

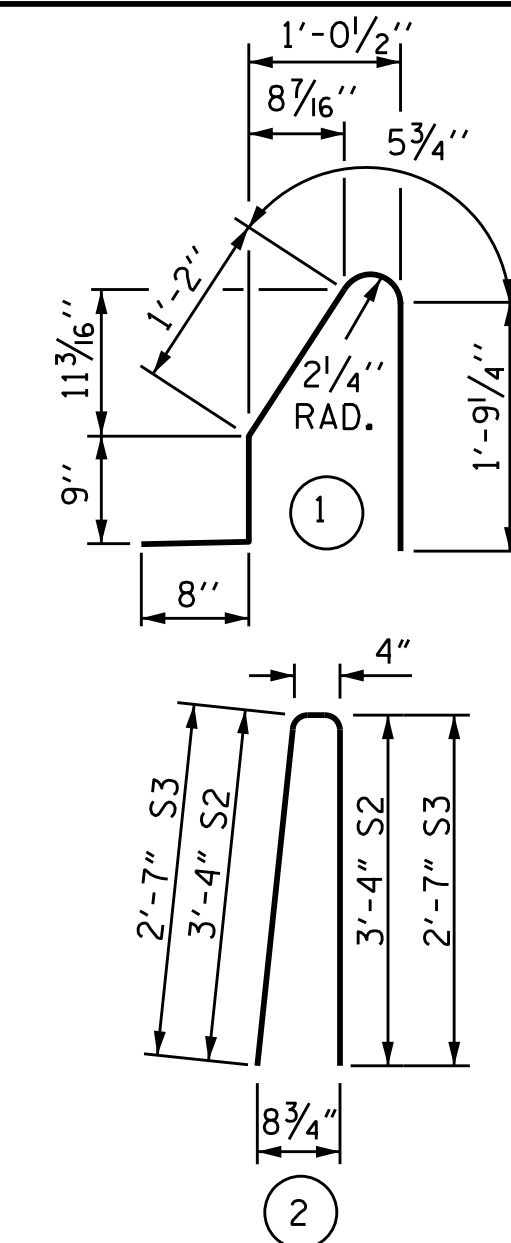
**NOTES**

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.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

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.

**BAR TYPES**

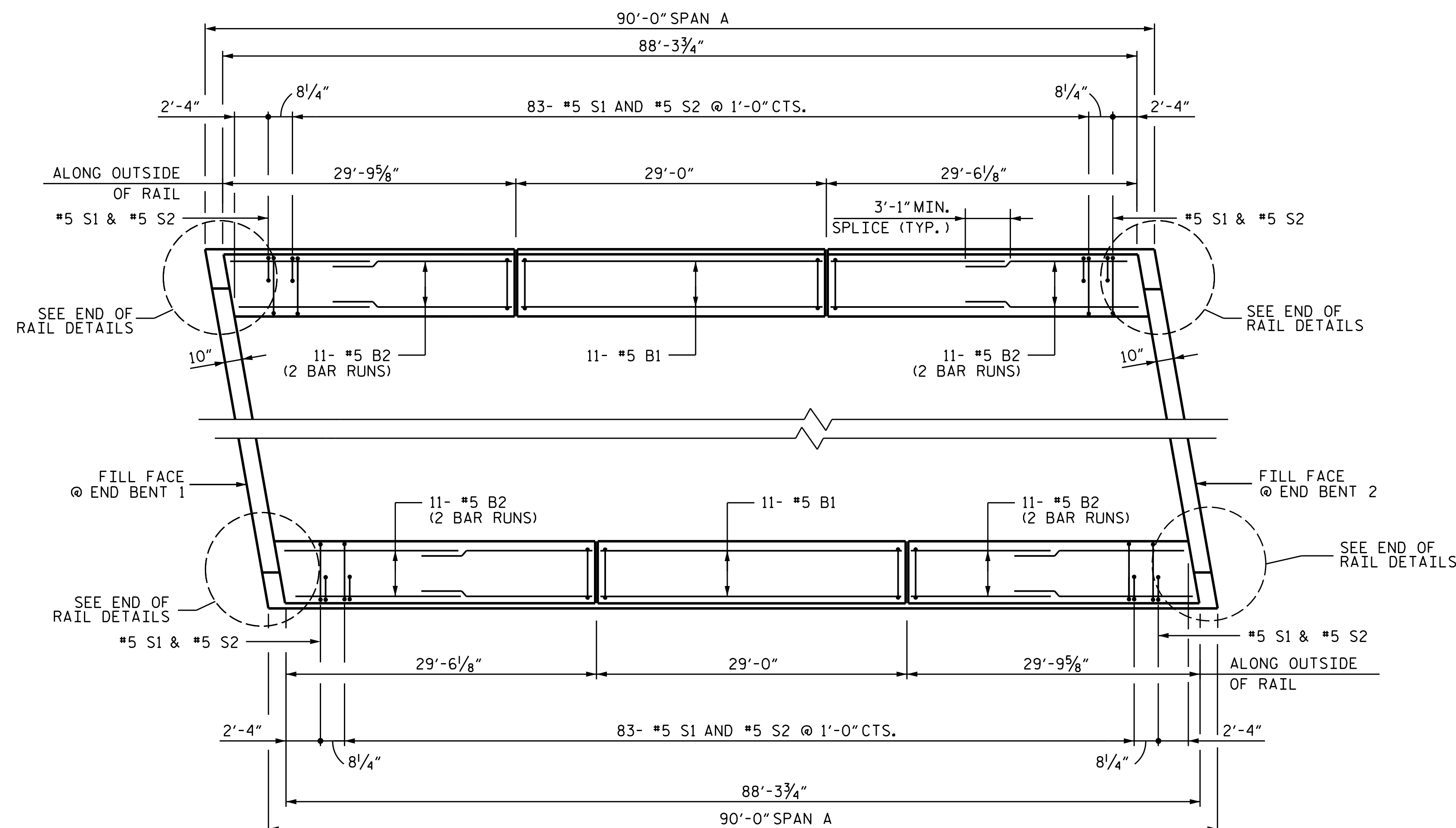


ALL BAR DIMENSIONS ARE OUT TO OUT

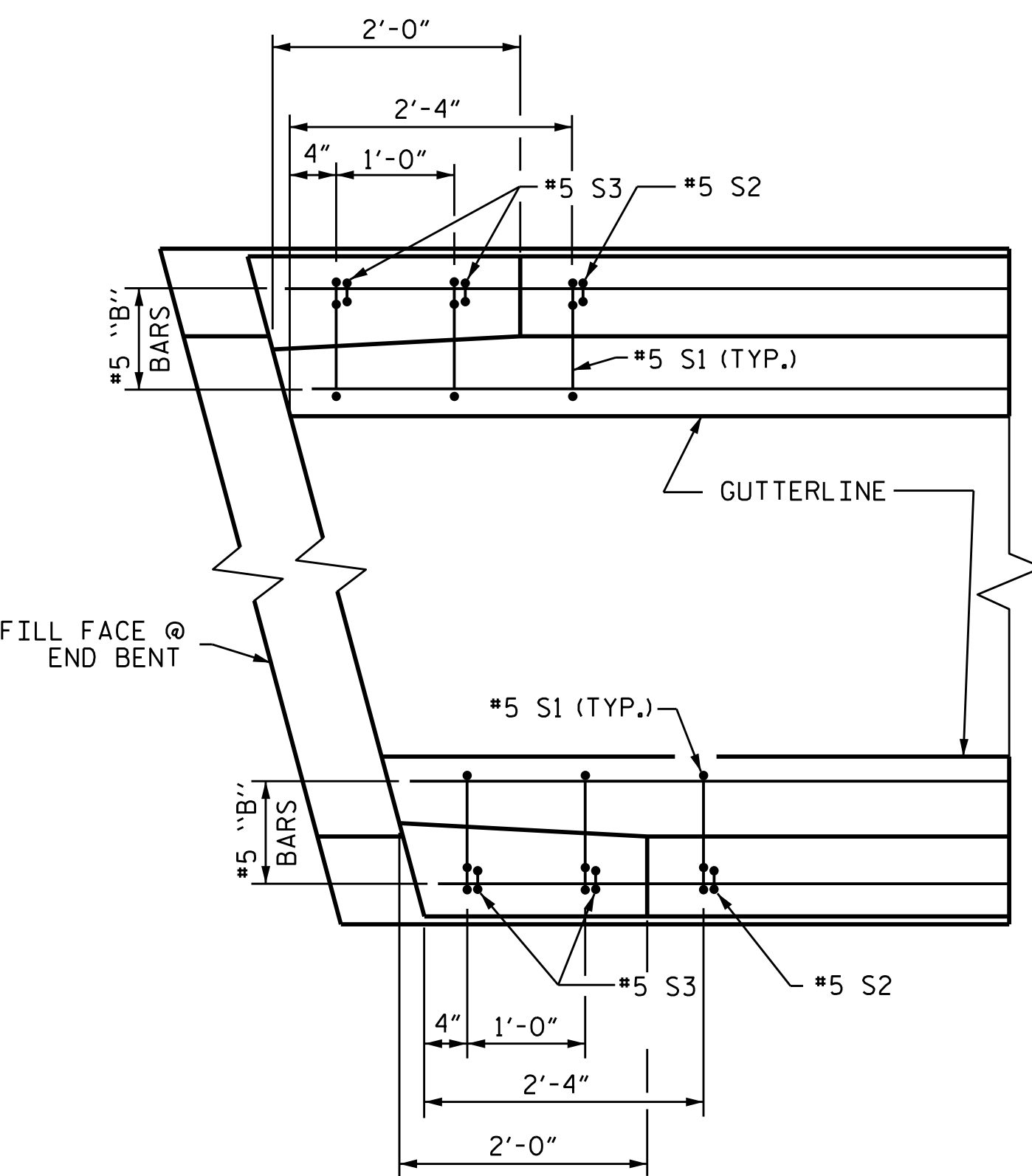
**BILL OF MATERIAL**

FOR CONCRETE BARRIER RAIL ONLY

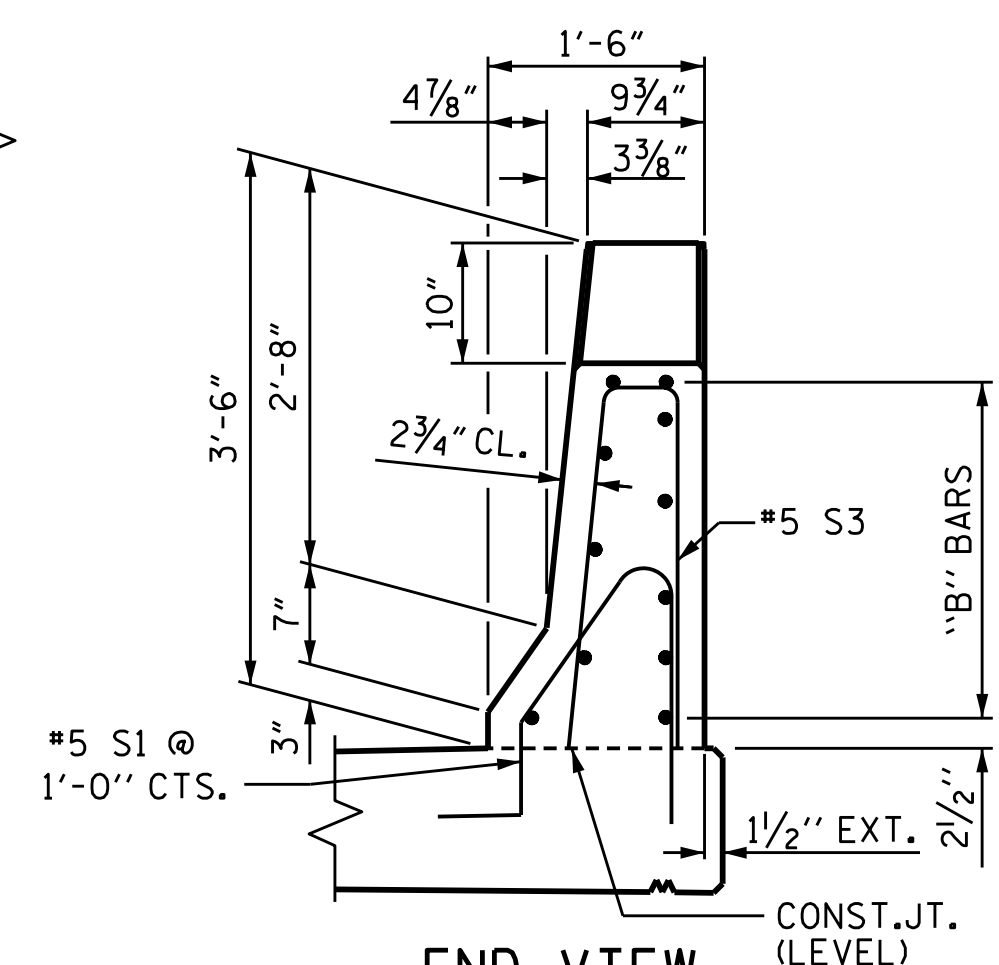
BAR NO.	SIZE	TYPE	LENGTH	WEIGHT
* S1	178 #5	1	4'-10"	897
* S2	170 #5	2	7'-0"	1241
* S3	8 #5	2	5'-6"	46
* B1	22 #5	STR	28'-8"	658
* B2	88 #5	STR	16'-4"	1499
* EPOXY COATED REINFORCING STEEL				4341 LBS.
CLASS AA CONCRETE				24.0 CU. YDS.
CONCRETE BARRIER RAIL				176.62 LIN. FT.



**PLAN**

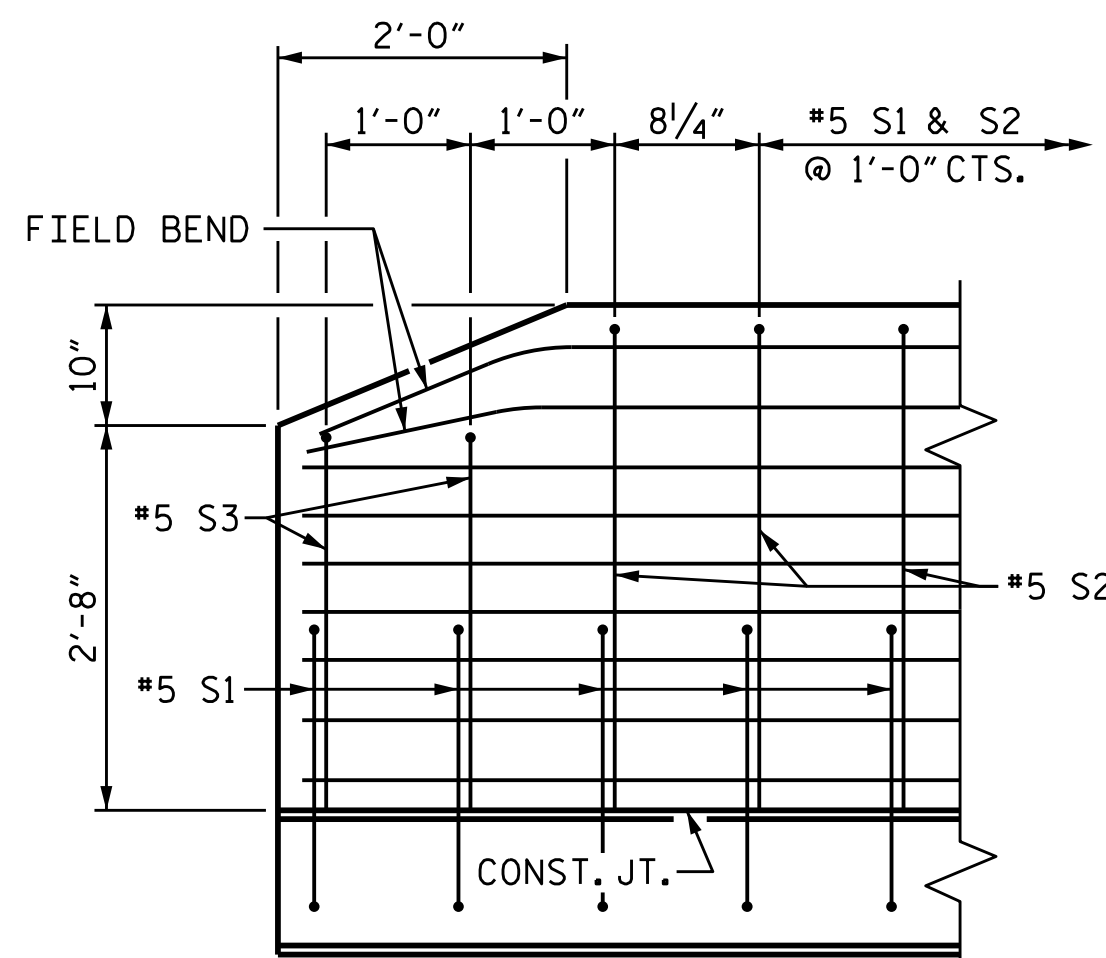


**PLAN VIEW**

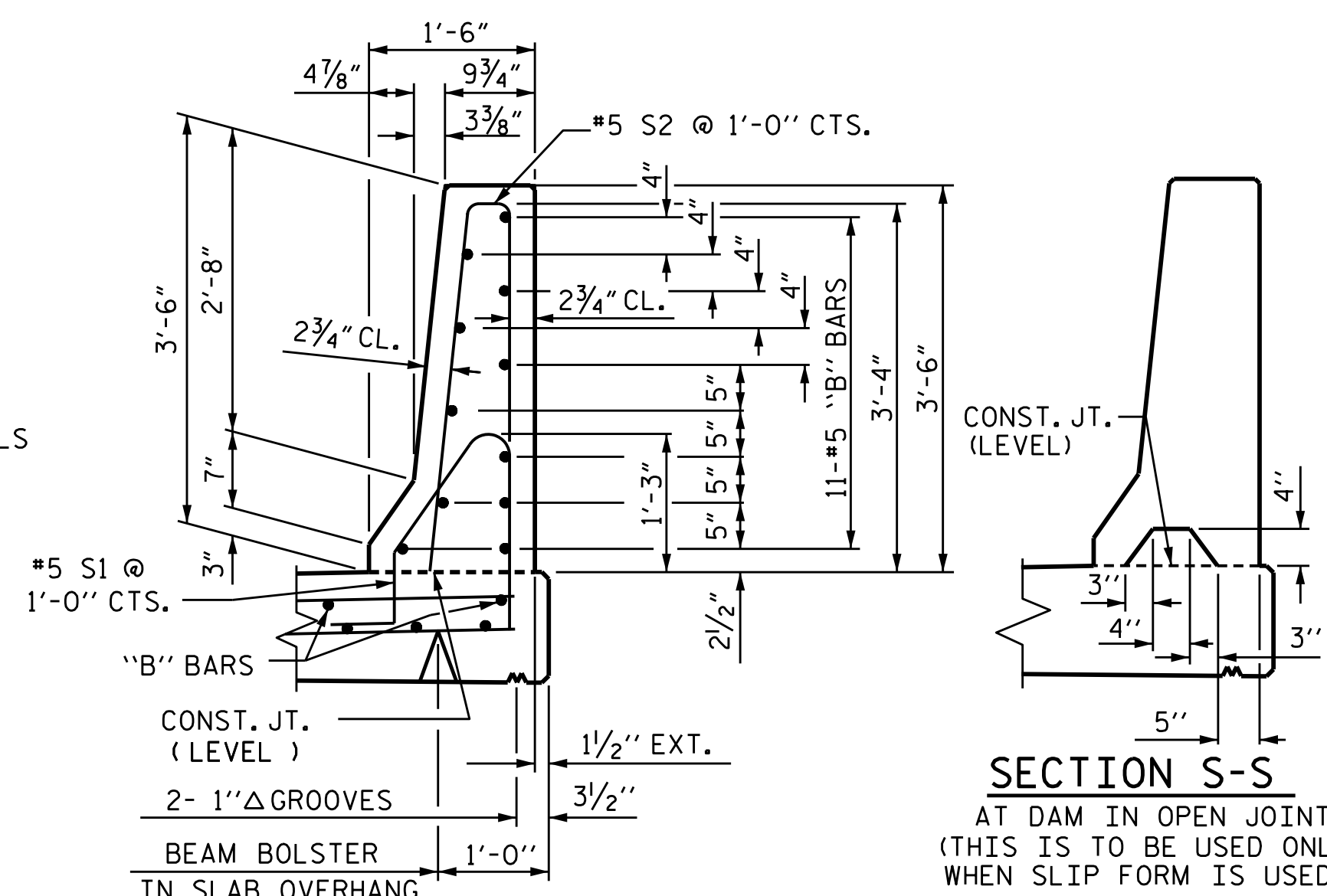


**END VIEW**

**END OF RAIL DETAILS**



**SIDE VIEW**

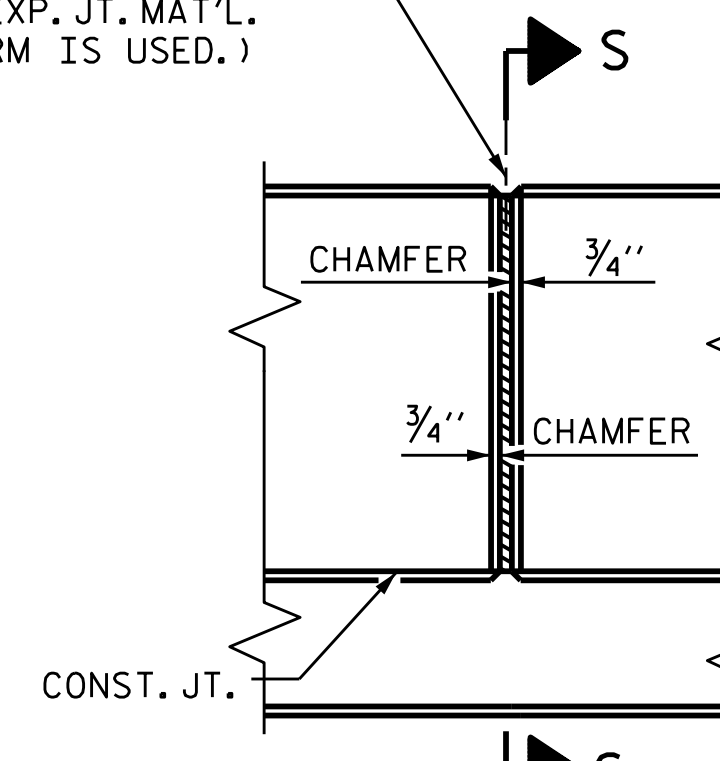


**SECTION THRU RAIL**

**SECTION S-S**

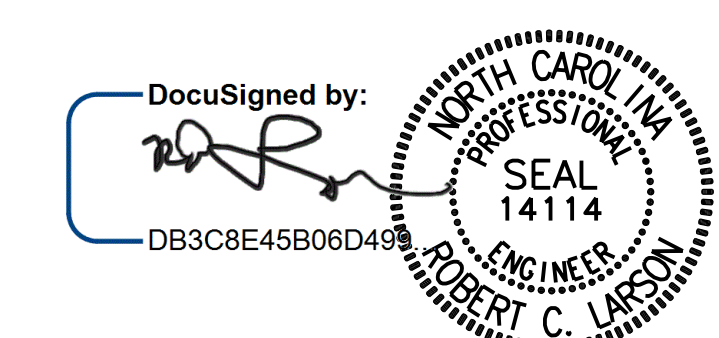
AT DAM IN OPEN JOINT (THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)

1/2" EXP. JT. MAT'L HELD IN PLACE WITH GALVANIZED NAILS.  
(NOTE: OMIT EXP. JT. MAT'L WHEN SLIP FORM IS USED.)



**ELEVATION AT EXPANSION JOINTS  
BARRIER RAIL DETAILS**

DESIGN ENGINEER OF RECORD	DATE
ASSEMBLED BY : A. K. ALLANKER	DATE : 07/21/19
CHECKED BY : R. C. LARSON	DATE : 04/06/20
DRAWN BY : ARB 5/87	REV. 7/12 MAA/GM
CHECKED BY : SJD 9/87	REV. 6/13 MAA/GM
	REV. 12/17 MAA/THC



**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

**KCI Associates**  
of North Carolina, P.A.  
2505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 785-9264

PROJECT NO. R-2561CA  
COLUMBUS COUNTY  
STATION: 16+93.00 -Y-

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
STANDARD  
CONCRETE  
BARRIER RAIL

REVISIONS		SHEET NO.	
NO.	BY:	DATE:	NO.
1			3
2			4

TOTAL SHEETS: 24

\$FILEL\$ \$DATES\$ \$TIME\$ \$USERS\$ \$PENTBL\$ \$PLTDV\$ \$KCI PROJECT NO. 241704391.04