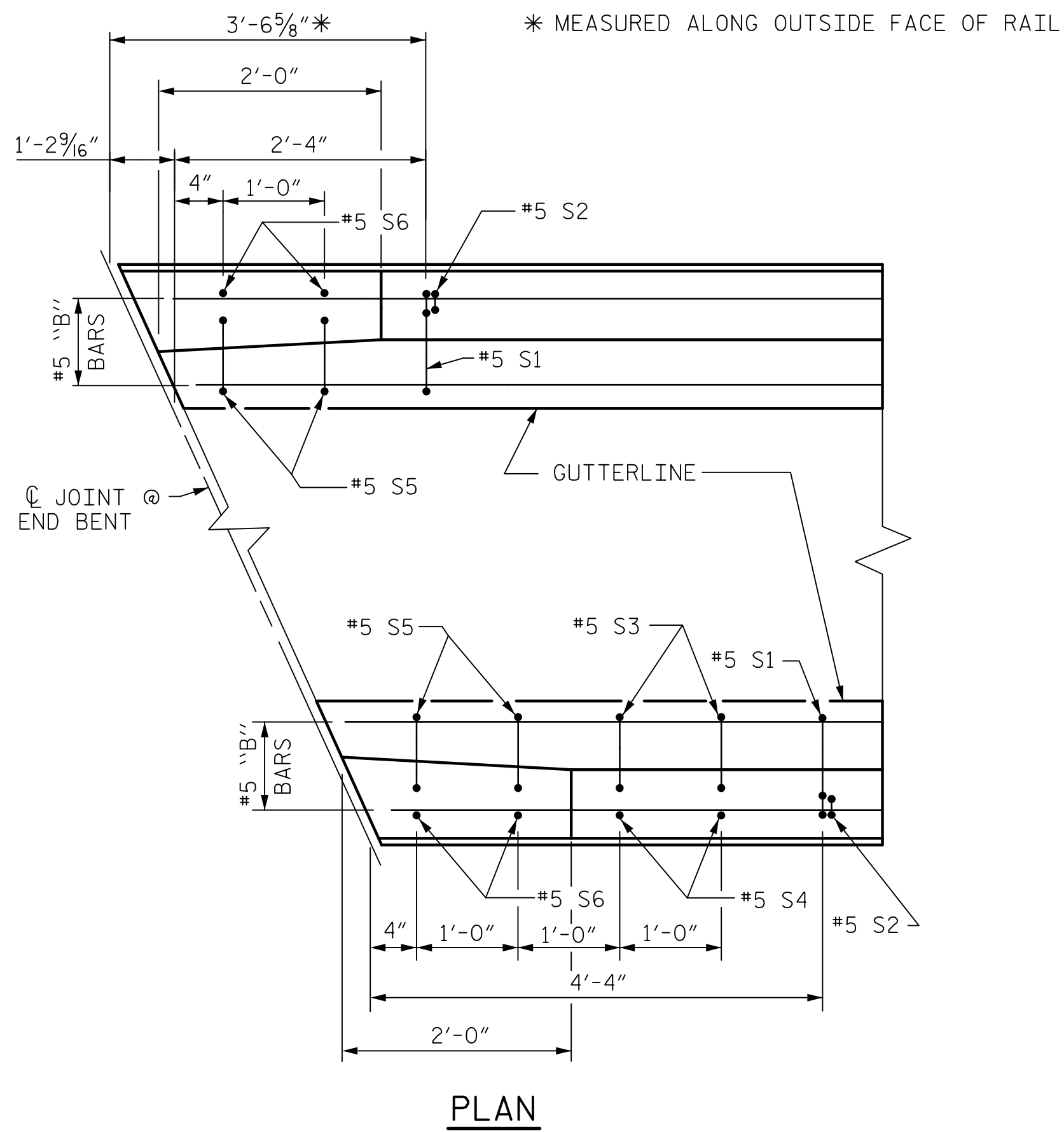
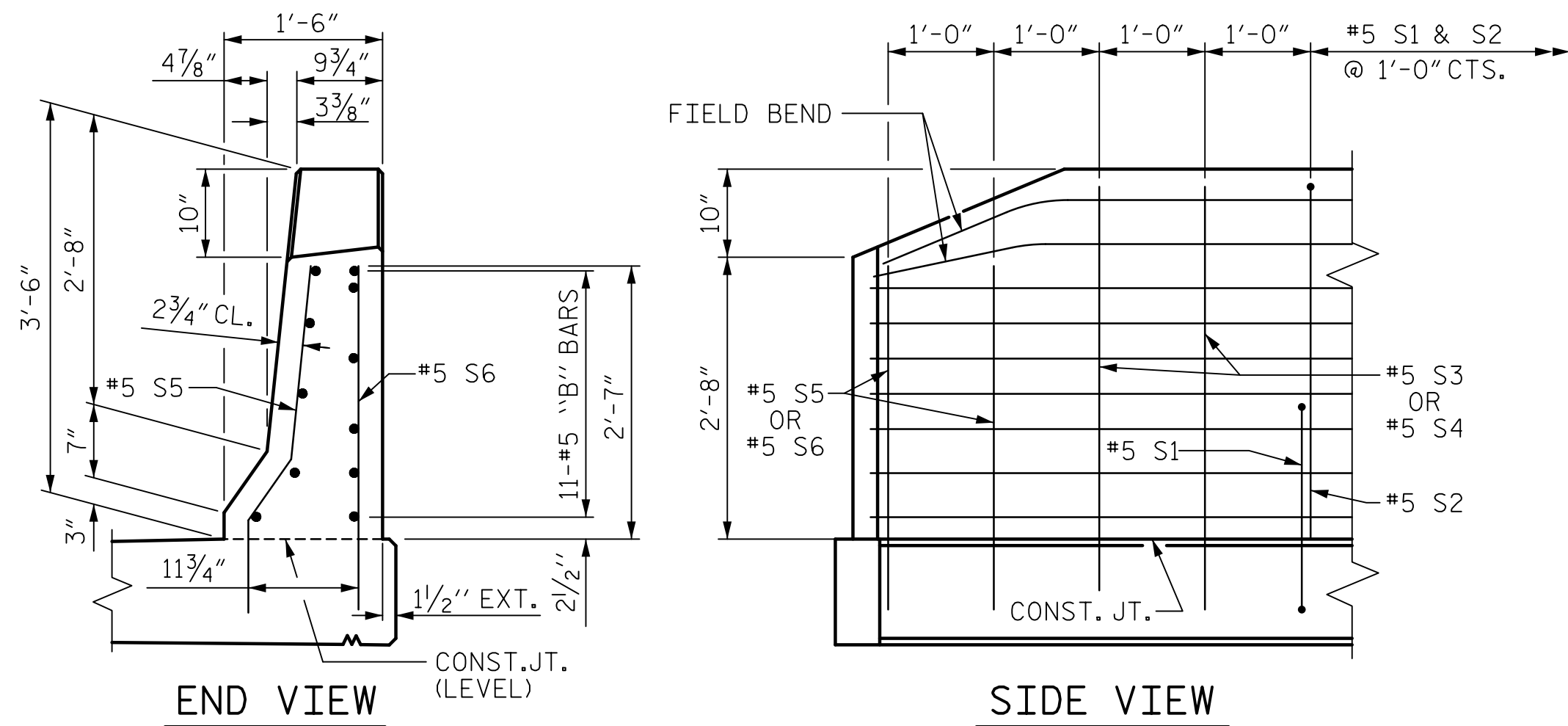


DATE: 5/27/2020
TIME: 12:55:42 PM

USER: \\usaf\p001\Users\John.C.Morrison\Projects\60571086 - BR-0042\BRO_CAD_GIS\910_CAD\VO_MCDOT_TIP\Structures\04 Drawings\002_S15_BR-0042_SML_CBR2.dgn

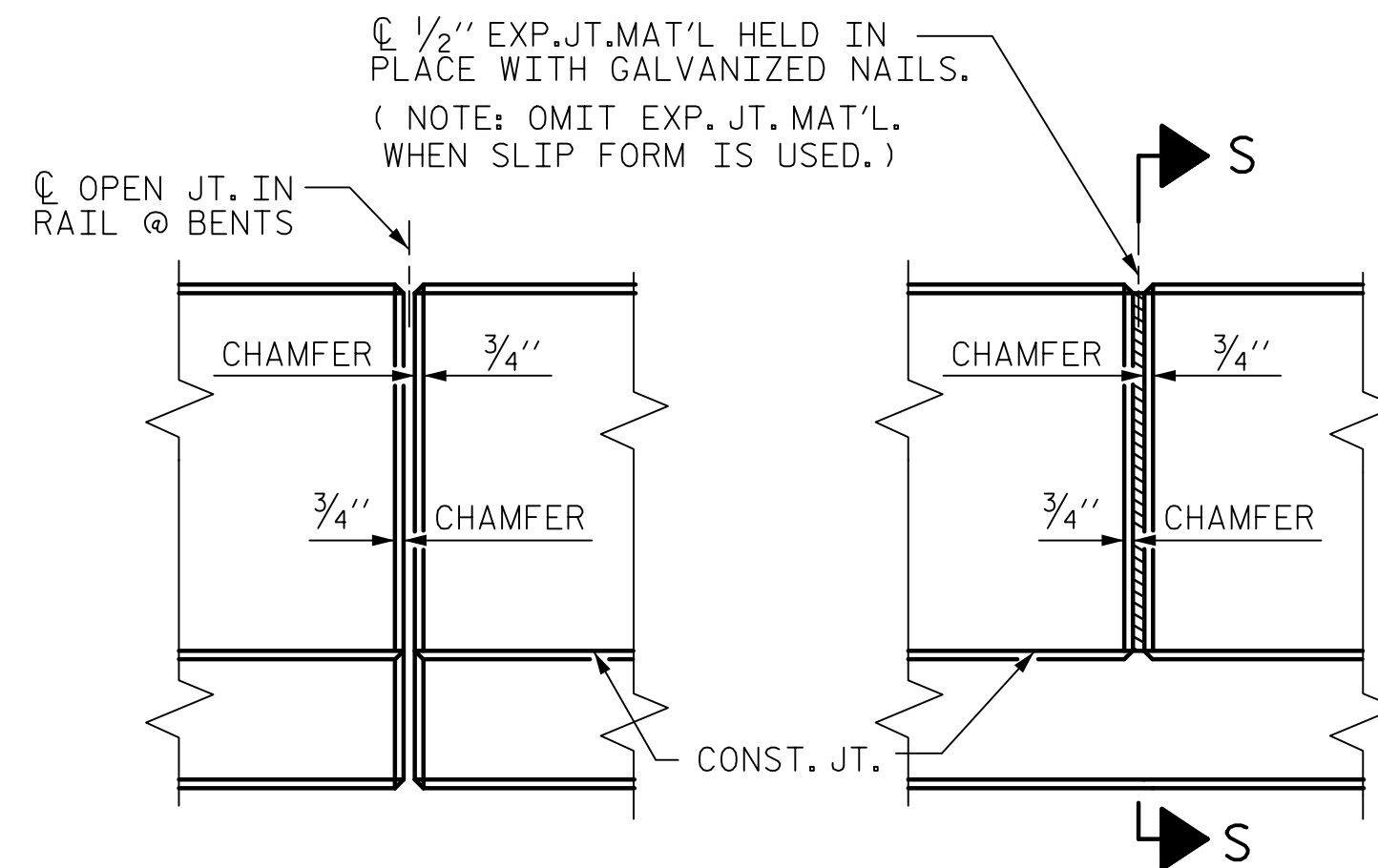


PLAN



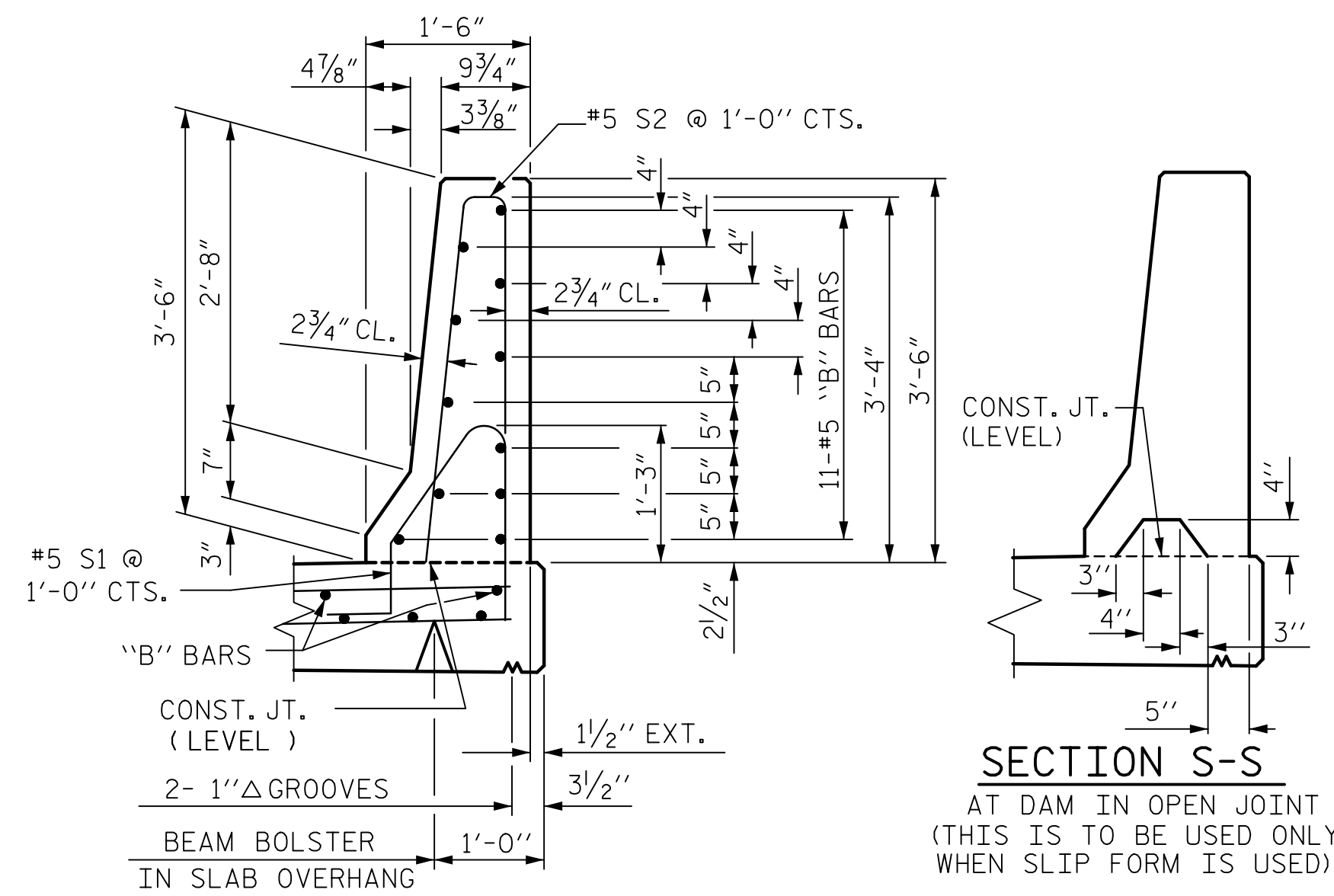
END OF RAIL DETAILS

FOR ADHESIVE ANCHORING AT SAWED JOINTS



ELEVATION AT EXPANSION JOINTS

BARRIER RAIL DETAILS



SECTION THRU RAIL

NOTES

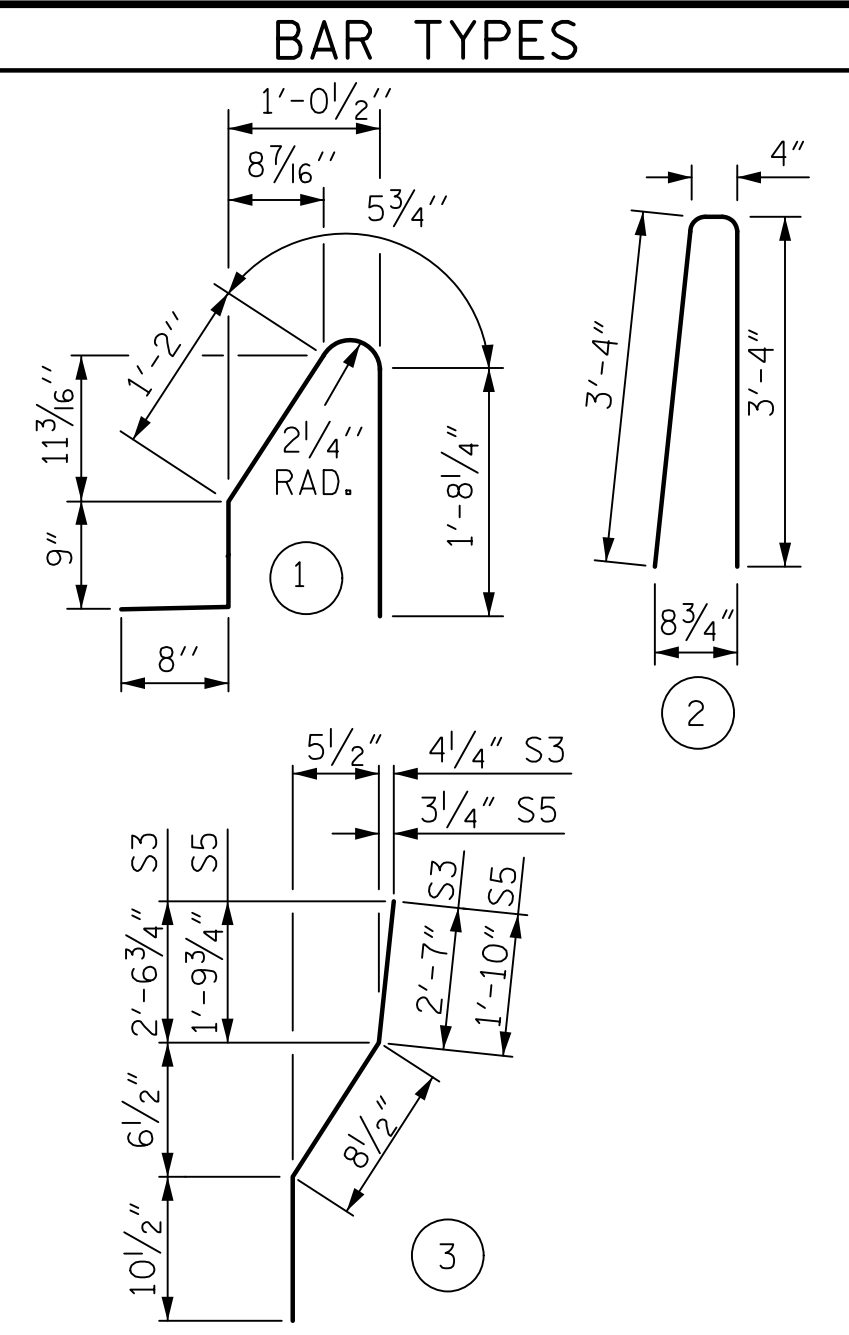
THE BARRIER RAIL IN EACH SPAN SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT SPAN HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

WHEN FOAM JOINT SEAL IS REQUIRED, THE JOINT IN THE DECK SHALL BE SAWED PRIOR TO THE CASTING OF BARRIER RAIL.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

THE #5 S3, S4, S5 AND S6 BARS SHALL BE INSTALLED, USING AN ADHESIVE ANCHORING SYSTEM, AFTER SAWING THE JOINT. THE YIELD LOAD FOR THE #5 S3, S4, S5 AND S6 BARS IS 18.6 KIPS. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

FOR CONCRETE BARRIER RAIL ONLY

BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
* S1	398	#5	1	4'-9"	1972
* S2	398	#5	2	7'-0"	2906
* S3	4	#5	3	4'-2"	17
* S4	4	#5	STR	4'-0"	17
* S5	8	#5	3	3'-5"	29
* S6	8	#5	STR	3'-3"	27
* B1	132	#5	STR	24'-7"	3385
* B2	88	#5	STR	15'-0"	1377

* EPOXY COATED REINFORCING STEEL				9,730 LBS.
CLASS AA CONCRETE				55.9 CU. YDS.
CONCRETE BARRIER RAIL				410.6 LIN. FT.

PROJECT NO. BR-0042
ROCKINGHAM COUNTY
STATION: 19+56.99 -L-

SHEET 2 OF 2

AECOM
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Designed by:
John C. Morrison
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
030474
JOHN C. MORRISON
5/27/2020

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD

CONCRETE BARRIER RAIL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-15
1			3			TOTAL SHEETS
2			4			28

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

(SHT 3)

STD. NO. CBR1