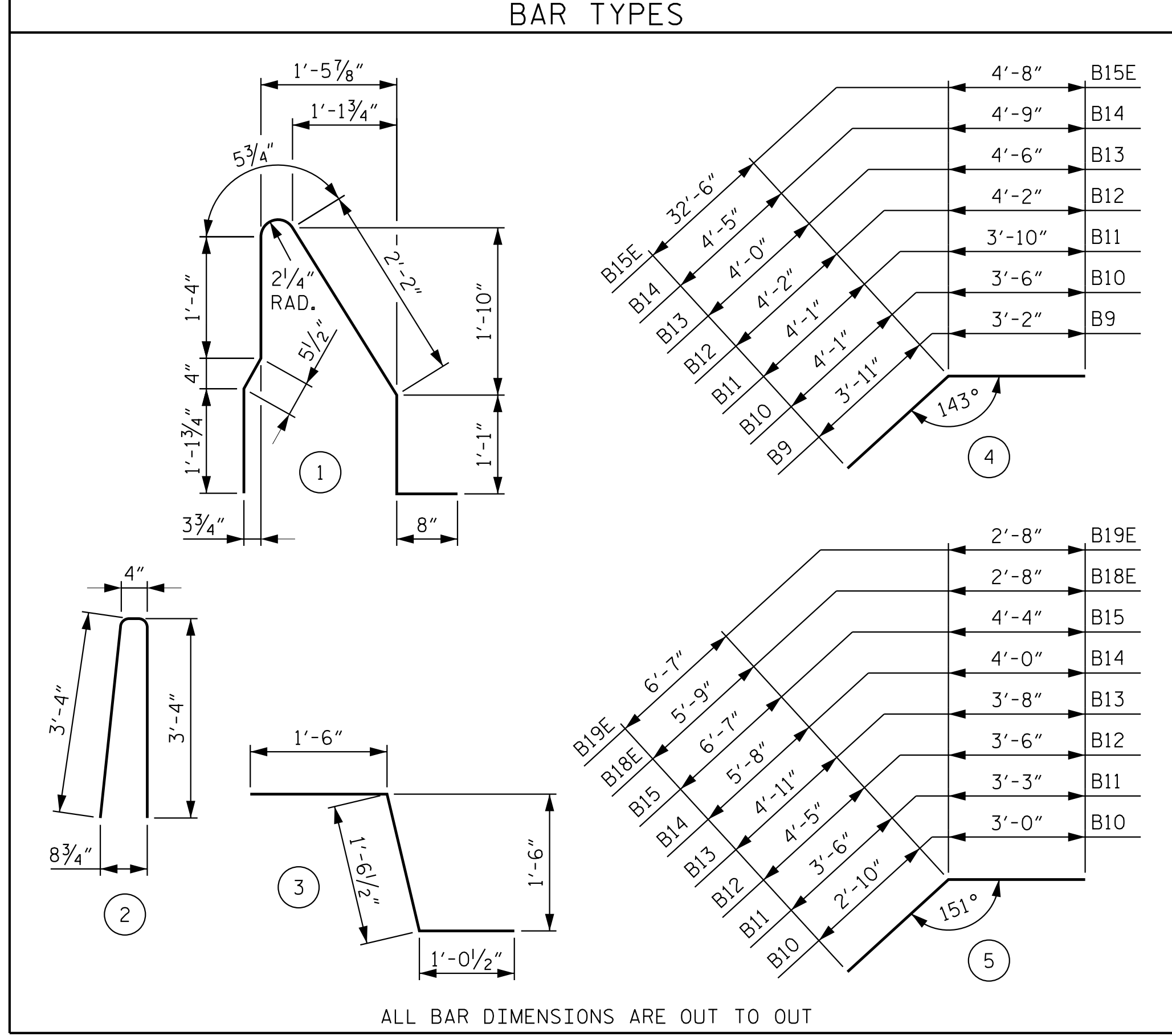


CONCRETE BARRIER RAIL WITH MOMENT SLAB

\* NOTCH NOT PRESENT IN AREA ABOVE END BENT BACKWALL



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL MOMENT SLAB @ END BENT 1						BILL OF MATERIAL MOMENT SLAB @ END BENT 2					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	2	#4	STR	16'-0"	21	B1	2	#4	STR	18'-7"	25
B2	2	#4	STR	15'-7"	21	B2	2	#4	STR	17'-6"	23
B3	2	#4	STR	15'-2"	20	B3	2	#4	STR	16'-4"	22
B4	2	#4	STR	14'-9"	20	B4	2	#4	STR	15'-2"	20
B5	3	#4	STR	14'-4"	19	B5	3	#4	STR	14'-0"	19
B6	3	#4	STR	13'-11"	37	B6	3	#4	STR	12'-4"	33
B7E	11	#5	STR	16'-0"	184	B7E	6	#5	STR	12'-5"	78
B8	14	#4	STR	30'-0"	281	B8E	5	#5	STR	13'-9"	72
B9	2	#4	4	7'-1"	9	B9	28	#4	STR	28'-2"	527
B10	2	#4	4	7'-7"	10	B10	2	#4	5	5'-10"	8
B11	2	#4	4	7'-11"	11	B11	2	#4	5	6'-9"	9
B12	2	#4	4	8'-4"	11	B12	2	#4	5	7'-11"	11
B13	3	#4	4	8'-6"	11	B13	2	#4	5	8'-7"	11
B14	3	#4	4	9'-2"	24	B14	3	#4	5	9'-8"	13
B15E	11	#5	4	37'-2"	426	B15	3	#4	5	10'-11"	29
						B16E	10	#5	STR	28'-2"	294
G1	55	#5	STR	4'-4"	249	B17E	12	#5	STR	28'-2"	354
G2	55	#4	STR	4'-4"	159	B18E	5	#5	5	8'-5"	44
						B19E	6	#5	5	9'-3"	58
S1E	54	#5	1	7'-4"	413						
S2E	54	#5	2	7'-0"	394	G1	83	#5	STR	4'-4"	375
S3	49	#5	3	4'-2"	213	G2	83	#4	STR	4'-4"	240
						S1E	77	#5	1	7'-4"	589
						S2E	77	#5	2	7'-0"	562
						S3	72	#5	3	4'-2"	313
REINFORCING STEEL	LBS.				1,116	REINFORCING STEEL	LBS.				1,678
EPOXY COATED REINFORCING STEEL	LBS.				1,417	EPOXY COATED REINFORCING STEEL	LBS.				2,051
CLASS AA CONCRETE BARRIER RAIL	C.Y.				7.2	CLASS AA CONCRETE BARRIER RAIL	C.Y.				10.6
CLASS A CONCRETE MOMENT SLAB	C.Y.				15.9	CLASS A CONCRETE MOMENT SLAB	C.Y.				23.4
CONCRETE BARRIER RAIL WITH MOMENT SLAB	LIN. FT.				52.0	CONCRETE BARRIER RAIL WITH MOMENT SLAB	LIN. FT.				76.7

\*"E" DENOTES EPOXY COATED REINFORCING STEEL.

NOTES:

FOR CONCRETE BARRIER RAIL WITH MOMENT SLAB, SEE CONCRETE BARRIER RAIL WITH MOMENT SLAB PROVISION.

CONCRETE BARRIER RAIL WITH MOMENT SLAB SHALL BE A MINIMUM OF 15' IN LENGTH.

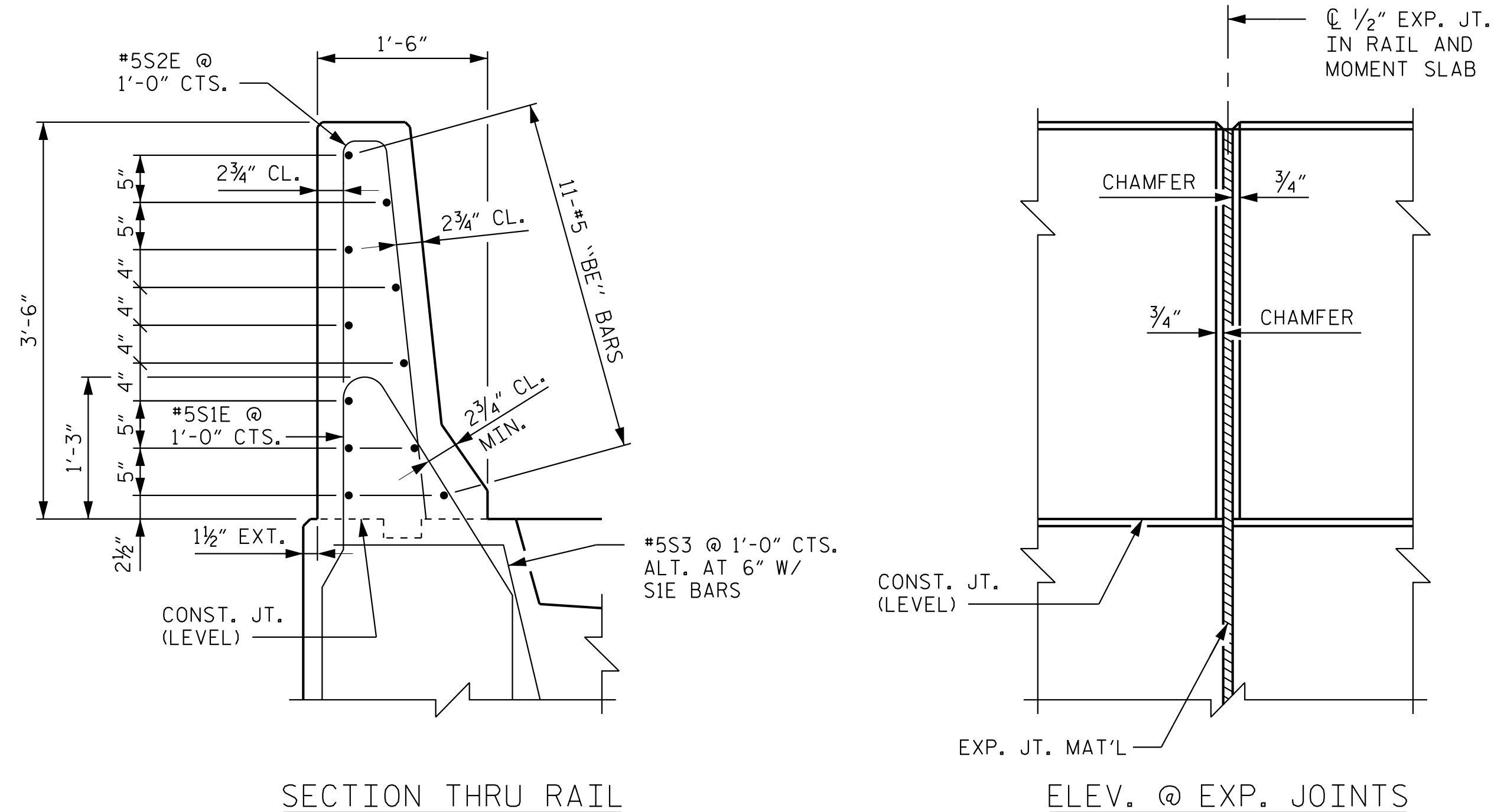
EXPANSION JOINTS SHALL BE PLACED IN THE BARRIER RAIL AND MOMENT SLAB AS SHOWN ON "MOMENT SLAB DETAILS", SHEET 1 OF 3 AND 2 OF 3.

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.

THE BARRIER RAIL SHALL NOT BE CAST UNTIL THE MOMENT SLAB CONCRETE HAS ATTAINED AN AGE OF THREE CURING DAYS OR A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI. IN ADDITION, NO FILL MATERIAL, ASPHALT, OR CONSTRUCTION EQUIPMENT IS ALLOWED ON THE MOMENT SLAB PRIOR TO SATISFYING THE MINIMUM CONCRETE CURING AND STRENGTH REQUIREMENTS.

ALL REINFORCING STEEL IN THE BARRIER RAIL SHALL BE EPOXY COATED.

IF EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, BARRIERS, PIPES, INLETS OR UTILITIES WILL INTERFERE WITH CONCRETE BARRIER RAIL WITH MOMENT SLAB OR CONCRETE FACING FOR RETAINING WALL WILL BE THICKER THAN 8", CONCRETE BARRIER RAIL WITH MOMENT SLAB DETAILS SHALL BE REVISED AND SUBMITTED FOR APPROVAL.



SECTION THRU RAIL

ELEV. @ EXP. JOINTS

BARRIER RAIL DETAILS

DRAWN BY: D. D. LOWERY	DATE: 10/17
CHECKED BY: A. L. PHILLIPS	DATE: 10/17
DESIGN ENGINEER OF RECORD: S. A. DENNEY	DATE: 10/17

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Professional Engineer seals for Seth A. Denney (SEAL 033752, ENGINEER, NORTH CAROLINA PROFESSIONAL SEAL) and Andrew L. Phillips (SEAL 040769, ENGINEER, NORTH CAROLINA PROFESSIONAL SEAL). Both are dated 10/23/2017.

**KimleyHorn**  
421 Fayetteville Street, Suite 600  
Raleigh, NC 27601-1772  
Phone (919) 677-2000  
NC LICENSE # F-0102

PROJECT NO. U-5806  
CABARRUS COUNTY  
STATION: 15+75.56 -Y1-  
27+06.95 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

MOMENT SLAB DETAILS

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-50	
1			3			TOTAL SHEETS	
2			4			50	