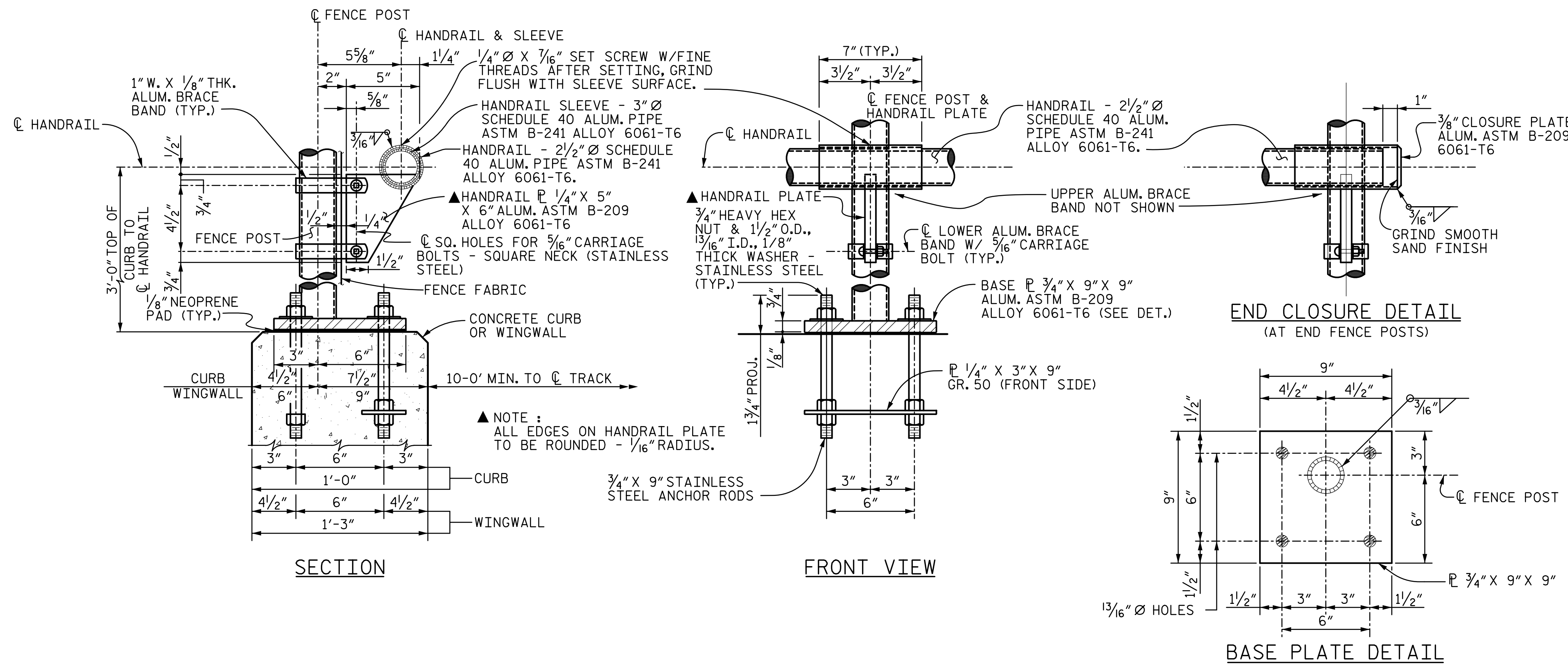
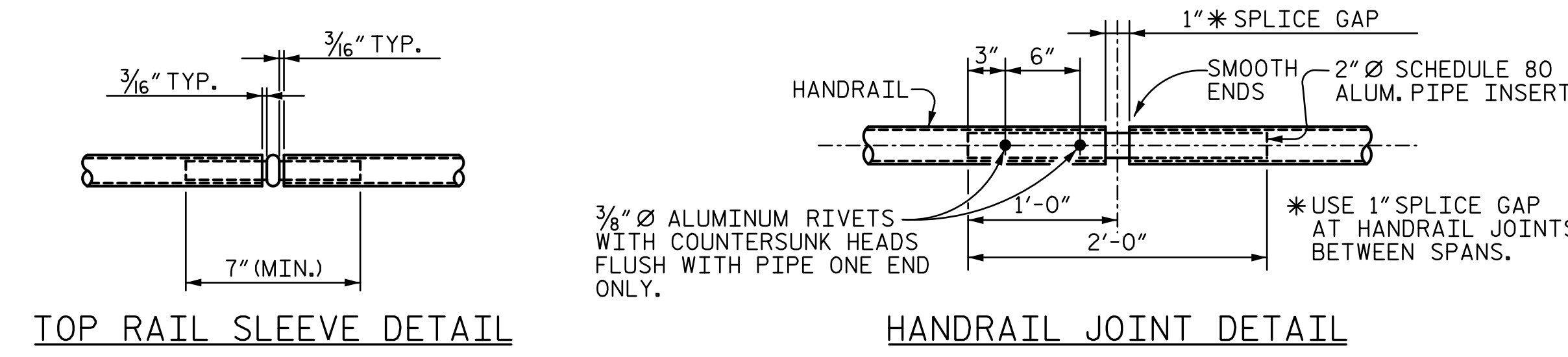


**NOTES FOR HANDRAIL AND FENCING**

- ALL HANDRAIL PIPE, SLEEVES, AND EXPANSION JOINTS TO BE SMOOTH AND FREE OF SHARP EDGES.
- ALUMINUM PIPE TO BE ASTM B-241, ALLOY 6061-T6, ALUMINUM BASE PLATE, CLOSURE PLATE, AND HANDRAIL PLATE TO BE ASTM B-209, ALLOY 6061-T6.
- FENCE FABRIC TO BE TYPE III ALUMINUM ALLOY WIRE ASTM B-211, ALLOY 6061-T89 OR T94.
- BRACE RAIL AND BRACE ENDS, POST TOPS, TURNBUCKLES, TRUSS RODS, GATE HINGES AND LATCHES, STRETCHER BARS, AND BAR BANDS IN ACCORDANCE WITH AASHTO M181.
- STAINLESS STEEL BOLTS, NUTS, AND ANCHOR RODS TO BE ASTM A-276, TYPE 304 STAINLESS STEEL WASHERS TO BE ASTM A-276, TYPE 302. ANCHOR ROD THREADS SHALL BE ROLLED, NOT CUT.
- POST TO BE SET PERPENDICULAR TO TOP OF CURB AND RAILS SHALL BE PLACED PARALLEL TO THE GRADE OF THE BRIDGE.
- BOTTOM OF BASE PLATE SHALL BE THOROUGHLY COATED WITH ALUMINUM IMPREGNATED CAULKING COMPOUND OR APPROVED QUALITY.
- CERTIFIED MILL REPORTS ARE REQUIRED FOR POST, RAIL, AND FENCE FABRIC. SHOP INSPECTION IS NOT REQUIRED.
- AFTER ANCHOR BOLT AND OTHER BOLT NUTS HAVE BEEN TIGHTENED, THREADS SHALL BE NICKED TO LOCK NUTS.
- THE ALUMINUM BRACE BANDS USED TO SECURE HANDRAIL SLEEVE SHALL BE OF SUCH SIZE NECESSARY TO CLAMP TIGHTLY TO FENCE POST.
- WELDING SHALL BE IN ACCORDANCE WITH THE CURRENT AWS STRUCTURAL WELDING CODE - ALUMINUM.
- ANCHOR PLATE SHALL BE STEEL CONFORMING TO ASTM SPECIFICATION A36.
- UPPER ANCHOR ROD NUTS SHALL BE HEAVY HEX NUTS, PER ASTM A276 TYPE 302 OR 304 STAINLESS STEEL.
- LOWER ANCHOR ROD NUTS SHALL BE HEAVY HEX NUTS, PER ASTM A563.
- FOR HANDRAIL AND FENCE, SEE SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL. SEE SUBMITTAL OF WORKING DRAWINGS SPECIAL PROVISIONS FOR DETAILS.



**DETAILS FOR PIPE RAILING**  
NOT TO SCALE

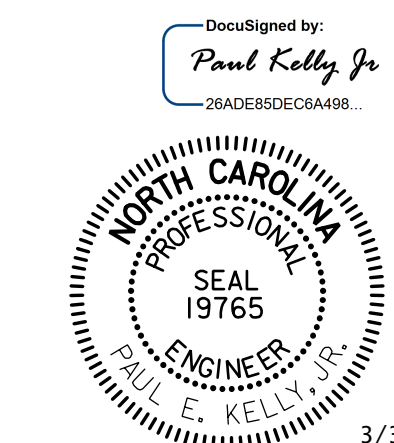


PROJECT NO. U-3308  
DURHAM COUNTY  
 STATION: POT 24+09.63 -LALT-  
POT 21+11.43 -NSN-

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**HANDRAIL AND FENCE DETAILS**



3/31/2015

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S3-24
1			3			TOTAL SHEETS
2			4			44

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

STV / Ralph Whitehead Associates, Inc.  
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 NC License No. F-0991

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DRAWN BY : KPL DATE : 06-14  
 CHECKED BY : DJM DATE : 06-14

**DETAILS FOR CHAIN LINK FENCE**  
NOT TO SCALE

