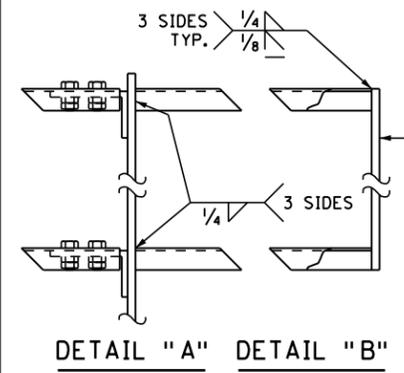


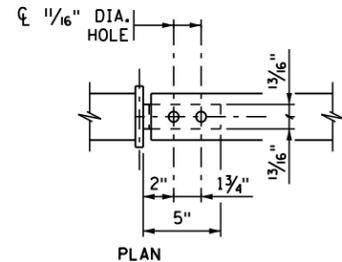
DESIGNER NOTE:
CHOOSE ONE JOINT OPENING AND DELETE OTHERS.

DESIGNER NOTE
REMOVE PRIOR TO PLOTTING FINAL PLAN:
FOR ROADWAY DESIGN SPEEDS GREATER THAN
45 MPH ORNAMENTAL RAILING MUST
BE PROTECTED BY A TRAFFIC BARRIER.

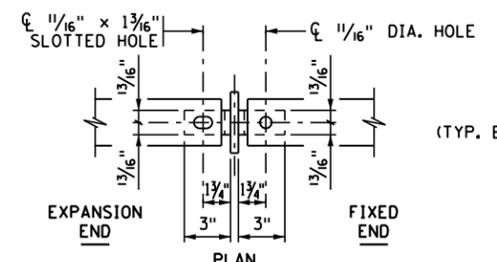
DESIGNER NOTE
REMOVE PRIOR TO PLOTTING FINAL PLAN:
PARAPET SHOWN BASED ON STANDARD FIGURE 5-397.166.



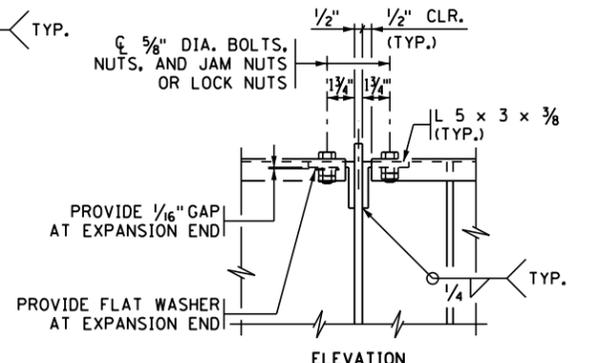
DETAIL "A" DETAIL "B"



PLAN

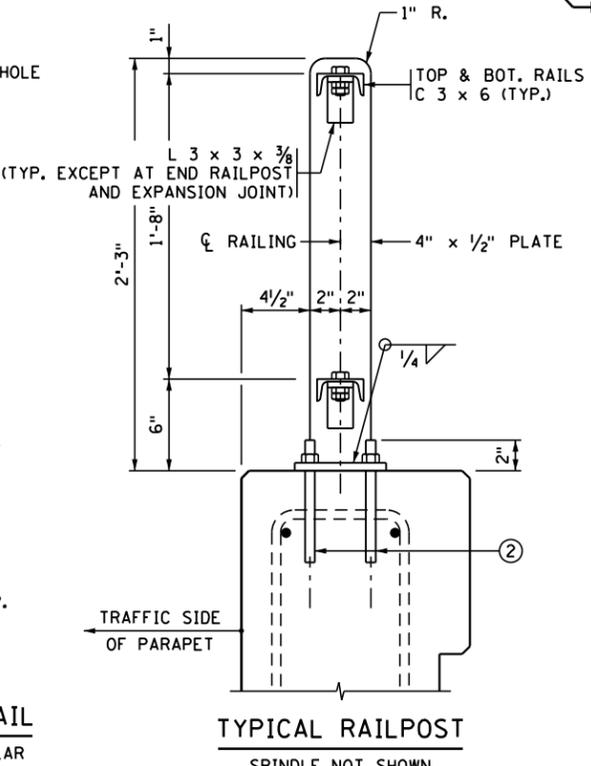


PLAN



ELEVATION

INTERMEDIATE RAILPOST DETAIL
TOP AND BOTTOM RAIL CONNECTIONS SIMILAR



TYPICAL RAILPOST
SPINDLE NOT SHOWN

GENERAL NOTES

- CONTINUOUSLY GROUND ALL METAL RAILINGS; SEE SPECIAL PROVISIONS. REFER TO THE ELECTRICAL PLANS AND ELECTRICAL SPECIAL PROVISIONS FOR DETAILS REGARDING BONDING MULTIPLE ELECTRICAL GROUNDING SYSTEMS.
- MEASURE PAYMENT LENGTH AS THE OUT TO OUT LENGTH ALONG THE CENTERLINE OF THE RAILING BETWEEN THE OUTSIDE ENDS.
- INSTALL RAIL POSTS AND SPINDLES [NORMAL TO GRADE OR PLUMB.]
- PROVIDE STRUCTURAL STEEL PER SPEC. 3306.
- GALVANIZE BOLTS, NUTS, WASHERS AND ANCHORS PER SPEC. 3392. GALVANIZE ALL OTHER STRUCTURAL STEEL PER SPEC. 3394, AFTER FABRICATION.
- STRAIGHTEN ALL RAILING MEMBERS AFTER FABRICATION AND GALVANIZING TO WITHIN 1/8" IN 10 FT. BY MECHANICAL MEANS WITHOUT DAMAGE TO ZINC COATING.
- SEE SPECIAL PROVISIONS FOR COATING TO BE APPLIED TO METAL RAILING.
- PRICE BID FOR METAL RAILING INCLUDES ANCHORAGES AND ALL MATERIAL ABOVE TOP OF CONCRETE PARAPET.
- SEE SPECIAL PROVISIONS FOR REQUIREMENTS NOT INCLUDED ON THIS SHEET.
- ① SEE STANDARD BRIDGE DETAIL B950 FOR LIGHT POLE ANCHORAGE IF REQUIRED
- ② ADHESIVE ANCHORAGE WITH 5/8" DIA. ANCHOR ROD PER SPEC. 3385, TYPE A WITH HEX NUT AND WASHER. PROVIDE AN ADHESIVE WITH A MINIMUM CHARACTERISTIC BOND STRENGTH IN UNCRACKED CONCRETE OF 1.5 KSI. EMBED THE ANCHORAGE NO LESS THAN 5" REGARDLESS OF CHARACTERISTIC BOND STRENGTH. DRILL THROUGH REINFORCEMENT (IF ENCOUNTERED) TO ACHIEVE MINIMUM EMBEDMENT. ENSURE HEX NUT IS IN CONTACT WITH THE ADJACENT SURFACE AND TORQUE TO 60 FT-LBS UNLESS A HIGHER TORQUE IS RECOMMENDED BY THE MANUFACTURER. PROOF LOAD TO 6.9 KIPS. SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
- ③ IF LIGHT POLE IS MOUNTED ON BLISTER, RAILING MAY BE CONTINUOUS IN FRONT OF LIGHT POLE (SEE PARAPET & LIGHT POLE DETAILS).
- ④ COORDINATE LIGHT POLE DETAILS WITH THE RAILING FABRICATOR TO ENSURE PROPER CLEARANCES AND RAILING CONFIGURATION ADJACENT TO THE POLE.
- ⑤ SEE SUPERSTRUCTURE SHEETS AND CONCRETE PARAPET PLAN SHEET FOR CONTROL JOINT SPACING AND DETAILS.
- ⑥ IF NON-RAISED SIDEWALK, SEE CONCRETE PARAPET PLAN SHEET.

REVISED: FEBRUARY 27, 2019

APPROVED: DECEMBER 02, 2015

David A. J. Sarnaker
STATE BRIDGE ENGINEER

ELEVATION
END RAILPOST DETAIL
TOP AND BOTTOM
RAIL CONNECTIONS SIMILAR

CERTIFIED BY _____ DATE _____
LICENSED PROFESSIONAL ENGINEER
NAME: _____ LIC. NO. _____

TITLE:
METAL RAILING (TYPE M-1) FOR BIKEWAYS
ON CONCRETE PARAPET (TYPE P-1)

DES: _____ DR: _____
CHK: _____ CHK: _____
SHEET NO. OF SHEETS

FIG. 5-397.154

APPROVED: _____
BRIDGE NO. _____