

PLAN  
SECTION E-E  
**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.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

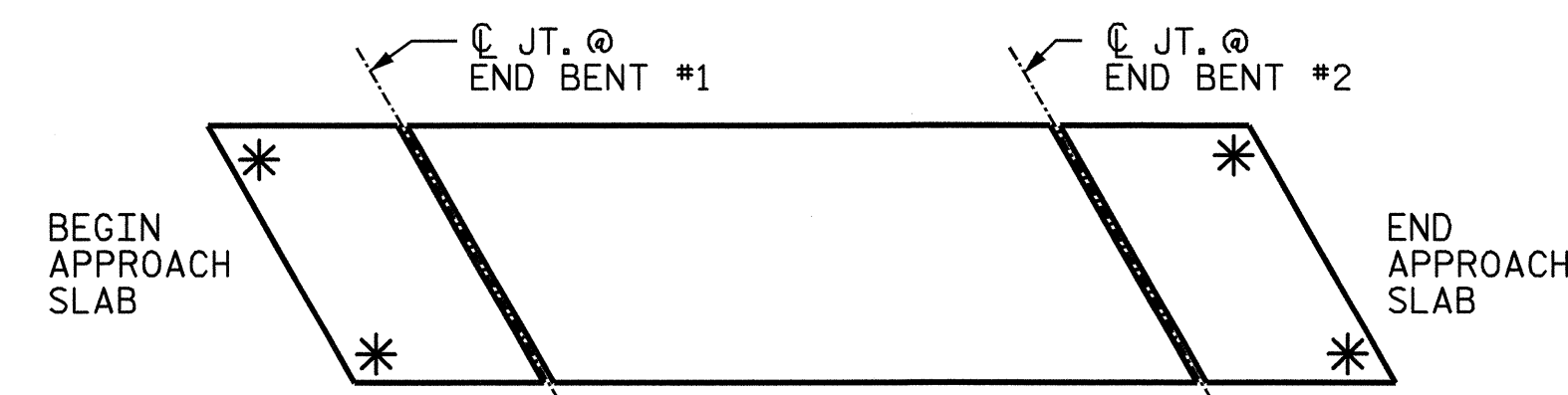
THE COST OF THE GUARDRAIL ANCHOR ASSEMBLIES WITH BOLTS, NUTS AND WASHERS COMPLETE IN PLACE, SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE BID FOR BRIDGE APPROACH SLABS.

THE 1 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.

THE #5 S1 AND #5 S3 BARS SHALL BE INSTALLED, WHERE NOTED ON THE PLANS, USING AN ADHESIVE ANCHORING SYSTEM AFTER SAWING THE JOINT, FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS. THE YIELD LOAD FOR THE #5 S1 AND #5 S3 BARS IS 18.6 KIPS. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

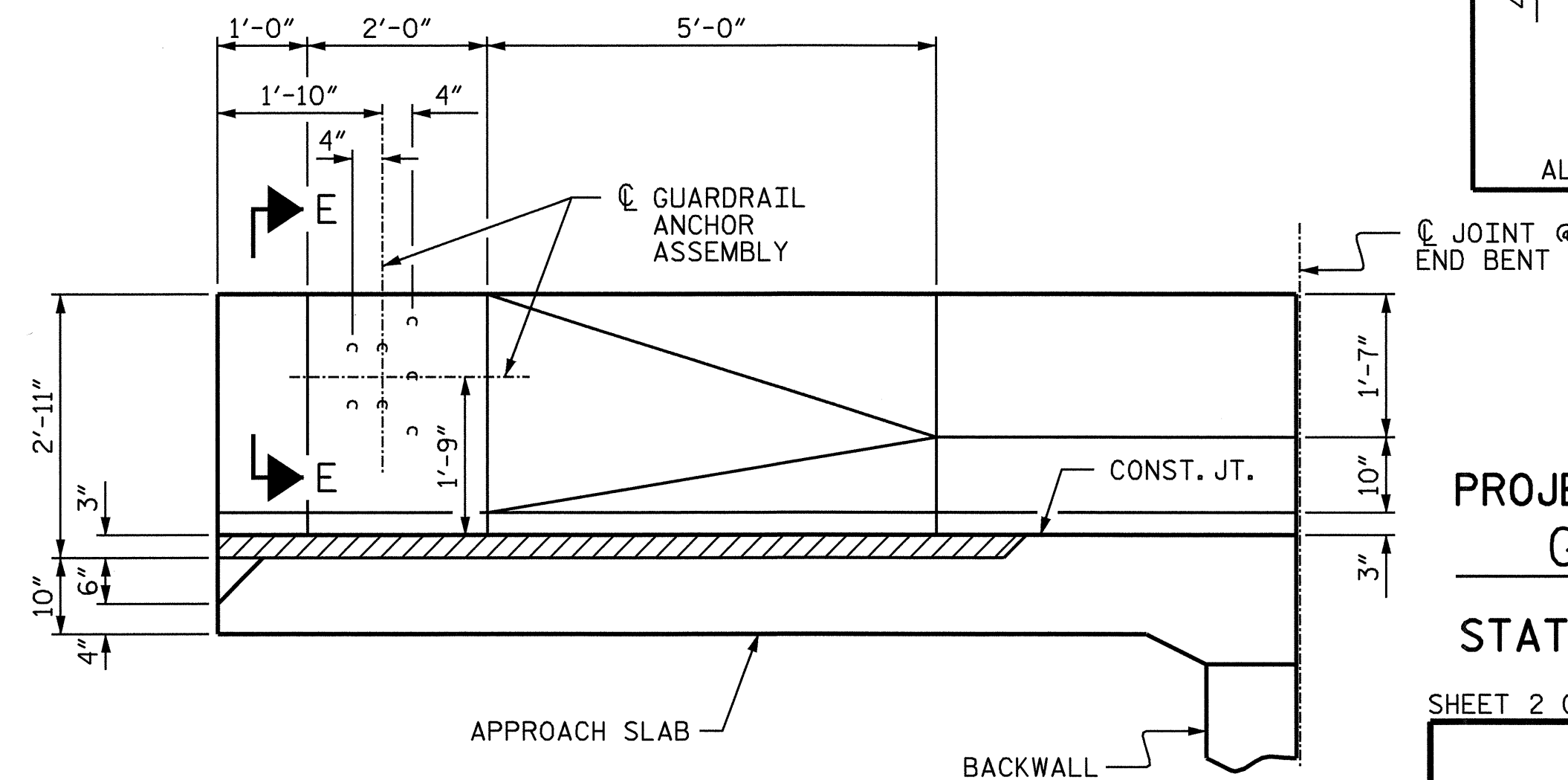
**BILL OF MATERIAL**

FOR APPROACH SLAB #1						FOR APPROACH SLAB #2					
BAR NO	SIZE	TYPE	LENGTH	WEIGHT		BAR NO	SIZE	TYPE	LENGTH	WEIGHT	
* A1	33	5	STR	42'-3"	1454	* A1	33	5	STR	45'-11"	1580
A2	24	4	STR	22'-0"	353	A2	24	4	STR	23'-10"	382
* B1	72	6	STR	16'-1"	1739	* B1	72	6	STR	16'-1"	1739
B2	72	6	STR	16'-8"	1802	B2	72	6	STR	16'-8"	1802
* B3	7	5	STR	16'-4"	119	* B7	7	5	STR	16'-7"	121
* B4	1	5	3	11'-8"	12	* B8	1	5	3	10'-8"	11
* B5	7	5	STR	16'-9"	122	* B9	7	5	STR	16'-6"	120
* B6	1	5	3	11'-0"	11	* B10	1	5	3	12'-0"	13
* S1	76	5	STR	3'-3"	258	* S1	76	5	STR	3'-3"	258
* S2	40	5	1	4'-1"	170	* S2	40	5	1	4'-1"	170
* S3	30	5	2	2'-3"	70	* S3	30	5	2	2'-3"	70
REINFORCING STEEL LBS. 2155						REINFORCING STEEL LBS. 2184					
* EPOXY COATED REINFORCING STEEL LBS. 3955						* EPOXY COATED REINFORCING STEEL LBS. 4082					
CLASS AA CONCRETE BREAKDOWN						CLASS AA CONCRETE BREAKDOWN					
POUR 1 SLAB			C. Y.	19.9		POUR 1 SLAB			C. Y.	20.0	
POUR 2 RAIL			C. Y.	3.5		POUR 2 RAIL			C. Y.	3.5	
CLASS AA CONCRETE			C. Y.	23.4		CLASS AA CONCRETE			C. Y.	23.5	



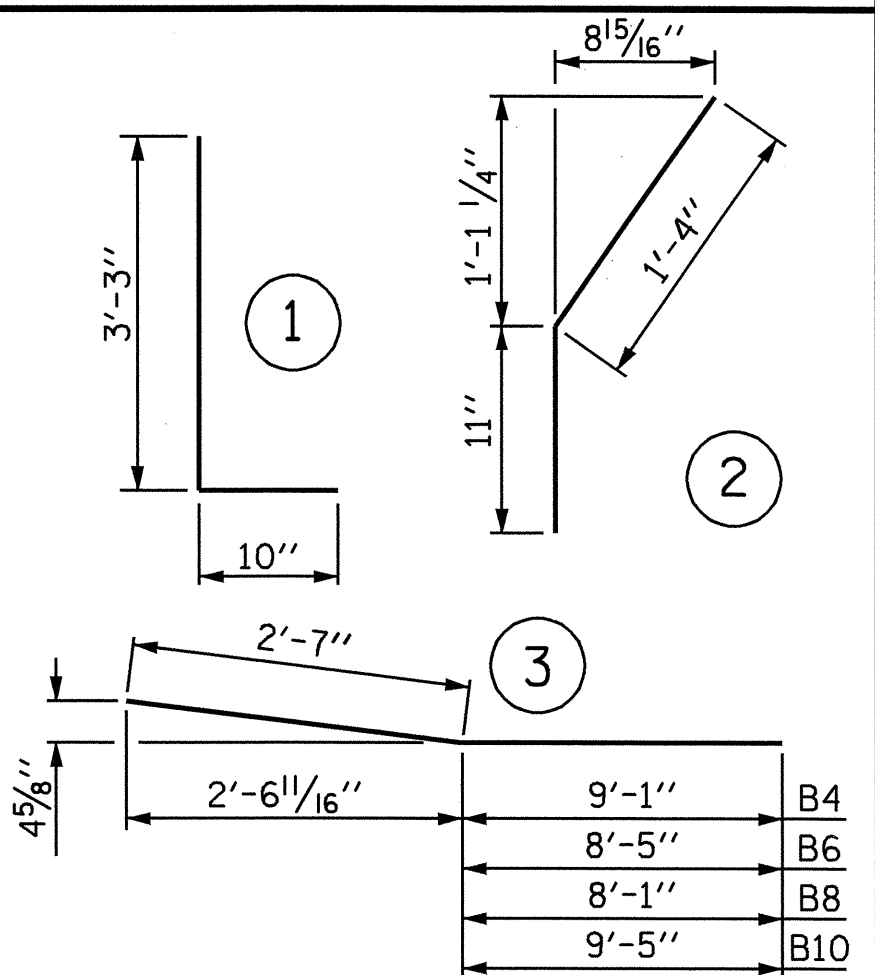
**SKETCH SHOWING POINTS OF ATTACHMENT**

\* INDICATES POINTS OF ATTACHMENT

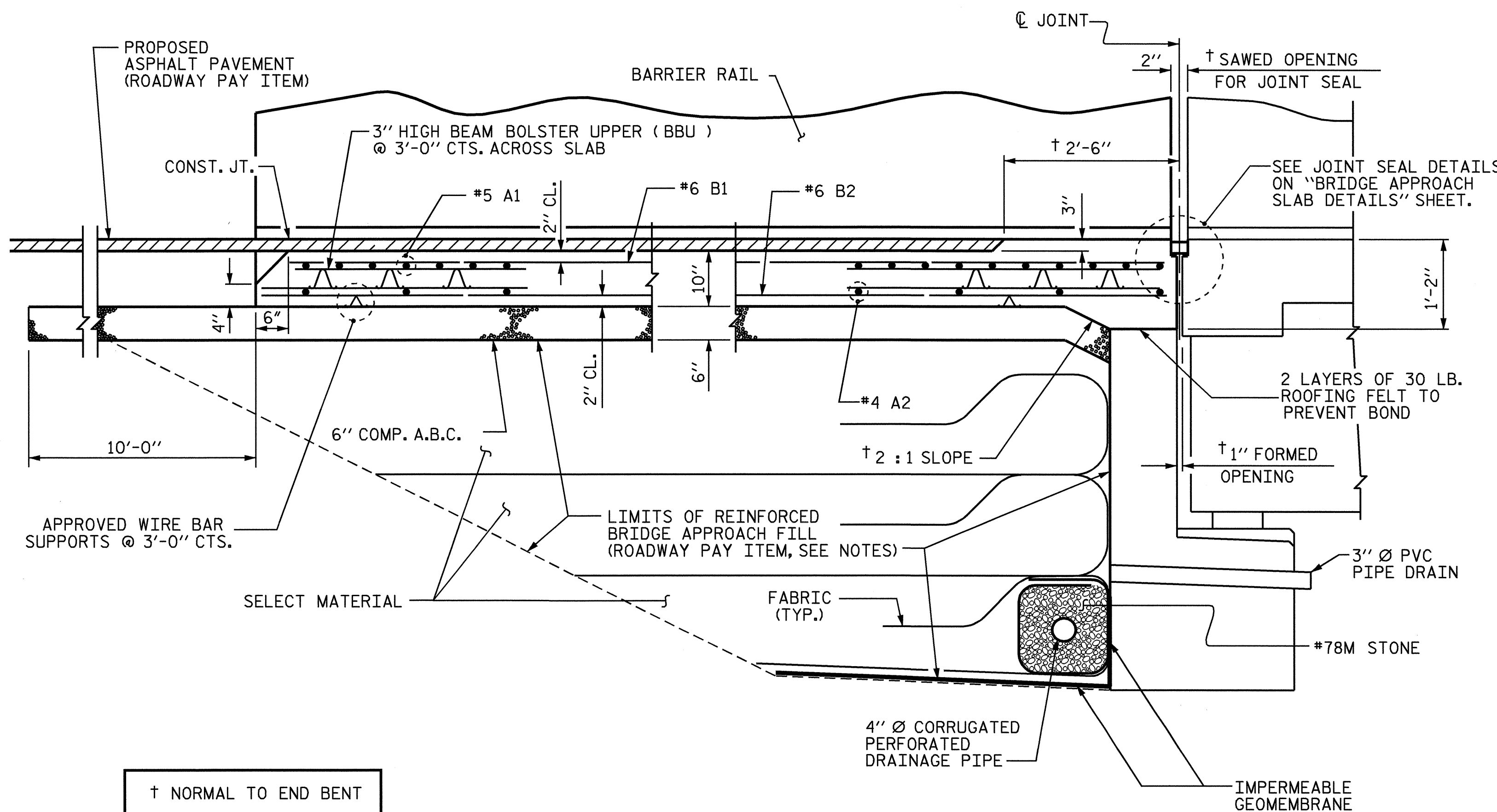


**ELEVATION**

**BAR TYPES**



ALL BAR DIMENSIONS ARE OUT TO OUT

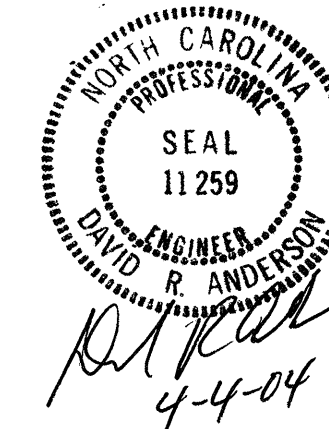


**SECTION THRU SLAB**

PROJECT NO. **B-3649**  
**GUILFORD COUNTY**  
 STATION: **17+39.20 -L-**

SHEET 2 OF 4

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 STANDARD  
**BRIDGE APPROACH SLAB FOR FLEXIBLE PAVEMENT WITH BARRIER RAIL**



REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	5-30	
1			3			TOTAL SHEETS 32	
2			4				

STD. NO. BAS5

ASSEMBLED BY: M.A. ALLEN DATE: 2-04  
 CHECKED BY: W.K. FISCHER DATE: 2-20-04  
 DRAWN BY: LES 8/01 REV. 5/7/03 RWW/JTE  
 CHECKED BY: RDR 8/01