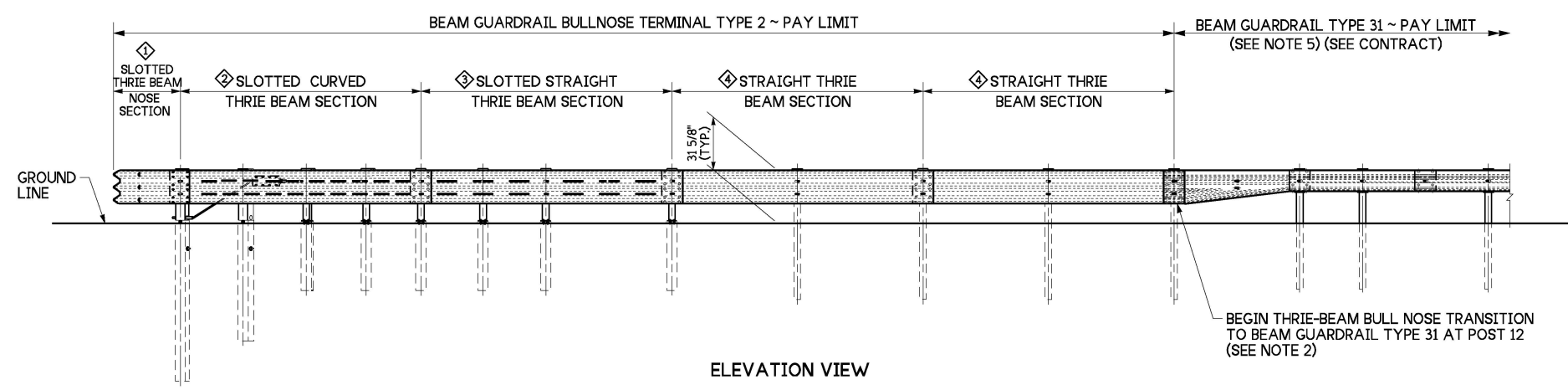
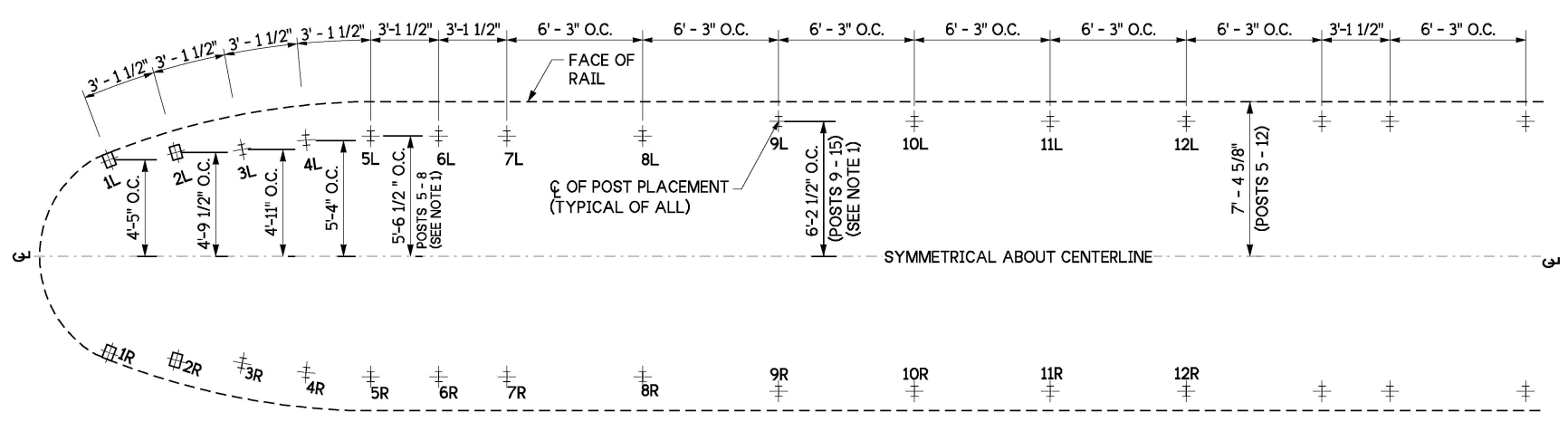


\* SEE ELEVATION - (POSTS 1 - 3) DETAIL, SHEET 4

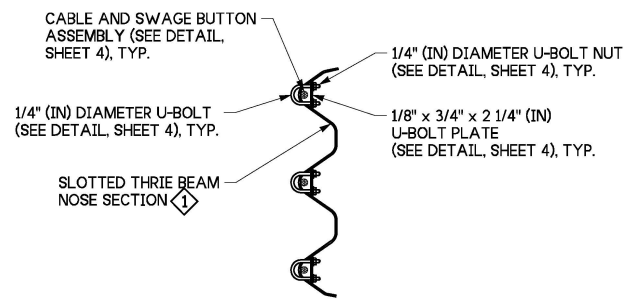
PLAN VIEW



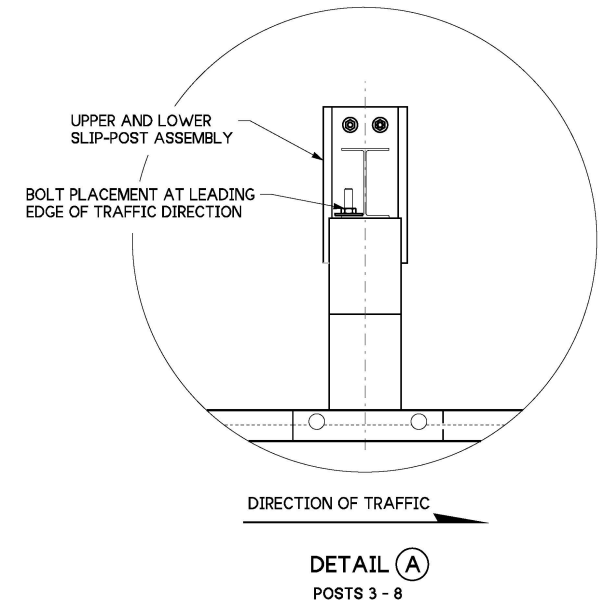
ELEVATION VIEW



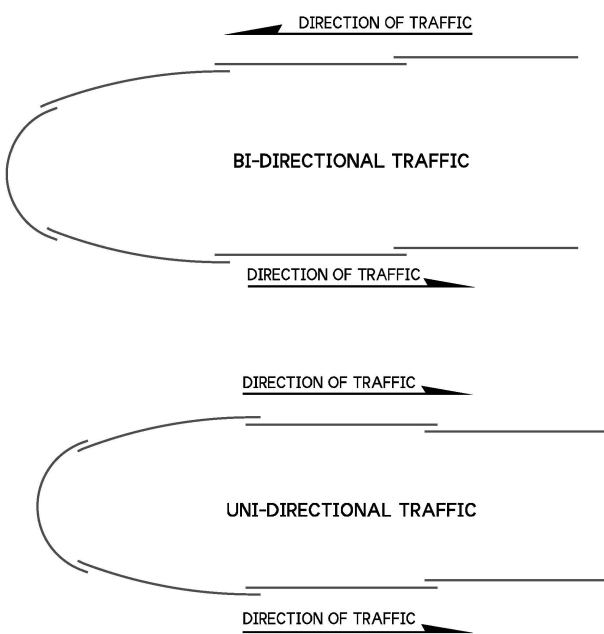
POST SPACING LAYOUT  
(SEE NOTE 1)



NOSING CABLE ANCHOR  
(ASTM A36)  
SECTION 1



DETAIL A  
POSTS 3 - 8



RAIL LAPPING DETAIL

NOTES:

1. See sheet 2 for Bull Nose Terminal Type 2 placement cases. Post spacing shown for placement case 1. When installing placement cases 2 and 3 adjust post offset and angle for posts after 5L & 5R for rail taper rate. Maintain post spacing parallel to rail elements.
2. See Thrie-Beam Bull Nose Transition to Beam Guardrail Type 31 detail (sheet 3) for transition to Type 31 Beam Guardrail.
3. For post details (#), see sheet 3.
4. For guardrail section details (◆), see sheet 6.
5. For additional installation requirements, and details of typical components not shown see Standard Plans:  
- C-20.10 Beam Guardrail Type 31, and  
- C-1b Beam Guardrail Posts and Blocks
6. Vertical bolts attaching the upper and lower UBSP assemblies for posts 3 - 8 shall be torqued to 60 - 75 ft/lbs.
7. Eight (8x) 5/8" x 1 1/2" (in) machine bolts with hex nut and washer. Place washer on face side of rail.

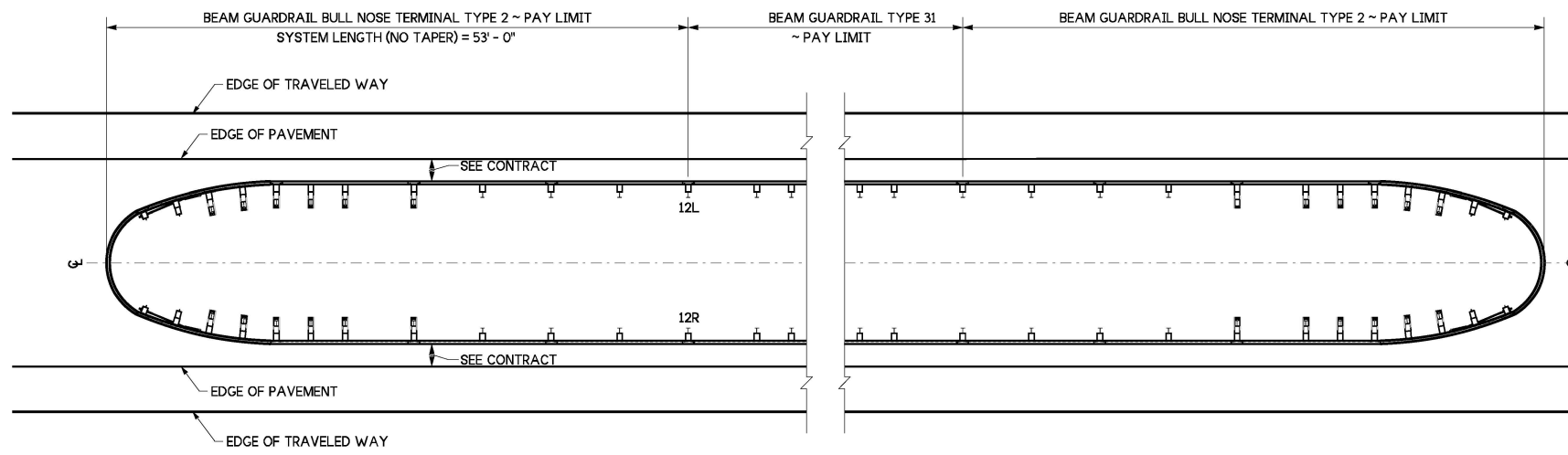


Jul 30, 2024

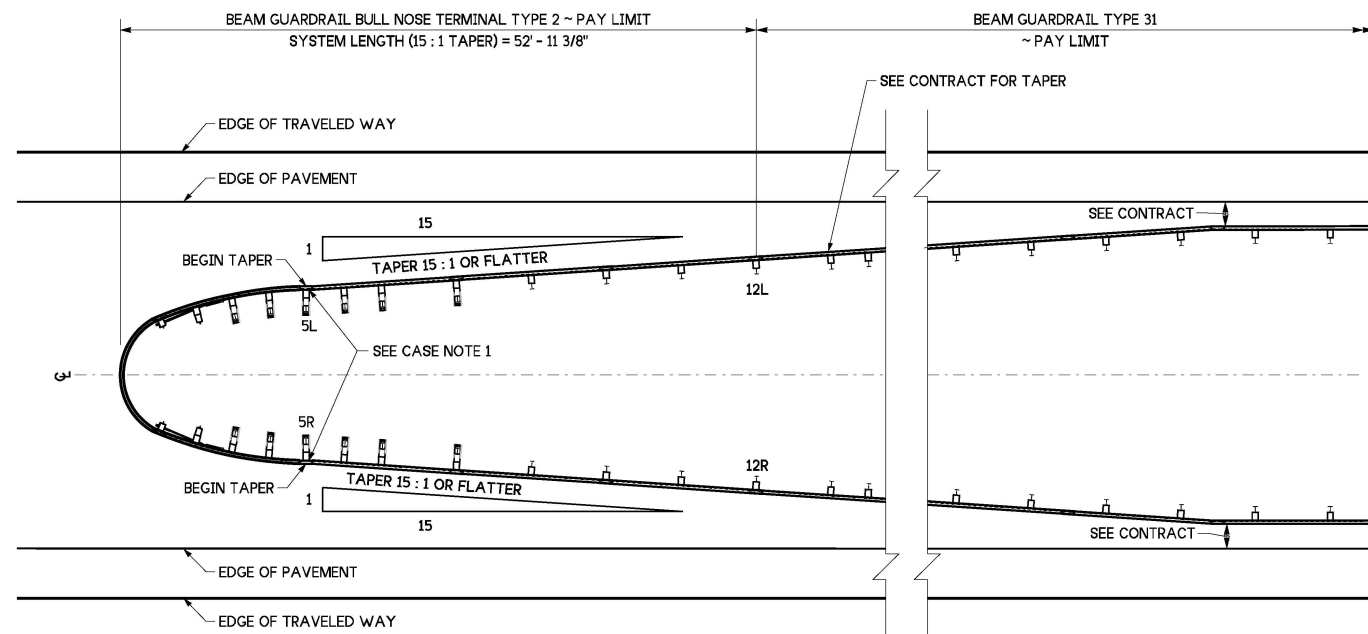
BEAM GUARDRAIL  
BULL NOSE TERMINAL TYPE 2  
STANDARD PLAN C-20.55-00

SHEET 1 OF 6 SHEETS

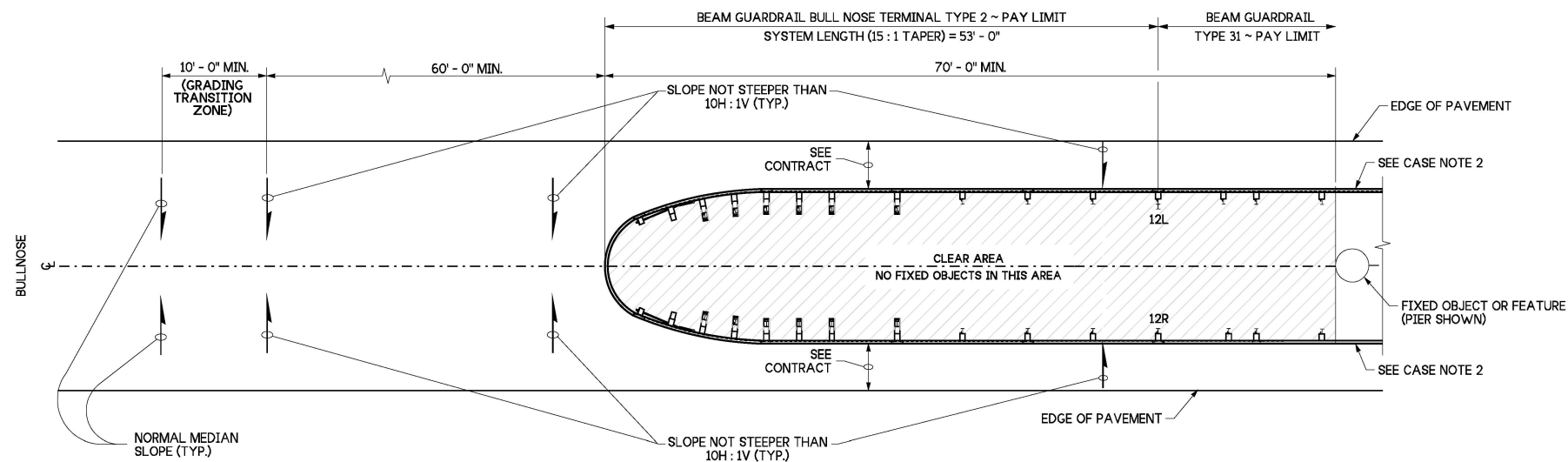
APPROVED FOR PUBLICATION  
*Michael S Fleming*  
 Michael S Fleming (Jul 30, 2024 14:40 PDT) Jul 30, 2024  
 STATE DESIGN ENGINEER  
 Washington State Department of Transportation



PLACEMENT CASE 1



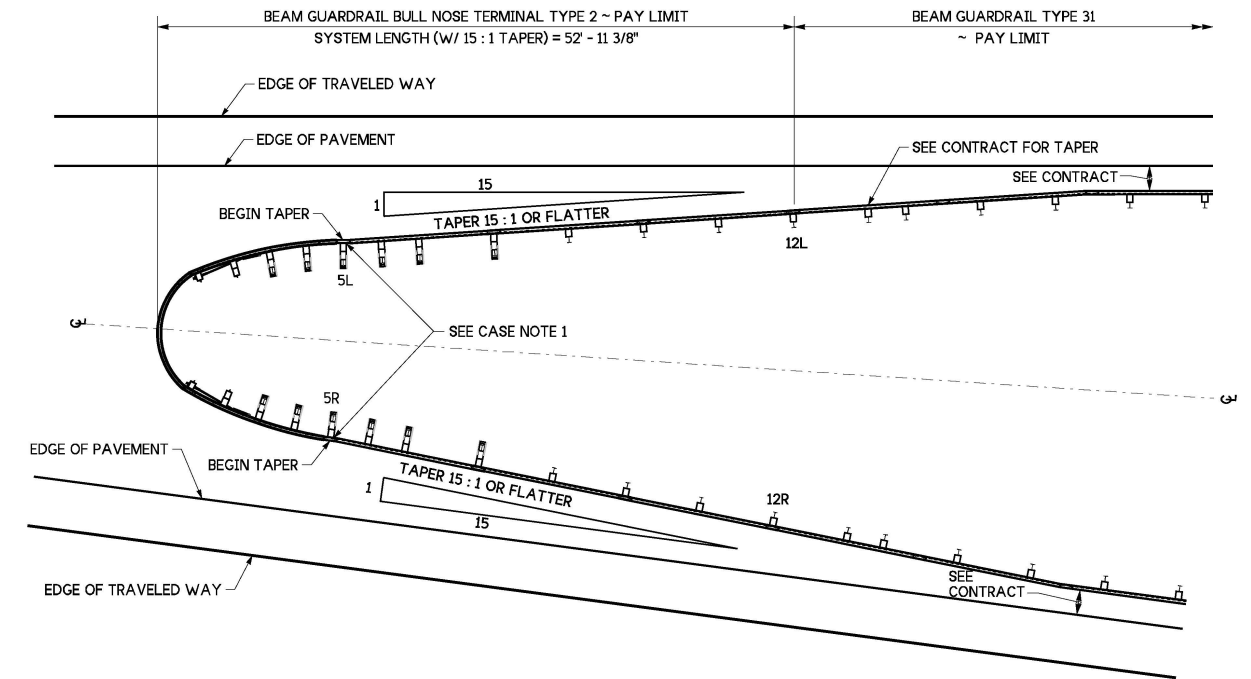
PLACEMENT CASE 2



BULL NOSE GUARDRAIL GRADING PLAN  
(PLACEMENT CASE 1 SHOWN - SEE CASE NOTE 3)

CASE NOTES:

1. Begin rail taper at or after post no. 5L & 5R. Taper remaining bull nose terminal type 2 rail elements at same rate.
2. Provide for a minimum of 5 feet deflection distance from face of guardrail to fixed object.
3. Grading, dimensions and slopes apply to all cases.



PLACEMENT CASE 3



Jul 30, 2024

BEAM GUARDRAIL  
BULL NOSE TERMINAL TYPE 2  
STANDARD PLAN C-20.55-00

SHEET 2 OF 6 SHEETS

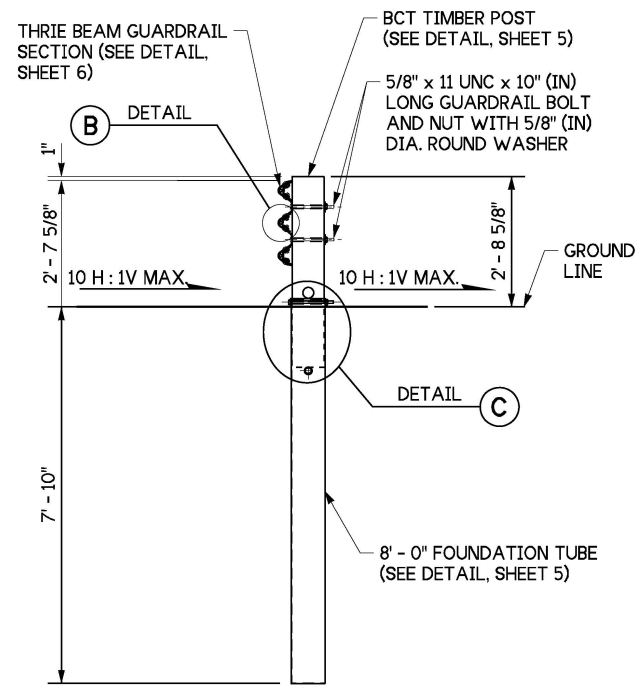
APPROVED FOR PUBLICATION

Michael S. Fleming  
Michael S. Fleming (Jul 30, 2024 14:40 PDT)

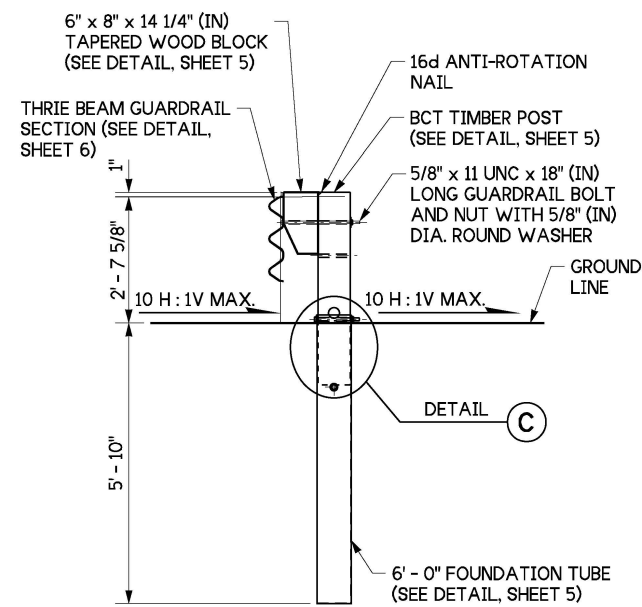
Jul 30, 2024

STATE DESIGN ENGINEER

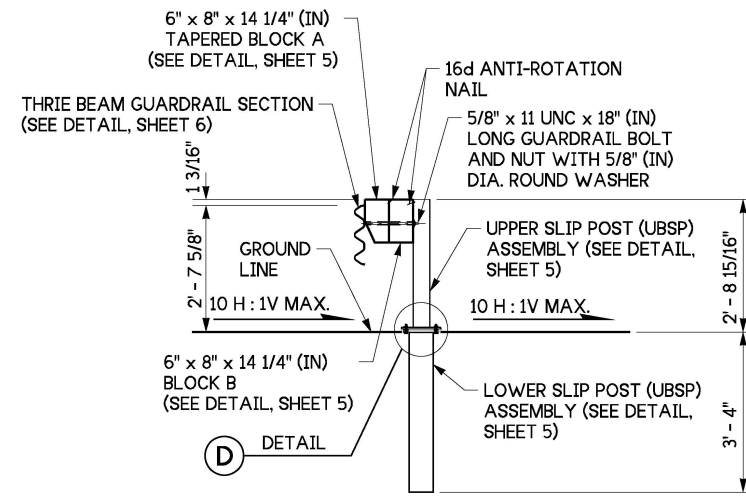




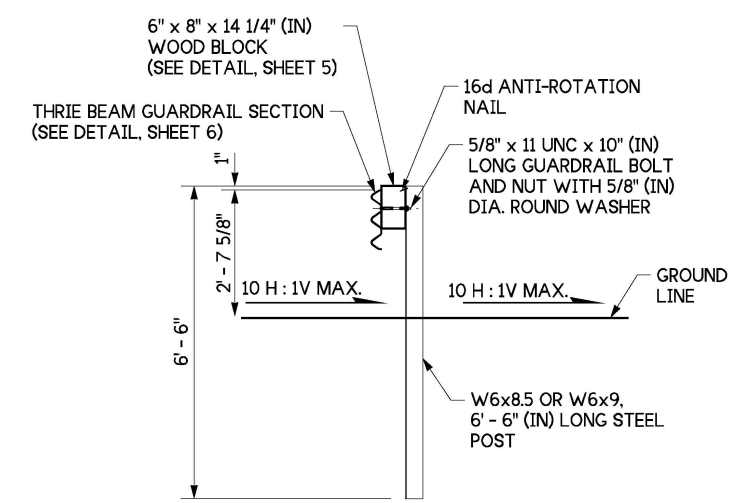
① POST DETAIL  
(POST # 1L & 1R)



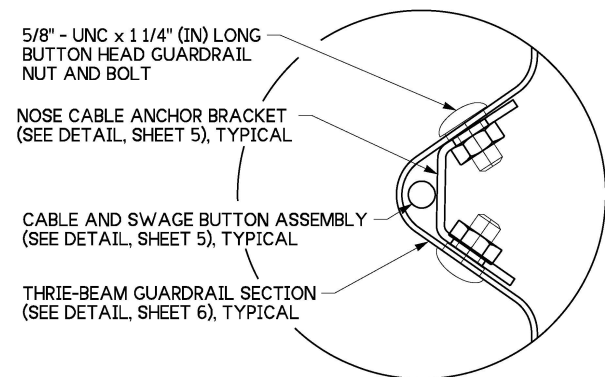
② POST DETAIL  
(POST # 2L & 2R)



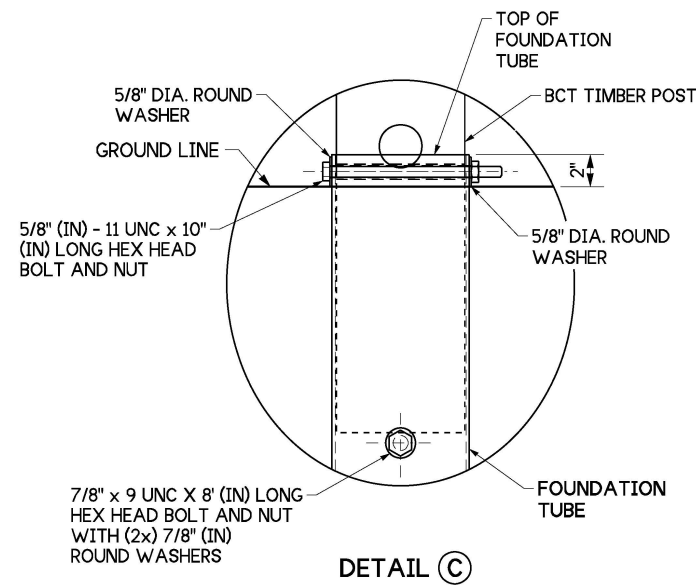
③ POST DETAIL  
(POST # 3-8 L&R)



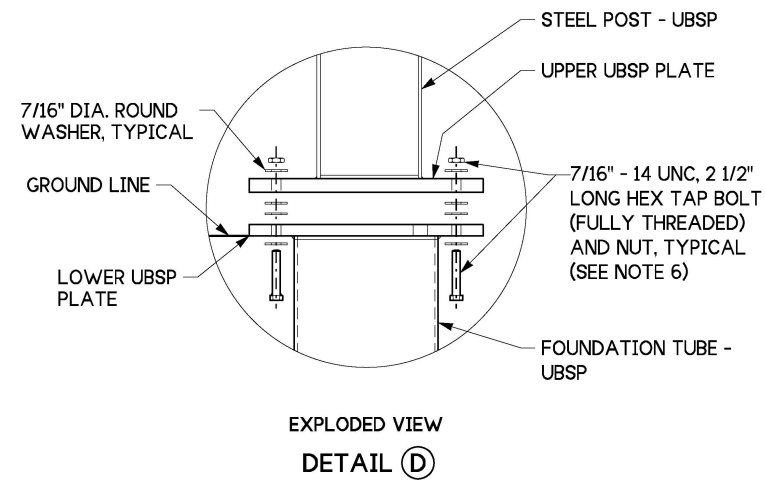
④ POST DETAIL  
(POST # 9-12 L&R)



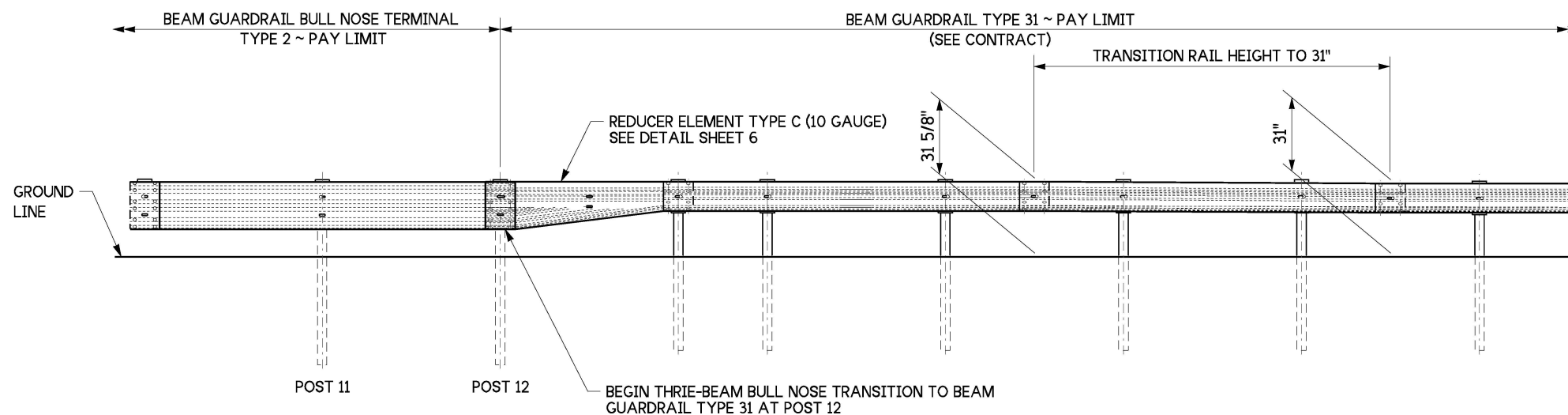
DETAIL B



DETAIL C



EXPLODED VIEW  
DETAIL D



THRIE-BEAM BULL NOSE TRANSITION TO BEAM GUARDRAIL TYPE 31



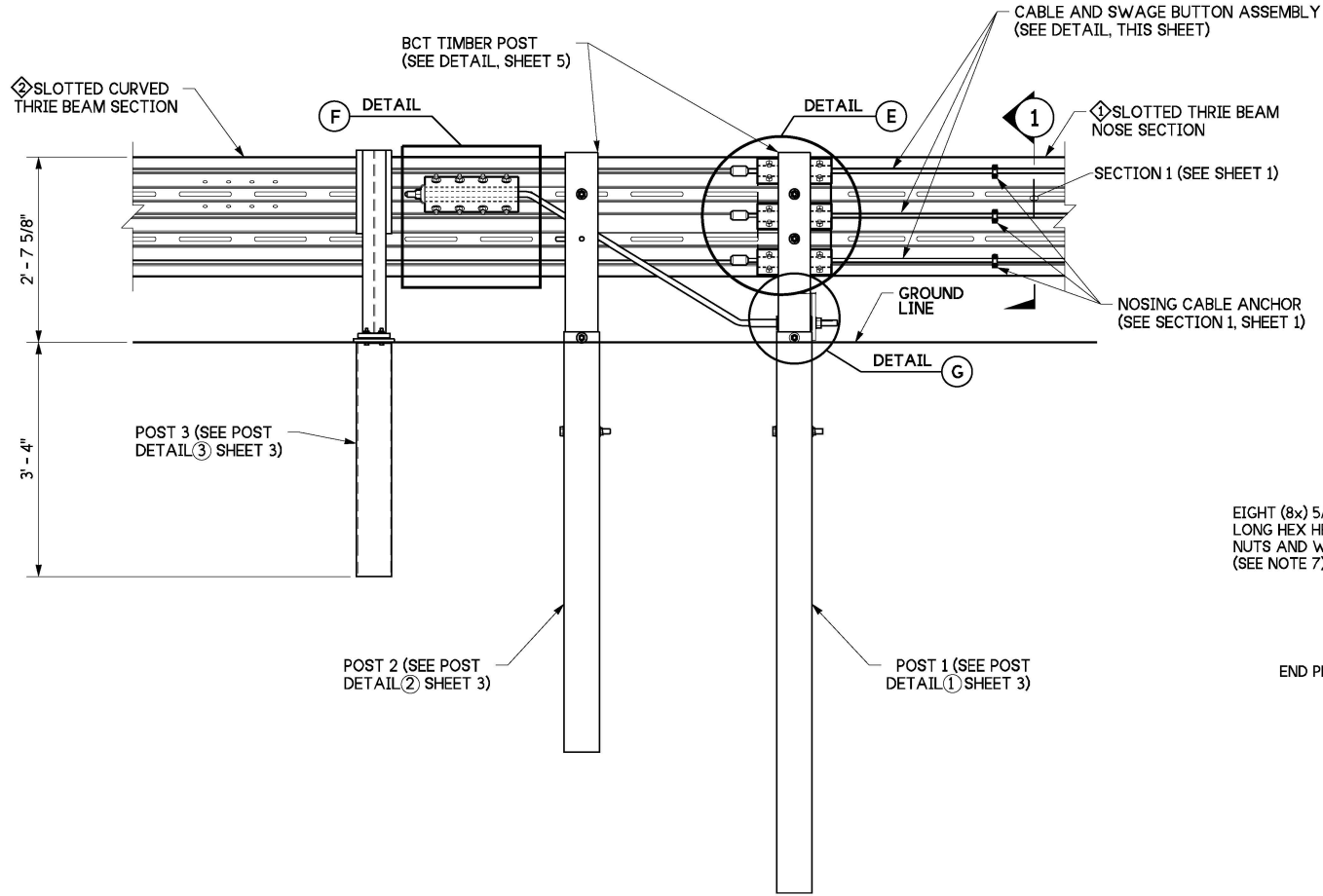
Jul 30, 2024

BEAM GUARDRAIL  
BULL NOSE TERMINAL TYPE 2  
STANDARD PLAN C-20.55-00

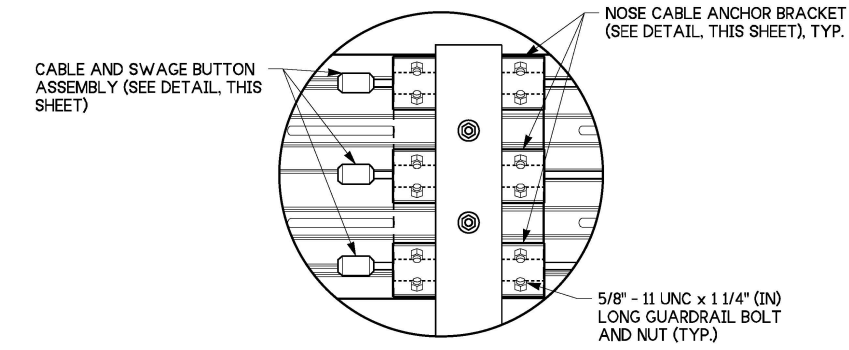
SHEET 3 OF 6 SHEETS

APPROVED FOR PUBLICATION  
*Michael S. Fleming*  
 Michael S. Fleming (Jul 30, 2024 14:40 PDT) Jul 30, 2024  
 STATE DESIGN ENGINEER  
 Washington State Department of Transportation

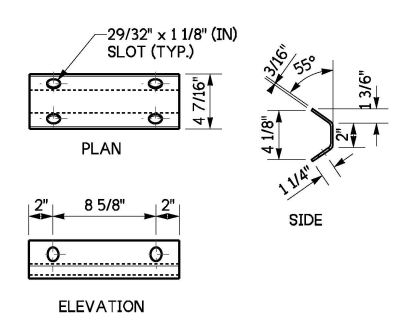




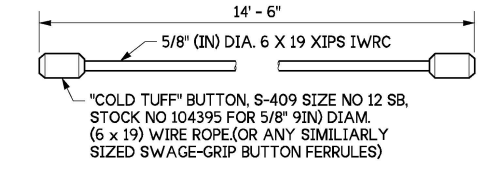
ELEVATION - (POSTS 1 - 3) DETAIL



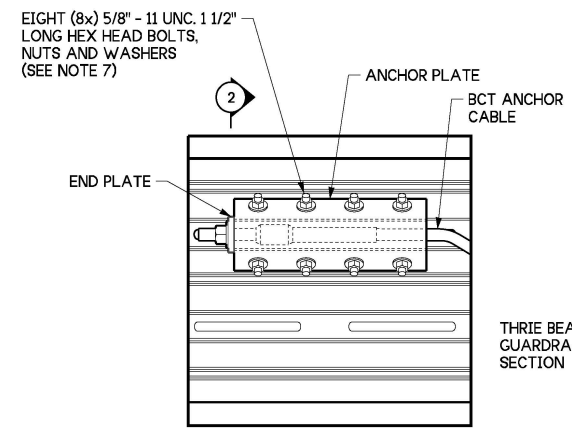
DETAIL E



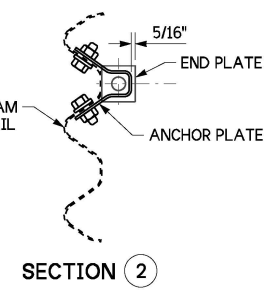
NOSE CABLE ANCHOR BRACKET (ASTM A36)



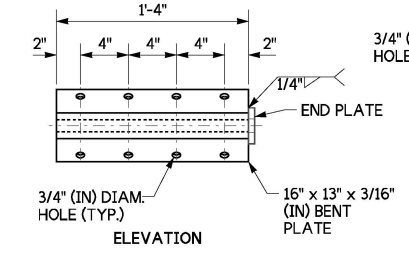
CABLE AND SWAGE BUTTON ASSEMBLY



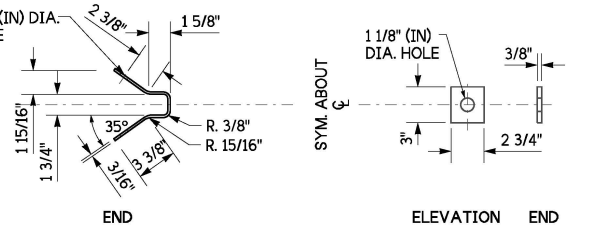
DETAIL F



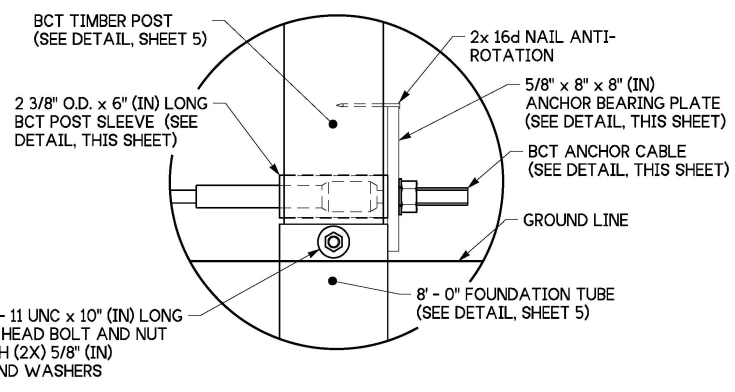
SECTION 2



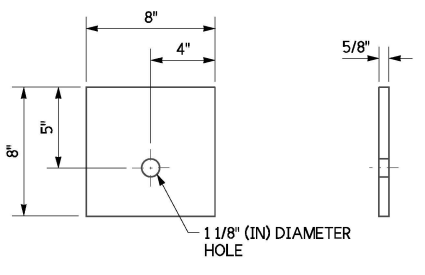
ANCHOR PLATE



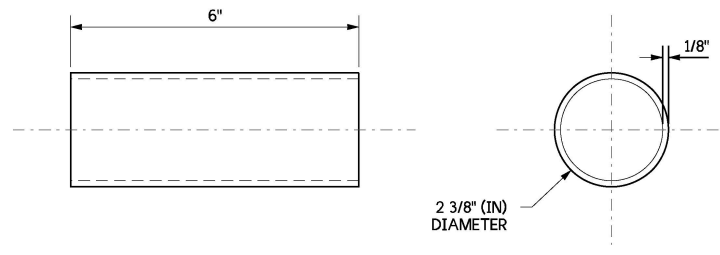
ELEVATION END END PLATE



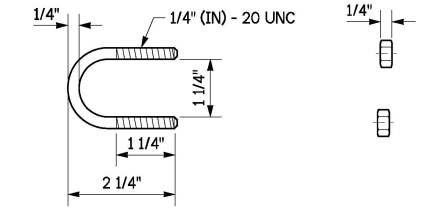
DETAIL G



ANCHOR BEARING PLATE DETAIL (ASTM A36)

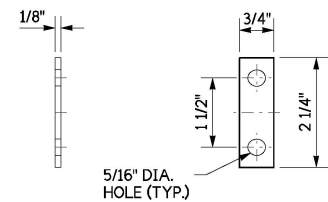


BCT POST SLEEVE DETAIL (ASTM A53 Gr. B SCHEDULE 40)

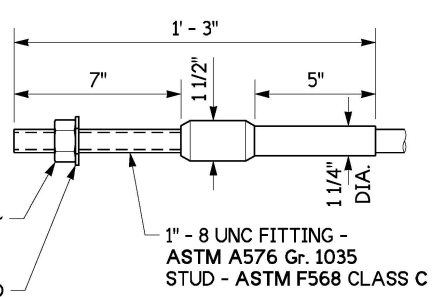


U-BOLT U-BOLT - ASTM A307 GR. A U-BOLT NUT (ASTM A36)

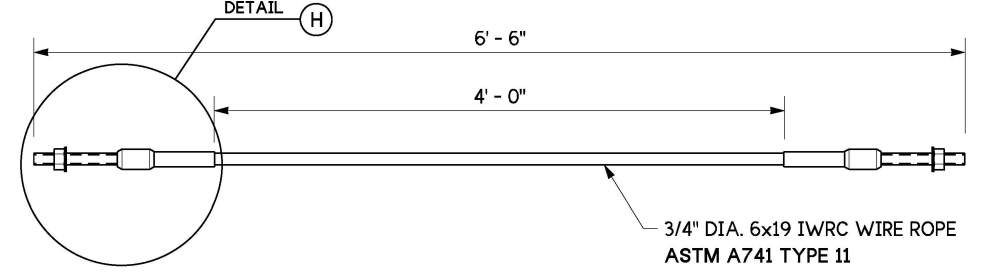
U-BOLT DETAIL



U-BOLT PLATE DETAIL (ASTM A36)



DETAIL H



BCT ANCHOR CABLE DETAIL



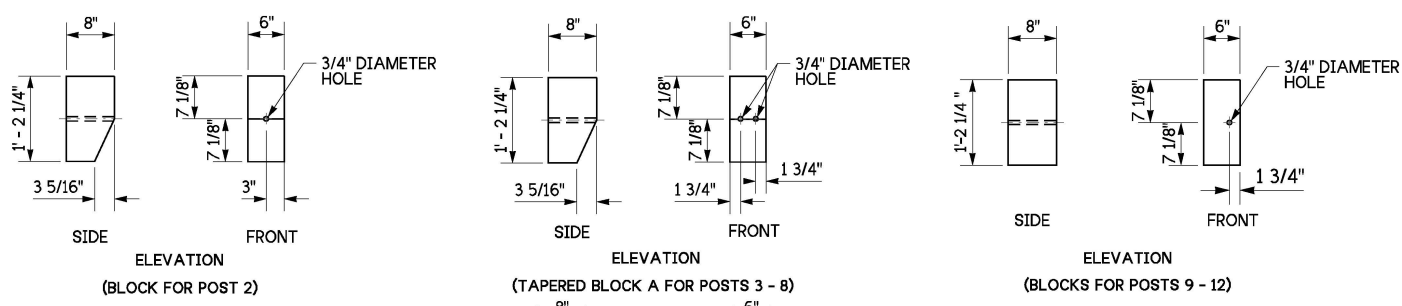
Jul 30, 2024

**BEAM GUARDRAIL  
BULL NOSE TERMINAL TYPE 2  
STANDARD PLAN C-20.55-00**

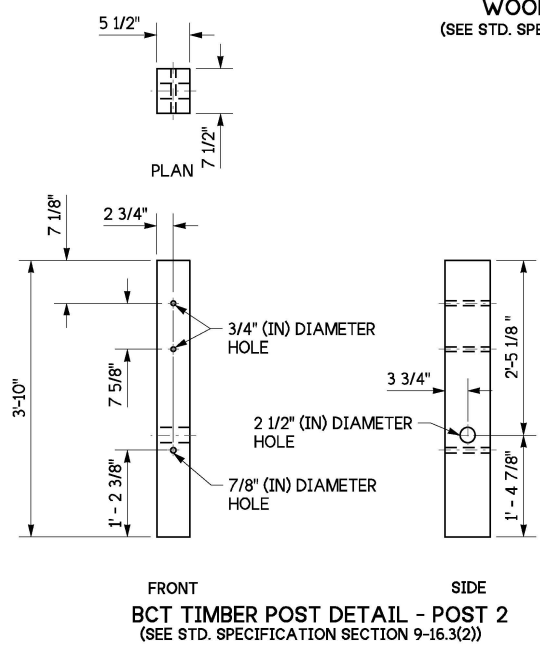
SHEET 4 OF 6 SHEETS

APPROVED FOR PUBLICATION  
*Michael S Fleming*  
 Michael S Fleming (Jul 30, 2024 14:40 PDT) Jul 30, 2024  
 STATE DESIGN ENGINEER  
 Washington State Department of Transportation

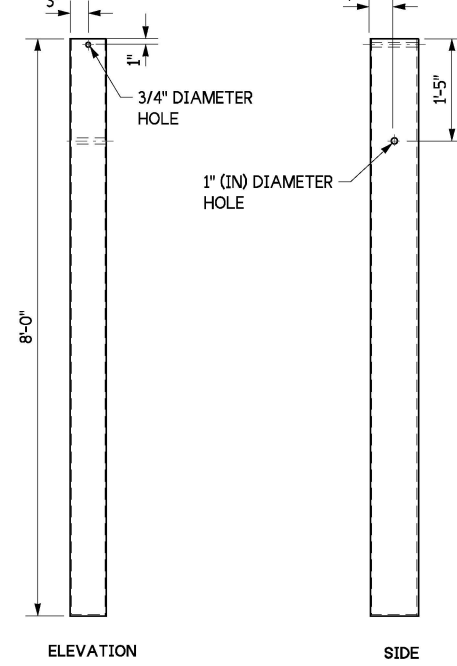




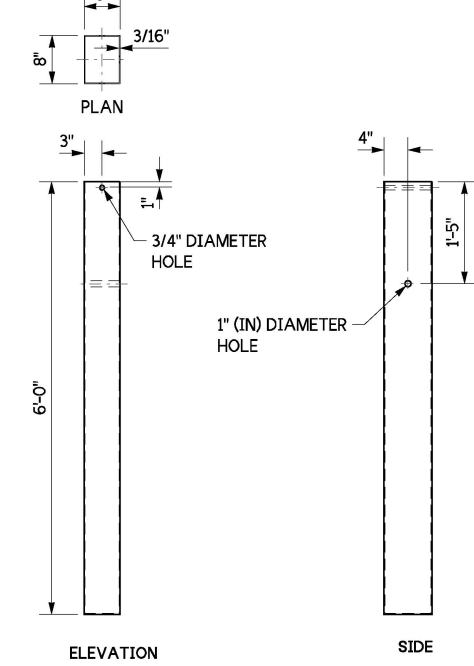
**WOOD BLOCK DETAILS**  
(SEE STD. SPECIFICATION, SECTION 9-16.3(2))



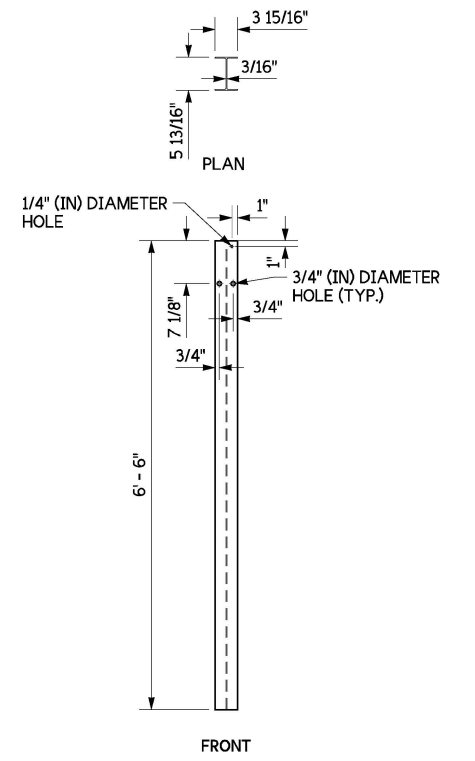
**BCT TIMBER POST DETAIL - POST 2**  
(SEE STD. SPECIFICATION SECTION 9-16.3(2))



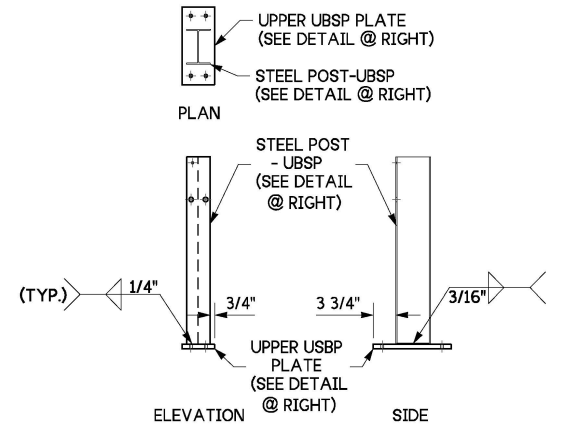
**8' - 0" FOUNDATION TUBE - POST 1**  
(TS3/16" x 6" x 96" LONG ~ ASTM A500 Gr. B)



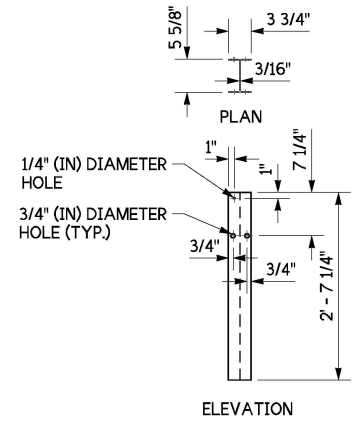
**6' - 0" FOUNDATION TUBE - POST 2**  
(TS3/16" x 6" x 72" LONG ~ ASTM A500 Gr. B)



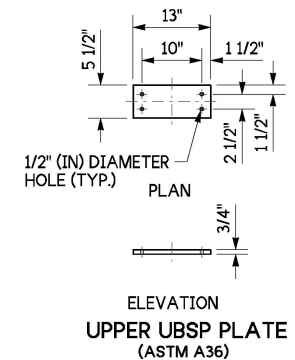
**STEEL POST DETAIL - POSTS 9 - 12**  
(W6x8.5 or W6x9)  
(ASTM A992)



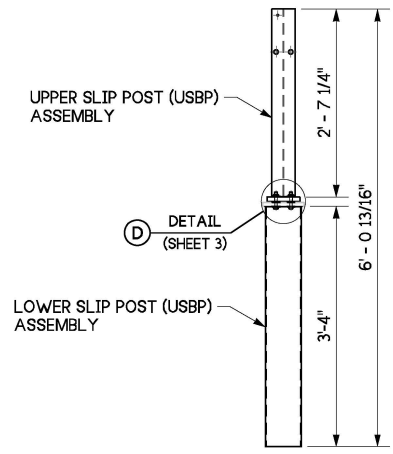
**UPPER SLIP POST (USBP) ASSEMBLY POSTS 3 - 8**



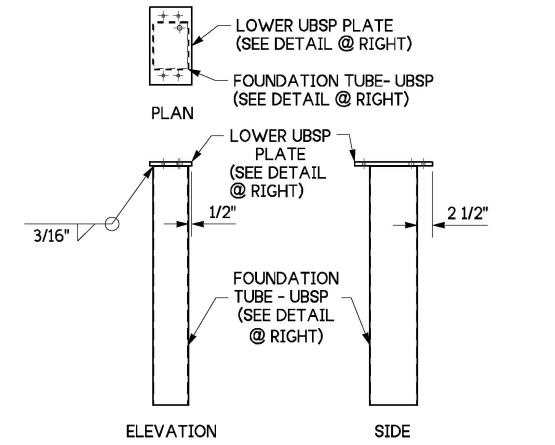
**STEEL POST - USBP**  
(W6x8.5 OR W6x9)  
(ASTM 992)



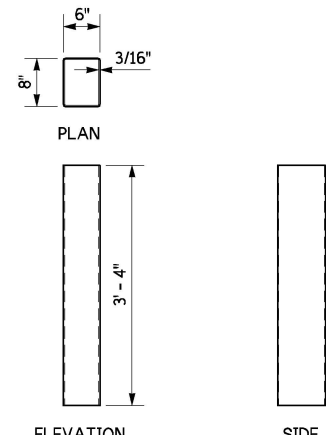
**UPPER USBP PLATE**  
(ASTM A36)



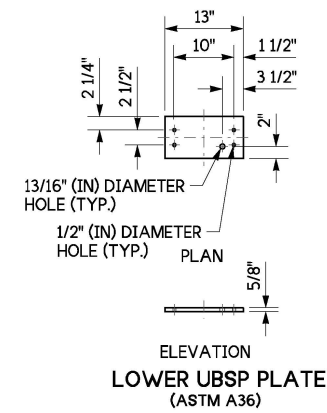
**UNIVERSAL BREAKAWAY STEEL POST (UBSP) ASSEMBLY - POSTS 3 - 8**  
(VERTICAL BOLTS - SHALL BE TORQUED TO 60-75 FT/LBS)



**LOWER SLIP POST (USBP) ASSEMBLY - POSTS 3 - 8**



**FOUNDATION TUBE - USBP**  
(ASTM A500 Gr. B)



**LOWER USBP PLATE**  
(ASTM A36)

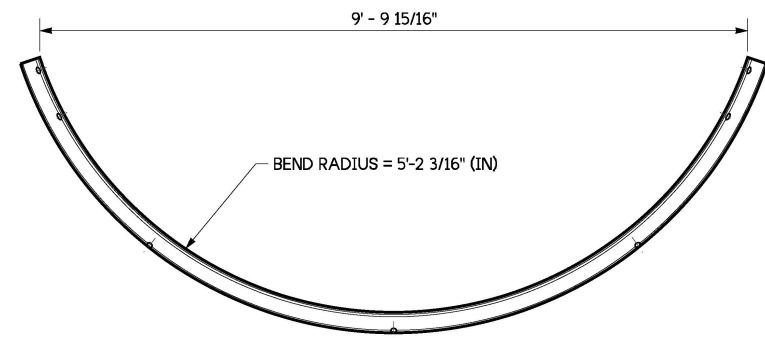
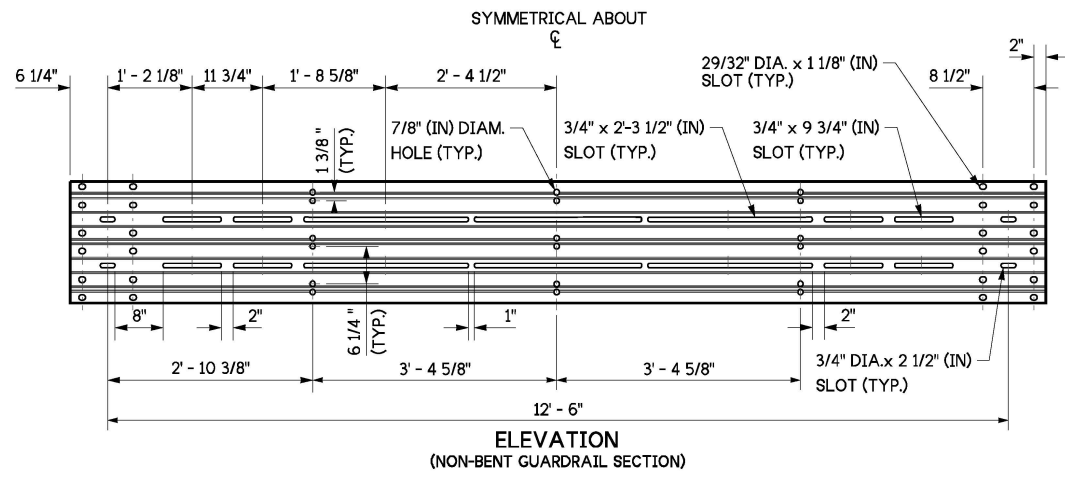


Jul 30, 2024

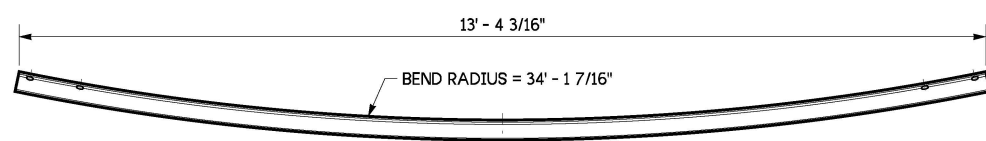
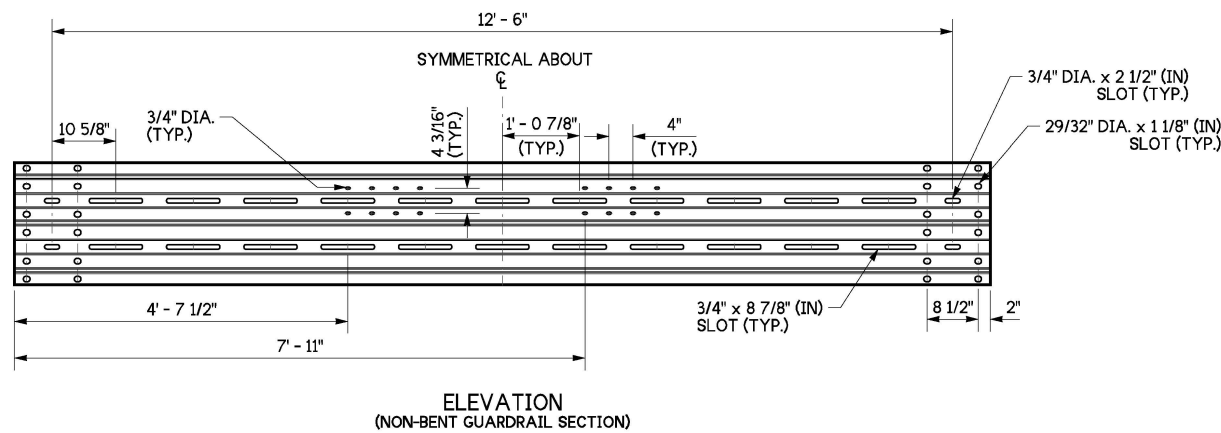
**BEAM GUARDRAIL  
BULL NOSE TERMINAL TYPE 2  
STANDARD PLAN C-20.55-00**

SHEET 5 OF 6 SHEETS

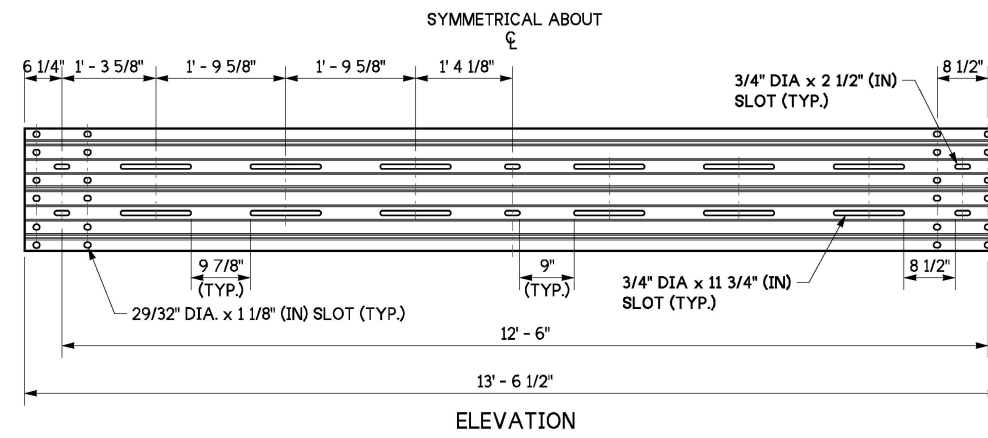
APPROVED FOR PUBLICATION  
*Michael S. Fleming*  
 Michael S Fleming (Jul 30, 2024 14:40 PDT)  
 Jul 30, 2024  
 STATE DESIGN ENGINEER  
**Washington State Department of Transportation**



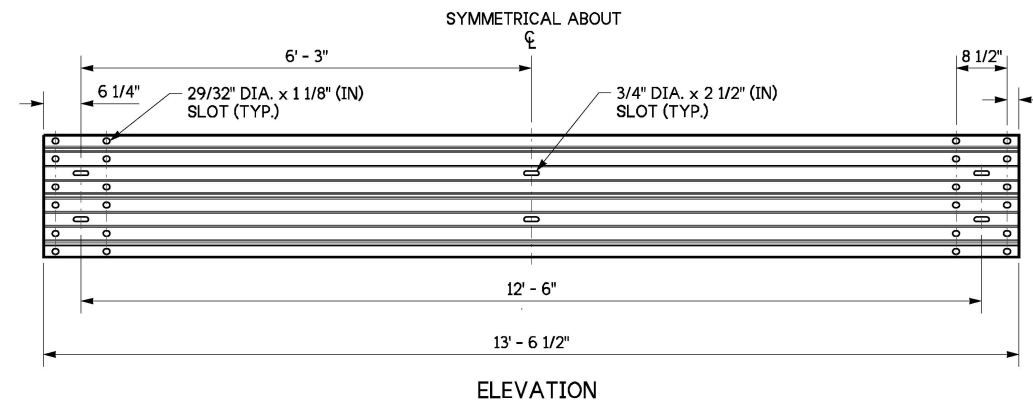
① SLOTTED THRIE BEAM NOSE SECTION (12 GAUGE)



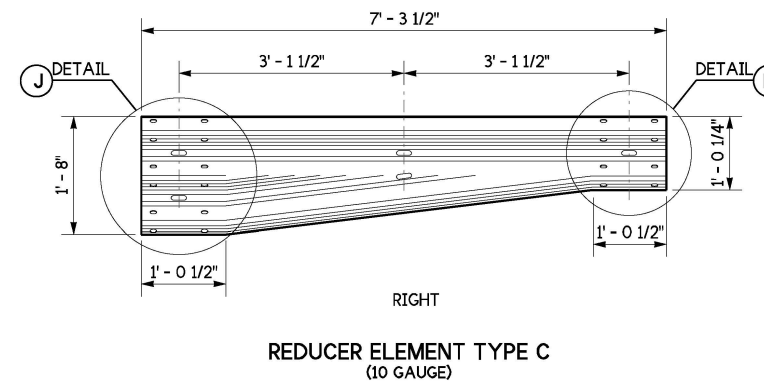
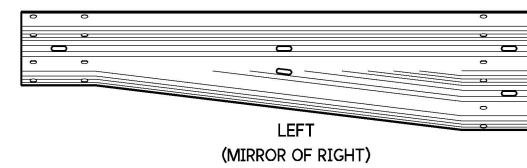
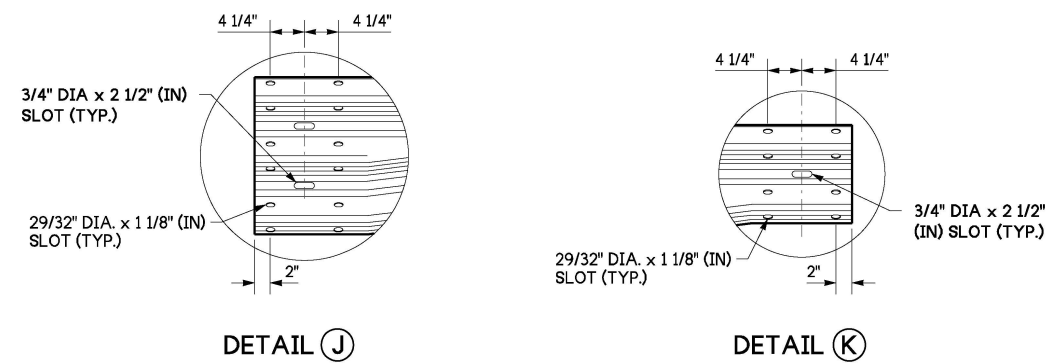
② SLOTTED CURVED THRIE BEAM SECTION (12 GAUGE)



③ SLOTTED STRAIGHT THRIE BEAM SECTION (12 GAUGE)



④ STRAIGHT THRIE BEAM SECTION (12 GAUGE)



Jul 30, 2024

BEAM GUARDRAIL  
BULL NOSE TERMINAL TYPE 2  
STANDARD PLAN C-20.55-00

SHEET 6 OF 6 SHEETS

APPROVED FOR PUBLICATION

Michael S. Fleming  
Michael S. Fleming (Jul 30, 2024 14:40 PDT)

Jul 30, 2024

STATE DESIGN ENGINEER

