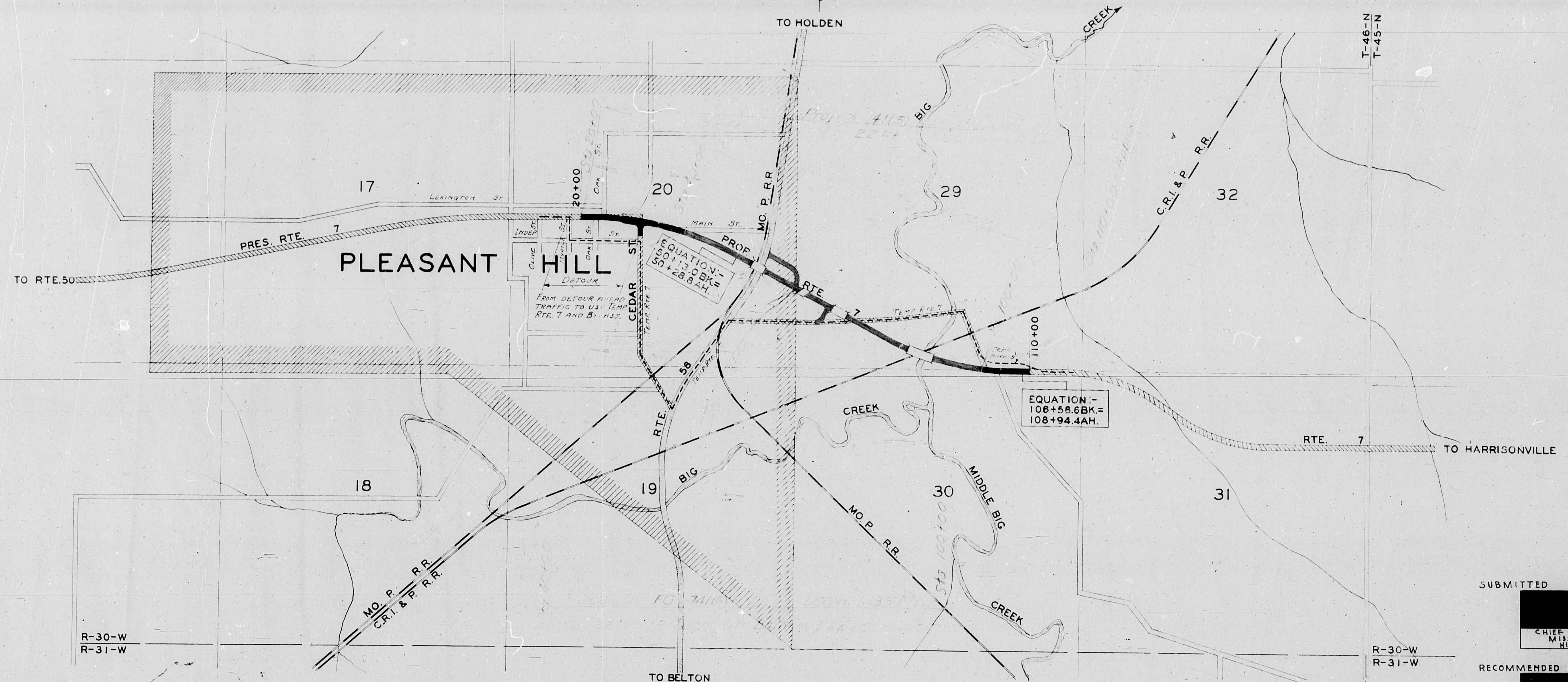


MISSOURI
STATE HIGHWAY COMMISSION
PLAN AND PROFILE
OF PROPOSED
STATE ROAD
FEDERAL AID PROJECT
CASS COUNTY

PLAN 1 IN. = 100 FT.
PROFILE, HOR. 1 IN. = 100 FT. VERT. 1 IN. = 10 FT.
CROSS-SECTIONS 1 IN. = 5 FT.



SCALE 1"=1000'

CONVENTIONAL SIGNS

STATE AND NATIONAL LINE	LEVEE
SHIP LINE OR BOROUGH	CULVERTS
SECTION LINE	DROP INLET
GRANT LINE	TROLLEY POLE
FENCE LINE	POWER POLE
GUARD RAIL	TELEPHONE OR TELEGRAPH POLE
UNFENCED PROPERTY	MARSH
RIGHT OF WAY LINE	HEDGE
TRAVELED WAY	GROUND ELEVATION
RAILROADS	GRADE ELEVATION
RETAINING WALL	SURFACE LINE
RISE OR SURVEY LINE	GRADE LINE

SUBMITTED

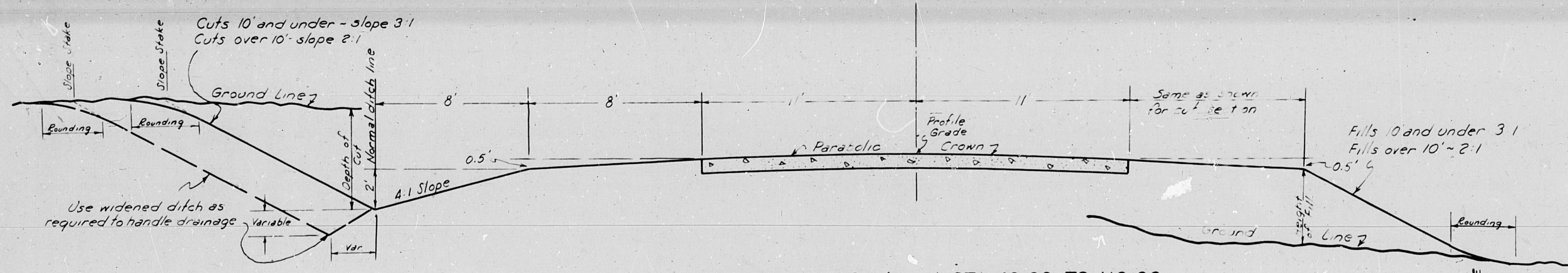
CHIEF ENGINEER
MISSOURI STATE
HIGHWAY COMMISSION

RECOMMENDED FOR APPROVAL

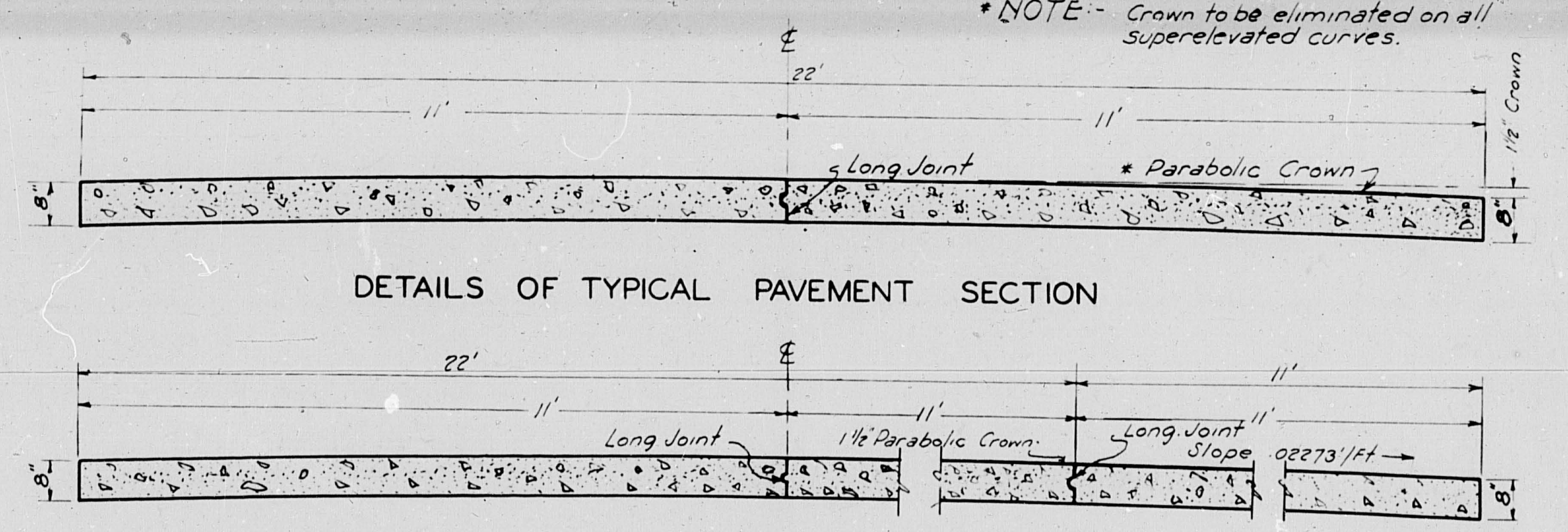
DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED

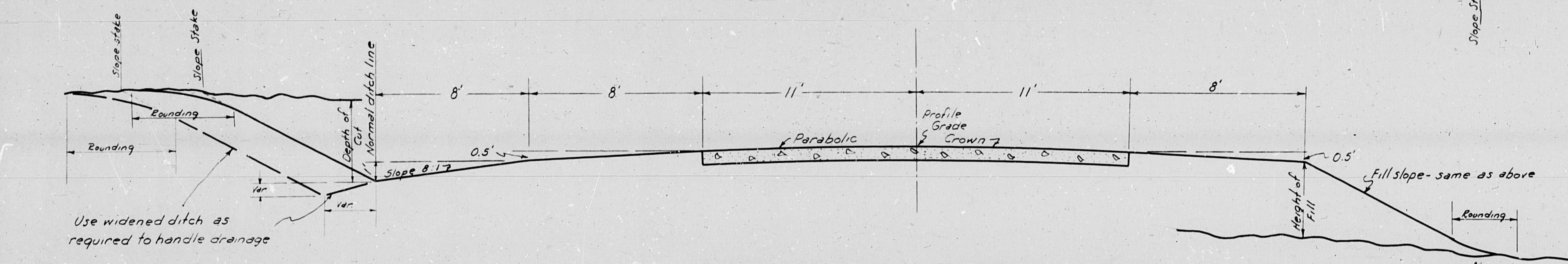
COMMISSIONER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY



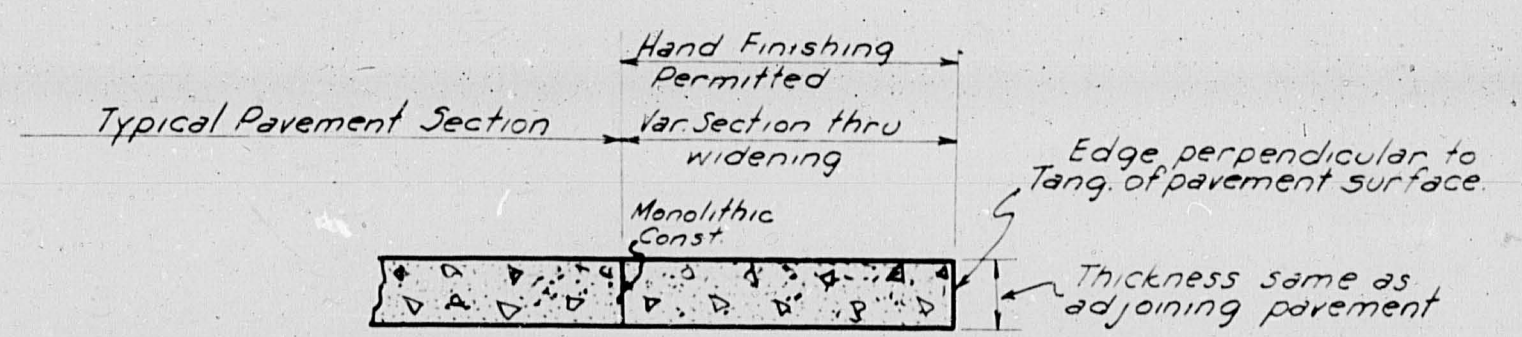
TYPICAL SECTION (TANG.) STA. 40+00 TO 110+00



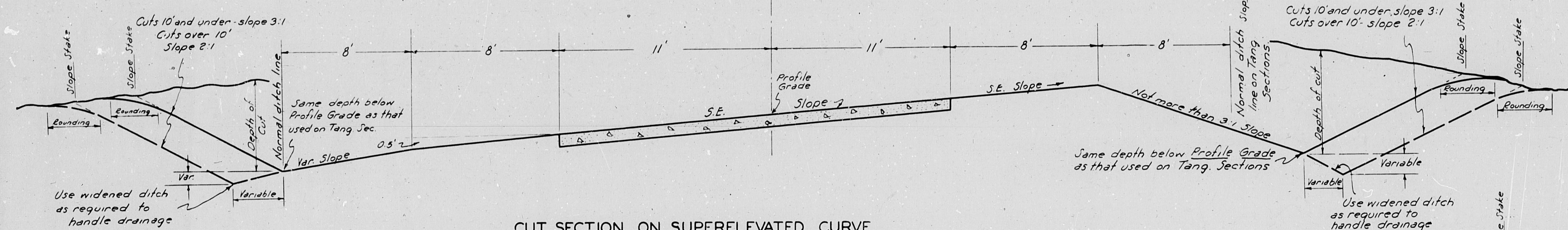
DETAILS OF TYPICAL PAVEMENT SECTION STA. 23+81.3 TO 25+72.6



TYPICAL SECTION STA. 20+00 TO 40+00

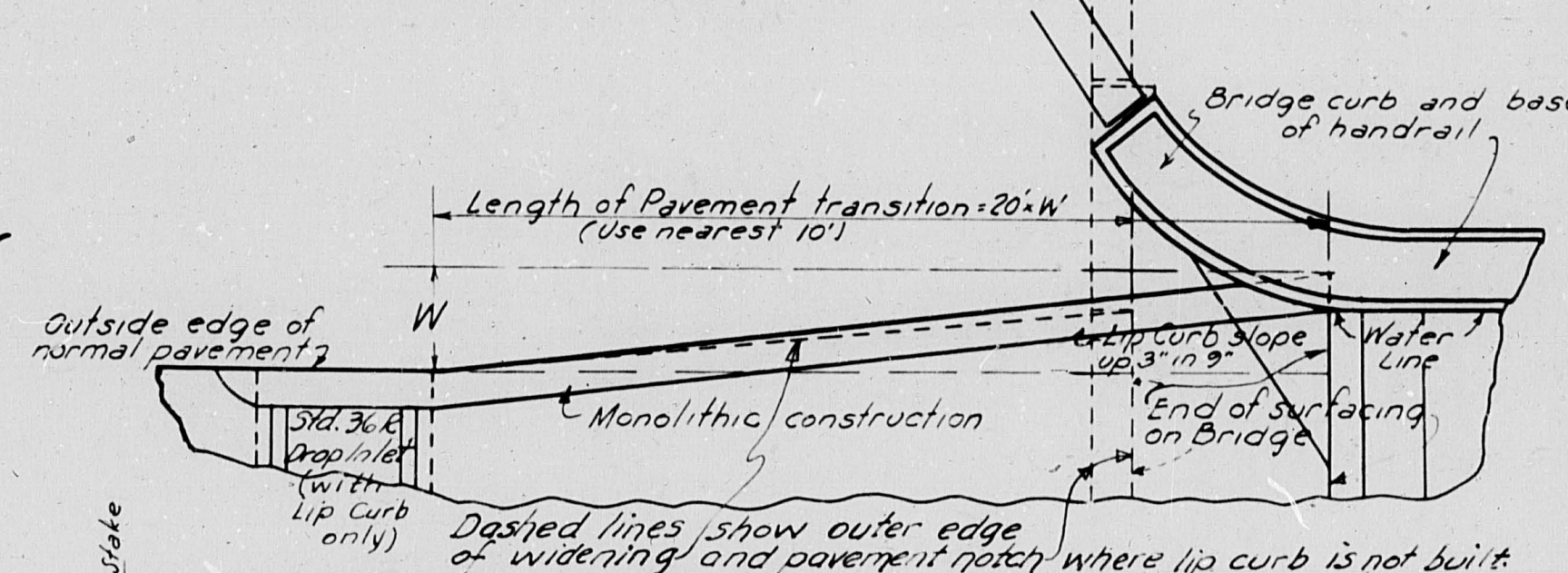


TYPICAL SECTION SHOWING CURVE WIDENING "W" OR OTHER IRREGULAR PAVEMENT WIDENING

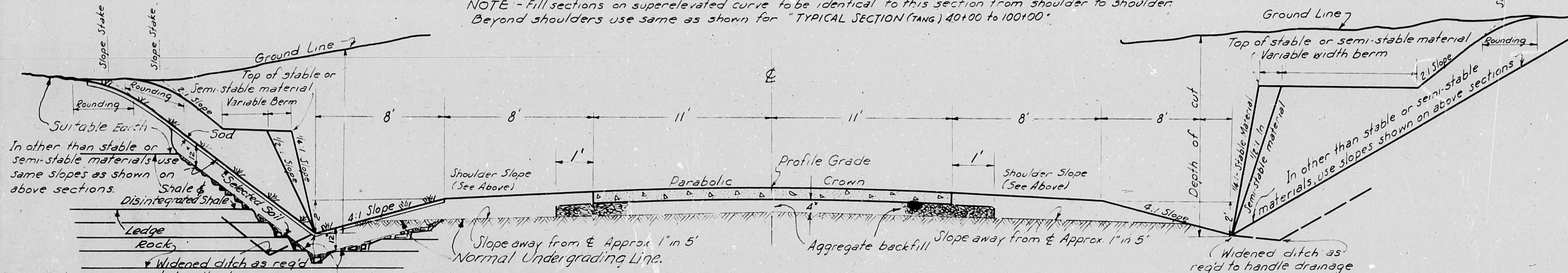


CUT SECTION ON SUPERELEVATED CURVE

NOTE - Fill sections on superelevated curve to be identical to this section from shoulder to shoulder. Beyond shoulders use same as shown for "TYPICAL SECTION (TANG.) 40+00 to 100+00".



PLAN OF PAVEMENT WIDENING AT BRIDGE ENDS



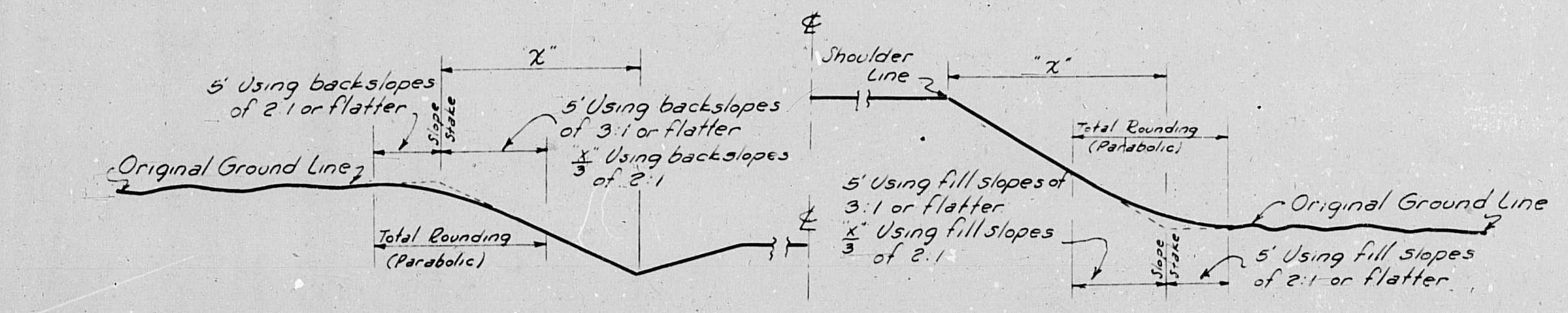
SECTION IN UNDERGRADED CUTS - ON TANGENT

NOTE: On superelevated curves, UNDERGRADING to parallel super-elevation, and other details from ditch line to ditch line shall be identical to those shown for "CUT SECTION ON SUPERELEVATED CURVES". For pay limits of OVERBREAK and BACKFILL see specifications.

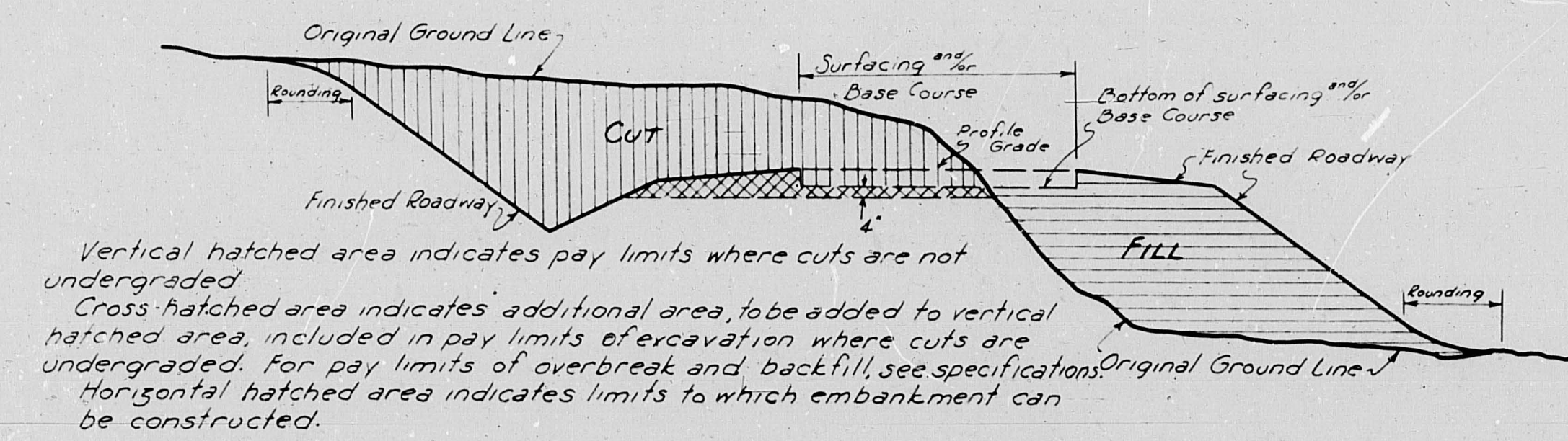
SODDING shall be performed where specified on the plans. Rock or shale slopes to be sodded shall be undergraded and backfilled with selected material as shown.

GENERAL NOTES:

For details of super-elevation and widening of horizontal curves, all pavement appurtenances, drainage items, etc.; see other drawings.
In transitioning from one cut or fill slope to another, use a 25' transition beginning at a point 25' back along that which would normally be the flatter slope and ending the transition at the actual point where the steeper slope is required. If the actual limits requiring the steeper slope is less than 25', do not change to the steeper slope.
All information shown on these is for the purpose of indicating general design and construction details. Actual construction of roadway widths, slopes, depths and types of ditches, undergraded cuts, and other features, shall conform to the details shown on the Cross Sections and the Plan-Profile sheets or as directed by the Engineer.



PARABOLIC ROUNDING REQUIRED AT TOP OF ROADWAY BACKSLOPES AND AT TOE OF ROADWAY FILL SLOPES



SKETCH SHOWING EXCAVATION PAY LIMITS

MISSOURI STATE HIGHWAY COMMISSION

TYPICAL SECTIONS FOR 38 FT. GRADED EARTH AND 22 FT. CONCRETE PAVEMENT

ROUTE: 7 COUNTY: CASS
PROJ. FA741(5) & FG-741(6)

MISSOURI STATE HIGHWAY COMMISSION

TYPE 38' GRADED EARTH, CULVERTS, BRIDGES, OVERHEADS & 22' P.C.C. PAVEMENT

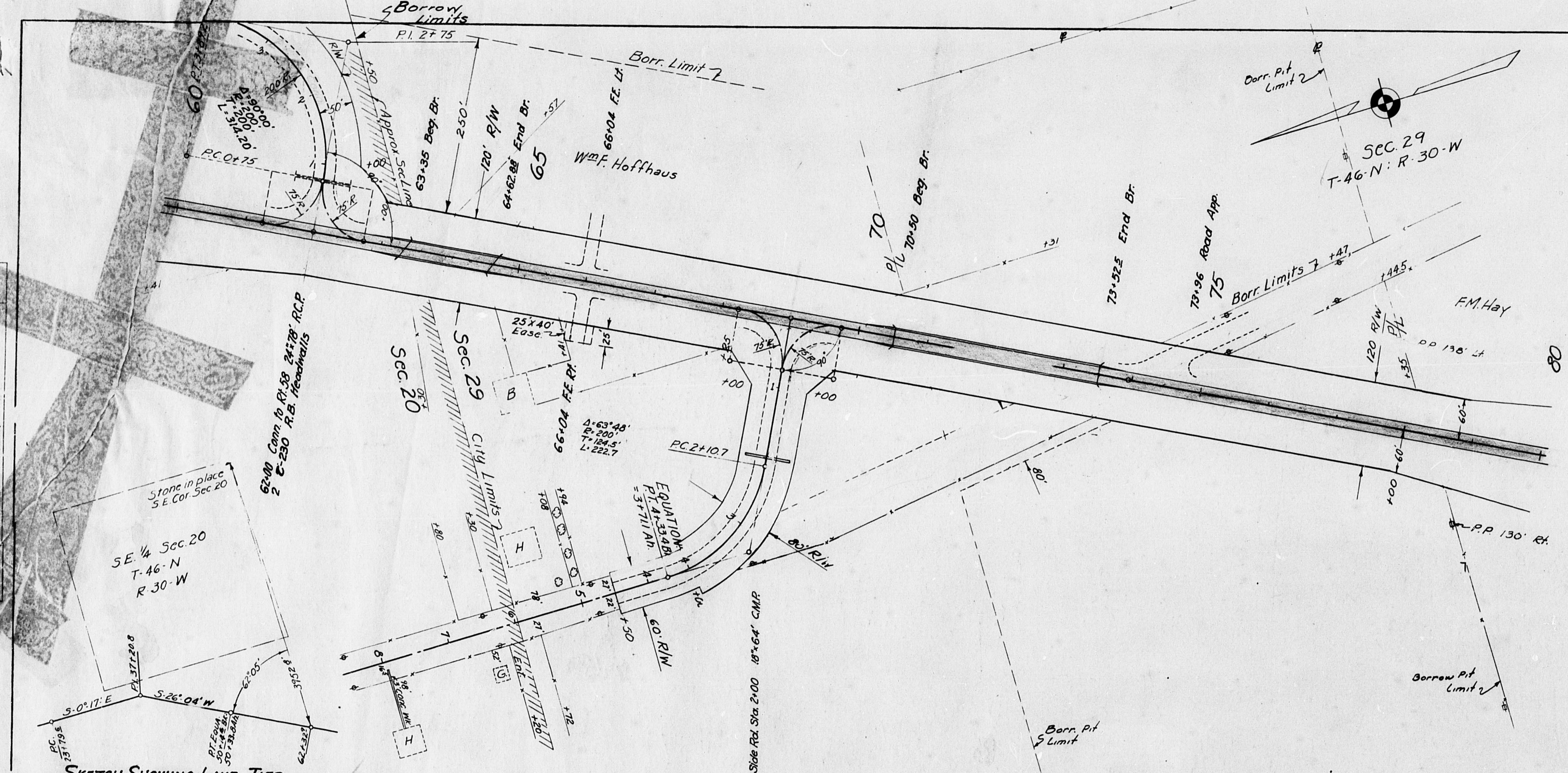
SUMMARY OF QUANTITIES

FED. ROAD DIST. No.	STATE	PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
5	MO.	FG 741 (6)		2A	132
DIV. No.	COUNTY			ROUTE	SEC. No.
4	CASS			7	

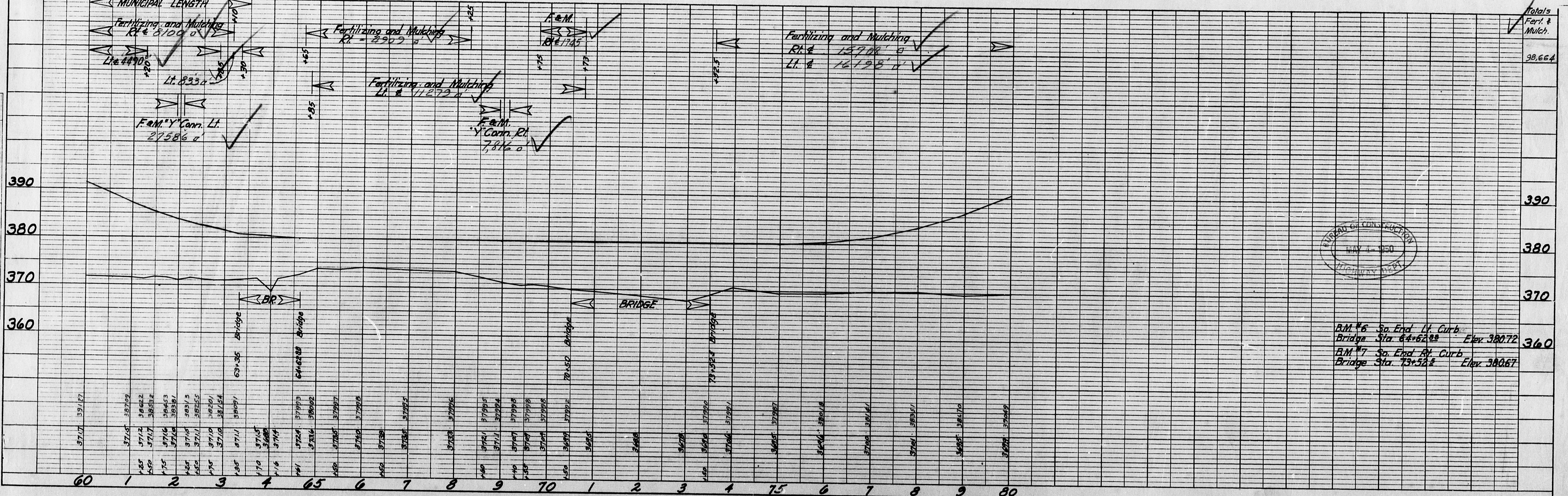
EXCAVATION										CONCRETE BOX CULVERTS										GENERAL SUMMARY																																		
Station	Cl. "A"	Cl. A Barrow	Cl. "C"	Fill	Back Fill	O'haul	Comp. Emb.	Comp. In Cuts		Station	Standard	Size Length	Cl. B Conc.	Reinf. Steel	Cl. 3 Excav	Remarks	LENGTH OF PROJECT			ITEM NO.	DESCRIPTION		UNIT	TOTAL UNITS	NO. UNITS																													
40+00										51+36	C-530	3'-2"-149'	39.8	5,500	253.5	30' SHOW CONC IN EACH SPAN	End of Project	Station	100+00	I-D	Class "A" Excavation	C ⁰ *7 Cu Yd	236,625	106,456																														
49+60	455	✓ 4767		15,660		1,400	15,433	713				Total	39.8	5,500	253.5		Beginning of Project	Station	40+00	I-E	Class "C" Excavation	Cu Yd																																
53+79	135	✓ 23,945		22,214			22,214										Apparent Length		6000	I-I	Class 3 Excavation for Structures	C ⁰ *7 Cu Yd	460	150																														
55+50	Fill Exception									CROSS ROAD REINF CONC. CULVERT PIPES										Equations and Exceptions:			I-K	Compacting Embankments (Rolling)	C ⁰ *7 Cu Yd	220,685	131,336																											
60+36		35,390		41,703		12,574	41,703			Station	12'	18"	G-20 Hdw.	Cl. B Conc.	Reinf. Steel	Cl. 3 Excav	Remarks	SSta. 50+14.6 bk - Sta. 50+33.8 ahd	-192		I-L	Compacting in Cuts (Rolling)	C ⁰ *7 Cu Yd	774	61																													
63+70		25,469		10,026		14,580	10,026			56+61.4	92'		L-RB Rl.	0.40	34	52.0	Incl. Cl. 3 for Drop Inlet			I-N	Overhaul	C ⁰ *7 1/4 Mi. Yd	28,554	28,554																														
68+60		6,327		5,122			5,122			99+96		46'	2-RC Rl.	1.66	126	1.5				IA-A	Broken Stone	C ⁰ *7 Cu Yd	148	148																														
70+65	441	✓ 6,997		3,639			3,639			Totals	92'	46'		2.1	160	53.5				IA-B	Screenings	C ⁰ *7 Ton	405	405																														
81+03	1182	✓ 30,972		26,324			25,924			DROP INLETS *										Total Corrections		-192	Feet	IB-A	Water (Compacting - Rolling)	C ⁰ *7 100 Gal	0																											
86+35	755	✓ 71,372		60,116			60,096													Net Length of Project		5,980.8	Feet	IC-D	Crushed Stone Surface	C ⁰ *7 Cu Yd	339	164																										
89+60	Fill Exception									Station	Side Stal	SIZE OPENING	Depth	Cl. B CONC.	REINFC STEEL	GRATES & BEARING PLATES	Remarks	State Length			IS-A	Portland Cement Conc Pavement	C ⁰ *7 Sq Yd	1,811.8	1,726																													
96+10	10,596	✓ 11,987		34,915	248		35,163			56+61.4	Lf	36 R	2'-2"	1'-9"	0.67	79	176	I-12 Opening		Federal Length	IS-B	Class "B" Concrete (Box Culverts)	Cu Yd	39.8	39.8																													
100+00	3,146	✓ 2,563		1,259	129		1,363	61		56+61.4	Rl	36 R	2'-2"	2'-3"	0.67	82	176	2'-12 Openings			IS-B	Class "B" Concrete (Other than Box Culverts)	Cu Yd	5.4	1.7																													
Sub-Totals	16,710	✓ 219,789		19,475	220,978	377	28,554	220,685	774	*Class 3 Excav. Included in X Road Culvert Pipes										End of Municipal Portion	Station	63+50	IS-C	12" R.C. Culvert Pipe (Cross Road)	Lin. Ft.	92	92																											
Borrow	219,789			377																Begin Municipal Portion	Station	40+00	IS-C	18" R.C. Culvert Pipe (Cross Road)	Lin. Ft.	46	46																											
Ent's & Appars.	126			20,433																Apparent Length		2,350.0	Feet	IS-B	15" C.M. Culvt. Pipe (Entrances)	Lin. Ft.	22	22																										
Totals	236,625			19,475	241,788		28,554	220,685	774											Equation - See Length of Project		-19.2	Feet	IS-B	18" C.M. Culvt. Pipe (Entrances)	C ⁰ *7 Lin. Ft.	64	64																										
										ENTRANCE-SIDE ROAD & APPROACH-PIPE CULVERTS										MUNICIPAL LENGTH										IS-B	24" C.M. Culvt. Pipe (Entrances)	Lin. Ft.	78	78																				
										Station	Type	Side	15"	18"	24"	30"	Relaid CLASS 3 EXCAV.	CL. B CONC.	STEEL	CLASS 3 EXCAV.	FILL	Remarks	State Length			IS-B	30" C.M. Culvt. Pipe (Entrances)	Lin. Ft.	60	60																								
										62+00	ROUTE 58 CONN. LI. &						4.0	1.97	195	175	8	15,326	22' P.C.C. PAVEMENT	Federal Length			IS-B	Relaid Pipe Culverts	C ⁰ *7 Lin. Ft.	112	112																							
										66+04	FE RT.									96	Crown	Profile Chaining (Including Bridges)		5982.3	IS-A	Reinforcing Steel	Lbs.	6020	130																									
										66+04	FE LT.									146	Crown	Profile Chaining (Bridge Lengths)		1,178.9	IS-A	Light Stone Revetment	C ⁰ *7 Sq Yd	732.7	732.7																									
										69+00	CONN. OLD RT. 7 Rl. & TEMPORARY R2 &						6.1			88	76	2,731	REL. 18' C&P FROM TEMP. S.R. 73+96 Rl. SHOWN BACK 200' CONCR.	Net Profile Chained Length (22' Width)		4803.4	IS-B	Grauted Light Stone Revetment	C ⁰ *7 Sq Yd	318.4	318.4																							
										73+96									28		441		4803.4 x 22 = 9'	11,741.6	Sq. Yds	IS-B	Class "C" Underdrain (Tile)	Lin. Ft.	104	104																								
										73+94	S.R. LI.								34		447	Skewed Ahead	Add for widening at Bridge Ends		+71.1	Sq. Yds	IS-B	Barriades	C ⁰ *7 Each	0	0																							
										85+25	Levee Rl.						60.1			1,032	ONE 30" AUTOMATIC FLOOD GATE	Deduct for 2 Drop Inlet Openings		- 0.2	Sq. Yds	IS-B	30" Automatic Flood Gate	Each	1	1																								
										86+50	FE RT.						48		44	Pipe in 2 Lines	Total P.C.C. Pavement		= 11,811.8	Sq. Yds*	IS-B	Grales and Bearing Plates	Lbs.	352	352																									
										92+39	FE LT.								13			Includes 126.0' Lin. Ft. Lip Type Curb Lt. & Rl. Sta. 56+01.0 to Sta. 56+64			IS-P	Fertilizing and Mulching	C ⁰ *7 Acre	8.7	4.9																									
										97+27	PE LI.								6	16	54																																	
										97+50	FE RT.								26	17	Crown																																	
										99+75	PE LT.								8	86	Crown																																	
										Totals			22	64	78	60	11/2	85.0	2.0	200	339	126	20,433				CONTINGENT ITEMS																											
										FERTILIZING & MULCHING										CLASS "C" UNDERDRAINS (TILE)										Left Over 18" C.M. Culvt. Pipe (C ⁰ *7)					Lin. Ft.	24																		
										Sheet N ^o		Sq. Ft.											Station										Location	Type	Lin. Ft.	Tile	Class "C" Excavation (C ⁰ *7)					Cu Yd	10,475	10,475										
										3		133,863											95+25										±	V-Lat.	52	BRIDGE STATION 53+28.25 Dwg. N ^o L-24																		
										4		28,664											97+75										±	V-Lat.	52	30 - (60'-70'-60' Cont.) 45' I Bm. Spans																		
										5		125,901											Total												104	1-G Class 1 Excavation for Structures (C ⁰ *4)					Cu Yd	415	415											
										Total		378,428																															16-B Class B Concrete (Superstructure)					Cu Yd	183.7	183.7				
												8.7																															16-B Class B Concrete (Substructure)					Cu Yd	325.2	325.2				
										LIGHT STONE REVETMENT										REMOVAL OF MISCELLANEOUS STRUCTURES										17-B Fabricated Structural Steel (I-Beam Spans)										C ⁰ *4 Lb.	189,320	189,320												
										Station	Sq. Yd	Remarks	Station										Side	Description	Cl. 3 Excav	17-C Steel Castings										C ⁰ *4 Lb.	5,220	5,220																
										63+35	251.1	At Br End	73+07										Rl.	Conc Box Under Old Route 7	68.0	17-E Gray Iron Alloy Castings										Lb.	430	430																
										64+63	251.6	At Br End														17-M Fab. Wrought Iron Blast Plates										C ⁰ *4 Lb.	10,230	10,230																
										73+52.5	230.0	At Br End														19-A Reinforcing Steel										Lb.	74,200	74,200																
										Total	732.7															22-D Steel Piles In Place										C ⁰ *4 Lin. Ft.	2,748	2,748																
										GROUTED LT. ST. REVETMENT																				22-D1 Steel Pile Cut-Off										C ⁰ *4 Lin. Ft.	363	363												
										Station	Sq. Yds	Remarks	Station										Side	Description	Cl. 3 Excav	CONTINGENT ITEMS										Paint (One Coat Red Lead)					C ⁰ *2 Lump Sum	1	1											
										85+56.5	318.4	At Br End														Elimination of Bevel on Haunches										C ⁰ *6 Lin. Ft. Beam	684	684																
										Total	318.4																									BRIDGE STATION 63+35 Dwg. N ^o L-25																		
										30" AUTOMATIC FLOOD GATE										BRIDGE STATION 85+56.5 Dwg. N ^o L-23										5-25' Cont. Slab Spans 30° Skew										L.A.														
										Station	Side	Description	Number	2-60' Cont. I-Beams - 260' Truss - 2-47' Cont. I-Beams										ITEM N ^o										DESCRIPTION	UNIT	TOTAL UNITS	R	M	16-B Cl. "B" Concrete (Handrail)					Cu. Yd.	16.3	16.3								
										85+25	Rl.	Outlet of 30" Pipe Thru Levee	1											1 - G										Cl. 1 Excavation for Structures	C ⁰ *5 Cu. Yd.	706.5	706.5	16-B Cl. "B" Concrete (Superstructure Except Handrail)					Cu. Yd.	205.0	205.0									
																				1 - H										Cl. 2 Excavation for Structures	C ⁰ *5 Cu. Yd.	190.5	190.5	16-B Cl. "B" Concrete (Substructure)					Cu. Yd.	52.6	52.6													
																				16 - B										Cl. B Concrete (Superstructure) (Incl. End Posts)	Cu. Yd.	327.5	271.5	19-A Reinforcing Steel					Lb.	45,900	45,900													
																				16 - B										Cl. B Concrete (Substructure)	Cu. Yd.	736.74	767	22-C Concrete Piles In Place					C ⁰ *3 Lin. Ft.	1,528	1,528													
																				18 - K										6" 12 gauge Metal Pipe	C ⁰ *5 Lin. Ft.	43	43	22-C1 Concrete Pile Cut-Off					C ⁰ *3 Lin. Ft.	144	144													
																				18 - K										8" 12 gauge Metal Pipe	C ⁰ *5 Lin. Ft.	169	169	22-E Test Piles					Lin. Ft.	100	100													
																				17 - B										Fab. Struct. Steel (Truss Span)	C ⁰ *5 Lb.	490,450	490,450																					
																				17 - B										Fab. Struct. Steel (I-Beam Spans)	C ⁰ *5 Lb.	147,320	147,320																					
																				17 - C										Steel Castings	C ⁰ *5 Lb.	2,850	2,850																					
																				17 - E										Gray Iron Alloy Castings	C ⁰ *5 Lb.	1,040	1,040																					
																				17 - M										Fab. Wrought Iron Blast Plates	C ⁰ *5 Lb.	5,150	5,150																					
																				19 - A										Reinforcing Steel	Lb.	130,870	130,870																					
																				19 - M										Fab. Wrought Iron (Drains)	C ⁰ *5 Lb.	1,040	1,040																					
																				22 - D										Steel Piles In Place	C ⁰ *5 Lin. Ft.	3,872	3,872																					
																				22 - D1										Steel Pile Cut-Off	C ⁰ *5 Lin. Ft.	598	598																					
																														CONTINGENT ITEMS										Paint (One Coat Red Lead)					C ⁰ *2 Lump Sum	1	1							
																																								Elimination of Bevel on Haunches					C ⁰ *6 Lin. Ft. Beam	2100	2100							

BRIDGE STA. 85+56.61

Figure 10-1 is a plan view diagram of a road intersection. It shows a horizontal road with a centerline and two parallel edges. A diagonal road intersects it at a 30-degree angle. The intersection area is shaded. Dimensions are given in feet: the horizontal road is 22' wide, the diagonal road is 26' wide. The intersection area is defined by a 30-degree angle. Horizontal distances are marked as 47.50', 40', and 32.50'. Vertical distances from the horizontal road centerline to the intersection points are 2', 11', and 2'. The text "NO SCALE" is at the bottom.



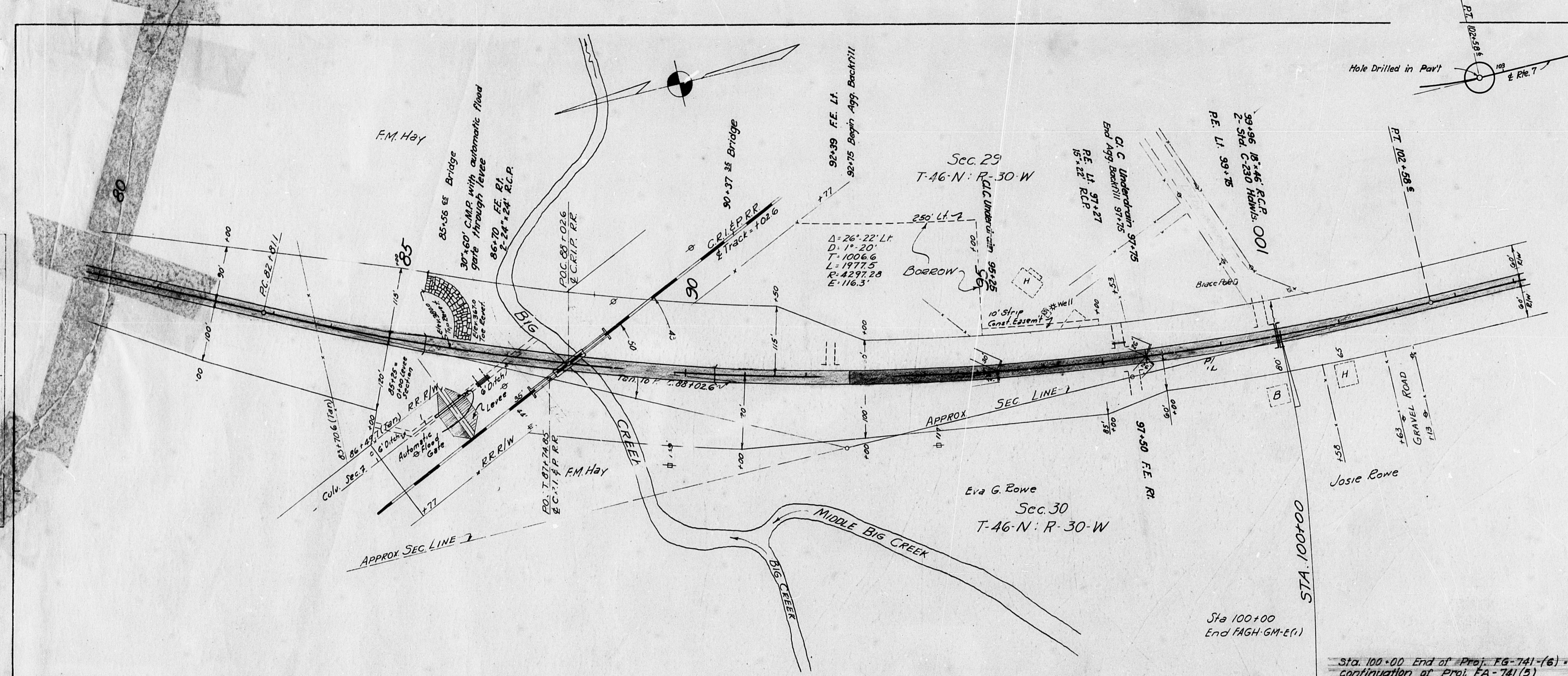
25
55
SKETCH SHOWING LAND TIES



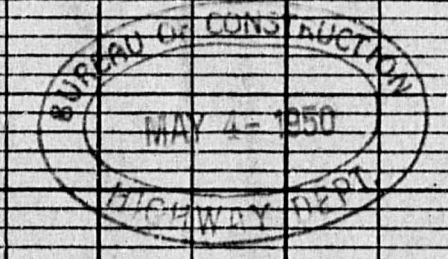
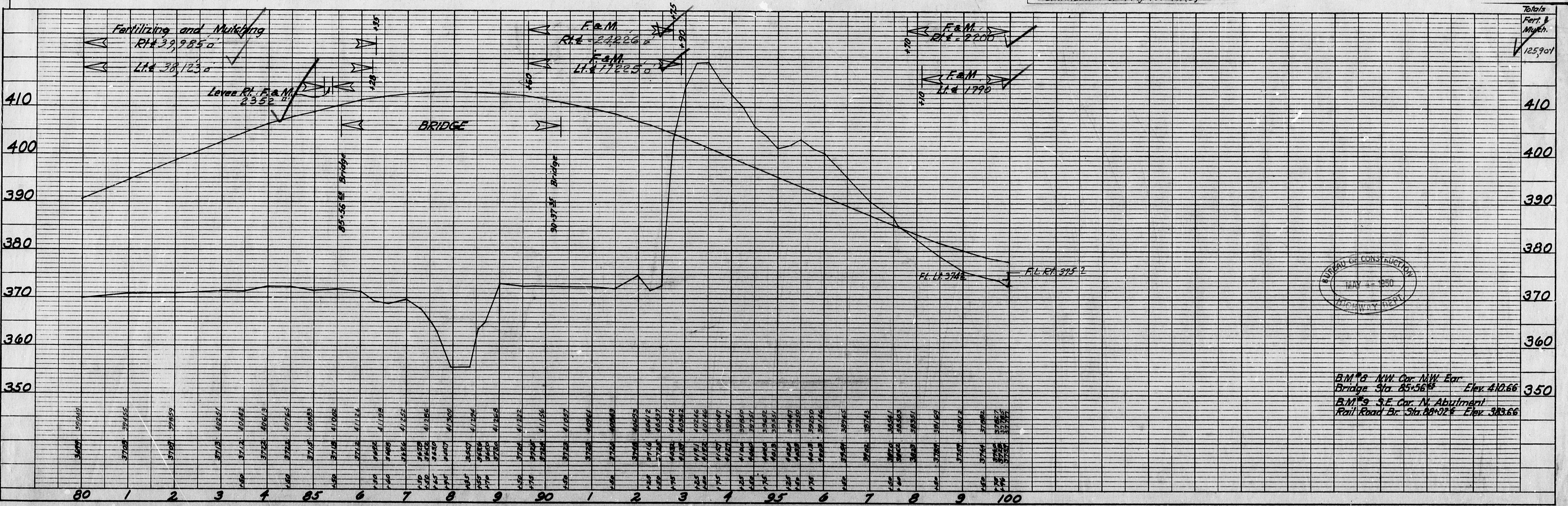
BUREAU OF CONSTRUCTION
MAY 4 - 1950
HIGHWAY DEPT.

BM #6	So. End Ry. Curb		
Bridge Sta. 64+62.99	Elev. 380.72	360	
BM #7	So. End Ry. Curb		
Bridge Sta. 73+52.5	Elev. 380.67		

PLAN
DATE
BY
CHECKED
NOTED
NO.



PROFILE
DATE
BY
CHECKED
NOTED
NO.



B.M. 8 NW. Cor. NW. Eor.
Bridge Sta. 85+56.65 Elev. 410.66
B.M. 9 S.E. Cor. N. Abutment
Rail Road Br. Sta. 88+02.6 Elev. 383.66

MISSOURI STATE HIGHWAY DEPARTMENT

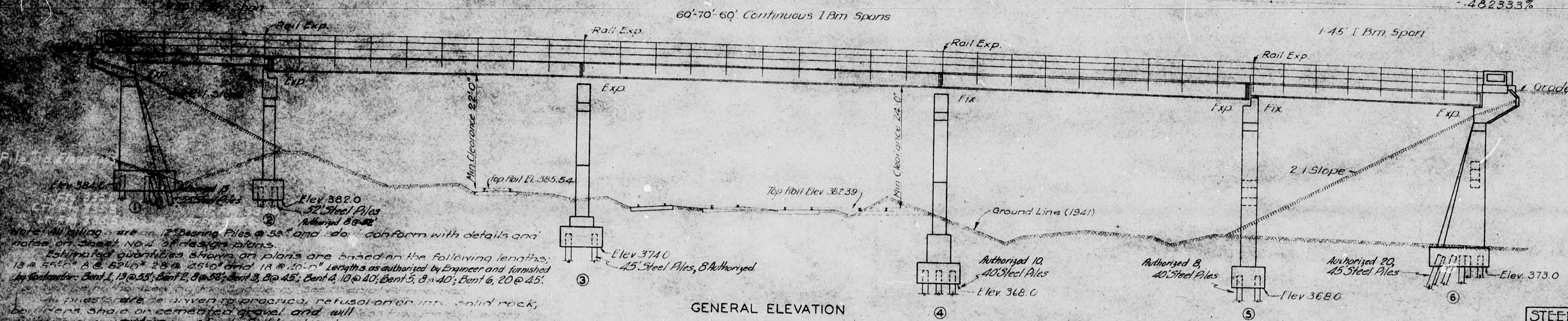
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-741(6)	19	1	1

FINAL PLANS

Sta 56+20
Elev 410.25

-4.82333%

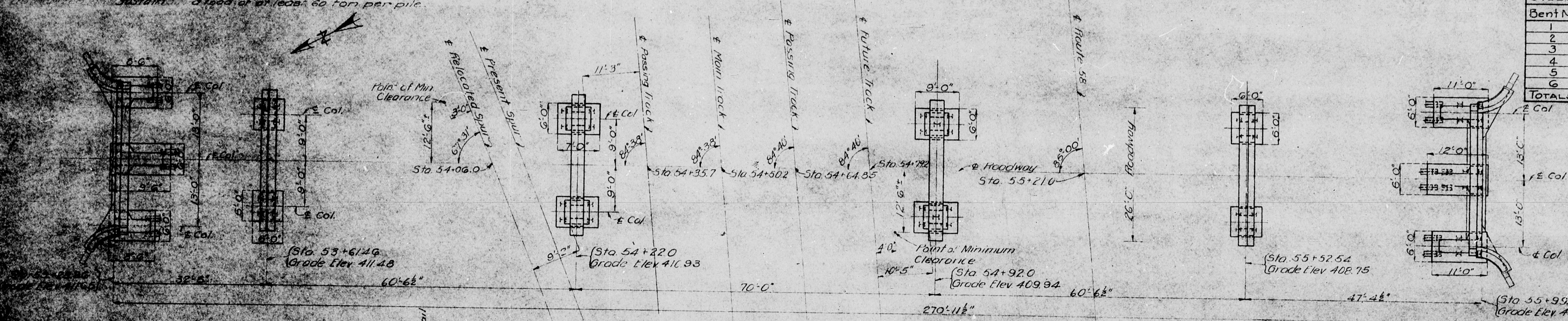
50%



GENERAL ELEVATION

Bent No.	Lin Ft. Pile in Place	Lin Ft. Pile Cutoff
1	663	52
2	386	30
3	319	41
4	341	39
5	266	54
6	773	129
TOTALS	2748	363

Bent No.	Class 1 Excavation
1	51.90
2	52.20
3	65.70
4	121.92
5	63.00
6	60.20
TOTAL	414.92
PRY	415.0



PLAN

Item	Substr.	Superstr.	Total
Class 1 Excavation for structures	cu yds		415.0
Class B Concrete	cu yds	183.7	598.9
Fabricated Structural Steel	Lbs	189320	189320
Steel Castings	Lbs	5220	5220
Gray Iron Alloy Castings	Lbs	430	430
Reinforcing Steel	Lbs	31290	74200
Steel Piling in Place	lin ft	2748	2748
Steel Pile cut-offs	lin ft	363	363
Wrought Iron Blast Plates	Lbs	10230	10230
Red Lead Painting	lin ft	1	1

Concrete in end posts is included with substructure concrete.

B.M. Elev 411.55 SW Cor. West Wing 15' Rt. Sta. 53+25

BRIDGE OVER MO. PAC. R.R. & RT. 58

STATE ROAD FROM PLEASANT HILL TO HARRISONVILLE

IN PLEASANT HILL

PROJECT NO. FG-741 (6) (RT. 7)

STA. 53+28.96

CASS

COUNTY

DESIGNED BY *W. W. Carver* DATE 3/8/1948
APPROVED BY *Chas. Brown* DATE 3/8/1948

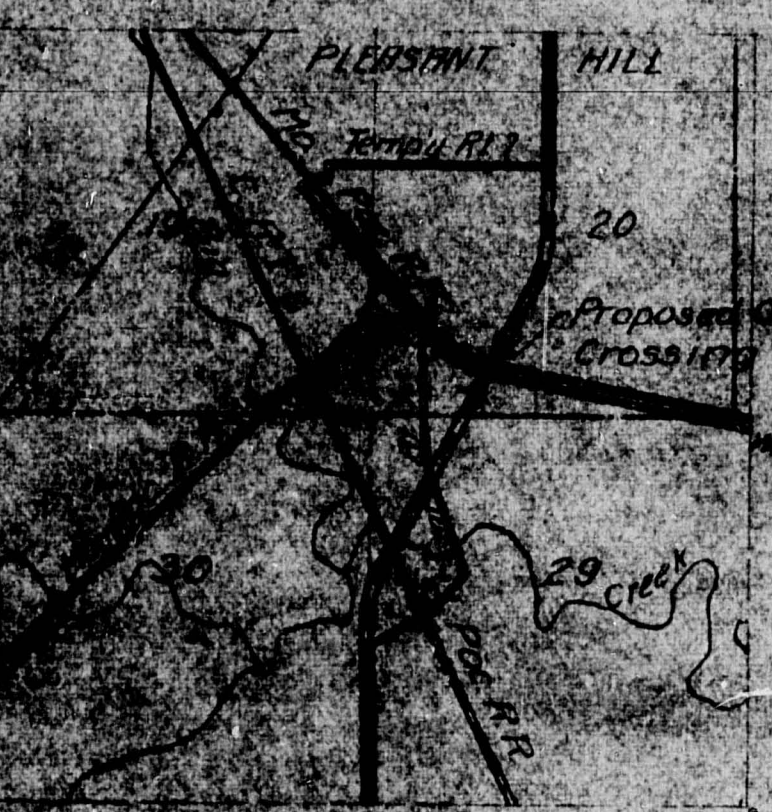
STD. C-1108

L-24

GENERAL NOTES:

Design Specifications A.A.S.H.O.-10-14.
Loading H-15 A.A.S.H.O.
Structural Steel Stress 18,000 #/sq. in.
Reinforcing Steel Stress 18,000 #/sq. in.
Concrete Class "B" 1,000 #/cu. yd.
All concrete shall be class "B".
Rivets 3/8" except as noted.
Qualifications of all welding operators and electrodes will be required in accordance with specifications, except that a proper certification of electrodes previously qualified will be acceptable.
Where joint filler is specified on plans it shall conform with the requirements for Premoulded Material Filler as given in Section 38-19A(1)h of the Standard Specifications.
Paint: Shop, none; Field, contact surfaces of bolted field connections one coat of red lead and surfaces inaccessible after erection three coats of red lead. Blast plates one coat of an approved asphaltic primer and a second coat of an approved asphaltic paint. All other exposed surfaces one coat red lead, second coat brown, third coat aluminum tinted blue, final coat aluminum. All coats excepting first coat of red lead is paid for in price bid on material painted. Red Lead coat covered by C2 No. 3.
Falsework for spans over existing railroad tracks shall be constructed with a minimum vertical clearance of 21'-0" from top of rails and a minimum lateral clearance of 9'-0" from centerline of tracks.
A rubbed surface finish will be required on all exposed surfaces of curbs, concrete end posts, and bents down to construction joint below curb section and on outside faces of roadway slab.

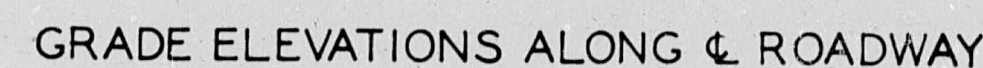
RAIL PROFILE



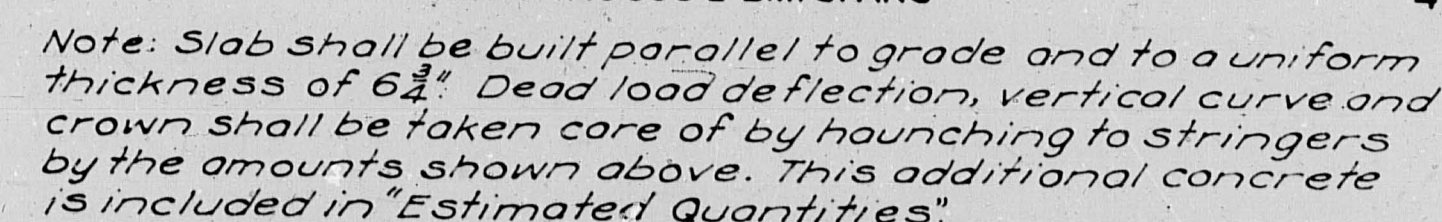
LOCATION SKETCH

Note: This drawing is not to scale. Follow dimensions.

FED ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
5	MO.	FG-741(G) (RT 7)	19		12



Inside Stringers
Outside Stringers



Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 9

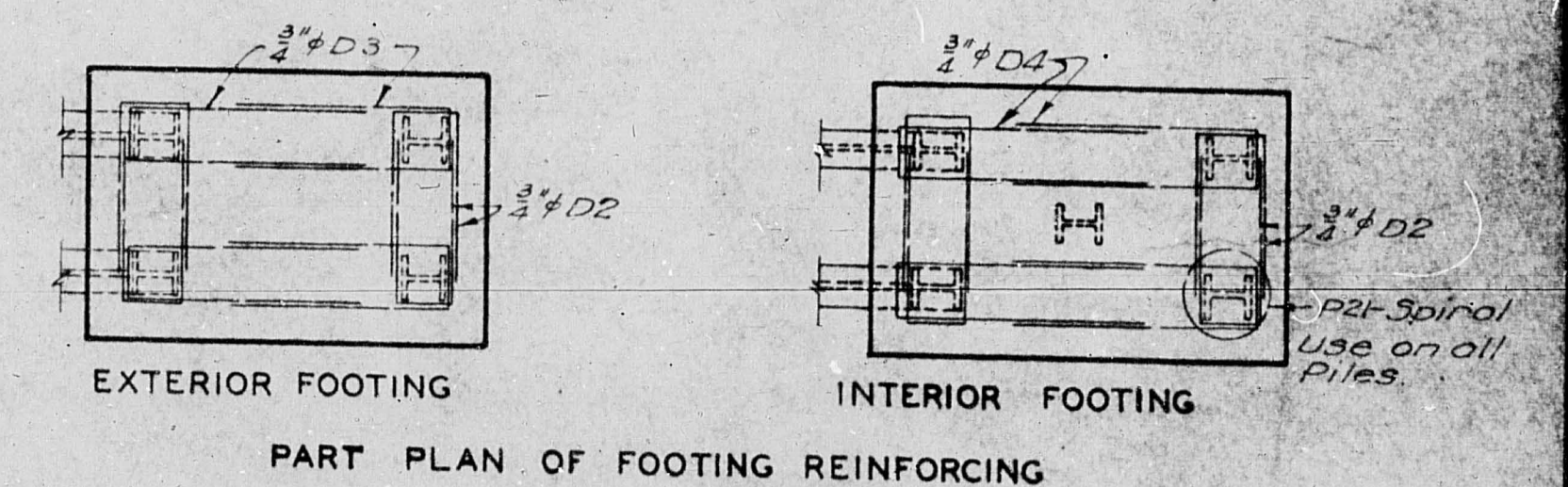
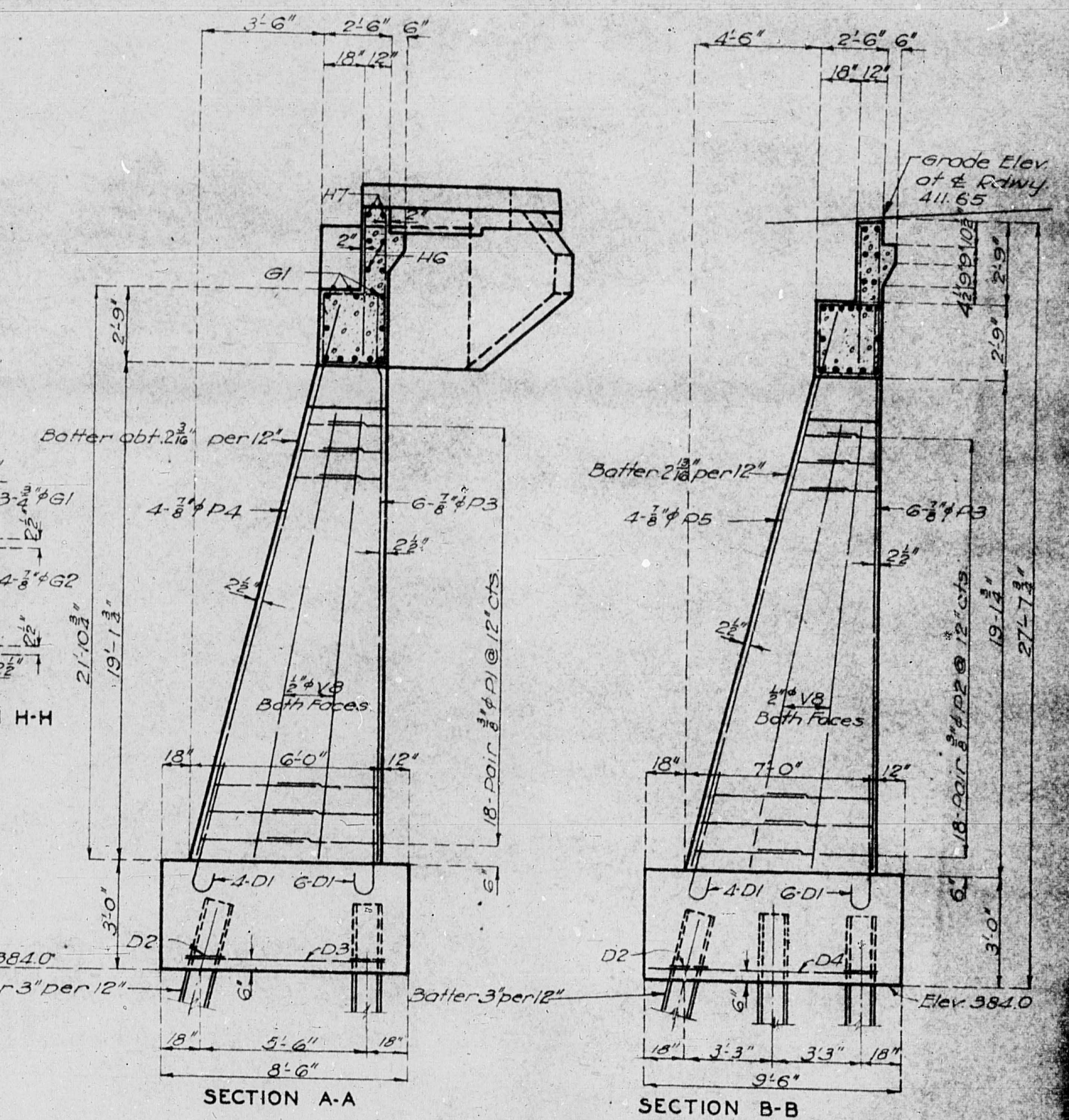
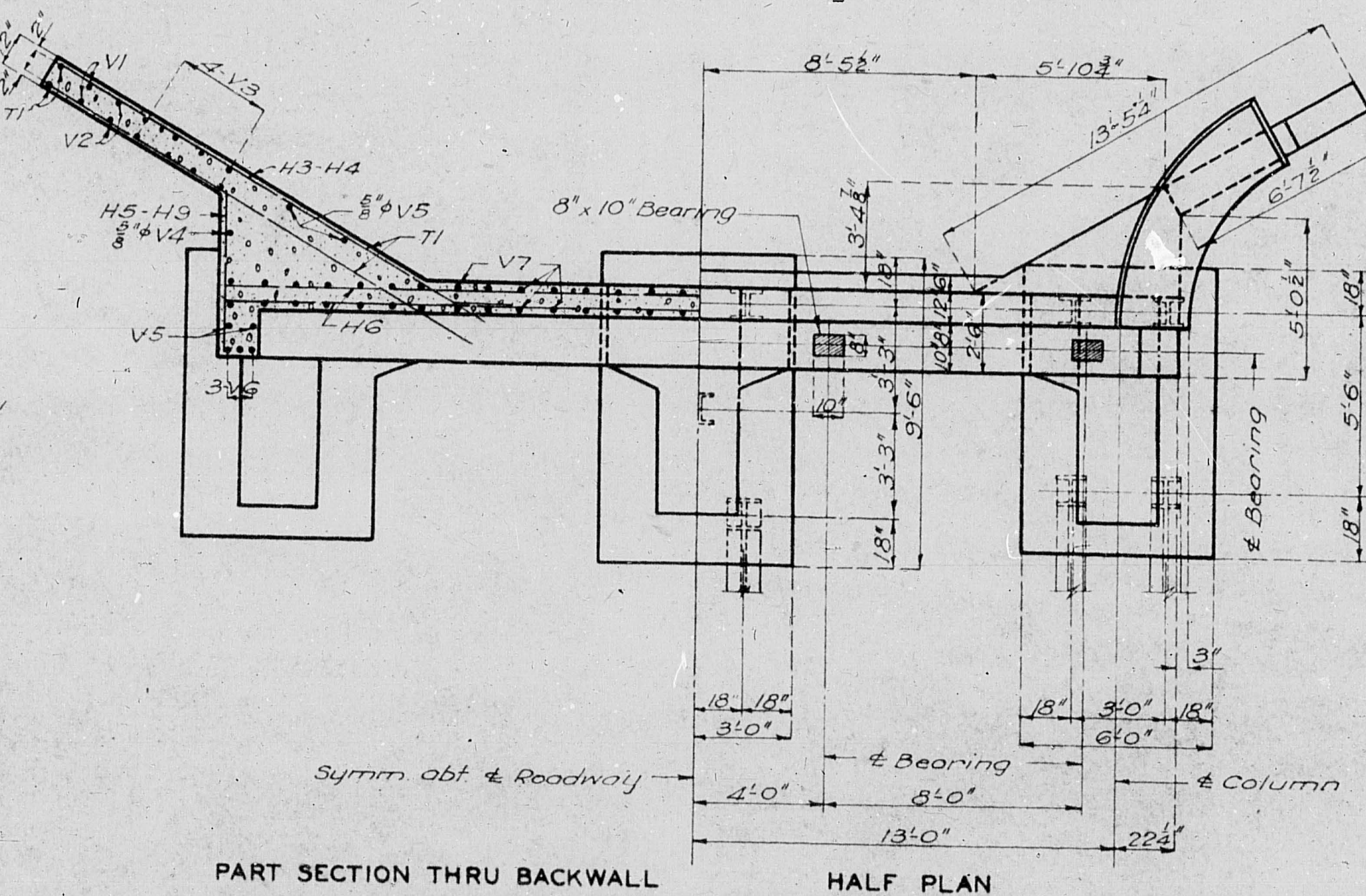
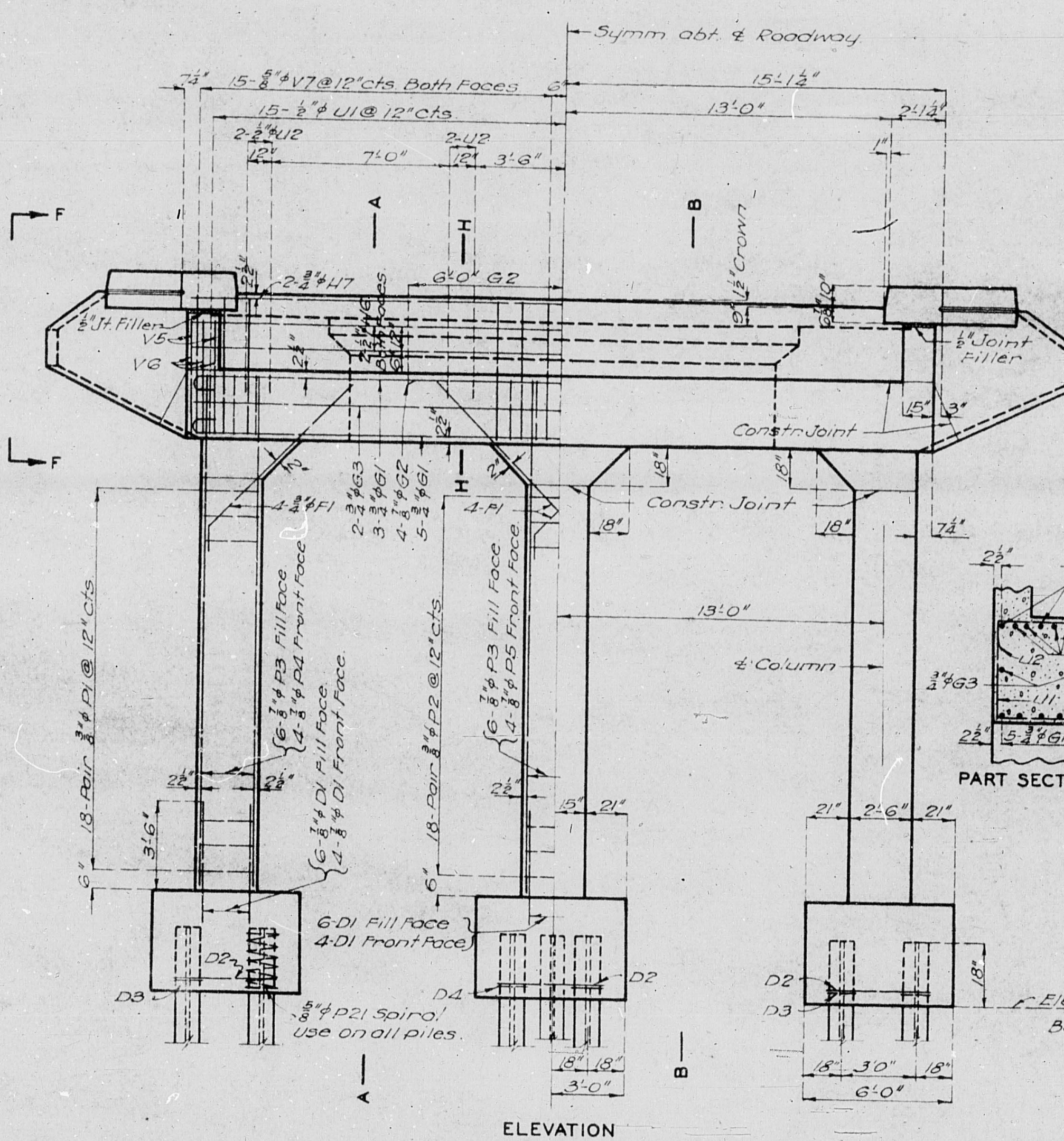
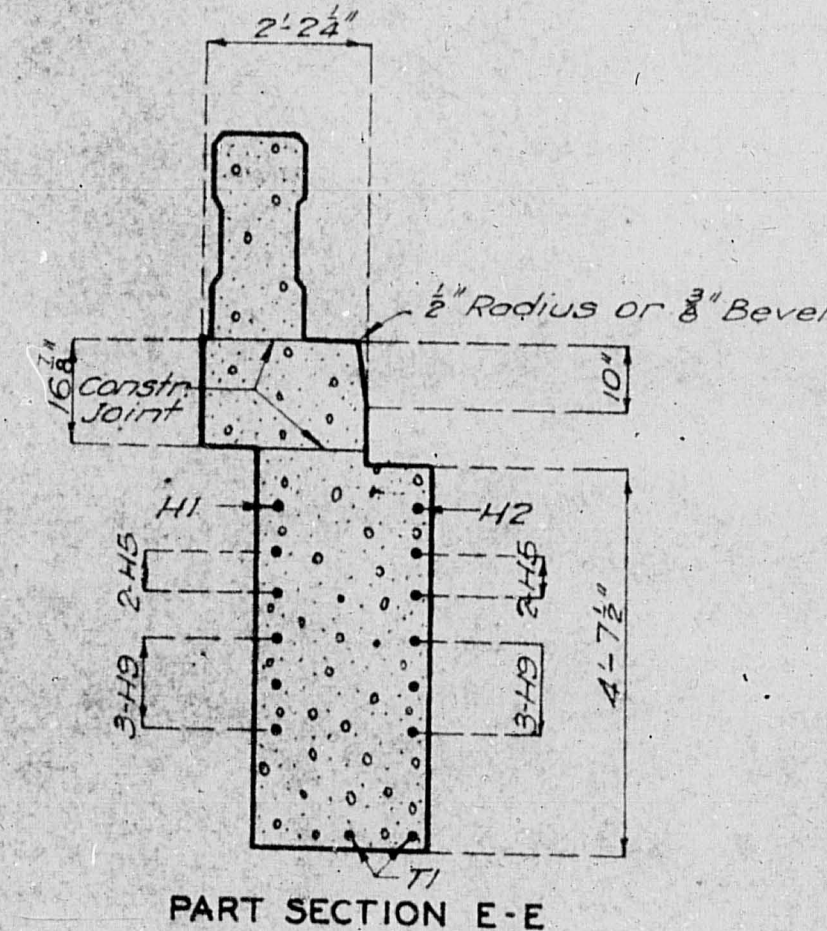
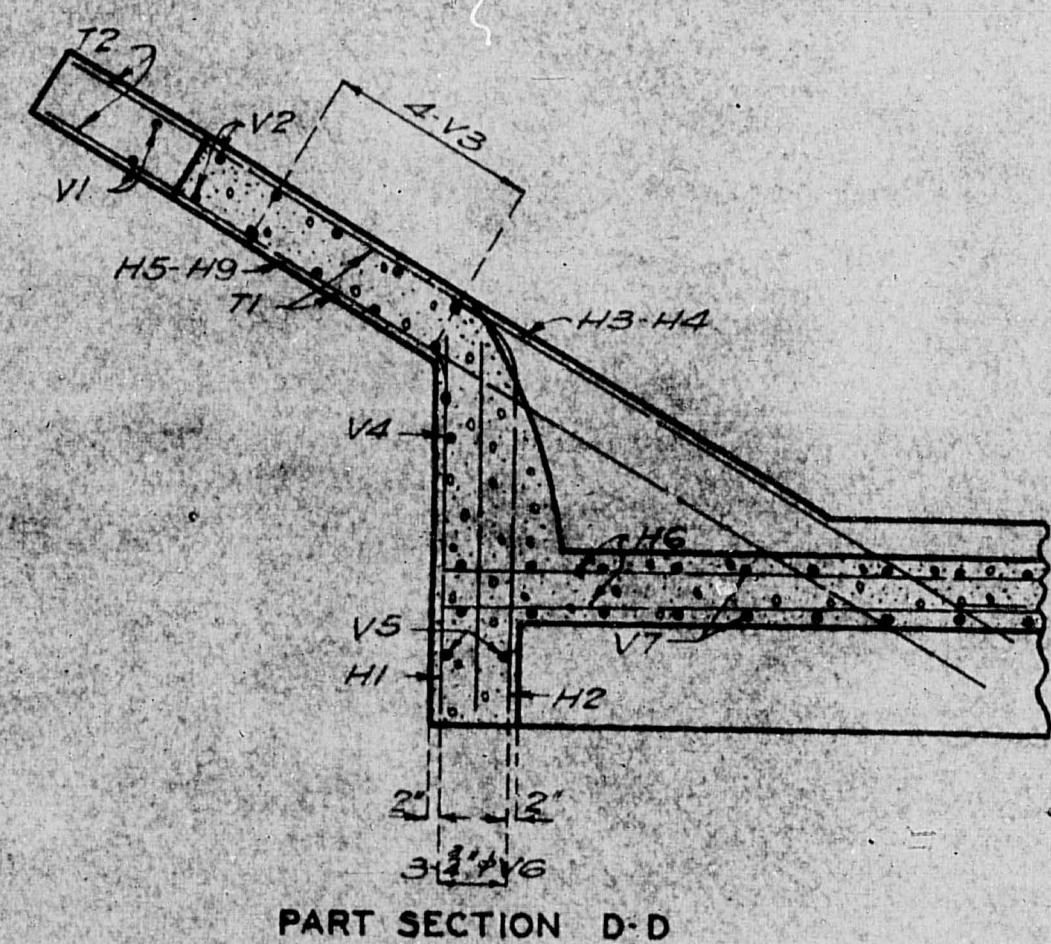
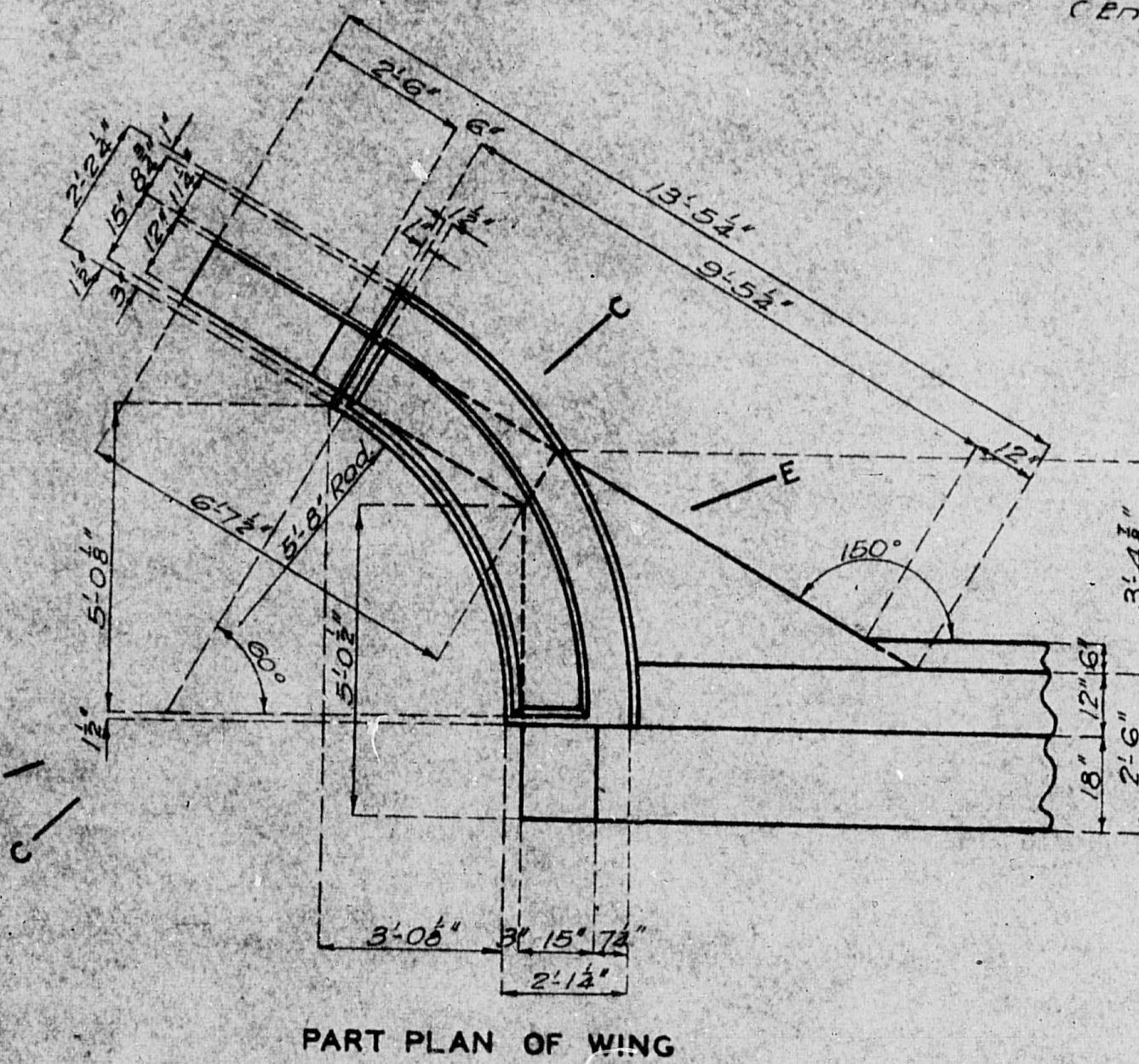
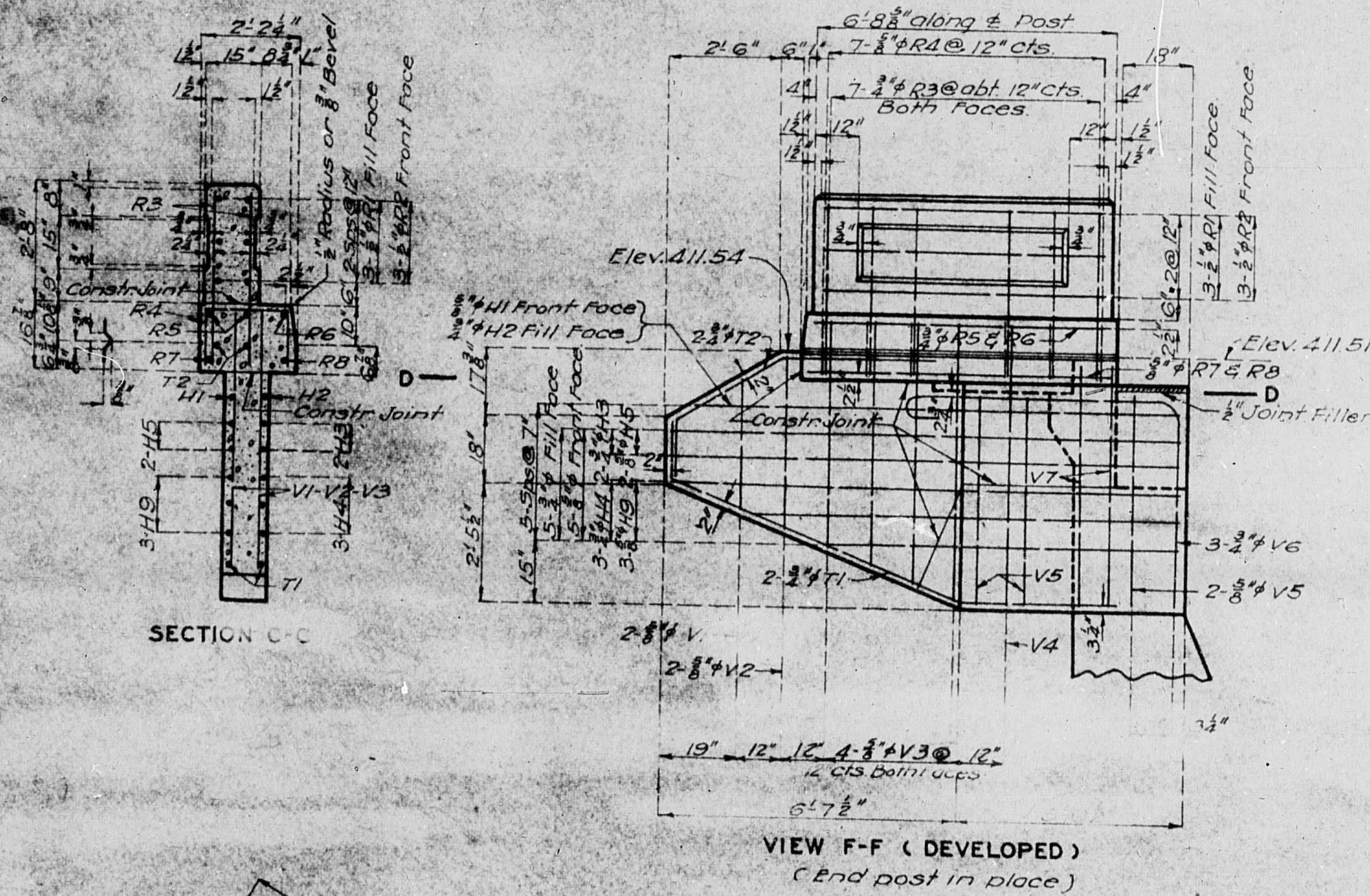
L-24

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	FG-741(6) (RT. 7)	19	1	

FINAL PLANS

Note: Ends of wings, curbs and posts are to be built parallel to grade. Ends of posts are to be vertical.



BRIDGE OVER MO. PAC. R.R. AND ROUTE 58
STATE ROAD FROM PLEASANT HILL TO HARRISONVILLE
IN PLEASANT HILL
PROJECT NO. FG-741(6) (RT. 7) STA. 53+28.96
CASS COUNTY

Designed Nov. 1944 by J.B.J.
Drawn Nov. 1944 by G.W.
Traced Dec. 1944 by H.C.
Checked June 1945 by A.K. & D.M.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3A of 5

L-24

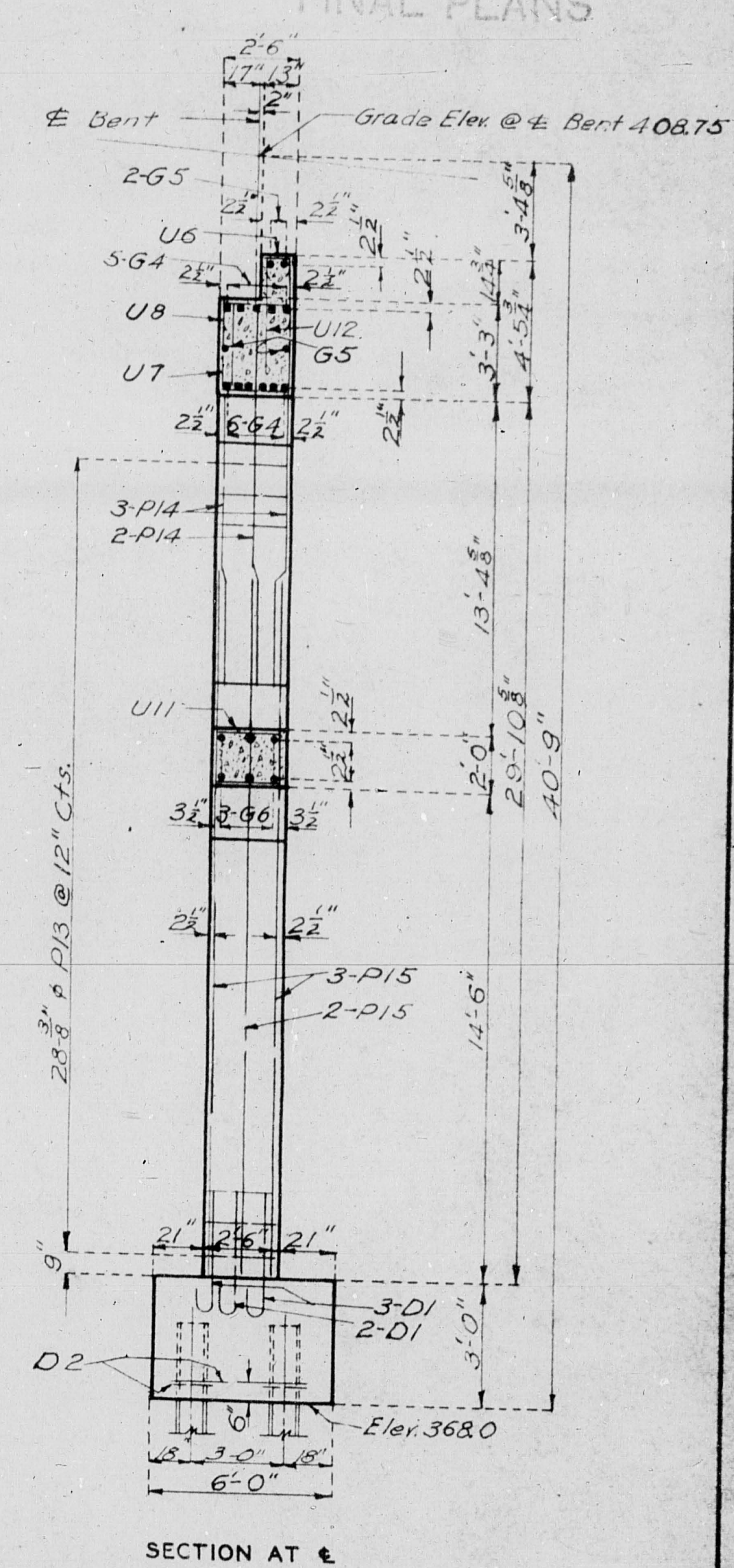
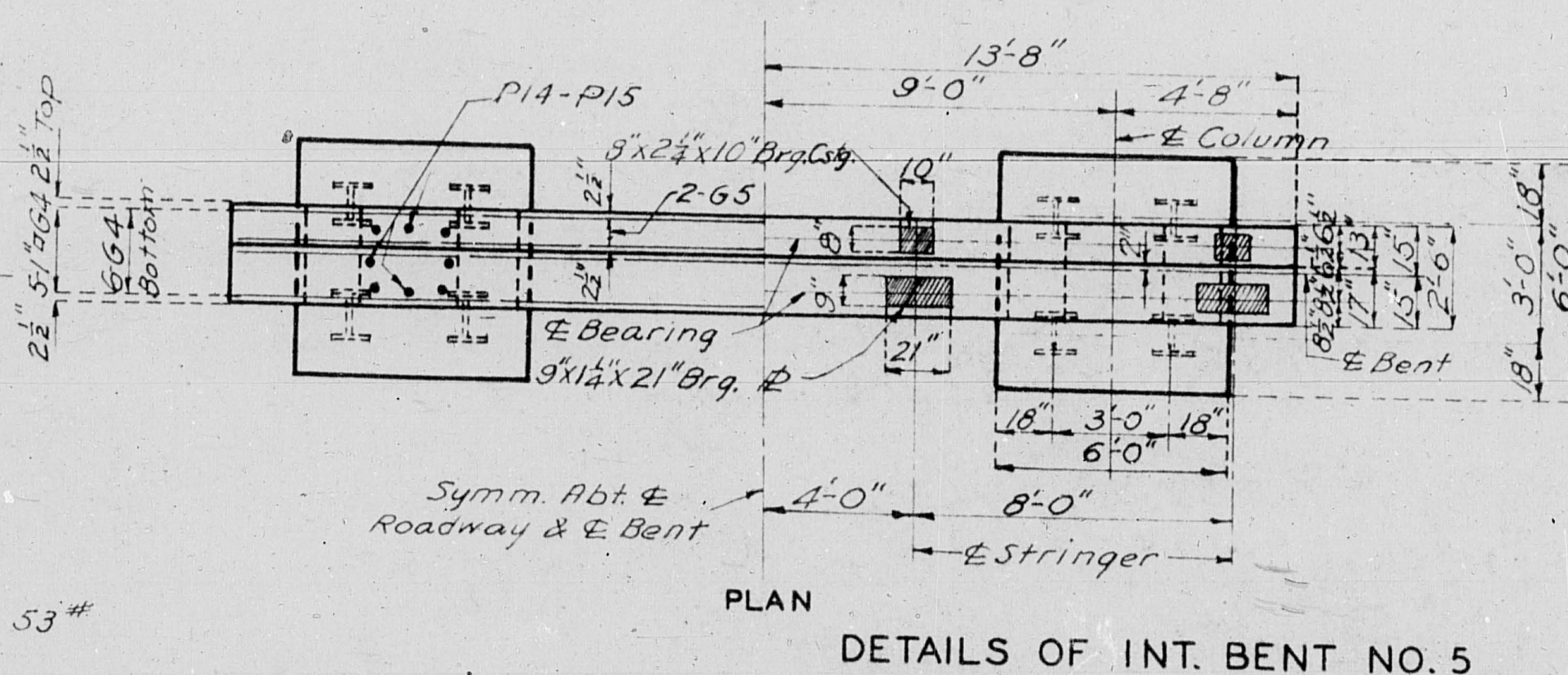
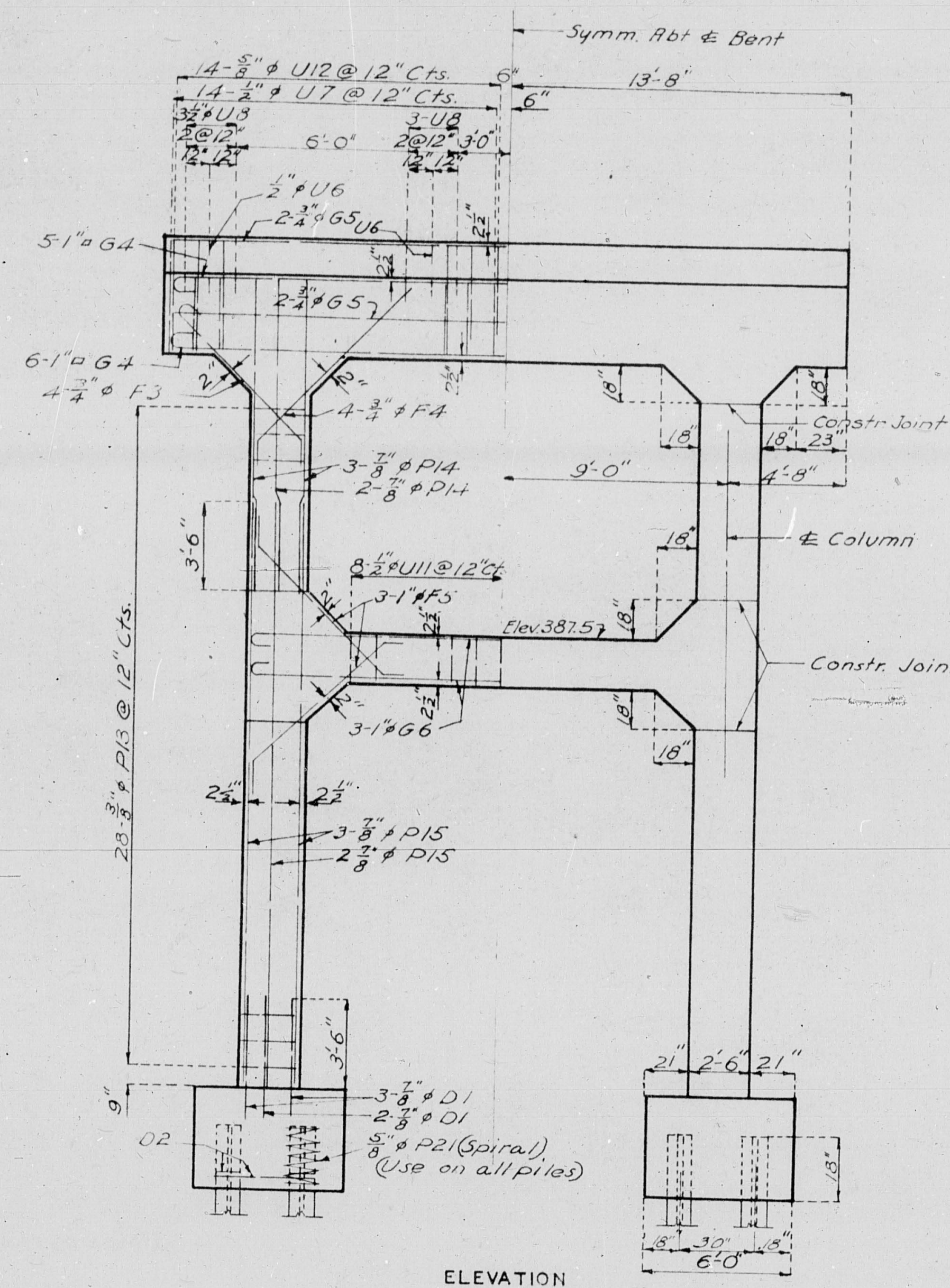
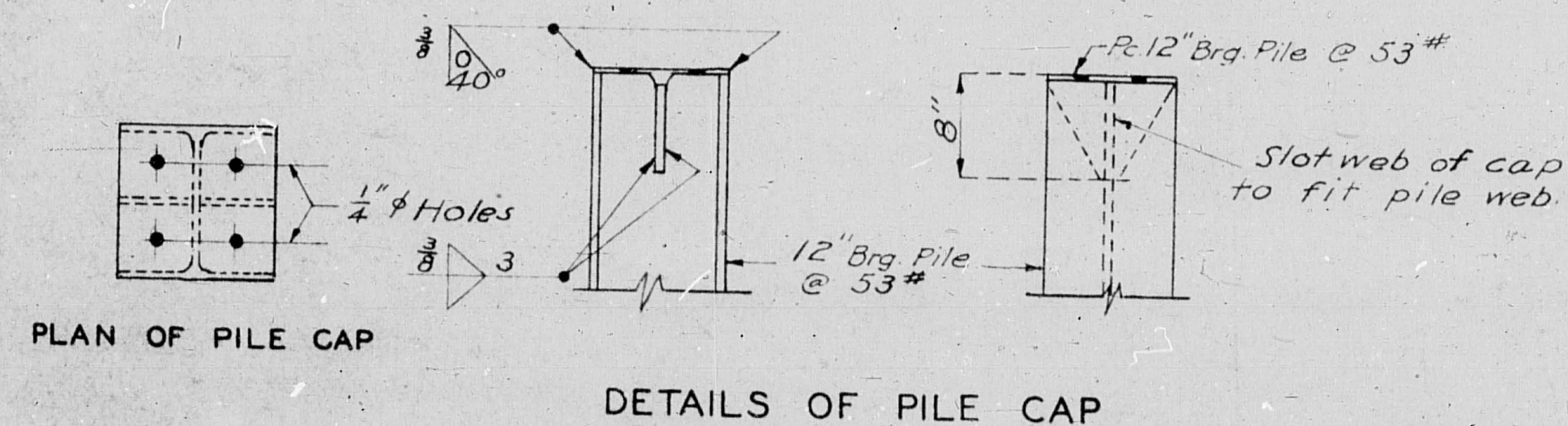
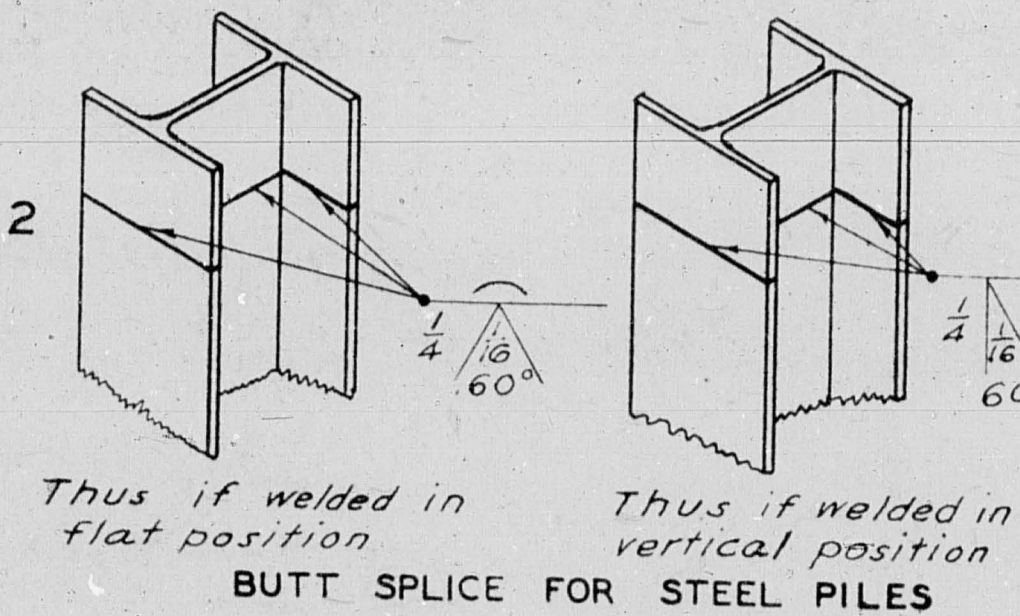
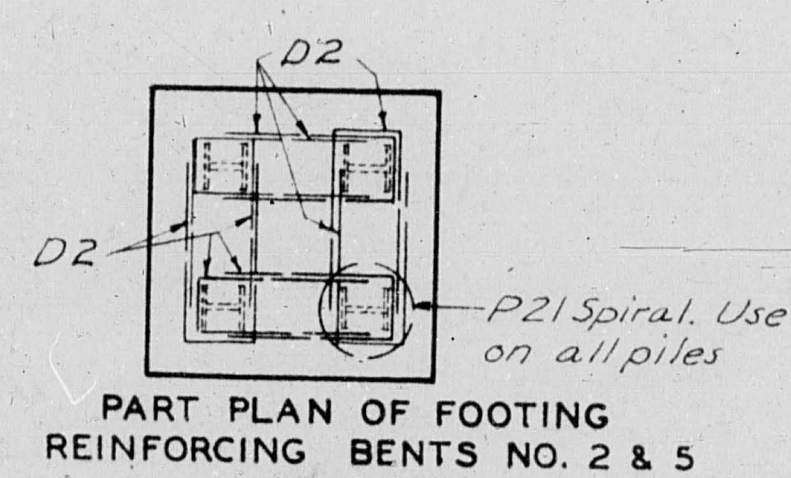
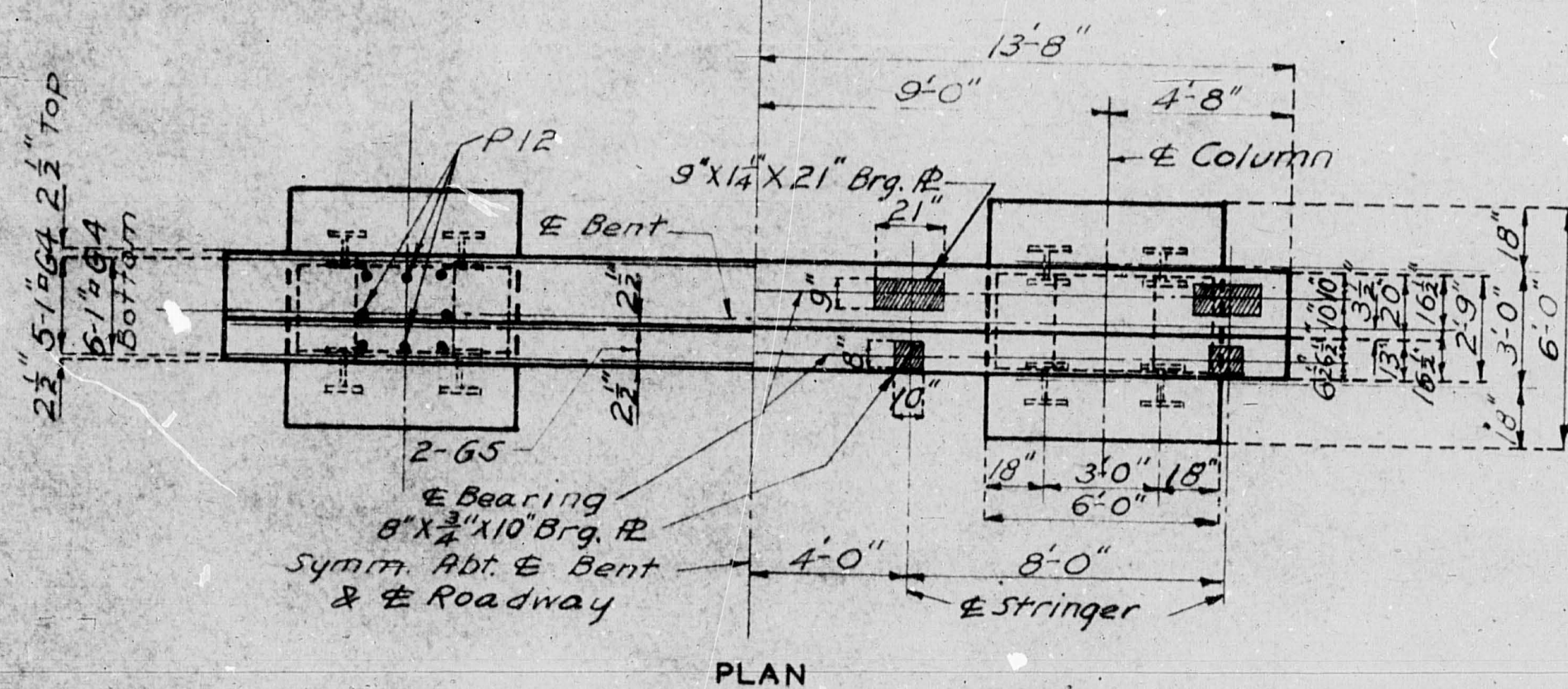
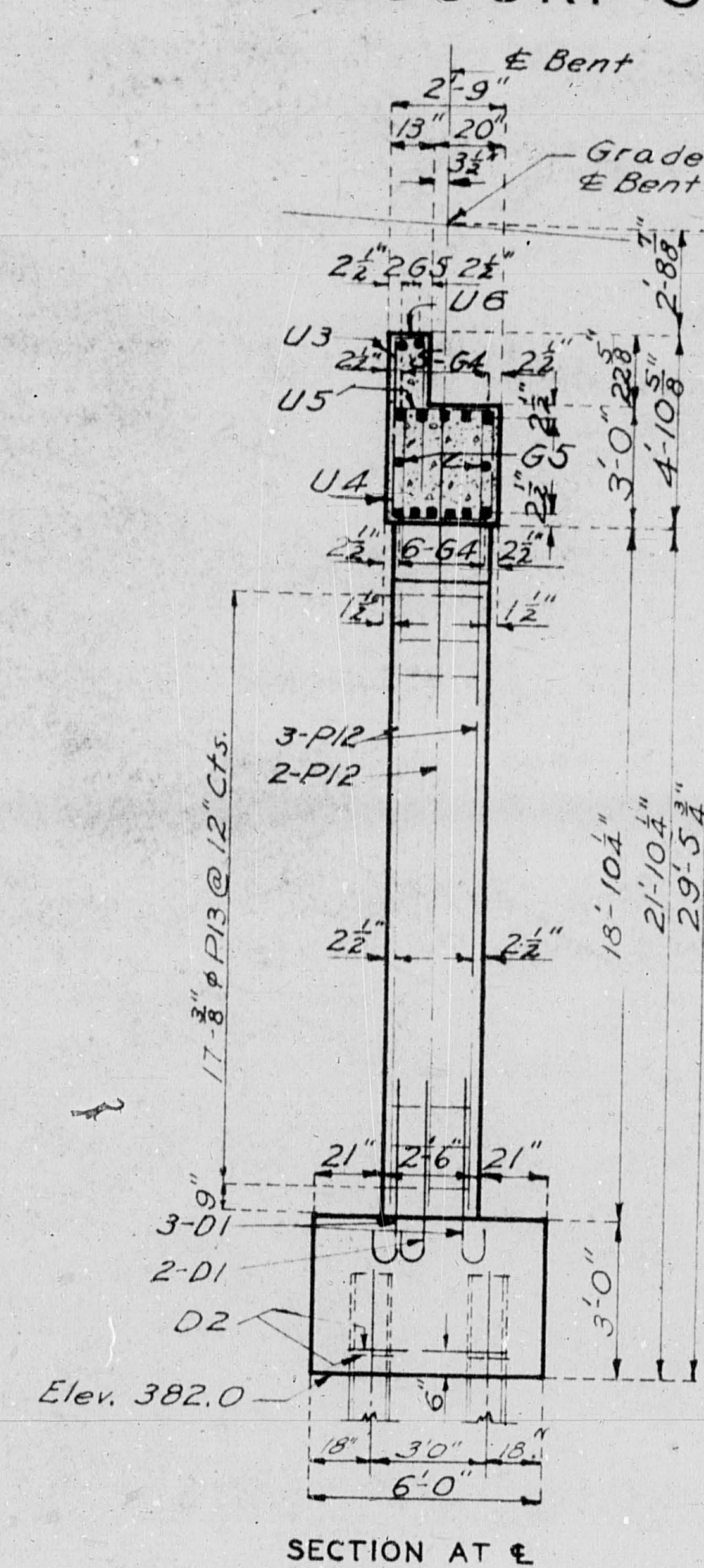
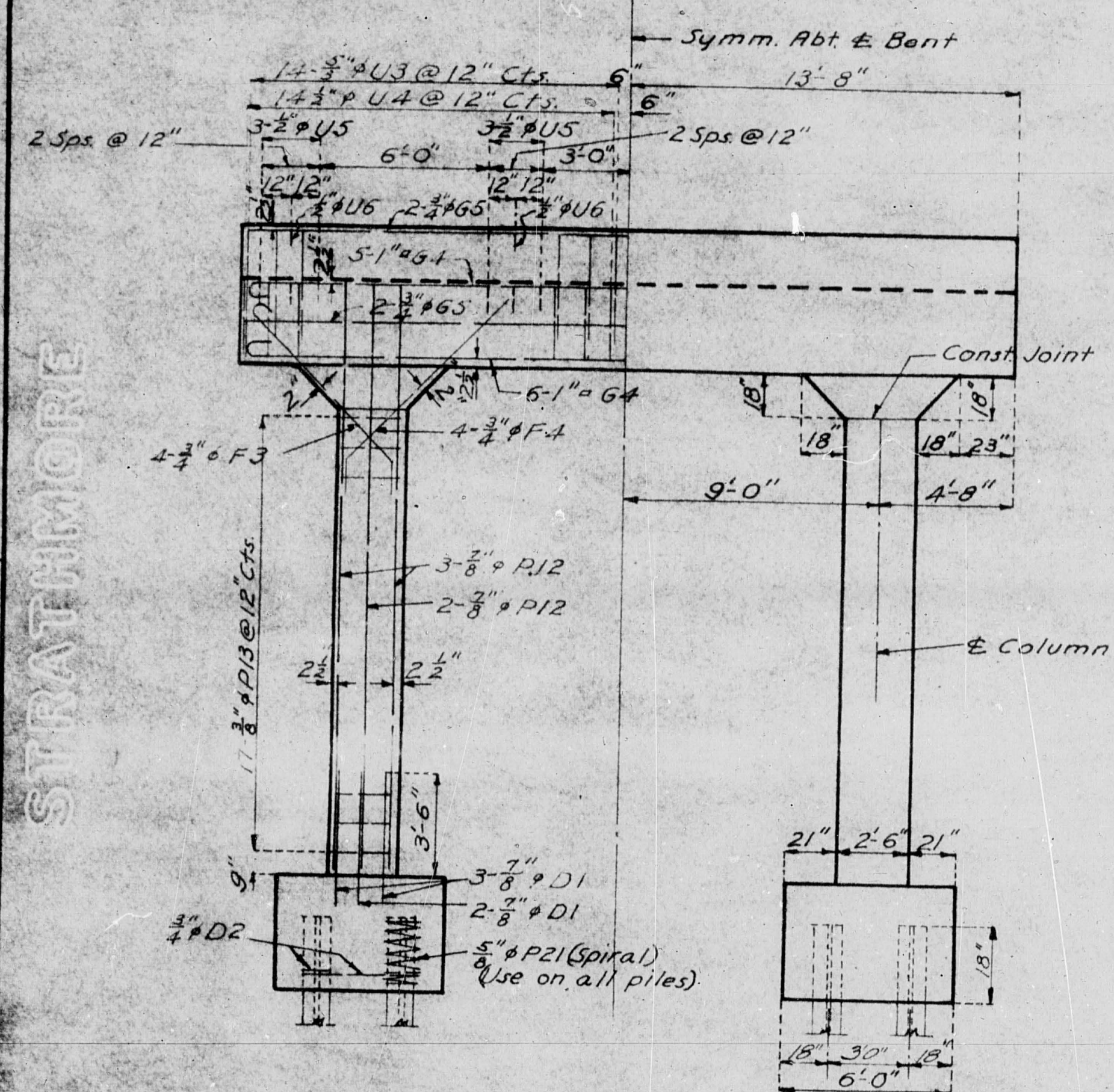
FINAL PLANS

Revised 3-6-44

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	PG-74(6) (RT. 7)	19		

FINAL PLANS



Designed Nov. 1944 by J.B.J.
 Drawn Dec. 1944 by G.W.
 Traced Feb. 1944 by N.C.W.
 Checked June 1945 by G.H. & D.M.

Note: This drawing is not to scale. Follow dimensions.

BRIDGE OVER MO. PAC. R.R. & ROUTE 58
 STATE ROAD FROM PLEASANT HILL TO HARRISONVILLE
 IN PLEASANT HILL
 PROJECT NO. FG-74(6) (RT. 7) STA. 53+28.96
 CASS COUNTY

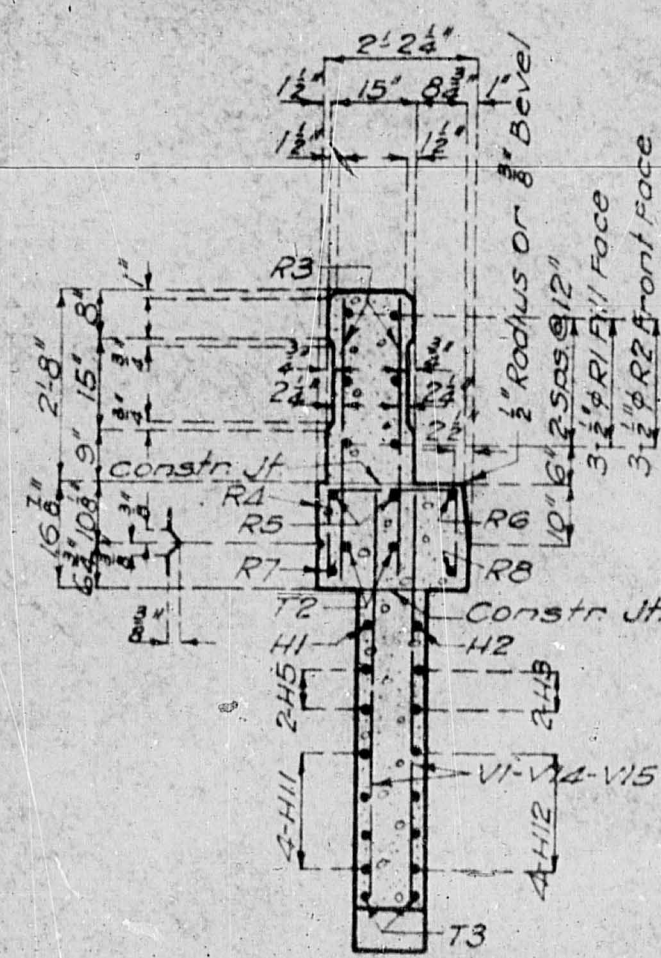
Sheet No. 4 of 5

L 24

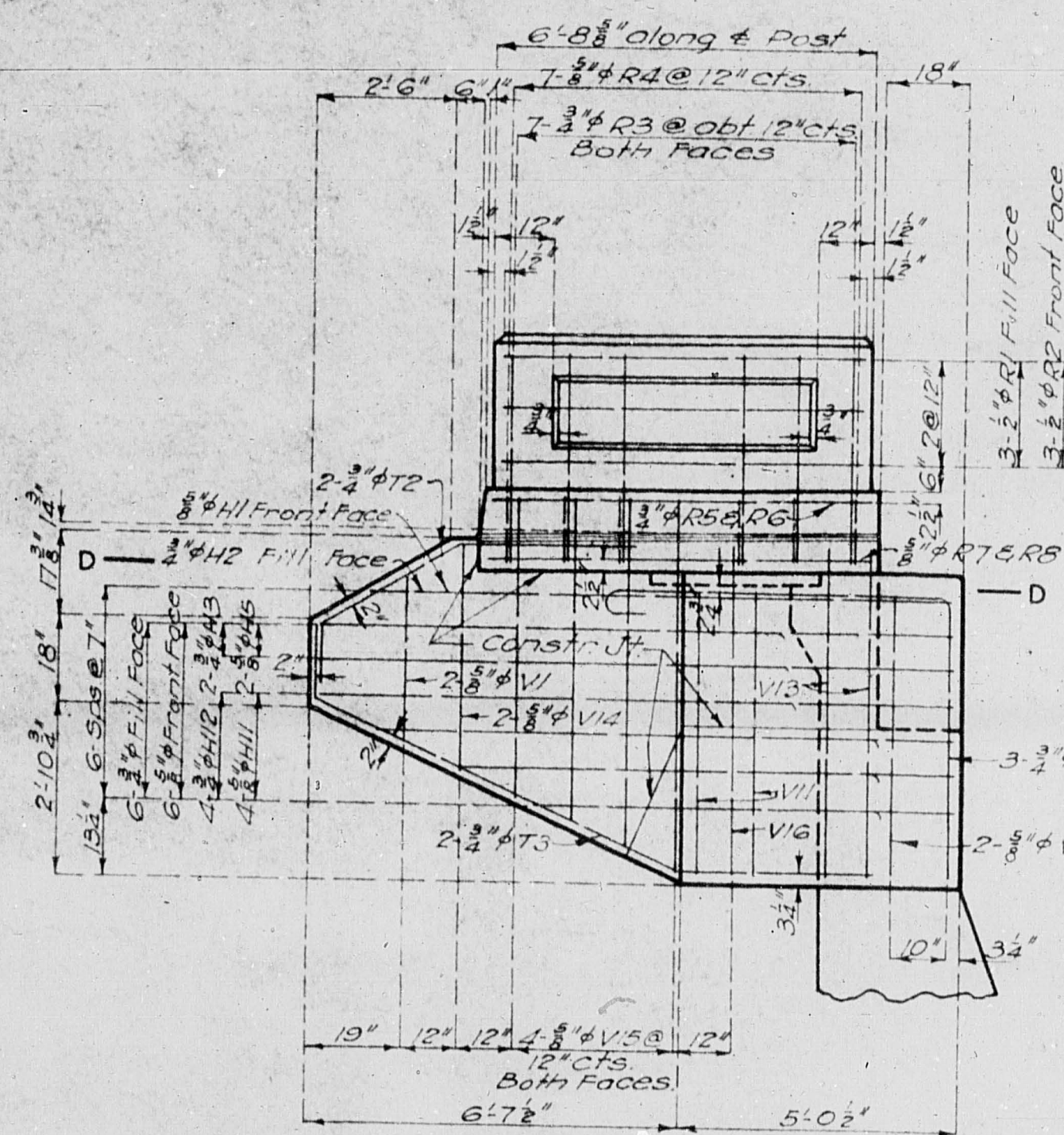
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-741(6) (RT 7)	19	13	13

Note: Top of wings, curbs and posts are to be built parallel to grade. End of posts are to be vertical.

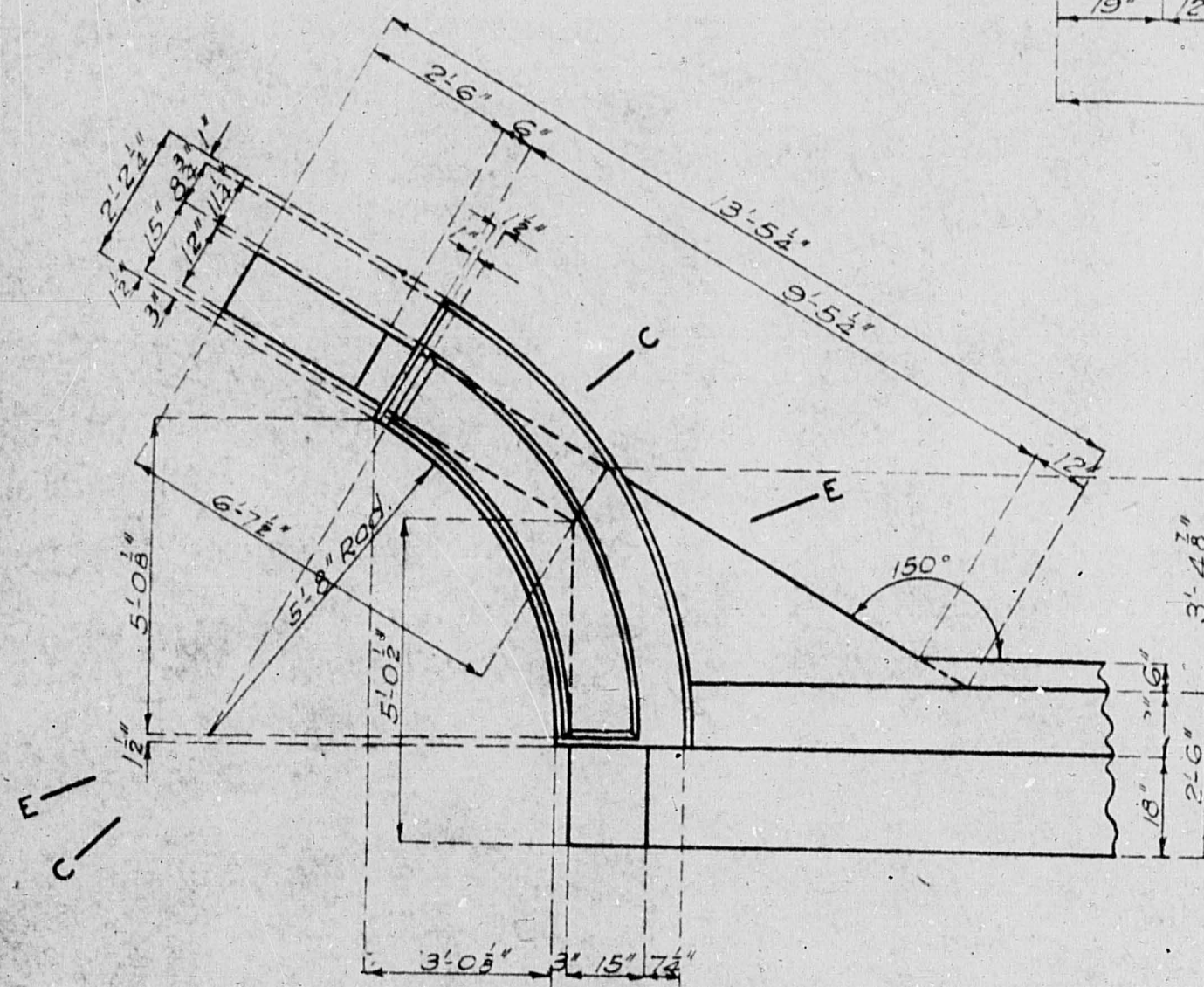


SECTION C-C

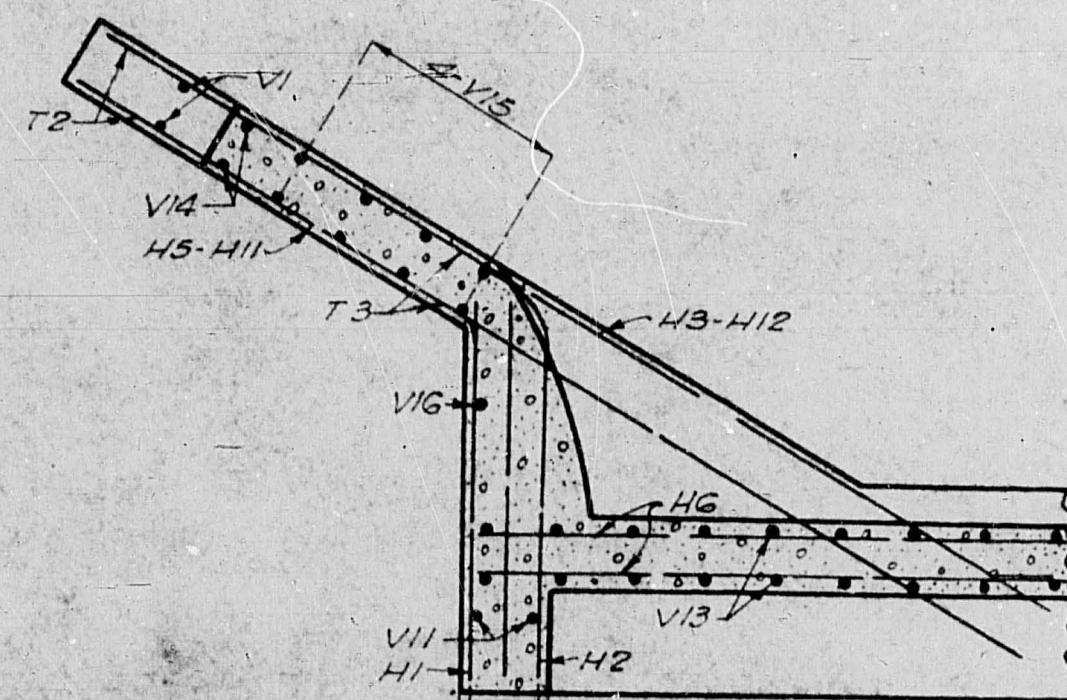


VIEW F-F (DEVELOPED)
(End post in place)

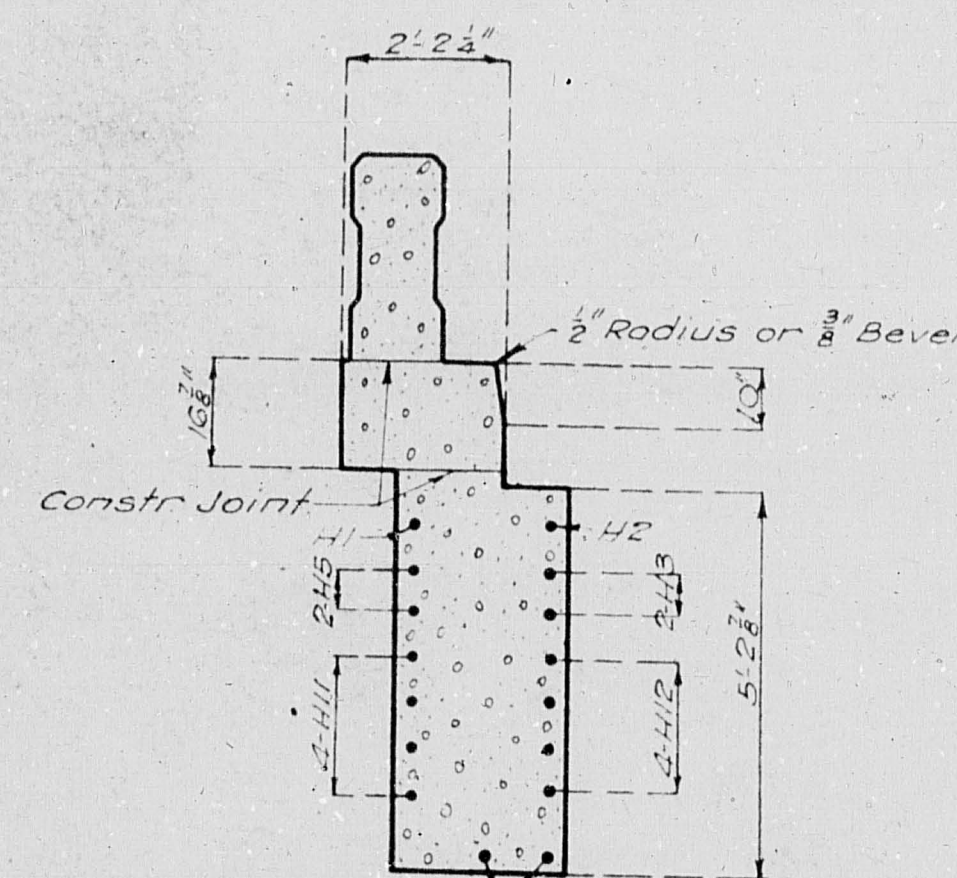
Note: Fill at End bent No. 6 shall not be carried above bottom of beam and wings until superstructure Span (5-6) is in place.



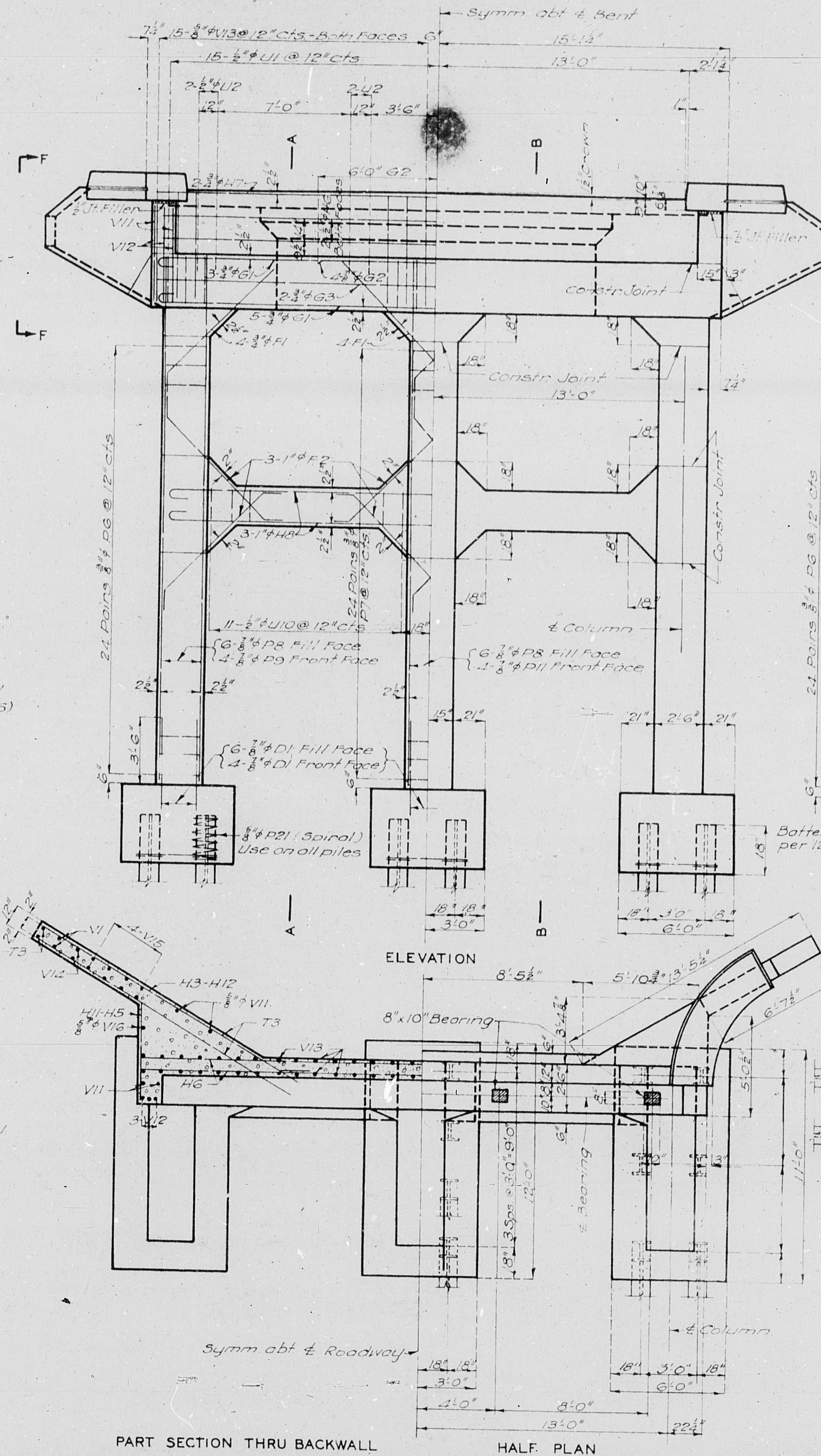
PART PLAN OF WING



PART SECTION D-D



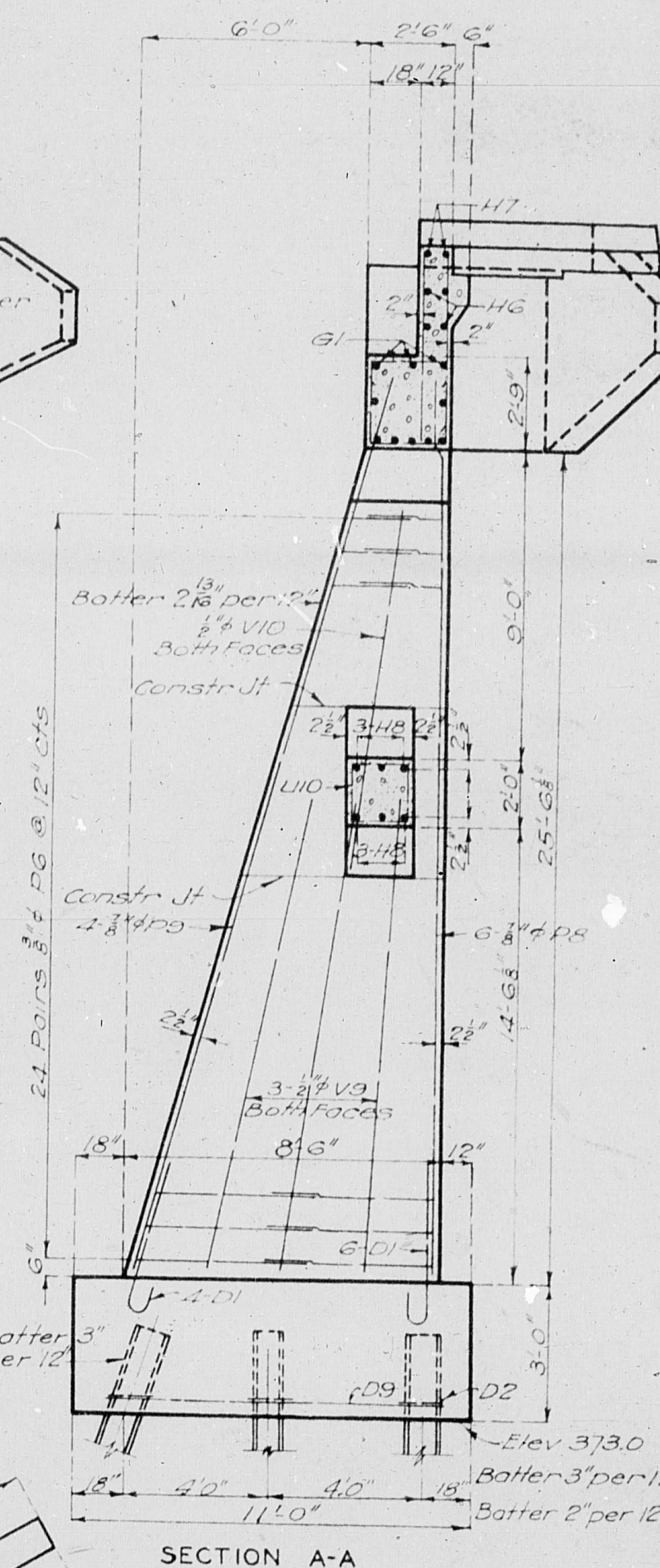
PART SECTION E-E



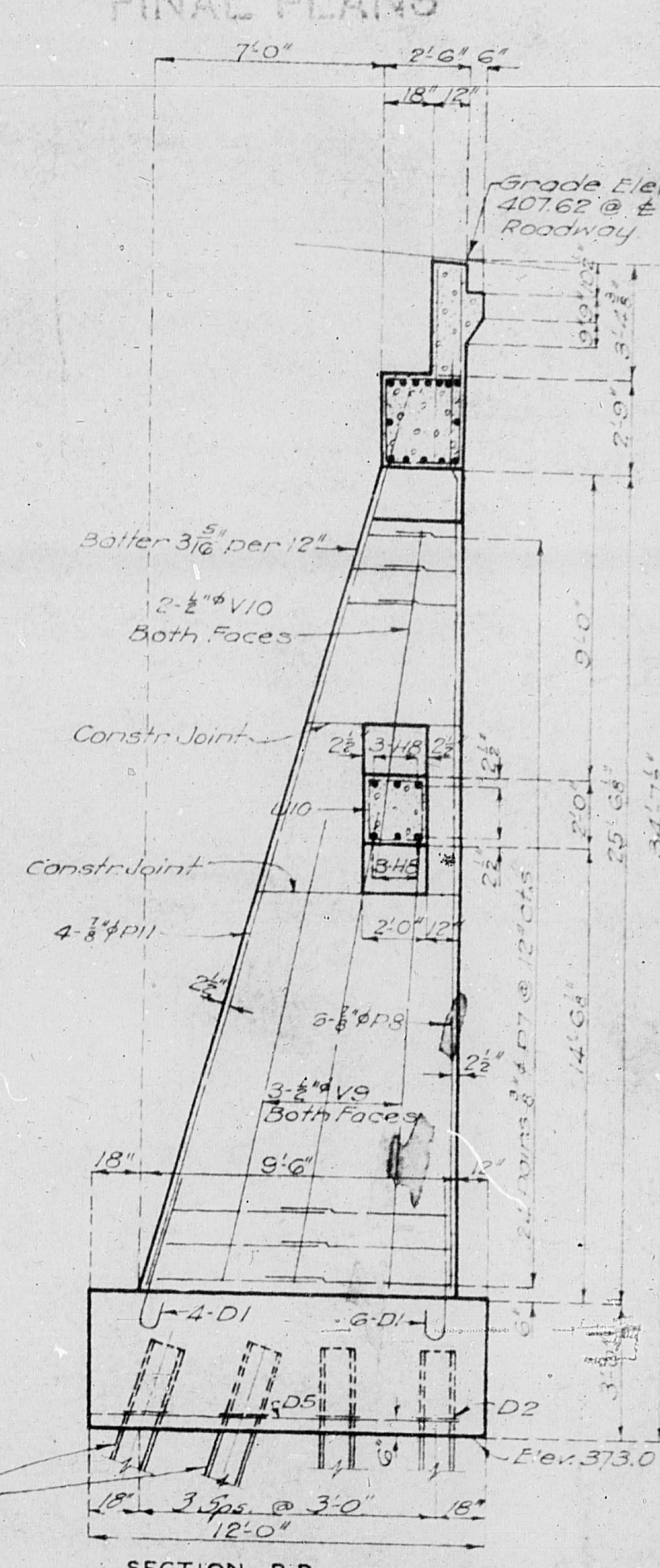
PART SECTION THRU BACKWALL

HALF PLAN

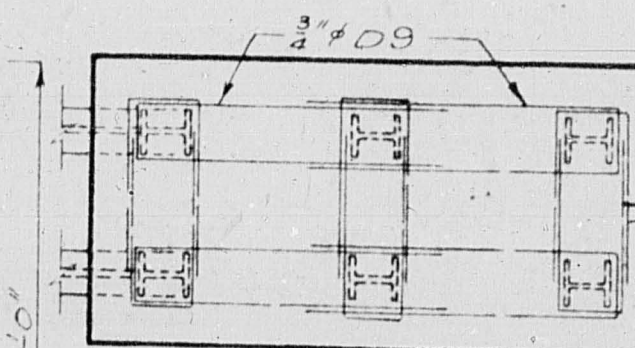
DETAILS OF END BENT NO. 6



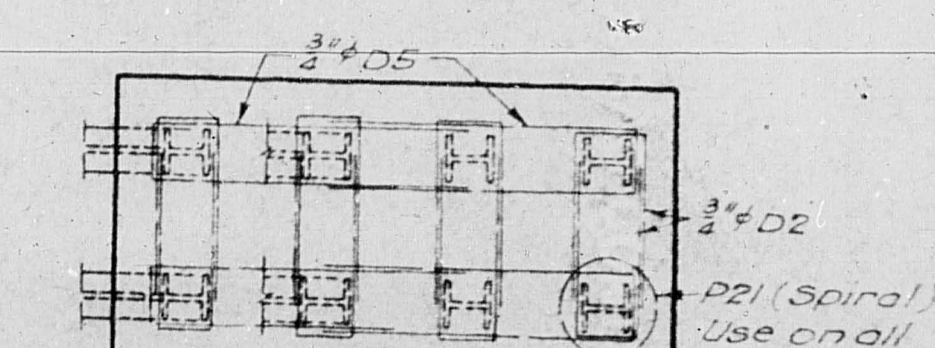
SECTION A-A



SECTION B-B



EXTERIOR FOOTING



INTERIOR FOOTING

PART PLAN OF FOOTING REINFORCING

Note: For details of top of piles and butt splice see sheet No. 4.

Designed Nov. 1944 by J.B.J.
Drawn Dec. 1944 by G.W.
Traced Jan. 1945 by H.C.
Checked June 1945 by A.K. & R.K.M.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6A of 5

BRIDGE OVER MO. PAC. R.R. AND ROUTE 58

STATE ROAD FROM PLEASANT HILL TO HARRISONVILLE
IN PLEASANT HILL
PROJECT NO. FG-741(6) (RT. 7) STA. 53+28.96

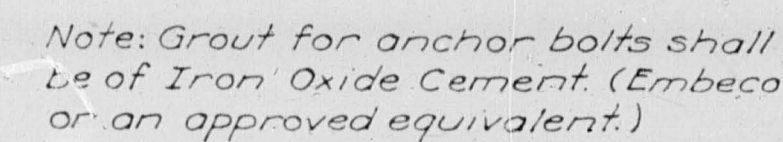
CASS

COUNTY

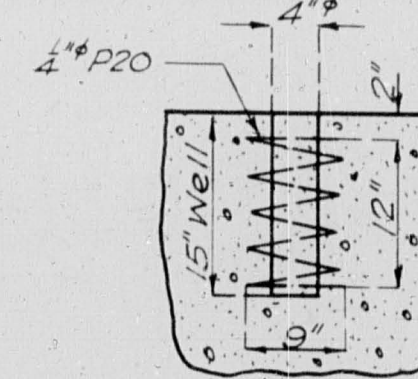
L-24

Revised 3-6-1946

FED. ROAD DIST NO	STATE	FED. AID PROJ NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	RG-7416) (R+7)	19		

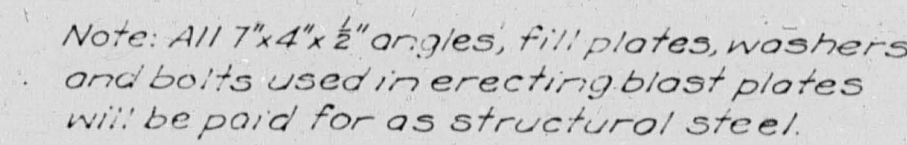


HALF ANCHOR BOLT PLAN

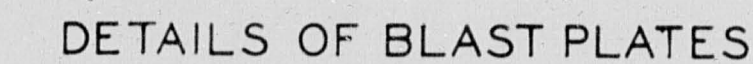


Note: Holes for all 1/2" anchor bolts shall be formed in substructure by placing and setting with template 4" wells of depth shown above.

PART SECTION SHOWING
ANCHOR BOLT WELLS



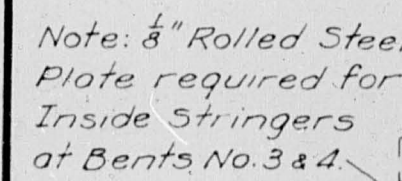
PART PLAN



Note: Location of center lines of railroad tracks and superelevations of rails to be verified in field before stringers and blast plates are fabricated.

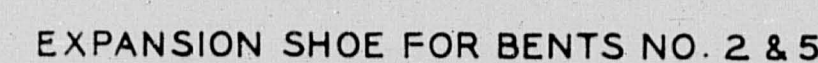


Note: Omit field splice if desired.

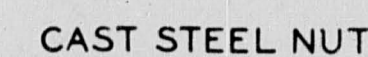


EXPANSION SHOE FOR BENT NO. 3

Note: Cost Steel Cap same as shown for Exp. Shoe for Bent N

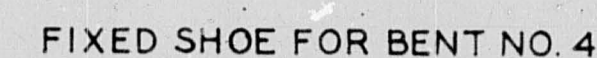


8. Required



Note: 16-3" Rolled Steel Pins required
32- Cast Steel Nuts required

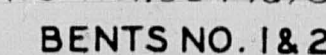
Note: Cast Steel Cap same as shown for Expansion Shoe



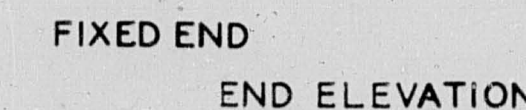
4-Required.
NOTES FOR BEARING CASTINGS, BENTS No. 2, 3, 4 & 5:

All fillets shall have $\frac{1}{2}$ " radius.
Finish all surfaces marked "X".
All pins, bolts and rolled plates
will be paid for as structural steel.
Anchor bolts shall be 1 1/2" swaged
bolts with hex. Nuts and shall extend
12" into concrete.

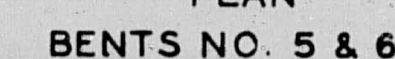
See Specifications for field coatings.
Cost of lead plates to be included
in unit price bid for other items.



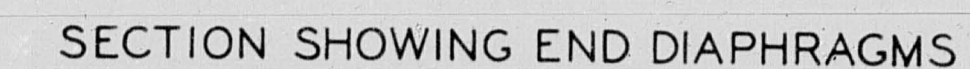
Note: Rolled plates for bearings shall be straightened to plane surfaces. Anchor bolts for rolled plates shall be 1" swaged bolts, no Hds, Hex nuts and shall extend 10" into concrete. Rolled plates and anchor bolts will be paid for as structural steel.



BOTTOM PLATES



DETAILS OF BEARINGS



nt. NOTES FOR CAST BEARING PLATES FOR BENTS No. 5 & 6:

NOTES FOR CASE: BEARING PLATES FOR BEAMS NO. 3 & 6:
Bearing plates may be either cast steel or gray iron alloy.
Finish all surfaces marked "S".
All machine finished surfaces shall be coated with white lead and tallow
before shipment or before being placed in open. Before erection, the white
lead and tallow shall be completely removed and the contact surfaces shall
be given a heavy coat of graphite and oil.
Stud bolts and nuts will be paid for as structural steel.
Anchor bolts shall be 1" ϕ swaged bolts, no heads or nuts and shall
extend 10" into concrete. Top ends of anchor bolts shall be above the top of
castings but not higher than 4" below top surface of bottom flange of beam.

BRIDGE OVER MO. PAC. R.R. & RT. 58

STATE ROAD FROM PLEASANT HILL TO HARRISONVILLE

PROJECT NO. FG-741(6) (RT. 7)

STA. 53 + 28.96

CASS

COUNTY

Designed Nov. 1944 by J.B.J.
Drawn Dec. 1944 by G.W. A.F.K.
Traced Dec. 1944 by G.W.
Checked June 1945 by A.F.K. & D.M.

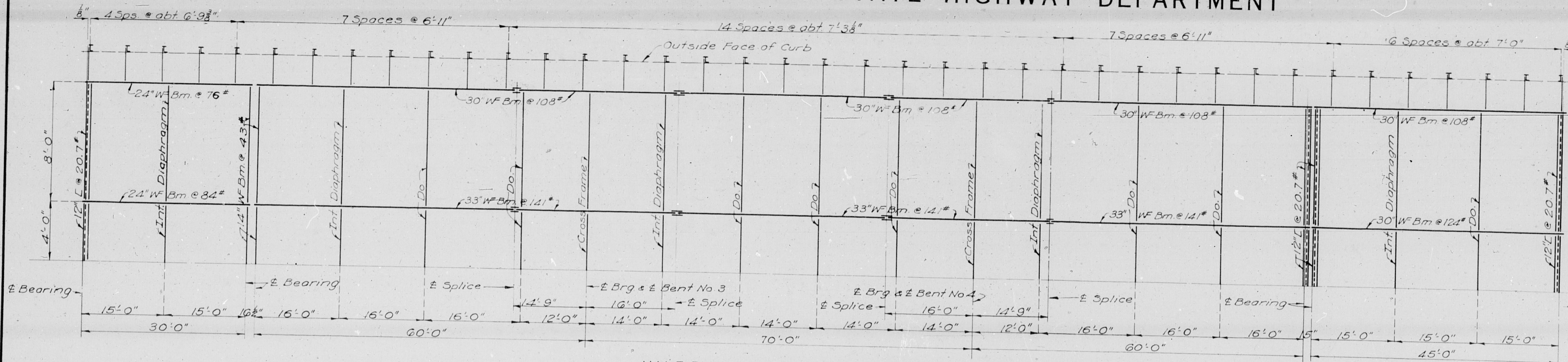
Note: This drawing is not to scale. Follow dimensions

Note: Cost of lead plates for bearing plates on bents No. 1, 2, 3 and 6 to be included in unit price bid for other items.

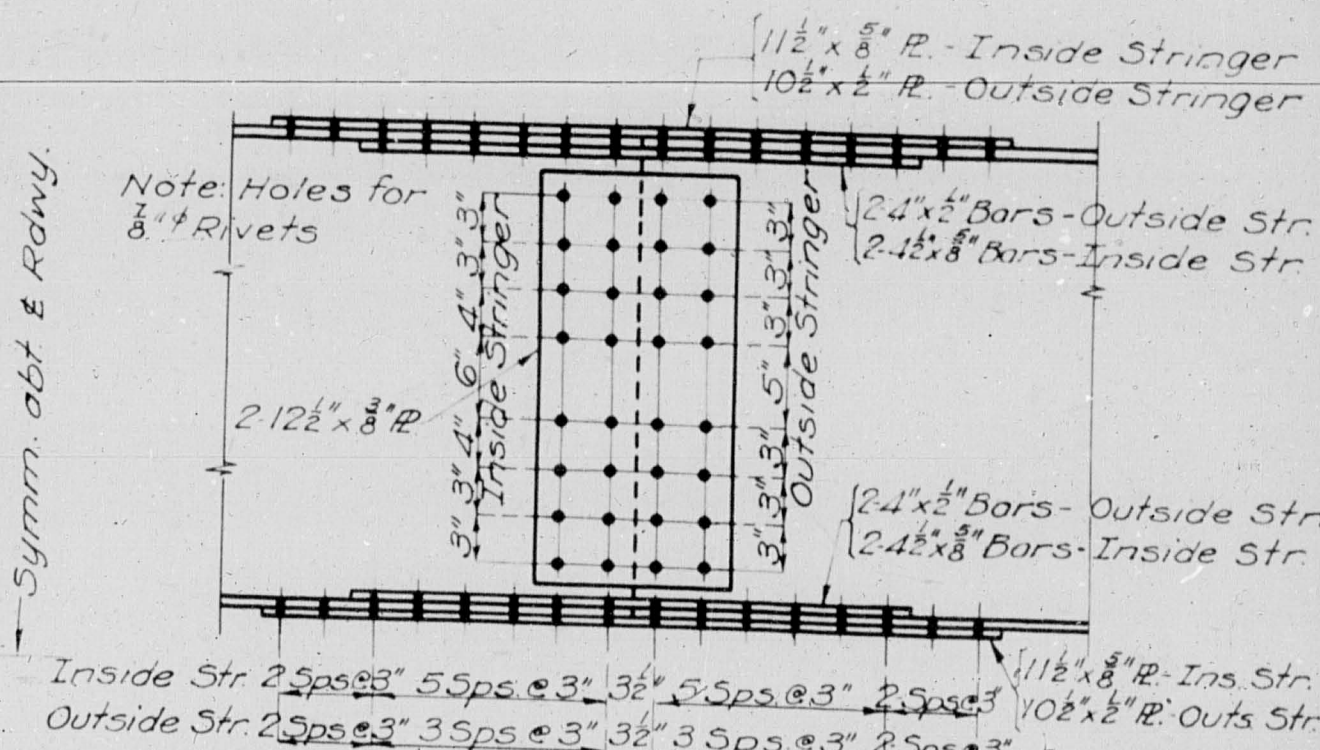
Sheet No. 7 of 9

MISSOURI STATE HIGHWAY DEPARTMENT

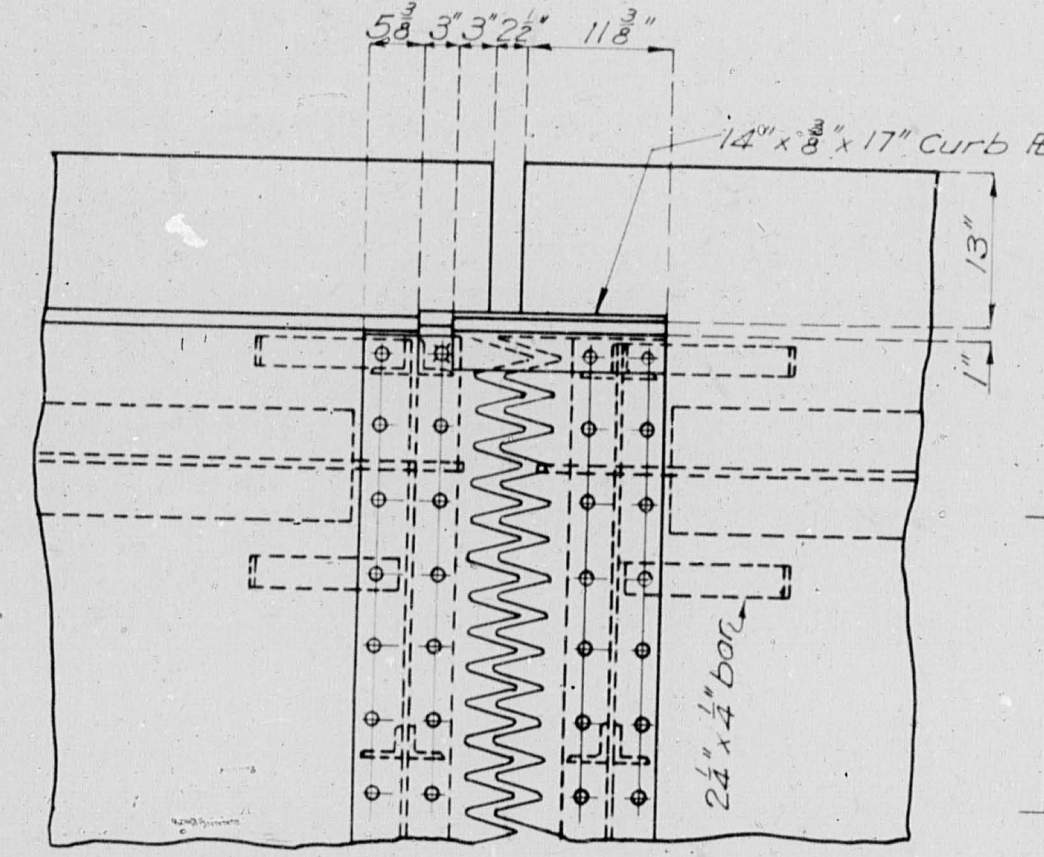
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	FG-741(6) (RT. 7)	19		



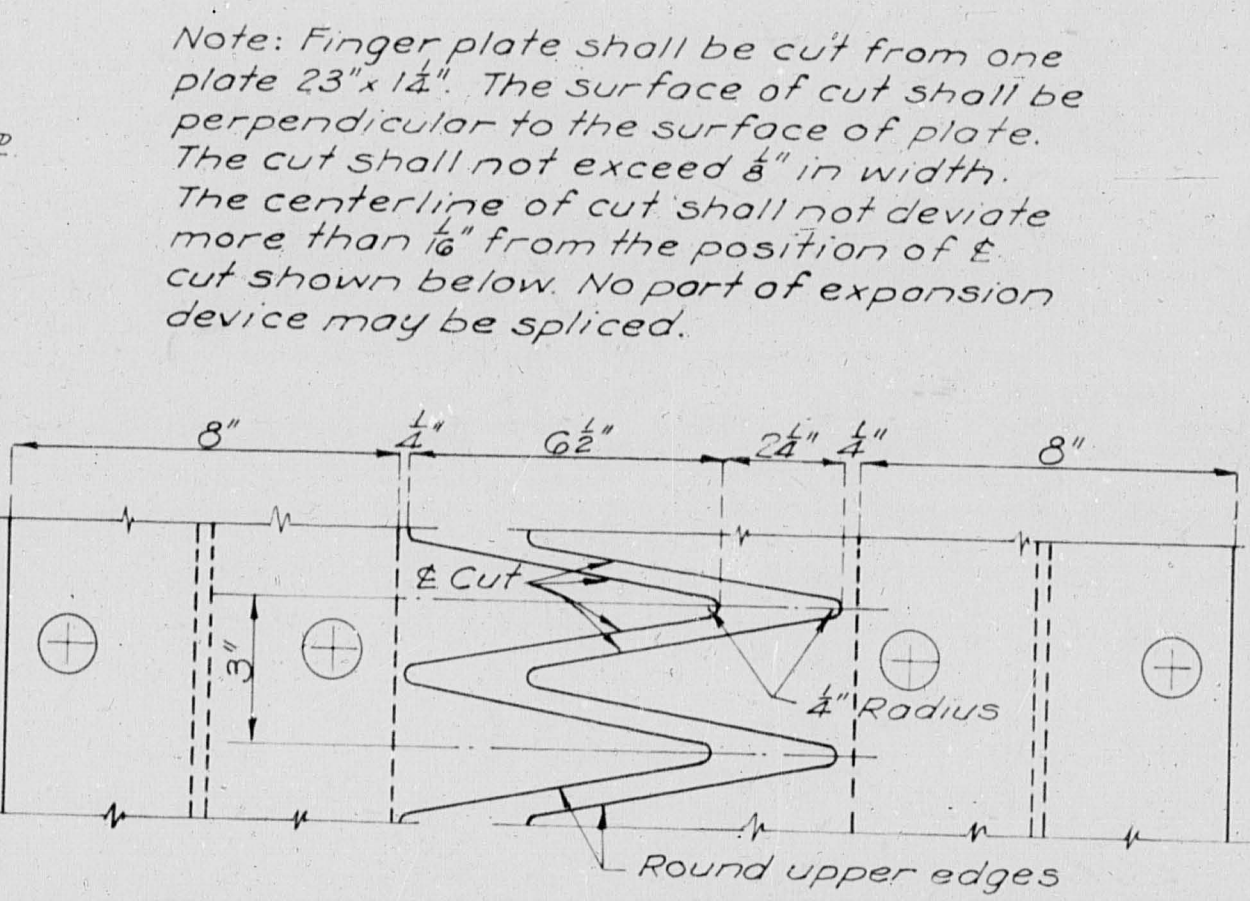
HALF PLAN OF STRUCTURAL STEEL



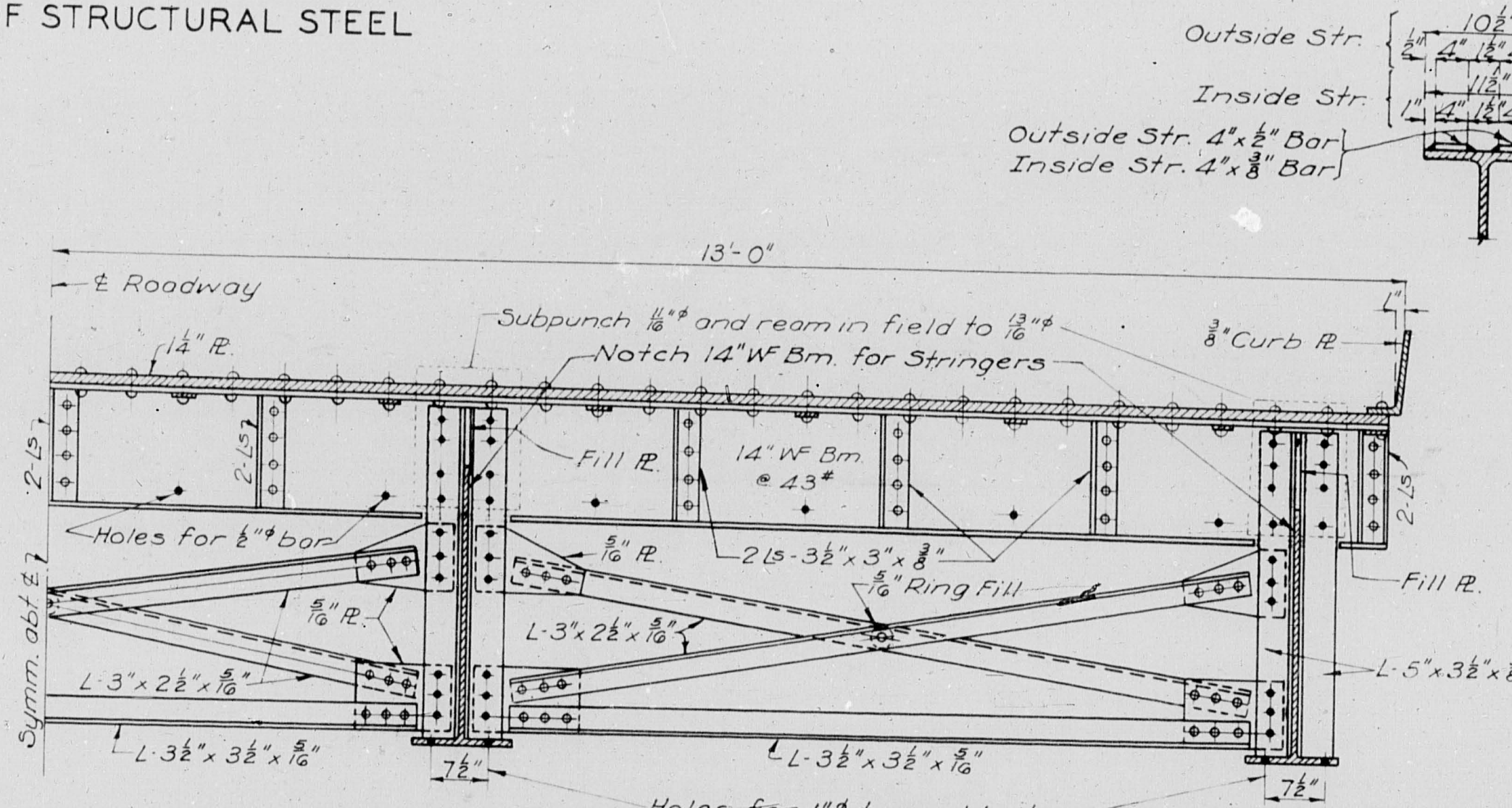
DETAILS OF FIELD SPLICE



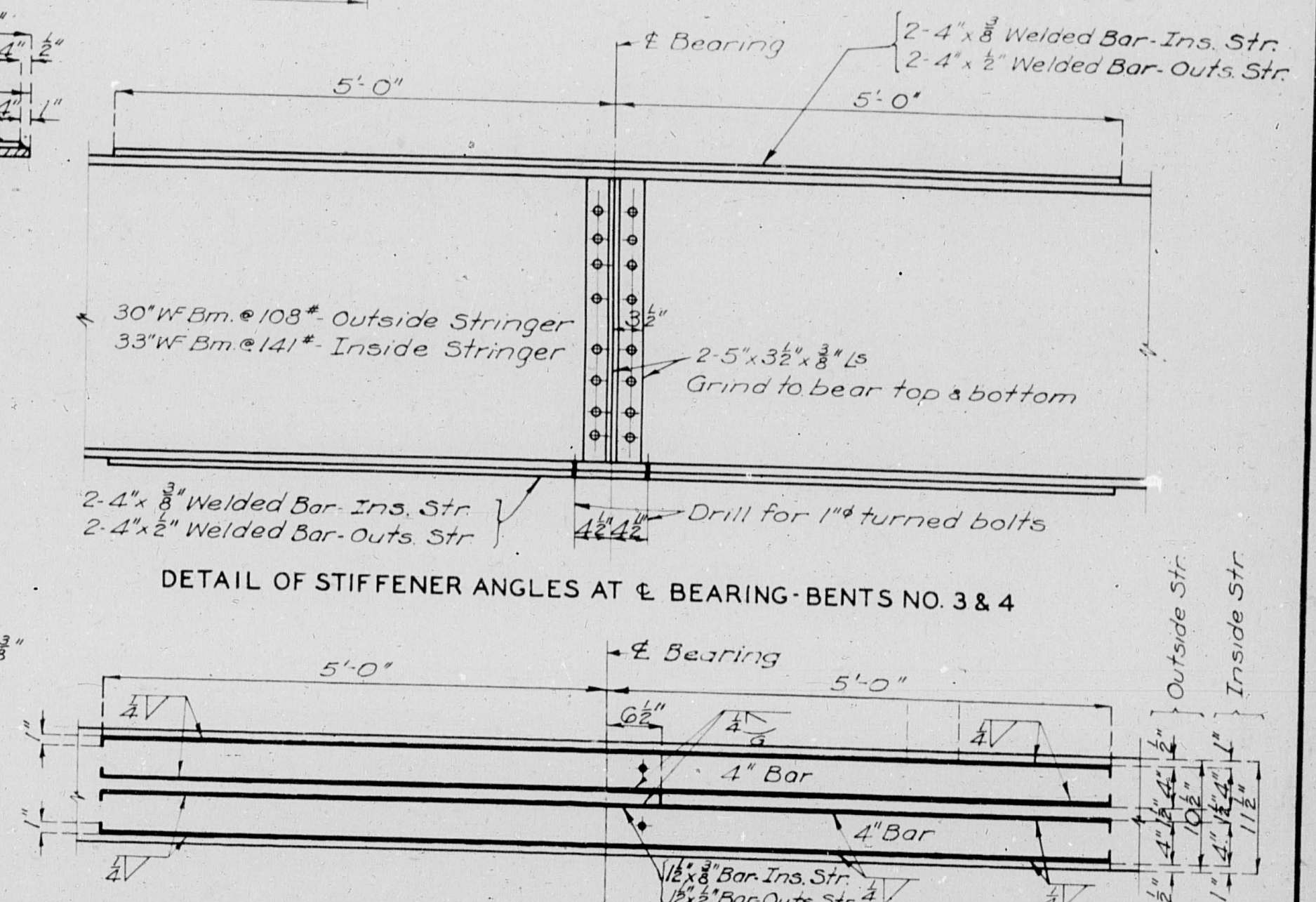
PART PLAN OF EXPANSION DEVICE



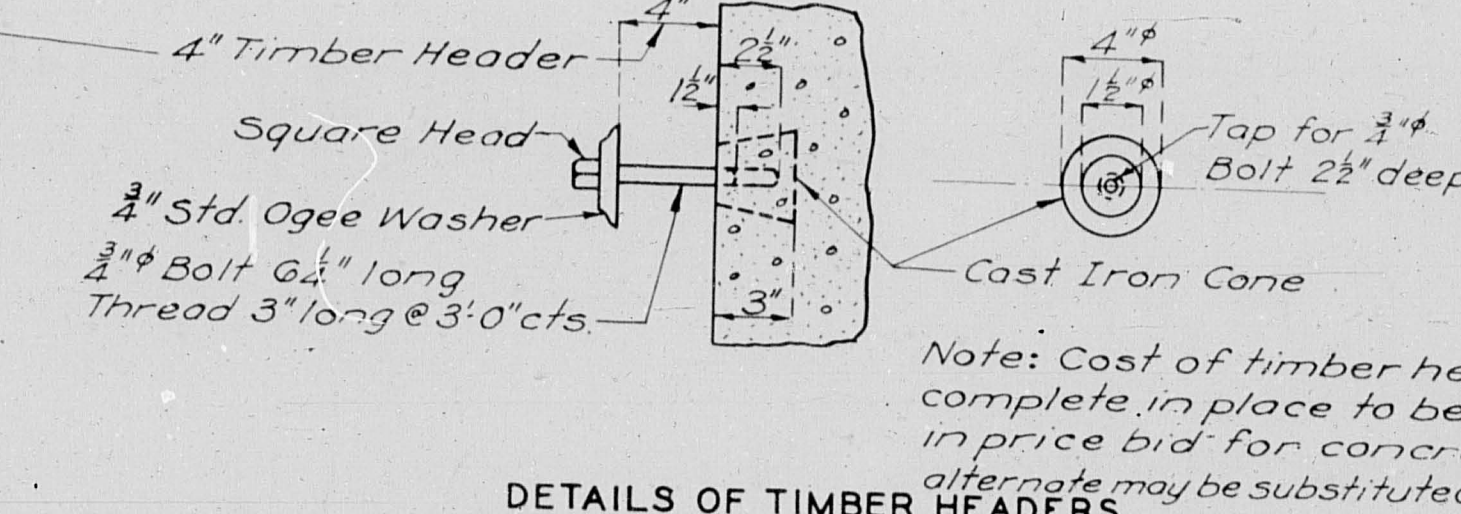
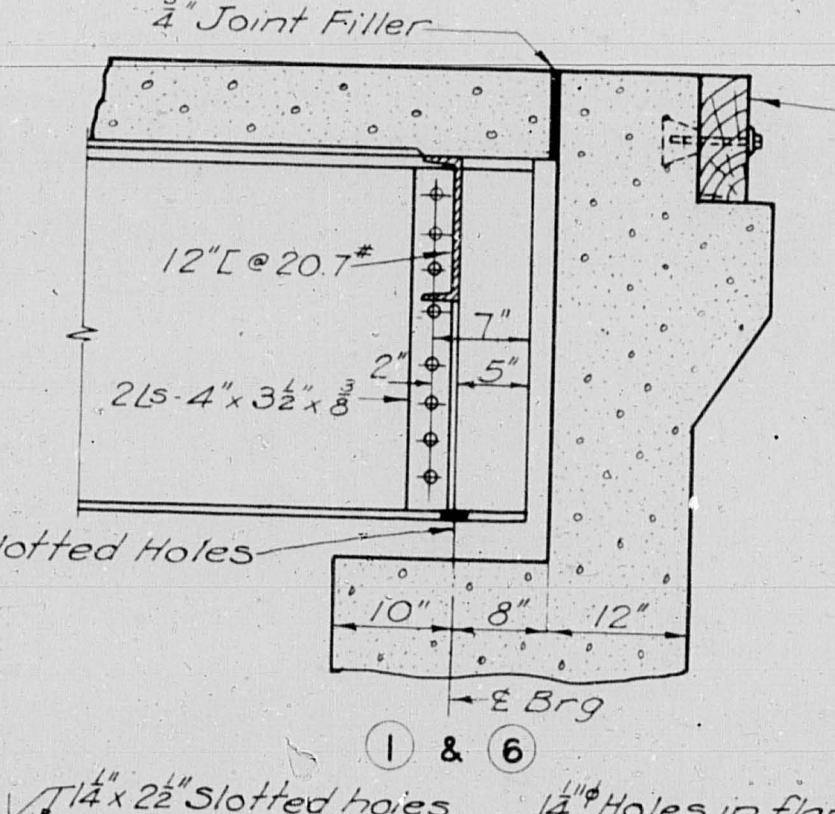
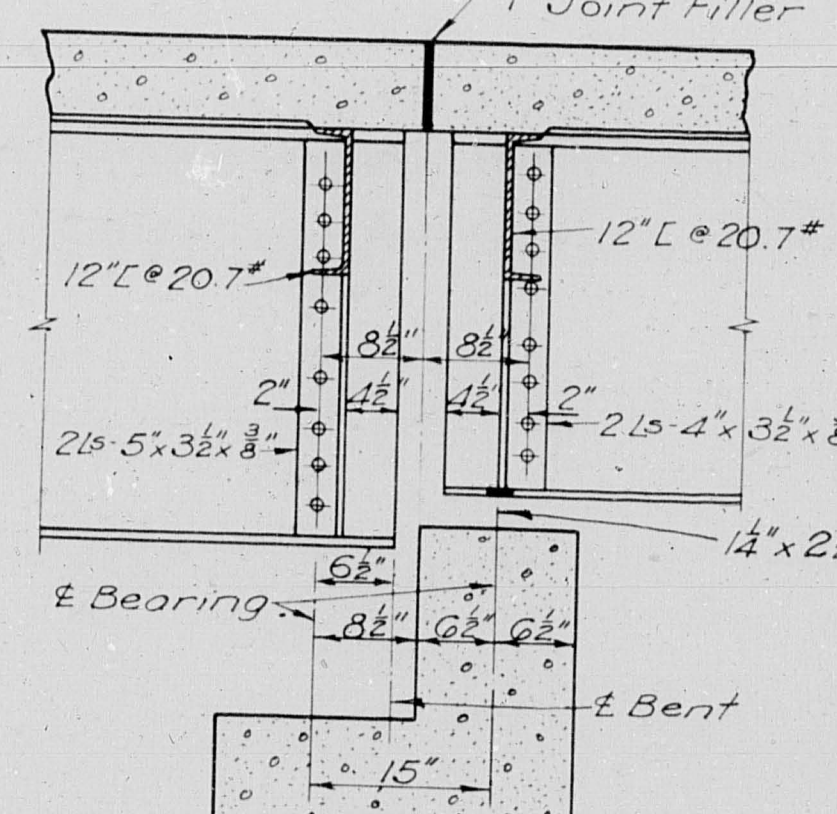
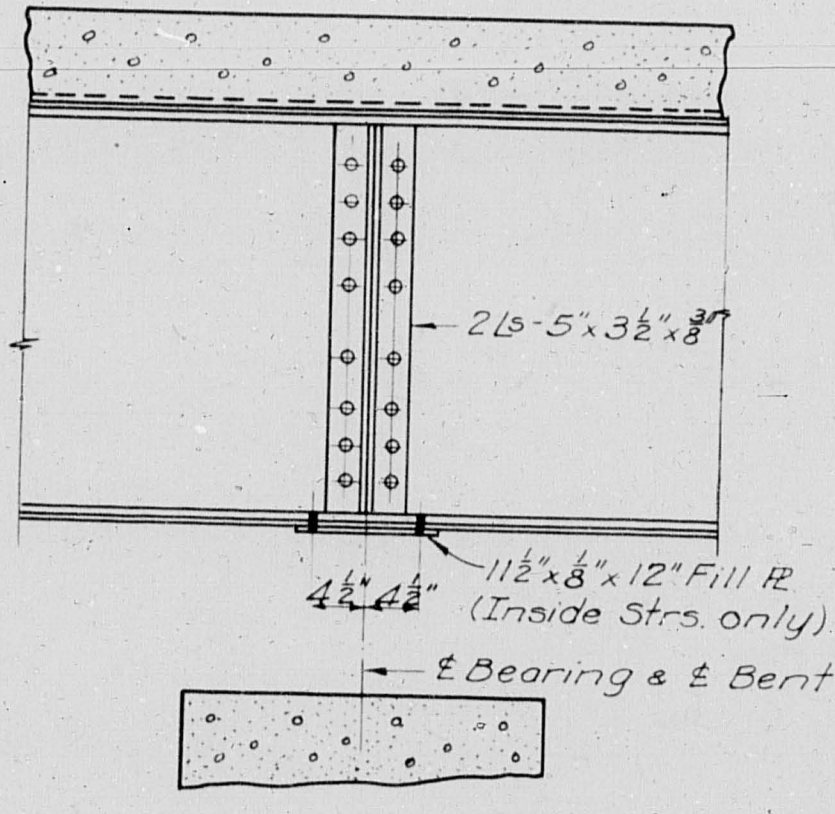
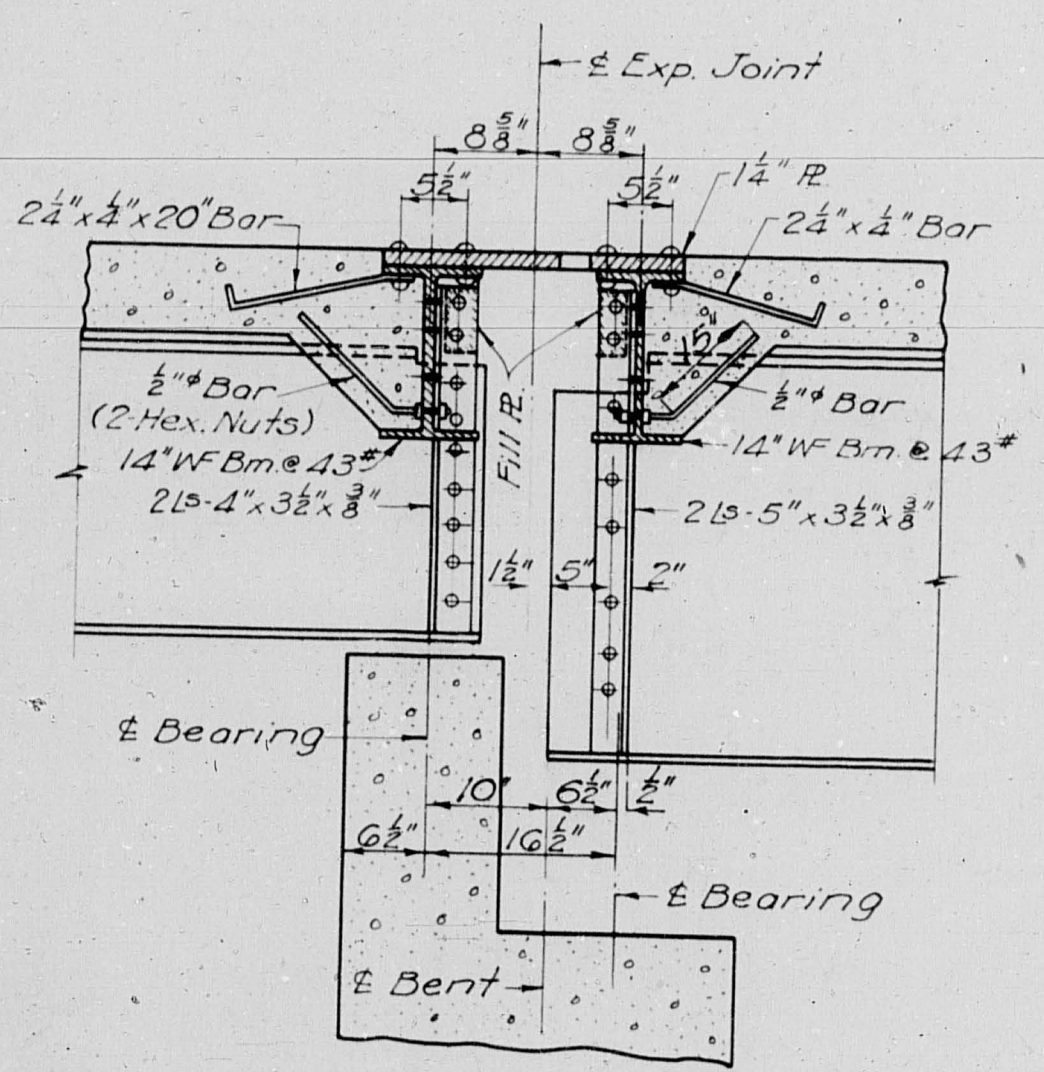
FINGER PLATE LAYOUT



HALF TRANSVERSE SECTION THROUGH EXPANSION JOINT



PLATES ON TOP FLANGE
PLATES ON BOTTOM FLANGE
WELDING DETAILS FOR COVER PLATES OVER BENTS NO. 3 & 4



DETAILS OF TIMBER HEADERS

BRIDGE OVER MO. PAC. R.R. & RT. 58
STATE ROAD FROM PLEASANT HILL TO HARRISONVILLE
IN PLEASANT HILL
PROJECT NO. FG-741(6) (RT. 7) STA. 53+28.96
CASS COUNTY

Designed Nov. 1944 by J.B.J.
Drawn Dec. 1944 by G.W.
Traced Dec. 1944 by G.W.
Checked June 1945 by C.A.K. & L.M.

Note: This drawing is not to scale. Follow dimensions.

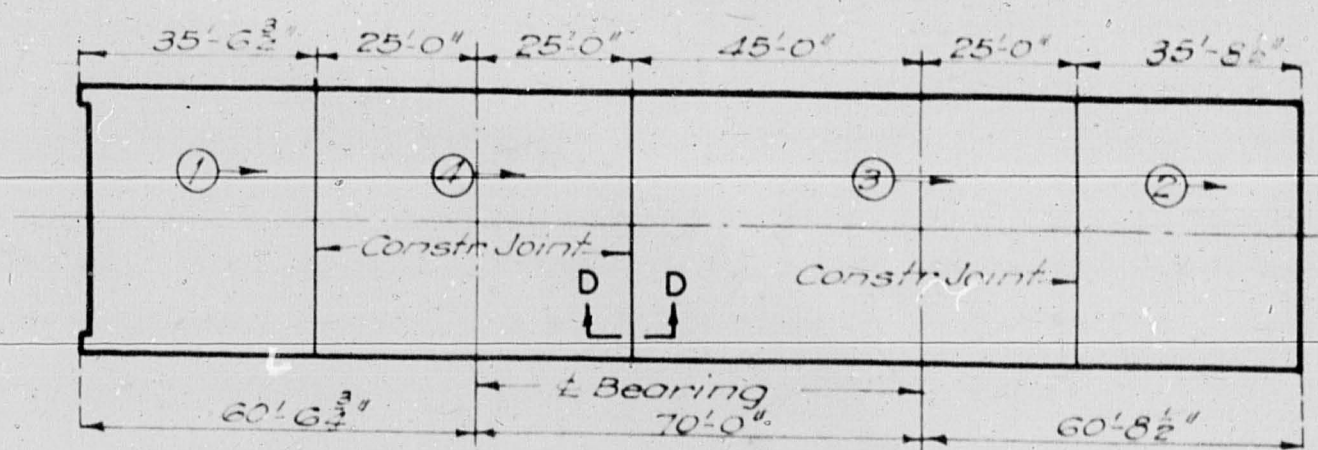
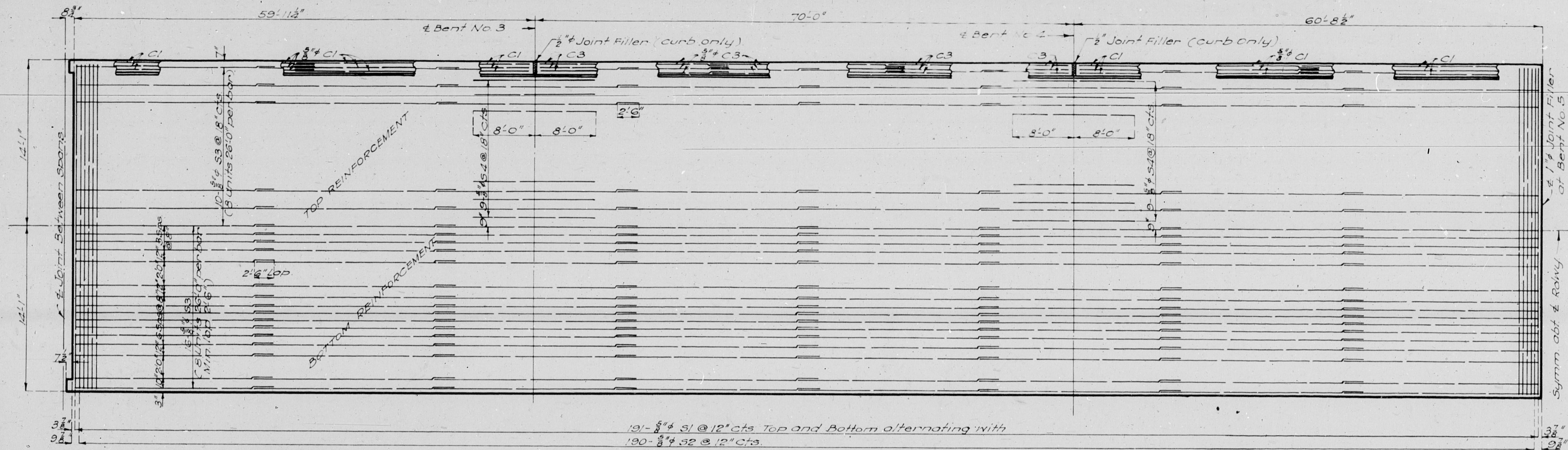
SPAN 1-2 ONLY

Sheet No. 8 of 9

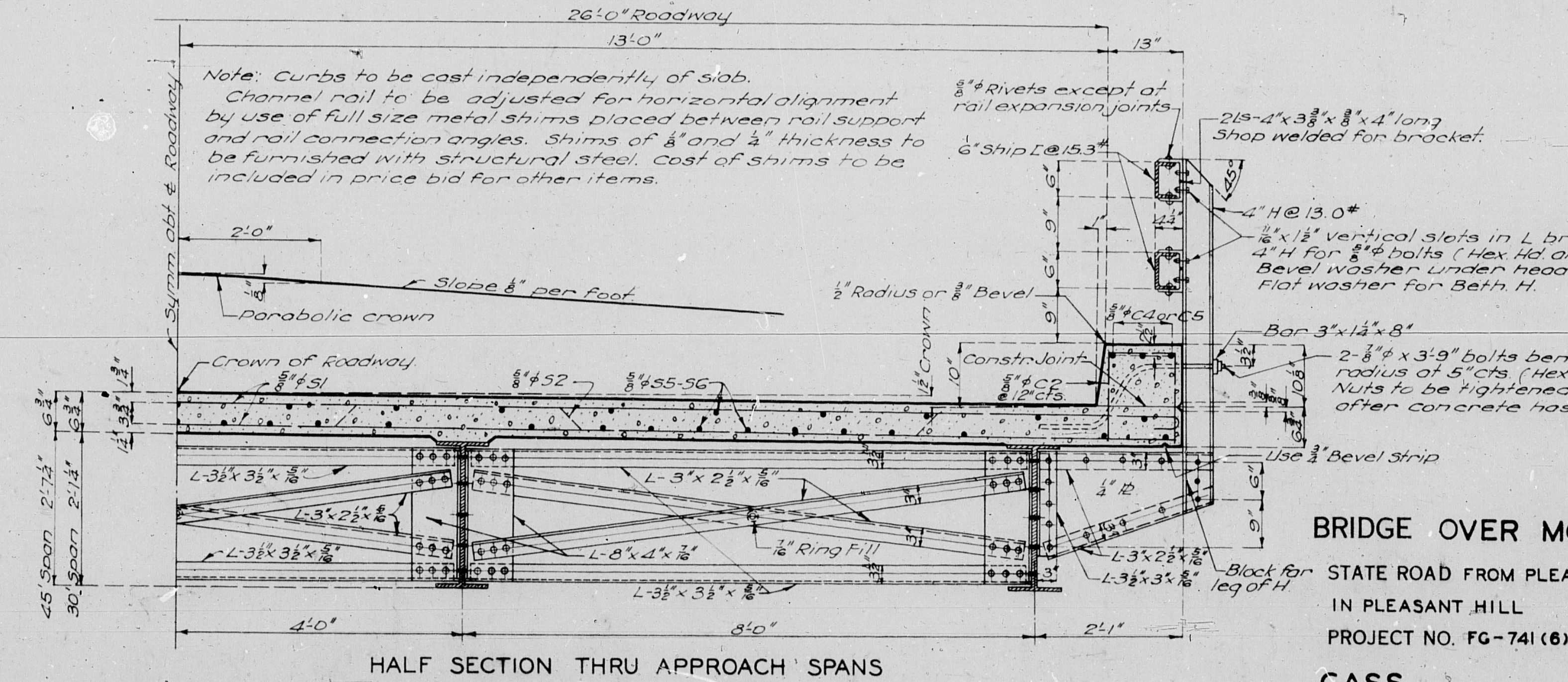
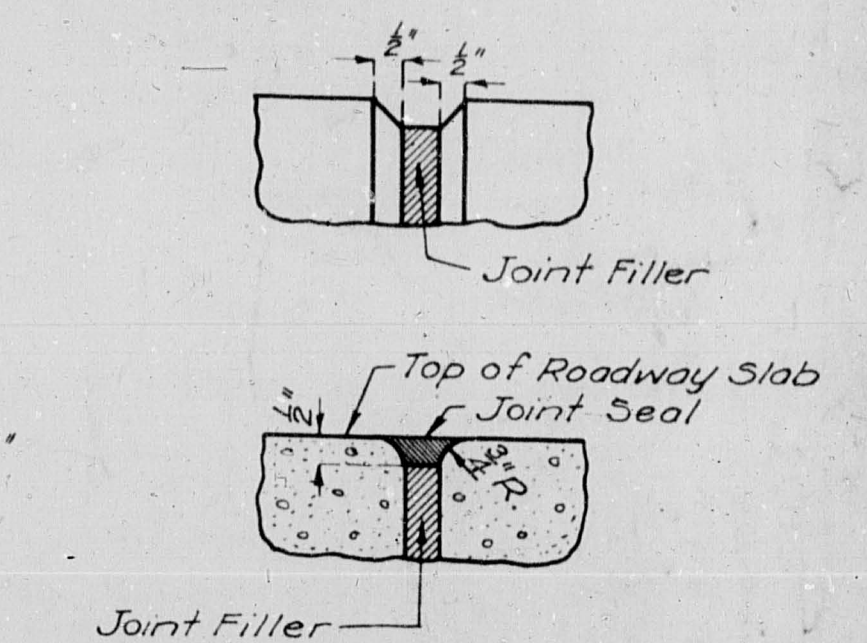
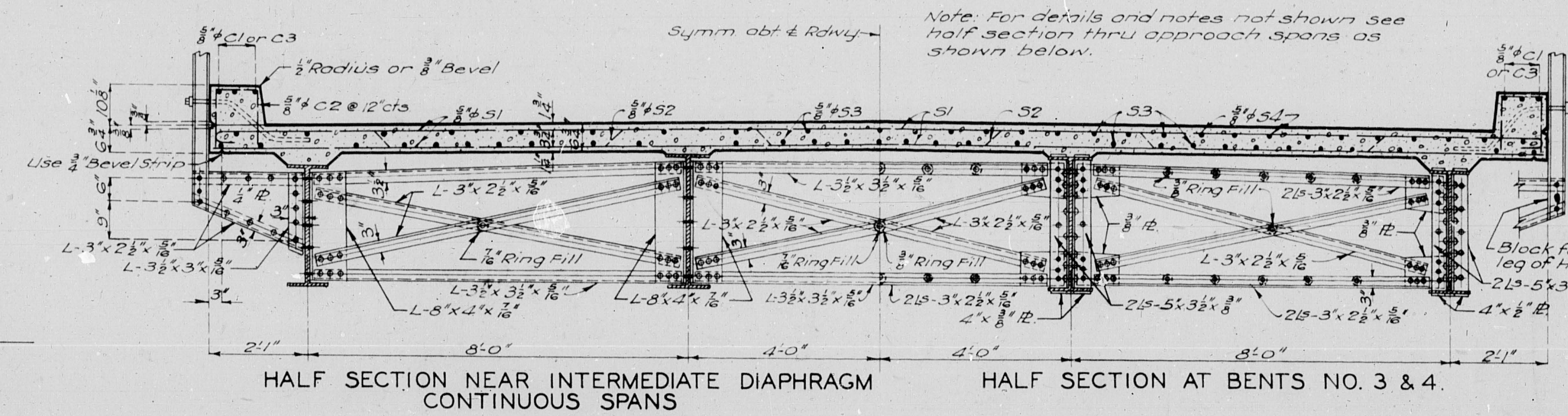
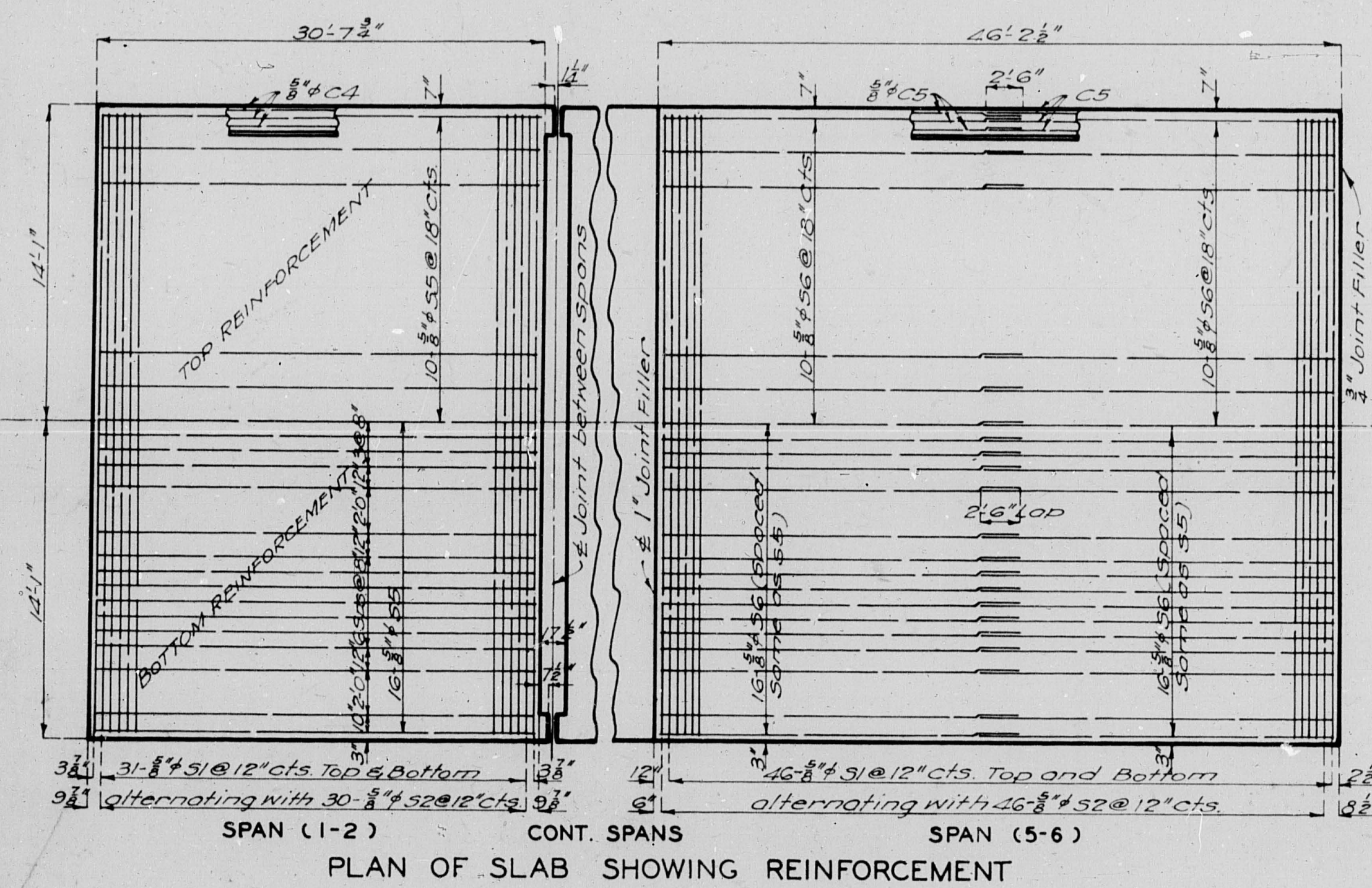
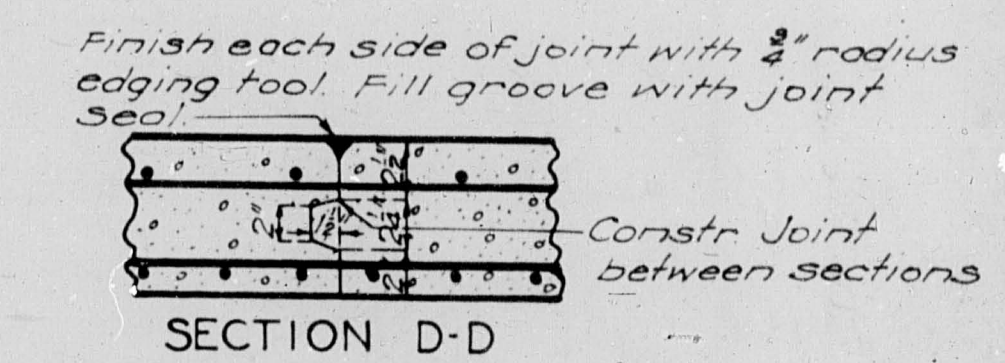
L-24

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-741(6) (RT. 7)	19		



SLAB POURING SEQUENCE

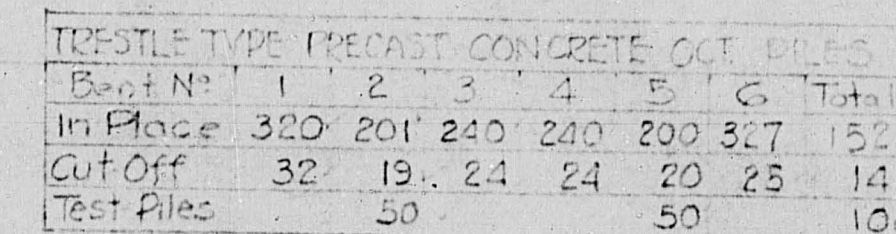
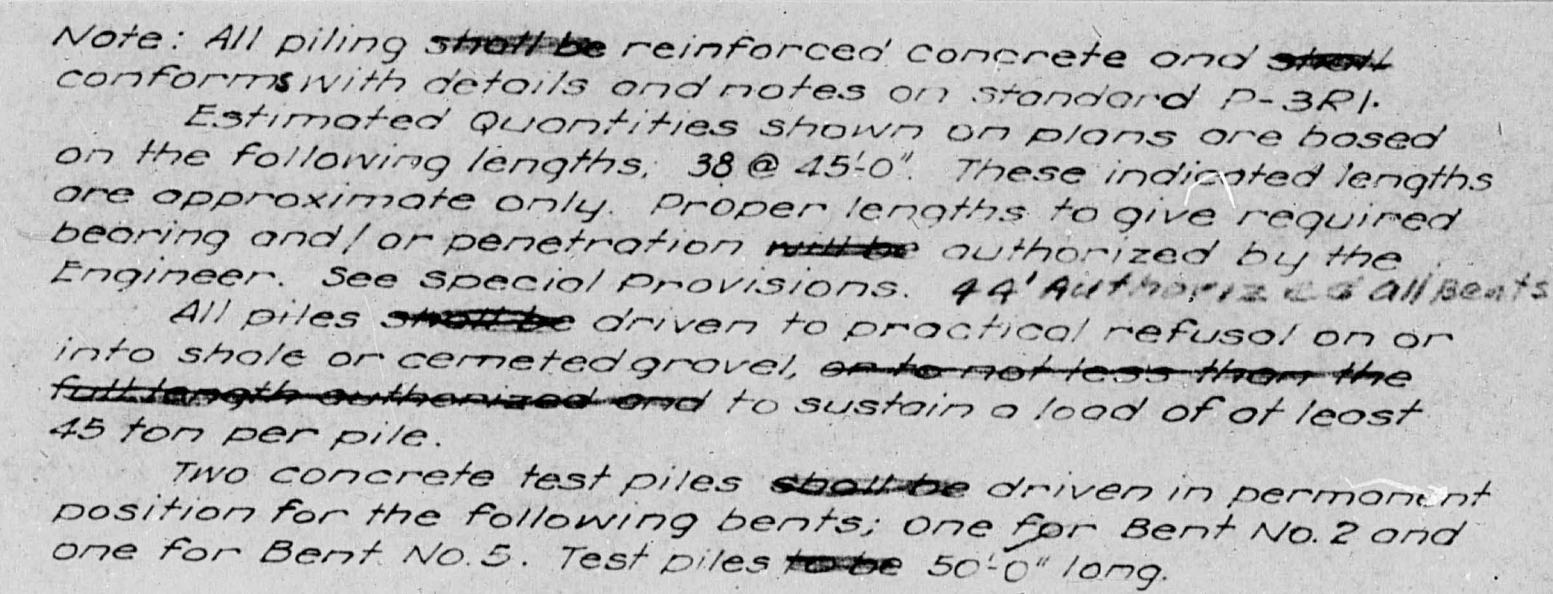


BRIDGE OVER MO. PAC. R.R. & ROUTE 58
STATE ROAD FROM PLEASANT HILL TO HARRISONVILLE
IN PLEASANT HILL
PROJECT NO. FG-741(6) (RT. 7) STA. 53+28.96
CASS COUNTY

Designed Nov. 1944 by J.B.J.
Drawn Dec. 1944 by G.W.
Traced Dec. 1944 by H.C.
Checked June 1945 by G.K. & R.M.

Note: This drawing is not to scale. Follow dimensions.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-711(6) (RT-7)	19		16



BILL OF REINFORCING STEEL							
No.	Size	Length	Mark	Location	Bending Sketches & Cutting Diagrams		
Superstructure							
18	3/8"	4'-0"	C1	Curb			
18C	3/8"	3'-9"	C2	"			
6	3/8"	24'-0"	C3	"			
18	3/8"	24'-9"	C4	"			
6	3/8"	27'-6"	C5	"			
48	3/8"	8'-6"	C6	glob			
4	3/8"	33'-0"	S2	"	CI-C2-U2		
236	3/8"	29'-0"	S3	"			
34	3/8"	31'-6"	S4	"			
20	1"	28'-9"	S5	"			
42	1"	29'-0"	S6	"			
30	3/4"	28'-6"	S7	"			
48	3/4"	20'-6"	S8	"			
32	1"	22'-6"	S9	"	SI-S5-S7-S11		
48	3/4"	16'-0"	S10	"			
32	1"	24'-9"	S11	"			
79	3/4"	28'-0"	S12	"			
12	1"	40'-6"	S13	"			
34	3/4"	40'-0"	S14	"	GI-H2		
24	1"	17'-3"	S15	"			
24	1"	18'-0"	S16	"			
28	3/8"	11'-9"	S17	"			
28	3/8"	12'-0"	S18	"			
28	3/8"	17'-3"	S19	"			
28	3/8"	18'-0"	S20	"			
12	1"	25'-9"	S21	"			
12	3/8"	6'-9"	F1	End Post			
12	3/8"	6'-0"	F2	"	17-S4-CUT 34		
60	2 1/2"	7'-8"	F3	Subposts			
64	2 1/2"	3'-9"	F4	Int Post			
56	2 1/2"	3'-9"	F5	End Post			
108	1 1/2"	9"	F6	Curb			
864	3/8"	2'-4"	F7	Bolusters			
8	2 1/2"	9'-3"	F8	Mail	UI		
56	2 1/2"	12'-3"	F9	"			
8	2 1/2"	10'-9"	F10	"			
8	2 1/2"	10'-3"	F11	"			
End Bents No. 1 & 4							
10	3 1/4"	6'-0"	H1	Beam			
10	3 1/4"	4'-3"	H2	"			
4	2 1/2"	4'-6"	H3	"	T2		
4	2 1/2"	9'-0"	I1	Wing			
6	3 1/2"	8'-0"	I2	"			
40	2 1/2"	9'-9"	U1	Beam			
24	1 1/2"	6'-6"	U2	"			
4	2 1/2"	3'-0"	V1	Wing			
4	2 1/2"	3'-0"	V2	"			
Int Bents No. 2, 3, 4 & 5							
52	1 1/2"	35'-3"	G1	Beam	TI		
8	1 1/2"	33'-3"	G2	"			
88	2 1/2"	9'-9"	U1	"			
46	2 1/2"	6'-6"	U2	"	R3		

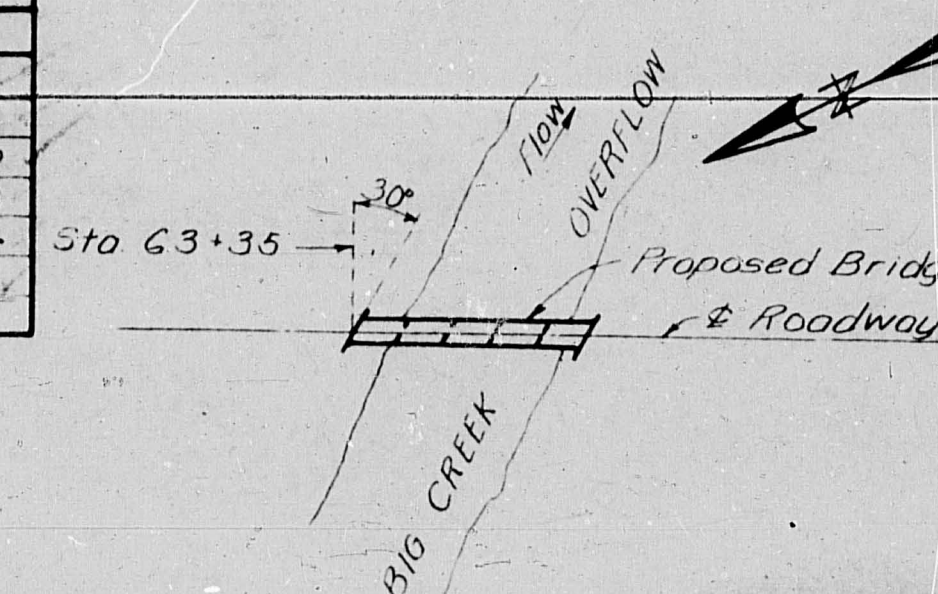
DESIGN NOTES:-
Design Specifications AASHTO 1944.
Loading H15 - AASHTO
Reinforcing Steel Stress 18,000 "psi"
Class "B" Concrete Stress 1000 "psi"
All concrete shall be class "B".
Where joint filler is specified on plans it shall conform with the requirements for Premoulded Material Filler as given in Section 38-19A(11) of the Standard Specifications.
A rubbed surface finish will be required on all exposed surfaces of handrail and curbs and outside faces of roadway slabs.

COUNTY

STD. P-39
STD. C-1000

Sheet No. 1A of 2

QUANTITIES	
Item	Superstr. Substr. Total
Class "B" Concrete (Handrail)	Cu Yds. 16.3 16.3
Class "B" Concrete	Cu Yds. 205.0 257.6
Reinforcing Steel	Lbs. 40950 45900
Concrete Piles in Place	Lin. Ft. 1528 1528
Concrete Bile cut-offs	Lin. Ft. 144 144
Concrete Test Piles	Lin. Ft. 100 100



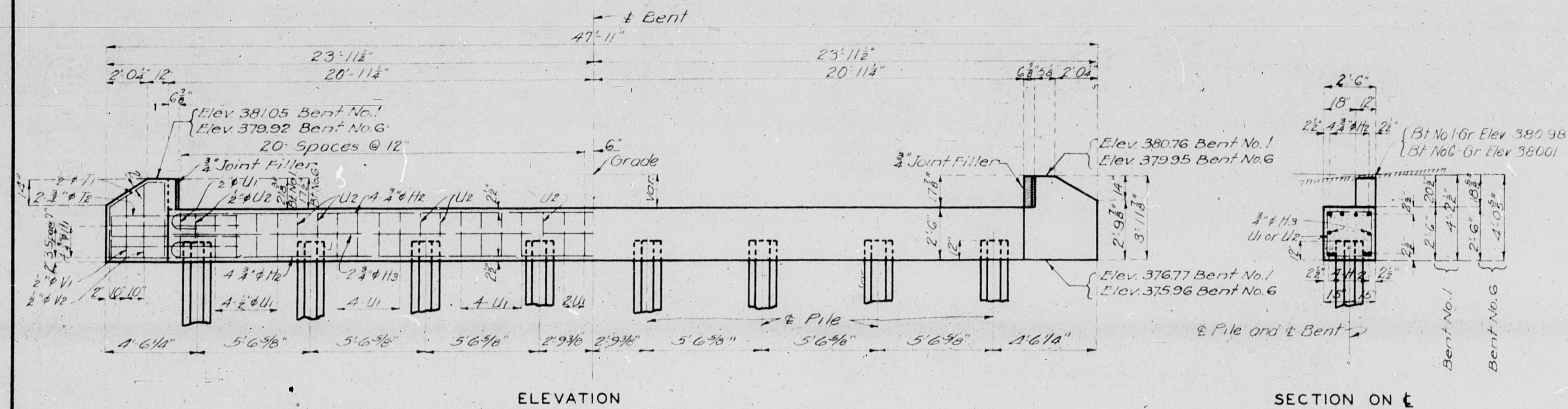
Designed May 1941 by J.B.J.
 Drawn May 1941 by C.S.A.
 Traced June 1941 by R.M.S.
 Checked Dec. 1944 by RAB.

Note: This drawing is not to scale. Follow dimensions.

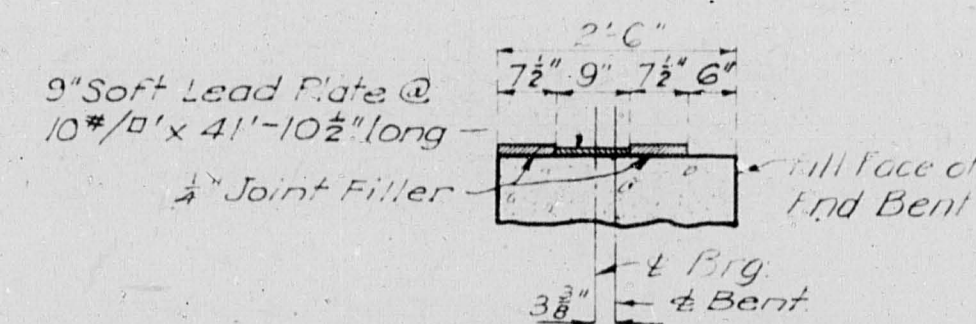
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	1-146	19	17	17

FINAL PLANS

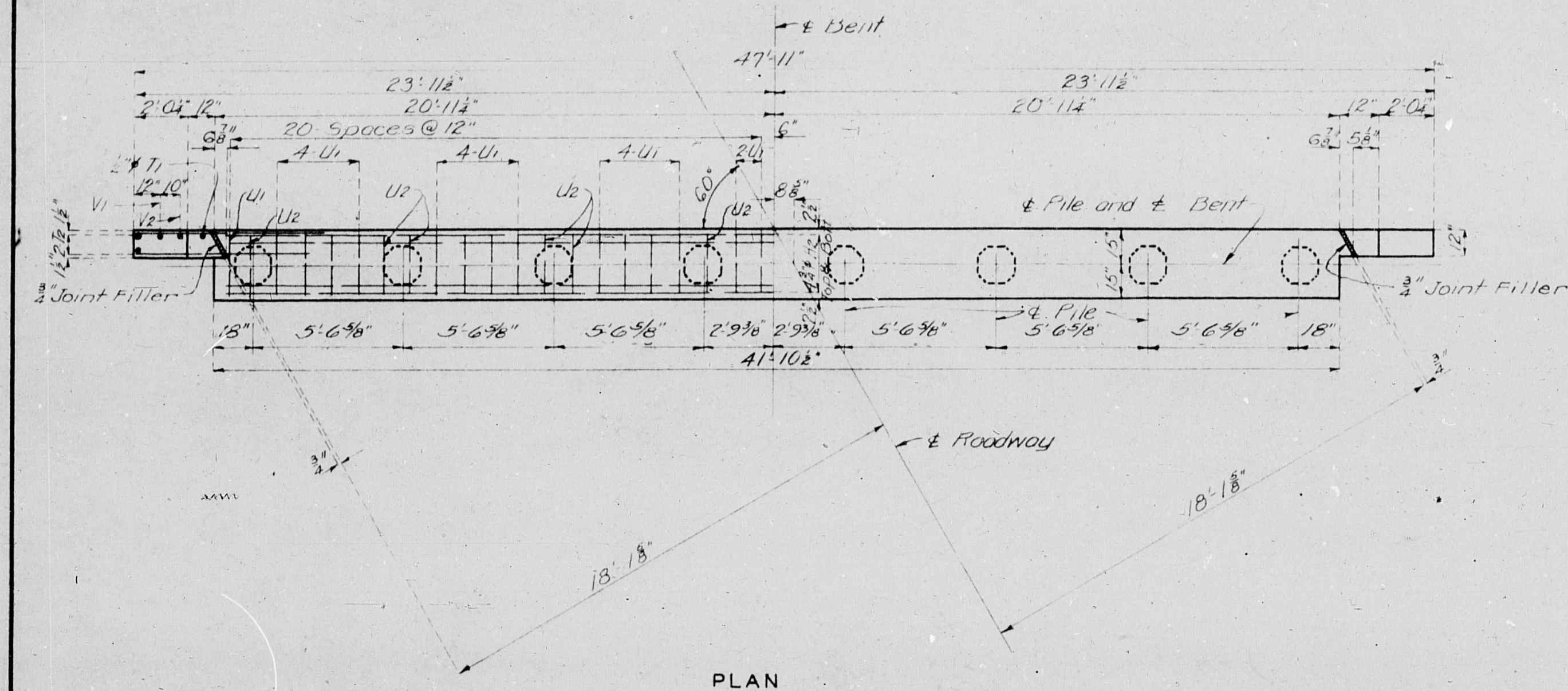


SECTION ON E



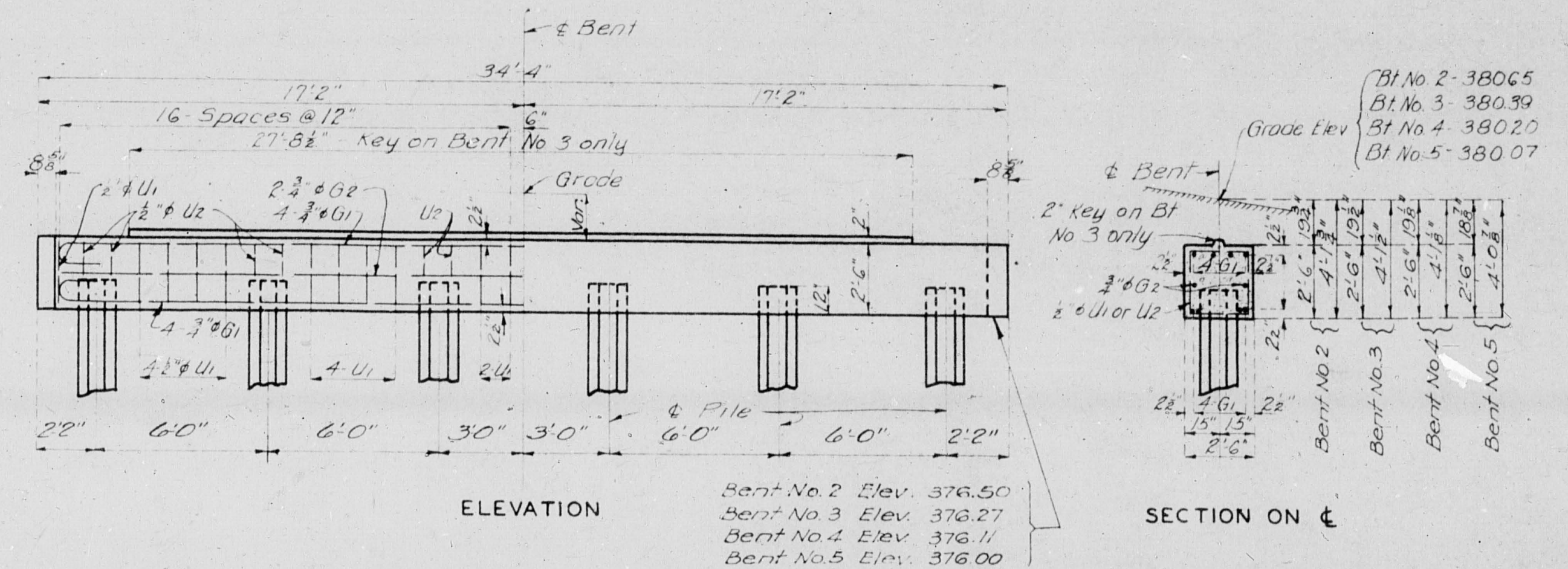
DETAIL OF BEARING AT
END BENTS NO. 1 & 6

Note: Cost of lead plates to be included
in price bid for other items.



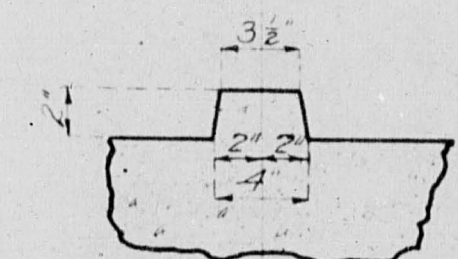
PLAN

DETAILS OF END BENTS NO. 1 & 6

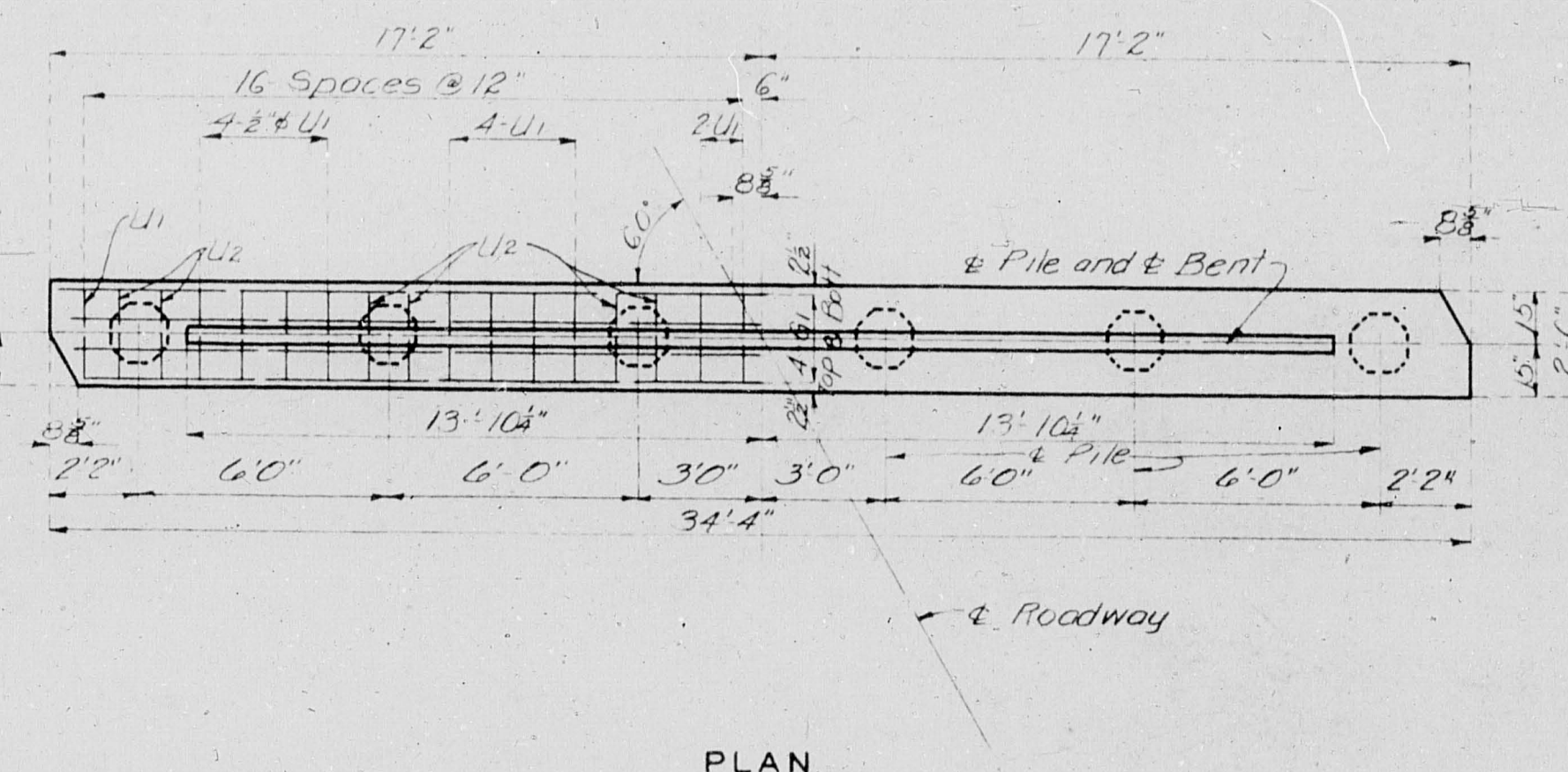


ELEVATION

SECTION ON E

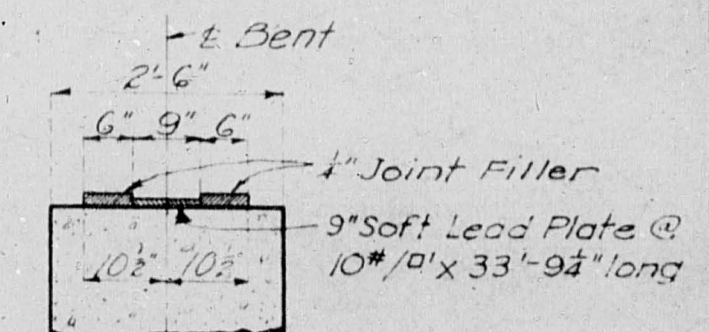


DETAIL OF KEY ON
BENT NO. 3 ONLY



PLAN

DETAILS OF INTERMEDIATE BENTS NO. 2, 3, 4 & 5



DETAIL OF BEARING FOR
BENTS NO. 2, 4 & 5

BRIDGE OVER BIG CREEK OVERFLOW

STATE ROAD FROM PLEASANT HILL SOUTH
AT PLEASANT HILL
PROJECT NO. FG-741(6) (RT. 7) STA. 63+35

CASS

COUNTY

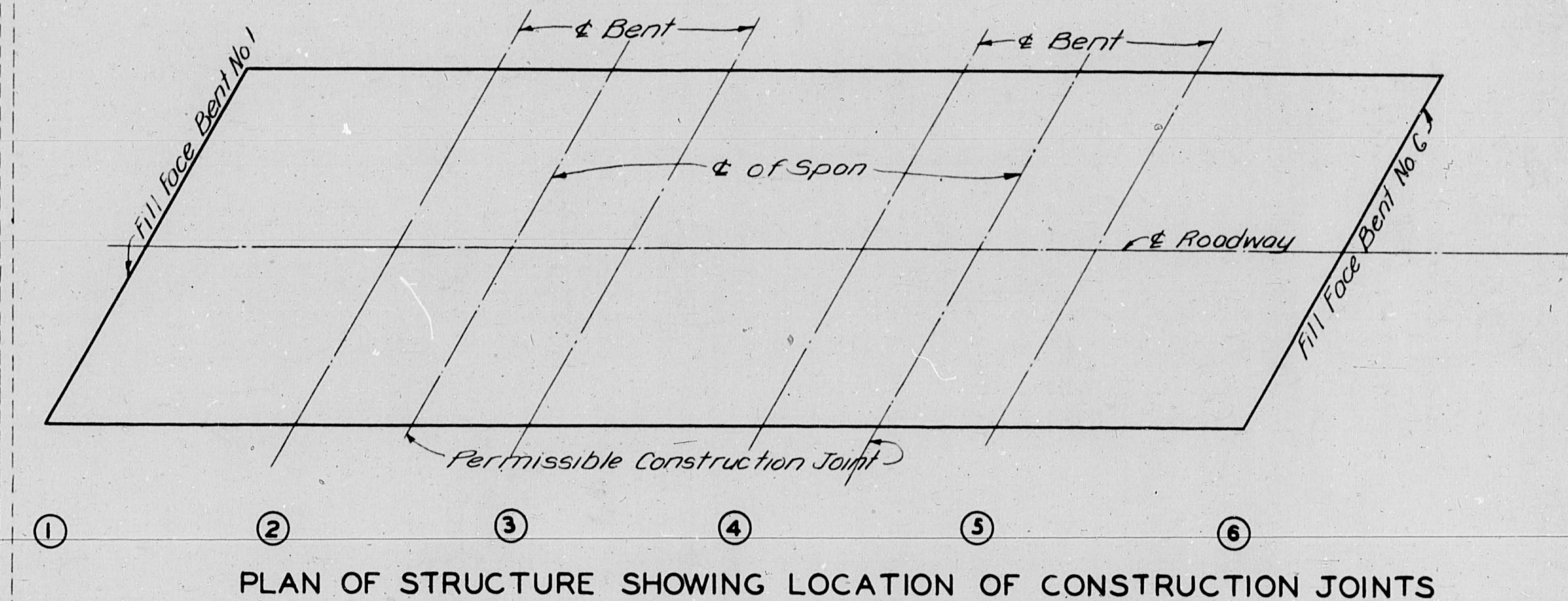
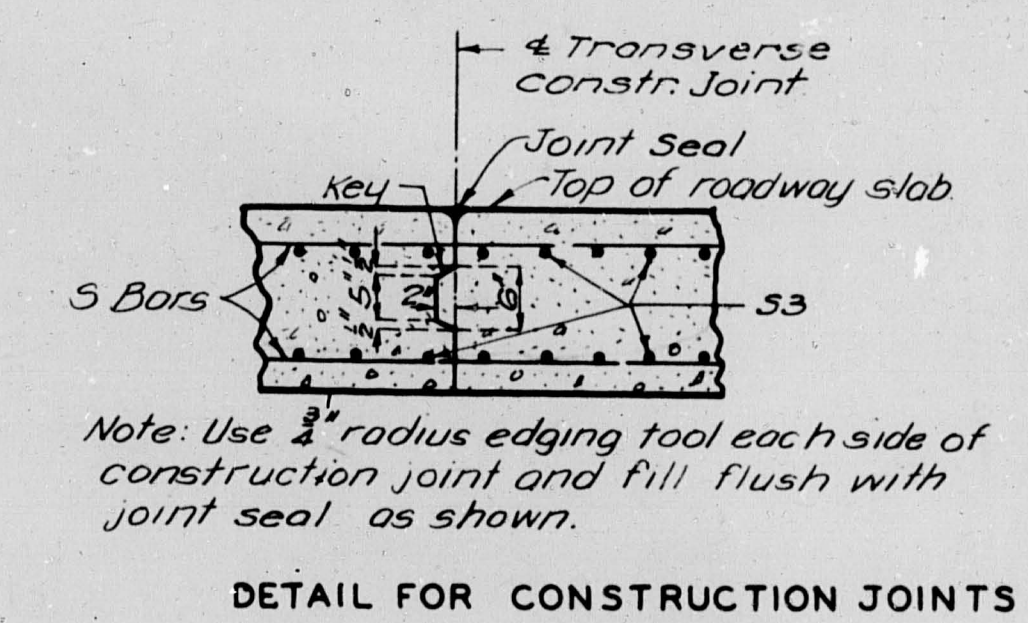
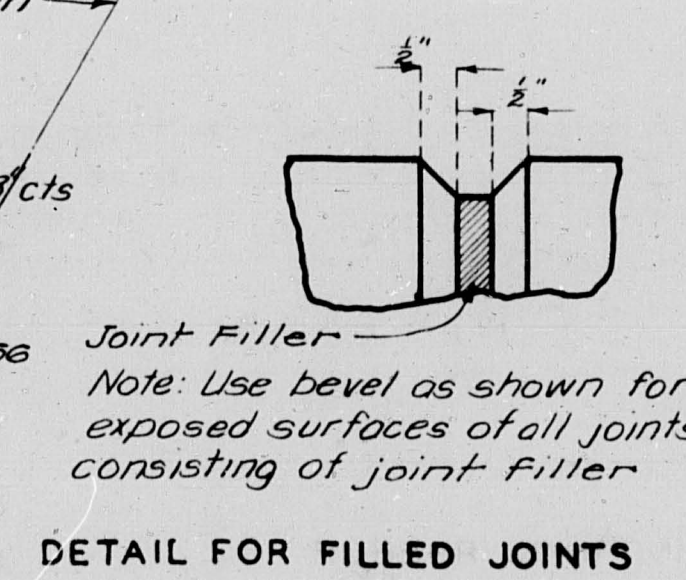
Designed May 1941 by J.B.J.
Drawn June 1941 by C.S.R.
Traced June 1941 by R.M.S.
Checked Dec. 1941 by R.A.B.

Note: This drawing is not to scale. Follow dimensions.

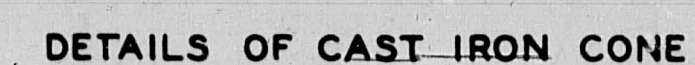
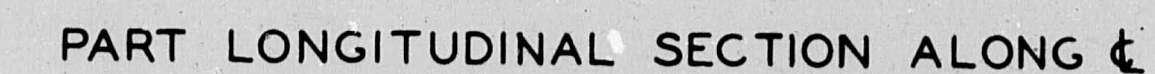
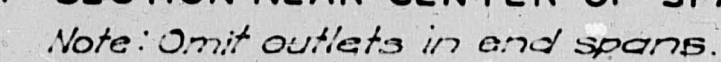
Sheet No. 2A of 2.

L-25

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-74(16) (RT 7)	19		



PLAN OF SLAB SHOWING REINFORCEMENT

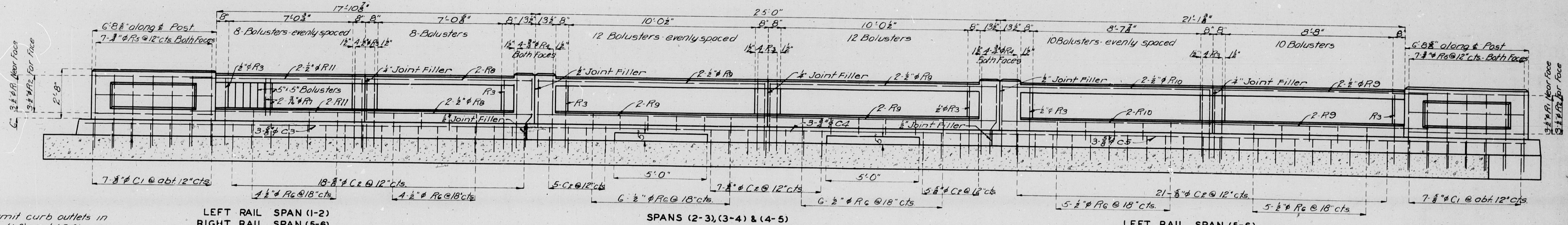


Note: This drawing is not to scale. Follow dimensions.

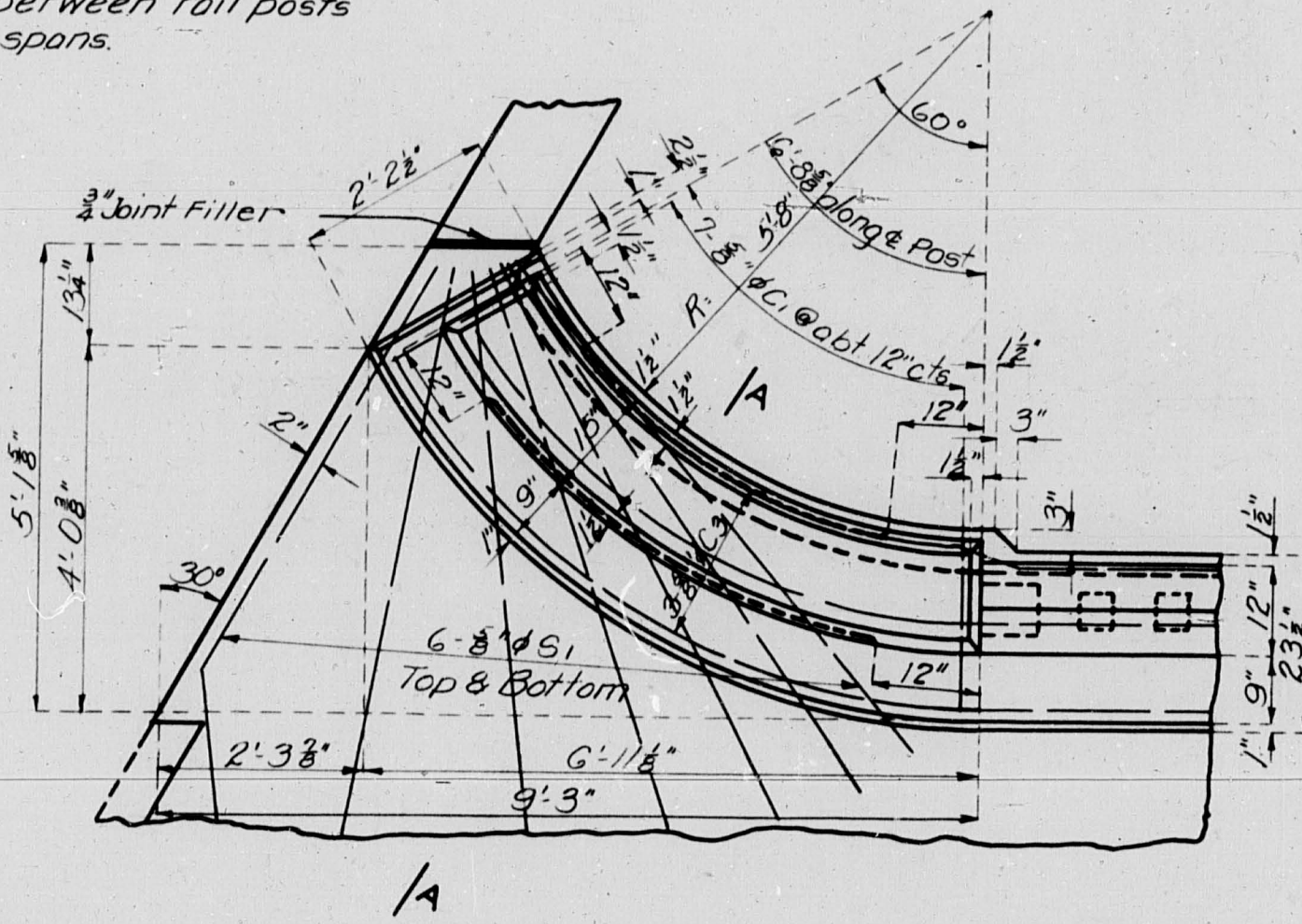
COUNTY

MISSOURI STATE HIGHWAY DEPARTMENT

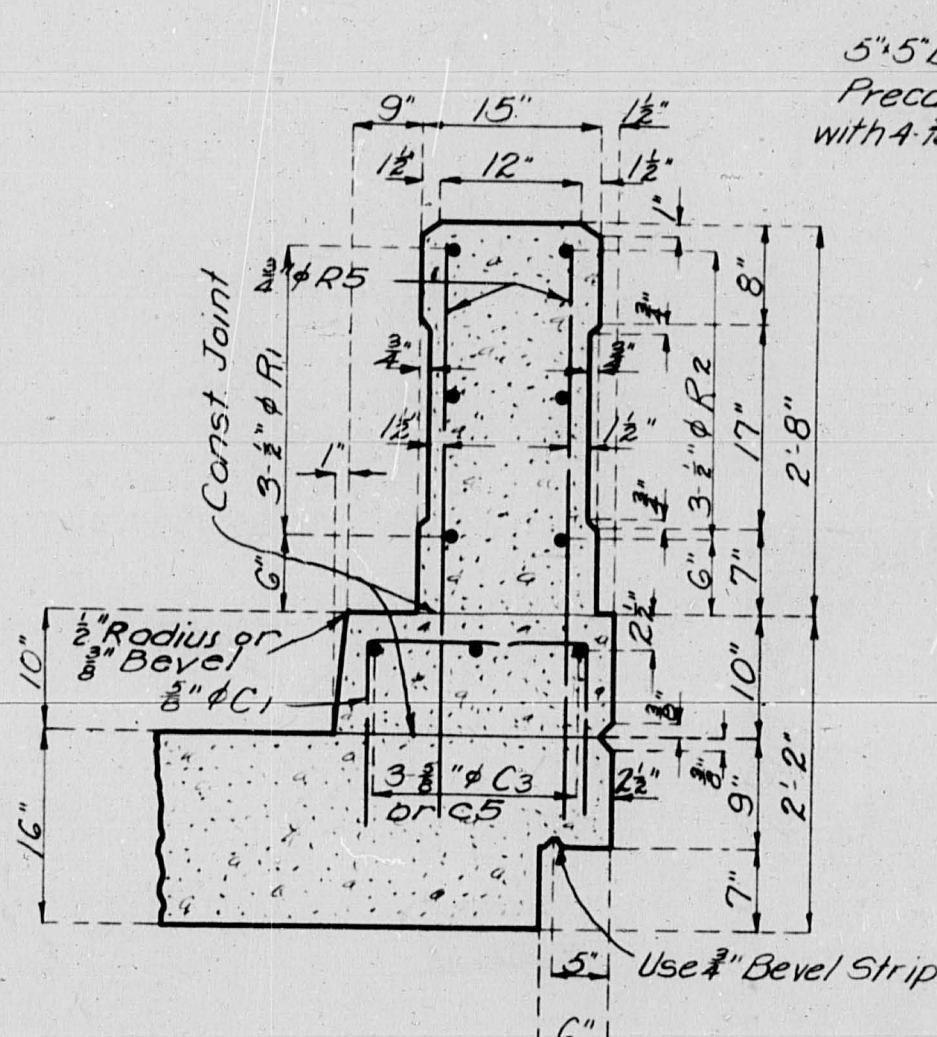
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-741(6) (RT. 7)	19	17	17



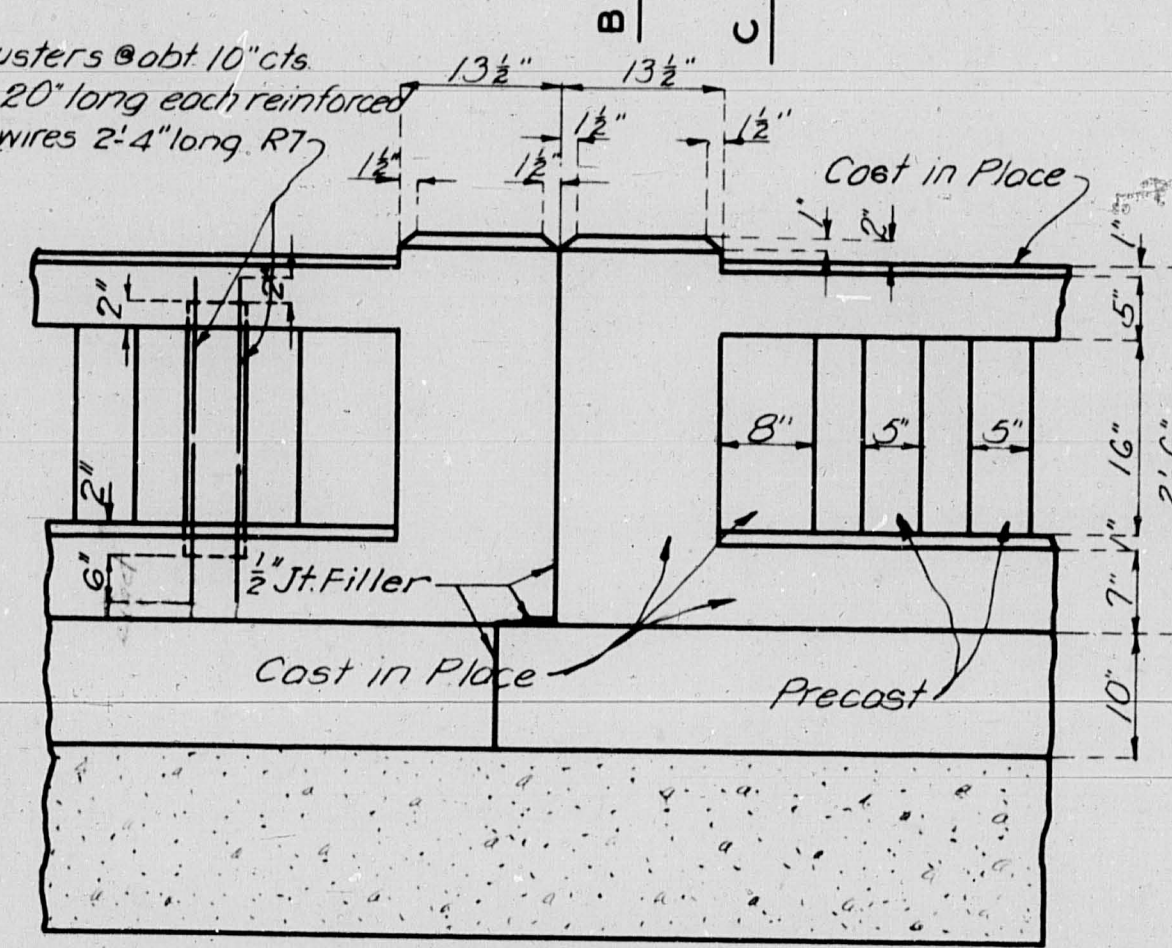
Note Omit curb outlets in Spans (1-2) and (5-6).
5'-5'-0" curb outlets to be centered between rail posts in all other spans.



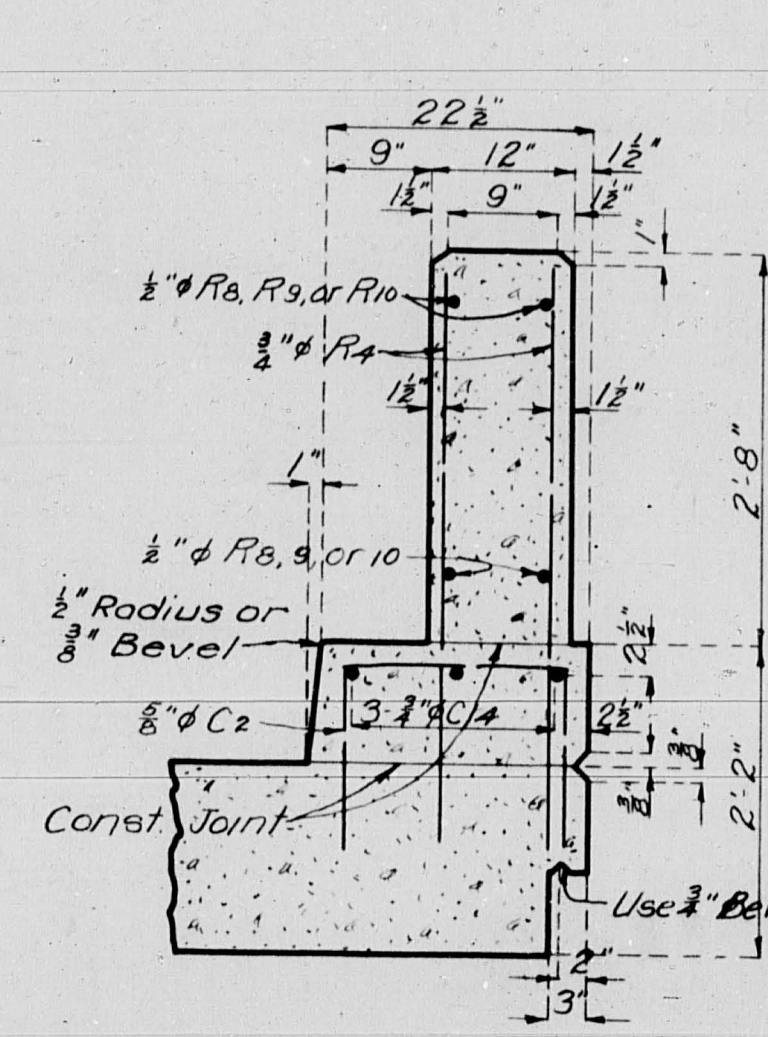
PART ELEVATION OF HANDRAILS
Note: Dimensions for handrail are at 1/4 rail.



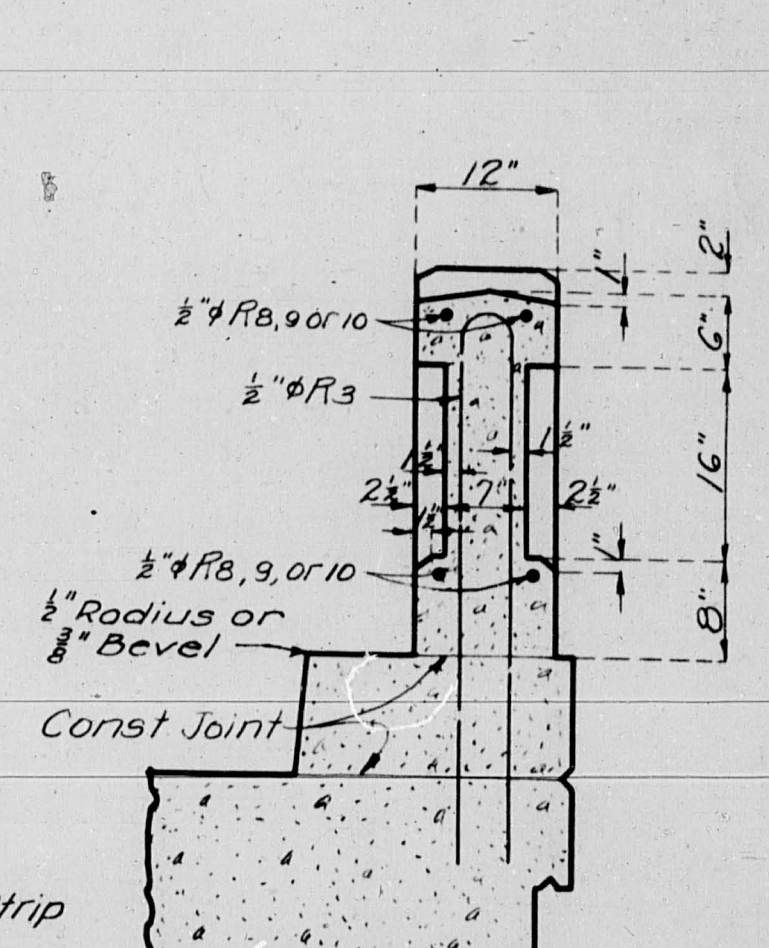
SECTION A-A



ELEVATION

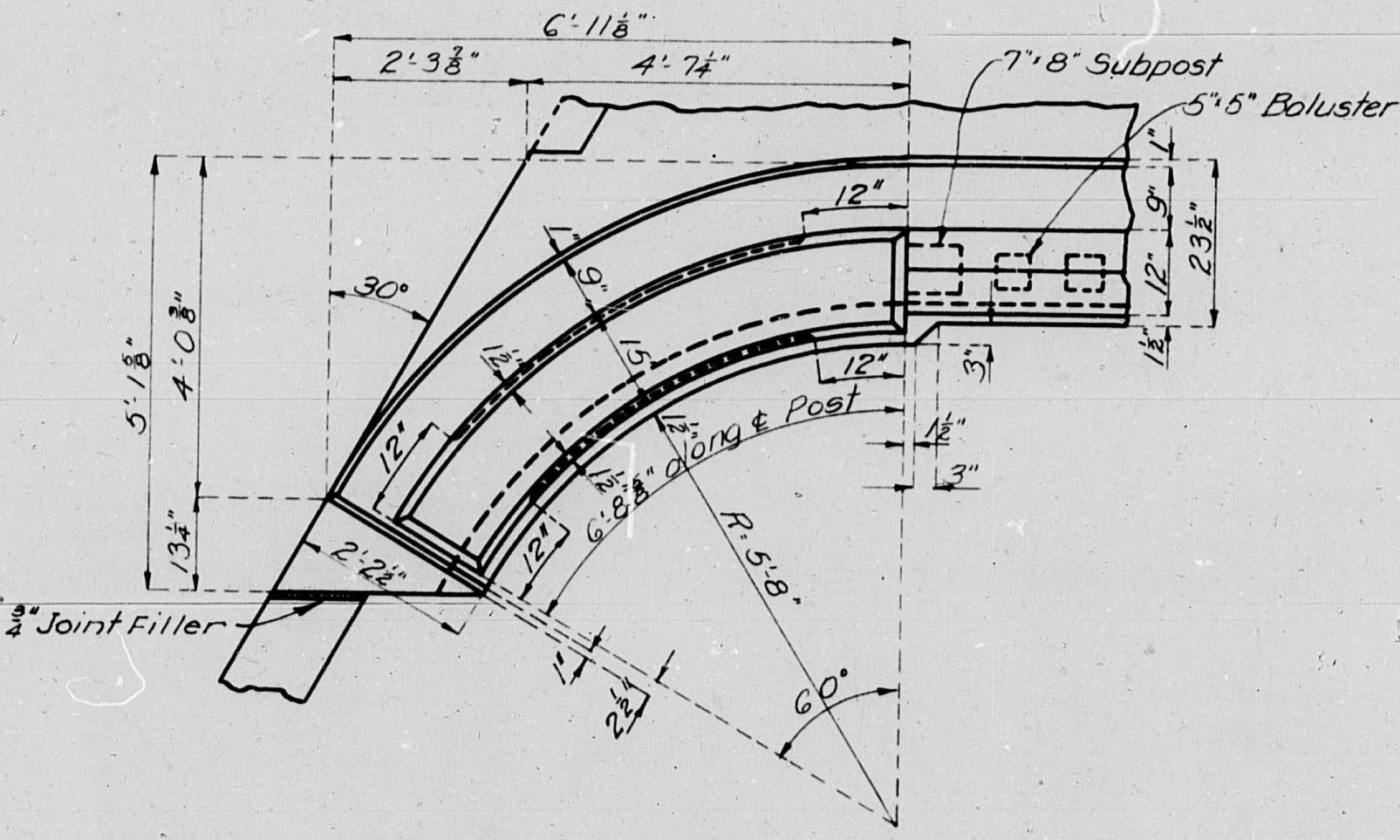


SECTION B-B



SECTION C-C

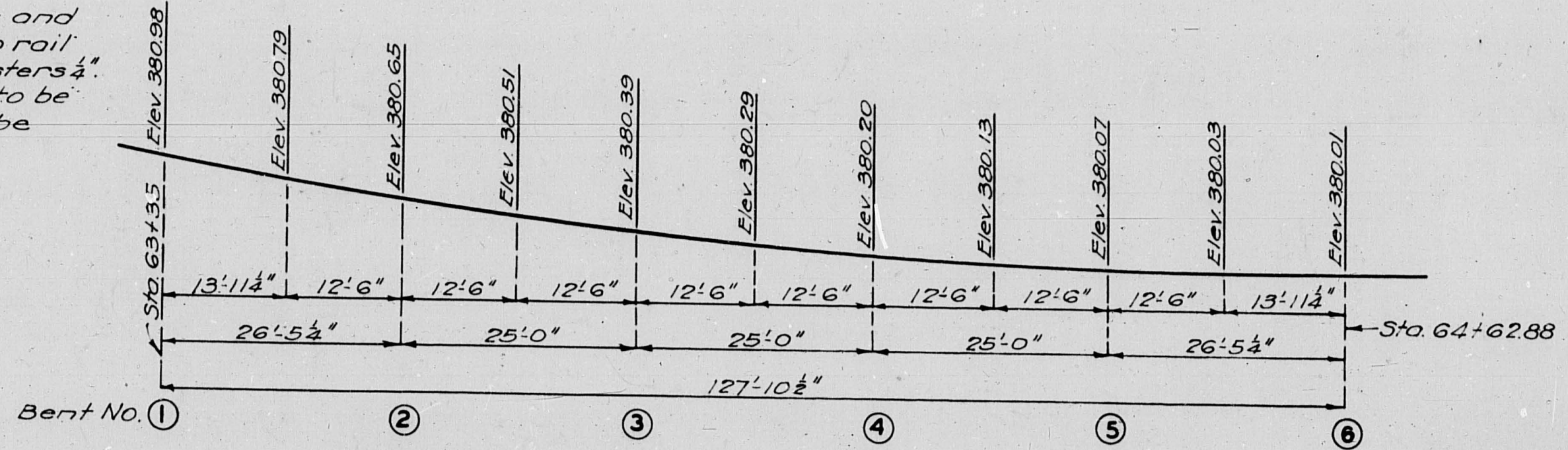
DETAILS OF INTERMEDIATE POSTS



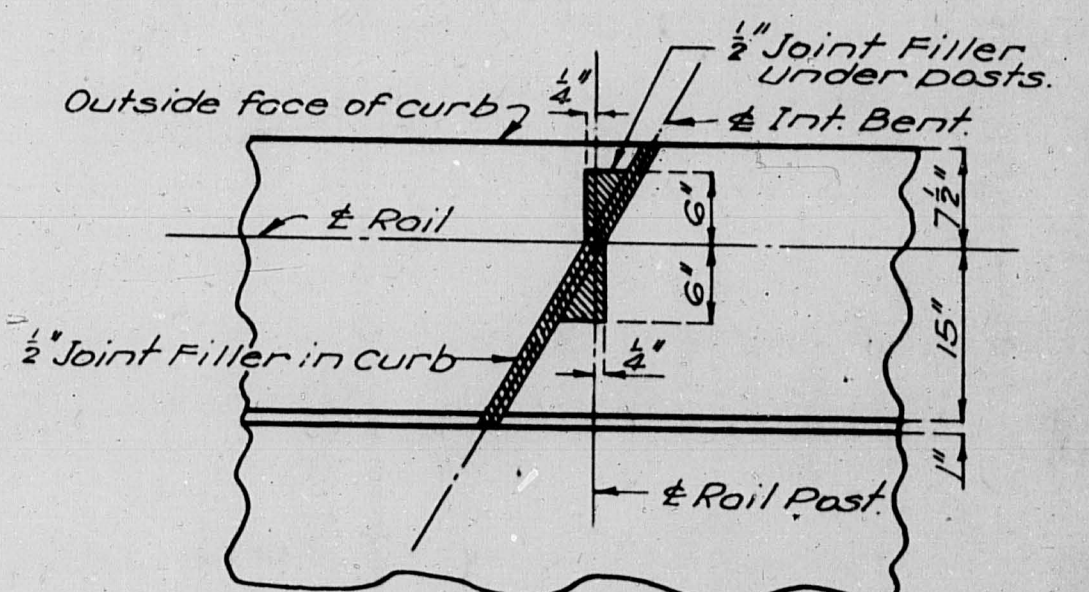
PLAN OF END POSTS

DETAILS OF END POSTS

Note: Curb, rail and top of posts to be built parallel to grade.
Posts, subposts and balusters shall be vertical.
Vertical edges of posts and subposts and bottom of top rail to be beveled 1/2". Bevel balusters 1/2".
Posts subpost and rail to be cast in place. Balusters to be precast.



SKETCH SHOWING GRADE ELEVATIONS AT ROADWAY



PLAN AT TOP OF CURB OVER INTERMEDIATE BENTS

BRIDGE OVER BIG CREEK OVERFLOW

STATE ROAD FROM PLEASANT HILL SOUTH
AT PLEASANT HILL

PROJECT NO. FG-741(6) (RT. 7) STA. 63+35

CASS

COUNTY

Designed May 1941 by J.B.J.
Drawn May 1941 by C.S.A.
Traced June 1941 by R.M.S.
Checked Dec. 1944 by R.A.S.

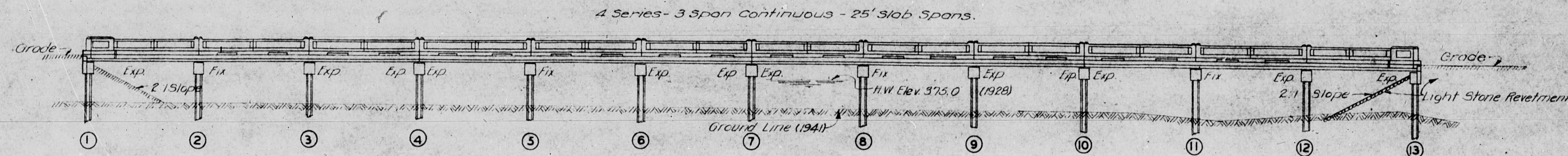
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 4 of 4

MISSOURI STATE HIGHWAY DEPARTMENT

FINAL PLANS

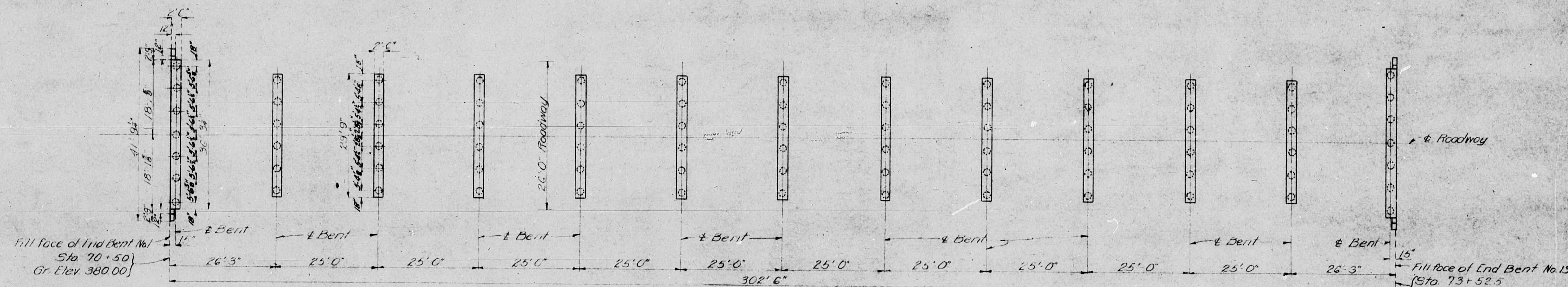
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-741(6)	1948	1	1



GENERAL ELEVATION

Note: All piling ~~shall be~~ reinforced concrete and ~~shall~~ conform with details and notes on Standard P-3R1.
 Estimated Quantities shown on plans are based on the following lengths: 74 @ 45' 0". These indicated lengths are approximate only. Proper lengths to give required bearing and/or penetration ~~shall be~~ authorized by the Engineer. See special provisions. ~~44' Authorize~~ 411 Bents.
 All piles ~~shall be~~ driven to practical refusal on or into shale or cemented gravel, ~~and not less than full length authorized and~~ to sustain a load of at least 45 ton per pile.
 Six concrete test piles ~~shall be~~ driven in permanent position for the following bents: one for Bent No. 1, one for Bent No. 5, one for Bent No. 6, one for Bent No. 9, one for Bent No. 10 and one for Bent No. 13. ~~One load test required. Test pile shall be 60' long.~~

BILL OF REINFORCING STEEL						Bending Sketches
No.	Size	Length	Mark	Location		
Superstructure						
28	3/4"	4' 0"	C1	Curb		
60	3/4"	22'-9"	C2	"		
12	3/4"	25'-3"	C3	"		
120	3/4"	3'-9"	C5	"		
34	3/4"	39'-9"	S1	Slabs		
102	3/4"	39'-0"	S2	"		
36	1"	39'-3"	S3	"		
96	1"	17'-3"	S4	"		
112	3/4"	17'-9"	S5	"		
112	3/4"	11'-9"	S6	"		
16	1"	30'-0"	S7	"		
30	2 1/2"	28'-9"	S8	"		
32	1"	22'-9"	S9	"		
32	1"	27'-6"	S10	"		
48	1"	28'-9"	S11	"		
16	1"	22'-9"	S12	"		
48	1"	21'-6"	S13	"		
96	1"	26'-3"	S14	"		
96	1"	21'-6"	S15	"		
90	3/4"	27'-9"	S16	"		
24	1"	29'-0"	S17	"		
16	1"	40'-0"	S18	"		
12	3/4"	20'-6"	S19	"		
68	3/4"	28'-0"	S20	"		
68	3/4"	16'-0"	S21	"		
48	3/4"	8'-6"	S22	"		
688	3/4"	29'-0"	S23	"		
12	1"	40'-6"	S24	"		
12	1/2"	6'-9"	R1	End Post		
12	1/2"	6'-0"	R2	"		
144	1/2"	7'-9"	R3	Subposts		
66	3/4"	3'-9"	R4	End Post		
272	1/2"	9'	R5	Roll		
16	1 1/4"	10'-0"	R6	"		
160	1/2"	12'-3"	R7	"		
2208	1/2"	2'-4"	R8	Bolsters		
176	3/4"	3'-9"	R9	Posts		
16	3/4"	11'-0"	R10	Roll		
End Bents No 1 and No 13						
16	3/4"	5'-9"	H1	Wing		
16	3/4"	38'-0"	H2	Beam		
4	3/4"	35'-9"	H3	"		
4	1 1/4"	8'-6"	W1	Wing		
8	3/4"	7'-9"	W2	"		
52	3/4"	9'-9"	U1	Beam		
20	1 1/4"	6'-6"	U2	"		
4	1 1/4"	3'-6"	V1	Wing		
4	3/4"	3'-0"	V2	"		
End Bents No 2 to No 12 Incl						
88	3/4"	31'-3"	G1	Beam		
22	3/4"	29'-6"	G2	"		
242	3/4"	9'-9"	U1	"		
88	3/4"	6'-6"	U2	"		



PLAN

Bent No.	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
IN PLACE	147	151	211	158	200	209	200	200	200	200	200	200	200	2403
CORDED	17	17	13	13	14	11	12	15	12	5	4	12	16	169
TEST PILE	50				50	50		50	60			50	300	

Note: A rubbed surface finish will be required on all exposed surfaces of handrail and curbs and outside faces of roadway slabs.

GENERAL NOTES:-

Design Specifications R.R.S.H.O. 1944
 Loading M15 - R.R.S.H.O.
 Reinforcing Steel Stress - 18,000 psi
 Class B Concrete Stress - 1000 psi
 All concrete shall be Class B
 Where joint filler is specified on plans it shall conform with the requirements for Prepacked Material Filler as given in Section 38-1940b of the standard specifications.
 B.M. Elev 383.66 S.E. Corner North Abutment of R.R. Bridge Sta. 88+00

BRIDGE OVER BIG CREEK OVERFLOW

STATE ROAD FROM PLEASANT HILL SOUTH

AT PLEASANT HILL

PROJECT NO. FG-741(6) (RT. 7) STA. 70+50

CASS

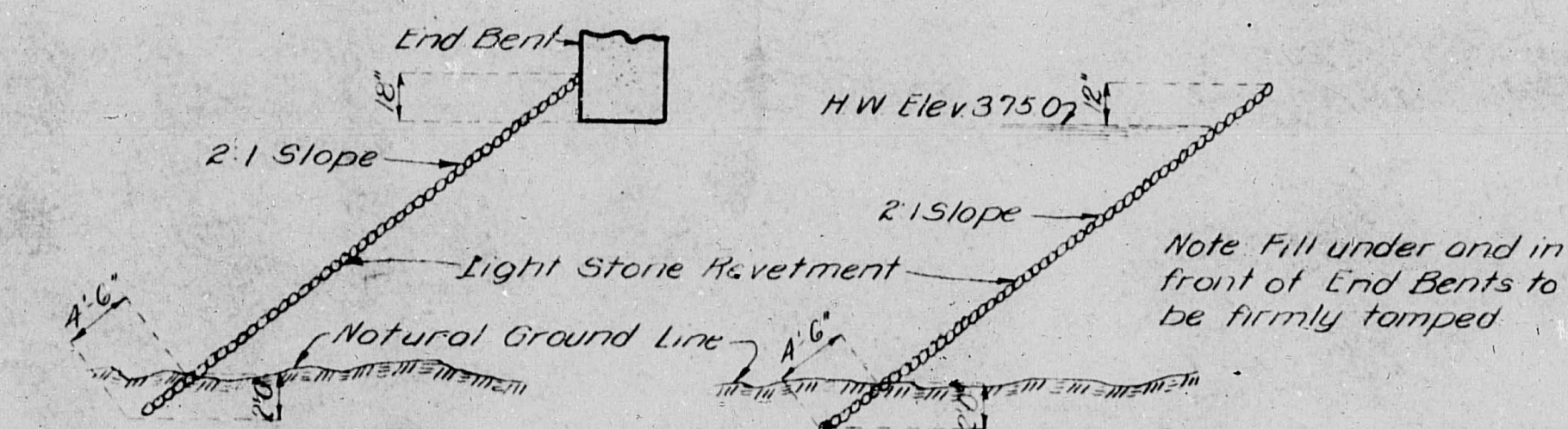
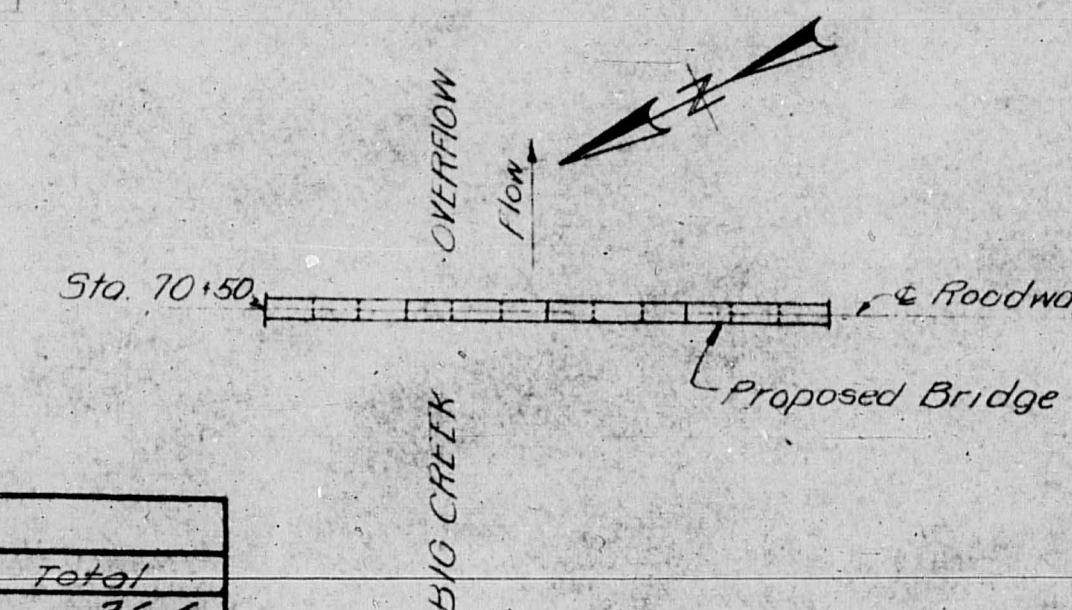
COUNTY

SUBMITTED BY *V. W. Arnold* DATE 3/8/1948
 APPROVED BY *C. W. Brown* DATE 3/8/1948

STD. P-351
 STD. C-1003
 L-32

FINAL QUANTITIES			
Item	Superstr.	Substr.	Total
Class B Concrete (Handrail)	Cu Yds. 36.6		36.6
Class B Concrete	Cu Yds. 477.1	94.1	571.2
Reinforcing Steel	Lbs. 100420	8890	109310
Concrete Piles in Place	Lin. Ft. 3087		3087
Concrete Pile cut-offs	Lin. Ft. 169		169
Concrete Test Piles	Lin. Ft. 300		300
Loading Tests	Each 0		0

LOCATION SKETCH



FRONT OF END BENT NO. 13

SIDE SLOPES OF FILL

Note: Light Stone Revetment shall be placed on fill at End Bent No. 13 as shown in sketches.
 Approximately 280 Sq. Yd. of Light Stone Revetment work included in road contract.

LIGHT STONE REVETMENT SKETCHES

Designed May 1941 by T.B.J.
 Drawn May 1941 by C.S.A.
 Traced June 1941 by R.M.S.
 Checked Dec 1941 by R.A.S.

Note: This drawing is not to scale. Follow dimensions.

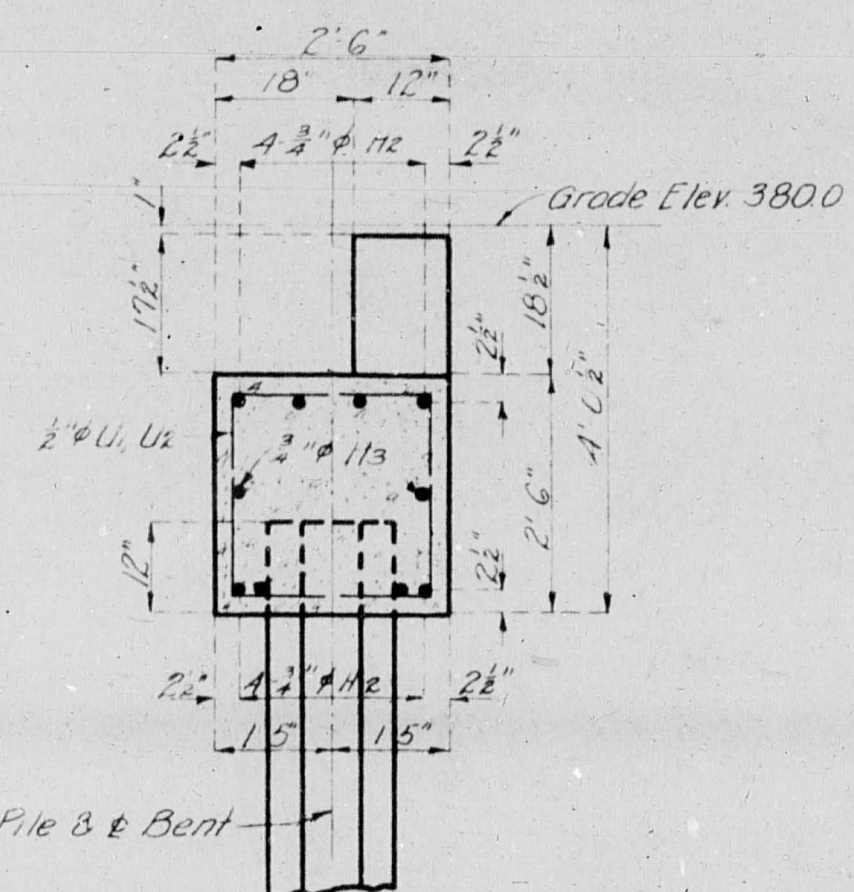
Sheet No 1A of 2

FINAL PLANS

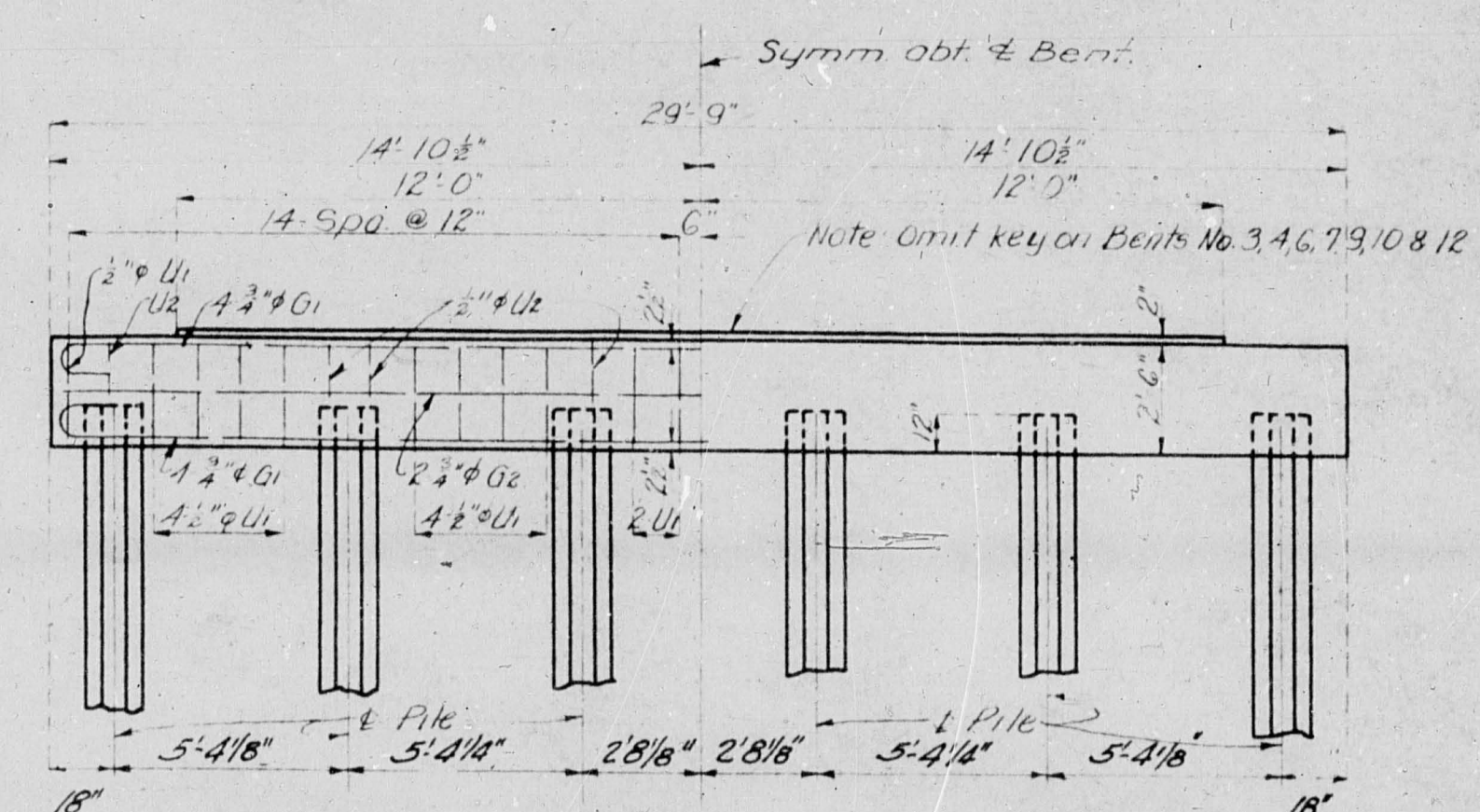
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	PA-4176 (K.T.)	19		

[illegible]

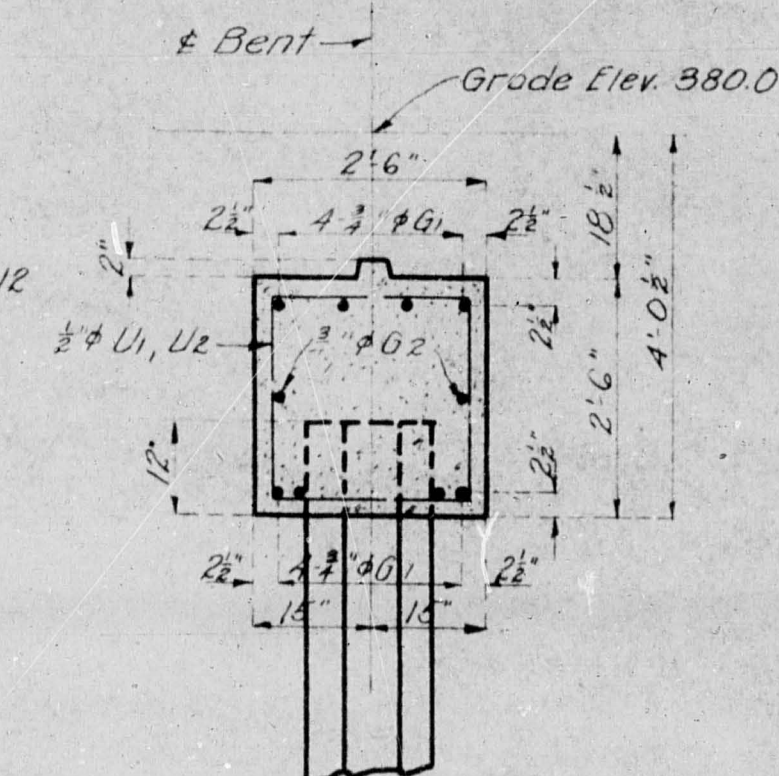
ELEVATION



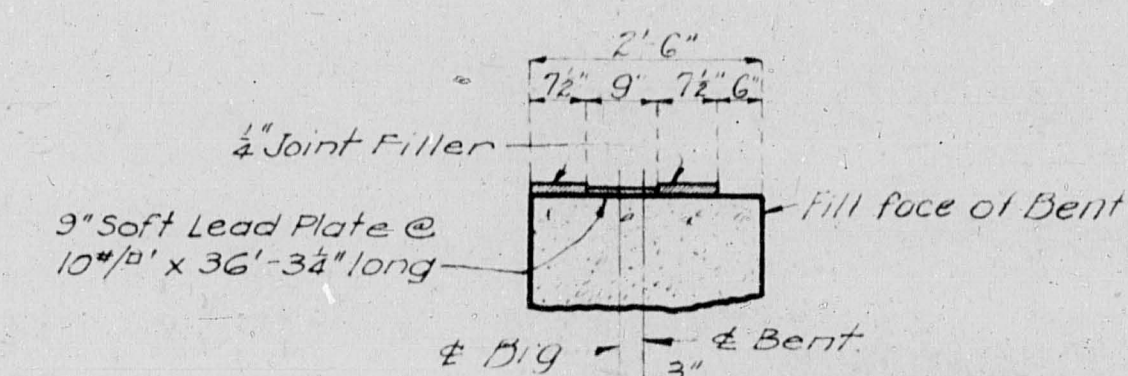
SECTION ON C



ELEVATION

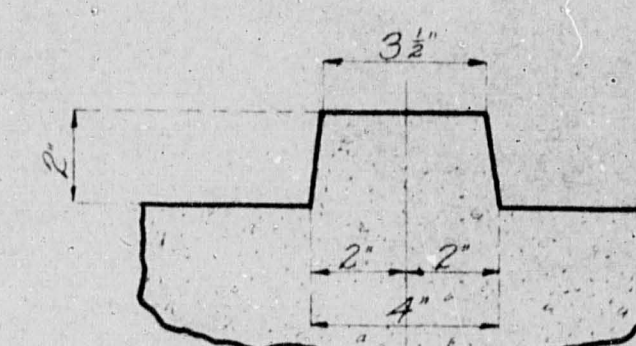


SECTION ON C



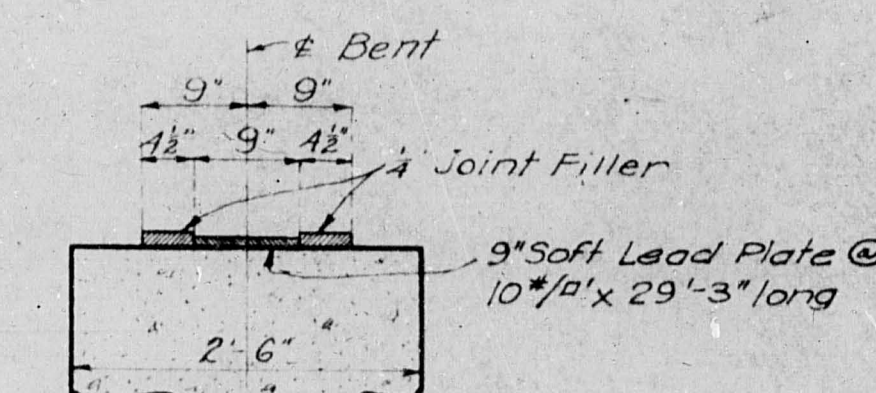
DETAIL OF BEARING AT
BENTS NO. 1 & 13

Note: Cost of lead plates to be included in price bid for other items.

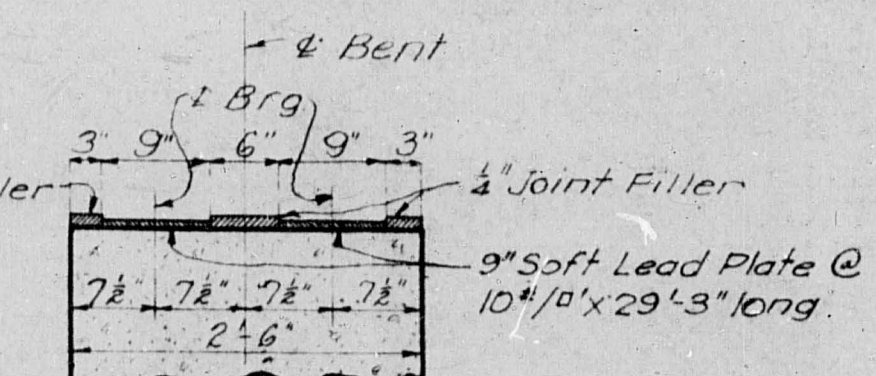


£ Bent

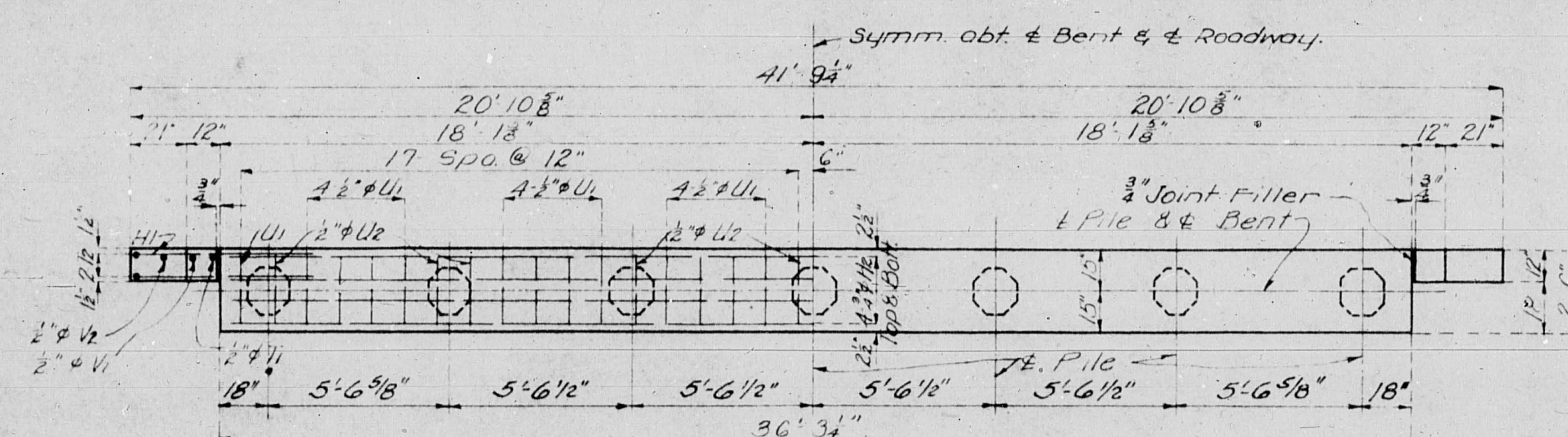
DETAILS OF KEY FOR
BENTS NO. 2, 5, 8 & 11



DETAILS OF BEARING FOR
BENTS NO. 3, 6, 9 & 12

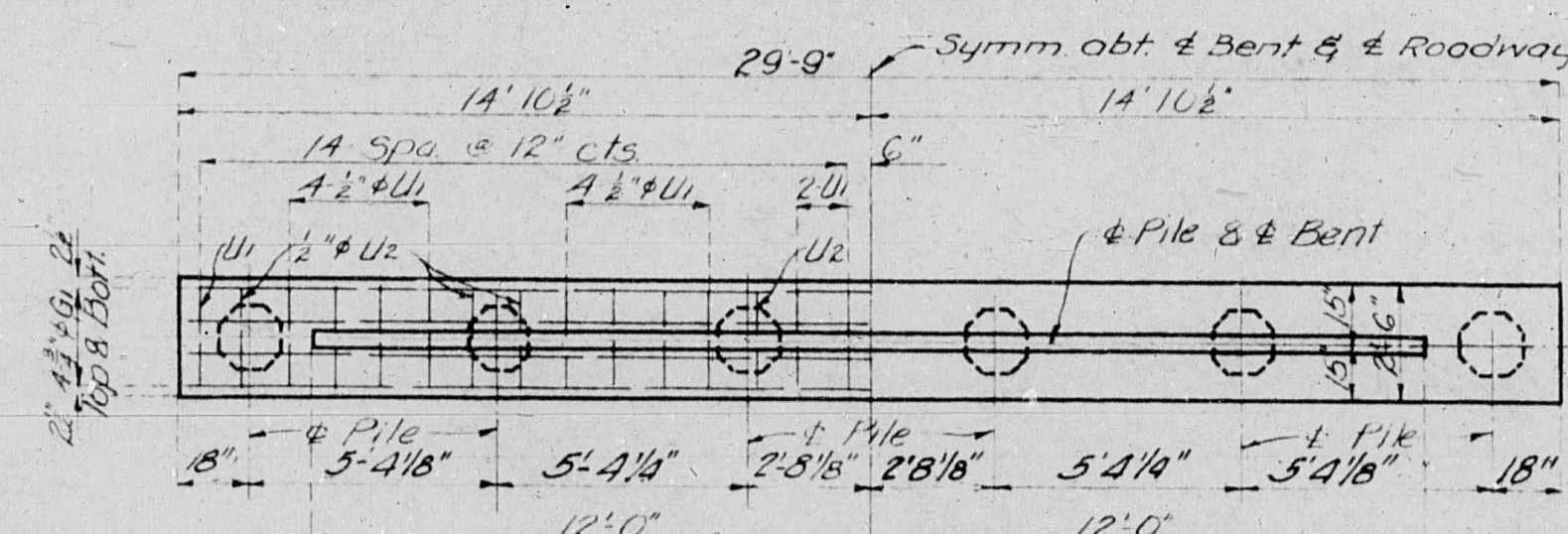


DETAILS OF BEARING FOR
BENTS NO. 4, 7 & 10



PLAN

DETAILS OF END BENTS NO. 1 & 13



PLAN

DETAILS OF INTERMEDIATE BENTS

STATE ROAD FROM PLEASANT HILL SOUTH
AT PLEASANT HILL
PROJECT NO. FG-741(6) (RT. 7) STA. 70+50

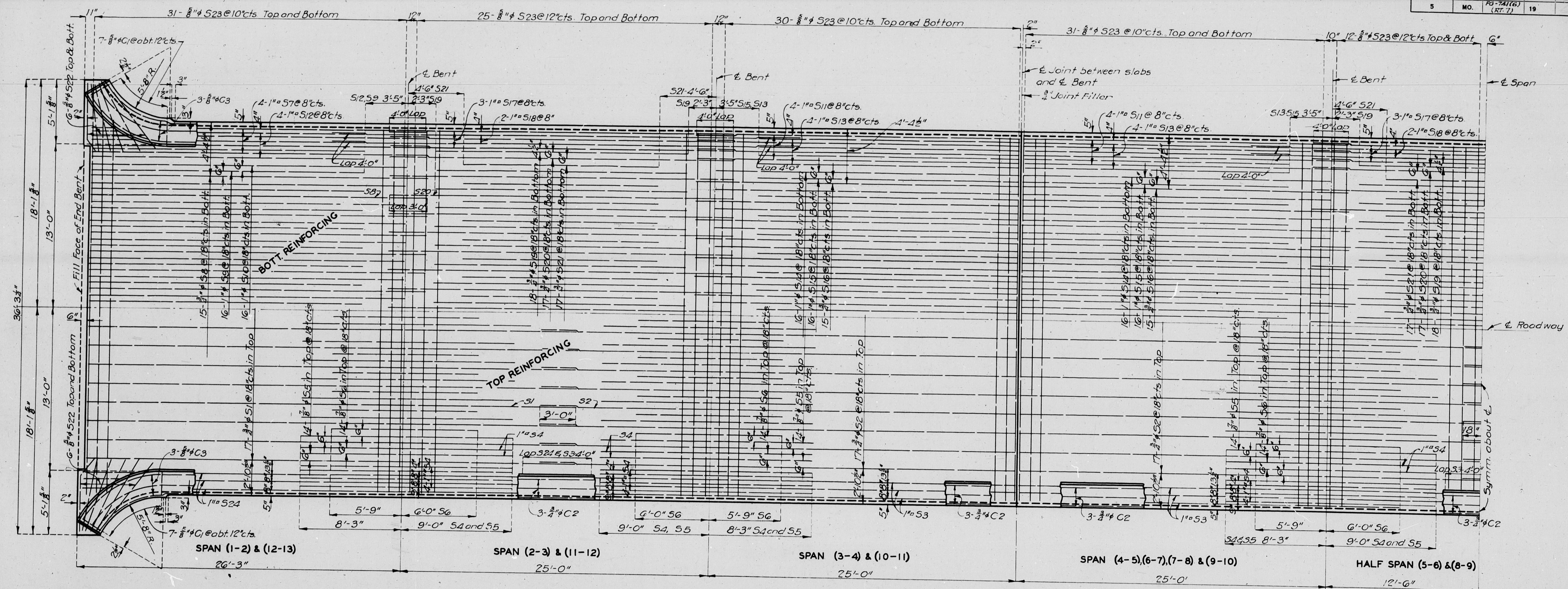
Designed May 1941 by J.B.J.
 Drawn May 1941 by C.S.A.
 Traced June 1941 by R.M.S.
 Checked Dec 1944 by RAB.

Note: This drawing is not to scale. Follow dimensions.

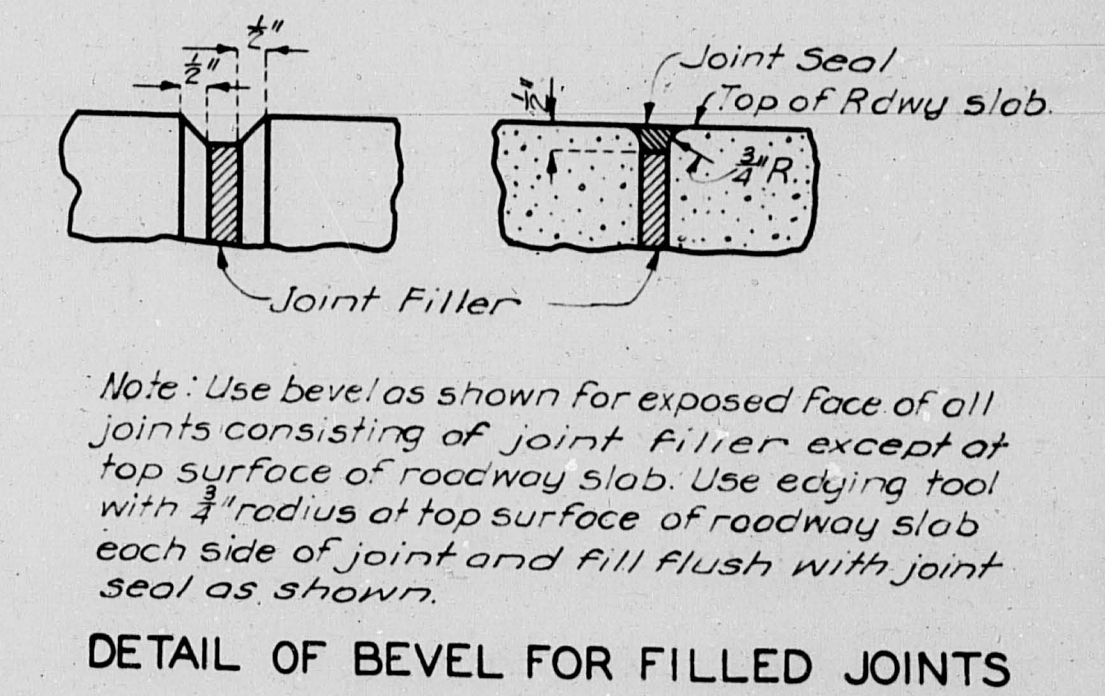
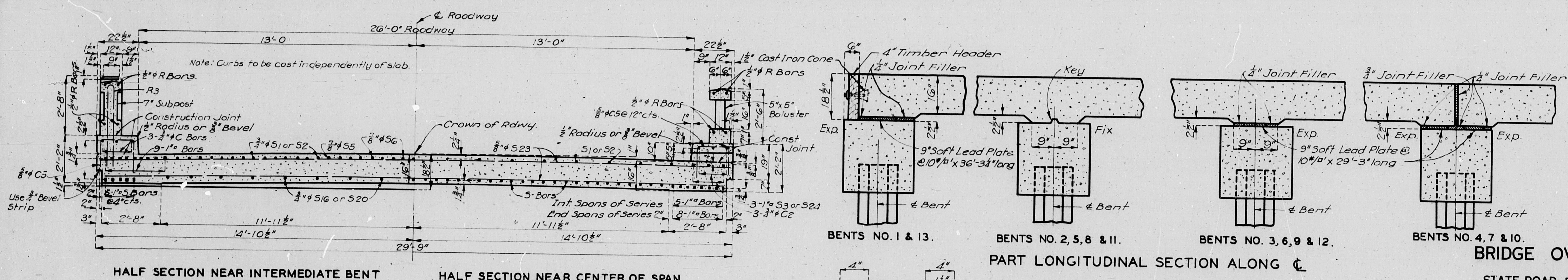
Sheet No. 2A of 2

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-741(6) (RT. 7)	19		



PLAN OF SLAB SHOWING REINFORCING STEEL



BRIDGE OVER BIG CREEK OVERFLOW
STATE ROAD FROM PLEASANT HILL SOUTH
AT PLEASANT HILL
PROJECT NO. FG-741(6) (RT. 7) STA. 70+50
CASS COUNTY

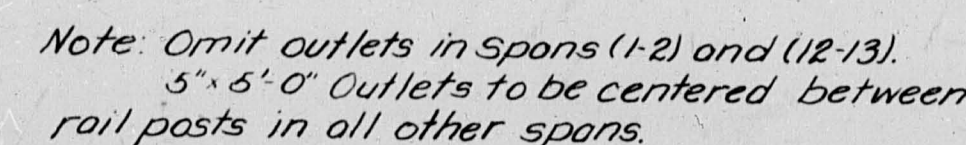
Designed Apr. 1941 by J.B.J.
Drawn May 1941 by C.S.A.
Traced May 1941 by C.S.
Checked Dec. 1944 by RAB

Note: Cost of timber headers complete in place to be included in price bid for concrete.

DETAILS OF CAST IRON CONE

Note: This drawing is not to scale. Follow dimensions

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
5	MO.	RT-22(6) (RT.7)	19		

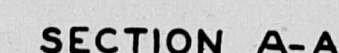


SPANS (3-4), (4-5), (6-7), (7-8), (9-10) & (10-11)

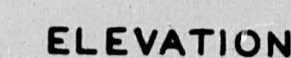
Note: Posts, Subposts, and Rail to be cast in place.
Balusters to be precast



DETAILS OF END POSTS



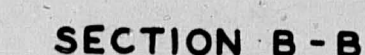
SECTION A-A



ELEVATION

Note: Vertical edges of posts and subposts
and bottom of top rail to be beveled $\frac{1}{4}$ ".
Bevel balusters $\frac{1}{4}$ ".

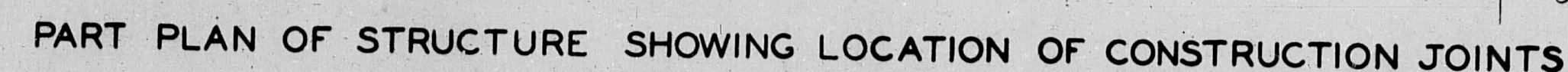
DETAILS OF INTERMEDIATE POSTS



SECTION B - B



SECTION C-C



PART PLAN OF STRUCTURE SHOWING LOCATION OF CONSTRUCTION JOINTS



DETAILS OF TRANSVERSE CONSTRUCTION JOINT

Designed May 1941 by J.B.J.
 Drawn May 1941 by C.S.A.
 Traced June 1941 by P.M.S.
 Checked Dec. 1944 by PAB.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 4 of 4

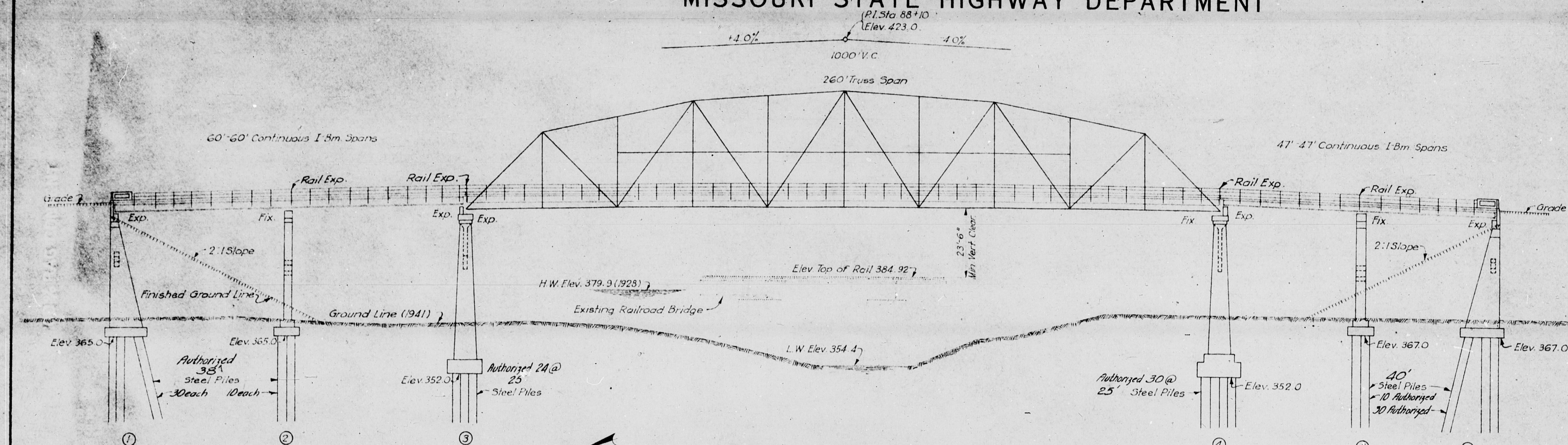
STATE ROAD FROM PLEASANT HILL SOUTH
AT PLEASANT HILL
PROJECT NO. FG-741(6) (RT. 7) STA. 70+50

CASS COUNTY

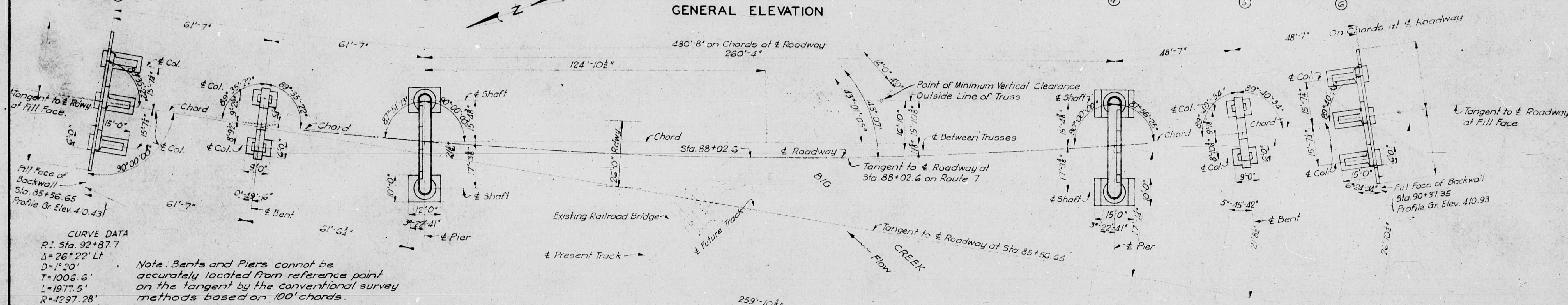
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-741(6) (2A 7)	19	1	7

FINAL PLANS



Note: All piling are 12" Brg. Pile @ 53" and conform with details and notes on Sheet No. 3. of these design plans. All piles are driven to practical refusal on or into solid rock, boulders shale, or compacted gravel, and will sustain a load of at least 60 tons per pile. Estimated quantities shown on plans are based on the following lengths: 40 @ 35'-0", 54 @ 22'-0" or Lengths as authorized by the Engineer and furnished by the Contractor: Bents 1 and 2, 40 @ 38'; Bents 3 and 4, 54 @ 25'; Bents 5 and 6, 10 @ 40'. Total Length authorized-4470 lin. ft.



CURVE DATA
P.I. Sta. 92+87.7
Δ=26°22' Lt
D=1°20'
T=1006.6'
L=1977.5'
R=4297.28'
S.E.=.0167'/ft.

Note: Bents and Piers cannot be accurately located from reference point on the tangent by the conventional survey methods based on 100' chords.

GENERAL NOTES:

Design Specifications A.A.S.H.O. 1941.
Loading H-15
Structural Steel Stress 18,000#/in.²
Reinforcing Steel Stress 13,000#/in.²
Concrete Class "B" 1000#/in.²
All concrete shall be Class "B".
Qualifications of all welding operators and electrodes will be required in accordance with Specifications, except that a proper certification of electrodes previously qualified will be acceptable.
Rivets 3/4" except where otherwise noted.
Paint: Shop, none; Field, Contact surfaces of bolted field connections one coat of red lead and surfaces inaccessible after erection three coats of red lead. Blast plates one coat of an approved asphaltic primer and a second coat of an approved asphaltic paint. All other exposed surfaces one coat red lead, second coat brown third coat aluminum tinted blue and final coat of aluminum. Payment for all coats excepting first coat red lead is included in price bid for material painted. See C.O.No.3
Where joint filler is specified it shall conform with the requirements for Premaulded Material Filler as given in Section 38-19 A(11) of the Standard Specifications.
A rubbed surface finish will be required on all exposed surfaces of curbs, concrete and posts and on outside faces of roadway slab.
Falsework for span over existing railroad tracks shall be constructed with a minimum vertical clearance of 21'-0" from top of rails and minimum lateral clearance of 9'-0" from centerline of track.

PLAN

FINAL QUANTITIES			
Item	Substr.	Superstr.	Total
Class 1 Excavation for Structures Cu.Yds	106.5		106.5
Class 2 Excavation for Structures Cu.Yds	190.5		190.5
Class "B" Concrete Cu.Yds	736.7	327.5	1064.2
Fabricated Structural Steel (Truss Span) Lbs.		490450	490450
Fabricated Structural Steel (I-Beam Spans) Lbs.		147320	147320
Steel Castings Lbs.		2850	2850
Gray Iron Alloy Castings Lbs.		1040	1040
Reinforcing Steel Lbs.	51890	78980	130870
Fabricated Wrought Iron (Blast Plates) Lbs.		5150	5150
Fabricated Wrought Iron (Drains) Lbs.		1040	1040
6" Metal Pipe Lin.Ft.	43		43
8" Metal Pipe Lin.Ft.	169		169
Steel Piling in place Lin.Ft.	3872		3872
Steel Pile Cut-Offs Lin.Ft.	598		598
Red Lead Painting Lump Sum		1	1

Note: Excavation for bridge made above Elev. 358.0 will be paid for as Class 1 Excavation for Structures. Excavation for bridge made below Elev. 358.0 will be paid for as Class 2 Excavation for Structures.

STEEL BEARING PILES 12" H 53 lbs		
Bent No.	Lin. Ft. In Place	Lin. Ft. Cut-Off
1	997	143
2	336	44
3	491	109
4	604	146
5	350	50
6	1094	106
TOTALS	3872	598

EXCAVATION		
Bent No.	Class 1 Excav.	Class 2 Excav.
1	122.4	
2	46.8	
3	143.7	86.67
4	249.6	104.00
5	45.2	
6	99.0	
Total	706.7	190.67
PAY	706.5	190.5

BM. Elev. 383.66 - S.E. Corner North Abutment of R.R. Bridge.
BM. Elev. 410.66 - NW. Cor. Rt. Wingwall Bent #1, Bridge Sta 85+56.65
BRIDGE OVER C. R. I. & P. R. R. AND BIG CR.

STATE ROAD FROM PLEASANT HILL SOUTH
AT PLEASANT HILL
PROJECT NO. FG-741(6) (RT. 7) STA. 85+56.65

CASS COUNTY

SUBMITTED BY U. W. Ernsel DATE 3/8/1948
APPROVED BY C. W. Brown DATE 3/8/1948
BRIDGE ENGINEER
CHIEF ENGINEER

STD-C10R
L-23

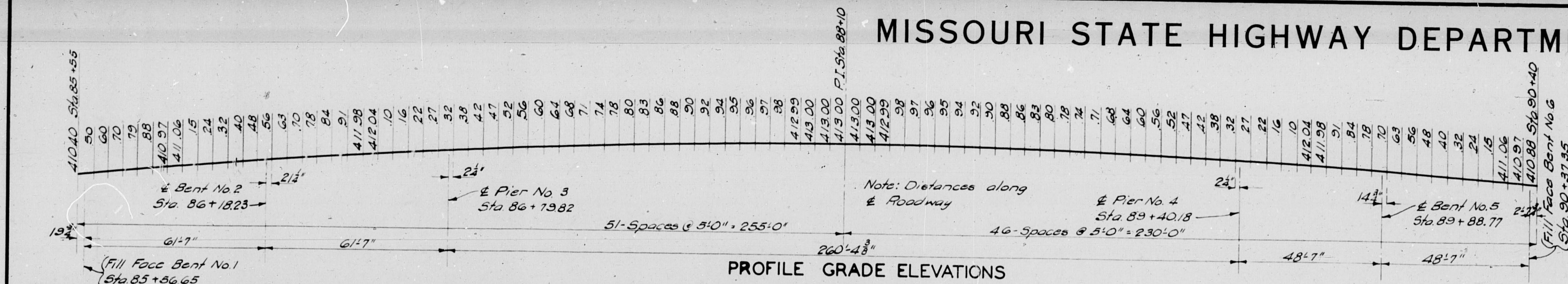
Designed May 1947 By R.A.C.
Drawn May 1947 By H.T.B.
Traced May 1947 By J.T.F.
Checked May 1947 By R.A.B. & N.W.R.

Note: This drawing is not to scale. Follow dimensions.

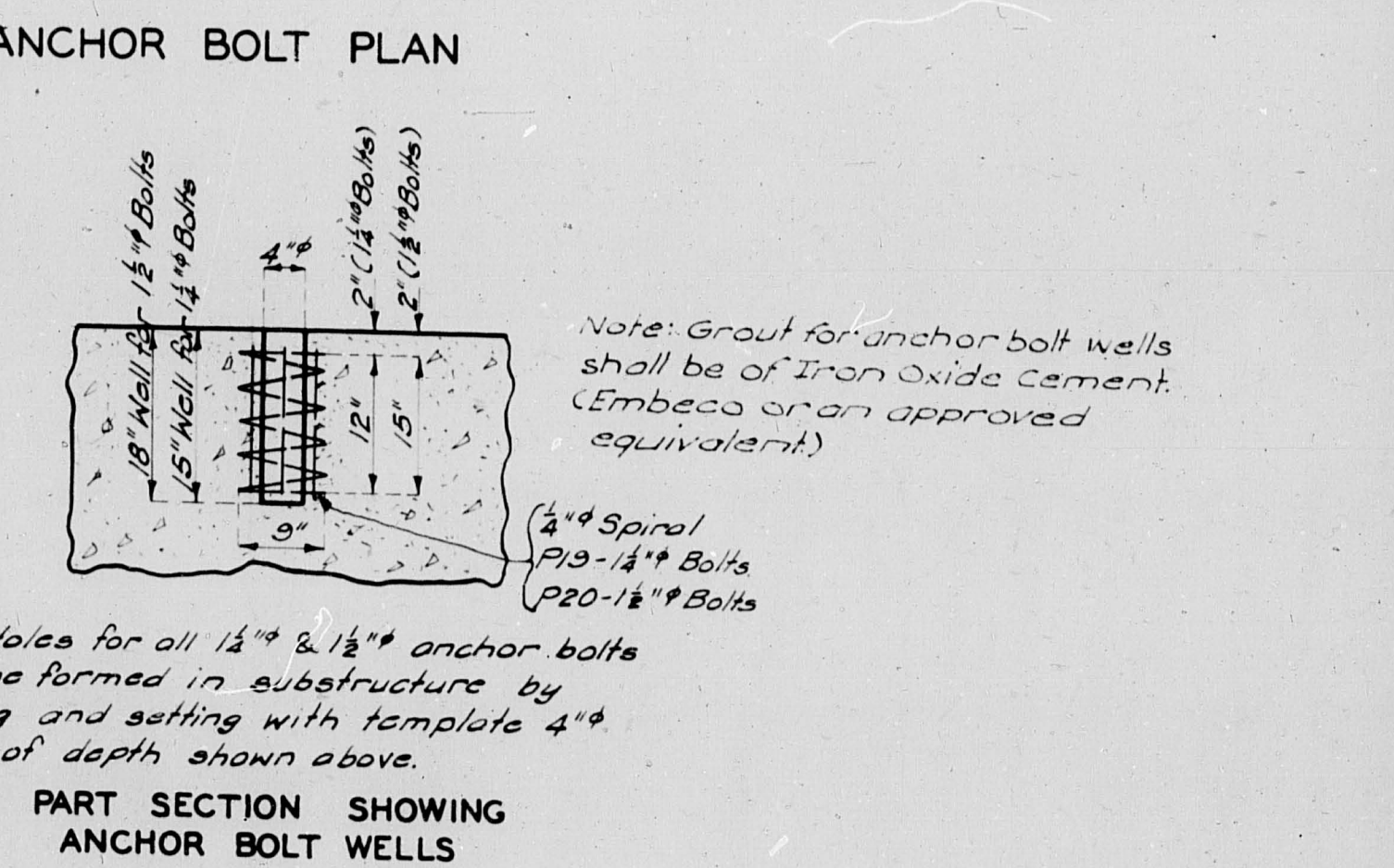
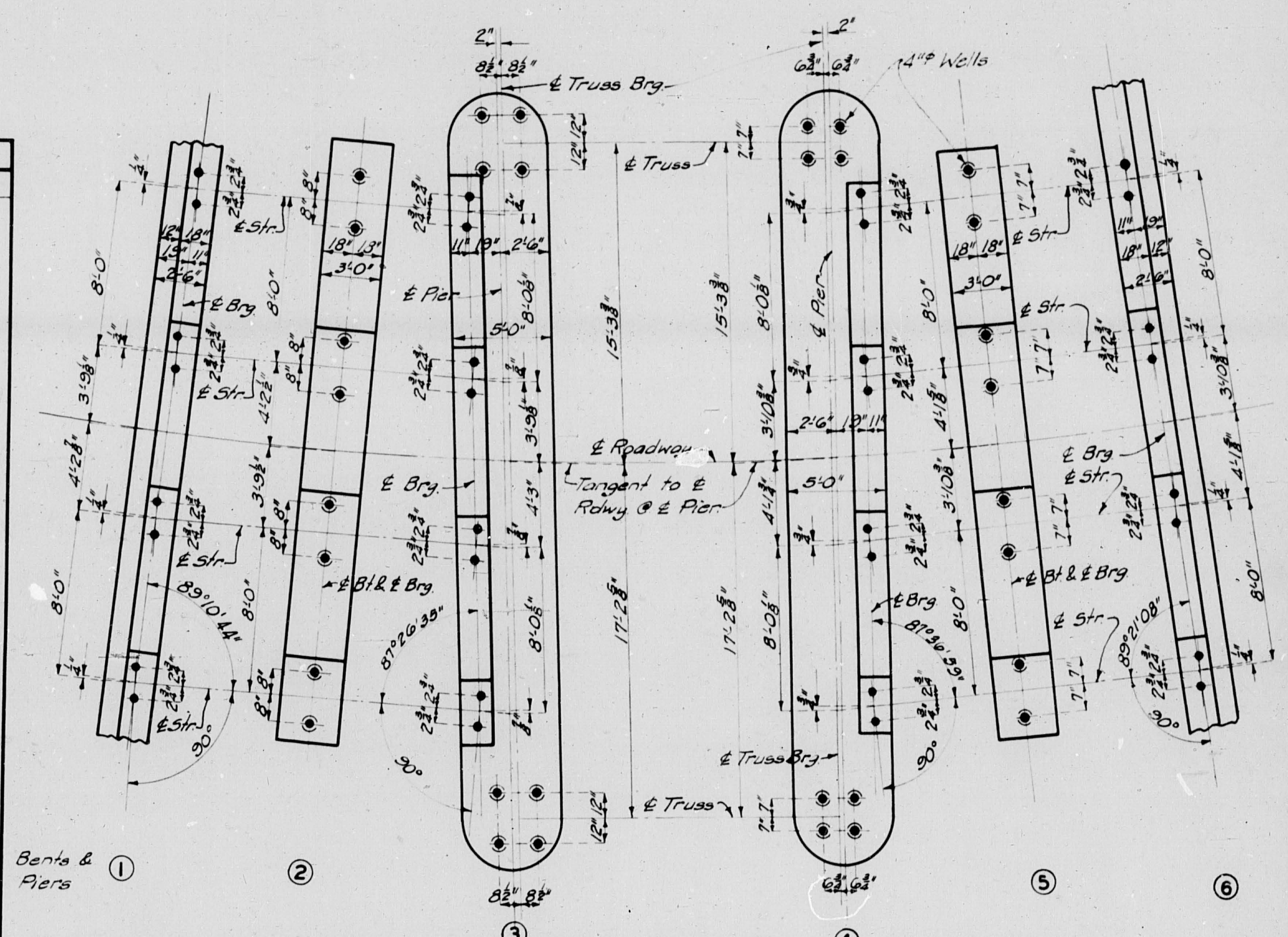
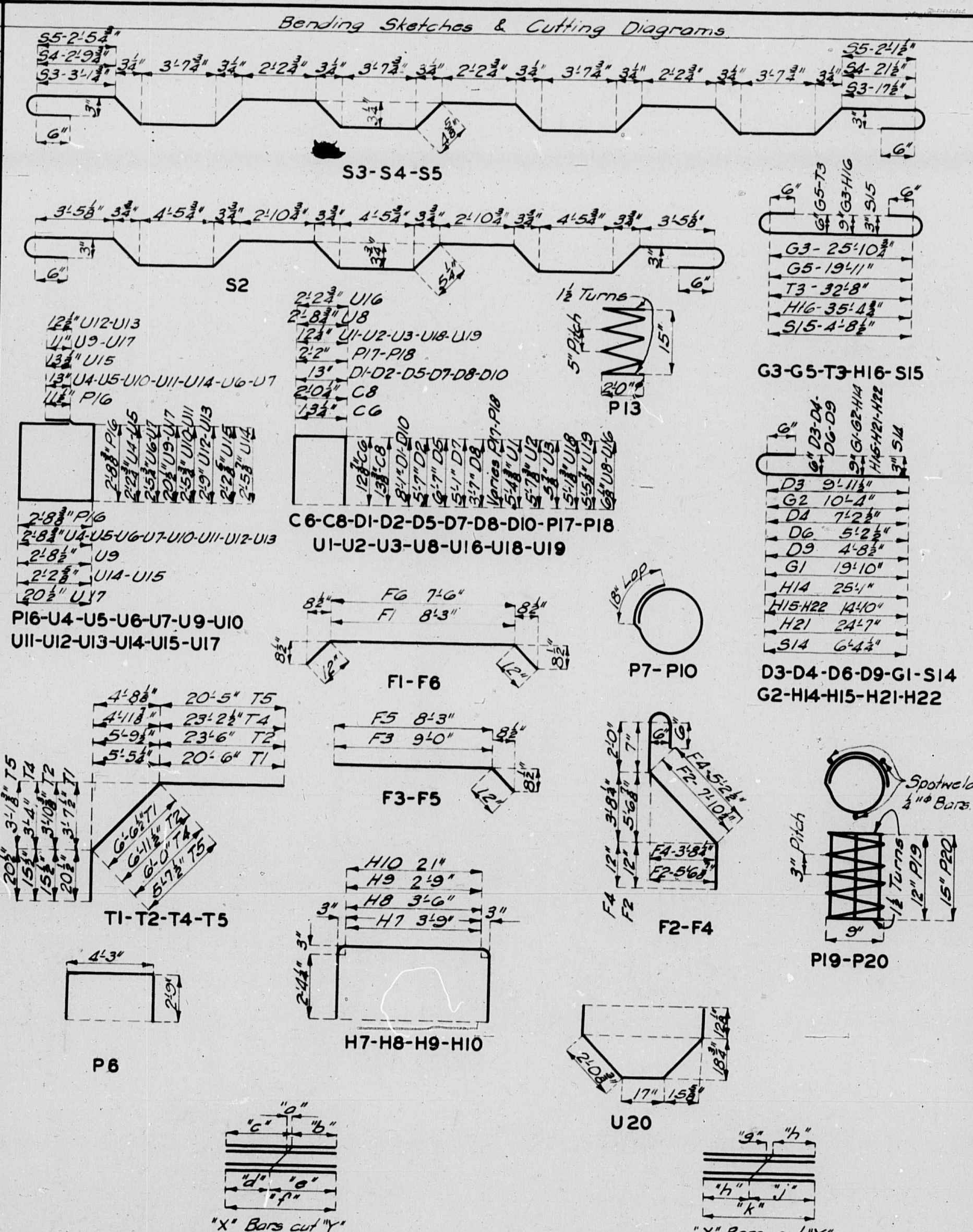
Sheet No. 1

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-74(16) (R. 7)	19		



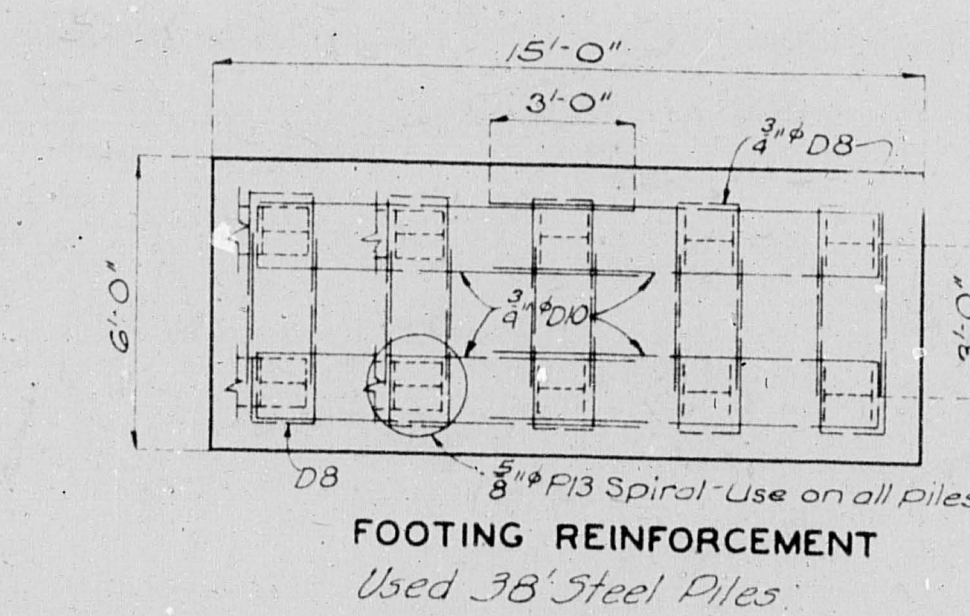
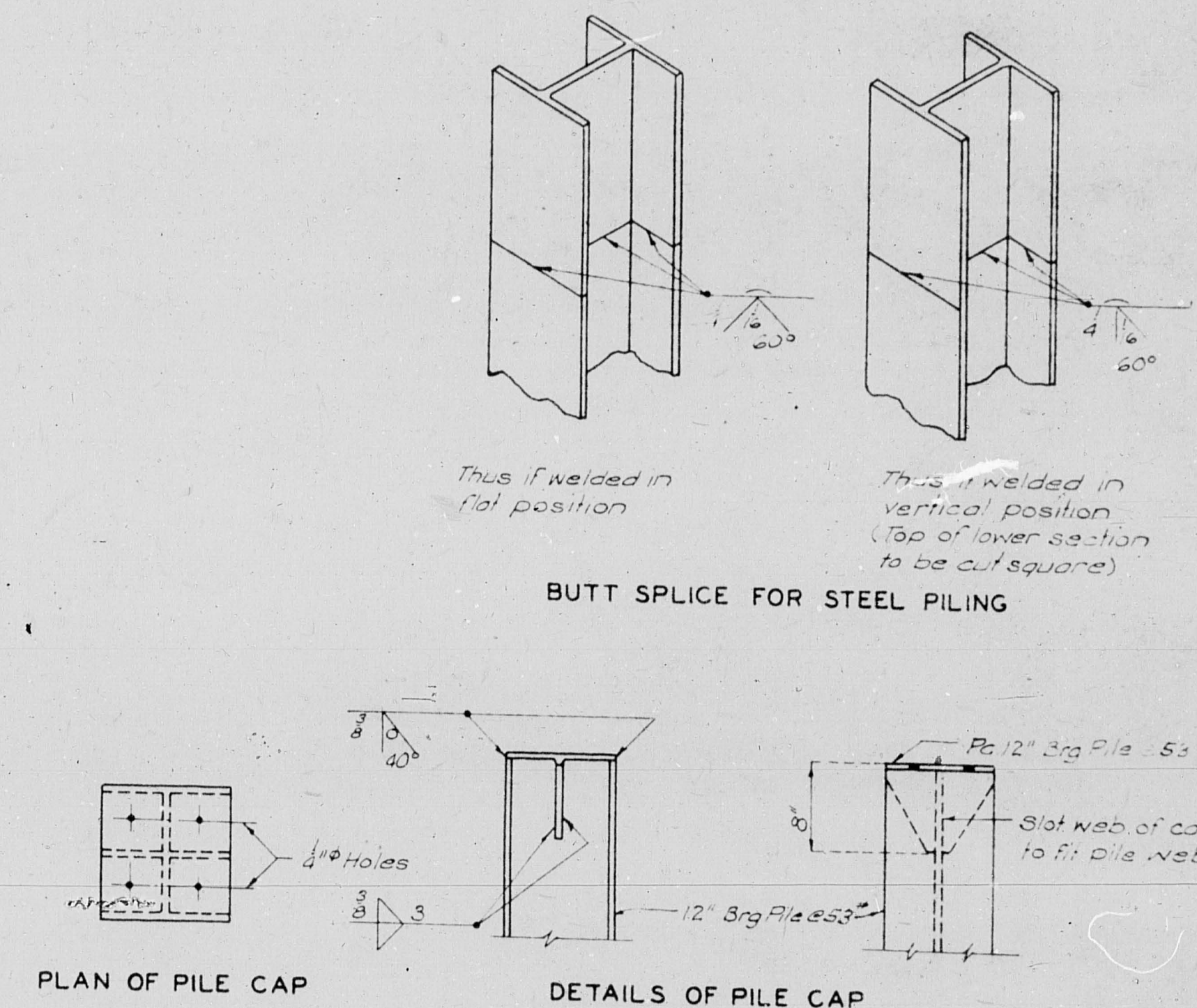
COMPLETE BILL OF REINFORCING STEEL									
No.	Size	Length	Mark	Location	No.	Size	Length	Mark	Location
Superstructure					Bents No. 2 & 5 (Continued)				
12	3/4"	30'-6"	C1	Curb	10	1/2"	11'-6"	U6	Beam Bt. No. 5
18	3/4"	22'-4"	C2	"	6	3/4"	11'-6"	U7	" " " "
48	3/4"	25'-9"	C3	"	4	3/4"	3'-9"	U8	" " " "
12	3/4"	25'-3"	C4	"	26	3/4"	9'-9"	U9	Tie Beam
12	3/4"	23'-9"	C5	"	11	3/4"	11'-6"	U10	Beam Bt. No. 2
332	3/4"	3'-3"	C6	"	42	3/4"	10'-0"	U15	" " " "
8	3/4"	7'-0"	C7	"	16	3/4"	3'-3"	U16	" " " "
28	3/4"	4'-3"	C8	"	48	3/4"	7'-9"	U17	Tie Beam
4	3/4"	6'-0"	C9	"					
12	3/4"	6'-9"	R1	Rail					
12	3/4"	6'-0"	R2	"					
56	3/4"	3'-9"	R3	"					
12	3/4"	6'-6"	C10	Curb					
956	3/4"	28'-3"	S1	Slab					
215	3/4"	30'-6"	S2	"					
128	3/4"	30'-9"	S3	"					
69	3/4"	30'-9"	S4	"					
63	3/4"	30'-9"	S5	"					
250	3/4"	26'-6"	S6	"					
56	3/4"	16'-0"	S7	"					
200	3/4"	26'-0"	S8	"					
38	3/4"	29'-6"	S9	"					
152	3/4"	31'-0"	S10	"					
300	3/4"	28'-6"	S11	"					
4	3/4"	28'-0"	S12	"					
7	3/4"	27'-0"	S13	"					
48	3/4"	7'-3"	S14	"					
8	3/4"	6'-6"	S15	"					
End Bents No. 1 & 6					Intermediate Bents No. 2 & 5				
60	3/4"	8'-3"	D8	Footing	32	1/2"	6'-6"	D6	Footing
60	3/4"	6'-0"	D9	"	16	3/4"	11'-3"	D7	"
24	3/4"	17'-3"	D10	"	16	3/4"	8'-3"	D8	"
16	3/4"	9'-6"	F4	Haunch	24	1/2"	10'-3"	F1	Tie Beam
32	3/4"	9'-3"	F5	"	16	3/4"	10'-0"	F2	Haunch
48	1/2"	9'-6"	F6	Tie Beam	16	3/4"	10'-0"	F3	"
3	1/2"	26'-3"	H14	Beam Bt. No. 1	13	1/2"	21'-6"	G1	Beam
3	1/2"	16'-6"	H15	"	13	1/2"	12'-0"	G2	"
6	1/2"	38'-9"	H16	Beam	14	1/2"	28'-3"	G3	Beam
2	1/2"	11'-6"	H17	Beam Bt. No. 1	4	3/4"	26'-9"	G4	"
4	3/4"	36'-3"	H18	Beam	12	1/2"	22'-6"	G5	Tie Beam
7	3/4"	10'-9"	H19	Wing Bt. No. 1	72	3/4"	5'-3"	P21	Web
5	3/4"	16'-6"	H20	"	16	3/4"	11'-9"	U1	Haunch Pier # 4
3	1/2"	26'-3"	H21	Beam Bt. No. 6	16	3/4"	24'-6"	P11	Col. Bt. No. 5
3	1/2"	16'-6"	H22	"	16	3/4"	17'-3"	P12	"
2	1/2"	10'-6"	H23	"	20	3/4"	37'-9"	P13	Footing
7	3/4"	10'-0"	H24	Wing Bt. No. 6	16	3/4"	26'-6"	P14	Col. Bt. No. 2
4	3/4"	15'-9"	H25	"	16	3/4"	16'-9"	P15	"
4	3/4"	34'-9"	H26	Backwall	16	3/4"	19'-9"	P19	Anchor Walls
60	3/4"	37'-9"	P13	Footing	15	3/4"	11'-0"	U4	Beam Bt. No. 5
105	3/4"	21'-6"	P17	Col. Bt. No. 1					
102	3/4"	21'-3"	P18	Col. Bt. No. 6					
2	3/4"	28'-9"	T1	Blvd. & Wing Bt. No. 1					



BRIDGE OVER C.R.I. & P.R.R. AND BIG CREEK
STATE ROAD FROM PLEASANT HILL SOUTH
AT PLEASANT HILL
PROJECT NO. FG-74(16)(RT. 7) STA. 85+56.65
CASS COUNTY

Designed April 1947 by R.A.C.
Drawn May 1947 by R.E.S.
Traced July 1947 by J.N.N.
Checked Jan. 1948 by N.M.R.
Note: This drawing is not to scale. Follow dimensions.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO	TOTAL SHEET
5	MO.	FG-744(6) (R+7)	19		



Designed April 1947 by R.A.C.
Drawn May 1947 by R.E.S.
Traced June 1947 by K.R.W.
checked Jan. 1949 by N.W.R.

Note: This drawing is not to scale. Follow dimensions.

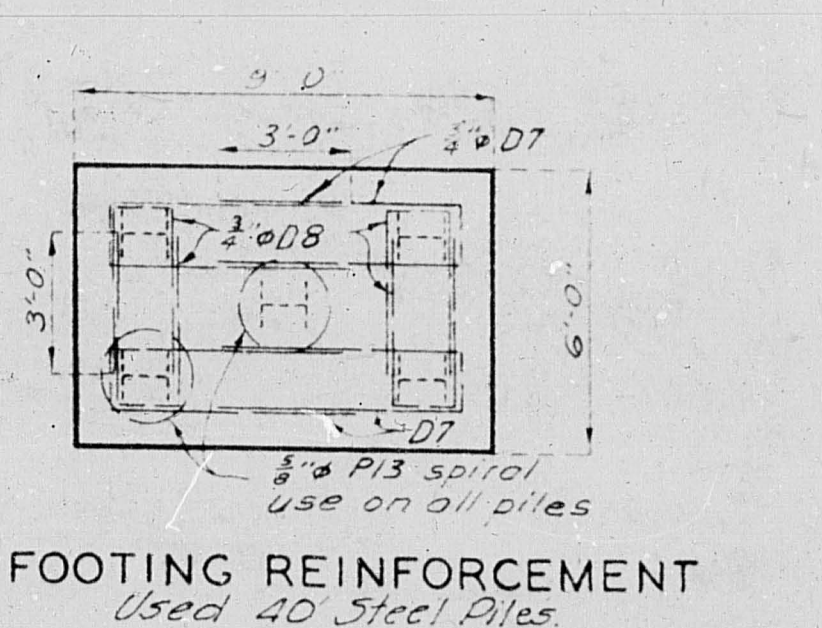
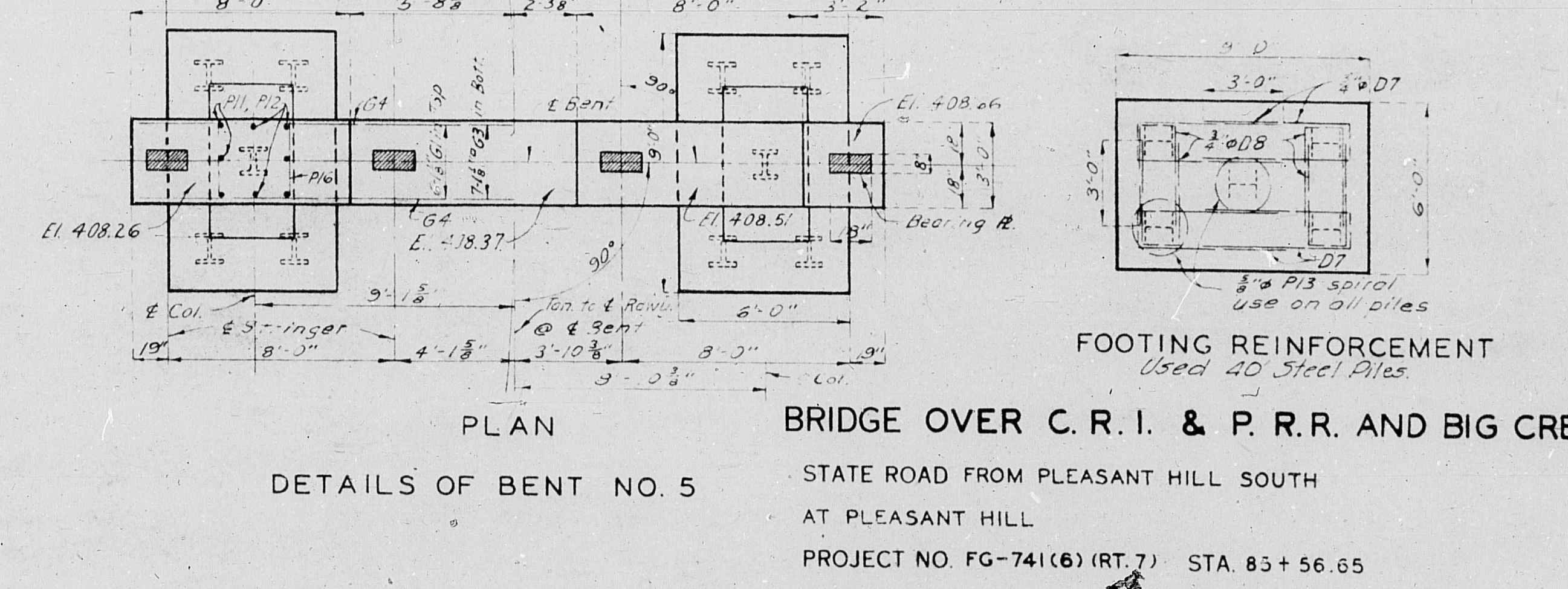
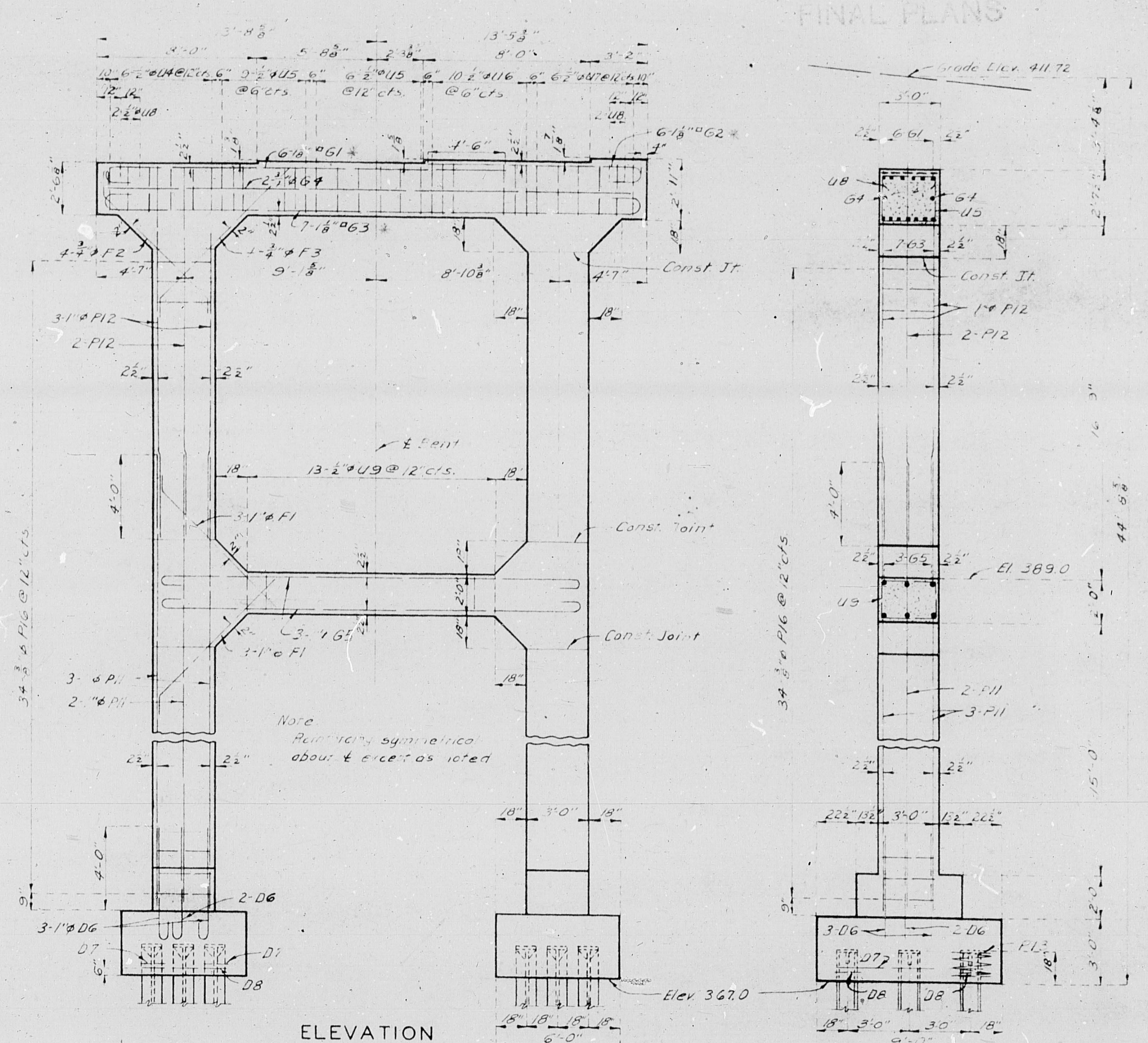
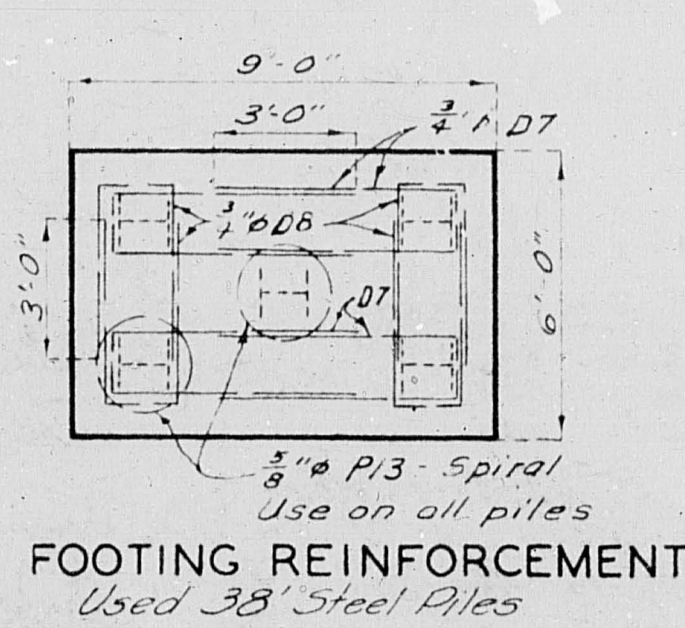
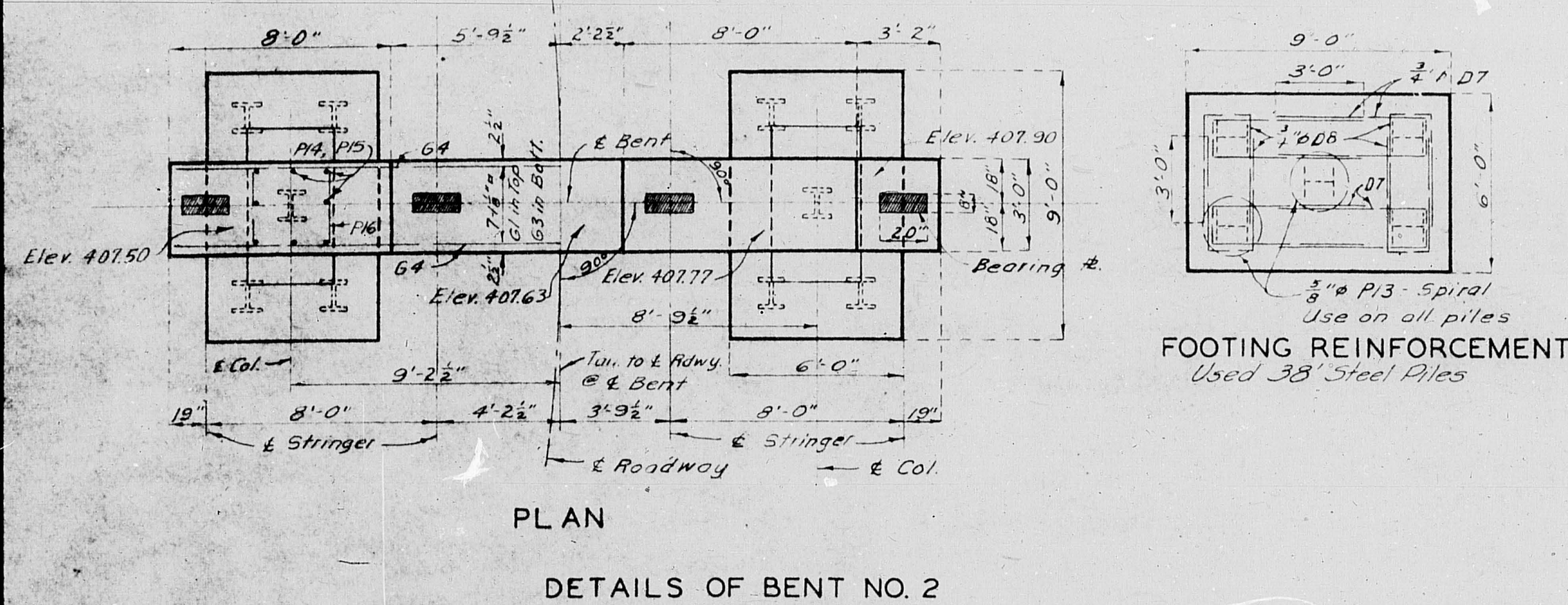
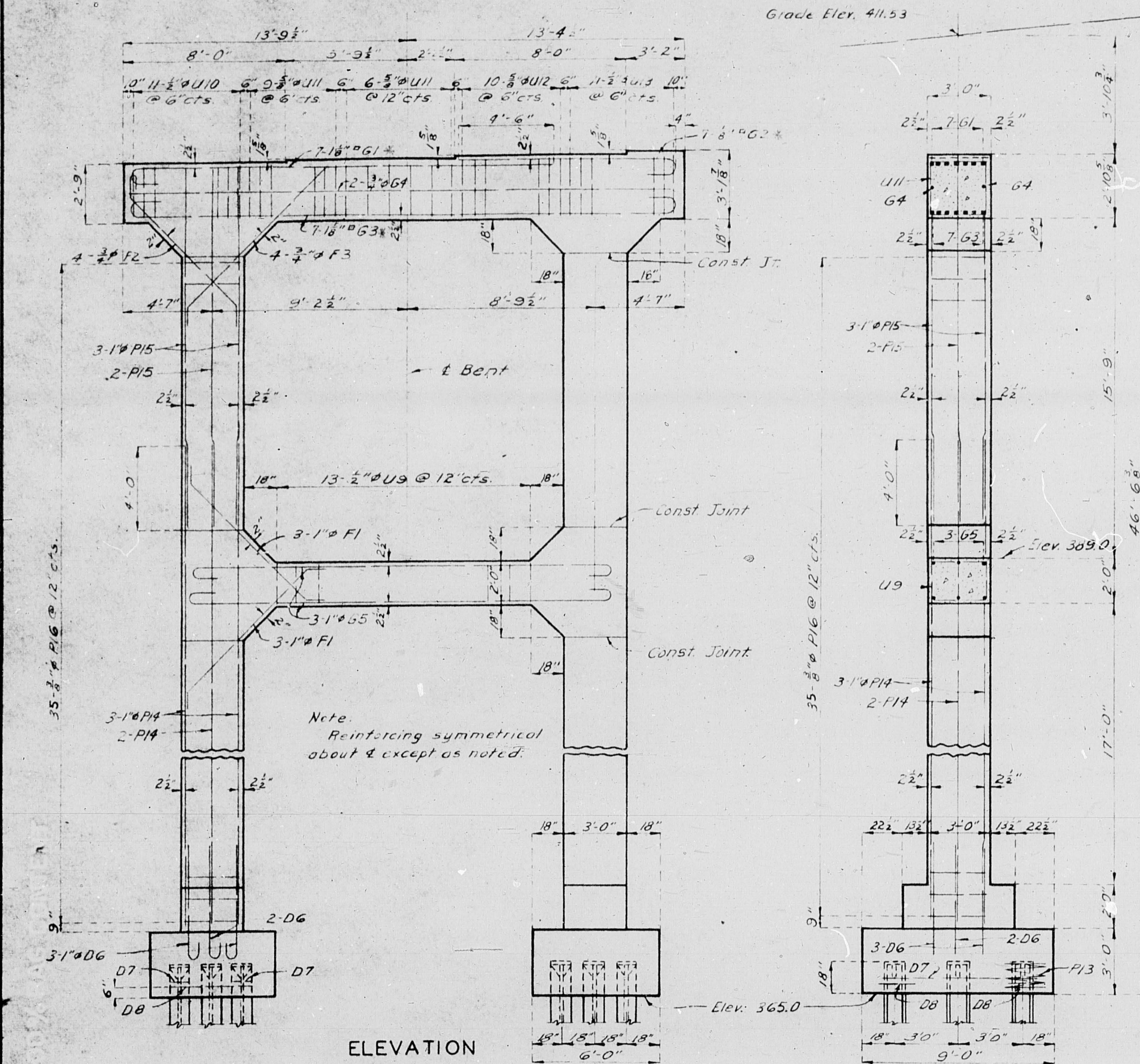
Sheet No.3

CASS COUNTY

L-23

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	74-1(6) (RT. 7)	19		



BRIDGE OVER C. R. I. & P. R. R. AND BIG CREEK
STATE ROAD FROM PLEASANT HILL SOUTH
AT PLEASANT HILL
PROJECT NO. FG-74(6) (RT. 7) STA. 85+56.65
CASS COUNTY

Designed April 1947 by R.A.C.
Drawn May 1947 by R.E.S.
Traced July 1947 by S.G.S.
Checked Jan 1948 by N.M.R.

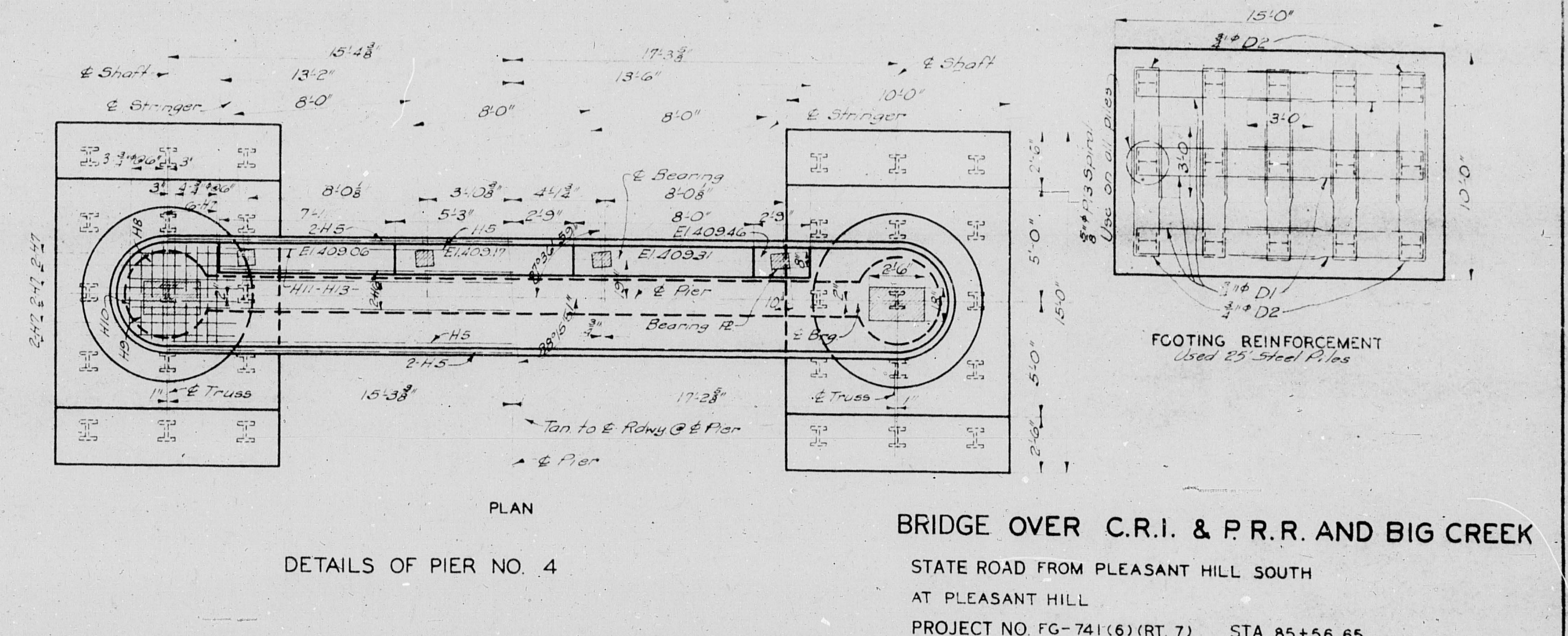
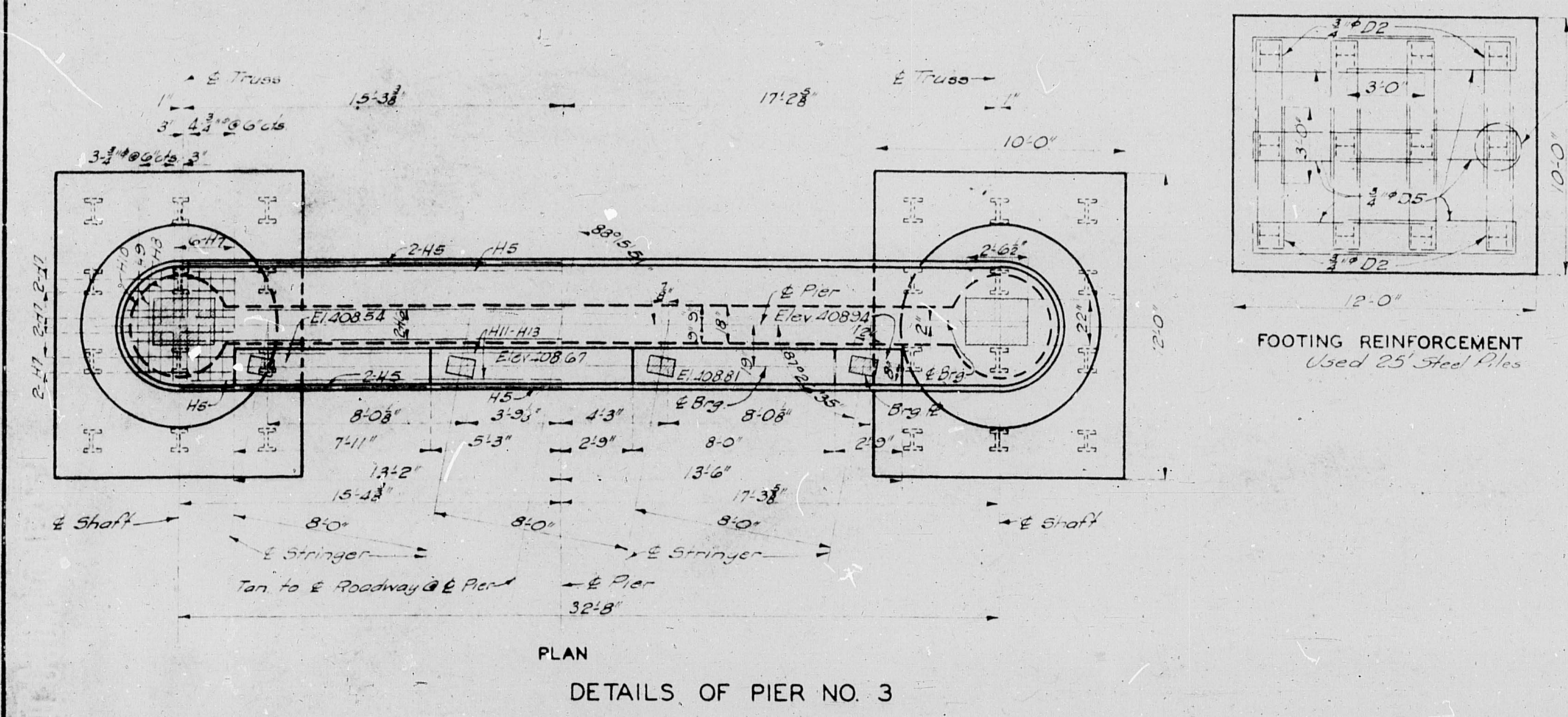
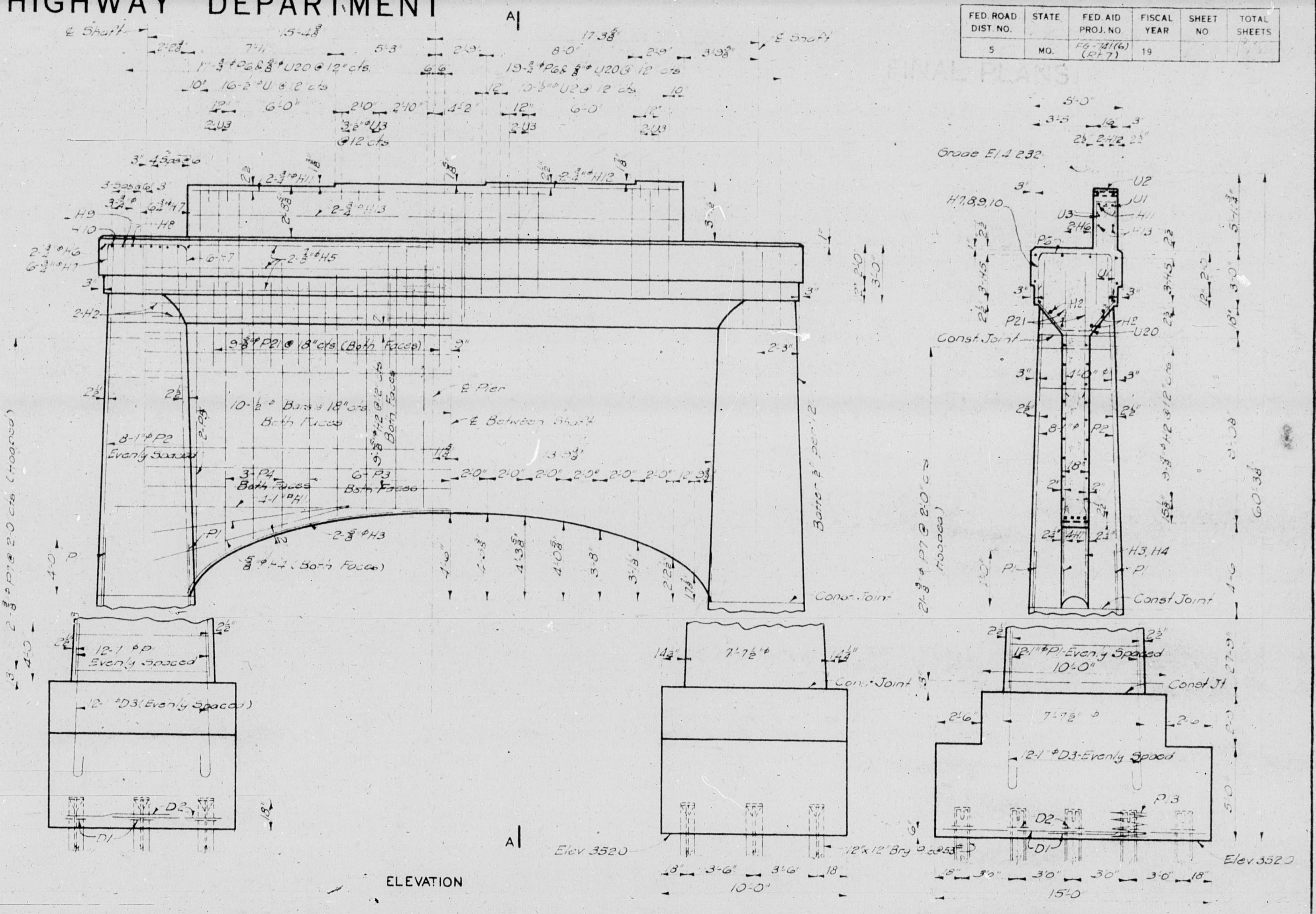
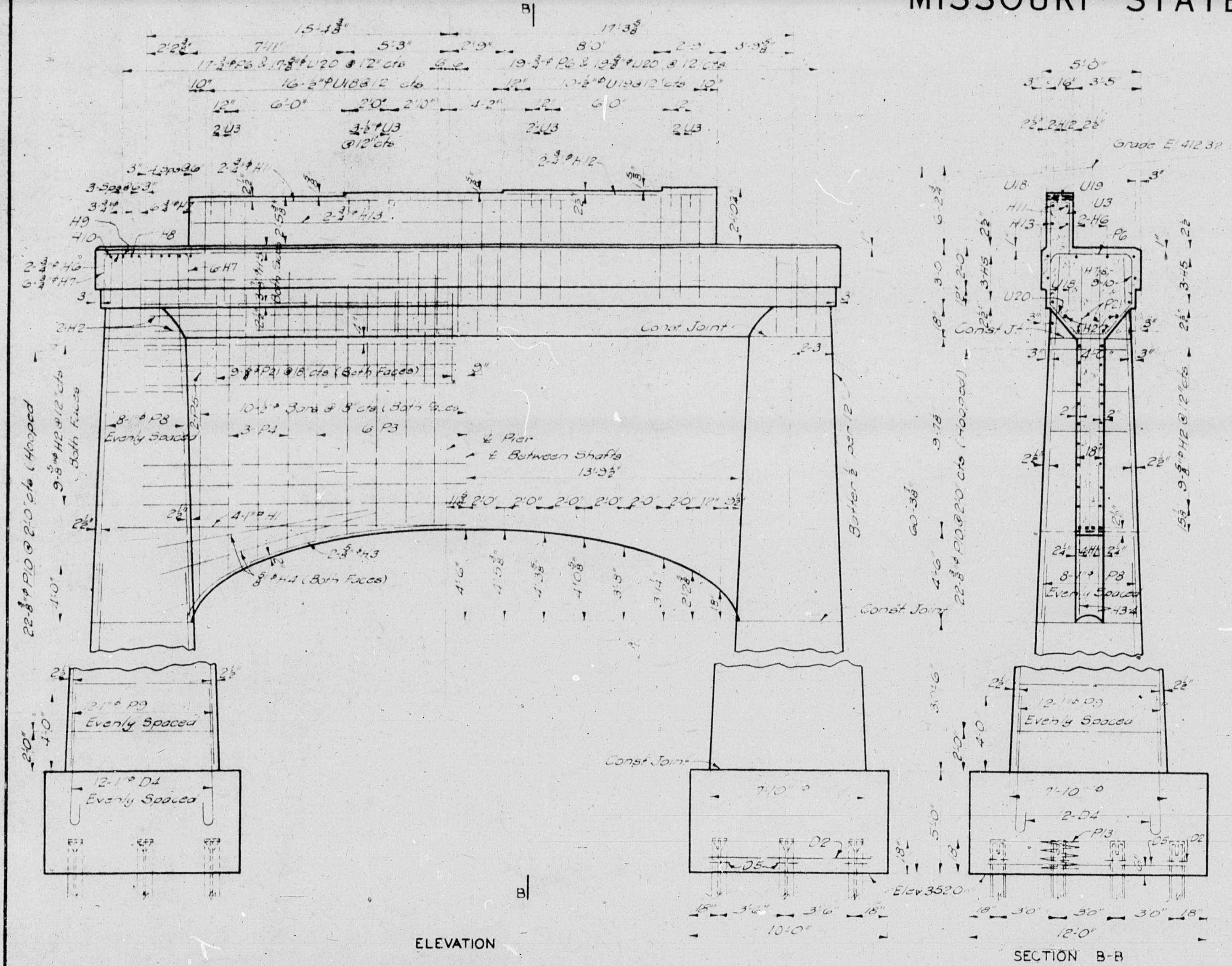
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 4

L-23

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-741(6) (RT. 7)	19		



BRIDGE OVER C.R.I. & P.R.R. AND BIG CREEK

STATE ROAD FROM PLEASANT HILL SOUTH
AT PLEASANT HILL

PROJECT NO. FG-741(6) (RT. 7) STA. 85+56.65

CASS

COUNTY

Designed by RAC
Drawn May 1947 by H.E.G.
Traced June 1947 by J.N.V.
Checked Jan. 1948 by N.W.R.

Note: This drawing is not to scale. Follow dimensions.

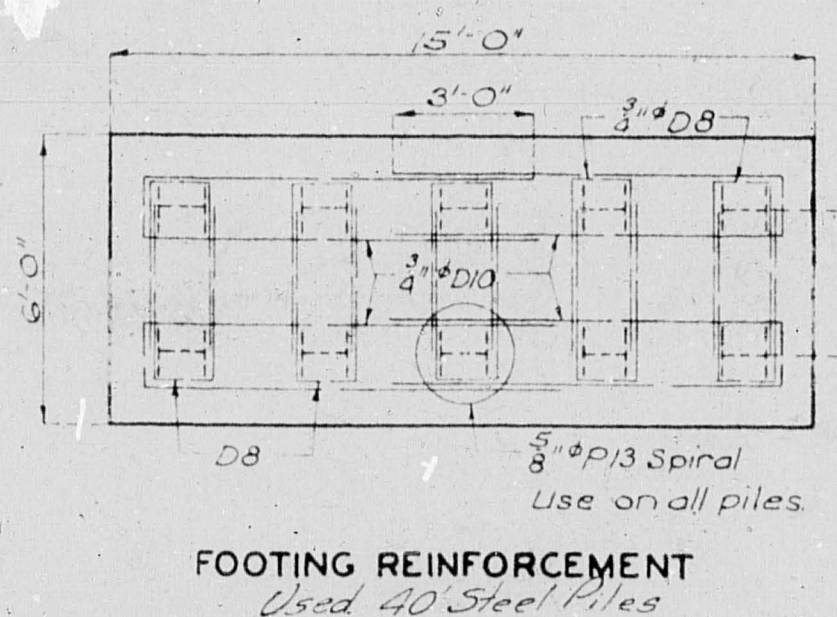
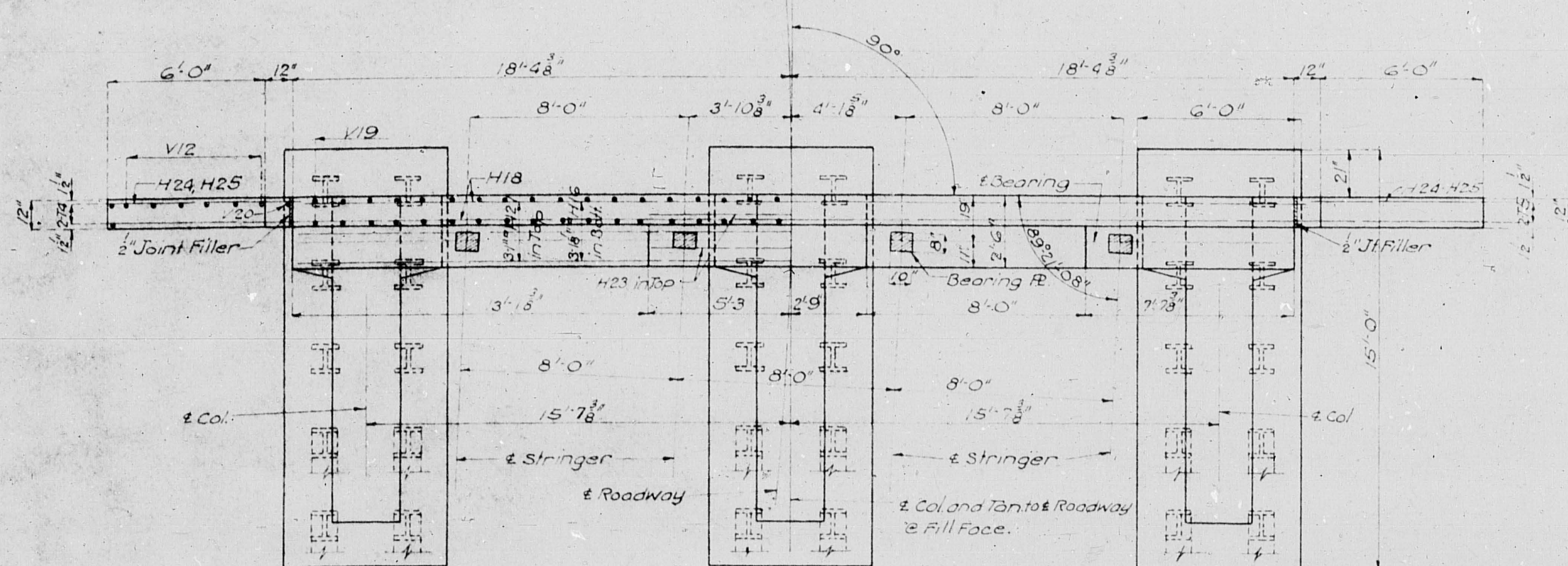
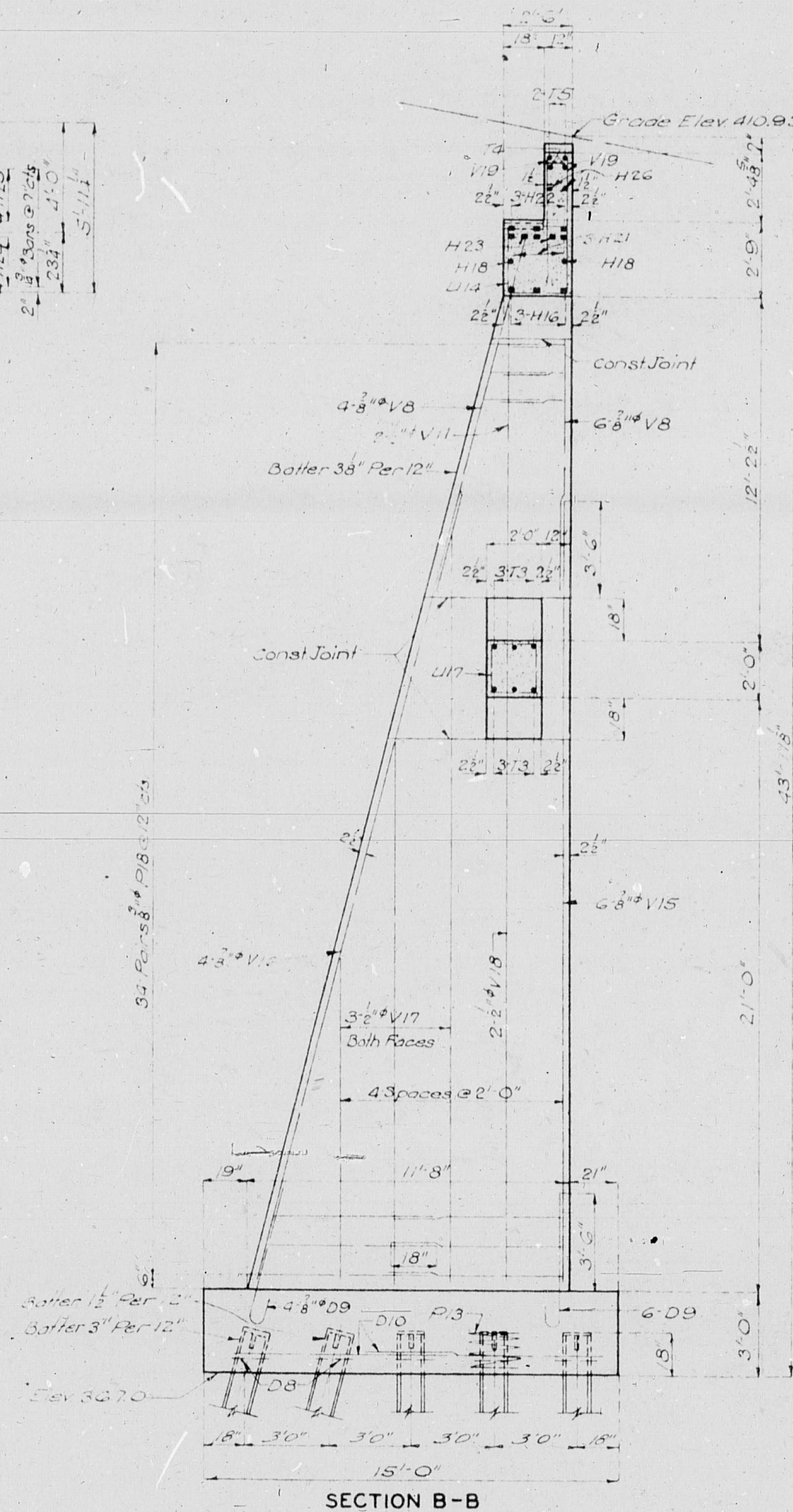
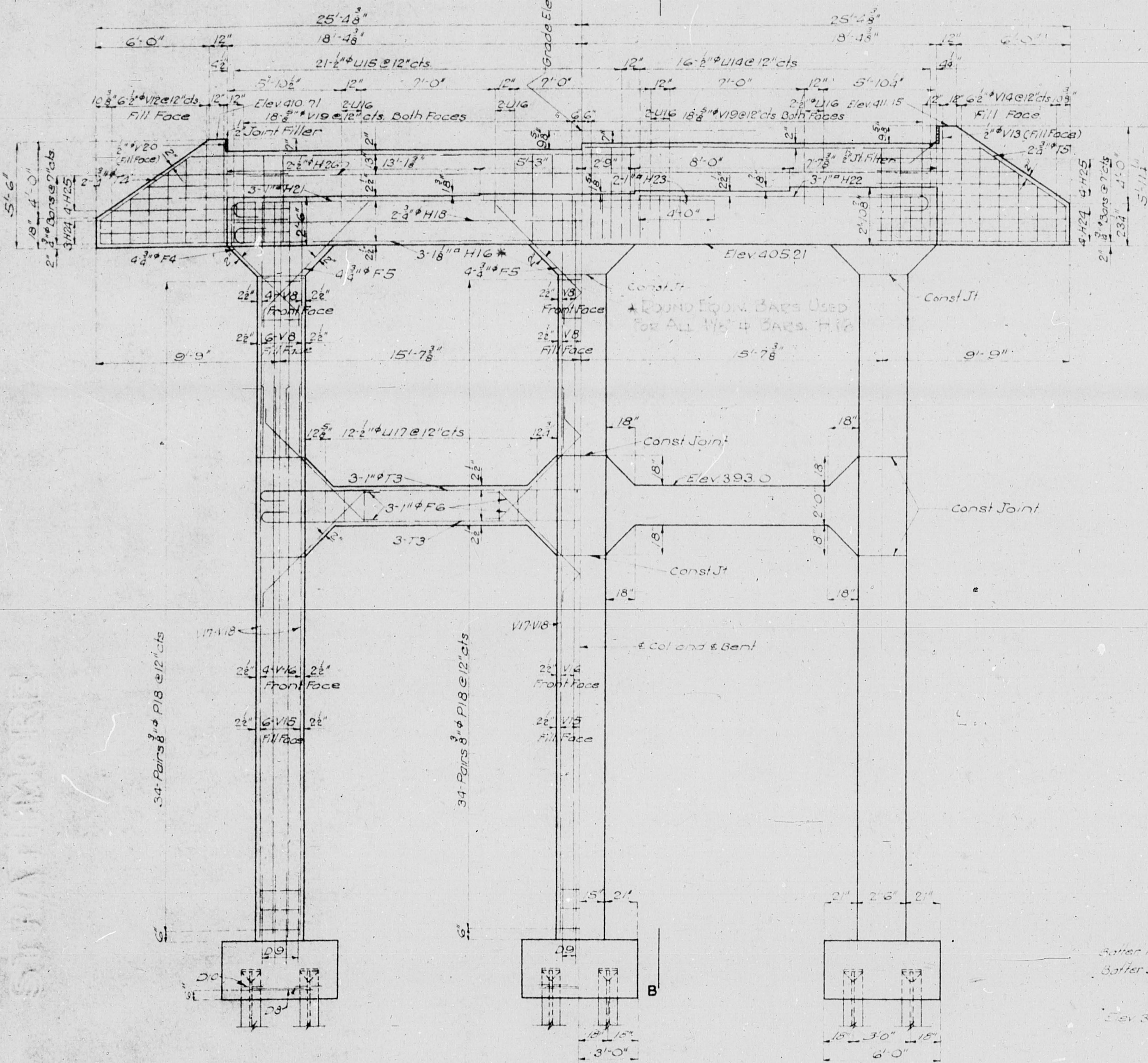
Sheet No. 3

L-23

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	74-11(6) (RT. 7)	19		

FINAL PLANS



DETAILS OF BENT NO. 6

Note: This drawing is not to scale. Follow dimensions.

BRIDGE OVER C.R.I. & P.R.R. AND BIG CREEK

STATE ROAD FROM PLEASANT HILL SOUTH

AT PLEASANT HILL

PROJECT NO. FG-74(6)(RT. 7) STA. 85+56.65

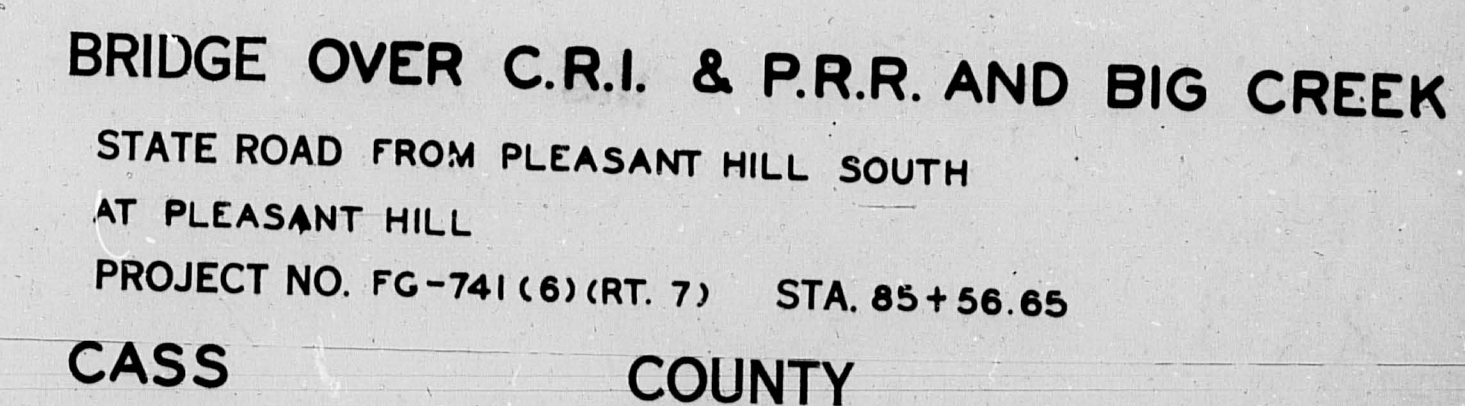
CASS

COUNTY

Designed April 1947 by R.A.C.
 Drawn May 1947 by R.E.S.
 Traced June 1947 by K.R.W.
 Checked Jan. 1948 by N.W.R.

Sheet No. 6

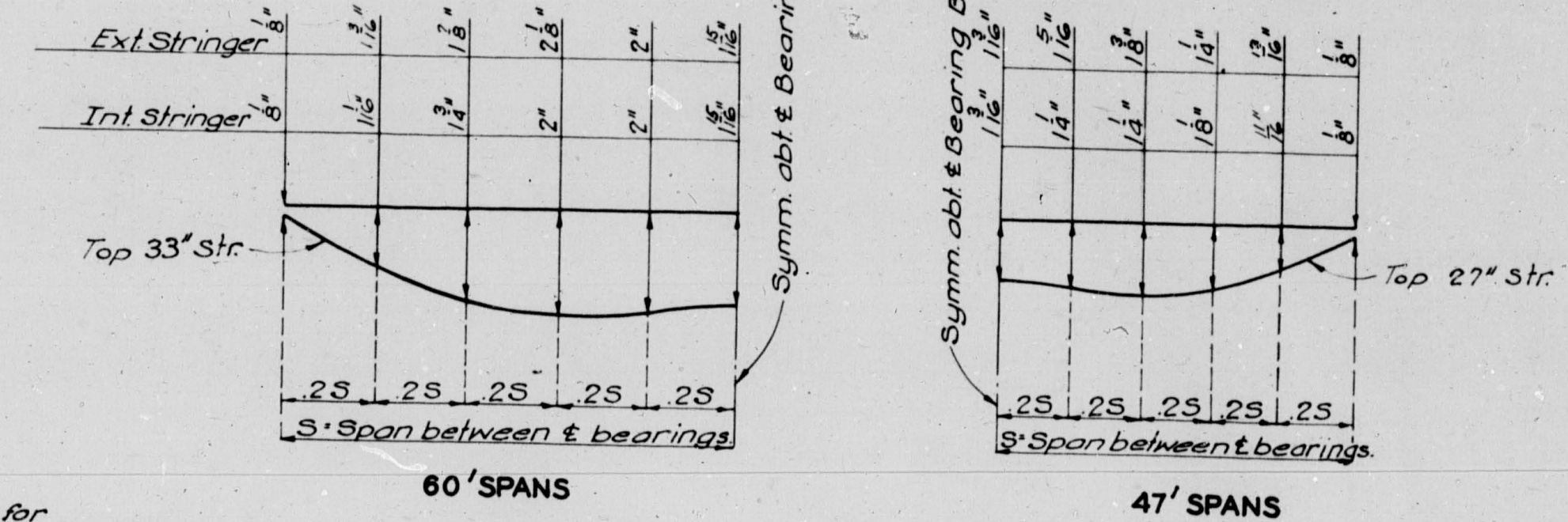
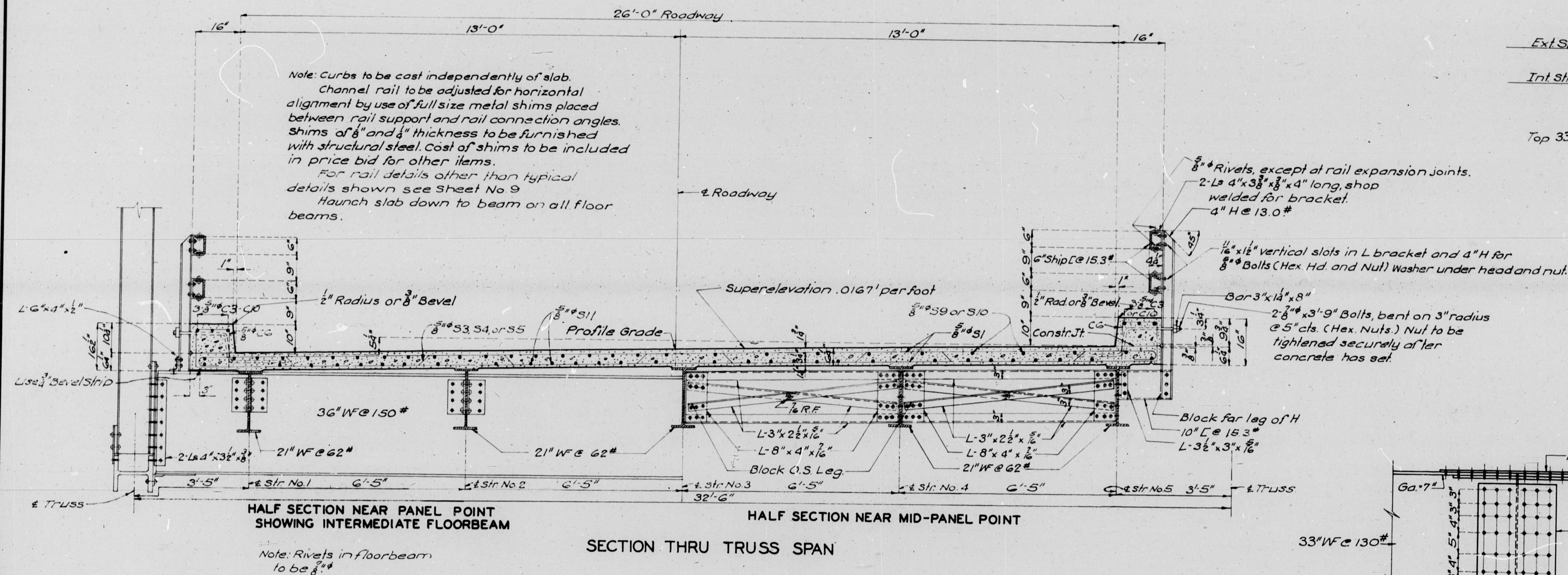
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.
5	MO.	FG-21(16) (Rt 7)	19	



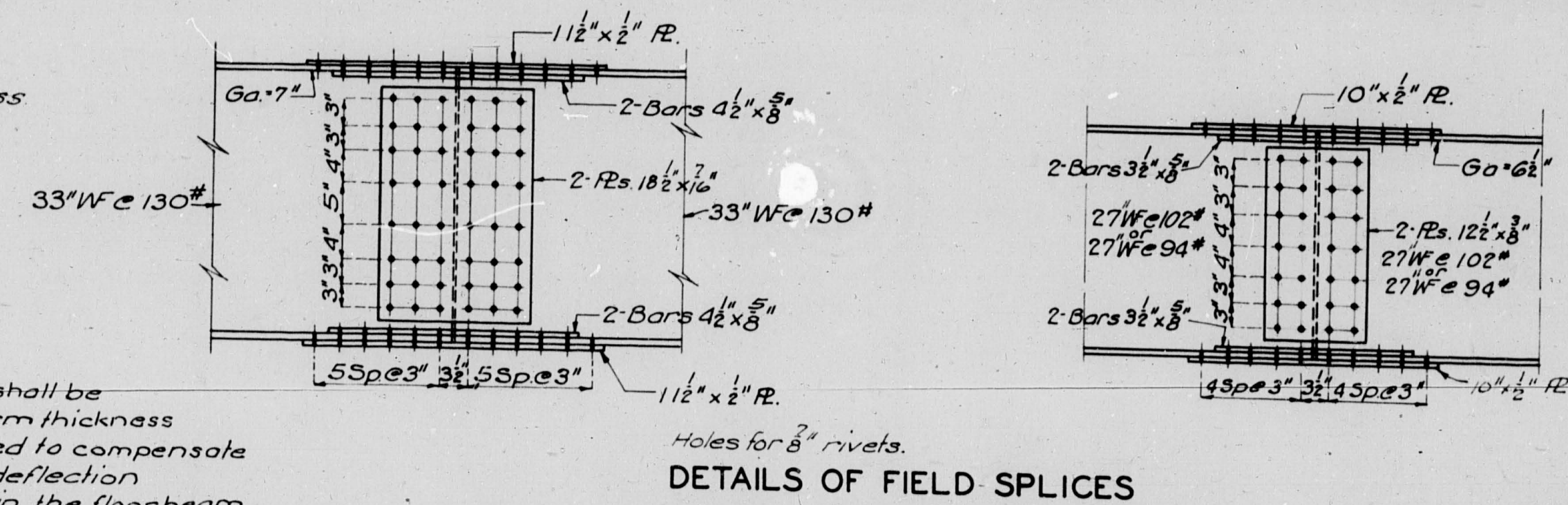
Sheet No. 7 of 14

MISSOURI STATE HIGHWAY DEPARTMENT

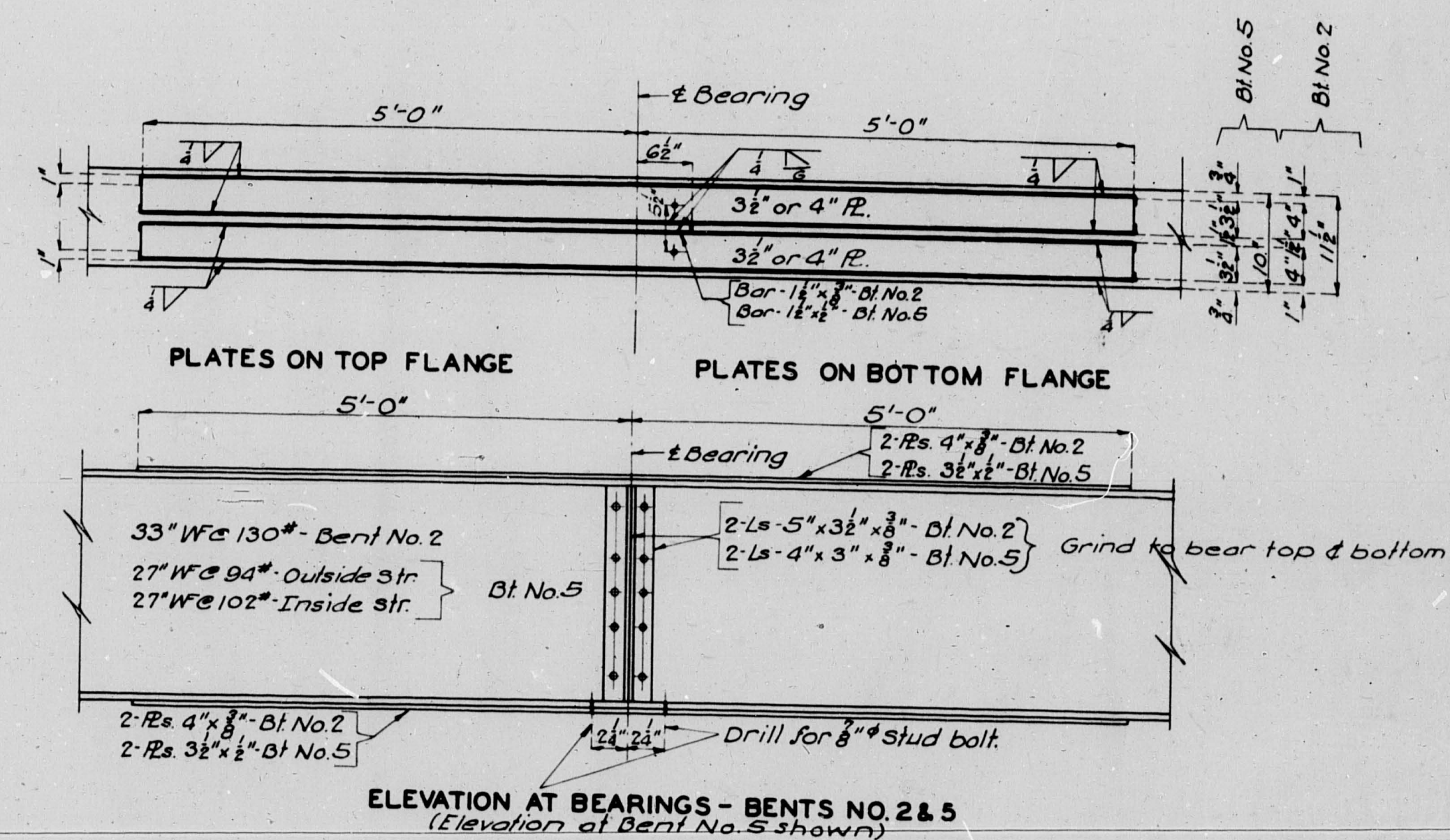
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-7116 (RF-7)	19		



SLAB HAUNCHING DIAGRAM - CONTINUOUS SPANS



DETAILS OF FIELD SPLICES



WELDING DETAILS FOR COVER PLATES OVER BENTS NO. 2 & 5

BRIDGE OVER C.R.I. & P.R.R. AND BIG CREEK

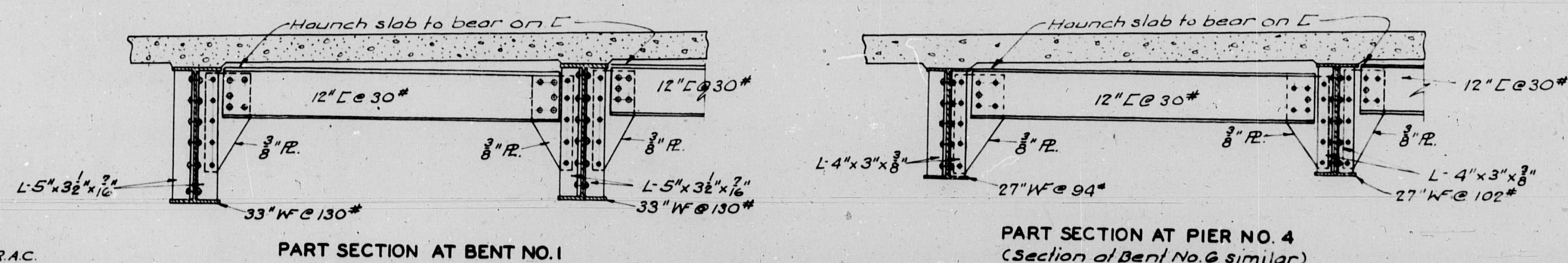
STATE ROAD FROM PLEASANT HILL SOUTH

AT PLEASANT HILL

PROJECT NO. FG-741(6)(RT. 7) STA. 85+56.65

CASS

COUNTY



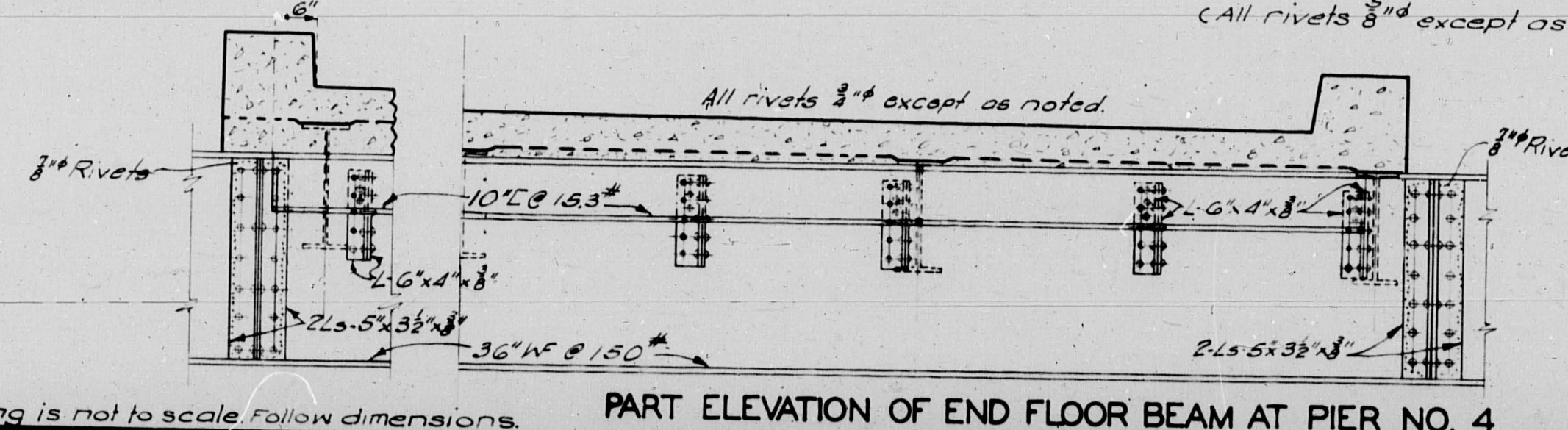
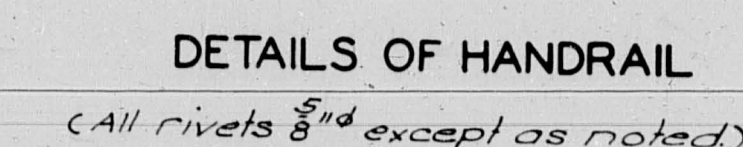
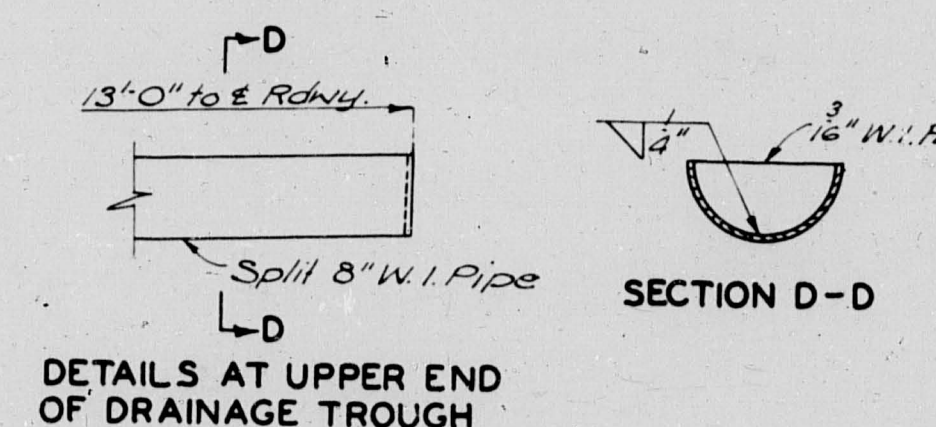
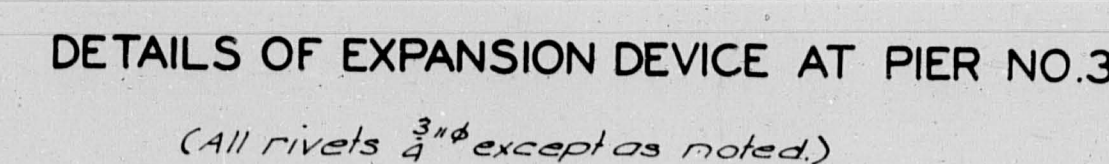
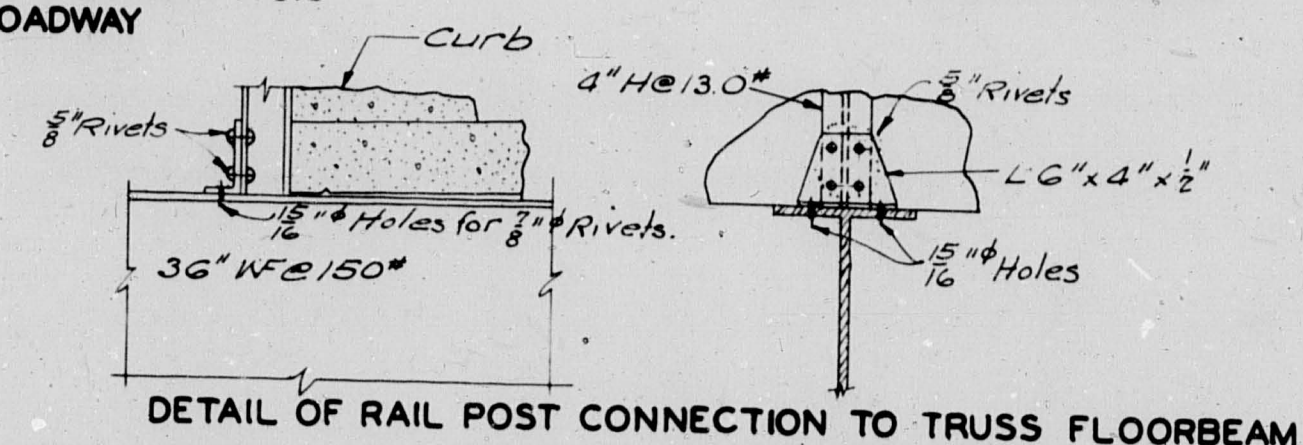
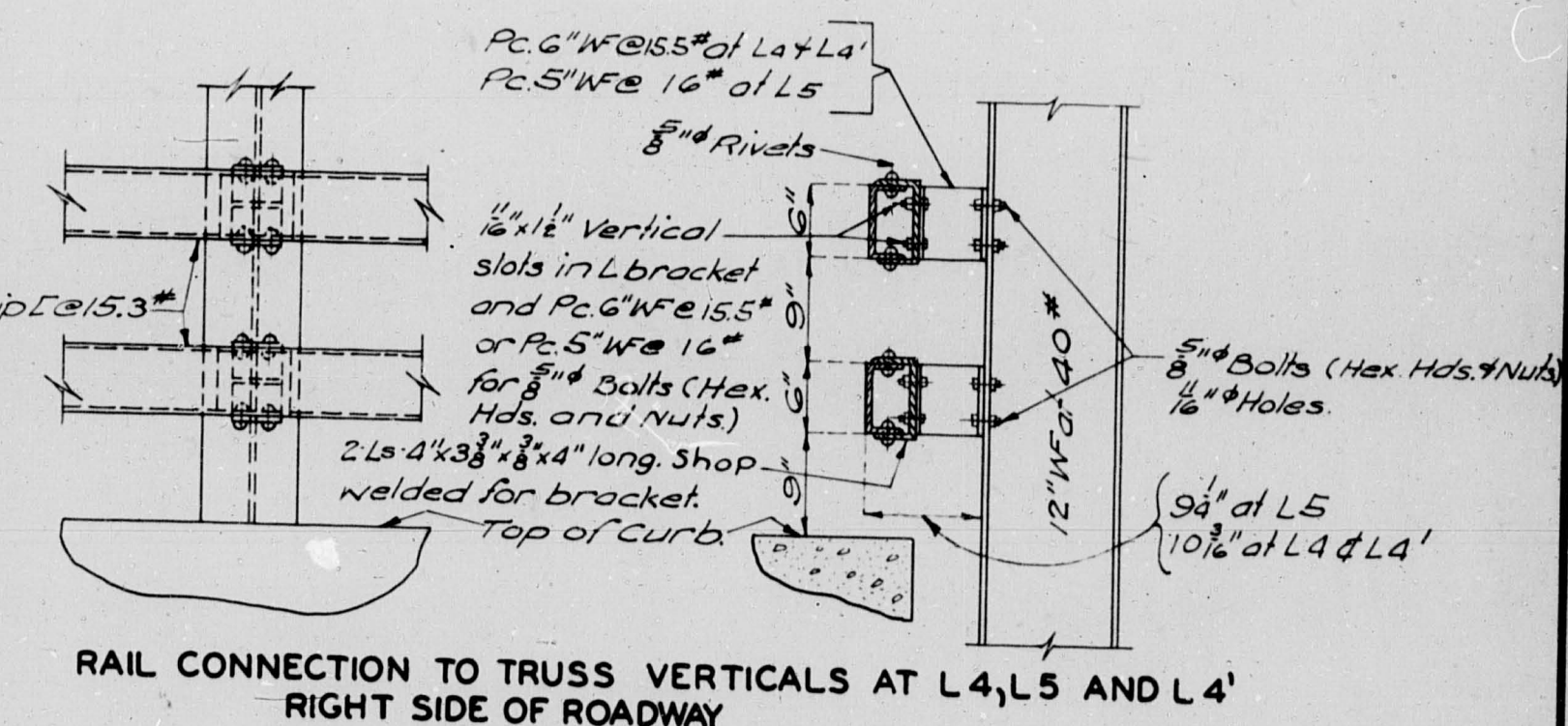
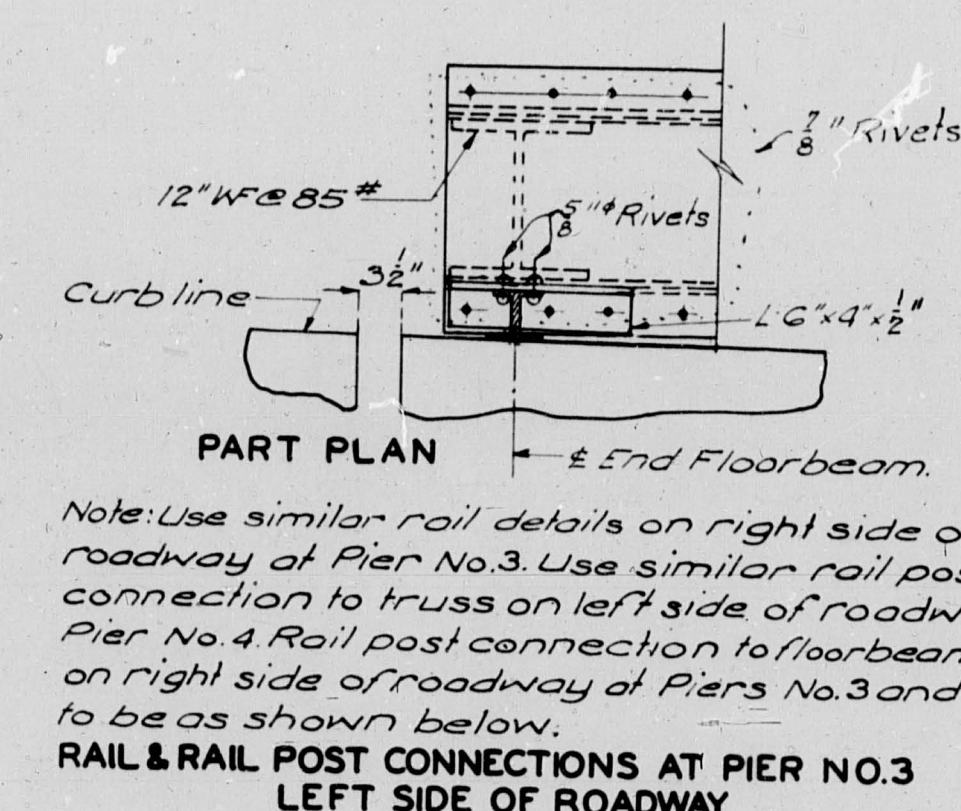
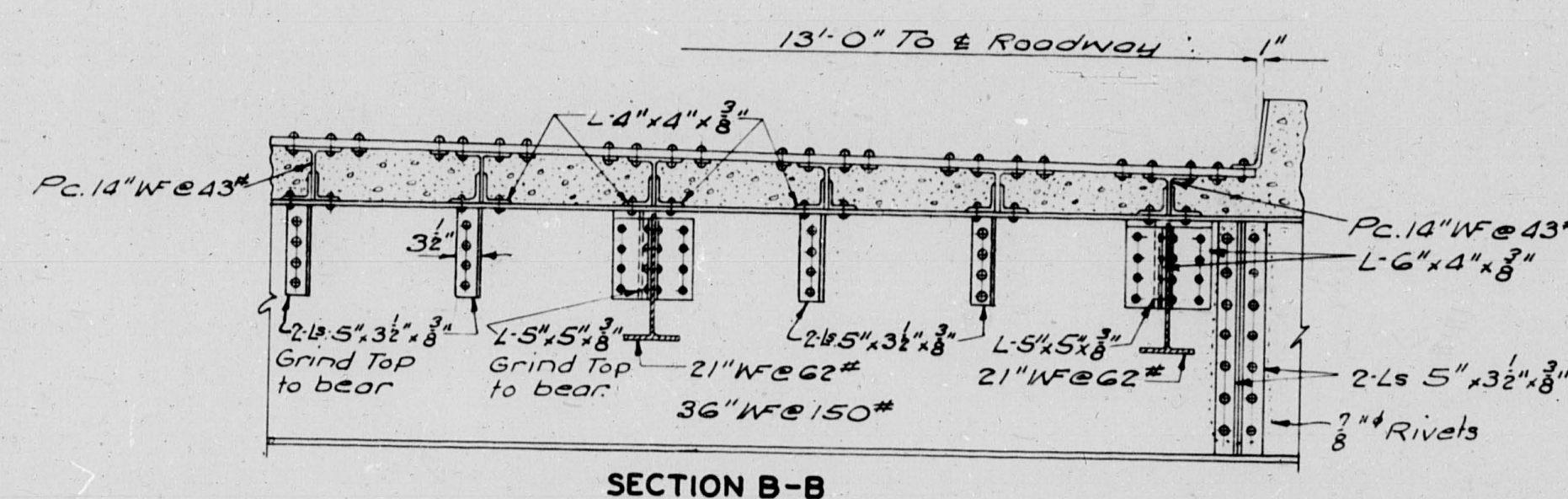
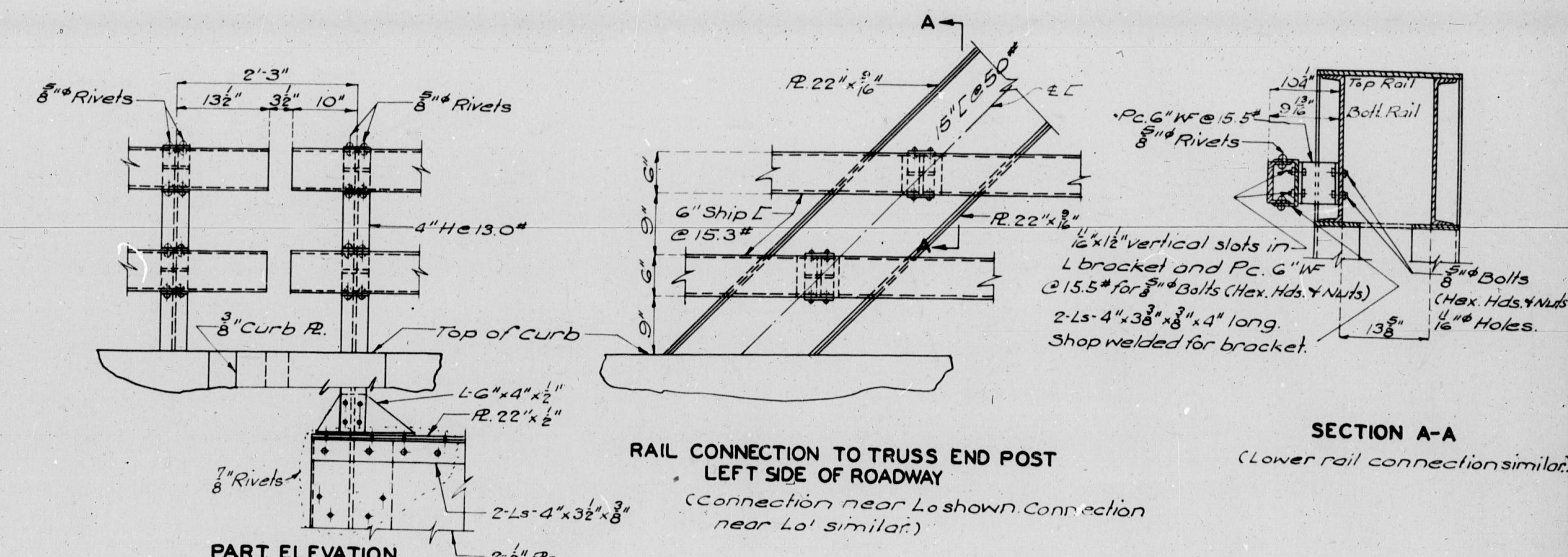
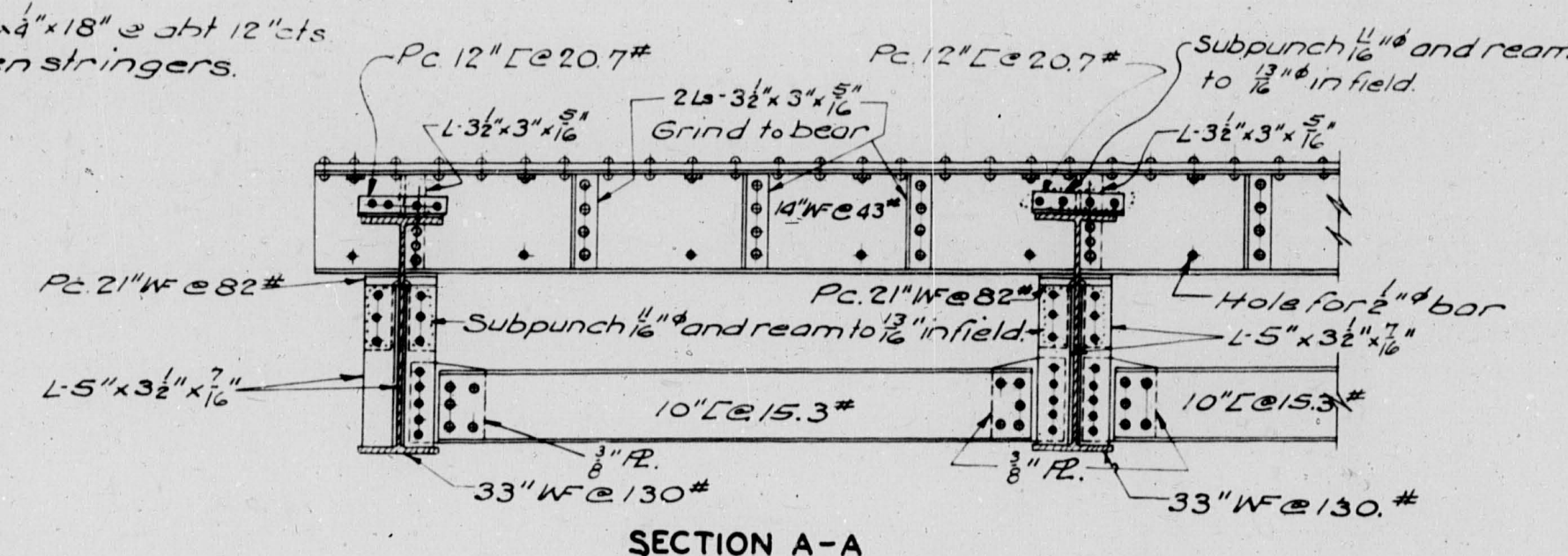
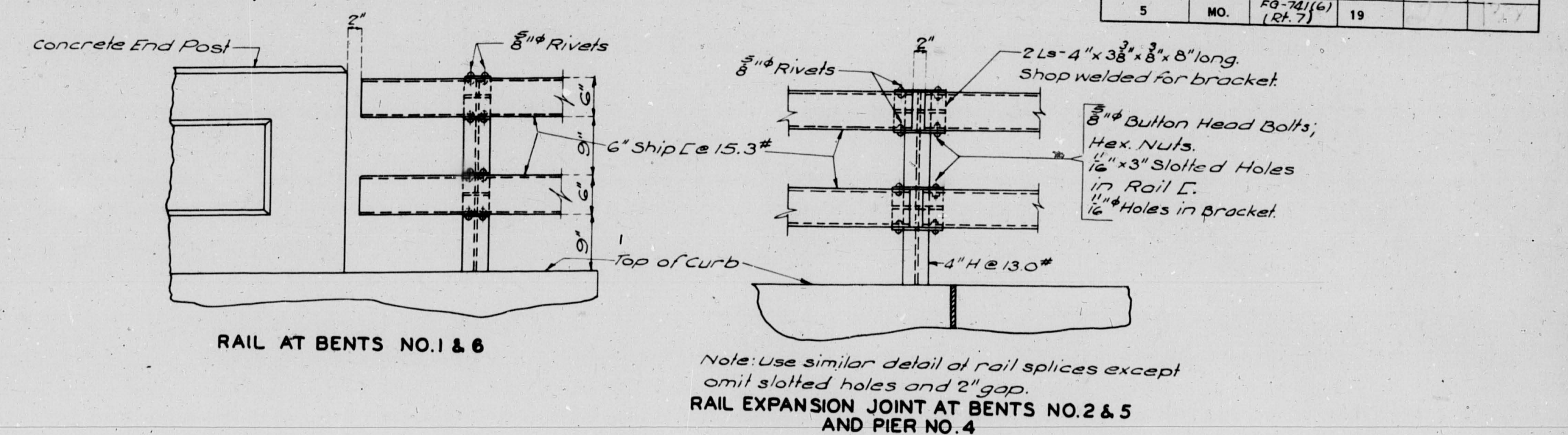
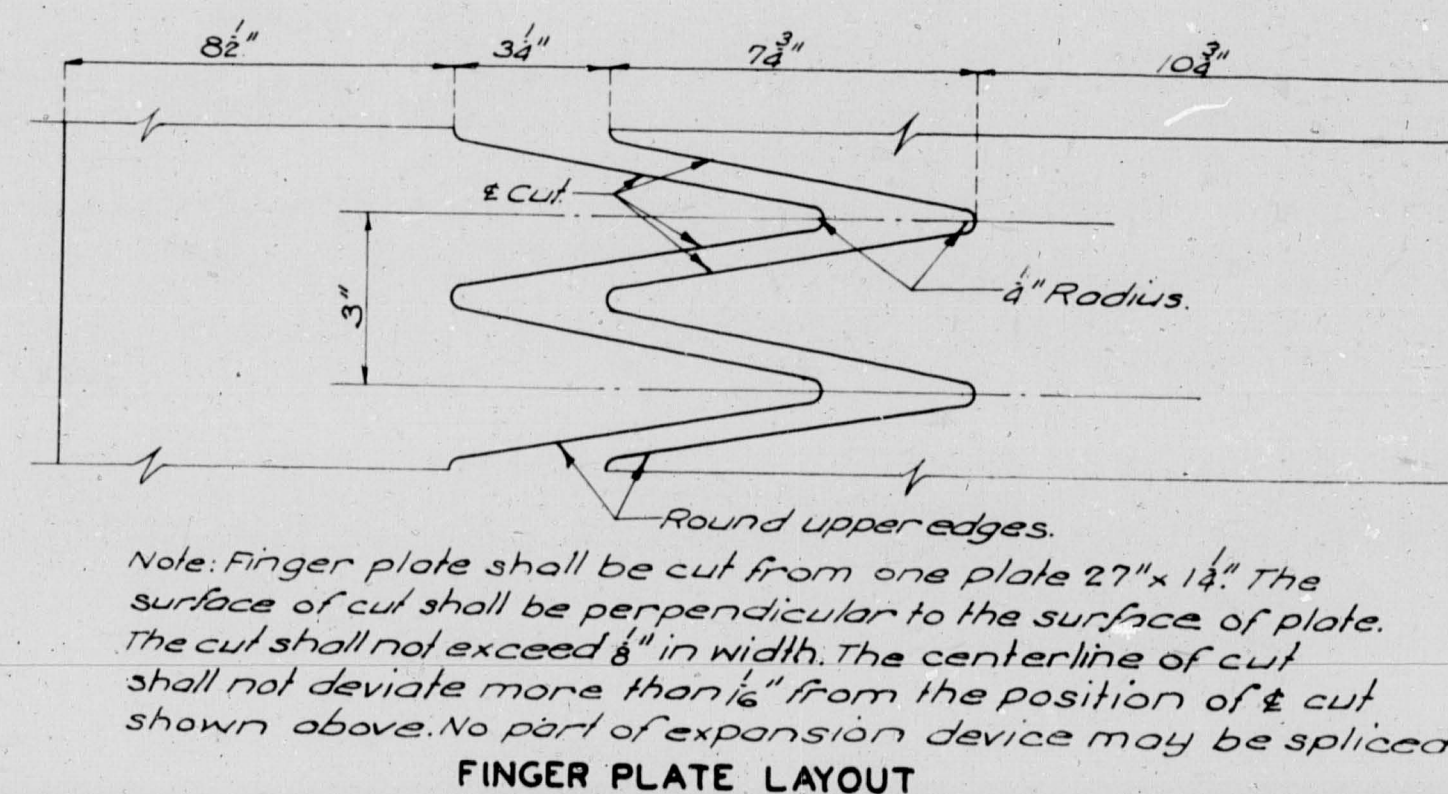
PART SECTION AT PIER NO. 4
(Section of Bent No. 6 similar)

Designed Feb. 1947 by R.A.C.
 Drawn April 1947 by H.T.B.
 Traced May 1947 by K.R.W.
 Checked Nov. 1947 by N.W.R.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 14

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
5	MO.	FO-741(6) (RT. 7)	19		



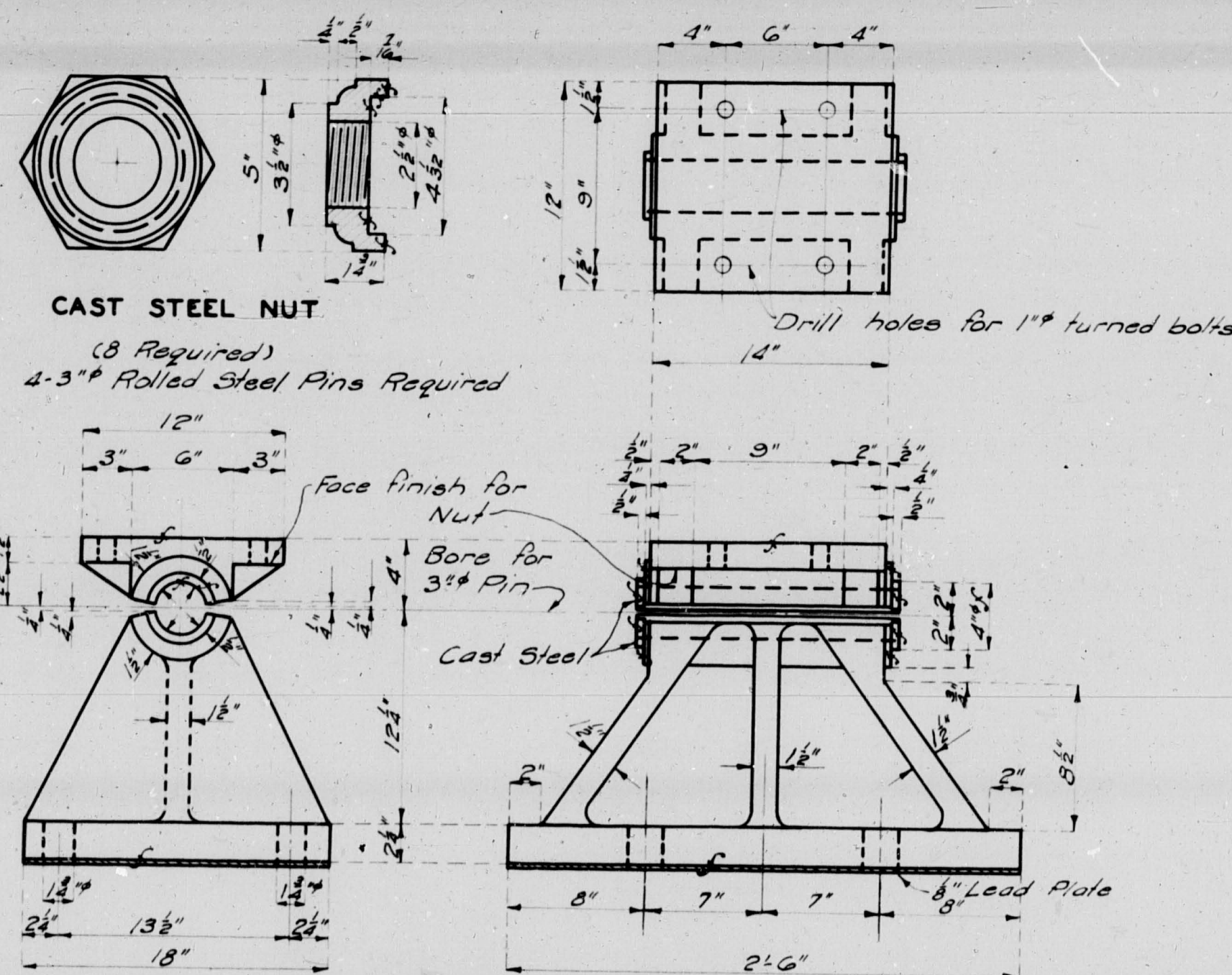
PART ELEVATION OF END FLOOR BEAM AT PIER NO. 4

Designed April 1947 by R.A.C.
Drawn June 1947 by H.T.B.
Traced July 1947 by K.R.W.
checked Nov. 1947 by N.H.R.

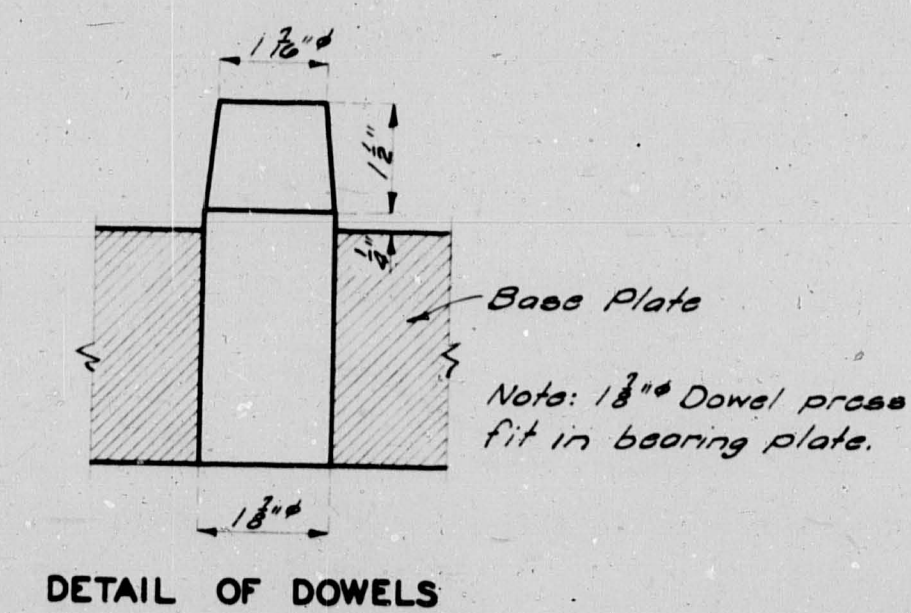
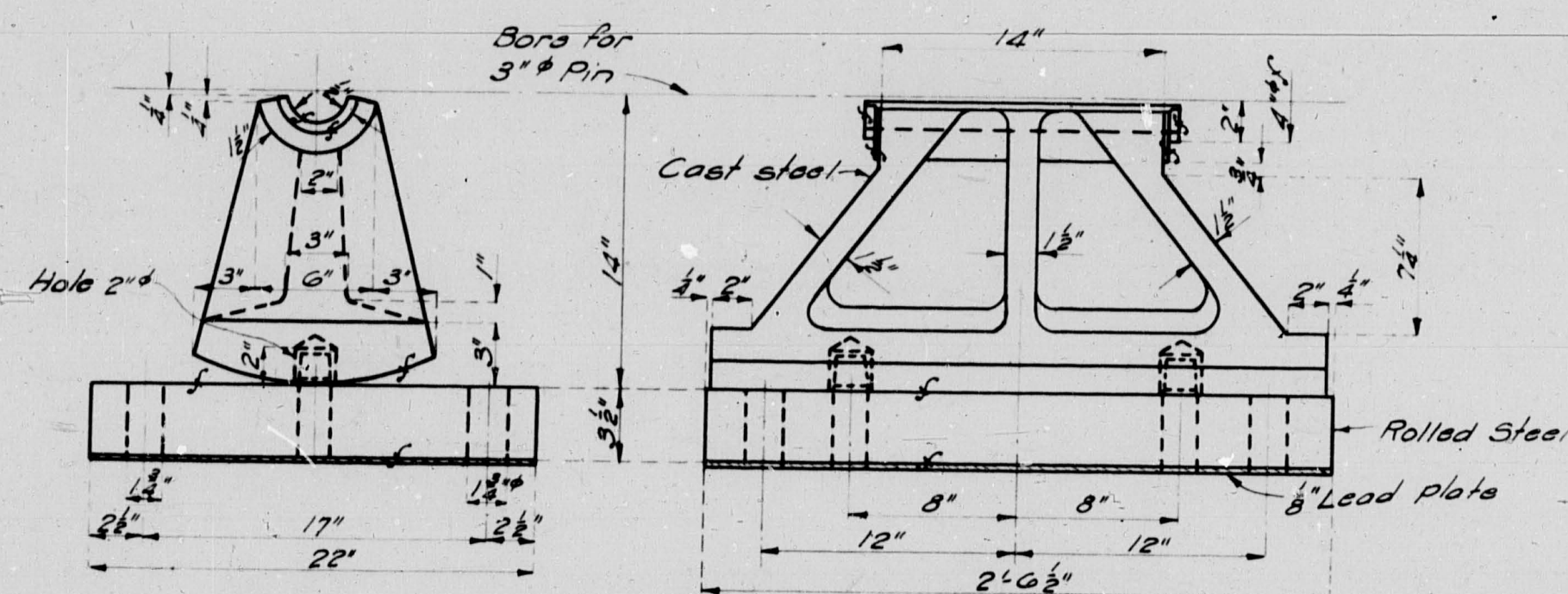
Sheet No. 9 of 14

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-741(6) (PL. 7)	19		



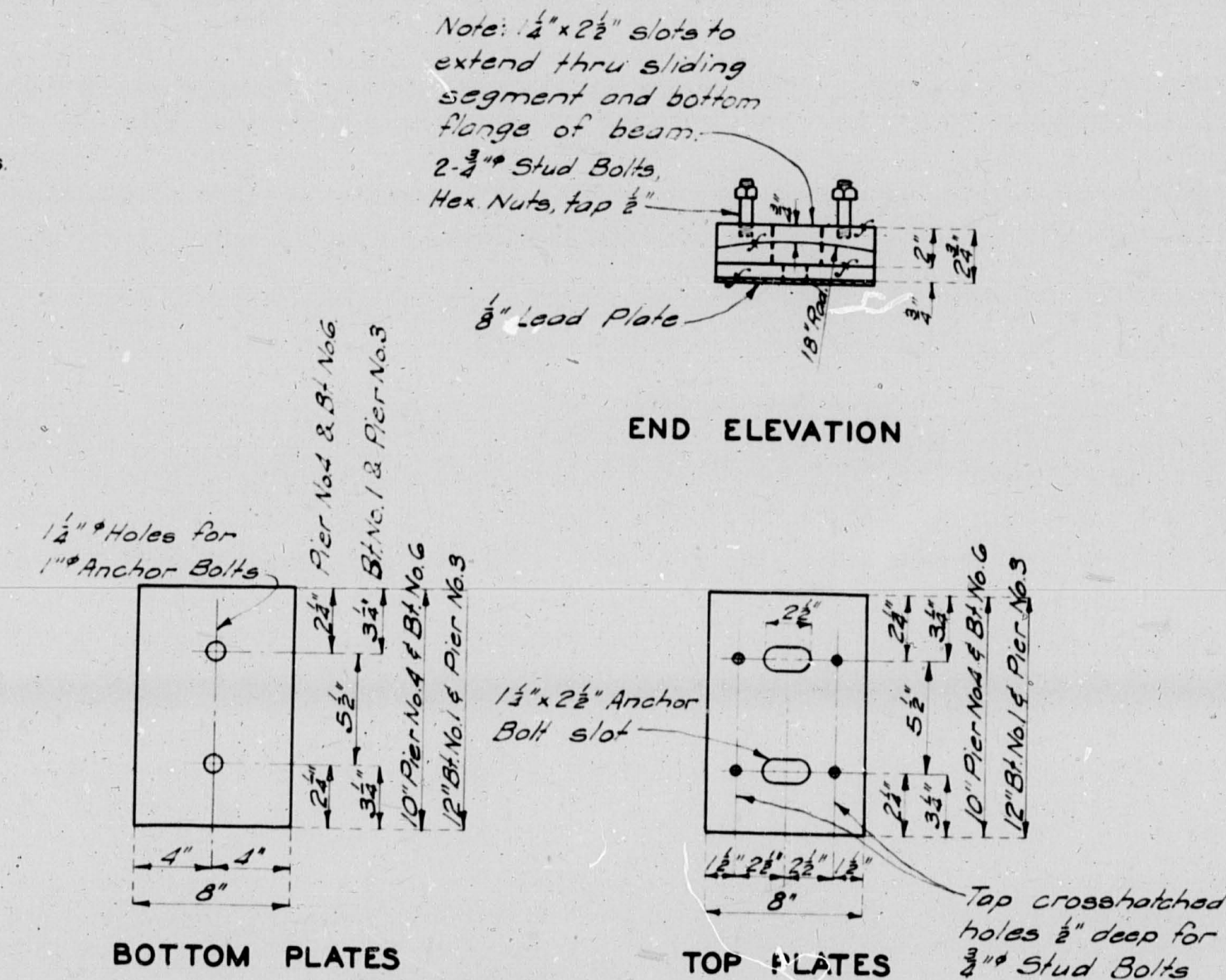
DETAILS OF FIXED SHOES FOR TRUSS SPAN
AT PIER NO. 4
(2 Sets Required)



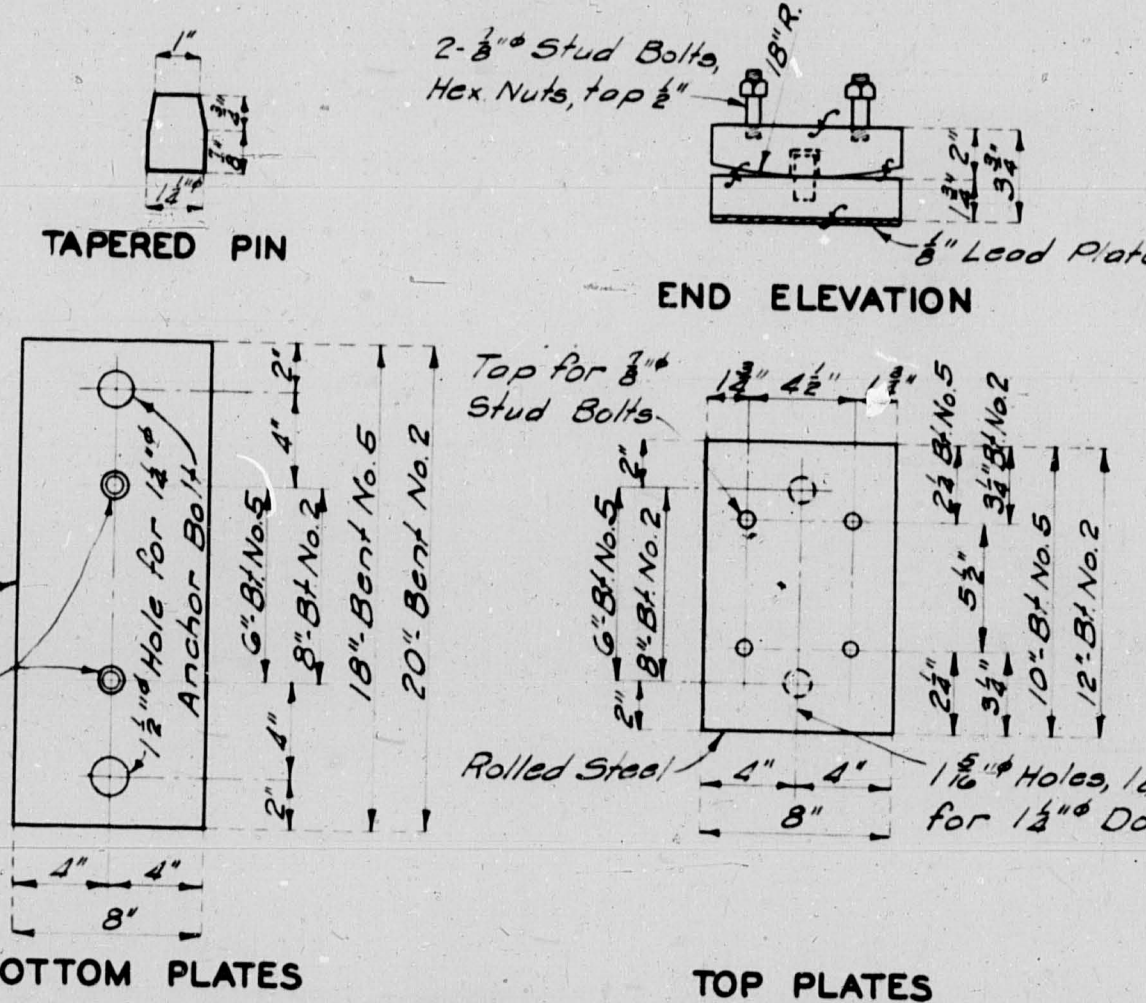
DETAILS OF EXPANSION SHOES FOR TRUSS SPAN
AT PIER NO. 3
(2 Sets Required)

Notes: Expansion shoes shall be set as shown above to counteract lengthening of lower chord under dead load. After falsework is removed and before floor is poured, shoes shall be checked for dimensions shown. For temperatures of steel different from 60° add or subtract 1/8" for each 6° temperature difference.

SHOE SETTING DIAGRAM



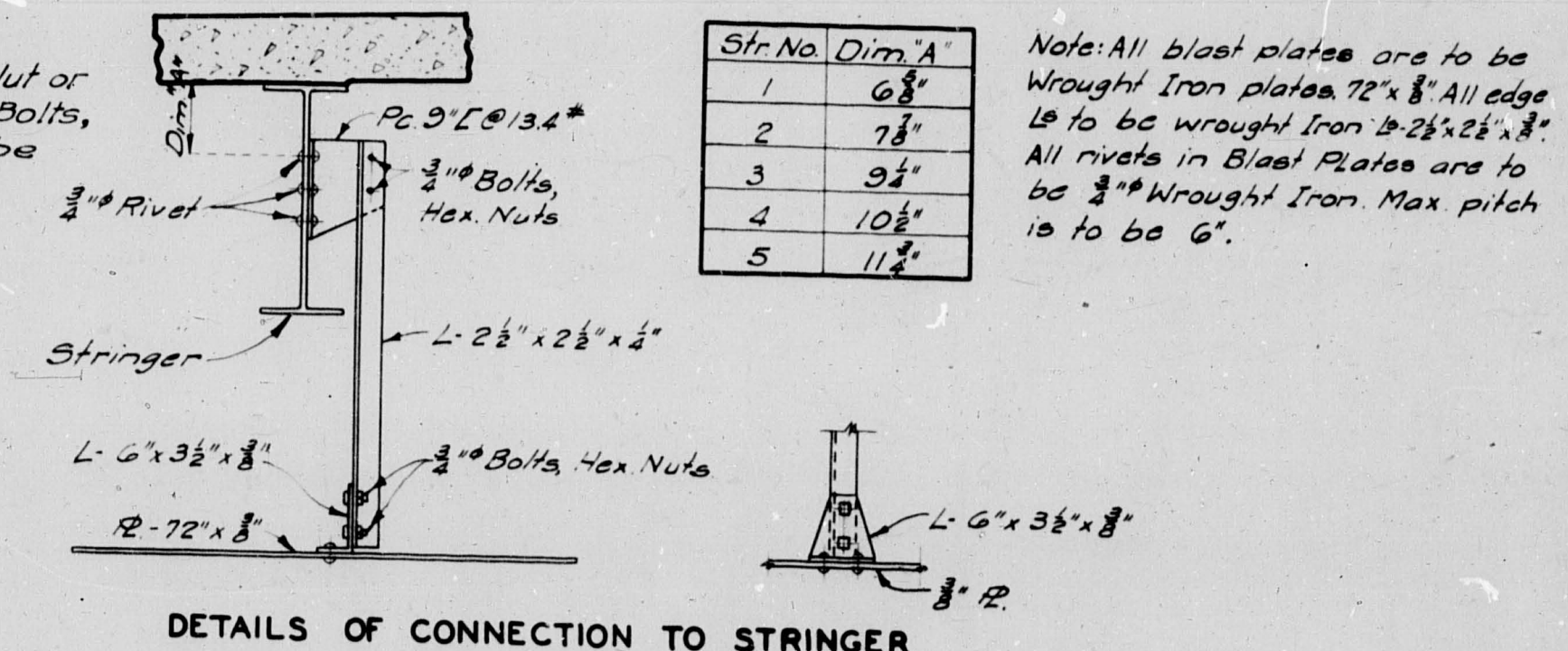
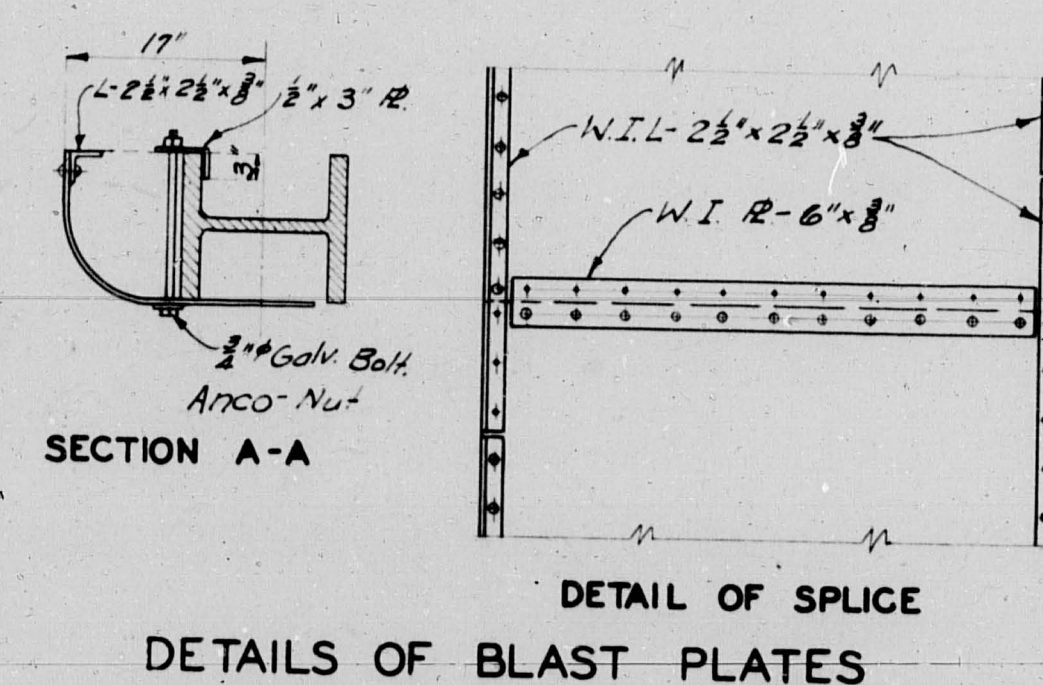
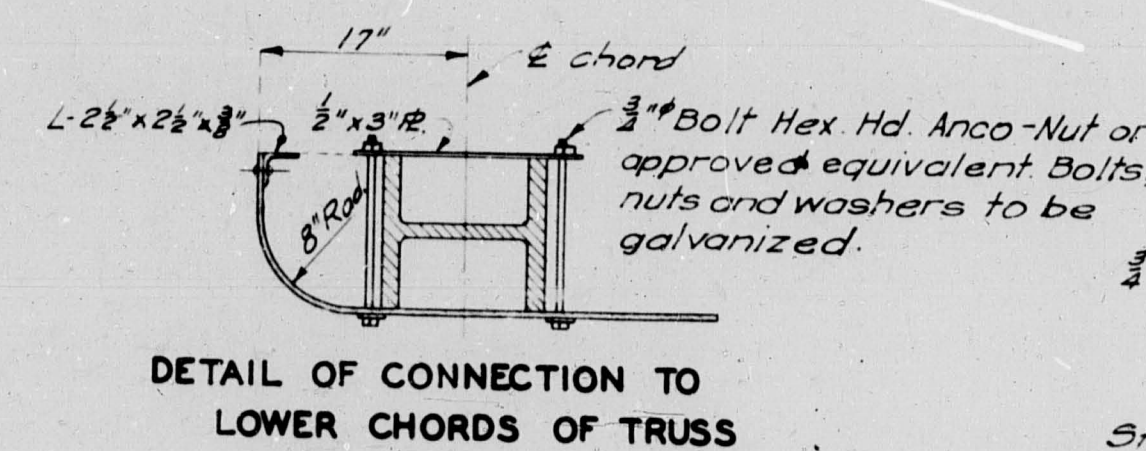
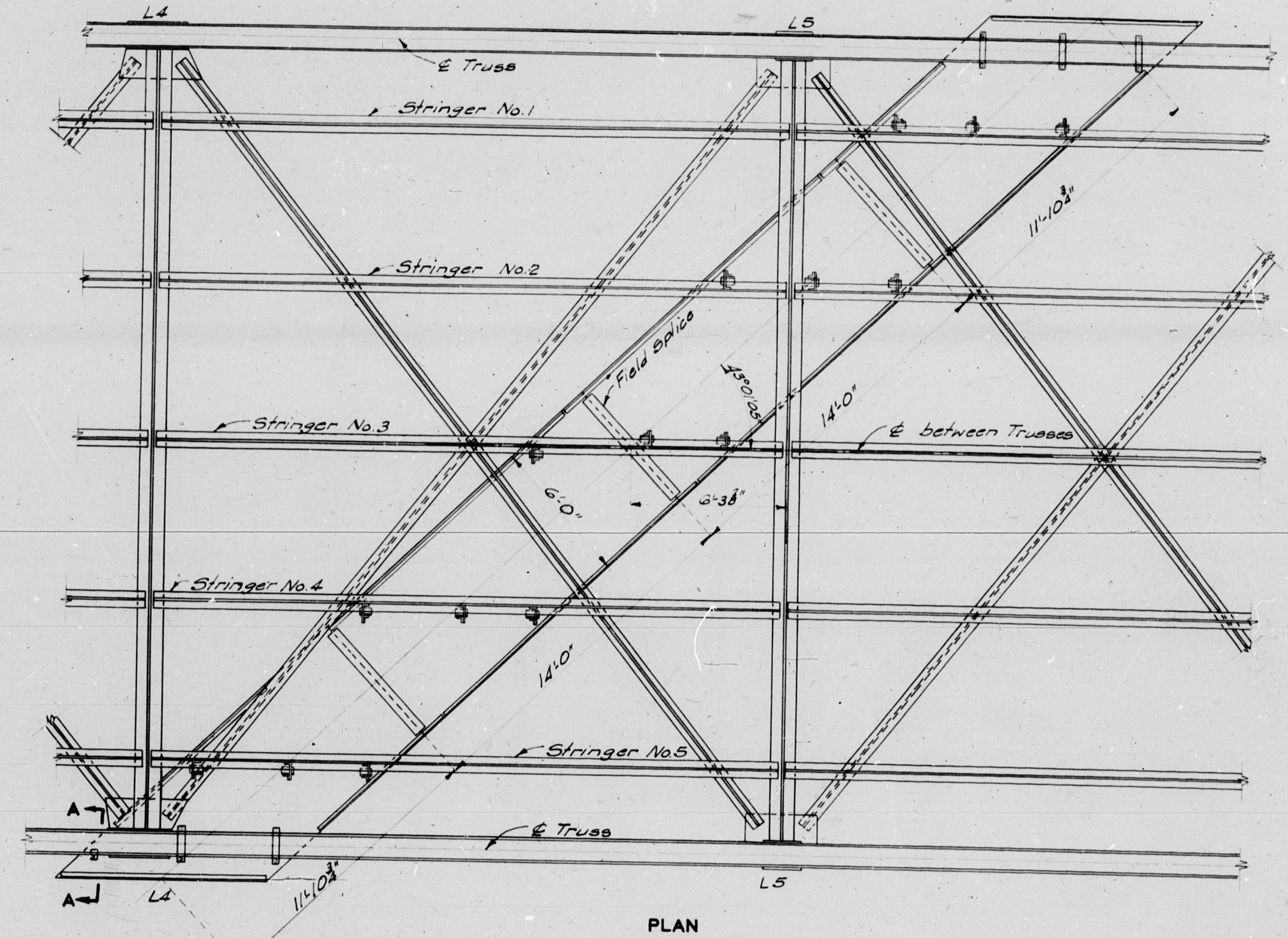
DETAILS OF BEARING PLATES FOR BEAM SPANS
AT BENTS NO. 1 & 6 AND PIERS NO. 3 & 4
(8 Sets Required - Bent No. 1 & Pier No. 3)
(8 Sets Required - Pier No. 4 & Bent No. 6)



DETAILS OF BEARING PLATES FOR BEAM SPANS
AT BENTS NO. 2 & 5
(4 Sets Required - Bent No. 2)
(4 Sets Required - Bent No. 5)

Notes:
All fillets shall have 1/4" radius.
Finish all surfaces marked "X".
Bearing castings at Bents No. 1 & 6 and Piers No. 3 & 4 shall be either gray iron alloy or cast steel.
Anchor bolts for bearing plates at Bents No. 1 & 6 and Piers No. 3 & 4 shall be 1" swaged bolts, no heads or nuts and shall extend 10" into concrete. Top ends of anchor bolts shall be above the top of casting but not higher than 1/2" below top surface of bottom flange of beam.
Anchor bolts for bearing plates at Bents No. 2 & 5 shall be 1 1/2" swaged bolts with hex nuts and shall extend 12" into concrete.
Anchor bolts for shoes at Piers No. 3 & 4 shall be 1 1/2" swaged bolts with hex nuts and shall extend 18" into concrete.
All pins, bolts, nuts, dowels, and rolled plates will be paid for as structural steel.
Cost of lead plates shall be included in price bid for other items.
All finished surfaces shall be painted with one coat of white lead and tallow.
See Specifications for field coatings.

Note: This drawing is not to scale. Follow dimensions.



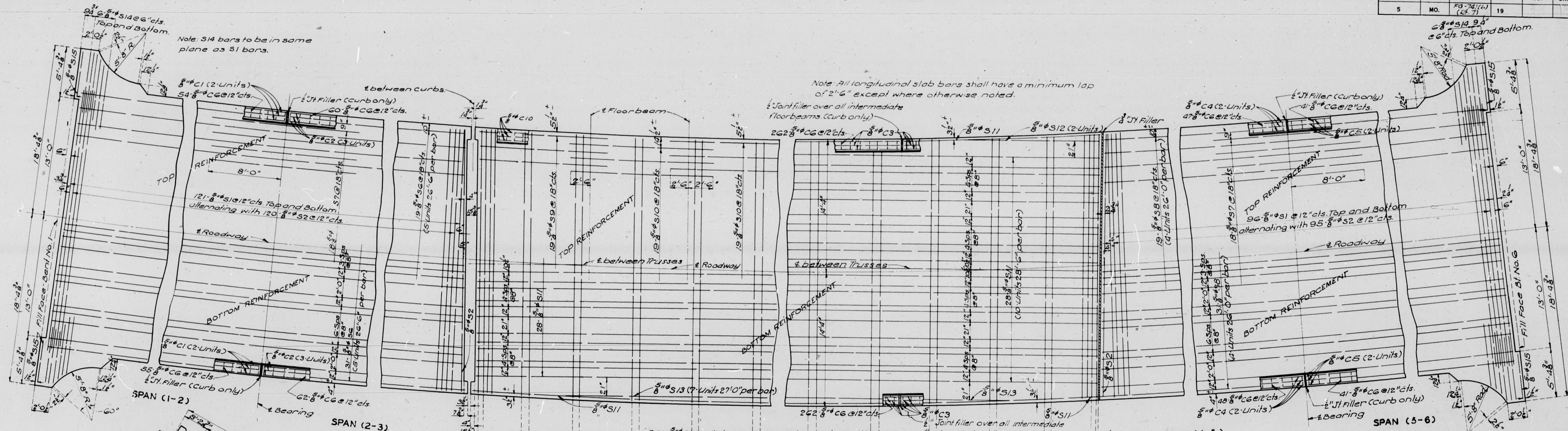
BRIDGE OVER C.R.I. & P.R.R. AND BIG CREEK
STATE ROAD FROM PLEASANT HILL SOUTH
AT PLEASANT HILL
PROJECT NO. FG-741(6) (RT. 7) STA. 85+56.65
CASS COUNTY

Designed Apr. 1947 by R.A.C.
Drawn Apr. 1947 by H.T.B.
Traced Apr. 1947 by J.M.N.
Checked Nov. 1947 by N.W.R.

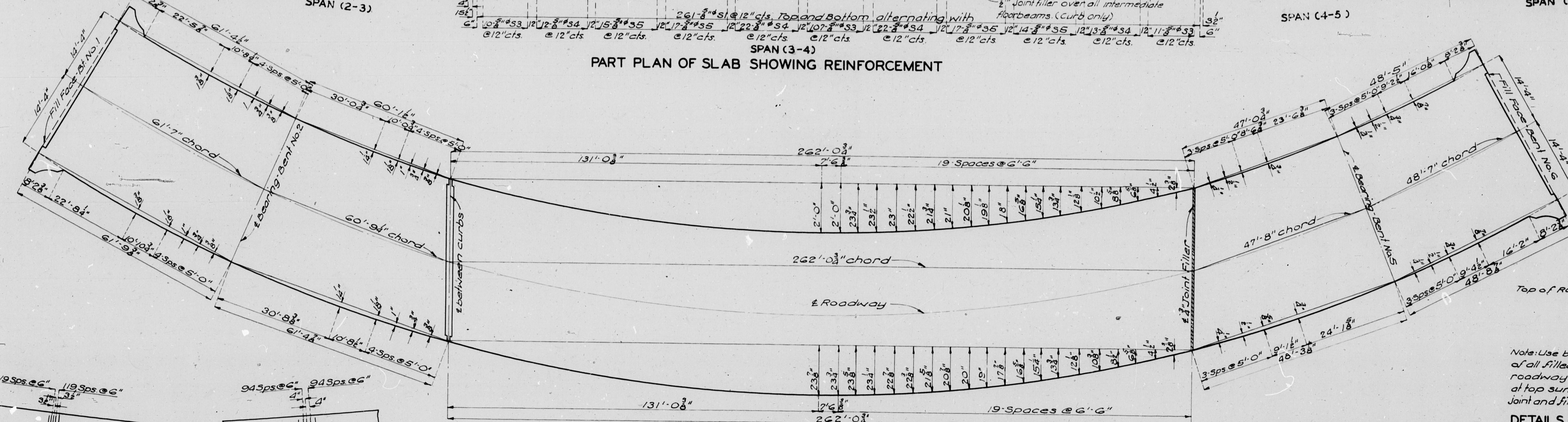
Sheet No. 10 of 11

MISSOURI STATE HIGHWAY DEPARTMENT

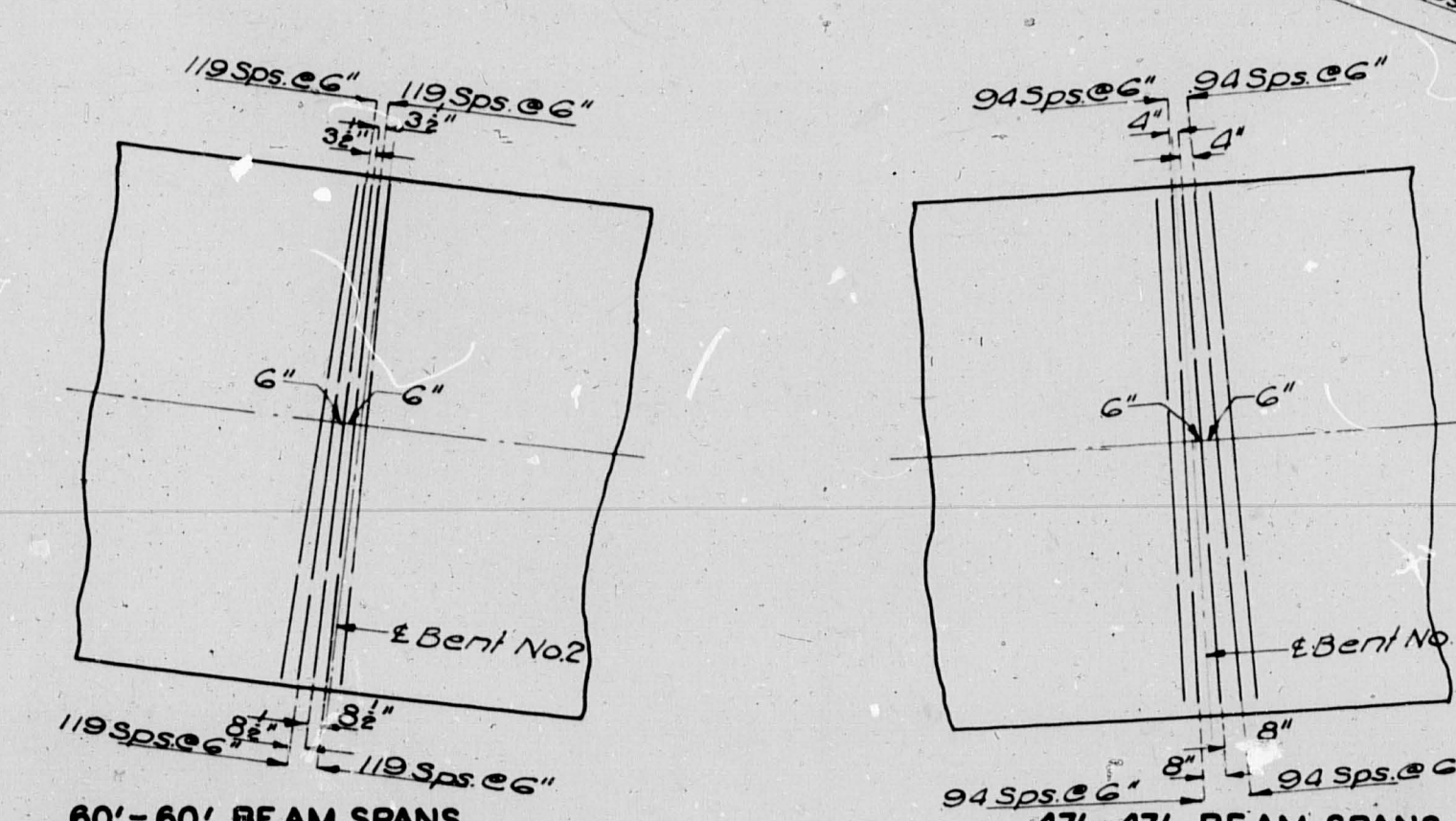
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-74(1) (C4.7)	19		



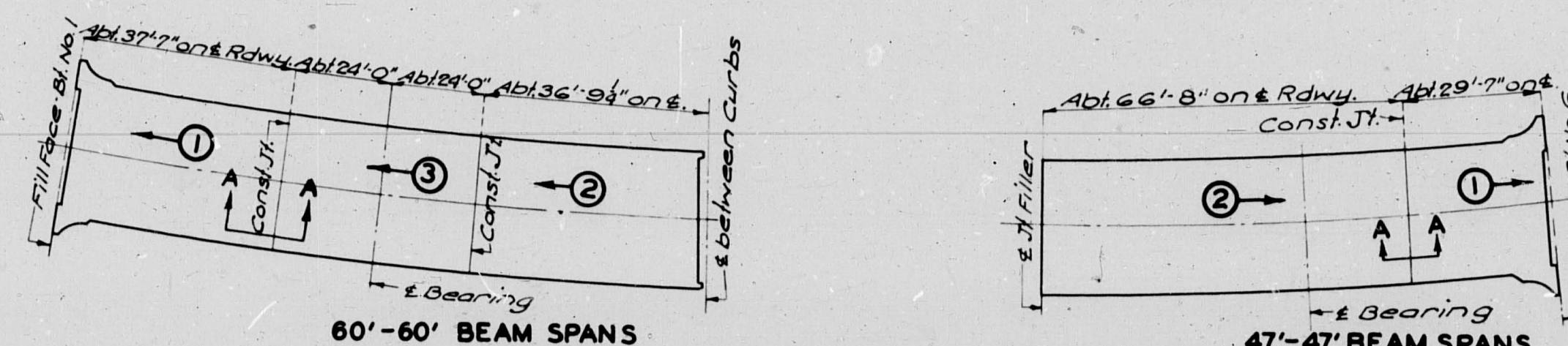
PART PLAN OF SLAB SHOWING REINFORCEMENT



PART PLAN OF SLAB SHOWING ORDINATES

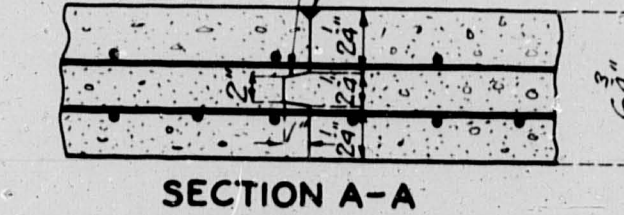


DETAILS SHOWING METHOD OF FANING TRANSVERSE BARS

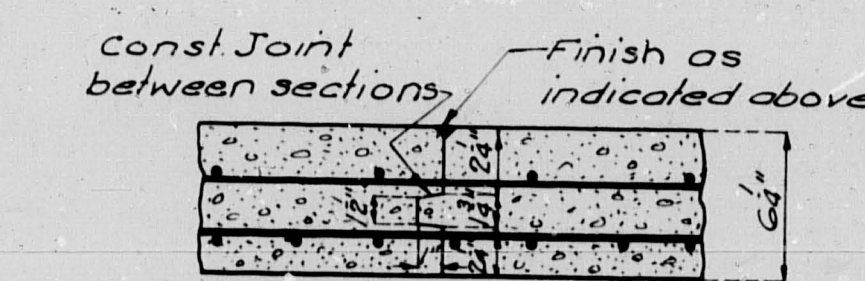


SLAB POURING SEQUENCE

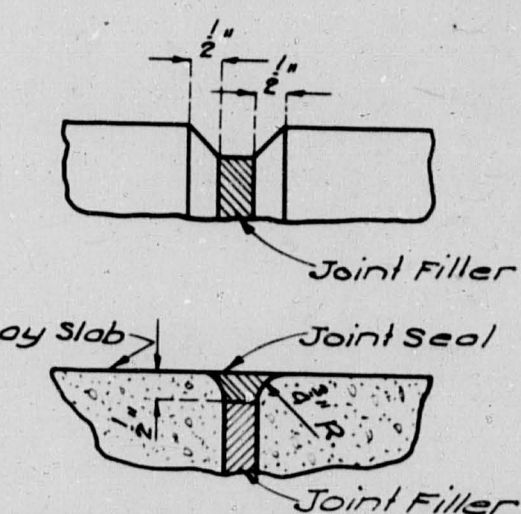
Const. Joint between sections. Finish each side of joint with 3/4" radius edging tool. Fill groove with joint seal.



SECTION A-A



CONSTRUCTION JOINT TRUSS SPAN (PERMISSIBLE)



DETAILS OF BEVEL FOR FILLED JOINTS

BRIDGE OVER C. R. I. & P. R. R. AND BIG CREEK

STATE ROAD FROM PLEASANT HILL SOUTH
AT PLEASANT HILL
PROJECT NO. FG-74(6) (RT. 7) STA. 85+56.65

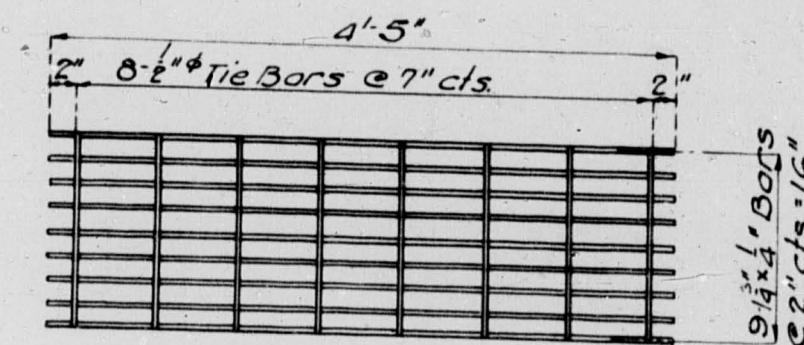
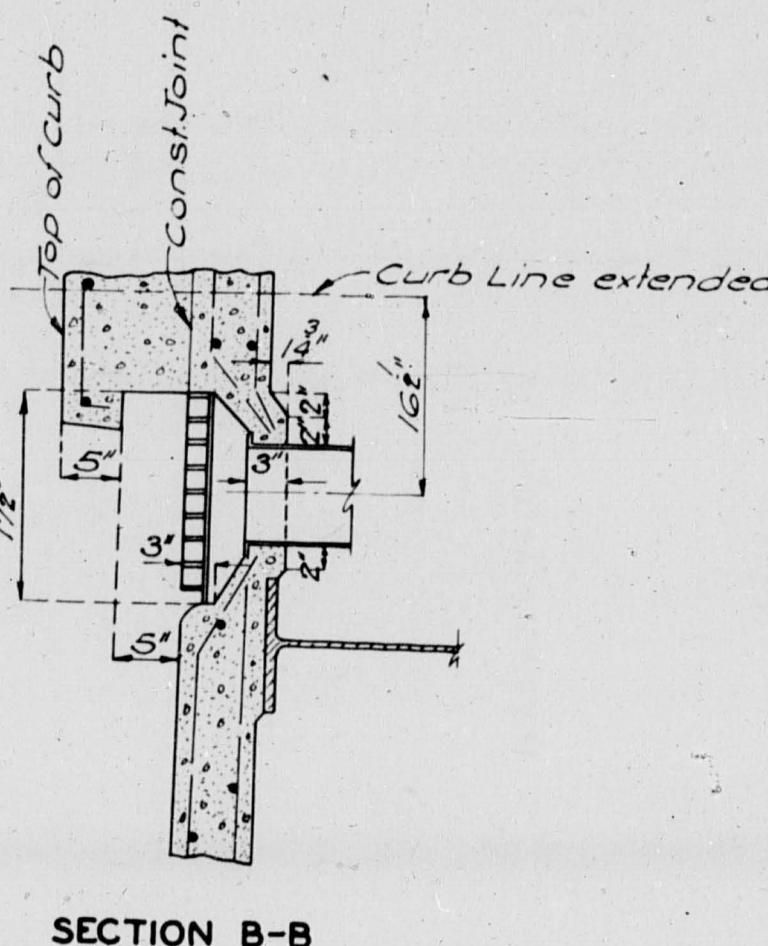
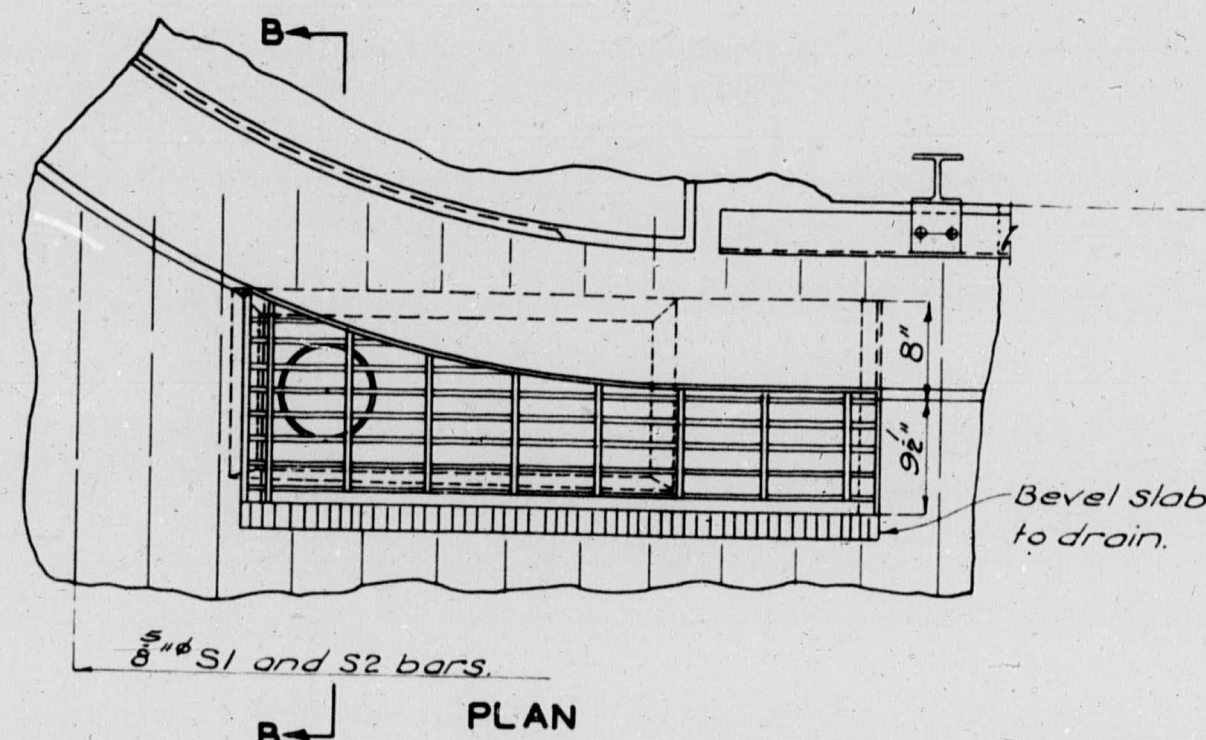
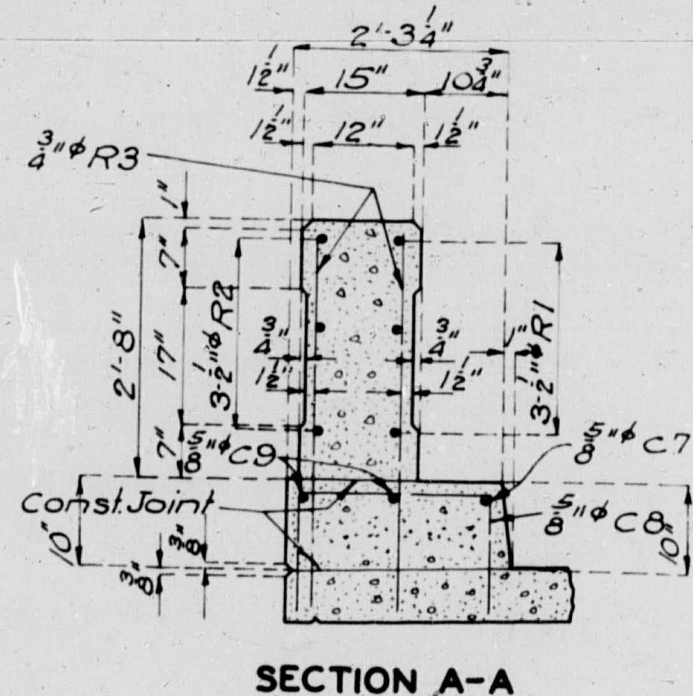
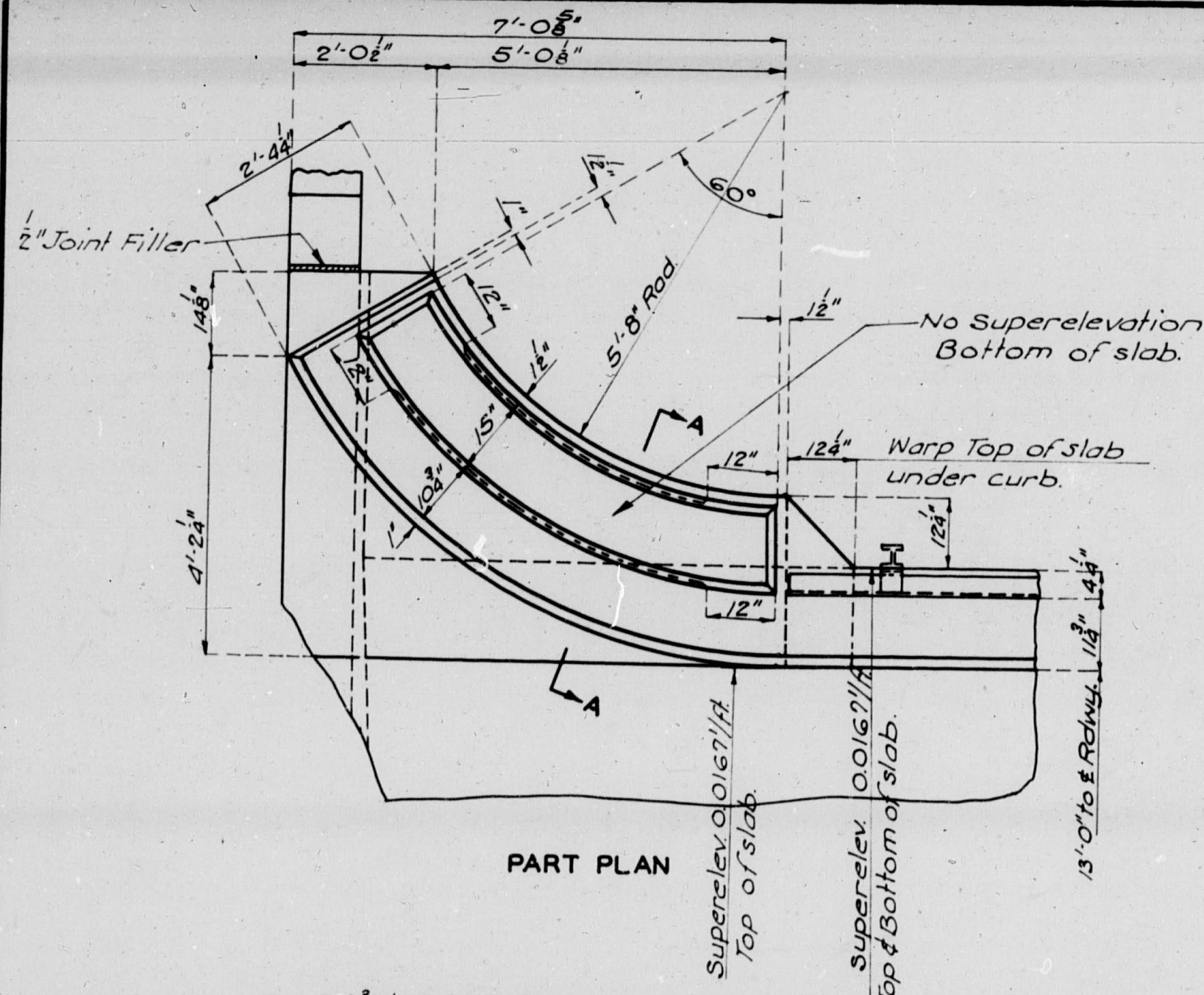
CASS COUNTY

Designed Feb. 1947 by R.A.C.
Drawn May 1947 by H.T.B.
Traced July 1947 by K.R.W.
Checked Nov. 1947 by N.N.R.

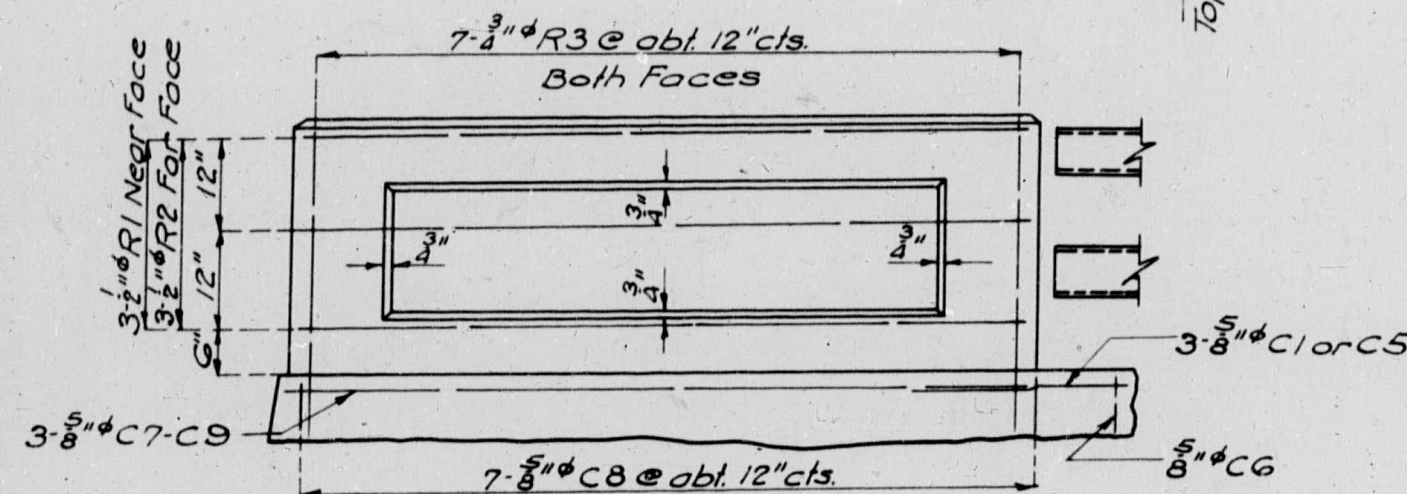
Note: This drawing is not to scale. Follow dimensions.

MISSOURI STATE HIGHWAY DEPARTMENT

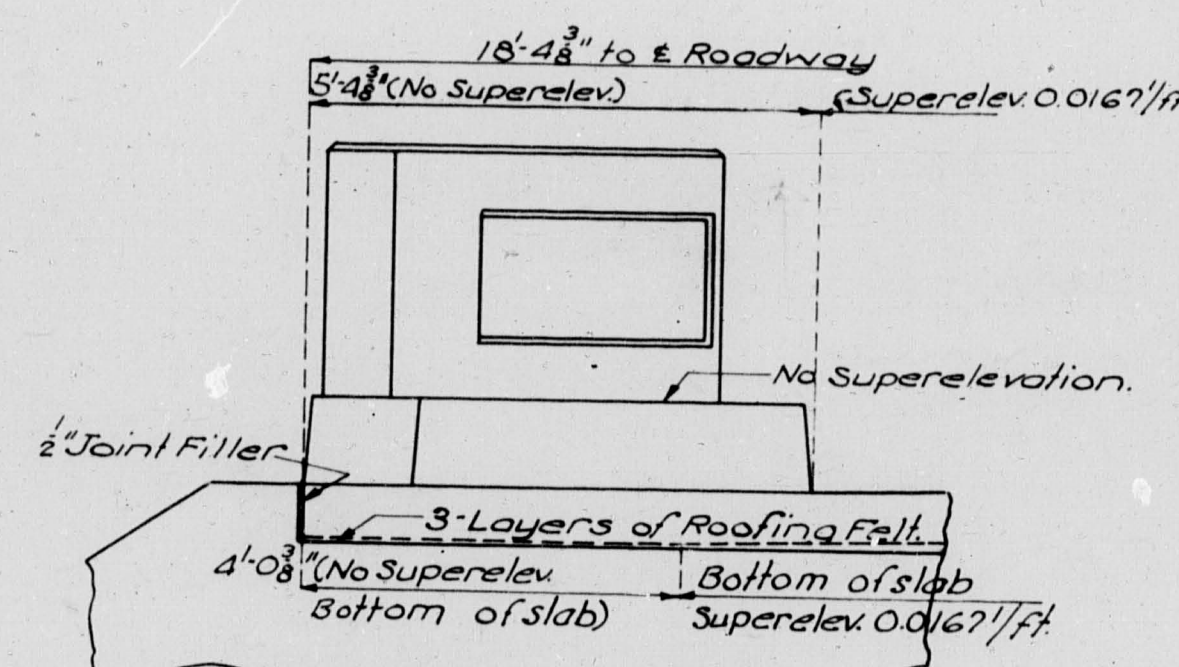
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	FG-741(6) (RT-7)	19		



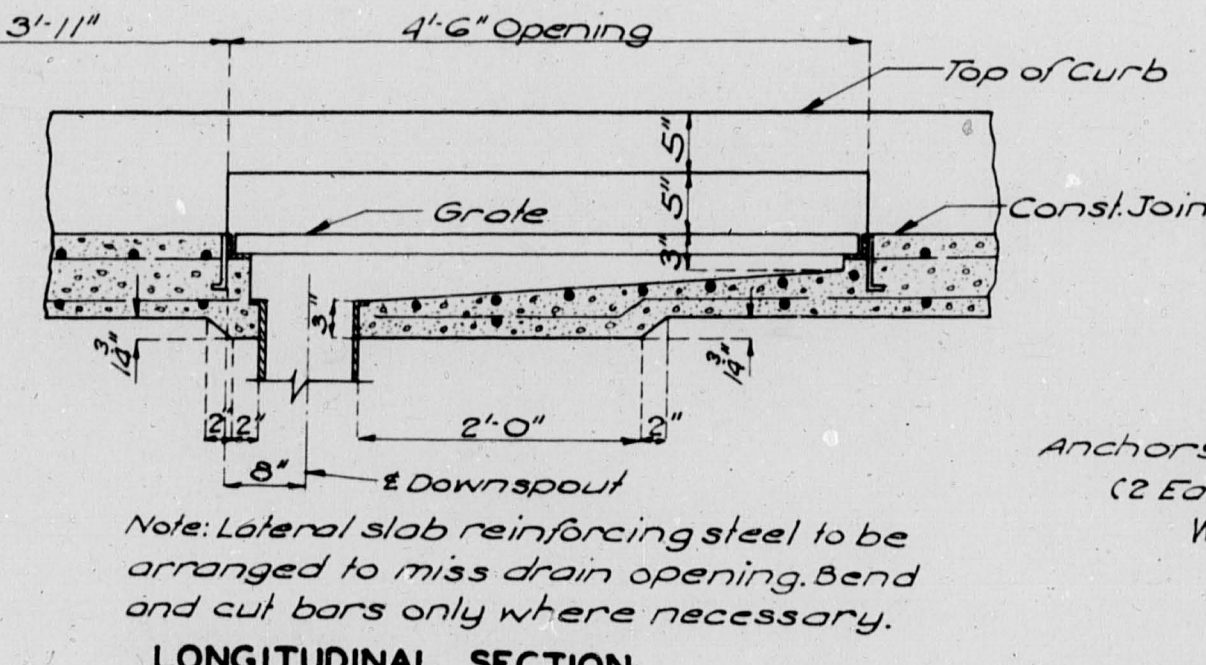
PLAN OF GRATES
(2 Required)
Note: Grates will be paid for as Fabricated Structural Steel.
Details for anchoring grates securely in place shall be submitted to the Engineer for approval before grates are fabricated.



DEVELOPED ELEVATION OF END POST SHOWING REINFORCEMENT

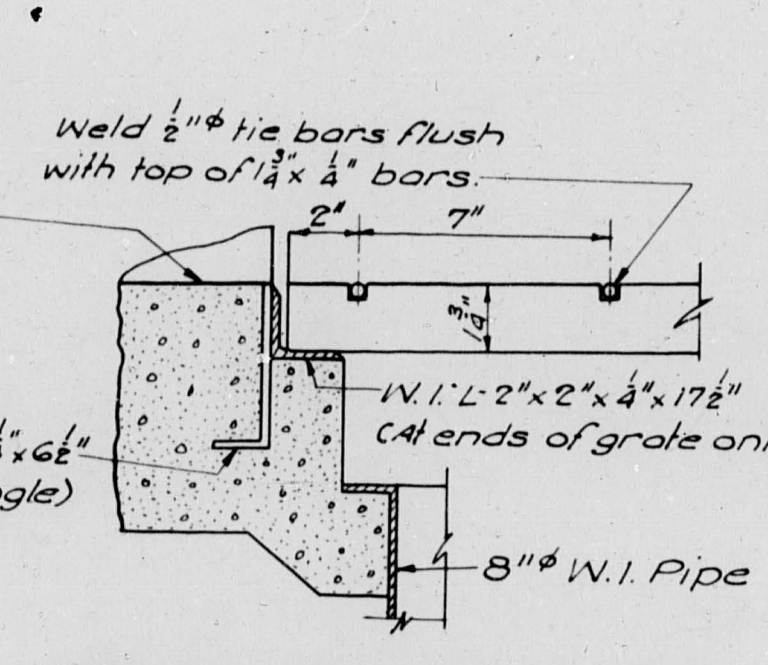


PART END ELEVATION



Note: Lateral slab reinforcing steel to be arranged to miss drain opening. Bend and cut bars only where necessary.

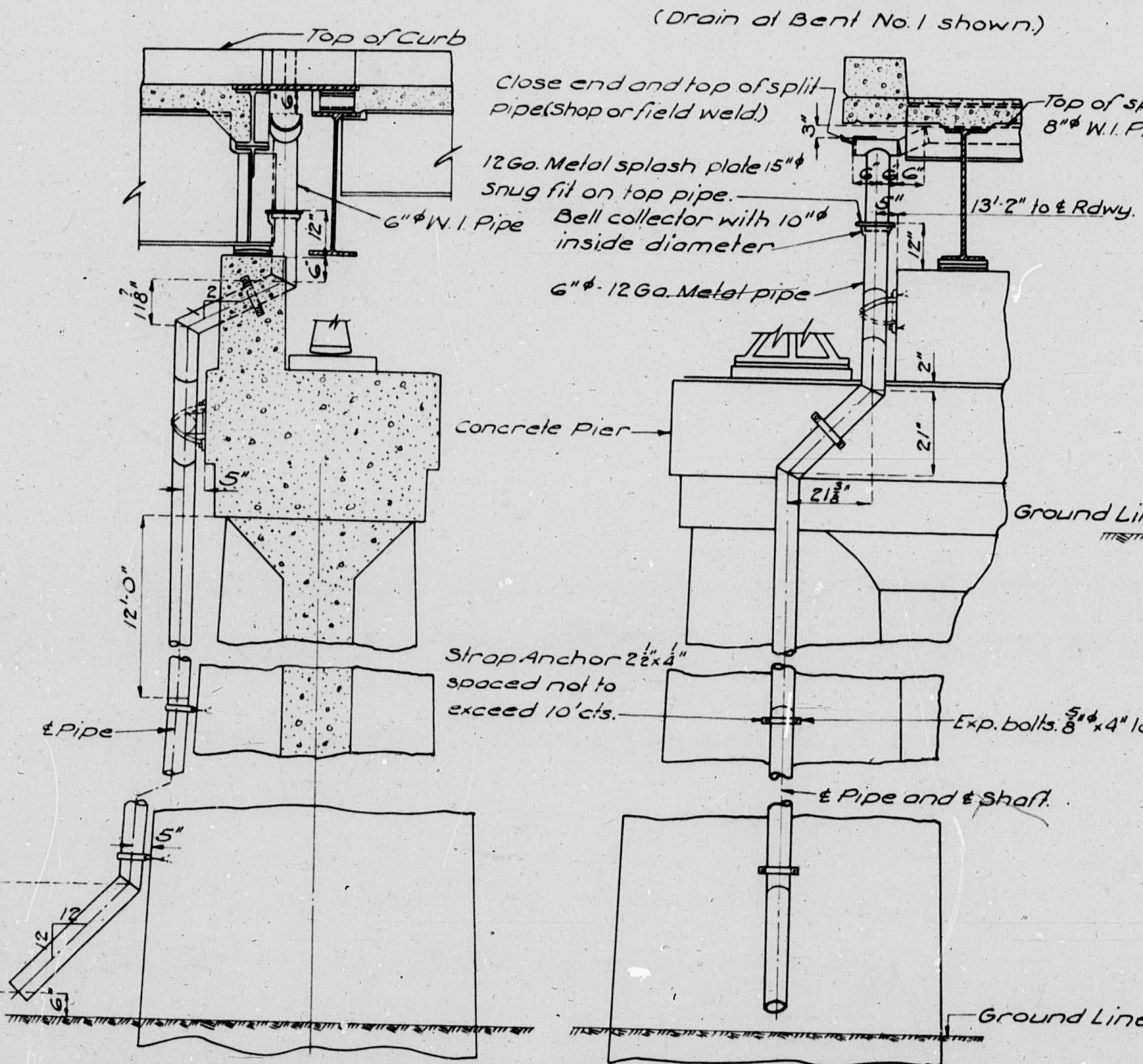
LONGITUDINAL SECTION



PART SECTION AT END OF GRATE

DETAILS OF DRAINS AT LEFT SIDE OF ROADWAY - BENTS NO. 1 & 6

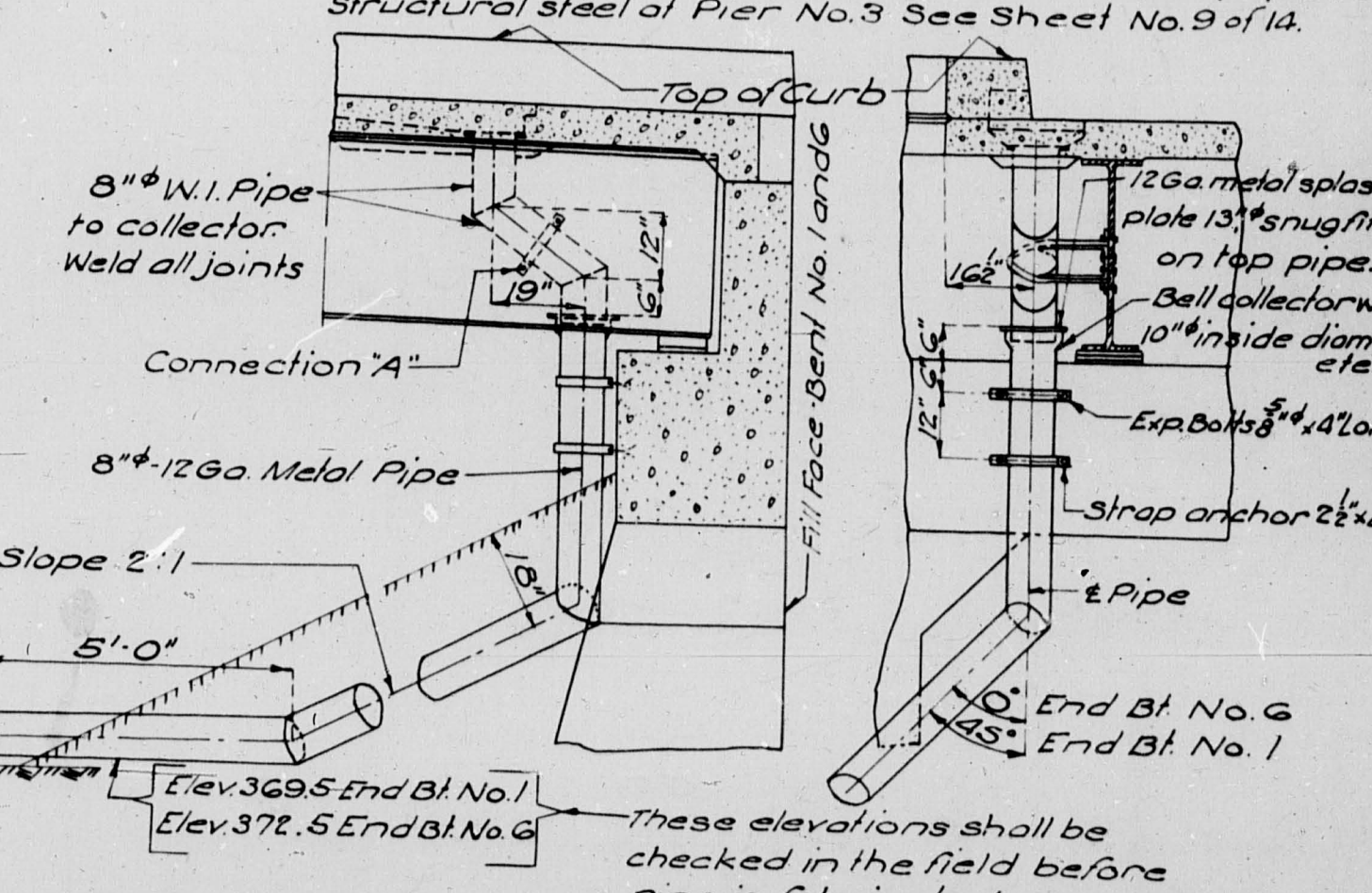
(Drain at Bent No. 1 shown)



PART ELEVATION SHOWING DOWNSPOUT

SECTION THROUGH BEAM SPAN NEAR DRAIN

DRAIN DETAILS AT LEFT SIDE OF ROADWAY-PIER NO. 3



SECTION NEAR DRAIN

DRAIN DETAILS AT LEFT SIDE OF ROADWAY-BENTS NO. 1 & 6

These elevations shall be checked in the field before pipe is fabricated.

PIPE CONNECTION TO END BENTS NO. 1 & 6 AND PIER NO. 3

BRIDGE OVER C. R. & P. R. R. AND BIG CREEK

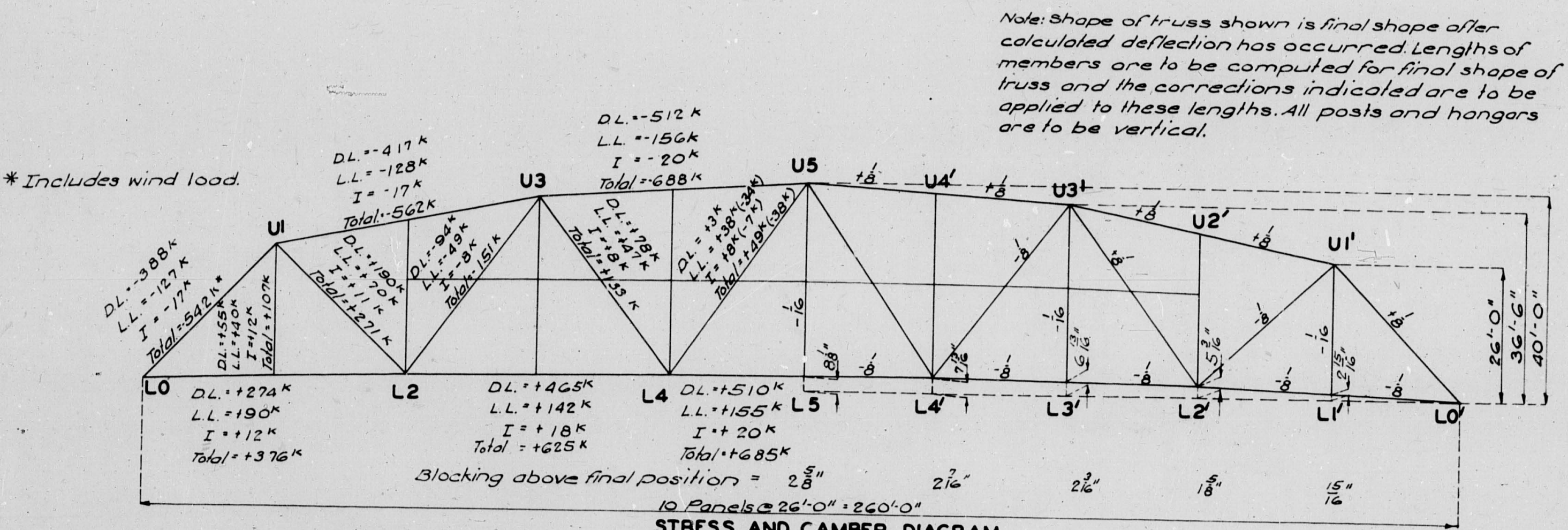
STATE ROAD FROM PLEASANT HILL SOUTH

AT PLEASANT HILL

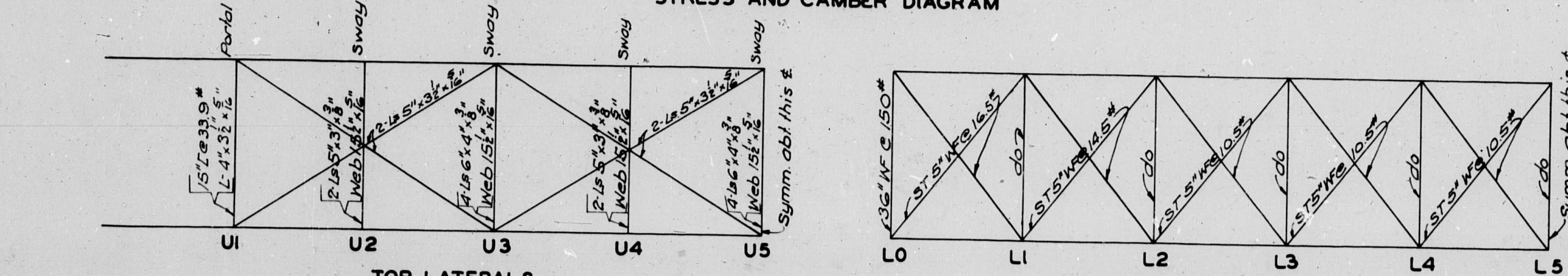
PROJECT NO. FG-741(6) (RT. 7) STA. 85+56.65

CASS COUNTY

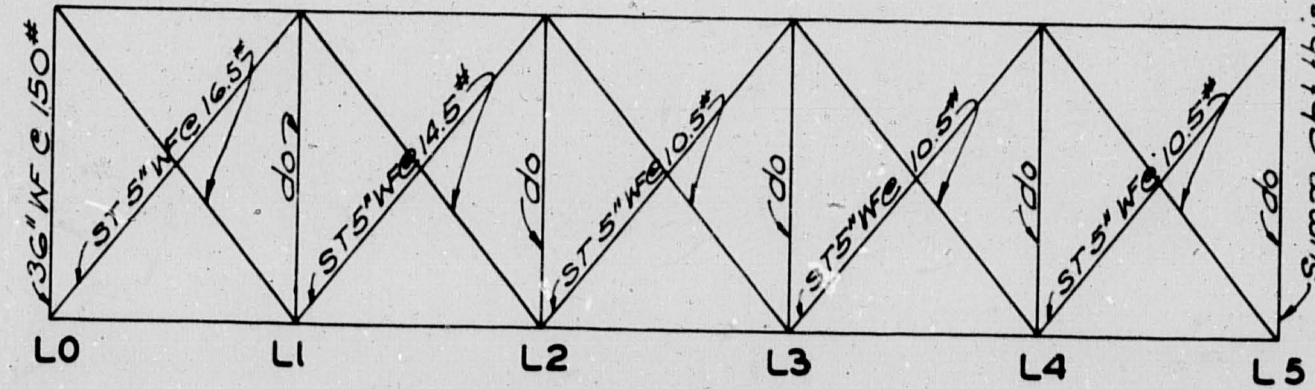
TYPICAL DETAILS OF FLARED END POST



STRESS AND CAMBER DIAGRAM



TOP LATERALS



BOTTOM LATERALS

TRUSS DETAILS

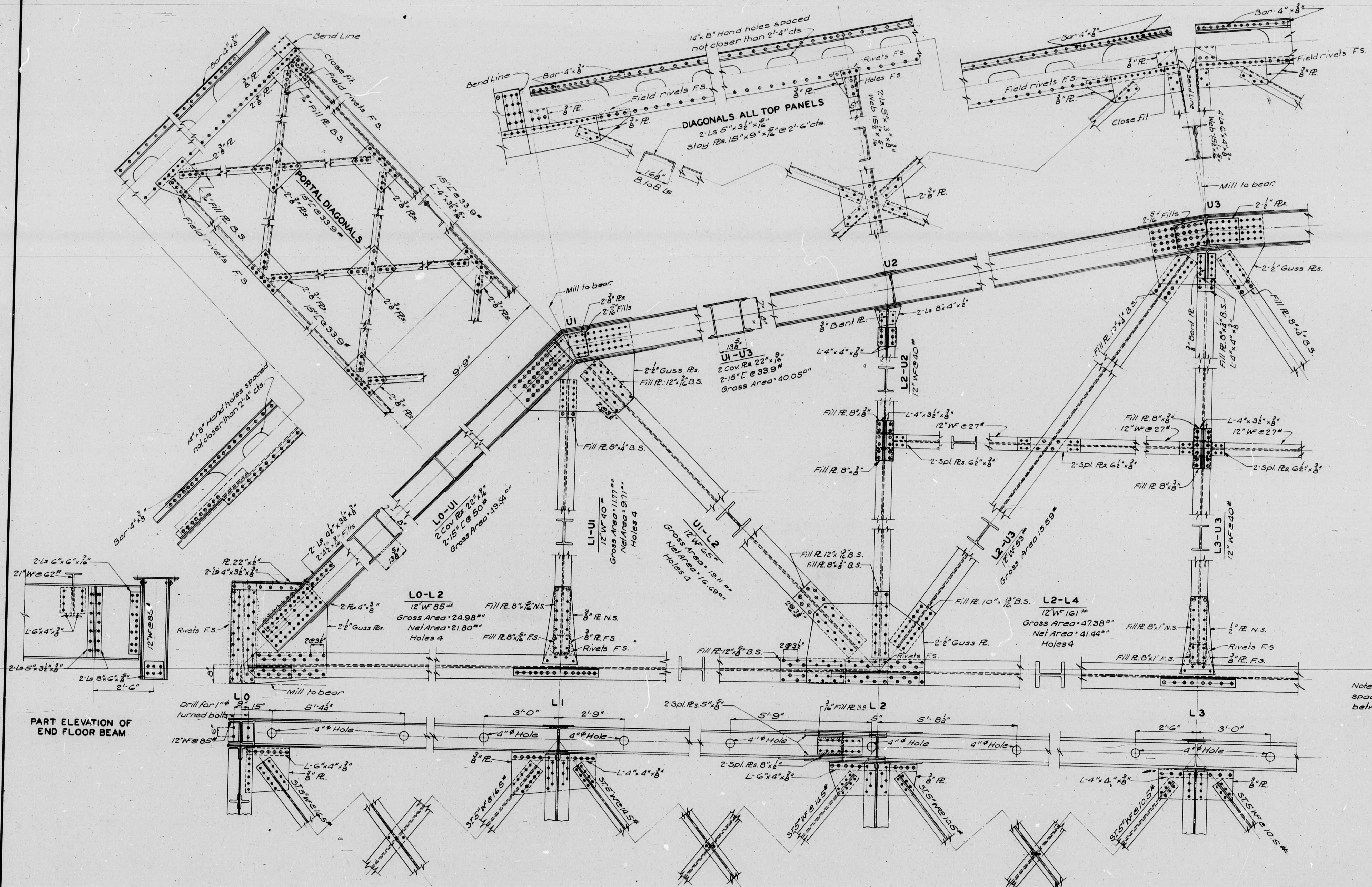
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 12 of 14

L-23

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FG-741(6) (RT. 7)	19		



PART ELEVATION OF END FLOOR BEAM

Note: 4\"/>

Note: All rivets 3\"/>

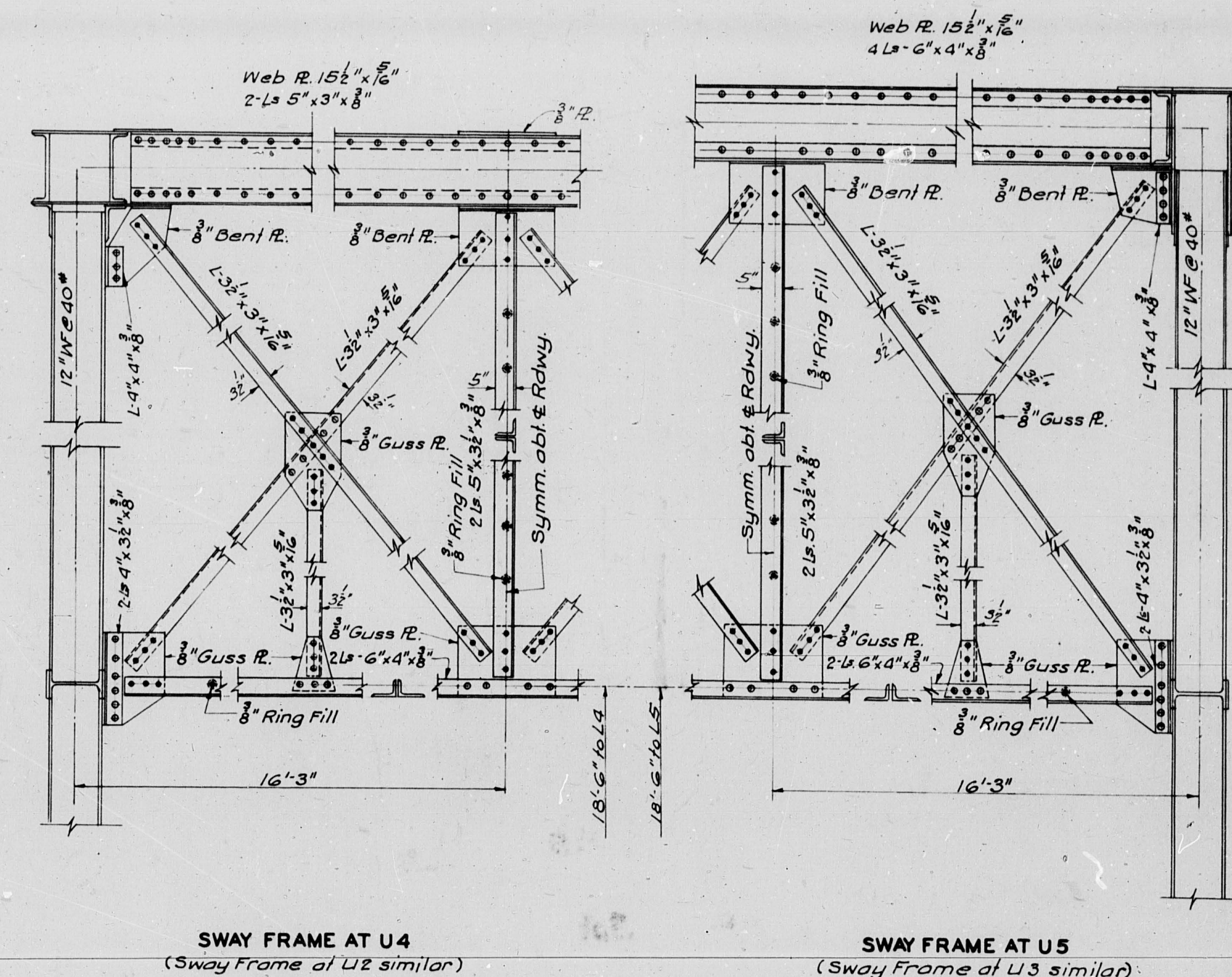
Note: This drawing is not to scale. Follow dimensions.

Designed Feb. 1947 by RAC.
Drawn Mar. 1947 by H.T.B.
Traced April 1947 by KRW.
Checked Nov. 1947 by N.W.R.

BRIDGE OVER C.R.I. & P.R.R. AND BIG CREEK
STATE ROAD FROM PLEASANT HILL SOUTH
AT PLEASANT HILL
PROJECT NO. FG-741(6) (RT. 7) STA. 65+56.65
CASS COUNTY

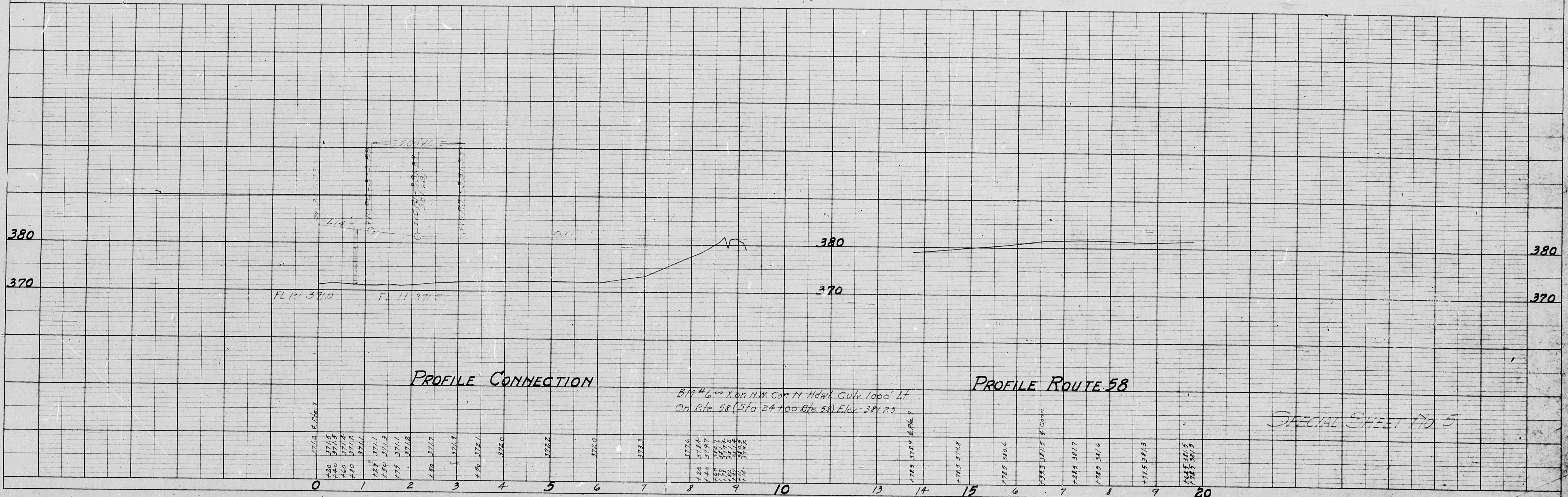
Sheet No. 1 of 14

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
5	MO.	FG-741(6) (RT-7)	19		



L-23

SPECIAL SHEET No 5

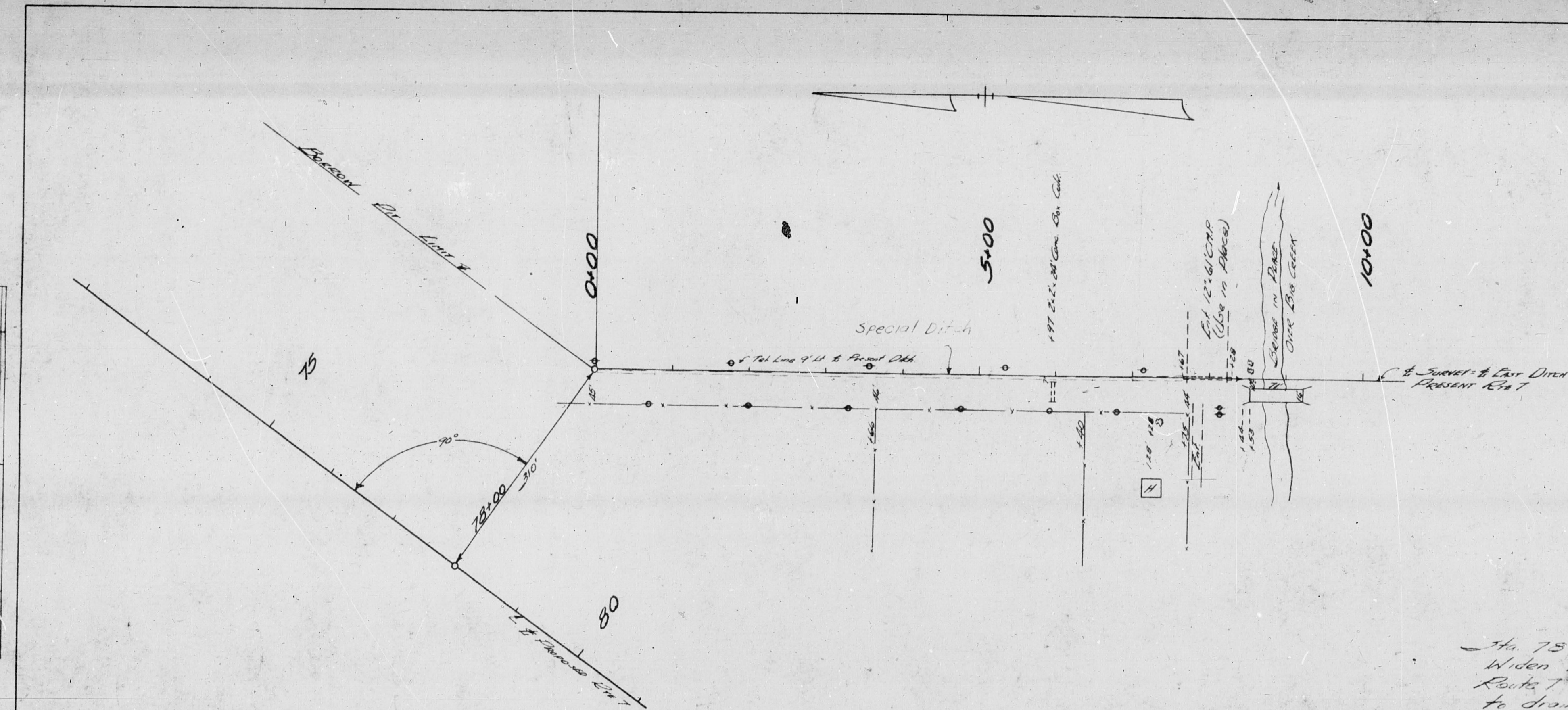




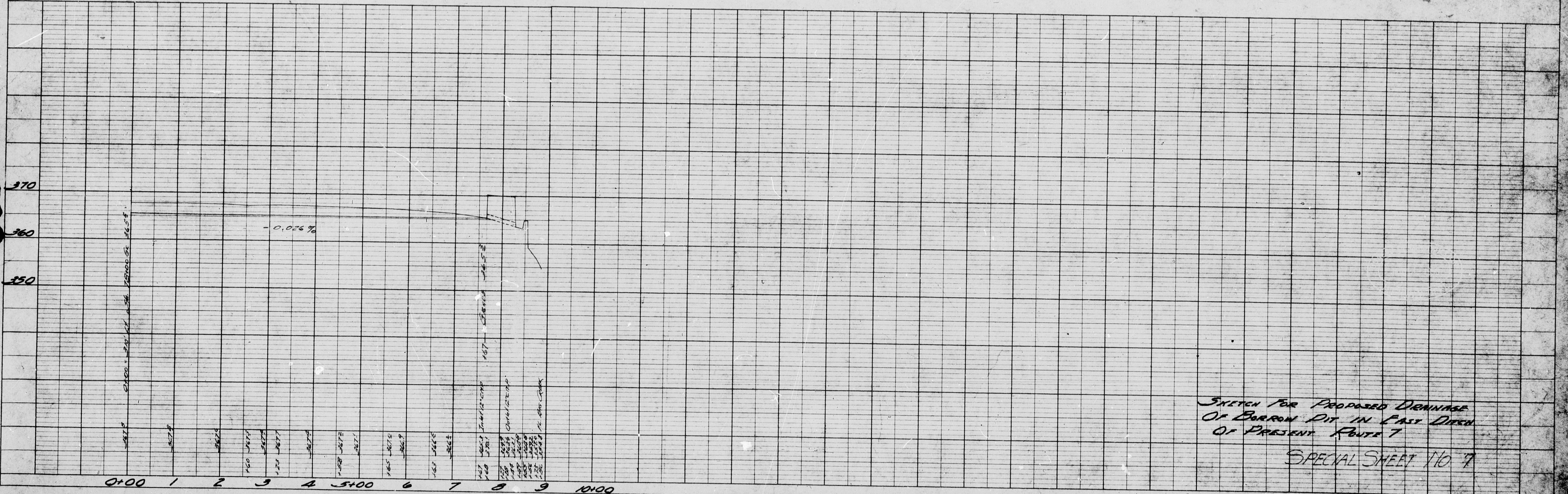
SCALE 1" = 100'

PLAN
DATE
SURVEYED
NOTE (DD)
ALIGNMENT CHECKED
BY OF WAY CHECKED
NO.

PROFILE
DATE
SURVEYED
NOTE (DD)
B.M. NOTED
STRUCTURE
NO.



Sta 75+00 - 310' L^t
Widen East Ditch present
Route 7 Sta 0+00 to Sta 7+67
to drain Borrow Pit No 3
4' Bottom 2:1 Slopes
See Special Cross Sections



Sketch for Proposed Drainage
Of Borrow Pit in East Ditch
Of Present Route 7

SPECIAL SHEET NO 7

F74(6)
Cass
41

1T-4
1K-4

SURFACE
APPROACH

1BA-1

C110R3 24D2
C27
C530
C230R1
36R

P3R1

AIRPORTS

36A-13
15E-16
15DE-54
15CE-1

MISC

26A-8