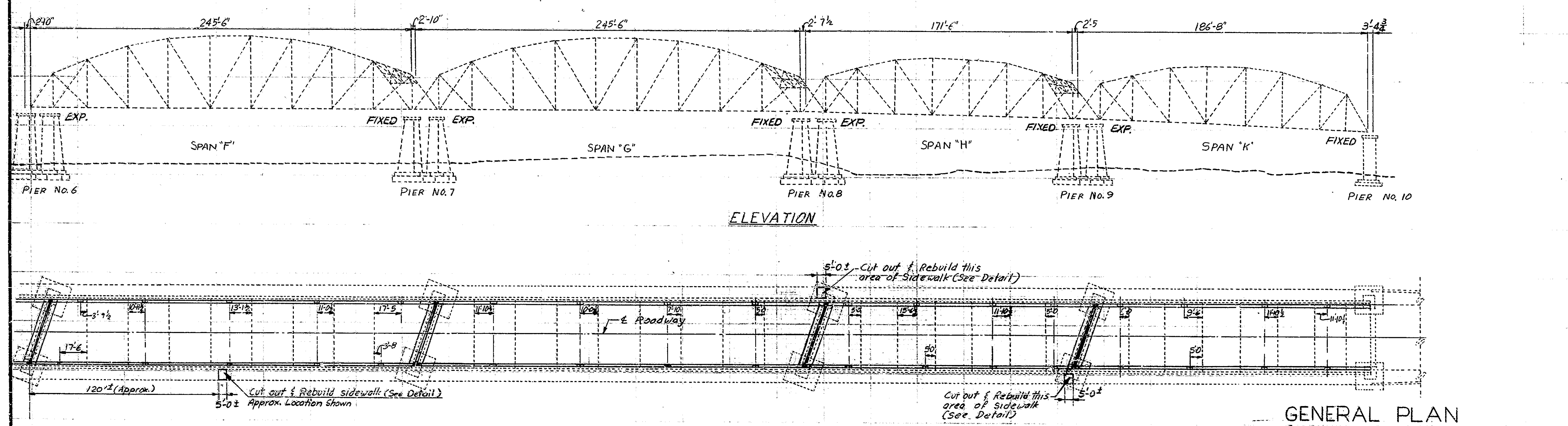
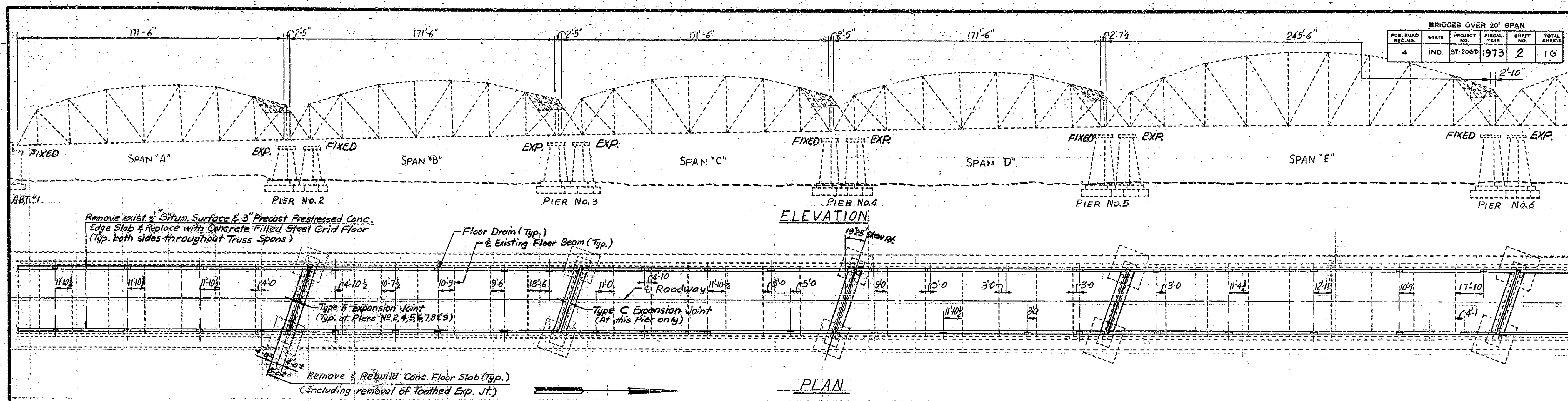


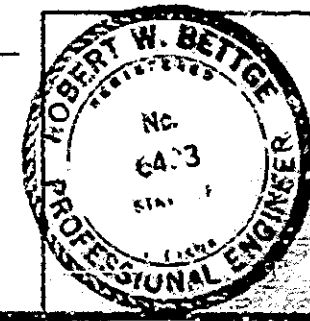
BRIDGES OVER 20' SPAN					
PUR. ROAD	STATE	PROJECT	FISCAL	SHEET	TOTAL
NO.		NO.	YEAR	NO.	SHEETS
4	IND.	ST-206D	1973	2	16



GENERAL PLAN

REPAIRS TO STEEL TRUSS & REINFORCED CONCRETE BRIDGE
 17 SPANS (SEE ELEVATION), 39'-8" ROADWAY, 2'-6" SIDEWALKS
 OVER PENN CENTRAL ON STATE ROAD 152
INDIANA STATE HIGHWAY COMMISSION
 LAKE COUNTY

SCALE: 1" = 30'-0" DATE: FEB. 8, 1973
 RECOMMENDED FOR APPROVAL: *Robert W. Betts*
 DRAWING: R1 OF 6
 PROJECT: ST-206D
 CONTRACT NO. B9335
 BRIDGE FILE: 152-45-1031 D

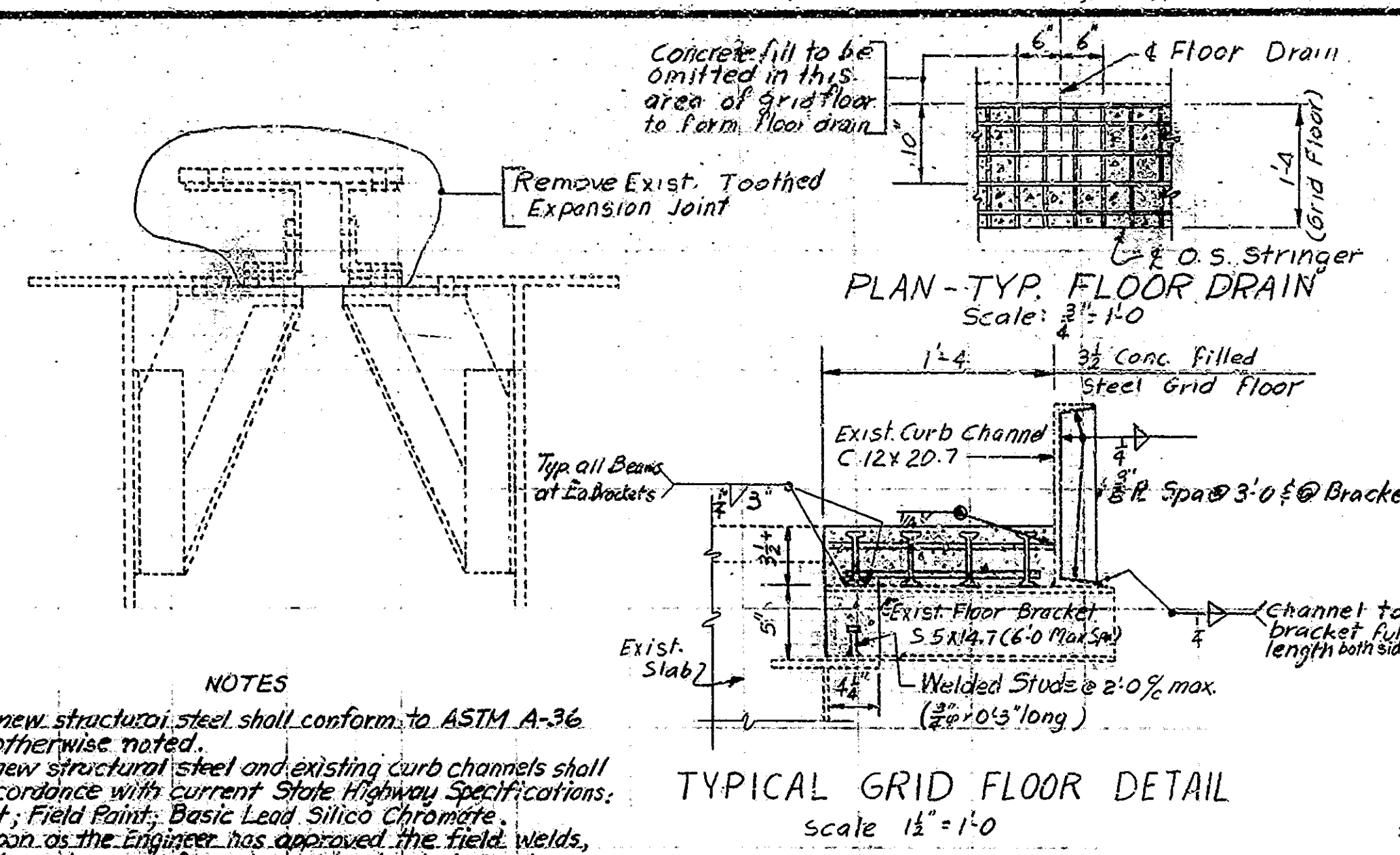
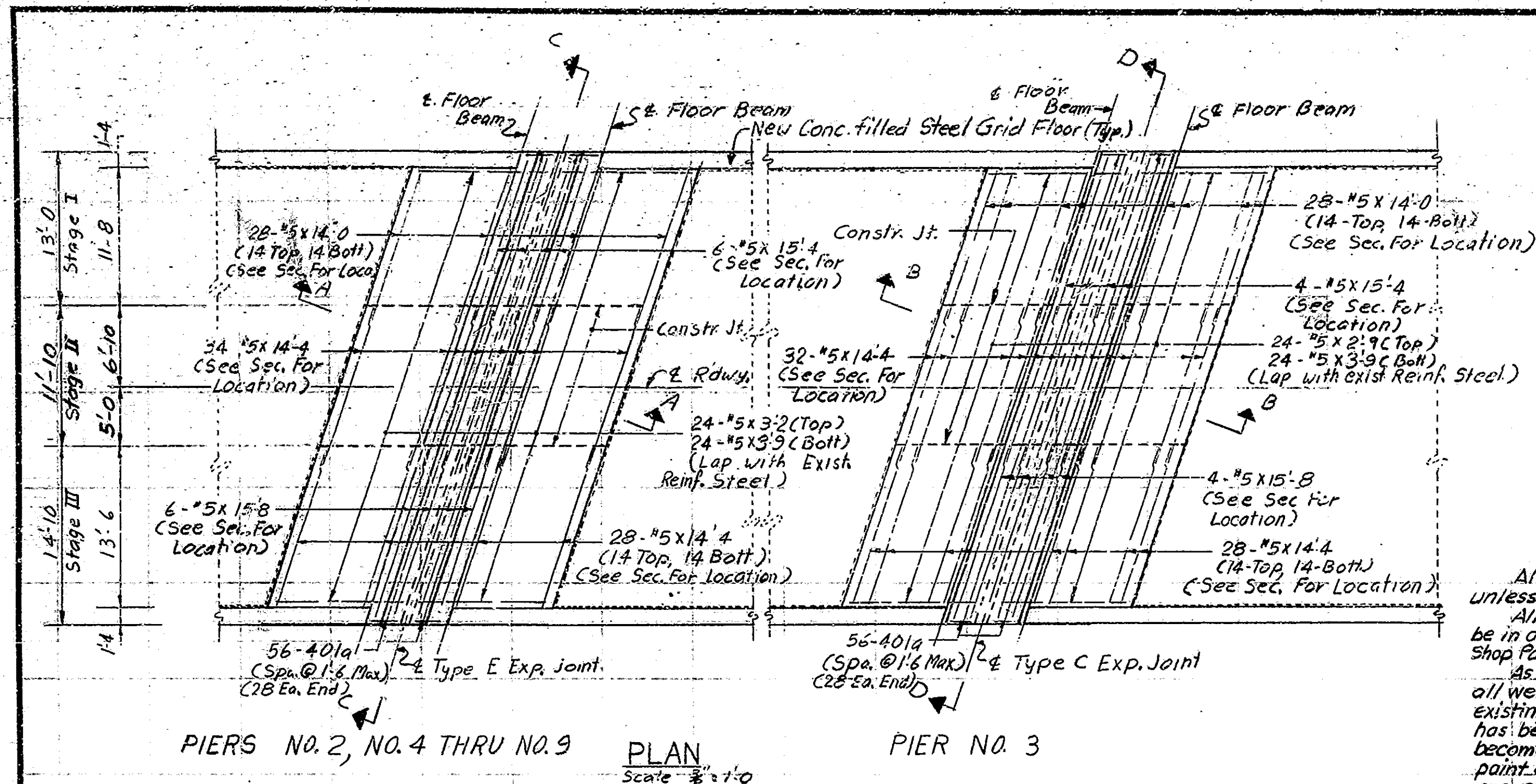


DESIGNED: C.K.D.
 DRAWN: H.P.P. 7-28-72
 TRACED: C.K.D.

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	ST-206D	1973	4	16

BILL OF MATERIALS

REINFORCING STEEL				
SIZE AND MARK	NO OF BARS	LENGTH	WEIGHT (LBS)	
#5	46	15'-3"		
#5	42	15'-4"		
#5	494	14'-4"		
#5	224	14'-0"		
#5	192	3'-9"		
#5	168	3'-2"		
#5	24	2'-9"		
Total #5			13,518	
Total Reinf. Steel 13,518				
CONCRETE				
Class 'A' in Super Str.				
Pour N° 1 (Stage I)				19.8 Cu Yd
Pour N° 2 (Stage II)				215 Cu Yd
Pour N° 3 (Stage III)				229 Cu Yd
Total Class 'A' in Super Str.				632 Cu Yd
MISCELLANEOUS				
* Conc. Filled Steel Grid Floor				475.8 Lb
Expansion Joint Type C				43 Lb
Expansion Joint Type E				276 Lb
1/4" Fillet Weld				6530 Lb
Temp. Pavement Marking Tape				12000 Lb

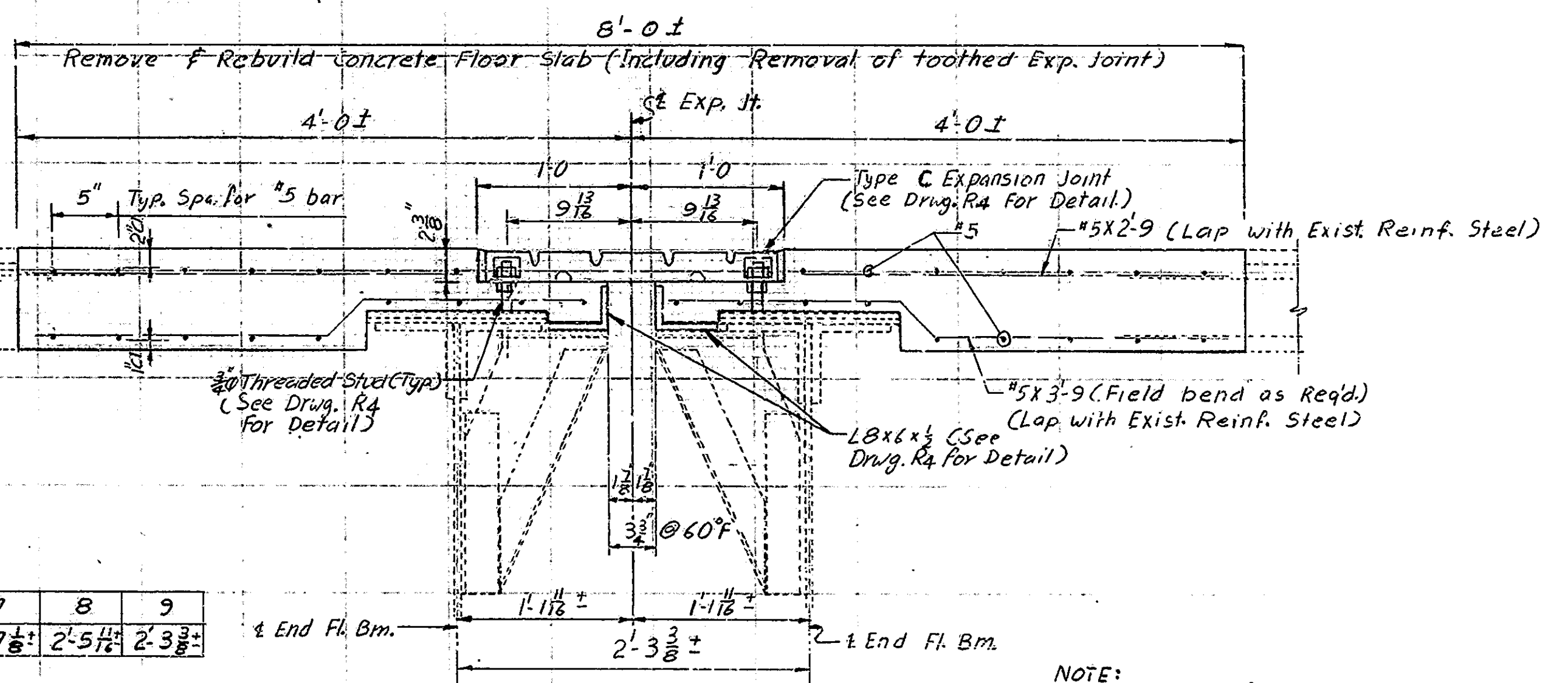
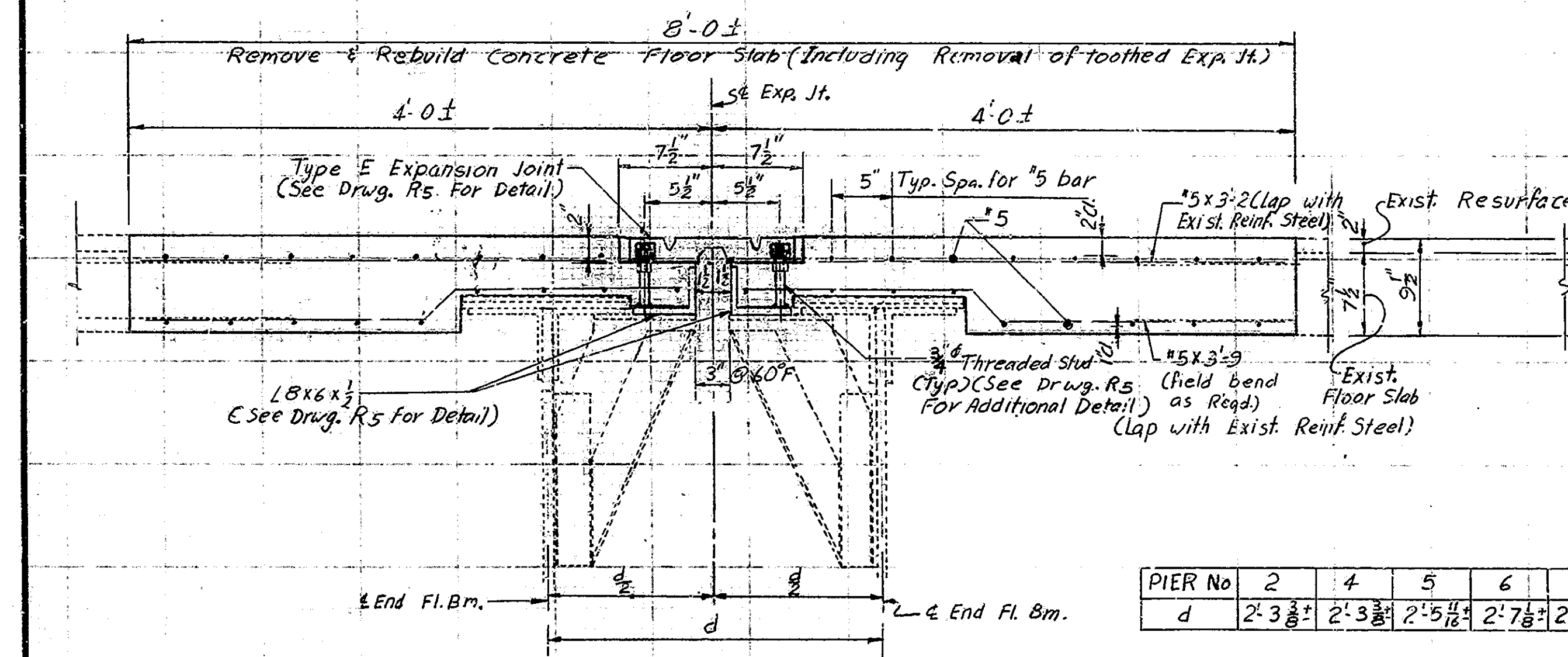


NOTES

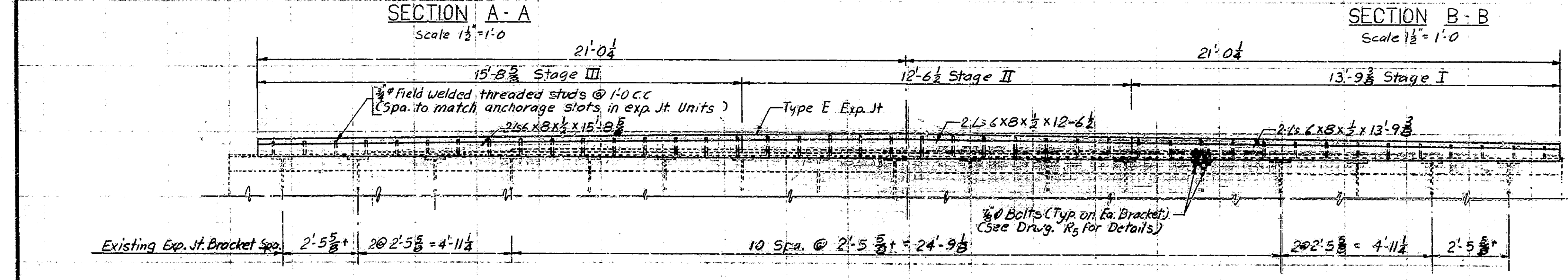
All new structural steel shall conform to ASTM A-36 unless otherwise noted.

All new structural steel and existing curb channels shall be in accordance with current State Highway Specifications: Shop Paint; Field Paint; Basic Lead Silico Chromate.

As soon as the Engineer has approved the field welds, all welds and any surface of new structural steel and existing curb channels from which the shop or field coat has been omitted or becomes worn off or has otherwise become defective shall be thoroughly cleaned of all charred paint or any foreign matter and completely covered with one coat of shop paint.



PIER No	2	4	5	6	7	8	9
d	2'-3 3/8"	2'-3 3/8"	2'-5 1/8"	2'-7 3/8"	2'-7 3/8"	2'-5 1/8"	2'-3 3/8"



NOTE:

For Reinf. Bar Notes See Br. Std. C1.

For Section D-D See Drwg. R4 - For Location of Floor Drain See General plan Drwg. R1.

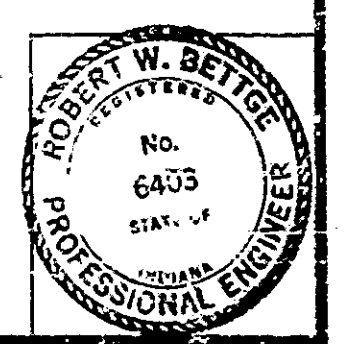
For Expansion Joint Detail See Drwg. R4 & R5.

FLOOR REPAIRS
INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED DATE: FEB. 8, 1973

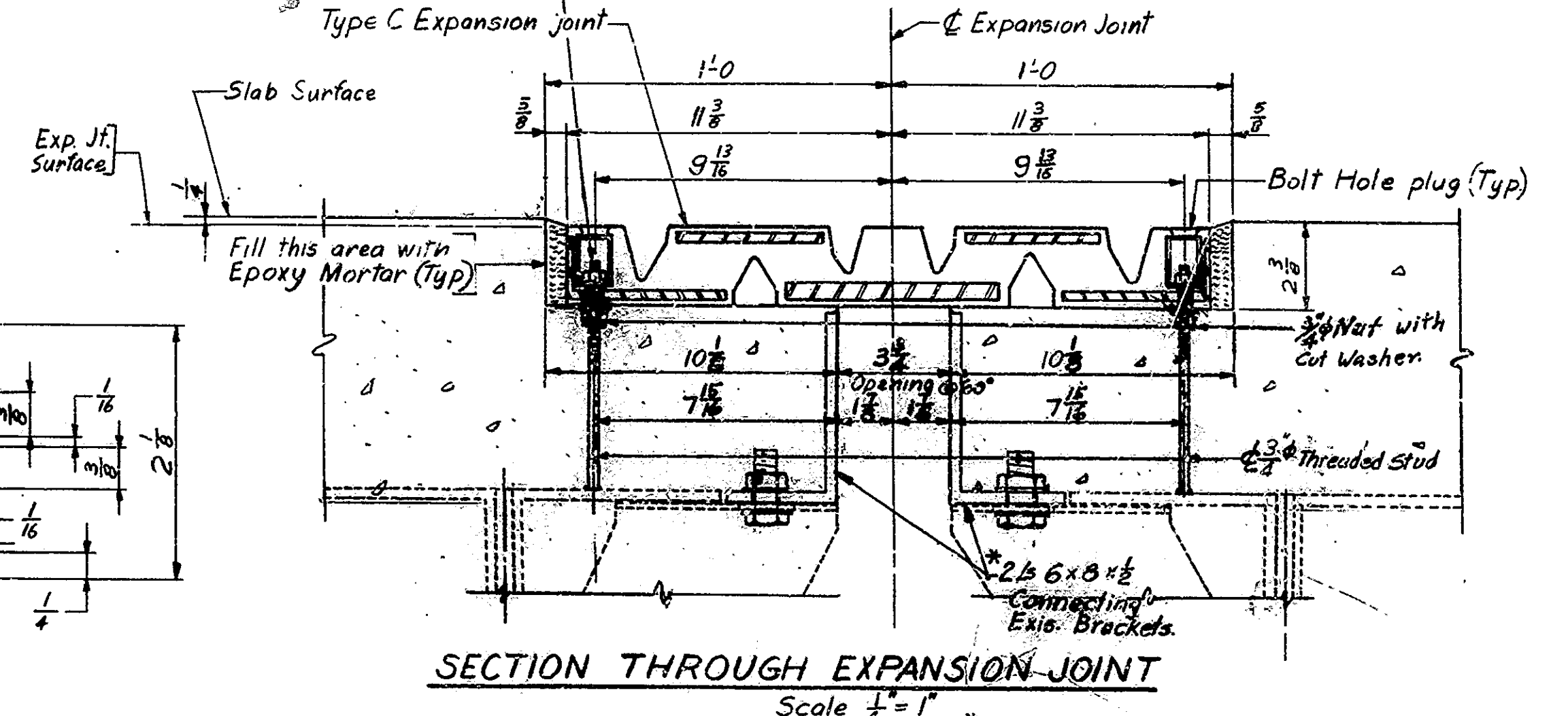
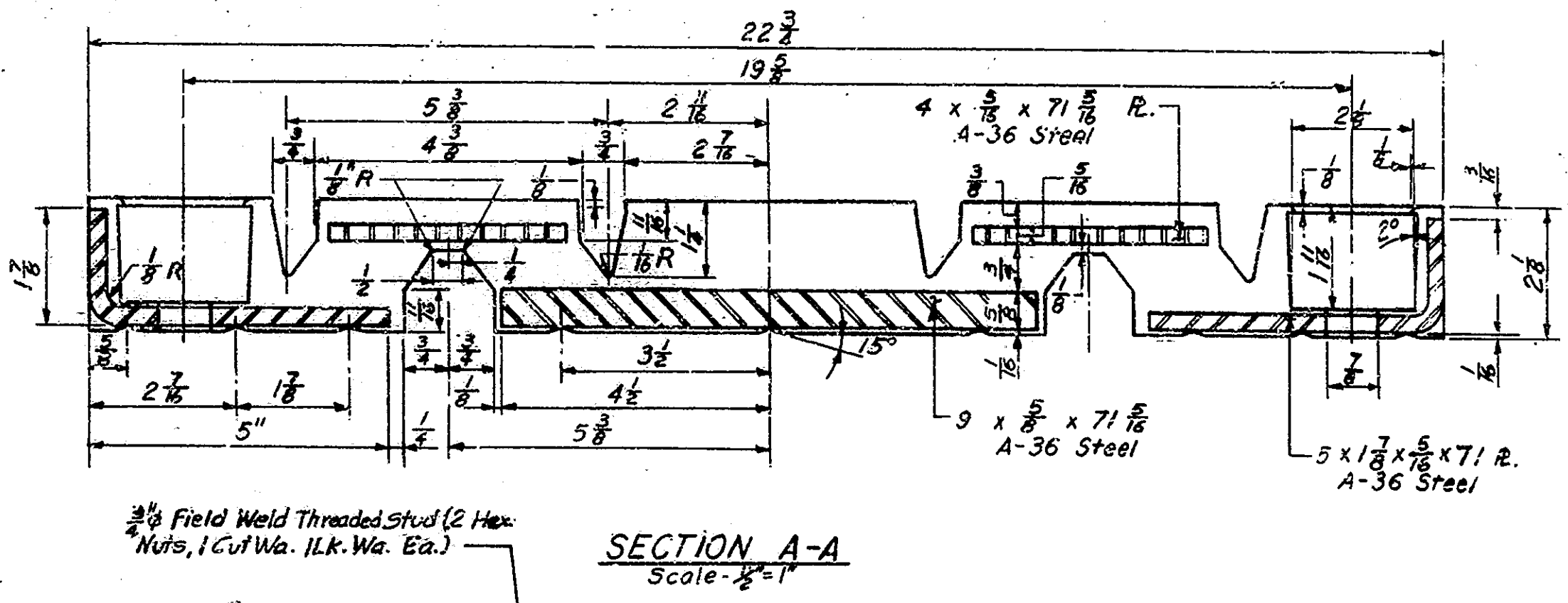
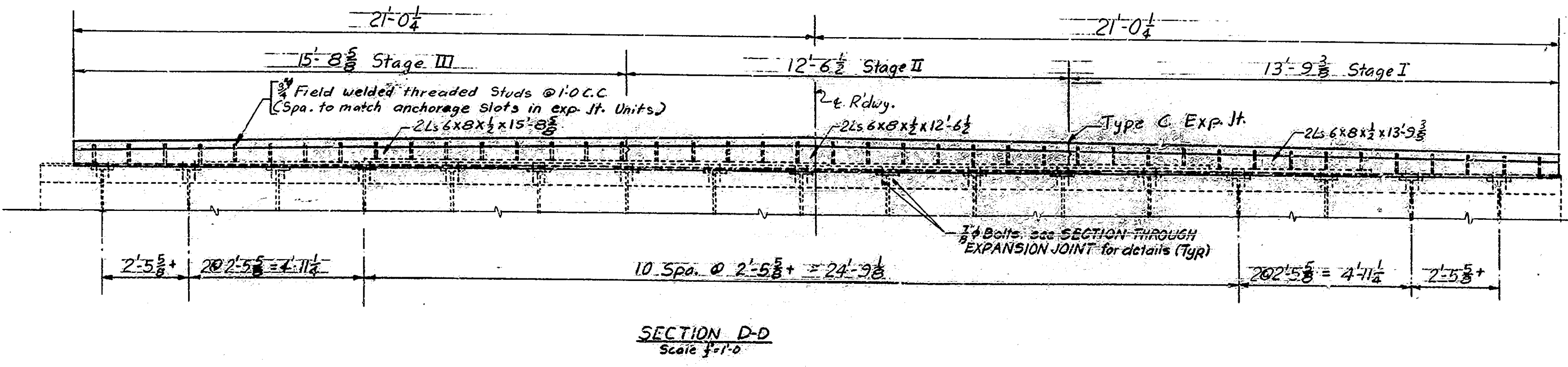
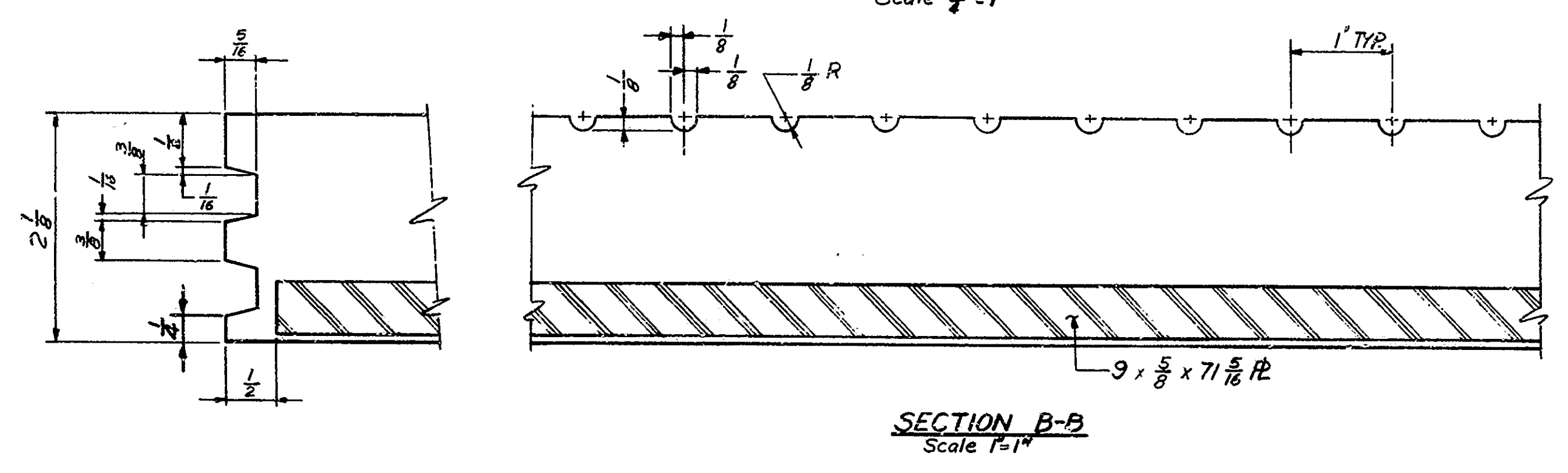
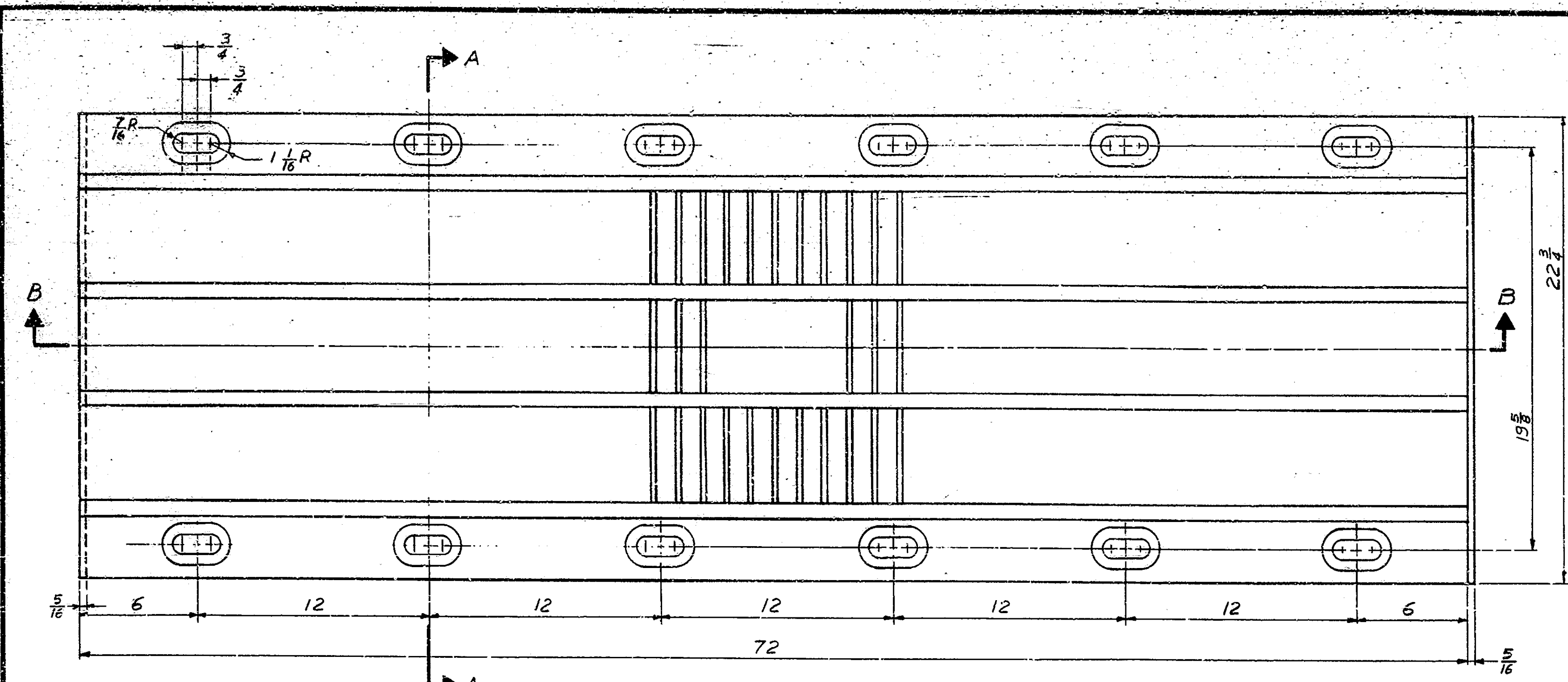
RECOMMENDED FOR APPROVAL: *Robert W. Beitre*

DRAWING: R3 OF 6
PROJECT: ST-206D
CONTRACT NO. B9935
BRIDGE FILE: 152-45-1031D



DESIGNED: CWD
DRAWN: H.B. Plafie
TRACED: CWD

BRIDGES OVER 20' SPAN					
PUR. ROAD	STATE	PROJECT	FISCAL	SHEET	TOT.
NO.		NO.	YEAR	NO.	SHEETS
4	IND.	8T-2066	1973	5	16



NOTES

Refer to Special Provisions for physical properties of materials and construction methods.

The cost of the Angles, Bolts, Threaded Studs, Nuts, Washers, Bolt Hole Plugs and all materials needed to erect the expansion joint shall be included in the cost of the pay item Type C Expansion Joint.

Tighten nuts on 3/8" threaded studs to 85 ft/lbs torque.

All Bolt Holes to be plugged with proper Bolt Hole Plugs as supplied by the manufacturer.

For Location of Section D-D see Drwg. R3.

TYPE C EXPANSION JOINT DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED DATE: FEB. 8, 1973

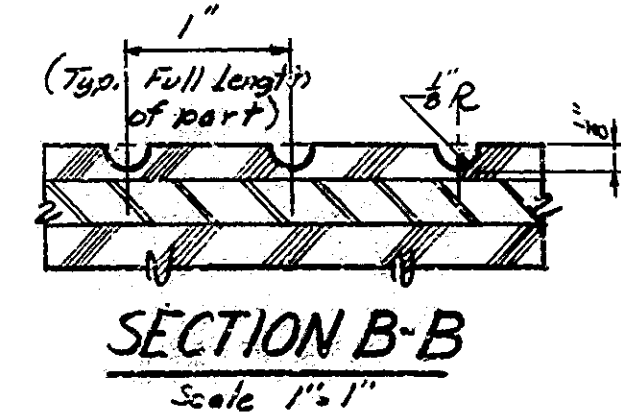
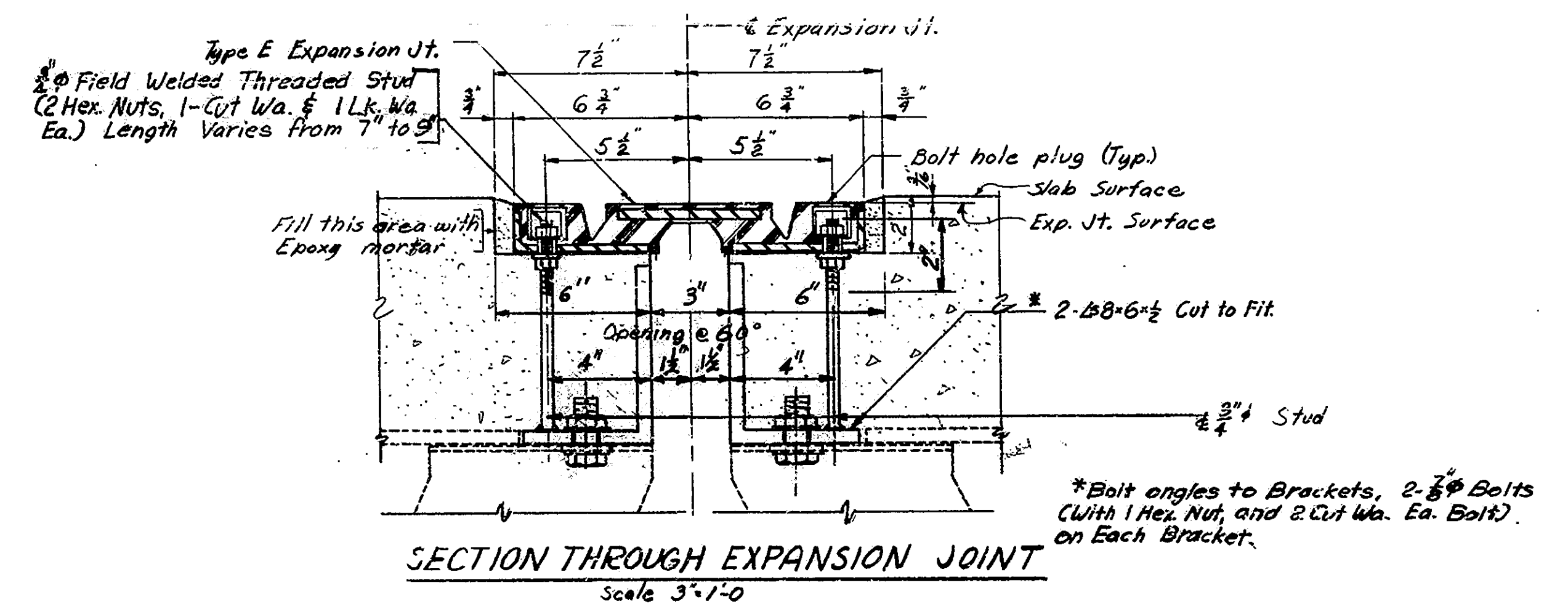
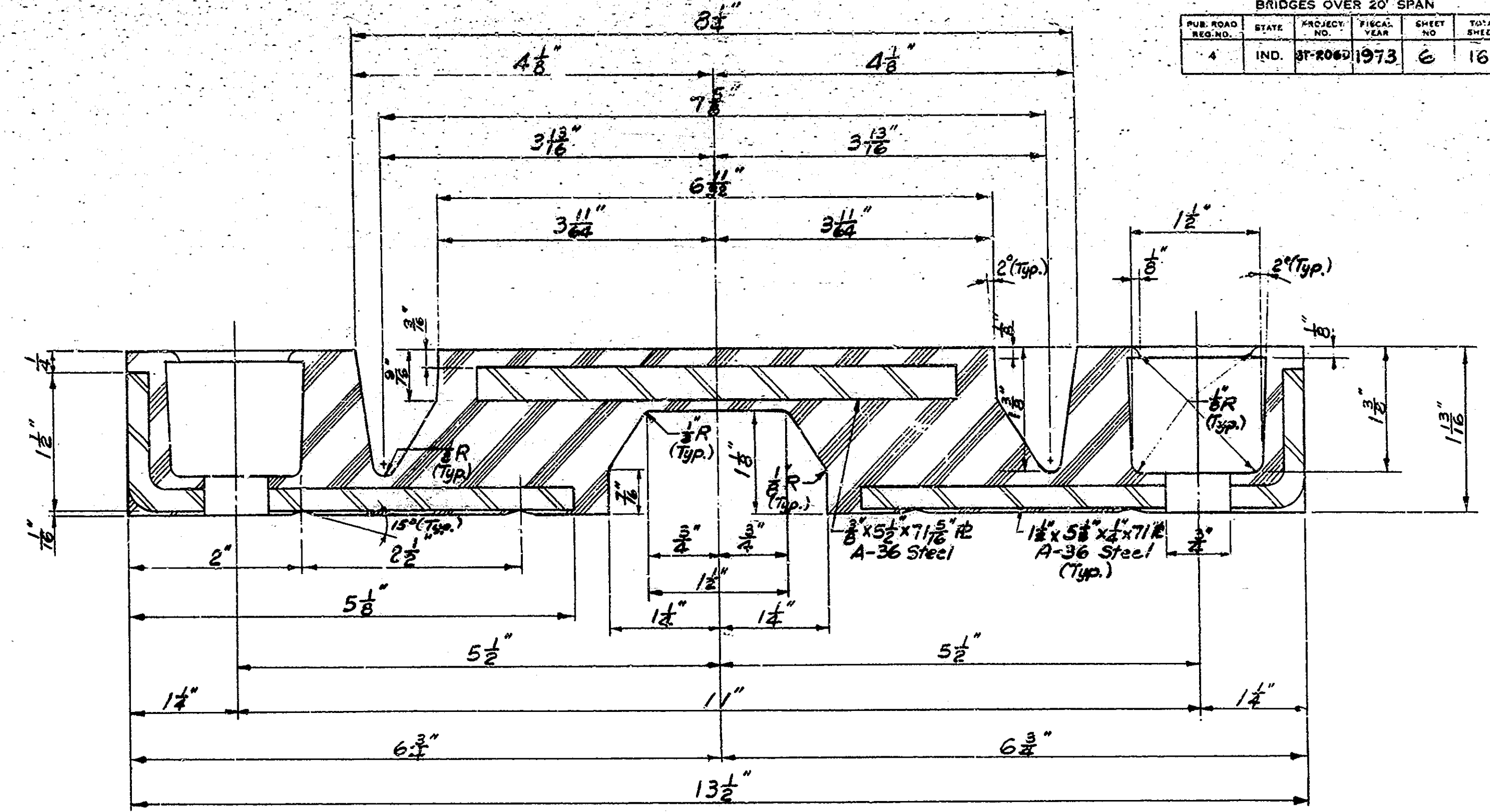
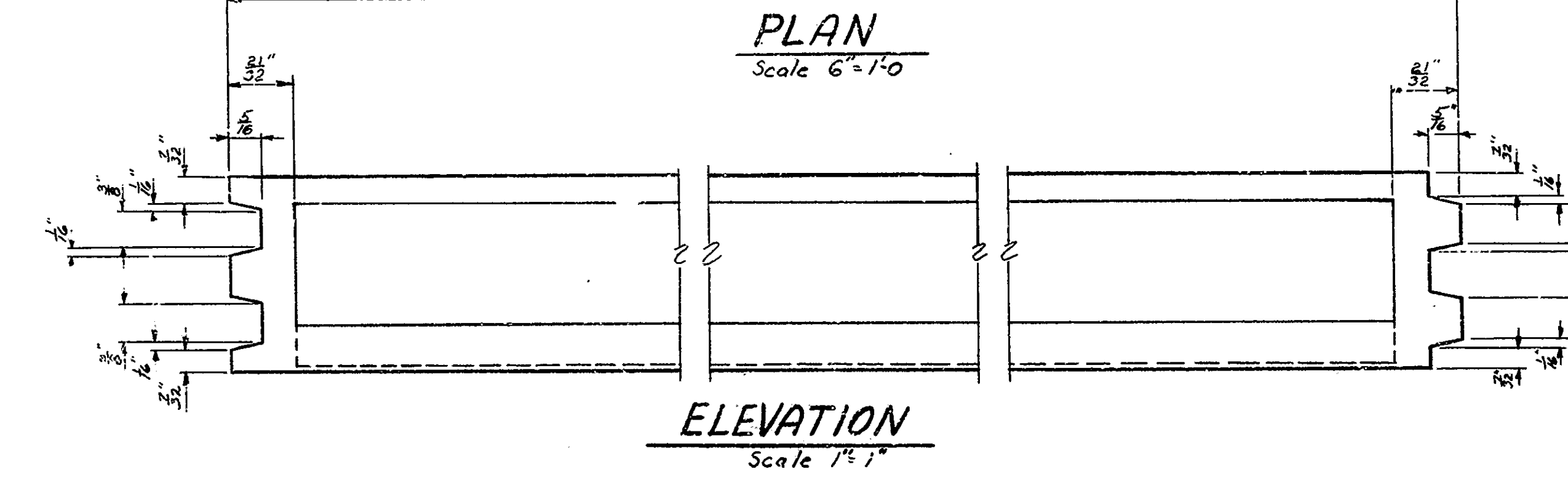
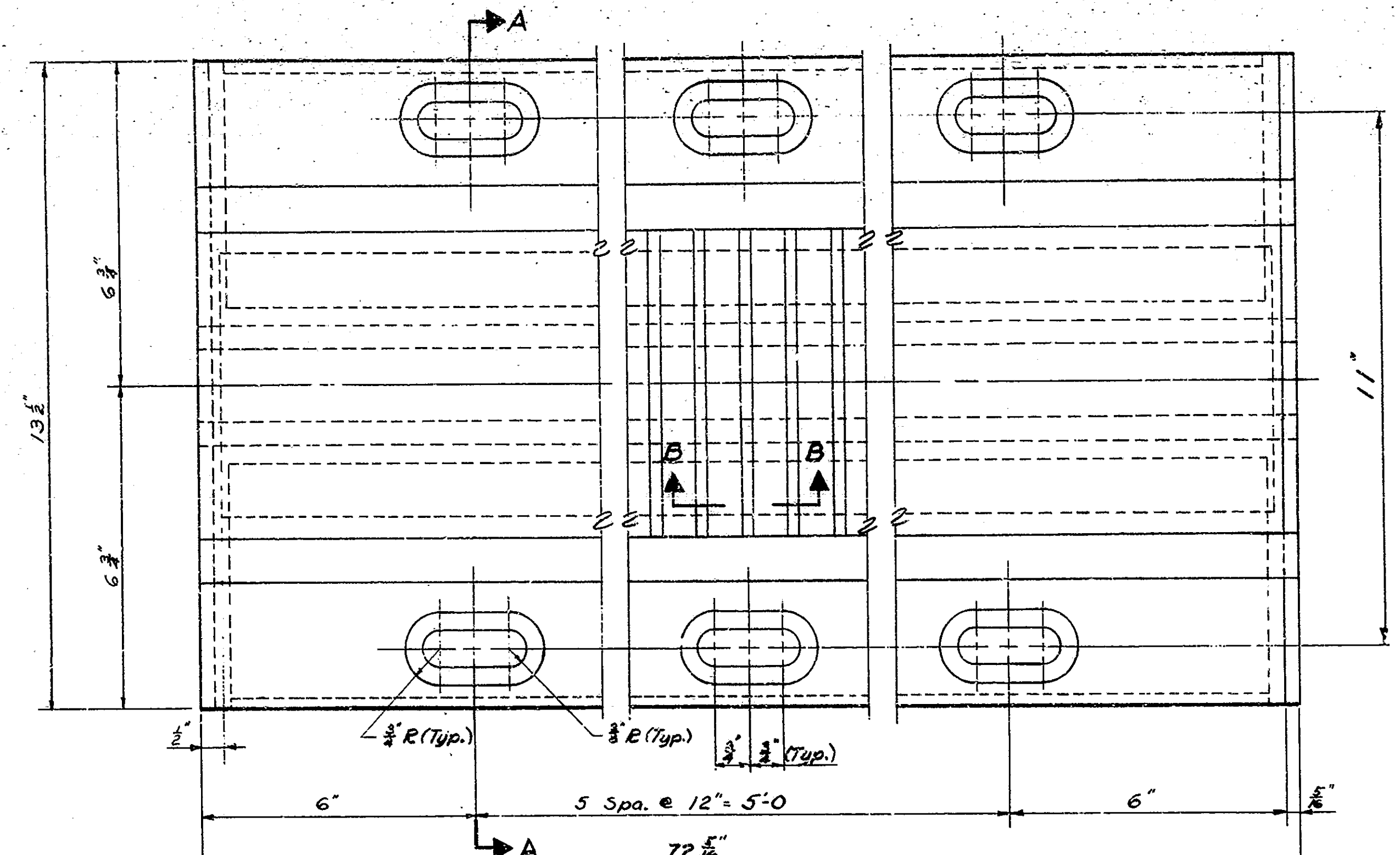
RECOMMENDED FOR APPROVAL: Robert W. Betty

DESIGNED: R4 OF 6
PROJECT: ST-206D
CONTRACT NO. 89335
BRIDGE FILE: 152-45-1031D



DESIGNED: SC 8-6-71
DRAWN: SC 8-6-71
TRACED: SC 8-6-71

BRIDGES OVER 20' SPAN					
PUB. ROAD	STATE	PROJECT	FISCAL	SHEET	TOTAL
NO.		NO.	YEAR	NO.	SHEETS
4	IND.	ST-206D	1973	6	16



NOTES

Refer to Special Provisions for physical properties of materials and construction methods.

The cost of the Angles, Bolts, Threaded Studs, Nuts, Washers, Bolt Hole Plugs and all materials needed to erect the expansion joint shall be included in the cost of the pay item "Type E Expansion Joint".

Tighten nuts on $\frac{3}{8}$ " threaded studs to 45 Ft. lbs. Torque.

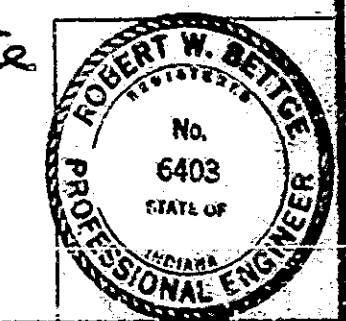
All Bolt Holes to be plugged with proper Bolt Hole Plugs as supplied by the manufacturer.

The bed for the joint shall be formed as near to a true plane as possible. The bed shall then be smoothed to a true plane with a neat portland cement grout which shall be cured before the joint is set. The manufacturer's recommendations for joint installation, proper bolt torque, sealant application, bolt protection etc. shall be followed.

Flush with top of anchor plate when used.

**TYPE E
EXPANSION JOINT DETAILS
INDIANA STATE HIGHWAY COMMISSION**

SCALE:- AS NOTED
DATE:- FEB. 8, 1973
RECOMMENDED FOR APPROVAL: *Robert W. Betge*
DRAWING:- R5 OF 6
PROJECT:- ST-206D
CONTRACT NO. B9335
BRIDGE FILE:- 152-45-1031D



DESIGNED: CKD	CKD
DRAWN: S.J.L./M.M.	CKD
TRACED: CKD	CKD

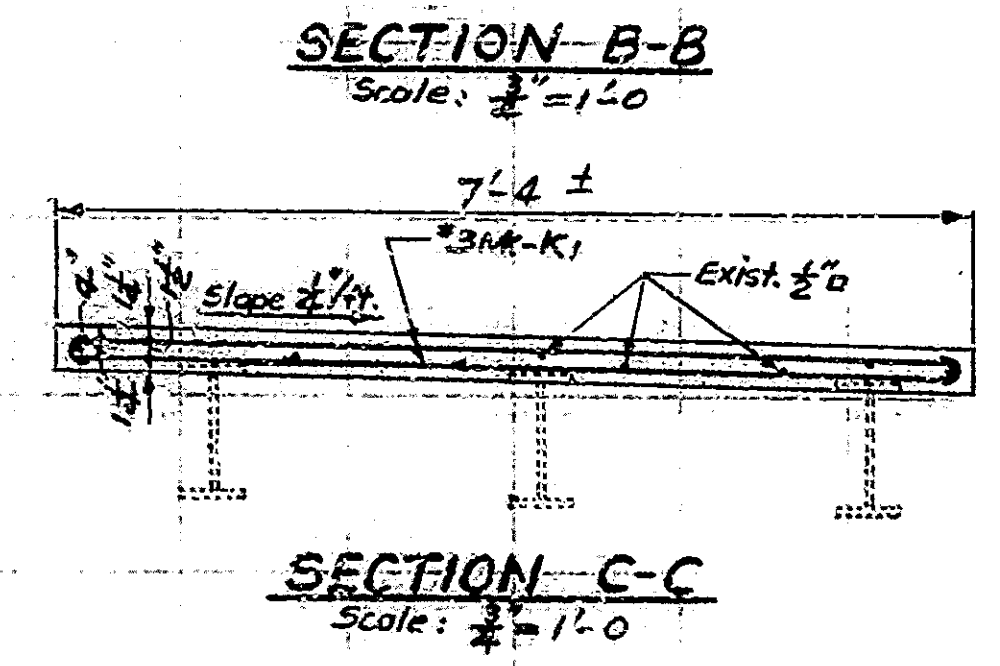
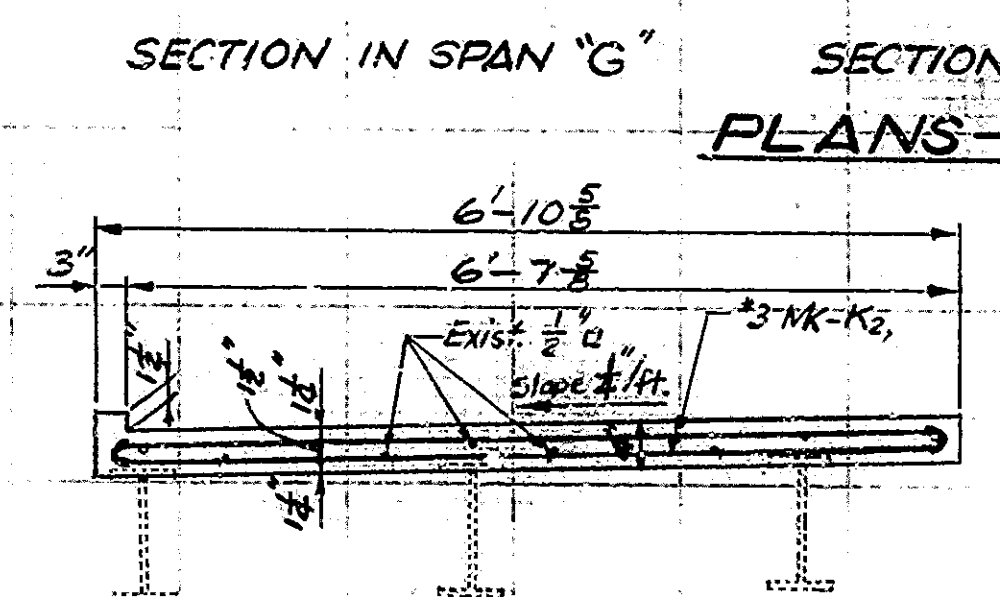
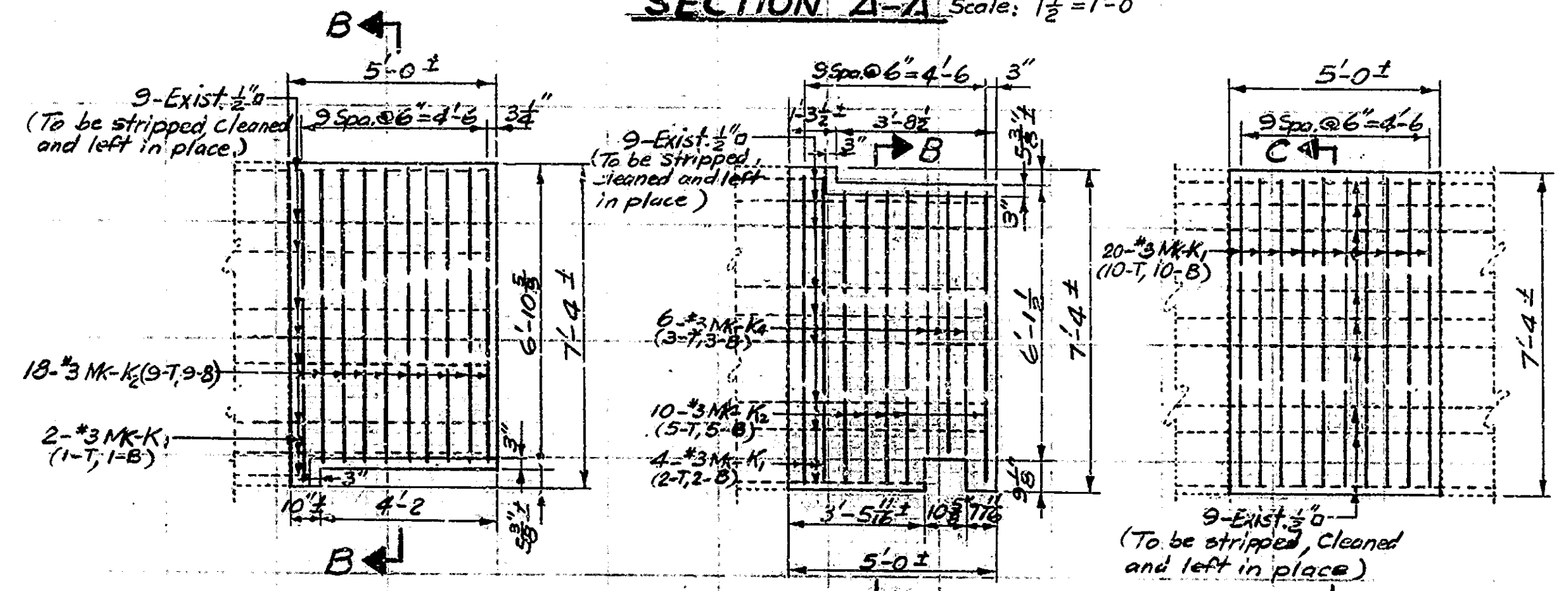
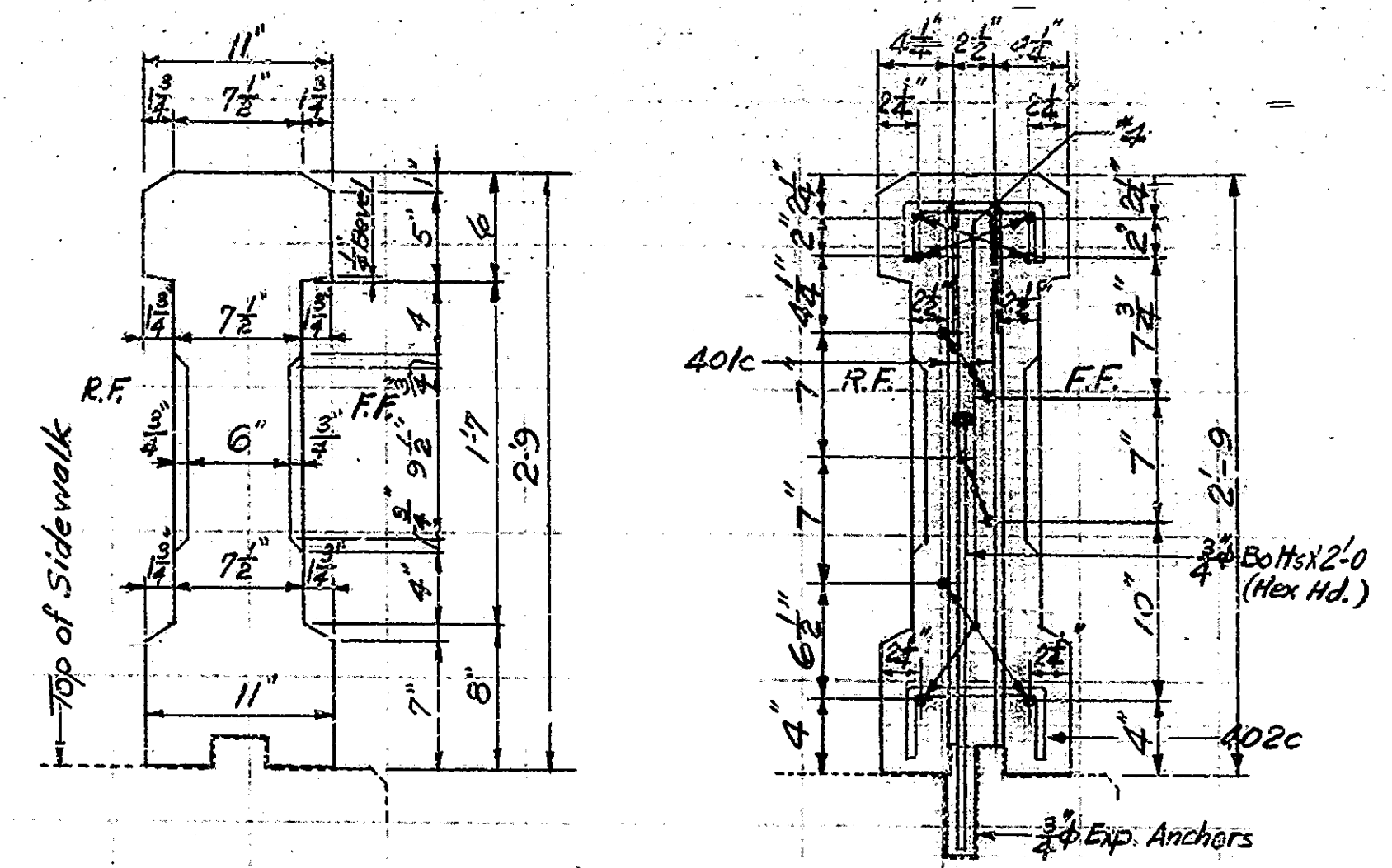
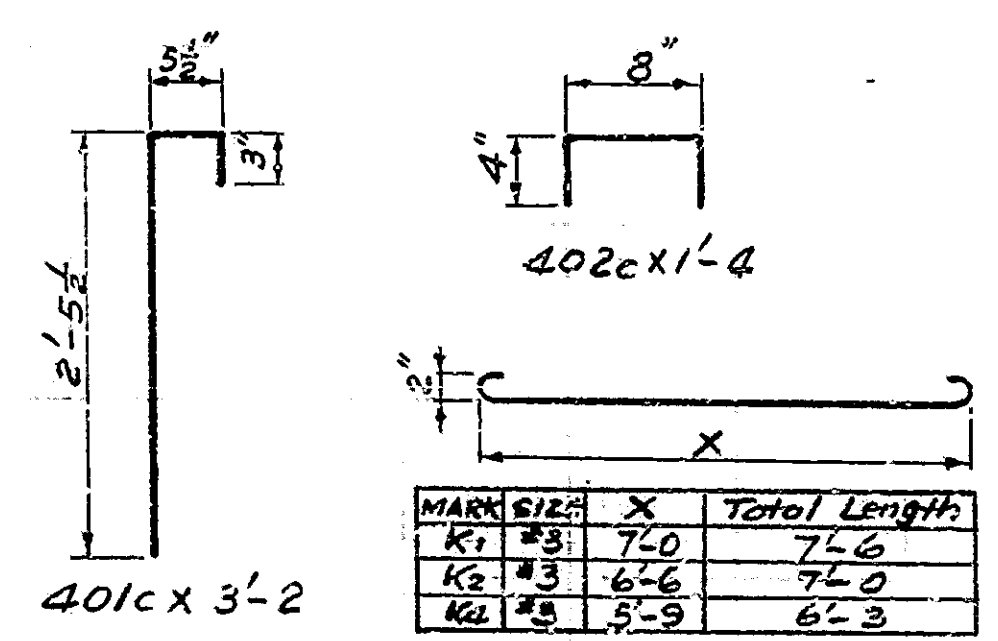
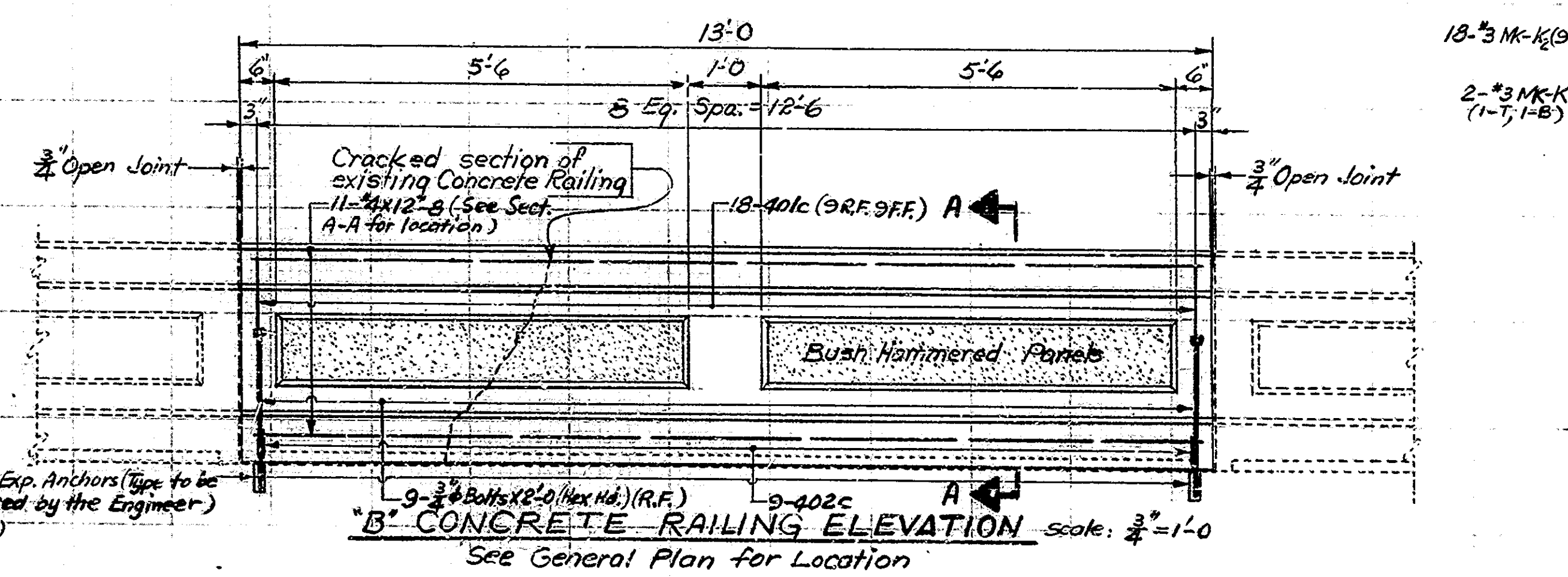
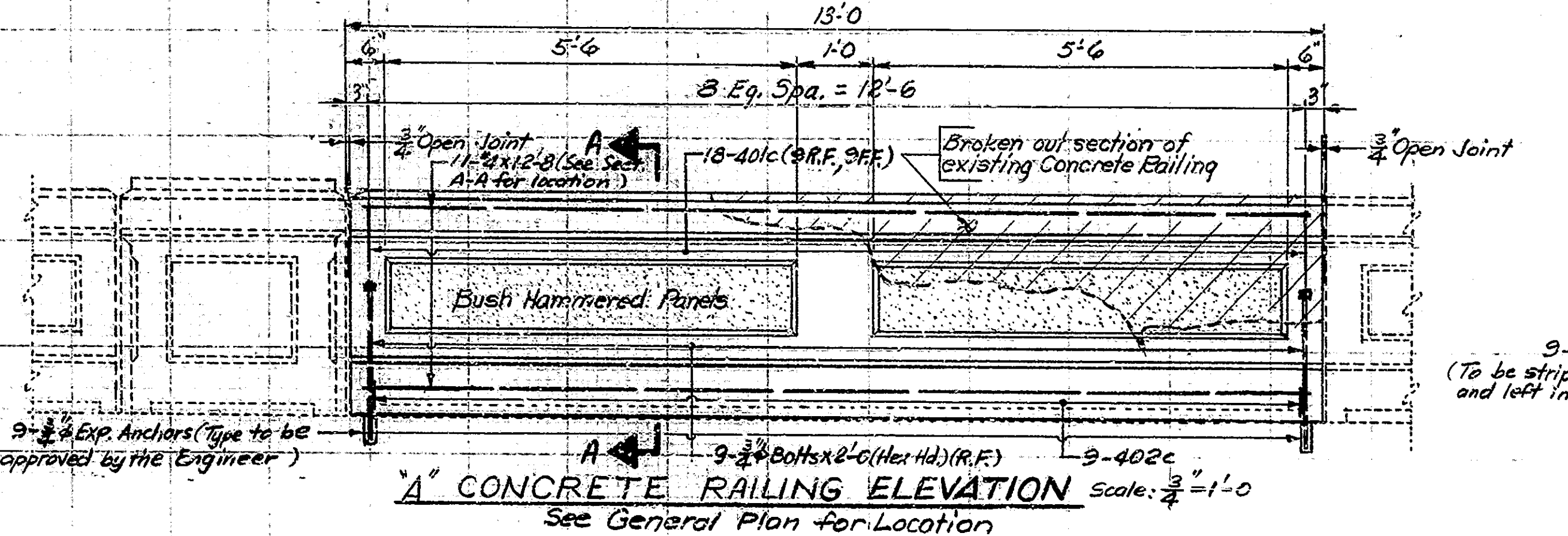
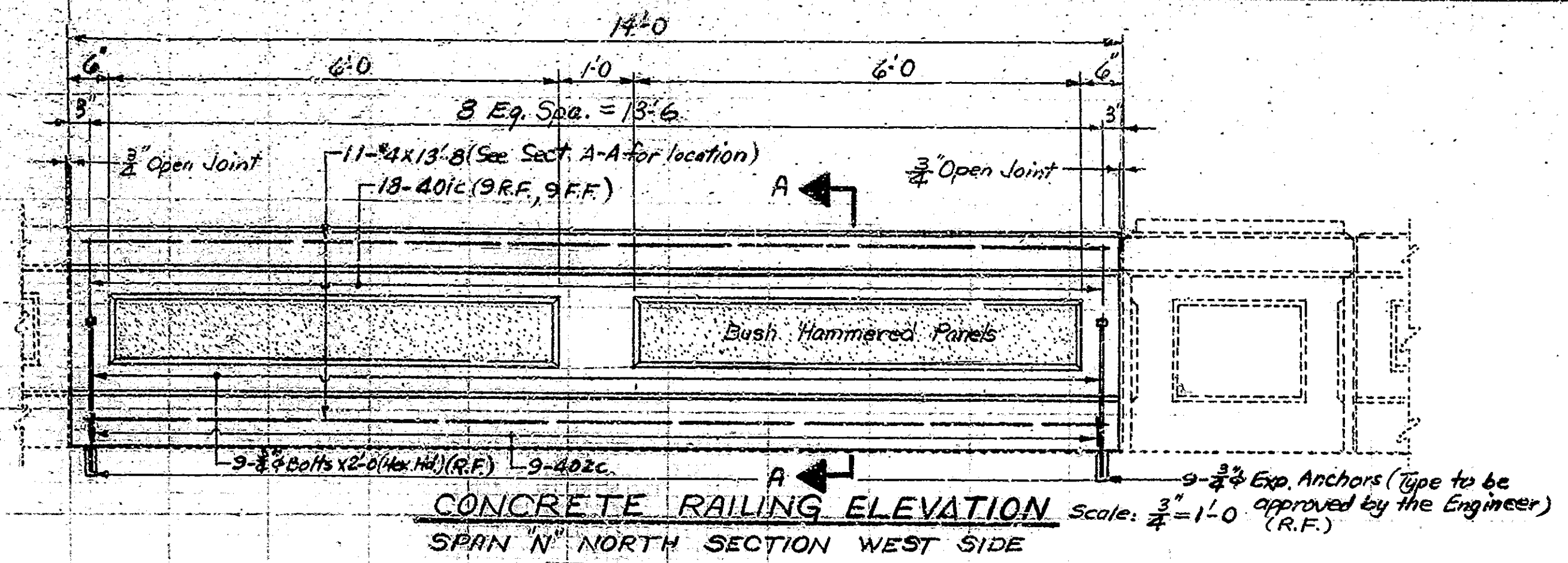
BRIDGES OVER 20' SPAN				
PVE ROAD	STATE	PROJECT	FISCAL	TOTAL
REQ. NO.		NO.	YEAR	SHEETS
4	IND.	ST-206D	1973	7
				16

**BILL OF MATERIALS
(FOR CONCRETE RAILINGS)**

REINFORCING STEEL			
SIZE AND MARK	NO. OF BARS	LENGTH	WEIGHT Lbs.
401c	52	3'-2"	
402c	27	7'-4"	
#4	11	13'-0"	
#4	22	12'-8"	
Total	112		425
Total Reinforcing Steel 425			
CONCRETE			
Concrete Railing		2.9 CYS.	
MISCELLANEOUS			
#4 Exp. Anchors		27 Each	

**BILL OF MATERIALS
(FOR SIDEWALK REPAIRS)**

REINFORCING STEEL			
SIZE AND MARK	NO. OF BARS	LENGTH	WEIGHT Lbs.
#3 K1	26	7'-6"	
#3 K2	28	7'-0"	
#3 K3	6	6'-3"	
Total	60		161
Total Reinforcing Steel 161			
CONCRETE			
Class 'A' in Superstructure		1.3 CYS.	



NOTES

For Reinforcing Bar Notes see Br. Std. C1.
For General Notes, Construction Procedures and Repairing Locations see Drawing R2.
Existing vertical reinforcing bars which extended from sidewalk to be stripped, cleaned and left in place.
#4 Expansion Anchors shall be a type approved by the Engineer. They shall be a minimum of 3 inches in length and capable of pull-out test of 10,000 pounds.

CONCRETE RAILING AND SIDEWALK REPAIR DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED DATE: FEB. 8, 1973
RECOMMENDED FOR APPROVAL: *Robert W. Betz*
DRAWING: R6 OF 6 PROJECT: ST-206D
CONTRACT NO. B9335 BRIDGE FILE: 152-45-1031D



DESIGNED: CKD
DRAWN: JCC 10-18-72 v. G.H.M. 2-7-73
TRACED: CKD

ESTIMATE OF QUANTITIES

STRUCTURE PAY ITEMS				
CODE NO.	DESCRIPTION	UNIT	STRUCTURE	TOTAL QUANTITY
51001	CONCRETE CLASS A IN SUBSTRUCTURE	CYS.	6.45	
51003	CONCRETE CLASS A IN SUBSTRUCTURE	CYS.		
51010	CONCRETE CLASS B ABOVE FOOTINGS	CYS.		
51013	CONCRETE CLASS B IN FOOTINGS	CYS.		
51043	CONCRETE STRUCTURAL MEMBERS	LSUM		
51030	REINFORCING STEEL	LBS.	14,065	
51035	STRUCTURAL STEEL	LBS.		
51038	STRUCTURAL STEEL	LSUM		
51090	ANCHOR PLATES	LBS.		
51091	ANCHOR BODIES (OK-AR 1)	EACH		
51092	ANCHOR BODIES (OK-AR 2)	EACH		
51093	ANCHOR BODIES (OK-AR 3)	EACH		
51094	ANCHOR BODIES (OK-AR 4)	EACH		
51095	ANCHOR PLATES (OK-AP 1)	EACH		
51096	ANCHOR PLATES (OK-AP 2)	EACH		
51097	ANCHOR PLATES (OK-AP 3)	EACH		
51098	ANCHOR PLATES (OK-AP 4)	EACH		
51099	ANCHOR BODIES	EACH		
51099	CAST IRON DRAIN PIPE 4 INCH	LBS.		
51100	CAST IRON DRAIN PIPE 6 INCH	LBS.		
51101	CAST IRON DRAIN PIPE 8 INCH	LBS.		
51110	CAST IRON GRATES, BASINS AND CUTTINGS	LBS.		
51132	RAILING RESET	LFT.		
51135	RAILING (TYPE S OR C)	LFT.		
51136	RAILING (TYPE SA OR G)	LFT.		
51137	RAILING (TYPE 6 OR D)	LFT.		
51139	RAILING (TYPE 7 OR E)	LFT.		
51020	CONCRETE RAILING	CYS.	2.9	
51025	CONCRETE RAILING	LFT.		
51014	CLASS X EXCAVATION	CYS.		
51020	EXCAVATION	CYS.		
51223	WATERWAY EXCAVATION	CYS.		
51224	WATERWAY EXCAVATION	LSUM		
51225	DRY EXCAVATION	CYS.		
51230	FOUNDATION EXCAVATION (UNCLASSIFIED)	CYS.		
51231	FOUNDATION EXCAVATION (UNCLASSIFIED)	LSUM		
51813	PNEUMATICALLY PLACED MORTAR	SFT.		
51806	REPOINTING MASONRY IN STR'S	SFT.		
51814	WELDED STEEL WIRE FABRIC	SFT.		
51859	PAINTING OLD STEEL BRIDGE	LSUM		

STRUCTURE PAY ITEMS				
CODE NO.	DESCRIPTION	UNIT	STRUCTURE	TOTAL QUANTITY
51135	TIMBER PILES FURNISHED, UNGRADED	LFT.		
51140	TIMBER PILES DRIVEN, UNGRADED	LFT.		
51145	TIMBER PILES FURNISHED, TREATED	LFT.		
51150	TIMBER PILES DRIVEN, TREATED	LFT.		
51155	PILE SHELLS FURNISHED AND DRIVEN (12 INCH)	LFT.		
51160	PILE SHELLS FURNISHED AND DRIVEN (14 INCH)	LFT.		
51165	STEEL H PILES FURNISHED AND DRIVEN (8 BP 36)	LFT.		
51190	STEEL H PILES FURNISHED AND DRIVEN (10 BP 42)	LFT.		
51195	STEEL H PILES FURNISHED AND DRIVEN (12 BP 53)	LFT.		
51210	PILE ENGAGEMENT (CONCRETE)	LFT.		
51328	REMOVAL OF PRESENT STRUCTURE (PORTIONS)	LSUM		
51330	REMOVAL OF PRESENT STRUCTURE	LSUM		
51335	TEMPERARY BRIDGE AND APPROACHES	LSUM		
51366	CONCRETE SLOPEWALL, 5 INCH SLOPPING	SYS.		
51367	SLOPPING	SYS.		
51370	RIPRAP	TON		
51375	REFRESHMENT RIPRAP	SYS.		
51377	HANDLAD RIPRAP 12 INCH DAMPED RIPRAP	TON		
51385	STEEL DRAIN PIPE (6 INCH)	LSUM		
51400	STEEL DRAIN PIPE (8 INCH)	LSUM		
51092	STEEL PIPE CONDUIT (2 INCH)	LFT.		
51826	SURFACE SEAL	SFT.		
51827	COAL TAR INTERLAYER PROTECTIVE COAT	LSUM		
ADDITIONAL ITEMS				
	EXPANSION ANCHORS	EACH	47	
	CONCRETE FILLER STEEL AND FLOOR	SFT.	4788	
	TYPE C EXPANSION JOINT	LFT.	43	
	TYPE E EXPANSION JOINT	LFT.	298	
	REPOINTING CONCRETE MASONRY	SFT.	1,000	
	STANDARD BARRICADE TYPE 1	EACH	2	
	WELLET WR-10 (4")	LFT.	5,850	

APPROACH PAY ITEMS				
CODE NO.	DESCRIPTION	UNIT	STRUCTURE	TOTAL QUANTITY
60200	UNCLASSIFIED EXCAVATION	CYS.		
60240	COMMON EXCAVATION	CYS.		
62245	BORROW	CYS.		
62250	B BORROW	CYS.		
62302	REMOVAL OF PAVEMENT	SYS.		
62323	BREAKING PAVEMENT	SYS.		
62390	TERMINAL JOINT	LFT.		
62495	CONTRACTION JOINT, TYPE D-1	LFT.		
62380	CONCRETE PAVEMENT REINFORCED (7 INCH)	SYS.		
62285	CONCRETE PAVEMENT REINFORCED (8 INCH)	SYS.		
62290	CONCRETE PAVEMENT REINFORCED (9 INCH)	SYS.		
62300	CONCRETE PAVEMENT REINFORCED (10 INCH)	SYS.		
60070	CONCRETE SIDEWALK	SYS.		
62305	TYPE P COMPACTED AGGREGATE FOR BASE (SIZE NO. 53)	TON		
62600	COVER AGGREGATE	TON		
62605	AGGREGATE FOR SHOULDER DRAINS	TON		
62610	AGGREGATE FOR UNDER SLABS	CYS.		
62308	TYPE D COMPACTED AGGREGATE FOR BASE (SIZE NO. 53)	TON		
62310	SUBBASE	CYS.		
62315	BITUMINOUS STABILIZED SUBBASE TYPE I, II, OR III	TON		
62320	BITUMINOUS STABILIZED SUBBASE	TON		
62325	BITUMINOUS BASE	TON		
62330	BITUMINOUS SURFACE	TON		
62335	BITUMINOUS MATERIAL FOR TACK COAT	TON		
62340	BITUMINOUS MATERIAL FOR PRIME COAT	TON		
62345	BITUMINOUS MATERIAL FOR SEAL COAT	TON		
62370	BITUMINOUS MIXTURE FOR APPROACHES	TON		
62375	BITUMINOUS MIXTURE FOR SHOULDER	TON		
62380	BITUMINOUS MIXTURE, APPLIED	TON		
62500	GUARD RAIL, TYPE A	LFT.		
62505	GUARD RAIL, TYPE B	LFT.		
62510	GUARD RAIL, TYPE C	LFT.		
62515	GUARD RAIL, TYPE D	LFT.		
62520	GUARD RAIL, TYPE E	LFT.		
62525	GUARD RAIL, TYPE F	LFT.		
62530	GUARD RAIL, TYPE G	LFT.		
60035	RESET GUARD RAIL	LFT.		
62335	REMOVAL OF GUARD RAIL	LFT.		
62380	SODDING	SYS.		
62385	MULCHED SEEDING	SYS.		
62390	SHED MIXTURES	LBS.		
62395	TEMPERARY SEED MIXTURES	LBS.		
62400	MULCHING MATERIAL	TON		
62405	FERTILIZER	TON		
62410	WATER	M.G.		
62415	AGRICULTURAL LIME/STONE	TON		
60550	CROWN VEGET SEEDING	LBS.		
62001	MULCHING MATERIAL, WOOD CHIPPINGS (TYPE)	TON		
62640	MAINTAINING TRAFFIC	LSUM		
62370	CLEARING RIGHT-OF-WAY	LSUM		

*INCLUDES LFT. FOR YELLOW BARRIER LINE

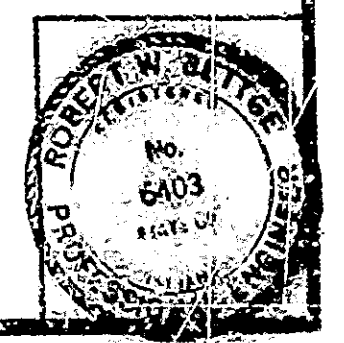
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2. INCLUDES TONS FOR TEMPORARY SEEDING
3. INCLUDES TONS FOR TEMPORARY SEEDING

REVISIONS	
DATE	ITEM

APPROACH PAY ITEMS				
CODE NO.	DESCRIPTION	UNIT	STRUCTURE	TOTAL QUANTITY
60400	47" FENCE, F. FIELD	LFT.		
60405	68" FENCE, CHAIN LINK	LFT.		
62340	CONSTRUCTION SIGNS (TYPE A)	EACH	12	
62345	CONSTRUCTION SIGNS (TYPE B)	EACH	20	
62350	STANDARD BARRICADES (TYPE III)	EACH	2	
60650	STOP SIGN, TYPE R-1A	EACH		
60652	NO ENTRY SIGN, TYPE R-11-A	EACH		
60655	YIELD SIGN, TYPE R-30L	EACH		
60657	PASS WITH CARE SIGN, TYPE R-12A	EACH		
60660	CURVE SIGN, TYPE M-2AR	EACH		
60665	CURVE SIGN, TYPE M-2AL	EACH		
60670	REVERSE CURVE SIGN, TYPE W-4AR	EACH		
60675	REVERSE CURVE SIGN, TYPE W-4AL	EACH		
60680	LARGE ARROW SIGN, TYPE W-11A	EACH		
60685	STOP AHEAD SIGN, TYPE W-13A	EACH		
60725	DELIMITER WITH POST, TYPE D-1 3 INCH	EACH		
60740	DELIMITER WITH POST, TYPE D-2 3 INCH	EACH		
60755	DELIMITER WITH POST, TYPE D-3 3 INCH	EACH		
60770	DELIMITER POST	EACH		
60720	TEMPORARY PAVEMENT MARKING TAPE	LFT.	12,000	
60715	TEMPORARY PAVEMENT MARKING PAINT	LFT.		
62360	RIGHT-OF-WAY MARKERS	EACH		
62365	PAINTED LINE	LFT.		
60500	MONUMENT, TYPE A	EACH		
60505	MONUMENT, TYPE B	EACH		
60510	MONUMENT, TYPE C	EACH		
60515	MONUMENT, TYPE D	EACH		

BRIDGE ESTIMATE OF QUANTITIES INDIANA STATE HIGHWAY COMMISSION

DATE FEB. 8, 1973
Robert W. Reiter
ASSISTANT ENGINEER OF HIGHWAYS
SHEET 9 OF 16



PROJECT: ST-206D
CONTRACT NO: B9335
BRIDGE FILE: 182-15-1031D

SUPERVISED CHM c'd/TCC 2-8-73
TRACED c'd