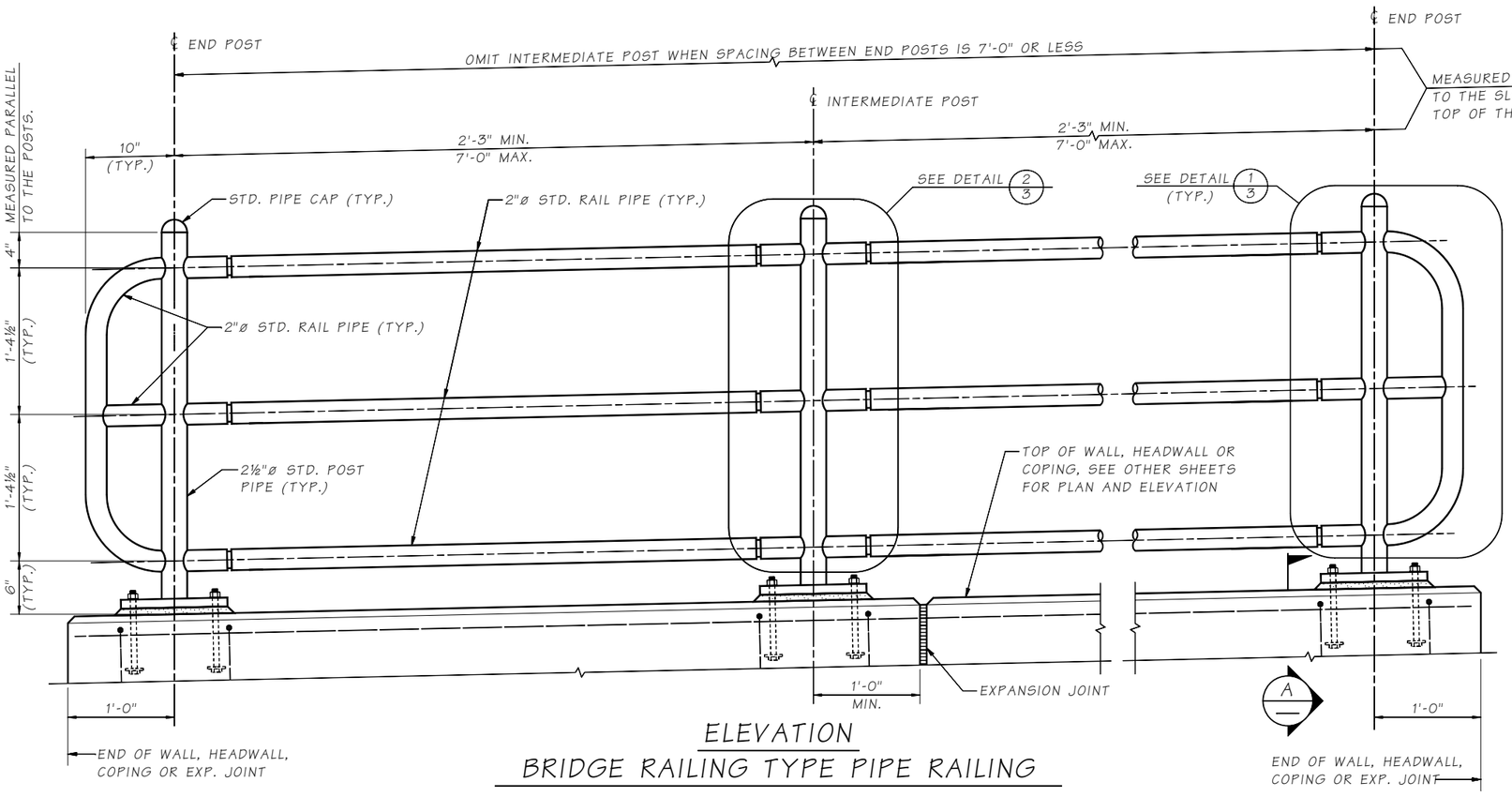
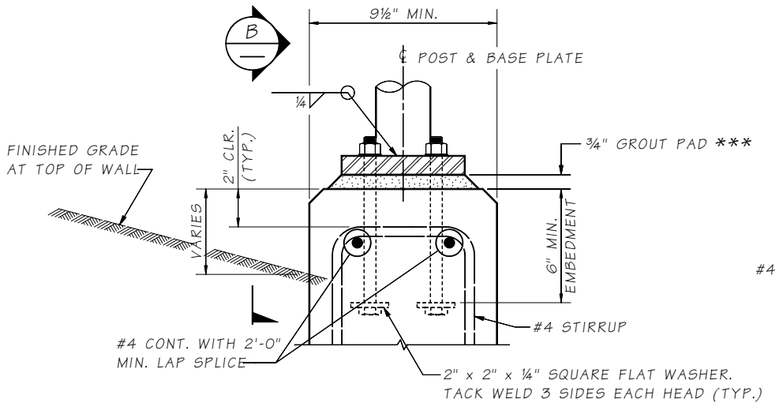
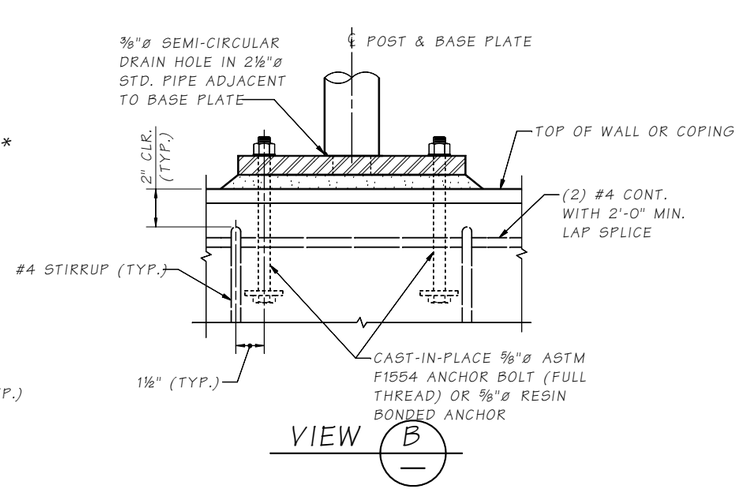


ELEVATION
BRIDGE RAILING TYPE PIPE RAILING

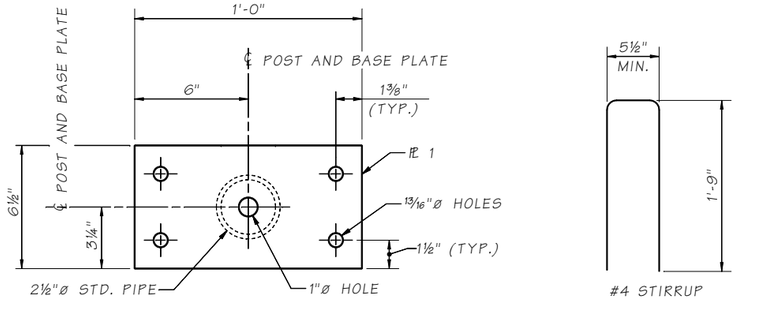


SECTION A — 2

*** GROUT SHALL BE IN ACCORDANCE WITH SECTION 9-20.3 (2)



VIEW B



BASE PLATE DETAIL

NOTES:

1. PIPE RAIL HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 8TH EDITION 2017.
2. ALL POSTS AND VERTICAL ENDS OF RAILING SHALL BE INSTALLED VERTICAL. ALL HORIZONTAL RAILING SHALL BE INSTALLED PARALLEL TO TOP OF WALL, HEADWALL OR COPING.
3. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1.
4. INTERMEDIATE AND END POSTS SHALL NOT BE INSTALLED ACROSS AN EXPANSION JOINT.
5. PIPE RAILING, PIPE POSTS AND PIPE RAILING SPLICES SHALL BE ADEQUATELY WRAPPED TO INSURE SURFACE PROTECTION DURING HANDLING AND TRANSPORTATION TO THE JOB SITE.
6. ALL PARTS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111, M232, OR ASTM F2329 AFTER FABRICATION, UNLESS NOTED OTHERWISE.
7. SUPPLEMENTAL REQUIREMENTS S2, S3 AND S4 OF ASTM F1554 NEED NOT BE MET FOR THE ANCHOR BOLTS.
8. REINFORCEMENT SHOWN IS FOR ANCHOR BOLT CONNECTION ONLY. CONTRACTOR TO DESIGN ADDITIONAL REINFORCEMENT REQUIRED FOR HEADWALL, COPING OR TOP OF WALL.
9. CUTTING SHALL BE DONE BY SAWING OR MILLING AND ALL CUTS SHALL BE TRUE AND SMOOTH, FLAME CUTTING WILL NOT BE PERMITTED.
10. PIPE RAILING AND SPLICES MAY BE HEATED TO FACILITATE FORMING OR BENDING.

PART	MATERIAL SPECIFICATION
PIPES	ASTM A53, GRADE B, TYPE E OR S, OR EQUIVALENT HSS TUBE ASTM A500 GRADE B.
PLATES	ASTM A36 OR ASTM A572
DRIVE PINS	ASTM A276 TYPE 302 STAINLESS STEEL

LAST REVISED: 3/7/18

SR JOB NO. SHEET

8.1-A7-1

Bridge Design Engr.		W:\STANDARDSBE11\PIPERAILING\PIPERAILENGDETAILS1of3.MAN 1 of 3.MAN				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO. / TOTAL SHEETS
Supervisor	Sup					10	WASH.		
Designed By	Designer	Date				JOB NUMBER			
Checked By	Checker	Date							
Detailed By	Detailer	Date							
Bridge Projects Engr.									
Prelim. Plan By									
Architect/Specialist		DATE	REVISION	BY	APP'D				

Mon Jul 09 09:07:04 2018

BRIDGE AND STRUCTURES OFFICE

Washington State Department of Transportation

BRIDGE RAILING TYPE PIPE RAILING DETAILS 1 OF 3

BRIDGE SHEET NO. / SHEET OF SHEETS