

LEGEND

- ① W6X25 WITH 1/4" DIA. HOLES ON EACH SIDE OF POST FOR STUD NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1" X 9 1/2" X 10", WITH 1/16" X 1/2" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
- ③ A325 - 7/8" DIA. HEX BOLTS (GALVANIZED) WITH A325 NUT & WASHER, 14" LONG AT END POSTS AND AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 15". USE 8" LONG AT ALL OTHER LOCATIONS. 4 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING.
- ④ 1/4" X 8" X 8" FLAT BAR, WITH 15/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3.
- ⑤ TS 4 X 4 X 0.25 STRUCTURAL TUBING, CONFORMING TO ASTM DESIGNATION A501 OR A500 GRADE B. ATTACH TO NO. 1 WITH TWO NO. 6 STUDS.
- ⑥ 5/8" DIA. X 1/2" LG. SHOP WELDED STUDS WITH HEX NUT AND 2" WASHERS.
- ⑦ 3/8" X 1'-4" X 1'-8" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACED SYM. ABOUT TUBES NO. 5.
- ⑧ 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5 FOR 7/8" DIA. A325 BOLTS W/HEX NUTS AND WASHERS.
- ⑨ SQUARE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT" WITH A MINIMUM OUT TO OUT DIMENSION OF 3 9/16".
- ⑩ TS 3 X 3 X 0.25 X (2'-4" AT EXPANSION JOINTS) & (1'-10" AT FIELD JOINTS) LONG, PROVIDE 1/2" DIA. SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF NO. 5. PROVIDE 3/8" DIA. X 1/2" WELDING STUDS ON TOP AND BOTTOM SURFACES AT CENTERLINE.

GENERAL NOTES

BID ITEM SHALL BE "RAILING TUBULAR TYPE F B- - ", WHICH INCLUDES ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS

POST BASE PLATES, NO. 2, SHALL BE FLAT WITH ALL SURFACES SMOOTH, STRAIGHT AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

ALL MATERIAL, EXCEPT ANCHORAGE DETAIL NO. 4 SHALL BE GALVANIZED AFTER FABRICATION.

FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

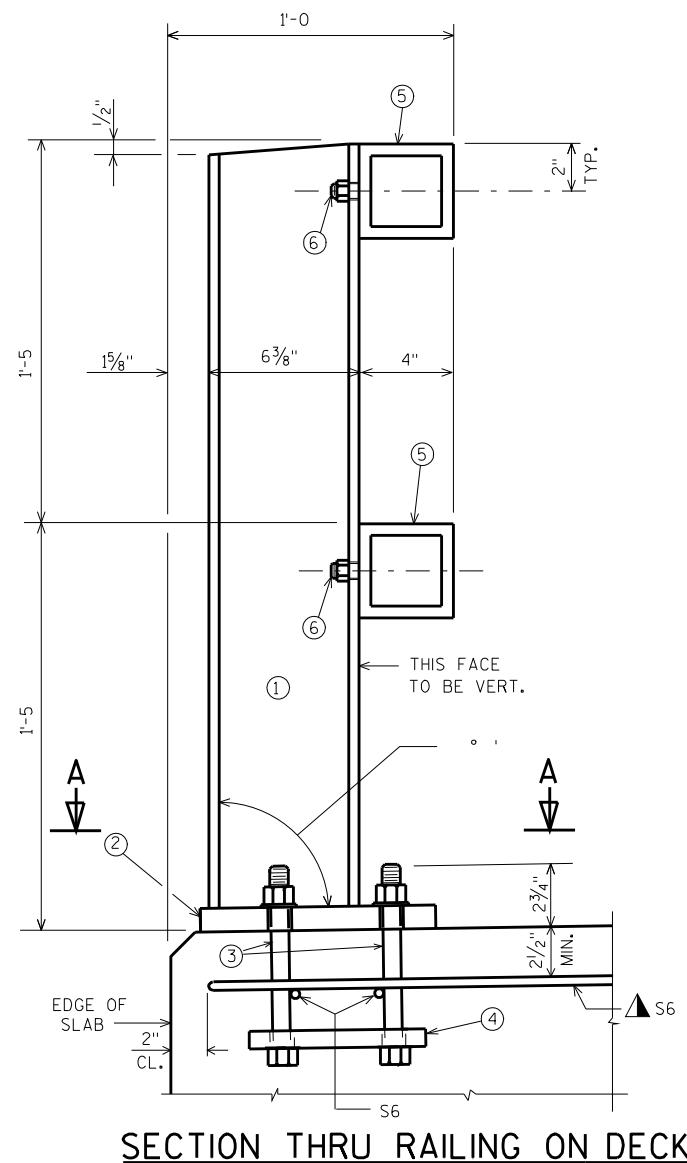
ALL MATERIALS USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO ASTM DESIGNATION A709 GRADE 36 UNLESS NOTED OTHERWISE.

STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.

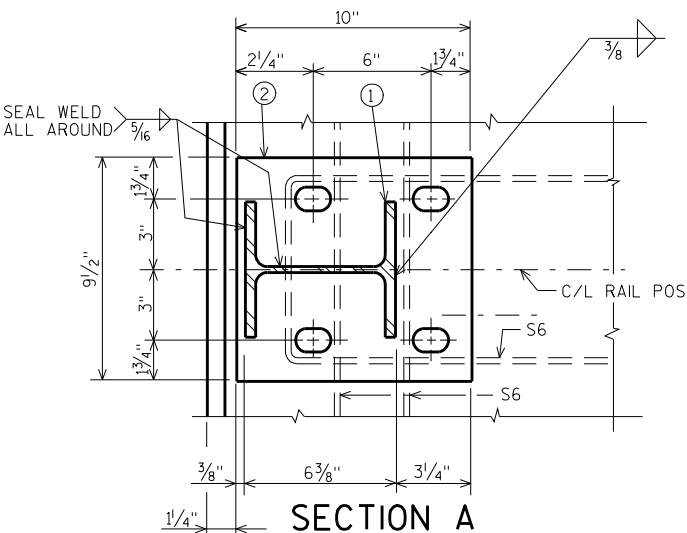
PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.

PLACE FIRST BOTTOM LONGITUDINAL BAR CLEAR OF DRIP GROOVE.

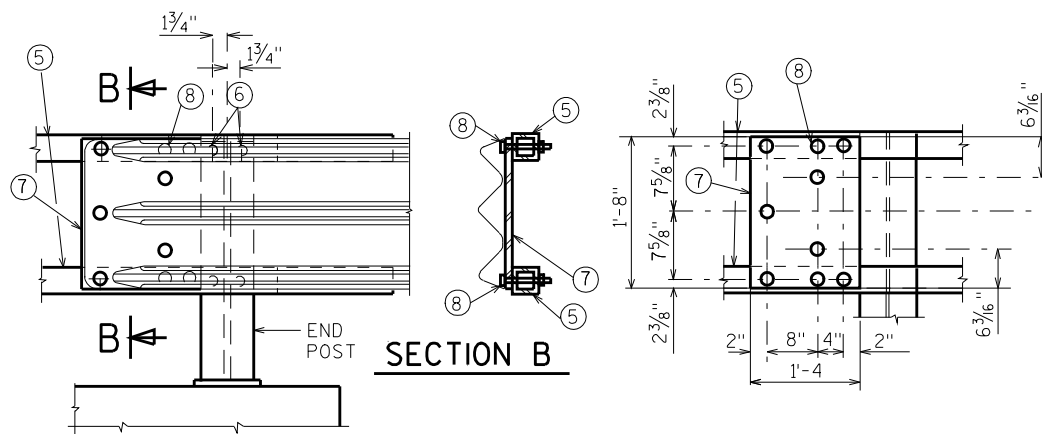
▲ TIE TO TOP MAT OF STEEL.



SECTION THRU RAILING ON DECK



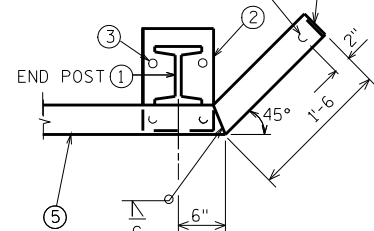
SECTION A



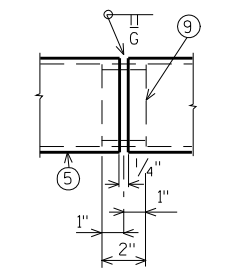
DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)

CLOSURE ENDS ON STEEL RAILING SHALL BE 1/4" PLATE. WELD & GRIND SMOOTH.
1" Ø DRAIN HOLE IN BOT. OF ALL TUBES.

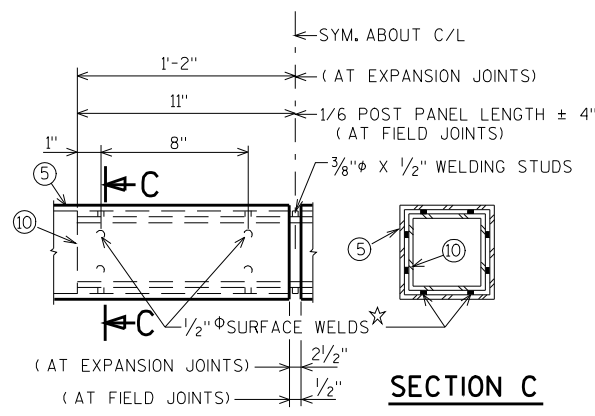


DETAIL FOR END POSTS



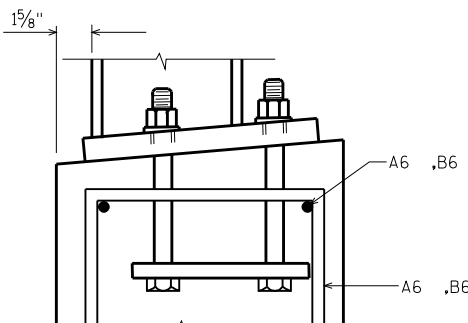
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

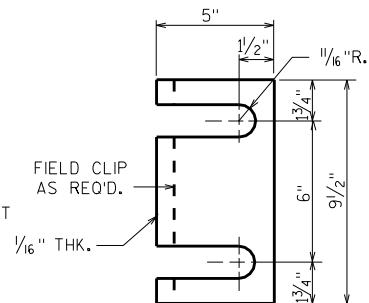


FIELD ERECTION JOINT DETAIL

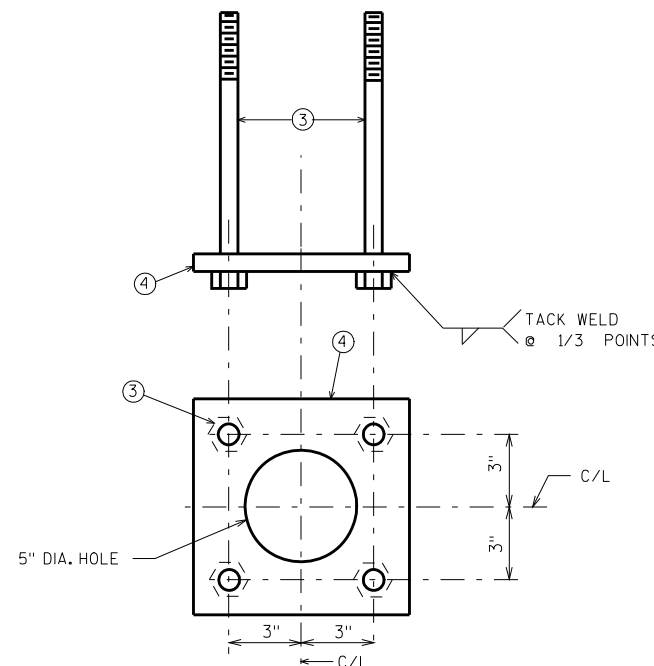
★ MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



SECTION AT TOP OF WING



POST SHIM DETAIL
4 PER POST



ANCHORAGE DETAIL

8

8

LV = 1 2 3 5 6 7 8 9

SCALE = 3/32

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE			
DRAWN BY		PLANS CK'D.	
TUBULAR RAILING TYPE 'F'		SHEET	