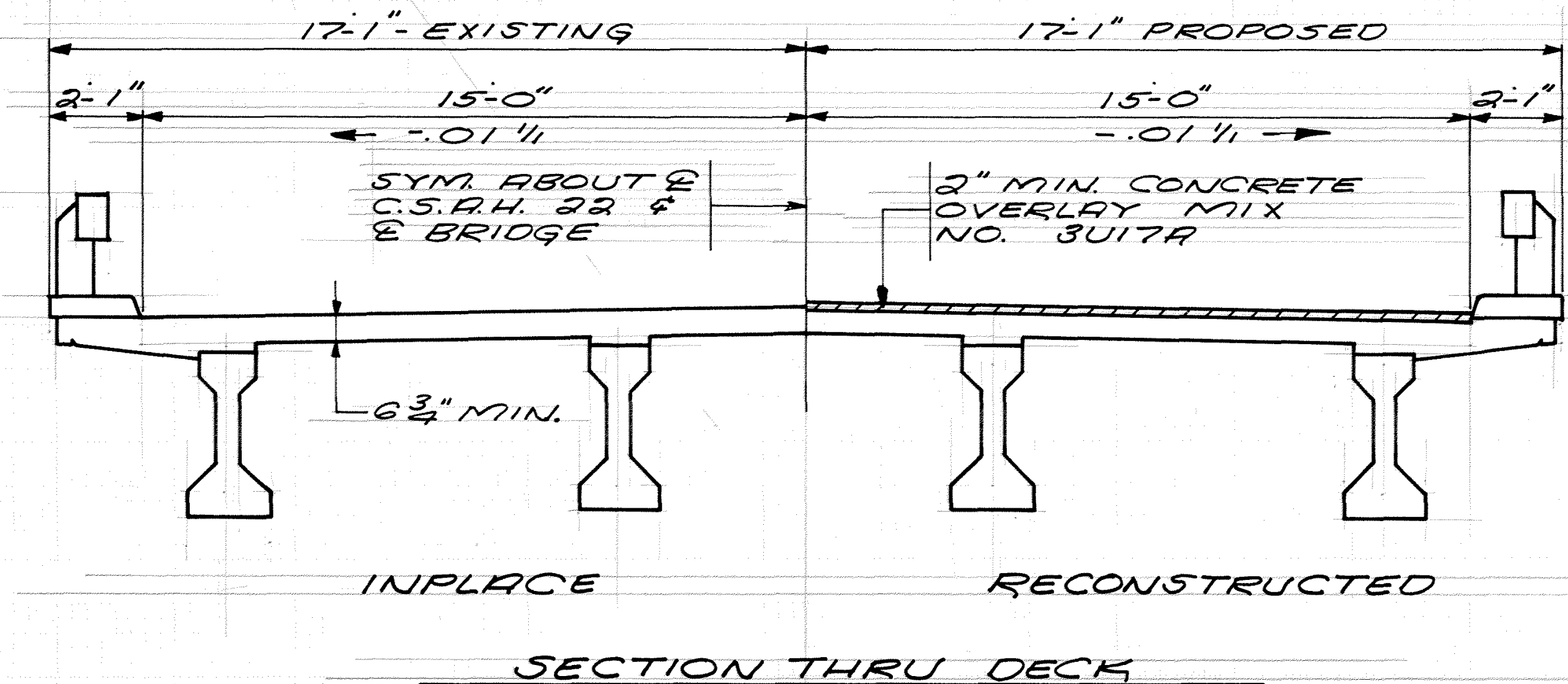


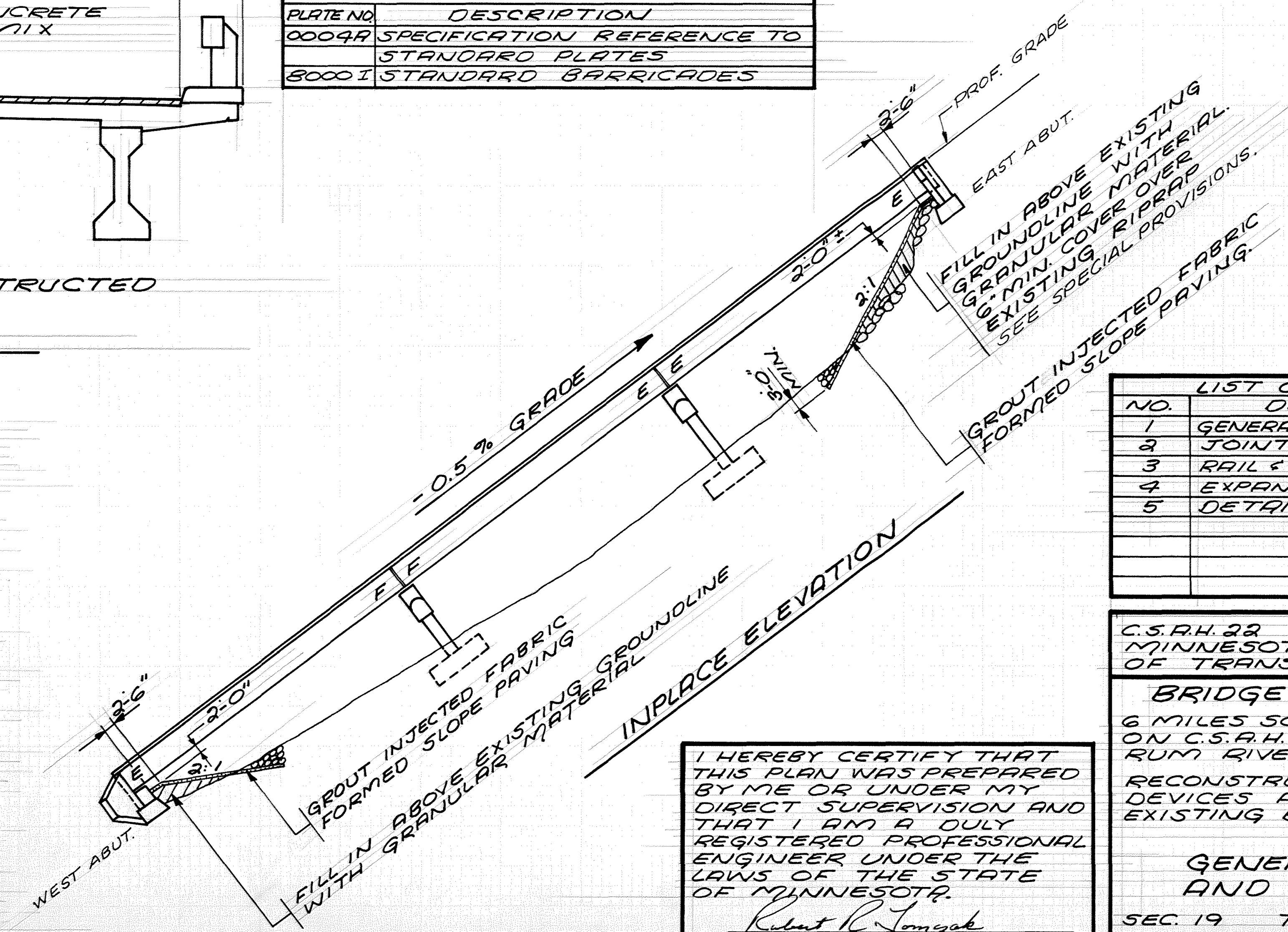
DESIGN DATA
 MAXIMUM ALLOWABLE DESIGN STRESSES
 $f'_c = 4000$ PSI $n = 8$ DECK AREA = 8163 S.F.
 $f_y = 60000$ PSI REINFORCEMENT

CONSTRUCTION NOTES
 THE 1983 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.
 THE FIRST DIGIT OR THE FIRST TWO DIGITS OF EACH BAR MARK INDICATES THE BAR SIZE.
 NO CUTTING WILL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR & APPROVED BY THE ENGINEER. REMOVAL & RECONSTRUCTION SHALL CONFORM TO MN/DOT 2433.
 APPROVED BONDING GROUT SHALL BE APPLIED TO ALL VERTICAL EDGES BETWEEN NEW & INPLACE CONCRETE AT JOINT AND SLAB RECONSTRUCTION.
 PROVIDE SAWCUTS IN CONC. WEARING COURSE OVER ALL CONSTRUCTION JOINTS IN EXISTING SLAB. SEAL WITH CONCRETE JOINT SEALER AS PER MN/DOT 3720.
 ALL EXISTING REINFORCEMENT TO REMAIN INPLACE EXCEPT AS NOTED OR DIRECTED BY THE ENGINEER.
 ALL NEW AND REPLACEMENT REINFORCEMENT, DOWELS AND ANCHORAGES TO BE EPOXY COATED.



THE FOLLOWING STD. PLATES APPROVED BY THE FEDERAL HWY. ADMINISTRATION SHALL APPLY.

PLATE NO.	DESCRIPTION
0004A	SPECIFICATION REFERENCE TO STANDARD PLATES
8000 I	STANDARD BARRICADES



SCHEDULE OF QUANTITIES			
ITEM NO.	ITEM	QUANT.	UNIT
2021.501	MOBILIZATION	1	SUM
2031.503	FIELD LABORATORY, TYPE D	1	EACH
2433.505	REMOVE SLAB, TYPE 1	650	SQ. FT.
2401.511	STRUCTURE CONCRETE, (3x33)	430	SQ. FT.
2402.591	EXPANSION DEVICE, TYPE 3	86(P)	LIN. FT.
0404.603	CONCRETE OVERLAY, 3UI7A	7168(P)	SQ. FT.
2433.516	ANCHORAGES, TYPE A	76	EACH
2433.505	REMOVE SLAB, TYPE 3	430	SQ. FT.
0433.601	SCARIFY BRIDGE DECK	7168(P)	SQ. FT.
0433.601	SCARIFY BITUMINOUS APPROACHES	3000(P)	SQ. FT.
0433.607	RECONSTRUCT EXPANSION JOINT, TYPE C	86(P)	LIN. FT.
0563.601	TRAFFIC CONTROL	1	SUM
2433.516	ANCHORAGES, TYPE B	8	EACH
0514.601	FABRIC-FORMED SLOPE PAVING	620	SQ. YD.

LIST OF SHEETS	
NO.	DESCRIPTION
1	GENERAL PLAN & ELEVATION
2	JOINT RECONSTRUCTION
3	RAIL & CURB RECONSTRUCT.
4	EXPANSION DEVICE
5	DETAILS

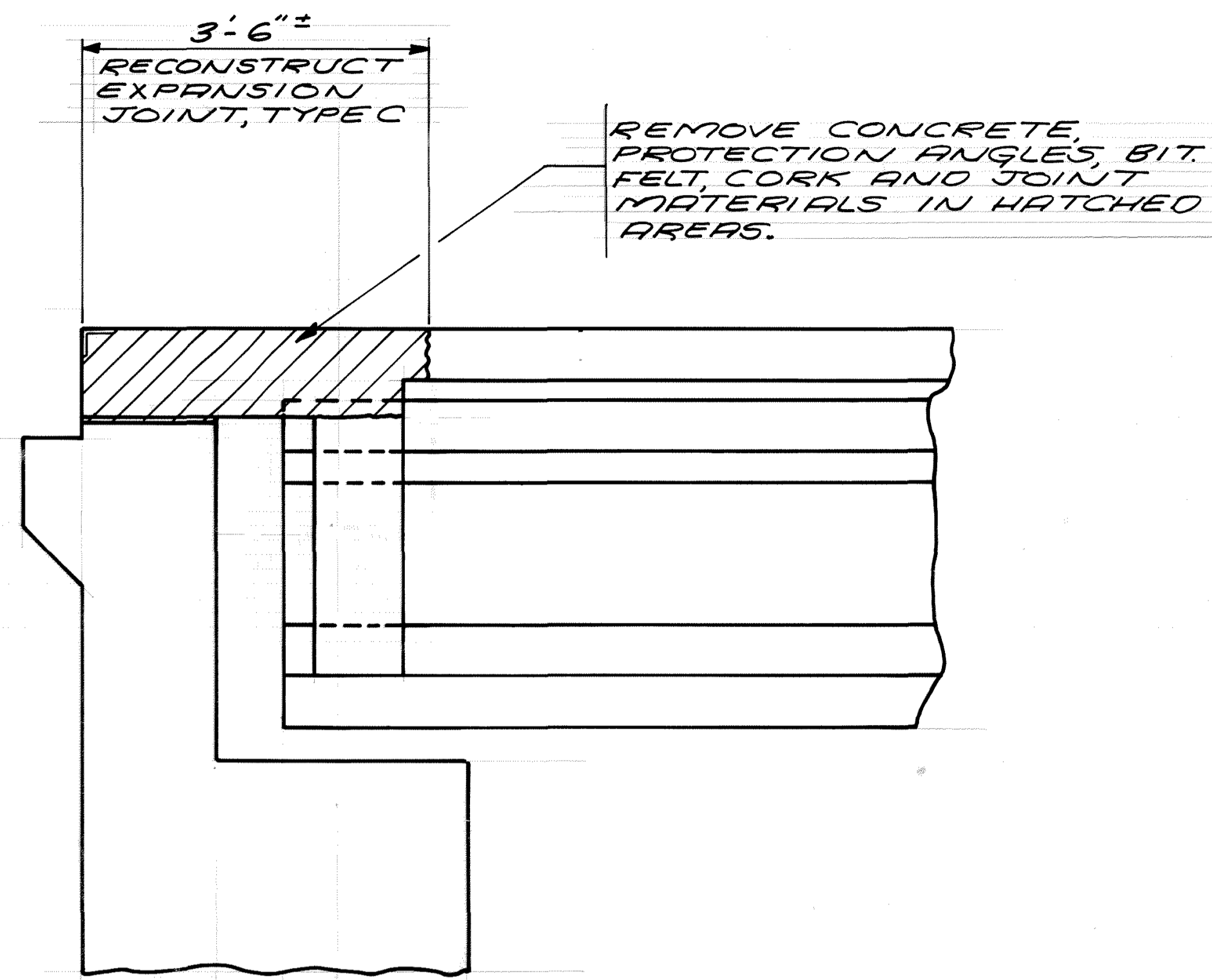
C.S.A.H. 22 ANOKA COUNTY
 MINNESOTA DEPARTMENT
 OF TRANSPORTATION

BRIDGE NO. 02519
 6 MILES SO. OF ST. FRANCIS
 ON C.S.A.H. 22 OVER THE
 RUM RIVER.

RECONSTRUCT EXPANSION
 DEVICES AND OVERLAY
 EXISTING BRIDGE 02519

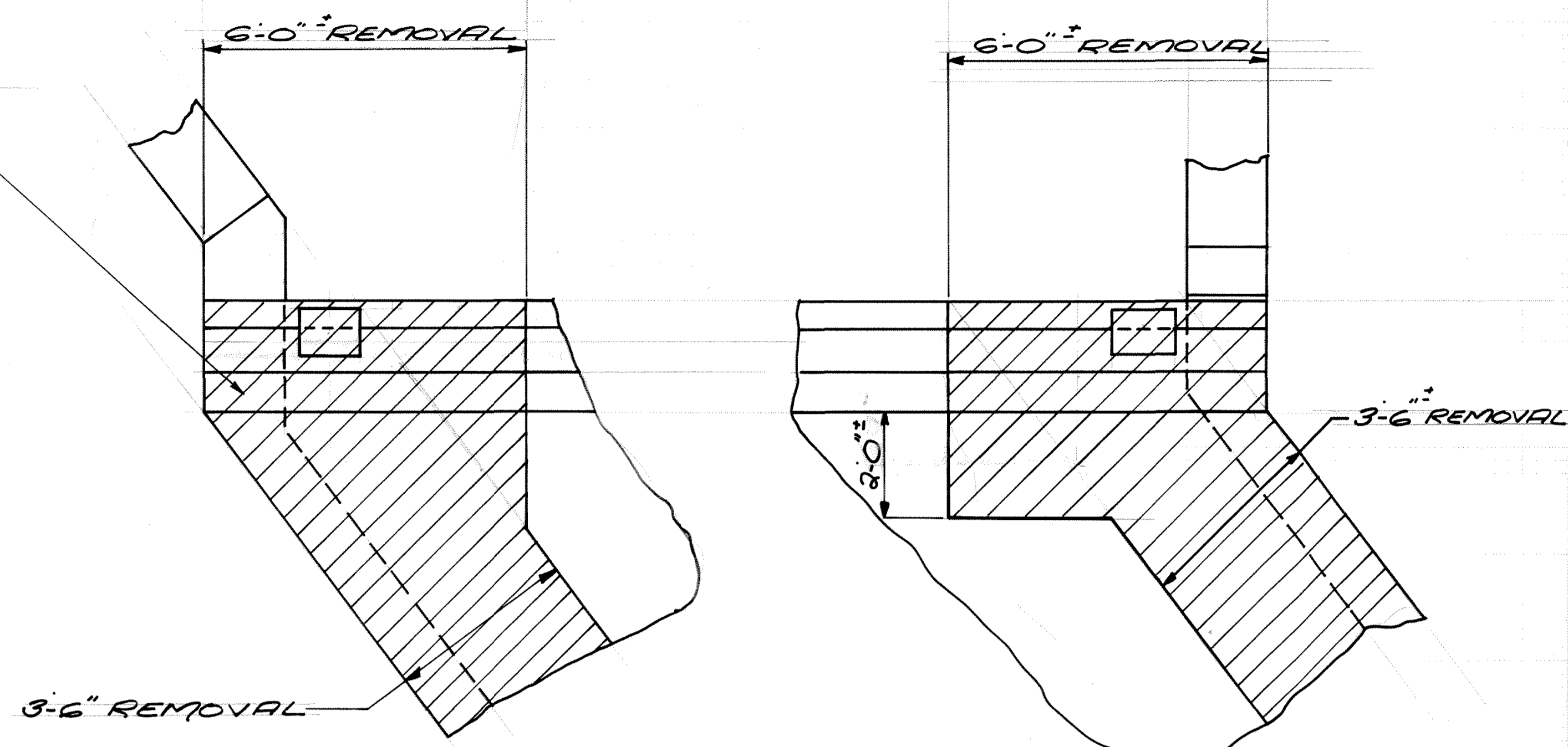
**GENERAL PLAN
 AND ELEVATION**
 SEC. 19 T33N R24W
 OAK GROOVE TWP.
 ANOKA COUNTY
 APPROVED: *K. V. Benthall* 5-19-86
 BRIDGE ENGINEER

I HEREBY CERTIFY THAT
 THIS PLAN WAS PREPARED
 BY ME OR UNDER MY
 DIRECT SUPERVISION AND
 THAT I AM A DULY
 REGISTERED PROFESSIONAL
 ENGINEER UNDER THE
 LAWS OF THE STATE
 OF MINNESOTA.
Robert R. Longob
 REG. NO. 6924
 DATE: 4-16-86

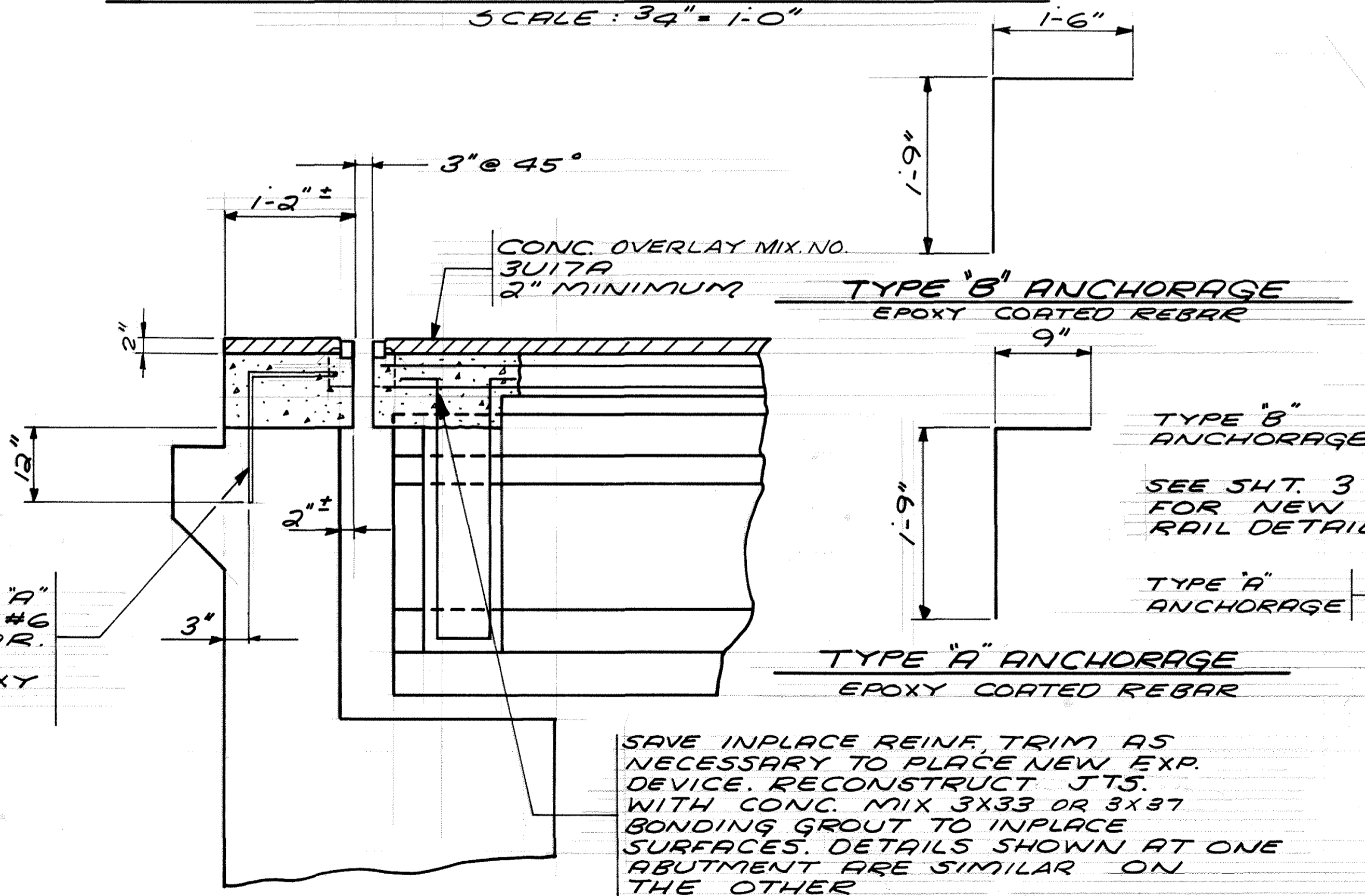


INPLACE ABUTMENT ELEVATION
SCALE: 3/4" = 1'-0"

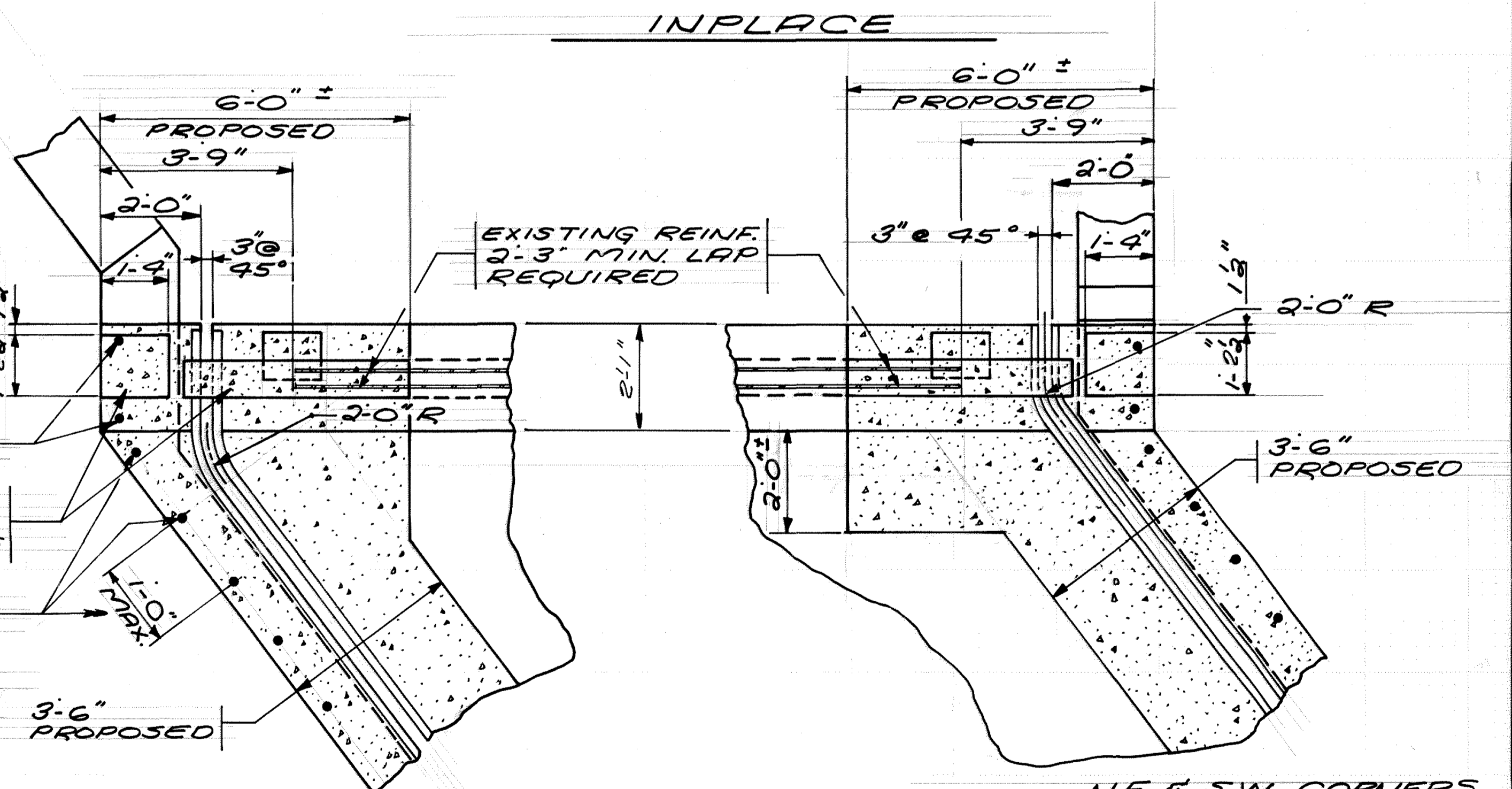
NOTE:
SAVE INPLACE REINF. IN SLAB,
CURB & RAILING. TRIM BARS AS
NECESSARY IN SLAB & CURB TO PLACE
NEW EXP. DEVICE. RAILING BARS
SHALL BE TRIMMED WITH A MIN. LAP
OF 2'-3"



N.W. & S.E. CORNERS N.E. & S.W. CORNERS



RECONSTRUCTED ABUTMENT ELEVATION



N.W. & S.E. CORNERS N.E. & S.W. CORNERS

RECONSTRUCTED

S.A.P. 02-622-02

JOINT RECONSTRUCTION	DRAWN: D.J.V.	CHECKED: R.R.T.	APPROVED: 5-19-86	BRIDGE NUMBER 02519
	SHEET 2 OF 5 SHEETS			

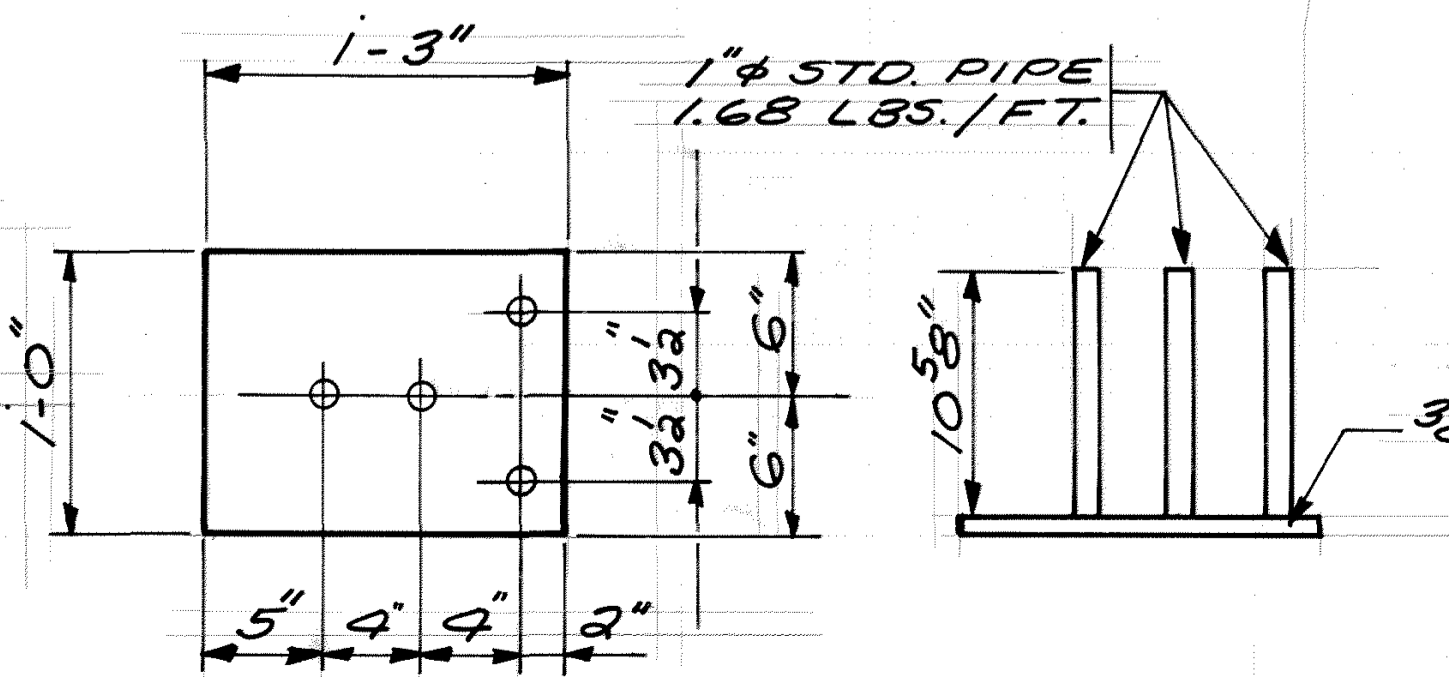
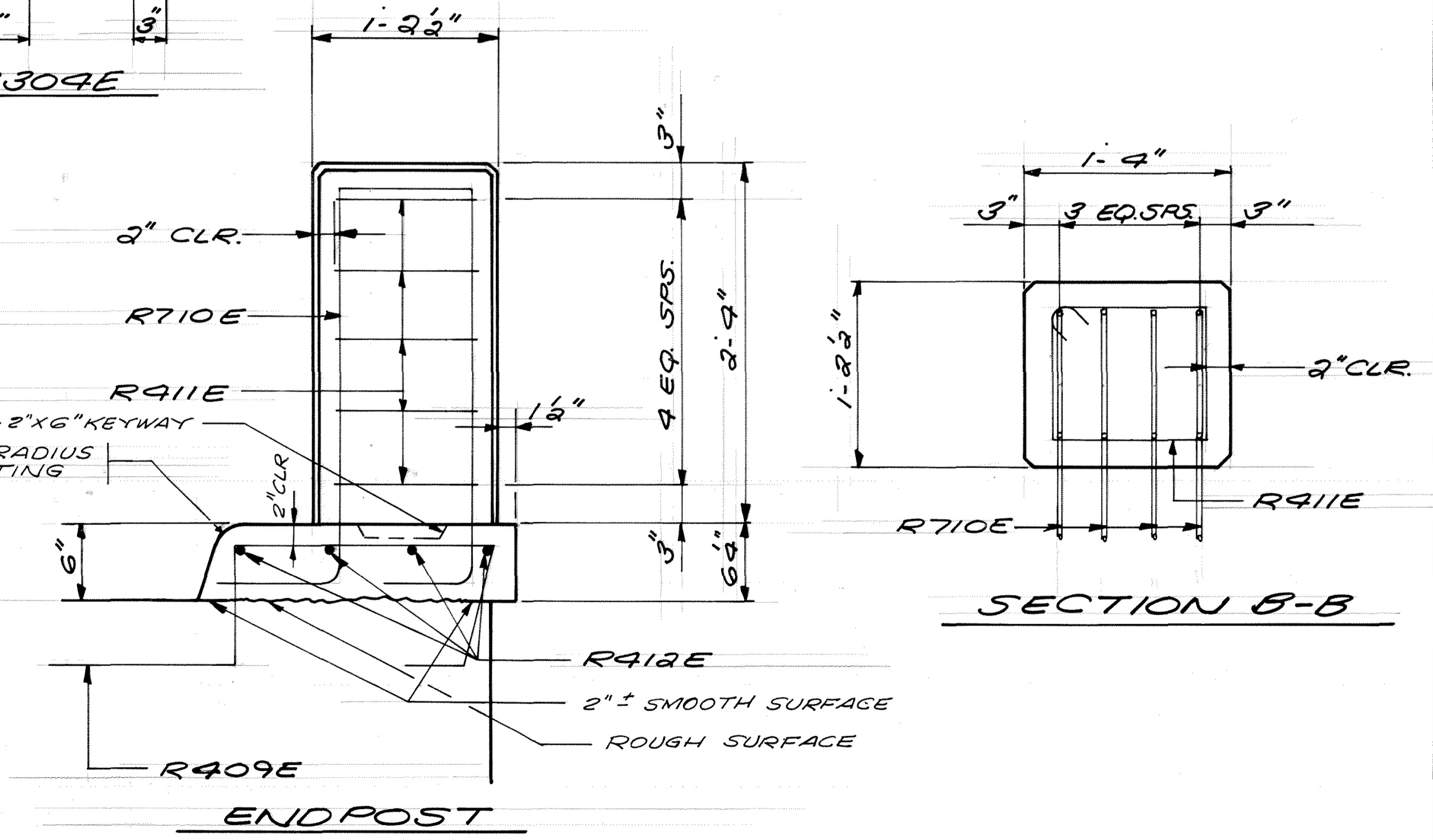
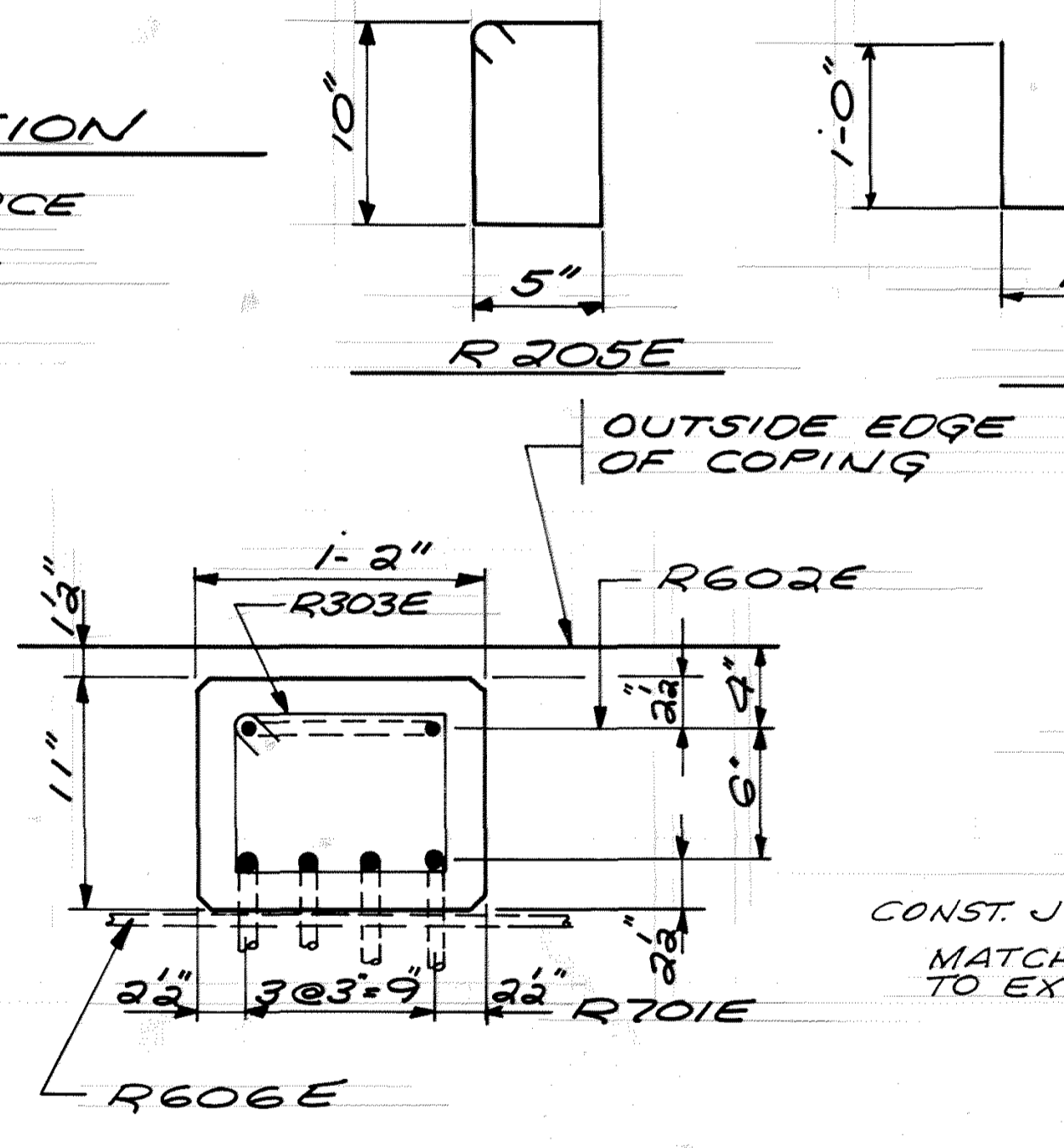
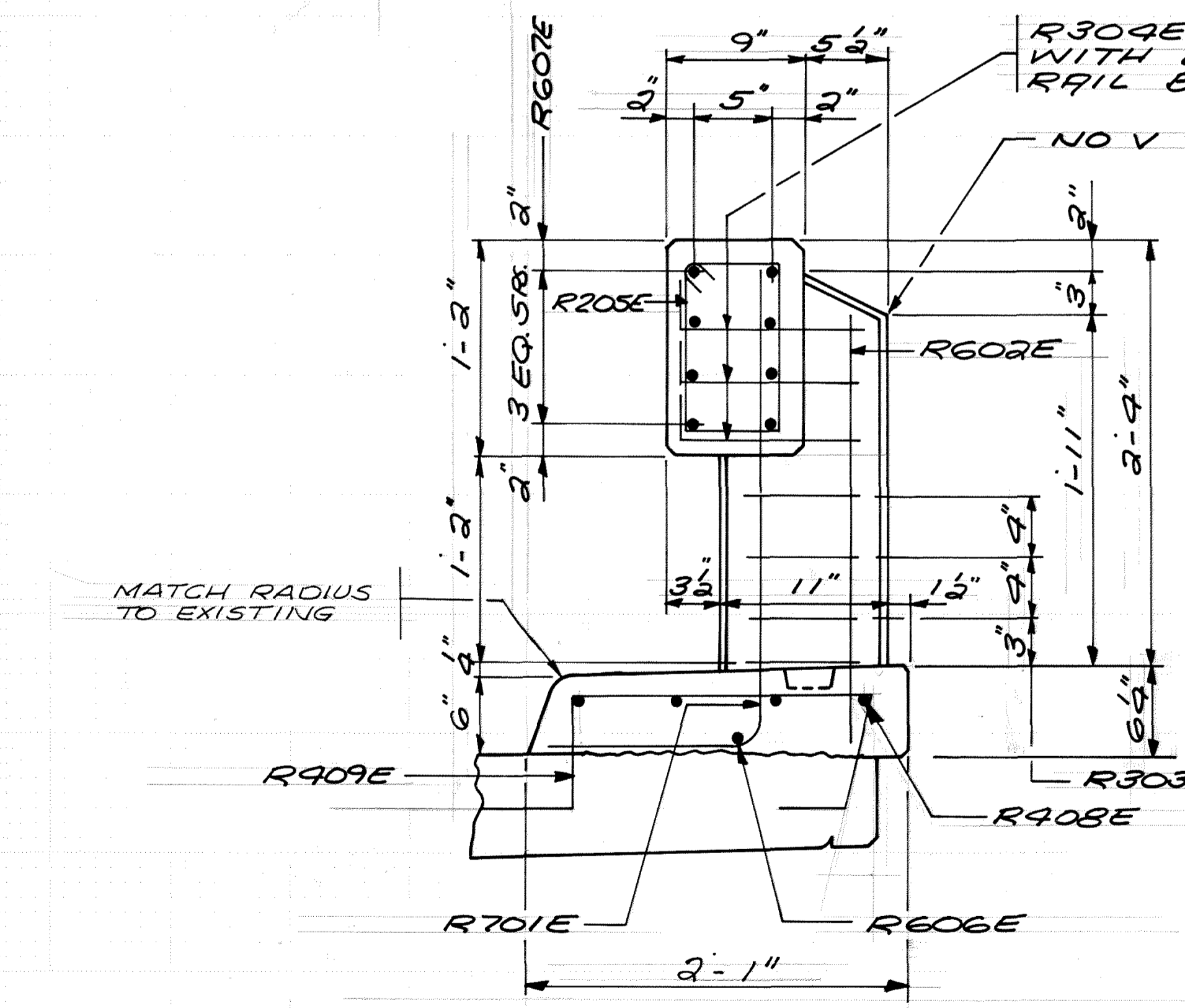
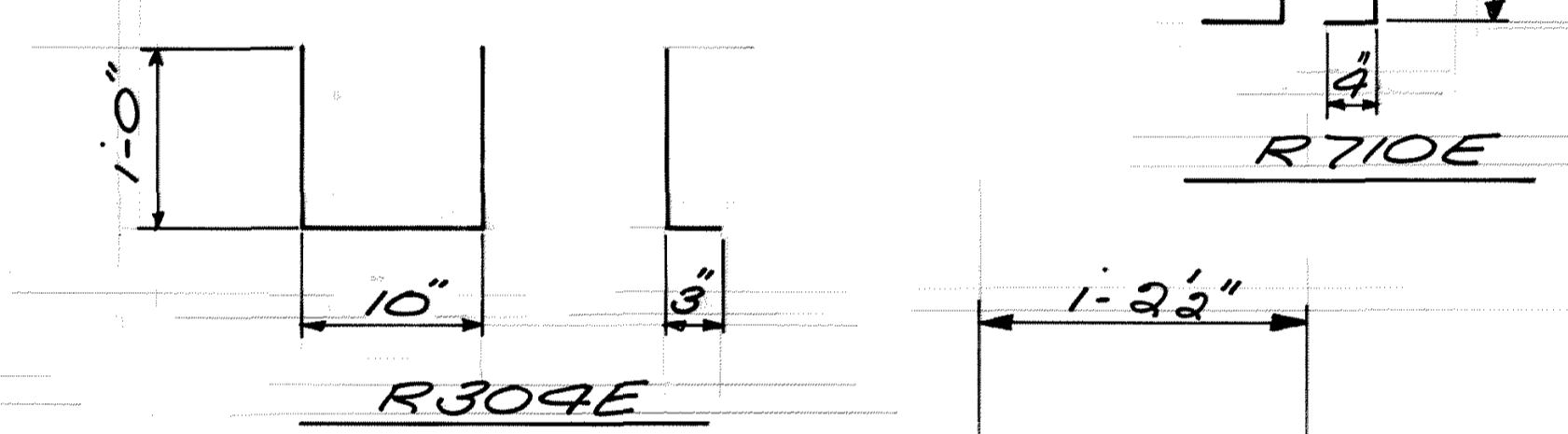
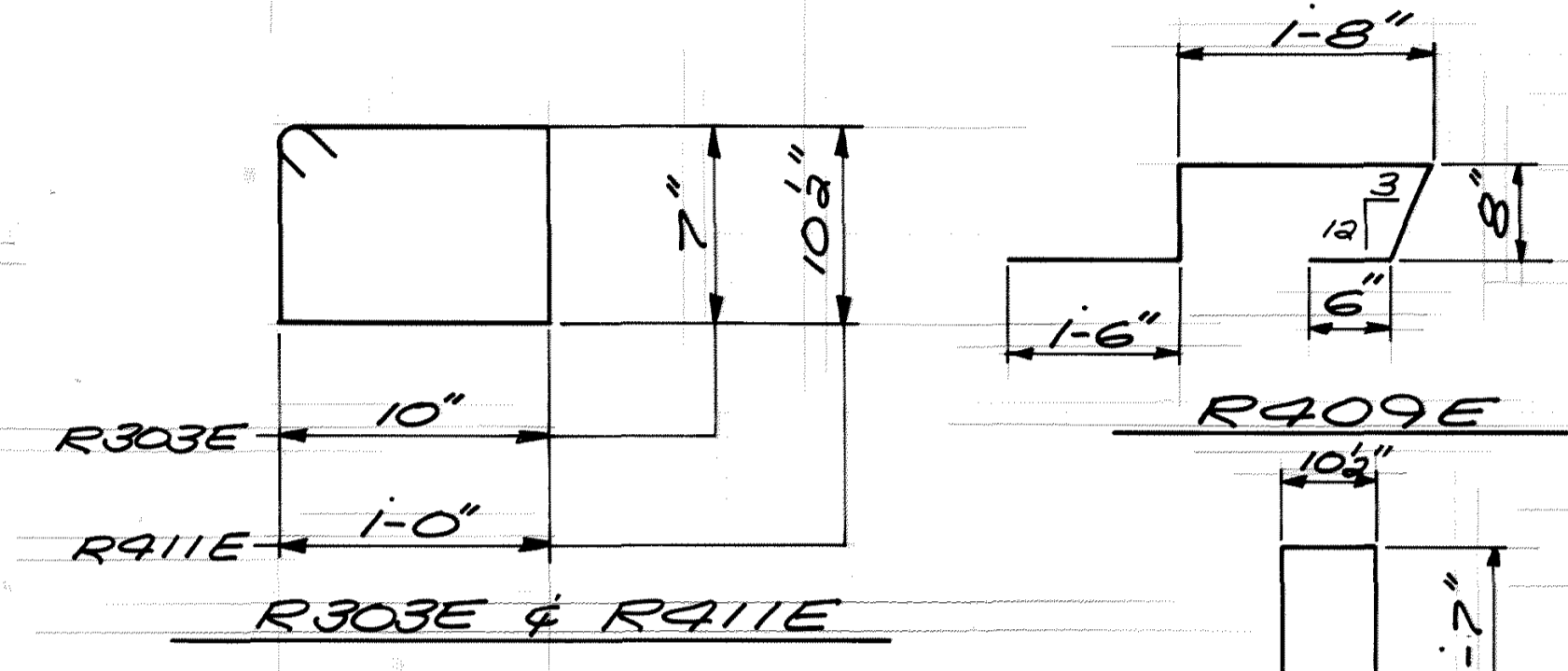
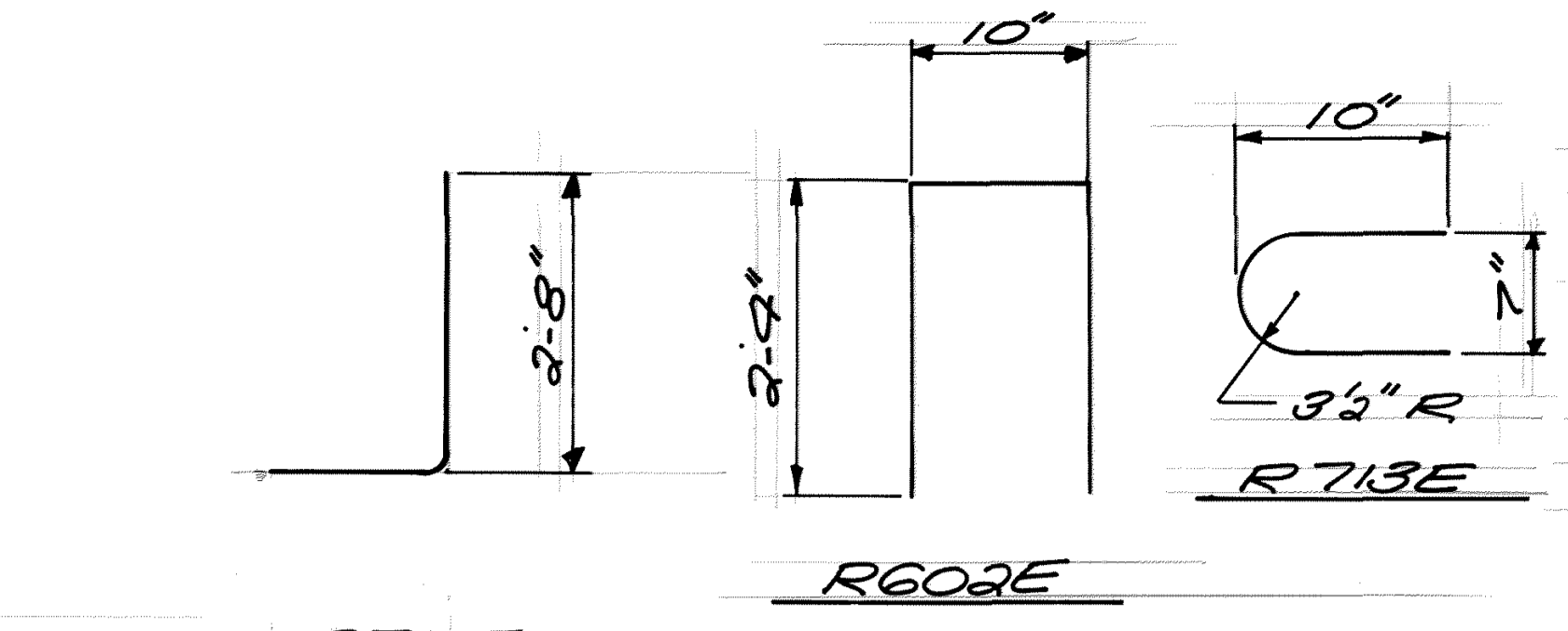
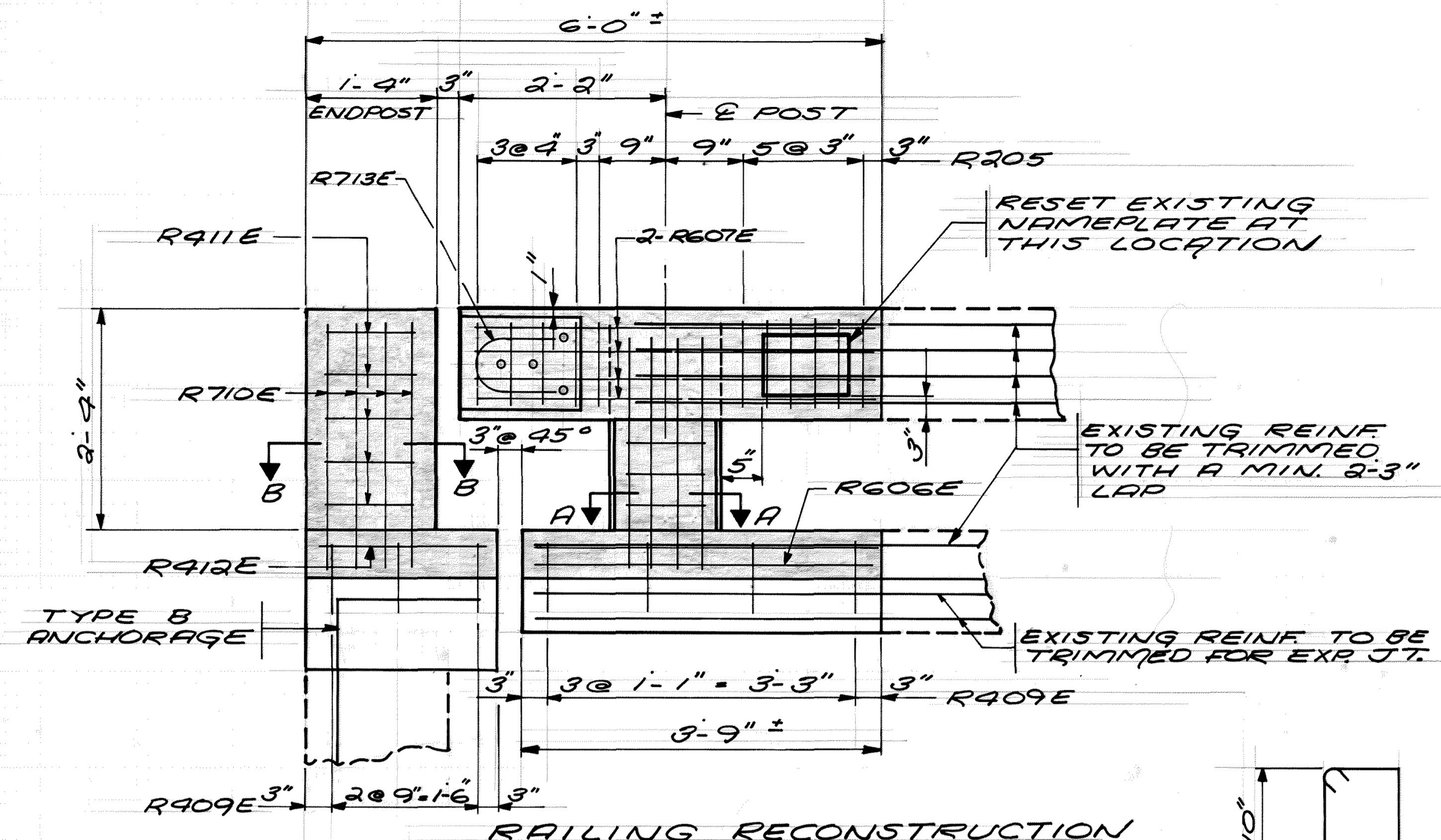
BILL OF REINFORCEMENT- RAILING				
BAR	NO	LEN	SHAPE	LOCATION
R701E	4	3'-8"	BENT	POST
R602E	4	5'-6"	"	"
R303E	3	3'-6"	"	"
R304E	3	2'-10"	"	"
R205E	11	3'-2"	"	"
R606E	1	3'-6"	STR. CURB	
R607E	8	4'-0"	"	RAIL
R408E	4	3'-6"	"	CURB
R409E	7	5'-0"	BENT	"
R710E	4	6'-9"	"	END POST
R411E	5	4'-6"	"	"
R412E	4	1'-8"	STR. CURB	
R713E	1	2'-0"	BENT	END POST

RAILING & CURB RECONSTRUCTION TO BE INCLUDED IN PRICE BID FOR RECONSTRUCT EXPANSION JOINT. THIS INCLUDES CONCRETE, REINF., ANCHORAGES, GUARDRAIL CONN., ETC.

RAILING & CURBS TO BE STRUCTURE CONCRETE (3X46)

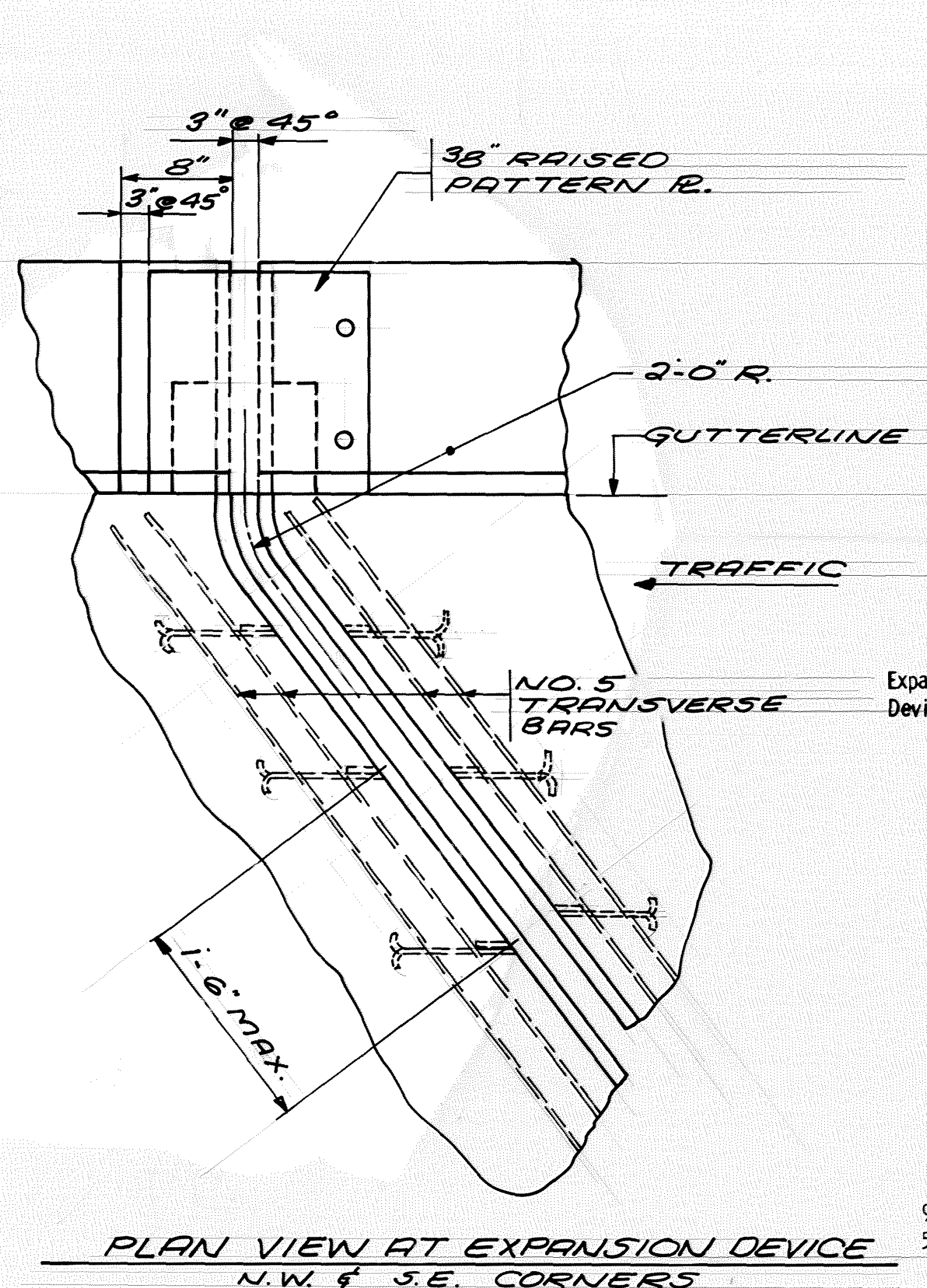
NEW REINFORCEMENT SHALL BE EPOXY COATED.

GUARDRAIL CONNECTION TO BE STRUCTURAL STEEL SPEC. 3306 GALV. PER SPEC. 3394 AFTER FABRICATION FINISH ALL EDGES OF RAILING & RAIL POSTS TO AN 1/2" V EXCEPT WHERE OTHERWISE NOTED.

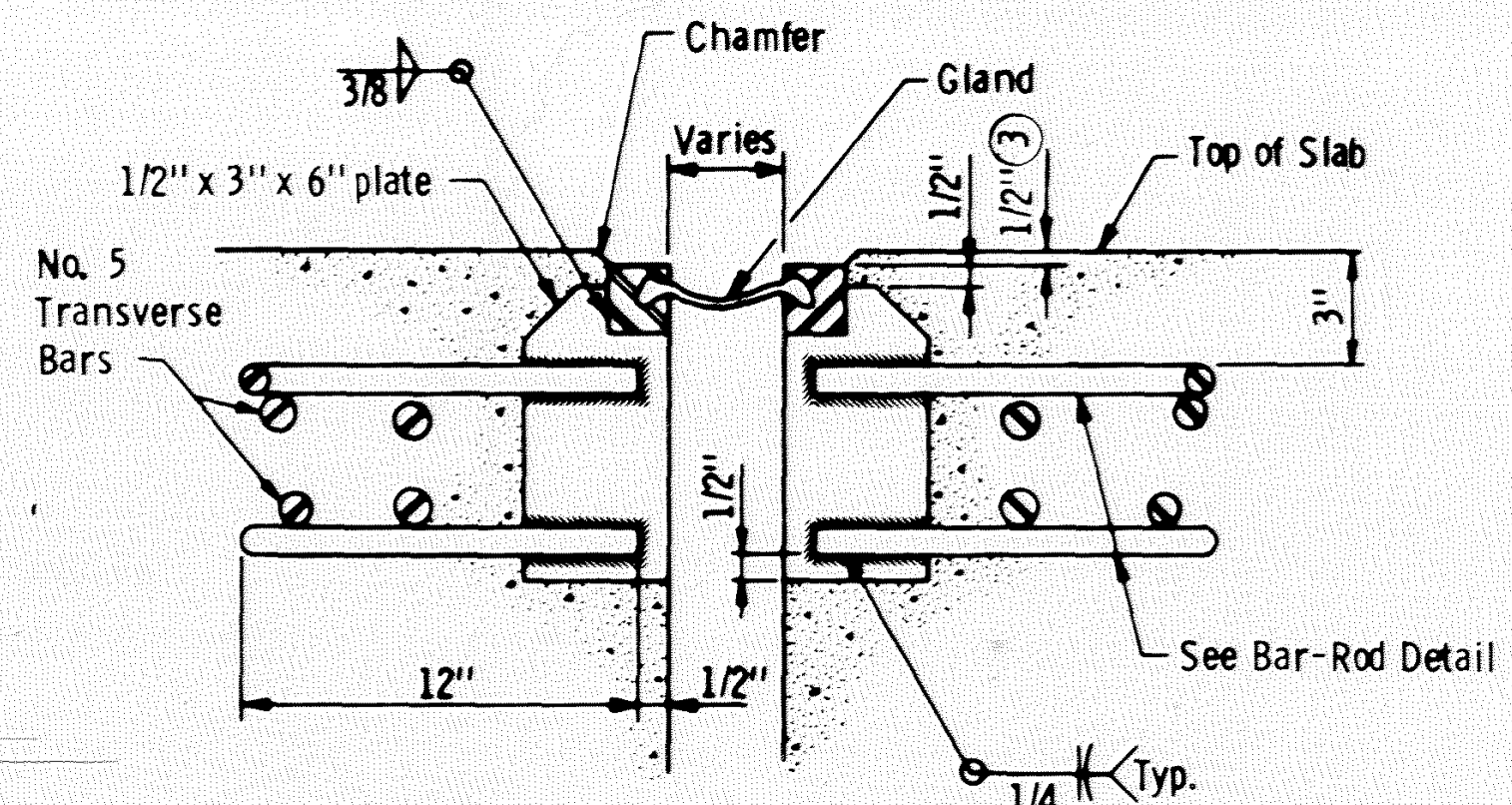


S.A.P. 02-622-22

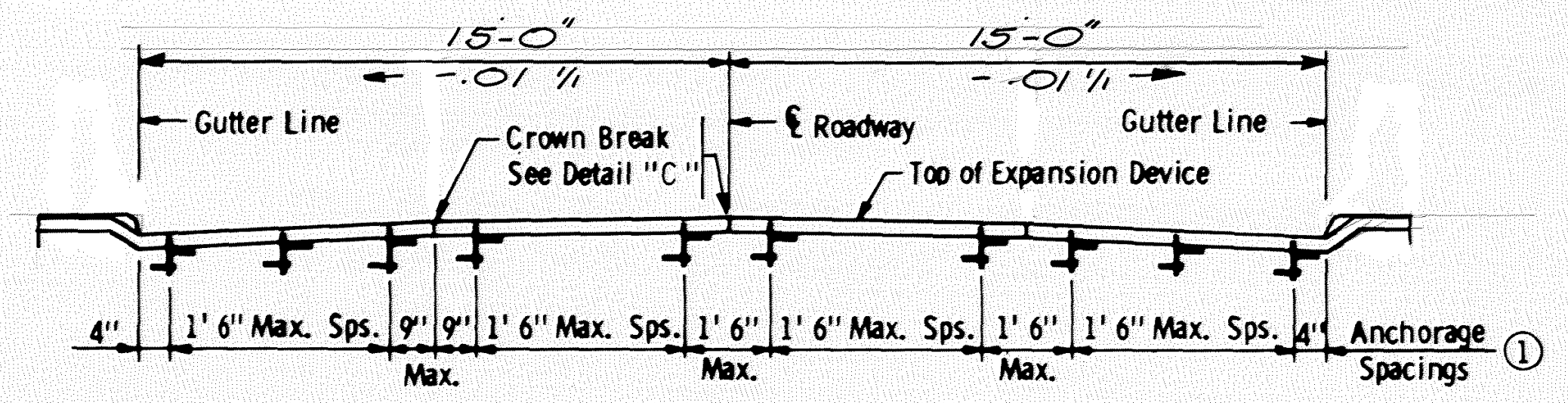
ONE LINE CONC. RAIL & CURB RECONSTRUCTION	DRAWN D.J.V.	CHECKED R.E.T.	APPROVED 5-19-86	BRIDGE NUMBER 02519
SHEET 3 OF 5 SHEETS				



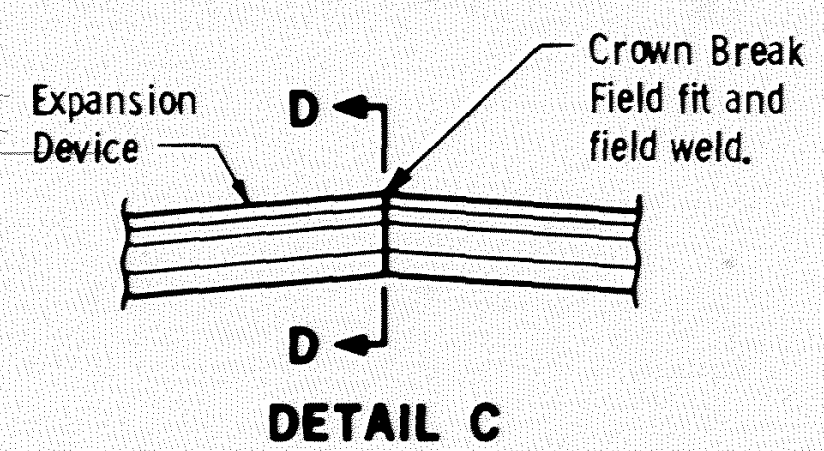
PLAN VIEW AT EXPANSION DEVICE
N.W. & S.E. CORNERS



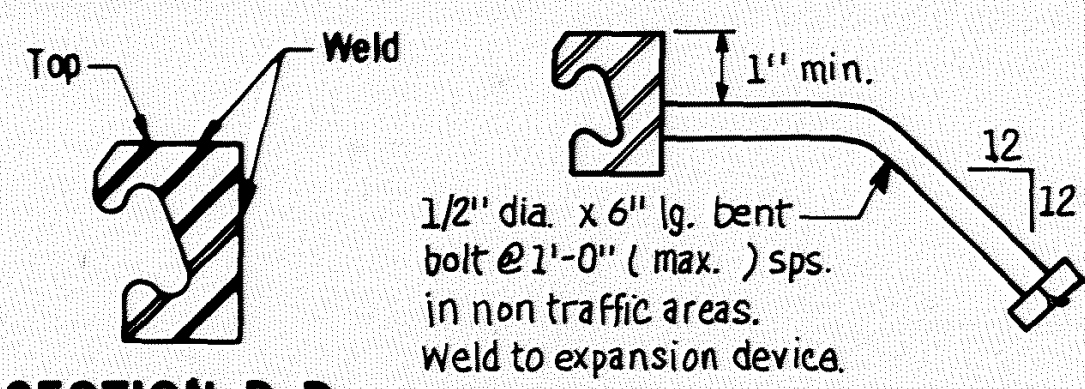
SECTION A-A
ANCHORAGE WITH ROD OPTION SHOWN



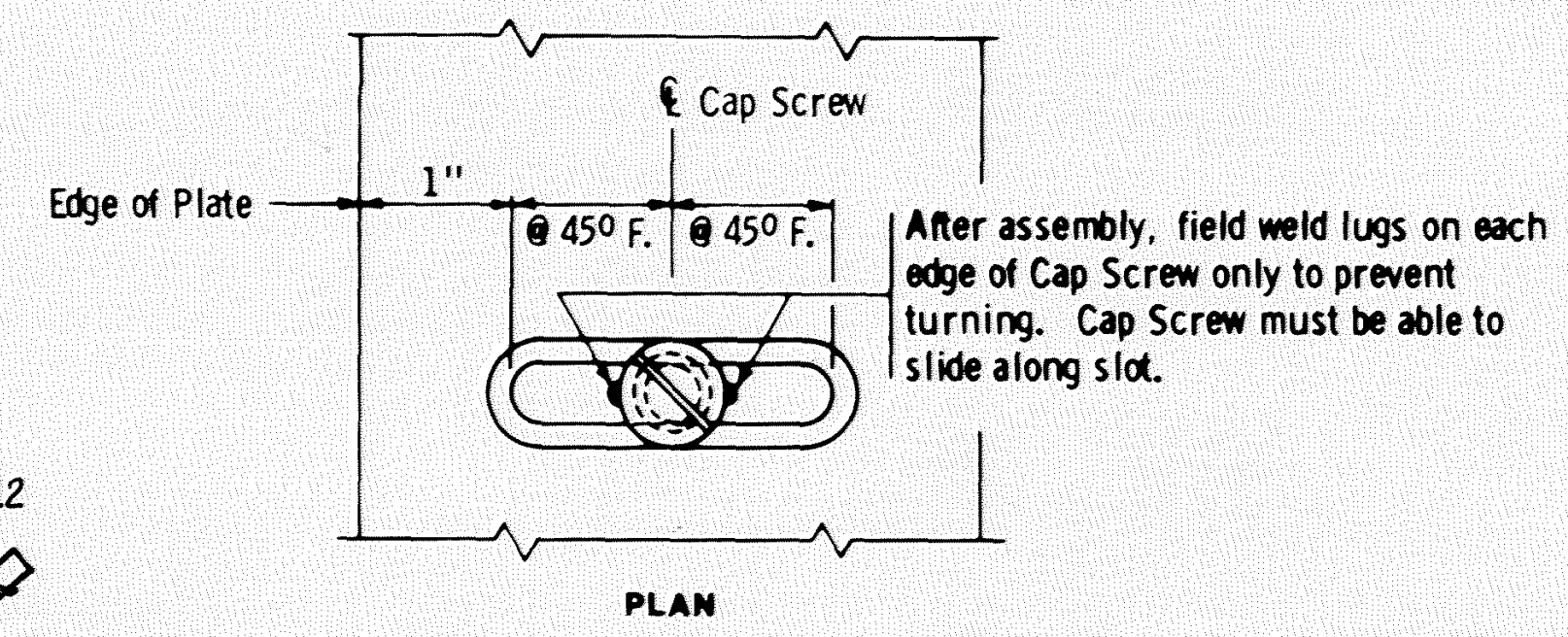
SECTION B-B
SECTION B-B IS TAKEN PERPENDICULAR TO R.D.WY.



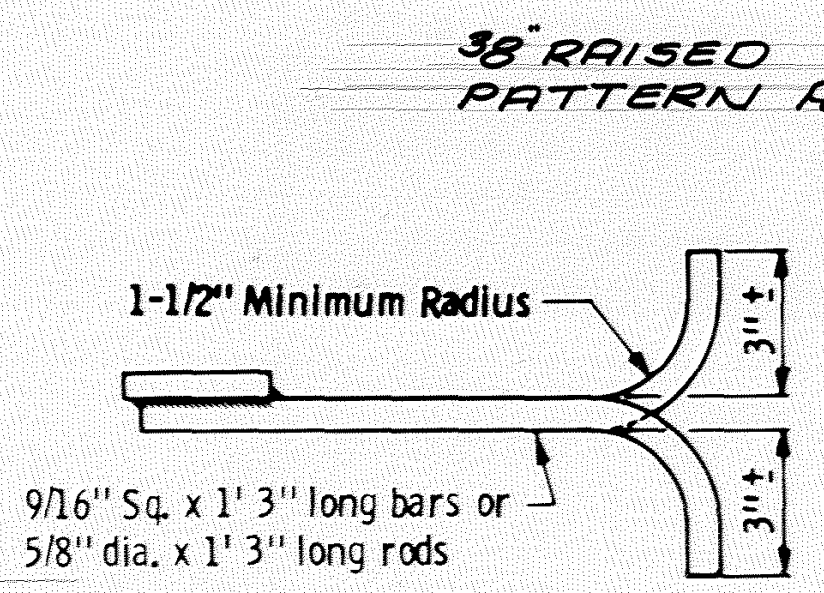
DETAIL C



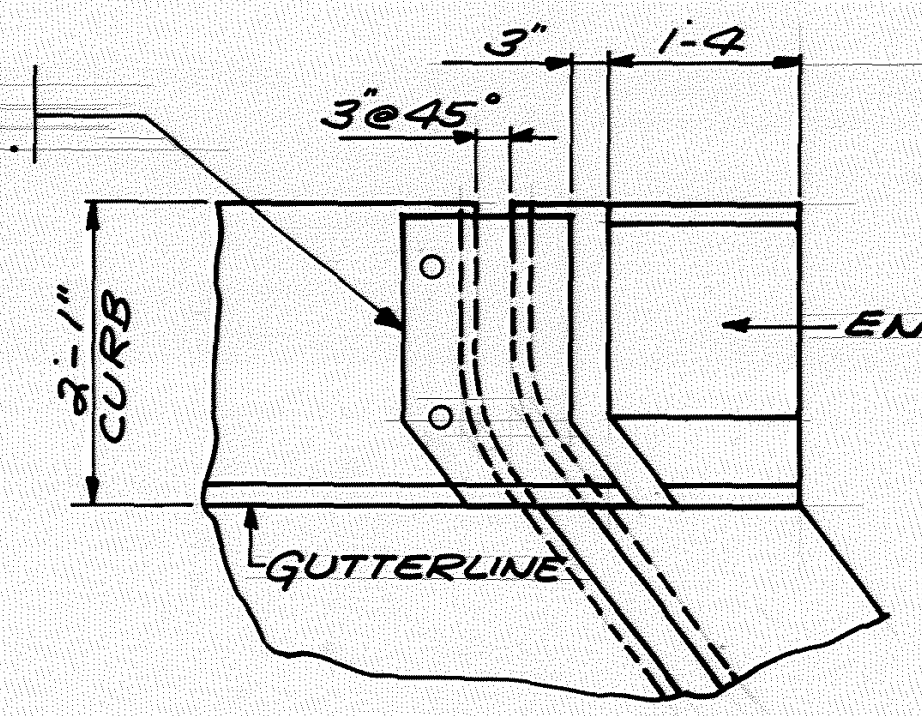
SECTION D-D
BENT BOLT DETAILS



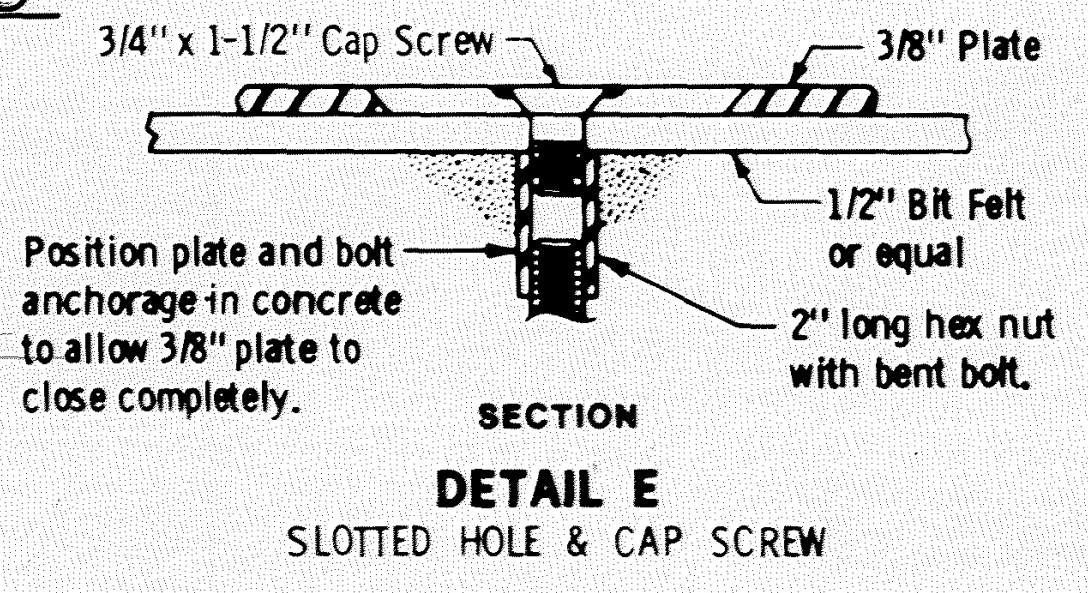
PLAN



BAR-ROD DETAIL

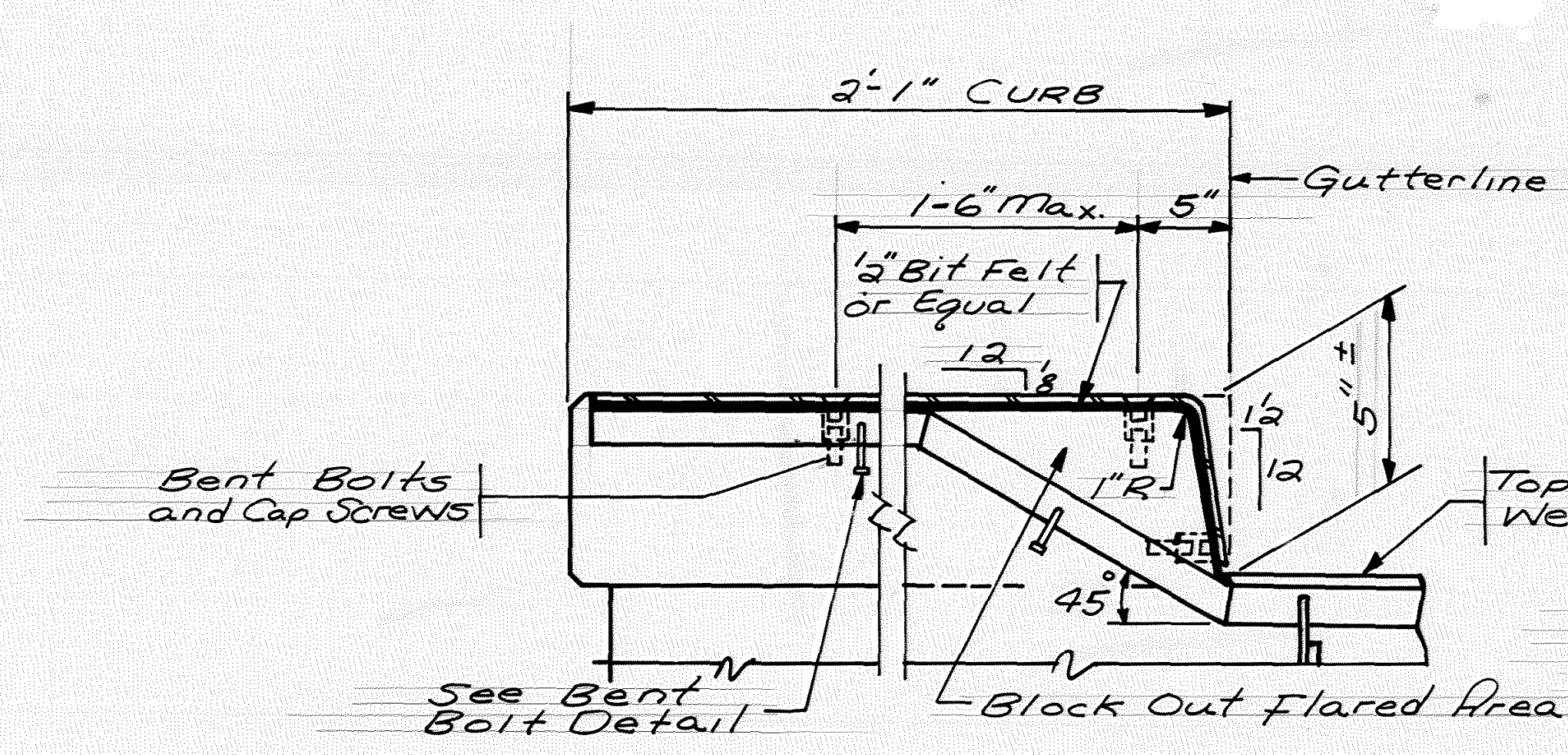


PLAN VIEW N.E. & S.W. CORNERS

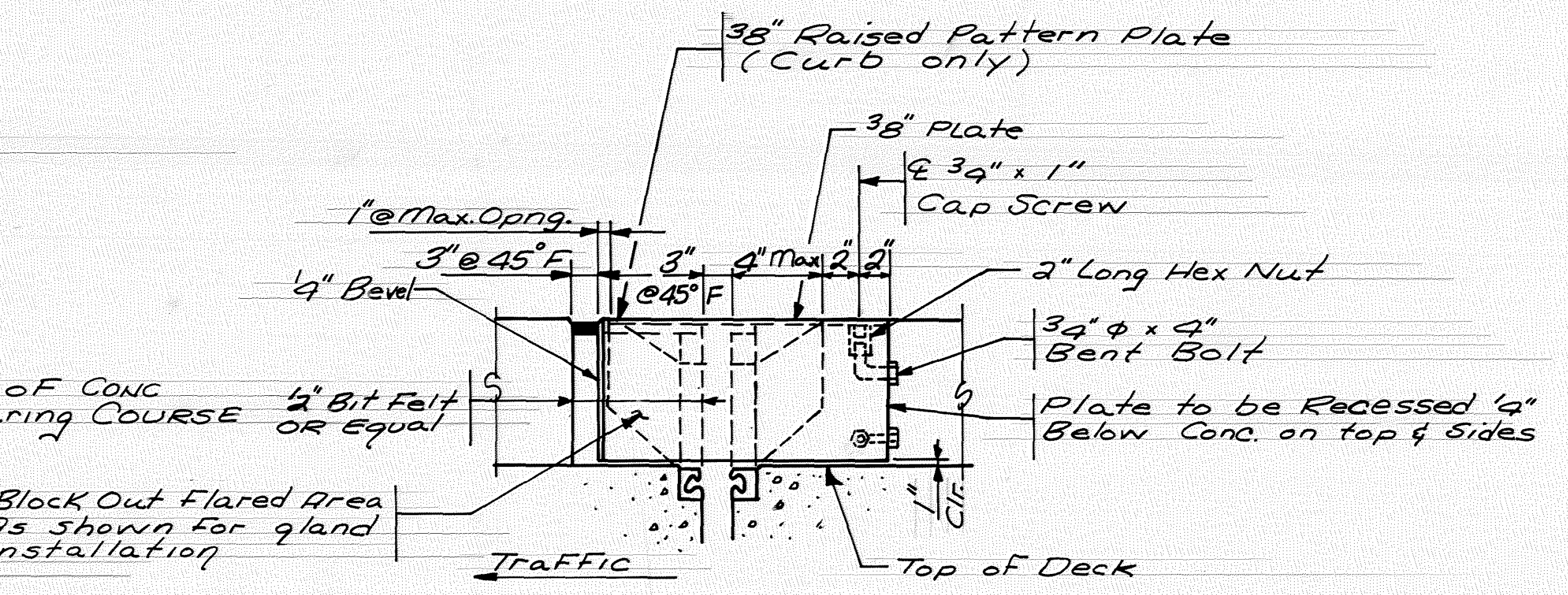


SECTION
DETAIL E
SLOTTED HOLE & CAP SCREW

- NOTES:**
Galvanize structural steel after fabrication as per Spec. 3394.
Joints in roadway plate or extrusion shall be located at breaks in transverse profile and as otherwise required. Joints shall be close fit and welded. Repair after welding as per Spec. 2471.3L.
Structural steel shall comply with Spec. 3306, Spec. 3307 & Spec. 3309.
Expansion device shall be straightened to a tolerance of 1/8" in 10 ft.
Cap screws shall be countersunk 1/16" below top of plate.
Galvanize screws and nuts as per Spec. 3392.
New reinforcement bars are to be Epoxy Coated.
When expansion devices are used at ends of bridge, the bridge contractor shall furnish expansion device and gland. The roadway contractor shall install the part of the expansion device which includes the gland as shown on this sheet.



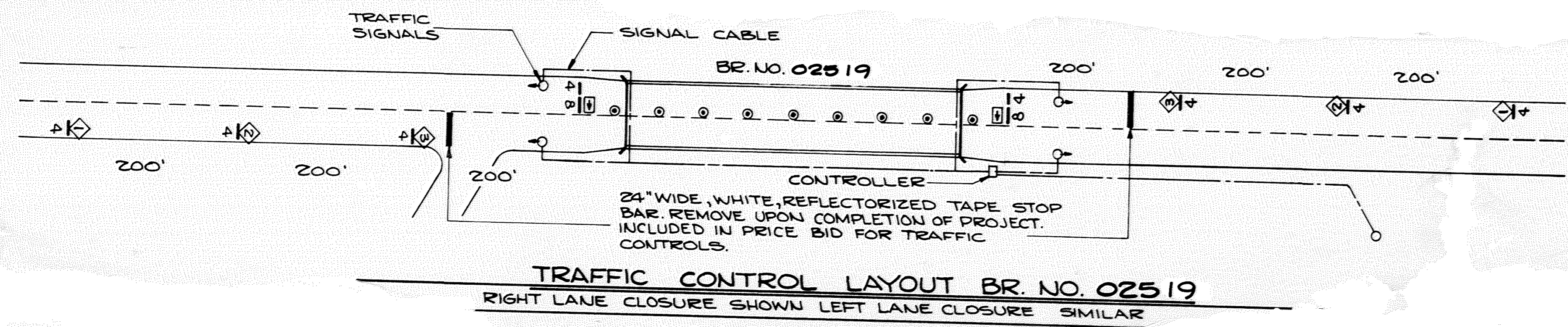
CURB DETAILS



INSIDE ELEVATION

- ① Dimension along centerline of joint.
② For roadway skews over 25° use 45°.
③ 5/8" max. when Snowplow Fingers are used. Use 1/8" (with 1/4" max.) when Snowplow Fingers are not used.

- ⊙ DENOTES TYPE II OR TYPE I (MODIFIED) BARICADE WITH STEADY BURN WARNING LIGHT
- DENOTES TYPE III BARICADE WITH FLASHING WARNING LIGHT & BARICADE WEIGHTS. NUMBER INDICATES SIZE.
- ◇ DENOTES WARNING SIGNS. SEE KEY FOR DESCRIPTION.



- 1 ROAD WORK AHEAD
- 2 SIGNAL AHEAD
- 3 ONE LANE BRIDGE
- 4 RIGHT LANE CLOSED
- 5
- 6 LEFT LANE CLOSED
- 7
- 8 ROAD NARROWS

FOR INFORMATIONAL PURPOSES ONLY.

ESTIMATE OF MATERIALS	
EXPANSION JOINT TYPE C	
CONCRETE MIX 3X33 OR 3X37	9.0 CU. YD.
CONCRETE MIX 3X46	2.5 CU. YD.
REINFORCEMENT BARS (EPOXY COATED)	575 POUND
OVERLAY	
CONCRETE MIX 3U17A	45 CU. YD.