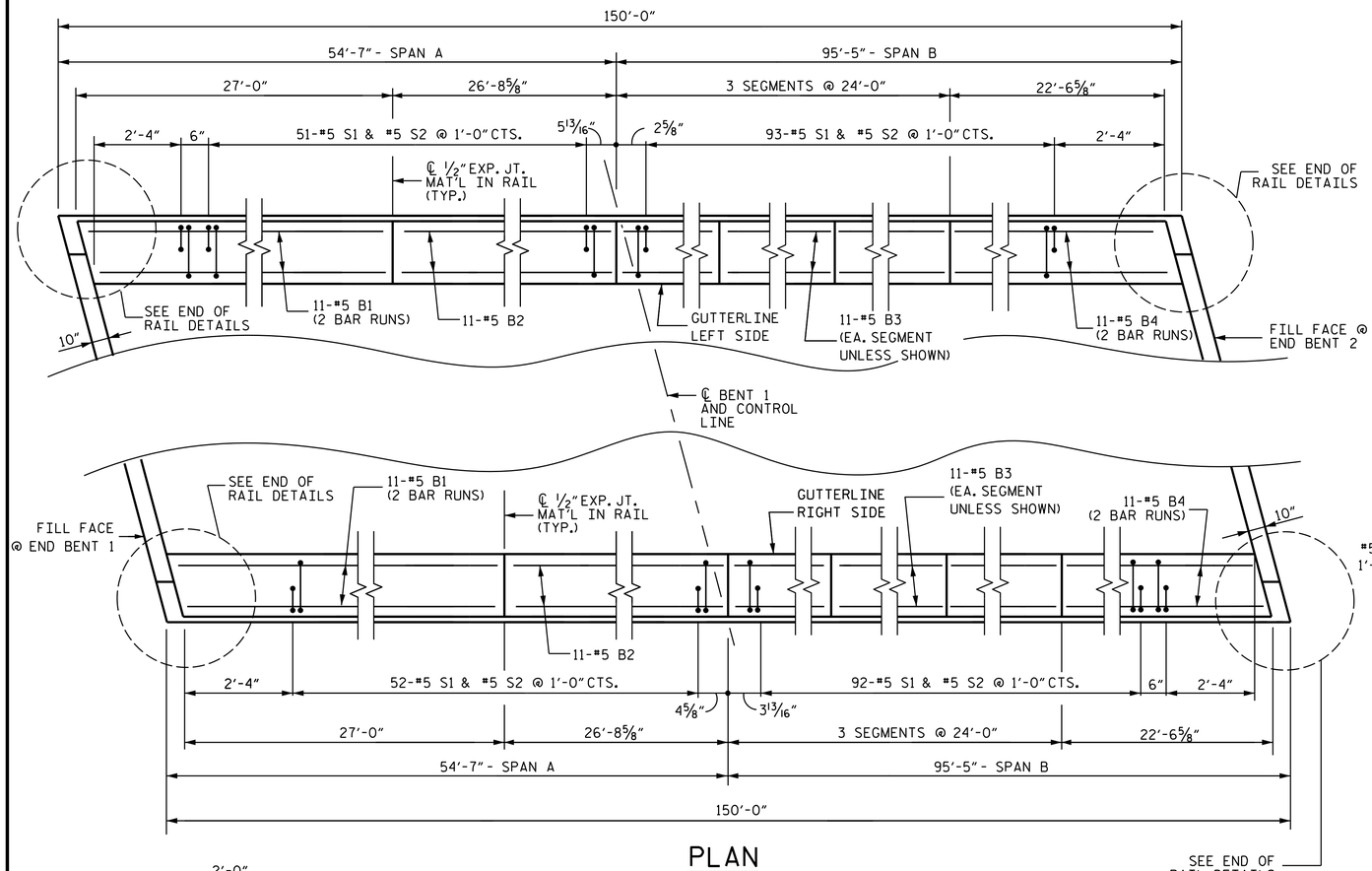


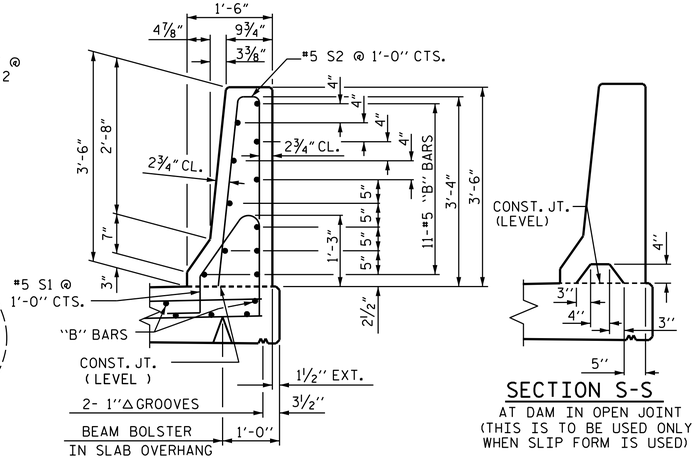
PLAN

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, ½" 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.

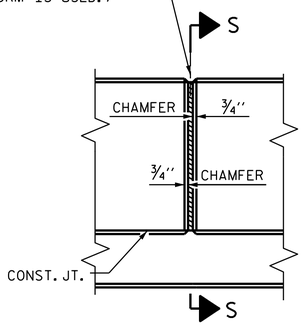


SECTION THRU RAIL

SECTION S-S

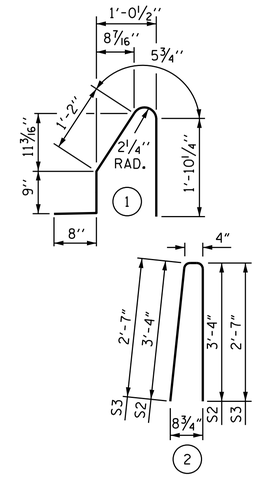
AT DAM IN OPEN JOINT (THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)

℄ ½" 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

BAR TYPES



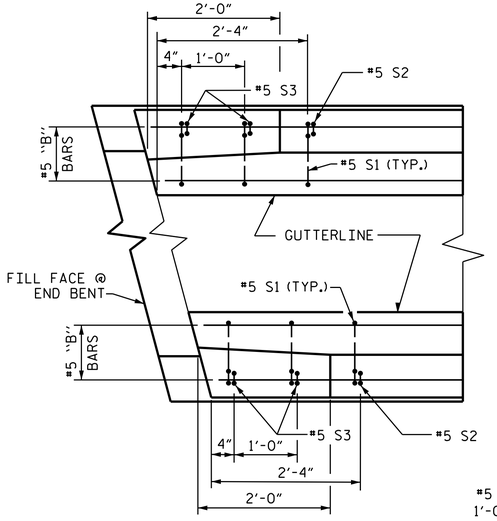
ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

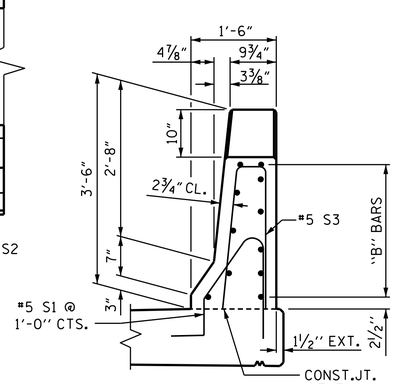
FOR CONCRETE BARRIER RAIL ONLY

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* S1	298	#5	1	4'-11"	1528
* S2	290	#5	2	7'-0"	2117
* S3	8	#5	2	5'-6"	46
* B1	44	#5	STR	15'-1"	692
* B2	22	#5	STR	26'-4"	604
* B3	66	#5	STR	23'-8"	1629
* B4	44	#5	STR	12'-11"	593

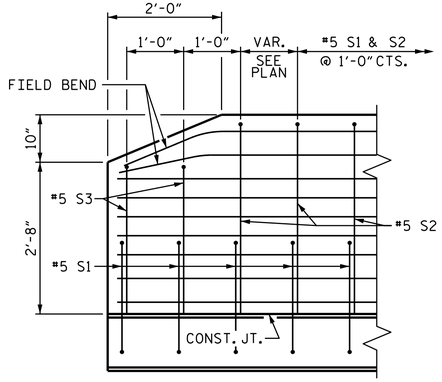
* EPOXY COATED REINFORCING STEEL	7209 LBS.
CLASS AA CONCRETE	40.3 CU. YDS.
CONCRETE BARRIER RAIL	296.54 LIN. FT.



PLAN



END VIEW



SIDE VIEW

END OF RAIL DETAILS

PROJECT NO. R-2561CA

COLUMBUS COUNTY

STATION: 71+06.00 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

CONCRETE BARRIER RAIL

RIGHT LANE

DESIGN ENGINEER OF RECORD:	DATE: 8/15/2022
ASSEMBLED BY : A. K. ALLANK	DATE : 08/23/19
CHECKED BY : R. C. LARSON	DATE : 07/01/20
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

DocuSigned by: DB3C8E45B06D498...
8/15/2022

NORTH CAROLINA PROFESSIONAL SEAL 14114 ENGINEER ROBERT C. LARSON

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

KCI Associates of North Carolina, P.A.
ENGINEERS ◆ PLANNERS ◆ SCIENTISTS ◆ CONSTRUCTION MANAGERS LICENSE NUMBER: C-0764
4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-15
1			3			TOTAL SHEETS
2			4			29

STD. NO. CBR1 (SHT 3)

$FILE$ $TIME$ $USER$ $PENTBLS$ $PLTDRVS$
$DATE$ KCI PROJECT NO. 241704391.04