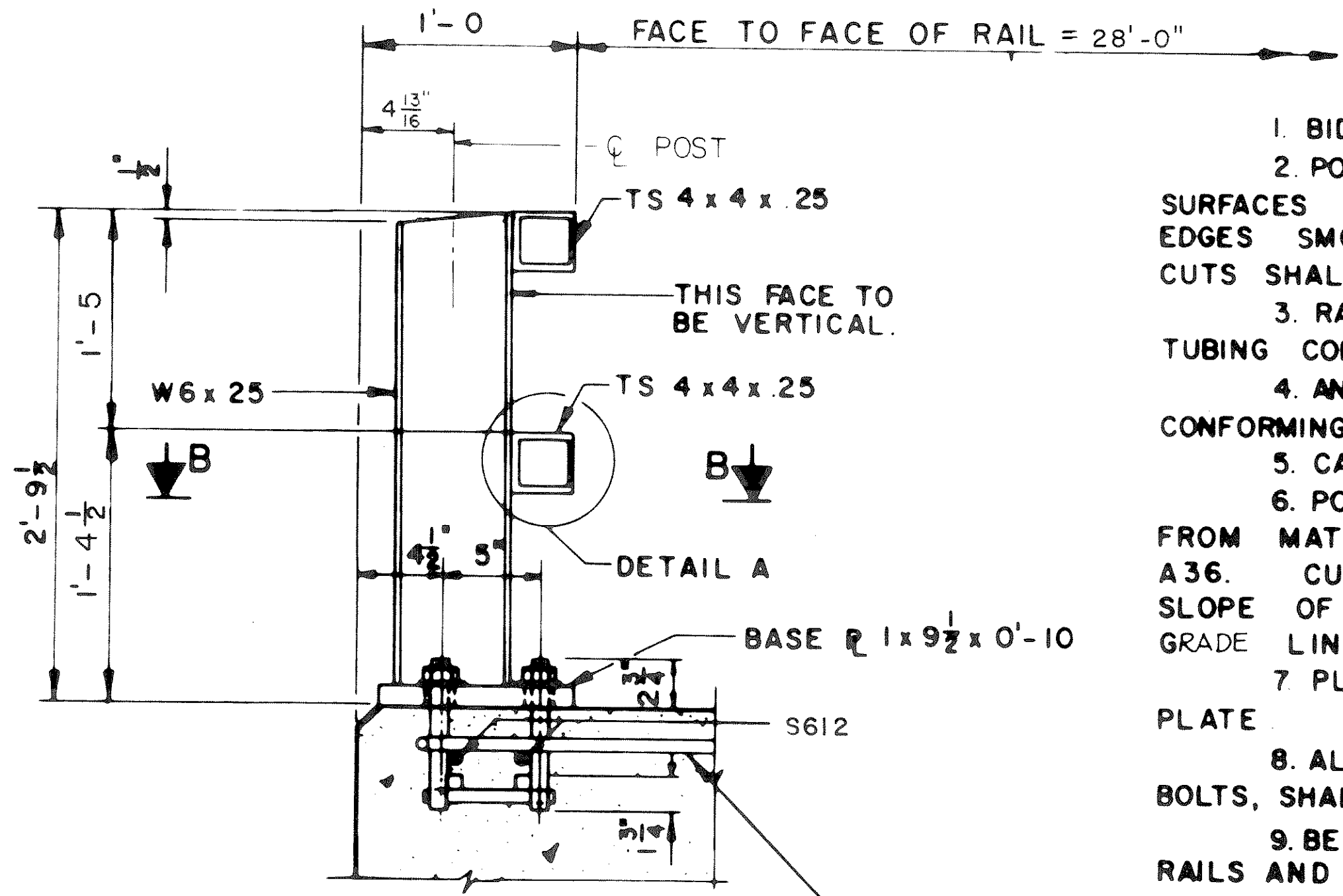
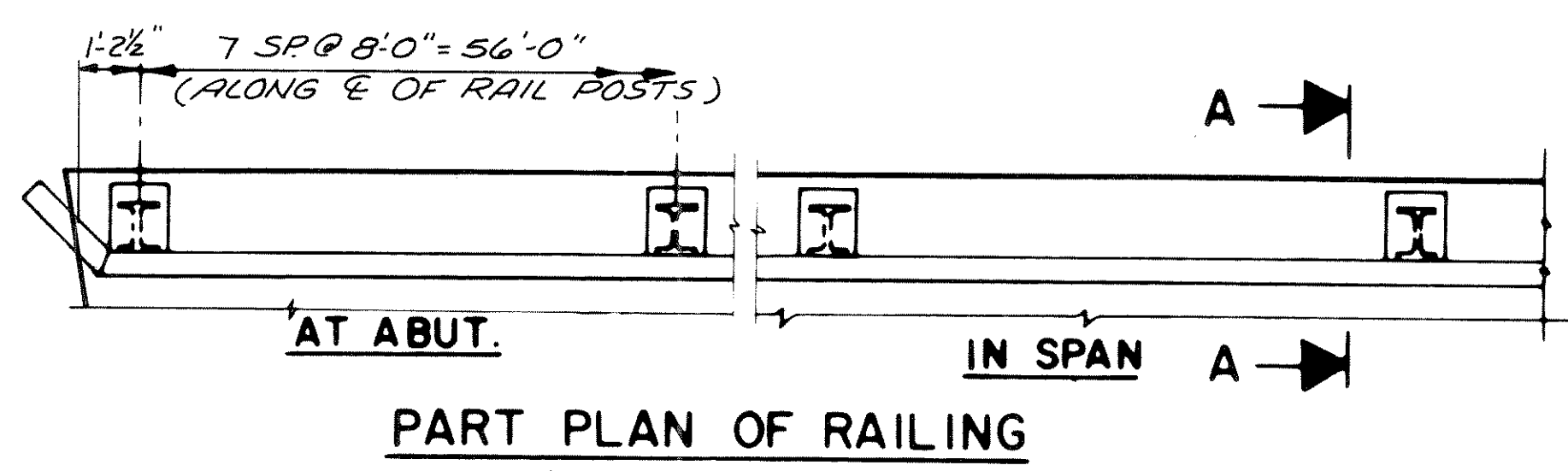
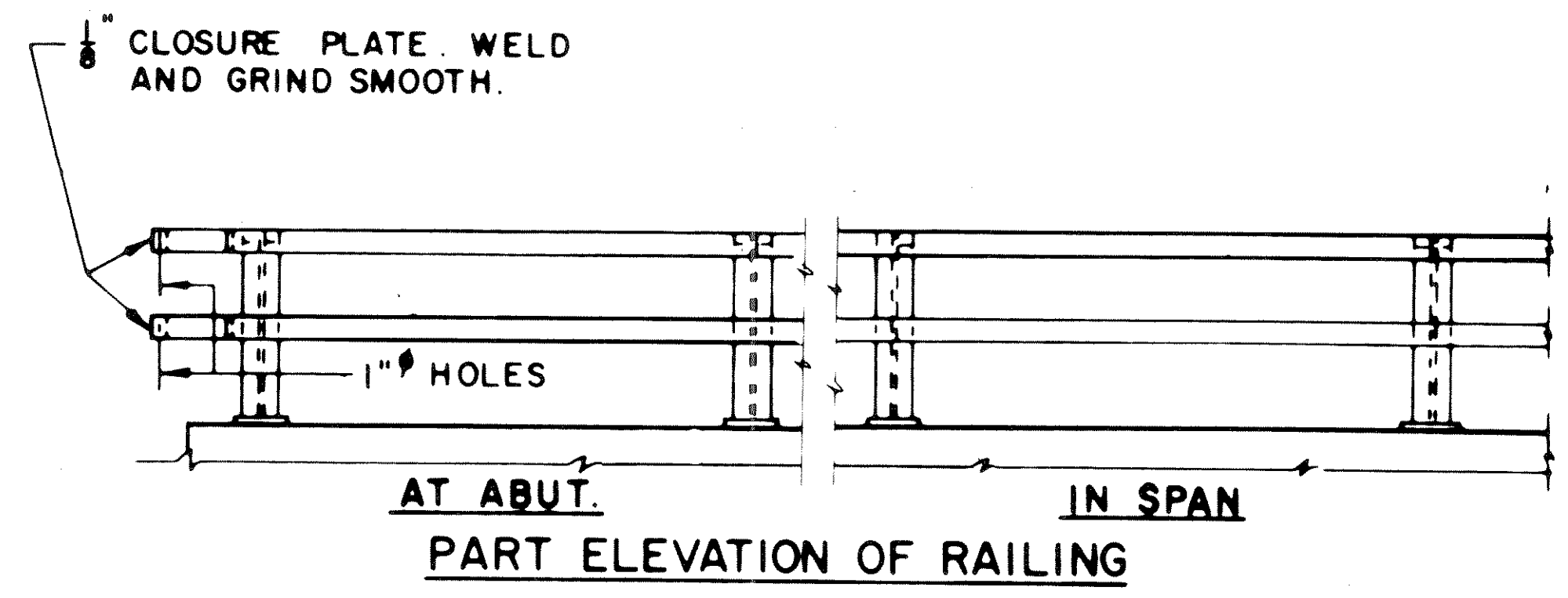


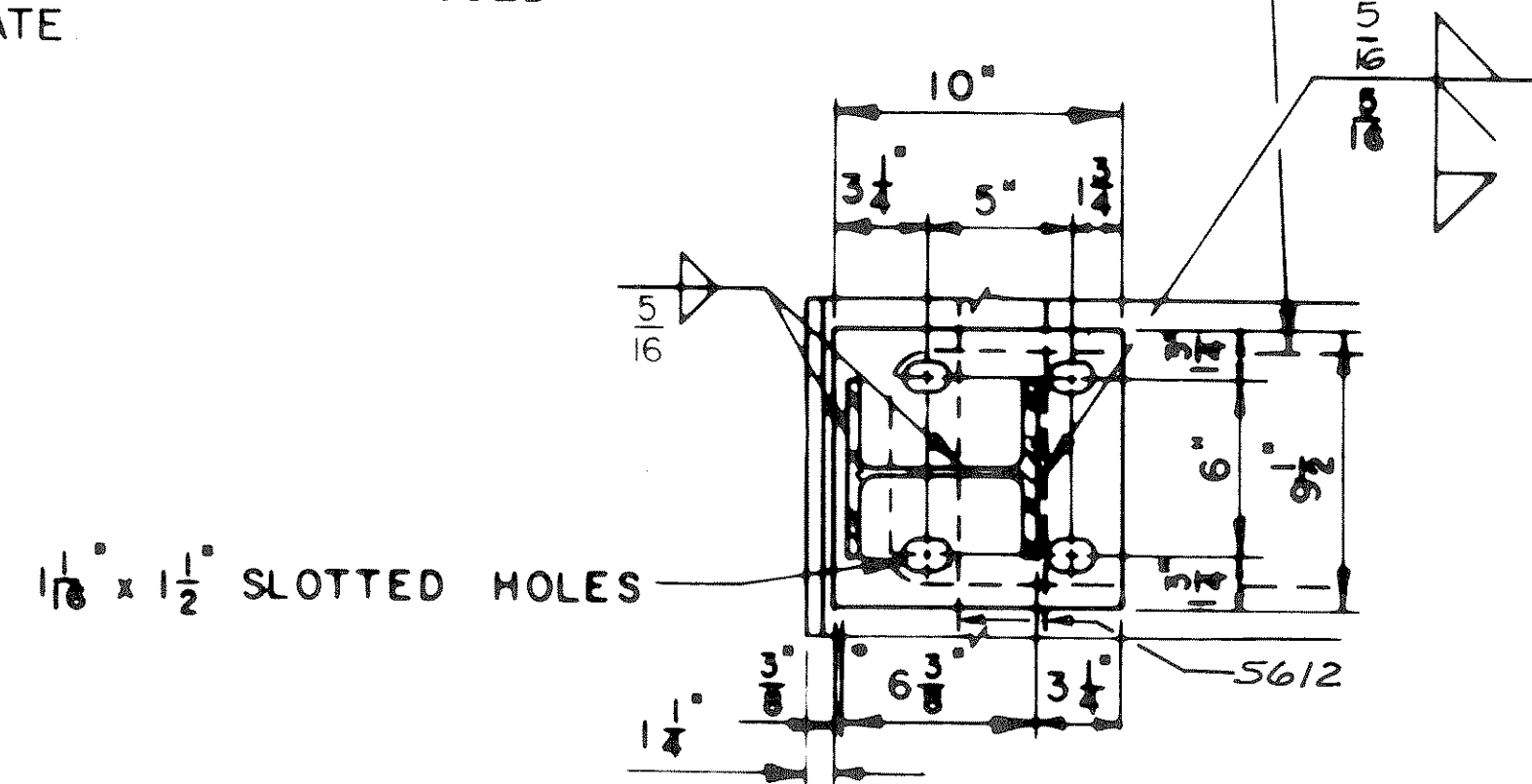
**GENERAL NOTES**

1. BID ITEM SHALL BE 'TUBULAR RAILING, TYPE F'.
  2. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.
  3. RAILING SHALL BE 4 x 4 x .25 STRUCTURAL TUBING CONFORMING TO A.S.T.M. DESIGNATION A36.
  4. ANCHOR BOLTS SHALL BE 7/8" NOMINAL CONFORMING TO A.S.T.M. A 449 WITH 3" THREAD.
  5. CALC EXPOSED OPENINGS BETWEEN SHIMS.
  6. POST, BASE PLATES AND SHIMS SHALL BE MADE FROM MATERIAL CONFORMING TO A.S.T.M. DESIGNATION A36. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST NORMAL TO GRADE LINE.
  7. PLACE ANCHOR BOLTS NORMAL TO BASE PLATE.
  8. ALL MEMBERS, INCLUDING UPPER 4" OF ANCHOR BOLTS, SHALL BE GALVANIZED AFTER FABRICATION.
  9. BEAM GUARD ATTACHMENT MAY BE WELDED TO RAILS AND RAILS MAY BE WELDED TO POSTS.
  10. FILL POST ANCHOR BOLT HOLES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.
  11. RAILING SHALL BE FABRICATED IN 2 OR 3 PANEL LENGTHS.
  12. STEEL SHIMS SHALL BE USED UNDER POST WHERE REQ'D FOR ALIGNMENT.
  13. HIGH STRENGTH NUTS & WASHERS SHALL BE USED WITH ANCHOR BOLTS.
- NOTE: BEAM GUARD RAIL ATTACHMENTS TO BE INCLUDED IN BID ITEMS FOR RAILINGS.

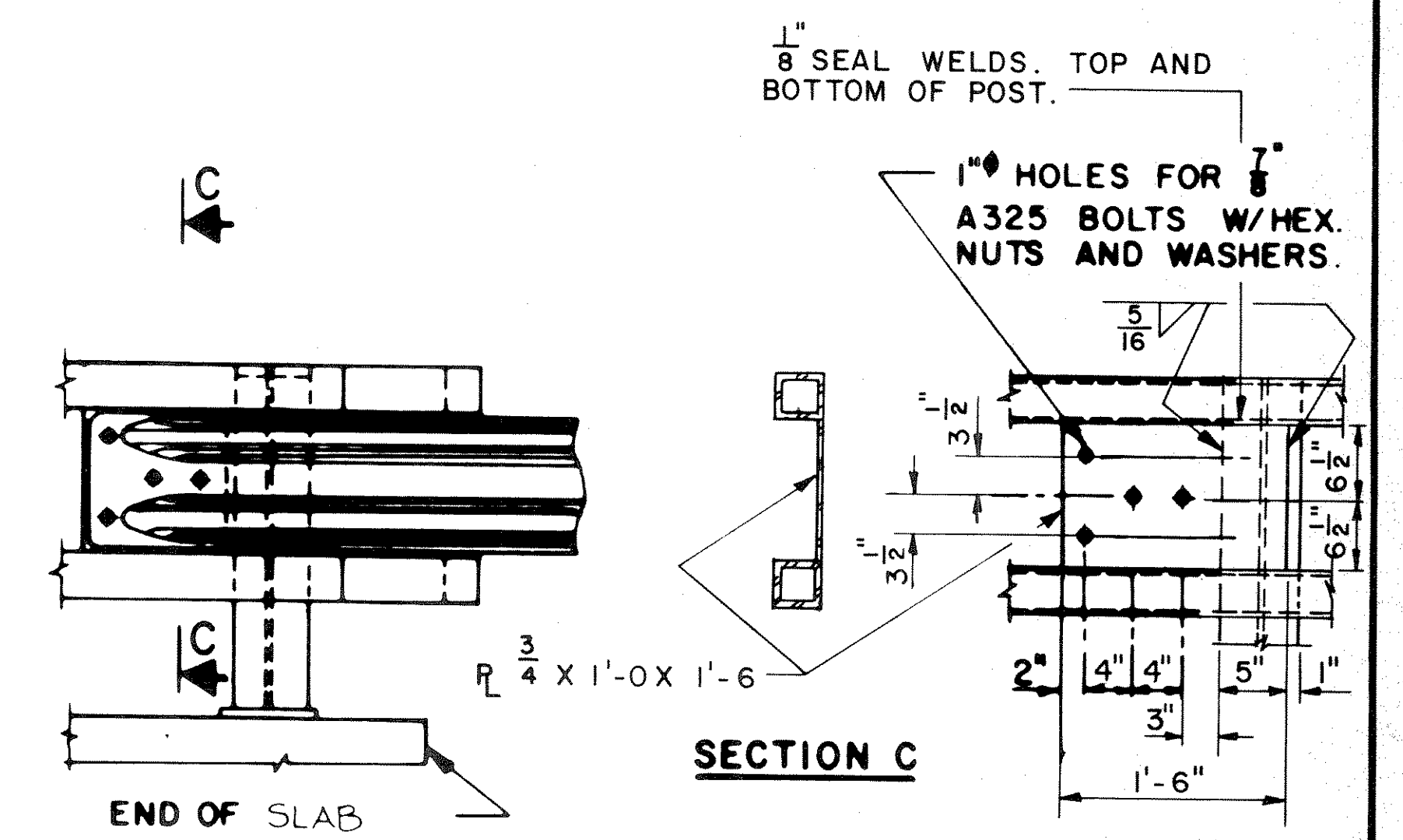
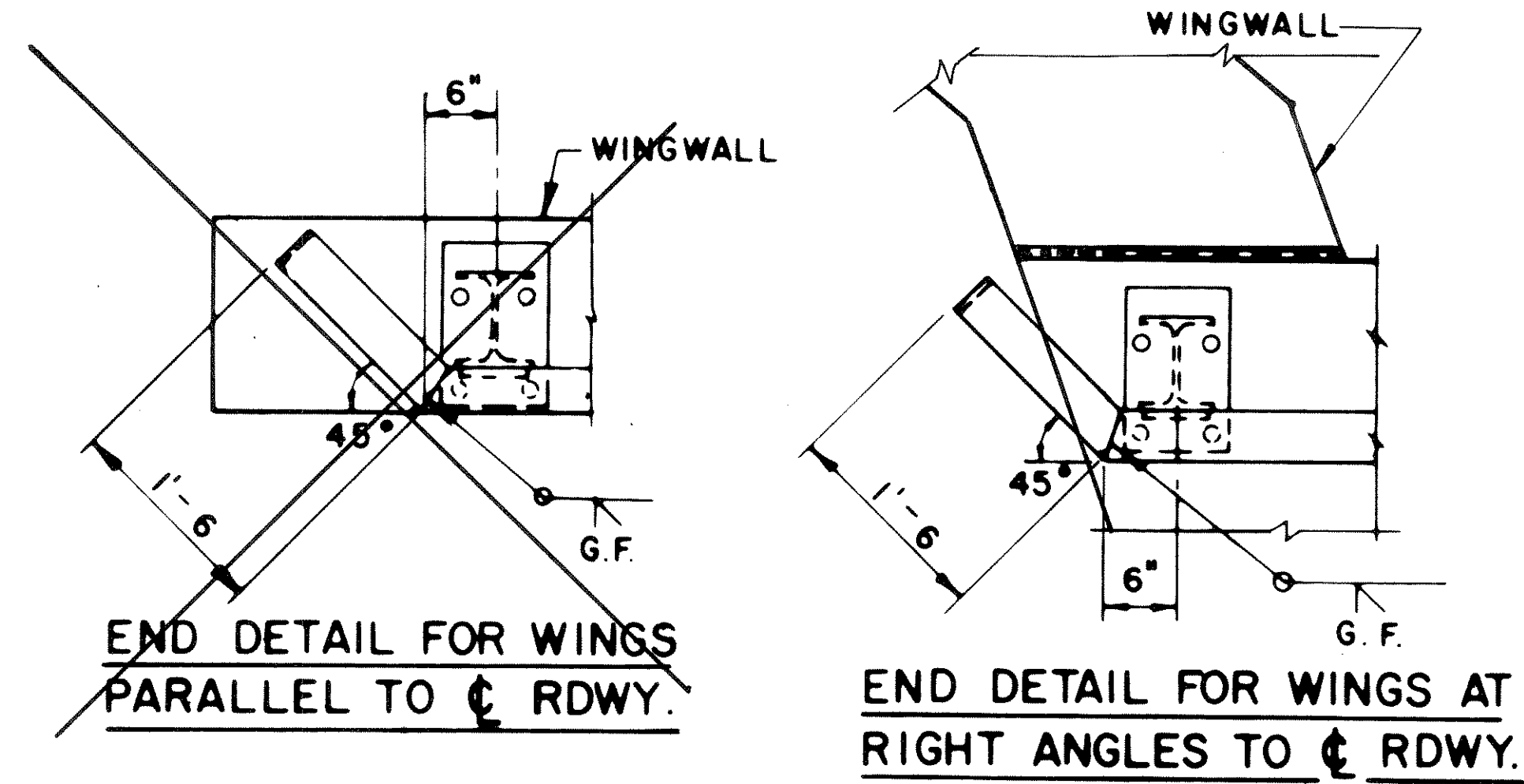


**SECTION A**

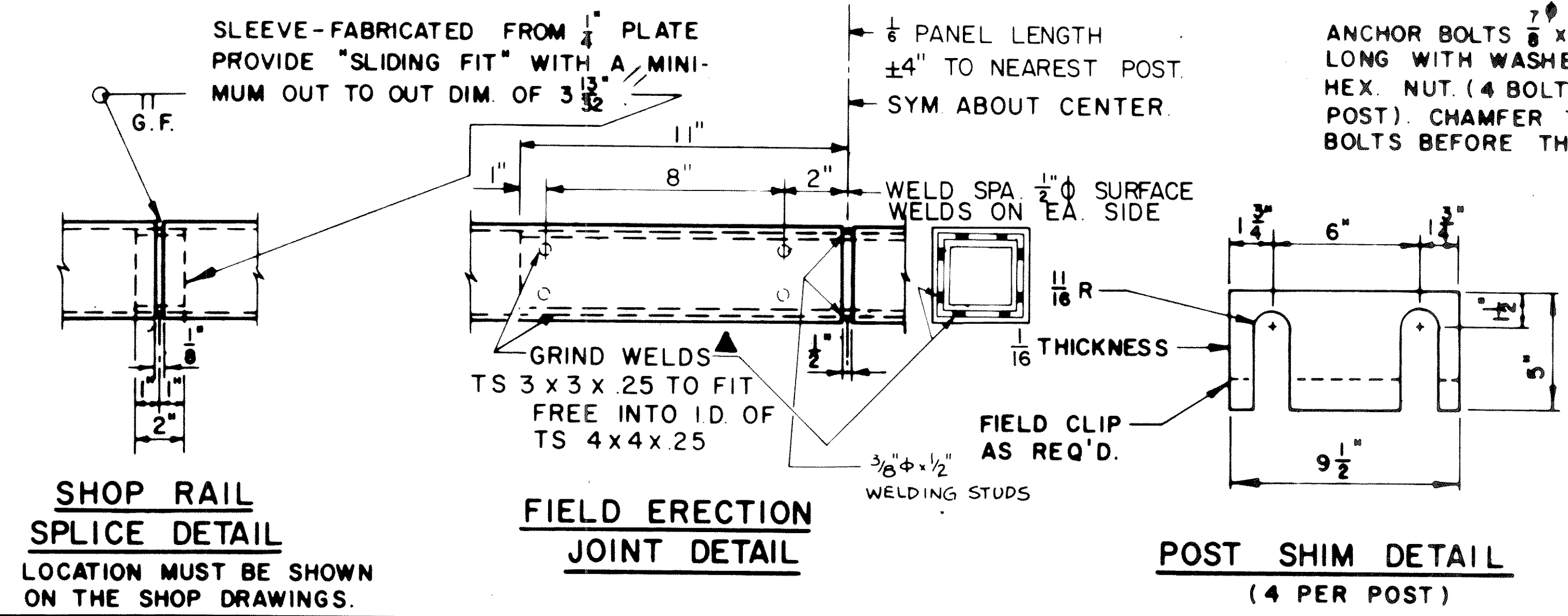
▲ MINIMUM 5/8" FLAT SURFACE DIAMETER PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE



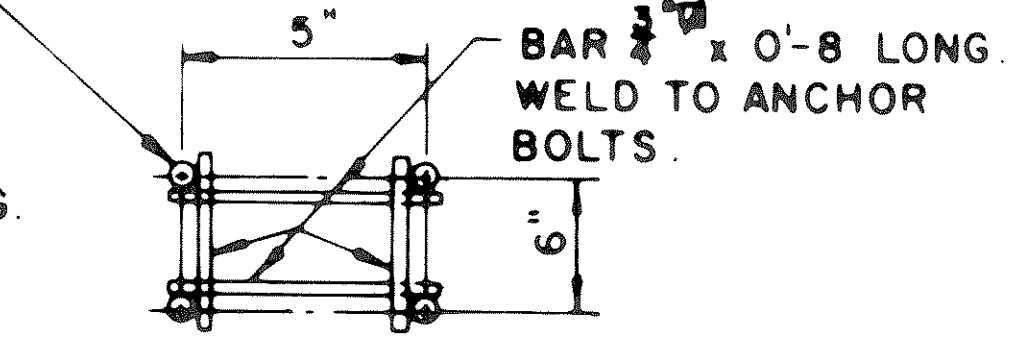
**SECTION B**



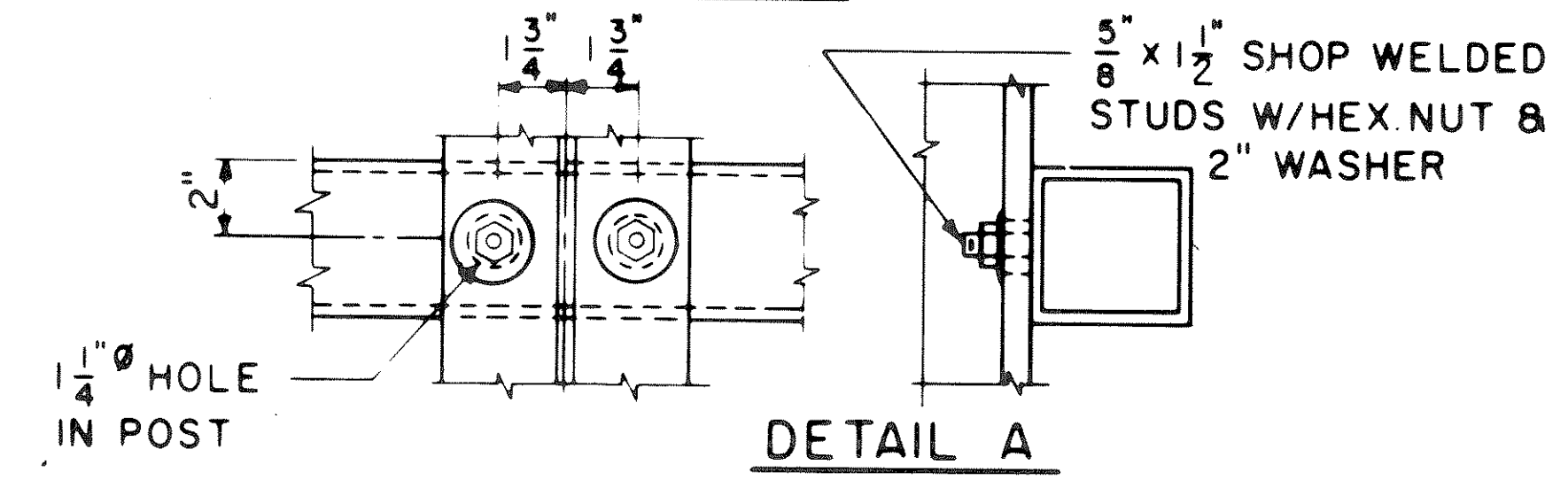
**DETAIL AT END POST (BEAM GUARD RAIL ATTACHMENT)**



ANCHOR BOLTS 7/8" x 0'-8 1/2" LONG WITH WASHER AND HEX. NUT. (4 BOLTS PER POST). CHAMFER TOP OF BOLTS BEFORE THREADING.



**ANCHOR BOLT DETAIL**



**POST SHIM DETAIL (4 PER POST)**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
STRUCTURE B-35-84		
Const. Spec. 1981	Drawn By: NJA	Plans Checked: RIS
TUBULAR RAILING TYPE "F"		SHEET 11 OF 11 X67862