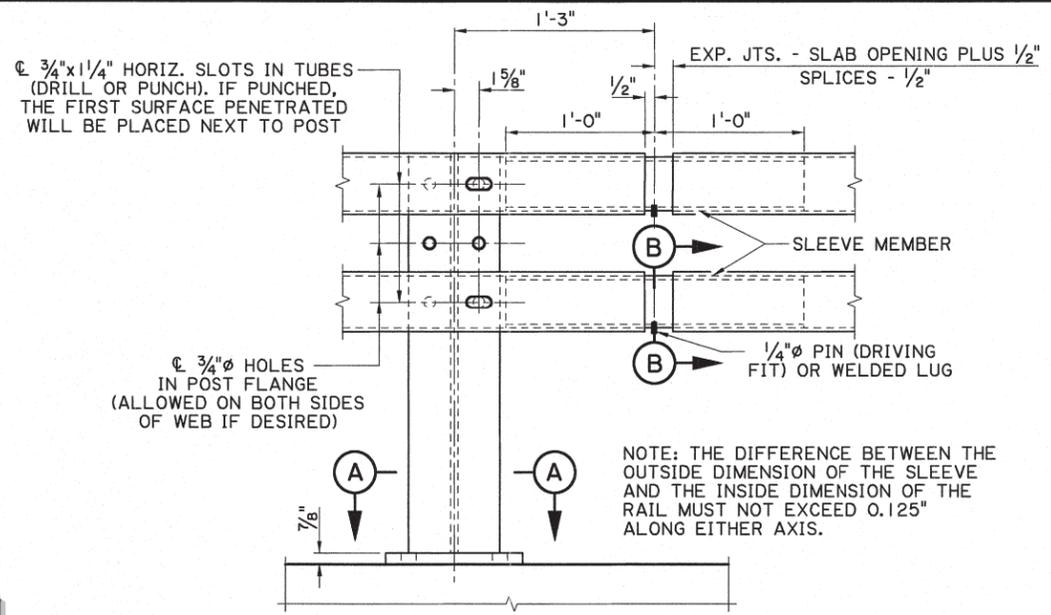
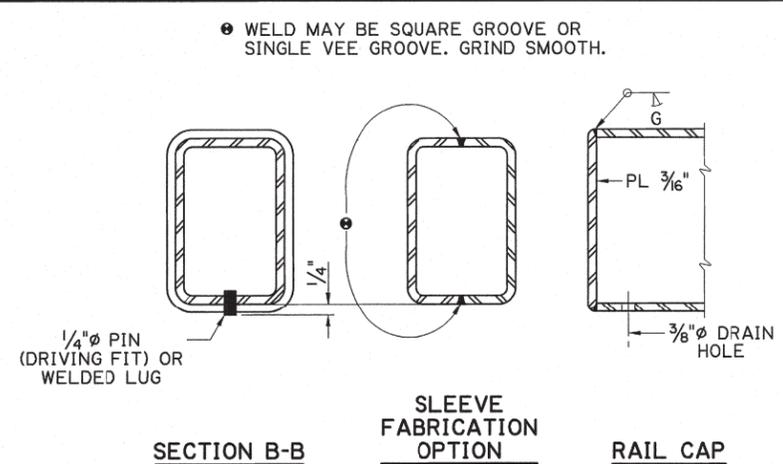


SECTION THROUGH RAIL



TUBE SPLICE DETAILS



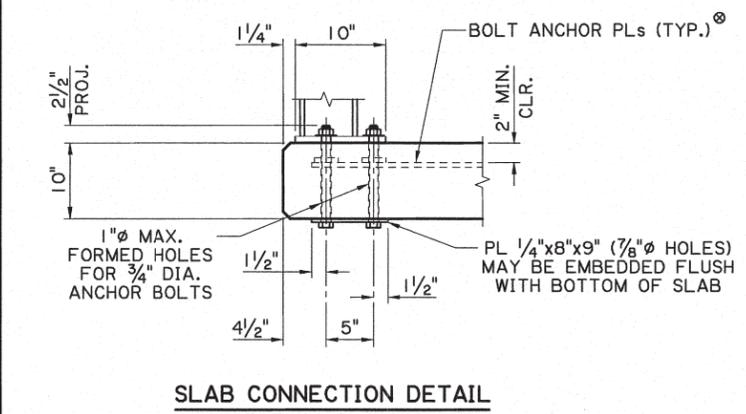
SECTION B-B

SLEEVE FABRICATION OPTION

RAIL CAP

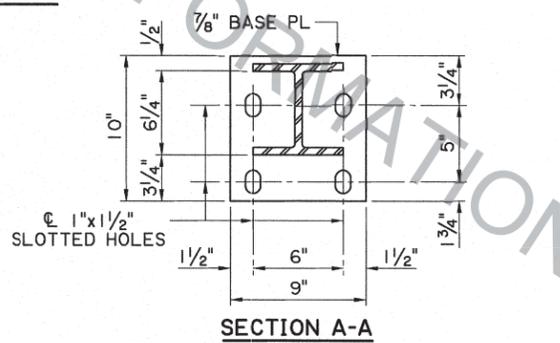
TUBE & SLEEVE MEMBERS		
RAIL MEMBER	SLEEVE THICKNESS	
MATERIAL	THICKNESS	MATERIAL A36
A 500 GRADE C	0.188"	0.188"
A 500 GRADE B	0.250"	0.250"
A 500 GRADE A OR A 501	0.313"	0.250"

NOTE: OTHER SECTIONS OF EQUAL OR GREATER STRENGTH ARE ACCEPTABLE FOR SLEEVES.

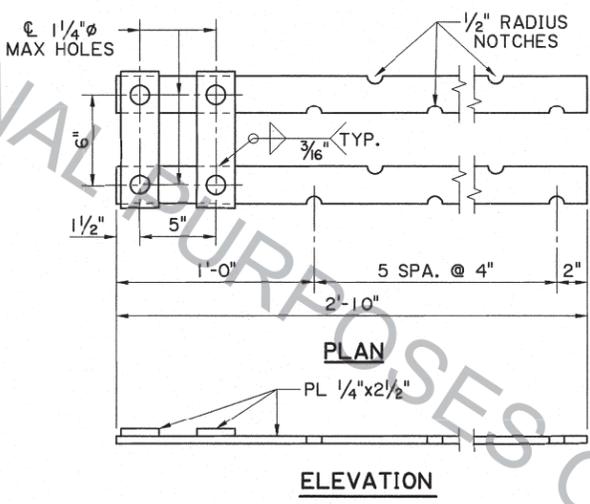


SLAB CONNECTION DETAIL

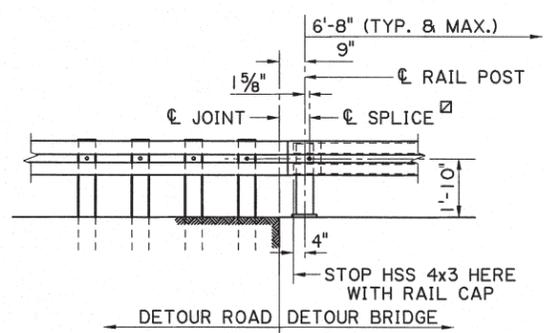
INSTALL ONE ANCHORAGE PLATE ASSEMBLY IN SLAB AT EACH RAIL POST. DO NOT GALVANIZE OR OIL THIS ASSEMBLY. BOLT ANCHORAGE PLATES MAY NOT BE CUT.



SECTION A-A

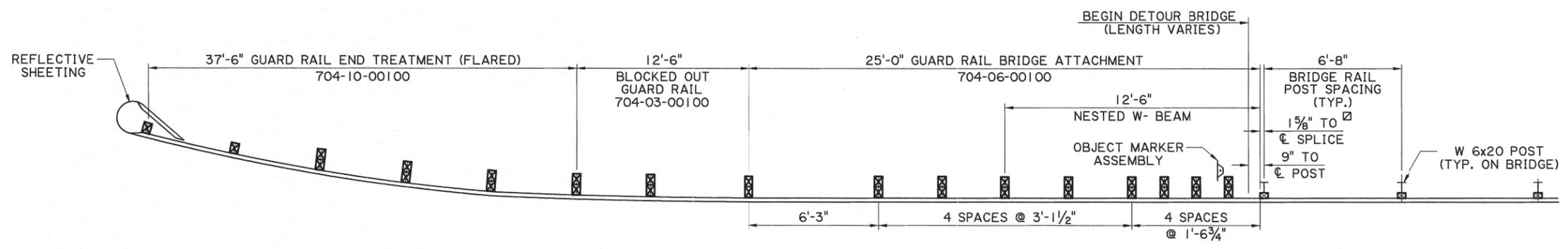


BOLT ANCHORAGE PLATES



CONNECTION DETAIL

NOTES:
 FOR MORE GUARD RAIL INFORMATION, SEE STANDARD PLANS.
 THIS RAIL HAS BEEN APPROVED AS A NCHRP 350-TEST LEVEL 3 BARRIER.
 ALL STEEL POSTS AND PLATES SHALL CONFORM TO (ASTM-A36).
 GALVANIZE ALL STEEL COMPONENTS UNLESS OTHERWISE SHOWN ON PLANS. ANCHOR BOLTS ARE 3/4 inch ASTM-A325 BOLTS OR A449 HEAVY HEX BOLTS (OR A449 THREADED RODS WITH ONE TACK WELDED HEAVY HEX NUT EACH) WITH ONE HEAVY HEX NUT AND ONE 2" O.D. WASHER (0.122" MIN. THICK) AT EACH BOLT. OPTIONALLY USE RECTANGULAR 3/8" x 2" x 3" ASTM-A36 PLATE WITH 1 1/8" HOLE.
 ATTACH SECTION LENGTHS OF HSS 4x3 MEMBERS CONTINUOUSLY TO A MINIMUM OF THREE POSTS (EXCEPT AT ABUTMENTS WITH EXPANSION JOINTS). FACE OF RAIL AND POSTS MUST BE VERTICAL TRANSVERSELY UNLESS OTHERWISE APPROVED BY THE BRIDGE DESIGN ENGINEER. POSTS MUST BE PERPENDICULAR TO ADJACENT ROADWAY GRADE. USE EPOXY MORTAR UNDER POST BASE PLATES IF GAPS LARGER THAN 1/16" EXIST.
 FOR ALL RAILS, ERECTION DRAWINGS SHOWING LENGTHS, SPLICE LOCATIONS, RAIL POST SPACING AND ANCHOR BOLT SETTING SHALL BE SUBMITTED TO THE BRIDGE ENGINEER FOR REVIEW.



TYPICAL GUARD RAIL LAYOUT



SHEET NUMBER	
DESIGNED	T. BRAUNER
CHECKED	K. BRAUNER
REVIEWED	P. VAUGHT
DATE	03-01-17
PROJECT	BD.2.B.1.0.16 PRECAST PANEL DETOUR BRIDGE
STATE	LA
REVISION OR CHANGE ORDER DESCRIPTION	UPDATED FOR 2016 SPECIFICATIONS & BARRIER
REVISION NUMBER	16 OF 16
BY	K.M.B.

GUARD RAIL DETAILS

BRIDGE & STRUCTURAL DESIGN