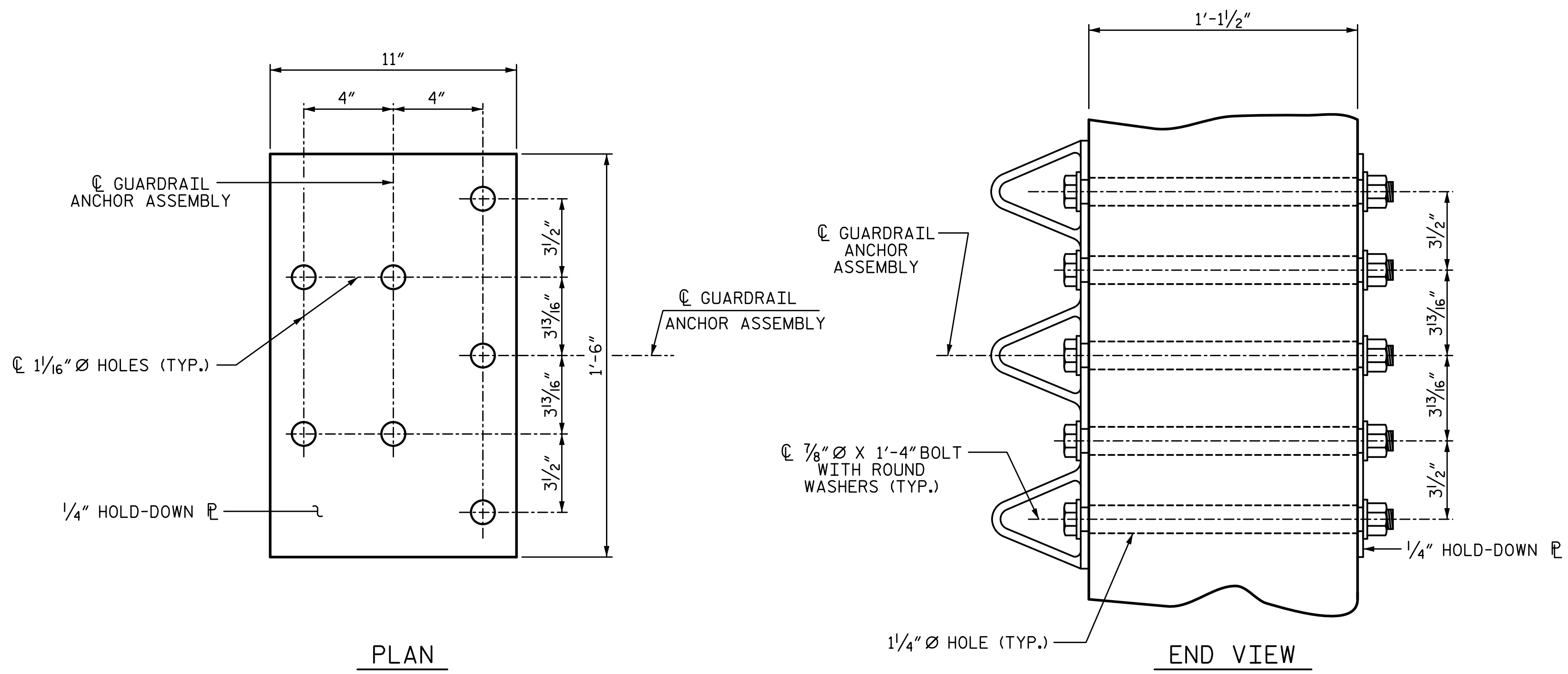


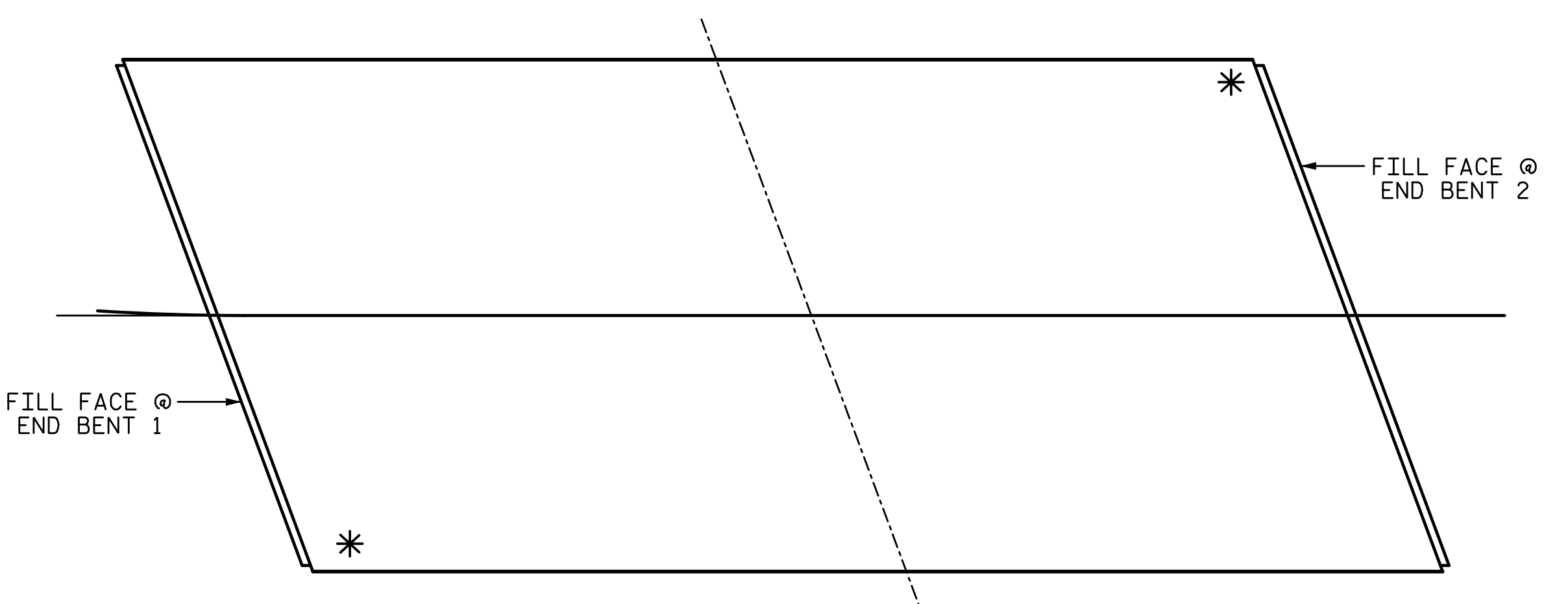
1/9/2018 1:44:46 PM G:\Projects\2016\U-2525C (Greensboro Eastern Loop)\Structures\Site 9\Drawings\Final\U2525C\_SMU\_BR\_SITE9.dgn



**GUARDRAIL ANCHOR ASSEMBLY DETAILS**

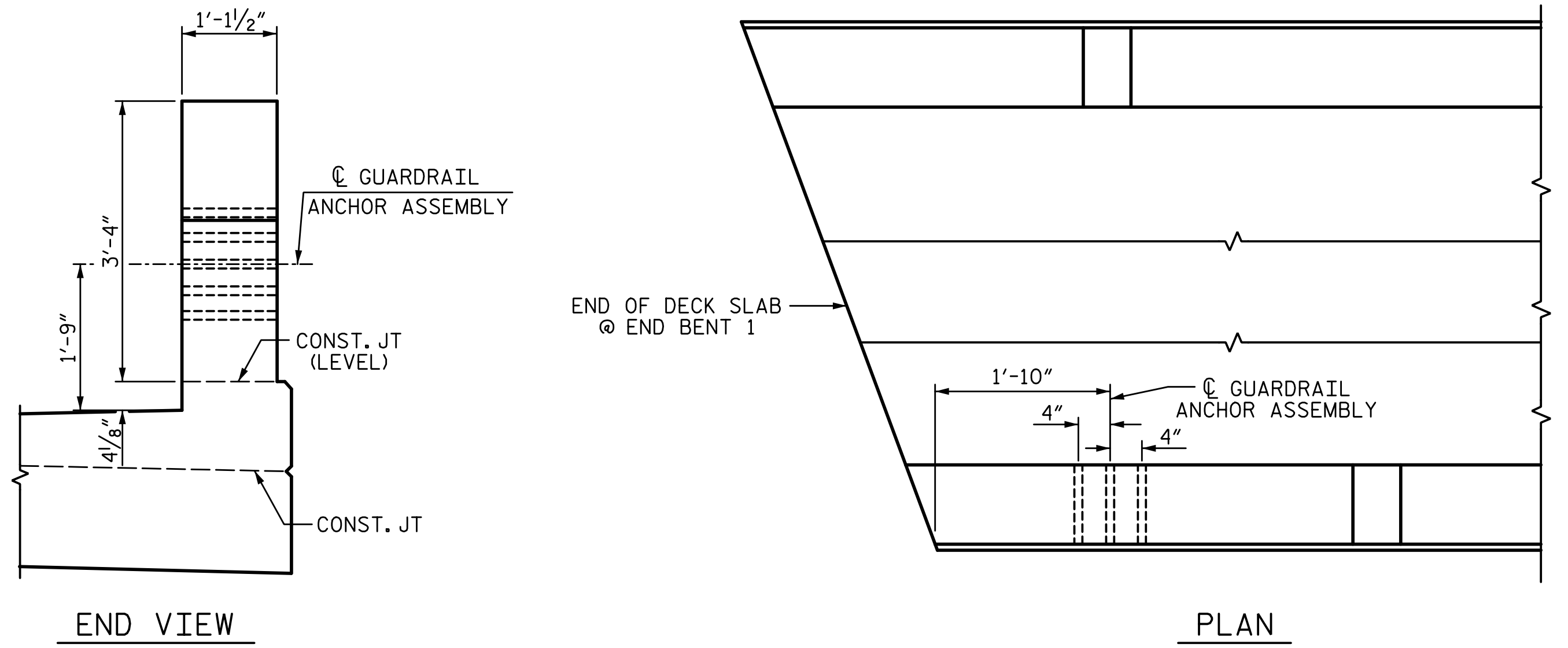
**NOTES:**

- THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 7 - 7/8" Ø BOLTS WITH NUTS AND WASHERS.
- THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.
- BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.
- THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF THE PARAPET. FOR POINTS OF ATTACHMENT, SEE SKETCH.
- AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.
- THE COST OF THE GUARDRAIL ANCHOR ASSEMBLIES WITH BOLTS, NUTS AND WASHERS COMPLETE IN PLACE, SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS.
- THE VERTICAL REINFORCING BARS MAY BE SHIFTED SLIGHTLY IN THE END POST TO CLEAR ASSEMBLY BOLTS.
- THE 1/4" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.



**SKETCH SHOWING POINTS OF ATTACHMENT**

\* LOCATION OF GUARDRAIL ATTACHMENT

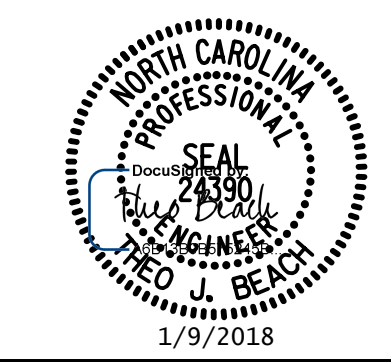


**LOCATION OF GUARDRAIL ANCHOR AT END POST**  
END BENT 1 SHOWN, END BENT 2 SIMILAR

PROJECT NO. U-2525C  
GUILFORD COUNTY  
STATION: 25+52.71 -Y7-

DRAWN BY: <u>S.D. COOPER</u>	DATE: <u>12-17</u>
CHECKED BY: <u>T.J. BEACH</u>	DATE: <u>12-17</u>
DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u>	DATE: <u>12-17</u>

PLANS PREPARED BY:  
**SE & A**  
SIMPSON ENGINEERS ASSOCIATES  
5640 Dillard Drive  
Suite 200  
Cary, NC 27518  
(919) 852-0468  
(919) 852-0538 (Fax)  
www.simpsonengr.com  
LICENSURE NO. C-2521



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
**GUARDRAIL ANCHORAGE  
DETAILS  
FOR METAL RAILS**

<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>					
NO.		BY:		DATE:	
1		3			
2		4			
REVISIONS					SHEET NO. S10-21
					TOTAL SHEETS 36