	0.036
STA.	86+90.32	-0.020	0.020
STA.	87+41.43	-0.020	0.000
STA.	87+92.54	-0.020	-0.020

PI STA = 84+25.53
Y = 464854.12
X = 801875.47
DELTA = 7°37'29"
D = 1°29'43"
T = 255.32
L = 509.88
R = 3831.45
PC STA = 81+70.22
PT STA = 86+80.10
SE = 3.6%

NEW MGS GUARDRAIL 3 K AND MGS GUARDRAIL TERMINAL EATS REQ'D
SEE CONSTRUCTION DETAILS AND CROSS SECTIONS

NORTHERN NATURAL GAS
PIPELINE CROSSING
CAUTION

PC: 81+70.22

PT: 86+80.10

70 STH 13 72 74 N42° 42' 50.21"E 76 78 30+00 80 82 84 86 88 90 92 94 96 N35° 05' 20.91"E 98 100

STA 71+96
EXISTING CULVERT

STA 75+65
EXISTING CULVERT

MISSION SPRINGS ROAD
32+00
33+06

ML STA 78+93.7 RT = SR STA 30+00
MISSION SPRINGS ROAD
PAVE TAPERS TO TYPE C INTERSECTION
PAYMENT FOR PREPARATION TO PAVE
TAPERS IS INCLUDED IN SHAPING SHOULDERS
MATCH EXISTING
BUTT JOINT REQ'D

STA 85+17
EXISTING CULVERT

STA 91+70
EXISTING CULVERT

PI: 106+00.52

BOYD CREEK

SALVAGE EXISTING GUARDRAIL FROM EACH
QUADRANT OF THE STRUCTURE
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITIONS
AND MGS GUARDRAIL TERMINAL EATS REQ'D
SEE CONSTRUCTION DETAILS AND CROSS SECTIONS

PI: 120+48.05

PI: 125+92.88

102 N35° 05' 20.91"E 104 106 STH 13 108 110 112 114 N34° 59' 50.18"E 116 118 120 N34° 03' 38.60"E 122 124 126 128 N34° 32' 31.94"E 130

EXCEPTION TO NET CL LENGTH
STA 112+73 - 112+95
EXISTING STRUCTURE TO REMAIN IN PLACE
BUTT JOINTS REQ'D AT ENDS OF DECK

EXISTING PASSING LANE

STA 102+77
EXISTING CULVERT

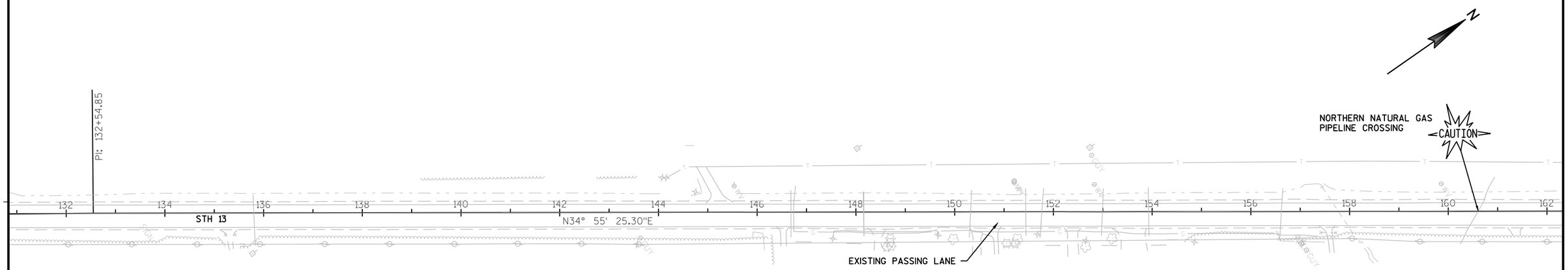
STA 118+27
EXISTING CULVERT

STA 127+30
EXISTING CULVERT

STA 129+92
EXISTING CULVERT

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	PLAN LAYOUT SHEET 2 OF 6	SHEET	E

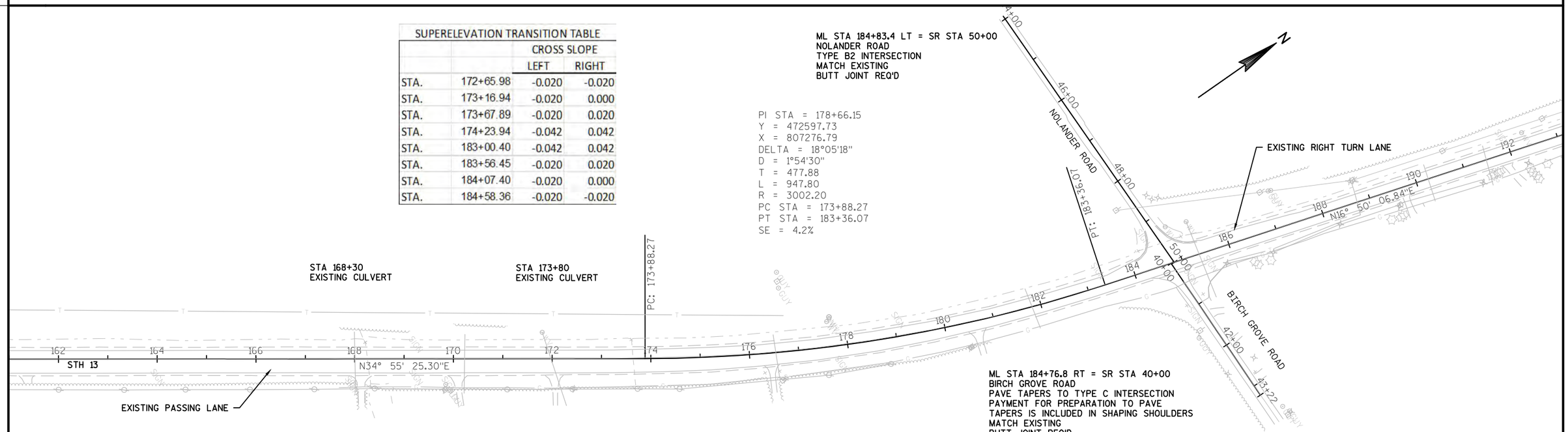
FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\SHEETSPLAN\PLANLAYOUT.DWG PLOT DATE : 2/17/2015 11:21 AM PLOT BY : KERBER RIEDL, BARBARPLOT NAME : PLOT SCALE : 1" = 200'_XREF
WISDOT/CADDS SHEET 44



SUPERELEVATION TRANSITION TABLE			
		CROSS SLOPE	
		LEFT	RIGHT
STA.	172+65.98	-0.020	-0.020
STA.	173+16.94	-0.020	0.000
STA.	173+67.89	-0.020	0.020
STA.	174+23.94	-0.042	0.042
STA.	183+00.40	-0.042	0.042
STA.	183+56.45	-0.020	0.020
STA.	184+07.40	-0.020	0.000
STA.	184+58.36	-0.020	-0.020

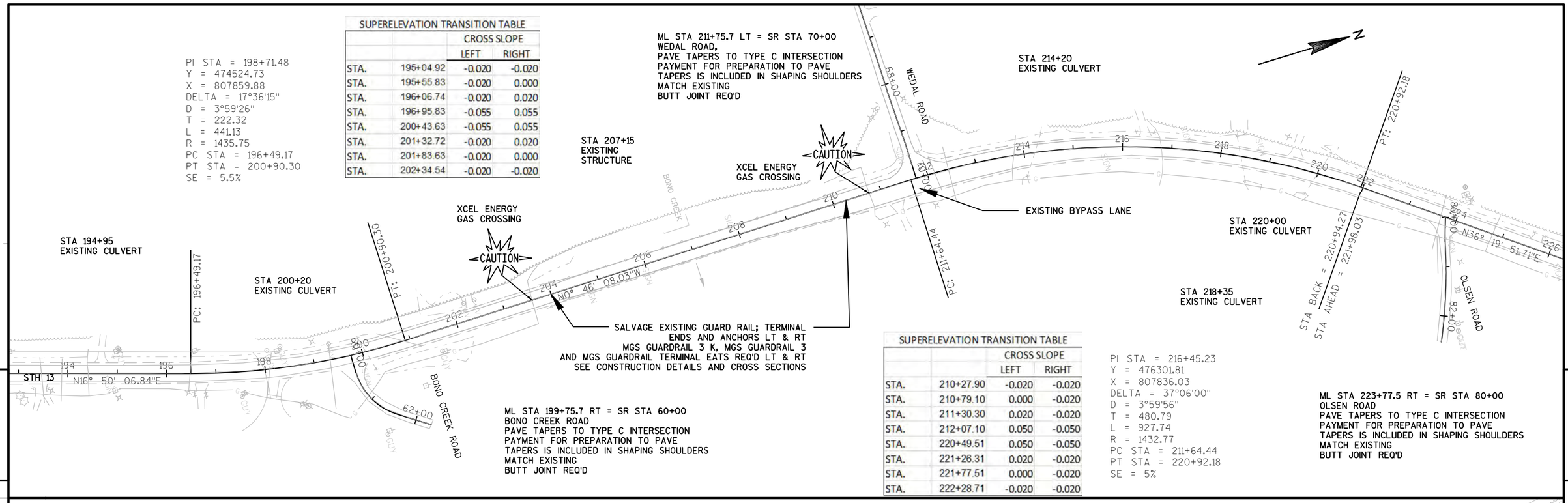
ML STA 184+83.4 LT = SR STA 50+00
NOLANDER ROAD
TYPE B2 INTERSECTION
MATCH EXISTING
BUTT JOINT REQ'D

PI STA = 178+66.15
Y = 472597.73
X = 807276.79
DELTA = 18°05'18"
D = 1°54'30"
T = 477.88
L = 947.80
R = 3002.20
PC STA = 173+88.27
PT STA = 183+36.07
SE = 4.2%



ML STA 184+76.8 RT = SR STA 40+00
BIRCH GROVE ROAD
PAVE TAPERS TO TYPE C INTERSECTION
PAYMENT FOR PREPARATION TO PAVE
TAPERS IS INCLUDED IN SHAPING SHOULDERS
MATCH EXISTING
BUTT JOINT REQ'D

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	PLAN LAYOUT SHEET 3 OF 6	SHEET 48	E



PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	PLAN LAYOUT SHEET 4 OF 6	SHEET 49	E

ML STA 268+44 LT = SR STA 120+00
NEVERS ROAD
TYPE D MODIFIED INTERSECTION
PAVE SOUTH TAPER TO TYPE C INTERSECTION
AND NORTH TAPER TO TYPE D INTERSECTION
PAYMENT FOR PREPARATION TO PAVE TAPERS
IS INCLUDED IN SHAPING SHOULDERS
MATCH EXISTING
BUTT JOINT REQ'D

N

115+23
116+00
118+00
120+00
NEVERS ROAD

STA 270+82
EXISTING CULVERT

STA 272+75
EXISTING CULVERT

STA 279+64
EXISTING CULVERT

STA 287+88
EXISTING CULVERT

SALVAGE EXISTING GUARDRAIL AND ANCHORAGES ON LEFT
MGS GUARDRAIL 3 AND MGS GUARDRAIL TERMINAL EATS REQ'D LT
SEE CONSTRUCTION DETAILS AND CROSS SECTIONS

SALVAGE EXISTING GUARDRAIL AND ANCHORAGES ON LEFT
MGS GUARDRAIL 3 AND MGS GUARDRAIL TERMINAL EATS REQ'D LT
SEE CONSTRUCTION DETAILS AND CROSS SECTIONS

EXISTING BYPASS LANE

258 260 262 264 266 268 270 272 274 276 278 280 282 284 286 288

STH 13

N0°43' 59.15"E

EXISTING BYPASS LANE

STA 261+59
EXISTING CULVERT

ML STA 281+76.9 RT = SR STA 130+00
LAKE SHORE DRIVE
PAVE TAPERS TO TYPE C INTERSECTION
PAYMENT FOR PREPARATION TO PAVE
TAPERS IS INCLUDED IN SHAPING SHOULDERS
MATCH EXISTING
BUTT JOINT REQ'D

131+00
132+00
LAKE SHORE DRIVE

5

5

N

ML STA 294+90 LT = SR STA 140+00
WANNEBO ROAD
TYPE D MODIFIED INTERSECTION
PAVE TAPERS TO TYPE D INTERSECTION
PAYMENT FOR PREPARATION TO PAVE
TAPERS IS INCLUDED IN SHAPING SHOULDERS
MATCH EXISTING
BUTT JOINT REQ'D

136+00
138+00
140+00
WANNEBO ROAD

STA 291+71
EXISTING CULVERT

FAULKNER ROAD
158+00
160+00

ML STA 305+70 LT = SR STA 160+00
FAULKNER ROAD
PAVE TAPERS TO TYPE C INTERSECTION
PAYMENT FOR PREPARATION TO PAVE
TAPERS IS INCLUDED IN SHAPING SHOULDERS
MATCH EXISTING
BUTT JOINT REQ'D

PI: 316+00.47
PI: 319+73.62

290 292 294 296 298 300 302 304 306 308 310 312 314 316 318 320

STH 13

N0° 43' 59.15"E

N0° 47' 41.21"E

ML STA 294+99 RT = SR STA 150+00
SUMMIT AVENUE
PAVE TAPERS TO TYPE C INTERSECTION
PAYMENT FOR PREPARATION TO PAVE
TAPERS IS INCLUDED IN SHAPING SHOULDERS
MATCH EXISTING
BUTT JOINT REQ'D

150+00
152+00
SUMMIT AVE

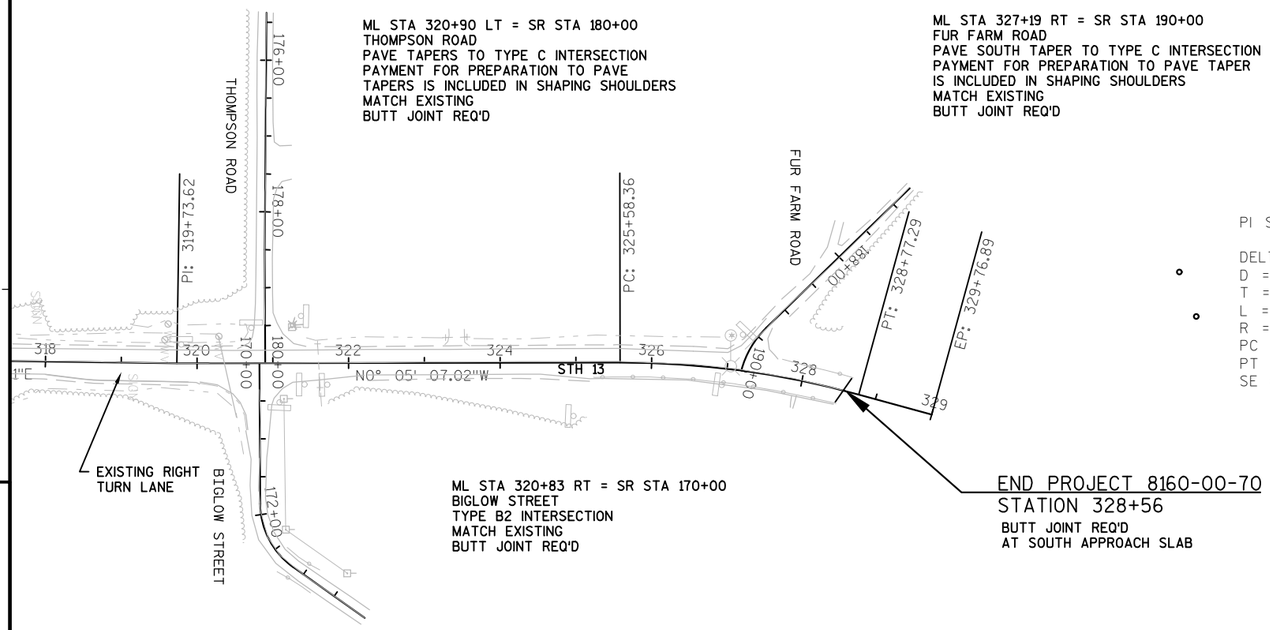
STA 303+63
EXISTING CULVERT

STA 306+74
EXISTING CULVERT

STA 315+73
EXISTING CULVERT

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	PLAN LAYOUT SHEET 5 OF 6	SHEET	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\SHEETSPLAN\PLANLAYOUT.DWG PLOT DATE : 2/17/2015 11:22 AM PLOT BY : KERBER RIEDL, BARBARPLOT NAME : PLOT SCALE : 1" = 200'_XREF
WISDOT/CADDS SHEET 44



PI STA = 336+57.44 BK
= 331+71.28 AHD
DELTA = 91 16'23" RT
D = 5 20'
T = 1099.08'
L = 1712'
R = 1074.3'
PC STA = 325+58.36
PT STA = 342+70.36
SE = 6%

SUPERELEVATION TRANSITION TABLE

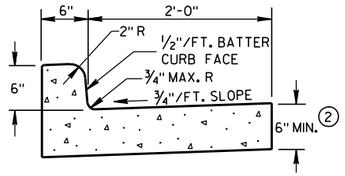
		CROSS SLOPE	
		LEFT	RIGHT
STA.	324+05.36	-0.020	-0.020
STA.	324+56.36	-0.020	0.000
STA.	325+07.36	-0.020	0.020
STA.	326+09.36	-0.060	0.060

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	PLAN LAYOUT SHEET 6 OF 6	SHEET	E

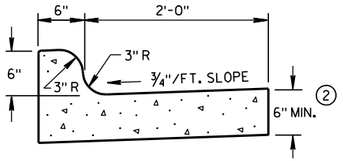
Standard Detail Drawing List

08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E09-06	SILT FENCE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
13A10-01A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B29-01	SAFETY EDGE
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)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	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)
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16C	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C08-16D	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-02A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

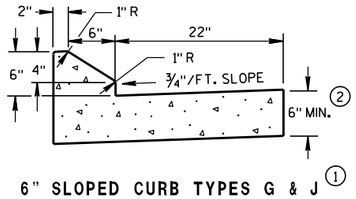
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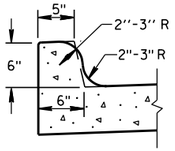
TYPES A & D (1)



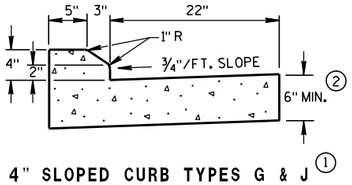
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

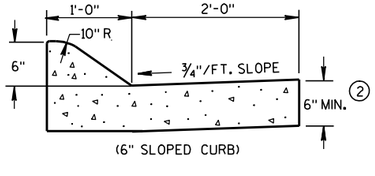


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

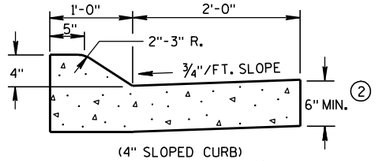


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

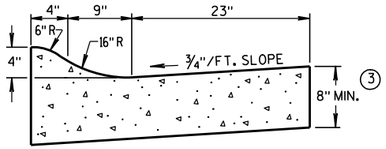


(6" SLOPED CURB)



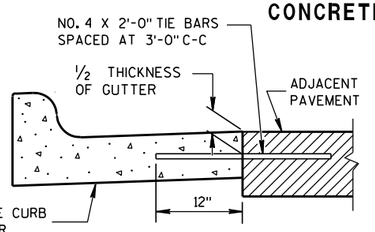
(4" SLOPED CURB)

TYPES A & D (1)

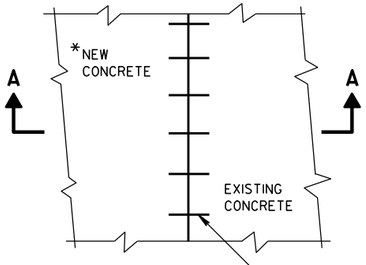


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

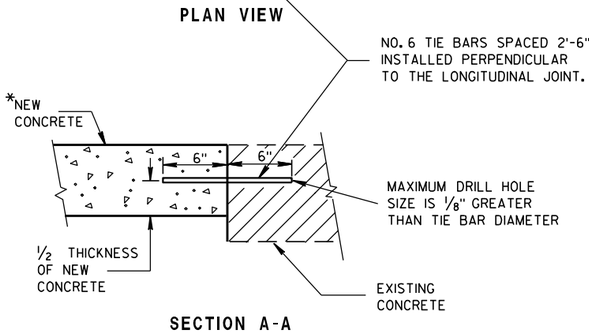


TYPICAL TIE BAR LOCATION (1)



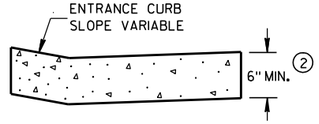
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW



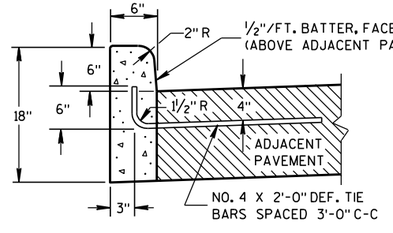
SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



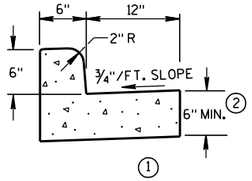
DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)



(1)

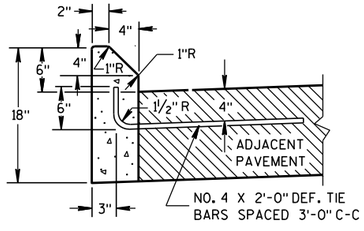
TYPES A & D



(1)

TYPES A & D

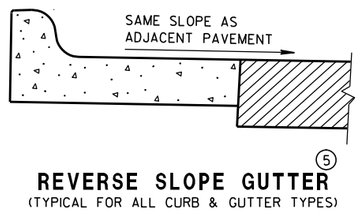
CONCRETE CURB & GUTTER 18"



(1)

TYPES G & J

CONCRETE CURB



(5)

REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

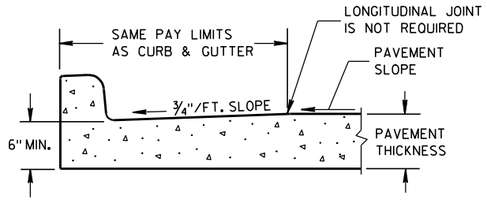
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

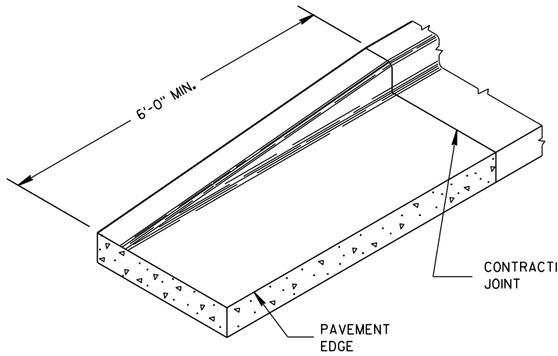
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(5) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

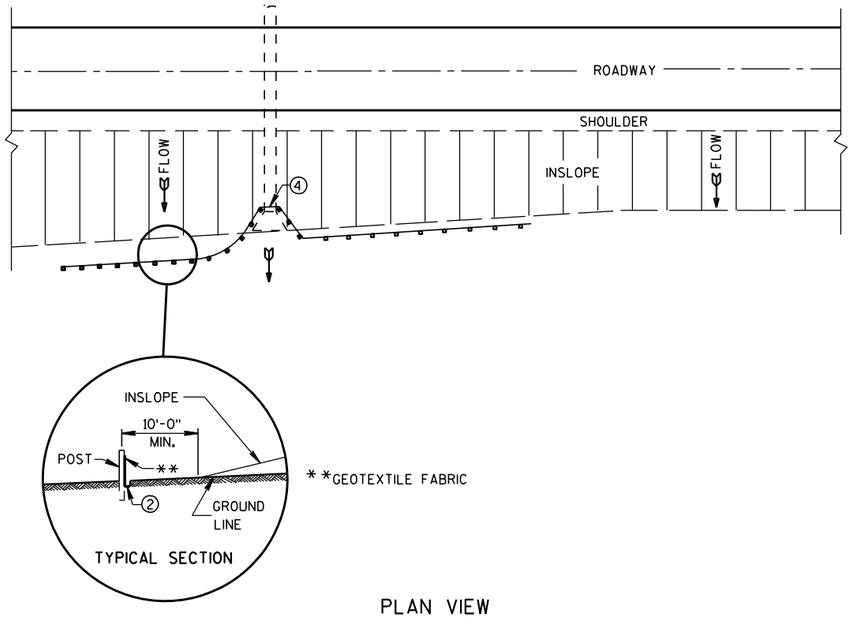
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

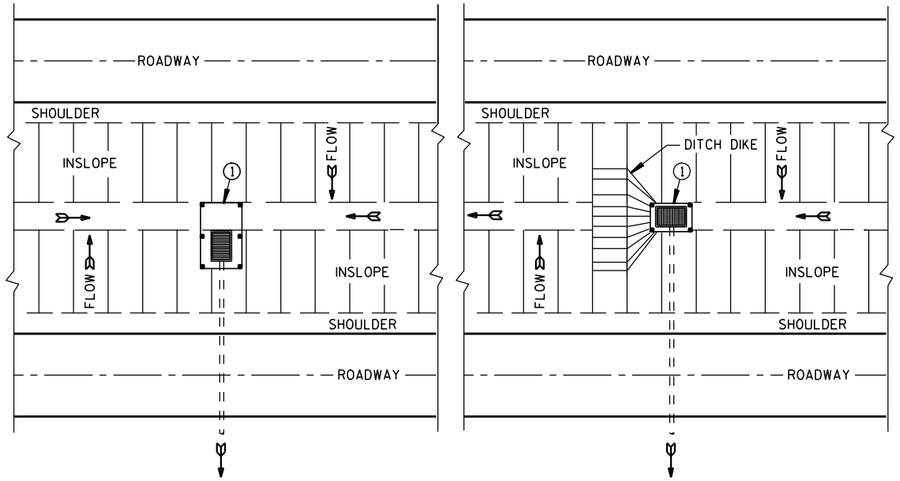
6

S.D.D. 8 D 1-17



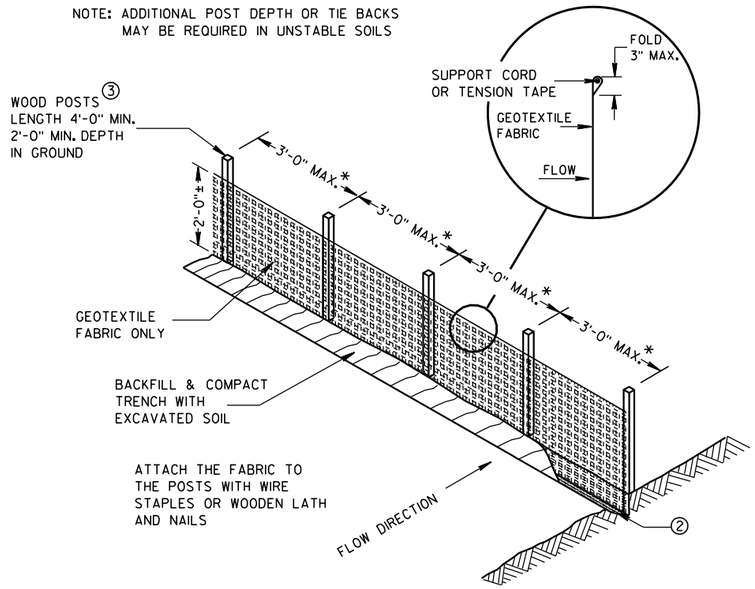
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE

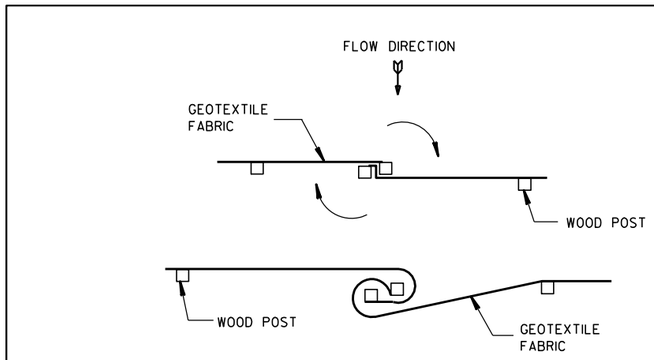


PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



SILT FENCE

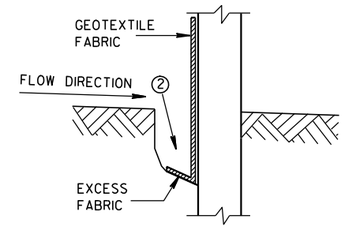


JOINING TWO LENGTHS OF SILT FENCE 5

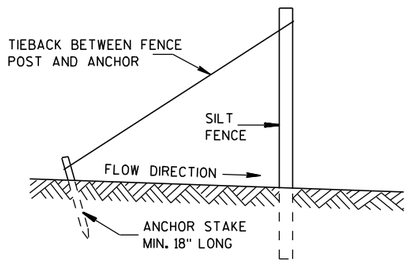
GENERAL NOTES

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

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



TRENCH DETAIL



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

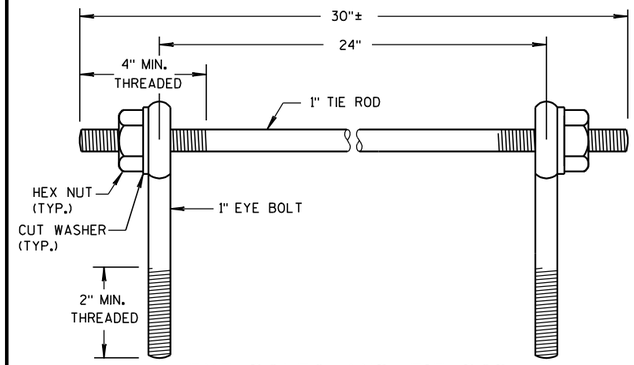
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

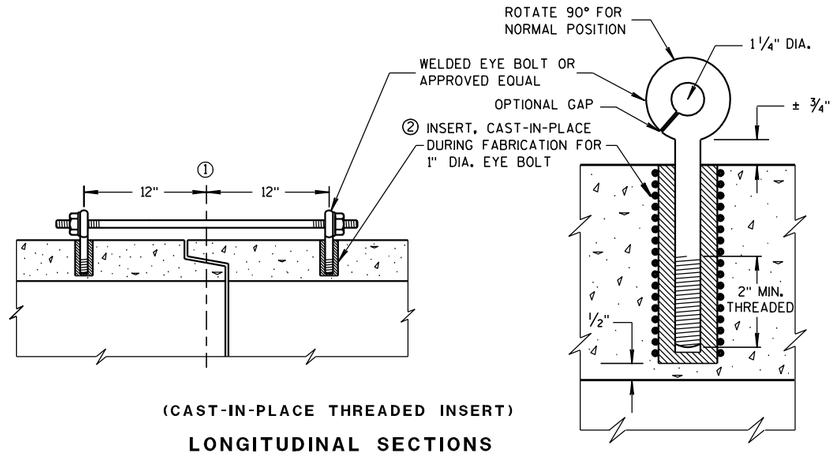
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

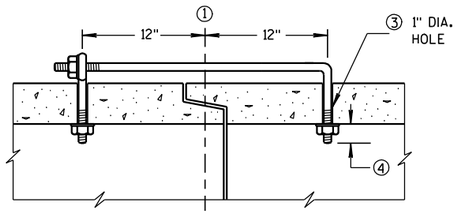
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

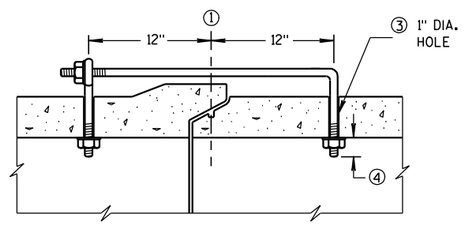
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

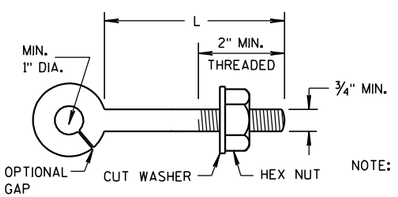


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

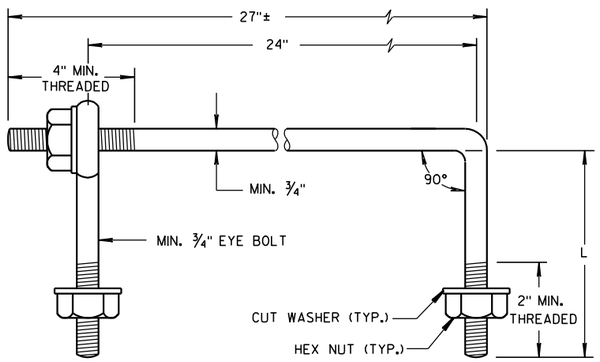
EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

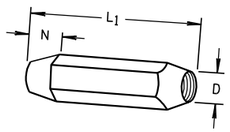
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

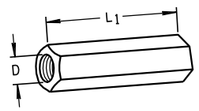
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



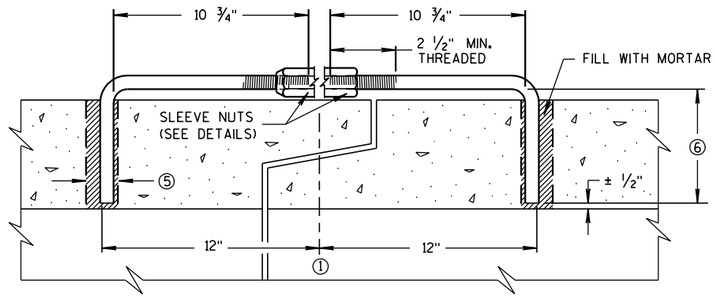
TAPERED



PLAIN

RIGHT AND LEFT THREADS

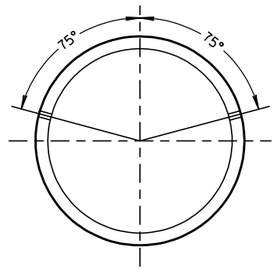
SLEEVE NUTS



LONGITUDINAL SECTION

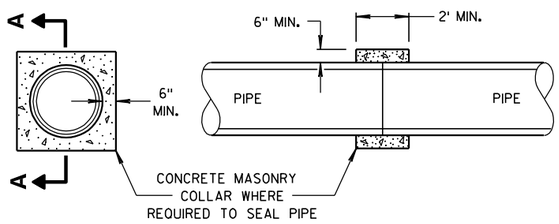
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
55 — 'MENT

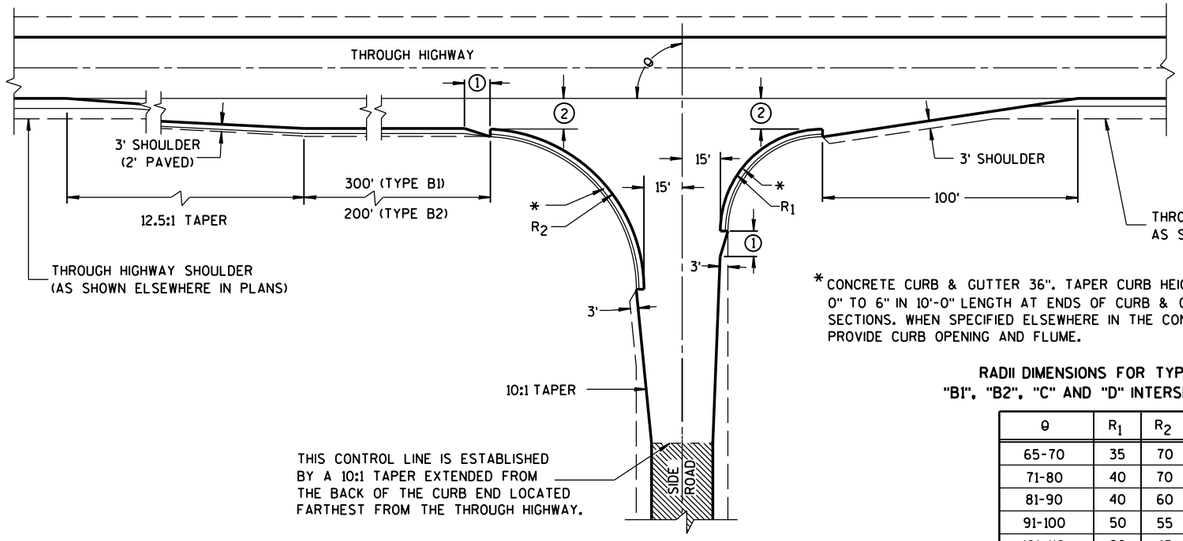
FHWA

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S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7

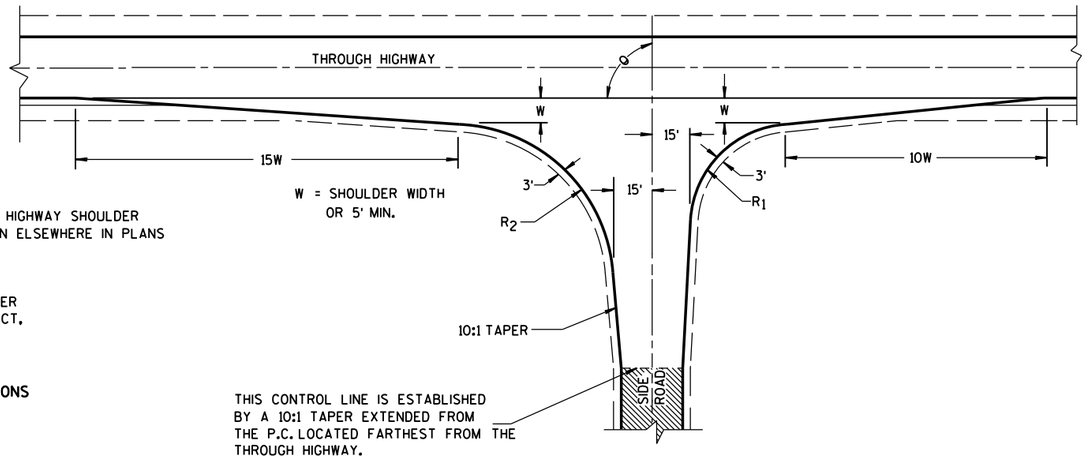


TYPE "B1" AND "B2"

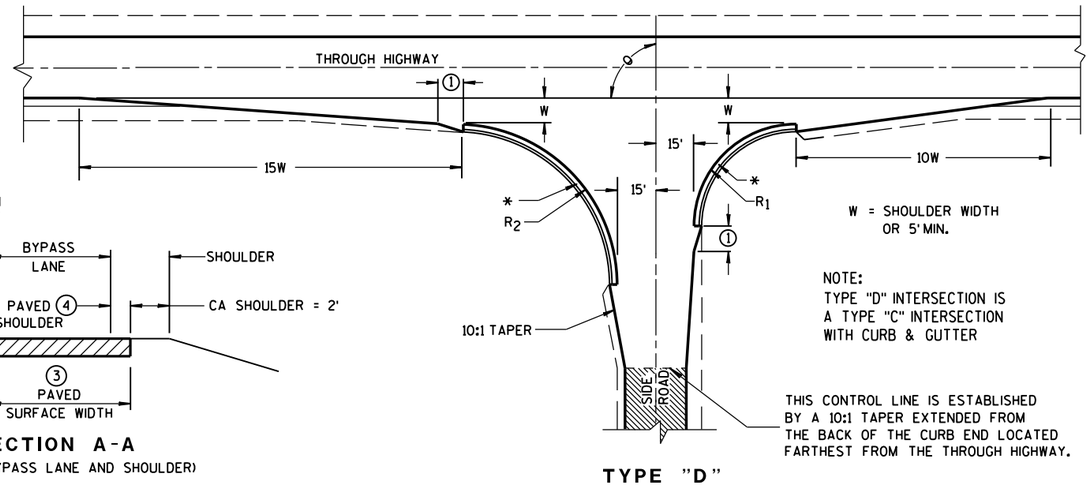
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

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

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



TYPE "C"



TYPE "D"

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

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

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

EXISTING PAVED SURFACE

BYPASS LANE

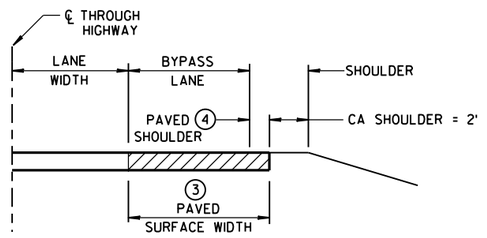
(1) 10-FT TYPICAL.

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

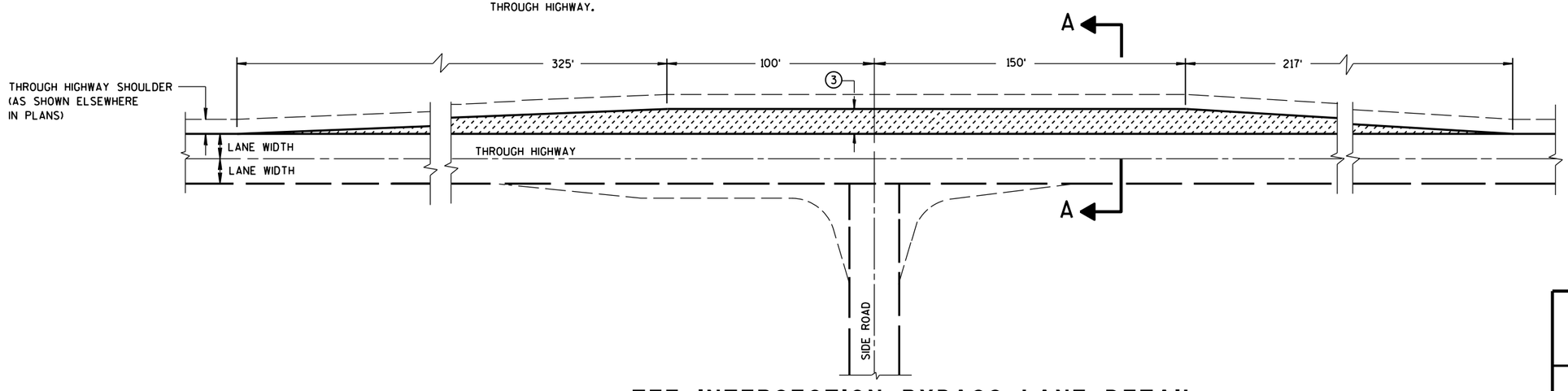
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

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

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



SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



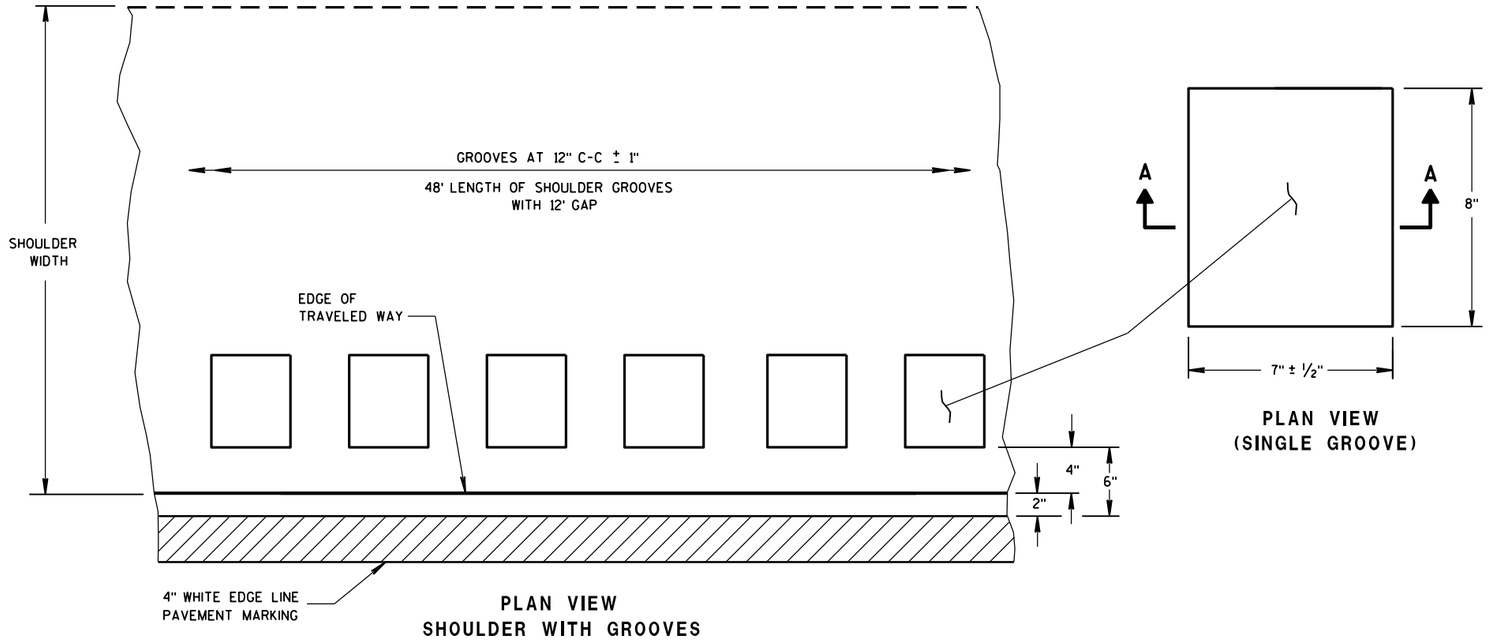
TEE INTERSECTION BYPASS LANE DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



PLAN VIEW
SHOULDER WITH GROOVES

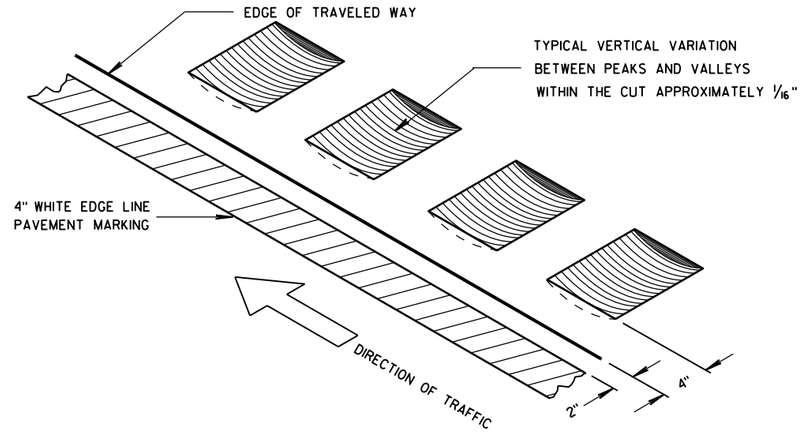
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

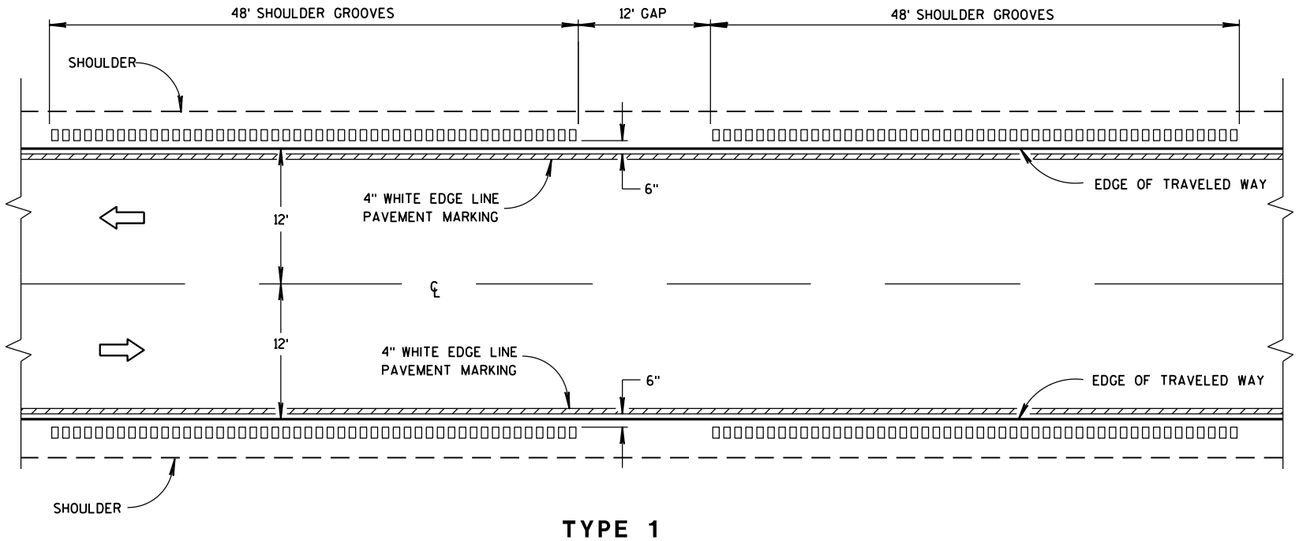
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

(1) SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.

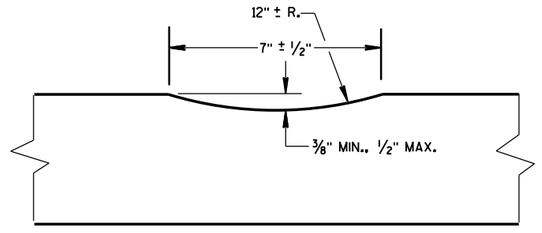


ISOMETRIC

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



TYPE 1
2-LANE SHOULDER RUMBLE STRIP



SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

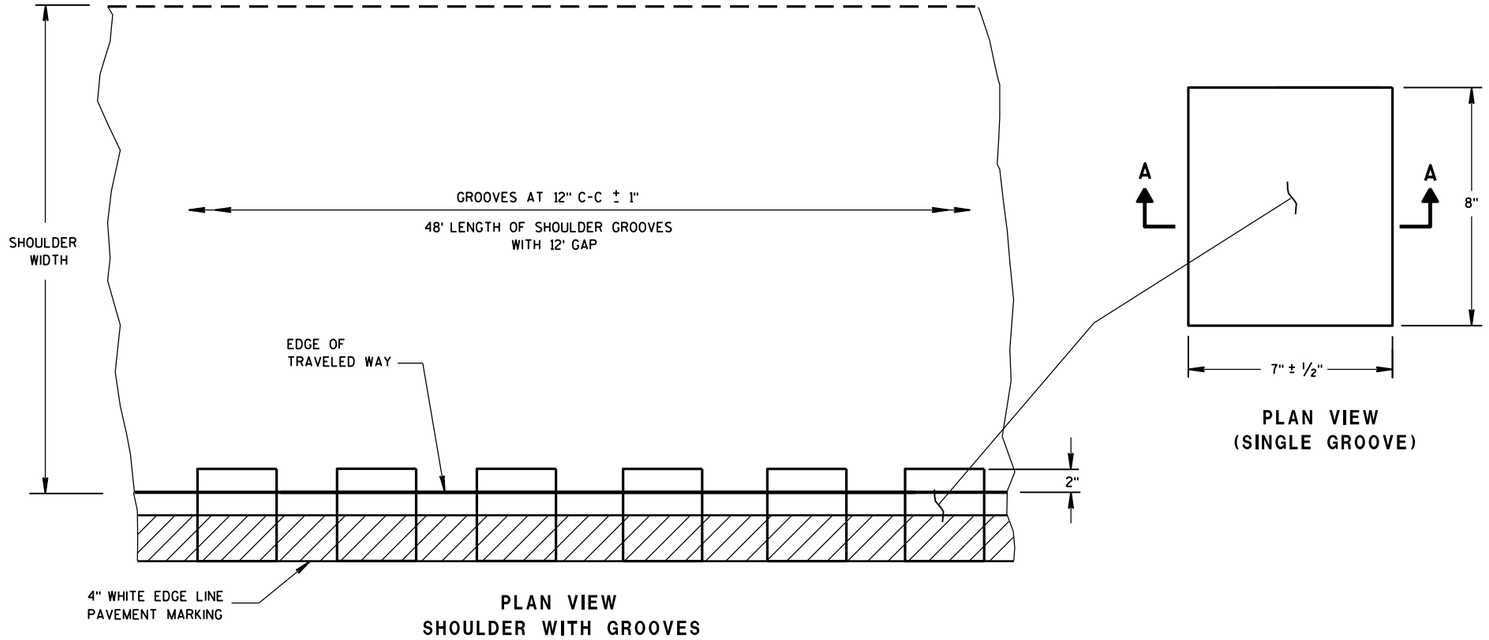
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

S.D.D. 13 A 10-1a

6

S.D.D. 13 A 10-1a



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

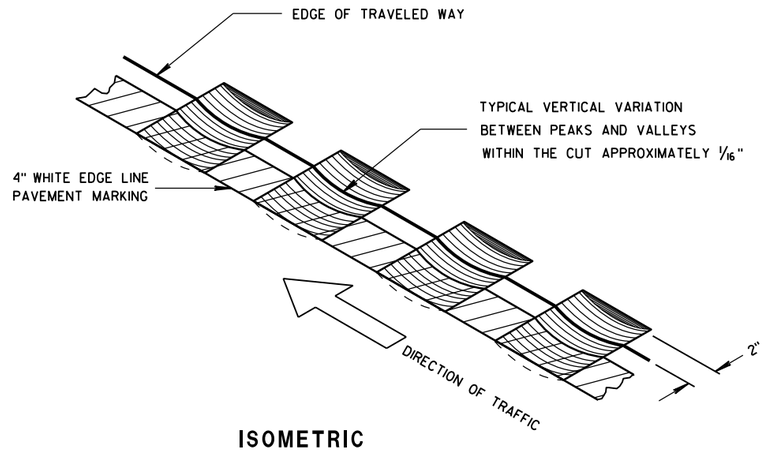
PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP

GENERAL NOTES

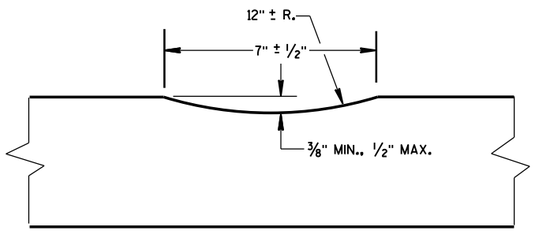
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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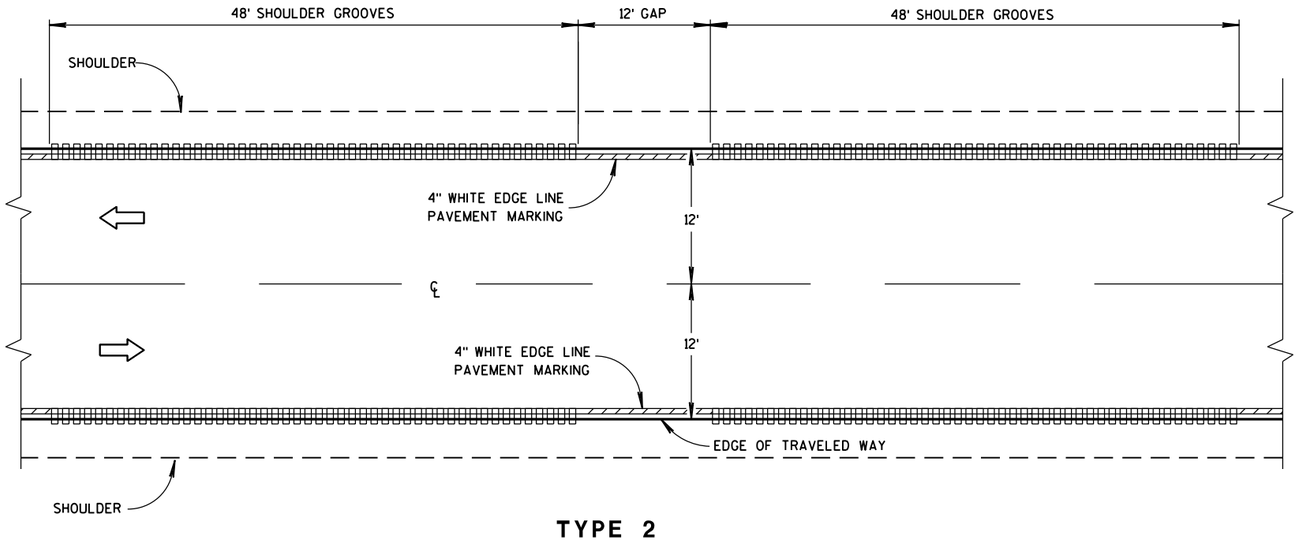
(1) SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



ISOMETRIC



SECTION A-A



TYPE 2
2-LANE SHOULDER RUMBLE STRIP

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

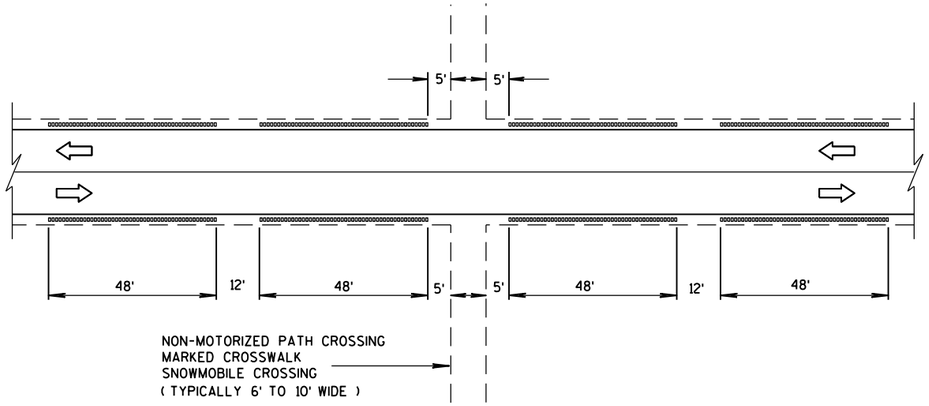
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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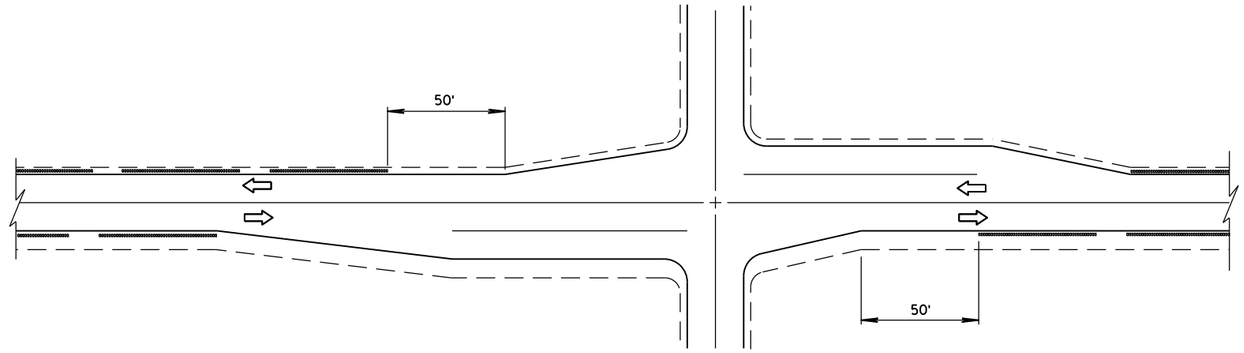
S.D.D. 13 A 10-1b

6

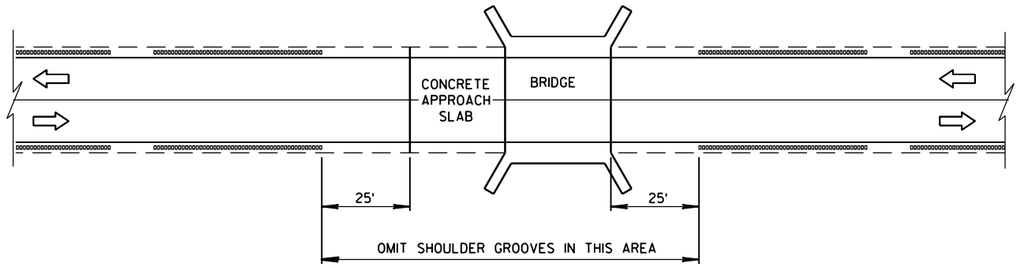
S.D.D. 13 A 10-1b



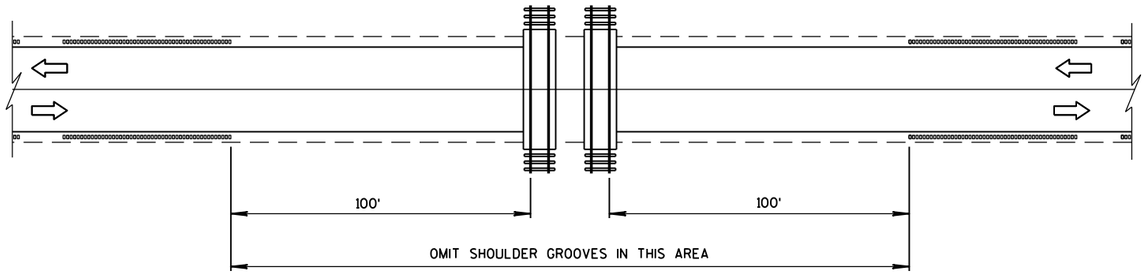
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



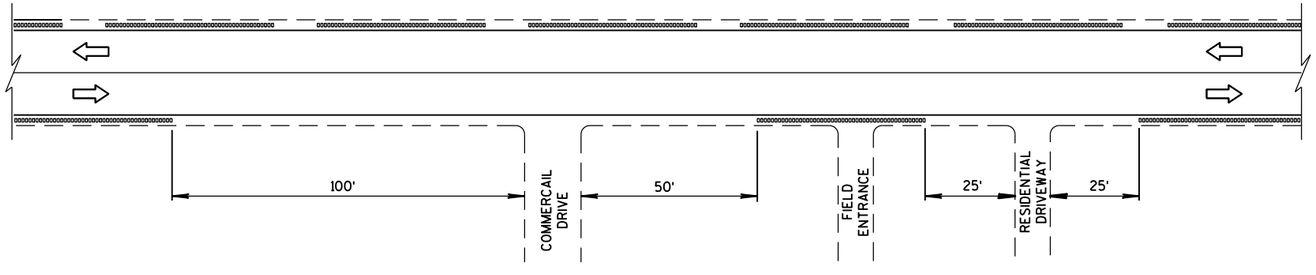
SHOULDER GROOVES AT INTERSECTIONS



SHOULDER GROOVES AT BRIDGES



SHOULDER GROOVES AT RAILROADS

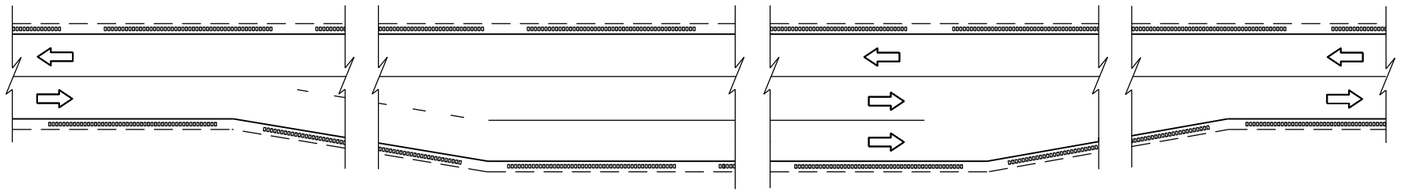


SHOULDER GROOVES AT DRIVEWAYS (1)

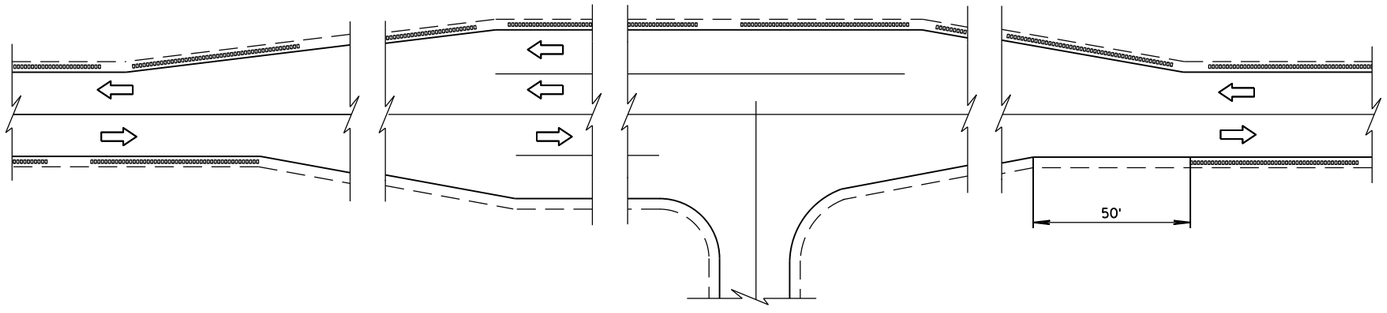
2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 13 A 10-1c



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



SHOULDER GROOVES AT BYPASS LANES

6

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S.D.D. 13 A 10-1d

S.D.D. 13 A 10-1d

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

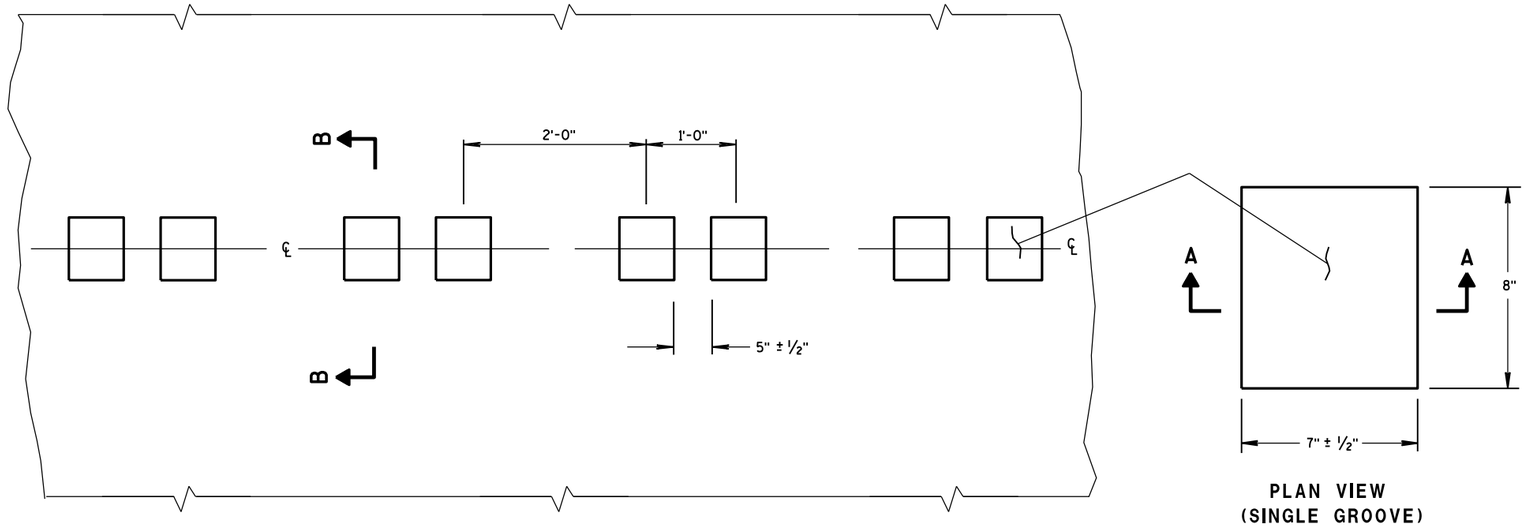
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/2012
DATE

/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER

FHWA



PLAN VIEW
CENTER LINE WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

GENERAL NOTES

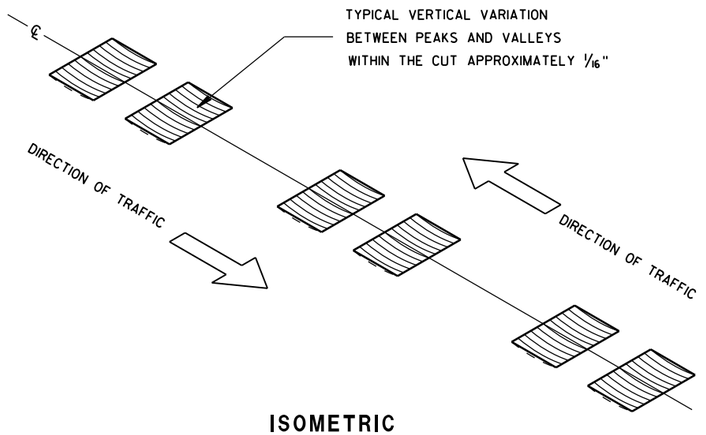
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTER LINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

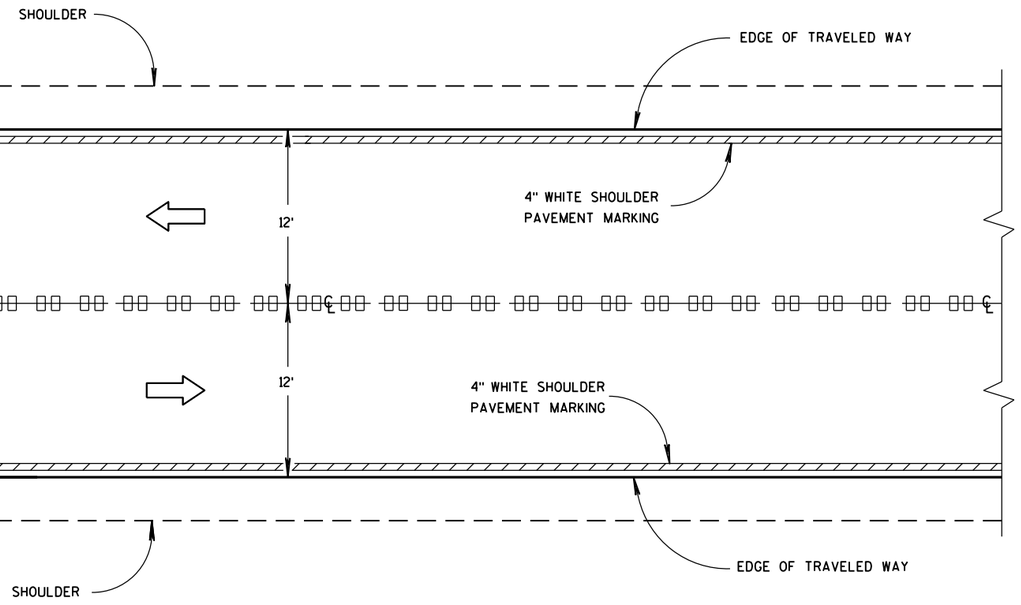
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

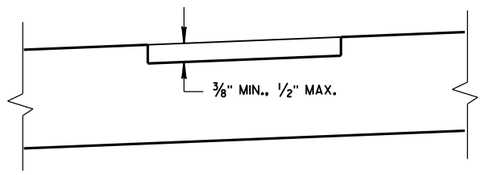
① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



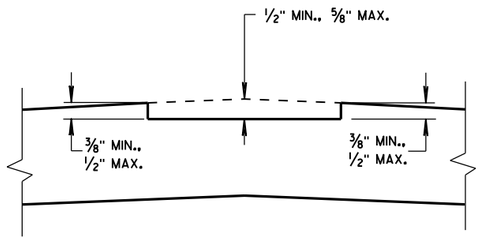
ISOMETRIC



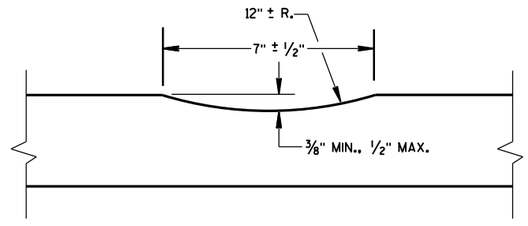
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



SECTION B-B
CROWNED ROADWAY



SECTION A-A

6

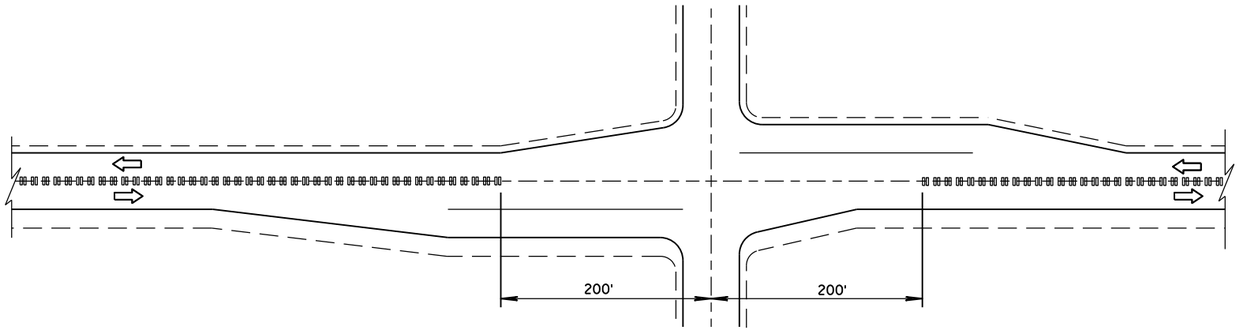
S.D.D. 13 A 11-2a

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

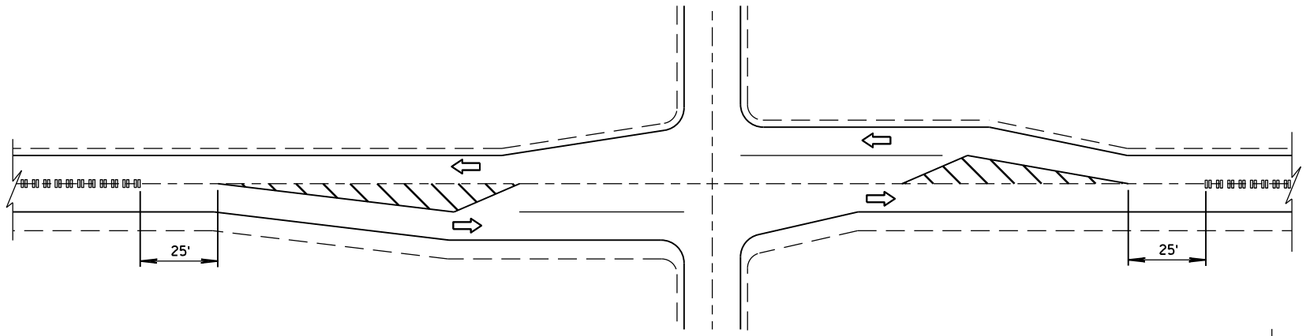
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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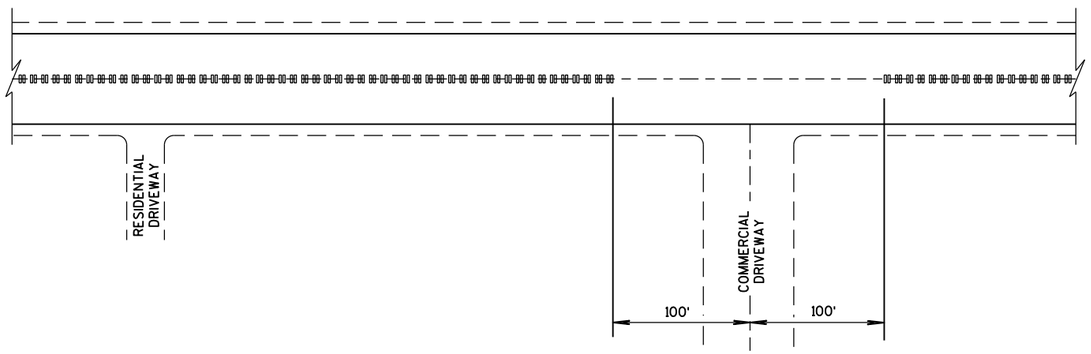
S.D.D. 13 A 11-2a



CENTER LINE GROOVES AT INTERSECTIONS

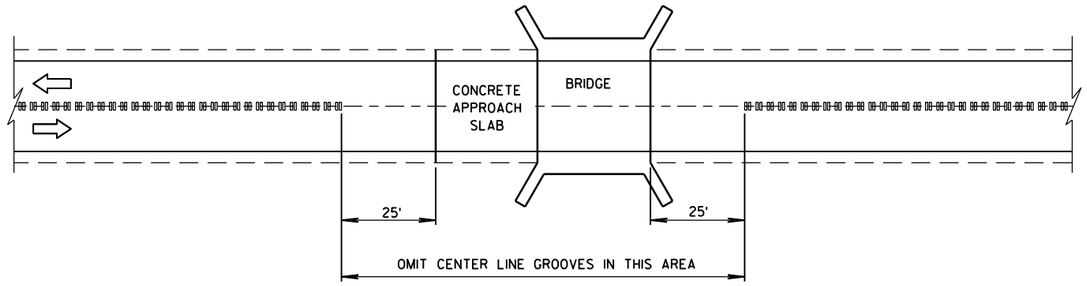


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

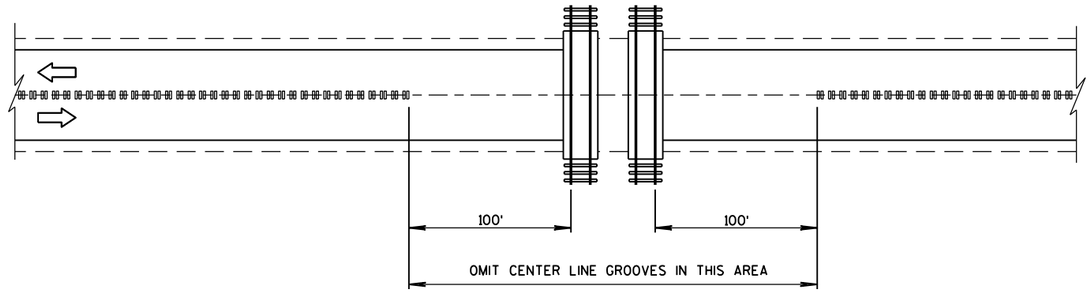


CENTER LINE GROOVES AT DRIVEWAYS (1)

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



CENTER LINE GROOVES AT BRIDGES



CENTER LINE GROOVES AT RAILROADS

6

S.D.D. 13 A 11-2b

6

S.D.D. 13 A 11-2b

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

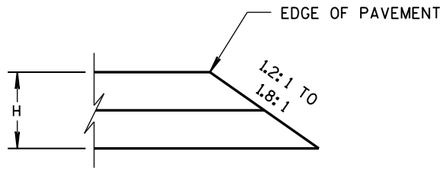
APPROVED

5/15/2013 — DATE

/S/ Jerry H. Zoda — ROADWAY STANDARDS DEVELOPMENT ENGINEER

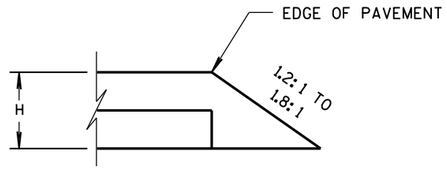
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FHWA



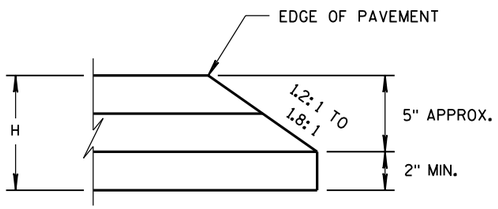
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



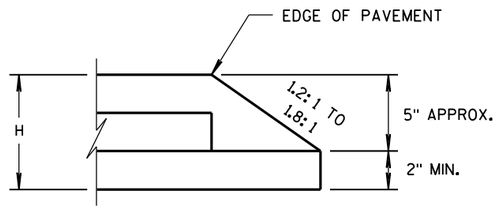
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

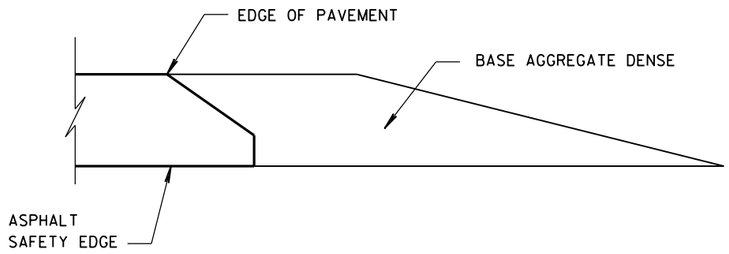
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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.

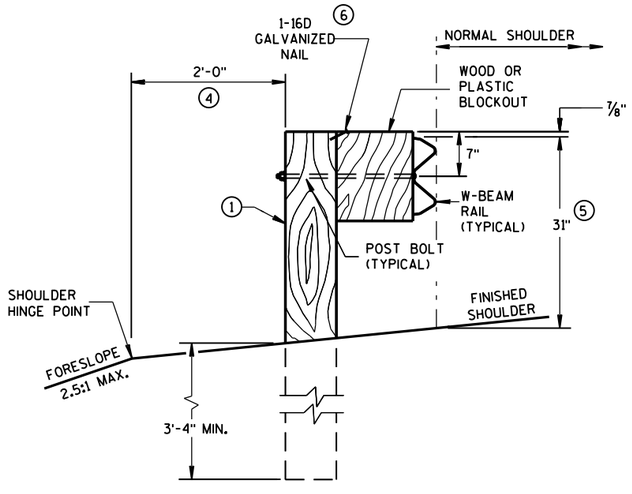
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(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).

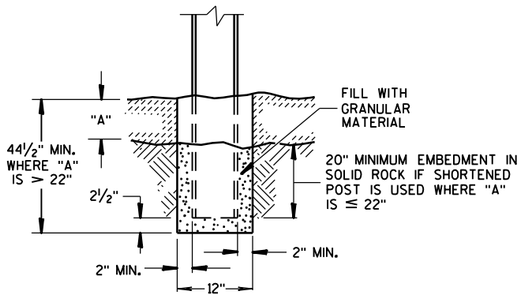
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

(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.



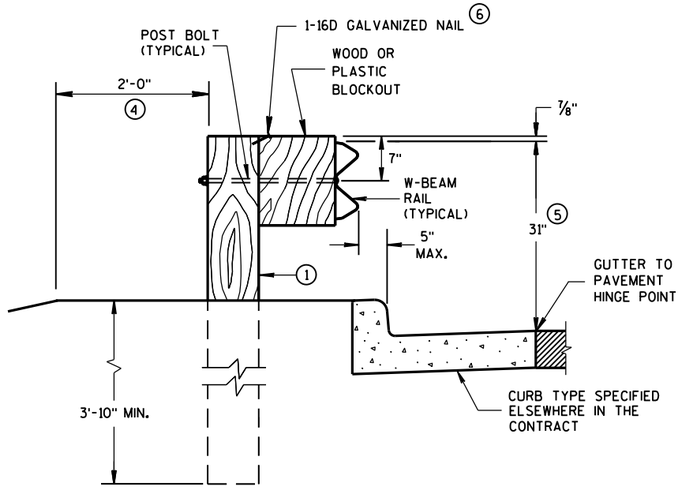
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



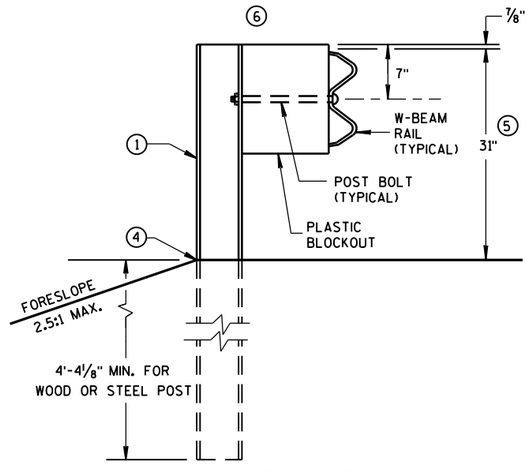
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



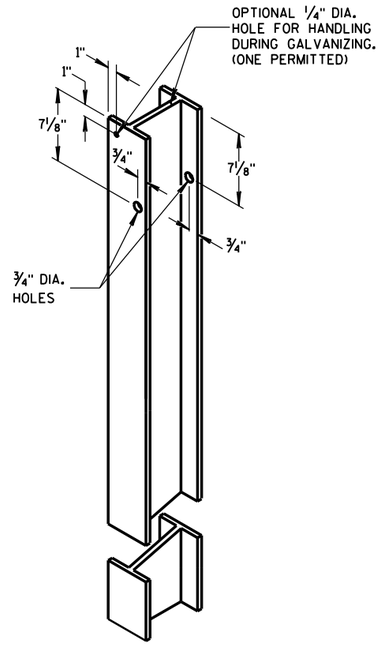
END VIEW

LOCATED ALONG A CURBED ROADWAY

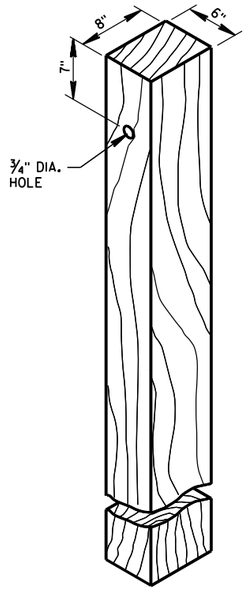


END VIEW

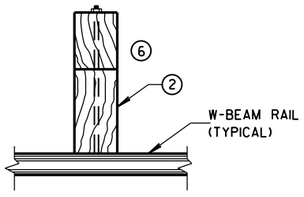
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



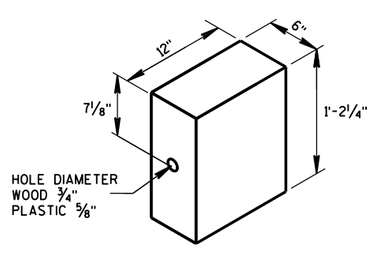
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



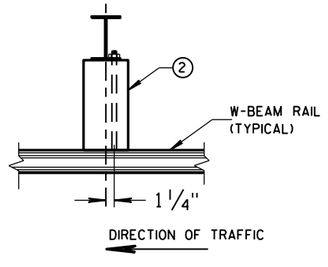
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)

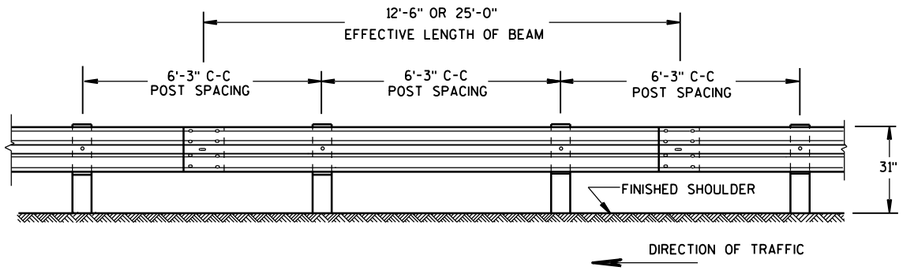


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

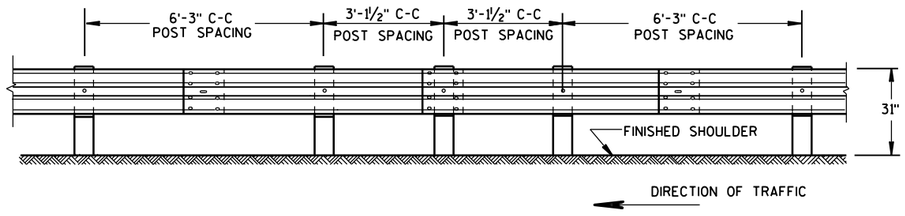
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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



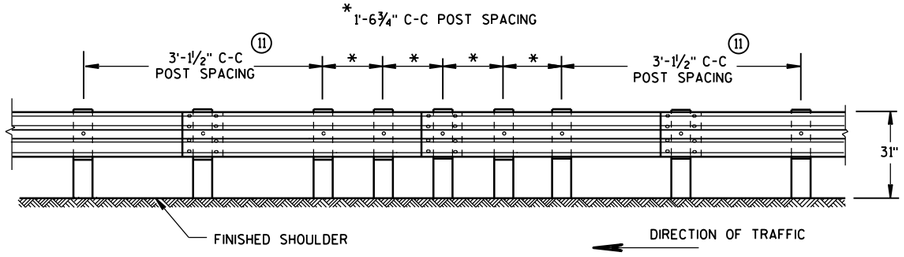
FRONT VIEW

POST SPACING STANDARD INSTALLATION



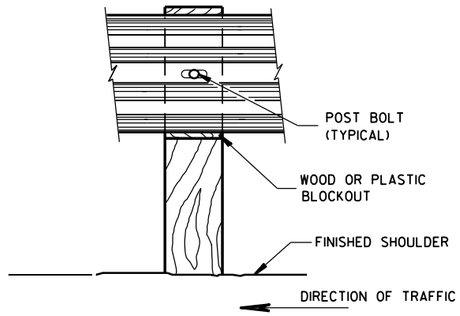
FRONT VIEW

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

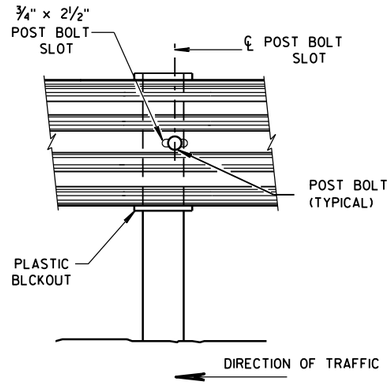


FRONT VIEW

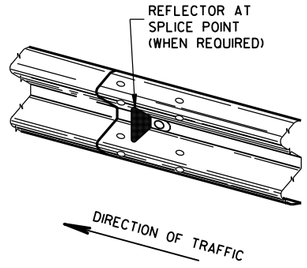
QUARTER POST SPACING (QS)

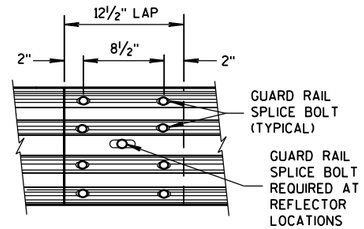


FRONT VIEW AT WOOD POST



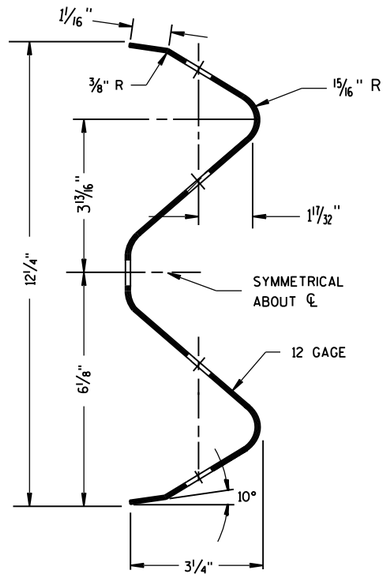
FRONT VIEW AT STEEL POST



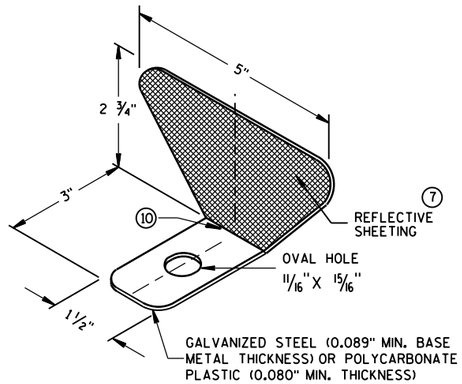


FRONT VIEW

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

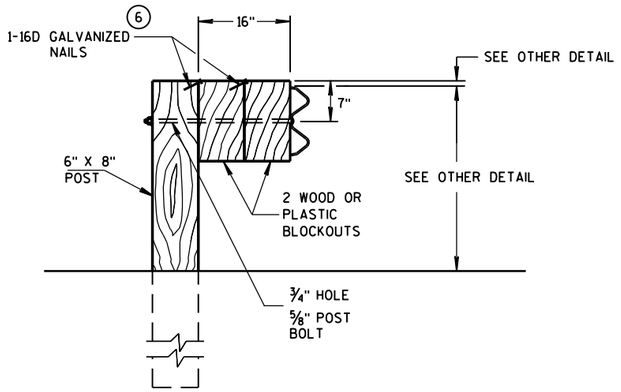
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ⑨ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ⑩	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

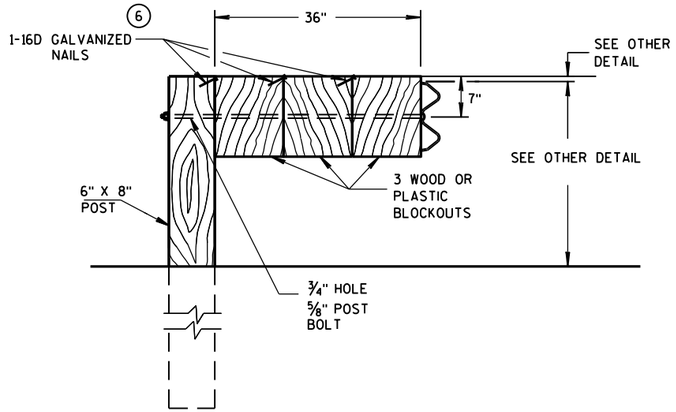
6

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.

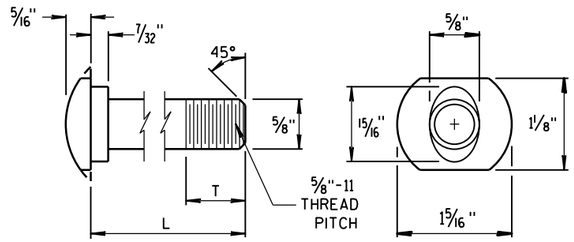


DETAIL FOR 36" BLOCKOUT DEPTH

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.

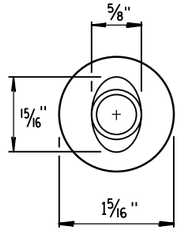
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

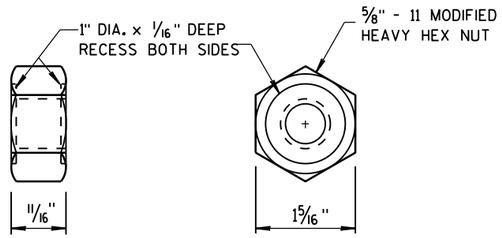


POST BOLT TABLE

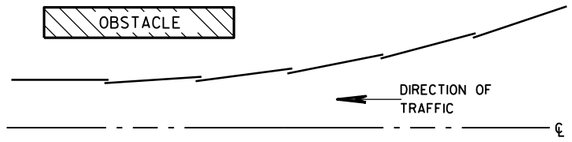
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

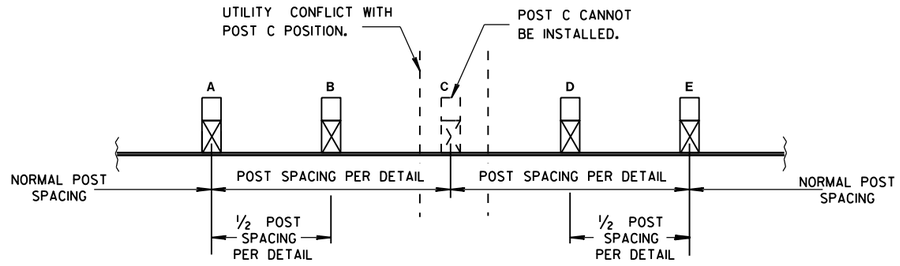


POST BOLT AND RECESS NUT

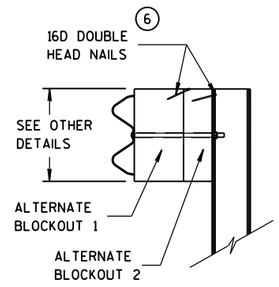


PLAN VIEW

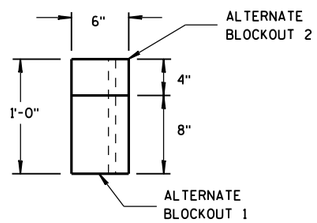
BEAM LAPPING DETAIL



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.

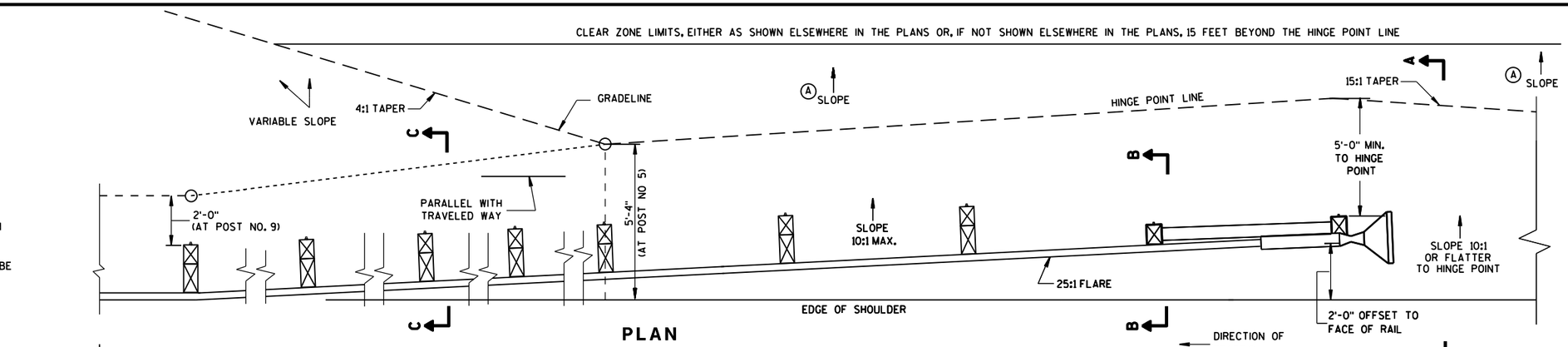
SEE SDD 14B42 FOR MORE INFORMATION.

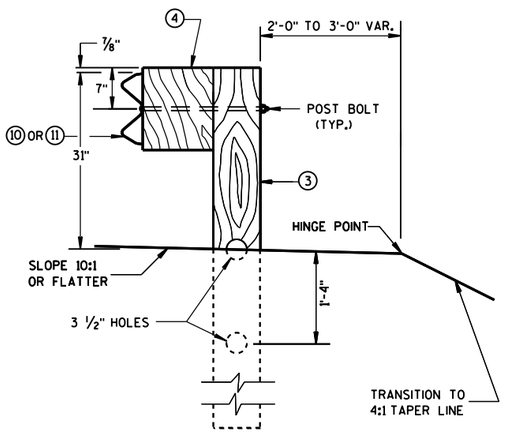
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

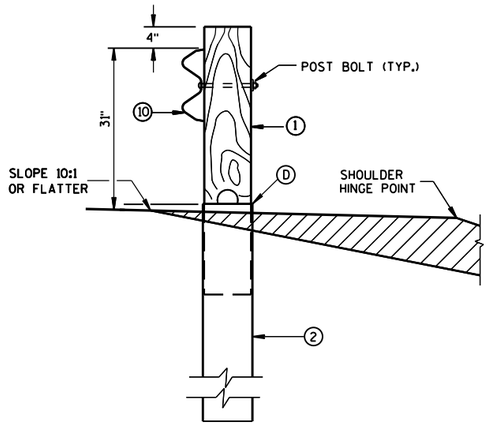
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

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.

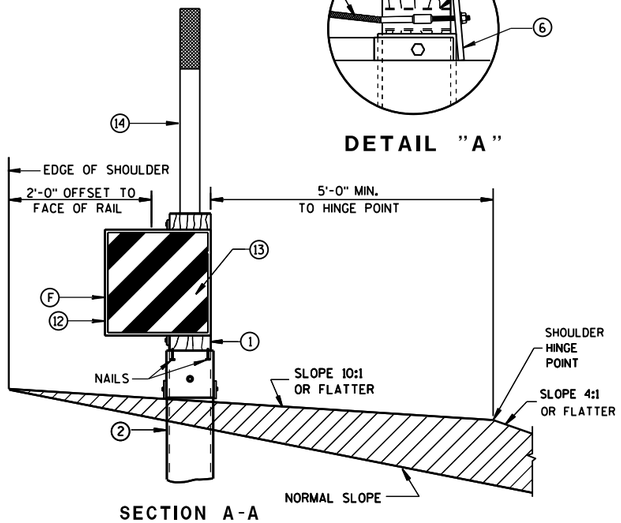




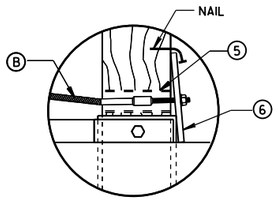
SECTION C-C
TYPICAL AT POST NOS. 3-9



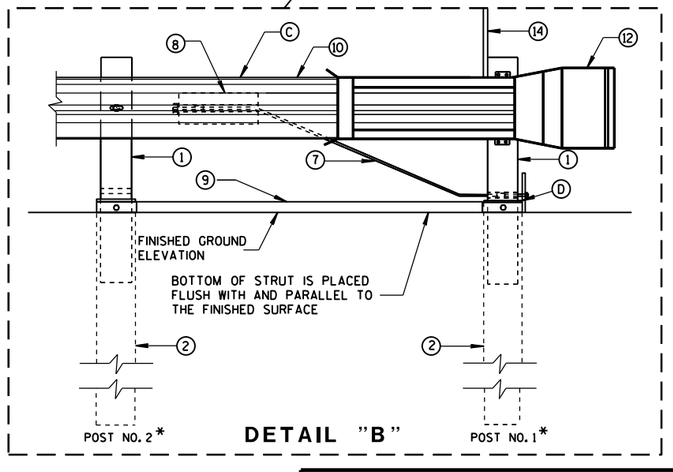
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"

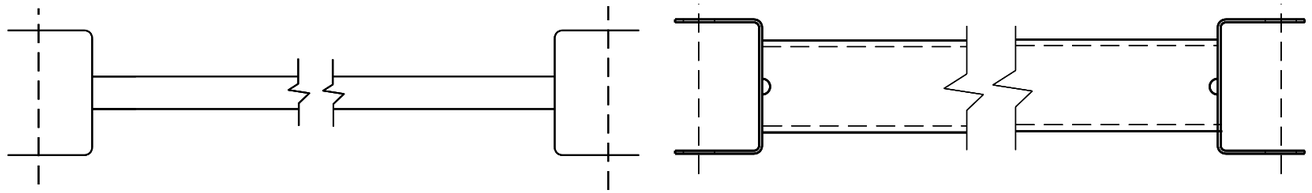


DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

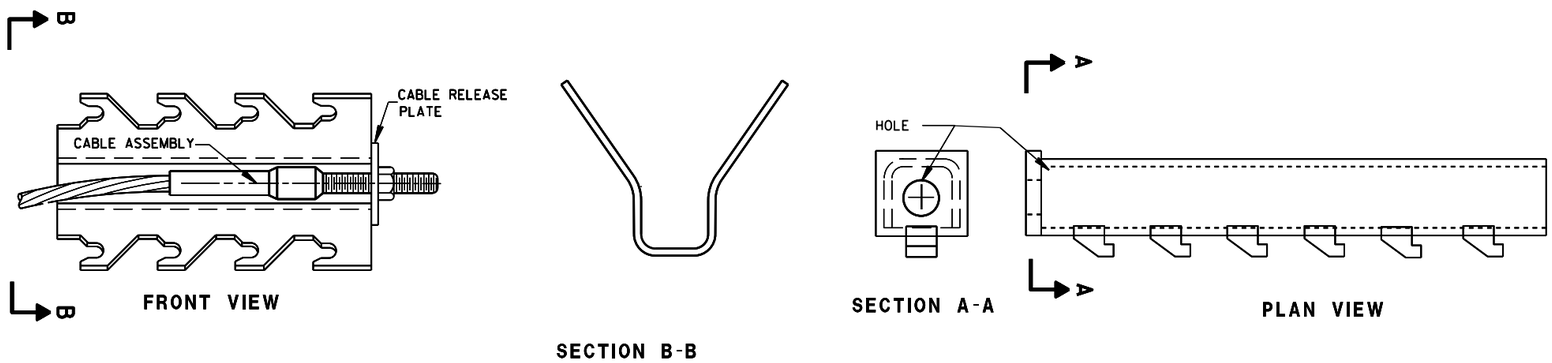
S.D.D. 14 B 44-2a



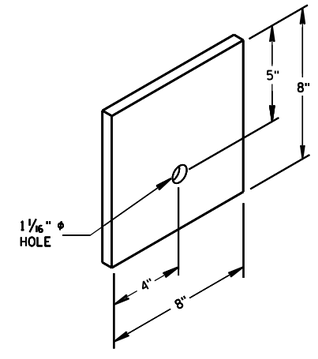
GENERIC GROUND STRUT (9) (H)

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)



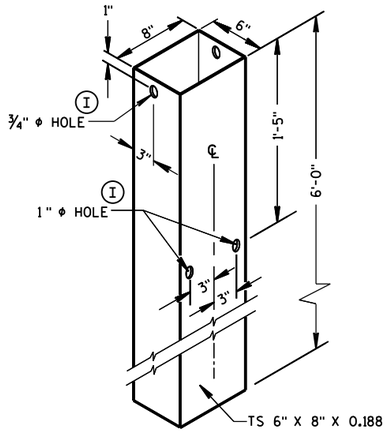
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

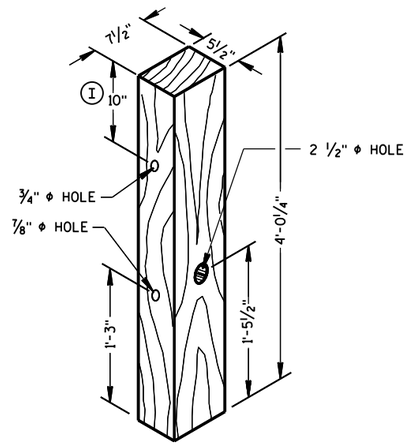
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

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

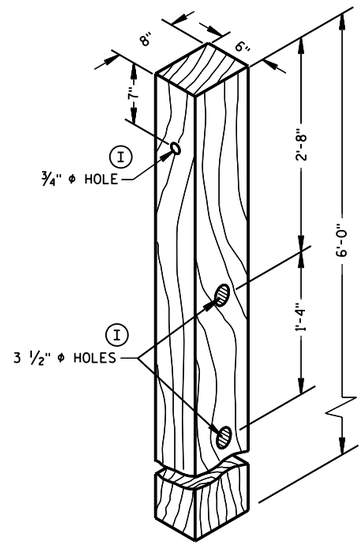


FOUNDATION TUBE (2)



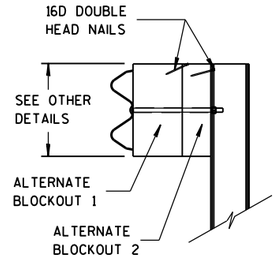
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

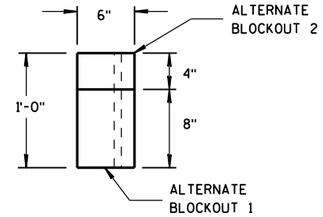


POSTS NUMBER 3-9

WOOD CRT POST (3)

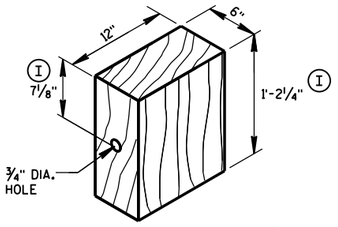


SIDE VIEW



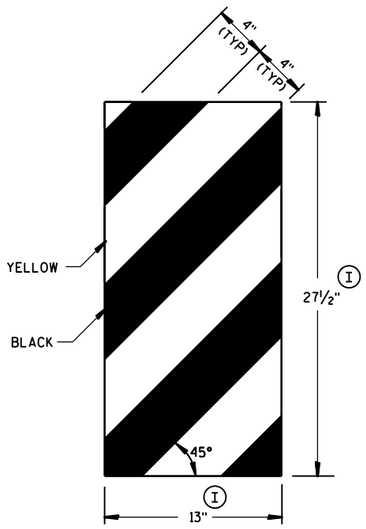
TOP VIEW

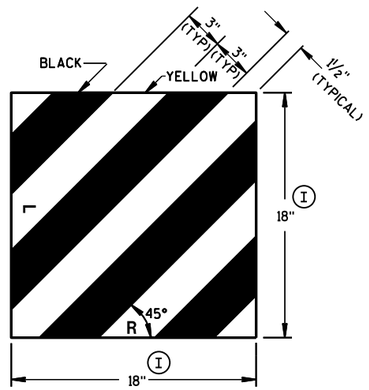
ALTERNATE WOOD BLOCKOUT DETAIL



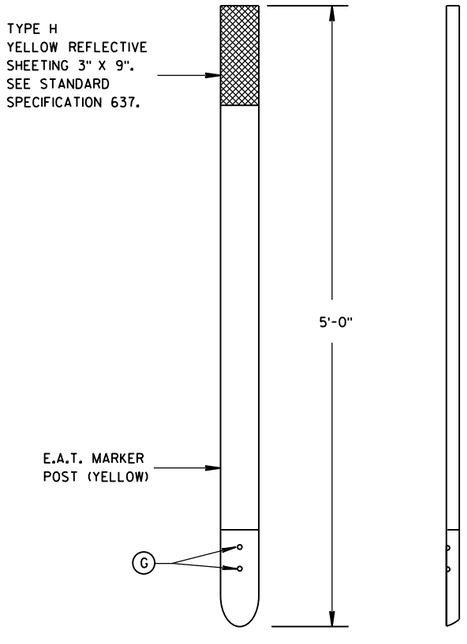
WOOD BLOCKOUT (4)

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





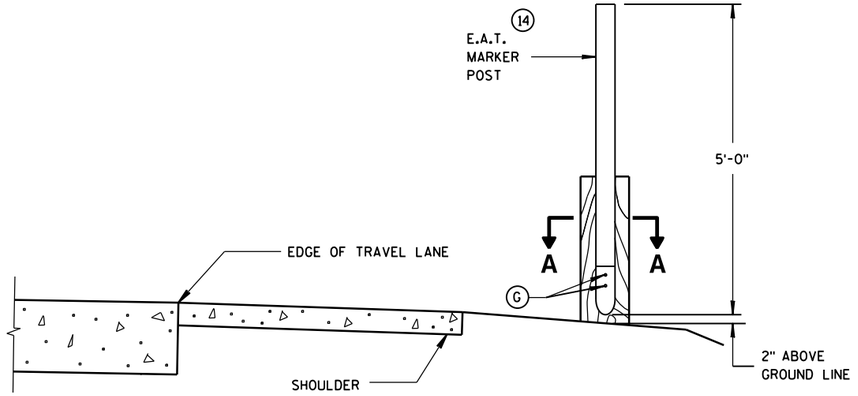
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

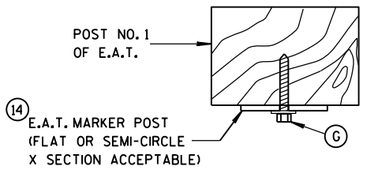
SIDE VIEW

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

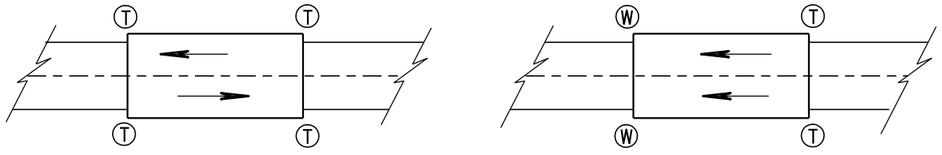
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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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

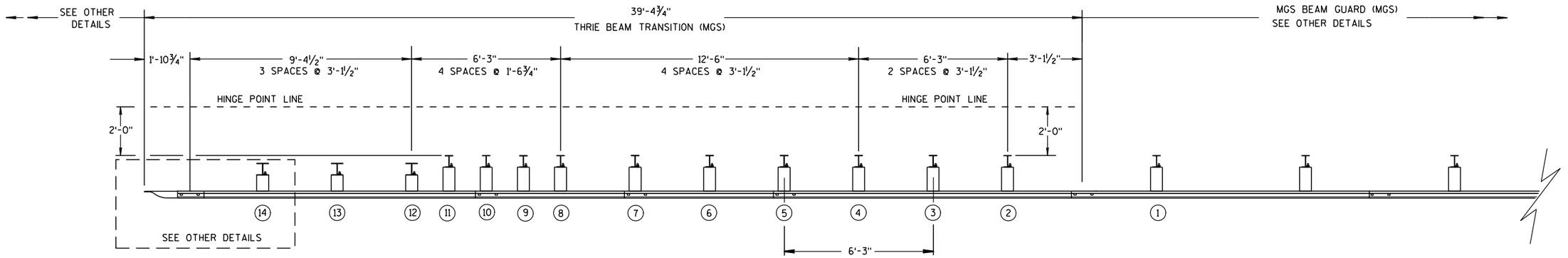
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

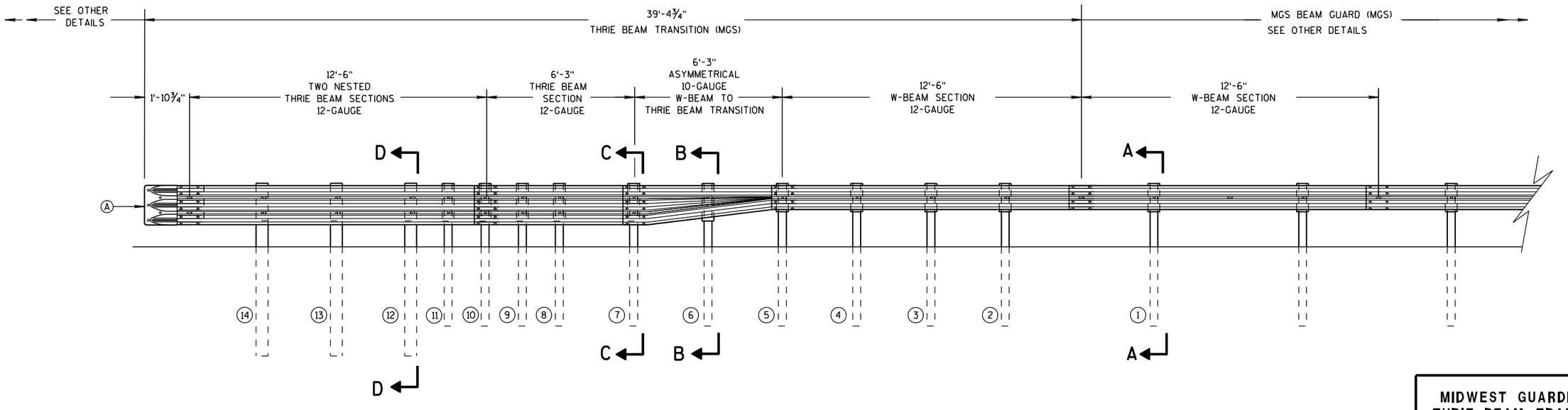
TRANSITION USES STEEL POSTS ONLY.

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

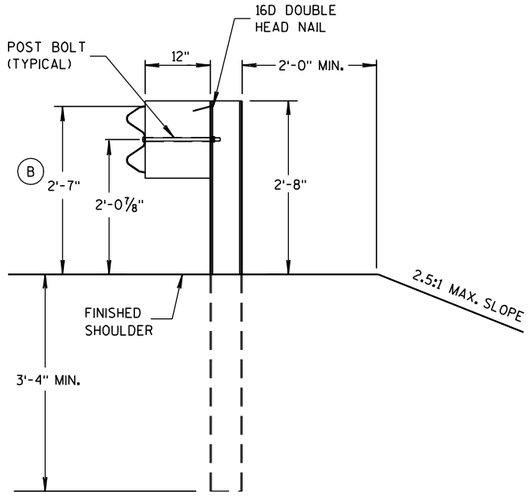
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

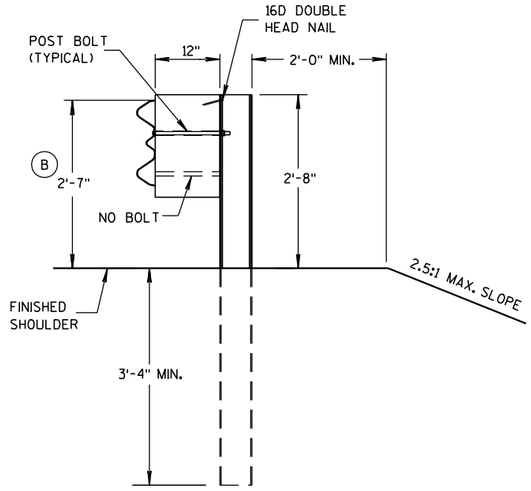
GENERAL NOTES

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



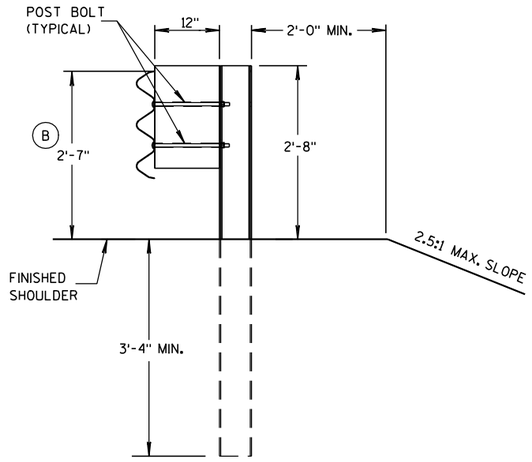
SECTION A-A

POSTS 1-5



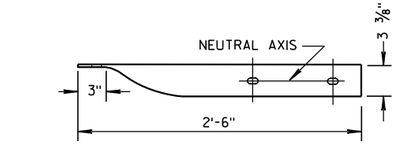
SECTION B-B

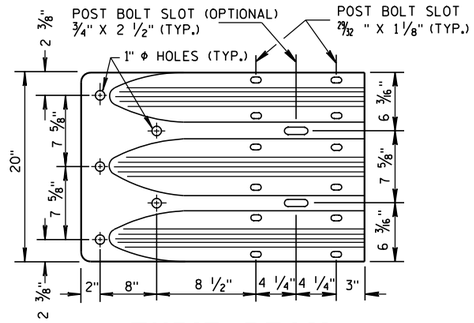
POST 6



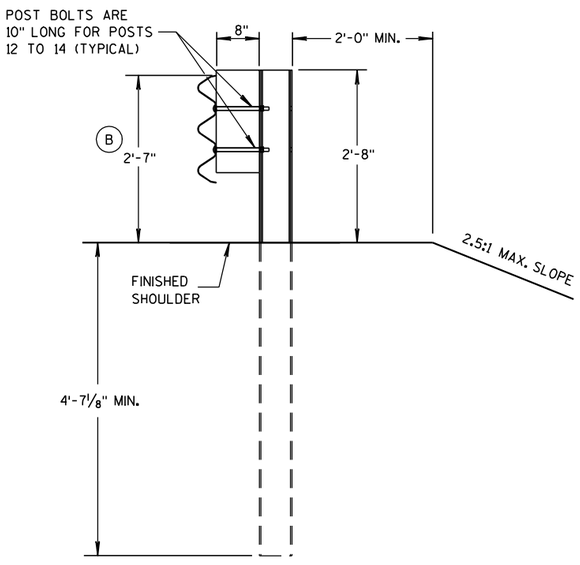
SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14

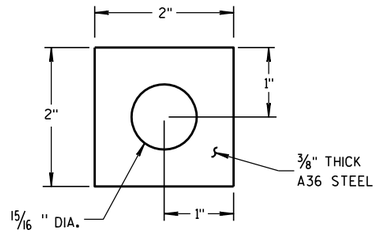
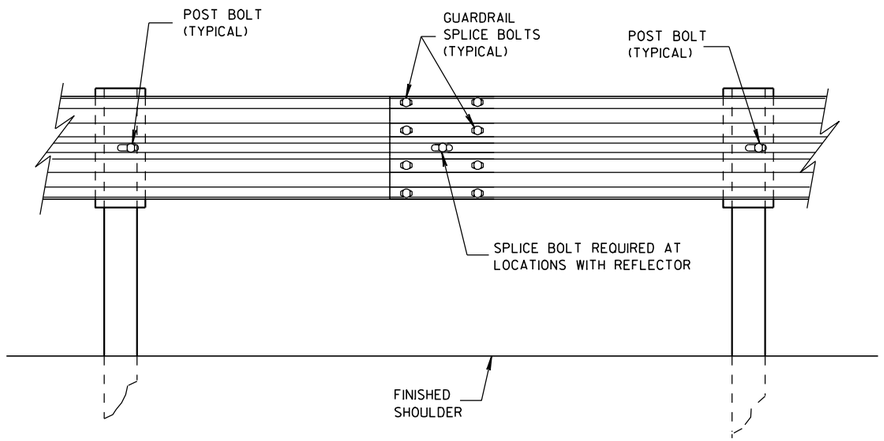
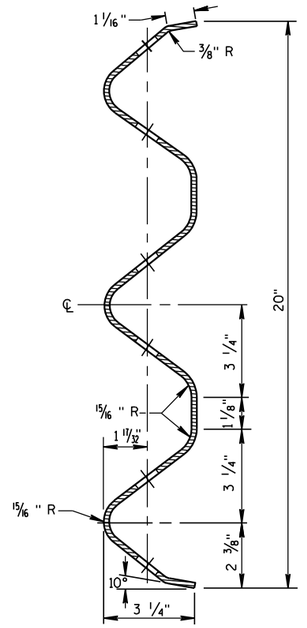


PLATE WASHER DETAIL



SPLICE DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

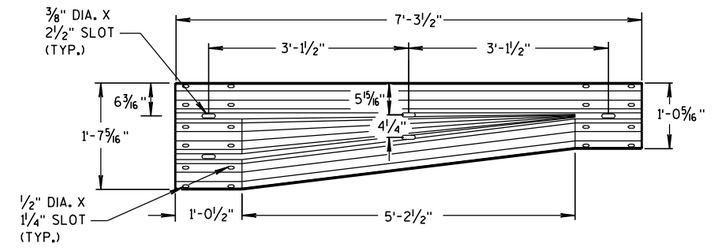
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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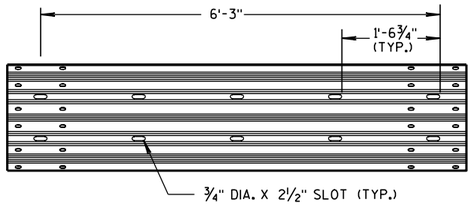
S.D.D. 14 B 45-3b

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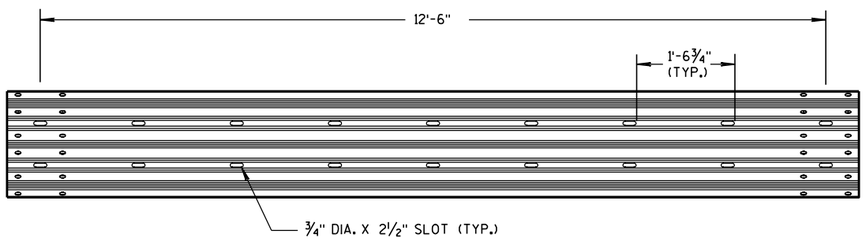
S.D.D. 14 B 45-3b



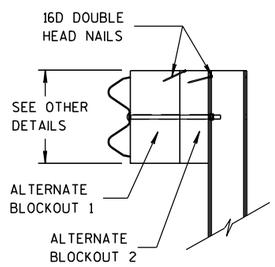
W-BEAM TO THRIE BEAM TRANSITION SECTION



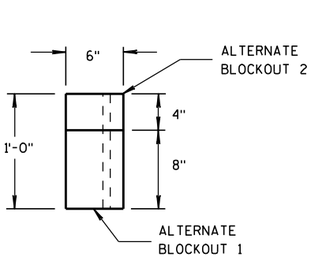
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

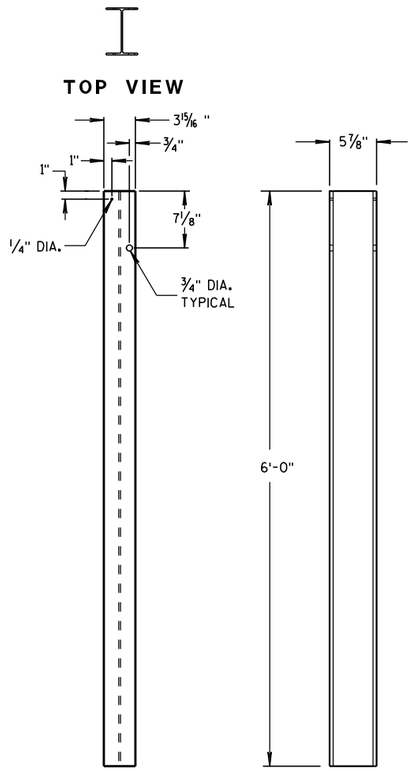


SIDE VIEW

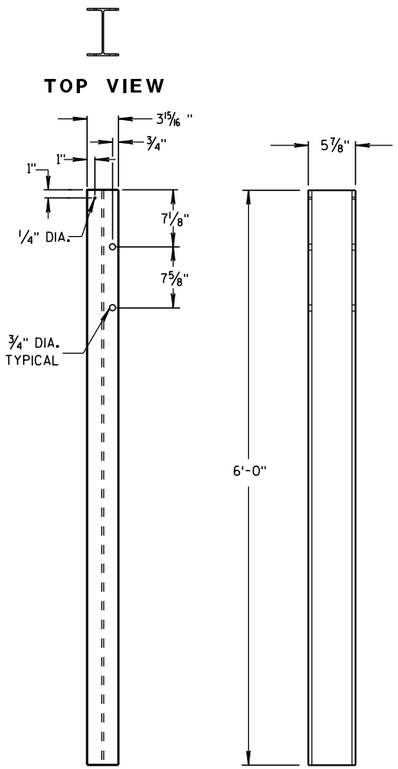


TOP VIEW

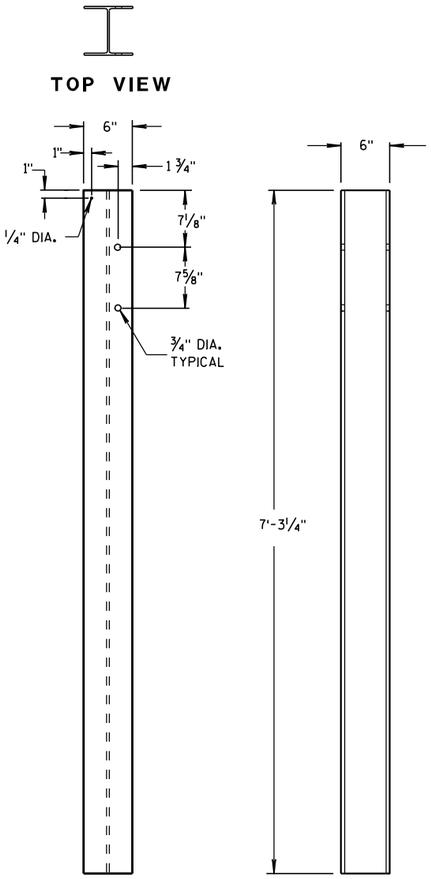
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

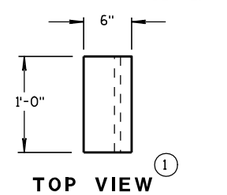


STEEL POSTS 6-11

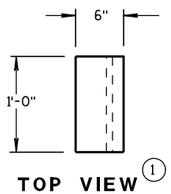


STEEL POSTS 12-14

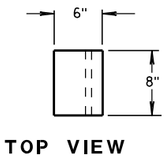
① WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



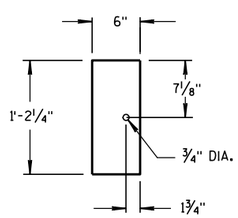
TOP VIEW ①



TOP VIEW ①

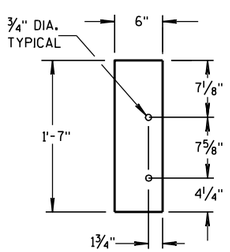


TOP VIEW



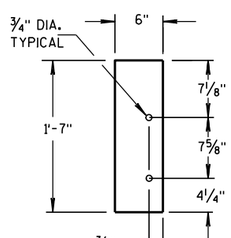
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

STEEL POST SIZES

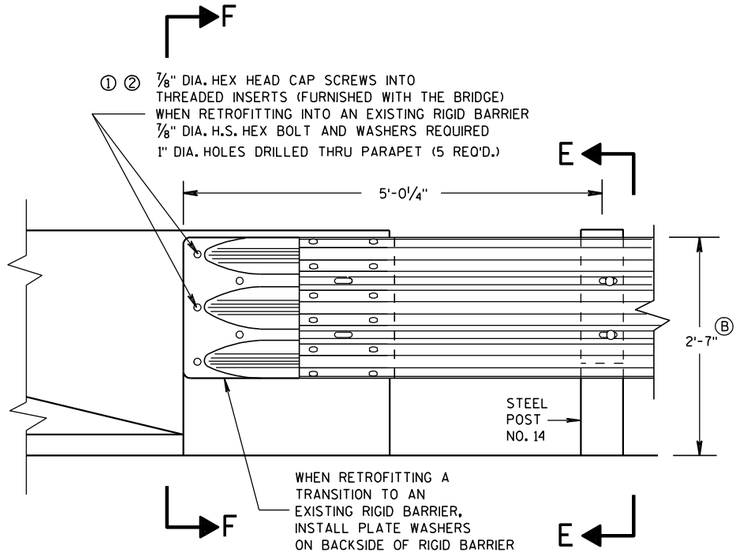
POST NUMBER	SECTION TYPE	LENGTH
①	W6x9	72"
②	W6x9	72"
③	W6x9	72"
④	W6x9	72"
⑤	W6x9	72"
⑥	W6x9	72"
⑦	W6x9	72"
⑧	W6x9	72"
⑨	W6x9	72"
⑩	W6x9	72"
⑪	W6x9	72"
⑫	W6x15	87 1/8"
⑬	W6x15	87 1/8"
⑭	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

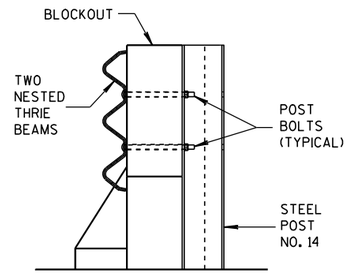
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



FRONT VIEW



SECTION E-E

GENERAL NOTES

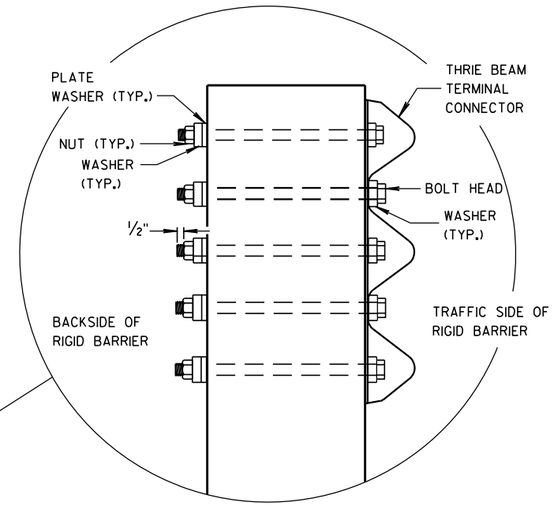
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

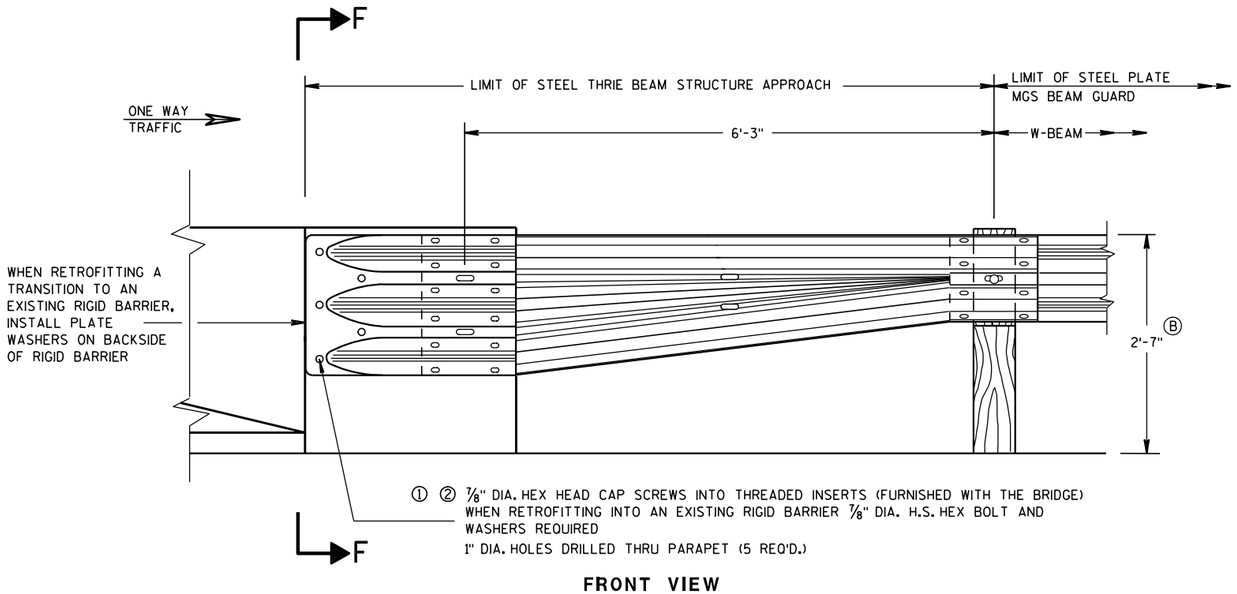
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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.

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

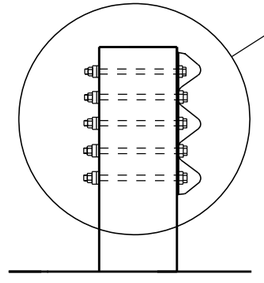
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW



SECTION F-F

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

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

FHWA

GENERAL NOTES

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

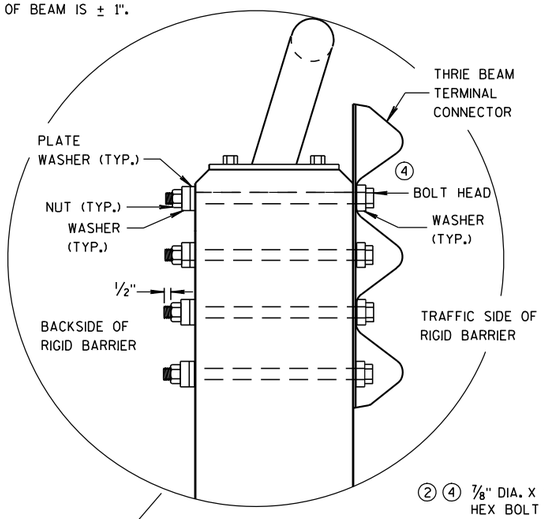
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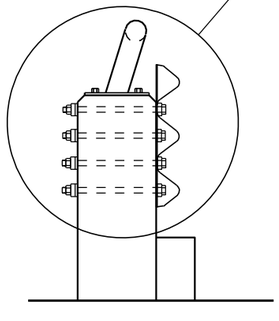
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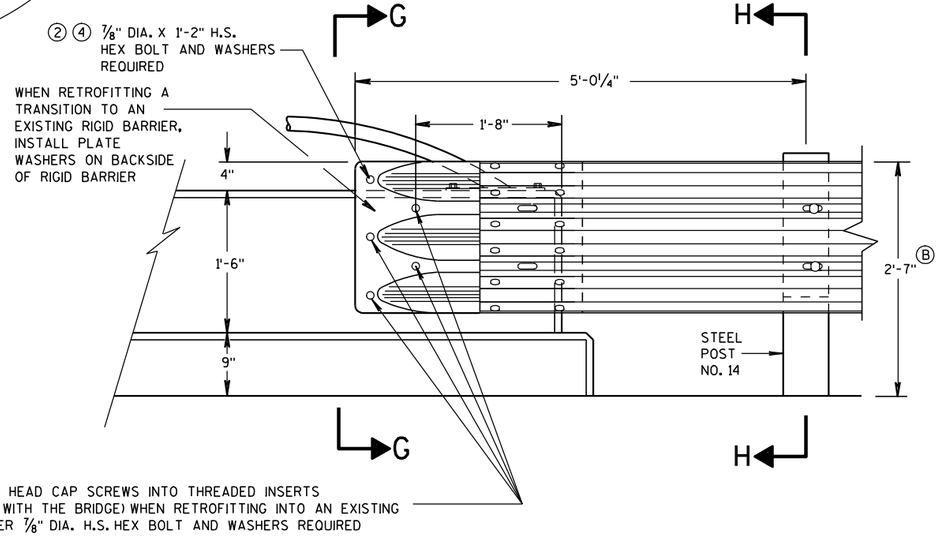
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

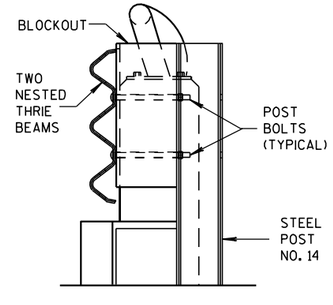




SECTION G-G

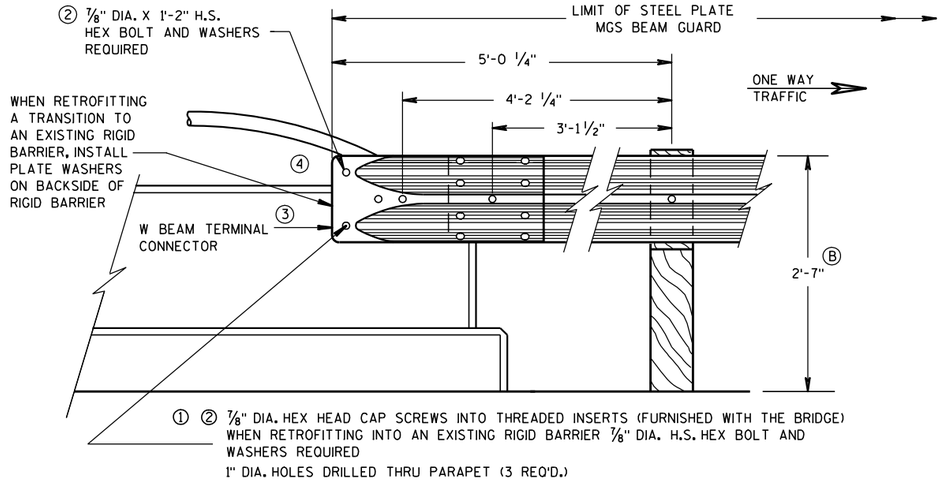


FRONT VIEW



SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

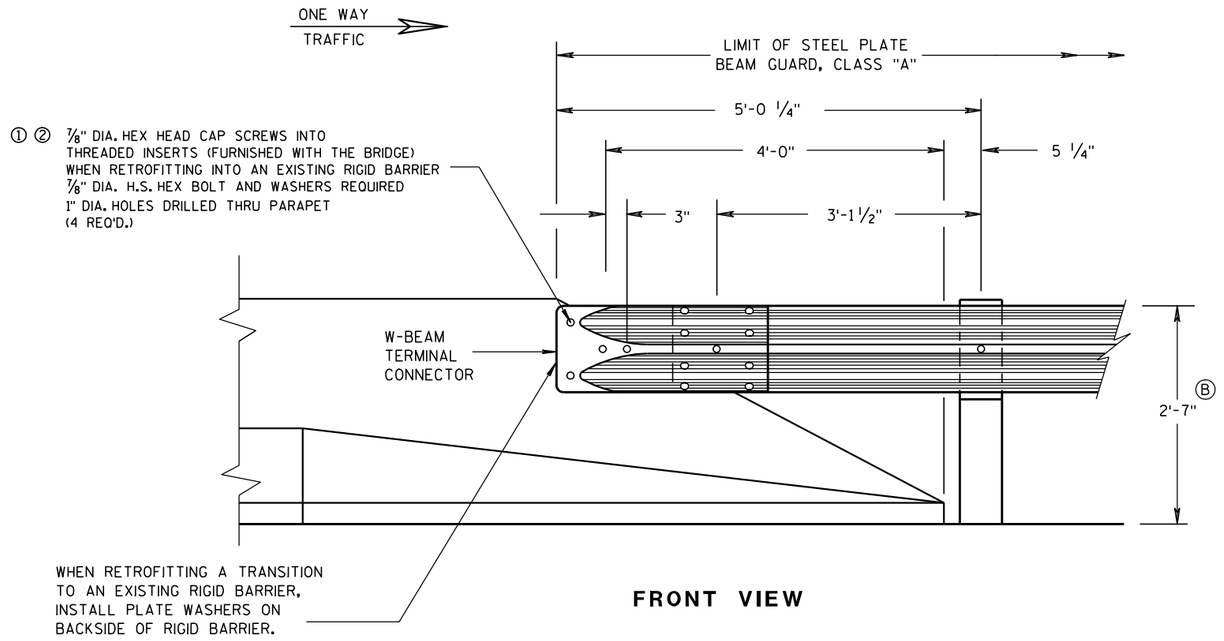
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S.D.D. 14 B 45-3e

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

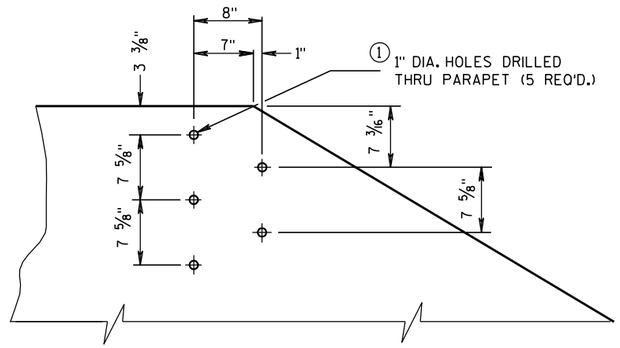
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

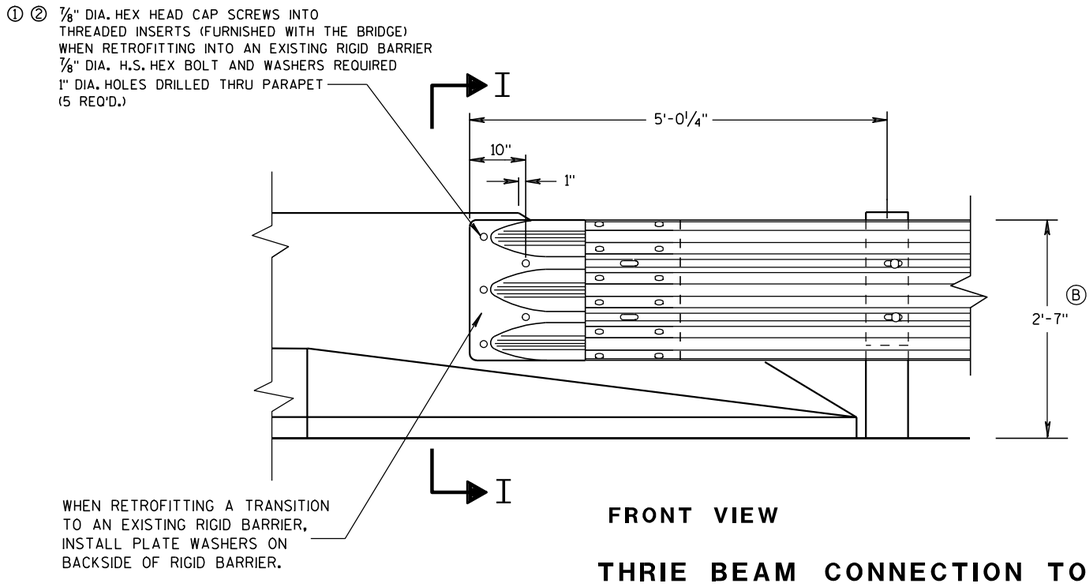
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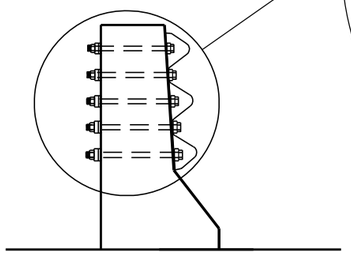
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



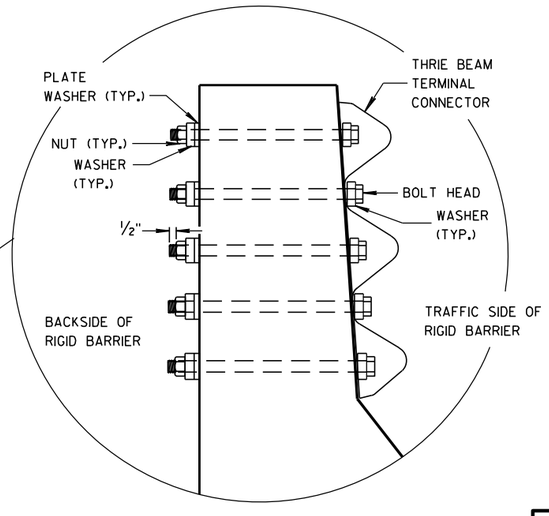
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

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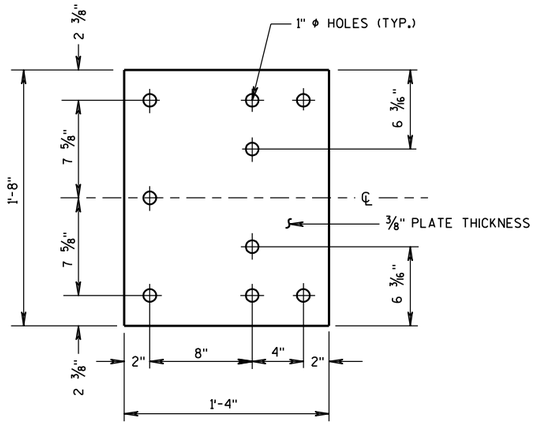
FHWA

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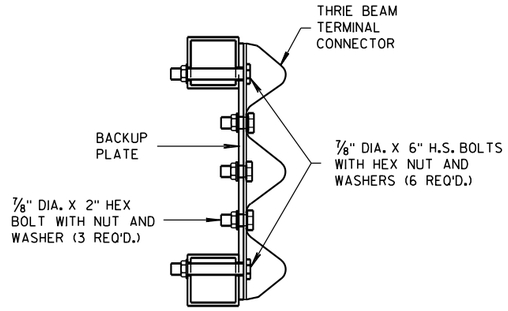
S.D.D. 14 B 45-3f

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



BACK-UP PLATE DETAIL

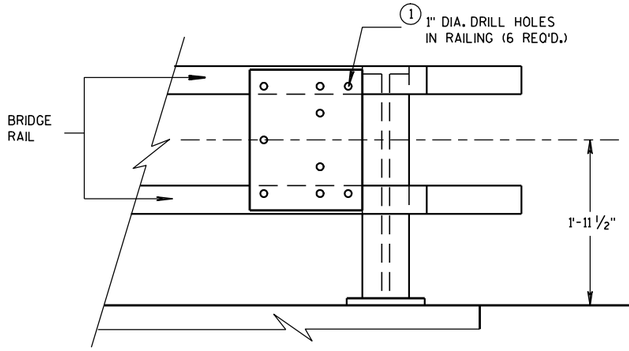


SECTION J-J

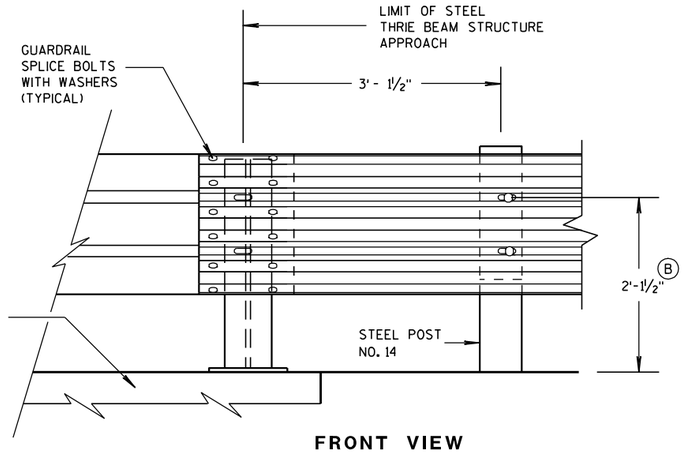
GENERAL NOTES

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

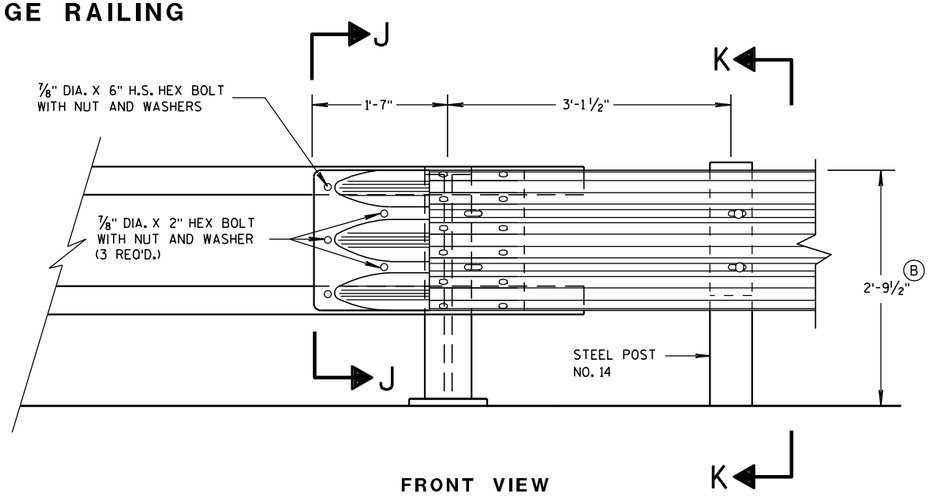


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

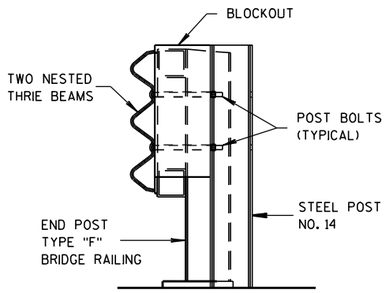


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

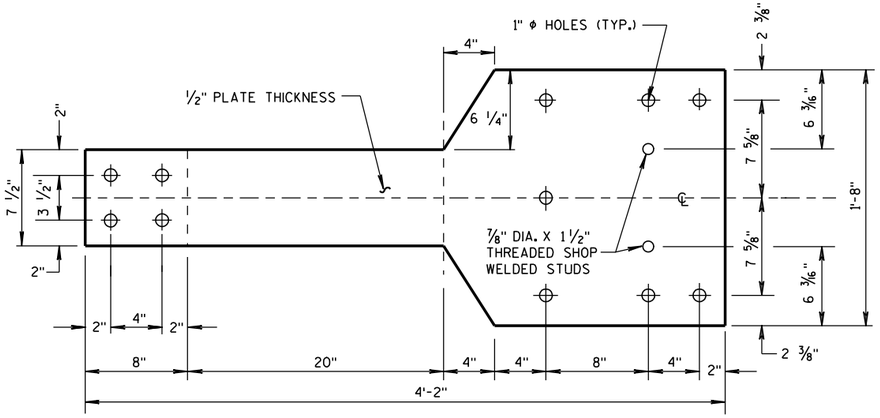
THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/31/2012 DATE FHWA	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER

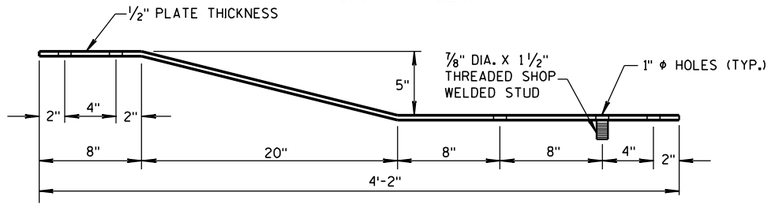
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S.D.D. 14 B 45-3g

GENERAL NOTES

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

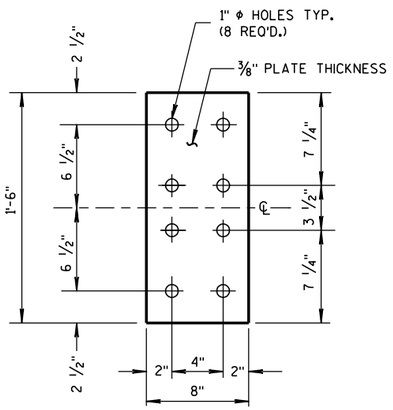


FRONT VIEW



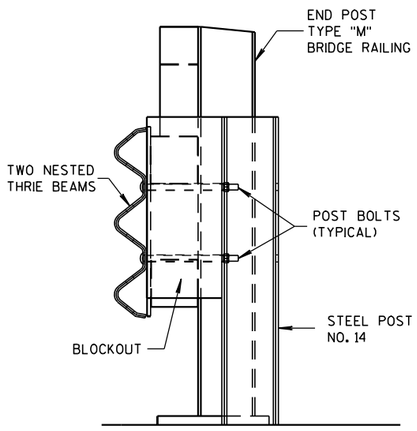
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

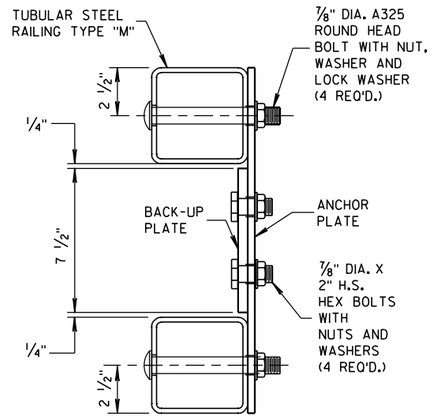


FRONT VIEW

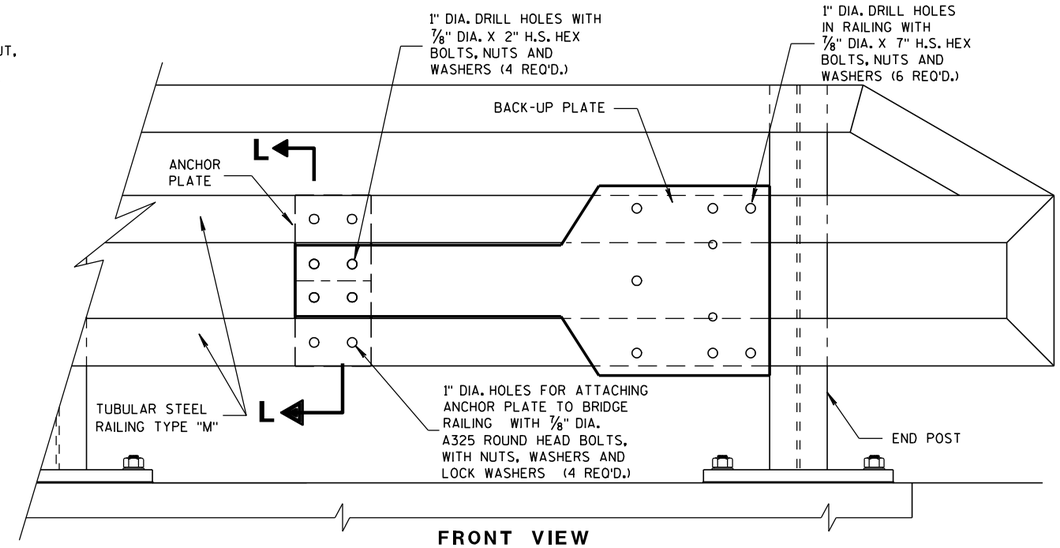
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

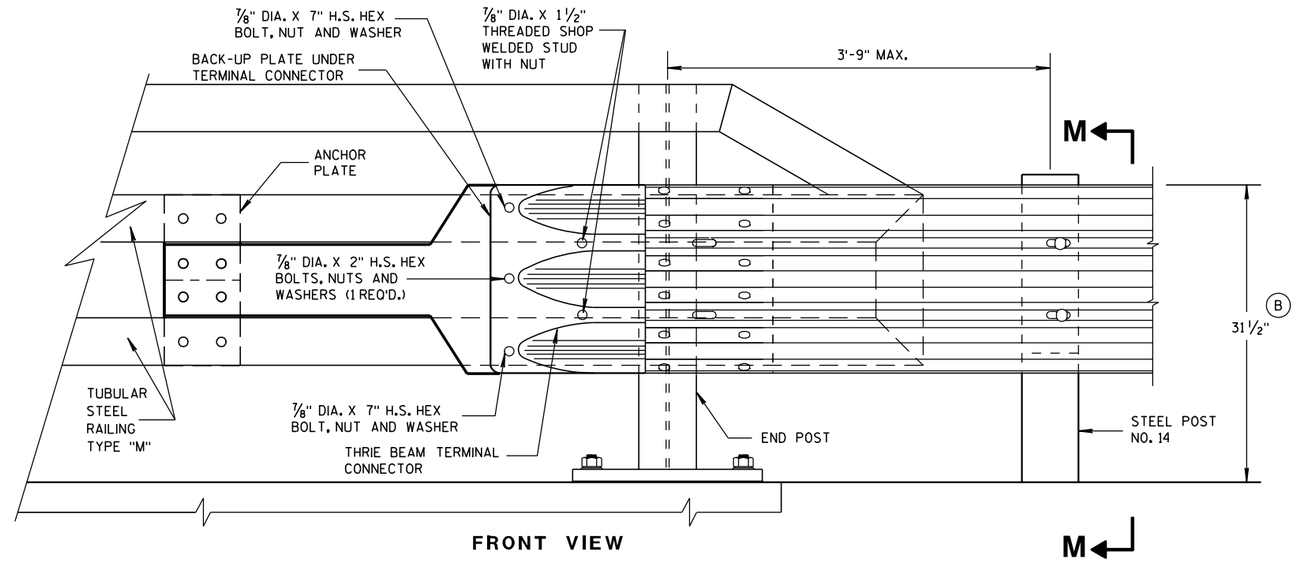


SECTION L-L

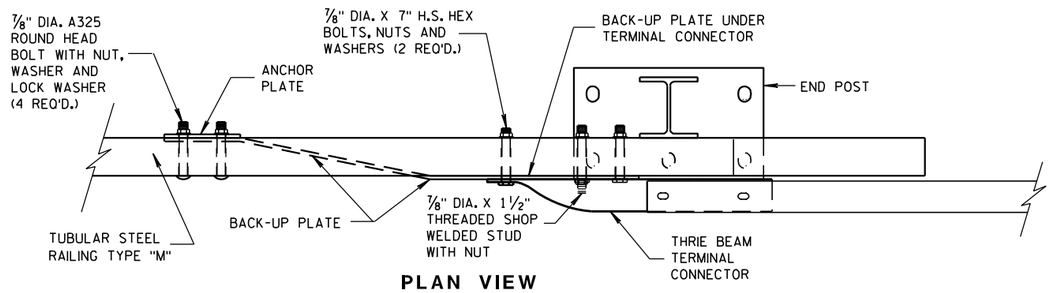


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

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

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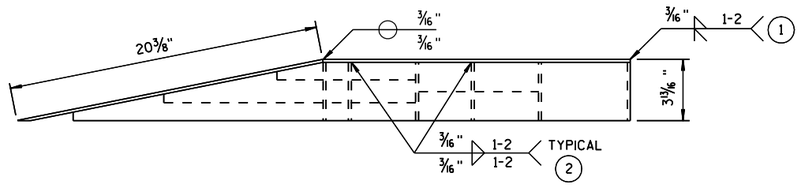
FHWA

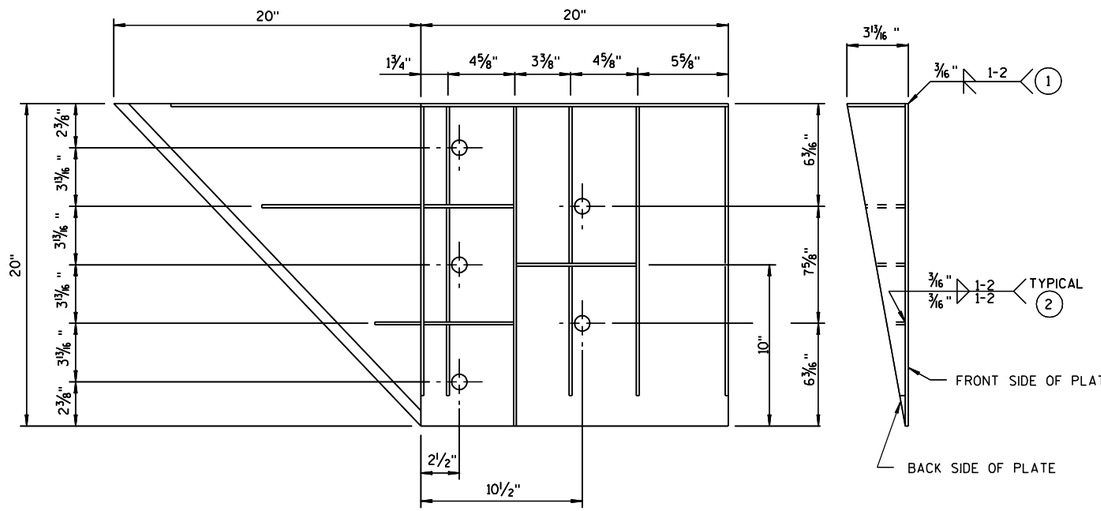
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S.D. 14 B 45-3h

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S.D. 14 B 45-3h





WELDING INSTRUCTION

(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".

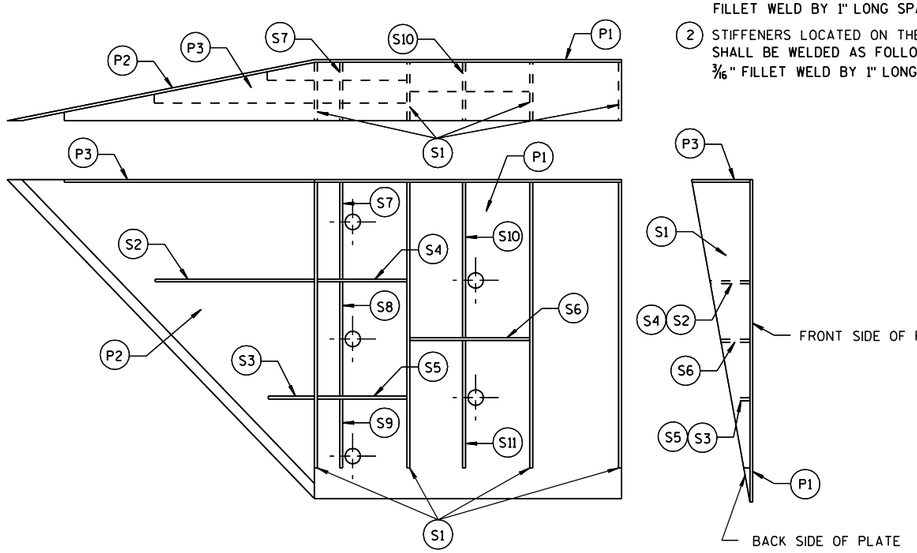


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

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

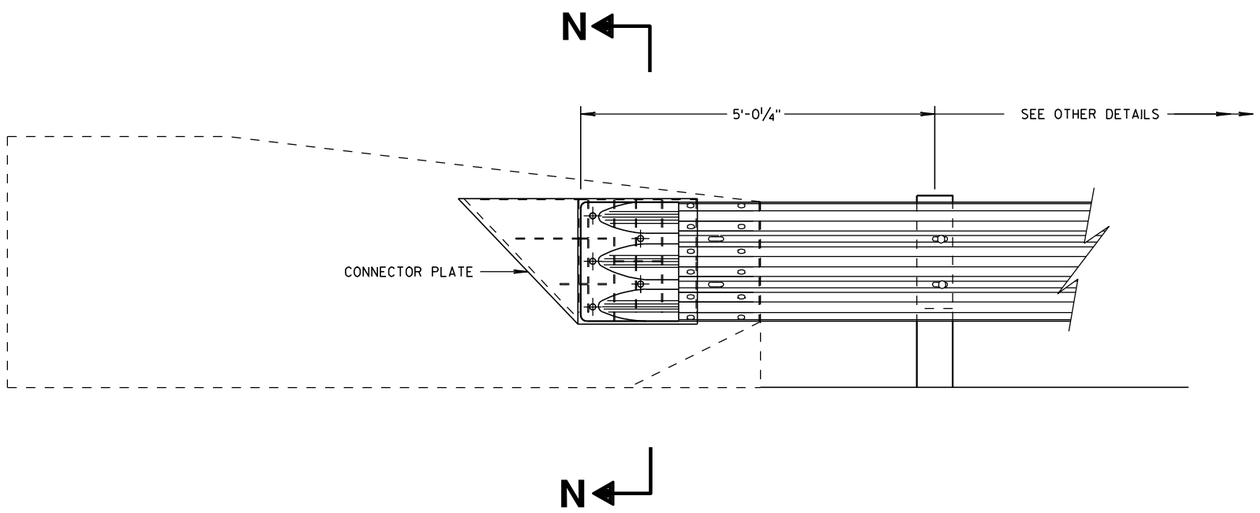
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ROADWAY STANDARDS ENGINEER
FHWA

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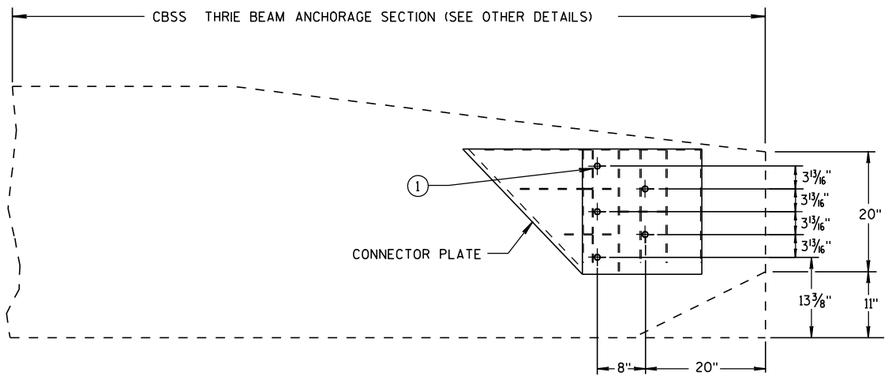
S.D.D. 14 B 45-3i

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



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

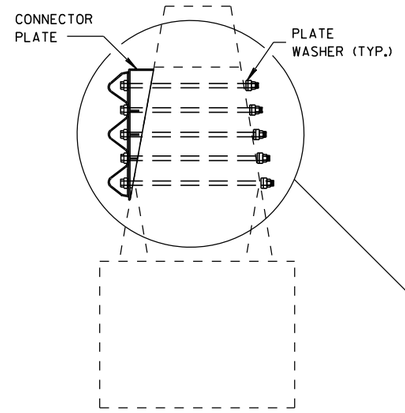


SINGLE SLOPE CONNECTION PLATE PLACEMENT

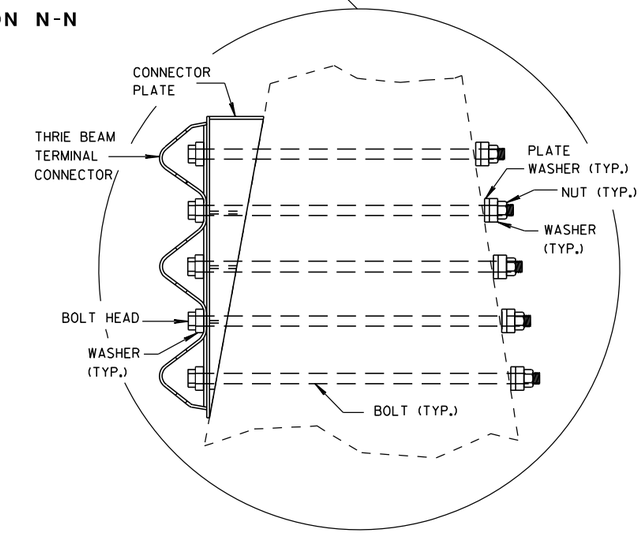
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SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

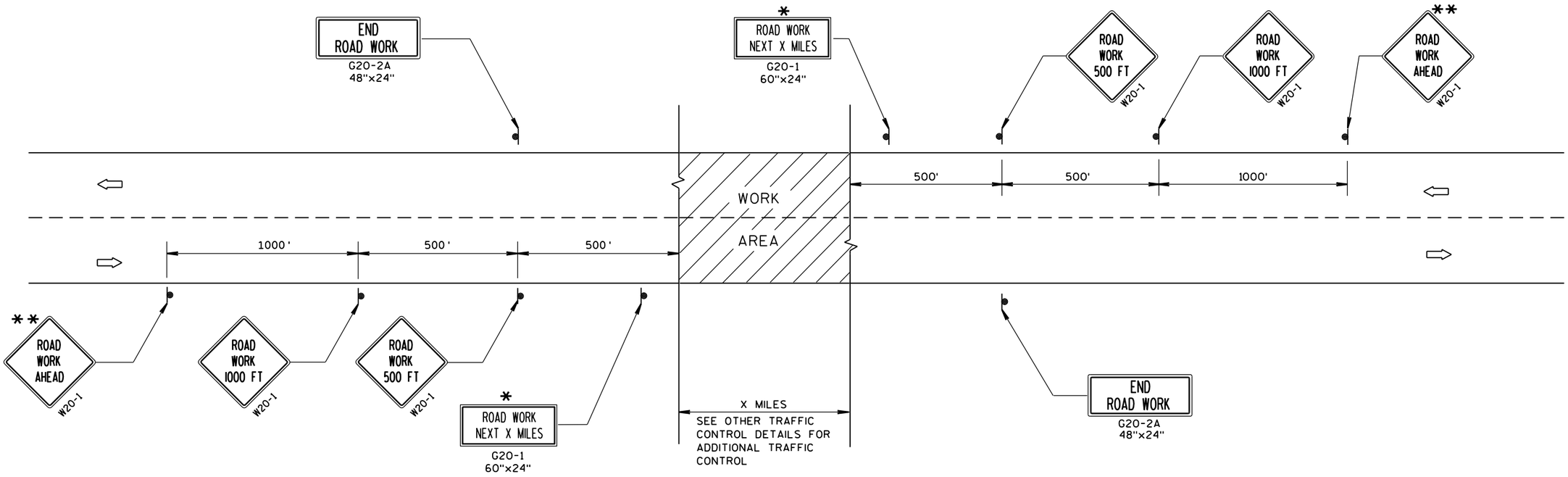
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

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

FHWA



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

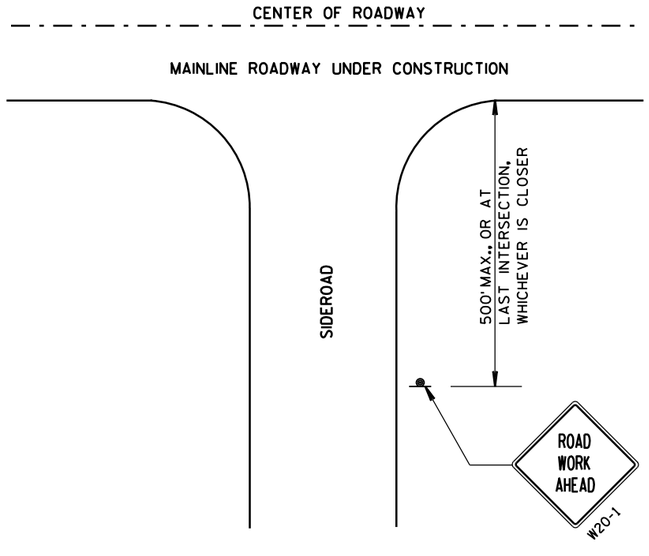
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

SIGN

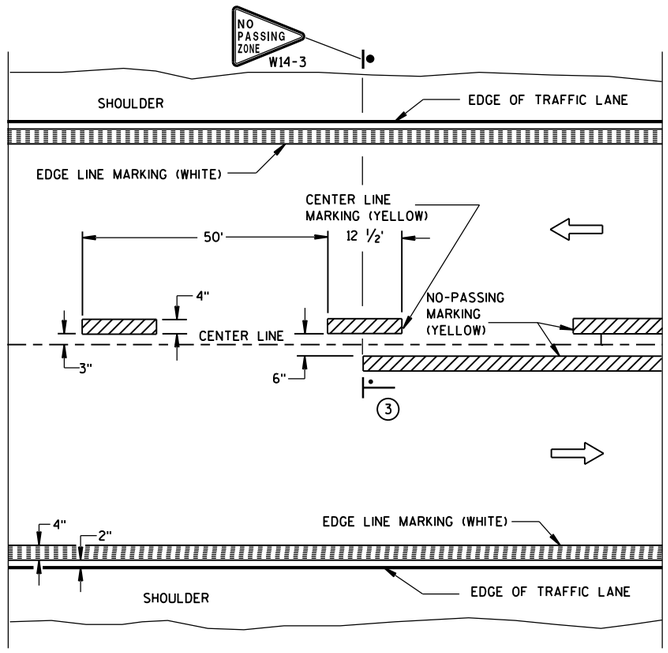
FHWA

6

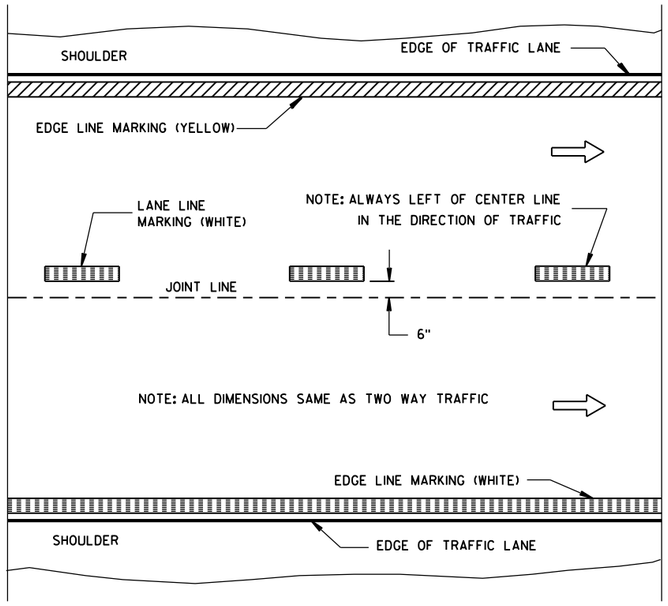
S.D.D. 15 C 4-2

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S.D.D. 15 C 4-2

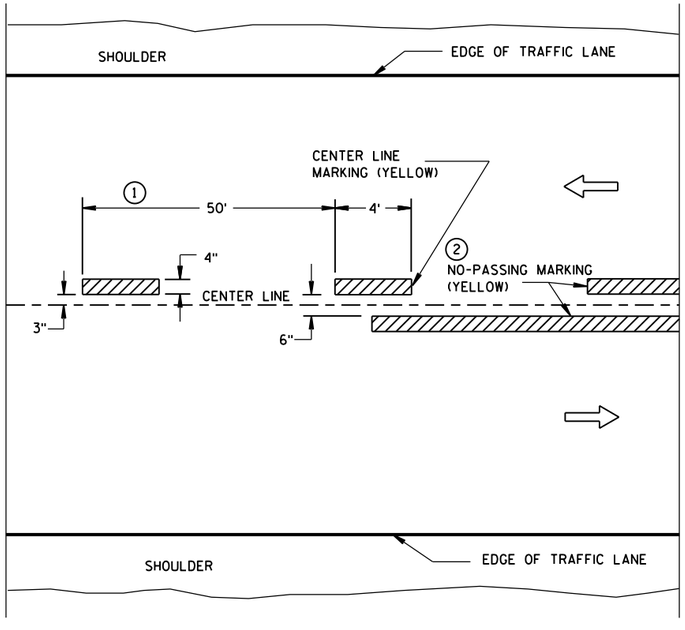


TWO WAY TRAFFIC

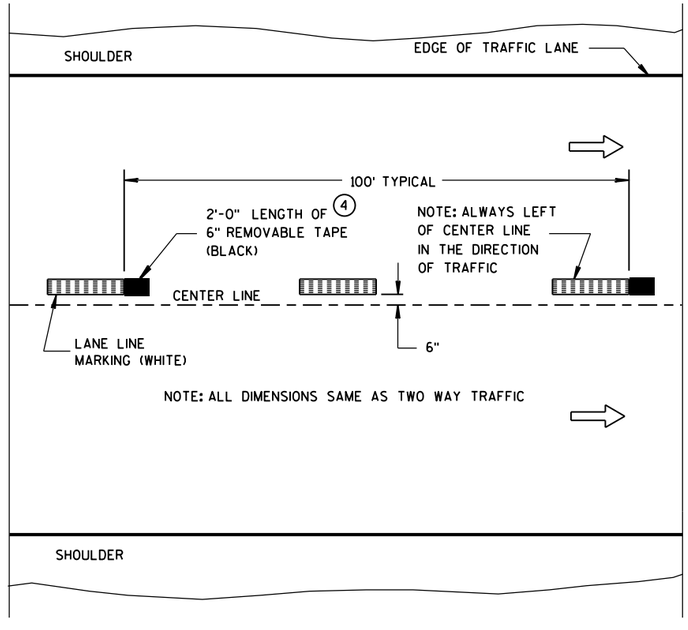


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

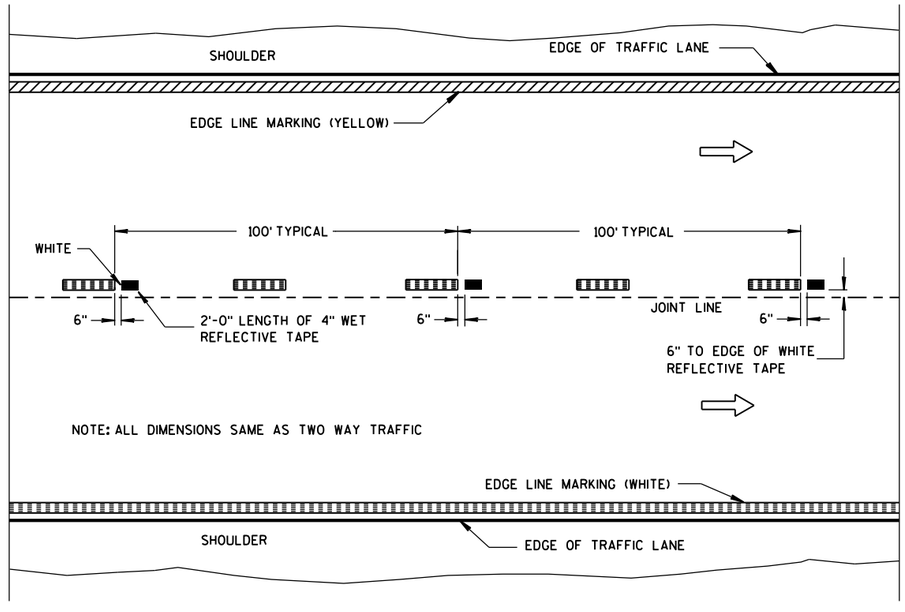
GENERAL NOTES

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

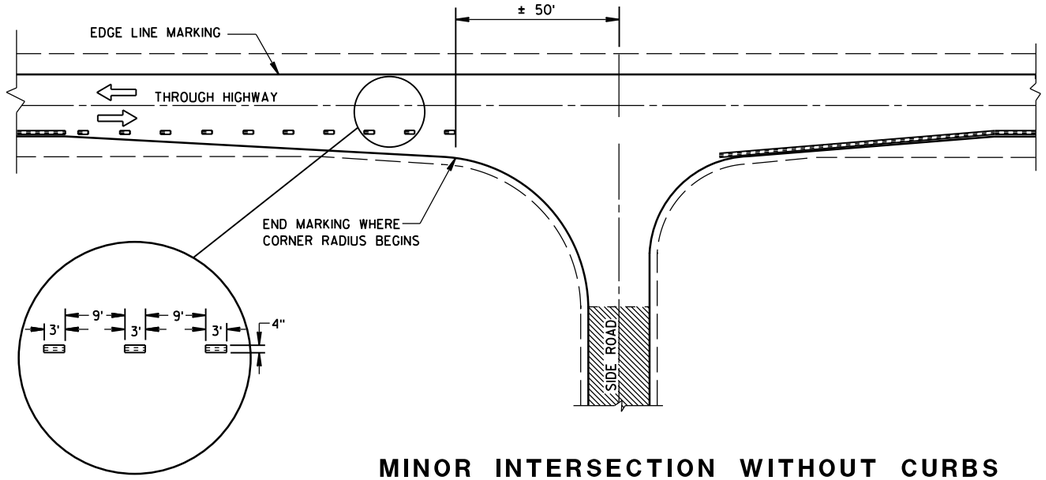
FHWA

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

6

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



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

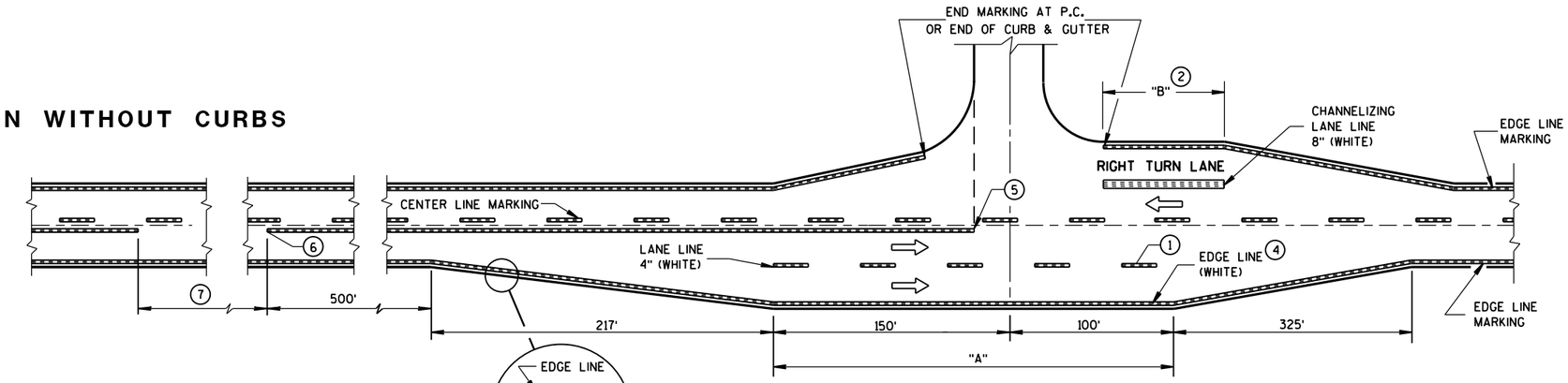
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

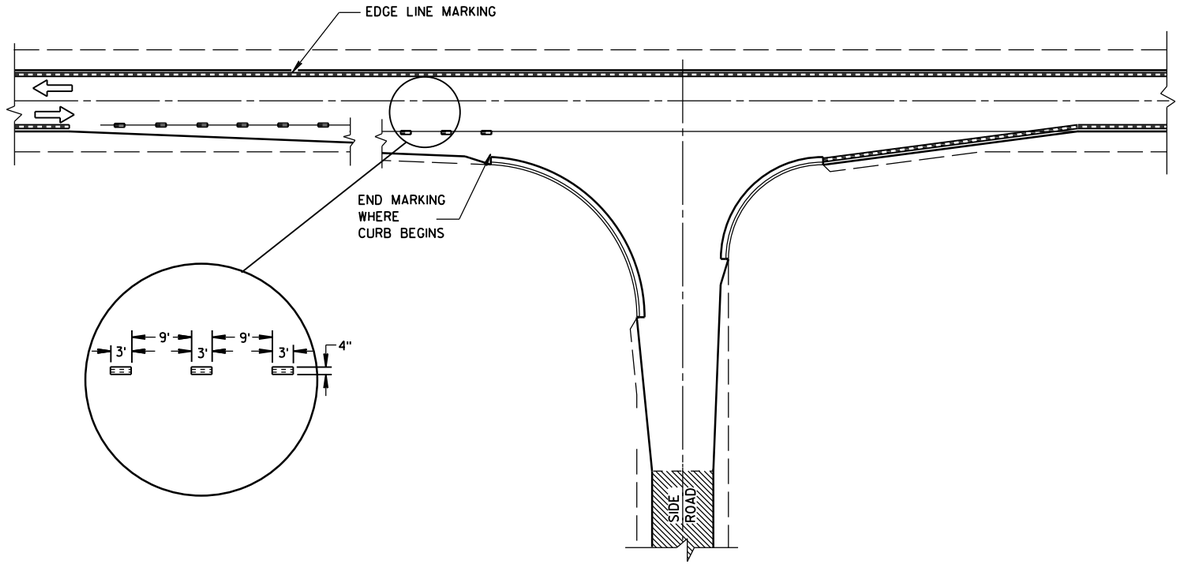
(7)

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



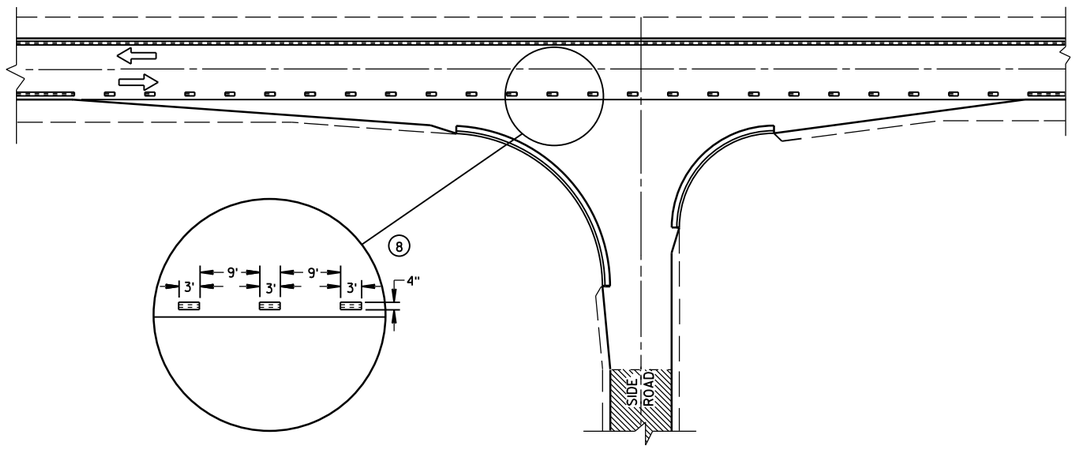
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

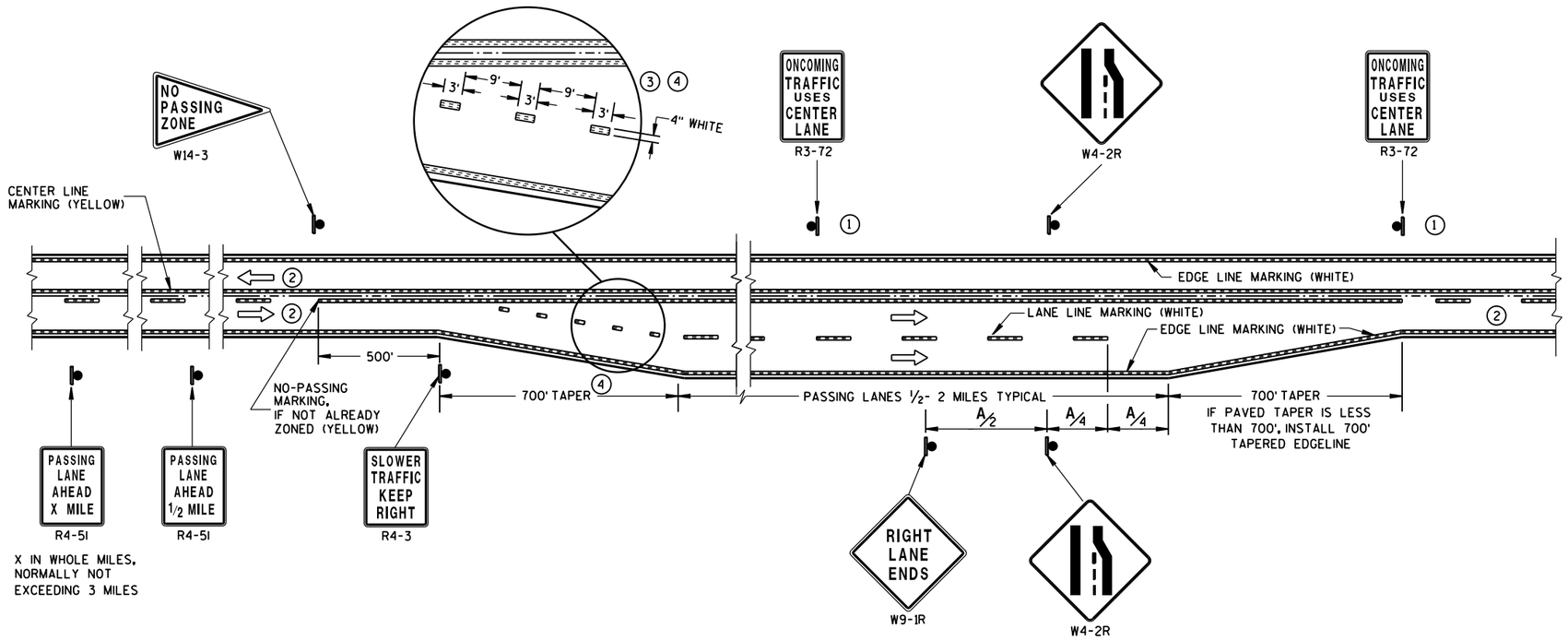
(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

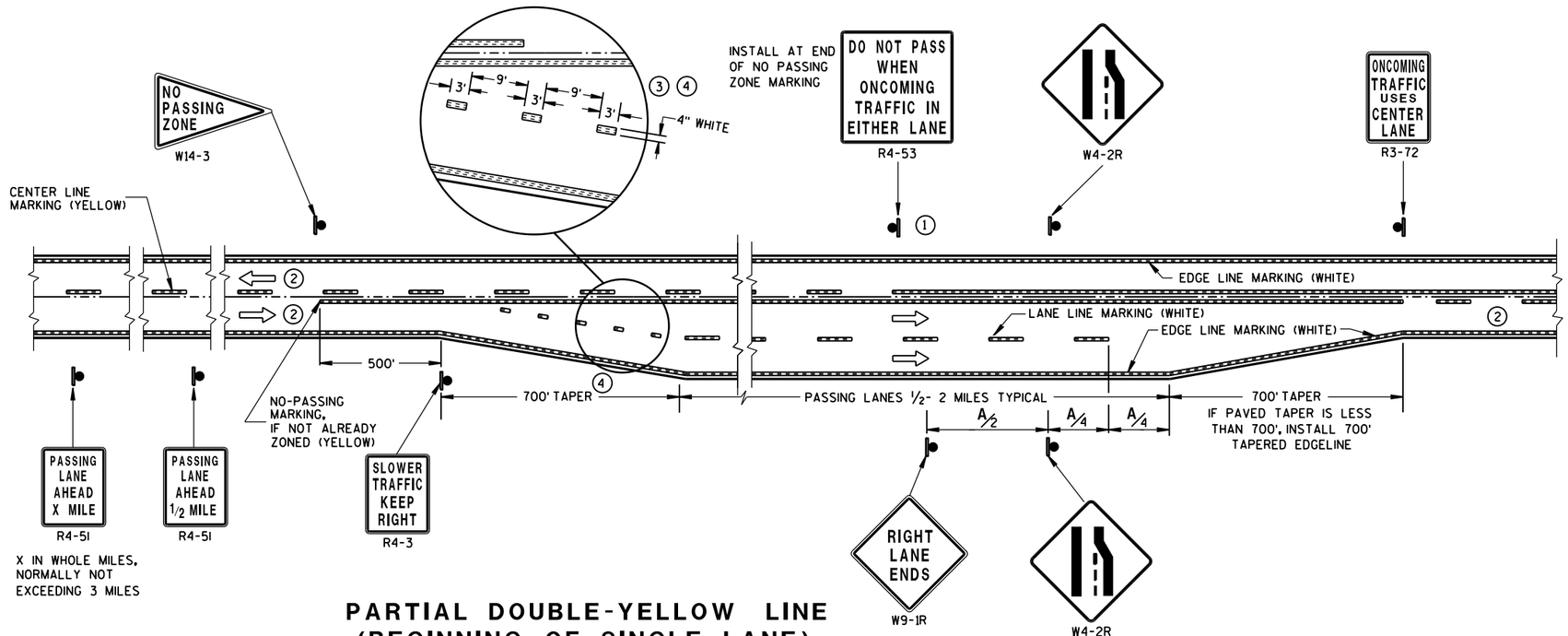
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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



SOLID DOUBLE-YELLOW LINE
(THROUGHOUT ENTIRE PASSING/CLIMBING LANE)



PARTIAL DOUBLE-YELLOW LINE
(BEGINNING OF SINGLE LANE)

GENERAL NOTES

1. SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
2. THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
3. THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3'LINE 9'GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
4. WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

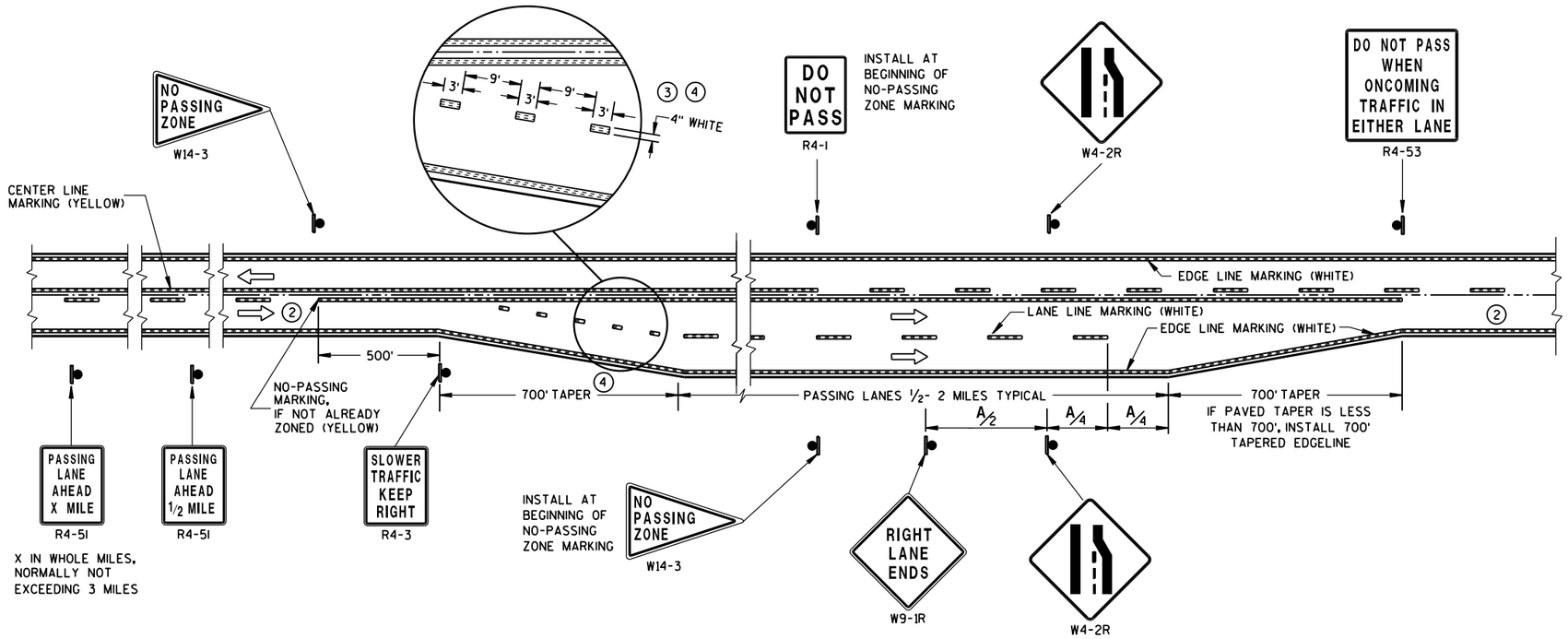
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950

PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

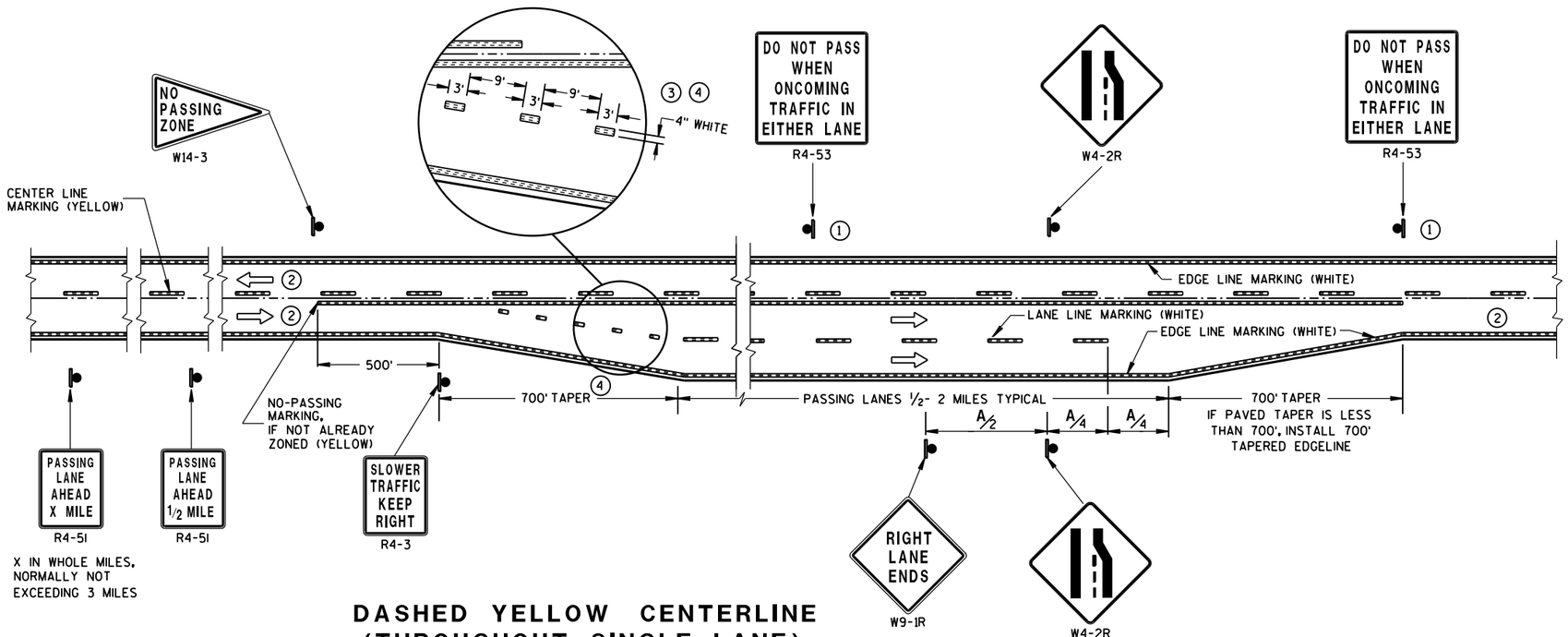
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



SOLID DOUBLE-YELLOW LINE (END OF SINGLE LANE)



DASHED YELLOW CENTERLINE (THROUGHOUT SINGLE LANE)

GENERAL NOTES

1. SIGN SHALL BE REPEATED AT 1/2 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
2. THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
3. THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3'LINE 9'GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
4. WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950

PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

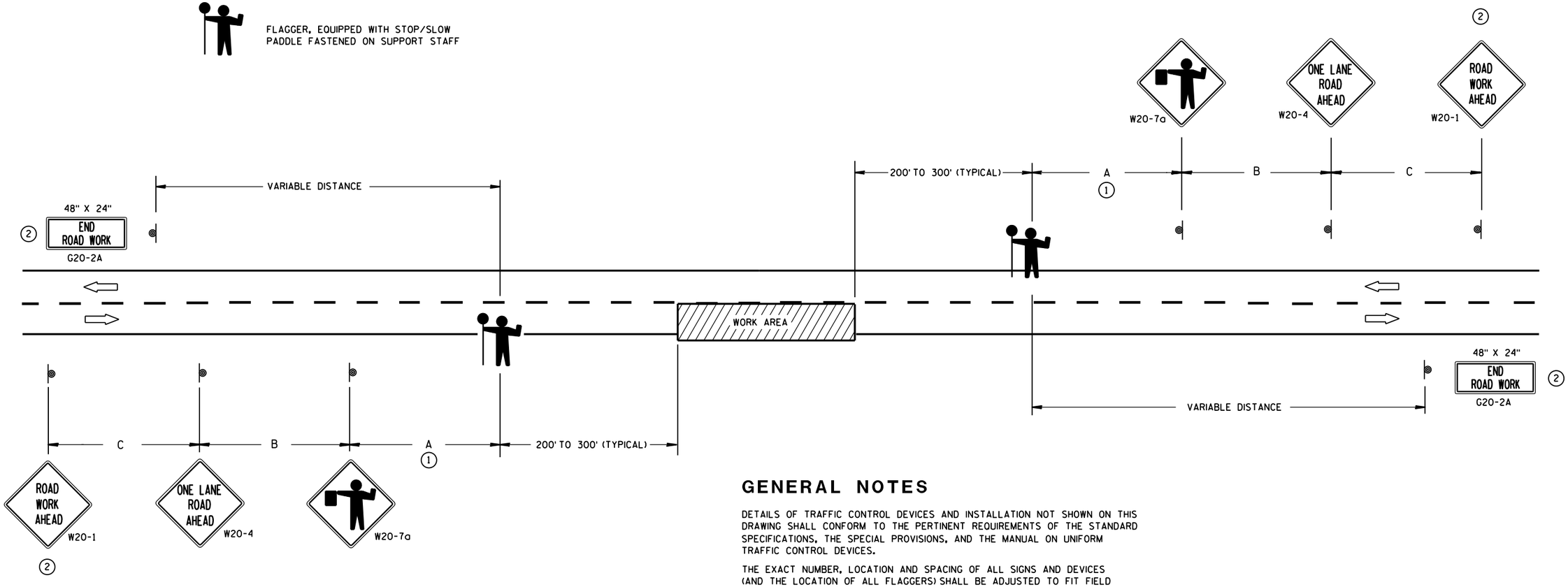
SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

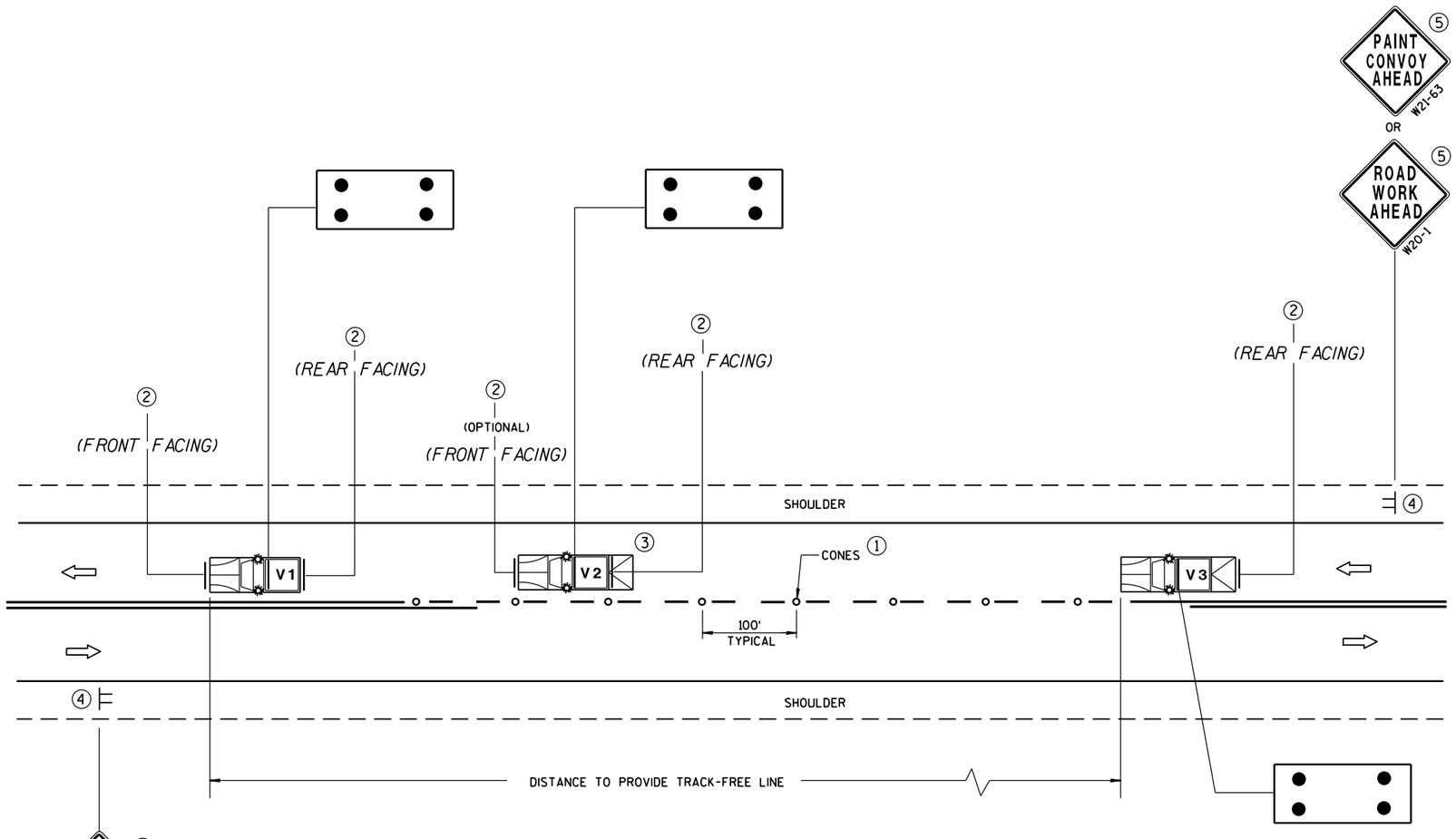
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 C 12-4

6

S.D.D. 15 C 12-4



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

- **V1** LEAD VEHICLE
- **V2** SHADOW VEHICLE
- **V3** TRAIL VEHICLE WITH TMA
- **TMA** TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/3/2013 DATE	/S/ Travis Feltes STATE TRAFFIC E
FHWA	

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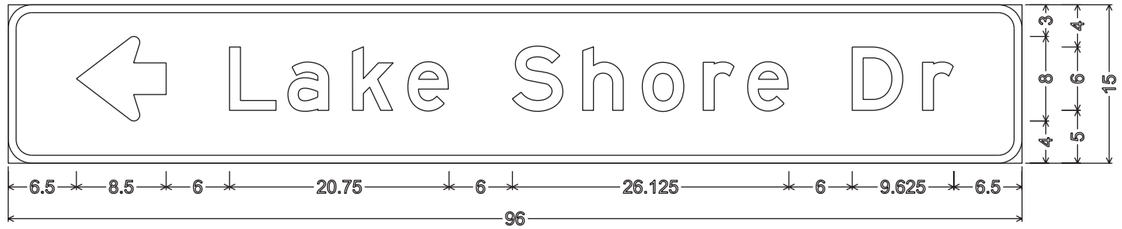
S.D.D. 15 C 19-2a

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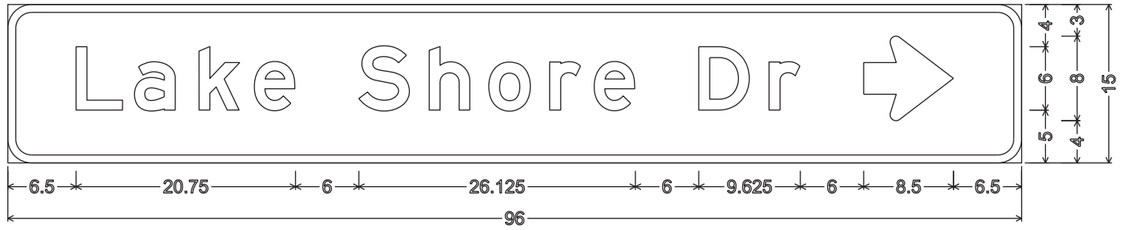
S.D.D. 15 C 19-2a

NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E

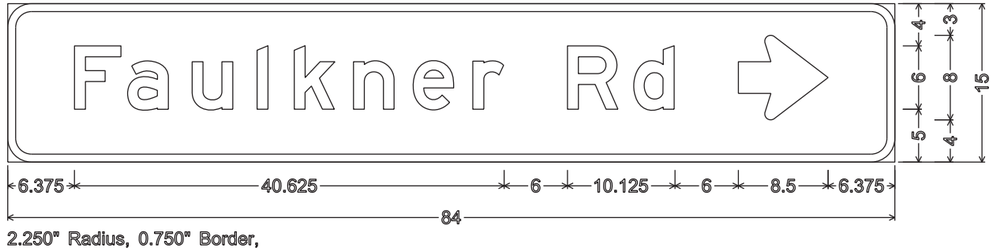


2.250" Radius, 0.750" Border,

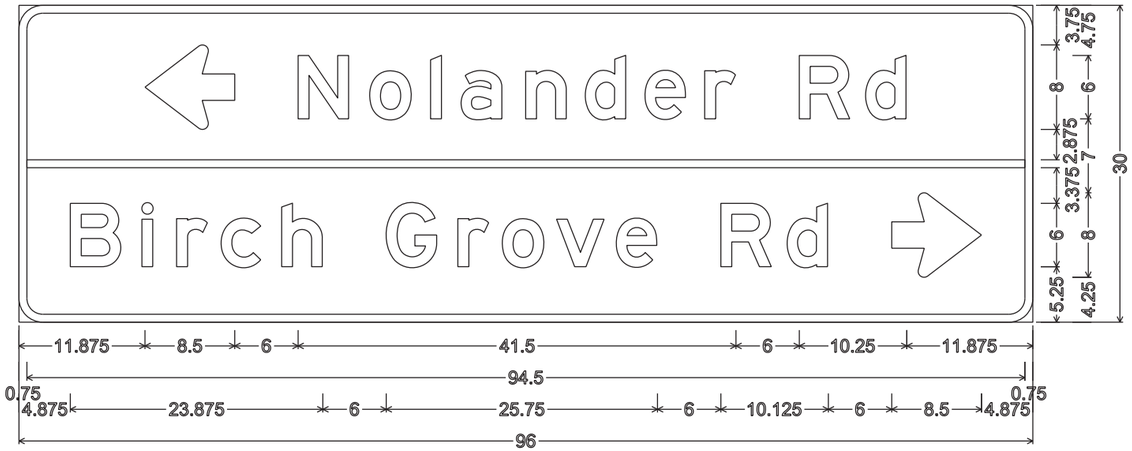


2.250" Radius, 0.750" Border,

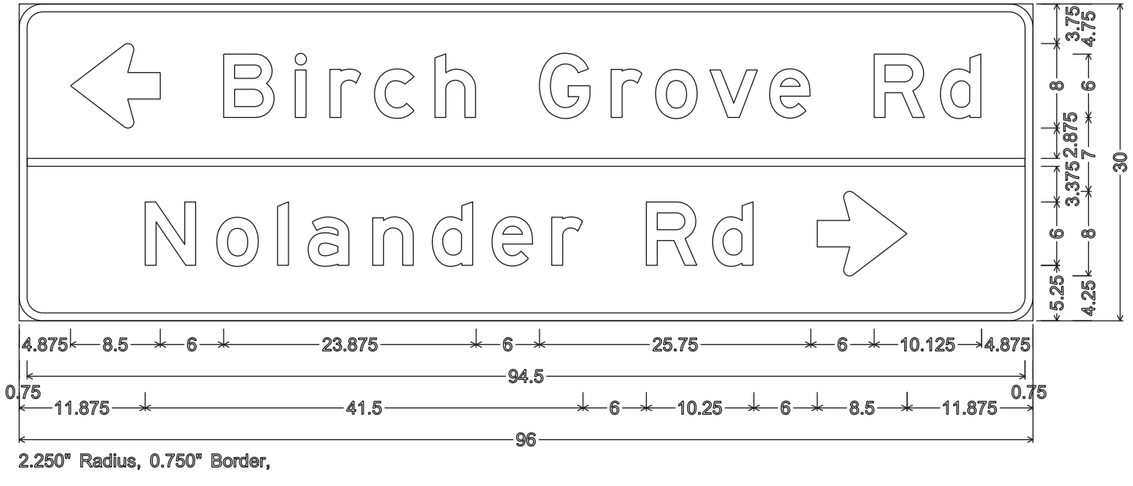
2.250" Radius, 0.750" Border,



2.250" Radius, 0.750" Border,



2.250" Radius, 0.750" Border,



2.250" Radius, 0.750" Border,

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	PERMANENT SIGNING	SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_d8\8041oo13.dgn PLOT DATE : 22-OCT-2013 15:13 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 14.691997:1.000000 WISDOT/CADDS SHEET 42

NOTES

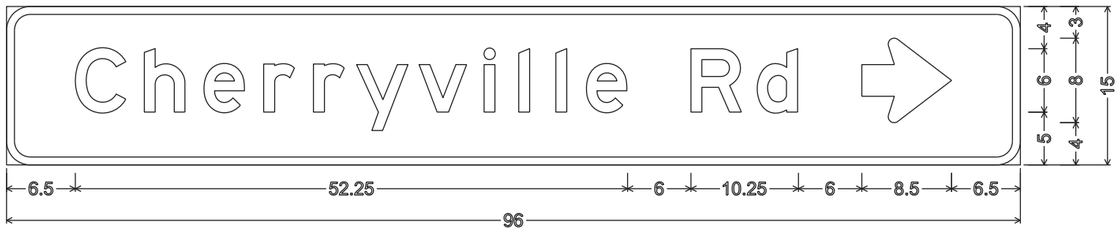
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2. Color:
   Background - Green
   Message - White
3. Message Series - E



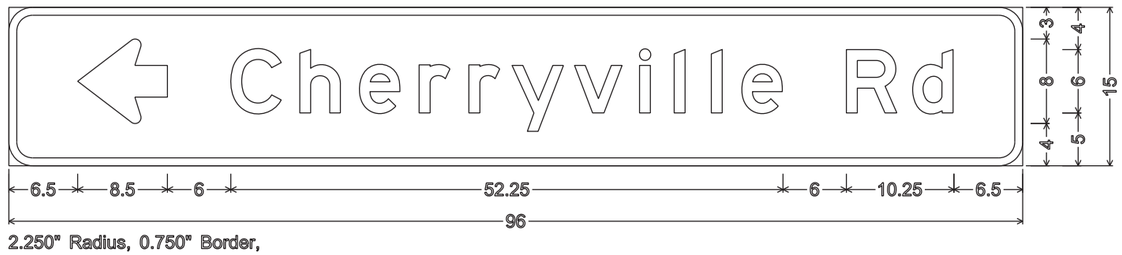
2.250" Radius, 0.750" Border,



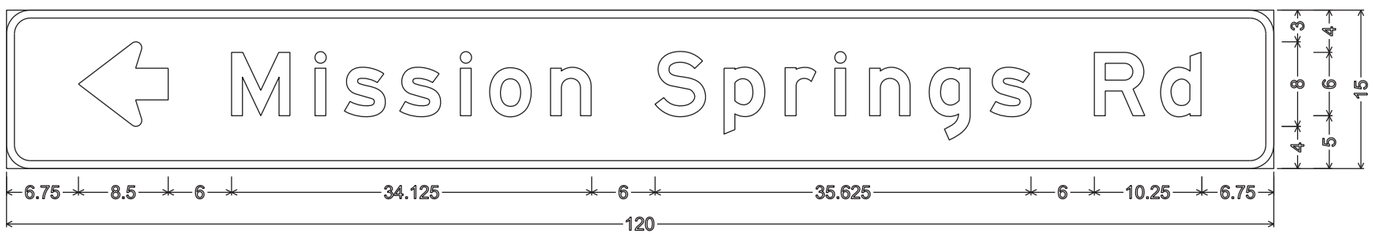
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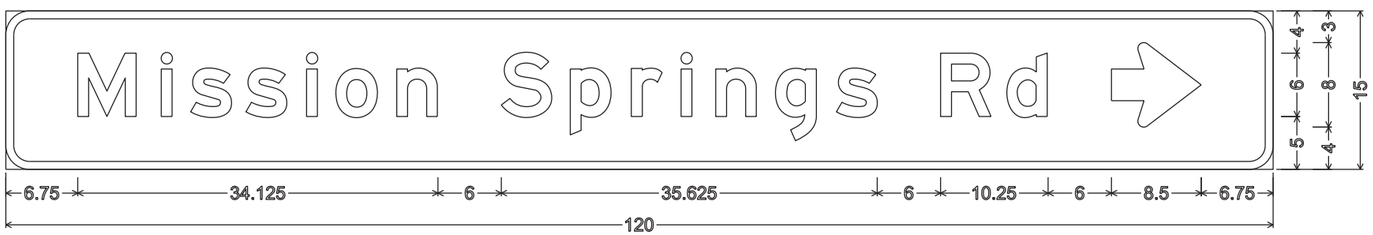
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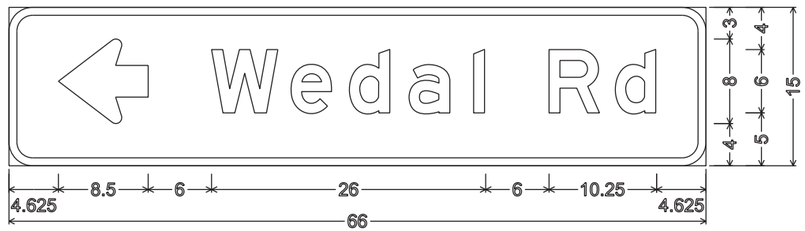
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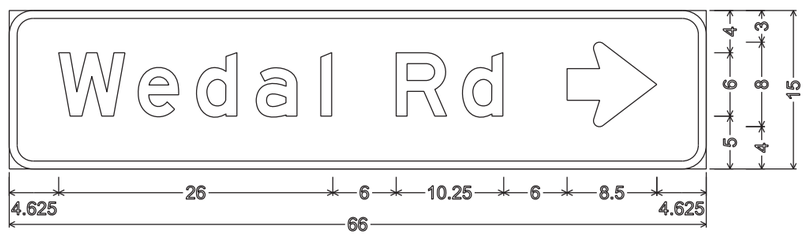
2.250" Radius, 0.750" Border,



2.250" Radius, 0.750" Border,



2.250" Radius, 0.750" Border,



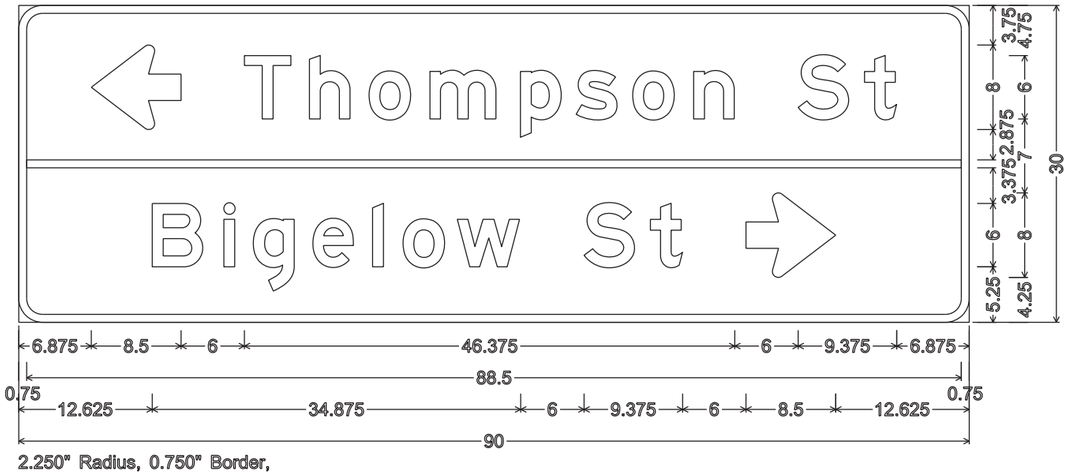
2.250" Radius, 0.750" Border,

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	PERMANENT SIGNING	SHEET NO: E

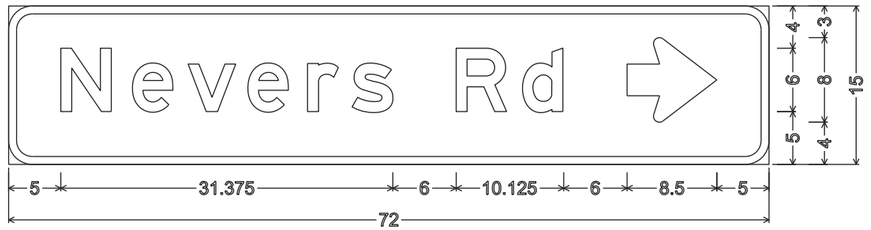
FILE NAME : C:\CAEfiles\Projects\tr_d8\8041oo13.dgn PLOT DATE : 22-OCT-2013 15:19 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 14.691997:1.000000
WISDOT/CADDS SHEET 42

NOTES

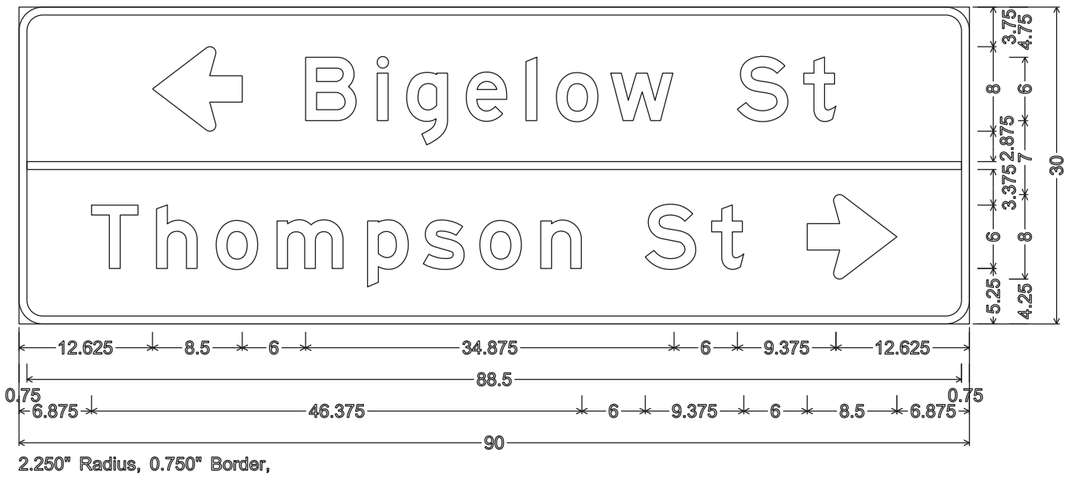
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E



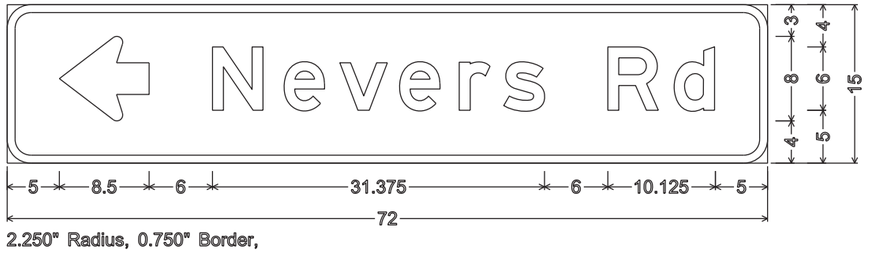
2.250" Radius, 0.750" Border,



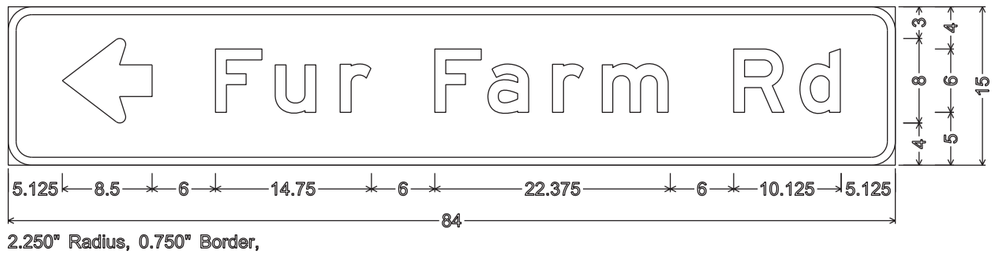
2.250" Radius, 0.750" Border,



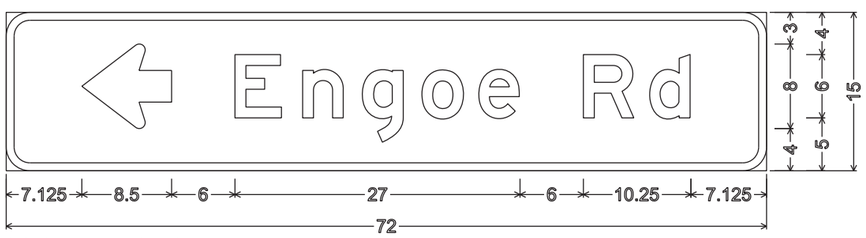
2.250" Radius, 0.750" Border,



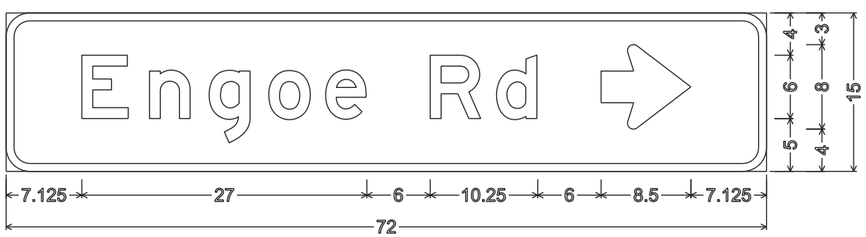
2.250" Radius, 0.750" Border,



2.250" Radius, 0.750" Border,



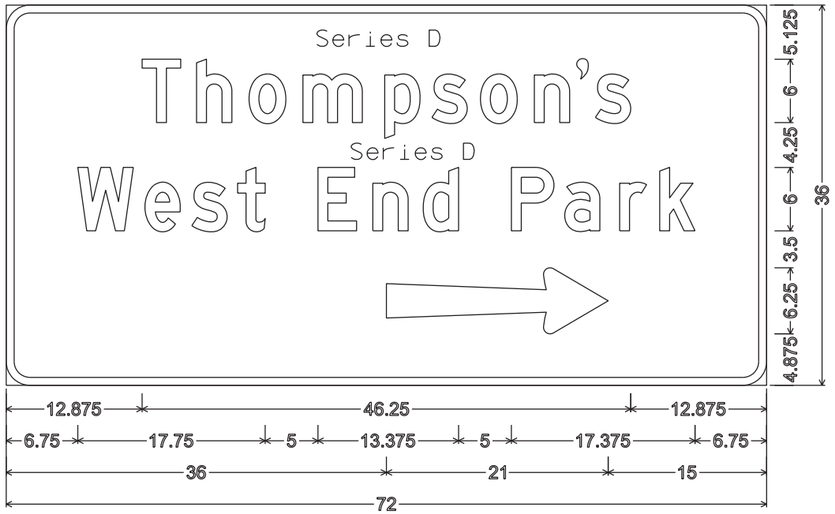
2.250" Radius, 0.750" Border,



2.250" Radius, 0.750" Border,

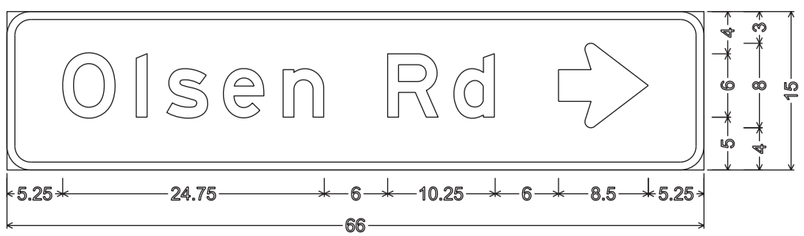
PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	PERMANENT SIGNING	SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_d8\8041oo13.dgn PLOT DATE : 22-OCT-2013 15:20 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 14.691997:1.000000
WISDOT/CADDS SHEET 42



2.250" Radius, 0.750" Border, White on Brown;

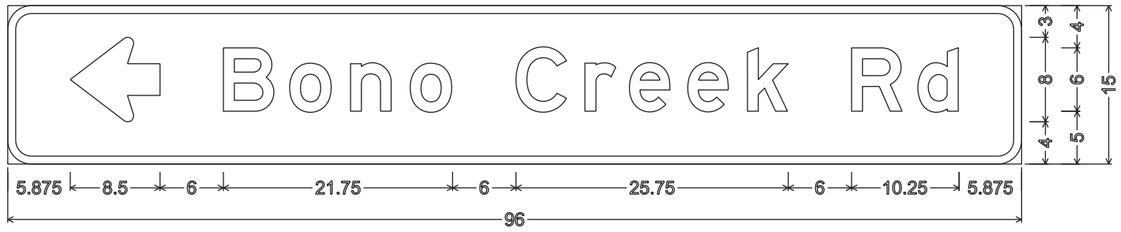
2.250" Radius, 0.750" Border,



2.250" Radius, 0.750" Border,

NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green except as noted
   Message - White
3. Message Series - E except as noted



2.250" Radius, 0.750" Border,



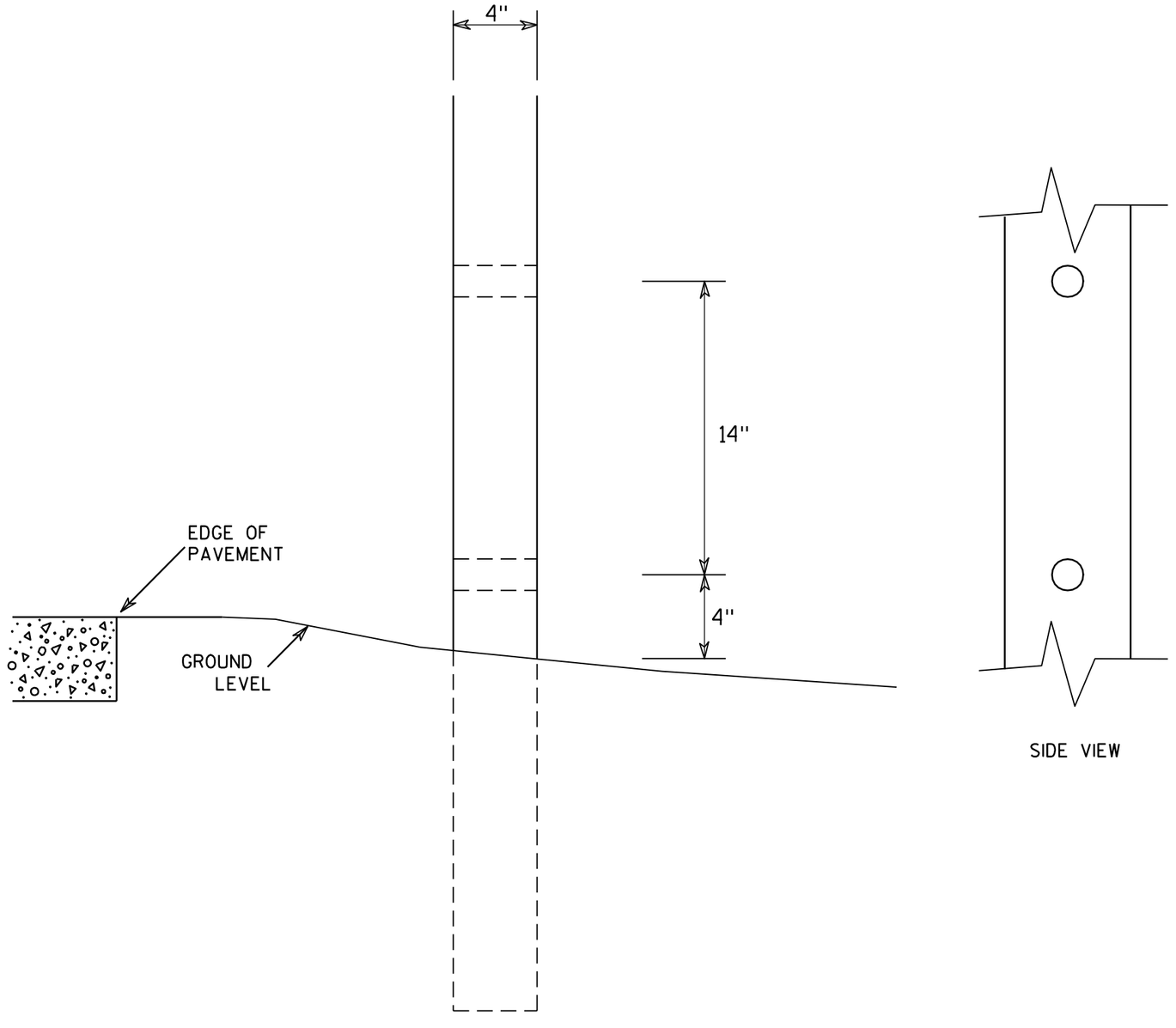
2.250" Radius, 0.750" Border,

7

7

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	PERMANENT SIGNING	SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_d8\8041a013.dgn PLOT DATE : 22-OCT-2013 15:20 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 14.691997:1.000000
WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

7

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4 X 6 WOOD POST MODIFICATIONS

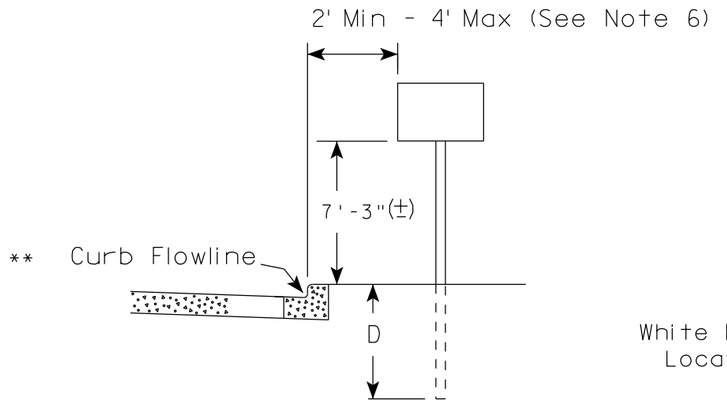
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

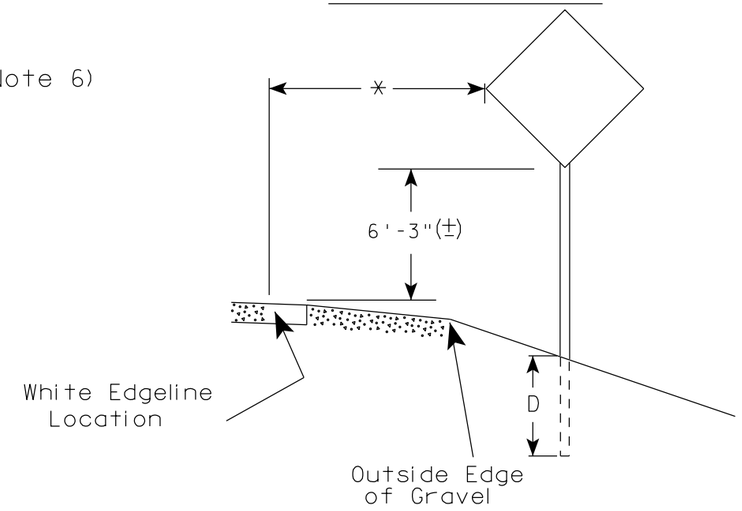
DATE 3/27/97 PLATE NO. A4-11.2

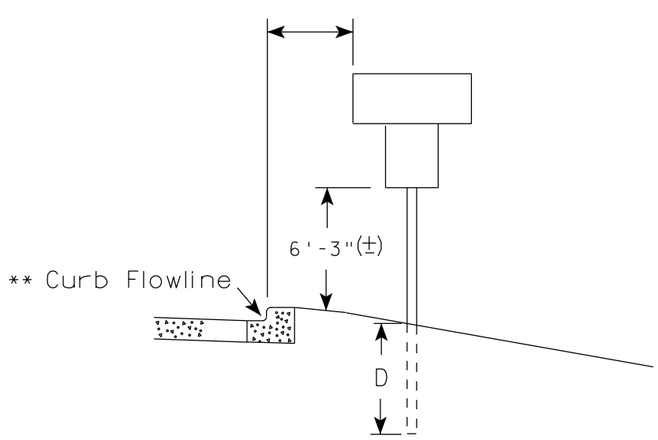
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 91	E

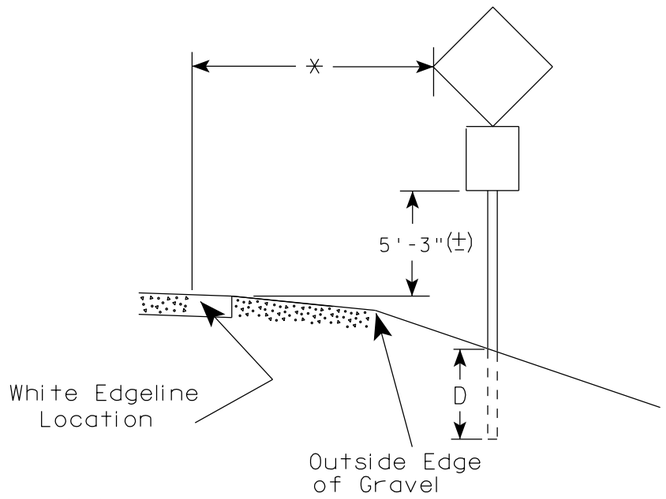
URBAN AREA



RURAL AREA (See Note 2)







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

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

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

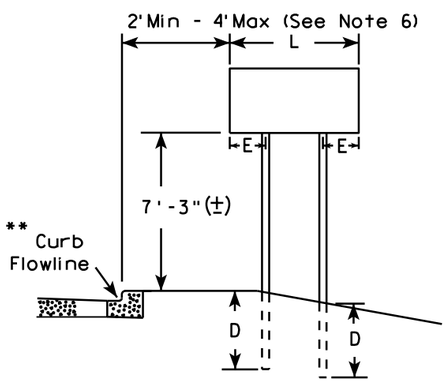
APPROVED Matthew R Rauch
for State Traffic Engineer

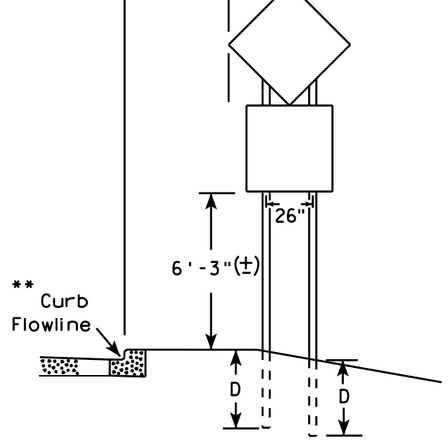
DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

7

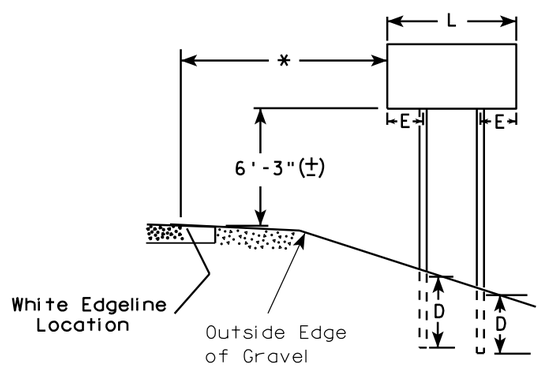
URBAN AREA

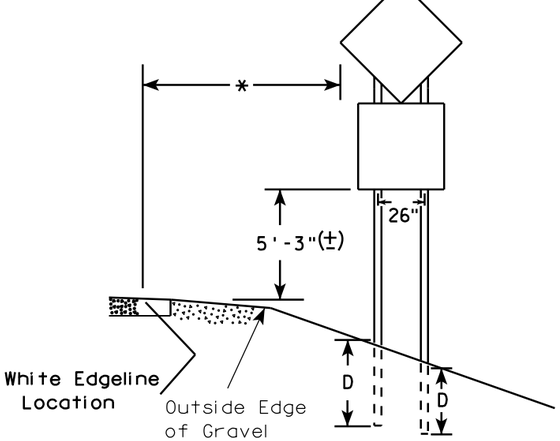




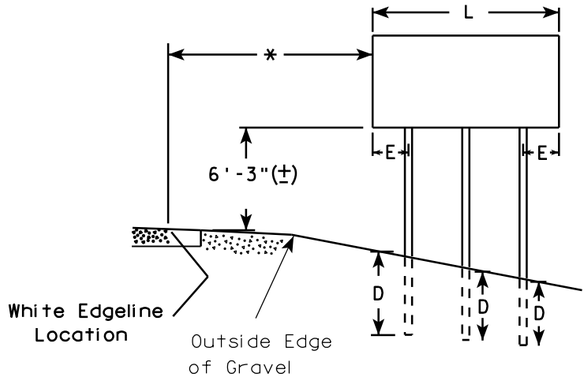
48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN



GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. 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), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

* 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.

** 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.

*** See A4-3 sign plate for signs 4' or less in width or 20 S.F. or less in area.

***

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

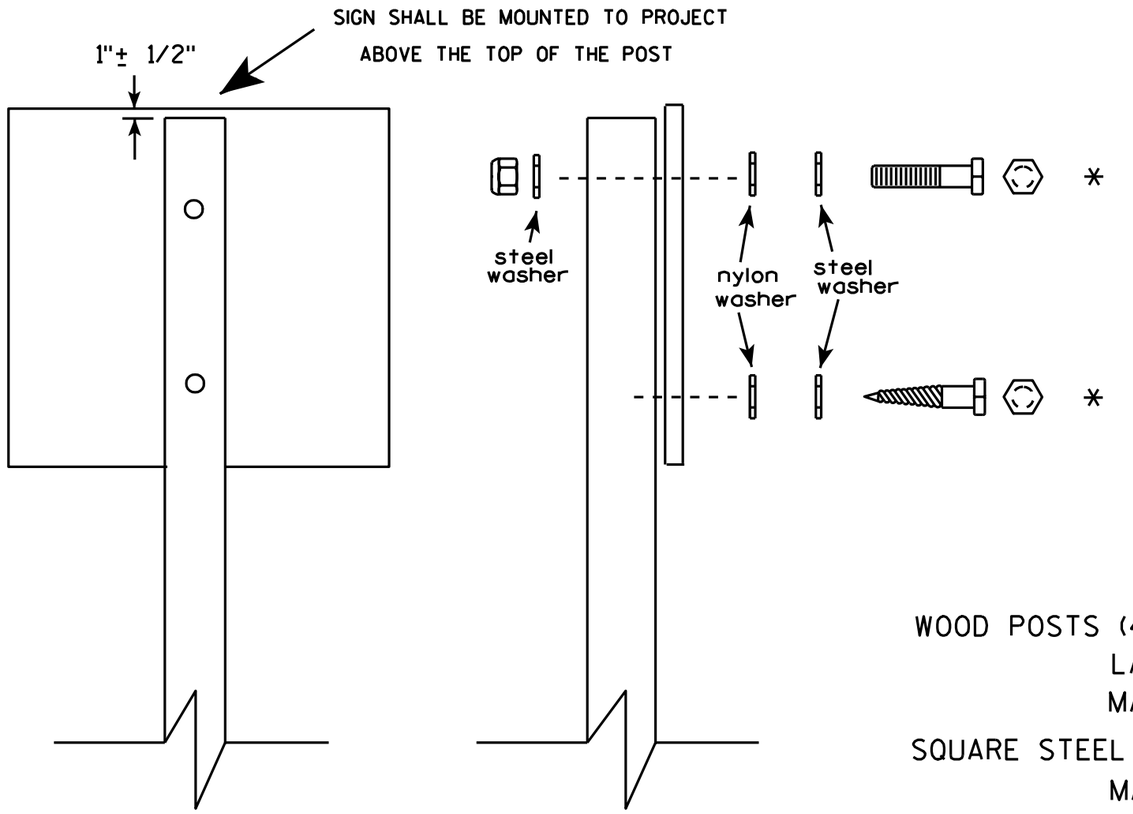
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-4 12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 30-SEP-2013 13:27 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 107.021305:1.000000 WISDOT/CADDS SHEET 42



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

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

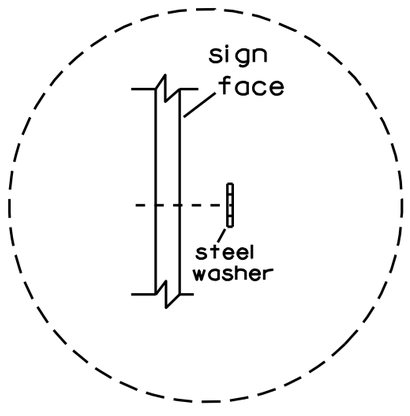
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

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



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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

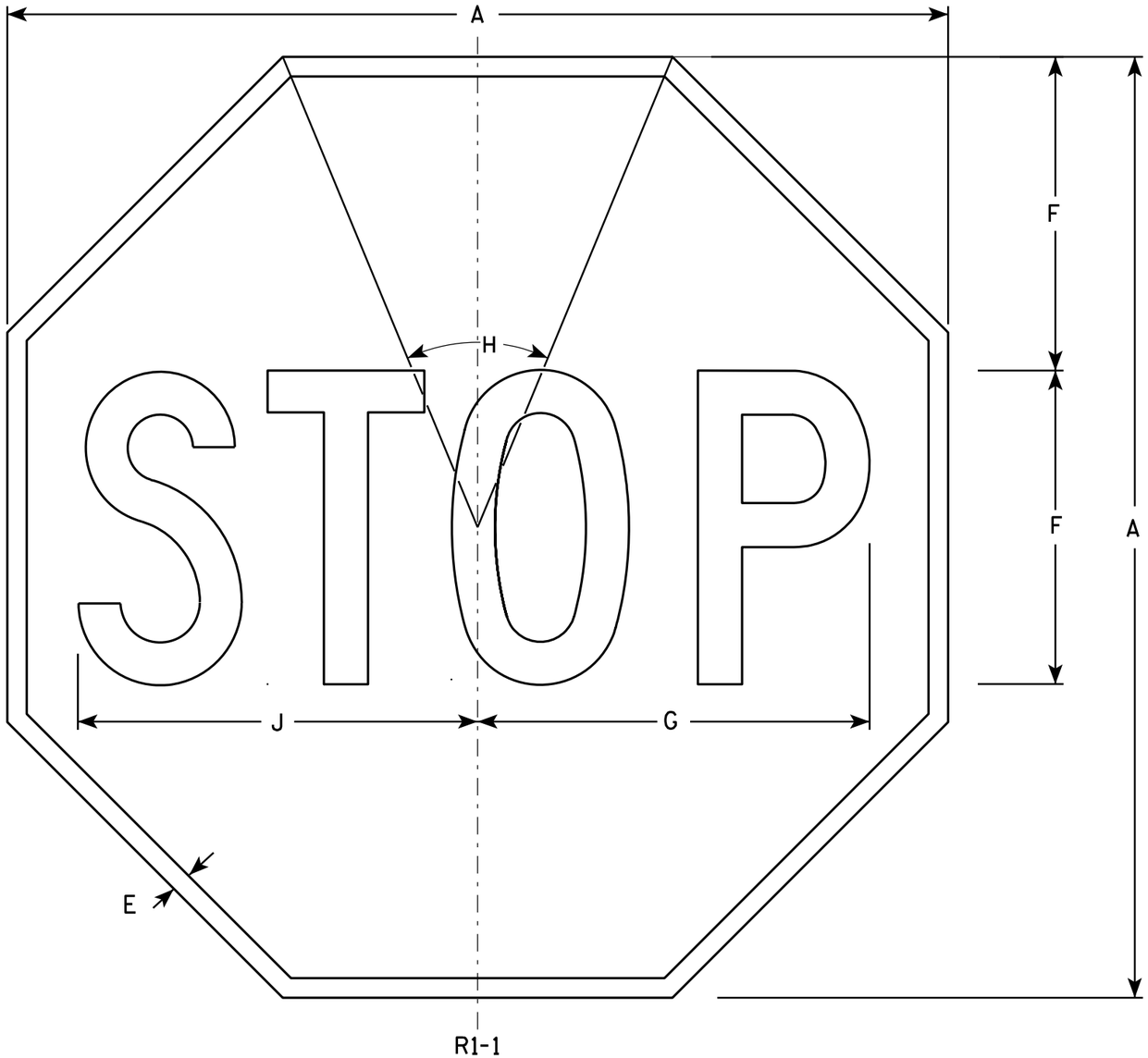
DATE 3/23/10 PLATE NO. A4-8.7

7

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PROJECT NO:

SHEET NO: 94 E



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

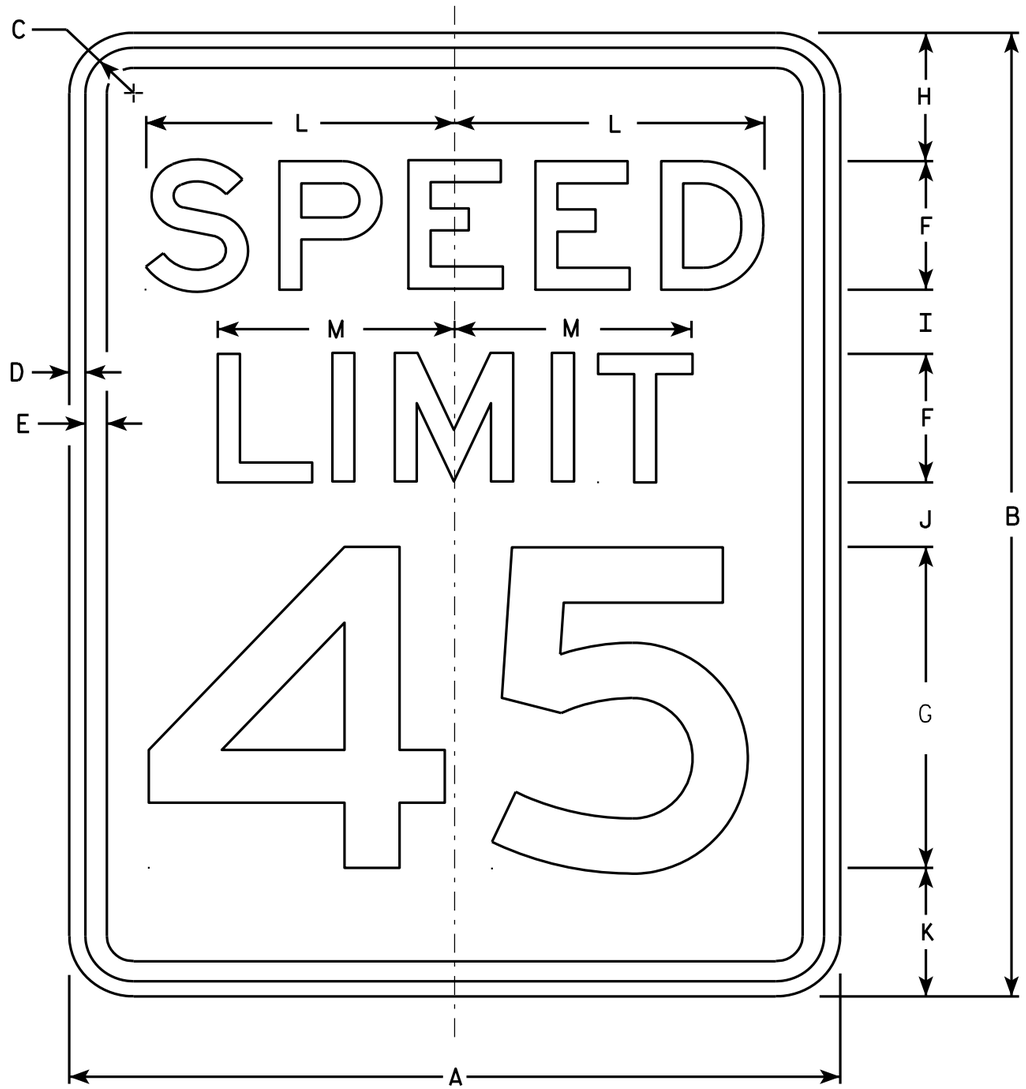
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 95	E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. 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.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

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	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

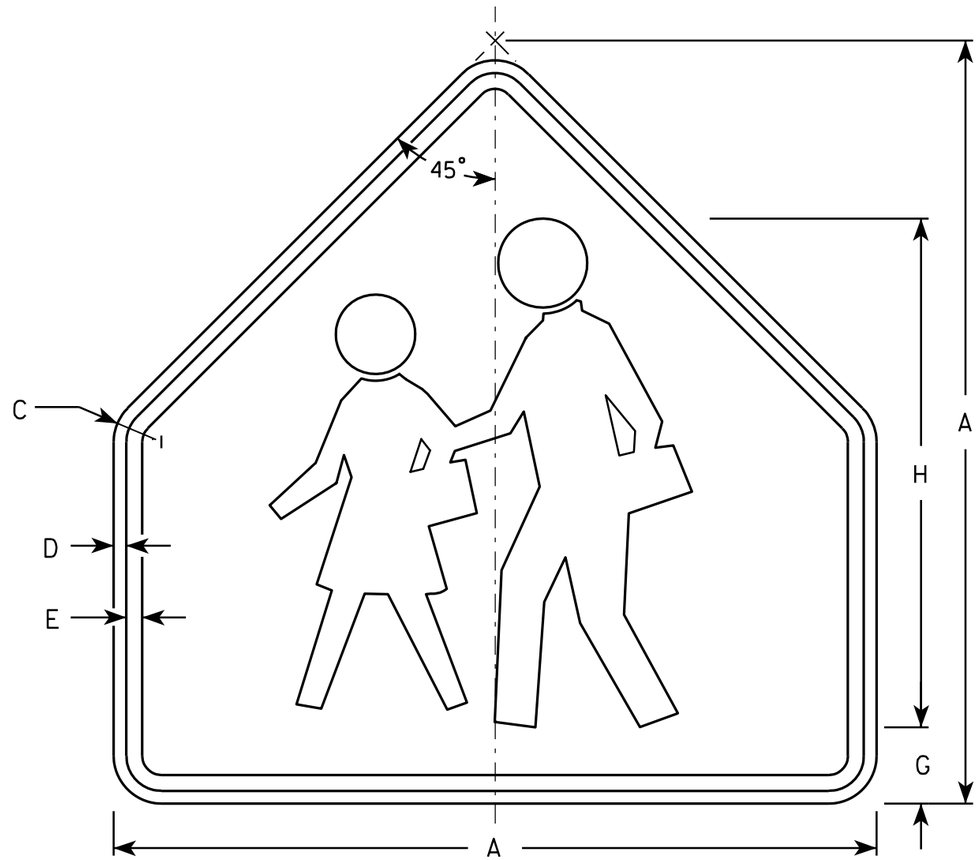
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 96	E



S1-1

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-Green
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

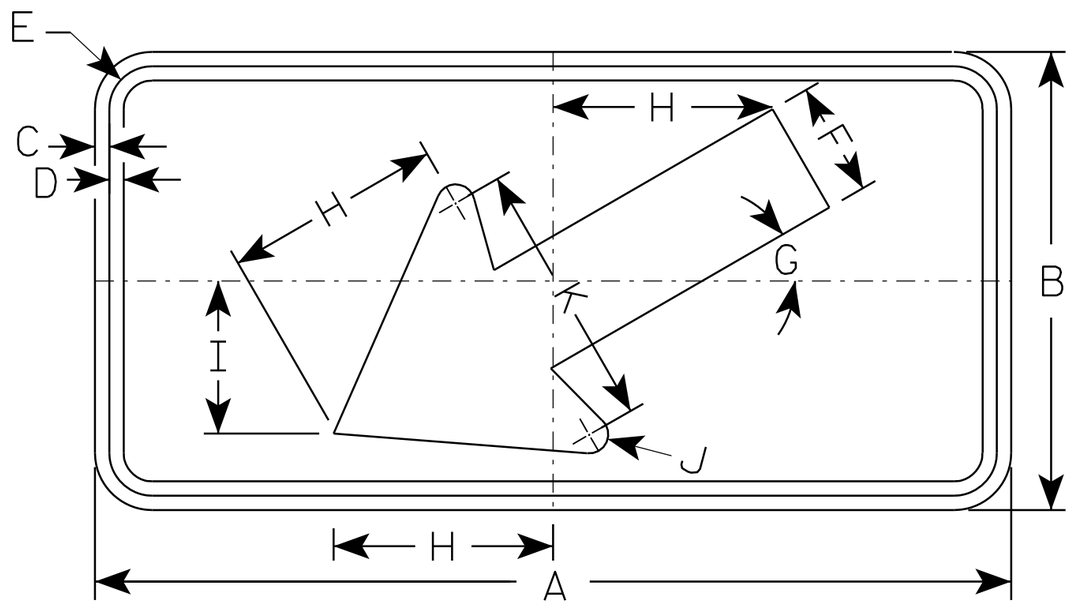
STANDARD SIGN
S1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/05 PLATE NO. S1-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 97	E



S16-7L

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-Green
   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. S16-7R are the same as S16-7L except the arrow is reversed along the vertical centerline.

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	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2S	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
5																											

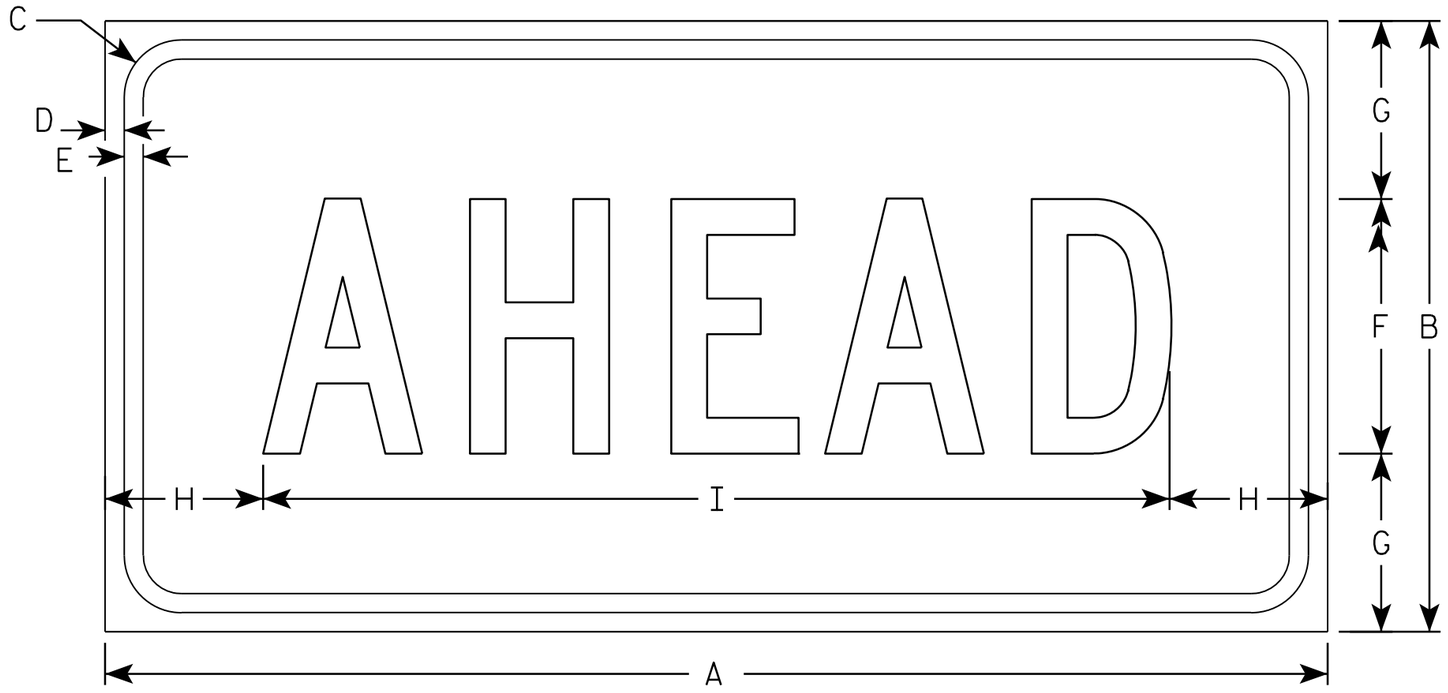
STANDARD SIGN
S16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/22/13 PLATE NO. S16-7.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 98 | E



S16-9P

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-Green
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2S	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

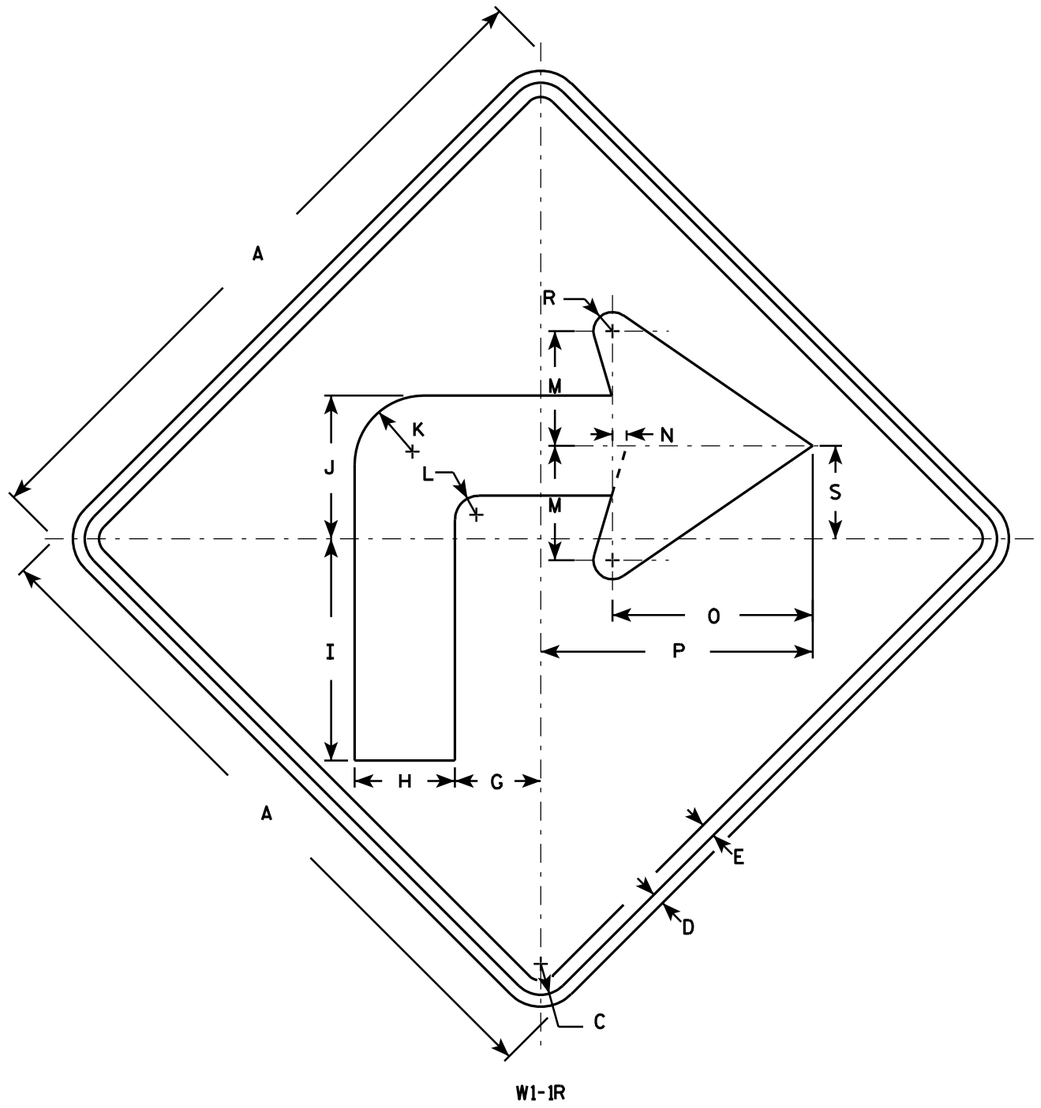
STANDARD SIGN
S16-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/22/13 PLATE NO. S16-9P.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 99 | E



W1-1R

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. W1-1L is the same as W1-1R except the arrow is reversed along the vertical centerline.

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	24		1 1/8	3/8	1/2		3	3 1/2	7 3/4	5	2 1/2	7/8	4	1/2	7	9 1/2		5/8	3 1/4								4.0
2S	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
2M	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
3	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
4	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0
5	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0

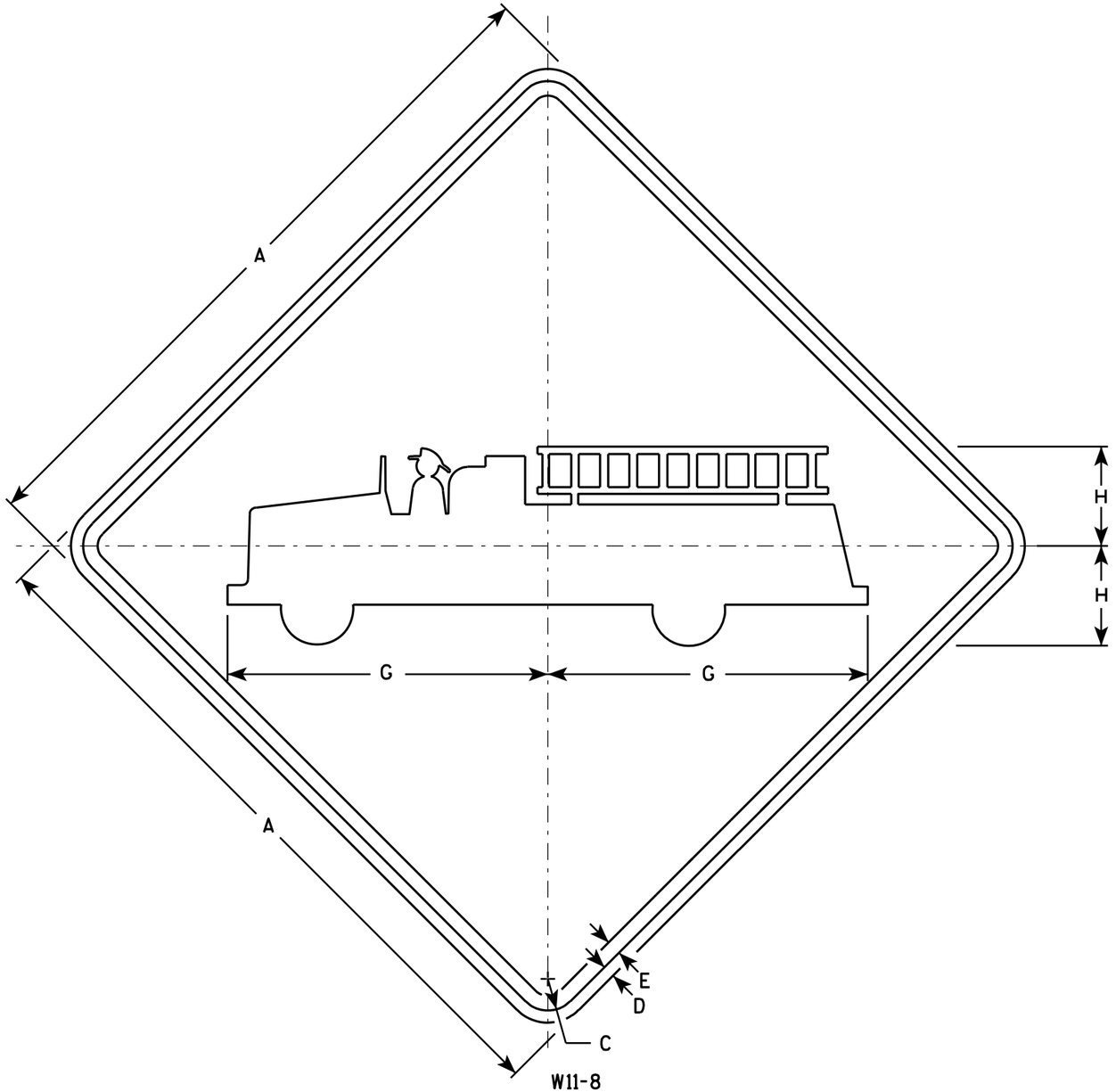
STANDARD SIGN
W1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-1.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 100 | E



W11-8

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		11	3 3/8																			4.0
2S	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
2M	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
3	36		1 5/8	5/8	3/4		16 1/2	5 1/4																			9.0
4	48		2 1/4	3/4	1		22	7																			16.0
5																											

STANDARD SIGN
W11-8

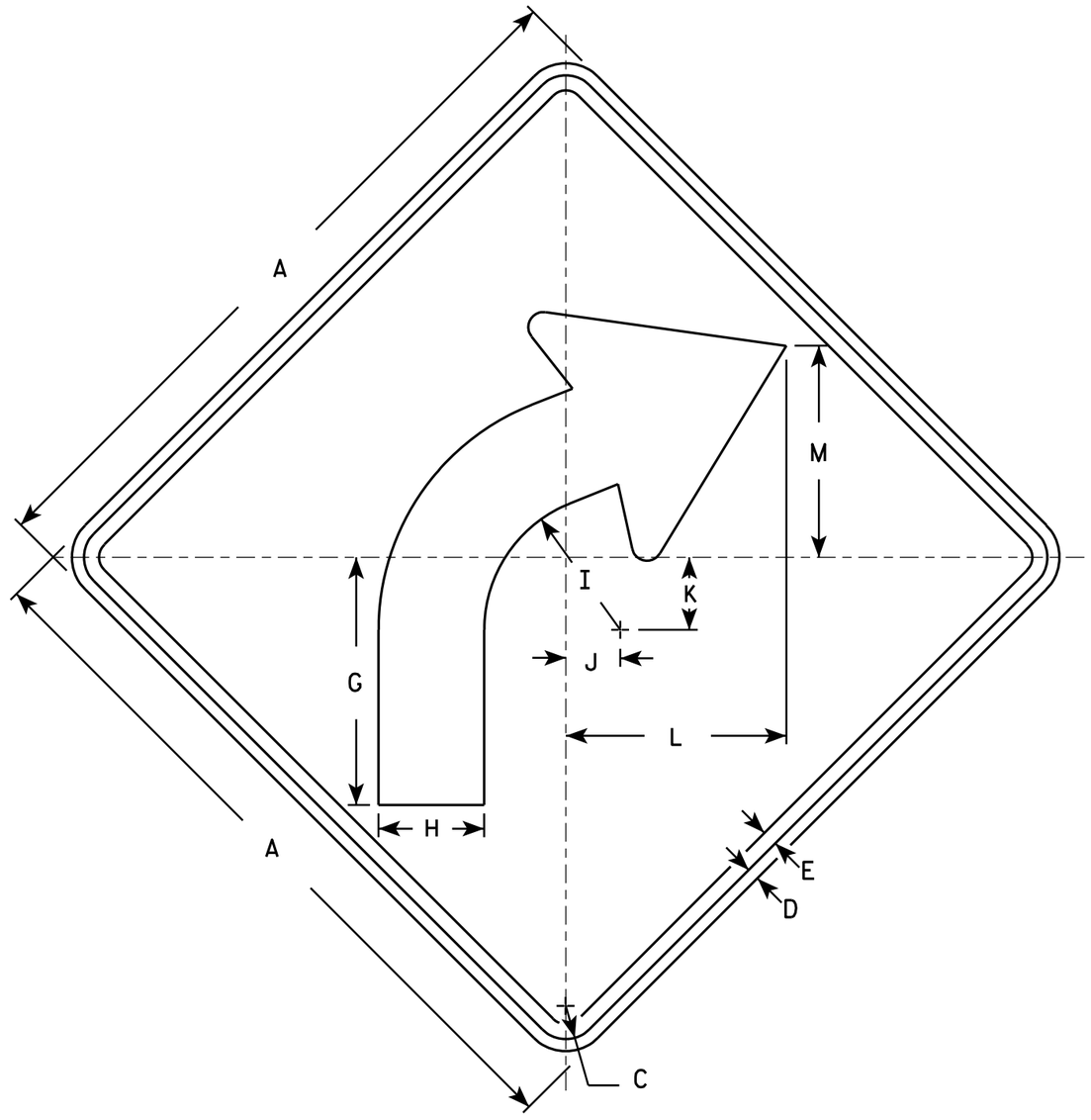
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W11-8.7

PROJECT NO:

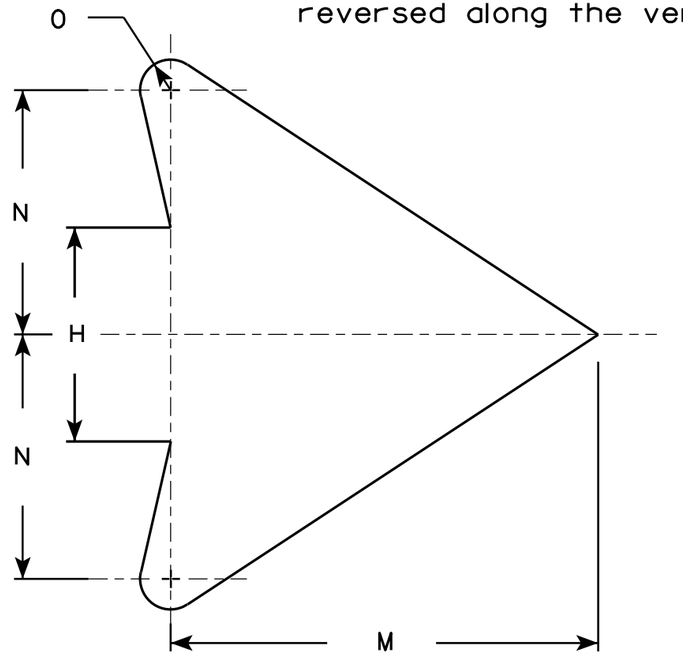
SHEET NO: 101 E



W1-2R

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. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

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	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

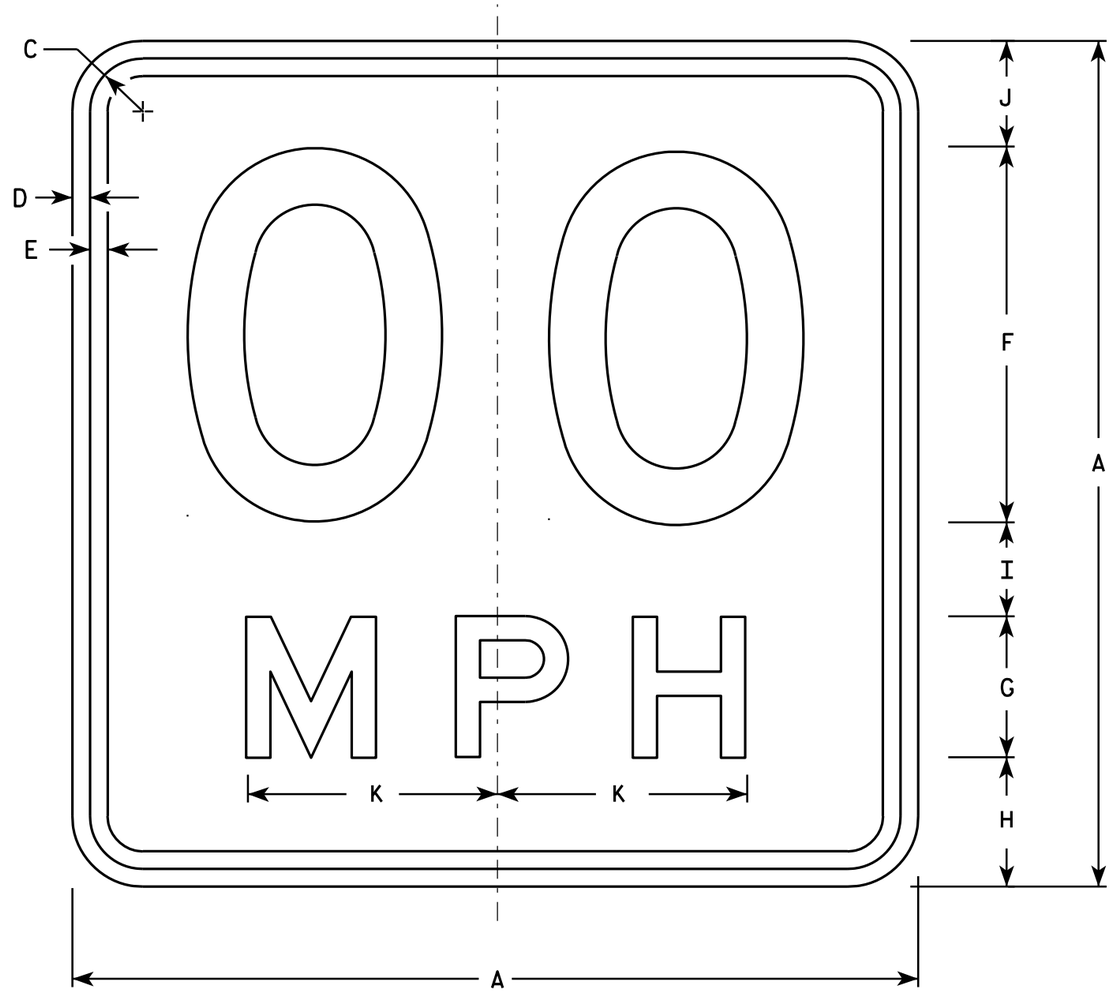
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 102	E



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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. Message Series - See Note 6
4. 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.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	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	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

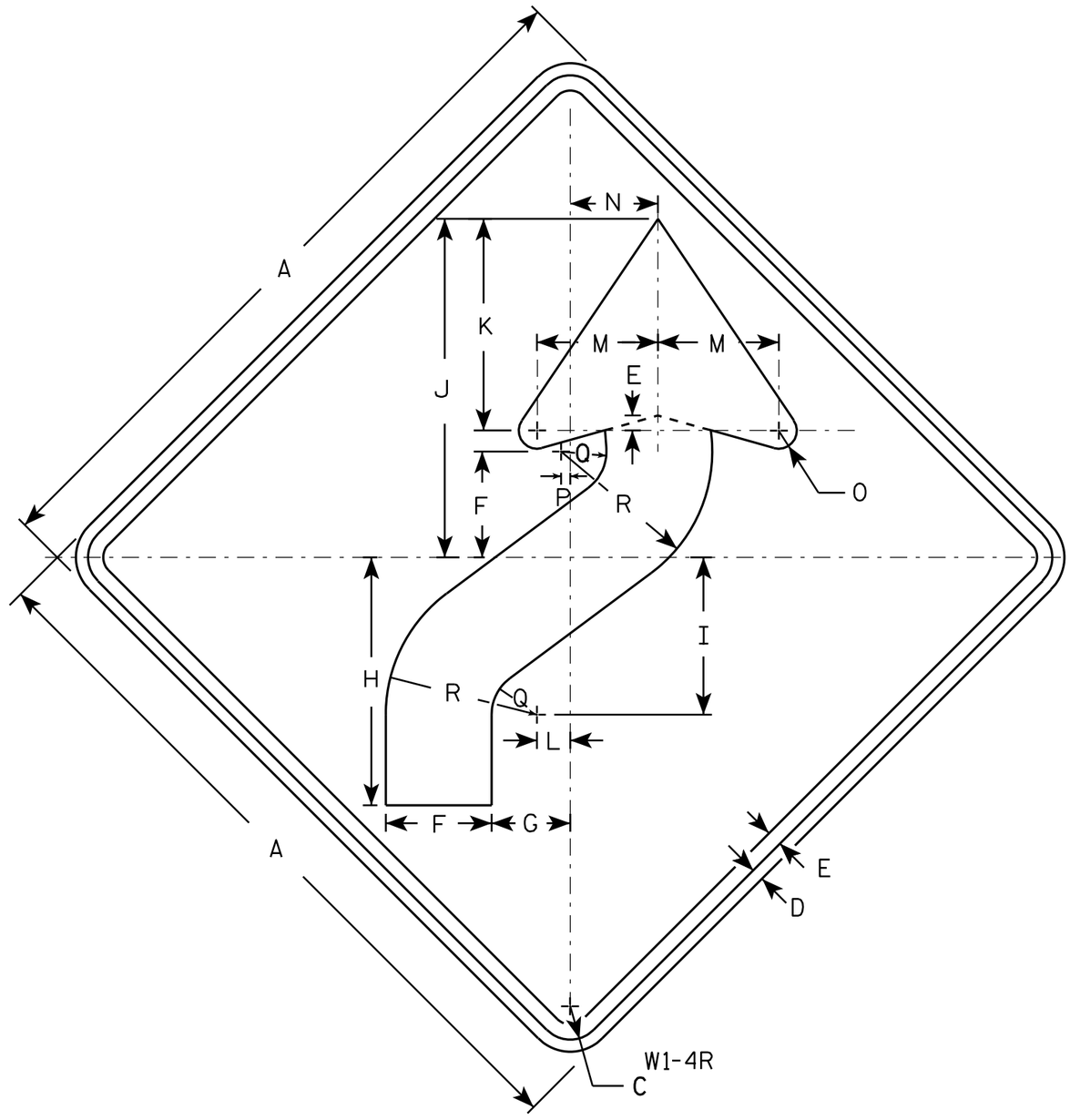
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 103 | E



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. W1-4L is the same as W1-4R except the arrow is reversed along the vertical centerline.

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	24		1 1/8	3/8	1/2	3 1/2	2 5/8	8 1/4	5 1/4	11 1/4	7	1 1/8	4	3	5/8	1/4	1 1/2	5									4.0
2S	30		1 3/8	1/2	5/8	4 3/8	3 1/4	10 1/4	6 1/2	14	8 3/4	1 3/8	5	3 5/8	3/4	3/8	1 7/8	6 1/4									6.25
2M	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
3	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
4	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN

W1-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-4.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 104 | E

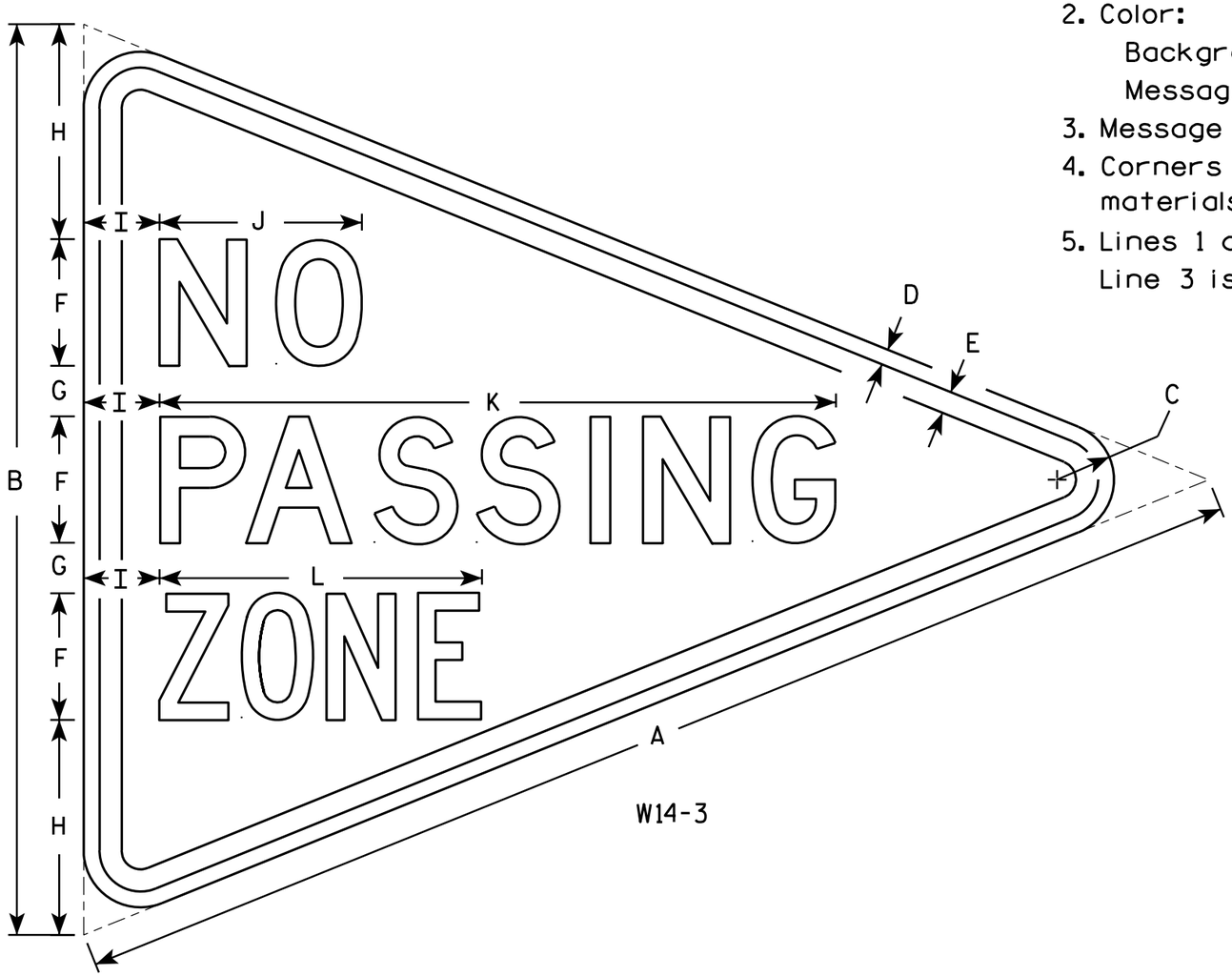
7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W14.DGN PLOT DATE : 17-MAY-2012 13:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.706180:1.000000

WISDOT/CADDS SHEET 42

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. Message Series - See note 5
4. Corners and borders shall be rounded on all base materials for this sign.
5. Lines 1 and 2 are Series D.
   Line 3 is series C.



W14-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

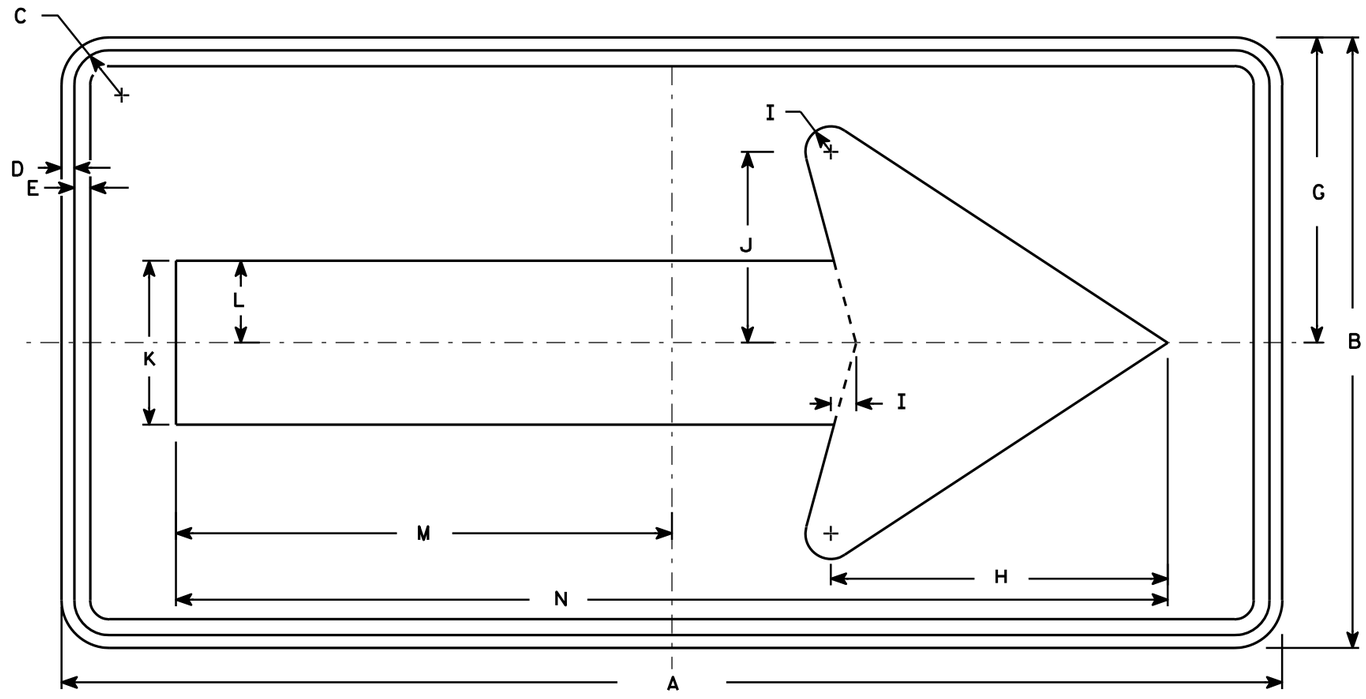
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 105	E



W1-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

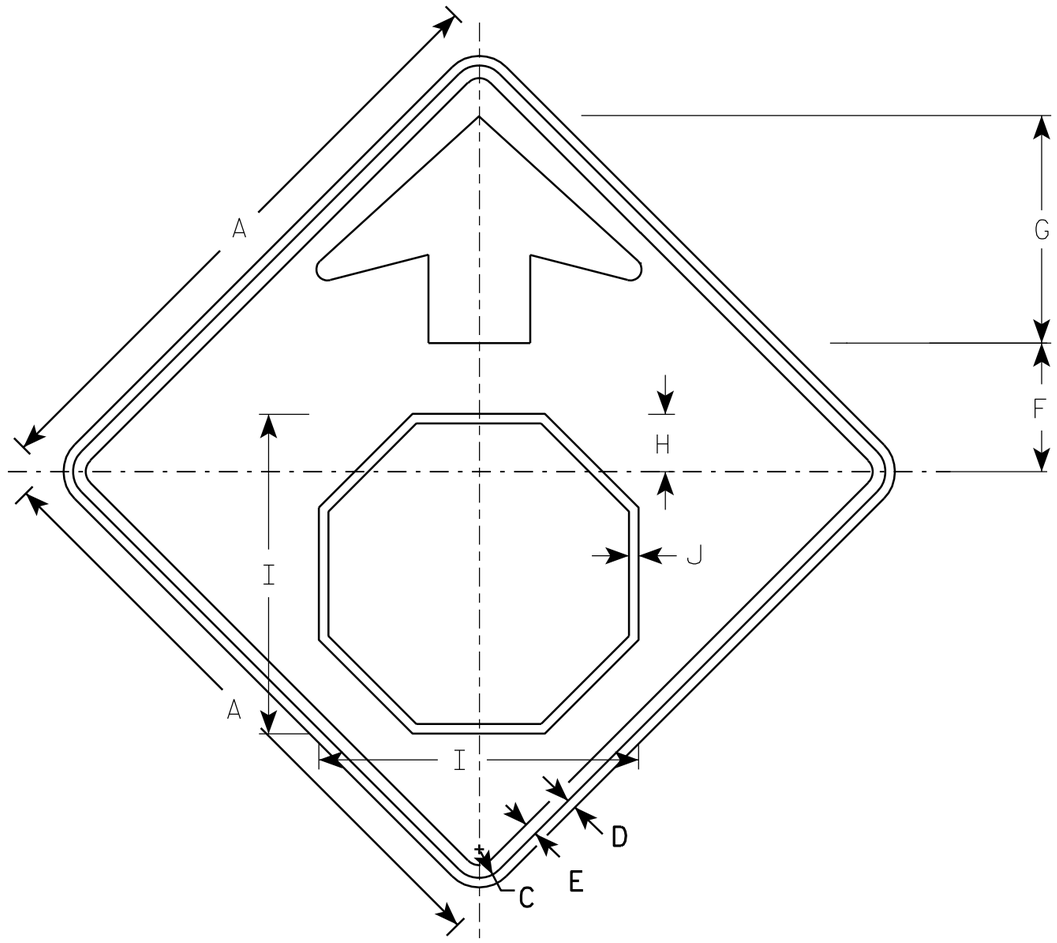
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

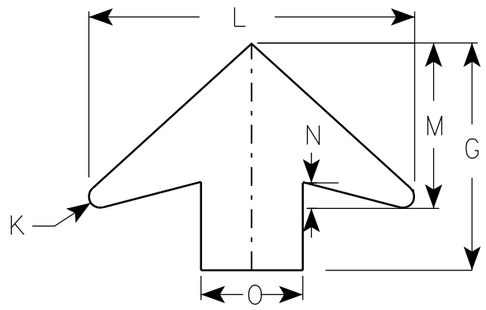
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 106



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

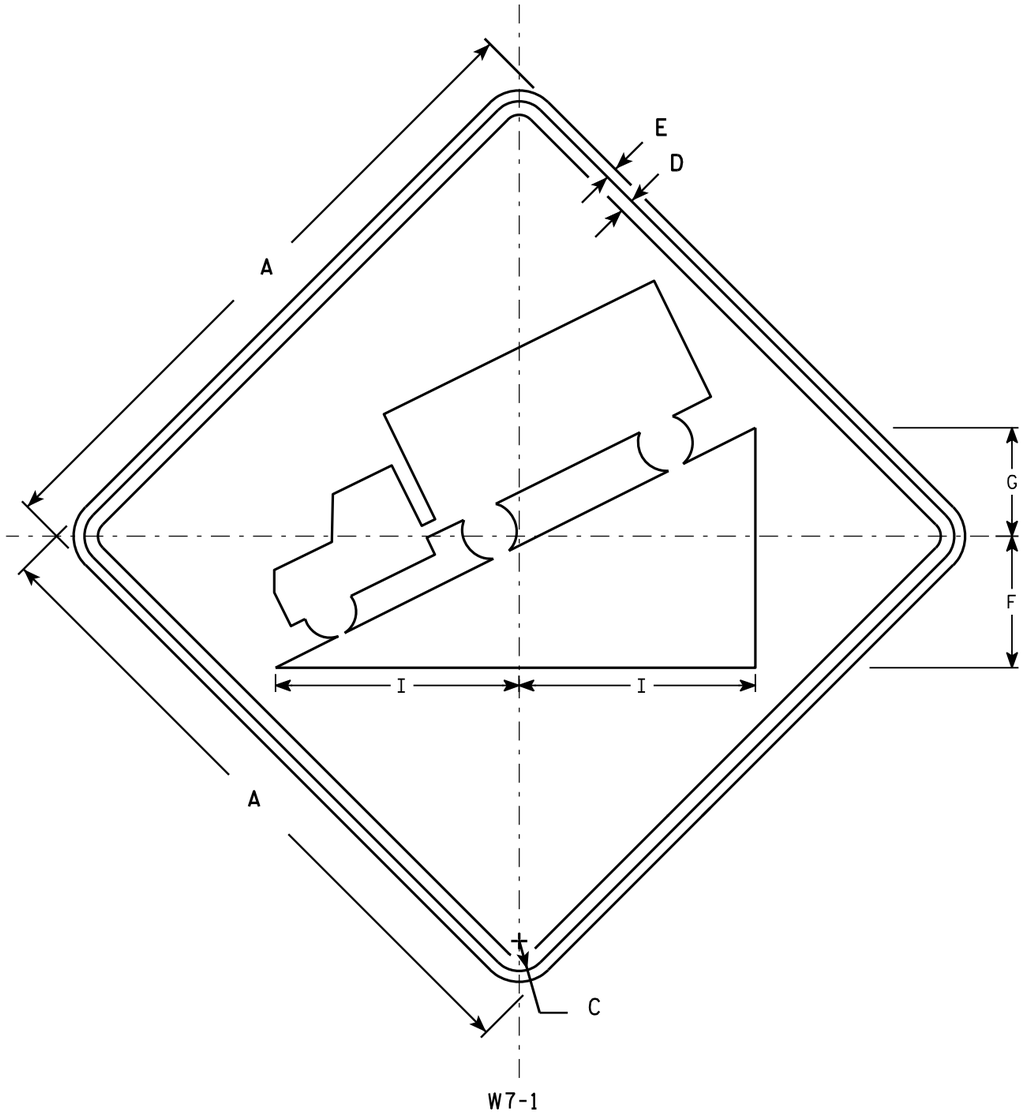
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 107 E



W7-1

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. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	3/8	5	4		8 3/4																		4.0
2S	30		1 3/8	1/2	5/8	6	5		11																		6.25
2M	36		1 5/8	5/8	3/4	7 1/4	6		13 1/4																		9.0
3	36		1 5/8	5/8	3/4	7 1/4	6		13 1/4																		9.0
4	36		1 5/8	5/8	3/4	7 1/4	6		13 1/4																		9.0
5	48		2 1/4	3/4	1	9 3/4	8		17 1/2																		16.0

STANDARD SIGN
W7-1

WISCONSIN DEPT OF TRANSPORTATION

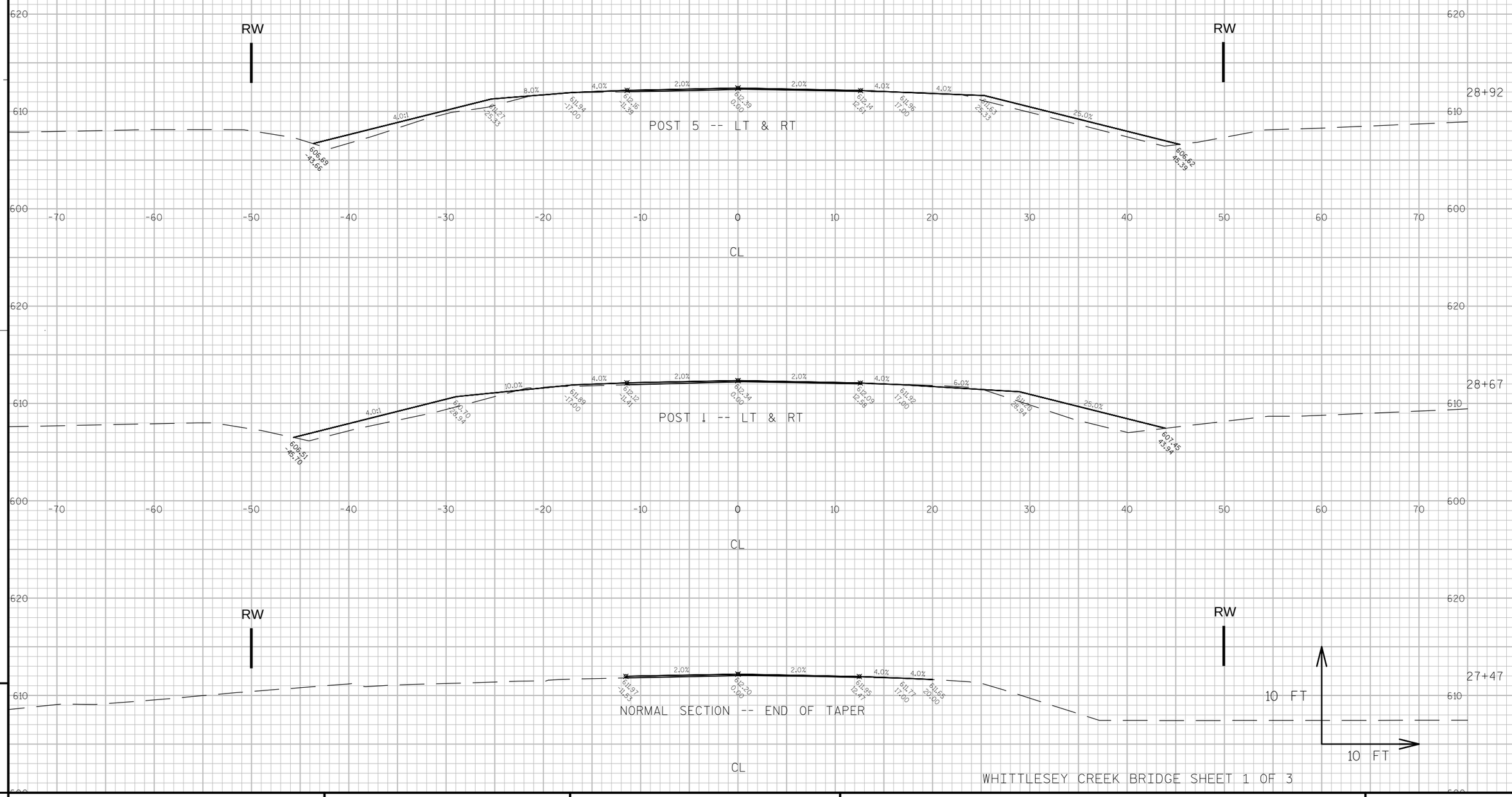
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W7-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 108	E

7

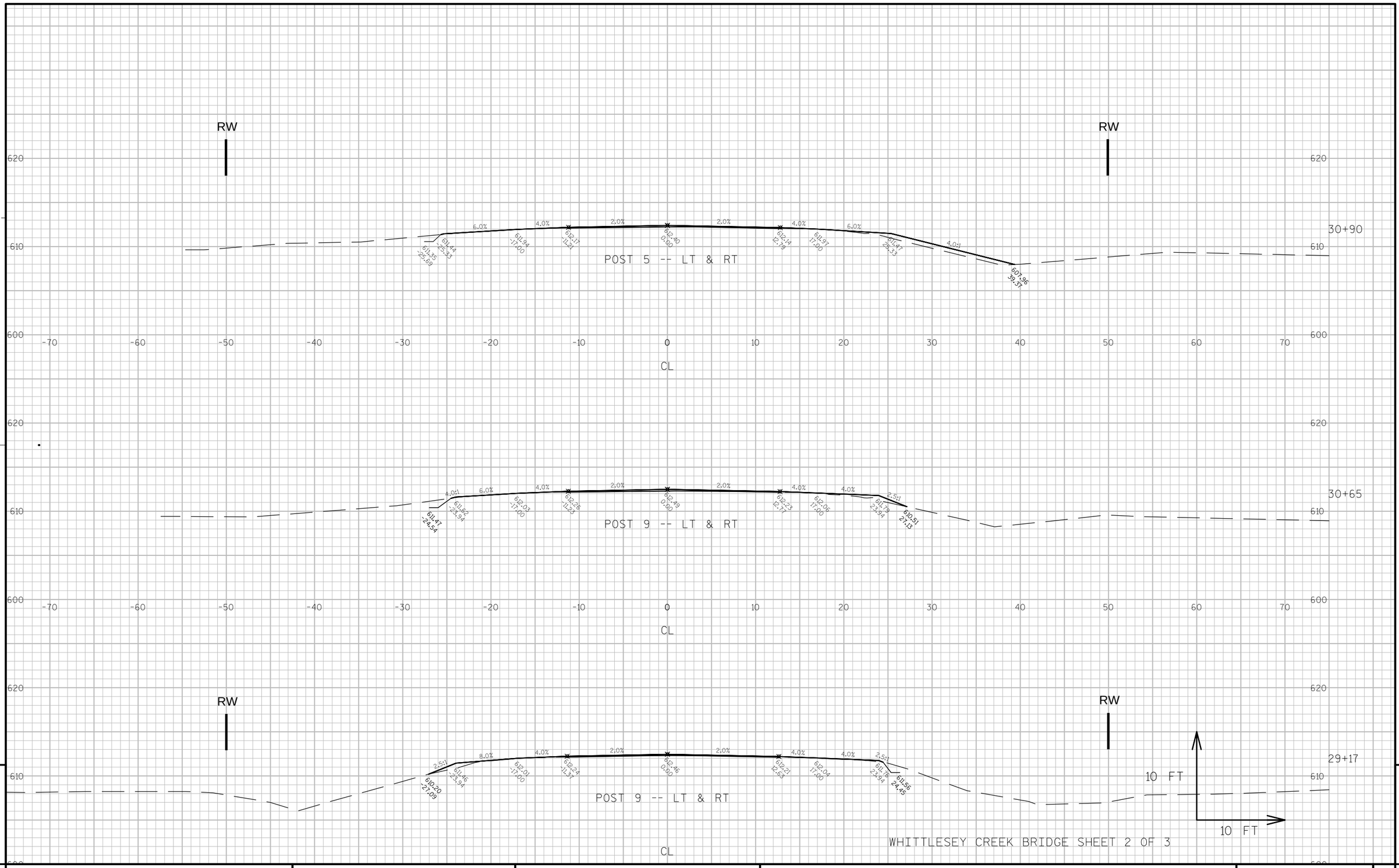
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W71.DGN PLOT DATE : 12-MAR-2013 14:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.946657:1.000000
WISDOT/CADDS SHEET 42



PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 109	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 10/9/2014 4:26 PM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 110	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 10/9/2014 4:26 PM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1" = 10'_XREF

RW

RW

620

620

610

610

600

600

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

4.0:1 6.0% 4.0% 2.0% 2.0% 4.0% 6.0% 4.0:1

611.49 -20.65 | 611.85 -20.00 | 611.83 -17.00 | 612.07 -11.07 | 612.29 0.90 | 612.03 12.93 | 611.87 17.00 | 611.53 20.00 | 611.32 21.48

32+35

NORMAL SECTION -- END OF TAPER

CL

RW

RW

620

620

610

610

4.0:1 10.0% 4.0% 2.0% 2.0% 4.0% 10.0% 4.0:1

609.07 -35.53 | 610.71 -28.94 | 611.91 -17.00 | 612.14 -11.18 | 612.37 0.90 | 612.11 12.92 | 611.94 17.00 | 610.75 28.94 | 607.64 41.36

31+15

10 FT

10 FT

POST 1 LT & RT

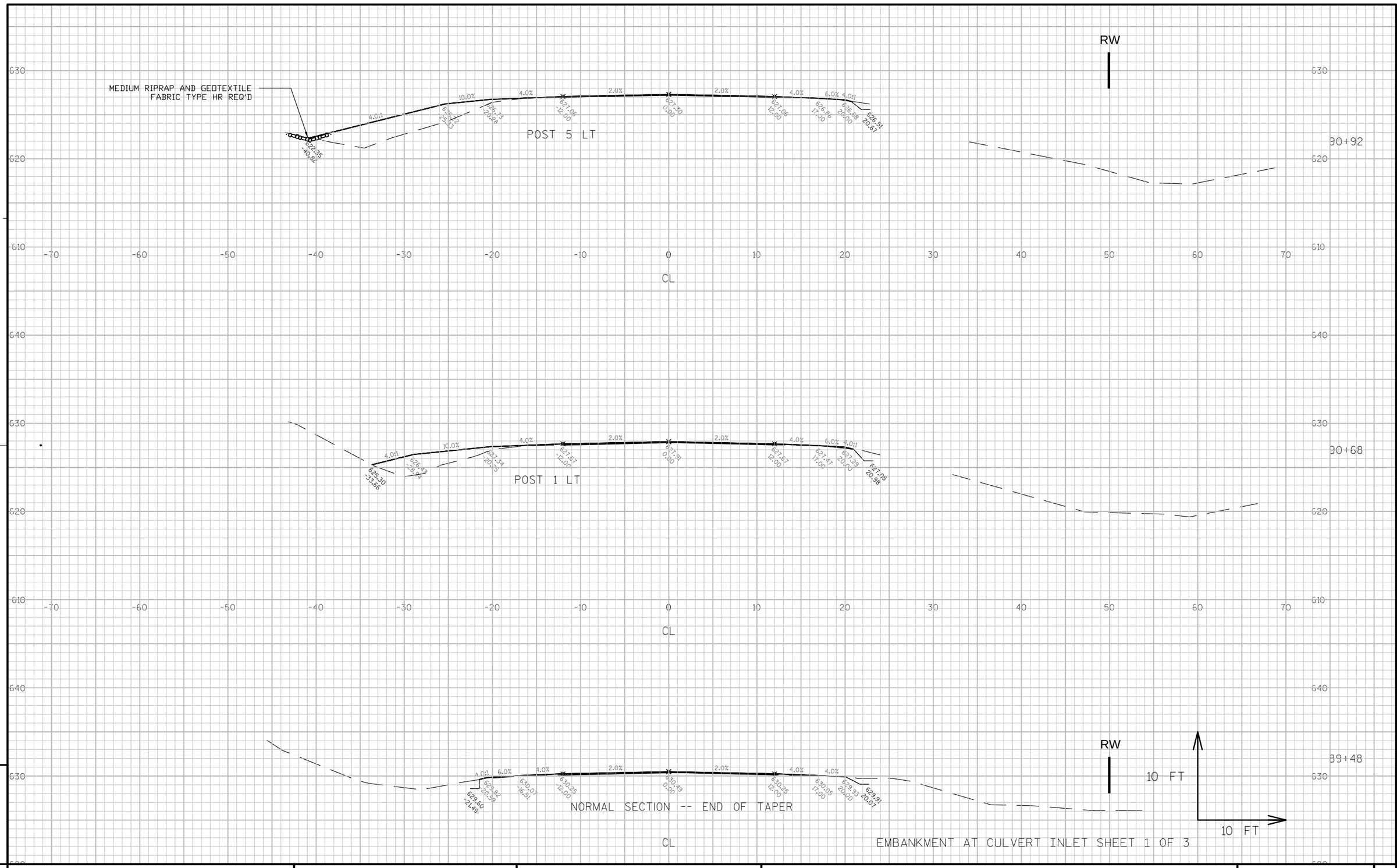
CL

WHITTLESEY CREEK BRIDGE SHEET 3 OF 3

9

9

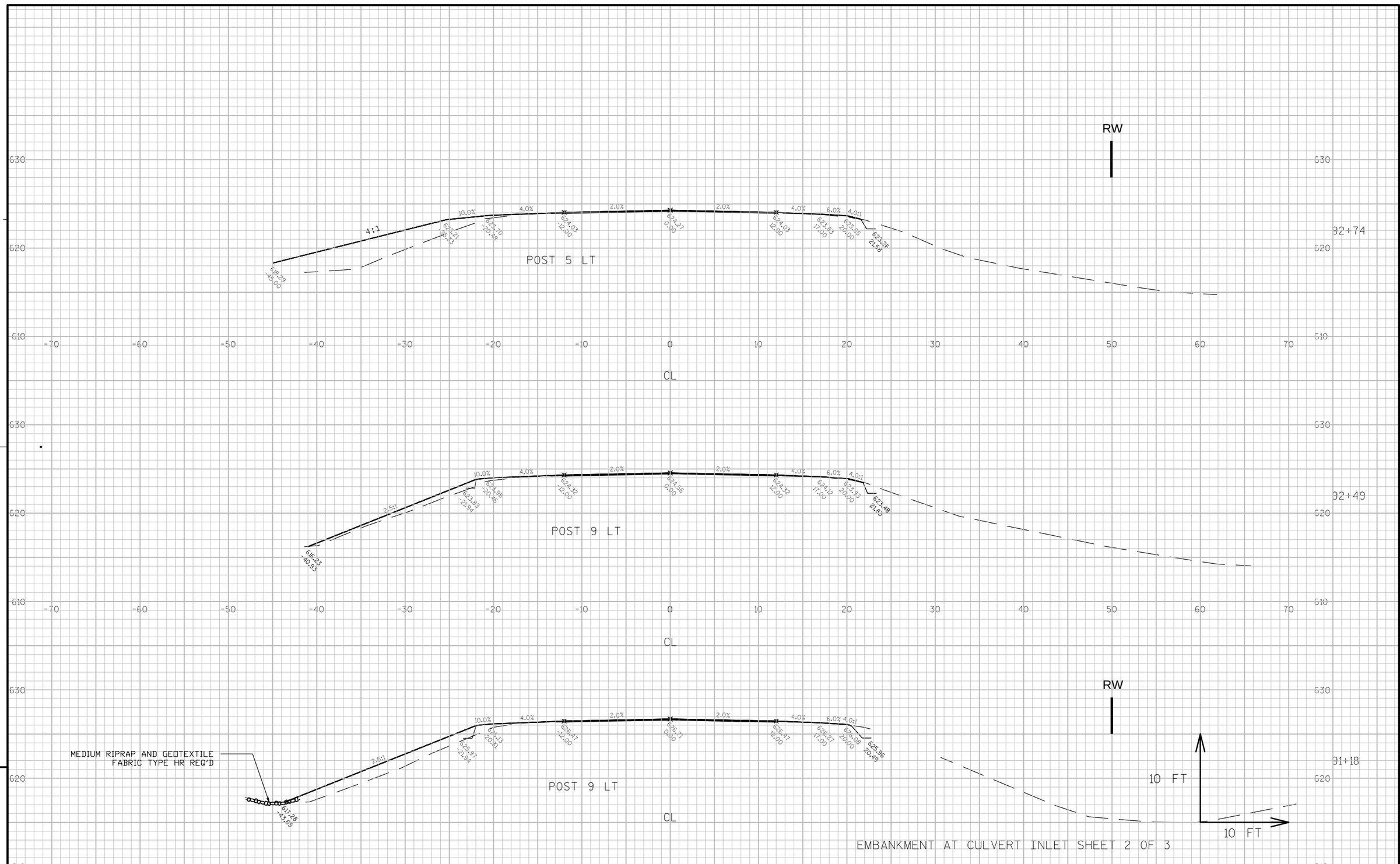
PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 111	E



PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 112 E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 10/9/2014 4:27 PM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49

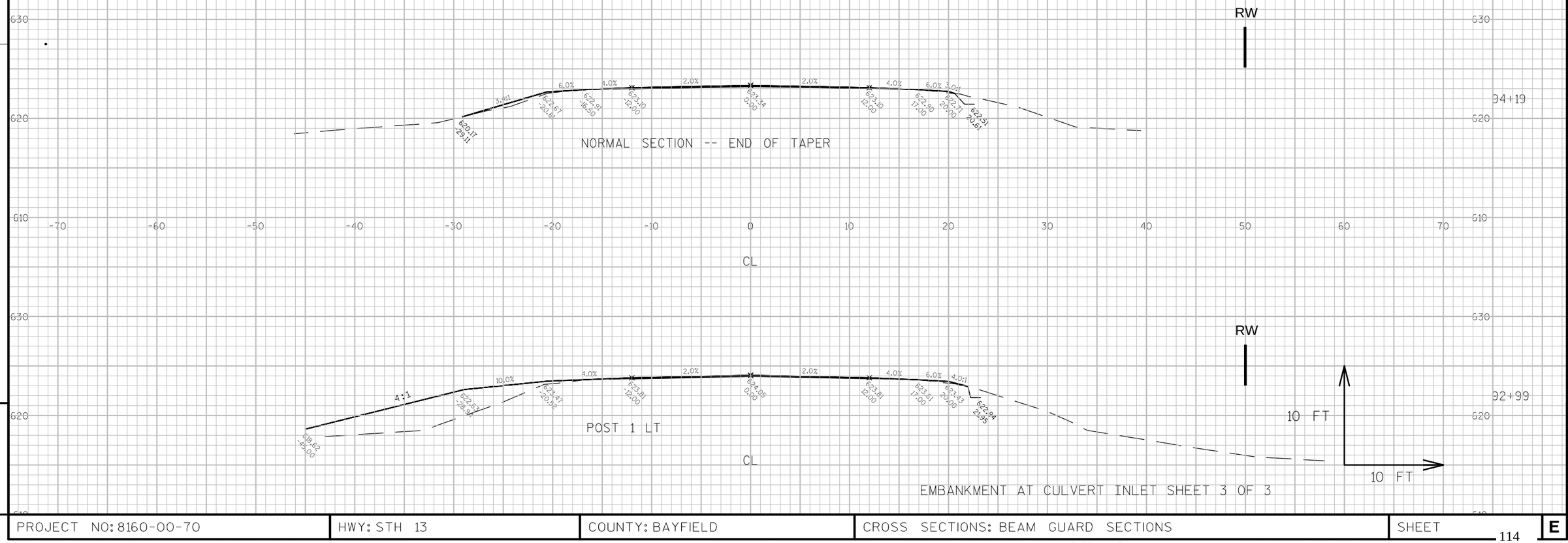


9

9

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET	E

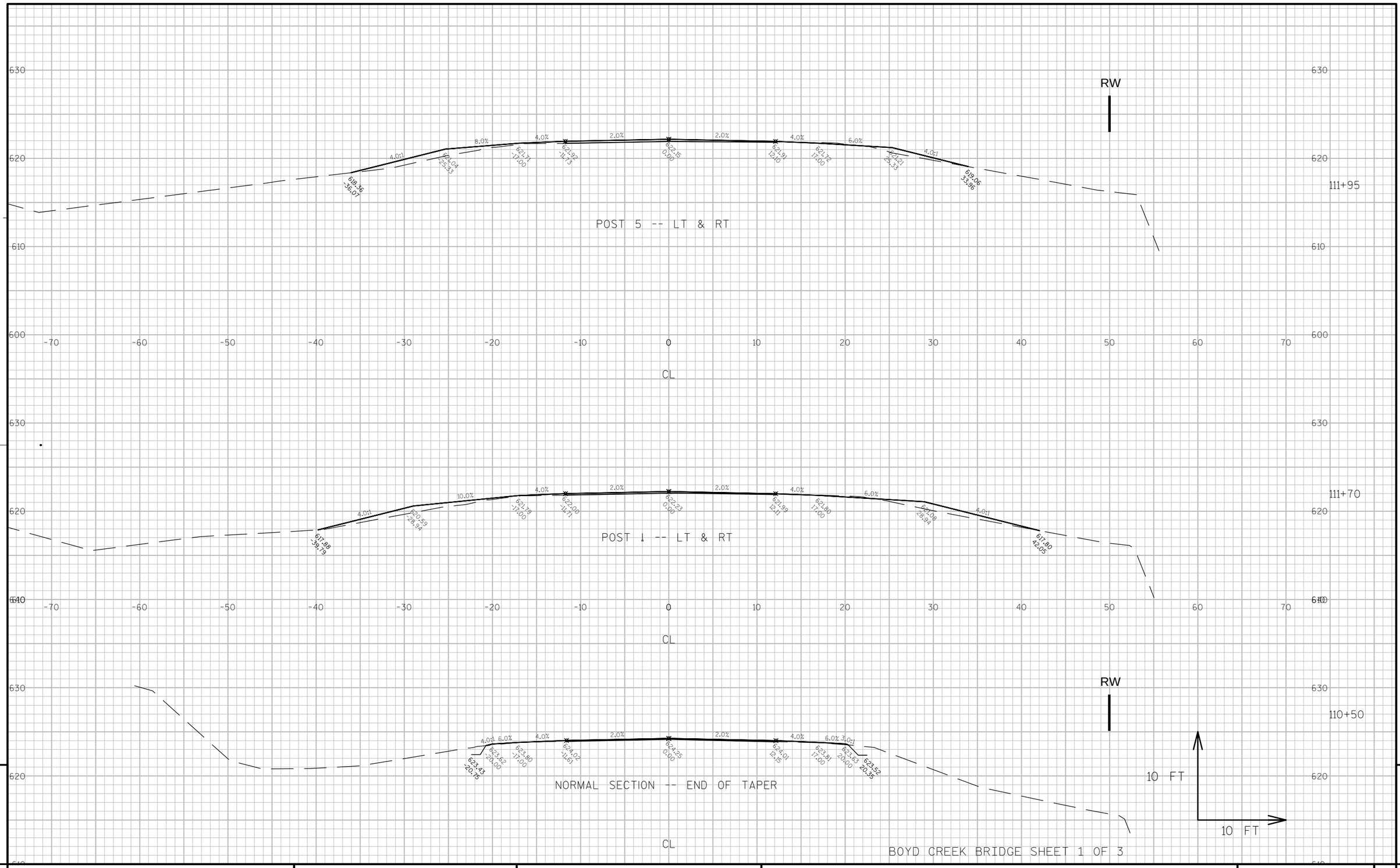
FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 10/9/2014 4:27 PM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1" = 10'_XREF
WISDOT/CADDS SHEET 49



9

9

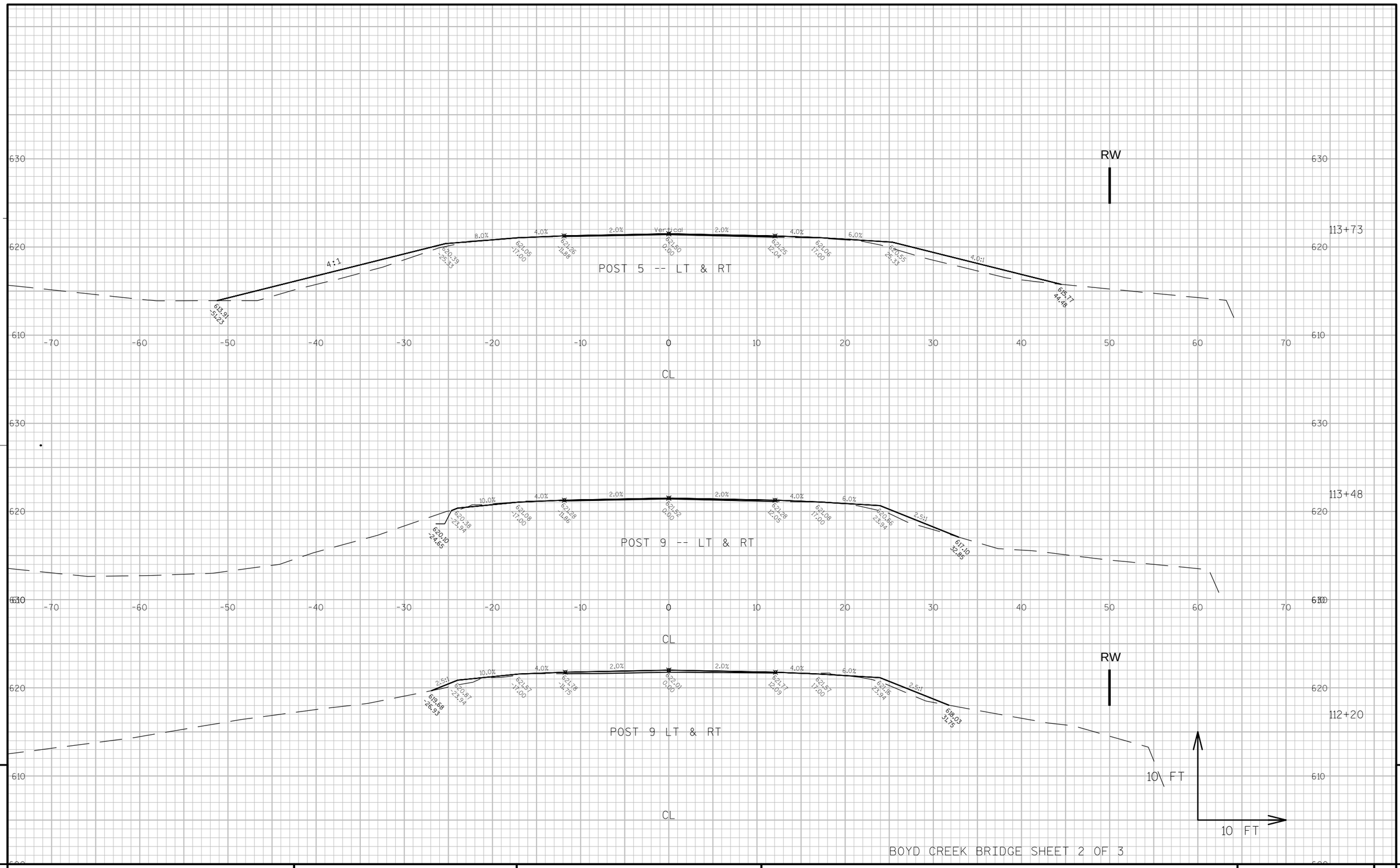
PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 114	E



PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 115	E

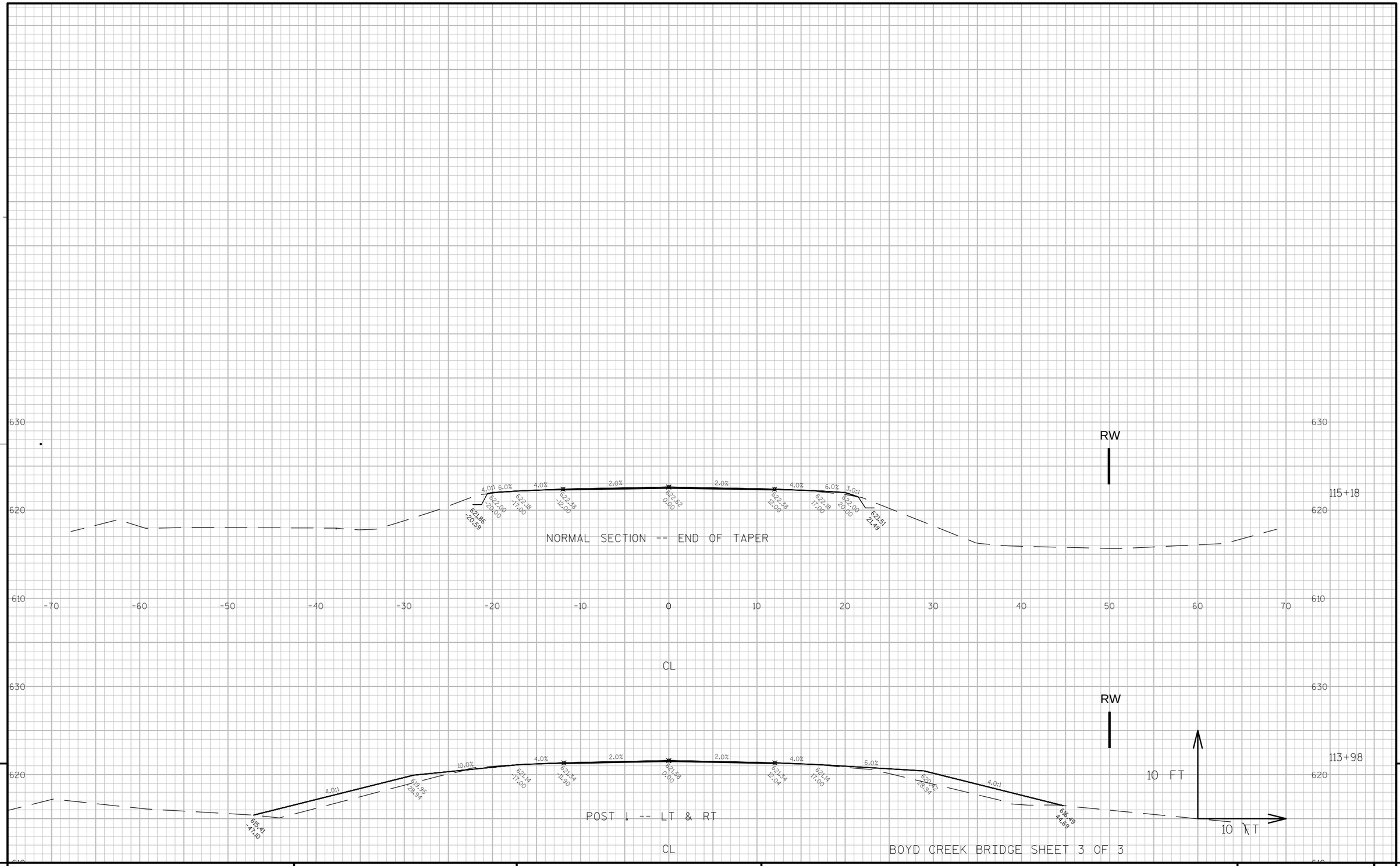
FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 10/9/2014 4:28 PM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET	E

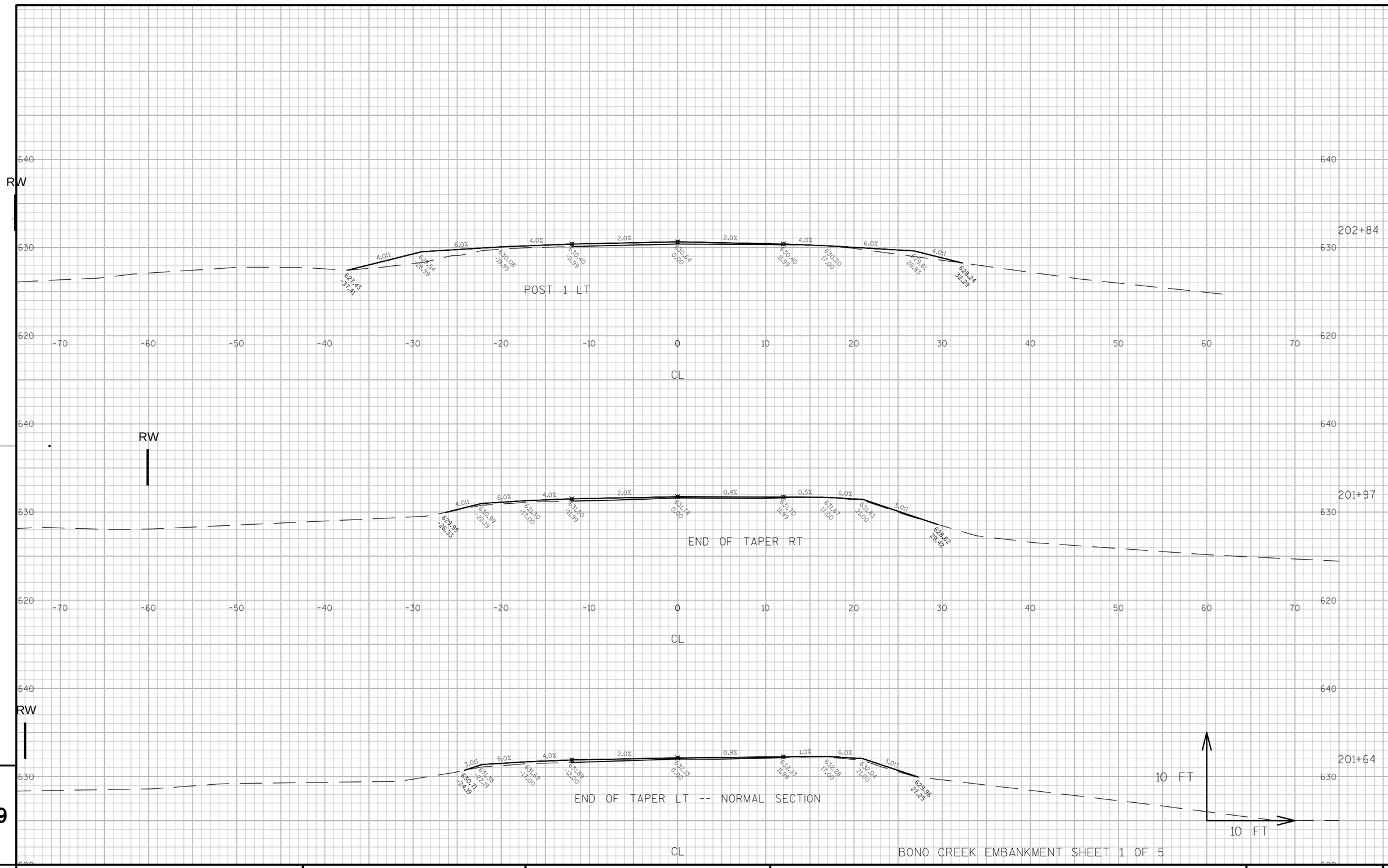
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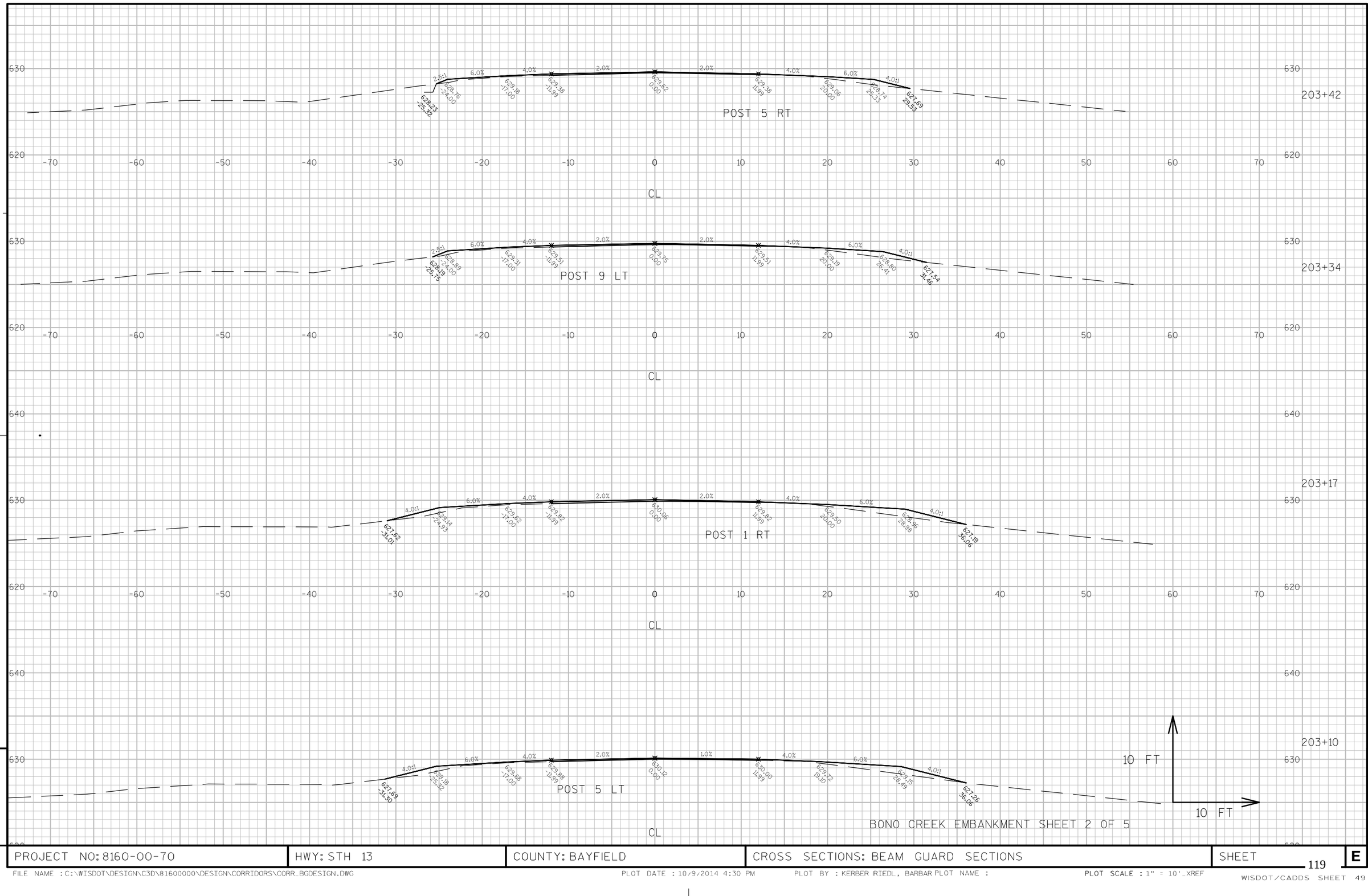
9

9

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 117	E

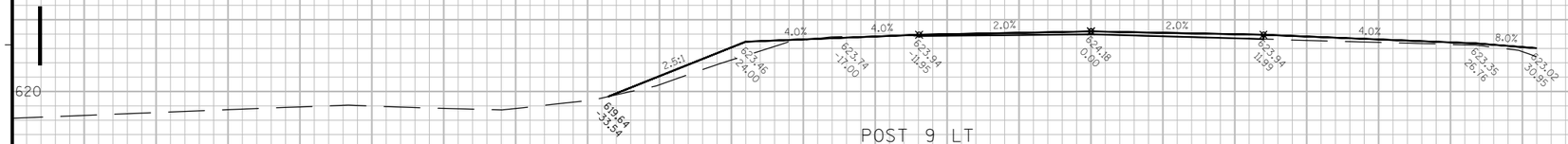


PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 118	E

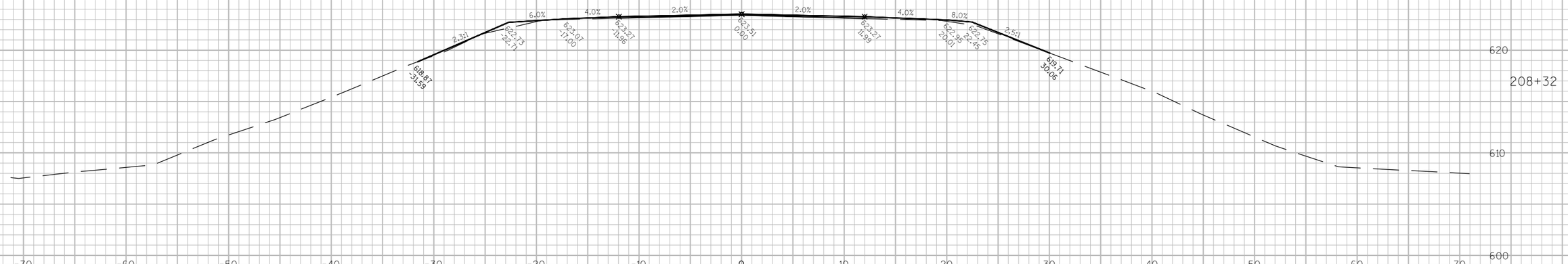


PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 119	E

RW



POST 9 LT



CL



POST 9 RT

CL

10 FT

10 FT

BONO CREEK EMBANKMENT SHEET 3 OF 5

209+79

208+32

203+67

9

9

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 10/9/2014 4:30 PM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49

RW

630
620
610

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

4.0:1 1.4% 1.4% 1.3% 2.0% 4.0% 6.0% 2.5:1

620.21 -44.64 | 624.27 -29.37 | 624.44 -17.00 | 624.51 -11.95 | 624.86 0.00 | 624.42 11.99 | 623.73 29.18 | 624.44 33.95 | 620.96 40.16

POST 9 RT

210+36

CL

RW

630
620
610

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

4.0:1 1.5% 1.5% 1.5% 2.0% 4.0% 8.0% 2.5:1

620.09 -45.22 | 624.17 -29.92 | 624.34 -17.00 | 624.42 -11.95 | 624.60 0.00 | 624.36 11.98 | 623.68 29.05 | 623.31 33.61 | 621.09 39.16

POST 1 LT

210+29

CL

RW

630
620
610

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

4.0:1 4.0% 4.0% 2.0% 2.0% 4.0% 8.0% 2.5:1

618.85 -40.45 | 623.63 -25.92 | 623.96 -17.00 | 624.17 -11.95 | 624.41 0.00 | 624.17 11.98 | 623.53 27.91 | 623.18 32.28 | 617.55 46.39

POST 5 LT

210+04

CL

10 FT

10 FT

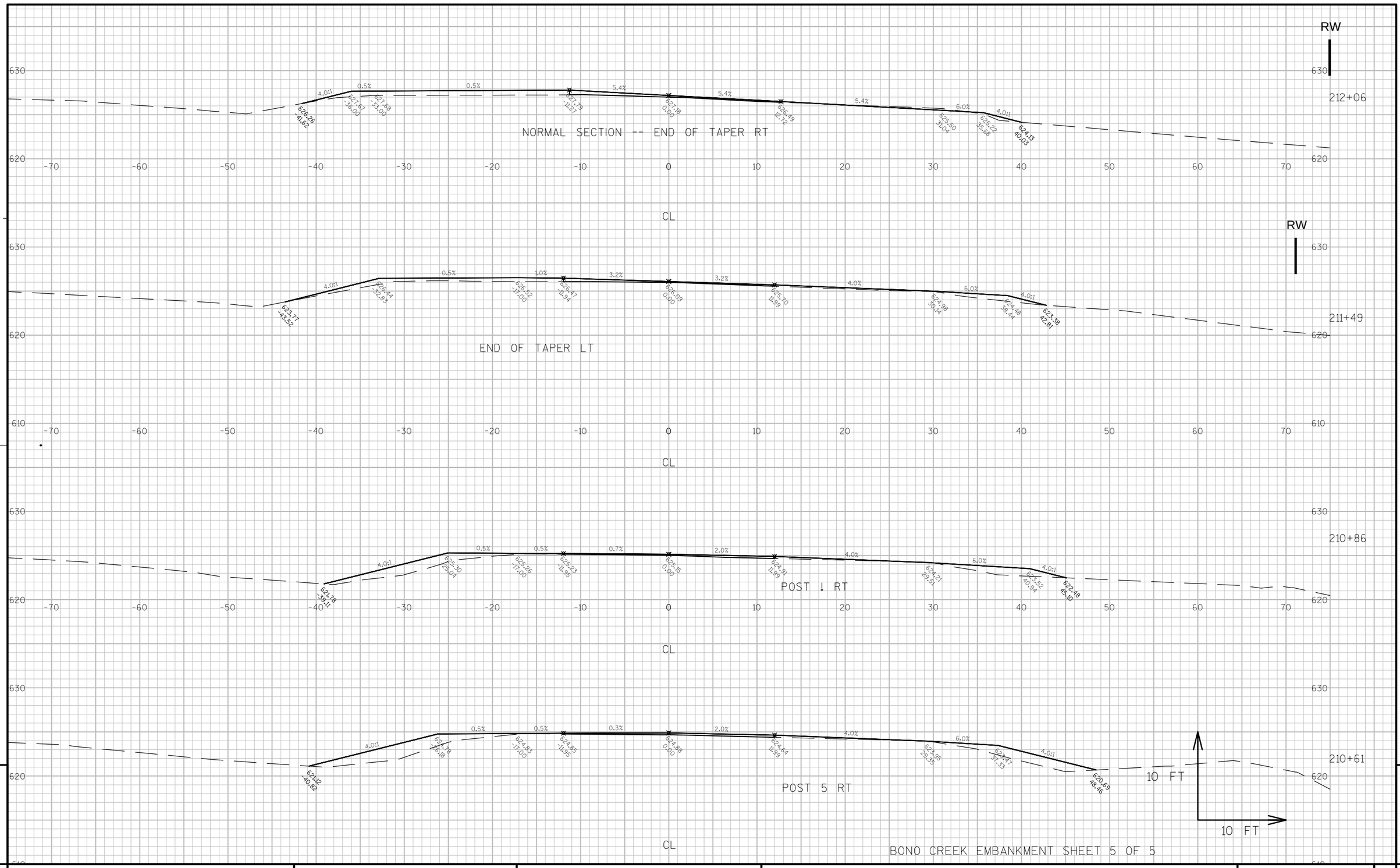
BONO CREEK EMBANKMENT SHEET 4 OF 5

9 9

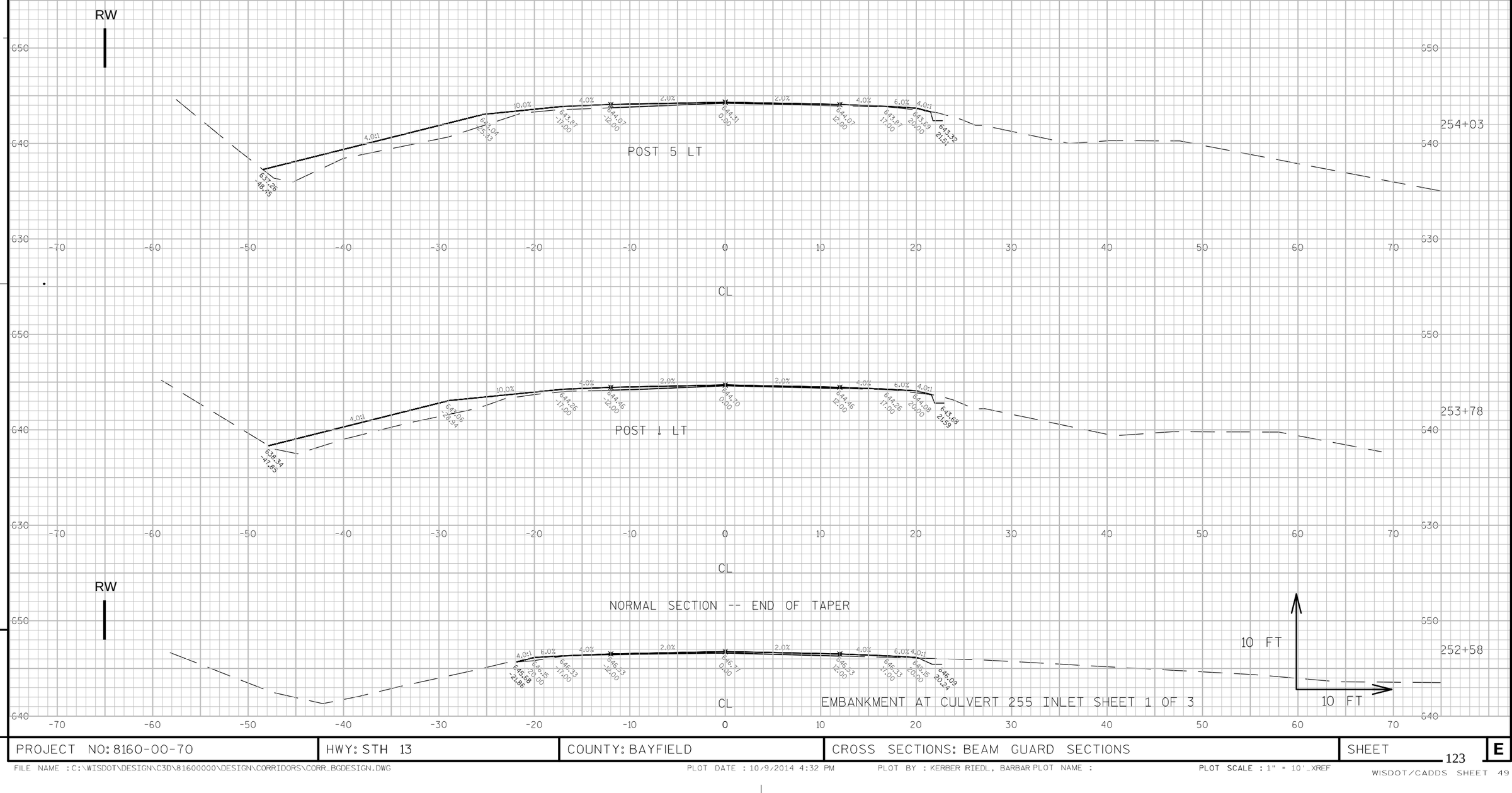
PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 10/9/2014 4:31 PM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



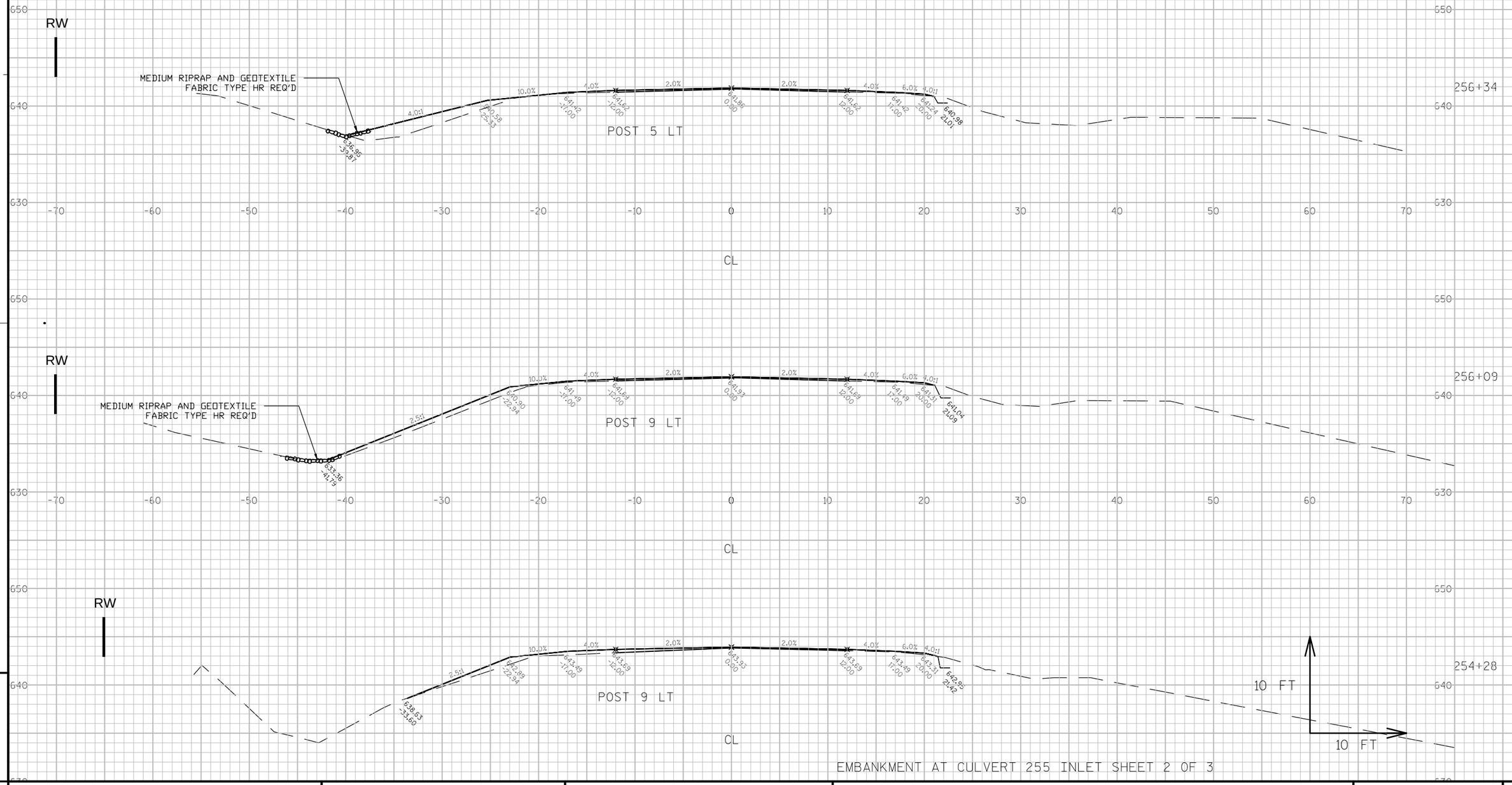
PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 122 E



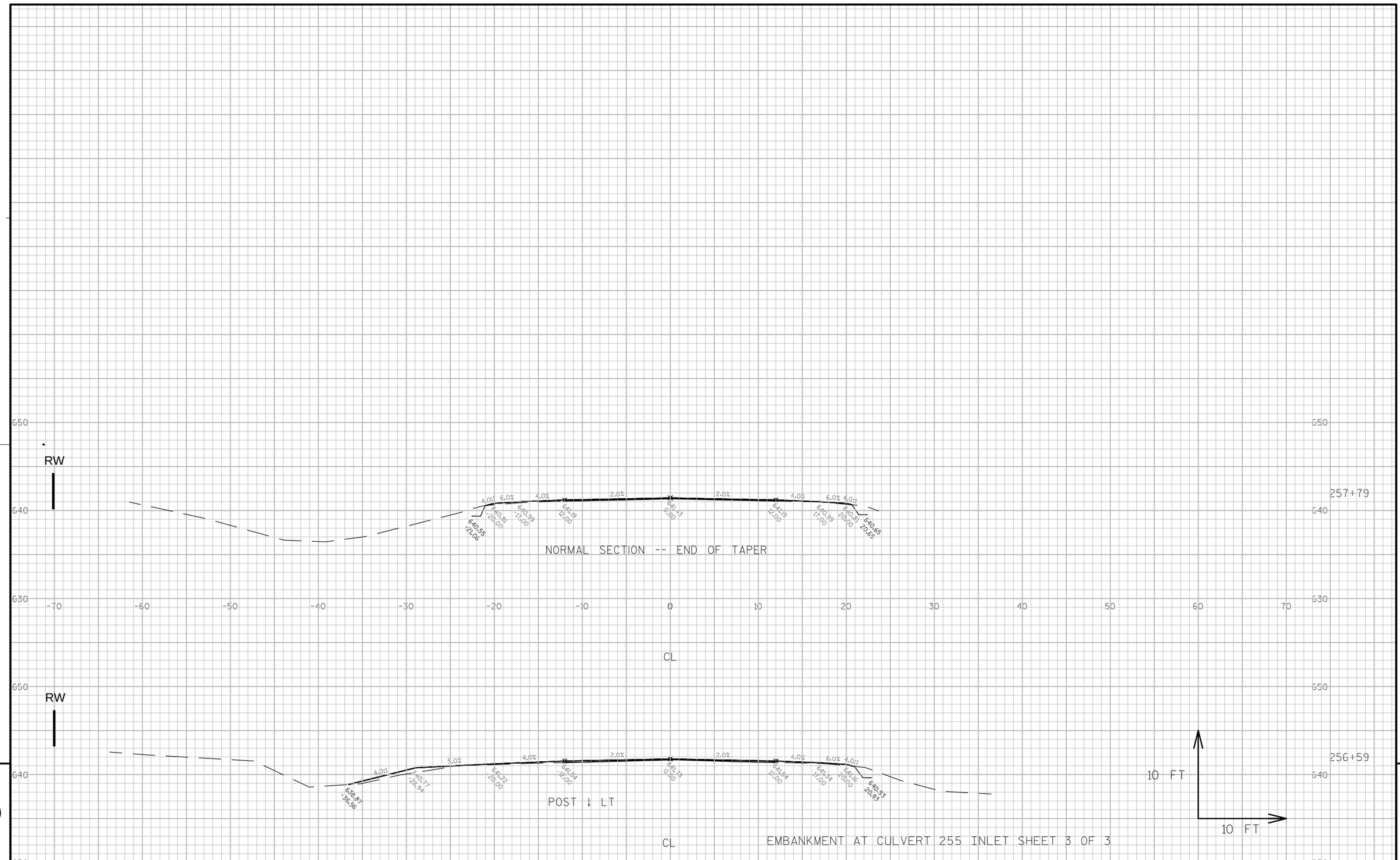
EMBANKMENT AT CULVERT 255 INLET SHEET 1 OF 3

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 123 E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 10/9/2014 4:32 PM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1" = 10'_XREF



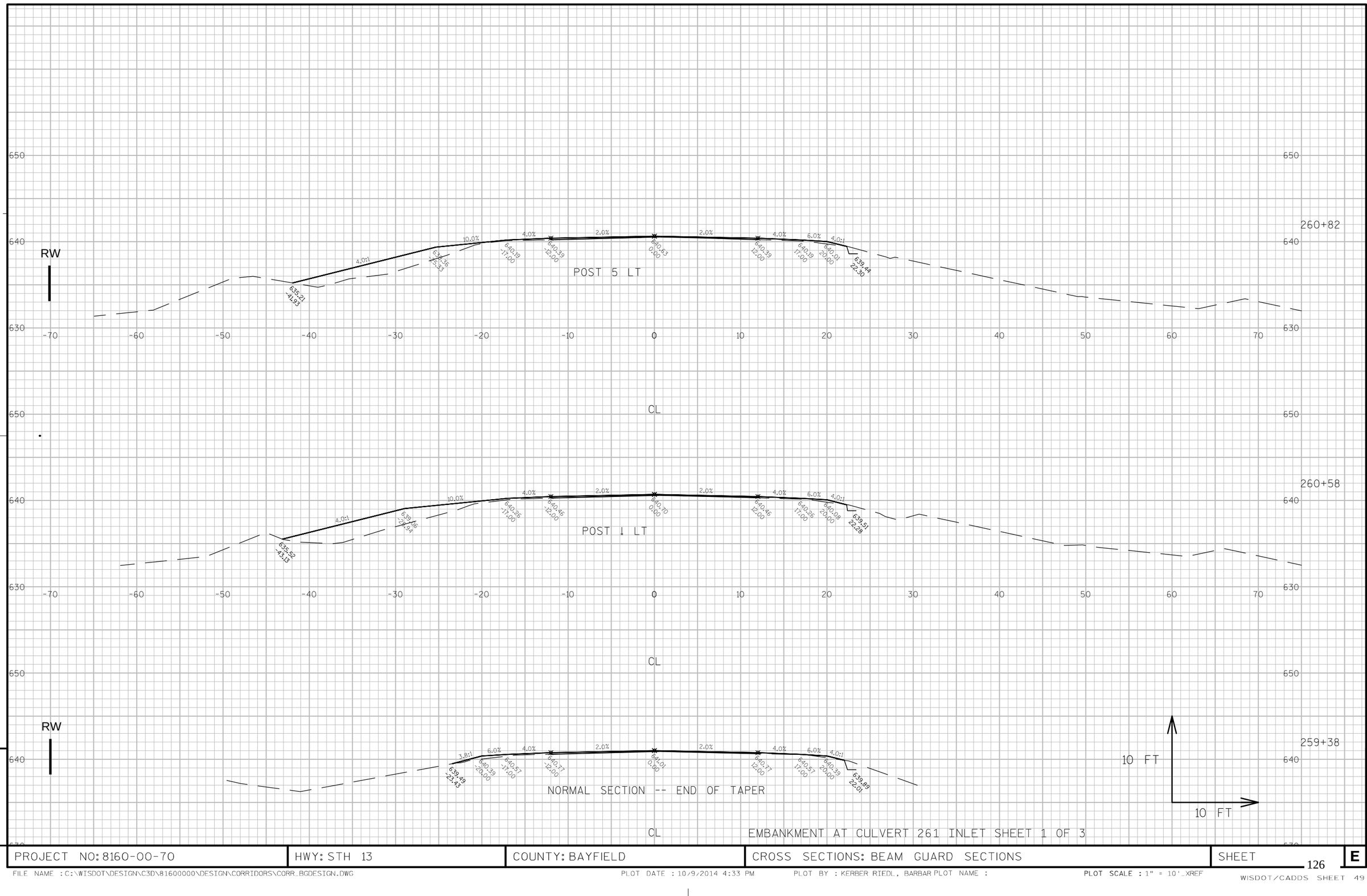
PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 124	E



9

9

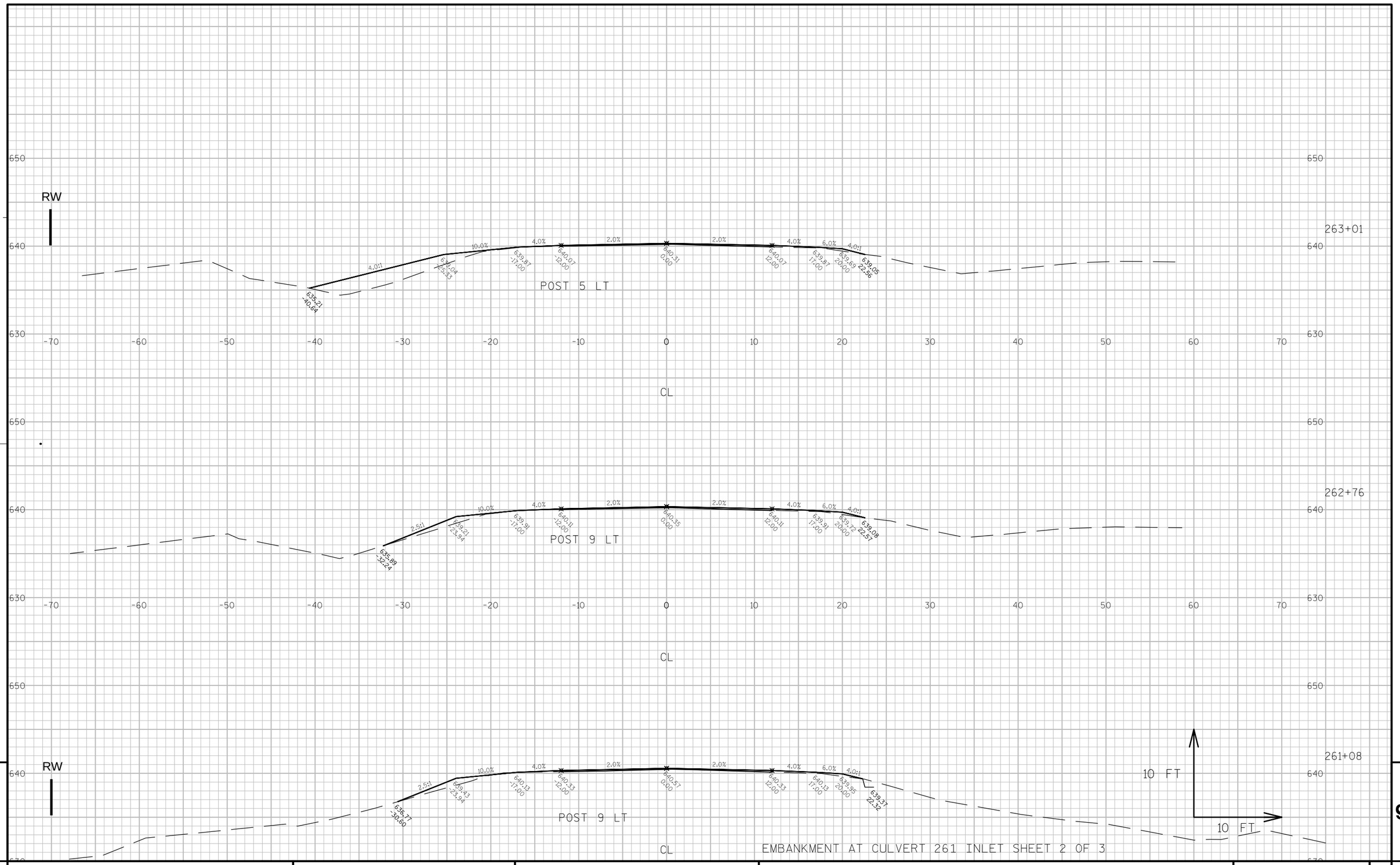
PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 125	E



PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 126 E

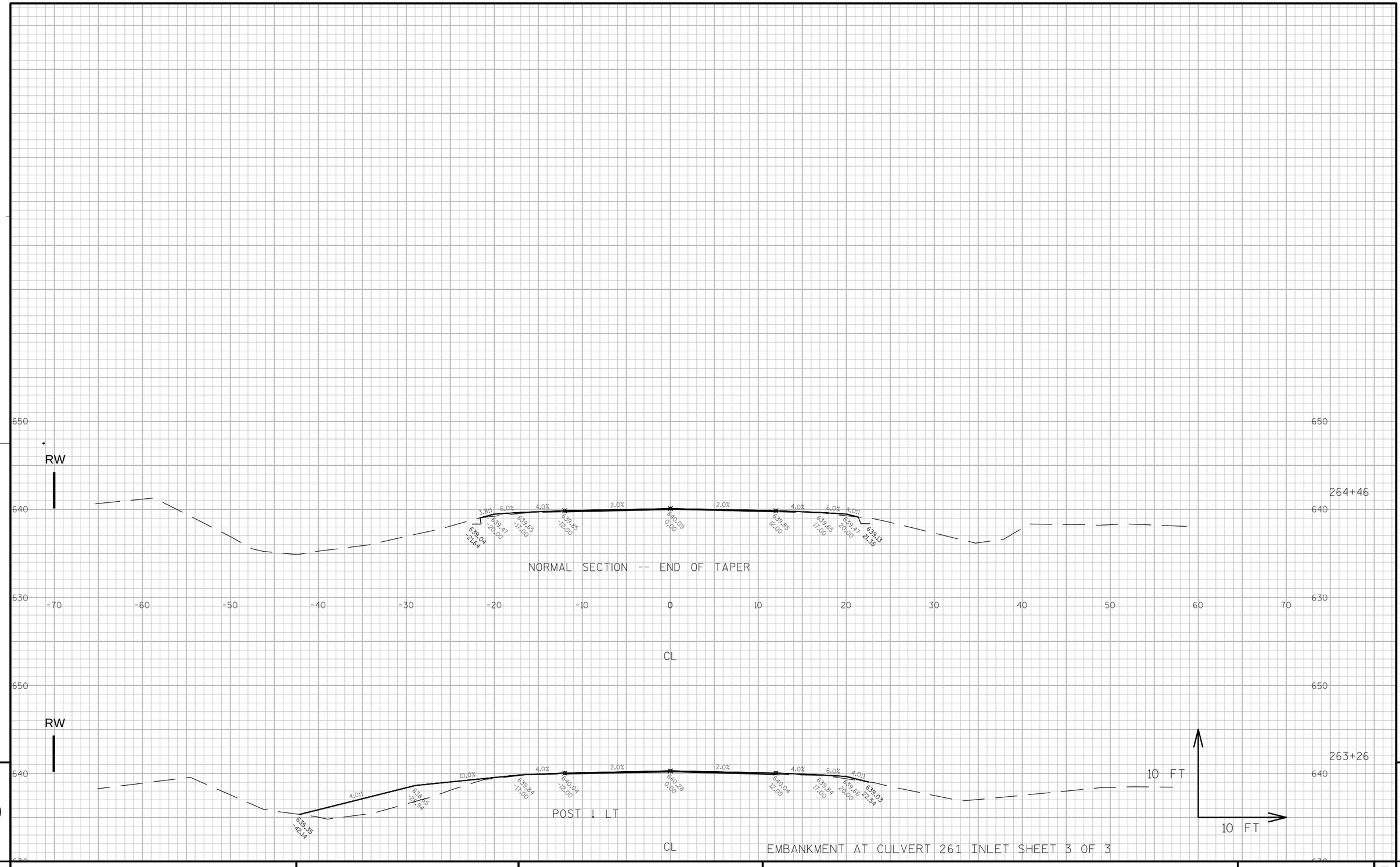
FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 10/9/2014 4:33 PM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



EMBANKMENT AT CULVERT 261 INLET SHEET 2 OF 3

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 127	E



PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 128	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 10/9/2014 4:33 PM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1" = 10'_XREF

RW

POST 9 LT

CL

POST 5 LT

CL

POST 1 LT

CL

NOTE: SEE CROSS SECTION SHEETS FOLLOWING THESE FOR A CULVERT EXTENSION WITHIN THE TAPER AREA FOR THIS BEAM GUARD LOCATION

RW

NORMAL SECTION -- END OF TAPER

10 FT

10 FT

EMBANKMENT AT CULVERT 272 INLET SHEET 1 OF 3

272+23

271+98

271+73

270+53

9

9

PROJECT NO: 8160-00-70	HWY: STH13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 10/9/2014 4:34 PM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49

RW

640
630
620

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

4.0:1 10.0% 4.0% 2.0% 2.0% 4.0% 6.0% 4.0:1

6:32.45 -37.58
6:34.51 -28.94
6:35.81 -17.00
6:36.01 -12.00
6:36.25 0.00
6:36.01 12.00
6:35.81 17.00
6:35.63 20.00
6:35.35 21.17

POST 1 LT

CL

273+92

RW

640
630
620

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

4.0:1 10.0% 4.0% 2.0% 2.0% 4.0% 6.0% 4.0:1

6:32.35 -36.29
6:34.09 -25.93
6:35.33 -17.00
6:35.53 -12.00
6:35.37 0.00
6:35.53 12.00
6:35.33 17.00
6:35.74 20.00
6:35.46 21.18

POST 5 LT

CL

273+66

RW

640
630
620

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

4.0:1 10.0% 4.0% 2.0% 2.0% 4.0% 6.0% 4.0:1

6:33.36 -31.92
6:35.35 -23.94
6:36.05 -17.00
6:36.25 -12.00
6:36.49 0.00
6:36.25 12.00
6:36.05 17.00
6:35.86 20.00
6:35.56 21.20

POST 9 LT

CL

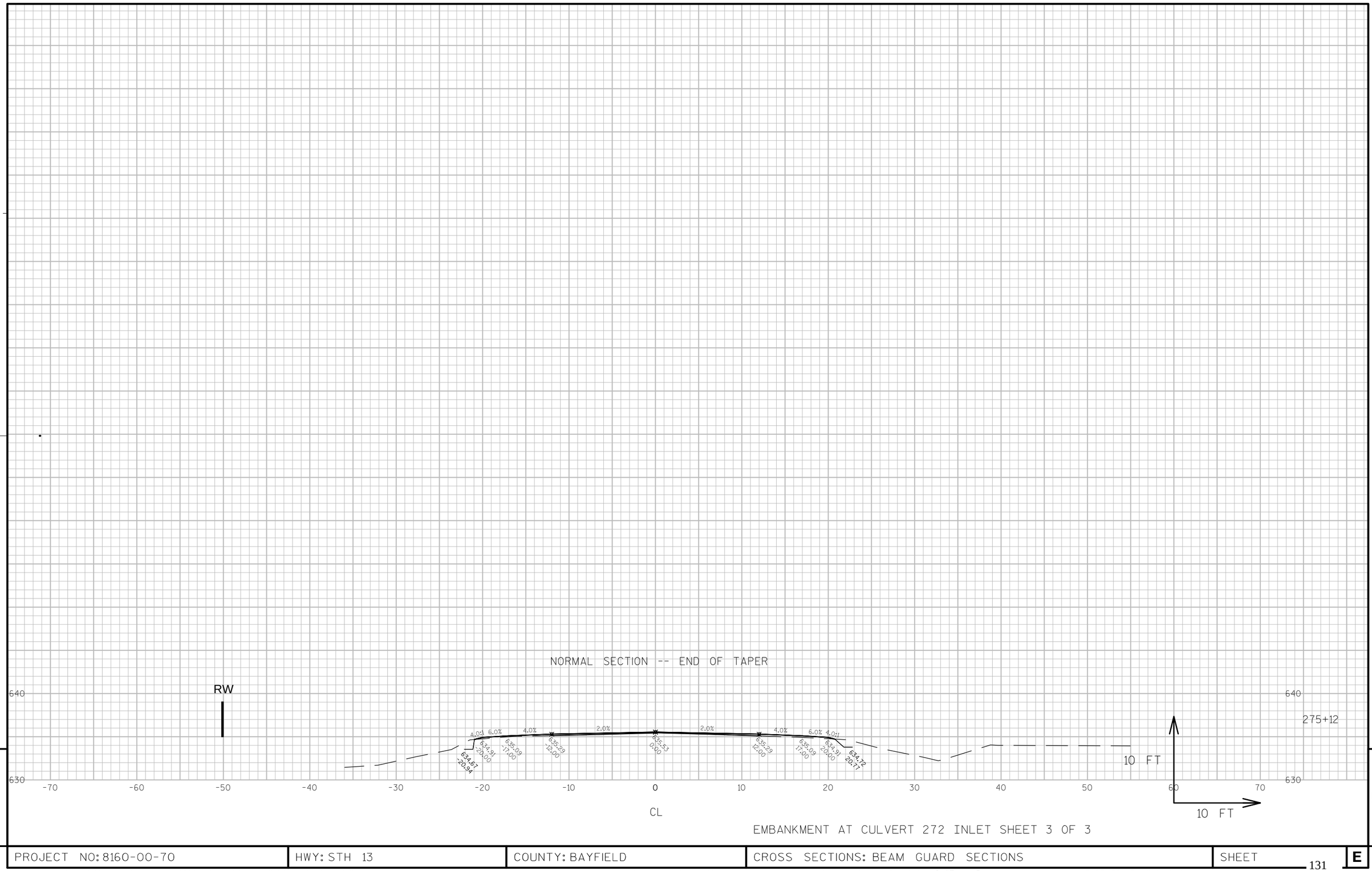
10 FT
10 FT

273+42

EMBANKMENT AT CULVERT 272 INLET SHEET 2 OF 3

9 9

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 130 E

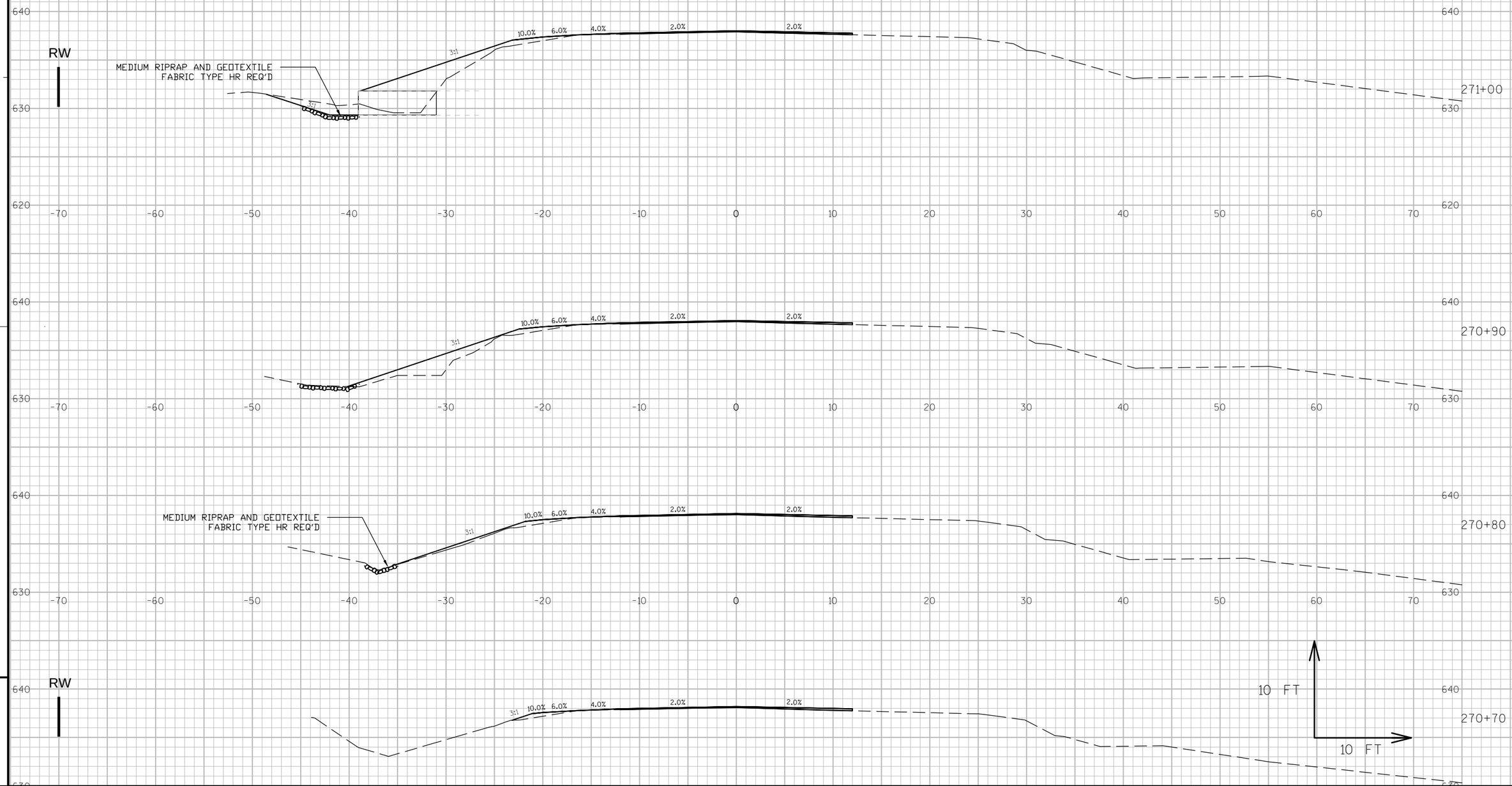


EMBANKMENT AT CULVERT 272 INLET SHEET 3 OF 3

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG PLOT DATE : 10/9/2014 4:34 PM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 0.100002
WISDOT/CADDS SHEET 49

EMBANKMENT AT CULVERT 272 INLET
EXTENSION FOR CULVERT IN TAPER AREA PAGE 1 OF 2
CULVERT LINER PAID FOR IN PROJECT 8160-03-61



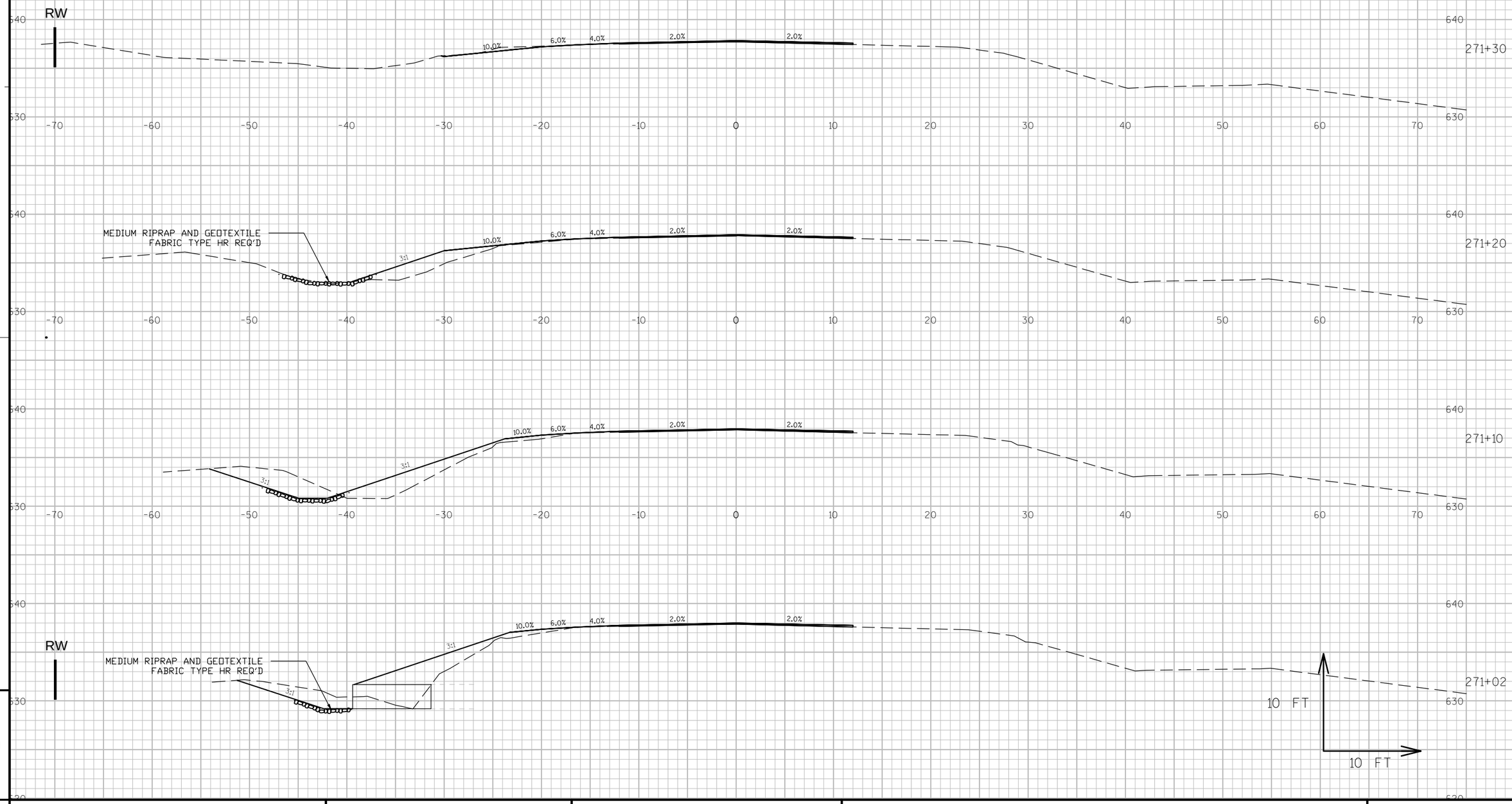
9

9

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 132	E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\BG272_CULVEXT.DWG PLOT DATE : 10/16/2014 10:58 AM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1" = 10'_XREF

EMBANKMENT AT CULVERT 272 INLET
EXTENSION FOR CULVERT IN TAPER AREA PAGE 2 OF 2
CULVERT LINER PAID FOR IN PROJECT 8160-03-61



9

9

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: BEAM GUARD SECTIONS	SHEET 133	E

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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http://www.dot.wisconsin.gov

SUP

APRIL 2015

PROJECT ID: 8160-03-61

WITH: 8160-00-70

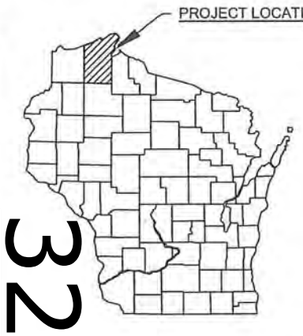
COUNTY: BAYFIELD

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
~~Section No.~~	~~7~~	~~Sign Plates~~
~~Section No.~~	~~8~~	~~Structure Plans~~
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 84

PROJECT LOCATION



N

32

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ASHLAND - BAYFIELD

USH 2 TO 7TH STREET

STH 13

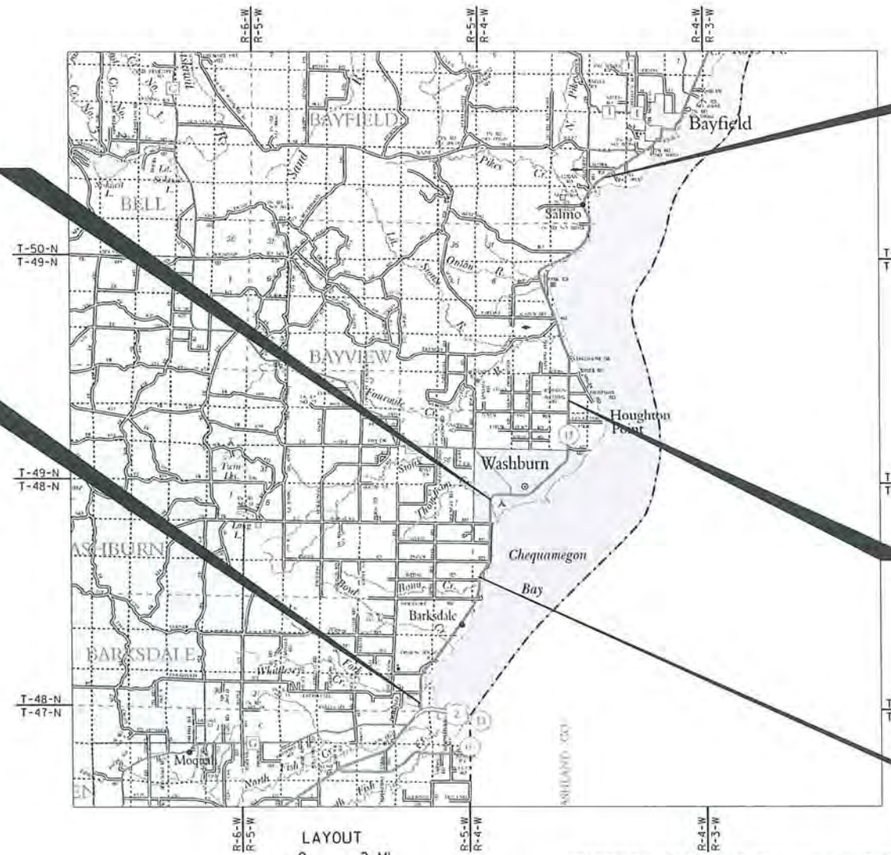
BAYFIELD COUNTY

STATE PROJECT NUMBER
8160-03-61

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8160-03-61		

END CONSTRUCTION
STA. 328+56.16'S'

END PROJECT
STA. 505+00.00'N'



BEGIN PROJECT
STA. 7+90.44'S'
X = 799,717.95
Y = 457,990.73

BEGIN CONSTRUCTION
STA. 140+00.00'N'
X = 820,084.45
Y = 501,275.60

EQUATION
STA. 220+94.27'S' BK. =
STA. 221+98.03'S' AH.

LAYOUT
SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.000 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, BAYFIELD 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.

DESIGN DESIGNATION

	(STA. 7+91-328+56)	(STA. 150+00-505+00)
A.A.D.T.	= 9050 (2018)	5,200 (2017)
A.A.D.T.	= 10,150 (2028)	6,200 (2037)
D.H.V.	= 1320	2130
D.D.	= 61/39	61/39
T.	= 13.0%	10.0%
DESIGN SPEED	= 55 MPH	55 MPH
ESALS	= 3,401,800	3,200,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
MARSH AREA		STORM SEWER	SS
		TELEPHONE	T
		WATER	W
		UTILITY PEDESTAL	
WOODED OR SHRUB AREA		POWER POLE	
		TELEPHONE POLE	

10-29-2004 Philip L. Keppers

ORIGINAL PLANS PREPARED BY

N.W.B.E. NORTHERN WISCONSIN-BASED ENGINEERS, INC.

WISCONSIN HEATHER J. HARRINGTON E-27174 HAYWARD WIS. PROFESSIONAL ENGINEER

DATE: 10/29/14

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NWBE, INC.
Designer	NWBE, INC.
Project Manager	PHILIP KEPPERS
Regional Examiner	DANIEL OJIBWAY
Regional Supervisor	DAVID OSTROWSKI
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 10-29-2004 Philip L. Keppers (Signature)

E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\010101_TI.DWG

PLOT DATE : 10/15/2014 7:38:35 AM PLOT BY : USER PLOT NAME :

WISDOT/CADDS SHEET 10

2

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE IN ACCORDANCE WITH THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

CURVE DATA IS BASED ON THE ARC DEFINITION. BEARINGS SHOWN ON THE PLAN ARE GRID BEARINGS AND ARE TO THE NEAREST SECOND.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE OR ASPHALTIC SURFACE COURSE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE. THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. COORDINATE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGER'S HOTLINE AND/OR A DIRECT CALL TO UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGER'S HOTLINE.

VERTICAL SAWCUTS SHALL BE MADE THROUGH ALL EXISTING PAVEMENTS AT REMOVAL LIMITS.

SHRINKAGE OF EARTHWORK IS VARIABLE AND IS ESTIMATED AT 25% IN THE YARDAGE SUMMARY. EXCAVATION BELOW SUBGRADE (EBS) IS ESTIMATED AND MAY VARY AS DIRECTED BY THE ENGINEER.

6-INCH BASE PATCHING ASPHALTIC SHALL BE CONSTRUCTED IN 2 LAYERS MINIMUM.

7 1/2-INCH BASE PATCHING ASPHALTIC SHALL BE CONSTRUCTED IN 3 LAYERS MINIMUM.

8-INCH BASE PATCHING ASPHALTIC SHALL BE CONSTRUCTED IN 3 LAYERS MINIMUM.

8 1/2-INCH BASE PATCHING ASPHALTIC SHALL BE CONSTRUCTED IN 3 LAYERS MINIMUM.

RADIUS DIMENSIONS AS SHOWN ON THE PLAN ARE TO THE EDGE OF PAVEMENT. ELEVATIONS SHOWN ON INTERSECTION DETAIL SHEETS ARE AT THE EDGE OF PAVEMENT.

RESTORE SIDE ROAD INTERSECTIONS, DRIVEWAYS, AND OTHER ENTRANCES TO EXISTING SURFACE CONDITIONS UNLESS SHOWN OTHERWISE ON THE PLAN.

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

SILT FENCE SHALL BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, AND IT SHALL BE INSTALLED PRIOR TO CONSTRUCTION.

THE EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND APPROVED BY THE ENGINEER IN CONSULTATION WITH THE DNR.

EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT OF WAY SHALL BE RESTORED AS DIRECTED BY THE ENGINEER.

STATIONING, DISTANCES AND OFFSETS FOR PROPOSED SIGNS SHOWN ON THE PLAN ARE APPROXIMATE. ACTUAL LOCATIONS OF SIGNS ARE TO BE COORDINATED IN THE FIELD WITH THE ENGINEER.

ALL CONCRETE CULVERT PIPE AND STORM SEWER JOINTS SHALL BE WRAPPED AND TIED.

STAKING FOR SUBBASE IS INCLUDED IN CONSTRUCTION STAKING SUBGRADE.

TRANSPORTATION PROJECT PLAT SHEETS 4.01, 4.04 AND 4.06 WERE AMENDED. SEE AMENDED TPP SHEETS FOR CHANGES TO PARCELS 1, 4, 7, 8 AND 11.

WISDOT CONTACT
WISCONSIN DEPARTMENT OF TRANSPORTATION
ATTN: PHILIP KEPPERS, PE - PROJECT MANAGER
1701 NORTH 4TH STREET
SUPERIOR, WI 54880
PHONE (715) 395-3027
EMAIL: Philip.Keppers@dot.wi.gov

WDNR CONTACT
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: SHAWN HASELEU
ENVIRONMENTAL ANALYSIS AND REVIEW SPECIALIST
810 WEST AMPLE STREET
SPOONER, WI 54801
PHONE (715) 635-4228
EMAIL: Shawn.Haseleu@wisconsin.gov

DESIGN CONTACT
NORTHERN WISCONSIN-BASED ENGINEERS (NWBE)
ATTN: HEATHER HARRINGTON, PE
P.O. BOX 328
HAYWARD, WI 54843
PHONE (715) 634-4334
EMAIL: heather@cheqnet.net

BAYFIELD COUNTY CONTACT
BAYFIELD COUNTY HIGHWAY DEPARTMENT
ATTN: THOMAS TOEPFER - COMMISSIONER
P.O. BOX 428
311 SOUTH 1ST AVENUE EAST
WASHBURN, WI 54891
PHONE (715) 373-6115
EMAIL: ttoepfer@bayfieldcounty.org



LIST OF STANDARD ABBREVIATIONS

ABUT.	ABUTMENT
AGG.	AGGREGATE
AH.	AHEAD
AADT	ANNUAL AVERAGE DAILY TRAFFIC
APPROX.	APPROXIMATE
A.E.W.	APRON END WALL
ASPH.	ASPHALTIC
BK.	BACK
BEG.	BEGIN
B.M.	BENCH MARK
C/L OR ℄	CENTER LINE
C.E.	COMMERCIAL ENTRANCE
CONC.	CONCRETE
CONSTR.	CONSTRUCTION
CO.	COUNTY
C.T.H.	COUNTY TRUNK HIGHWAY
X-SEC.	CROSS SECTION
CR.	CRUSHED
CULV.	CULVERT
C.P.	CULVERT PIPE
D.O.T.	DEPARTMENT OF TRANSPORTATION
D.H.V.	DESIGN HOUR VOLUME
DIA.	DIAMETER
DISCH. OR DIS.	DISCHARGE
E.	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
EA.	EACH
ELEC.	ELECTRIC
EL. OR ELEV.	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
E.B.S.	EXCAVATION BELOW SUBGRADE
EXIST.	EXISTING
FERT.	FERTILIZE
F.E.	FIELD ENTRANCE
FIN.	FINISHED
F.L. OR ℄	FLOW LINE
HORIZ.	HORIZONTAL
INL.	INLET
INT.	INTERSECTION
INV.	INVERT
LT.	LEFT
L.H.F.	LEFT-HAND FORWARD
L.F.	LINEAR FOOT
L.S.	LUMP SUM
MAX.	MAXIMUM
MISC.	MISCELLANEOUS
N.	NORTH
Y	NORTH GRID COORDINATE
N.E.	NORTHEAST
N.W.	NORTHWEST
PAVT.	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.O.T.	POINT ON TANGENT
P.E.	PRIVATE ENTRANCE
PROJ.	PROJECT
R.	RANGE
REQD.	REQUIRED
R/L	REFERENCE LINE
RT.	RIGHT
R.H.F.	RIGHT-HAND FORWARD
R/W	RIGHT-OF-WAY
RD.	ROAD
SHLD.	SHOULDER
S.	SOUTH
S.D.D.	STANDARD DETAIL DRAWINGS
S.T.H.	STATE TRUNK HIGHWAYS
STA.	STATION
STRUCT.	STRUCTURE
TEL.	TELEPHONE
TEMP.	TEMPORARY
TN.	TOWN
T.	TRUCKS (PERCENT OF)
TYP.	TYPICAL
U.G.	UNDERGROUND
VAR.	VARIABLE
V.	VELOCITY OR DESIGN SPEED
V.C.	VERTICAL CURVE
W.	WEST
WB	WESTBOUND
W.A.	WORKING DAY
WZ	WORK ZONE

UTILITIES

CENTURYLINK
ALAN NICKELL - ENGINEER II
P.O. BOX 369
MINONG, WI 54859
PHONE (715) 378-2131
MOBILE (715) 566-3879
EMAIL: alan.nickell@centurylink.com

CHARTER COMMUNICATIONS
TOM HAASE
2304 S. MAIN ST.
RICE LAKE, WI 54868
PHONE (715) 234-5341
MOBILE (715) 370-1601
EMAIL: tom.haase@chartercom.com

XCEL ENERGY - ELECTRIC
ATTN: MURRAY SMERER - SENIOR DESIGNER
2400 FARM ROAD
ASHLAND, WI 54806
PHONE (715) 682-6928
EMAIL: murray.j.smerer@xcelenergy.com

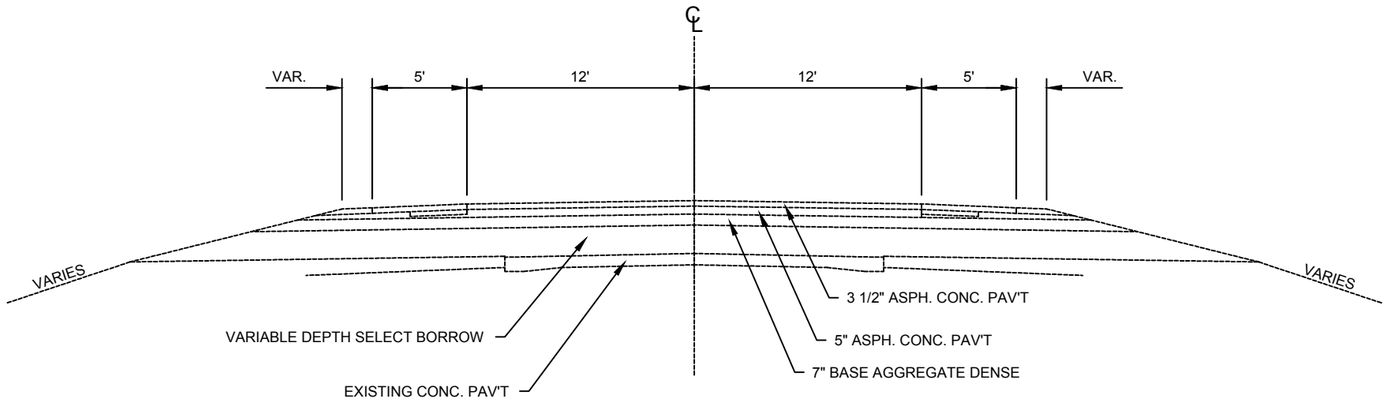
NORTHERN NATURAL GAS
ATTN: JEFF TELKER
1995 NNG RD
CARLTON, MN 55718
PHONE: (402) 530-3466
MOBILE: (218) 348-3470
EMAIL: Jeff.Telker@NNGco.com

UTILITIES CONT.

XCEL ENERGY - GAS
ATTN: MURRAY SMERER - SENIOR DESIGNER
2400 FARM ROAD
ASHLAND, WI 54806
PHONE (715) 682-6928

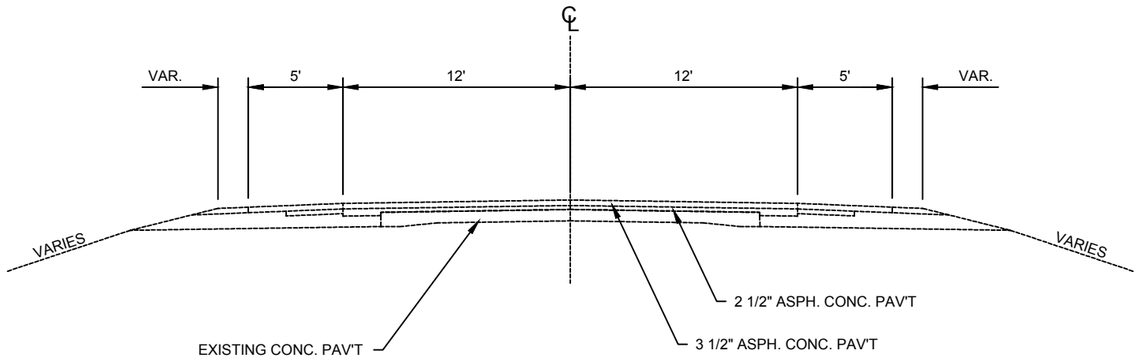
NORVADO
ATTN: GUY FOLSOM - FIELD ENGINEER
P.O. BOX 67
CABLE, WI 54821
PHONE (715) 798-7123
MOBILE (715) 580-8123
EMAIL: gfolsom@norvado.com

WASHBURN MUNICIPAL WATER AND SEWER UTILITY
ATTN: MICHAEL D. DECUR - DIRECTOR OF PUBLIC WORKS
P.O. BOX 638
WASHBURN, WI 54891
PHONE (715) 373-6171
MOBILE (715) 292-1325
EMAIL: dpw@cityofwashburn.org



TYPICAL EXISTING SECTION

STA. 37+00'S' - 39+97'S'



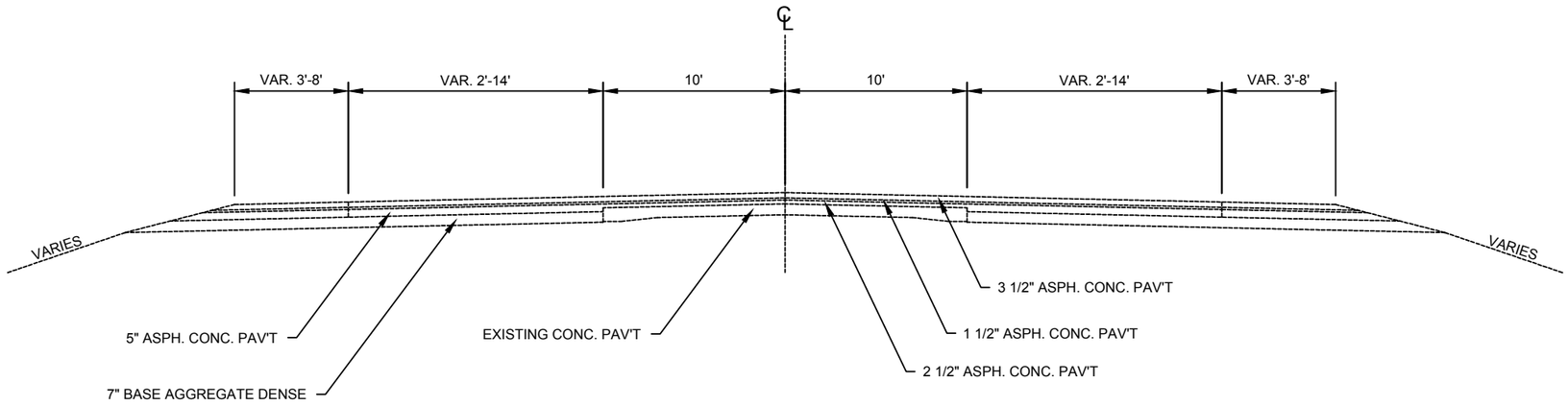
TYPICAL EXISTING SECTION

STA. 40+27'S' - 51+38'S'
STA. 60+65'S' - 121+24'S'
STA. 185+87'S' - 195+00'S'
STA. 223+00'S' - 321+00'S'

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	TYPICAL SECTIONS	SHEET 3	E

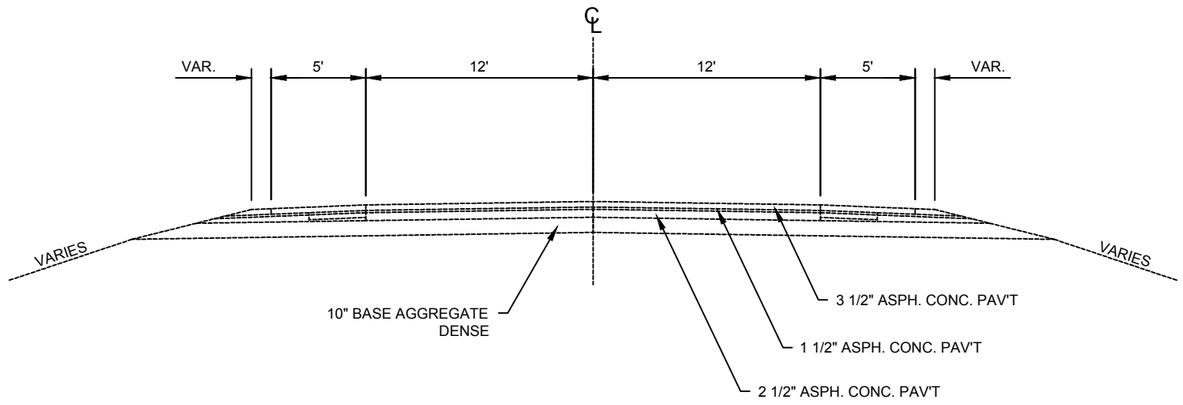
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WISDOT/CADDS SHEET 42

2



TYPICAL EXISTING SECTION

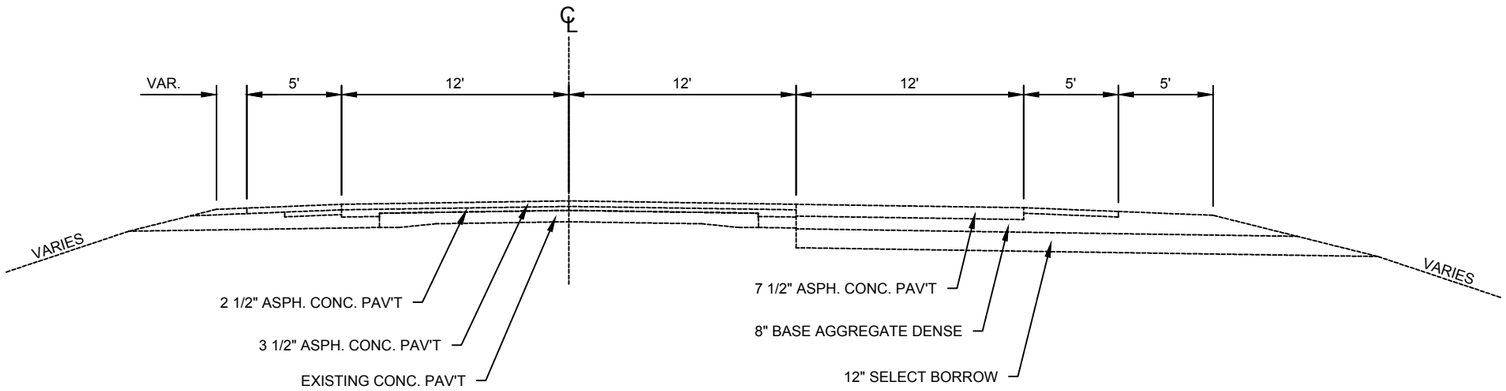
STA. 51+38'S' - 60+65'S'



TYPICAL EXISTING SECTION

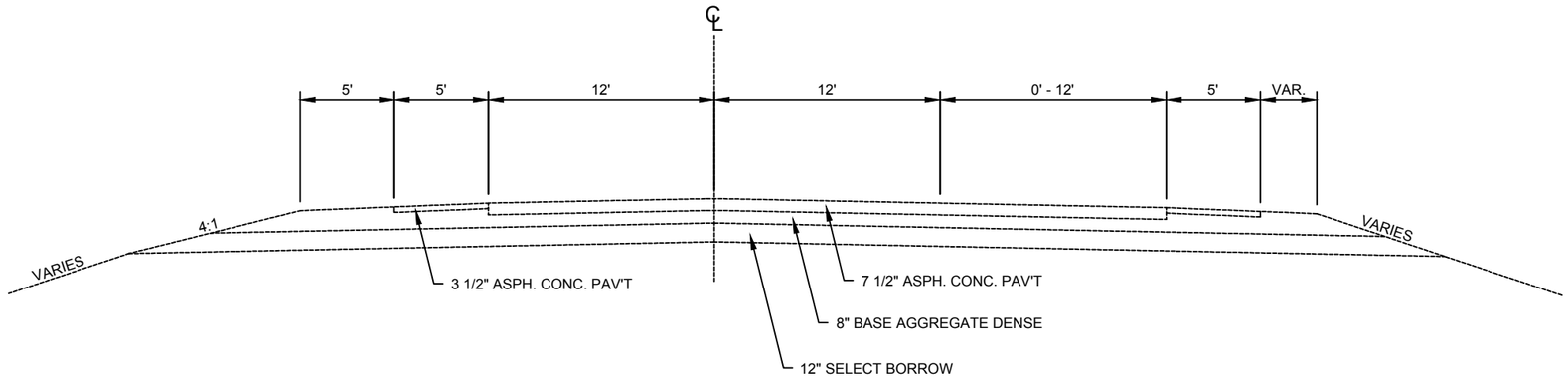
STA. 195+00'S' - 223+00'S'
STA. 321+00'S' - 328+58'S'

2



TYPICAL EXISTING SECTION

STA. 121+24'S' - 174+39'S'

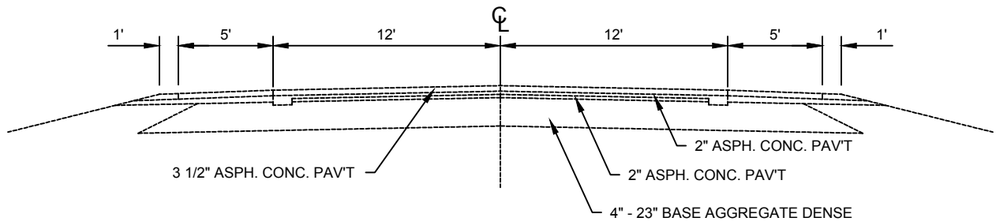


TYPICAL EXISTING SECTION

STA. 174+39'S' - 185+87'S'

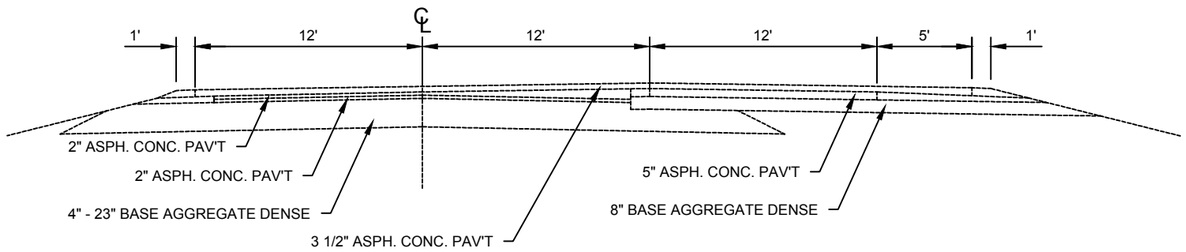
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : \\NWBESERVER\DRAWINGS\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\020301_TS.DWG PLOT DATE : 8/26/2014 8:59 AM PLOT BY : USER PLOT NAME : PLOT SCALE : 1 IN:8 FT
WISDOT/CADDS SHEET 42



TYPICAL EXISTING SECTION

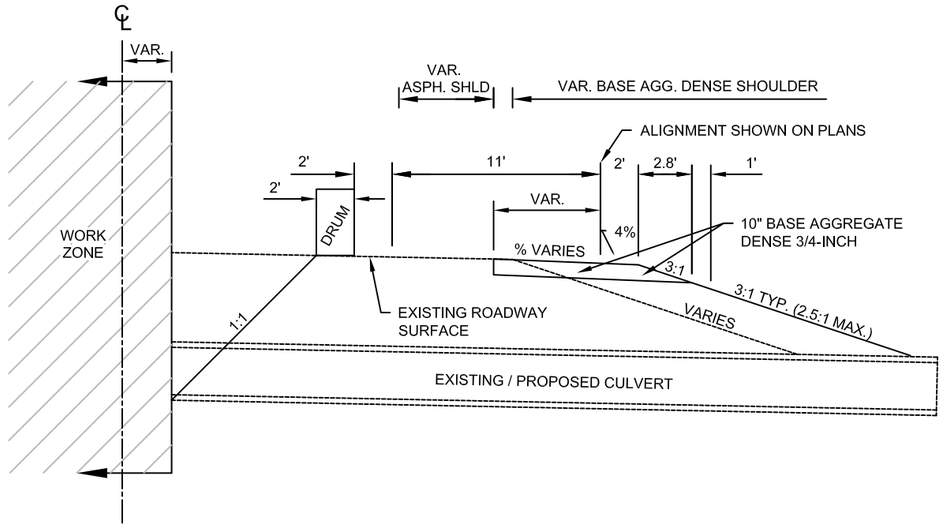
STA. 77+59'N' - 232+40'N'



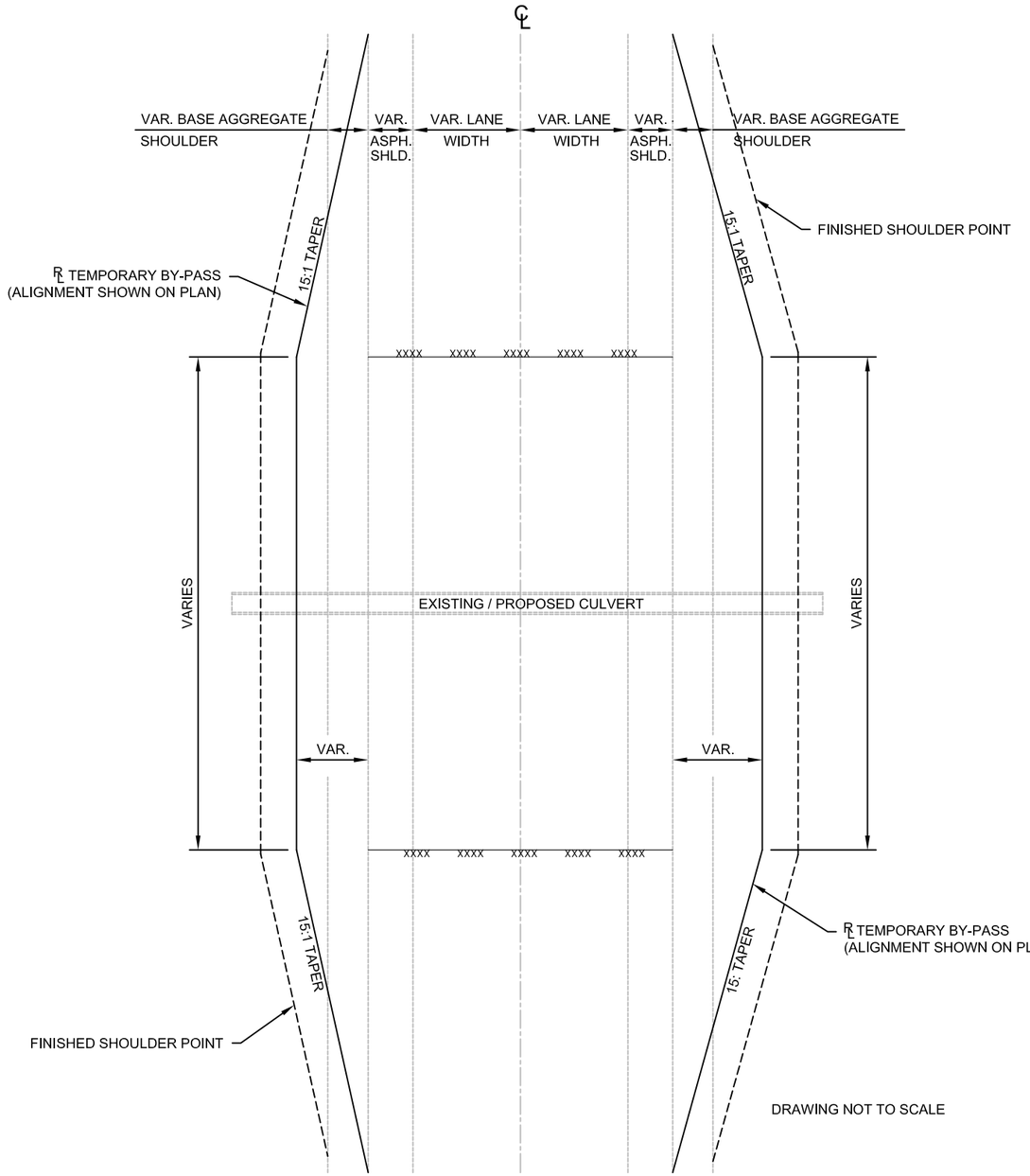
TYPICAL EXISTING SECTION

STA. 478+00'N' - 530+00'N'

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	TYPICAL SECTIONS	SHEET 6	E



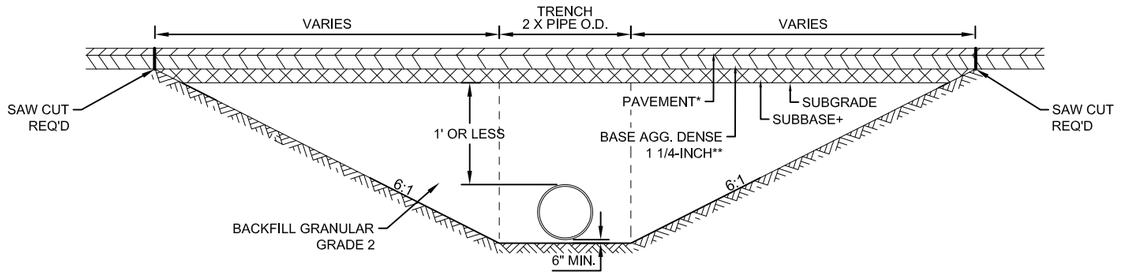
TYPICAL TEMPORARY BY-PASS SECTION
FOR CULVERT INSTALLATION



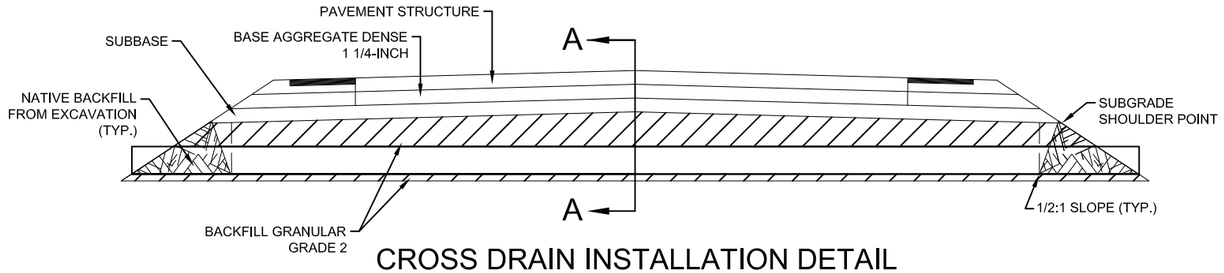
TEMPORARY BY-PASS DETAIL FOR
CULVERT INSTALLATION

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	TYPICAL SECTIONS	SHEET 7	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\020301_TS.DWG PLOT DATE : 10/29/2014 3:00 PM PLOT BY : USER PLOT NAME : PLOT SCALE : 1 IN:8 FT



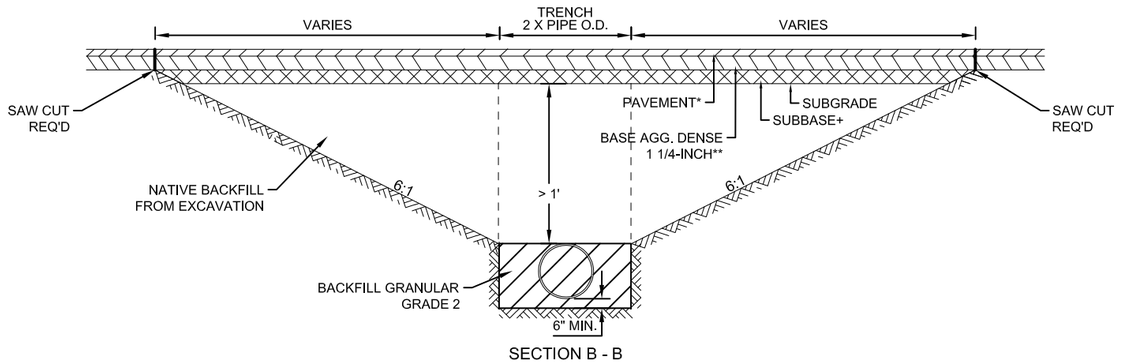
SECTION A - A



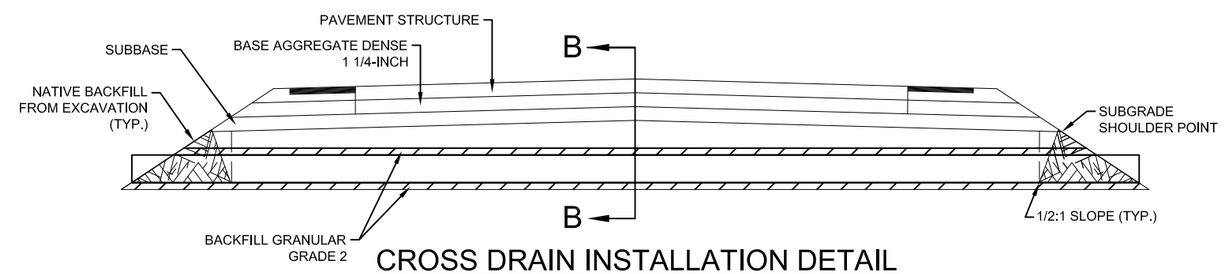
CROSS DRAIN INSTALLATION DETAIL

FOR D<5'

CROSS DRAIN REPLACEMENT STATION	ALIGNMENT	PAVEMENT DEPTH*	BASE AGGREGATE DENSE 1 1/4-INCH DEPTH**	SUBBASE DEPTH+
		INCHES	INCHES	INCHES
44+99	'S'	6	8	12
67+22	'S'	6	8	12
214+22	'S'	7.5	10	---
291+69	'S'	6	8	12
306+72	'S'	6	8	12

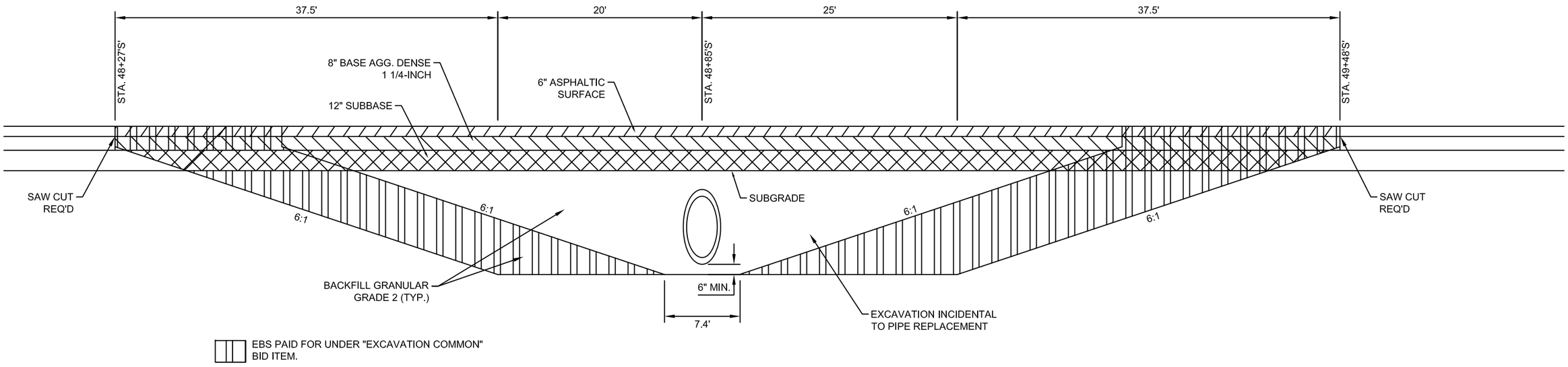


SECTION B - B

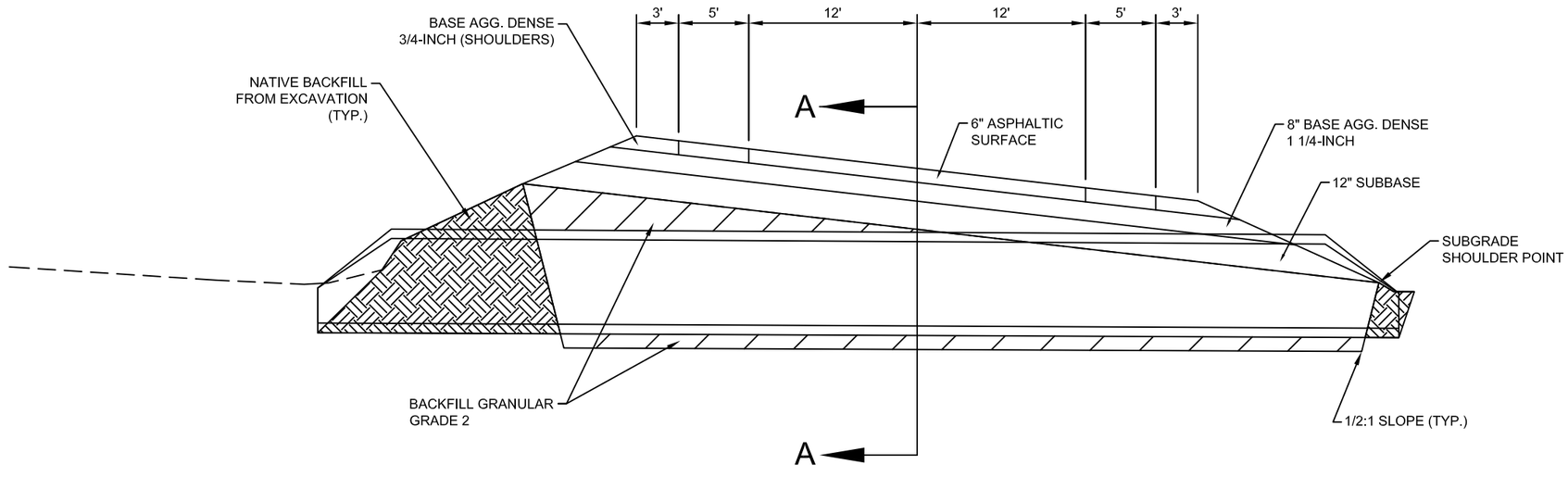


CROSS DRAIN INSTALLATION DETAIL

FOR D>5'



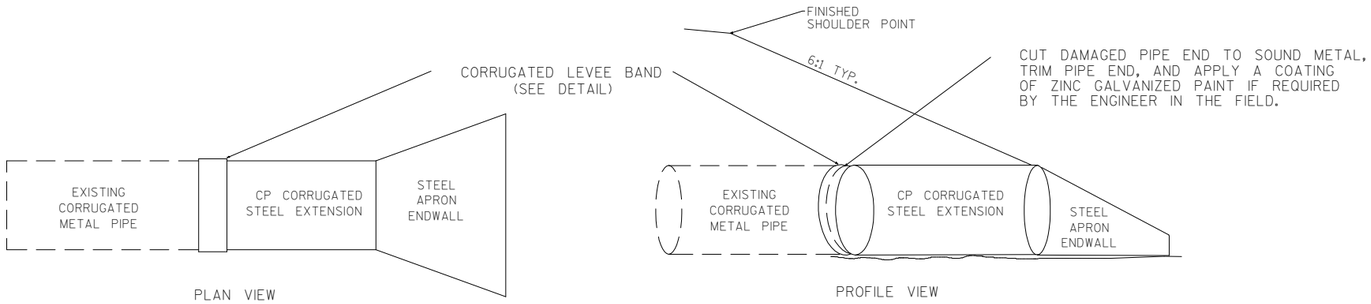
SECTION A - A



* LIMITS OF EBS NOT TO EXCEED EXISTING TOE OF SLOPE

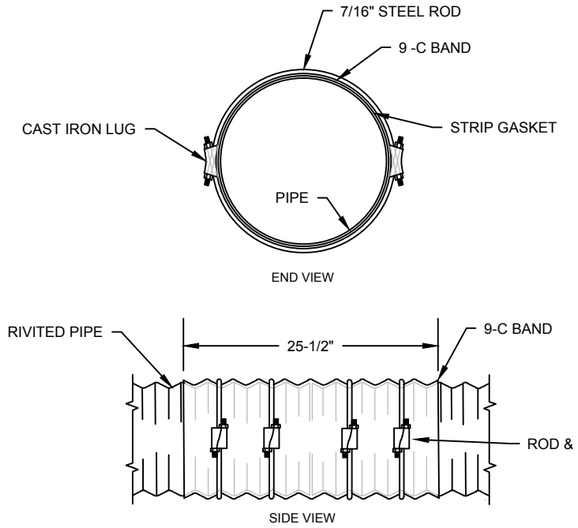
CROSS DRAIN INSTALLATION AND EBS DETAIL STA. 48+85'S'

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 9	E



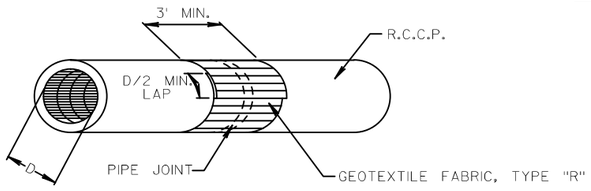
NOTE:
THE 2-FOOT WIDE METAL BAND COLLAR IS INCIDENTAL TO THE CULVERT PIPE CORRUGATED STEEL PAY ITEM, AND THE DIAMETER MUST MATCH THE PIPE EXTENSION DIAMETER.

CULVERT PIPE END EXTENSION DETAIL



NOTES:
PIPE BANDS SHALL HAVE THE SAME COATING AS THE MANUFACTURED PIPE. PIPE BANDS SHALL BE 24" WIDE CORRUGATED BANDS WITH THREADED ROD AND LUG CONNECTION. A 24" WIDE, SLEEVE OR STRIP GASKET, MADE OF 3/8" THICK FLAT CLOSED CELL NEOPRENE SHALL BE INSTALLED OVER THE PIPE JOINT PRIOR TO THE CONNECTION BAND INSTALLATION.

CORRUGATED LEVEE BAND DETAIL



NOTE: GEOTEXTILE FABRIC FOR PIPE JOINTS IS INCIDENTAL TO THE PIPE ITEM.

GEOTEXTILE FABRIC REQUIRED FOR PIPE JOINTS

PIPE DIA. (IN.)	PIPE O.D. (IN.)	FABRIC/JOINT (S.Y.)
18	23	2.3
21	26.5	2.6
24	30	3.0
27	33.5	3.3
30	37	3.6
36	44	4.3
42	51	5.0
48	58	5.7
54	65	6.4
60	72	7.1
66	79	7.8
72	86	8.5

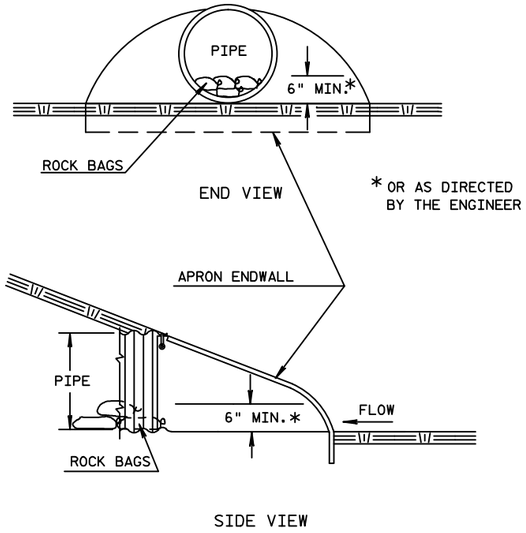
DETAIL OF WRAPPED PIPE JOINT

WRAP ALL JOINTS

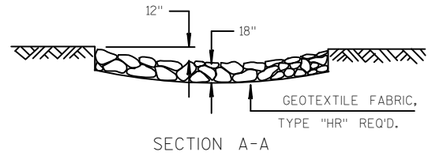
RUNOFF COEFFICIENT TABLE

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

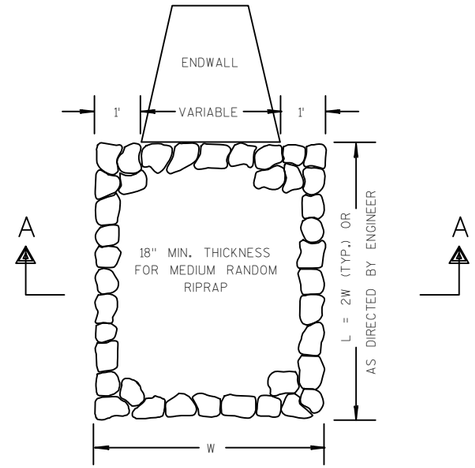
TOTAL PROJECT AREA = 165 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 29.6 ACRES (INCLUDING ROADWAYS)



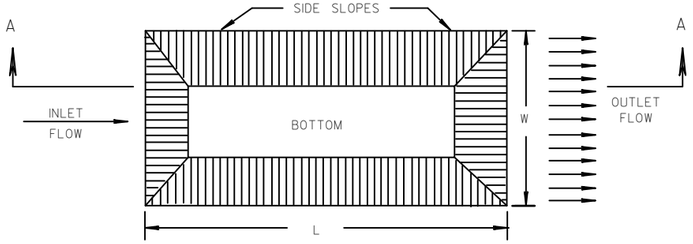
CULVERT PIPE CHECK



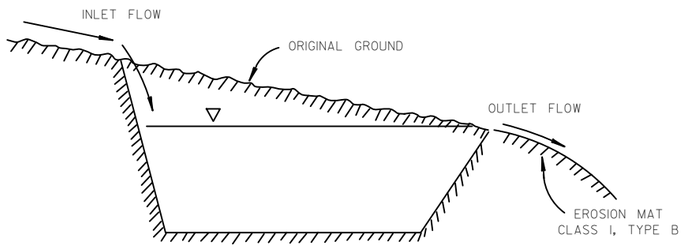
SECTION A-A



MEDIUM RIPRAP TREATMENT AT CULVERTS



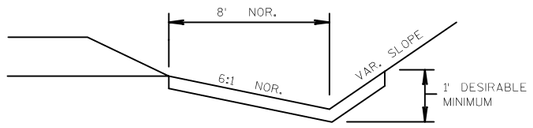
PLAN VIEW



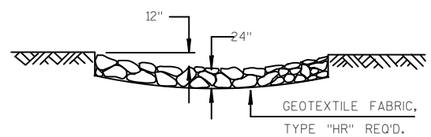
SECTION A-A

TEMPORARY SEDIMENT BASIN DETAIL

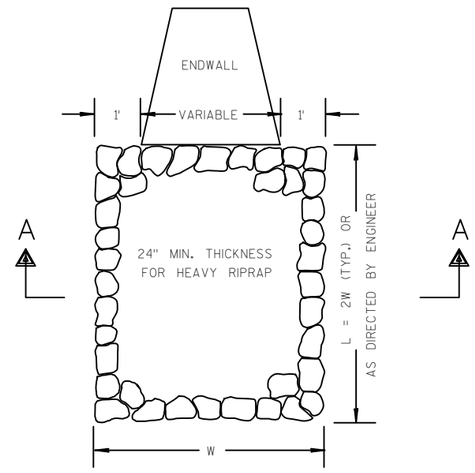
NOTE: EXCAVATION AND BACKFILL FOR SEDIMENT BASIN TO BE PAID FOR UNDER "EXCAVATION COMMON" ITEM. (EXACT LOCATIONS AND DIMENSIONS TO BE AS DIRECTED BY THE ENGINEER.)



EROSION MAT DETAIL FOR DITCHES



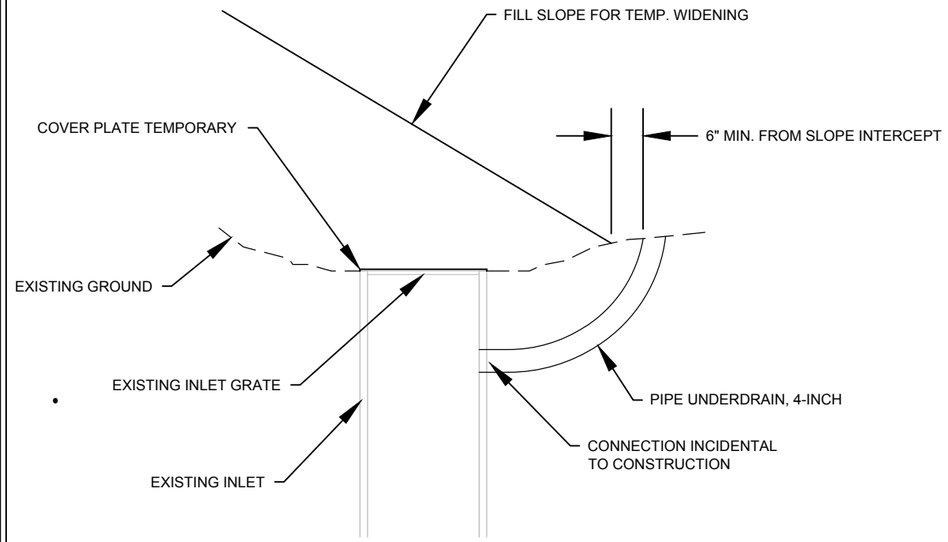
SECTION A-A



HEAVY RIPRAP TREATMENT AT CULVERTS

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS	SHEET 11	E

2

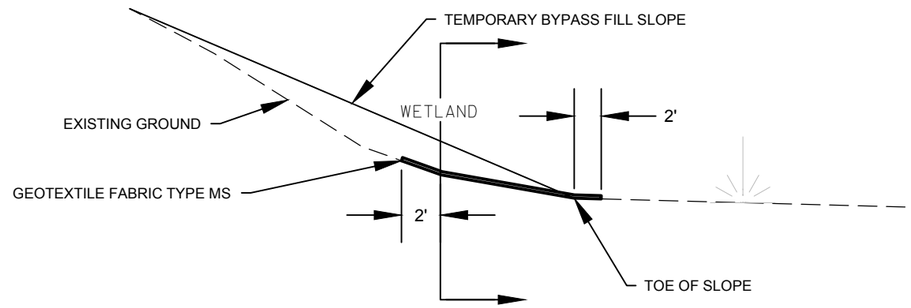


TEMPORARY WATER PASSAGE DETAIL

GENERAL NOTES:

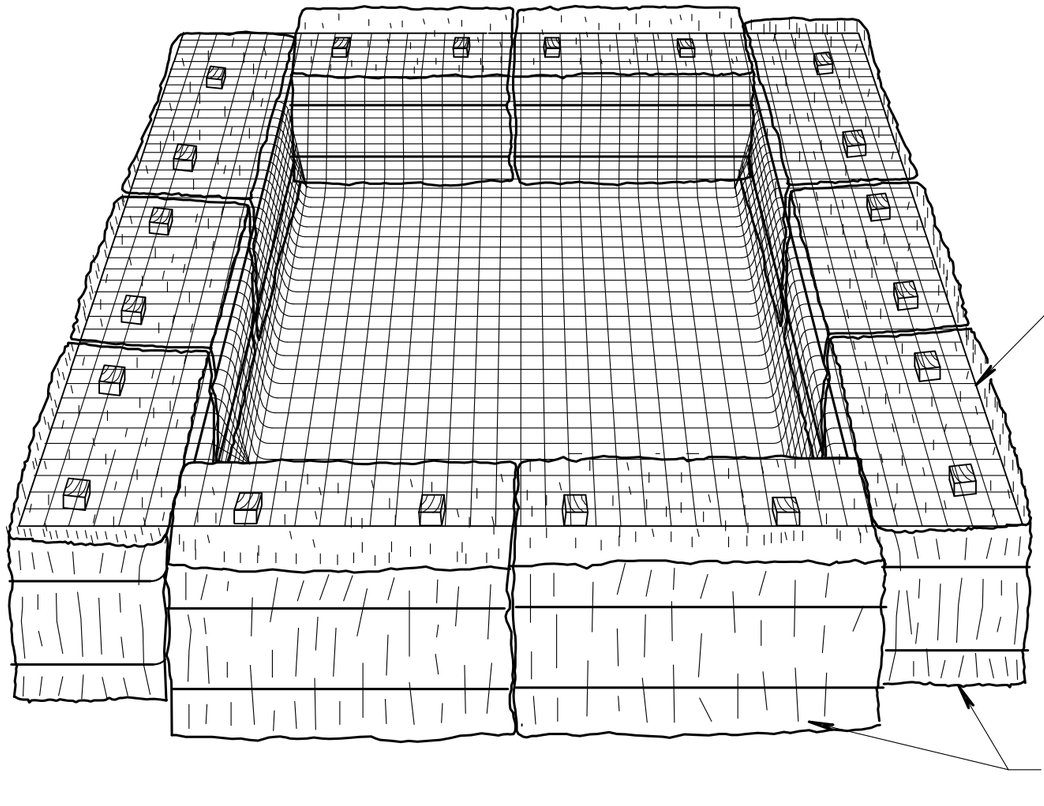
TEMPORARY BYPASS REMOVAL - REMOVE TEMPOARY BYPASS AND GEOTEXTILE FABRIC IN A WAY THAT MINIMIZES THE IMPACT ON THE DISTRUBED WETLAND AREAS.

PAYMENT FOR REMOVAL GEOTEXTILE FABRIC TYPE MS IS INCIDENTAL TO GEOTEXTILE FABRIC TYPE MS, ITEM 645.0125.



GEOTEXTILE FABRIC TYPE MS
AT TEMPORARY BYPASS DETAIL

2

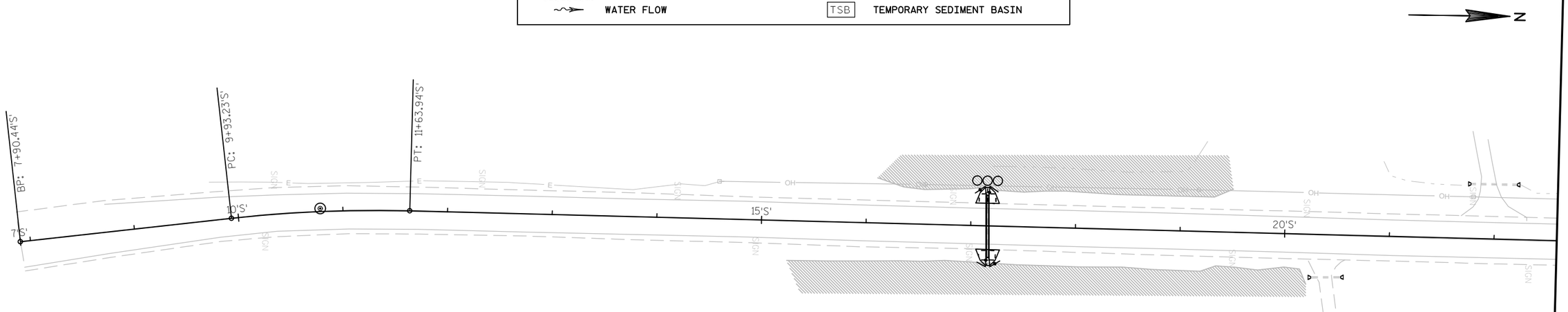


TEMPORARY SETTLING BASIN

MAY BE MODIFIED AND USED IN LIEU OF TEMPORARY SEDIMENT BASIN.

LEGEND

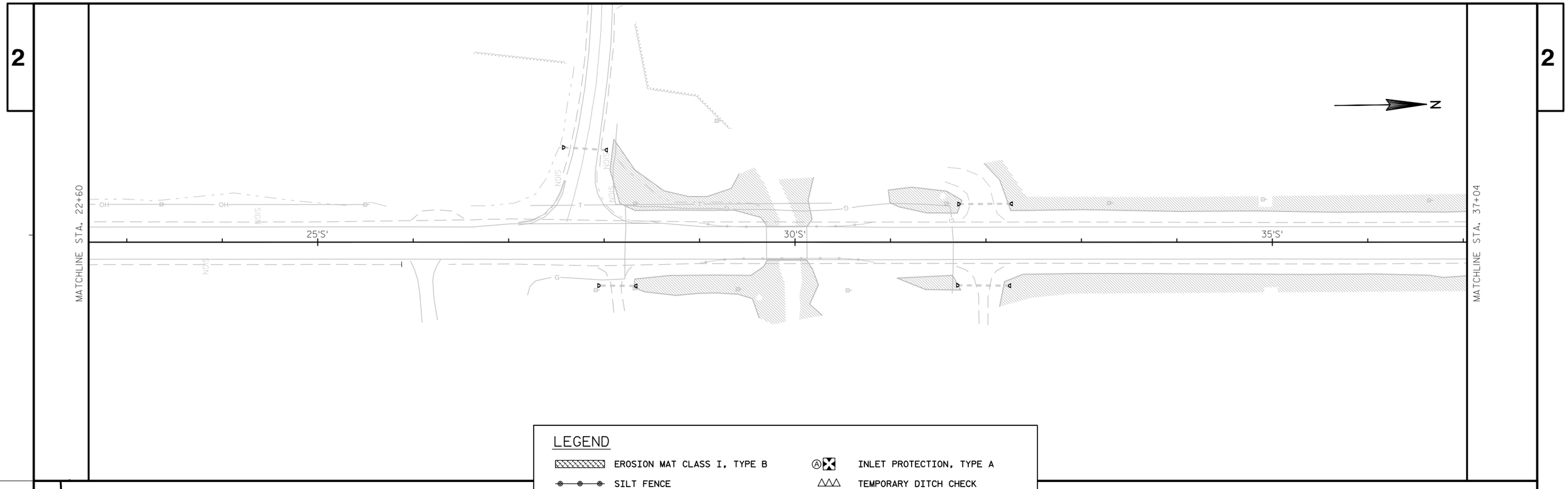
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIPRAP, MEDIUM OR HEAVY
- WATER FLOW
- INLET PROTECTION, TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- TSB — TEMPORARY SEDIMENT BASIN



GENERAL NOTES FOR EROSION CONTROL:

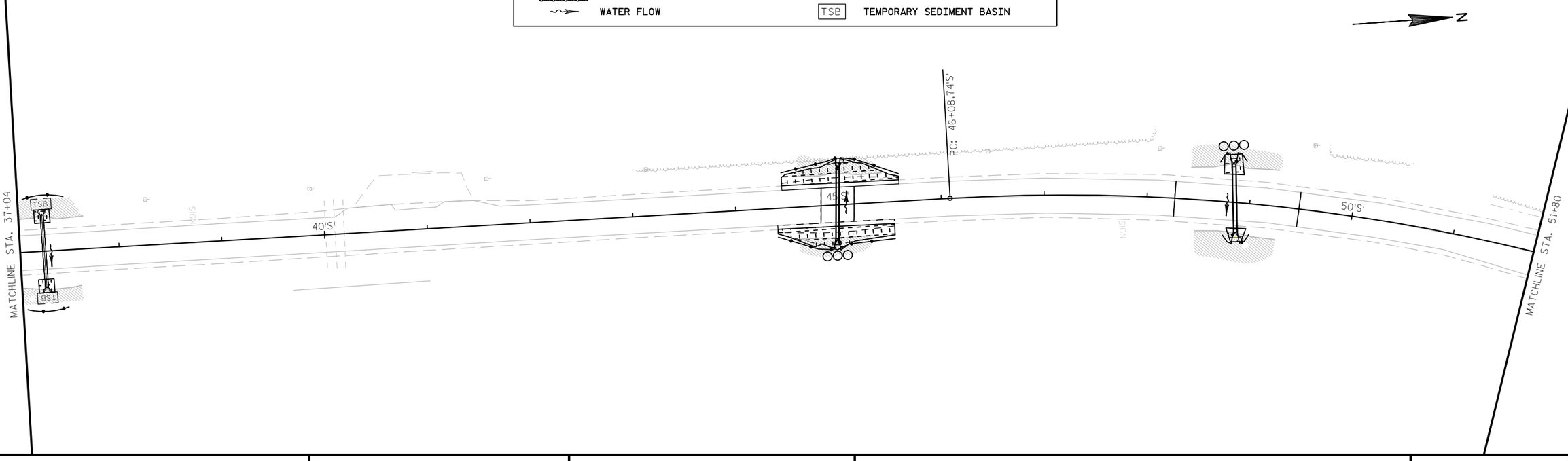
ALL SILT FENCE THAT CROSSES THE FLOW LINE OF A CULVERT IS FOR CLEANING PURPOSES ONLY. THE SILT FENCE SHALL BE INSTALLED THE DAY OF THE CLEANING AND REMOVED AFTER ALL TASKS ARE COMPLETED AND WITH APPROVAL OF THE ENGINEER.

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 14	E



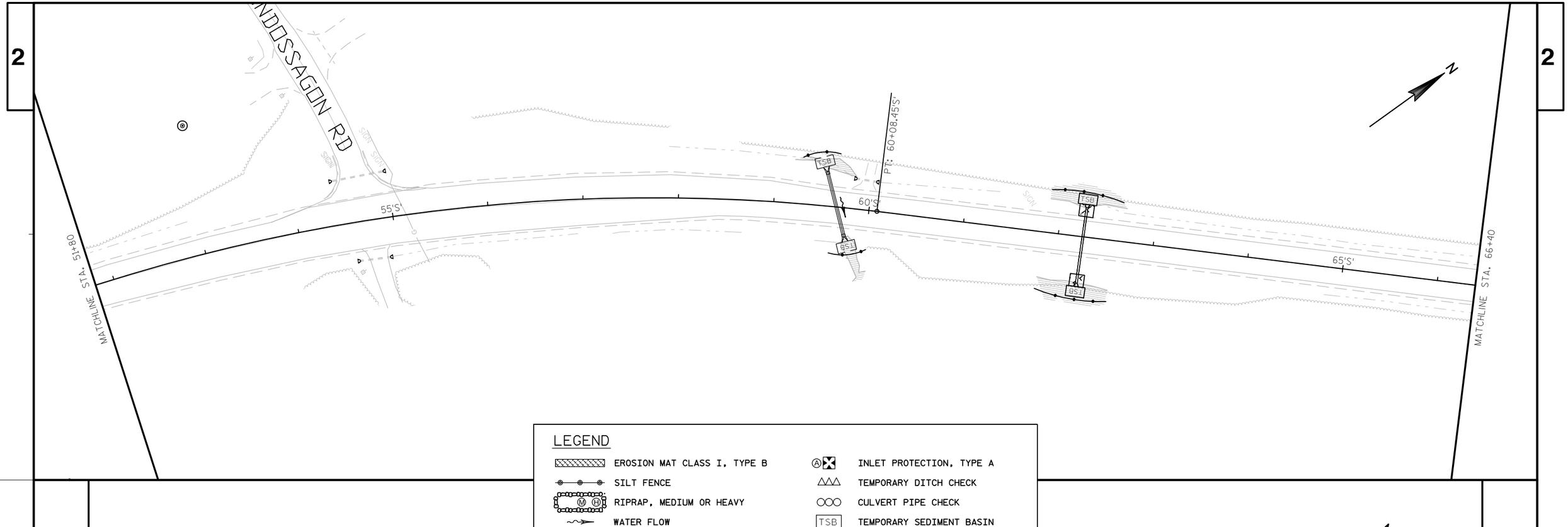
LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIPRAP, MEDIUM OR HEAVY
- WATER FLOW
- INLET PROTECTION, TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- TSB — TEMPORARY SEDIMENT BASIN



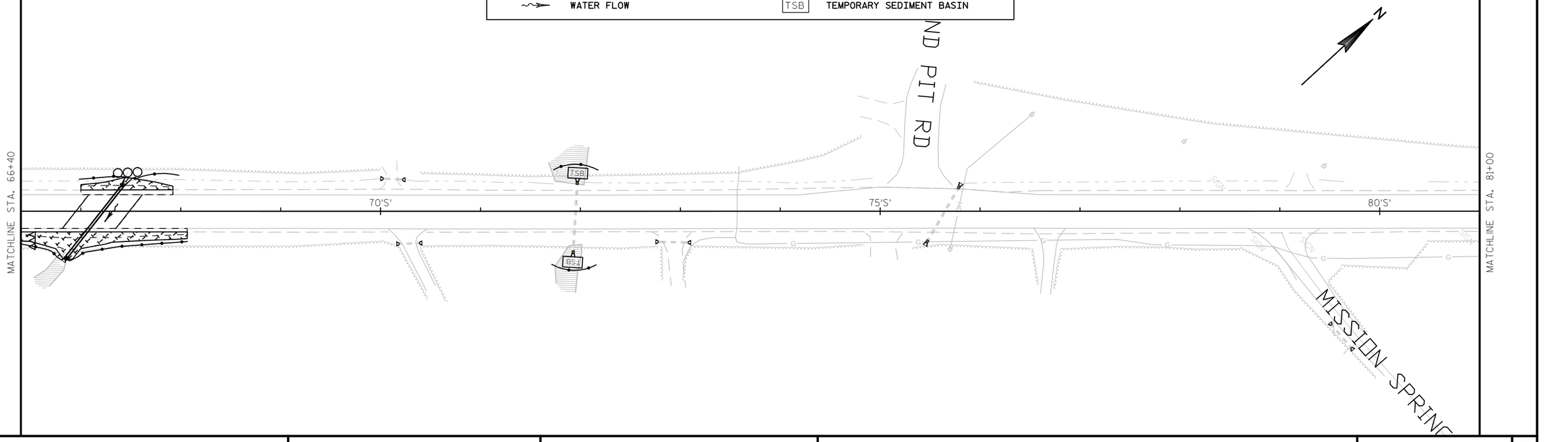
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 15	E

2



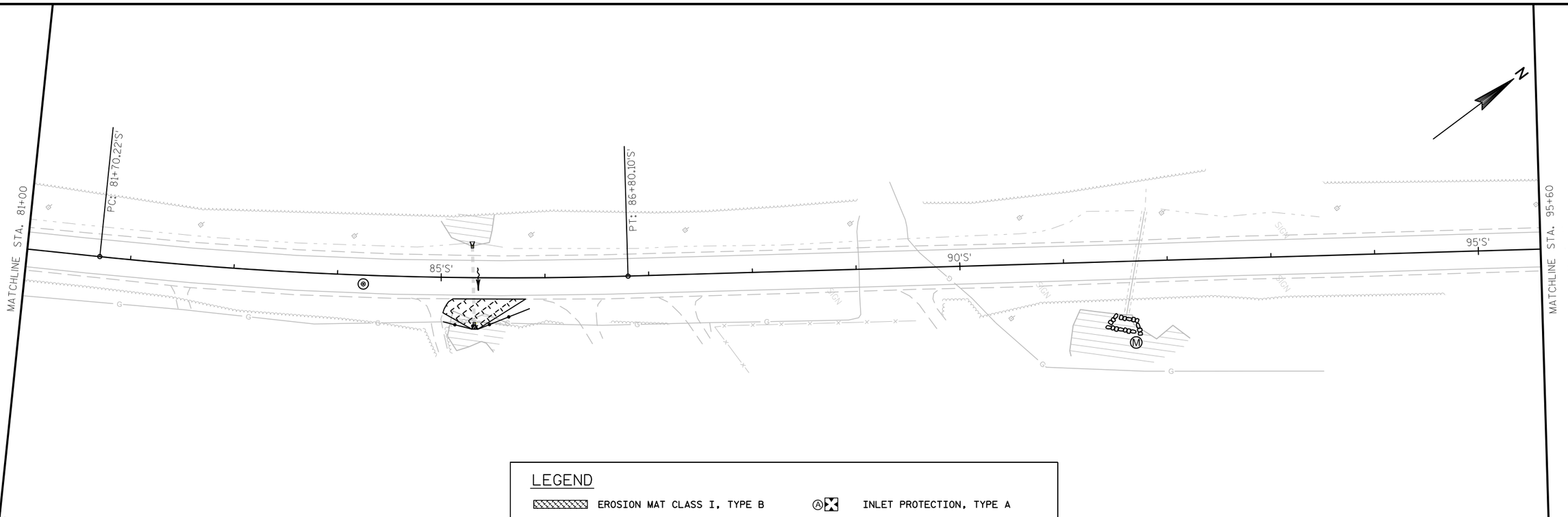
LEGEND

EROSION MAT CLASS I, TYPE B	INLET PROTECTION, TYPE A
SILT FENCE	TEMPORARY DITCH CHECK
RIPRAP, MEDIUM OR HEAVY	CULVERT PIPE CHECK
WATER FLOW	TEMPORARY SEDIMENT BASIN



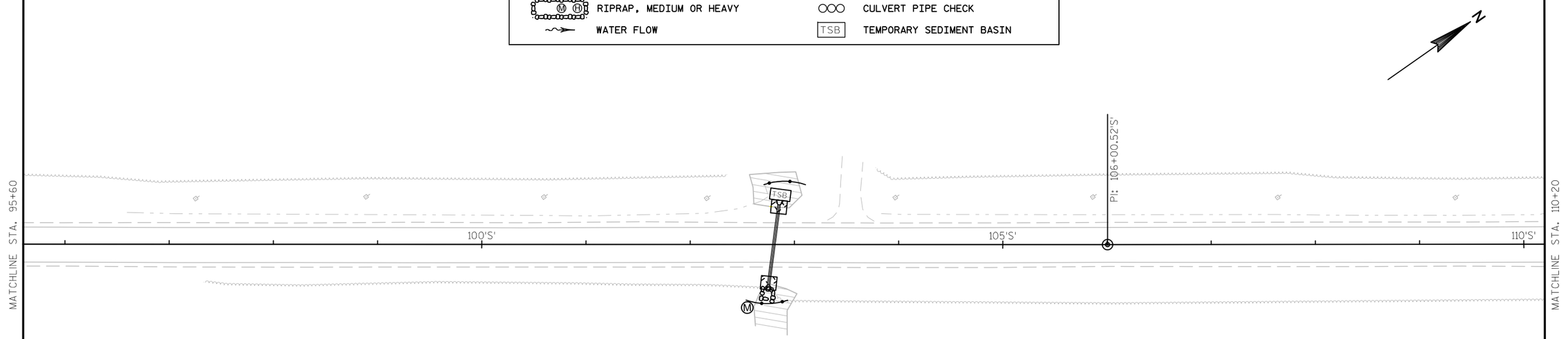
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 16	E

2



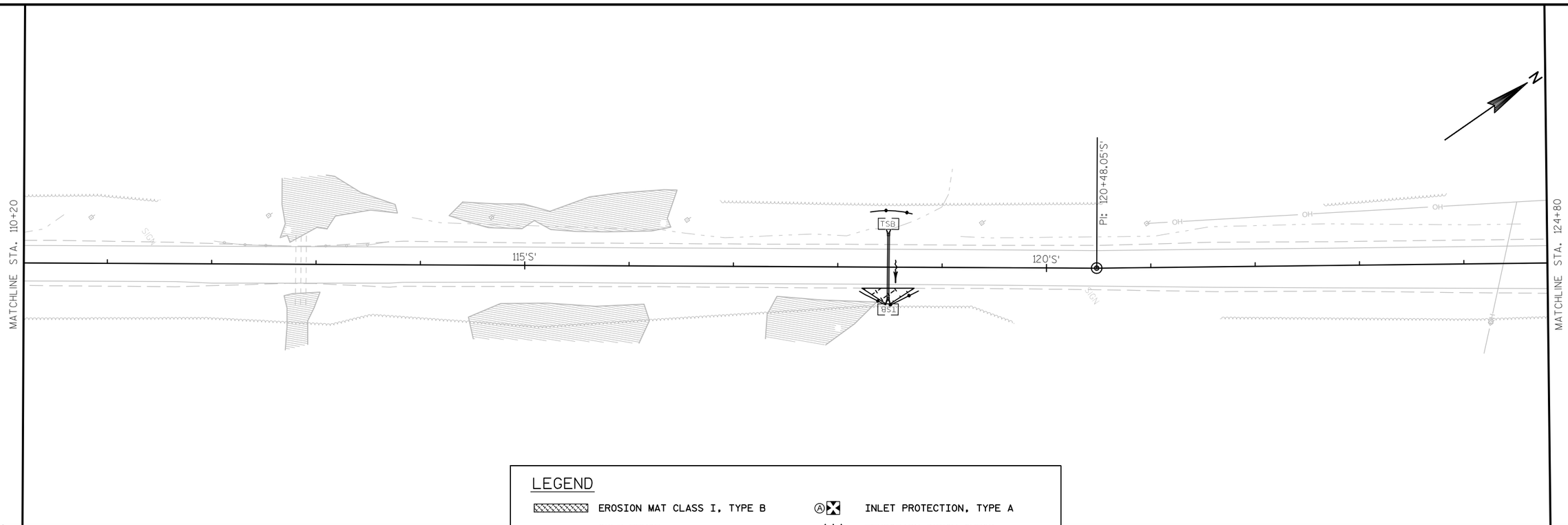
LEGEND

EROSION MAT CLASS I, TYPE B	INLET PROTECTION, TYPE A
SILT FENCE	TEMPORARY DITCH CHECK
RIPRAP, MEDIUM OR HEAVY	CULVERT PIPE CHECK
WATER FLOW	TEMPORARY SEDIMENT BASIN



PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 17	E

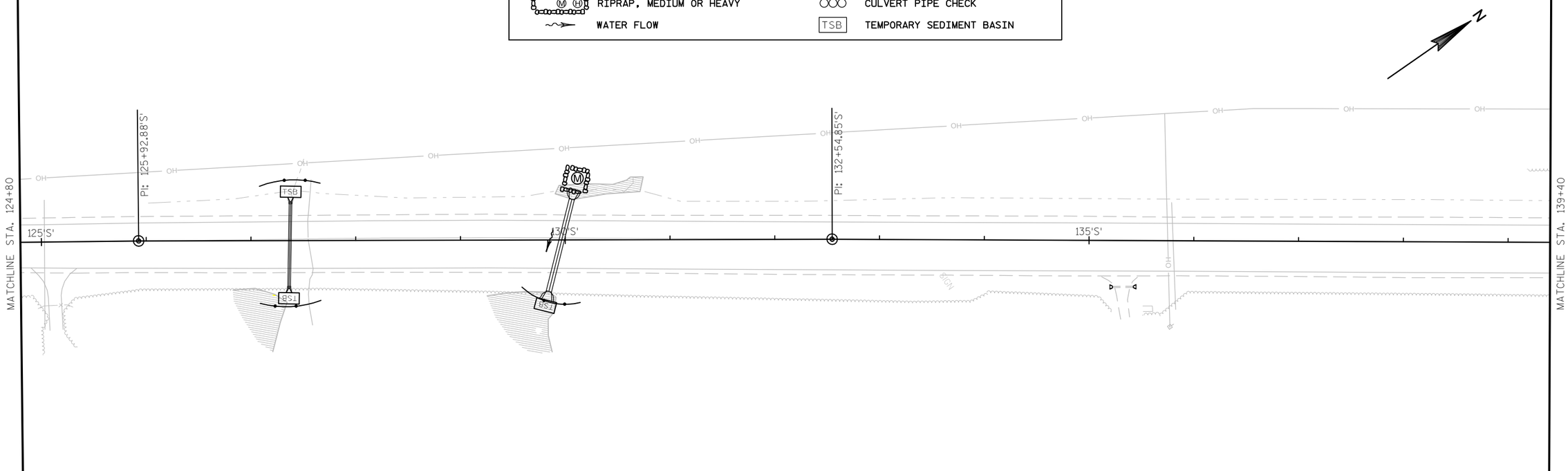
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2

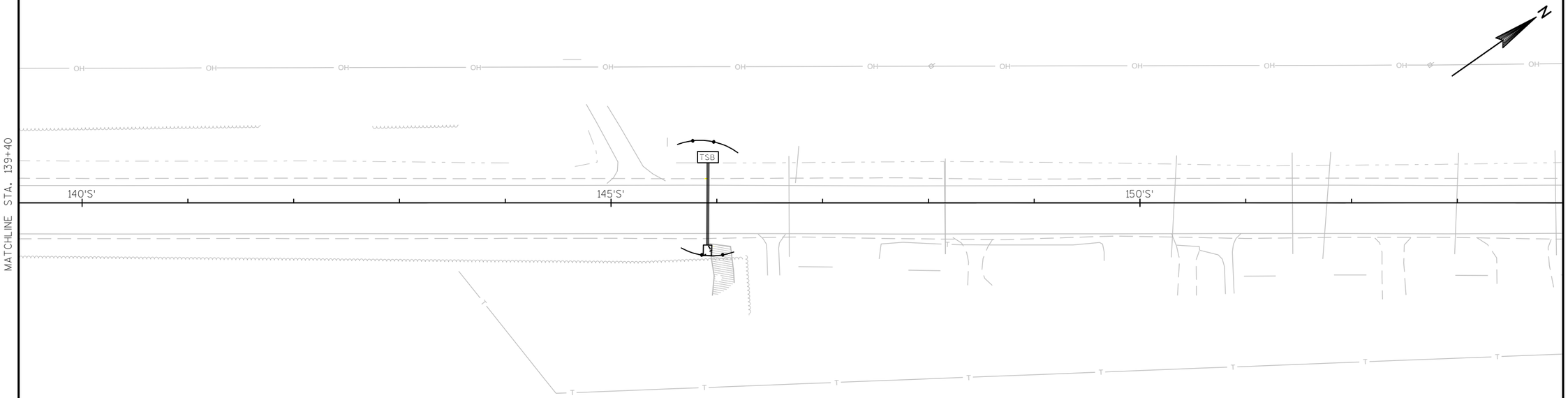
LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIPRAP, MEDIUM OR HEAVY
- WATER FLOW
- INLET PROTECTION, TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- TEMPORARY SEDIMENT BASIN



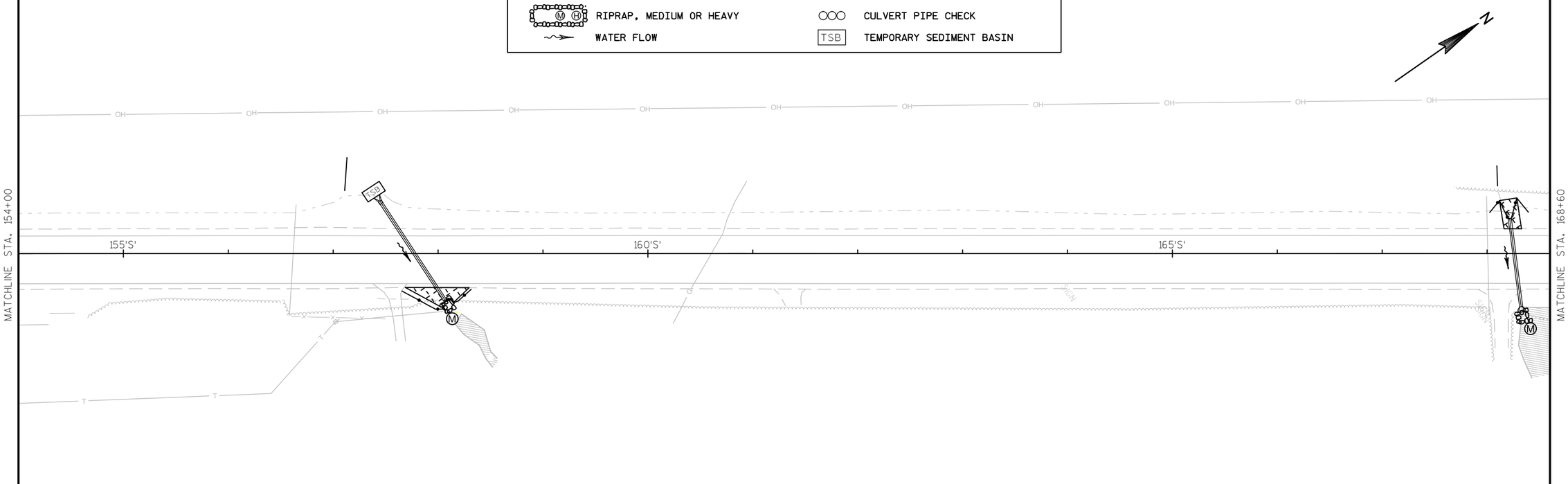
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 18	E

2



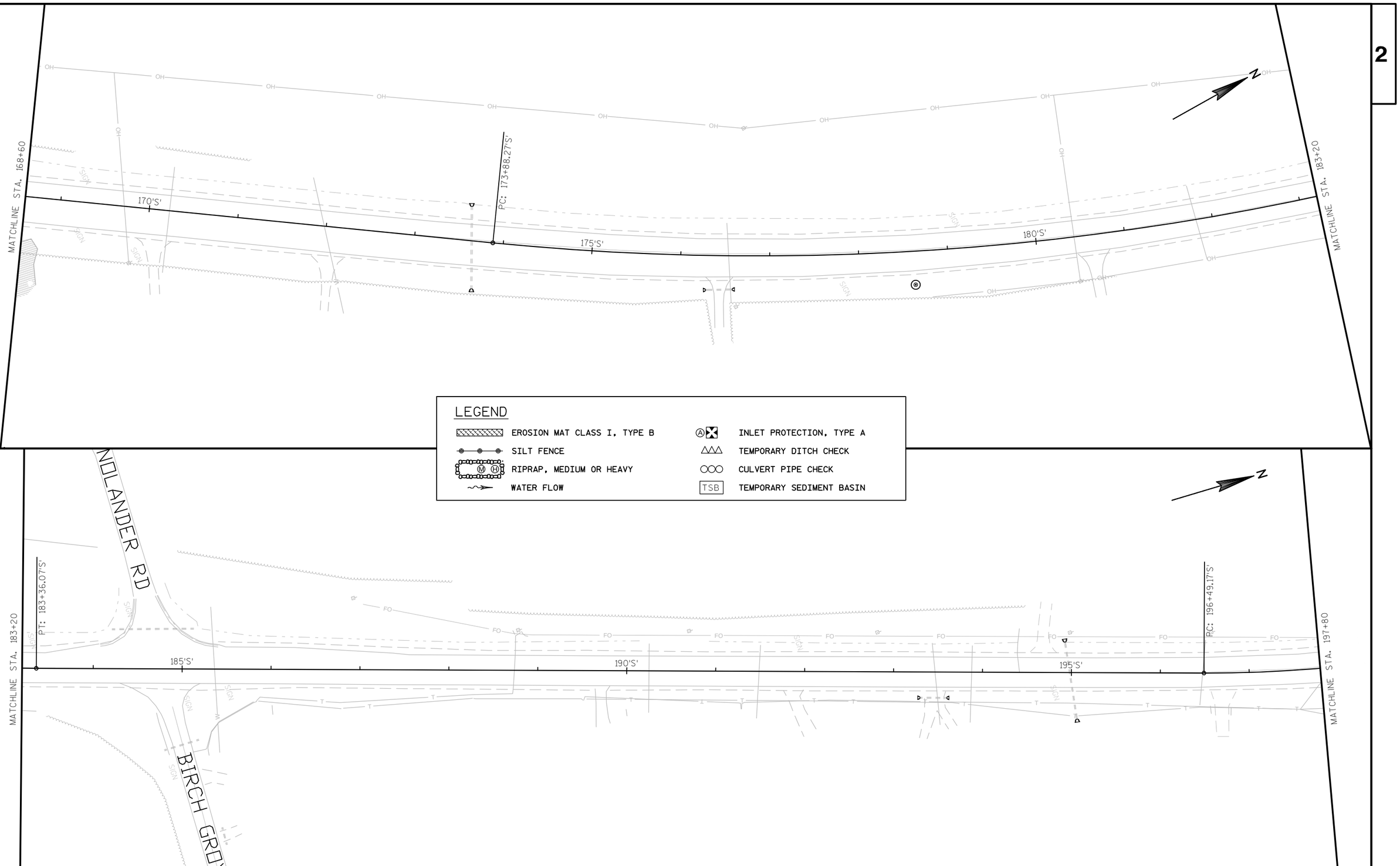
LEGEND

EROSION MAT CLASS I, TYPE B	Ⓐ INLET PROTECTION, TYPE A
SILT FENCE	TEMPORARY DITCH CHECK
Ⓜ Ⓗ RIPRAP, MEDIUM OR HEAVY	CULVERT PIPE CHECK
WATER FLOW	TSB TEMPORARY SEDIMENT BASIN



PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 19	E

2



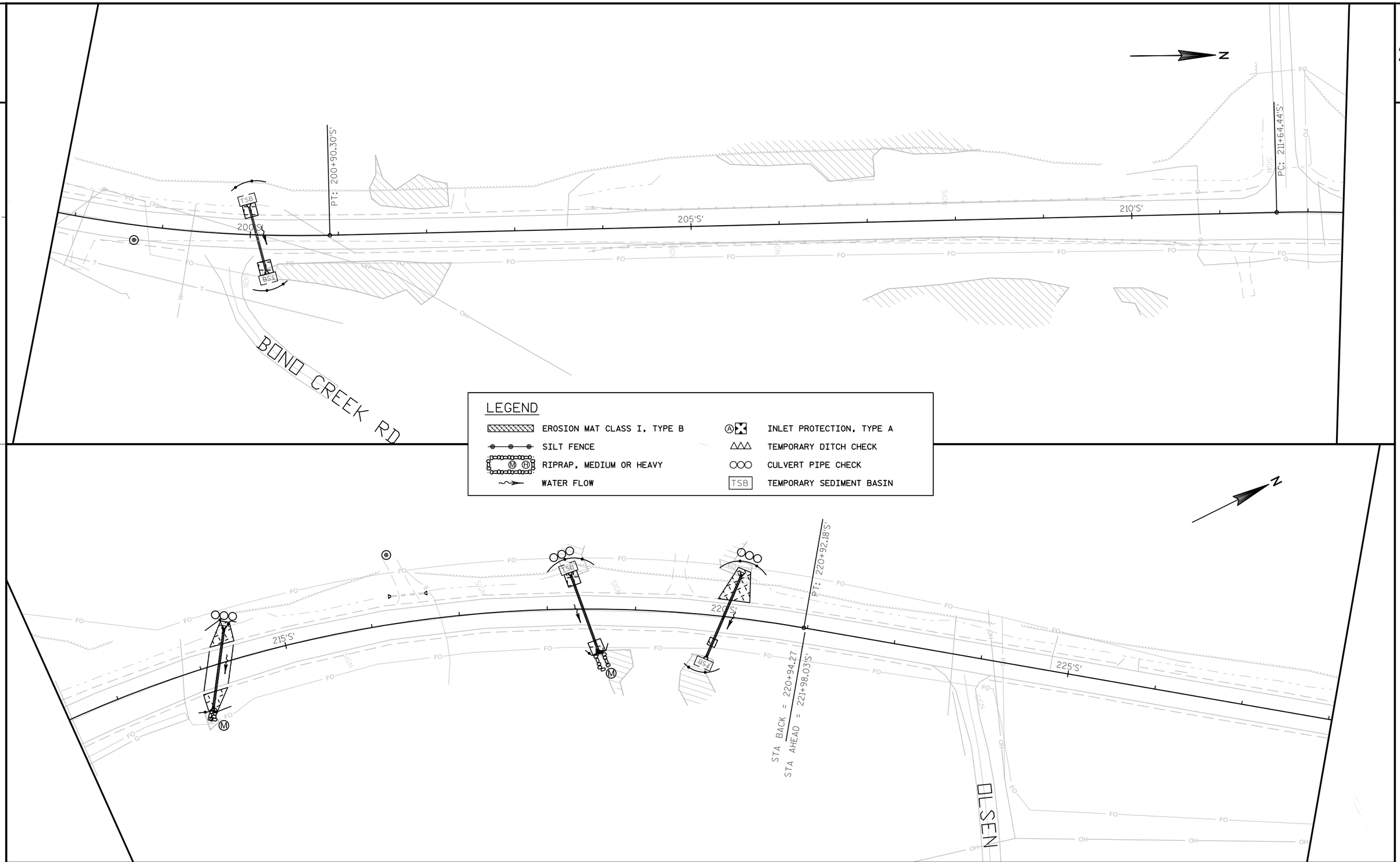
LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIPRAP, MEDIUM OR HEAVY
- WATER FLOW
- INLET PROTECTION, TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- TSB — TEMPORARY SEDIMENT BASIN

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 20	E

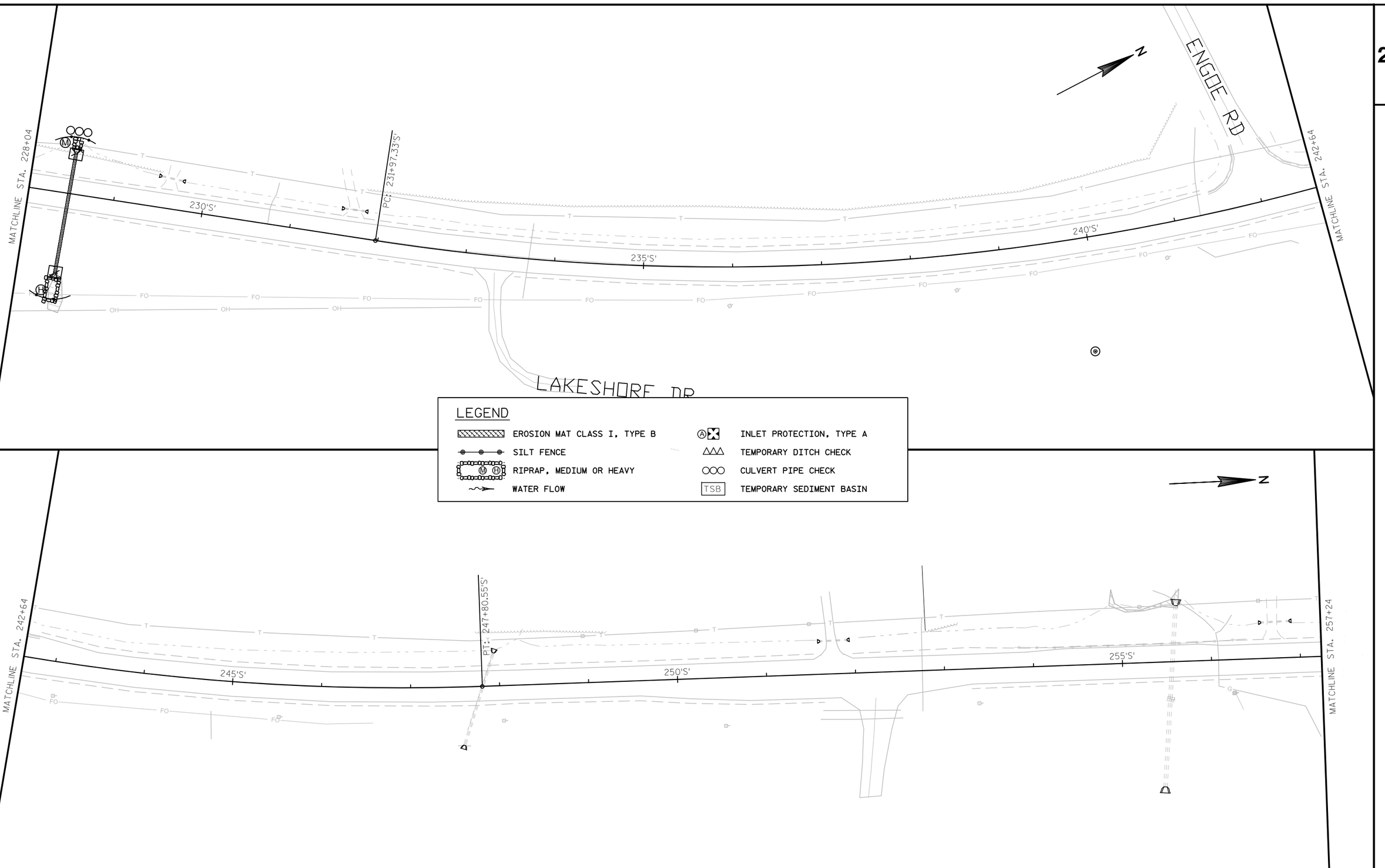
FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\022001_EC.DWG PLOT DATE : 10/16/2014 11:45 AM PLOT BY : USER PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2



PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 21	E

2

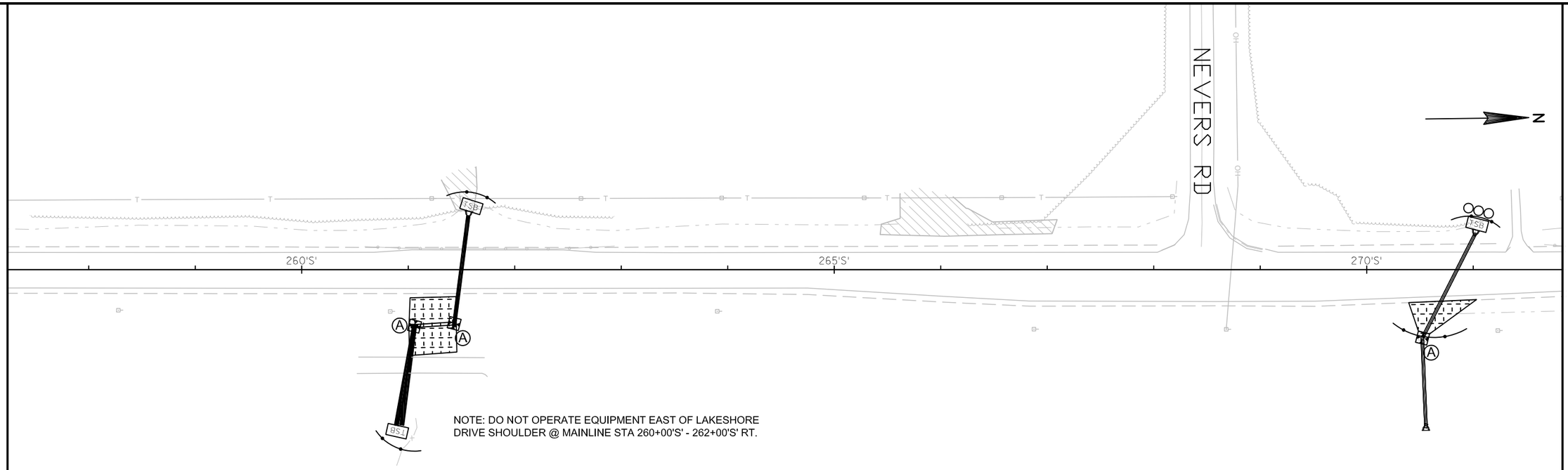


LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIPRAP, MEDIUM OR HEAVY
- WATER FLOW
- INLET PROTECTION, TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- TSB — TEMPORARY SEDIMENT BASIN

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 22	E

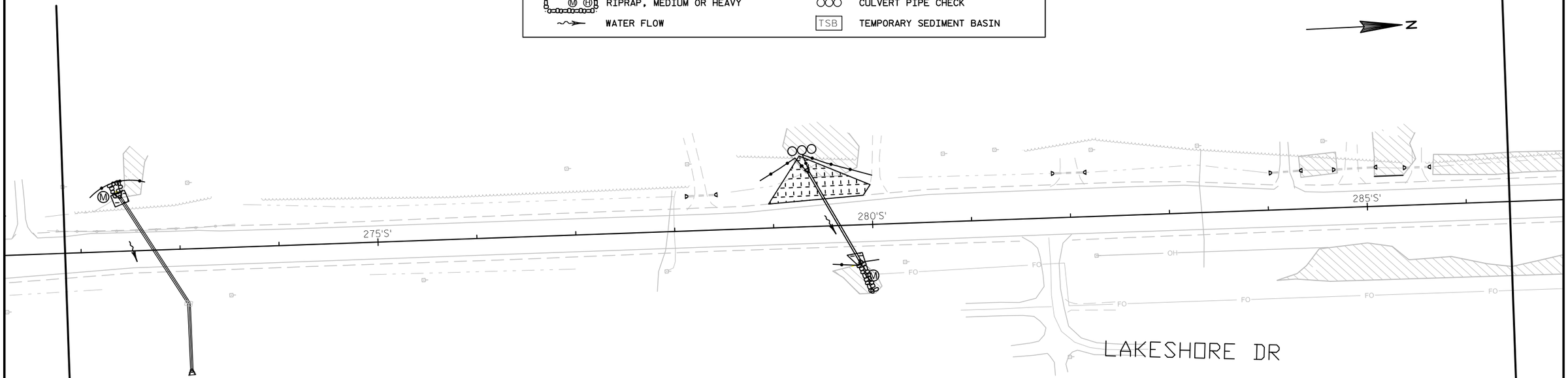
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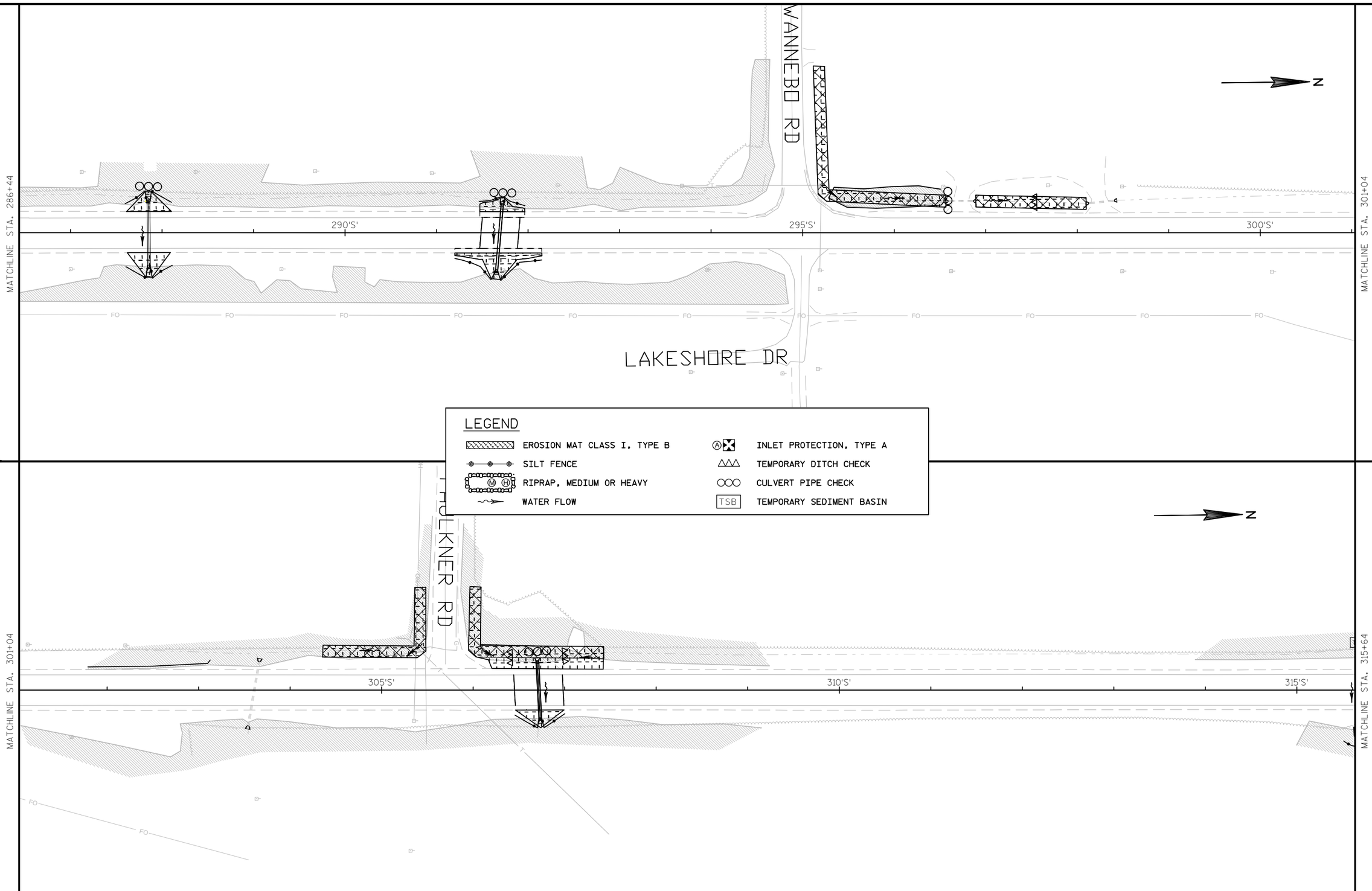
NOTE: DO NOT OPERATE EQUIPMENT EAST OF LAKESHORE DRIVE SHOULDER @ MAINLINE STA 260+00'S' - 262+00'S' RT.

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIPRAP, MEDIUM OR HEAVY
- WATER FLOW
- (A) INLET PROTECTION, TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- TSB TEMPORARY SEDIMENT BASIN



PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 23	E

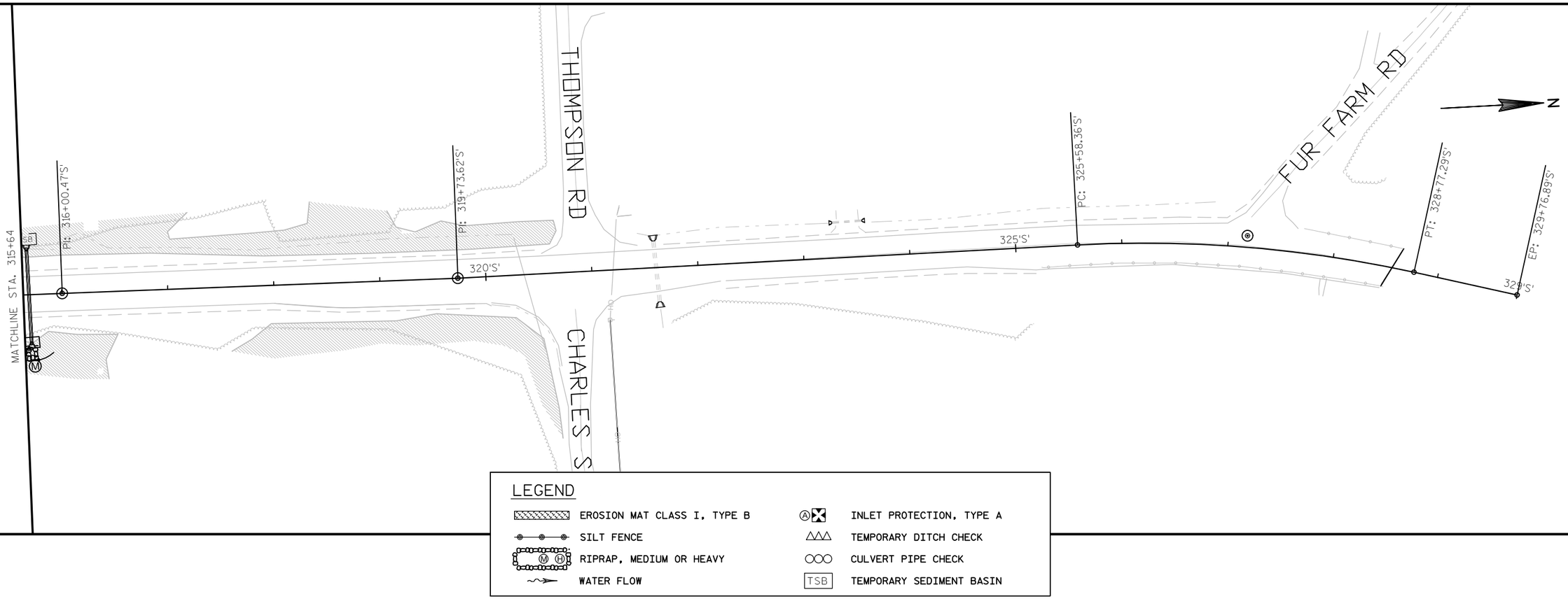


2

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 24	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\022001_EC.DWG PLOT DATE : 10/16/2014 11:45 AM PLOT BY : USER PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 44

2



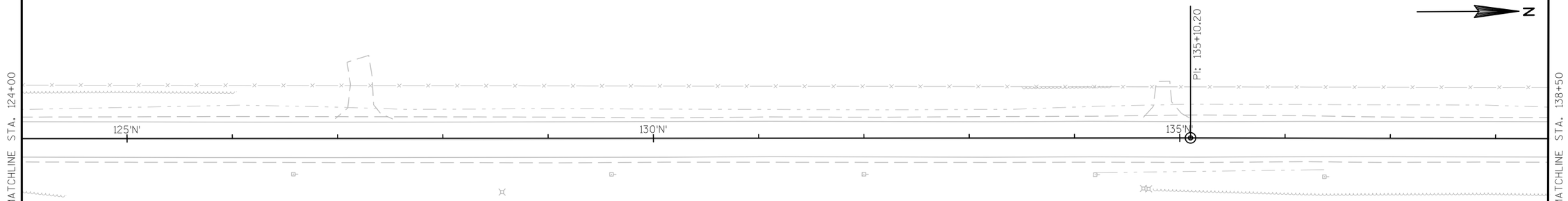
LEGEND

EROSION MAT CLASS I, TYPE B	INLET PROTECTION, TYPE A
SILT FENCE	TEMPORARY DITCH CHECK
RIPRAP, MEDIUM OR HEAVY	CULVERT PIPE CHECK
WATER FLOW	TEMPORARY SEDIMENT BASIN

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 25	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\022001_EC.DWG PLOT DATE : 10/16/2014 11:45 AM PLOT BY : USER PLOT NAME : PLOT SCALE : 1" = 100'_XREF WISDOT/CADDS SHEET 44

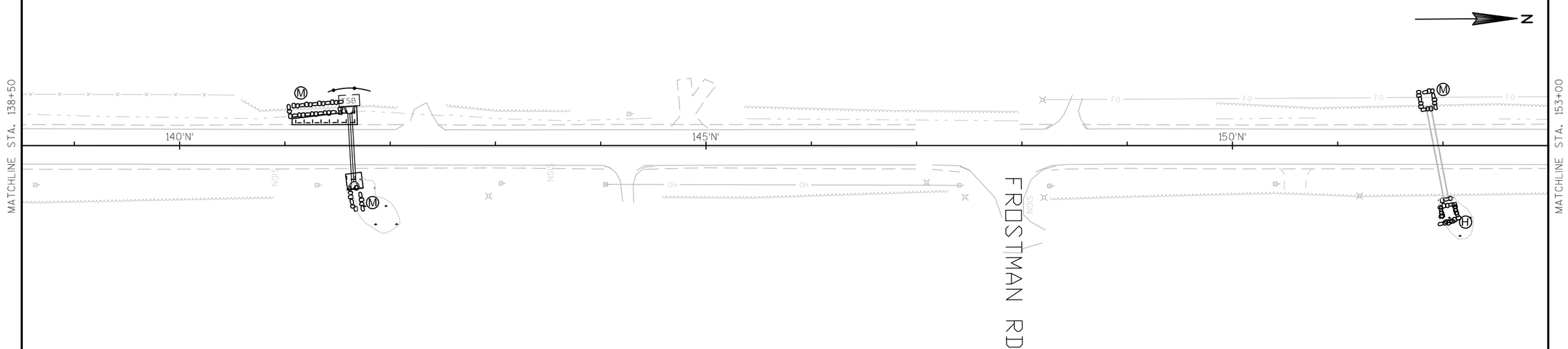
2



2

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIPRAP, MEDIUM OR HEAVY
- WATER FLOW
- INLET PROTECTION, TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- TSB TEMPORARY SEDIMENT BASIN



PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 26	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1229 STH13 SUPERIOR AVE - 7TH ST\C3D\022001_EC_STH_13_BAYFIELD.DWG PLOT DATE : 10/16/2014 11:34 AM PLOT BY : USER PLOT NAME : PLOT SCALE : 1:100_XREF

2

2

MATCHLINE STA. 502+42

505'N'

510'N'

515'N'

MATCHLINE STA. 516+92

BAYVIEW RD

LEGEND

EROSION MAT CLASS I, TYPE B	INLET PROTECTION, TYPE A
SILT FENCE	TEMPORARY DITCH CHECK
RIPRAP, MEDIUM OR HEAVY	CULVERT PIPE CHECK
WATER FLOW	TSB TEMPORARY SEDIMENT BASIN

MATCHLINE STA. 516+92

520'N'

525'N'

530'N'

MATCHLINE STA. 531+42

WEBER RD

SANITARIUM

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	EROSION CONTROL PLAN	SHEET 27	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1229 STH13 SUPERIOR AVE - 7TH ST\C3D\022001_EC_STH_13_BAYFIELD.DWG PLOT DATE : 10/14/2014 3:47 PM PLOT BY : USER PLOT NAME : PLOT SCALE : 1:100_XREF

NOTES:

PLACE SIGNS IN EACH DIRECTION AT THE END OF EACH WORK DAY, AND WHEN CULVERT PIPE REPLACEMENT WORK IS COMPLETE.

'ROAD WORK AHEAD' SIGNS ARE NOT REQUIRED WHEN REPLACEMENT WORK ZONES ARE SPACED LESS THAN 1500 FEET APART.

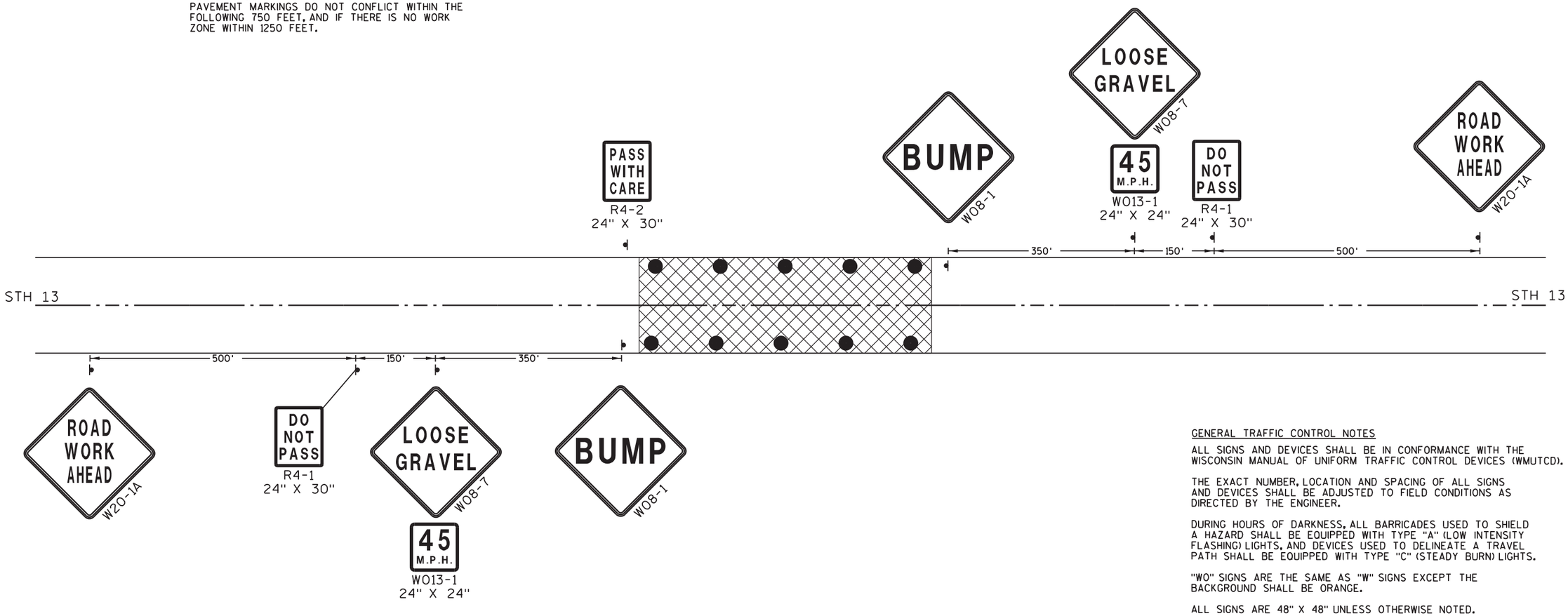
MAINTAIN 'BUMP' AND 'LOOSE GRAVEL' SIGNS UNTIL ASPHALTIC SURFACE PAVEMENT IS COMPLETED.

PLACE DRUMS ON GRAVEL 15 FEET FROM CENTERLINE UNTIL ASPHALTIC SURFACING AND SHOULDERS ARE IN PLACE.

PLACE 'PASS WITH CARE' SIGNS ONLY IF EXISTING PAVEMENT MARKINGS DO NOT CONFLICT WITHIN THE FOLLOWING 750 FEET, AND IF THERE IS NO WORK ZONE WITHIN 1250 FEET.

TRAFFIC CONTROL LEGEND

- CULVERT REPLACEMENT ZONE
- POST MOUNTED SIGN
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DRUM (TYP. 25 FOOT SPACING)



GENERAL TRAFFIC CONTROL NOTES

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD).

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

DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" (LOW INTENSITY FLASHING) LIGHTS, AND DEVICES USED TO DELINEATE A TRAVEL PATH SHALL BE EQUIPPED WITH TYPE "C" (STEADY BURN) LIGHTS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND SHALL BE ORANGE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

PAVEMENT MARKINGS NOT APPROPRIATE TO THE TRAVEL PATH SHALL BE REMOVED IF TRAFFIC CONTROL WILL BE INPLACE FOR MORE THAN 4 DAYS.

ALL TYPE III BARRICADES SHALL HAVE AN EQUIVALENT WIDTH OF 8 FEET. BARRICADES IN A CLOSED LANE 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.

DATE 18FEB15 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	8160-03-61 QUANTITY
0010	201.0105	Clearing	STA	2.000	2.000
0020	201.0205	Grubbing	STA	7.000	7.000
0040	203.0100	Removing Small Pipe Culverts	EACH	9.000	9.000
0100	204.0245	Removing Storm Sewer (size) 01. 30-Inch	LF	38.000	38.000
0110	204.0270	Abandoning Culvert Pipes	EACH	2.000	2.000
0120	204.9060.S	Removing (item description) 01. Apron Endwalls	EACH	15.000	15.000
0130	205.0100	Excavation Common	CY	1,052.000	1,052.000
0150	208.0100	Borrow	CY	65.000	65.000
0160	209.0100	Backfill Granular	CY	729.000	729.000
0180	213.0100	Finishing Roadway (project) 02. 8160-03-61	EACH	1.000	1.000
0190	305.0110	Base Aggregate Dense 3/4-Inch	TON	415.000	415.000
0200	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	745.000	745.000
0220	350.0145	Subbase 12-Inch	SY	1,674.000	1,674.000
0250	465.0105	Asphaltic Surface	TON	458.000	458.000
0310	520.4024	Culvert Pipe Temporary 24-Inch	LF	8.000	8.000
0320	520.7000	Cleaning Culvert Pipes	EACH	9.000	9.000
0330	520.9700.S	Culvert Pipe Liners (size) 01. 24-Inch	LF	366.000	366.000
0340	520.9700.S	Culvert Pipe Liners (size) 02. 30-Inch	LF	298.000	298.000
0350	520.9700.S	Culvert Pipe Liners (size) 03. 36-Inch	LF	336.000	336.000
0360	520.9700.S	Culvert Pipe Liners (size) 04. 48-Inch	LF	66.000	66.000
0370	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	11.000	11.000
0380	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	9.000	9.000
0390	521.1030	Apron Endwalls for Culvert Pipe Steel 30-Inch	EACH	5.000	5.000
0400	521.1036	Apron Endwalls for Culvert Pipe Steel 36-Inch	EACH	5.000	5.000
0410	521.1048	Apron Endwalls for Culvert Pipe Steel 48-Inch	EACH	2.000	2.000
0420	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	240.000	240.000
0430	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	68.000	68.000
0440	522.0136	Culvert Pipe Reinforced Concrete Class III 36-Inch	LF	66.000	66.000
0450	522.0330	Culvert Pipe Reinforced Concrete Class IV 30-Inch	LF	60.000	60.000
0460	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	5.000	5.000
0470	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	4.000	4.000
0480	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	4.000	4.000
0490	524.0124	Culvert Pipe Salvaged 24-Inch	LF	42.000	42.000
0500	524.0136	Culvert Pipe Salvaged 36-Inch	LF	28.000	28.000
0510	524.0624	Apron Endwalls for Culvert Pipe Salvaged 24-Inch	EACH	2.000	2.000
0520	524.0636	Apron Endwalls for Culvert Pipe Salvaged 36-Inch	EACH	1.000	1.000
0540	606.0200	Riprap Medium	CY	142.000	142.000
0550	606.0300	Riprap Heavy	CY	35.000	35.000
0560	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	38.000	38.000
0570	611.0430	Reconstructing Inlets	EACH	3.000	3.000

3

DATE 18FEB15 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	8160-03-61 QUANTITY
0640	618.0100	Maintenance And Repair of Haul Roads (project) 02. 8160-03-61	EACH	1.000	1.000
0650	619.1000	Mobilization	EACH	0.150	0.150
0660	625.0100	Topsoil	SY	218.000	218.000
0670	625.0500	Salvaged Topsoil	SY	3,566.000	3,566.000
0680	628.1104	Erosion Bales	EACH	20.000	20.000
0690	628.1504	Silt Fence	LF	3,365.000	3,365.000
0700	628.1520	Silt Fence Maintenance	LF	3,365.000	3,365.000
0710	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0720	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0730	628.2004	Erosion Mat Class I Type B	SY	4,924.000	4,924.000
0750	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0760	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0770	628.7555	Culvert Pipe Checks	EACH	96.000	96.000
0780	629.0210	Fertilizer Type B	CWT	3.010	3.010
0790	630.0110	Seeding Mixture No. 10	LB	55.500	55.500
0800	630.0200	Seeding Temporary	LB	109.700	109.700
0810	633.5200	Markers Culvert End	EACH	80.000	80.000
0900	643.0200	Traffic Control Surveillance and Maintenance (project) 02. 8160-03-61	DAY	20.000	20.000
0910	643.0300	Traffic Control Drums	DAY	3,440.000	3,440.000
0930	643.0715	Traffic Control Warning Lights Type C	DAY	3,440.000	3,440.000
0940	643.0900	Traffic Control Signs	DAY	1,890.000	1,890.000
0950	645.0111	Geotextile Fabric Type DF Schedule A	SY	80.000	80.000
0960	645.0120	Geotextile Fabric Type HR	SY	493.000	493.000
0970	645.0140	Geotextile Fabric Type SAS	SY	220.000	220.000
1010	649.0200	Temporary Pavement Marking Reflective Paint 4-Inch	LF	1,278.000	1,278.000
1020	650.4500	Construction Staking Subgrade	LF	952.000	952.000
1030	650.5000	Construction Staking Base	LF	952.000	952.000
1050	650.6000	Construction Staking Pipe Culverts	EACH	6.000	6.000
1080	650.9910	Construction Staking Supplemental Control (project) 02. 8160-03-61	LS	1.000	1.000
1090	650.9920	Construction Staking Slope Stakes	LF	623.000	623.000
1100	690.0150	Sawing Asphalt	LF	247.000	247.000
1110	690.0250	Sawing Concrete	LF	200.000	200.000
1140	SPV.0090	Special 01. Regrade Ditch	LF	657.000	657.000

3

CLEARING AND GRUBBING

STATION	-	STATION	LOCATION		201.0105 CLEARING STA	201.0205 GRUBBING STA	DISTANCE FROM CL
71+75	-	72+15	STH 13 'S'	RT	1	1	55'
102+65	-	102+95	STH 13 'S'	RT	*	1	50'
228+40	-	228+55	STH 13 'S'	LT	*	1	50'
261+40	-	261+80	STH 13 'S'	LT	*	1	65'
272+30	-	272+50	STH 13 'S'	LT	*	1	65'
315+60	-	315+75	STH 13 'S'	RT	*	1	50'
141+05	-	141+70	STH 13 'N'	LT	1	1	45'
TOTALS					2	7	

* CLEARING ITEMS PAID FOR UNDER PROJECT 8160-00-70 UNDER ITEM 202.0105

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH
PROJECT LIMITS STH 13 'S'	3	4
TOTALS	3	4

ASPHALTIC SURFACE & ASSOCIATED ITEMS

STATION	-	STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	305.0110** BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	350.0145 SUBBASE 12-INCH SY
44+83	-	45+15	STH 13 'S'	41	10	70	160
48+27	-	49+48	STH 13 'S'	154	37	274	686
66+95	-	67+48	STH 13 'S'	85	17	116	298
214+07	-	214+36	STH 13 'S'	60	12	81	---
291+48	-	291+89	STH 13 'S'	52	13	89	231
306+45	-	306+98	STH 13 'S'	66	17	116	298
TOTALS				458	105	745	1674

**SUB-TOTAL FOR ITEM 305.0110 (SEE ADDITIONAL QUANTITIES)

REMOVING PIPE CULVERTS

STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	204.9060.S.01 REMOVING APRON ENDWALLS EACH
37+27	STH 13 'S'	-	2
44+99	STH 13 'S'	1	-
48+85	STH 13 'S'	1	-
62+26	STH 13 'S'	-	1
67+22	STH 13 'S'	1	-
102+77	STH 13 'S'	-	2
200+20	STH 13 'S'	-	2
214+22	STH 13 'S'	1	-
218+35	STH 13 'S'	-	1
220+00	STH 13 'S'	-	1
228+49	STH 13 'S'	-	2
261+59	STH 13 'S'	-	1
270+85	STH 13 'S'	1	1
279+66	STH 13 'S'	1	-
287+85	STH 13 'S'	1	-
291+69	STH 13 'S'	1	-
306+72	STH 13 'S'	1	-
141+63	STH 13 'N'	-	2
TOTALS		9	15

RECONSTRUCTING INLETS

STATION	LOCATION		611.0430 RECONSTRUCTING INLETS EACH
261+06	STH 13 'S'	RT	1
261+43	STH 13 'S'	RT	1
270+85	STH 13 'S'	RT	1
TOTAL			3

CULVERT PIPE TEMPORARY

STATION	LOCATION		520.4024 CULVERT PIPE TEMPORARY 24-INCH LF
67+22.0	STH 13 'S'	LT	8
TOTAL			8

ABANDONING CULVERT PIPES

STATION	LOCATION	204.0270 ABANDONING CULVERT PIPES EACH
379+62	STH 13 'N'	1
379+73	STH 13 'N'	1
TOTAL		2

BASE AGGREGATE DENSE 3/4-INCH

PIPE CULVERT REPLACEMENT STATION	STATION	-	STATION	LOCATION		305.0110** BASE AGGREGATE DENSE 3/4-INCH TON	COMMENT
44+99	44+46	-	45+60	STH 13 'S'	LT	48	TEMP. WIDENING
	44+40	-	45+53	STH 13 'S'	RT	48	TEMP. WIDENING
67+22	67+00	-	67+92	STH 13 'S'	LT	42	TEMP. WIDENING
	67+00	-	67+92	STH 13 'S'	RT	67	TEMP. WIDENING
214+22	213+67	-	214+77	STH 13 'S'	LT & RT	22	SHLD MAINTENANCE
291+69	291+47	-	291+96	STH 13 'S'	LT	23	TEMP. WIDENING
	291+20	-	292+15	STH 13 'S'	RT	38	TEMP. WIDENING
306+72	306+17	-	307+27	STH 13 'S'	LT & RT	22	SHLD MAINTENANCE
TOTAL						310	

**SUB-TOTAL FOR ITEM 305.0110 (SEE ADDITIONAL QUANTITIES)

BACKFILL GRANULAR

PIPE CULVERT	LOCATION	209.0100 BACKFILL GRANULAR (GRADE 2) CY	PIPE CULVERT DIAMETER INCH	DEPTH FROM CL PROFILE TO TOP OF PIPE CULVERT FT
44+99	STH 13 'S'	43	30	3.6
48+85	STH 13 'S'	356	36	2.3
67+22	STH 13 'S'	28	24	4.2
214+22	STH 13 'S'	35	24	3.2
291+69	STH 13 'S'	31	24	4.2
306+72	STH 13 'S'	236	30	1.5
TOTAL		729		

EROSION BALES

LOCATION	628.1104 EROSION BALES EACH	645.0111 GEOTEXTILE FABRIC TYPE DF SCHEDULE A SY	COMMENT
UNDISTRIBUTED STH 13 'S'	20	80	TEMP. SEDIMENT BASINS
TOTAL	20	80	

			205.0100 EXCAVATION COMMON															208.0100 BORROW
Division	From/To Station	Location	Common Excavation (1)		Salvaged / Unusable Pavement Material (4)	Available Material (5)	Marsh Excavation (6)	Rock Excavation (7)	Reduced Marsh in Fill (8)	Reduced EBS in Fill (9)	Expanded Marsh Backfill (10)	Expanded EBS Backfill (11)	Expanded Rock (12)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Borrow
			Cut (2)	EBS Excavation (3)					Factor 0.60	Factor 0.80	Factor 1.50	Factor 1.30	Factor 1.10		Factor 1.25			
1	7+90'S'-292+15'S'	STH 13 -TEMP. WIDENING LT & RT	79	0	0	79	0	0	0	0	0	0	0	115	144	-65	0	65
	48+27'S'-49+48'S'	EBS AT CULVERT REPLACEMENT	493	0	89	404	0	0	0	0	0	0	0	0	0	404	404	0
Division 1 Subtotal			572	0	89	483	0	0	0	0	0	0	0	115	144	339	404	65
2	7+90'S'-151+93'N'	STH 13 -REMOVE TEMP. WIDENING LT & RT	480	0	0	480	0	0	0	0	0	0	0	0	0	480	480	0
Division 2 Subtotal			480	0	0	480	0	0	0	0	0	0	0	0	0	480	480	0
Grand Total			1052	0	89	963	0	0	0	0	0	0	0	115	144	819	884	65
		Total Com. Exc	1052								0							

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
6) Marsh Excavation - to be backfilled with Select Borrow Material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well. Item number 205.0500
7) Rock Excavation item number 205.0200
8) Reduced Marsh in Fill - Excavated Marsh material is usuable in Fills outside the 1:1 slope. Marsh in Fill Reduction factor = 0.6
9) Reduced EBS in Fill - Excavated EBS material is usuable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
10) Expanded Marsh Backfill - This is to be filled with Select Borrow material. Marsh Backfill Factor = 1.5. Item number 208.11
11) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.3. Item number 208.11
12) Expanded Rock - Factor = 1.1.
13) Expanded Fill. Factor = 1.25
Depending on selections: **Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor**
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor) * Fill Factor
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

CULVERT PIPE LINER AND CLEANING ITEMS

STATION	LOCATION	520.9700.S.01 CULVERT PIPE LINERS 24-INCH LF	520.9700.S.02 CULVERT PIPE LINERS 30-INCH LF	520.9700.S.03 CULVERT PIPE LINERS 36-INCH LF	520.9700.S.04 CULVERT PIPE LINERS 48-INCH LF	520.9750.S CLEANING CULVERT PIPES FOR LINER VERIFICATION EACH	520.7000 CLEANING CULVERT PIPES EACH
37+29	STH 13 'S'	-	-	70	-	1	-
59+65	STH 13 'S'	-	-	-	-	-	1
62+26	STH 13 'S'	80	-	-	-	1	-
71+96	STH 13 'S'	-	-	-	-	-	1
102+77	STH 13 'S'	-	78	-	-	1	-
118+27	STH 13 'S'	-	-	-	-	-	1
127+30	STH 13 'S'	-	-	-	-	-	1
129+92	STH 13 'S'	-	-	-	-	-	1
145+98	STH 13 'S'	-	-	-	-	-	1
218+35	STH 13 'S'	82	-	-	-	1	-
220+00	STH 13 'S'	100	-	-	-	1	-
228+49	STH 13 'S'	-	-	138	-	1	-
261+06	STH 13 'S'	-	-	-	-	-	2
261+59	STH 13 'S'	-	102	-	-	1	-
270+85 #	STH 13 'S'	-	118	-	-	1	-
272+75	STH 13 'S'	-	-	128	-	1	-
279+66	STH 13 'S'	104	-	-	-	1	-
287+88	STH 13 'S'	-	-	-	-	-	1
141+63	STH 13 'N'	-	-	-	66	1	-
TOTALS		366	298	336	66	11	9

CROSS SECTIONS SHOWIN IN PROJECT 8160-00-70

CORRUGATED STEEL PIPE CULVERT ITEMS

STATION	LOCATION	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH EACH	521.1030 APRON ENDWALLS FOR CULVERT PIPE STEEL 30-INCH EACH	521.1036 APRON ENDWALLS FOR CULVERT PIPE STEEL 36-INCH EACH	521.1048 APRON ENDWALLS FOR CULVERT PIPE STEEL 48-INCH EACH
37+27	STH 13 'S'	-	-	2	-
62+26	STH 13 'S'	1	-	-	-
102+77	STH 13 'S'	-	2	-	-
200+20	STH 13 'S'	2	-	-	-
218+35	STH 13 'S'	2	-	-	-
220+00	STH 13 'S'	2	-	-	-
228+49	STH 13 'S'	-	-	2	-
261+59	STH 13 'S'	-	1	-	-
270+85 #	STH 13 'S'	-	1	-	-
272+75	STH 13 'S'	-	-	1	-
279+66	STH 13 'S'	2	-	-	-
315+73	STH 13 'S'	-	1	-	-
141+63	STH 13 'N'	-	-	-	2
TOTALS		9	5	5	2

*MINIMUM THICKNESS = STEEL = 0.064", ALUMINUM = 0.075"
**MINIMUM THICKNESS = STEEL = 0.079", ALUMINUM = 0.075"
CROSS SECTIONS SHOWN IN PROJECT 8160-00-70

REINFORCED CONCRETE PIPE CULVERT ITEMS

STATION	LOCATION	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	522.0330 CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH EACH
44+99	STH 13 'S'	-	68	-	-	-	2	-
48+85	STH 13 'S'	-	-	62	-	-	-	2
67+22	STH 13 'S'	88	-	-	-	1	-	-
214+22	STH 13 'S'	84	-	-	-	2	-	-
287+85	STH 13 'S'	-	-	4	-	-	-	2
291+69	STH 13 'S'	68	-	-	-	2	-	-
306+72	STH 13 'S'	-	-	-	60	-	2	-
TOTALS		240	68	66	60	5	4	4

STORM SEWER PIPE

STATION	LOCATION	STRUCT. #	INVERT ELEV.	INVERT ELEV.	TO STRUCT. #	SLOPE %	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	204.0245 REMOVING STORM SEWER (30-INCH) LF
261+06	STH 13 'S' 53 RT	40	619.50	620.10	39	1.60	38	38
						TOTAL	38	38

RIPRAP ITEMS

STATION	-	STATION	LOCATION		606.0200 RIPRAP MEDIUM CY	606.0300 RIPRAP HEAVY CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
91+70	-	-	STH 13 'S'	60' RT	14	-	40
102+77	-	-	STH 13 'S'	45' RT	6	-	18
130+10	-	-	STH 13 'S'	46' LT	22	-	57
158+10	-	-	STH 13 'S'	50' RT	6	-	18
168+33	-	-	STH 13 'S'	56' RT	6	-	18
214+20	-	-	STH 13 'S'	49' RT	3	-	12
218+61	-	-	STH 13 'S'	55' RT	8	-	25
228+45	-	-	STH 13 'S'	96' RT	-	15	36
228+50	-	-	STH 13 'S'	50' LT	6	-	18
272+40	-	-	STH 13 'S'	64' LT	6	-	18
279+87	-	-	STH 13 'S'	40' RT	9	-	29
315+70	-	-	STH 13 'S'	52' RT	4	-	15
141+04	-	141+53	STH 13 'S'	35' LT	21	-	60
141+67	-	-	STH 13 'S'	55' RT	8	-	25
151+83	-	-	STH 13 'N'	46' LT	10	-	29
152+05	-	-	STH 13 'N'	65' RT	-	20	40
504+15	-	-	STH 13 'N'	70' RT	13	-	35
TOTALS					142	35	493

LANDSCAPING ITEMS

STATION		STATION	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	628.2004 EROSION MAT CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0110 SEEDING MIXTURE NO. 10 LB	630.0200 SEEDING TEMPORARY LB	COMMENTS
17+05	-	17+25	STH 13 'S' LT	-	26	26	0.02	0.4	0.7	
17+05	-	17+25	STH 13 'S' RT	-	26	26	0.02	0.4	0.7	
37+20	-	37+35	STH 13 'S' RT	-	20	20	0.01	0.3	0.5	
37+20	-	37+35	STH 13 'S' LT	-	20	20	0.01	0.3	0.5	
44+40	-	45+55	STH 13 'S' RT	-	185	185	0.12	2.5	5.0	
44+45	-	45+60	STH 13 'S' LT	-	185	185	0.12	2.5	5.0	
48+75	-	49+00	STH 13 'S' RT	-	20	20	0.01	0.3	0.5	
48+75	-	48+95	STH 13 'S' LT	-	40	40	0.03	0.5	1.1	
62+20	-	62+35	STH 13 'S' RT	-	20	20	0.01	0.3	0.5	
62+20	-	62+35	STH 13 'S' LT	-	20	20	0.01	0.3	0.5	
66+40	-	68+05	STH 13 'S' RT	-	235	235	0.15	3.2	6.3	
67+00	-	67+95	STH 13 'S' LT	-	85	85	0.05	1.1	2.3	
85+00	-	85+80	STH 13 'S' RT	-	155	155	0.10	2.1	4.2	
102+65	-	102+85	STH 13 'S' RT	-	22	22	0.01	0.3	0.6	
102+75	-	102+95	STH 13 'S' LT	-	22	22	0.01	0.3	0.6	
118+20	-	118+70	STH 13 'S' RT	-	45	45	0.03	0.6	1.2	
145+87	-	145+95	STH 13 'S' RT	-	-	25	-	-	-	REGRADE DITCH
157+65	-	158+30	STH 13 'S' RT	-	65	65	0.04	0.9	1.8	
168+10	-	168+30	STH 13 'S' LT	-	52	52	0.03	0.7	1.4	
199+85	-	200+05	STH 13 'S' LT	-	25	25	0.02	0.3	0.7	
200+10	-	200+30	STH 13 'S' RT	-	25	25	0.02	0.3	0.7	
213+95	-	214+25	STH 13 'S' RT	-	45	45	0.03	0.6	1.2	
214+15	-	214+45	STH 13 'S' LT	-	55	55	0.03	0.7	1.5	
218+18	-	218+36	STH 13 'S' LT	-	25	25	0.02	0.3	0.7	
218+46	-	218+65	STH 13 'S' RT	-	25	25	0.02	0.3	0.7	
219+85	-	219+95	STH 13 'S' RT	-	5	5	0.01	0.1	0.1	
219+90	-	220+25	STH 13 'S' LT	102	-	102	0.06	1.4	2.8	SLOPE REPAIR
228+40	-	228+55	STH 13 'S' LT	-	25	25	0.02	0.3	0.7	
228+40	-	228+55	STH 13 'S' RT	-	25	25	0.02	0.3	0.7	
261+00	-	261+50	STH 13 'S' RT	-	260	260	0.16	3.5	7.0	
270+40	-	271+00	STH 13 'S' RT	-	120	120	0.08	1.6	3.2	
272+30	-	272+50	STH 13 'S' LT	-	22	22	0.01	0.3	0.6	
278+95	-	280+00	STH 13 'S' LT	-	295	295	0.19	4.0	8.0	
279+75	-	279+90	STH 13 'S' RT	-	20	20	0.01	0.3	0.5	
287+60	-	288+10	STH 13 'S' RT	-	80	80	0.05	1.1	2.2	
287+60	-	288+10	STH 13 'S' LT	-	67	67	0.04	0.9	1.8	
291+20	-	292+15	STH 13 'S' RT	-	120	120	0.08	1.6	3.2	
291+45	-	291+95	STH 13 'S' LT	-	52	52	0.03	0.7	1.4	
295+10	-	296+55	STH 13 'S' LT	-	-	380	-	-	-	REGRADE DITCH
296+90	-	298+10	STH 13 'S' LT	-	-	174	-	-	-	REGRADE DITCH
304+35	-	305+50	STH 13 'S' LT	-	-	246	-	-	-	REGRADE DITCH
305+95	-	306+20	STH 13 'S' LT	-	-	132	-	-	-	REGRADE DITCH
306+20	-	307+40	STH 13 'S' LT	-	335	335	0.21	4.5	9.0	
306+45	-	307+00	STH 13 'S' RT	-	57	57	0.04	0.8	1.5	
315+60	-	315+75	STH 13 'S' RT	-	20	20	0.01	0.3	0.5	
141+05	-	141+70	STH 13 'N' LT	72	-	72	0.05	1.0	1.9	
141+55	-	141+75	STH 13 'N' RT	-	25	25	0.02	0.3	0.7	
UNDISTRIBUTED				44	594	821	1	13	25	
TOTALS				218	3566	4924	3.01	55.5	109.7	

SILT FENCE ITEMS

STATION		STATION	LOCATION	628.1504 SILT FENCE LF	628.1905 SILT FENCE MAINTENANCE LF
17+00	-	17+25	LT STH 13 'S'	25	25
17+00	-	17+25	RT STH 13 'S'	25	25
37+05	-	37+45	LT STH 13 'S'	40	40
37+05	-	37+45	RT STH 13 'S'	40	40
44+40	-	45+55	RT STH 13 'S'	125	125
44+45	-	45+90	LT STH 13 'S'	125	125
48+70	-	48+90	LT STH 13 'S'	30	30
48+80	-	49+00	RT STH 13 'S'	30	30
59+30	-	59+70	LT STH 13 'S'	40	40
59+60	-	60+00	RT STH 13 'S'	40	40
61+85	-	62+60	LT STH 13 'S'	75	75
61+85	-	62+60	RT STH 13 'S'	75	75
66+40	-	68+05	RT STH 13 'S'	185	185
67+00	-	68+95	LT STH 13 'S'	120	120
71+70	-	72+15	LT STH 13 'S'	45	45
71+70	-	72+15	RT STH 13 'S'	45	45
85+05	-	85+90	RT STH 13 'S'	90	90
102+65	-	102+85	RT STH 13 'S'	25	25
102+75	-	102+95	LT STH 13 'S'	25	25
118+15	-	118+85	RT STH 13 'S'	70	70
127+10	-	127+65	LT STH 13 'S'	60	60
127+10	-	127+65	RT STH 13 'S'	60	60
129+50	-	130+05	RT STH 13 'S'	60	60
145+60	-	146+20	LT STH 13 'S'	60	60
145+70	-	146+10	RT STH 13 'S'	60	60
157+65	-	158+35	RT STH 13 'S'	85	85
168+00	-	168+40	LT STH 13 'S'	40	40
199+75	-	200+15	LT STH 13 'S'	40	40
200+00	-	200+40	RT STH 13 'S'	40	40
213+80	-	214+20	RT STH 13 'S'	40	40
214+15	-	214+55	LT STH 13 'S'	40	40
218+00	-	218+55	LT STH 13 'S'	60	60
218+45	-	218+70	RT STH 13 'S'	30	30
219+60	-	220+00	RT STH 13 'S'	40	40
219+90	-	220+40	LT STH 13 'S'	60	60
228+20	-	228+65	RT STH 13 'S'	40	40
228+25	-	228+70	LT STH 13 'S'	40	40
260+70	-	261+10	RT STH 13 'S'	50	50
261+35	-	261+80	LT STH 13 'S'	50	50
270+25	-	270+95	RT STH 13 'S'	70	70
270+80	-	271+25	LT STH 13 'S'	55	55
272+10	-	272+65	LT STH 13 'S'	60	60
278+90	-	280+00	LT STH 13 'S'	120	120
279+60	-	280+05	RT STH 13 'S'	45	45
287+60	-	288+10	RT STH 13 'S'	75	75
287+60	-	288+10	LT STH 13 'S'	75	75
291+20	-	292+15	RT STH 13 'S'	125	125
291+45	-	291+95	LT STH 13 'S'	70	70
306+45	-	307+00	RT STH 13 'S'	55	55
315+50	-	315+90	RT STH 13 'S'	40	40
141+40	-	141+80	LT STH 13 'N'	40	40
UNDISTRIBUTED				305	305
TOTALS				3365	3365

INLET PROTECTION

STATION	LOCATION	628.7005 INLET PROTECTION TYPE A EACH
270+93	STH 13 'S'	1
261+06	STH 13 'S'	1
261+43	STH 13 'S'	1
TOTALS		3

GEOTEXTILE FABRIC TYPE SAS

STATION		STATION	LOCATION	645.0140 GEOTEXTILE FABRIC TYPE SAS SY
44+32	-	45+45	STH 13 'S' LT	81
44+32	-	45+45	STH 13 'S' RT	45
66+74	-	66+95	STH 13 'S' RT	9
279+28	-	280+05	STH 13 'S' RT	49
291+50	-	292+00	STH 13 'S' LT	30
291+70	-	291+80	STH 13 'S' RT	6
TOTALS				220

DITCH AND PIPE CHECK ITEMS

STATION	LOCATION	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH
17+16	STH 13 'S' LT	-	5
44+99	STH 13 'S' LT	-	6
48+85	STH 13 'S' LT	-	7
66+45	STH 13 'S' RT	10	-
67+22	STH 13 'S' LT	-	5
214+22	STH 13 'S' LT	-	5
218+35	STH 13 'S' LT	-	5
220+00	STH 13 'S' LT	-	5
228+49	STH 13 'S' LT	-	7
270+93	STH 13 'S' LT	-	6
279+66	STH 13 'S' LT	-	5
287+85	STH 13 'S' LT	-	7
291+69	STH 13 'S' LT	-	5
296+55	STH 13 'S' LT	-	3
297+55	STH 13 'S' LT	10	-
306+40	STH 13 'S' LT	10	-
306+72	STH 13 'S' LT	-	6
306+97	STH 13 'S' LT	10	-
UNDISTRIBUTED		10	19
TOTALS		50	96

CULVERT END MARKER ITEM

STATION	DESCRIPTION	633.5200 MARKERS CULVERT END EACH
37+27	STH 13 'S'	2
44+99	STH 13 'S'	2
48+85	STH 13 'S'	2
59+65	STH 13 'S'	2
62+26	STH 13 'S'	2
67+22	STH 13 'S'	2
71+96	STH 13 'S'	2
75+65	STH 13 'S'	2
85+31	STH 13 'S'	2
91+70	STH 13 'S'	2
102+77	STH 13 'S'	2
118+27	STH 13 'S'	2
127+30	STH 13 'S'	2
129+92	STH 13 'S'	2
145+98	STH 13 'S'	2
157+90	STH 13 'S'	2
168+30	STH 13 'S'	2
173+80	STH 13 'S'	2
194+95	STH 13 'S'	2
200+20	STH 13 'S'	2
214+22	STH 13 'S'	2
218+35	STH 13 'S'	2
220+00	STH 13 'S'	2
228+49	STH 13 'S'	2
247+82	STH 13 'S'	2
255+58	STH 13 'S'	2
261+59	STH 13 'S'	2
270+93	STH 13 'S'	2
272+75	STH 13 'S'	2
273+06	STH 13 'S'	2
279+66	STH 13 'S'	2
287+85	STH 13 'S'	2
291+69	STH 13 'S'	2
303+63	STH 13 'S'	2
306+72	STH 13 'S'	2
315+73	STH 13 'S'	2
321+73	STH 13 'S'	2
141+63	STH 13 'N'	2
151+93	STH 13 'N'	2
504+25	STH 13 'N'	2
TOTAL		80

TEMPORARY PAVEMENT MARKINGS

STATION	-	STATION		649.0200 TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH WHITE LF	YELLOW LF	COMMENT
44+73	-	45+25	'S'	104	65	Solid Yellow Nbound/Skips Sbound
48+28	-	49+48	'S'	242	131	Solid Yellow Nbound/Skips Sbound
66+85	-	67+58	'S'	146	91	Solid Yellow Nbound/Skips Sbound
213+97	-	214+46	'S'	98	98	DBL Yellow
291+38	-	291+99	'S'	122	16	Yellow Skips
306+35	-	307+08	'S'	146	19	Yellow Skips
SUB-TOTALS				858	420	
TOTAL				1278		

SAWING ITEMS

STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
44+83	STH 13 'S'	14	20
45+15	STH 13 'S'	14	20
48+27	STH 13 'S'	14	20
49+48	STH 13 'S'	14	20
66+95	STH 13 'S'	23	20
67+48	STH 13 'S'	23	20
214+07	STH 13 'S'	45	-
214+36	STH 13 'S'	44	-
291+48	STH 13 'S'	14	20
291+89	STH 13 'S'	14	20
306+45	STH 13 'S'	14	20
306+98	STH 13 'S'	14	20
TOTALS		247	200

REGRADE DITCH

STATION	-	STATION	LOCATION		SPV.0090.01 REGRADE DITCH LF
145+98	-	-	STH 13 'S'	RT	10
295+11	-	296+56	STH 13 'S'	LT	268
296+89	-	298+10	STH 13 'S'	LT	120
304+36	-	305+48	STH 13 'S'	LT	172
305+94	-	307+43	STH 13 'S'	LT	87
TOTAL					657

CONSTRUCTION STAKING ROADWAY ITEMS

STATION	-	STATION	LOCATION		650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	COMMENT
44+46	-	45+53	STH 13 'S'	LT	107	107	107	TEMPORARY WIDENING
67+00	-	67+92	STH 13 'S'	LT	92	92	92	TEMPORARY WIDENING
291+47	-	291+96	STH 13 'S'	LT	49	49	49	TEMPORARY WIDENING
44+40	-	45+53	STH 13 'S'	RT	113	113	113	TEMPORARY WIDENING
66+40	-	68+07	STH 13 'S'	RT	167	167	167	TEMPORARY WIDENING
291+20	-	292+15	STH 13 'S'	RT	95	95	95	TEMPORARY WIDENING
44+83	-	45+15	STH 13 'S'	-	32	32	-	PIPE CULVERT REPLACEMENT
48+27	-	49+48	STH 13 'S'		121	121	-	EBS AND CULVERT REPLACEMENT
66+95	-	67+48	STH 13 'S'	-	53	53	-	PIPE CULVERT REPLACEMENT
214+07	-	214+36	STH 13 'S'	-	29	29	-	PIPE CULVERT REPLACEMENT
291+48	-	291+89	STH 13 'S'	-	41	41	-	PIPE CULVERT REPLACEMENT
306+45	-	306+98	STH 13 'S'	-	53	53	-	PIPE CULVERT REPLACEMENT
TOTALS					952	952	623	

SALVAGE PIPE ITEMS

STATION	LOCATION	524.0124 CULVERT PIPE SALVAGED 24-INCH LF	524.0136 CULVERT PIPE SALVAGED 36-INCH LF	524.0624 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 24-INCH EACH	524.0636 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 36-INCH EACH
17+16	STH 13 'S' LT	6	-	-	-
85+31	STH 13 'S' RT	28	-	1	-
118+27	STH 13 'S' RT	8	-	1	-
157+90	STH 13 'S' RT	-	16	-	-
168+30	STH 13 'S' LT	-	-	-	1
287+85	STH 13 'S' RT	-	12	-	-
TOTALS		42	28	2	1

TRAFFIC CONTROL DEVICES (FOR PIPE REPLACEMENTS)

STATION	-	STATION	LOCATION		DRUMS (AVE. # DAYS)	643.0300 TRAFFIC CONTROL DRUMS (COUNT)	DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	SIGNS (AVE. # DAYS)	643.0900 TRAFFIC CONTROL SIGNS (COUNT)	DAY
43+95	-	46+01	STH 13 'S'	RT & LT	30	24	720	720	30	9	270
47+82	-	49+92	STH 13 'S'	RT & LT	30	16	320	320	30	9	270
65+73	-	68+38	STH 13 'S'	RT & LT	30	24	720	720	30	9	270
213+15	-	215+25	STH 13 'S'	RT & LT	30	16	480	480	30	9	270
290+64	-	292+74	STH 13 'S'	RT & LT	30	24	720	720	30	9	270
305+67	-	307+77	STH 13 'S'	RT & LT	30	16	480	480	30	9	270
UNDISTRIBUTED					30	10	840	840	30	9	270
TOTALS							3440	3440			1890

CONSTRUCTION STAKING PIPE CULVERT

STATION	LOCATION	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH
44+99	STH 13 'S'	1
48+85	STH 13 'S'	1
67+22	STH 13 'S'	1
214+22	STH 13 'S'	1
291+69	STH 13 'S'	1
306+72	STH 13 'S'	1
TOTAL		6

TRAFFIC CONTROL

	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE DAY
PROJECT	20
TOTAL	20

TRANSPORTATION PROJECT PLAT NO: 8160-03-20-4.01 AMENDMENT NO: 1

AMENDS PARCEL 1 OF TPP 8160-03-20-4.01, RECORDED AS DOCUMENT 2014R-556115.
THAT PART OF LOT 11, PLAT OF MISSION SPRINGS, AND GOV'T LOT 1, ALL IN SECTION 26, T 48 N, R 5 W, TOWN OF BARKSDALE, BAYFIELD COUNTY, WISCONSIN.

RELOCATION ORDER STH 13 ASHLAND - BAYFIELD (USH 2 TO 7TH STREET) BAYFIELD COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02(3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			PLE (S.F.) REQUIRED
			NEW	EXISTING	TOTAL	
1	UNITED STATES OF AMERICA	PLE	0.00	0.00	0.00	(1100)
2	M.J. MLYNAREK & M.D. SORENSEN	PLE	0.00	0.00	0.00	(2000)
3	GREG M. LEDIN	PLE	0.00	0.00	0.00	(1500)

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BAYFIELD COUNTY, NAD83 (1991) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES. GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (3/4" O.D. X 24" IRON PIPE WITH CAP) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY AND ACCESS CONTROL SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: RIGHT-OF-WAY FOR STH 13 ESTABLISHED FROM PREVIOUS RW PLAT 8161-00-21 AND RW PLAT 8161-02-21. ACCESS CONTROL FOR STH 13 ESTABLISHED FROM PREVIOUS RW PLAT 8161-00-21.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

DIMENSIONING FOR EXISTING RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO A NEW REFERENCE LINE.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGIONAL OFFICE.

CONVENTIONAL ABBREVIATIONS

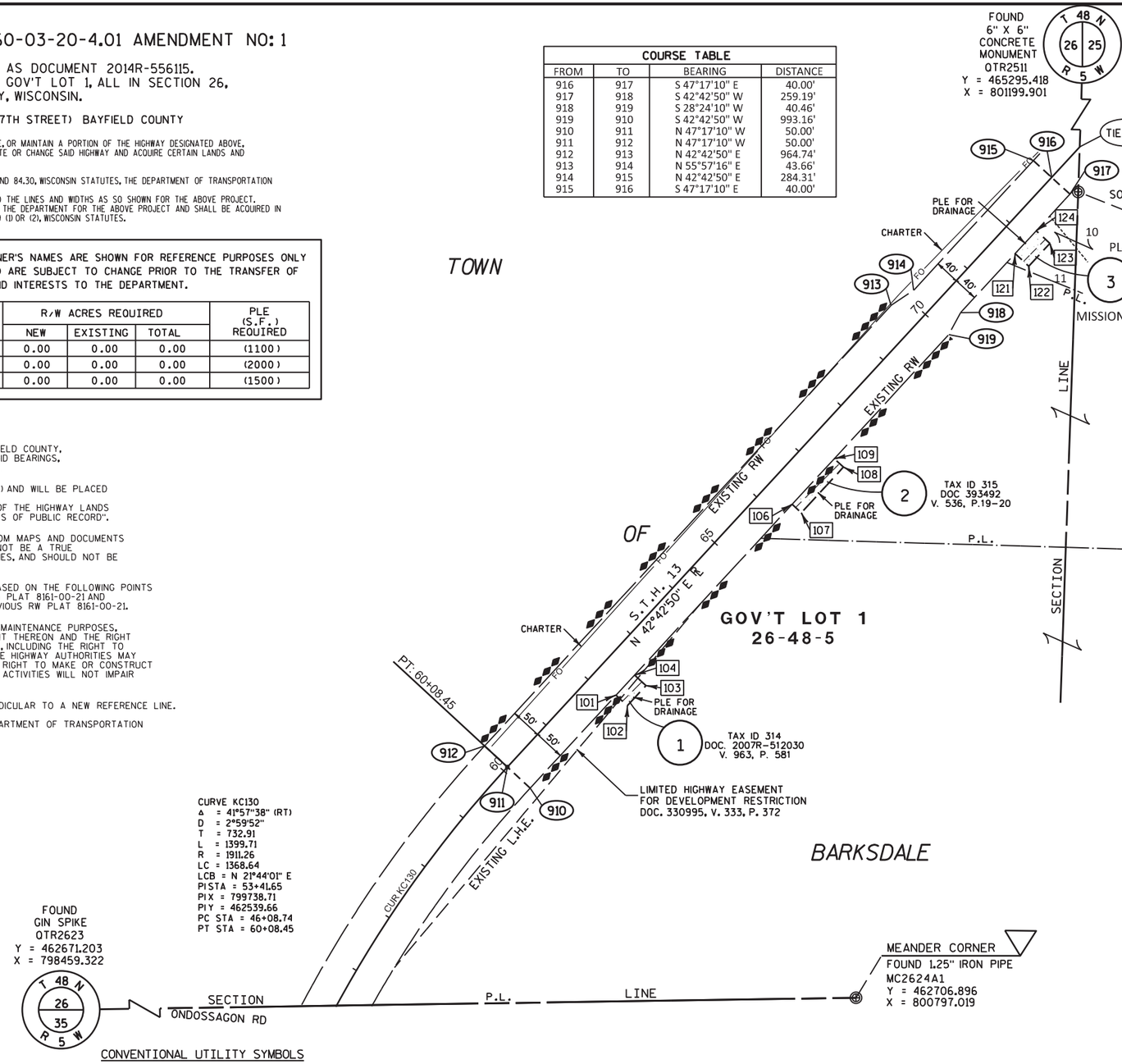
ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.		
HIGHWAY EASEMENT	H.E.		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		
PROPERTY LINE	PL		
RECORDED AS	(100')		

CURVE DATA

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

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	⌀ (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	•(SET)	PROPERTY LINE	
R/W STANDARD	▲(SET)	LOT & TIE LINES	
SIGN	ISIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT		CORPORATE LIMITS	
SECTION CORNER SYMBOL		RESTRICTED ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		RESTRICTED ACCESS (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY INTEREST	(40)	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	



ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN BAYFIELD COUNTY, WISCONSIN AT 8:00 AM ON FEBRUARY 03, 2015 AS DOCUMENT # 2015R-557615 AND FILED IN VOL. 1 of TPP PAGE 20.

PATRICIA A. OLSON
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8160-03-20-4.01
AMENDMENT NO:1

POINT TABLE - STATION OFFSET & COORDS.

POINT#	STATION	OFFSET	Y (N)	X (E)
STH 13				
911	60+08.45	0.00'	463078.17	800235.87
910	60+08.45	50.00'	463044.25	800272.60
912	60+08.45	-50.00'	463112.08	800199.13
101	62+12.00	50.00'	463193.81	800410.68
102	62+12.00	75.00'	463176.85	800429.05
103	62+56.00	75.00'	463209.18	800458.90
104	62+56.00	50.00'	463226.14	800440.53
106	66+30.00	50.00'	463500.93	800694.23
107	66+30.00	70.00'	463487.37	800708.92
108	67+30.00	70.00'	463560.84	800776.75
109	67+30.00	50.00'	463574.41	800762.06
913	69+73.19	-50.00'	463820.92	800853.55
919	70+01.61	50.00'	463773.97	800946.30
914	70+15.69	-40.00'	463845.37	800889.73
918	70+40.81	40.00'	463809.56	800965.55
121	71+70.00	40.00'	463904.48	801053.18
122	71+70.00	70.00'	463884.13	801075.22
123	72+20.00	70.00'	463920.87	801109.14
124	72+20.00	40.00'	463941.22	801087.10
915	73+00.00	-40.00'	464054.27	801082.59
916	73+00.00	0.00'	464027.13	801111.98
917	73+00.00	40.00'	464000.00	801141.37
SIX2516	73+11.80	47.33'	464003.70	801154.76
TIE2515	73+66.80	0.00'	464076.21	801157.29

CONVENTIONAL UTILITY SYMBOLS

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

UTILITY EASEMENT INFORMATION

PARCEL 1	NO UTILITY INFORMATION FOUND
PARCEL 2	NO UTILITY INFORMATION FOUND
PARCEL 3	NO UTILITY INFORMATION FOUND

PLSS TIE TABLE

FROM	TO	BEARING	DISTANCE
QTR2511	SIX2516	S 02°00'06" W	1292.50'
SIX2516	TIE2515	N 02°00'06" E	72.56'
TIE2515	916	S 42°42'50" W	66.80'

SCALE, FEET
0 100 200

N.W.B.E.
NORTHERN WISCONSIN BASED ENGINEERS, INC.

I, ROY E. WILLIAMS, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WISCONSIN DEPT. OF TRANSPORTATION, I HAVE SURVEYED TRANSPORTATION PROJECT PLAT 8160-03-20-4.01 AMENDMENT NO. 1 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

DATE JANUARY 15, 2015

Roy E. Williams

ROY E. WILLIAMS REGISTRATION NO. S1354

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

DATE JANUARY 20, 2015

Michael Piller
MICHAEL PILLER

WISCONSIN ROY E. WILLIAMS S-1354 SOUTH RANGE WI LAND SURVEYOR

TRANSPORTATION PROJECT PLAT NO: 8160-03-20-4.02

PART OF THE SW1/4 - NW1/4 OF SECTION 25, T 48 N, R 5 W, TOWN OF BARKSDALE, BAYFIELD COUNTY, WISCONSIN.

RELOCATION ORDER STH 13 ASHLAND - BAYFIELD (USH 2 TO 7TH STREET) BAYFIELD COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02(3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BAYFIELD COUNTY, NAD83 (1991) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (3/4" O.D. X 24" IRON PIPE WITH CAP) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY AND ACCESS CONTROL SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: RIGHT-OF-WAY FOR STH 13 ESTABLISHED FROM PREVIOUS RW PLAT 8161-00-21 AND RW PLAT 8161-02-21. ACCESS CONTROL FOR STH 13 ESTABLISHED FROM PREVIOUS RW PLAT 8161-00-21.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

DIMENSIONING FOR EXISTING RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO A NEW REFERENCE LINE.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGIONAL OFFICE.

UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	OWNERS	INTEREST REQUIRED
30	CENTURYLINK	RELEASE OF RIGHTS

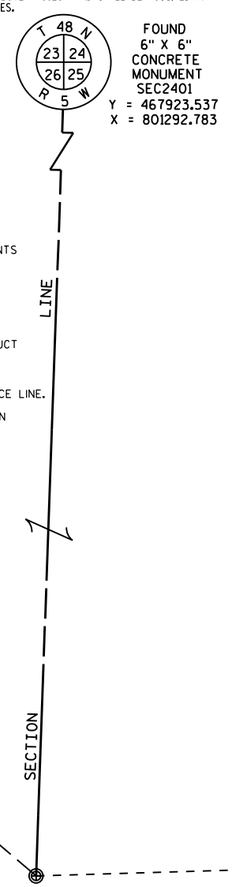
UTILITY EASEMENT INFORMATION		
PARCEL 4	WISCONSIN TELEPHONE CO. DBA CENTURYLINK	120225/V.124, P.480

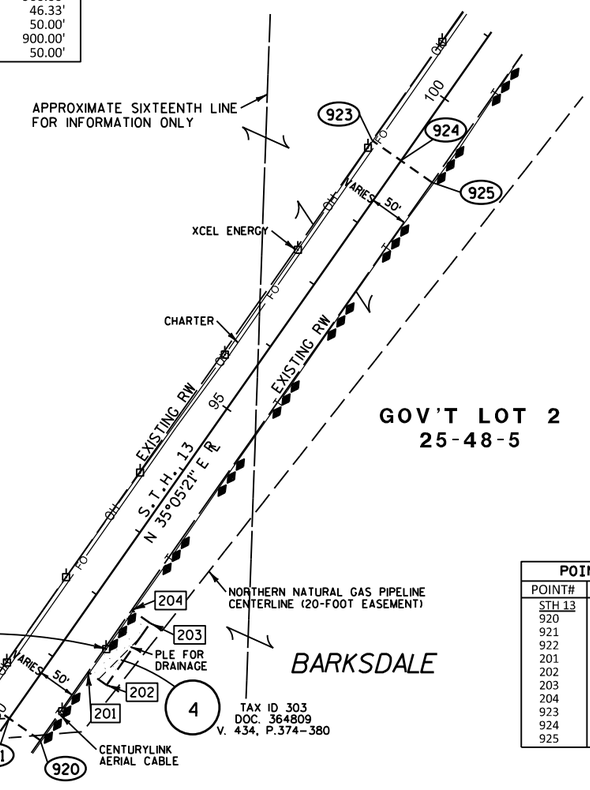
SCHEDULE OF LANDS & INTERESTS REQUIRED

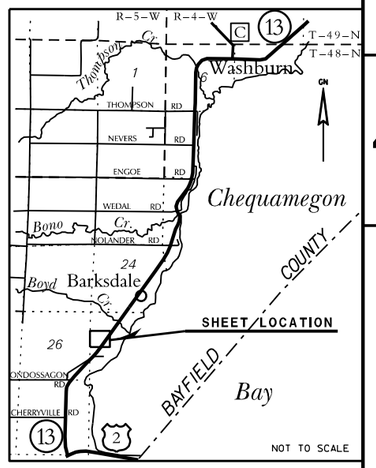
OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			PLE (S.F.) REQUIRED
			NEW	EXISTING	TOTAL	
4	BRETTING DEVELOPMENT CORP.,INC.	PLE	0.00	0.00	0.00	(3000)

COURSE TABLE			
FROM	TO	BEARING	DISTANCE
921	922	N 54°54'39" W	45.61'
922	923	N 35°02'36" E	900.00'
923	924	S 54°54'39" E	46.33'
924	925	S 54°54'39" E	50.00'
925	920	S 35°05'21" W	900.00'
920	921	N 54°54'39" W	50.00'







POINT TABLE - STATION OFFSET & COORDS.				
POINT#	STATION	OFFSET	Y (N)	X (E)
STH 13				
920	90+00.00	50.00'	465296.05	802247.05
921	90+00.00	0.00'	465324.80	802206.13
922	90+00.00	-45.61'	465351.01	802168.81
201	91+10.00	50.00'	465386.06	802310.28
202	91+10.00	80.00'	465368.82	802334.83
203	92+10.00	80.00'	465450.64	802392.31
204	92+10.00	50.00'	465467.89	802367.77
923	99+00.00	-46.33'	466087.86	802685.59
924	99+00.00	0.00'	466061.23	802723.50
925	99+00.00	50.00'	466032.49	802764.41

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LE (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	•(SET)	PROPERTY LINE	
R/W STANDARD	▲(SET)	LOT & TIE LINES	
SIGN	SIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT		CORPORATE LIMITS	
SECTION CORNER SYMBOL		RESTRICTED ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		RESTRICTED ACCESS (BY ACQUISTION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY INTEREST	40	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	**CURVE DATA**	
HIGHWAY EASEMENT	H.E.	LONG CHORD	LCH
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	RADIUS	R
PAGE	P.	DEGREE OF CURVE	D
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA
PROPERTY LINE	PL	LENGTH OF CURVE	L
RECORDED AS	(100')	TANGENT	TAN

CONVENTIONAL UTILITY SYMBOLS

	NON COMPENSABLE	COMPENSABLE
WATER	W	
GAS	G	
TELEPHONE	T	
OVERHEAD	OH	
TRANSMISSION LINES		
ELECTRIC	E	
CABLE TELEVISION	TV	
FIBER OPTIC	FO	
SANITARY SEWER	SAN	
STORM SEWER	SS	
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER		

PLSS TIE TABLE			
FROM	TO	BEARING	DISTANCE
SEC2401	QTR2511	S 02°01'27" W	2629.76'
QTR2511	921	N 88°19'40" E	1006.66'

SCALE, FEET
0 100 200

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN BAYFIELD COUNTY, WISCONSIN AT 8:00 AM ON SEPTEMBER 30, 2014 AS DOCUMENT # 2014R-556116 AND FILED IN VOL. 1 of TPP PAGE 13

PATRICIA A. OLSON
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8160-03-20-4.02
AMENDMENT NO:

N.W.B.E.
NORTHERN WISCONSIN-BASED ENGINEERS, INC.

I, ROY E. WILLIAMS, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WISCONSIN DEPT. OF TRANSPORTATION, I HAVE SURVEYED TRANSPORTATION PROJECT PLAT 8160-03-20-4.02 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

DATE SEPTEMBER 18, 2014
Roy E. Williams
ROY E. WILLIAMS REGISTRATION NO. S1354
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.
DATE SEPTEMBER 22, 2014
Michael Piller
MICHAEL PILLER

WISCONSIN ROY E. WILLIAMS S-1354 SOUTH RANGE WI LAND SURVEYOR

TRANSPORTATION PROJECT PLAT NO: 8160-03-20-4.03

PART OF THE SW1/4 - SE1/4 OF SECTION 24, T 48 N, R 5 W, TOWN OF BARKSDALE, BAYFIELD COUNTY, WISCONSIN.

RELOCATION ORDER STH 13 ASHLAND - BAYFIELD (USH 2 TO 7TH STREET) BAYFIELD COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02(3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			PLE (S.F.) REQUIRED
			NEW	EXISTING	TOTAL	
6	PAUL & TERRI BRETTING TRUST	PLE	0.00	0.00	0.00	(2700)

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BAYFIELD COUNTY, NAD83 (1991) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (3/4" O.D. X 24" IRON PIPE WITH CAP) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

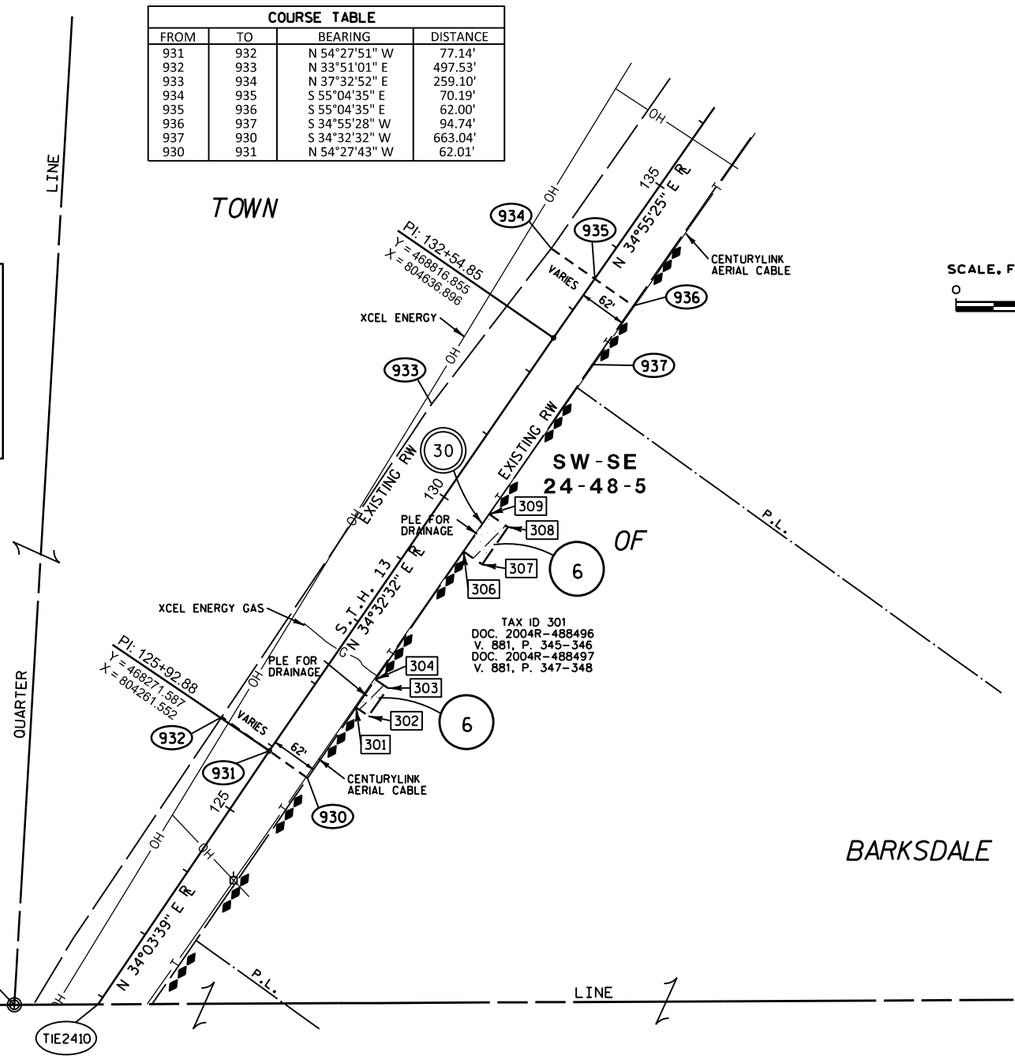
EXISTING HIGHWAY RIGHT-OF-WAY AND ACCESS CONTROL SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: RIGHT-OF-WAY FOR STH 13 ESTABLISHED FROM PREVIOUS RW PLAT 8161-02-21 AND RW PLAT 8510-12-21. ACCESS CONTROL FOR STH 13 ESTABLISHED FROM PREVIOUS RW PLAT 8161-00-21.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

DIMENSIONING FOR EXISTING RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE REFERENCE LINE FOR THIS PROJECT, WHICH IS INTENDED TO FOLLOW THE CENTERLINE OF STH 13. THE REFERENCE LINE DOES NOT COINCIDE WITH THE CENTERLINE SHOWN ON PREVIOUS PLAT 8510-12-21, WHICH PRECEDED THE ADDITION OF THE NORTHBOUND PASSING LANE.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGIONAL OFFICE.

COURSE TABLE			
FROM	TO	BEARING	DISTANCE
931	932	N 54°27'51" W	77.14'
932	933	N 33°51'01" E	497.53'
933	934	N 37°32'52" E	259.10'
934	935	S 55°04'35" E	70.19'
935	936	S 55°04'35" E	62.00'
936	937	S 34°55'28" W	94.74'
937	930	S 34°32'32" W	663.04'
930	931	N 54°27'43" W	62.01'



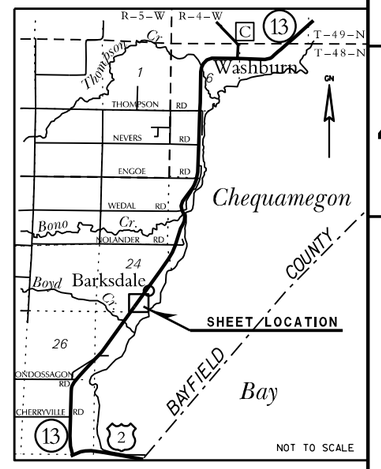
GN

SCALE, FEET
0 100 200

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN BAYFIELD COUNTY, WISCONSIN AT 8:00AM ON SEPTEMBER 30, 2014 AS DOCUMENT # 2014R-556117 AND FILED IN VOL. 1 of TPP PAGE 14

PATRICIA A. OLSON
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8160-03-20-4.03
AMENDMENT NO:



POINT TABLE - STATION OFFSET & COORDS.				
POINT#	STATION	OFFSET	Y (N)	X (E)
STH 13				
QTR2403	121+26.72	-91.08'	467936.41	803925.02
TIE2410	121+88.95	0.00'	467936.95	804035.32
930	125+91.29	62.00'	468235.54	804312.01
931	125+92.88	0.00'	468271.59	804261.55
932	125+94.22	-77.13'	468316.42	804198.78
301	127+05.00	62.00'	468328.78	804376.19
302	127+05.00	82.00'	468317.44	804392.67
303	127+50.00	82.00'	468354.51	804418.18
304	127+50.00	62.00'	468365.85	804401.71
306	129+55.00	62.00'	468534.71	804517.95
307	129+55.00	92.00'	468517.70	804542.66
308	130+15.00	92.00'	468567.12	804576.68
309	130+15.00	62.00'	468584.13	804551.97
933	130+91.72	-83.14'	468729.62	804475.91
937	132+55.26	62.00'	468781.70	804687.97
934	133+50.00	-70.19'	468935.05	804633.82
935	133+50.00	0.00'	468894.87	804691.37
936	133+50.00	62.00'	468859.37	804742.20

PLSS TIE TABLE			
FROM	TO	BEARING	DISTANCE
SEC2401	QTR2403	N 89°43'11" E	2632.26'
QTR2403	TIE2410	N 89°43'11" E	110.31'
TIE2410	931	N 34°03'39" E	403.93'

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LP (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	• (SET)	PROPERTY LINE	
R/W STANDARD	▲ (SET)	LOT & TIE LINES	
SIGN	SIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT		CORPORATE LIMITS	
SECTION CORNER SYMBOL		RESTRICTED ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		RESTRICTED ACCESS (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY INTEREST	40	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-Y	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	**CURVE DATA**	
HIGHWAY EASEMENT	H.E.	LONG CHORD	LC
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	RADIUS	R
PAGE	P.	DEGREE OF CURVE	D
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA
PROPERTY LINE	PL	LENGTH OF CURVE	L
RECORDED AS	(100')	TANGENT	TAN

CONVENTIONAL UTILITY SYMBOLS

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

UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	OWNERS	INTEREST REQUIRED
30	CENTURYLINK	RELEASE OF RIGHTS

UTILITY EASEMENT INFORMATION		
PARCEL 6	WISCONSIN TELEPHONE CO. DBA CENTURYLINK	120225/V.124. P.480

N.W.B.E.
NORTHERN WISCONSIN-BASED ENGINEERS, INC.

I, ROY E. WILLIAMS, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WISCONSIN DEPT. OF TRANSPORTATION, I HAVE SURVEYED TRANSPORTATION PROJECT PLAT 8160-03-20-4.03 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

DATE SEPTEMBER 18, 2014

Roy E. Williams

ROY E. WILLIAMS S-1354 SOUTH RANGE WI LAND SURVEYOR

ROY E. WILLIAMS REGISTRATION NO. S1354

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

DATE SEPTEMBER 22, 2014

Michael Piller

MICHAEL PILLER

TRANSPORTATION PROJECT PLAT NO: 8160-03-20-4.04 AMENDMENT NO: 1

AMENDS PARCELS 4, 7 AND 8 OF TPP 8160-03-20-4.04, RECORDED AS DOCUMENT 2014R-556118.
THAT PART OF GOV'T LOT 1 AND GOV'T LOT 2 OF SECTION 24, T 48 N, R 5 W,
TOWN OF BARKSDALE, BAYFIELD COUNTY, WISCONSIN.

RELOCATION ORDER STH 13 ASHLAND - BAYFIELD (USH 2 TO 7TH STREET) BAYFIELD COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02(3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

COURSE TABLE			
FROM	TO	BEARING	DISTANCE
941	942	N 55°04'35" W	77.27'
942	943	N 31°58'47" E	50.47'
943	944	N 34°46'23" E	1246.72'
944	945	N 35°10'20" E	1052.89'
945	946	S 55°04'35" E	78.57'
946	947	S 55°04'35" E	62.00'
947	948	S 34°55'25" W	1411.82'
948	949	N 55°04'35" W	17.00'
949	940	S 34°55'25" W	938.18'
940	941	N 55°04'35" W	45.00'

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEED IN BAYFIELD COUNTY, WISCONSIN AT 8:00 AM ON SEPTEMBER 30, 2014 AS DOCUMENT # 2014R-556118 AND FILED IN VOL. 1 of TPP PAGE 15

PATRICIA A. OLSON
SIGNATURE OF REGISTER OF DEEDS

39

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8160-03-20-4.04
AMENDMENT NO:1

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			PLE (S.F.) REQUIRED
			NEW	EXISTING	TOTAL	
4	BRETTING DEVELOPMENT CORP..INC.	PLE	0.00	0.00	0.00	(3407)
7	LYNDA F. SAVAGE	PLE	0.00	0.00	0.00	(324)
8	S.H. WARREN, LLC	PLE	0.00	0.00	0.00	(1375)

UTILITY EASEMENT INFORMATION		
PARCEL 4 PARCEL 8	WISCONSIN TELEPHONE CO. DBA CENTURYLINK	120225/V.124, P.480
PARCEL 7	WISCONSIN TELEPHONE CO. DBA CENTURYLINK	281542/V.244, P.449

UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	OWNERS	INTEREST REQUIRED
30	CENTURYLINK	RELEASE OF RIGHTS

PLSS TIE TABLE			
FROM	TO	BEARING	DISTANCE
QTR2403	QTR1303	N 03°20'55" E	5263.13'
QTR2403	TIE2405	N 03°20'55" E	2023.93'
TIE2405	941	S 86°39'05" E	1337.40'

POINT TABLE - STATION OFFSET & COORDS.				
POINT#	STATION	OFFSET	Y (N)	X (E)
STH 13				
TIE2405	138+49.72	-1139.40'	469956.89	804043.23
940	145+50.00	45.00'	469853.00	805415.25
941	145+50.00	0.00'	469878.77	805378.35
942	145+50.00	-77.27'	469923.00	805315.00
401	145+60.00	45.00'	469861.20	805420.97
402	145+60.00	77.00'	469842.88	805447.21
943	146+00.41	-79.86'	469965.81	805341.73
403	146+25.00	77.00'	469896.18	805484.42
404	146+25.00	45.00'	469914.50	805458.18
948	154+88.18	62.00'	470612.50	805966.28
949	154+88.18	45.00'	470622.23	805952.34
406	158+05.00	62.00'	470872.27	806147.65
407	158+05.00	92.00'	470855.09	806172.25
408	158+60.00	92.00'	470900.19	806203.74
409	158+60.00	62.00'	470917.36	806179.14
944	158+47.12	-83.14'	470989.89	806052.76
411	168+23.00	62.00'	471706.94	806730.44
412	168+23.00	87.00'	471692.63	806750.94
413	168+78.00	87.00'	471737.72	806782.43
414	168+78.00	62.00'	471752.04	806761.93
945	169+00.00	-78.57'	471850.55	806659.27
946	169+00.00	0.00'	471805.57	806723.69
947	169+00.00	62.00'	471770.07	806774.52

GN

SCALE, FEET
0 100 200

TOWN OF BARKSDALE

GOV'T LOT 1
24-48-5

GOV'T LOT 2
24-48-5

NW-SE
24-48-5

FOUND RAILROAD SPIKE
OTR1303
Y = 473190.558
X = 804232.434

FOUND IRON PIPE
QTR2403
Y = 467936.410
X = 803925.015

FOUND 6" X 6" CONCRETE MONUMENT
SIX2419
Y = 469256.579
X = 805325.366

TAX ID 300
DOC. 364809
V. 434, P.374-377

TAX ID 776
DOC. 2010R-533213
V. 1041, P. 786

TAX ID 96
DOC. 2005R-502923
V. 931, P. 299

PLE FOR DRAINAGE

CENTURYLINK (OVERHEAD CABLE & POLES)

CHARTER AERIAL CABLE ON XCEL POLES

XCEL ENERGY GAS

NORTHERN NATURAL GAS

EXISTING RW

S.I.H. 13
N 34°55'25" E

SUBDIVISION

PLAT OF BARKSDALE

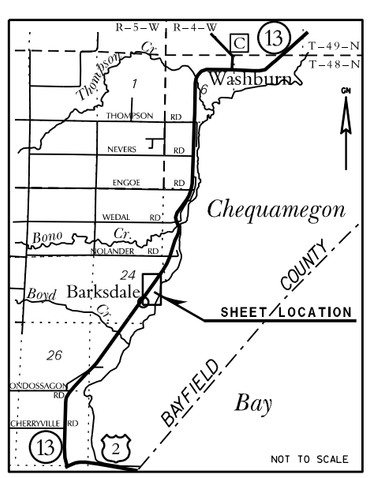
QUARTER LINE

SIXTEENTH LINE

NORVADO

CENTURYLINK

TIE2405



NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BAYFIELD COUNTY, NAD83 (1991) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (3/4" O.D. X 24" IRON PIPE WITH CAP) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY AND ACCESS CONTROL SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: RIGHT-OF-WAY FOR STH 13 ESTABLISHED FROM PREVIOUS RW PLAT 8161-02-21 AND RW PLAT 8510-12-21. ACCESS CONTROL FOR STH 13 ESTABLISHED FROM PREVIOUS RW PLAT 8161-00-21.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

DIMENSIONING FOR EXISTING RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE REFERENCE LINE FOR THIS PROJECT, WHICH IS INTENDED TO FOLLOW THE CENTERLINE OF STH 13. THE REFERENCE LINE DOES NOT COINCIDE WITH THE CENTERLINE SHOWN ON PREVIOUS PLAT 8510-12-21, WHICH PRECEDED THE ADDITION OF THE NORTHBOUND PASSING LANE.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGIONAL OFFICE.

CONVENTIONAL UTILITY SYMBOLS

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

	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	**CURVE DATA**	
HIGHWAY EASEMENT	H.E.	LONG CHORD	LC
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	RADIUS	R
PAGE	P.	DEGREE OF CURVE	D
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA
PROPERTY LINE	PL	LENGTH OF CURVE	L
RECORDED AS	(100')	TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	UP (1" UNLESS NOTED)	PROPOSED R/W LINE	
R/W MONUMENT	○ •(SET)	EXISTING H.E. LINE	
R/W STANDARD	▲ ▲(SET)	PROPERTY LINE	
SIGN	SIGN	LOT & TIE LINES	
SECTION CORNER MONUMENT		SLOPE INTERCEPTS	
SECTION CORNER SYMBOL		CORPORATE LIMITS	
FEE (HATCH VARIES)		RESTRICTED ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
TEMPORARY LIMITED EASEMENT		RESTRICTED ACCESS (BY ACQUISITION)	
PERMANENT LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
R/W BOUNDARY POINT	RWB20	SECTION LINE	
PARCEL NUMBER	102	QUARTER LINE	
UTILITY INTEREST	40	SIXTEENTH LINE	
SIGN NUMBER (OFF PREMISE)	21-1	EXISTING CENTERLINE	
BUILDING		PROPOSED REFERENCE LINE	
		PARALLEL OFFSET	

N.W.B.E.
NORTHERN WISCONSIN-BASED ENGINEERS, INC.

I, ROY E. WILLIAMS, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WISCONSIN DEPT. OF TRANSPORTATION, I HAVE SURVEYED TRANSPORTATION PROJECT PLAT 8160-03-20-4.04 AMENDMENT NO. 1, AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

DATE SEPTEMBER 18, 2014

Roy E. Williams

ROY E. WILLIAMS REGISTRATION NO. S1354

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

DATE SEPTEMBER 22, 2014

Michael Piller
MICHAEL PILLER

WISCONSIN ROY E. WILLIAMS S-1354 SOUTH RANGE WI LAND SURVEYOR

TRANSPORTATION PROJECT PLAT NO: 8160-03-20-4.05

PART OF GOVERNMENT LOT 1 OF SECTION 18, T 48 N, R 4 W, TOWN OF BARKSDALE, BAYFIELD COUNTY, WISCONSIN.

RELOCATION ORDER STH 13 ASHLAND - BAYFIELD (USH 2 TO 7TH STREET) BAYFIELD COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02(3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

4

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			PLE (S.F.) REQUIRED
			NEW	EXISTING	TOTAL	
9	MICKEY J. SAMPSON	PLE	0.00	0.00	0.00	(1500)

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BAYFIELD COUNTY, NAD83 (1991) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (3/4" O.D. X 24" IRON PIPE WITH CAP) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

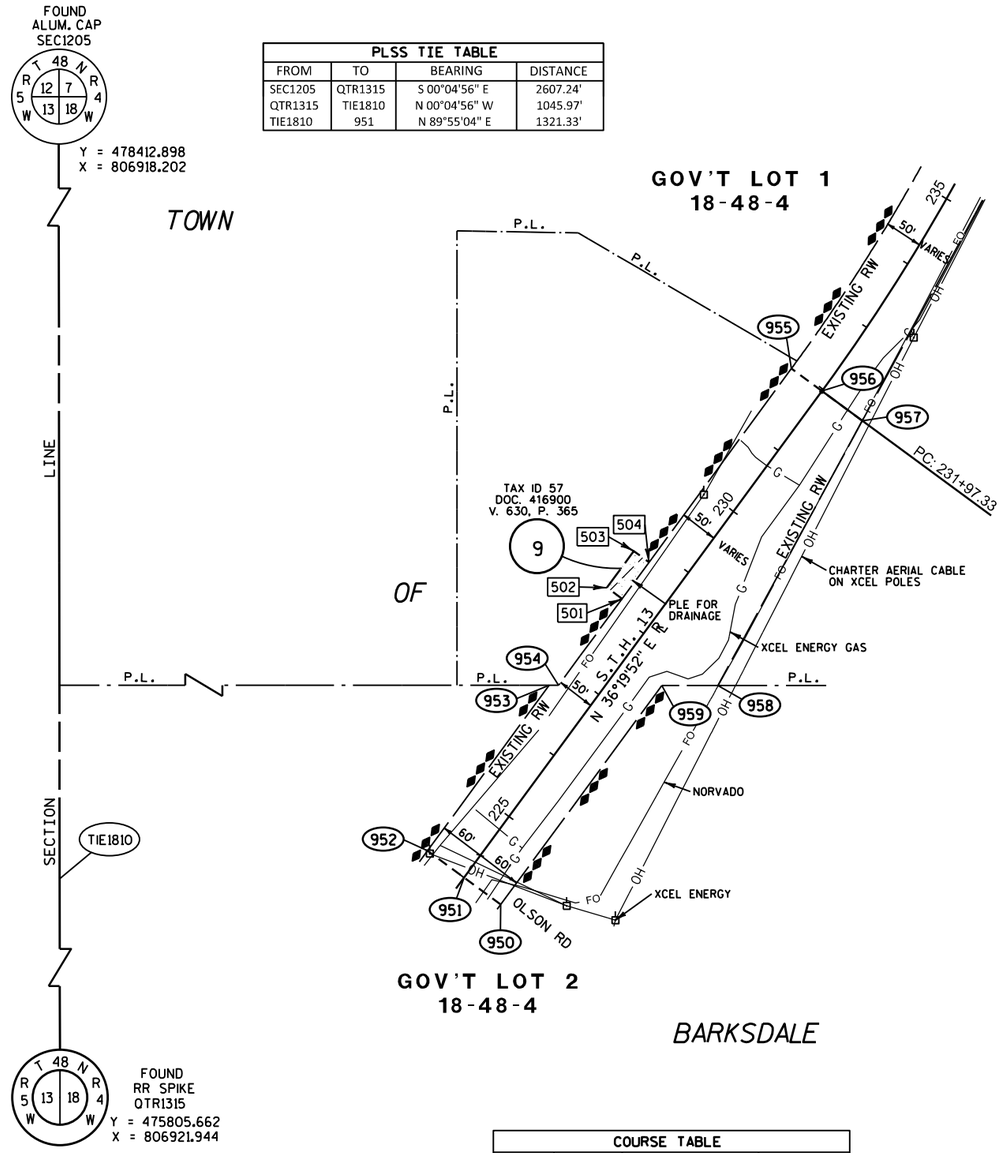
PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY AND ACCESS CONTROL SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: RIGHT-OF-WAY FOR STH 13 ESTABLISHED FROM PREVIOUS RW PLAT 8161-00-21 AND RW PLAT 8161-02-21. ACCESS CONTROL FOR STH 13 ESTABLISHED FROM PREVIOUS RW PLAT 8161-00-21.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

DIMENSIONING FOR EXISTING RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO A NEW REFERENCE LINE.

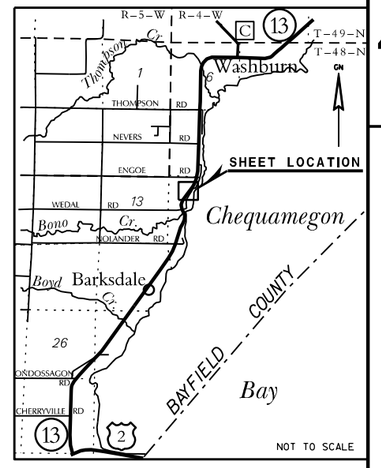
FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGIONAL OFFICE.



ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN BAYFIELD COUNTY, WISCONSIN AT 8:00 AM ON SEPTEMBER 30, 2014 AS DOCUMENT # 2014R-556119 AND FILED IN VOL. 1 of TPP PAGE 16.

PATRICIA A. OLSON
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8160-03-20-4.05
AMENDMENT NO:



4

POINT TABLE - STATION OFFSET & COORDS.

POINT#	STATION	OFFSET	Y (N)	X (E)
STH 13				
TIE1810	217+64.91	-1129.91'	476851.64	806920.44
950	224+00.00	60.00'	476817.99	808290.11
951	224+00.00	0.00'	476853.53	808241.77
952	224+00.00	-60.00'	476889.08	808193.44
953	226+70.88	-60.00'	477107.30	808353.92
954	226+78.22	-50.00'	477107.29	808366.32
959	227+59.04	60.00'	477107.23	808502.82
958	228+02.85	119.64'	477107.19	808576.83
501	228+20.00	-50.00'	477221.51	808450.32
502	228+20.00	-75.00'	477236.32	808430.18
503	228+80.00	-75.00'	477284.66	808465.73
504	228+80.00	-50.00'	477269.85	808485.87
955	231+97.33	-50.00'	477525.49	808673.87
956	231+97.33	0.00'	477495.87	808714.15
957	231+97.33	66.21'	477456.64	808767.49

PLSS TIE TABLE

FROM	TO	BEARING	DISTANCE
SEC1205	QTR1315	S 00°04'56" E	2607.24'
QTR1315	TIE1810	N 00°04'56" W	1045.97'
TIE1810	951	N 89°55'04" E	1321.33'

COURSE TABLE

FROM	TO	BEARING	DISTANCE
951	952	N 53°40'08" W	60.00'
952	953	N 36°19'52" E	270.88'
953	954	S 89°57'18" E	12.41'
954	955	N 36°19'52" E	519.11'
955	956	S 53°40'08" E	50.00'
956	957	S 53°40'08" E	66.21'
957	958	S 28°37'03" W	398.08'
958	959	N 89°58'15" W	74.01'
959	950	S 36°19'52" W	359.04'
950	951	N 53°40'08" W	60.00'

SCALE, FEET
0 100 200

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LP (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	● =(SET)	PROPERTY LINE	
R/W STANDARD	▲ =(SET)	LOT & TIE LINES	
SIGN	ISIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT	●	CORPORATE LIMITS	
SECTION CORNER SYMBOL		RESTRICTED ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		RESTRICTED ACCESS (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY INTEREST	40	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	**CURVE DATA**	
HIGHWAY EASEMENT	H.E.	LONG CHORD	LC
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	RADIUS	R
PAGE	P.	DEGREE OF CURVE	D
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA
PROPERTY LINE	PL	LENGTH OF CURVE	L
RECORDED AS	(100')	TANGENT	TAN

CONVENTIONAL UTILITY SYMBOLS

	NON COMPENSABLE	COMPENSABLE
WATER	W	
GAS	G	
TELEPHONE	T	
OVERHEAD TRANSMISSION LINES ELECTRIC	OH	
CABLE TELEVISION	TV	
FIBER OPTIC	FO	
SANITARY SEWER	SAN	
STORM SEWER	SS	
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		

N.W.B.E.
NORTHERN WISCONSIN-BASED ENGINEERS, INC.

I, ROY E. WILLIAMS, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WISCONSIN DEPT. OF TRANSPORTATION, I HAVE SURVEYED TRANSPORTATION PROJECT PLAT 8160-03-20-4.05 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

DATE SEPTEMBER 18, 2014
Roy E. Williams
ROY E. WILLIAMS REGISTRATION NO. S1354
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.
DATE SEPTEMBER 22, 2014
Michael Piller
MICHAEL PILLER

WISCONSIN ROY E. WILLIAMS S-1354 SOUTH RANGE WI LAND SURVEYOR

TRANSPORTATION PROJECT PLAT NO: 8160-03-20-4.06 AMENDMENT NO: 1

AMENDS PARCEL 11 OF TPP 8160-03-20-4.06, RECORDED AS DOCUMENT 2014R-556120.
PART OF GOV'T LOT 3 AND GOV'T LOT 2 OF SECTION 7, T 48 N, R 4 W,
TOWN OF BARKSDALE, BAYFIELD COUNTY, WISCONSIN.

RELOCATION ORDER STH 13 ASHLAND - BAYFIELD (USH 2 TO 7TH STREET) BAYFIELD COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02(3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			PLE (S.F.) REQUIRED
			NEW	EXISTING	TOTAL	
11	JEFFRY & KRISTINE VON HOLZEN REVOCABLE TRUST	PLE	0.00	0.00	0.00	(3084)
12	TOWN OF BARKSDALE	PLE	0.00	0.00	0.00	(1551)

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BAYFIELD COUNTY, NAD83 (1991) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (3/4" O.D. X 24" IRON PIPE WITH CAP) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY AND ACCESS CONTROL SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: RIGHT-OF-WAY FOR STH 13 ESTABLISHED FROM PREVIOUS RW PLAT 8161-00-21 AND RW PLAT 8510-12-21. ACCESS CONTROL FOR STH 13 ESTABLISHED FROM PREVIOUS RW PLAT 8161-00-21.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

DIMENSIONING FOR EXISTING RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO A NEW REFERENCE LINE.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGIONAL OFFICE.

UTILITY EASEMENT INFORMATION		
PARCEL 11	WISCONSIN BELL, INC. DBA CENTURYLINK	373795/ V.467, P.64-65
PARCEL 12	WISCONSIN BELL, INC. DBA CENTURYLINK	378351/ V.483, P.44-52

FOUND GIN SPIKE SEC601
Y = 483688.532
X = 806916.900

FOUND 1.5" IRON PIPE QTR1211
Y = 481049.975
X = 806900.082

FOUND ALUM. CAP SEC1205
Y = 478412.898
X = 806918.202

PLSS TIE TABLE			
FROM	TO	BEARING	DISTANCE
SEC601	QTR1211	S 00°21'55" W	2638.61'
SEC1205	QTR1211	N 00°23'37" W	2637.14'
QTR1211	TIE712	S 89°43'54" E	2170.37'
TIE712	961	N 00°56'51" E	32.85'

TOWN LINE

SECTION LINE

QUARTER

EXISTING RW

NEVERS RD

GOV'T LOT 2
7-48-4

GOV'T LOT 3
7-48-4

OF

BARKSDALE

NORVADO

CENTURYLINK EASEMENT CENTERLINE (10-FOOT EASEMENT)

TAX ID 33
DOC. 416628
V. 629, P. 326

XCEL ENERGY

CHARTER AERIAL CABLE ON XCEL POLES

PLE FOR DRAINAGE

TAX ID 41
DOC. 2008R-518918
V. 988, P. 758

CENTURYLINK EASEMENT CENTERLINE (15-FOOT EASEMENT)

CENTURYLINK (OVERHEAD CABLE & POLES)

MEANDER CORNER
FOUND 2" IRON PIPE
MC713
Y = 481037.945
X = 809467.538

S.T.H. 13
N 00°43'59" E R

BEGIN P.H.E.

END P.H.E.

VARIES

50'

70'

75.45'

275

270

265

260

P.L.

P.H.E.

EXISTING RW

OH

FO

LINE

TIE712

961 962 963 964 965 966 967 968 969 970 971 972 973 974

601 602 603 604 607 608

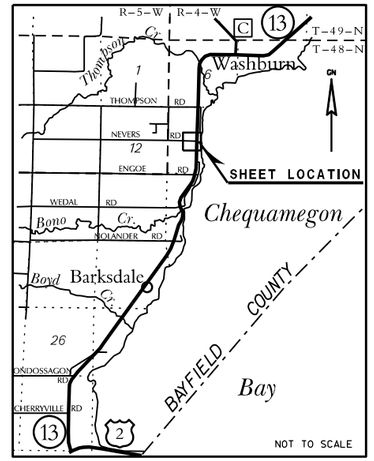
11 12 20 30 40

GN

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN BAYFIELD COUNTY, WISCONSIN AT 8:00 AM ON SEPTEMBER 30, 2014 AS DOCUMENT # 2014R-556120. AND FILED IN VOL. 1 of TPP PAGE 17.

PATRICIA A. OLSON
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8160-03-20-4.06
AMENDMENT NO:1



POINT TABLE - STATION OFFSET & COORDS.				
POINT#	STATION	OFFSET	Y (N)	X (E)
STH 13				
970	260+00.00	38.70'	480191.82	809263.60
971	260+00.00	0.00'	480192.31	809224.90
972	260+00.00	-70.00'	480193.21	809154.91
601	260+75.00	38.71'	480266.81	809264.57
602	260+75.00	75.00'	480266.35	809300.85
603	261+60.00	75.00'	480351.34	809301.94
604	261+60.00	38.72'	480351.80	809265.66
969	264+74.10	38.76'	480665.88	809269.72
968	266+12.61	75.46'	480803.90	809308.19
973	267+15.30	-70.00'	480908.45	809164.06
974	268+12.29	-165.43'	481006.66	809069.88
TIE712	268+45.45	-165.30'	481039.81	809070.43
MC713	268+48.67	231.80'	481037.95	809467.54
961	268+78.30	-165.18'	481072.65	809070.97
962	269+75.84	-70.00'	481168.97	809167.39
966	272+85.21	38.84'	481476.92	809280.18
967	272+85.22	75.46'	481476.46	809316.79
607	273+35.00	75.46'	481526.24	809317.43
608	273+35.00	38.85'	481526.71	809280.83
963	274+00.00	-70.00'	481593.09	809172.82
964	274+00.00	0.00'	481592.20	809242.81
965	274+00.00	38.86'	481591.70	809281.67

UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	OWNERS	INTEREST REQUIRED
20	XCEL ENERGY	RELEASE OF RIGHTS
30	CENTURYLINK	RELEASE OF RIGHTS
40	NORVADO	RELEASE OF RIGHTS

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LP (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	•(SET)	PROPERTY LINE	
R/W STANDARD	▲(SET)	LOT & TIE LINES	
SIGN	SIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT	●	CORPORATE LIMITS	
SECTION CORNER SYMBOL		RESTRICTED ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		RESTRICTED ACCESS (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY INTEREST	40	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	**CURVE DATA**	
HIGHWAY EASEMENT	H.E.	LONG CHORD	LC
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	RADIUS	R
PAGE	P.	DEGREE OF CURVE	D
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA
PROPERTY LINE	PL	LENGTH OF CURVE	L
RECORDED AS	(100')	TANGENT	TAN

CONVENTIONAL UTILITY SYMBOLS

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

COURSE TABLE			
FROM	TO	BEARING	DISTANCE
961	962	N 45°01'51" E	136.29'
962	963	N 00°43'59" E	424.16'
963	964	S 89°16'01" E	70.00'
964	965	S 89°16'01" E	38.86'
965	966	S 00°44'24" W	114.80'
966	967	S 89°17'08" E	36.61'
967	968	S 00°43'59" W	672.61'
968	969	S 15°34'25" W	143.28'
969	970	S 00°44'24" W	474.10'
970	971	N 89°16'01" W	38.70'
971	972	N 89°16'01" W	70.00'
972	973	N 00°43'59" E	715.30'
973	974	N 43°48'05" W	136.06'
974	961	N 00°56'51" E	66.00'

SCALE, FEET
0 100 200

N.W.B.E.
NORTHERN WISCONSIN-BASED ENGINEERS, INC.

I, ROY E. WILLIAMS, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WISCONSIN DEPT. OF TRANSPORTATION, I HAVE SURVEYED TRANSPORTATION PROJECT PLAT 8160-03-20-4.06 AMENDMENT NO. 1, AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

DATE SEPTEMBER 18, 2014

Roy E. Williams

ROY E. WILLIAMS REGISTRATION NO. S1354

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

DATE SEPTEMBER 22, 2014

Michael Piller
MICHAEL PILLER

WISCONSIN ROY E. WILLIAMS S-1354 SOUTH RANGE WI LAND SURVEYOR

BEGIN PROJECT
STA. 7+90.44'S'
X = 799717.95
Y = 457990.73

PC: 9+93.23'S'
PT: 11+63.94'S'
XCEL ENERGY ELECTRIC
STA. 17+16'S'
EXISTING 24" X 60' CPRC
1 - SALVAGE IN PLACE 12 LF (6 LT AND 6 RT)
CHERRYVILLE RD
STA. 29+92'S'
EXISTING BRIDGE
TO REMAIN IN PLACE
XCEL ENERGY GAS
CAUTION
MATCHLINE STA. 38+00'S'
10'S'
15'S'
20'S'
25'S'
30'S'
35'S'
N7° 02' 03"W
STH 13
N0° 45' 13"E
XCEL ENERGY GAS
STA. 37+27'S'
EXISTING CPCS 36" X 70'
2 - REMOVE AEW'S
1 - 36" X 70' CULVERT PIPE LINER
2 - AEW'S FOR CPCS 36-INCH REQ'D

PI STA = 10+78.72'S'
Y = 458276.84
X = 799682.64
DELTA = 7°47'16"
D = 4°33'44"
T = 85.48
L = 170.70
R = 1255.90
PC STA = 9+93.23'S'
PT STA = 11+63.94'S'
SE = 5.9%
TRANS. = 202'

LEGEND
DELINEATED WETLANDS

5

5

STA. 44+99'S'
EXISTING 30" X 72' CPRC
1 - REMOVE SMALL PIPE CULVERT
1 - 30" X 68' CPRC CL III
2 - AEW'S FOR CPRC 30-INCH REQ'D
E. ONDOSSAGON RD
STA. 48+85'S'
EXISTING CPCS 30" X 62'
1 - REMOVE SMALL CULVERT PIPE
1 - 36" X 62' CPRC CL III
2 - AEW'S FOR CPRC 36-INCH REQ'D
CAUTION
XCEL ENERGY ELECTRIC
XCEL ENERGY GAS
TEMP BYPASS
CAUTION
SLOPE INTERCEPT (TYP.)
PC: 46+08.74'S'
45+16'S', -22.0'
45+84'S', -22.0'
44+12'S', -17.2'
45+88'S', -16.9'L
45+86'S', 17.1'R
45+14'S', 21.7'R
44+82'S', 21.7'R
44+07'S', 16.6'R
TEMP BYPASS
STA. 48+27'S' - 49+48'S'
EBS
SEE CROSS DRAIN INSTALLATION
AND EBS DETAIL
50'S'
55'S'
STH 13
PT: 60+08.45'S'
60'S'
STA. 67+22'S'
EXISTING 24" X 94' CPRC
1 - REMOVE SMALL PIPE CULVERT
1 - 24" X 88' CPRC CL III
1 - AEW FOR CPRC 24-INCH REQ'D LT
MATCHLINE STA. 38+00'S'
40'S'
65'S'
CHARTER
TEMP BYPASS
66+39'S', -16.5'L
66+12'S', -21.2'L
67+65'S', -21.2'L
65+17'S', 17.4'L
66+78'S', 21.3'L
67+31'S', 21.9'L
TEMP BYPASS
SLOPE INTERCEPT (TYP.)
MATCHLINE STA. 68+00'S'
STA. 40+12'S'
EXISTING BRIDGE
TO REMAIN IN PLACE

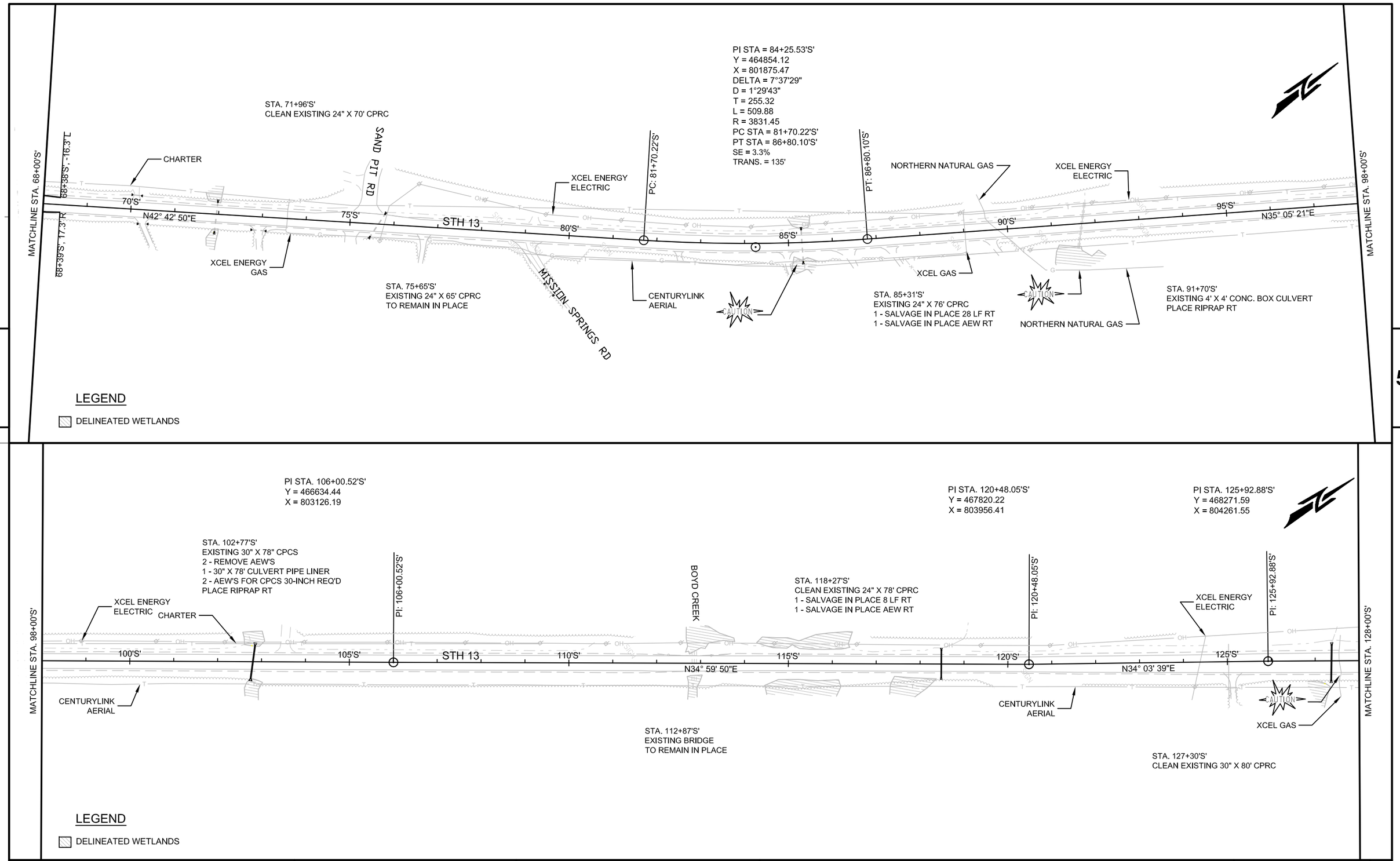
PI STA = 53+41.65'S'
Y = 462539.66
X = 799738.71
DELTA = 41°57'38"
D = 2°59'52"
T = 732.91
L = 1399.71
R = 1911.26
PC STA = 46+08.74'S'
PT STA = 60+08.45'S'
SE = 5.0%
TRANS. = 179'

STA. 59+65'S'
CLEAN EXISTING 36" X 74' CPRC

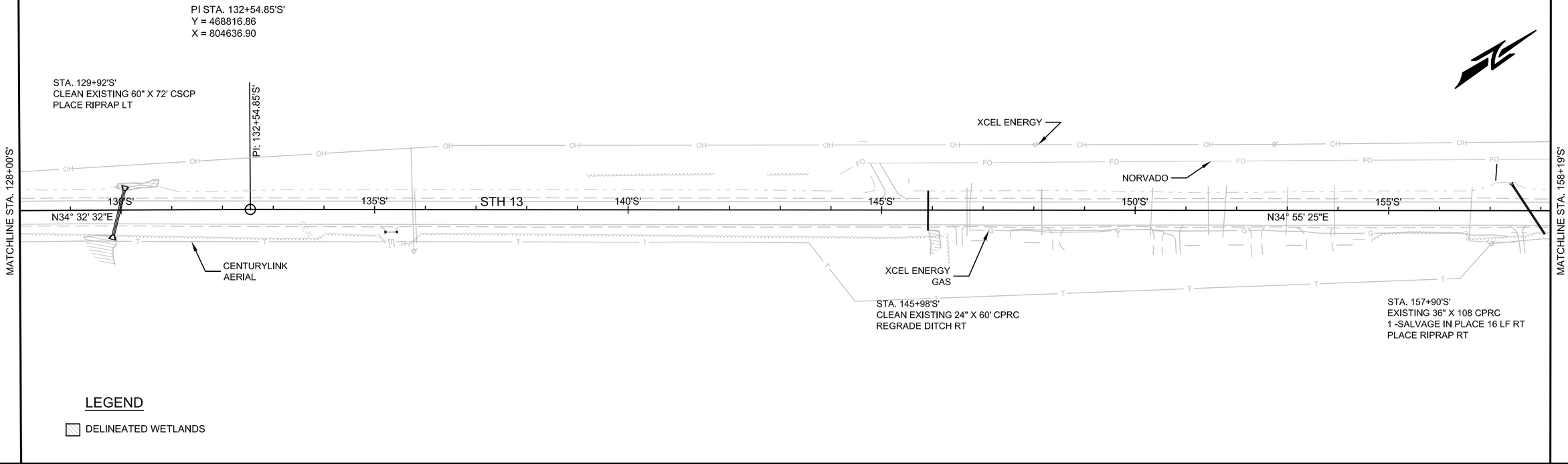
STA. 62+26'S'
EXISTING CPCS 24" X 80'
1 - REMOVE AEW LT
1 - 24" X 80' CULVERT PIPE LINER
1 - AEW FOR CPCS 24-INCH REQ'D LT

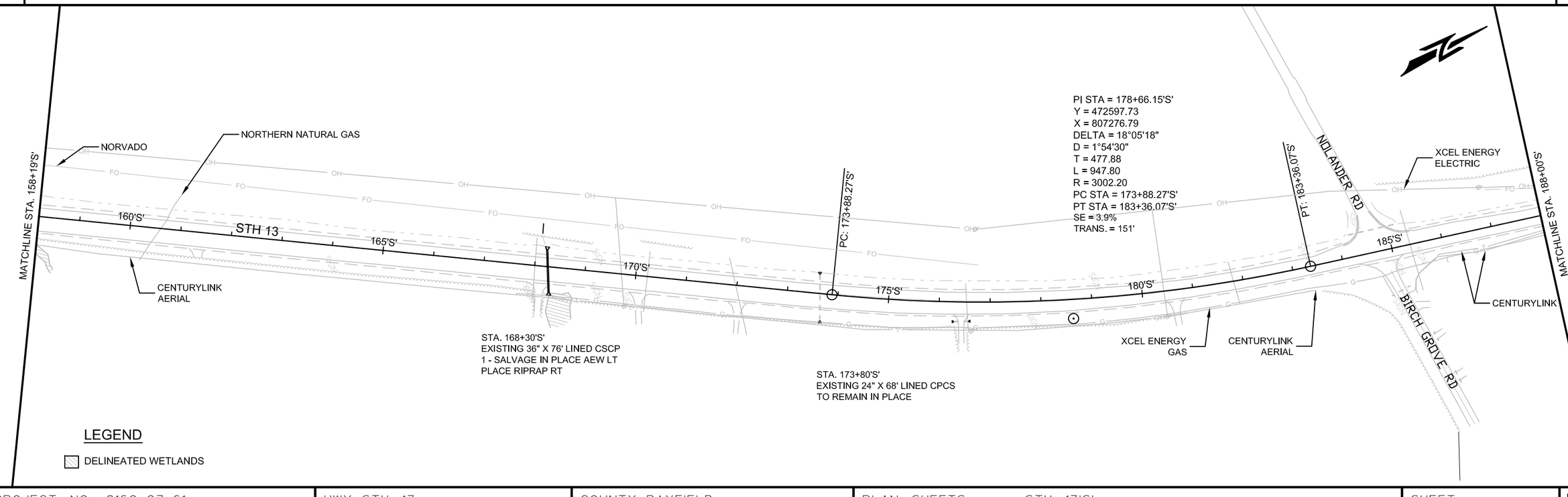
LEGEND
DELINEATED WETLANDS

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	PLAN SHEETS: STH 13'S'	SHEET 42	E



PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	PLAN SHEETS: STH 13'S'	SHEET 43	E





PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	PLAN SHEETS: STH 13'S'	SHEET 44	E

MATCHLINE STA. 188+00'S'

XCEL ENERGY ELECTRIC

190'S'

N16° 50' 07"E

CENTURYLINK

XCEL ENERGY GAS

STA. 194+95'S'
EXISTING 24" X 54' CPCS
TO REMAIN IN PLACE

195'S'

PC: 196+49.17'S'

PI STA = 198+71.48'S'
Y = 474524.73
X = 807859.88
DELTA = 17°36'15"
D = 3°59'26"
T = 222.32
L = 441.13
R = 1435.75
PC STA = 196+49.17'S'
PT STA = 200+90.30'S'
SE = 5.7%
TRANS. = 197'

PT: 200+90.30'S'

200'S'

BOND CREEK RD

STA. 200+20'S'
EXISTING 24" X 70' CPCS
2 - REMOVE AEW'S
2 - AEW'S FOR CPCS 24-INCH REQ'D

205'S'

N0° 46' 08"W

STA. 207+15'S'
EXISTING BRIDGE
TO REMAIN IN PLACE

STH 13

210'S'

NORVADO FO

XCEL ENERGY GAS

WEDAL RD

PC: 211+64.44'S'

STA. 214+22'S'
EXISTING 24" X 70' LINED CPCS
1 - REMOVE SMALL PIPE CULVERT
1 - 24" X 84' CPRC CL III
2 - AEW'S FOR CPRC 24-INCH REQ'D
PLACE RIPRAP RT

CENTURYLINK

215'S'

CAUTION

PI STA = 216+45.23'S'
Y = 476301.81
X = 807836.03
DELTA = 37°06'00"
D = 3°59'56"
T = 480.79
L = 927.74
R = 1432.77
PC STA = 211+64.44'S'
PT STA = 220+92.18'S'
SE = 5.7%
TRANS. = 197'

MATCHLINE STA. 218+00'S'

5

5

LEGEND

DELINEATED WETLANDS

STA. 218+35'S'
EXISTING 24" X 82' CPCS
1 - REMOVE AEW RT
1 - 24" X 82' CULVERT PIPE LINER
2 - AEW'S FOR CPCS 24-INCH REQ'D
PLACE RIPRAP RT

CENTURYLINK

PT: 220+92.18'S'

220'S'

STA BACK = 220+94.27

STA AHEAD = 221+98.03'S'

EQUATION

STA. 220+00'S'
EXISTING 24" X 100' CPCS
1 - REMOVE AEW LT
1 - 24" X 100' CULVERT PIPE LINER
2 - AEW'S FOR CPCS 24-INCH REQ'D

STA. 219+90'S' - 220+25'S'
REPAIR SLOPE LT

OLSEN RD

NORVADO

225'S'

N36° 19' 52"E

CAUTION

230'S'

PC: 231+97.33'S'

XCEL ENERGY GAS

STA. 228+49'S'
EXISTING 36" X 138' CPCS
2 -REMOVE AEW'S
1 - 36" X 138' CULVERT PIPE LINER
2 - AEW'S FOR CPCS 36-INCH REQ'D
PLACE RIPRAP LT AND RT

LAKESHORE DR

PI STA = 240+15.43'S'
Y = 478154.93
X = 809198.83
DELTA = 35°35'53"
D = 2°14'54"
T = 818.09
L = 1583.21
R = 2548.22
PC STA = 231+97.33'S'
PT STA = 247+80.55'S'
SE = 4.3%
TRANS. = 161'

CENTURYLINK

235'S'

STH 13

240'S'

CHARTER ON XCEL ENERGY POLES

ENGOE RD

CENTURYLINK AERIAL

245'S'

NORVADO

PT: 247+80.55'S'

STA. 247+82'S'
EXISTING 30" X 86' LINED CPCS
TO REMAIN IN PLACE

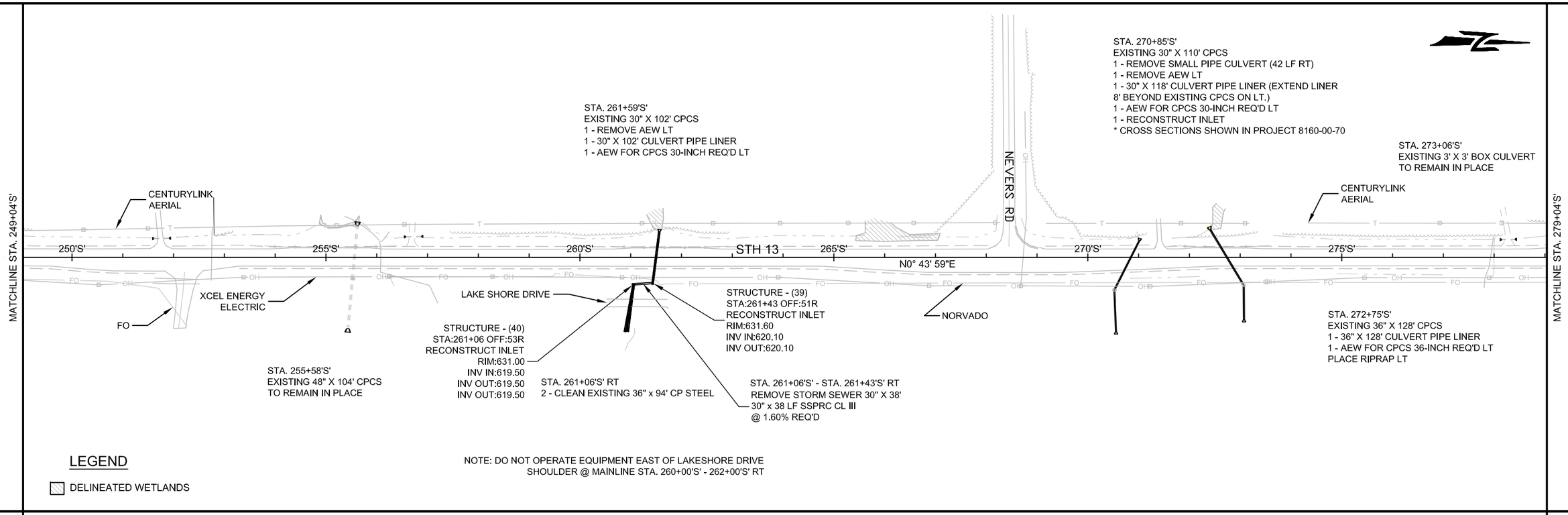
MATCHLINE STA. 249+04'S'

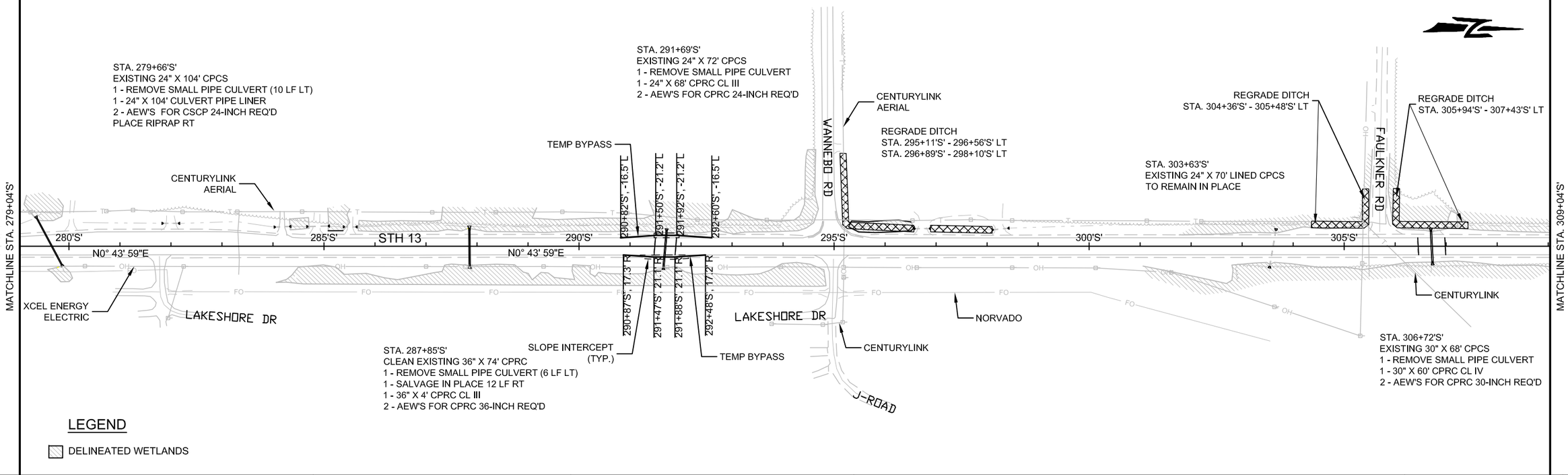
LEGEND

DELINEATED WETLANDS

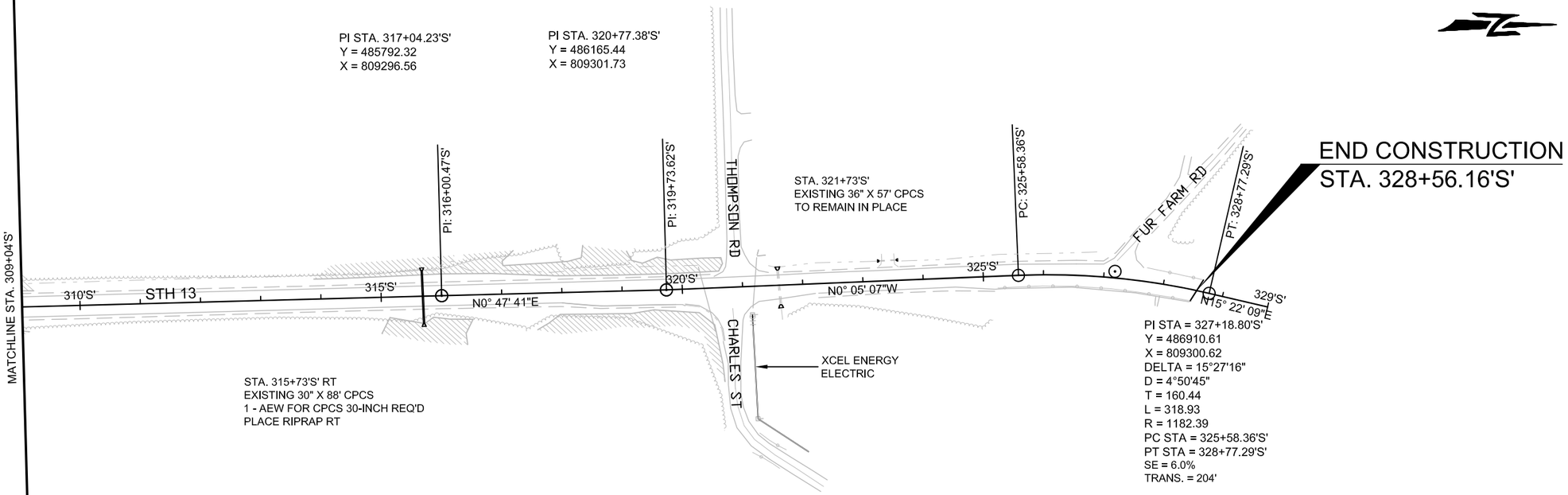
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	PLAN SHEETS: STH 13'S'	SHEET 45	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\050201_PN_STH_13.DWG PLOT DATE : 10/29/2014 3:43 PM PLOT BY : USER PLOT NAME : PLOT SCALE : 1" = 200'_XREF





PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	PLAN SHEETS: STH 13'S'	SHEET 46	E

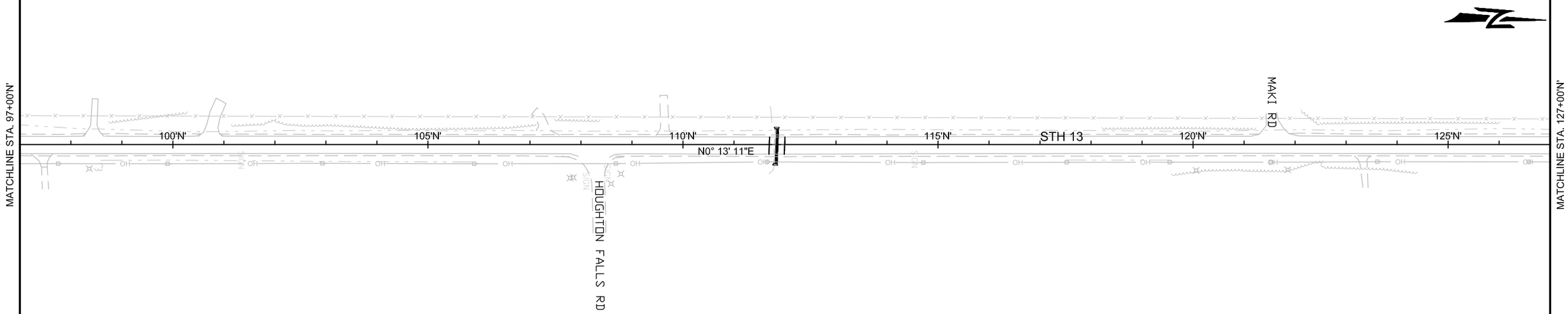


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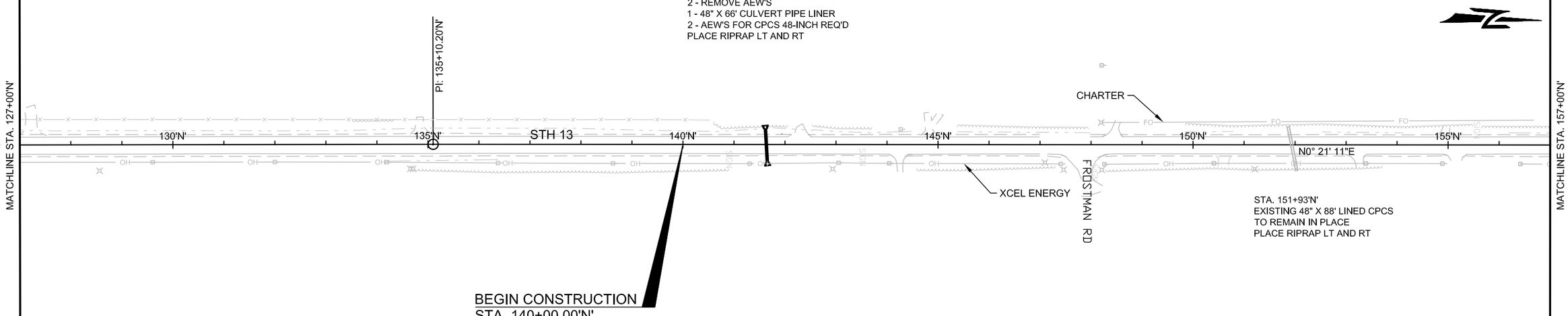
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	PLAN SHEETS: STH 13'S'	SHEET 47	E

STA. 111+80'N'
EXISTING 24" X 64' CPCS
TO REMAIN IN PLACE



PI STA. 135+10.20
Y = 500785.81
X = 820081.43

STA. 141+63'N'
EXISTING 48" X 66' CPCS
2 - REMOVE AEW'S
1 - 48" X 66' CULVERT PIPE LINER
2 - AEW'S FOR CPCS 48-INCH REQ'D
PLACE RIPRAP LT AND RT



STA. 151+93'N'
EXISTING 48" X 88' LINED CPCS
TO REMAIN IN PLACE
PLACE RIPRAP LT AND RT

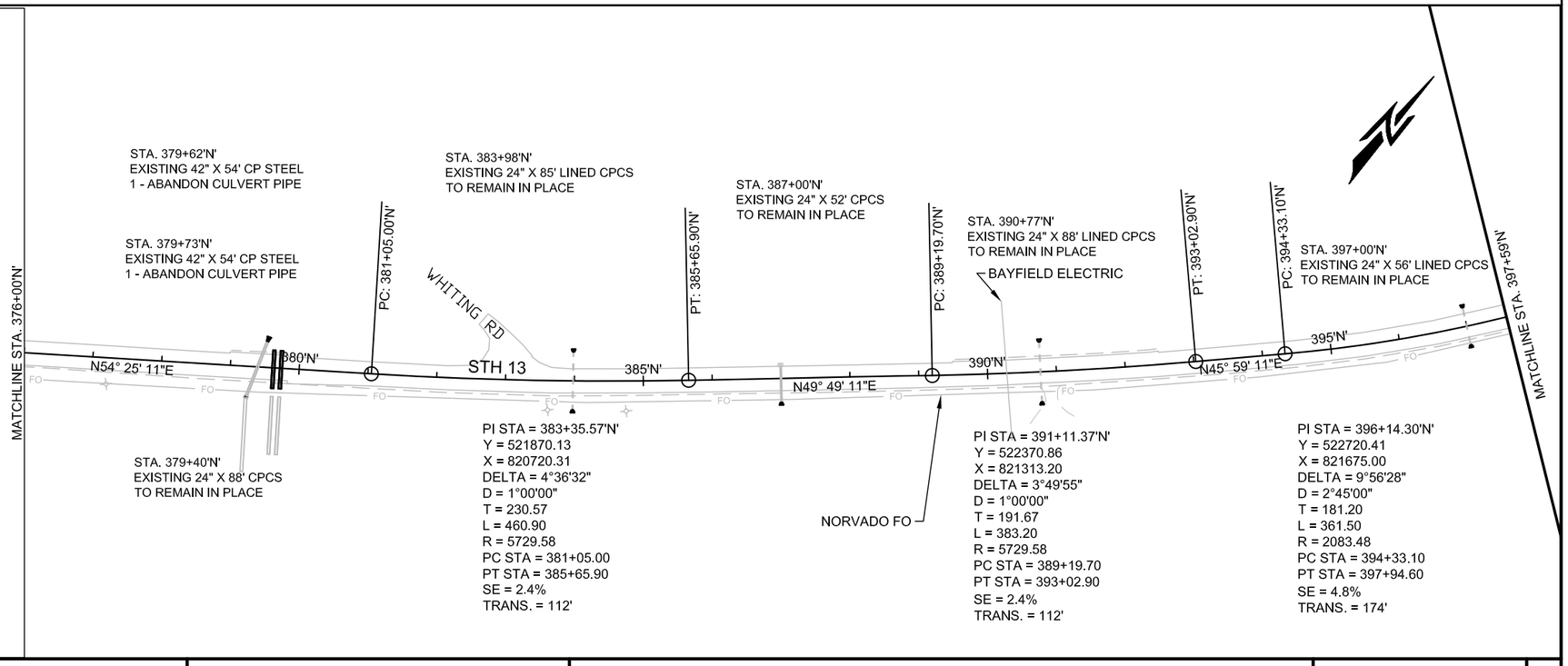
BEGIN CONSTRUCTION
STA. 140+00.00'N'

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	PLAN SHEETS: STH 13 'N'	SHEET 48 E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1229 STH13 SUPERIOR AVE - 7TH ST\C3D\STH 13 (SUPERIOR ST - 7TH ST.).DWG PLOT DATE : 10/17/2014 10:07 AM PLOT BY : GARY COLBERT PLOT NAME : PLOT SCALE : 1 IN:200 FT

5

5



PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	PLAN SHEETS: STH 13 'N'	SHEET 49	E

STA. 459+21'N'
EXISTING 42" X 29" X 64' CPCS
TO REMAIN IN PLACE

STA. 461+00'N'
EXISTING 24" X 66' CPCS
TO REMAIN IN PLACE

PI STA = 469+59.86'N'
Y = 529559.52
X = 822260.37
DELTA = 13°04'17"
D = 4°40'00"
T = 140.66
L = 280.10
R = 1227.77
PC STA = 468+19.20
PT STA = 470+99.30
SE = 6.0%
TRANS. = 204'

STA. 473+89'N'
EXISTING 42" X 60' CPCS
TO REMAIN IN PLACE

PI STA. 479+46.83
Y = 530191.12
X = 822677.95

STA. 485+60'N'
EXISTING 24" X 76' CPCS
TO REMAIN IN PLACE

STA. 485+68'N'
EXISTING 24" X 76' CPCS
TO REMAIN IN PLACE

PT: 467+06.90'N'
PC: 468+19.20'N'
PT: 470+99.30'N'
PI: 478+00.00'N'
PC: 459+82.50'N'
PC: 486+60.40'N'

MILLIGAN RD
HATCHERY RD

465'N'
470'N'
475'N'
480'N'
485'N'
460'N'

N20° 24' 11"E
N33° 28' 11"E
N32° 41' 11"E

STH 13

TEL

STA BACK = 471+10.30
STA AHEAD = 471+94.50'N'

EQUATION

MATCHLINE STA. 457+63'N'

PI STA = 457+36.14'N'
Y = 528368.84
X = 821981.79
DELTA = 19°54'43"
D = 4°00'00"
T = 251.44
L = 497.80
R = 1432.39
PC STA = 454+84.70
PT STA = 459+82.50
SE = 5.7%
TRANS. = 197'

PI STA = 463+46.64'N'
Y = 528981.14
X = 822045.23
DELTA = 14°29'17"
D = 2°00'00"
T = 364.14
L = 724.40
R = 2864.79
PC STA = 459+82.50
PT STA = 467+06.90
SE = 4.0%
TRANS. = 153'

STA. 483+20'N'
EXISTING 24" X 68' CPCS
TO REMAIN IN PLACE

STA. 483+27'N'
EXISTING 24" X 68' CPCS
TO REMAIN IN PLACE

STA. 488+39'N'
EXISTING 48" X 70' CPCS
TO REMAIN IN PLACE

MATCHLINE STA. 488+88'N'

5

5

STA. 504+25'N'
EXISTING 36" X 136' LINED CPCS
PLACE RIPRAP RT

PT: 498+34.90'N'

CHARTER
XCEL GAS
CENTURYLINK
NORVADO

STA. 510+87'N'
EXISTING 24" X 72' LINED CPCS
TO REMAIN IN PLACE

490'N'
495'N'
500'N'
505'N'
510'N'
515'N'

STH 13

N56° 05' 11"E

PORT SUPERIOR RD

STA BACK = 498+34.90
STA AHEAD = 498+30.10'N'

EQUATION

PI STA = 492+55.95'N'
Y = 531416.50
X = 823464.22
DELTA = 23°23'32"
D = 1°59'30"
T = 595.55
L = 1174.50
R = 2876.78
PC STA = 486+60.40
PT STA = 498+34.90
SE = 4.0%
TRANS. = 153'

STA. 499+11'N'
EXISTING 36" X 78' CPCS
TO REMAIN IN PLACE

CHARTER

BAYVIEW RD

END PROJECT
STA. 505+00.00'N'

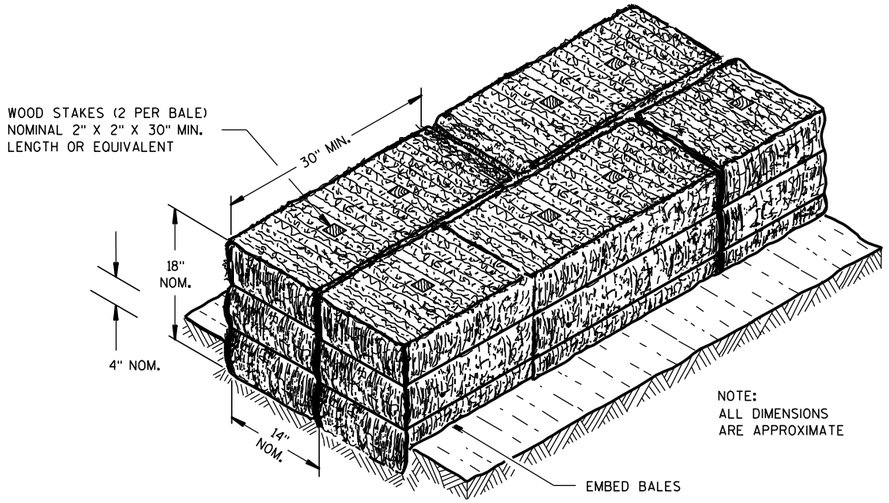
MATCHLINE STA. 488+88'N'

MATCHLINE STA. 518+42'N'

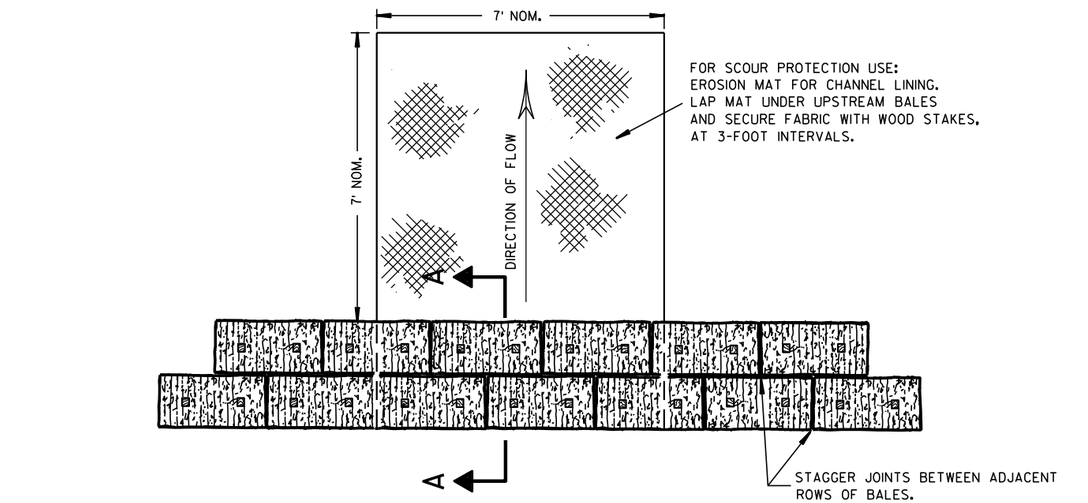
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	PLAN SHEETS: STH 13 'N'	SHEET 50	E

Standard Detail Drawing List

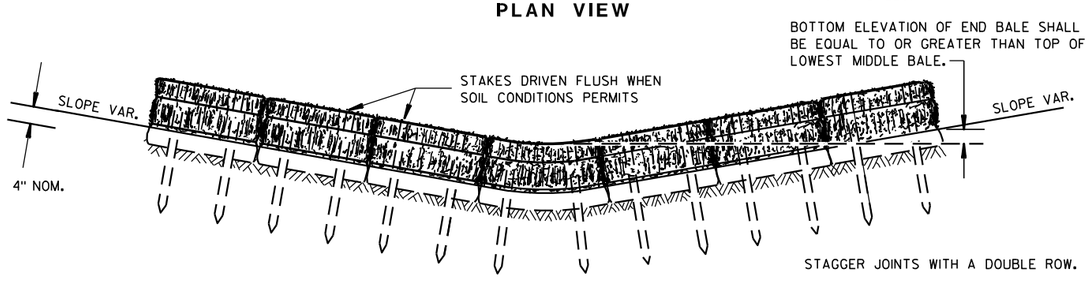
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F08-02	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15D28-02	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY



SECTION A-A



PLAN VIEW



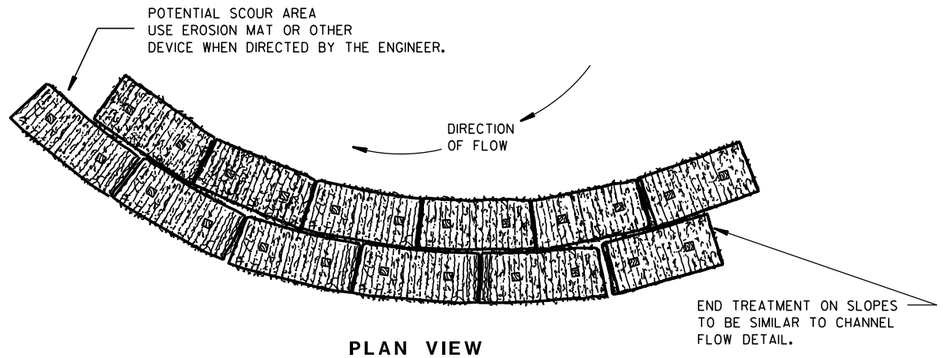
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

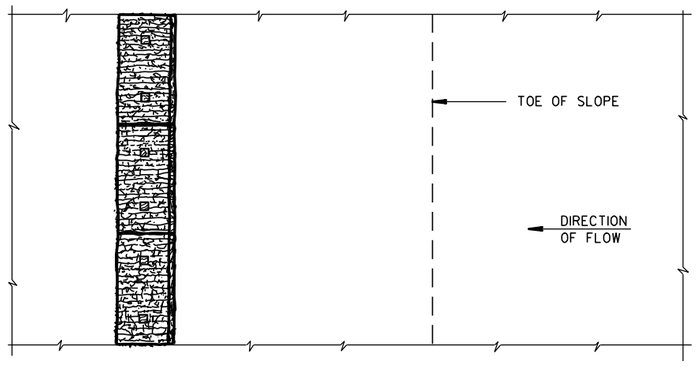
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

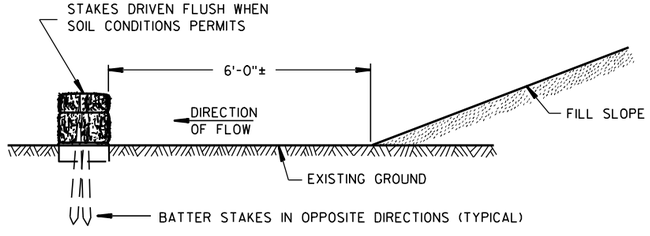


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

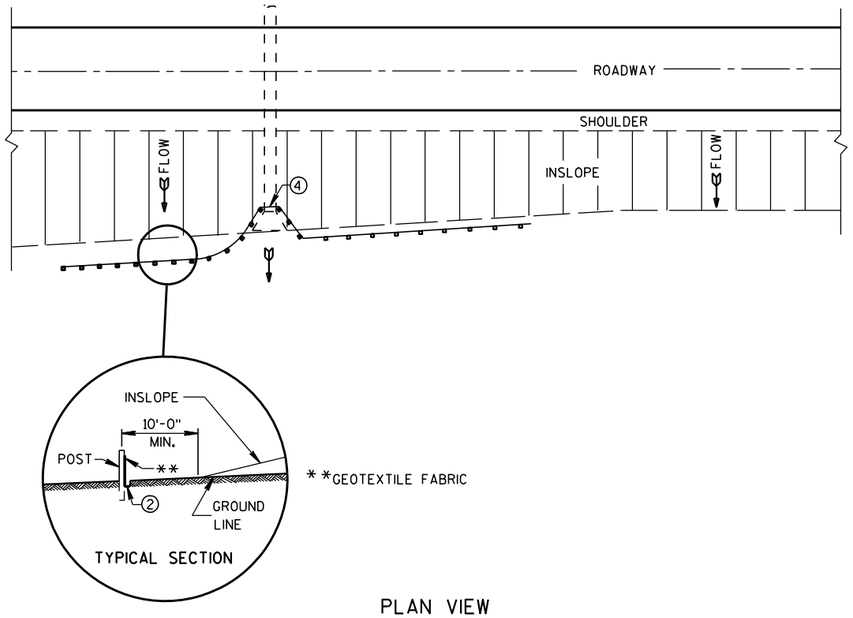
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

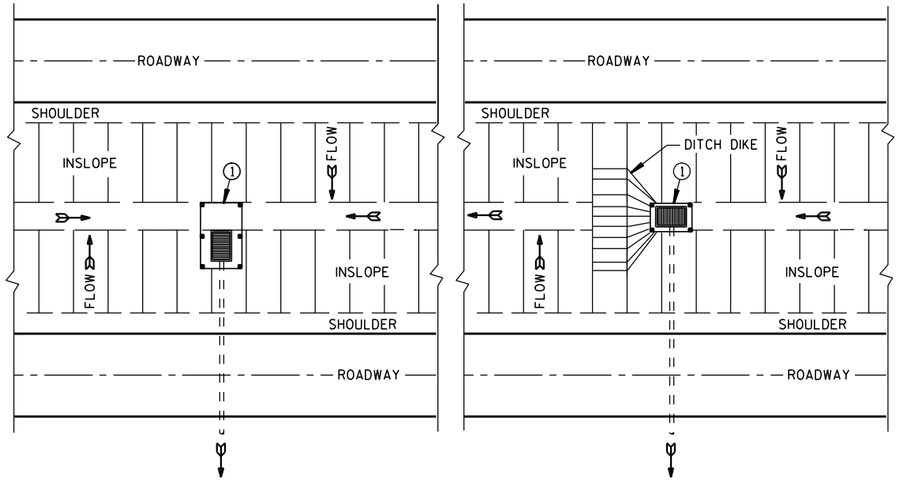
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



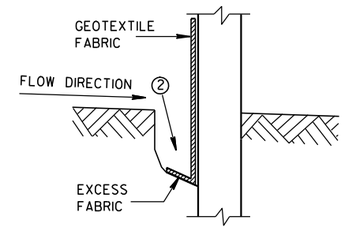
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

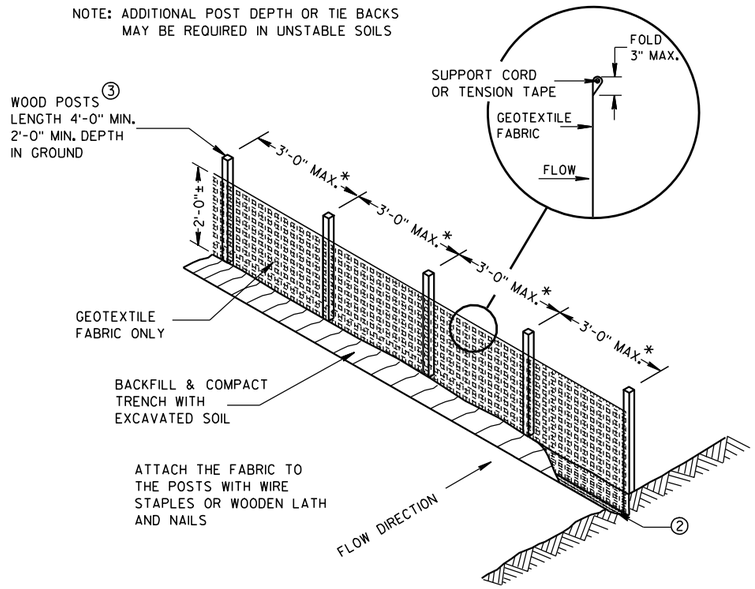
GENERAL NOTES

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

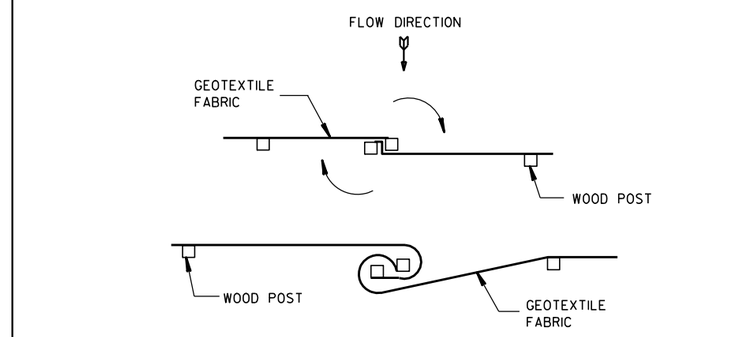
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



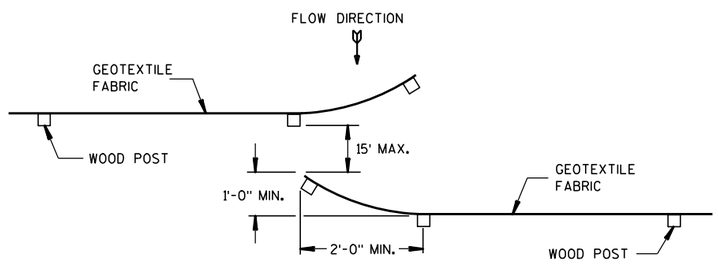
TRENCH DETAIL



SILT FENCE

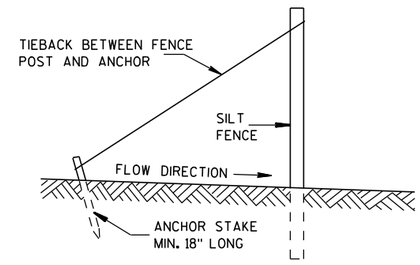


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

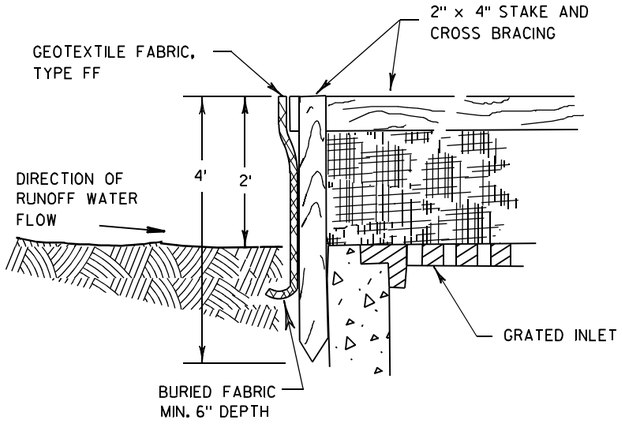
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

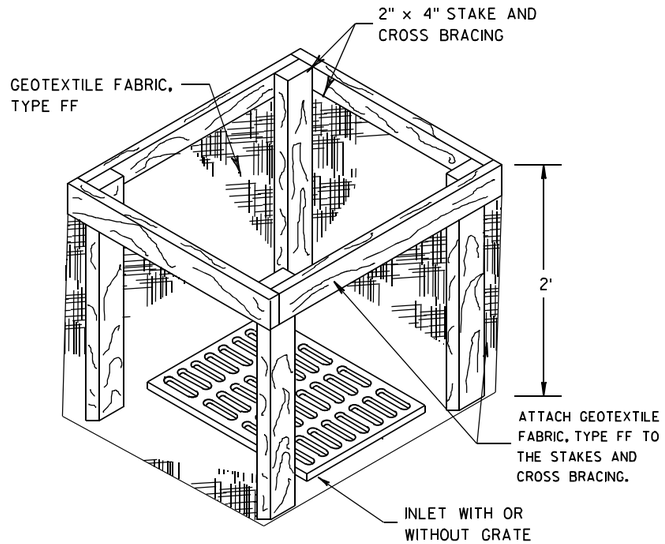
6

S.D.D. 8 E 9-6

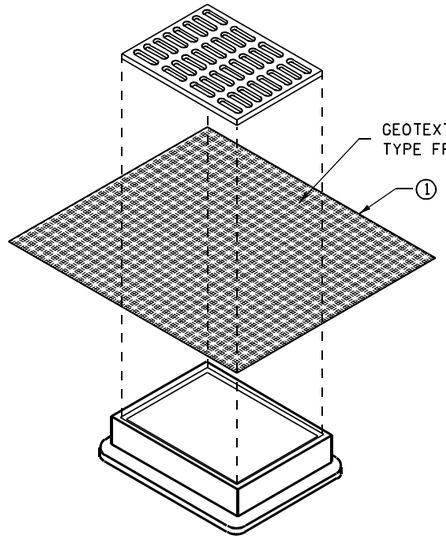
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S.D.D. 8 E 9-6



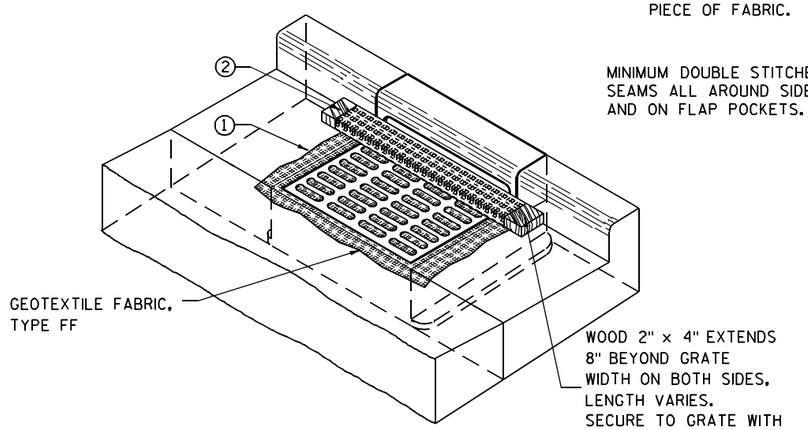


INLET PROTECTION, TYPE A

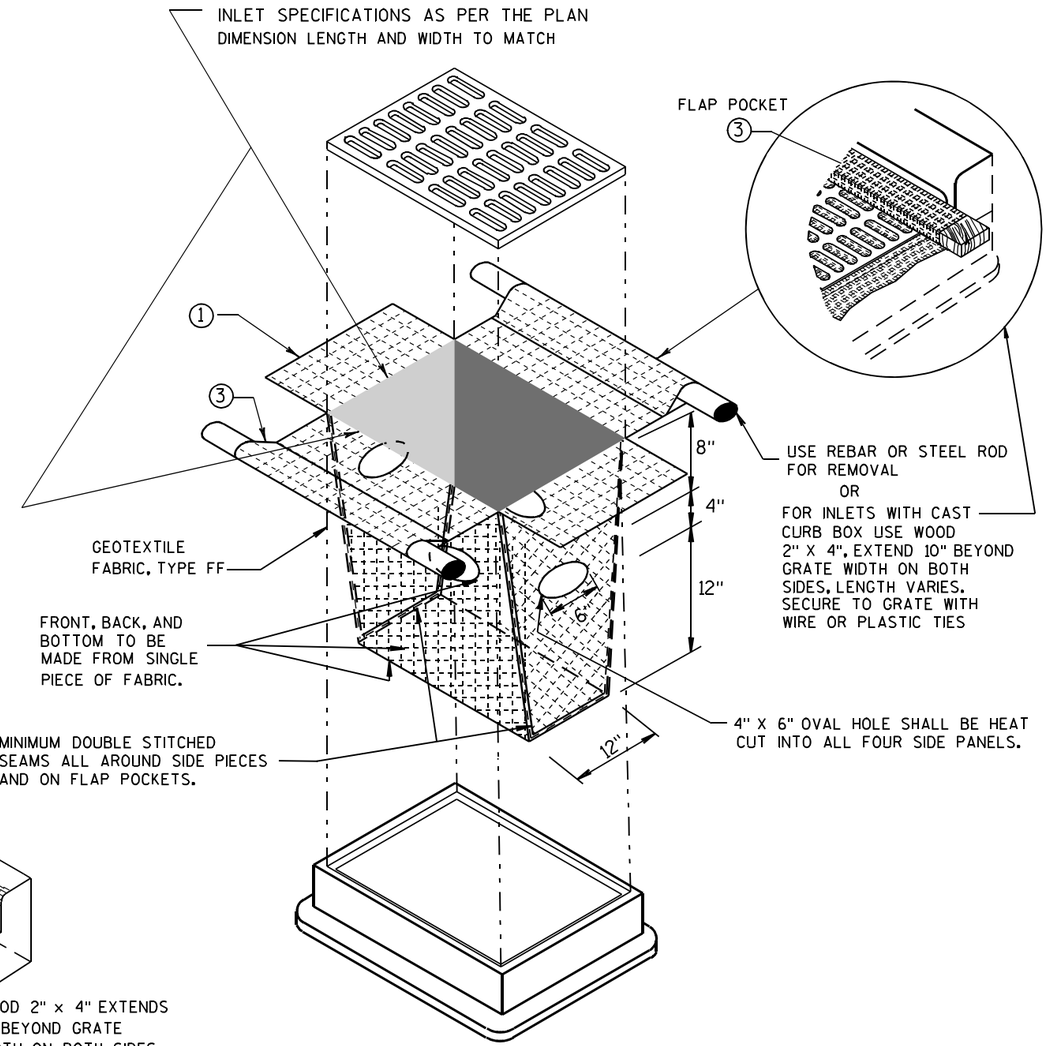


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 E 10-2

METAL APRON ENDWALLS

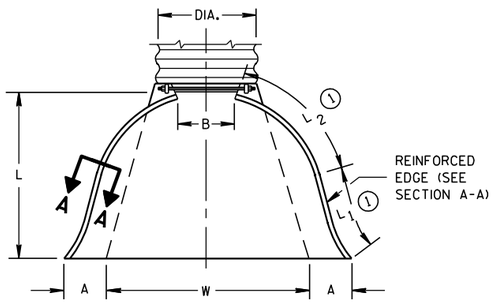
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

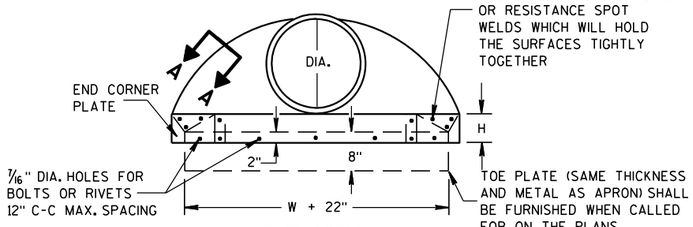
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

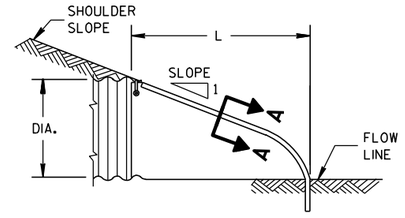
*MINIMUM
**MAXIMUM



PLAN VIEW

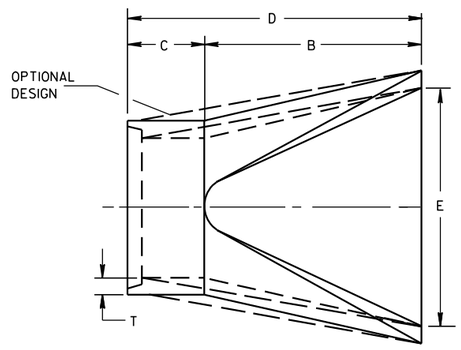


END VIEW

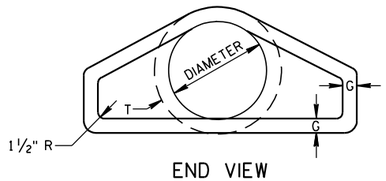


SIDE ELEVATION

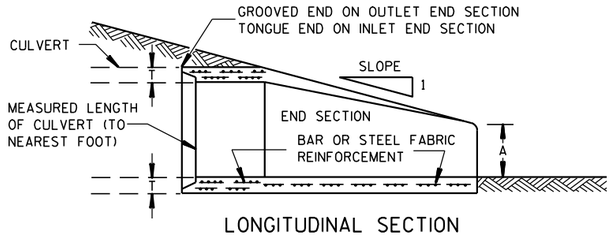
METAL ENDWALLS



PLAN

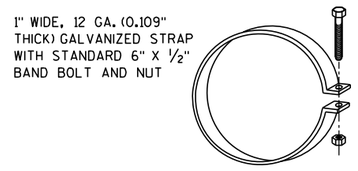


END VIEW



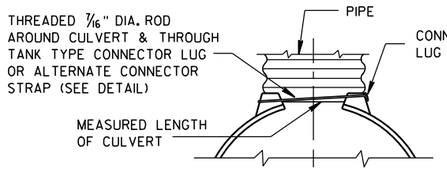
LONGITUDINAL SECTION

CONCRETE ENDWALLS

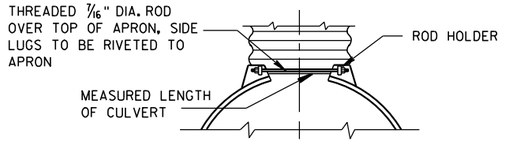


ALTERNATE FOR TYPE 1 CONNECTION

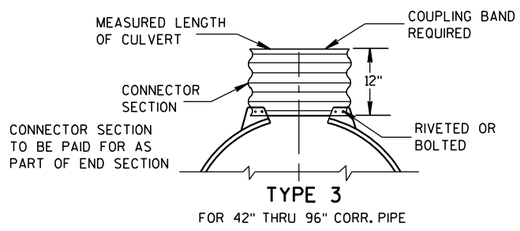
END SECTION CONNECTOR STRAP



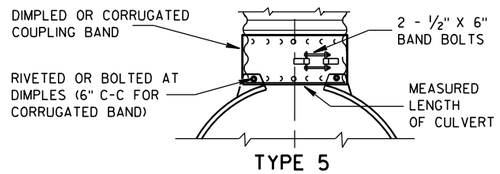
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

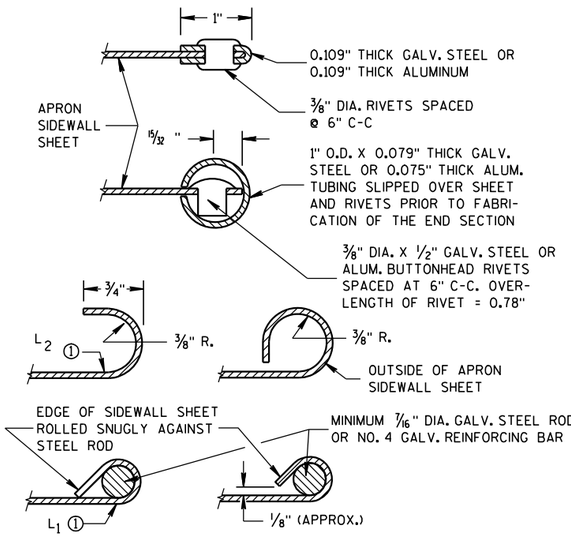
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

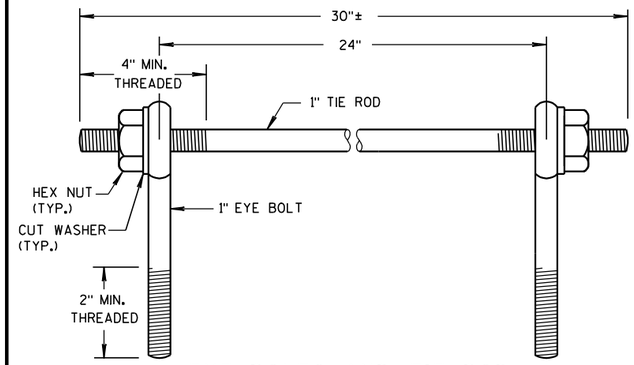
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

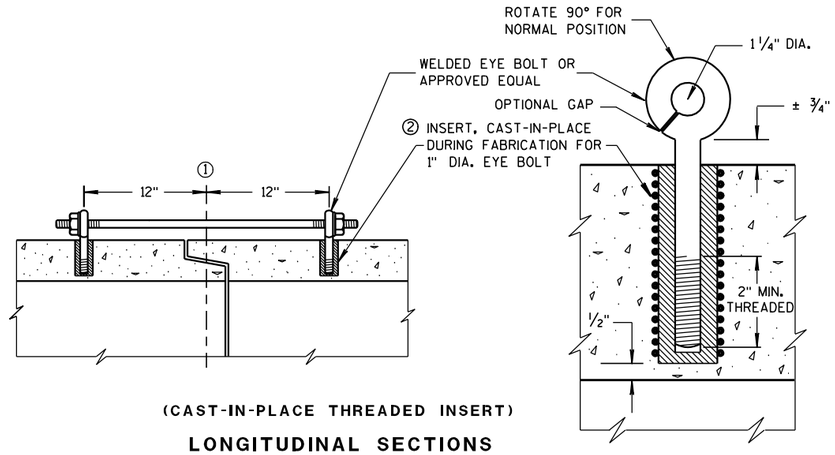
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

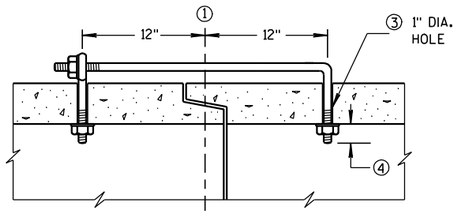
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

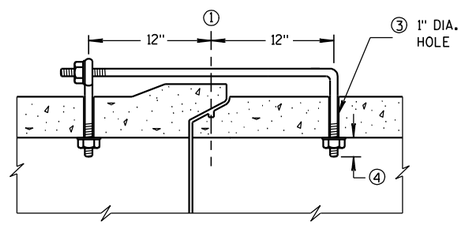
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

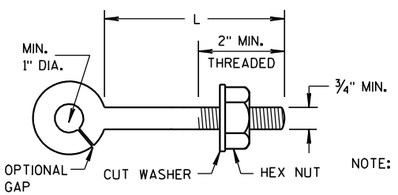


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

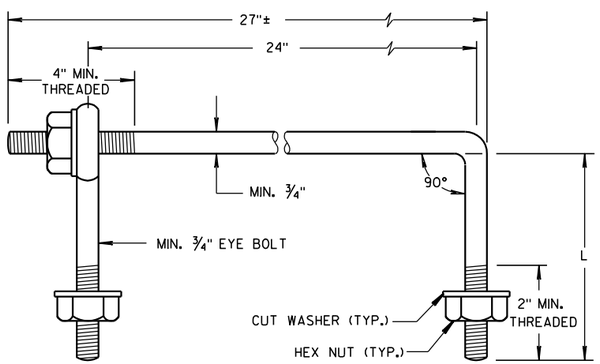
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

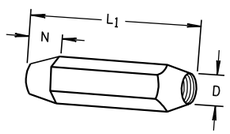
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

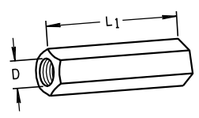
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



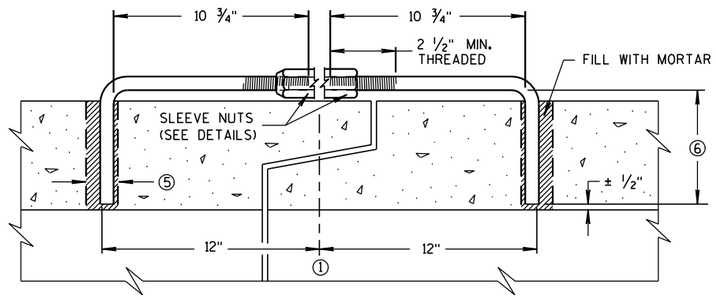
TAPERED



PLAIN

RIGHT AND LEFT THREADS

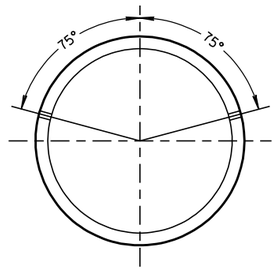
SLEEVE NUTS



LONGITUDINAL SECTION

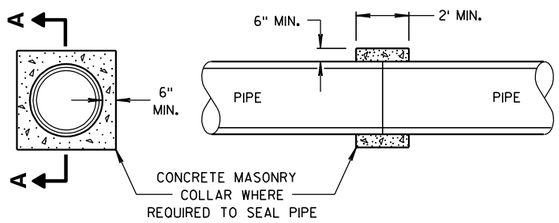
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

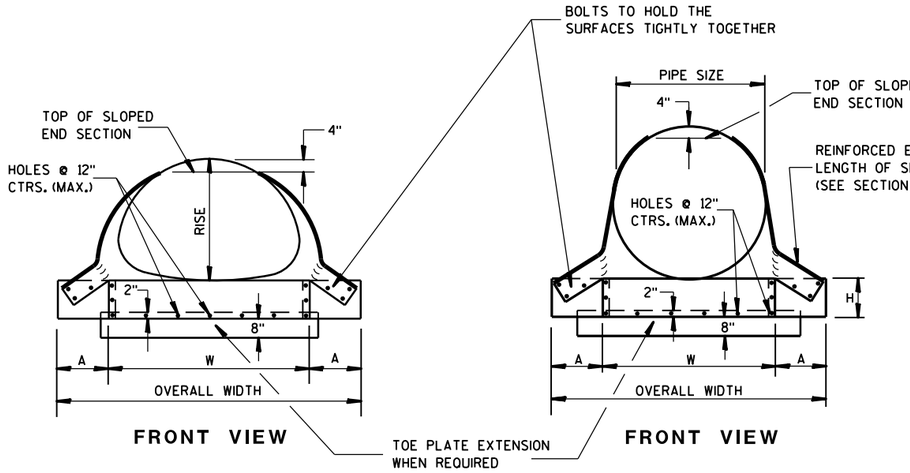
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 F 4-7

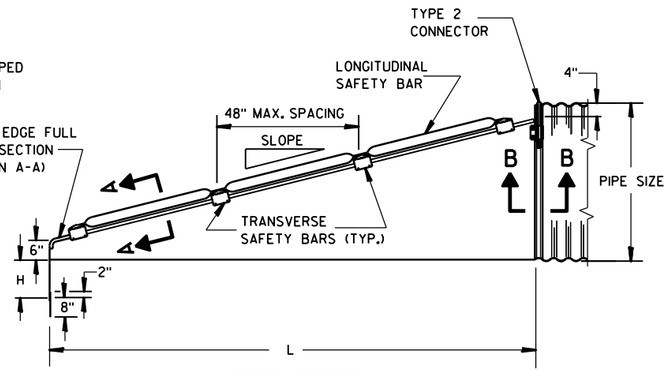
6

S.D.D. 8 F 4-7



FRONT VIEW

FRONT VIEW



SIDE VIEW
(48" SIZE ILLUSTRATED)

GENERAL NOTES

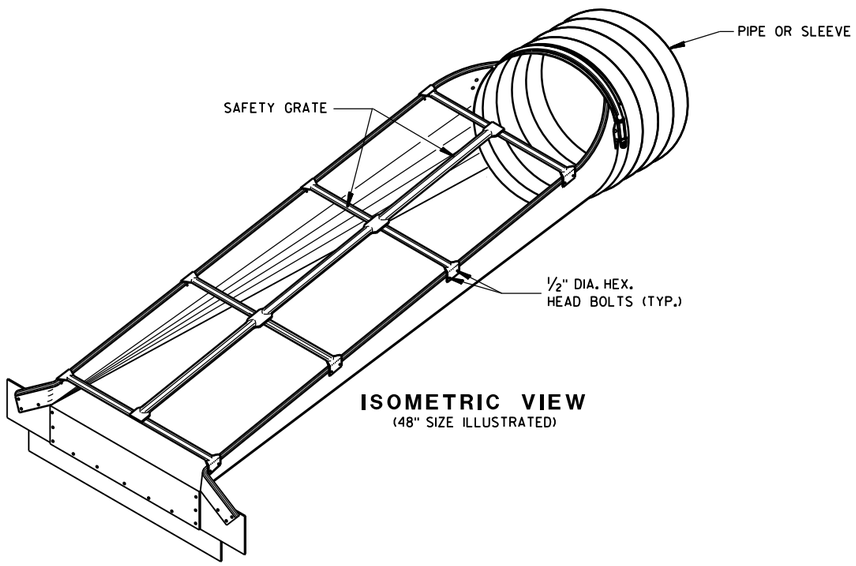
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

SAFETY GRATES SHALL BE FABRICATED FROM 3-INCH DIAMETER GALVANIZED PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL. THE LONGITUDINAL BAR SHALL BE WELDED TO THE TRANSVERSE BARS WHERE THE BARS CROSS. THE NUMBER OF TRANSVERSE BARS REQUIRED WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

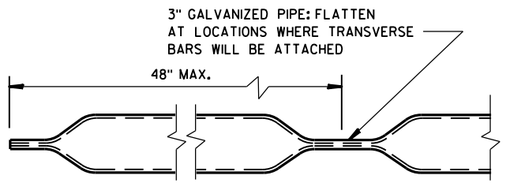
SLOPED STEEL ENDWALLS LOCATED AT THE ENDS OF CONCRETE CULVERT PIPE SHALL BE FURNISHED WITH STEEL ADAPTER SLEEVES.

STEEL APRON ENDWALLS FOR CULVERT PIPE CROSS DRAINS

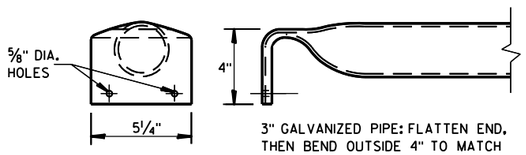
PIPE DIA. (IN.)	MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
36	.109	12	12	9	42	66	4:1	104	6:1	156
42	.109	12	16	12	48	80	4:1	128	6:1	192
48	.109	12	16	12	54	86	4:1	152	6:1	228
54	.109	12	16	12	60	92	4:1	176	6:1	264
60	.109	12	16	12	66	98	4:1	200	6:1	300



ISOMETRIC VIEW
(48" SIZE ILLUSTRATED)



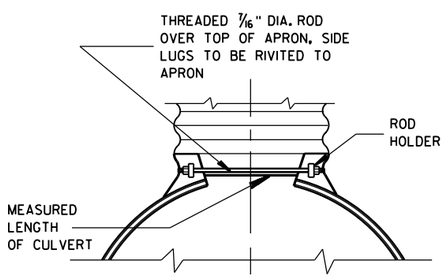
LONGITUDINAL SAFETY BAR



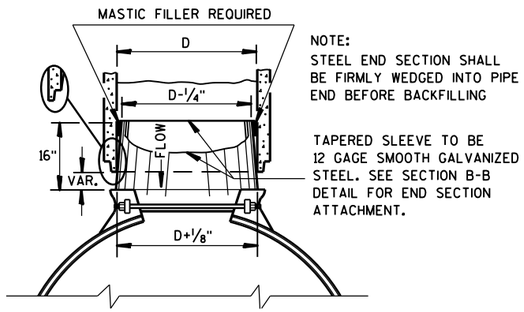
TRANSVERSE SAFETY BAR

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS

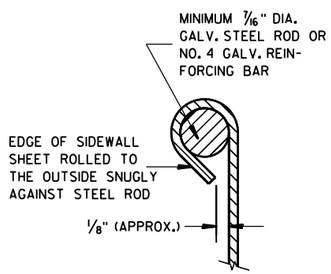
EQUIV. DIA. (IN.)	INCHES		MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	SPAN	RISE	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
30	35	24	.079	14	12	9	41	65	4:1	56	6:1	84
36	42	29	.109	12	12	9	48	72	4:1	76	6:1	114
42	49	33	.109	12	16	12	55	87	4:1	92	6:1	138
48	57	38	.109	12	16	12	63	95	4:1	112	6:1	168
54	64	43	.109	12	16	12	70	102	4:1	132	6:1	198
60	71	47	.109	12	16	12	77	109	4:1	148	6:1	222



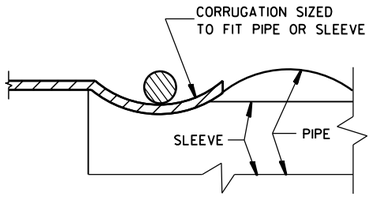
TYPE 2 CONNECTOR DETAIL



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



SECTION A-A



SECTION B-B

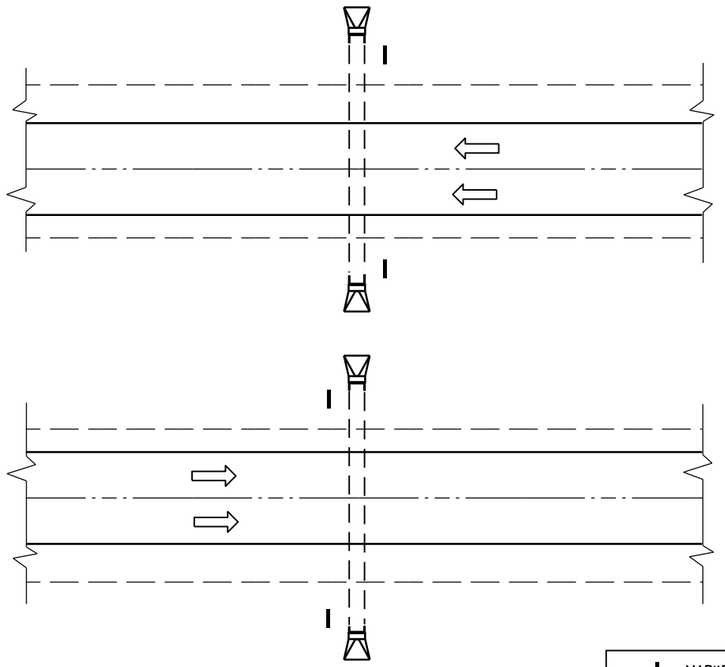
STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

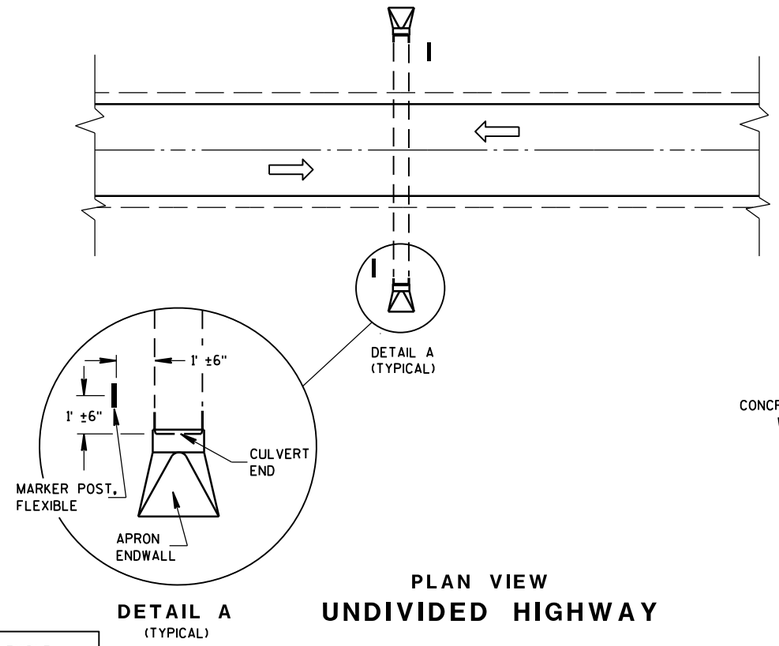
6

S.D.D. 8 F 8-2



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

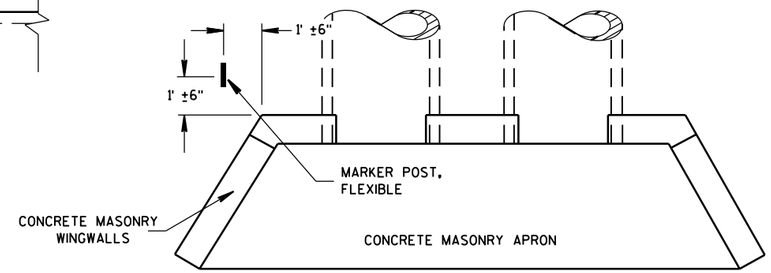
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

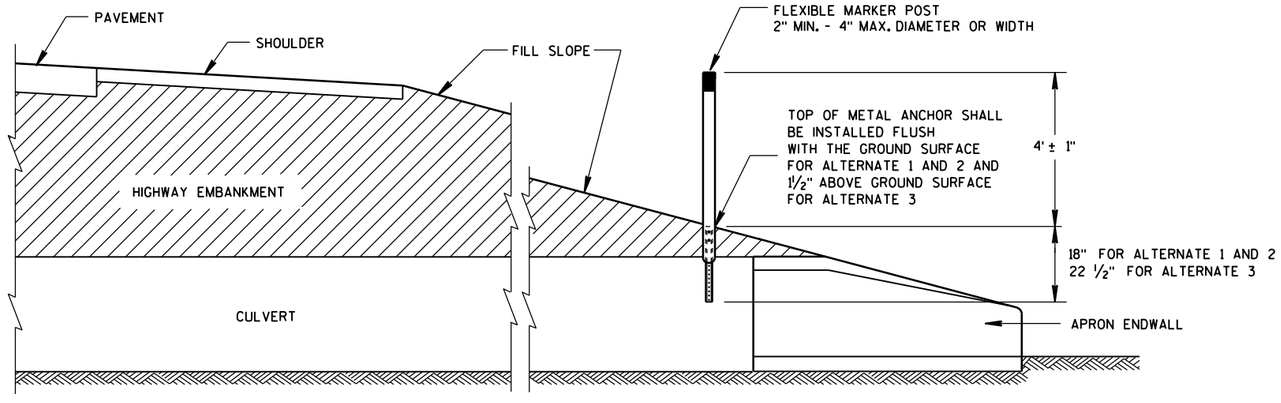
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

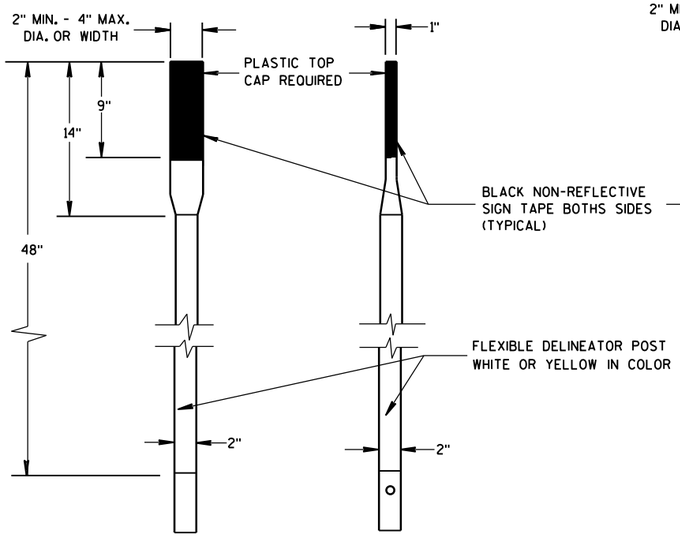
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

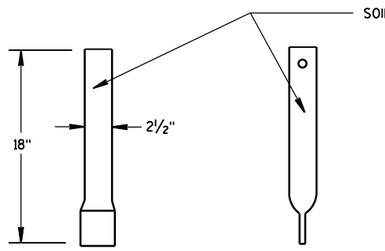
6

S.D.D. 15 A 3-2a

6

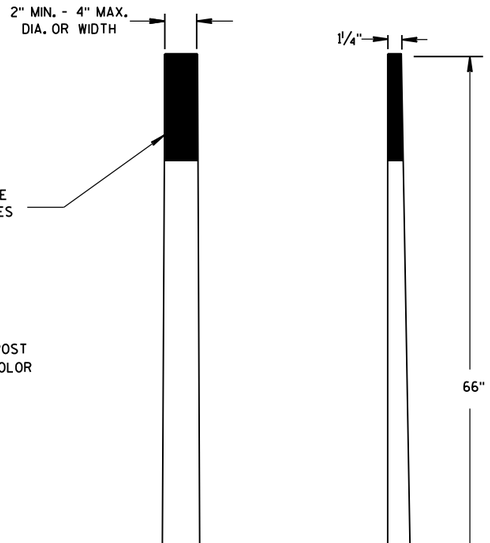
S.D.D. 15 A 3-2a





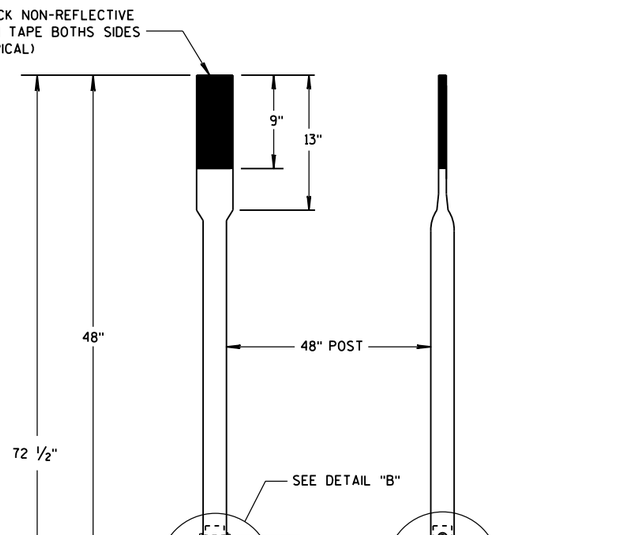
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

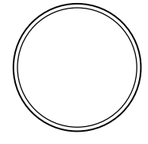
ALTERNATE 2



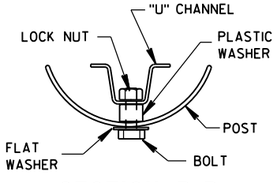
FRONT VIEW SIDE VIEW

ALTERNATE 3

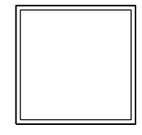
FLEXIBLE MARKER POSTS



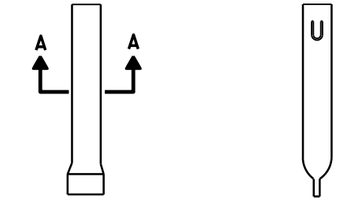
SECTION A-A



SECTION B-B

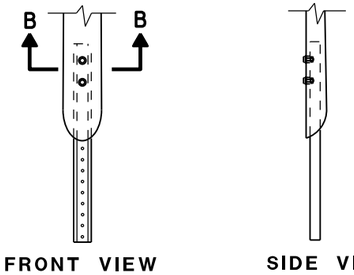


SECTION C-C



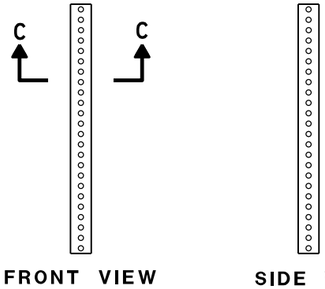
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

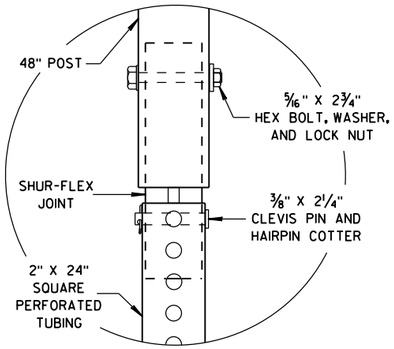
ALTERNATE 2



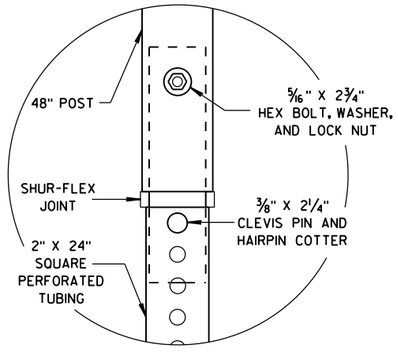
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



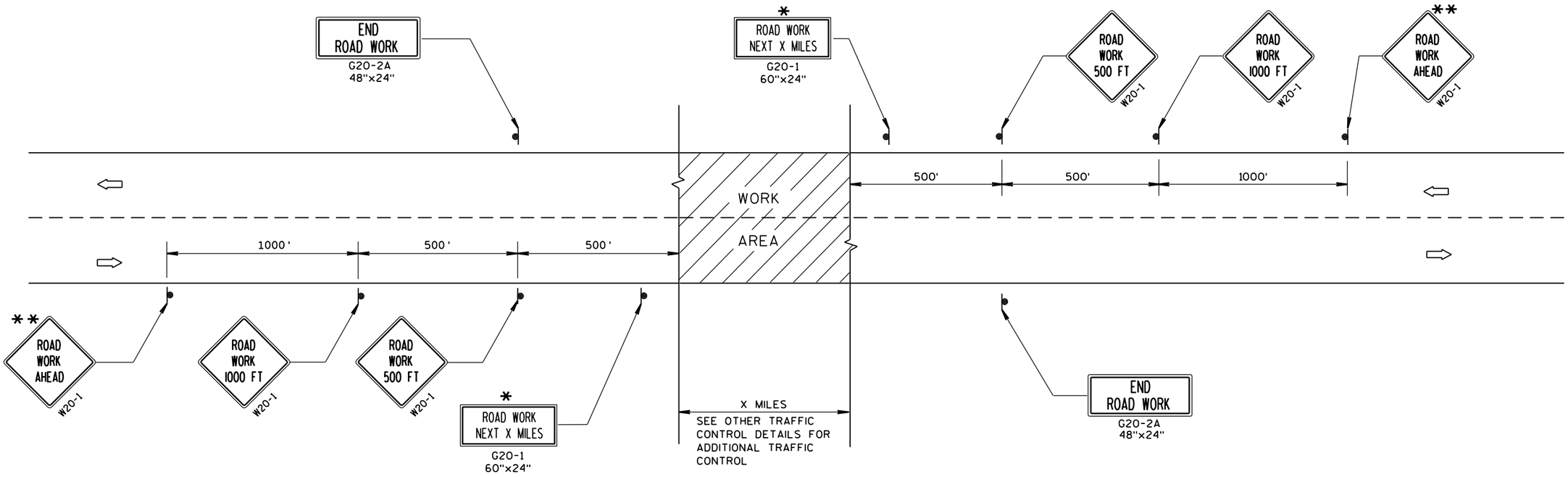
DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6
S.D.D. 15 A 3-2b



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

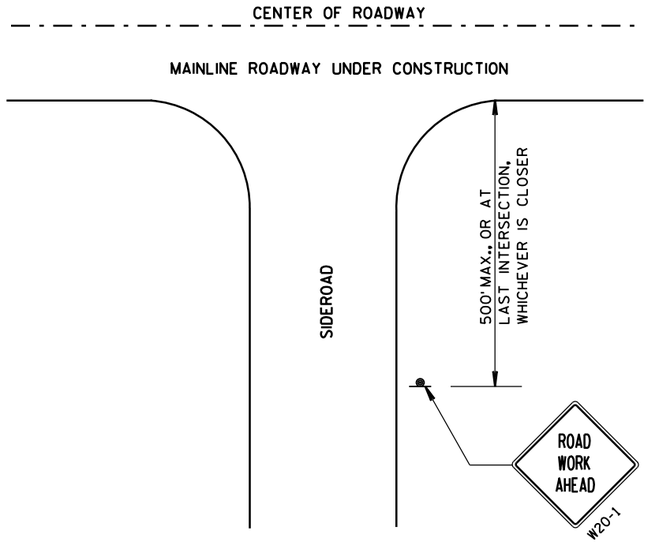
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 4-2

6

S.D.D. 15 C 4-2

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

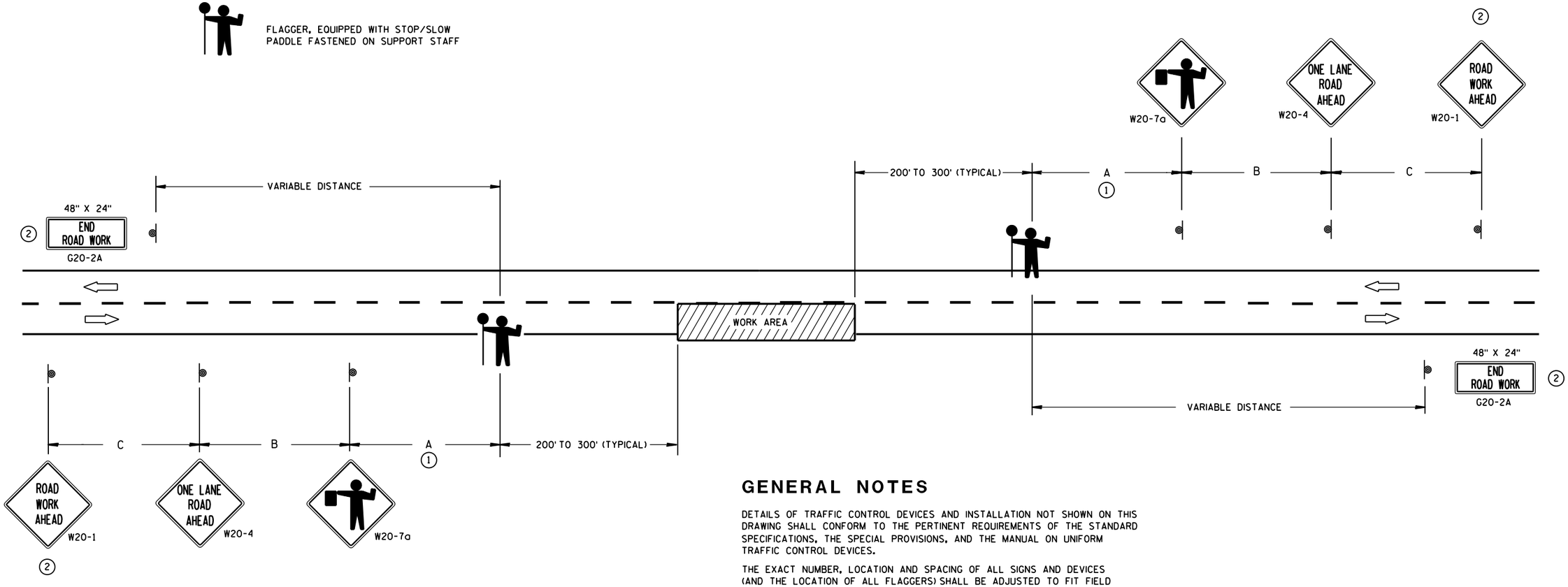
SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 15 C 12-4

6

S.D.D. 15 C 12-4

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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.

W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

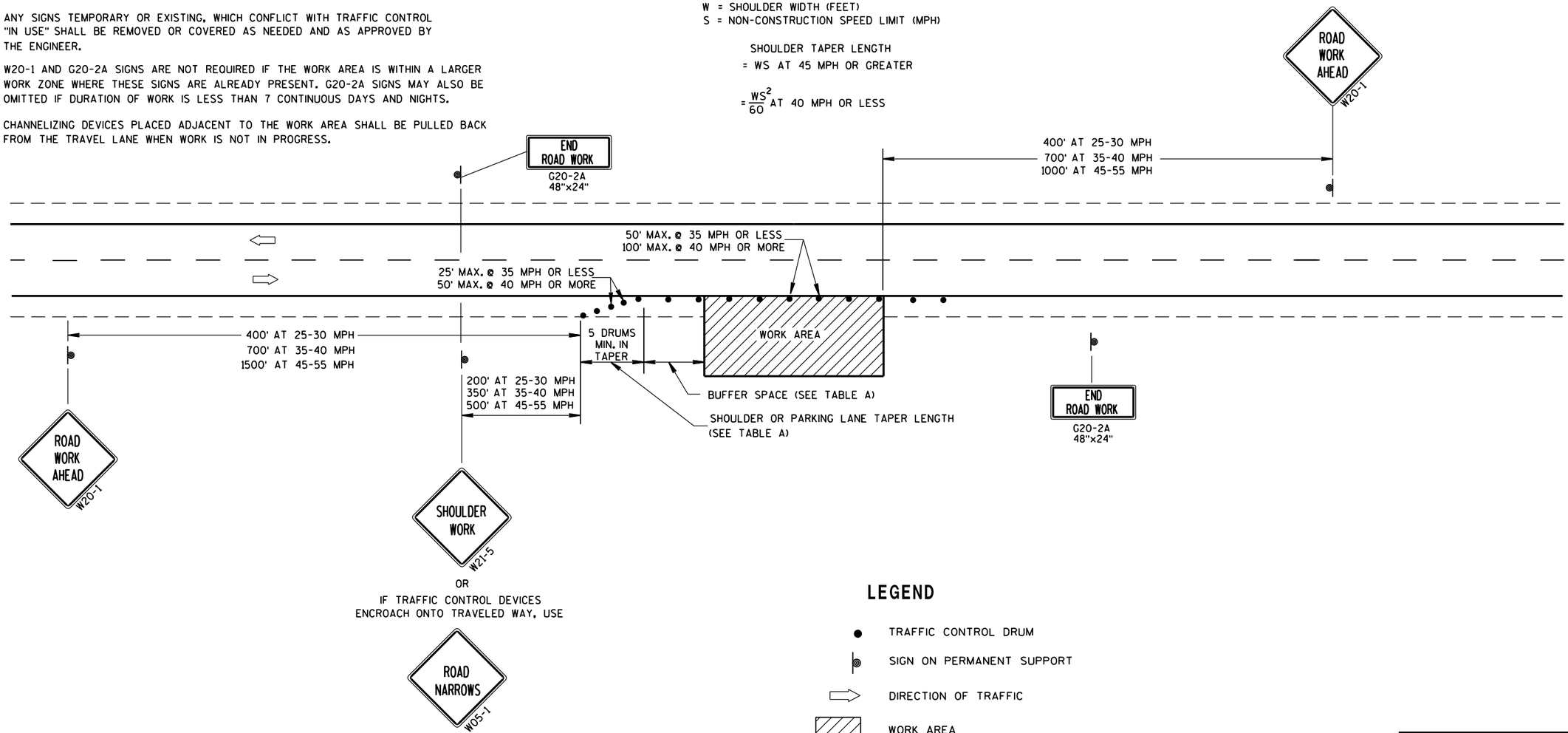
TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

SHOULDER TAPER LENGTH
= WS AT 45 MPH OR GREATER

$= \frac{WS^2}{60}$ AT 40 MPH OR LESS



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 D 28-2

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\090101_EW.DWG
PLOT DATE : 9/3/2008 9:44 AM
PLOT BY : GARY COLBERT
PLOT NAME : ----------
WISDOT/CADDS SHEET 49

EARTHWORK - TEMPORARY WIDENING FOR CROSS DRAIN AT STA. 44+99'S' LT

STATION (LT)	CUT END AREA	FILL END AREA	CUT RAW VOLUME	FILL RAW VOLUME	(ADJUSTED) FILL RAW VOLUME * 1.25	CUMULATIVE CUT VOLUME	(ADJUSTED) CUMULATIVE FILL VOLUME	MASS ORDINATE
	SF	SF	CY	CY	9	CY	CY	CY
44+46	3.3	0.7	-	-	-	-	-	-
44+50	3.3	1.3	0	0	0	0	0	0
44+84	3.2	11.0	4	8	10	5	10	-5
44+99	3.1	17.6	2	8	10	6	20	-13
45+16	3.2	16.6	2	11	13	8	33	-25
45+50	3.5	0.3	4	11	13	13	47	-34
45+60	3.6	0.0	1	0	0	14	47	-33
TOTALS			14	37	47			

EARTHWORK - TEMP. WIDENING REMOVAL FOR CROSS DRAIN AT STA. 44+99'S' LT

STATION (LT)	CUT END AREA	FILL END AREA	CUT RAW VOLUME	FILL RAW VOLUME	(ADJUSTED) FILL RAW VOLUME * 1.25	CUMULATIVE CUT VOLUME	(ADJUSTED) CUMULATIVE FILL VOLUME	MASS ORDINATE
	SF	SF	CY	CY	9	CY	CY	CY
44+46	1.9	0.0	-	-	-	-	-	-
44+50	2.7	0.0	0	0	0	0	0	0
44+84	14.5	0.0	11	0	0	11	0	11
44+99	21.1	0.0	10	0	0	21	0	21
45+16	20.1	0.0	13	0	0	34	0	34
45+50	1.6	0.0	14	0	0	48	0	48
45+60	0.6	0.0	0	0	0	48	0	48
TOTALS			48	0	0			

EARTHWORK - TEMPORARY WIDENING FOR CROSS DRAIN AT STA. 44+99'S' RT

STATION (RT)	CUT END AREA	FILL END AREA	CUT RAW VOLUME	FILL RAW VOLUME	(ADJUSTED) FILL RAW VOLUME * 1.25	CUMULATIVE CUT VOLUME	(ADJUSTED) CUMULATIVE FILL VOLUME	MASS ORDINATE
	SF	SF	CY	CY	9	CY	CY	CY
44+40	3.4	0.0	-	-	-	-	-	-
44+50	3.4	0.7	1	0	0	1	0	1
44+82	3.5	9.1	4	6	7	5	7	-2
44+99	3.6	7.4	2	5	6	8	14	-6
45+00	3.6	7.3	0	0	0	8	14	-7
45+14	3.5	7.3	2	4	5	10	19	-9
45+50	3.6	1.3	5	6	7	14	26	-12
45+53	3.6	0.5	0	0	0	15	26	-12
TOTALS			15	21	26			

EARTHWORK - TEMP. WIDENING REMOVAL FOR CROSS DRAIN AT STA. 44+99'S' RT

STATION (RT)	CUT END AREA	FILL END AREA	CUT RAW VOLUME	FILL RAW VOLUME	(ADJUSTED) FILL RAW VOLUME * 1.25	CUMULATIVE CUT VOLUME	(ADJUSTED) CUMULATIVE FILL VOLUME	MASS ORDINATE
	SF	SF	CY	CY	9	CY	CY	CY
44+40	1.1	0.0	-	-	-	-	-	-
44+50	2.2	0.0	1	0	0	1	0	1
44+82	12.3	0.0	9	0	0	9	0	9
44+99	10.6	0.0	7	0	0	16	0	16
45+00	10.4	0.0	0	0	0	17	0	17
45+14	10.5	0.0	5	0	0	22	0	22
45+50	2.4	0.0	9	0	0	31	0	31
45+53	1.5	0.0	0	0	0	31	0	31
TOTALS			31	0	0			

EARTHWORK - TEMPORARY WIDENING FOR CROSS DRAIN AT STA. 67+22'S' LT

STATION (LT)	CUT END AREA	FILL END AREA	CUT RAW VOLUME	FILL RAW VOLUME	(ADJUSTED) FILL RAW VOLUME * 1.25	CUMULATIVE CUT VOLUME	(ADJUSTED) CUMULATIVE FILL VOLUME	MASS ORDINATE
	SF	SF	CY	CY	9	CY	CY	CY
67+00	4.6	0.1	-	-	-	-	-	-
67+12	4.2	0.7	2	0	0	2	0	2
67+43	4.2	18.7	5	11	14	7	14	-7
67+50	4.2	9.2	1	4	5	8	19	-11
67+65	4.2	3.4	2	4	4	10	23	-13
67+92	4.4	0.0	4	2	2	15	25	-11
TOTALS			15	20	25			

EARTHWORK - TEMP. WIDENING REMOVAL FOR CROSS DRAIN AT STA. 67+22'S' LT

STATION (LT)	CUT END AREA	FILL END AREA	CUT RAW VOLUME	FILL RAW VOLUME	(ADJUSTED) FILL RAW VOLUME * 1.25	CUMULATIVE CUT VOLUME	(ADJUSTED) CUMULATIVE FILL VOLUME	MASS ORDINATE
	SF	SF	CY	CY	9	CY	CY	CY
67+00	1.5	0.0	-	-	-	-	-	-
67+12	2.8	0.0	1	0	0	1	0	1
67+43	21.1	0.0	14	0	0	15	0	15
67+50	11.7	0.0	4	0	0	19	0	19
67+65	5.6	0.0	5	0	0	24	0	24
67+92	0.8	0.0	3	0	0	27	0	27
TOTALS			27	0	0			

EARTHWORK - TEMPORARY WIDENING FOR CROSS DRAIN AT STA. 67+22'S' RT

STATION (RT)	CUT END AREA	FILL END AREA	CUT RAW VOLUME	FILL RAW VOLUME	(ADJUSTED) FILL RAW VOLUME * 1.25	CUMULATIVE CUT VOLUME	(ADJUSTED) CUMULATIVE FILL VOLUME	MASS ORDINATE
	SF	SF	CY	CY	9	CY	CY	CY
66+40	3.3	1.1	-	-	-	-	-	-
66+50	3.3	2.2	1	1	1	1	1	0
66+78	3.2	7.5	3	5	6	5	7	-2
66+85	3.2	8.5	1	2	3	5	10	-4
67+00	3.0	7.3	2	4	5	7	15	-8
67+31	2.6	4.3	3	7	8	10	23	-13
67+50	2.4	3.6	2	3	3	12	27	-15
68+00	2.1	1.4	4	5	6	16	33	-16
68+07	2.2	1.0	1	0	0	17	33	-16
TOTALS			17	26	33			

EARTHWORK - TEMP. WIDENING REMOVAL FOR CROSS DRAIN AT STA. 67+22'S' RT

STATION (RT)	CUT END AREA	FILL END AREA	CUT RAW VOLUME	FILL RAW VOLUME	(ADJUSTED) FILL RAW VOLUME * 1.25	CUMULATIVE CUT VOLUME	(ADJUSTED) CUMULATIVE FILL VOLUME	MASS ORDINATE
	SF	SF	CY	CY	9	CY	CY	CY
66+40	2.1	0.0	-	-	-	-	-	-
66+50	3.7	0.0	1	0	0	1	0	1
66+78	10.6	0.0	7	0	0	8	0	8
66+85	11.7	0.0	3	0	0	11	0	11
67+00	10.7	0.0	6	0	0	18	0	18
67+31	8.1	0.0	11	0	0	28	0	28
67+50	6.9	0.0	5	0	0	34	0	34
68+00	3.3	0.0	9	0	0	43	0	43
68+07	2.5	0.0	1	0	0	44	0	44
TOTALS			44	0	0			

EARTHWORK - TEMPORARY WIDENING FOR CROSS DRAIN AT STA. 291+69'S' LT

STATION (LT)	CUT END AREA	FILL END AREA	CUT RAW VOLUME	FILL RAW VOLUME	(ADJUSTED) FILL RAW VOLUME * 1.25	CUMULATIVE CUT VOLUME	(ADJUSTED) CUMULATIVE FILL VOLUME	MASS ORDINATE
	SF	SF	CY	CY	9	CY	CY	CY
291+47	4.4	1.6	-	-	-	-	-	-
291+50	4.4	2.2	0	0	0	0	0	0
291+66	4.4	4.1	3	2	2	3	3	0
291+69	4.4	10.3	0	1	1	4	4	0
291+92	4.4	0.2	4	4	6	7	9	-2
291+96	4.4	0.1	1	0	0	8	9	-1
TOTALS			8	7	9			

EARTHWORK - TEMP. WIDENING REMOVAL FOR CROSS DRAIN AT STA. 291+69'S' LT

STATION (LT)	CUT END AREA	FILL END AREA	CUT RAW VOLUME	FILL RAW VOLUME	(ADJUSTED) FILL RAW VOLUME * 1.25	CUMULATIVE CUT VOLUME	(ADJUSTED) CUMULATIVE FILL VOLUME	MASS ORDINATE
	SF	SF	CY	CY	9	CY	CY	CY
291+47	3.5	0.0	-	-	-	-	-	-
291+50	4.2	0.0	0	0	0	0	0	0
291+66	6.2	0.0	3	0	0	4	0	4
291+69	12.3	0.0	1	0	0	5	0	5
291+92	2.2	0.0	6	0	0	11	0	11
291+96	1.9	0.0	0	0	0	11	0	11
TOTALS			11	0	0			

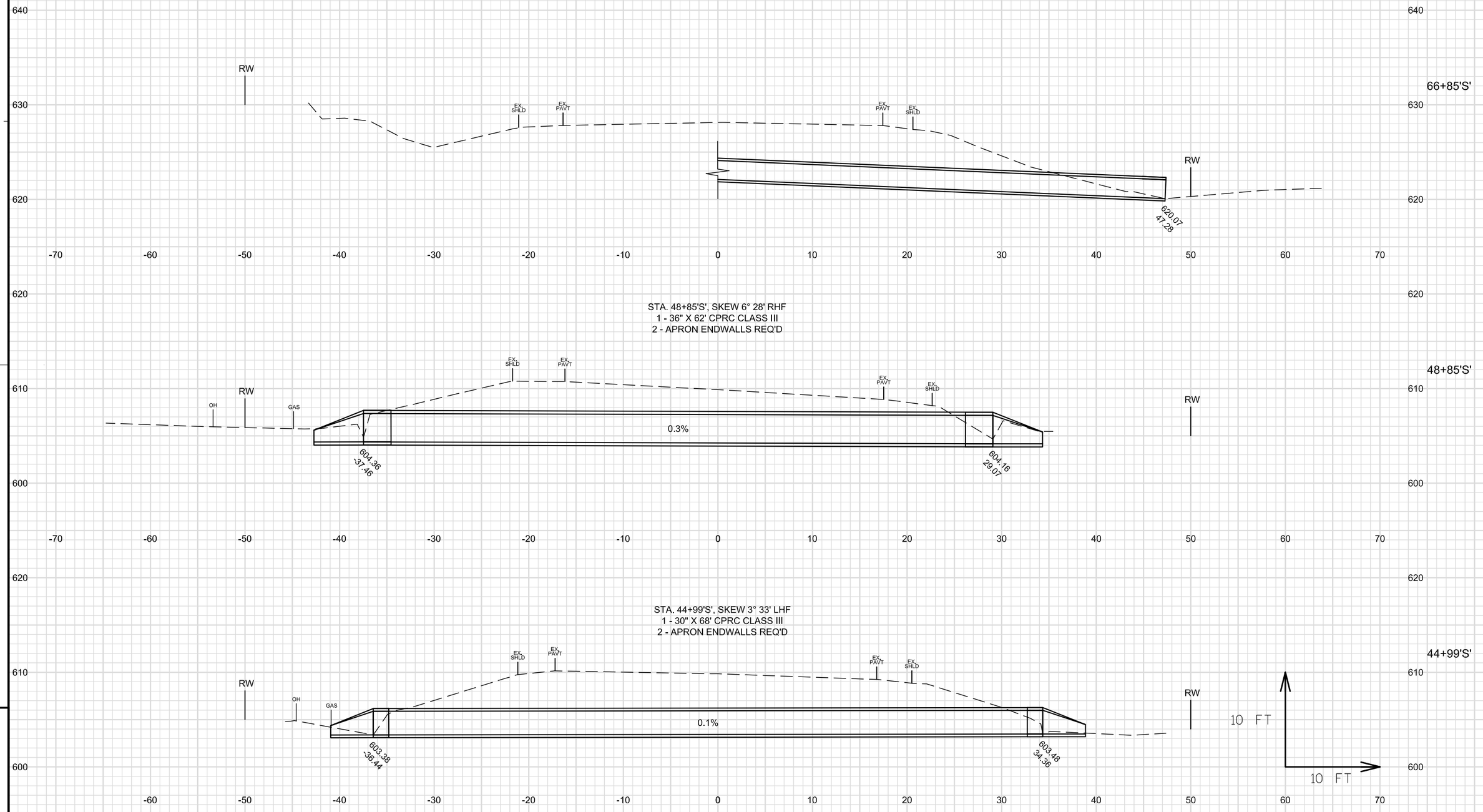
EARTHWORK - TEMPORARY WIDENING FOR CROSS DRAIN AT STA. 291+69'S' RT

STATION (RT)	CUT END AREA	FILL END AREA	CUT RAW VOLUME	FILL RAW VOLUME	(ADJUSTED) FILL RAW VOLUME * 1.25	CUMULATIVE CUT VOLUME	(ADJUSTED) CUMULATIVE FILL VOLUME	MASS ORDINATE
	SF	SF	CY	CY	9	CY	CY	CY
291+20	3.0	0.2	-	-	-	-	-	-
291+47	2.9	1.0	3	1	1	3	1	2
291+50	2.8	1.0	0	0	0	3	1	2
291+69	2.7	0.8	2	1	1	5	2	4
291+88	2.6	1.4	2	1	1	7	3	4
292+00	2.6	0.9	1	1	1	8	3	5
292+15	2.7	0.2	1	0	0	10	4	6
TOTALS			10	3	4			

EARTHWORK - TEMP. WIDENING REMOVAL FOR CROSS DRAIN AT STA. 291+69'S' RT

STATION (RT)	CUT END AREA	FILL END AREA	CUT RAW VOLUME	FILL RAW VOLUME	(ADJUSTED) FILL RAW VOLUME * 1.25	CUMULATIVE CUT VOLUME	(ADJUSTED) CUMULATIVE FILL VOLUME	MASS ORDINATE
	SF	SF	CY	CY	9	CY	CY	CY
291+20	1.6	0.0	-	-	-	-	-	-
291+47	4.1	0.0	3	0	0	3	0	3
291+50	4.1	0.0	0	0	0	3	0	3
291+69	4.0	0.0	3	0	0	6	0	6
291+88	4.7	0.0	3	0	0	9	0	9
292+00	3.6	0.0	2	0	0	11	0	11
292+15	1.9	0.0	2	0	0	13	0	13
TOTALS			13	0	0			

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PLOT DATE : 9/3/2008 9:44 AM
PLOT BY : GARY COLBERT
PLOT NAME : ----------
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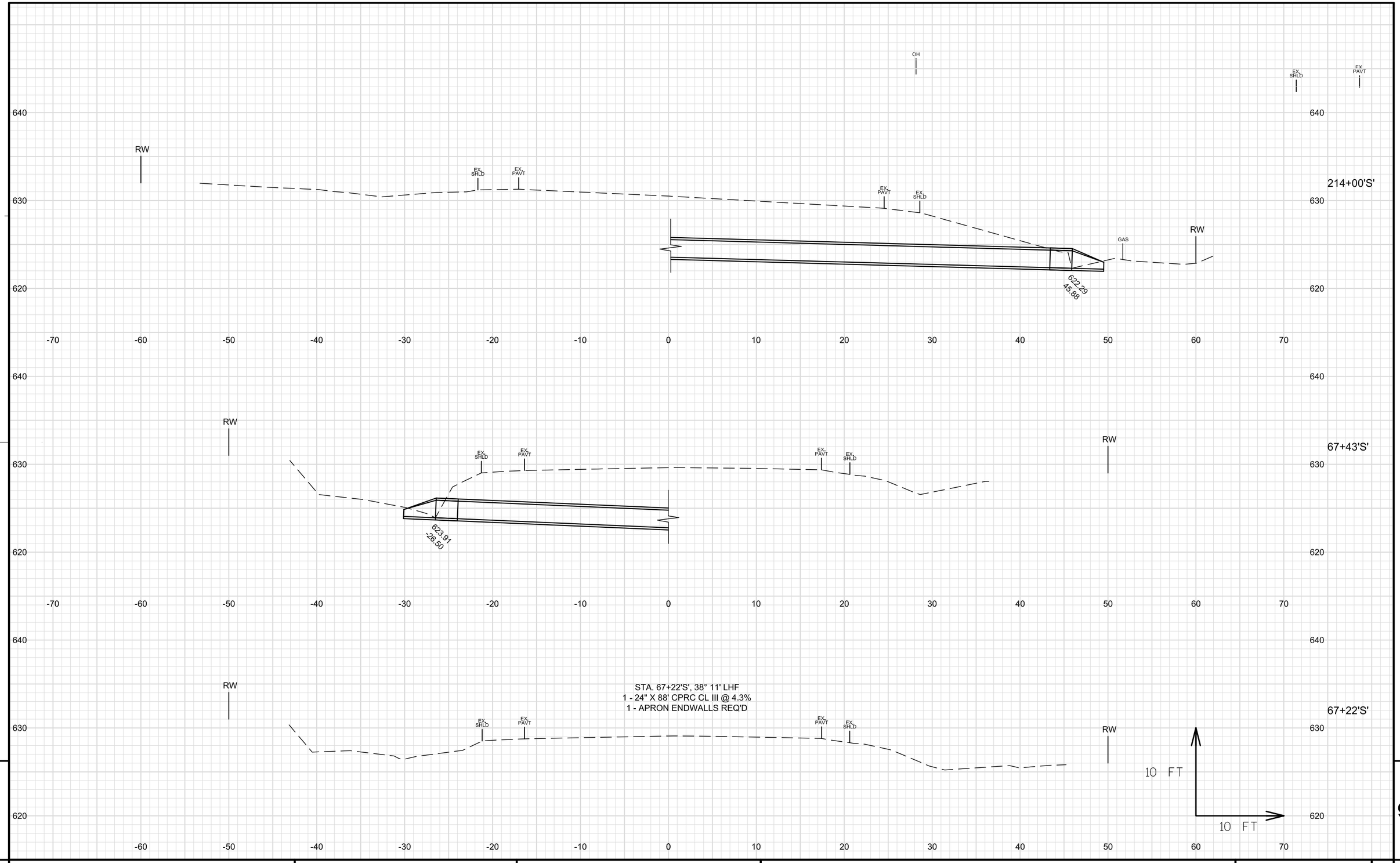


9

9

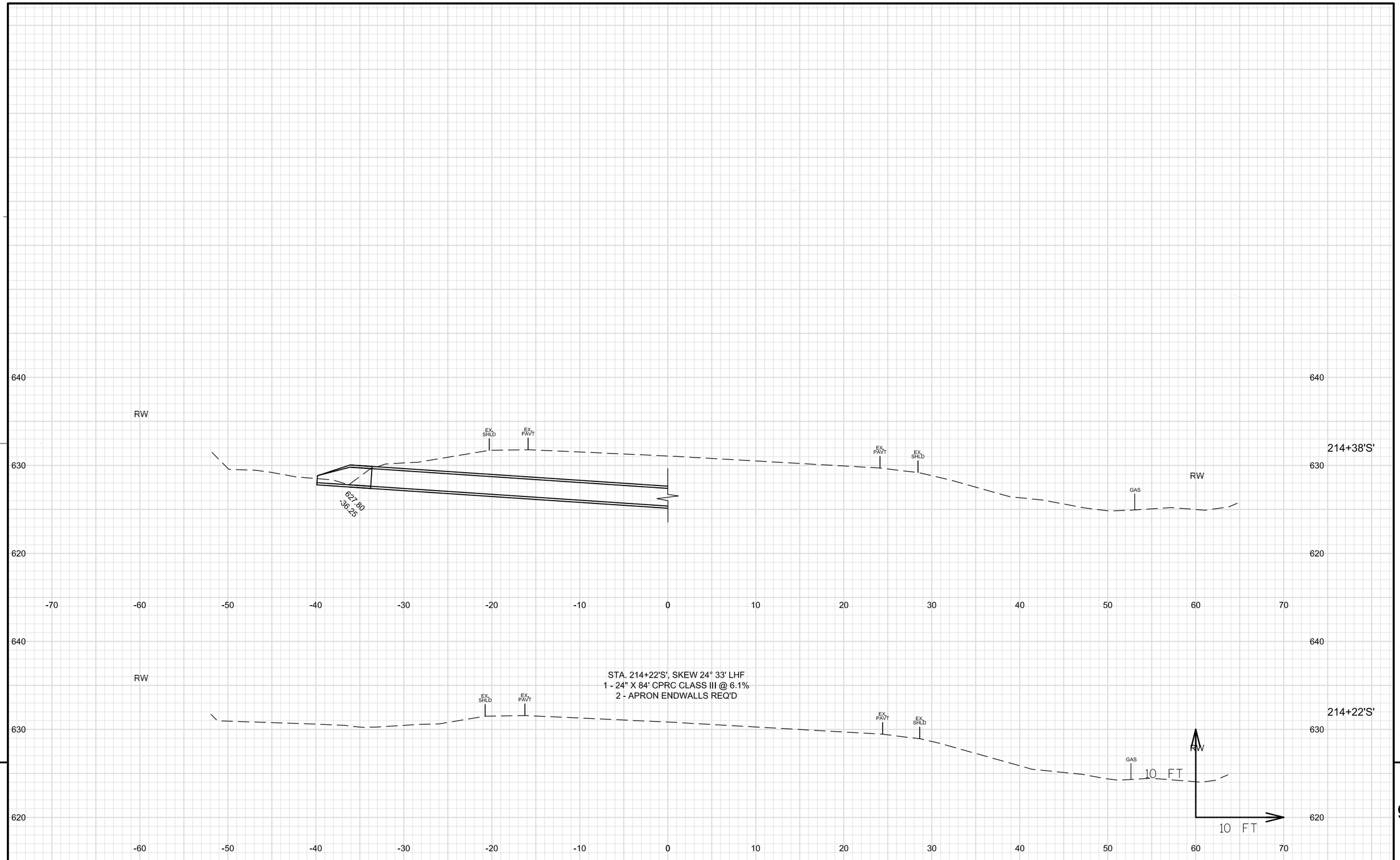
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' CROSS DRAINS	SHEET 65	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\090202_XS_STH_13_PIPE_REPLACEMENTS.DWG PLOT DATE : 10/14/2014 3:21 PM PLOT BY : GARY COLBERT PLOT NAME : PLOT SCALE : 1 IN:10 FT



PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' CROSS DRAINS	SHEET 66	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\090202_XS_STH_13_PIPE_REPLACEMENTS.DWG PLOT DATE : 10/16/2014 1:52 PM PLOT BY : GARY COLBERT PLOT NAME : PLOT SCALE : 1 IN:10 FT

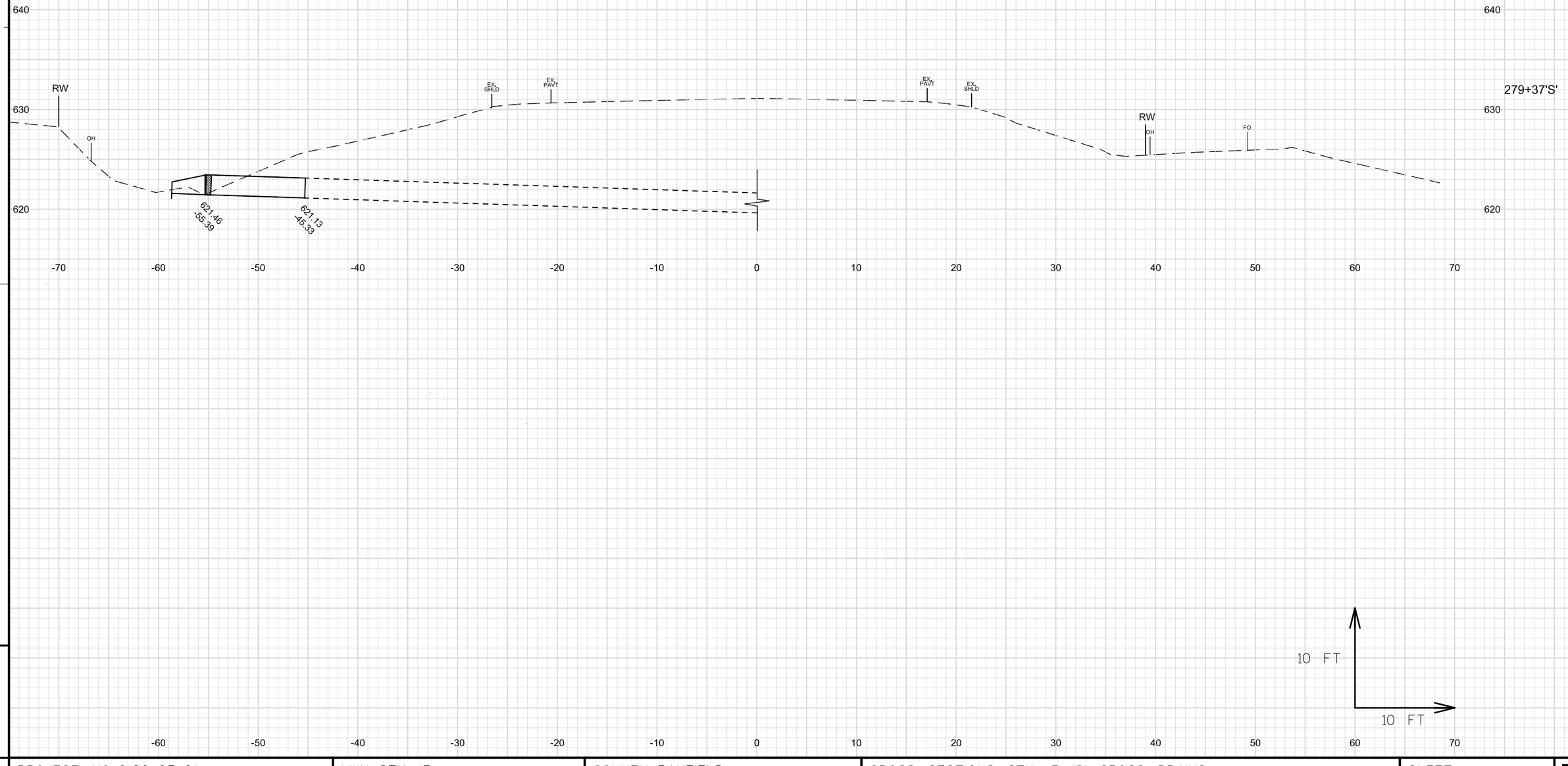


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PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' CROSS DRAINS	SHEET 67	E

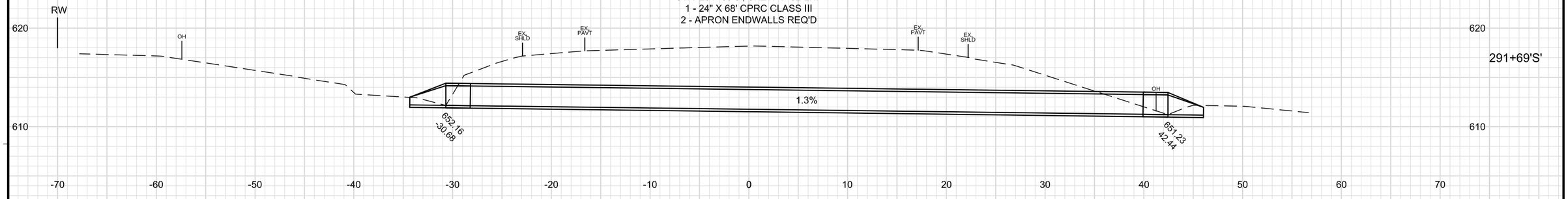
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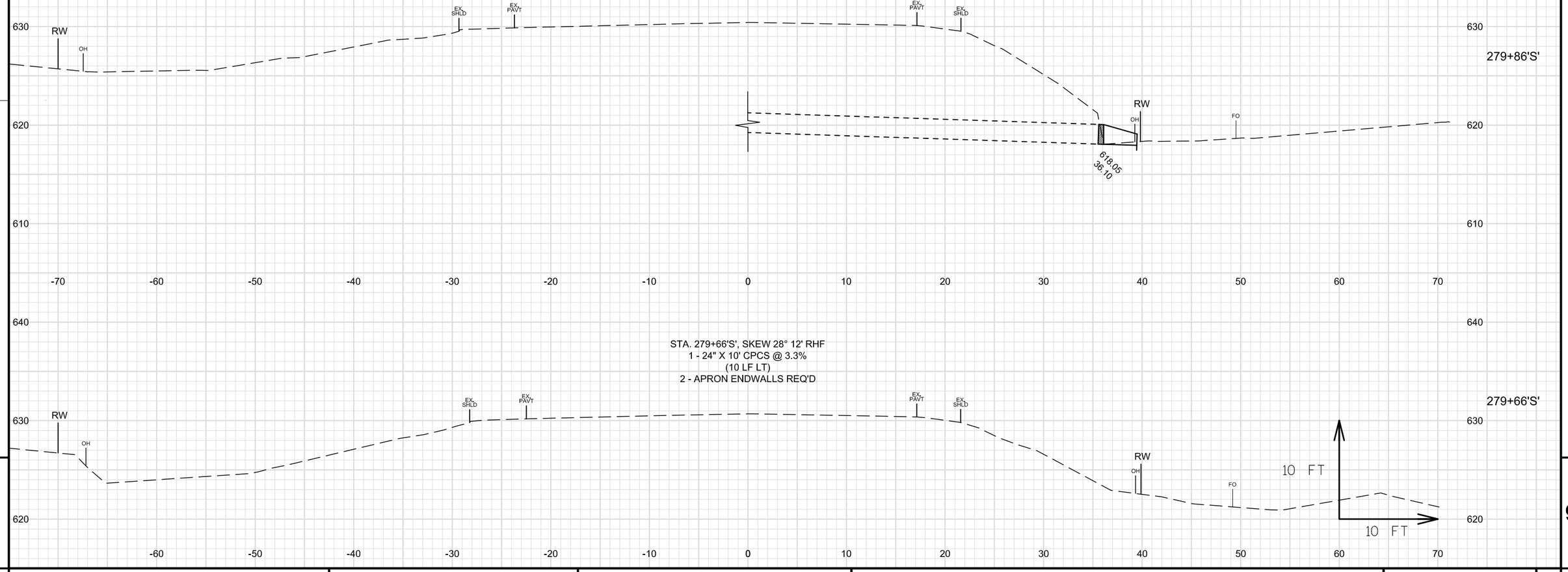


PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' CROSS DRAINS	SHEET 68	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\090202_XS_STH_13_PIPE_REPLACEMENTS.DWG PLOT DATE : 10/16/2014 1:08 PM PLOT BY : GARY COLBERT PLOT NAME : PLOT SCALE : 1 IN:10 FT

STA. 291+69'S', SKEW 4° 52 LHF
1 - 24" X 68' CPRC CLASS III
2 - APRON ENDWALLS REQ'D





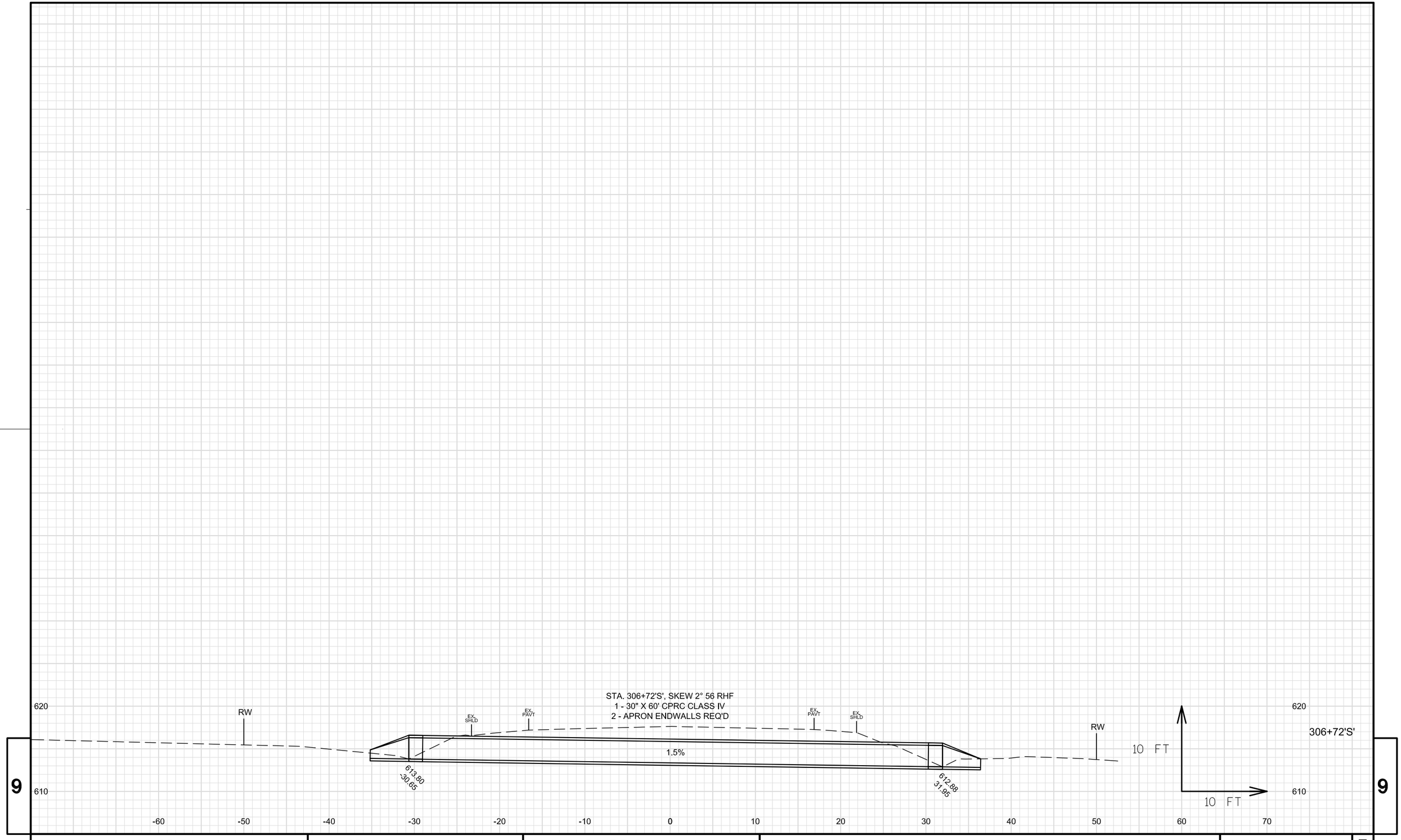
STA. 279+66'S', SKEW 28° 12' RHF
1 - 24" X 10' CPCS @ 3.3%
(10 LF LT)
2 - APRON ENDWALLS REQ'D

9

9

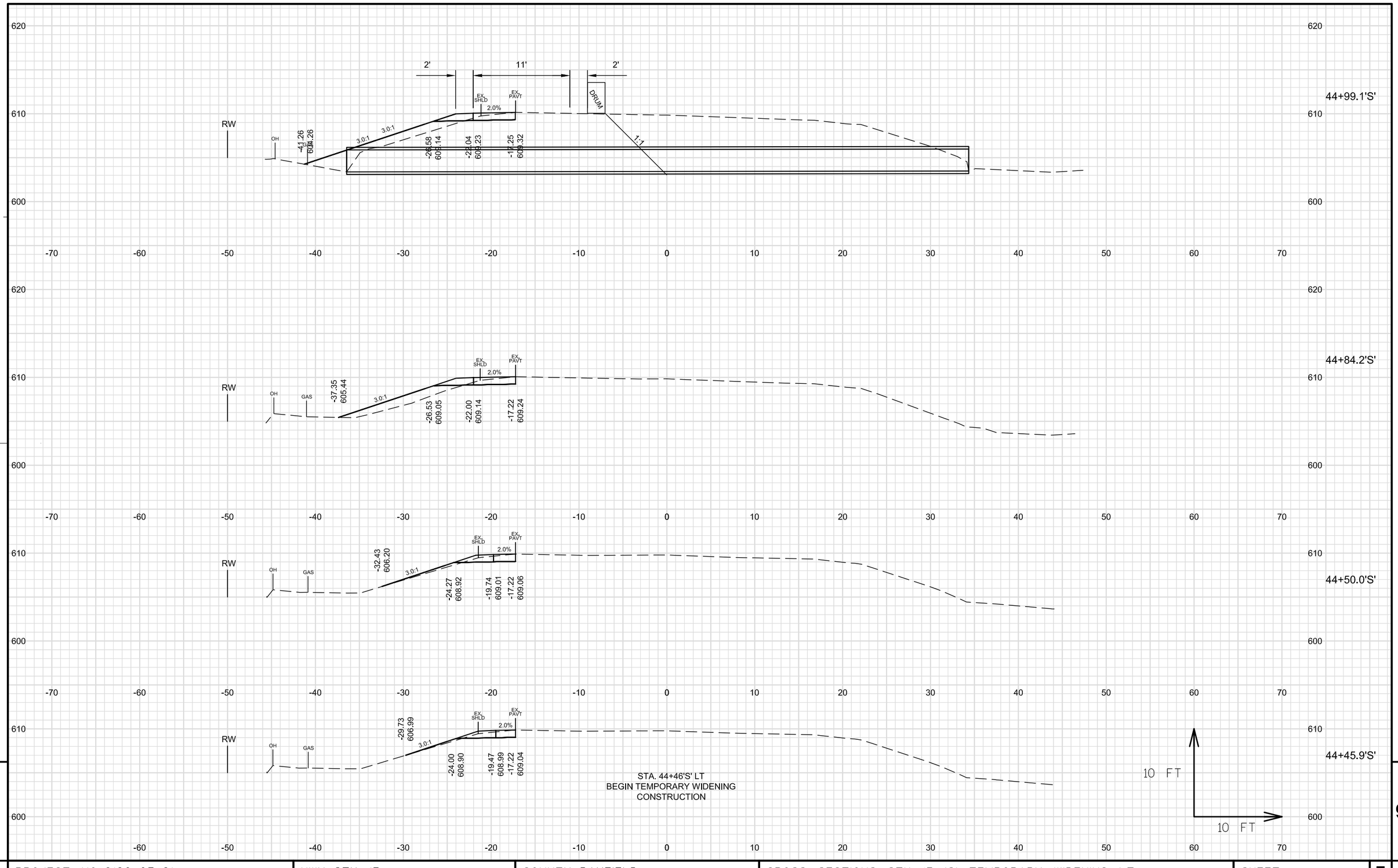
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' CROSS DRAINS	SHEET 69	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\090202_XS_STH_13_PIPE_REPLACEMENTS.DWG PLOT DATE : 10/14/2014 3:21 PM PLOT BY : GARY COLBERT PLOT NAME : PLOT SCALE : 1 IN:10 FT



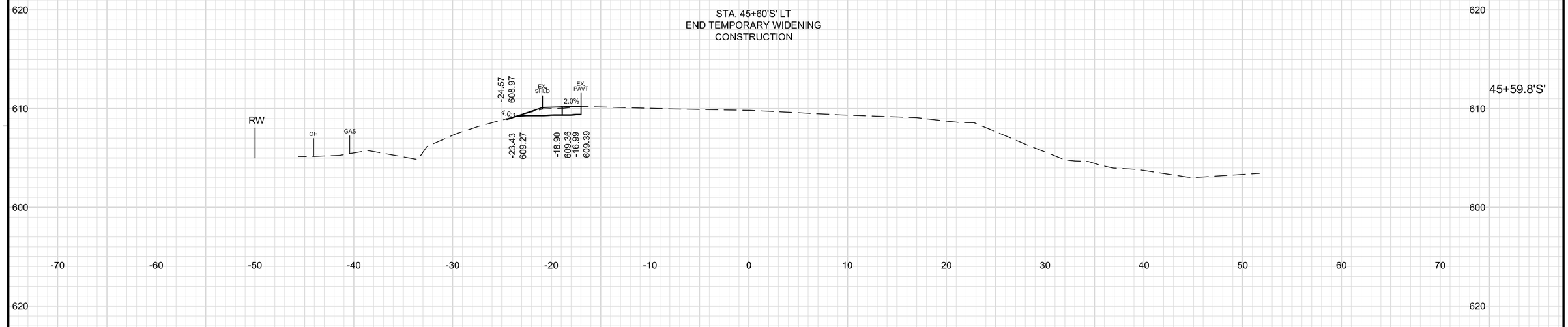
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' CROSS DRAINS	SHEET 70	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\090202_XS_STH_13_PIPE_REPLACEMENTS.DWG PLOT DATE : 10/14/2014 3:22 PM PLOT BY : GARY COLBERT PLOT NAME : PLOT SCALE : 1 IN:10 FT



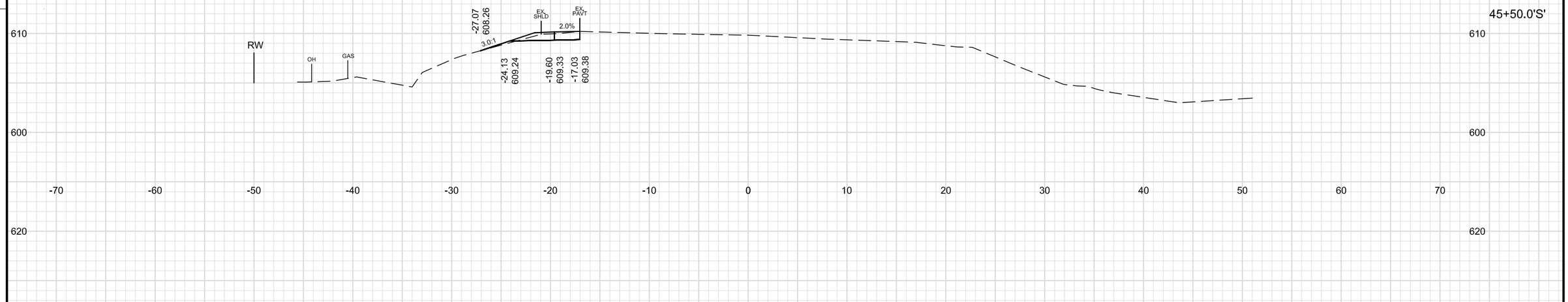
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING LT	SHEET 71	E

STA. 45+60'S' LT
END TEMPORARY WIDENING
CONSTRUCTION

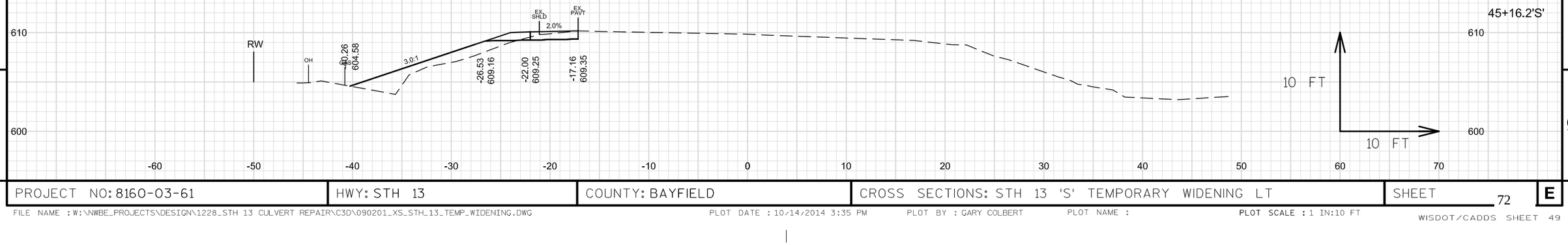


45+59.8'S'

45+50.0'S'



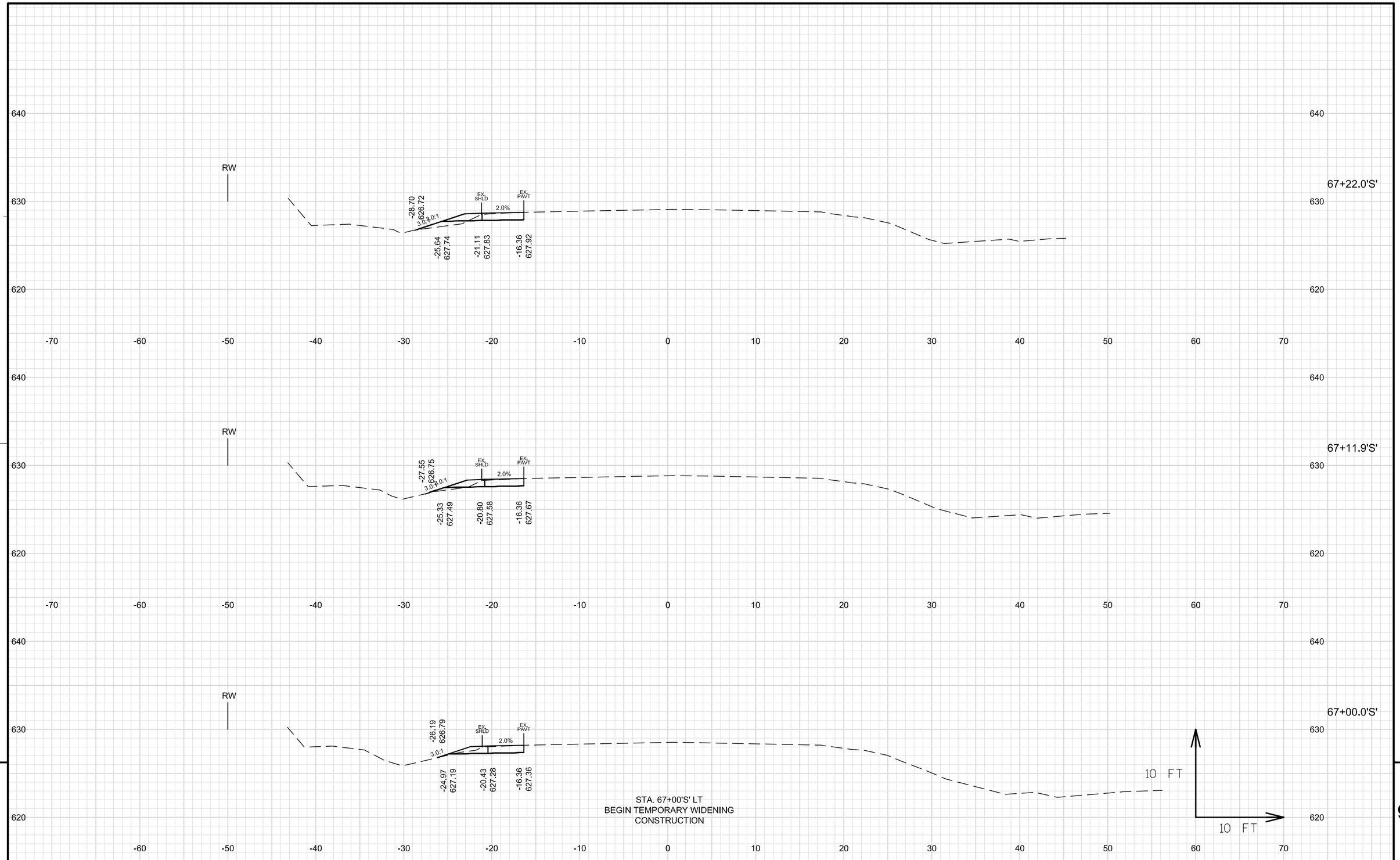
45+16.2'S'



9

9

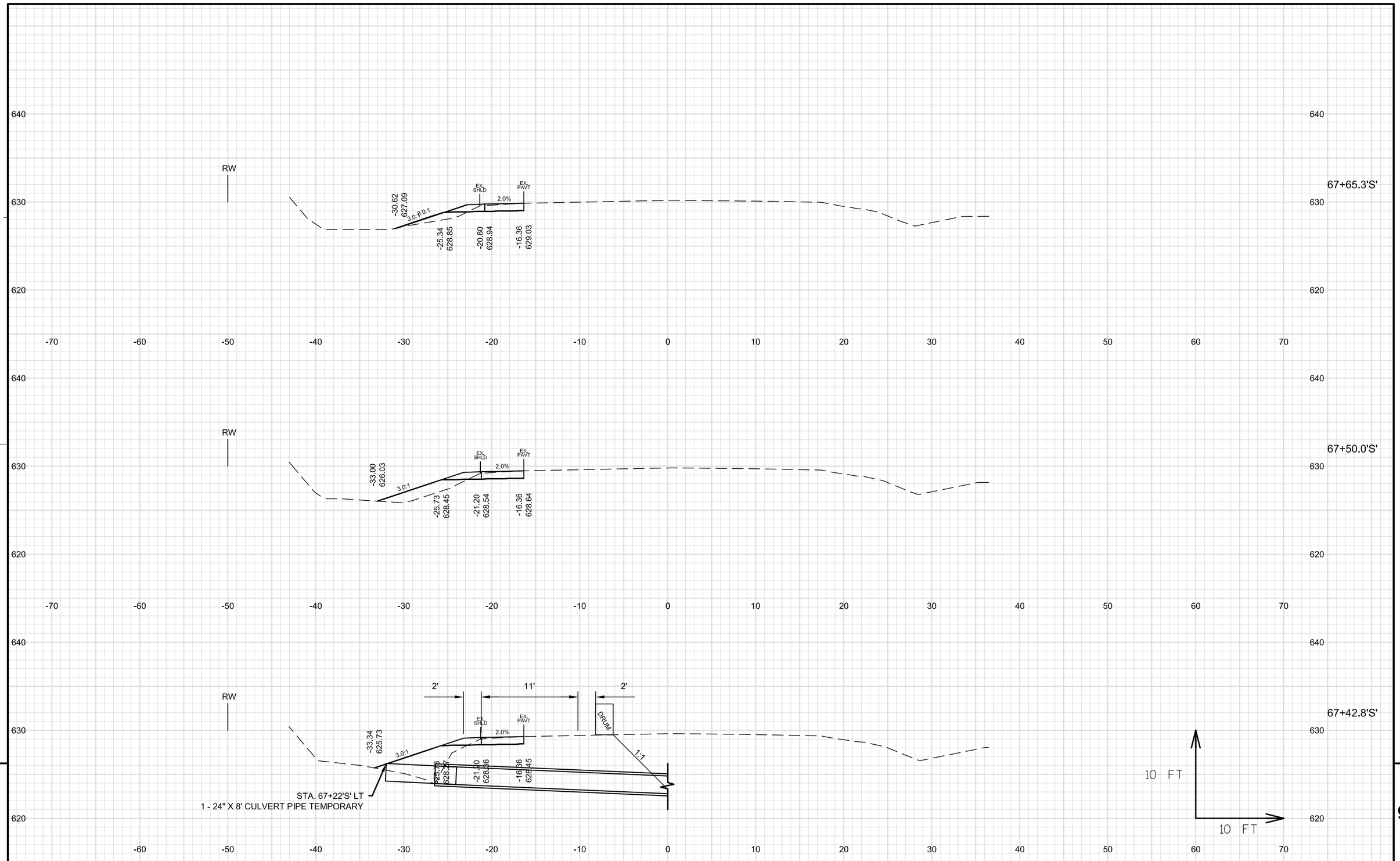
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING LT	SHEET 72	E



9

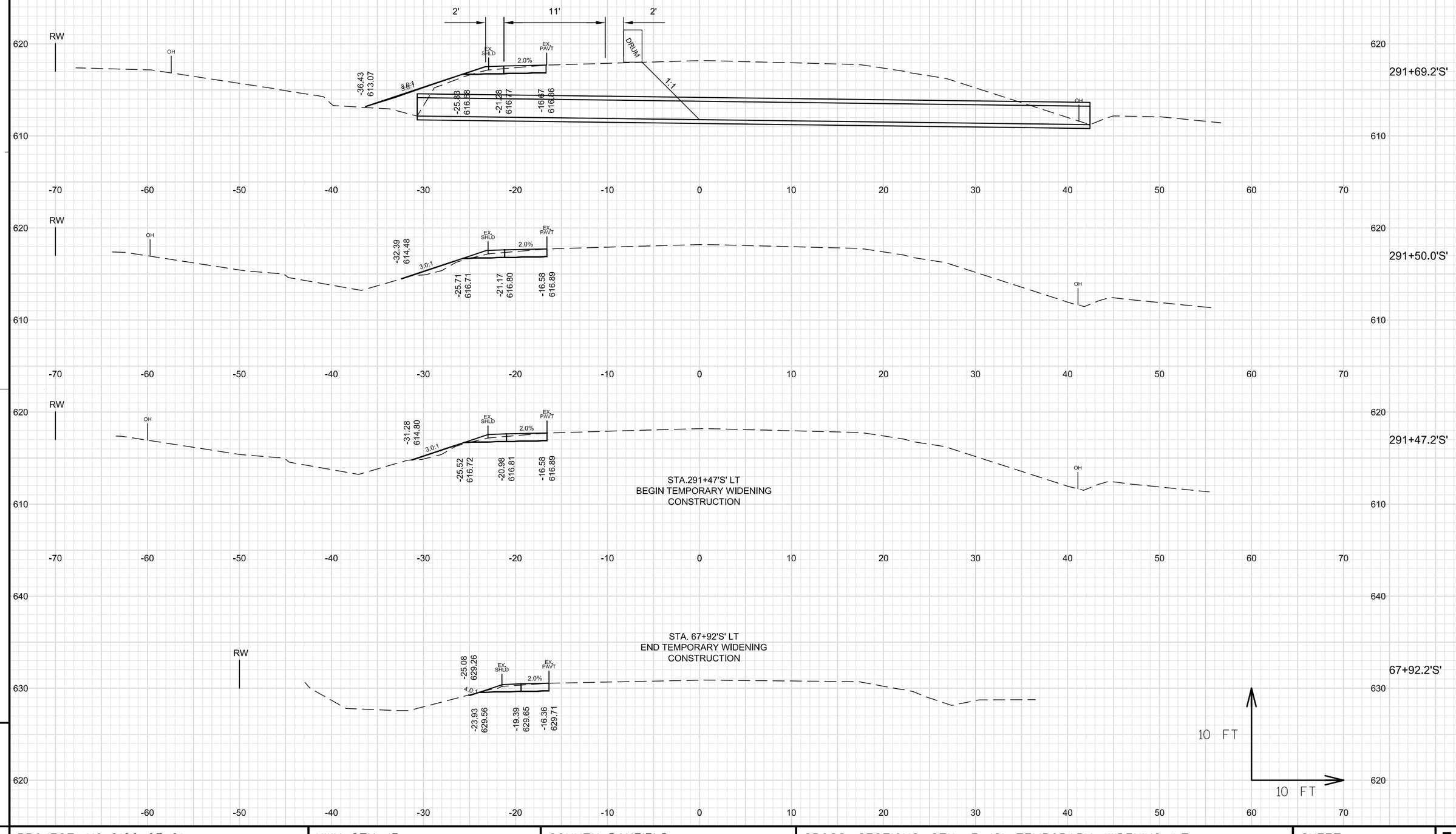
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PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING LT	SHEET 73	E



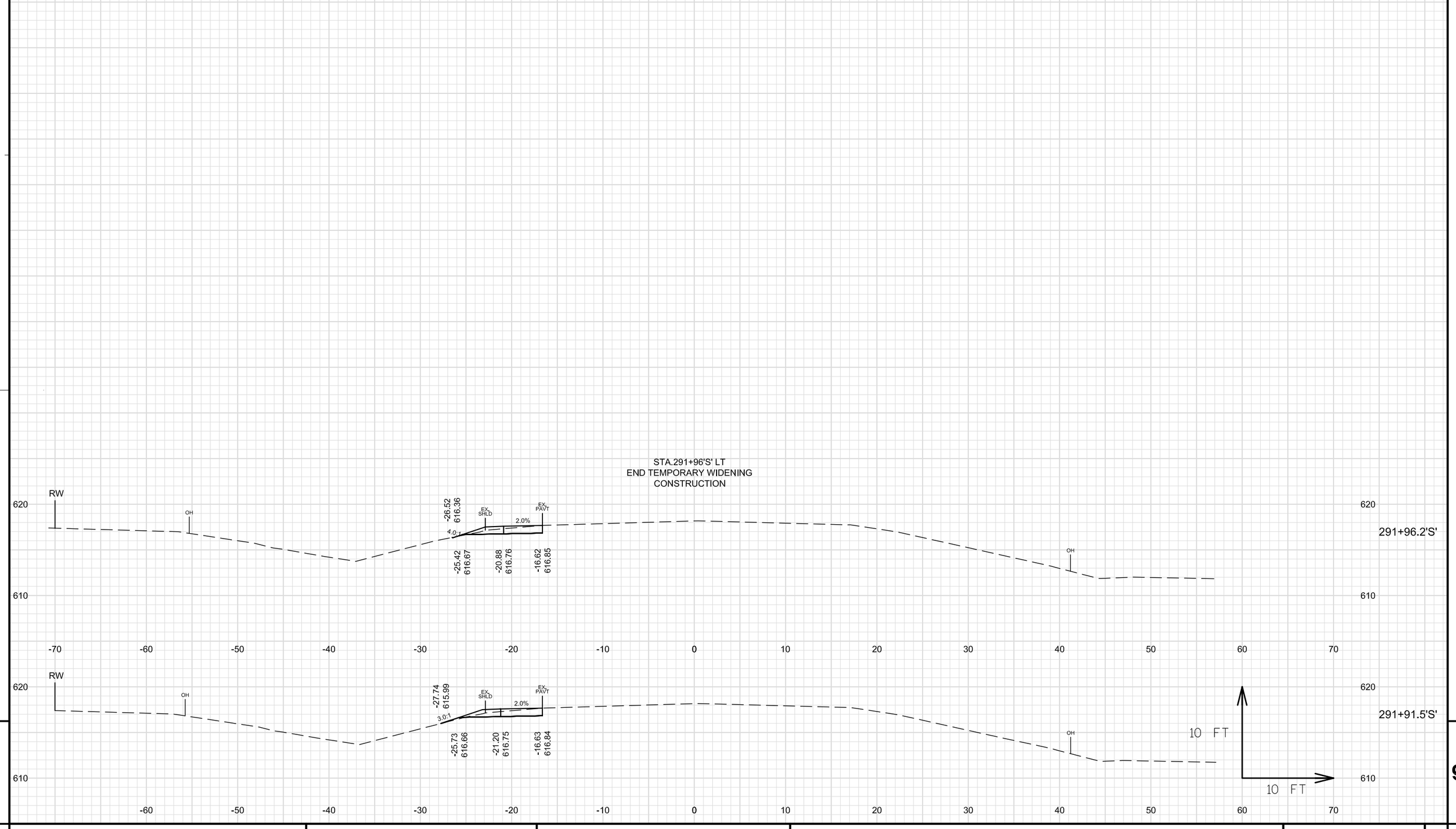
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING LT	SHEET 74 E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\090201_XS_STH_13_TEMP_WIDENING.DWG PLOT DATE : 10/14/2014 3:35 PM PLOT BY : GARY COLBERT PLOT NAME : PLOT SCALE : 1 IN:10 FT



PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING LT	SHEET 75	E

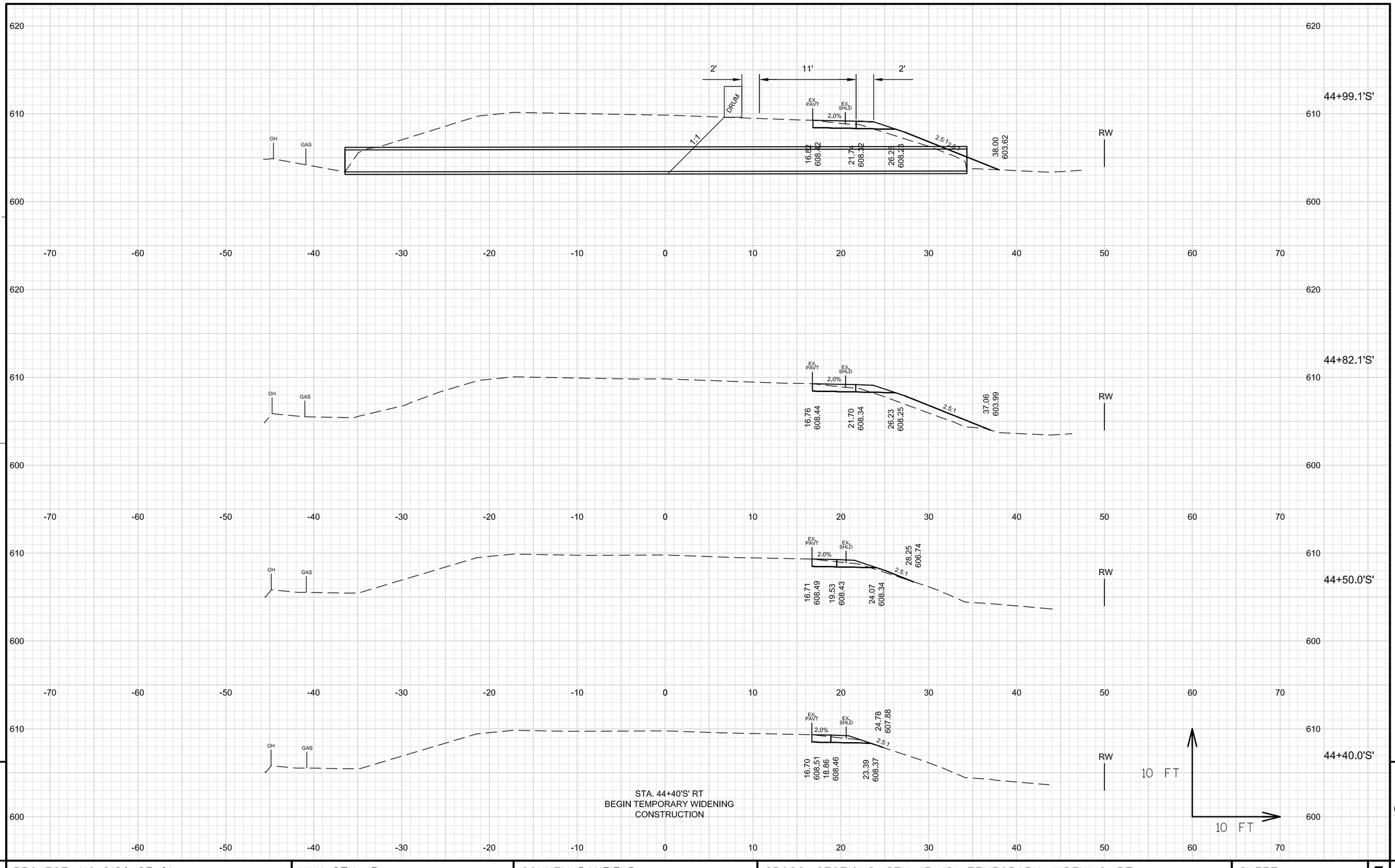
STA.291+96'S' LT
END TEMPORARY WIDENING
CONSTRUCTION



9

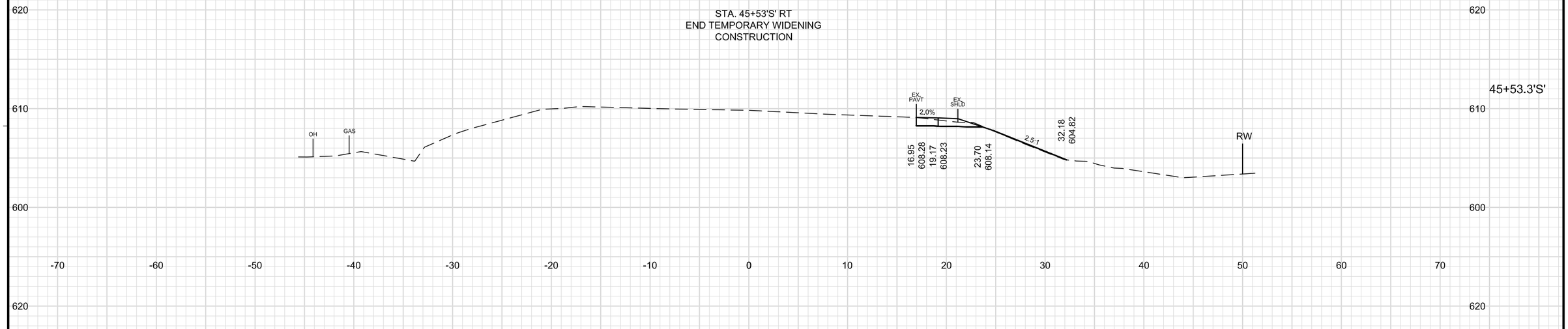
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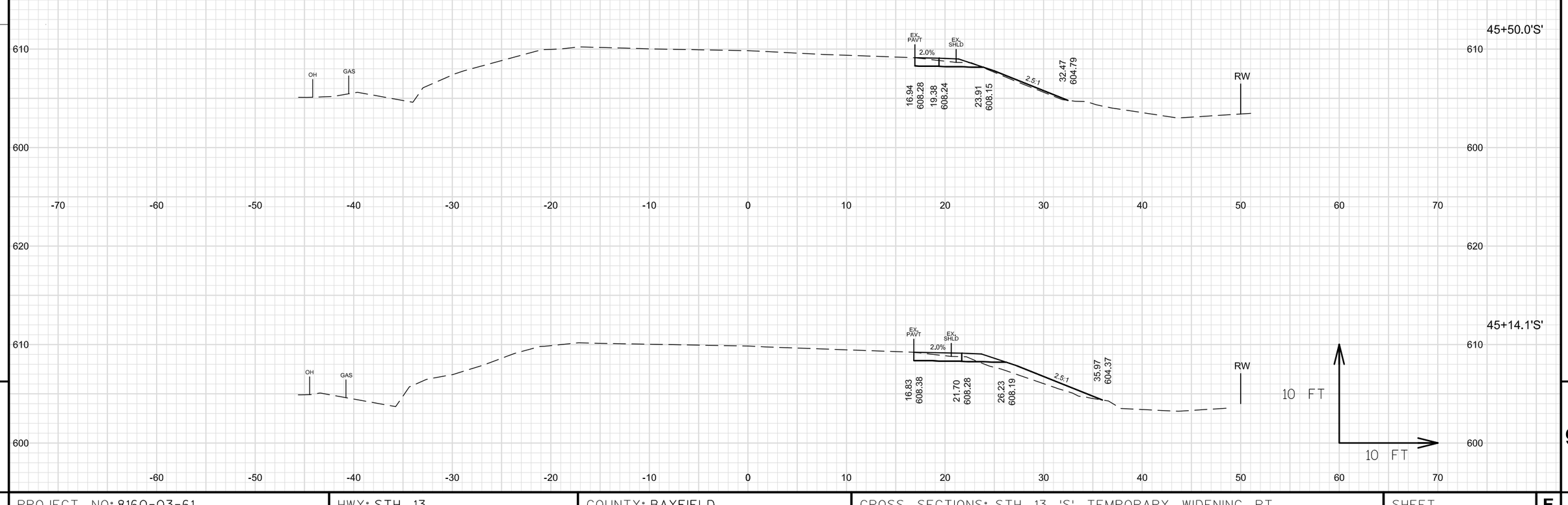
PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING LT	SHEET 76	E



PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING RT	SHEET 77	E

STA. 45+53'S' RT
END TEMPORARY WIDENING
CONSTRUCTION

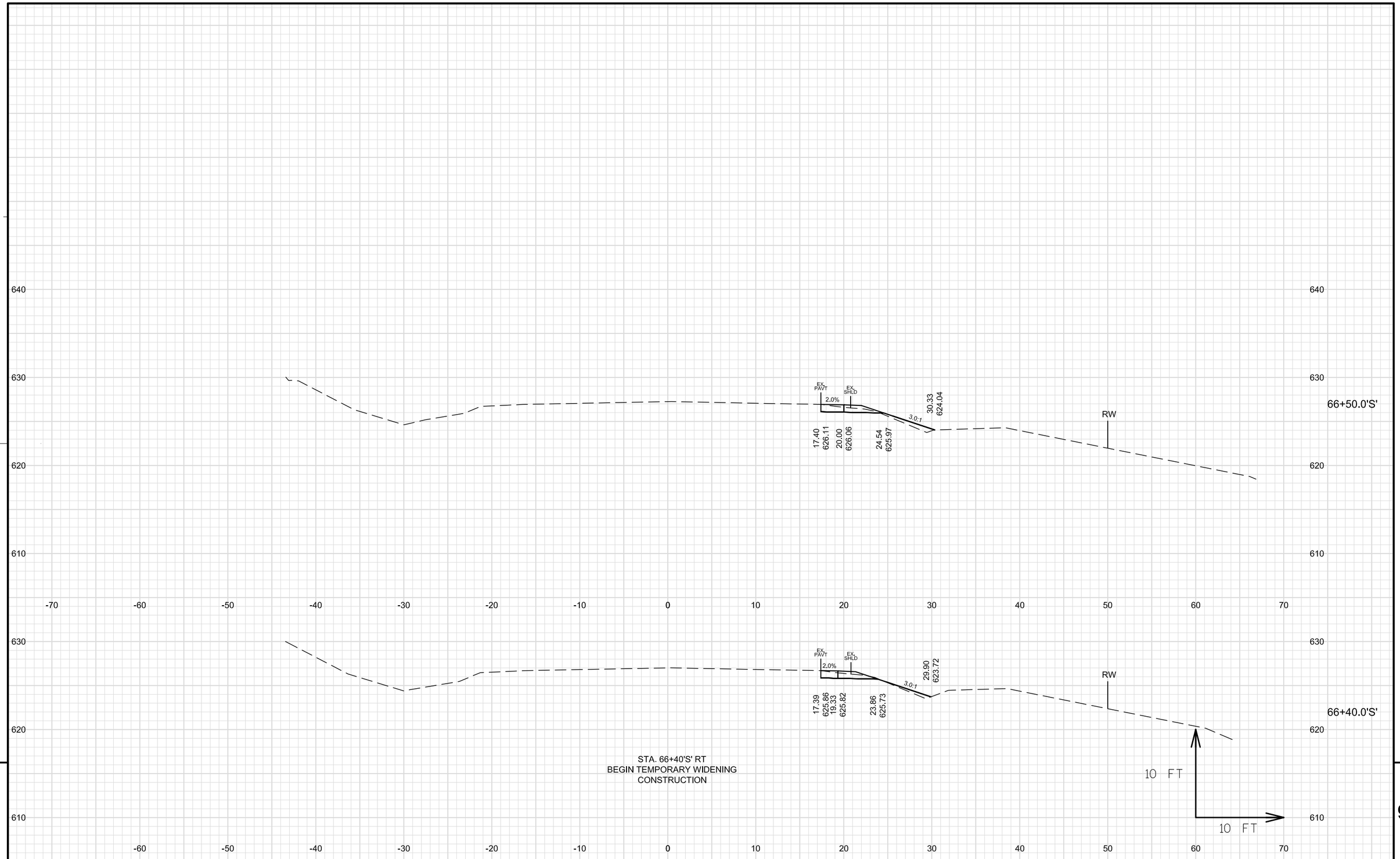




9

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PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING RT	SHEET 78	E



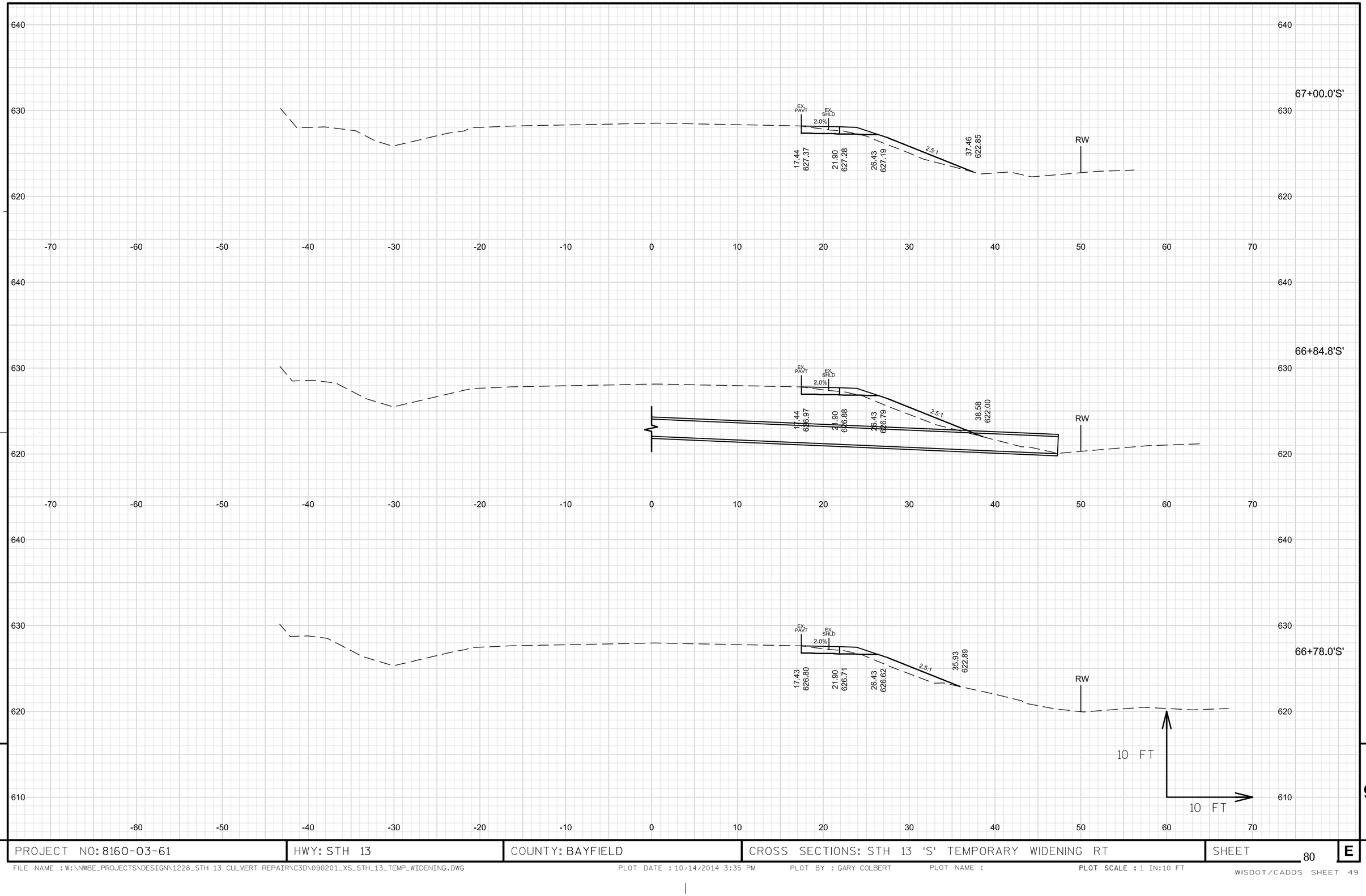
STA. 66+40'S' RT
BEGIN TEMPORARY WIDENING
CONSTRUCTION

9

9

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING RT	SHEET 79	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\090201_XS_STH_13_TEMP_WIDENING.DWG PLOT DATE : 10/14/2014 3:35 PM PLOT BY : GARY COLBERT PLOT NAME : PLOT SCALE : 1 IN:10 FT

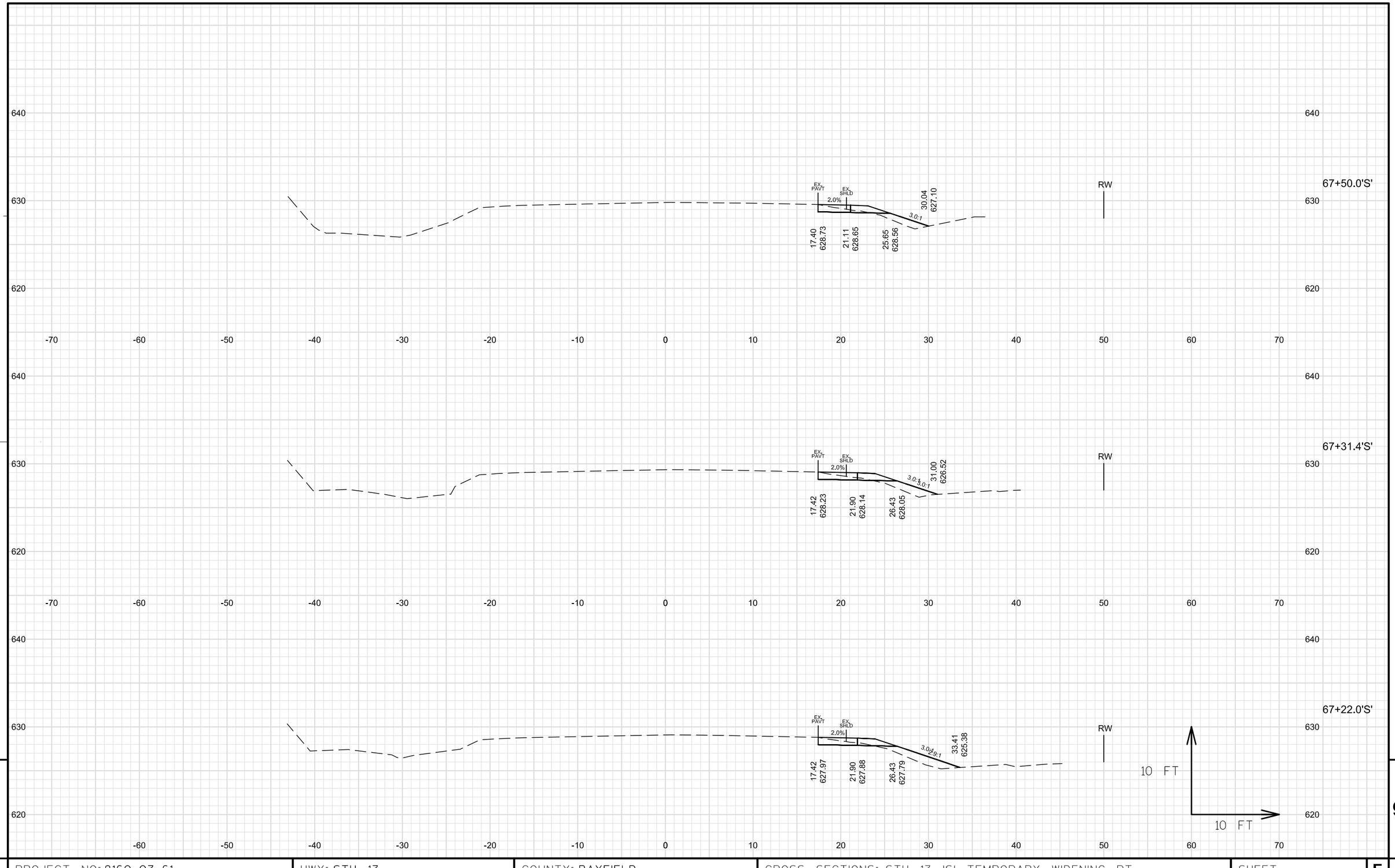


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9

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING RT	SHEET 80 E

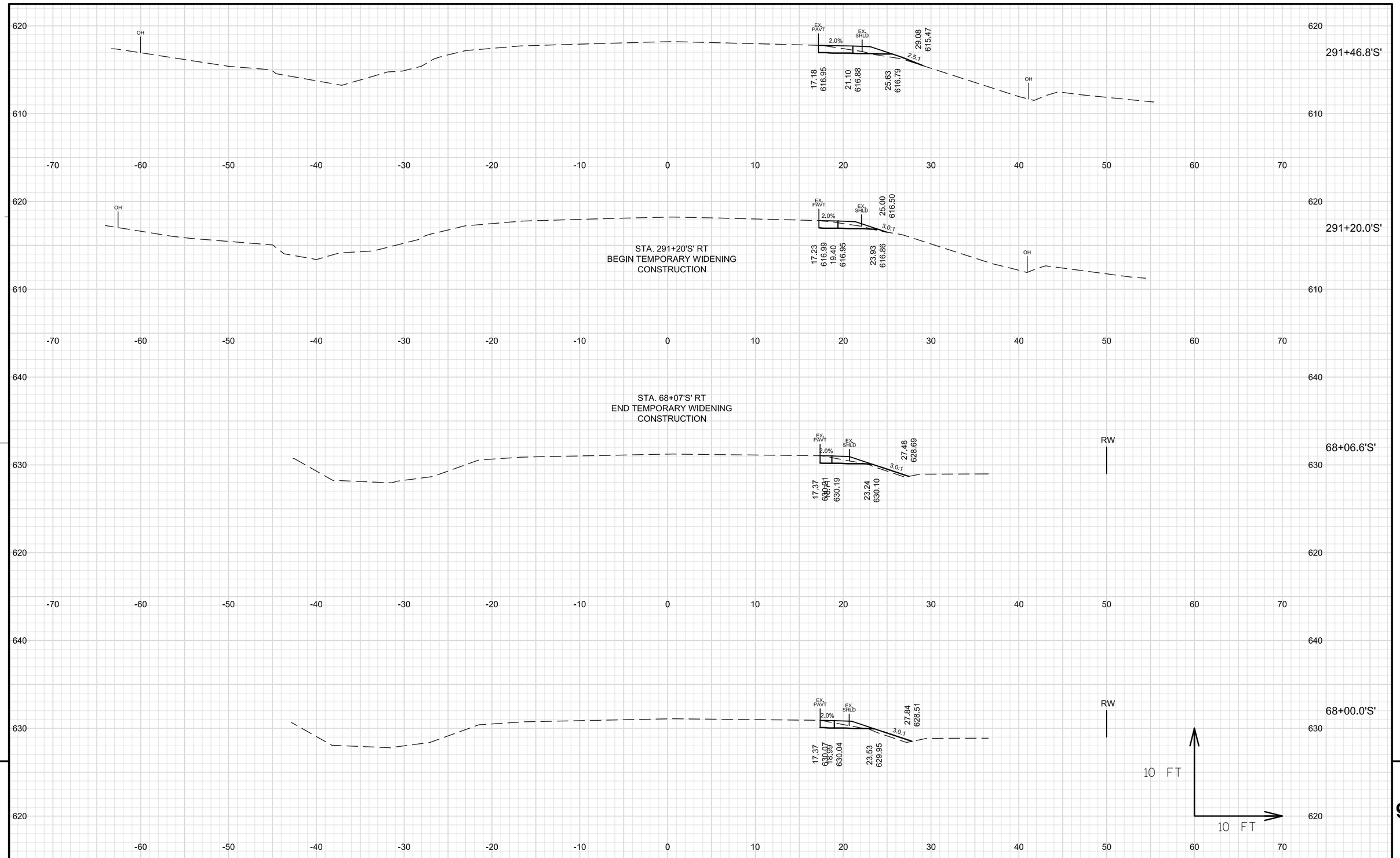
FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\090201_XS_STH_13_TEMP_WIDENING.DWG PLOT DATE : 10/14/2014 3:35 PM PLOT BY : GARY COLBERT PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

9

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING RT	SHEET 81	E



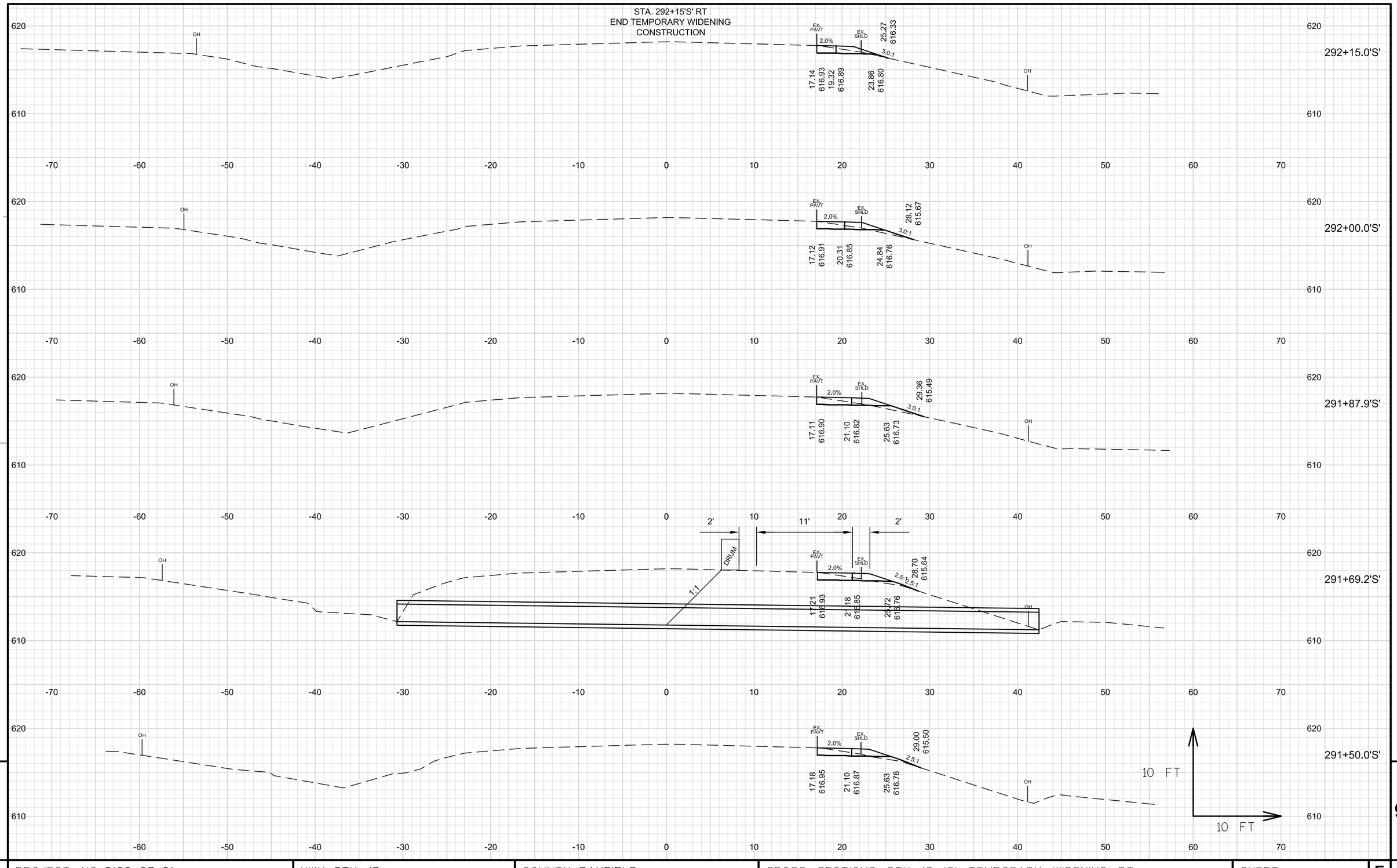
9

9

PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING RT	SHEET 82	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\090201_XS_STH_13_TEMP_WIDENING.DWG PLOT DATE : 10/14/2014 3:36 PM PLOT BY : GARY COLBERT PLOT NAME : PLOT SCALE : 1 IN:10 FT

STA. 292+15'S' RT
END TEMPORARY WIDENING
CONSTRUCTION



PROJECT NO: 8160-03-61	HWY: STH 13	COUNTY: BAYFIELD	CROSS SECTIONS: STH 13 'S' TEMPORARY WIDENING RT	SHEET 83 E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1228_STH 13 CULVERT REPAIR\C3D\090201_XS_STH_13_TEMP_WIDENING.DWG PLOT DATE : 10/14/2014 3:36 PM PLOT BY : GARY COLBERT PLOT NAME : PLOT SCALE : 1 IN:10 FT

Wisconsin Department of Transportation

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