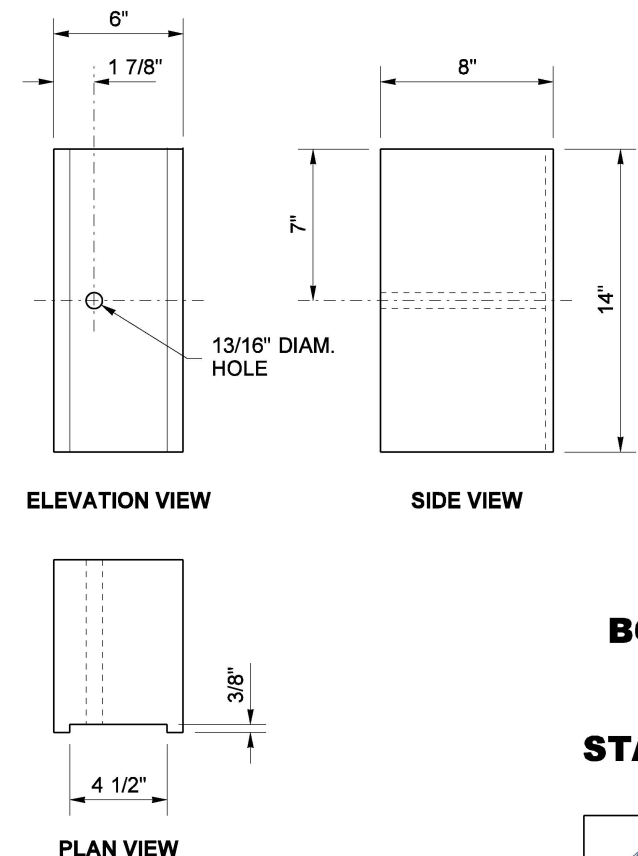
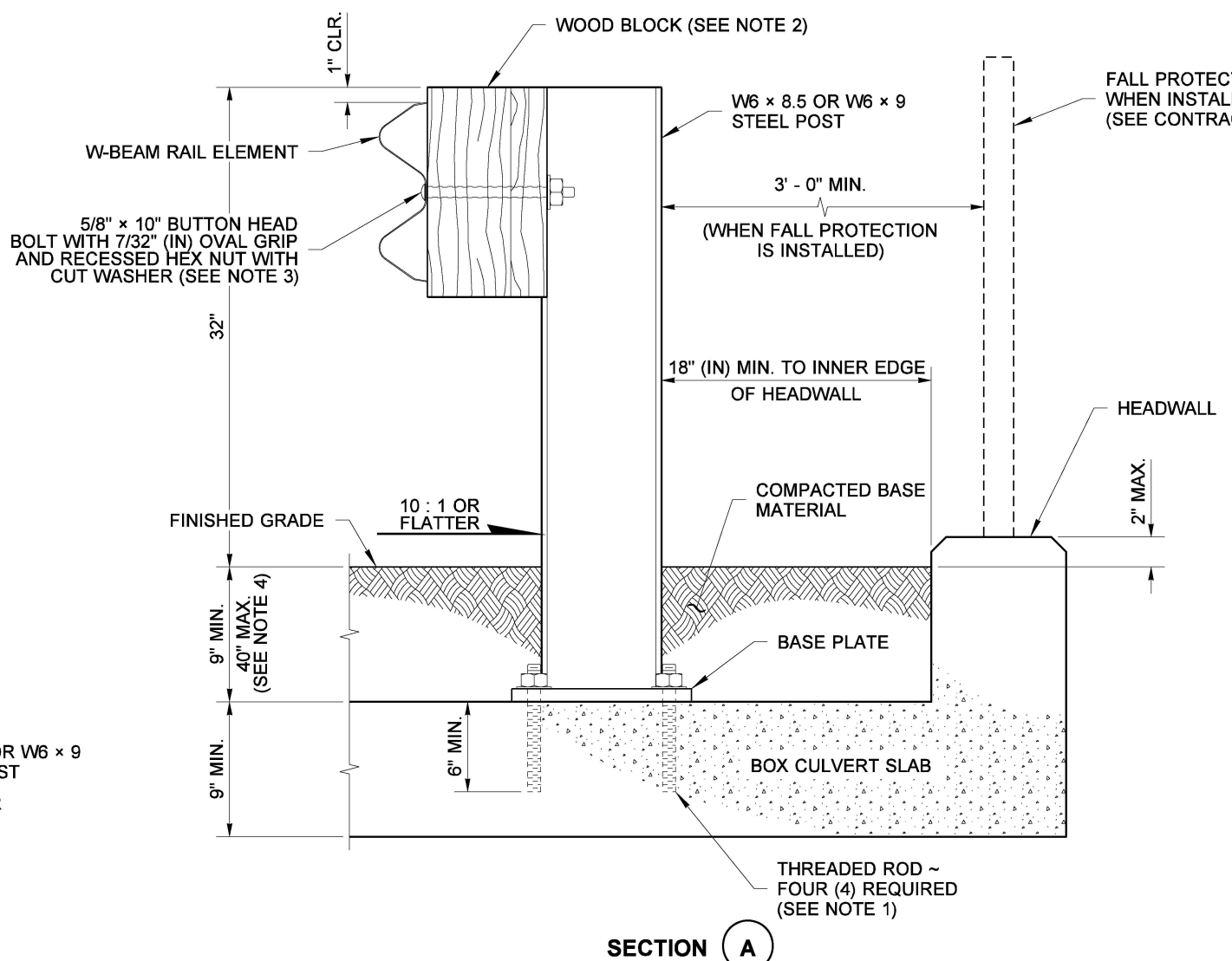
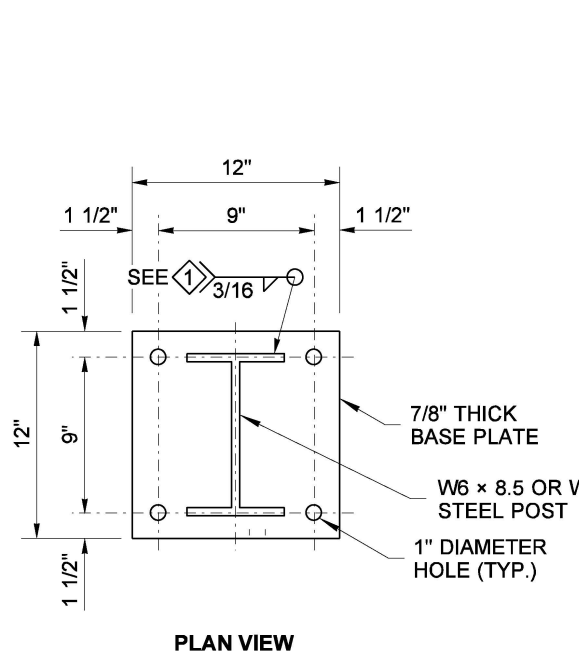
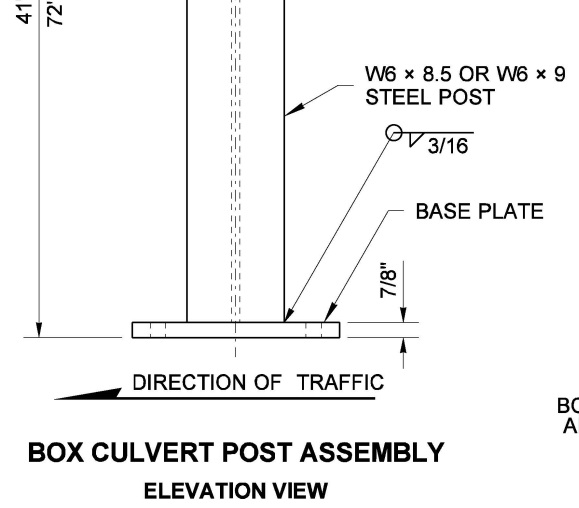
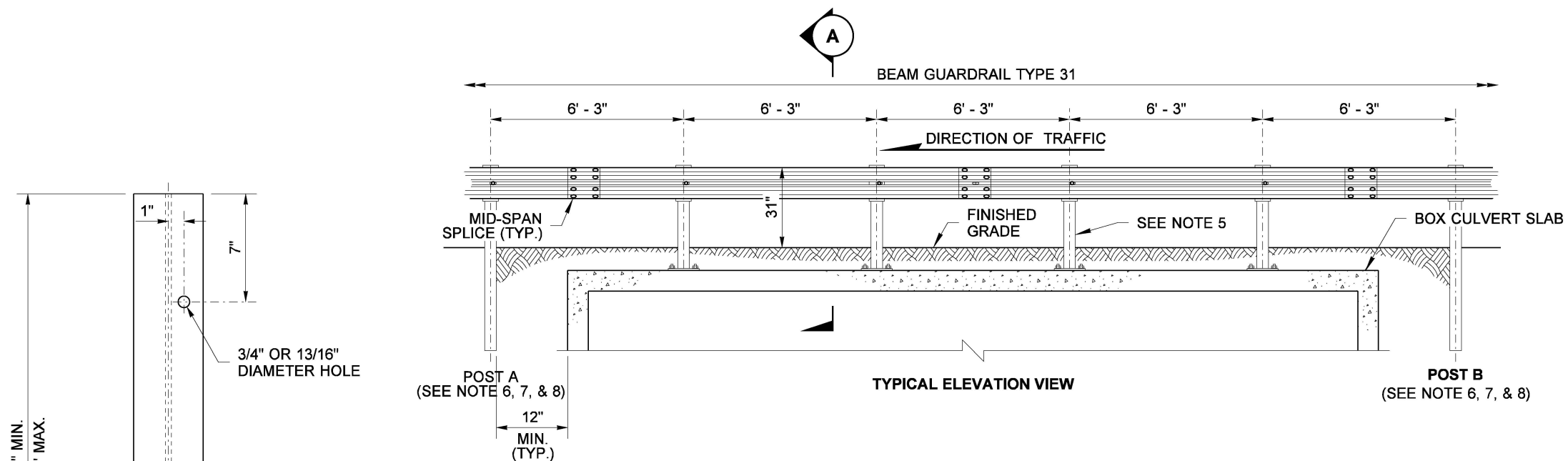


DRAWN BY: FERN LIDDELL



KEY NOTE
 1 WELDING SHALL CONFORM TO STD. SPEC. SECTION 6-03.3(25)

SECTION A
BOX CULVERT GUARDRAIL STEEL POST TYPE 31

WOOD BLOCKOUT
 (SEE NOTE 2)

NOTES

1. Attach Guardrail Post to Box Culvert with 7/8" (in) diameter high-strength threaded rods 8 1/2" (in) in length with resin-bonded anchors. See **Standard Specification, Section 9-06.5(4)**.
2. Wood blocks are shown. Blocks of an approved alternative may be used. See **Standard Specification, Section 9-16.3(2)**.
3. Attach blockouts to steel posts using bolt holes on approaching traffic side of post web.
4. Box culvert guardrail steel posts are not needed for fill depths greater than 40 inches. Install standard 6-foot length Type 31 guardrail posts per **Standard Plan C-20.10**. Place Type 31 guardrail a minimum of 5-feet away from the inner edge of headwall (measured from face of rail to inner face of headwall.)
5. Plan shows 4 box culvert posts installed on culvert lid. It is acceptable to use a greater or lesser number of box culvert guardrail posts to increase or decrease the length of system as needed.
6. Install at least 62.5-feet of Type 31 guardrail upstream and downstream from posts **A** and **B** (Terminals and Anchors included in length).
7. Install at least 12.5-feet of Type 31 Guardrail from guardrail posts **A** and **B** before installing terminals and anchors.
8. Install at least 37.5-feet of Type 31 guardrail upstream and downstream from guardrail posts **A** and **B** before starting a taper or radius rail guardrail system.



Jul 16, 2024

BOX CULVERT EMBEDDED ANCHOR GUARDRAIL STEEL POST ~ TYPE 31 STANDARD PLAN C-20.41-05

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Mark A. Powers Jul 18, 2024
 STATE DESIGN ENGINEER
 Washington State Department of Transportation