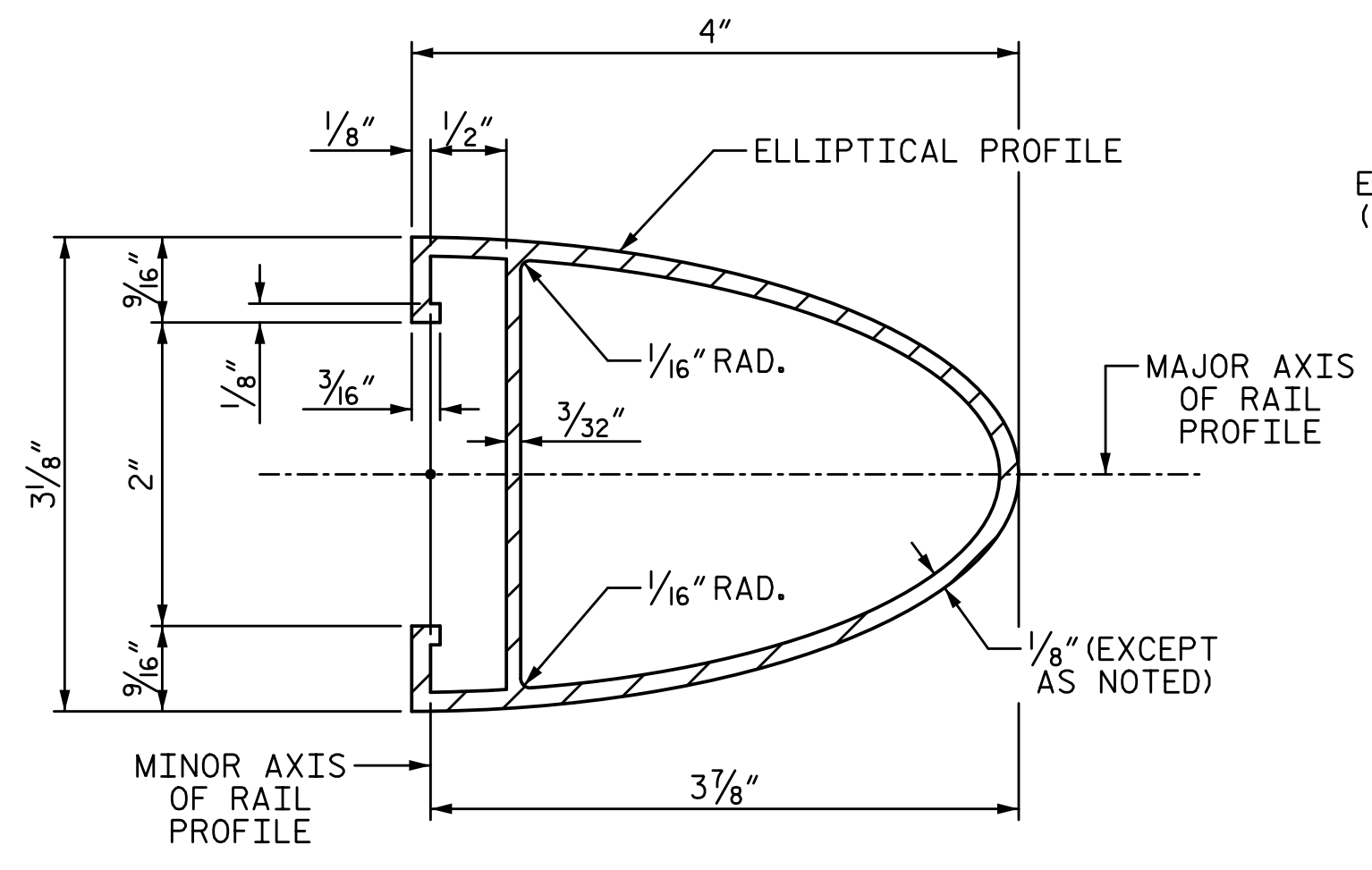
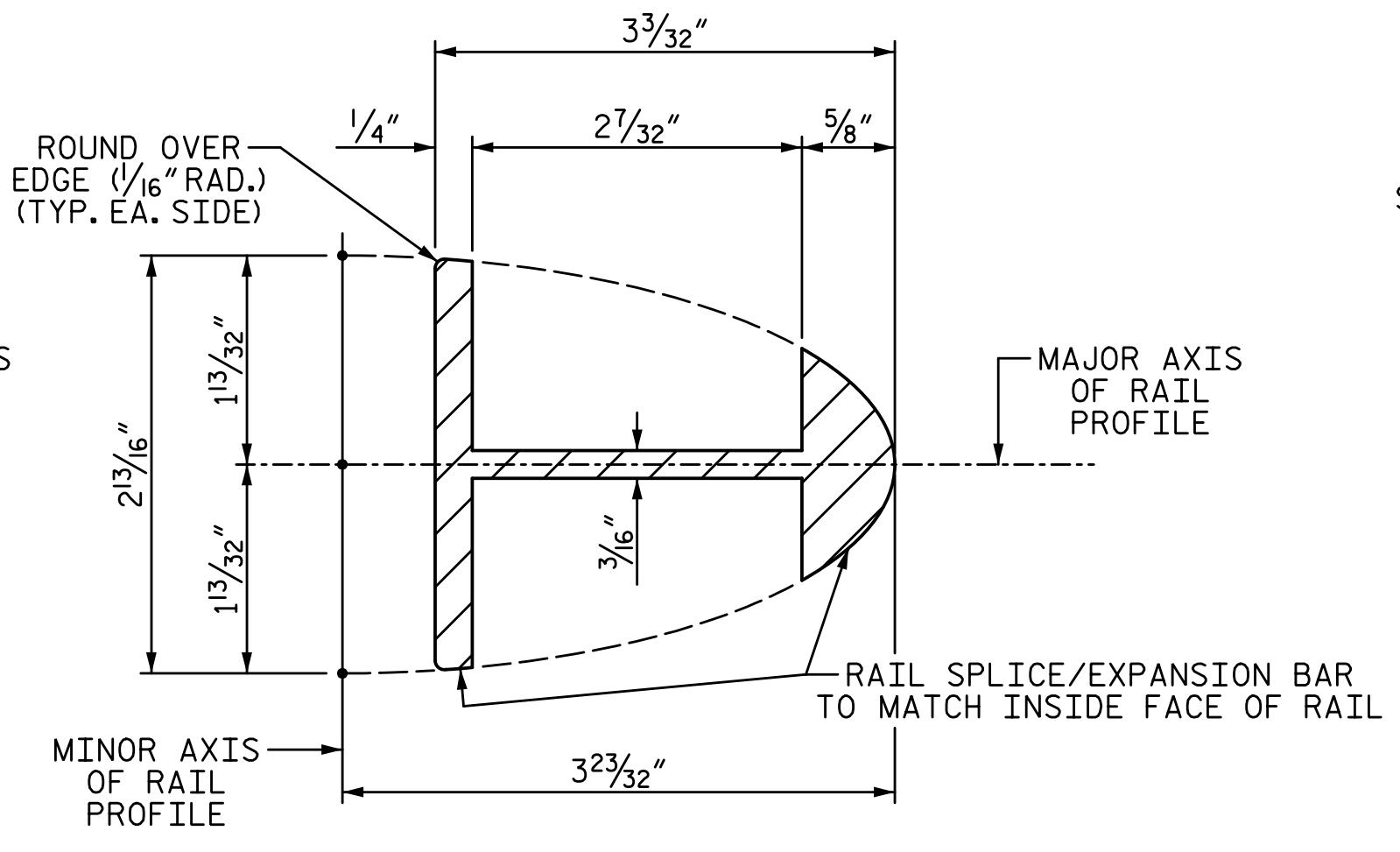


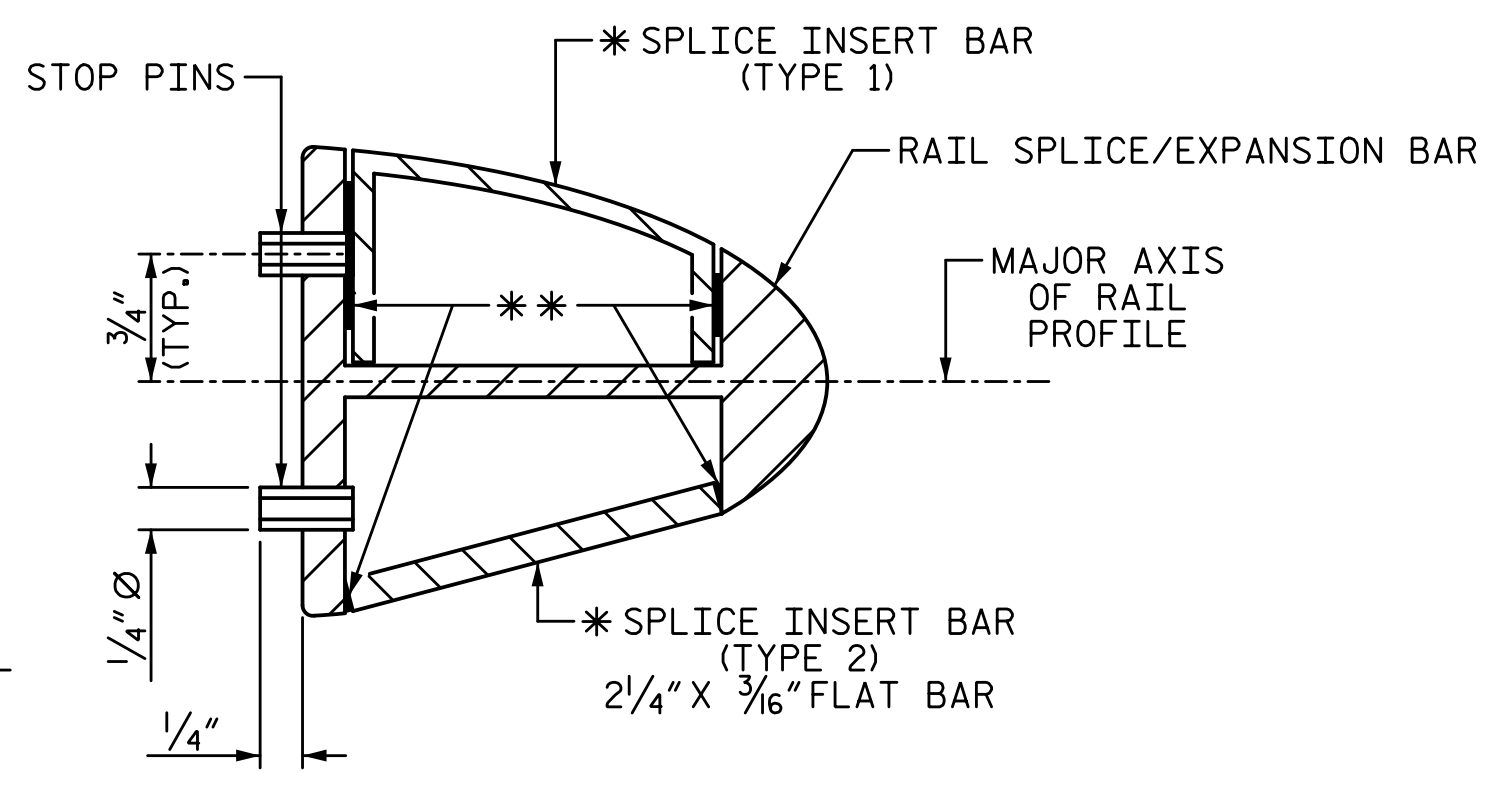
3/22/2017 8:28:31 AM G:\Projects\2014\U-3109A\Structures\Site 1-Bridge 16 (SBL)\Drawings\401-U3109A-SMU_2BMR SHEET 3.dgn



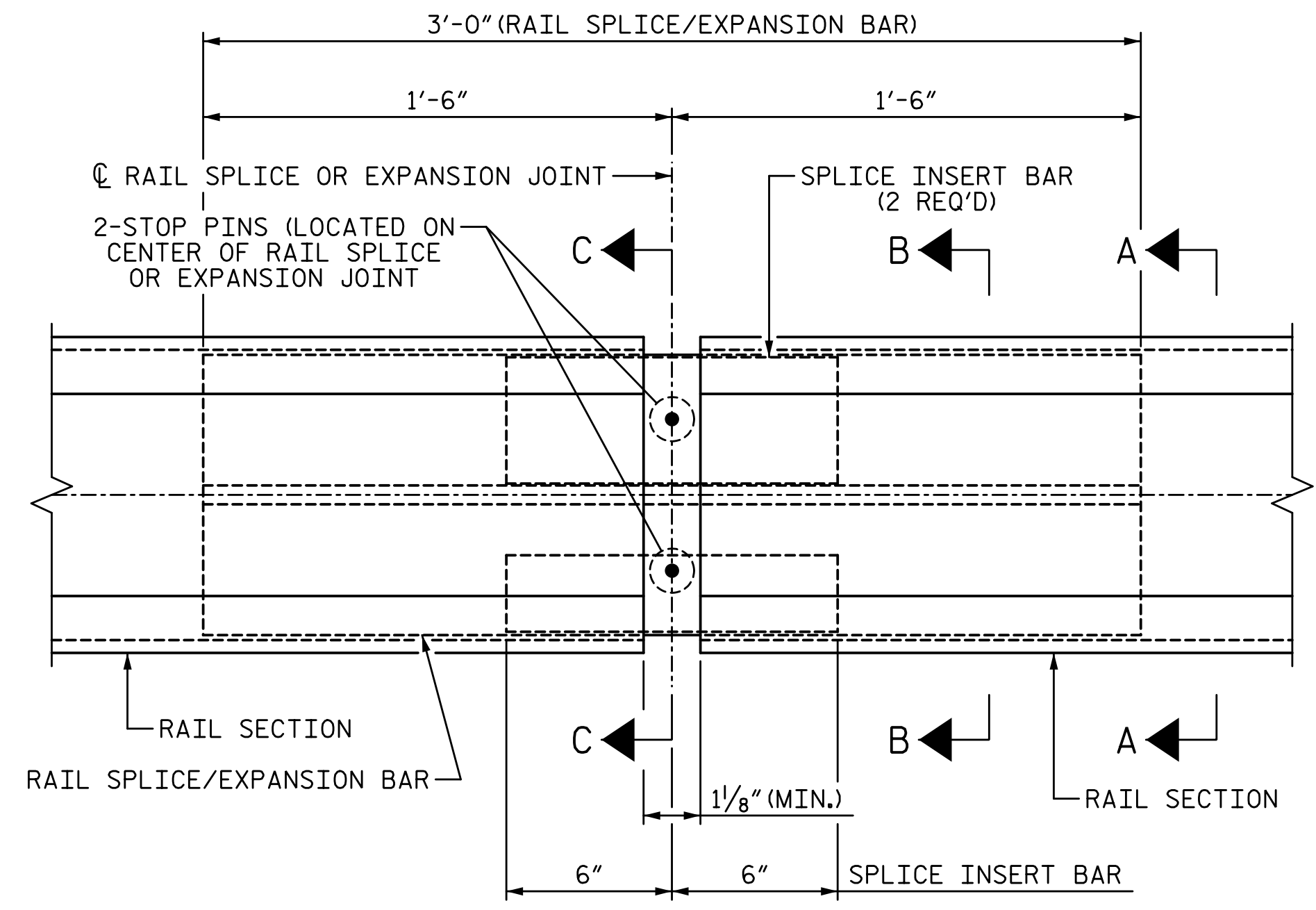
SECTION A-A
TYPICAL SECTION THRU RAIL



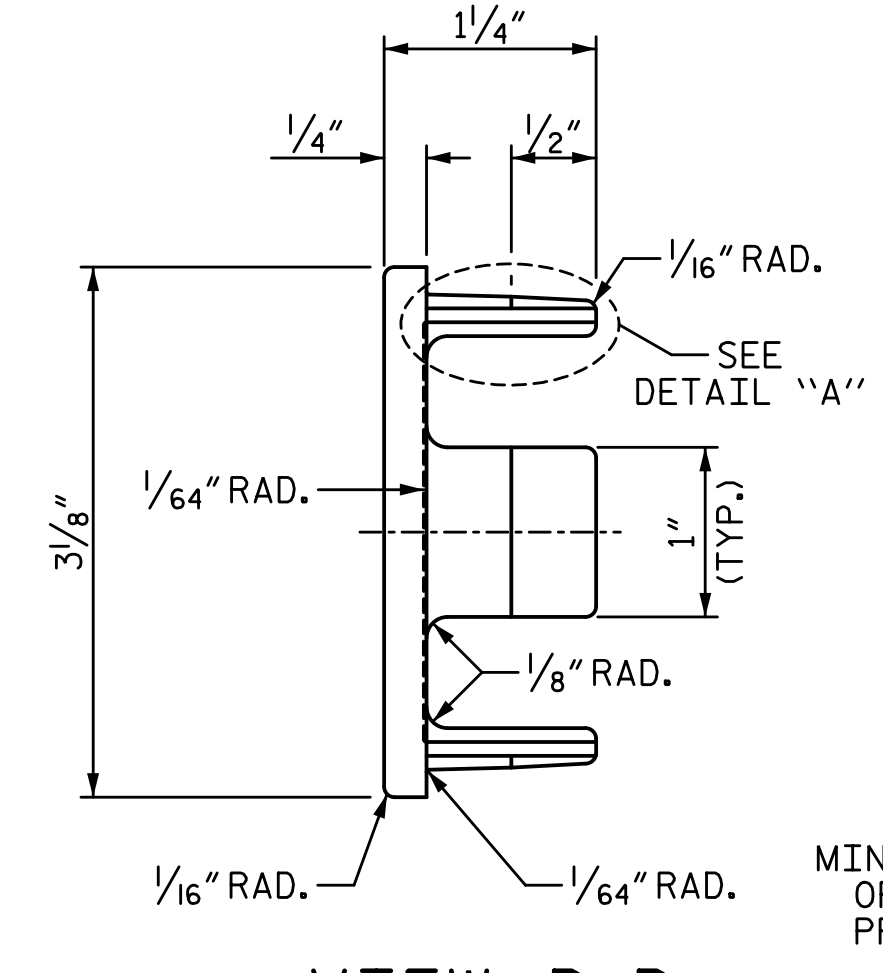
SECTION B-B
RAIL SPLICE/EXPANSION BAR
(RAIL NOT SHOWN FOR CLARITY)



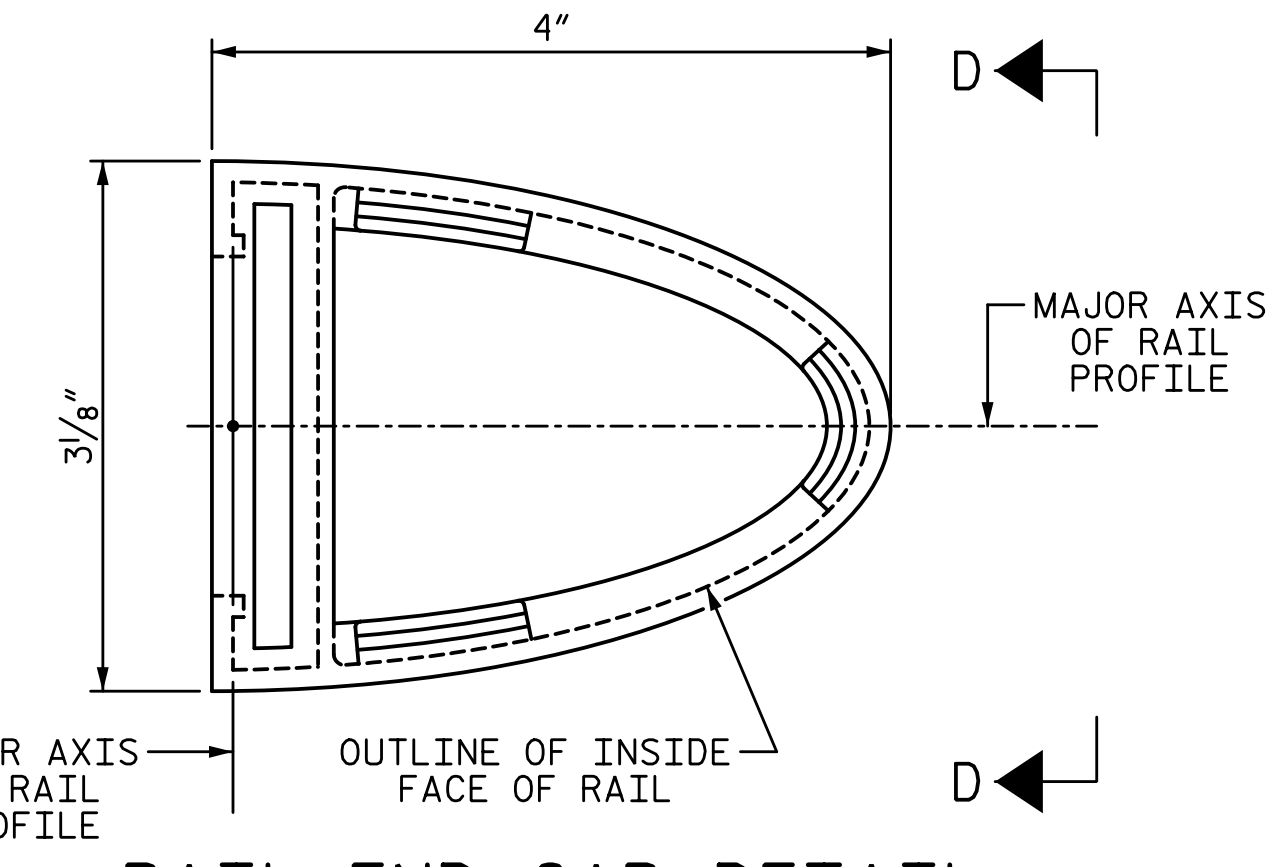
* USE OF EITHER TYPE 1 OF TYPE 2 SPLICE INSERT BAR IS AT THE OPTION OF THE CONTRACTOR
** TACK WELD TWO PLACES EACH END (TYP.)



RAIL SPLICE ASSEMBLY
TYPICAL AT EXPANSION JOINTS AND RAIL SPLICE LOCATIONS



VIEW D-D
PROVIDE FOR DRIVE FIT



RAIL END CAP DETAIL

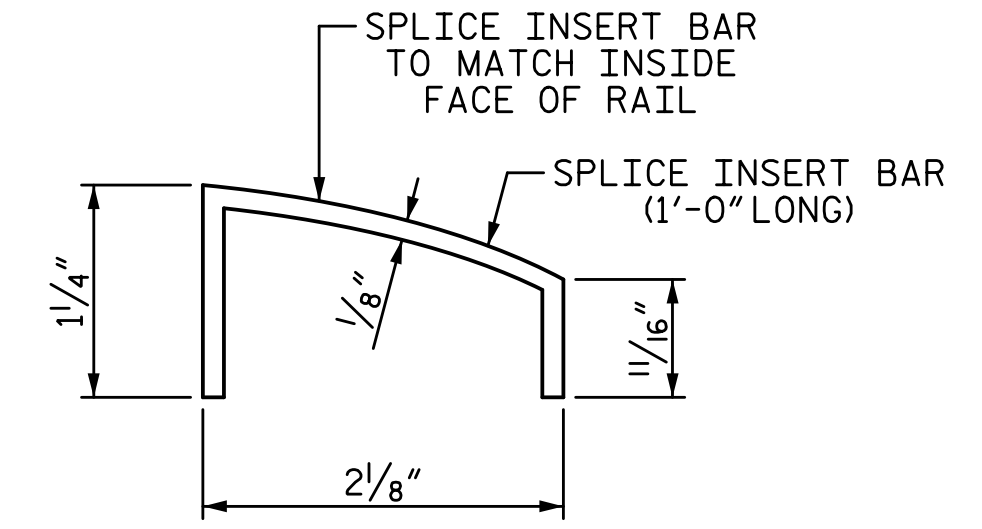
NOTES:

THE CONTRACTOR SHALL USE ADHESIVELY ANCHORED THREADED RODS TO PERMANENTLY ATTACH THE METAL RAIL POSTS TO THE TOP OF THE EXISTING CONCRETE BARRIER RAILS. LEVEL ONE FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE 3/4" Ø THREADED ROD IS 3 KIPS. FOR ADHESIVELY ANCHORED THREADED RODS, SEE THE STANDARD SPECIFICATIONS.

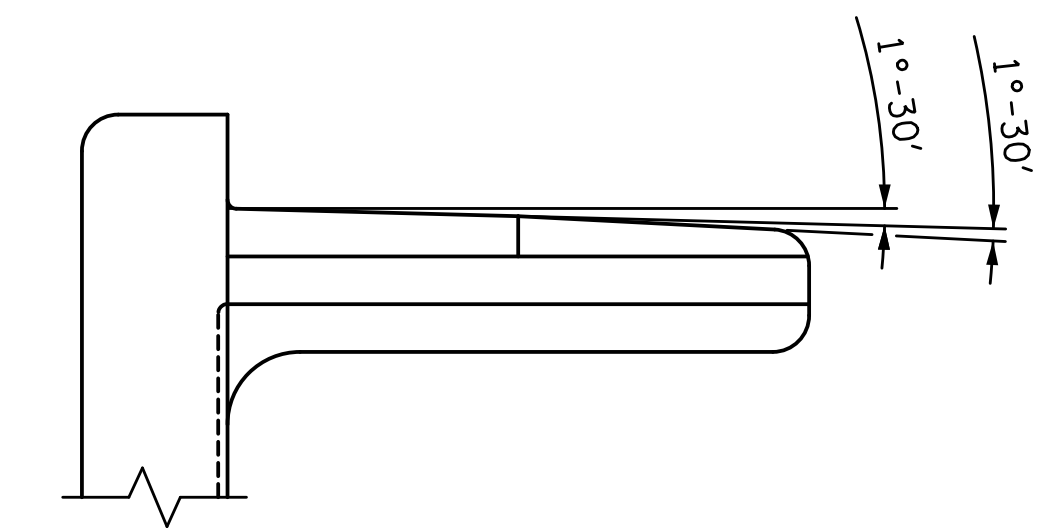
THE COST OF THE THREADED RODS AND WASHERS COMPLETE IN PLACE SHALL BE INCLUDED IN THE PRICE BID FOR LINEAR FEET OF 2 BAR METAL RAIL RETROFIT.

AFTER NUTS HAVE BEEN TIGHTEN, THE THREADED ROD THREADS SHALL BE DEFORMED TO PREVENT REMOVAL OF NUTS. TACK WELDING OF NUTS TO THREADED RODS, TO PREVENT THEFT, IS PERMITTED.

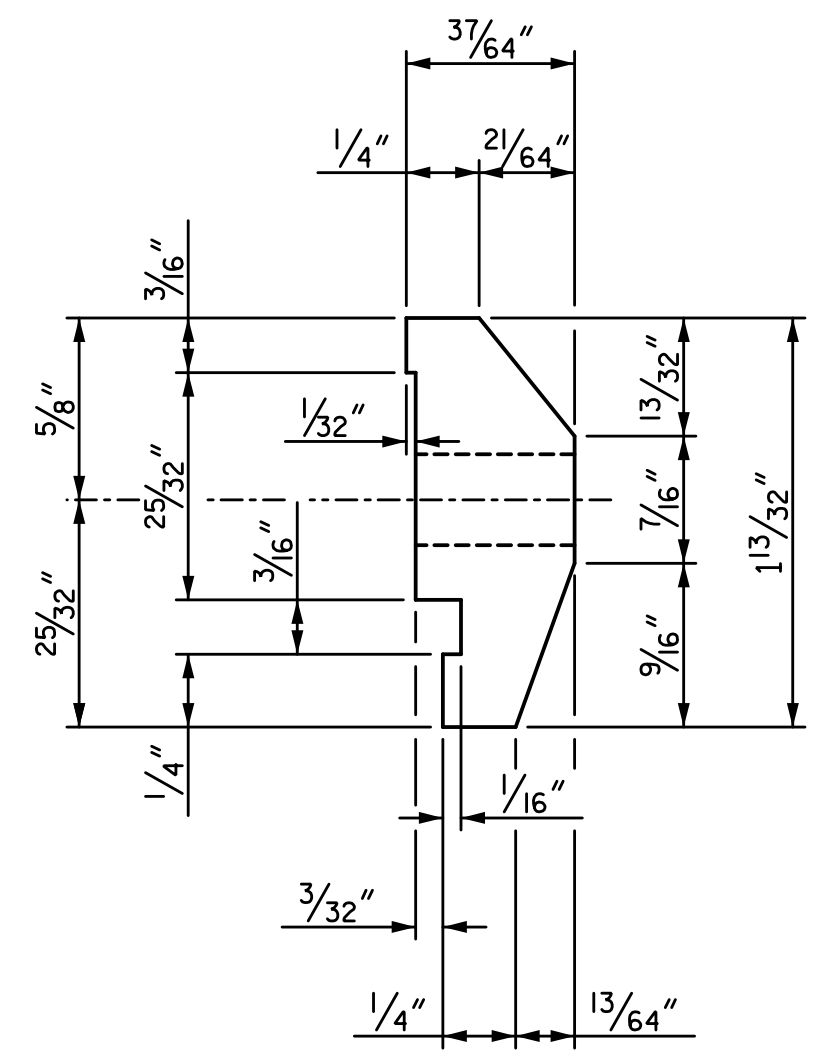
THE ADHESIVELY ANCHORED THREADED ROD SHALL MEET THE REQUIREMENTS OF ASTM F593 ALLOY 304 STAINLESS STEEL WITH MINIMUM OF 75,000 PSI ULTIMATE STRENGTH. NUTS SHALL MEET THE REQUIREMENTS OF ASTM F594 ALLOY 304 STAINLESS STEEL AND WASHERS SHALL MEET THE REQUIREMENTS OF ASTM F844 EXCEPT THEY SHALL BE MADE FROM ALLOY 304 STAINLESS STEEL.



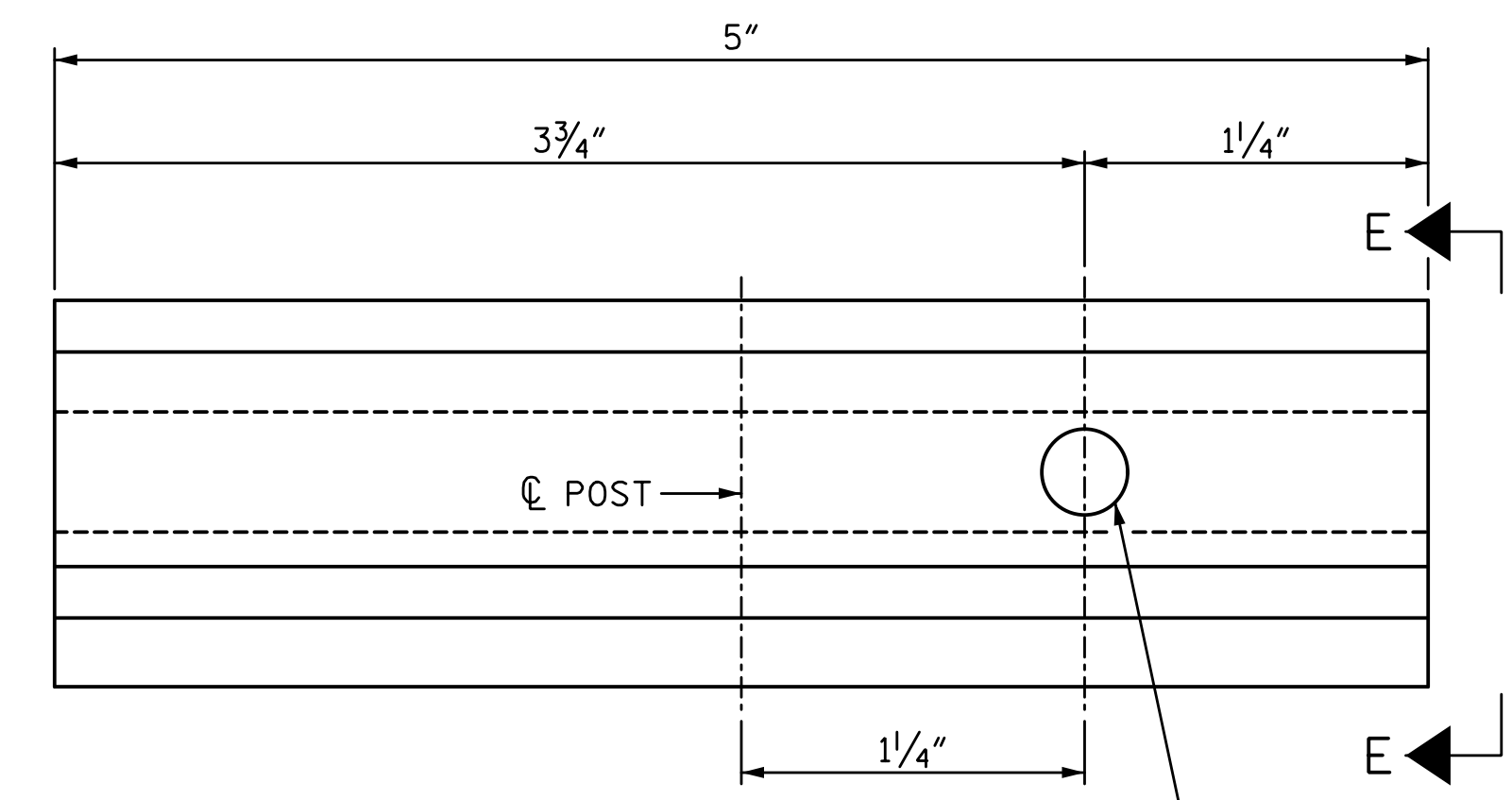
SPLICE INSERT BAR (TYPE 1)



DETAIL "A"



VIEW E-E



RAIL CLAMP BAR
(4 REQUIRED PER POST)

DRILL & TAP HOLE TO ACCEPT 3/8" Ø STAINLESS STEEL FASTENERS

DRAWN BY: T. BANKOVICH DATE: 2-17
CHECKED BY: B.S. COX DATE: 2-17
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 2-17

PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521



PROJECT NO. U-3109A
ALAMANCE COUNTY
STATION: 26+90.77 -SBL-

SHEET 4 OF 5
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S01-48
1			3			TOTAL SHEETS
2			4			S01-49