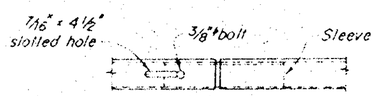
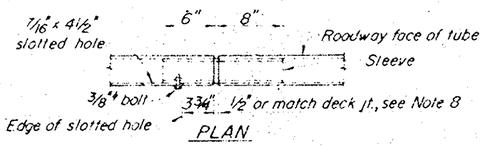
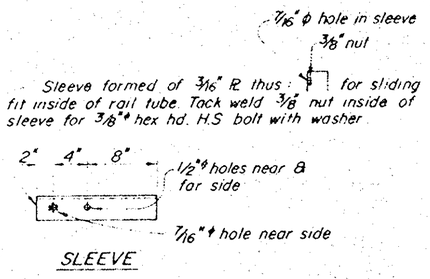
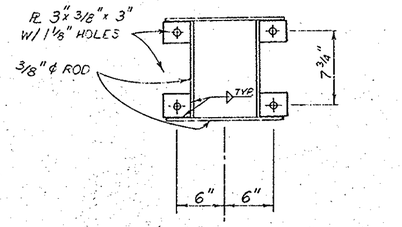


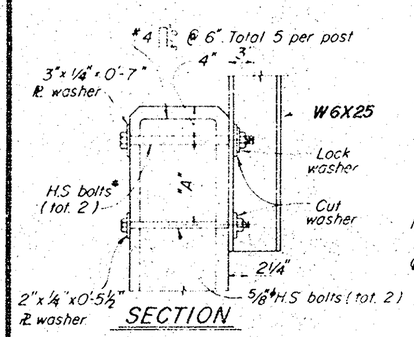



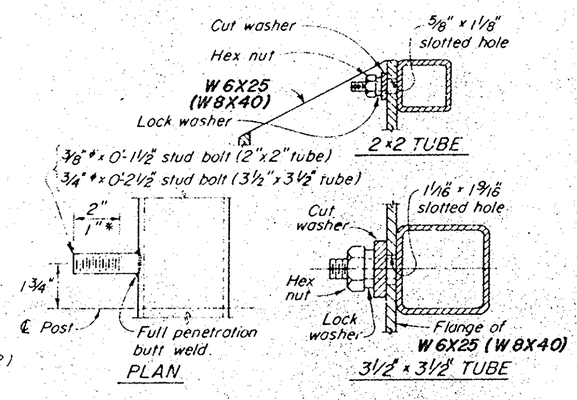

DETAIL A · TUBE SPLICE



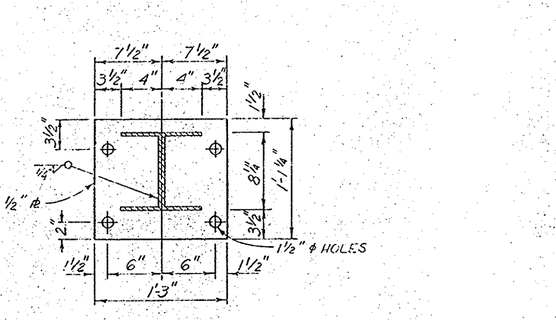

ANCHOR BOLT TEMPLATE




RAIL POST ON WALL

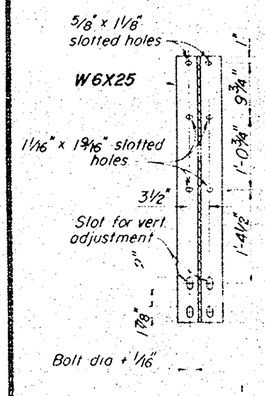


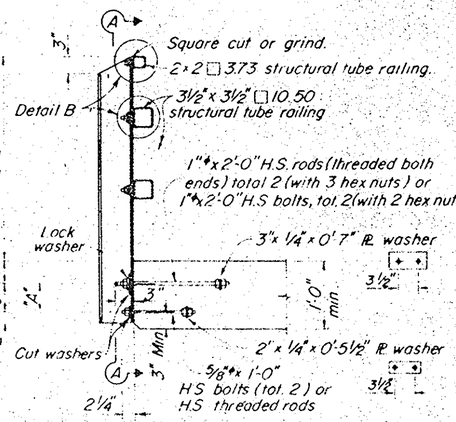

DETAIL B - STUD BOLT
(ONE STUD PER TUBE REQIRED IN EA. POST)




SECTION C-C

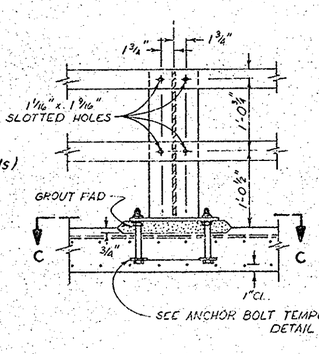
* 3/4"ϕ H.S. bolts : A = 10"
1"ϕ H.S. bolts : A = 5"



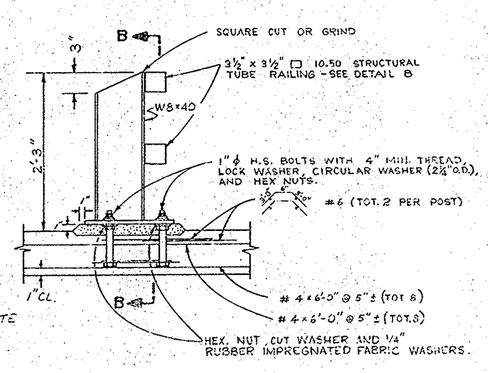




SECTION A-A

TYPE I




SECTION B-B




TYPE II

NOTES

1. Posts shall be vertical.
2. Tubing shall be shop bent to fit horizontal curve when curve radius is less than 950'.
3. Tubing shall be parallel to vertical alignment.
4. Contractor to provide metal shims to align posts.
5. Tubing shall be continuous over not less than 3 intermediate posts, with a minimum length of 3 panels except as noted.
6. Galvanize rail assembly after fabrication
7. Space posts to provide 1'-6" min clear between expansion joints and ℄ of post.
8. Rail joints in top and bottom tubes at deck expansion joints shall provide allowance for movement equal to width of deck joint with corresponding increase in length of sleeve.
9. Railing on bridge wingwalls to be placed after walls are backfilled.
10. 3/4" stud bolt nuts shall be torqued to 175 ft lbs, 3/8" stud bolt nuts shall be wrench tight.
11. Anchor bolt nuts shall be wrench tight.
12. No more than one tube splice per panel is permitted, except as noted.
13. H.S indicates High Strength.

# METAL TUBE BRIDGE RAIL

T-3041 (45)

ORANGE COUNTY ROAD DEPARTMENT
GARDEN GROVE BLVD.
BRIDGE SA-18
OVER
SANTA ANA RIVER
BRIDGE RAIL DETAILS
SCALE AS NOTED
SHEET 15 OF 17
DR. 7(10644)