

MICROFILMED
DEC 30 1985

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

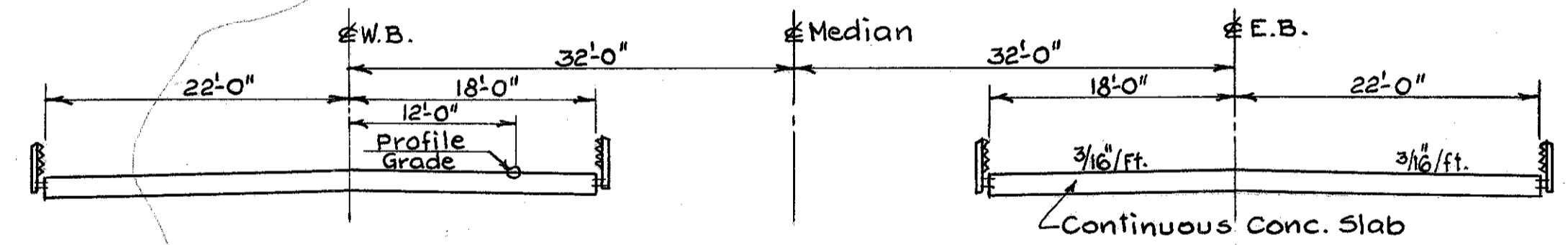
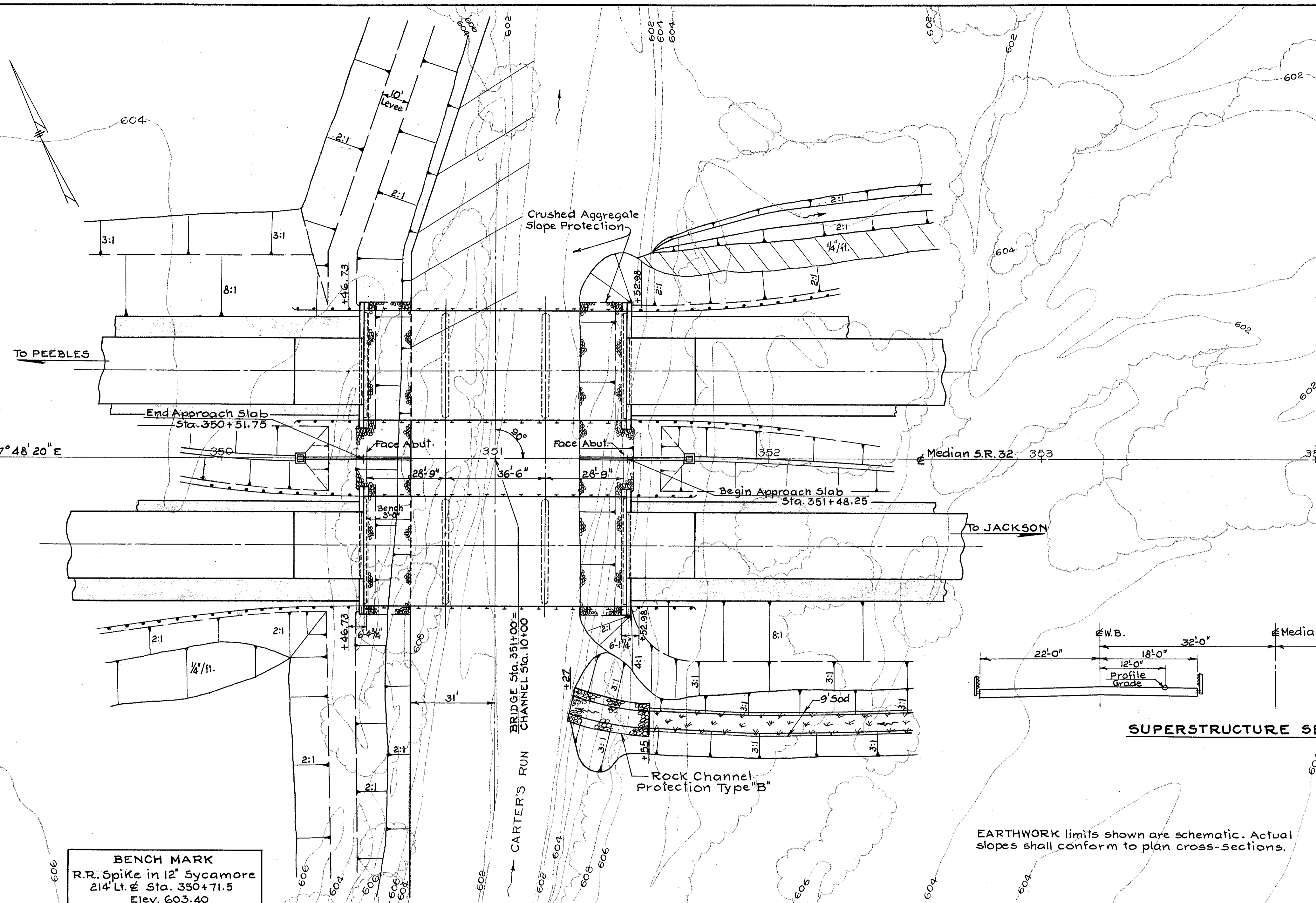
371
432

PIK-32-3.21

PROPOSED BRIDGE DATA

TYPE : Continuous Concrete Slab with Capped Pile Piers & Abutments.
 SPANS : 29'-3", 36'-6", 29'-3".
 ROADWAY : Two at 40'-0" w/ Guard Rail.
 SKEW : None.
 LOADING : HS 20-44.
 BRIDGE RAILING : Two deep beam rails with steel posts and bolts.
 APPROACH SLAB : AS-1-67 [25' Long].
 ALIGNMENT : Tangent.
 WEARING SURFACE : 1" Monolithic Concrete.

DRAINAGE AREA : 7.62 Sq. Mi.
 Q₅₀ : 4,000 cfs.
 50 Year Waterway 500' 50 Yr. Vel. 8.0 fps.



EXISTING BRIDGE DATA

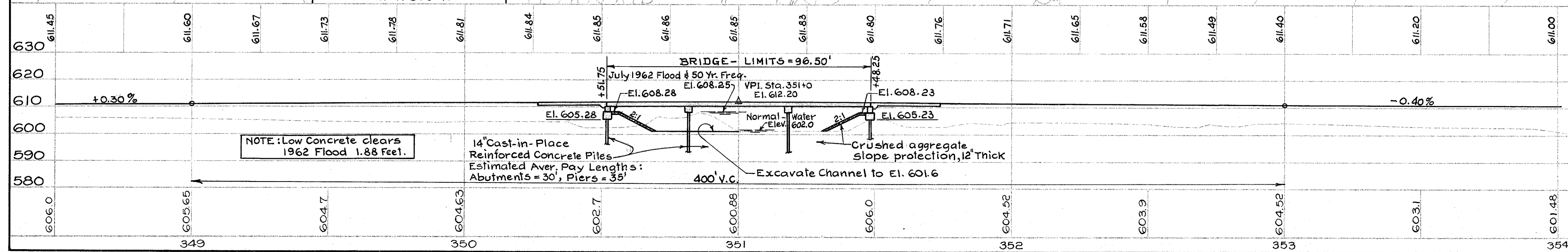
LOCATION : 1.2 Mi. Upstream
 TYPE : Steel Truss with Concrete Abuts.
 SPAN : 46'-6" f/f of Abutments.
 WIDTH : 24'-0" f/f of Guard rails.
 SKEW : 20° L.F.
 CONDITION : New.
 WATERWAY AREA : 285' [Normal, to low Steel].
 DRAINAGE AREA : 5.94 Sq. Mi.

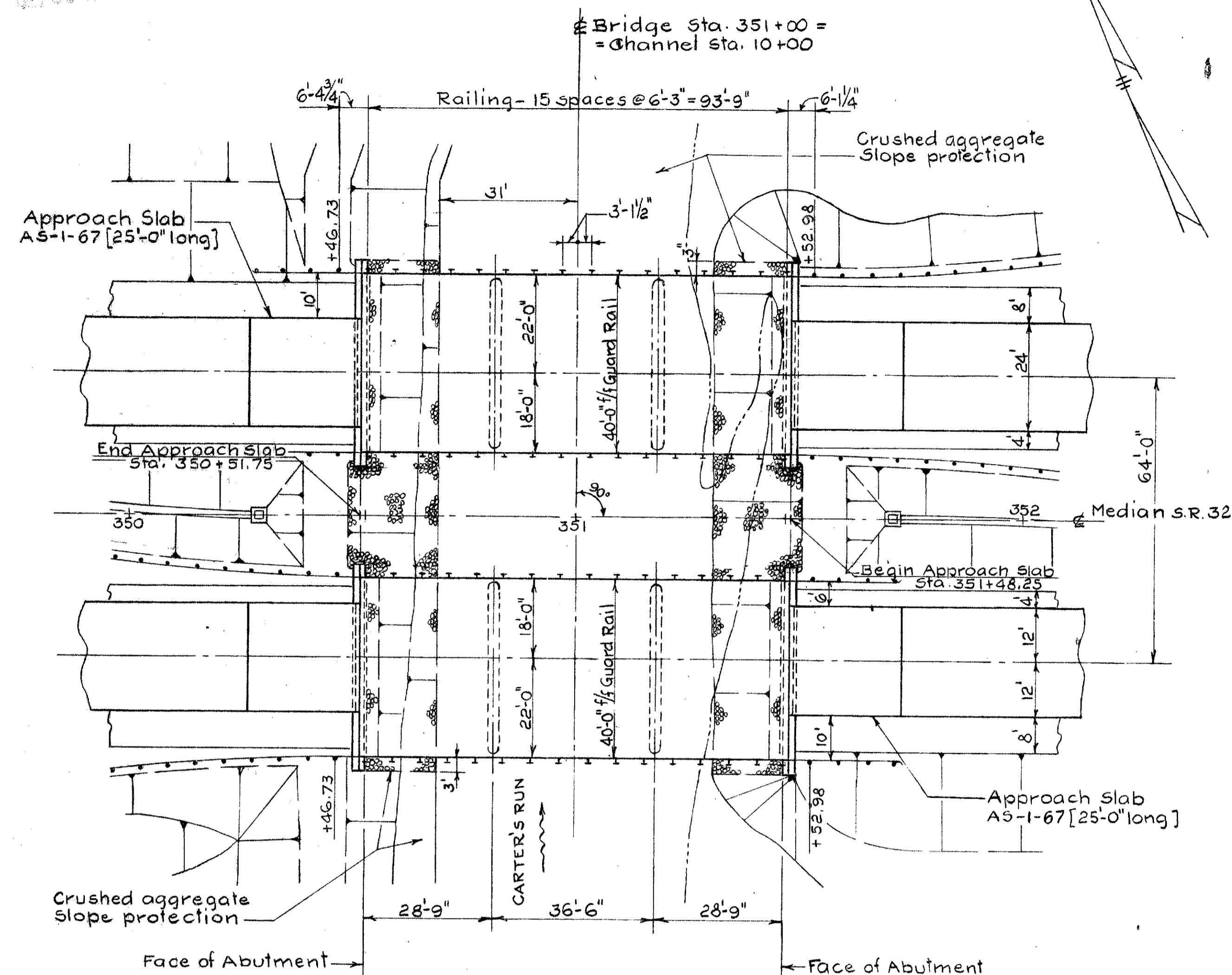
1990 DESIGN TRAFFIC
 P & A - 7,090
 B & C - 700

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 249 S. PAINT ST. CHILlicothe, OHIO

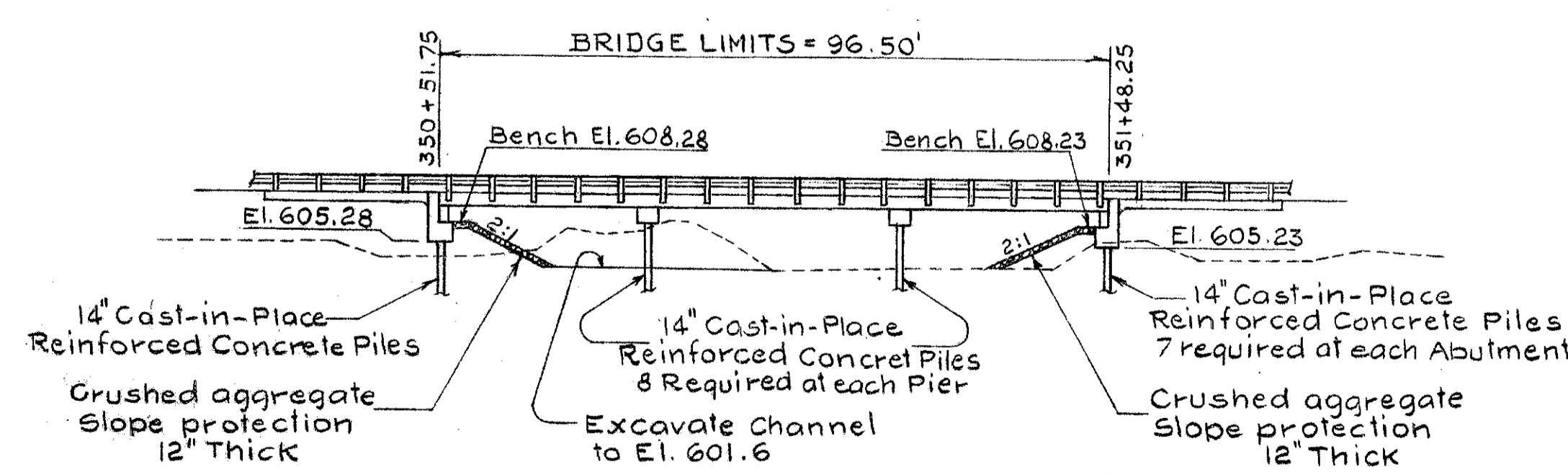
SITE PLAN
 BRIDGE No. PIK-32-0669 R & L
 S.R.-32 OVER CARTER'S RUN
 PIKE COUNTY S.R. 32
 STA. 350+51.75 TO STA. 351+48.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.I.C.	W.I.C.	L.F.	F.H.S.	J.M.K.	1/30/70	





GENERAL PLAN



GENERAL ELEVATION

Calculated FHS 8-12-68		Checked SCB 8-22-68		ESTIMATED QUANTITIES [TWO STRUCTURES]					
ITEM	QUANTITY	UNIT	DESCRIPTION	ABUT'S	PIERS	SUPER	GENERAL	AS BUILT	
503	171	Cu.Yds.	Unclassified excavation	171					
505	Lump	Sum	Test pile					Lump	
507	1,960	Lin.Ft.	14" Cast-in-Place reinforced concrete piles	840	1,120				
509	113,190	Lbs.	Reinforcing steel	10,224	8,672	94,294			
511	439	Cu.Yds.	Class "C" concrete, superstructure and pier caps		29	410			
511	93	Cu.Yds.	Class "C" concrete, abutments	93					
517	386.00	Lin.Ft.	Railing [two deep beam rails with steel post and bolts] as per plan			386.00			
518	31	Cu.Yds.	Porous Backfill	31					
601	468	Sq.Yds.	Crushed aggregate slope protection				468		
808	410	Units	Chemical admixtures for concrete, Type A, B or D.			410			

GENERAL NOTES:

REFERENCE shall be made to Standard Drawings P-1-54 revised 11-8-63, A5-1-67 revised 6-12-69 and to Supplemental Specifications 808 dated 1-1-71 and 836 dated 1-1-71.

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway Officials, 1969, including the Ohio "Supplement" to these specifications.

DESIGN DATA:
 Design Loading - HS 20-44
 Concrete Class "C" - unit stress 1200 p.s.i. for superstructure
 unit stress 1333 p.s.i. for substructure
 Structural Steel - ASTM A36 - unit stress 20,000 p.s.i.
 Reinforcing Steel - ASTM A615, A616 or A617 -
 unit stress 20,000 p.s.i.

PROCEDURE: The embankment shall be constructed to the level of the subgrade for a minimum distance of 200 feet back of the abutments. Excavation shall then be made for the abutments and for the benches.

ABUTMENT EXCAVATION QUANTITY, in addition to 503.11, includes the removal of embankment above the bench.

PILES shall be driven to a minimum bearing capacity of 29 tons per pile for the abutments and 38 tons per pile for the piers.

PIER PILE ENCASEMENT as shown on Std. Dwg. No. P-1-54 may be omitted provided that the tapered portion, if any, of all pier piles does not extend above the stream bed or the proposed surface of the ground. If the tapered portion of any pile extends above these limitations, the encasement will be required for all the pier piles. If the encasement is omitted the pile casings shall have a thickness of metal not less than 0.179", and the painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, the painting shall extend to at least one foot below the proposed surface of the ground.

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 249 S. Paint Street Chillicothe, Ohio

**GENERAL PLAN AND ELEVATION
 ESTIMATED QUANTITIES & GEN. NOTES**

BRIDGE No. PIK-32-0669 R.#L.
 S.R.-32 OVER CARTER'S RUN.
 PIKE COUNTY S.R.-32
 STA. 350+51.75 TO STA. 351+48.25

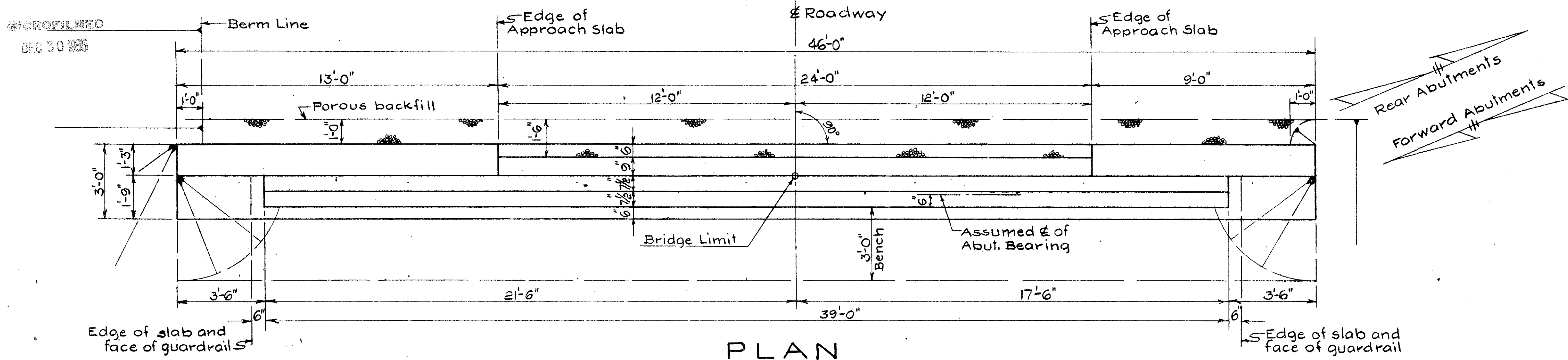
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W.I.C.	F.H.S. L.P.	L.P.	FHS	MU	1/30/70	

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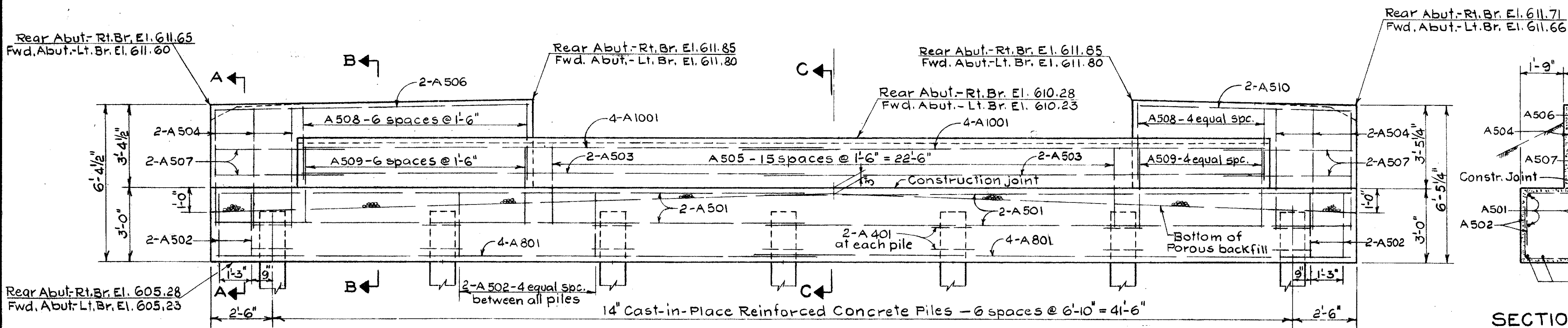
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

373
432

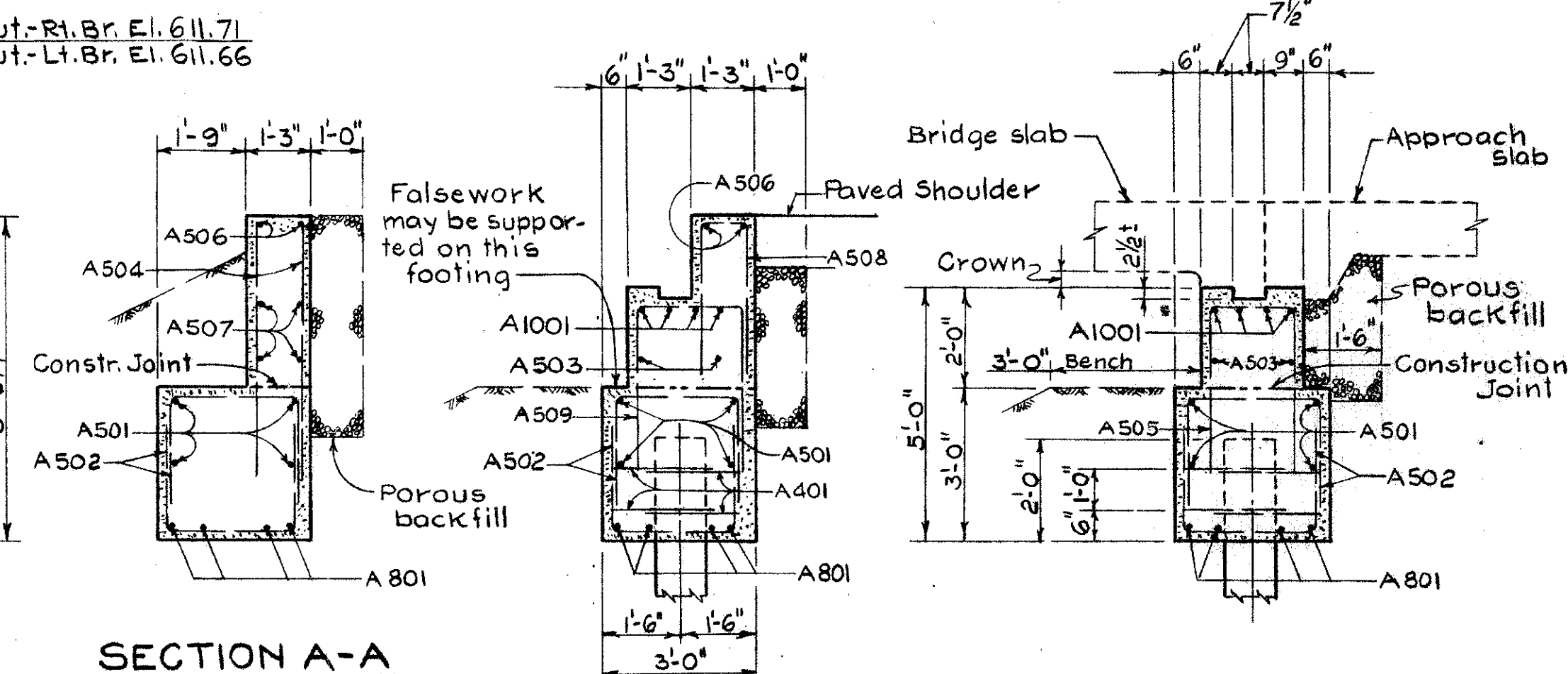
PIK-32-3.21



PLAN
REAR ABUTMENT - RIGHT BRIDGE
FORWARD ABUTMENT - LEFT BRIDGE



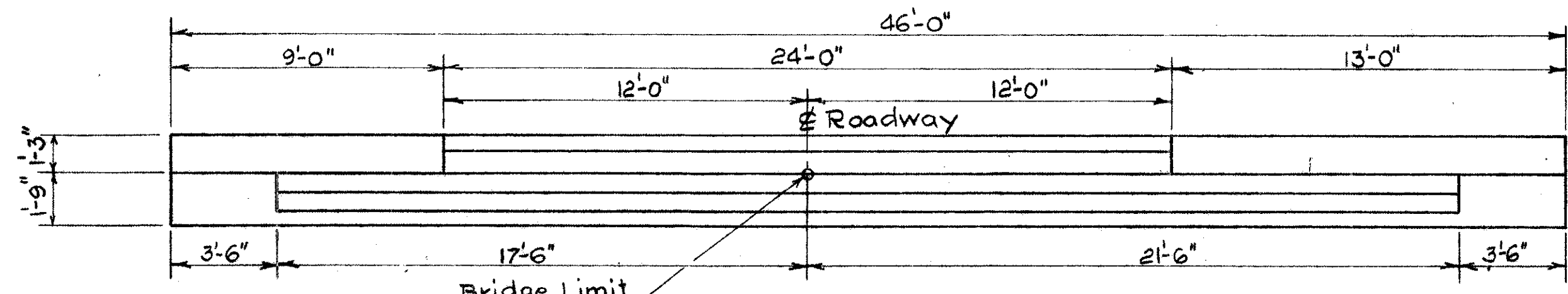
ELEVATION
REAR ABUTMENT - RIGHT BRIDGE
FORWARD ABUTMENT - LEFT BRIDGE



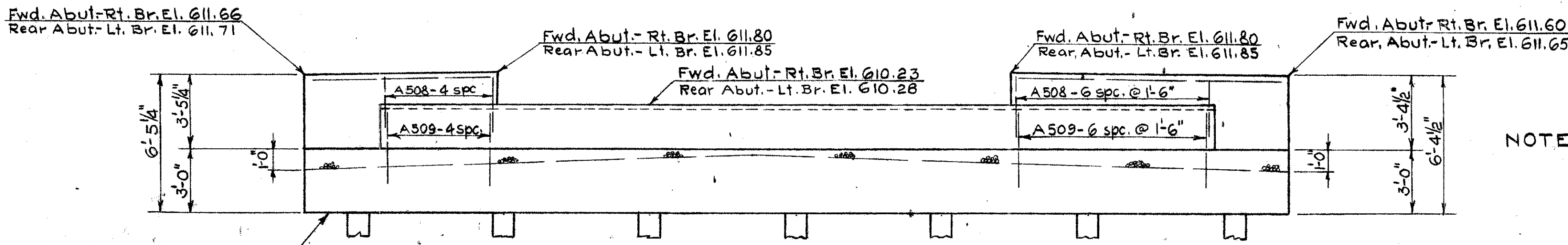
SECTION A-A

SECTION B-B

SECTION C-C



PLAN



ELEVATION
FORWARD ABUTMENT - RIGHT BRIDGE
REAR ABUTMENT - LEFT BRIDGE

NOTE:
POROUS BACKFILL shall extend upward to the approach slab, paved shoulders and to the surface of the the earth shoulders, and outward to the surface of the embankment slopes.

NOTE: All dimensions, details and reinforcing steel not shown are similar to Rear Abutment Right Bridge or Forward Abutment Left Bridge.

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249 S. Paint Street Chillicothe, Ohio

ABUTMENT DETAILS
BRIDGE No. PIK-32-0669 R.&L.
SR-32 OVER CARTERS RUN
PIKE COUNTY S.R. 32
STA. 350+51.75 TO STA. 351+48.25

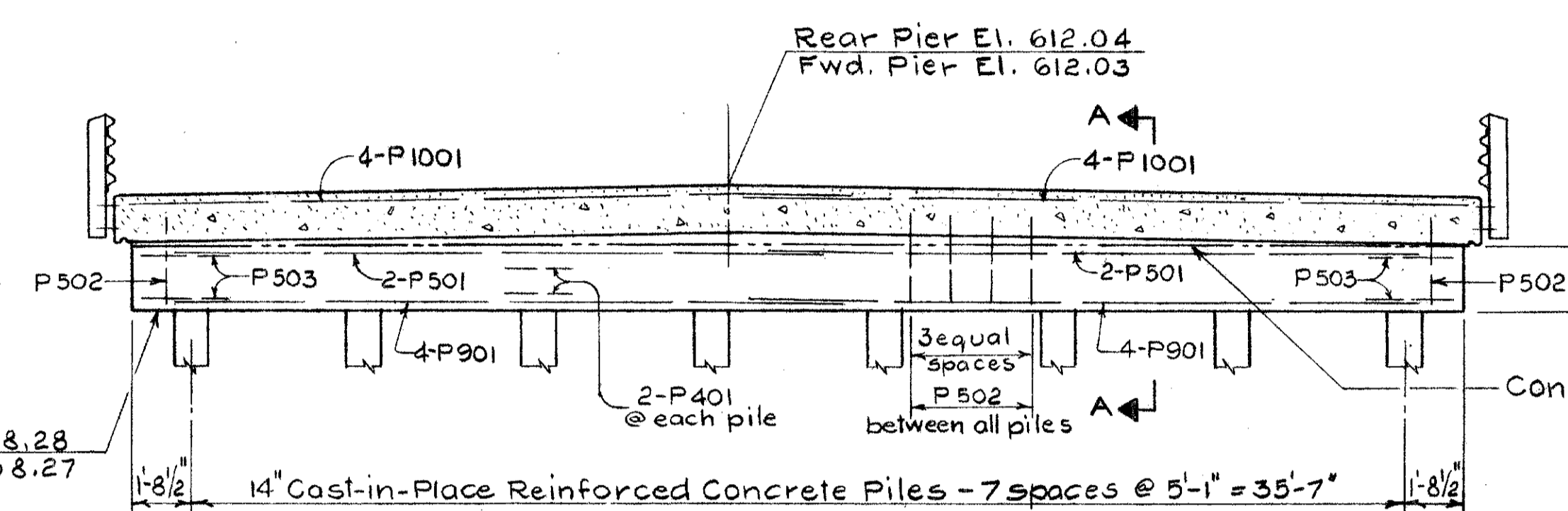
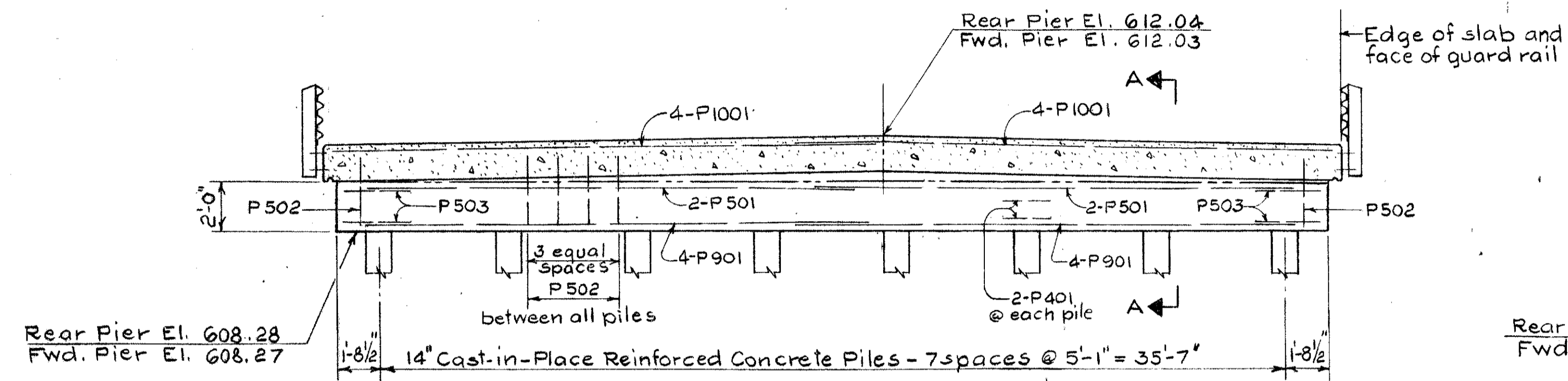
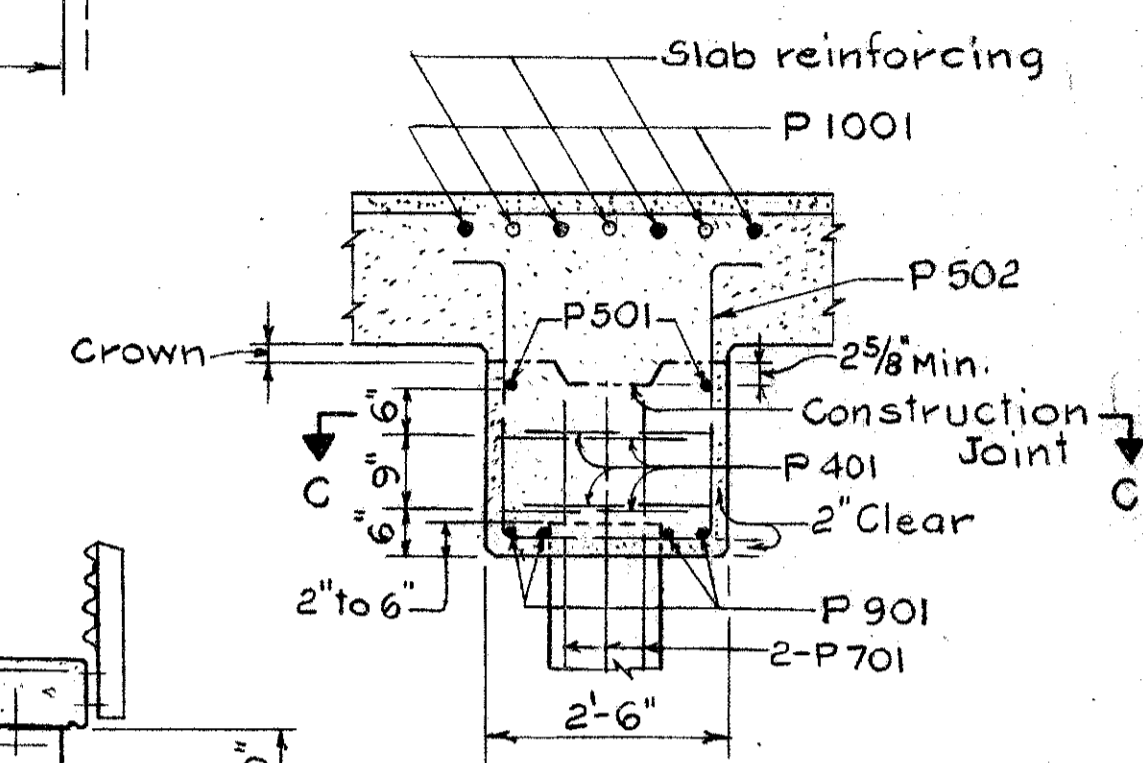
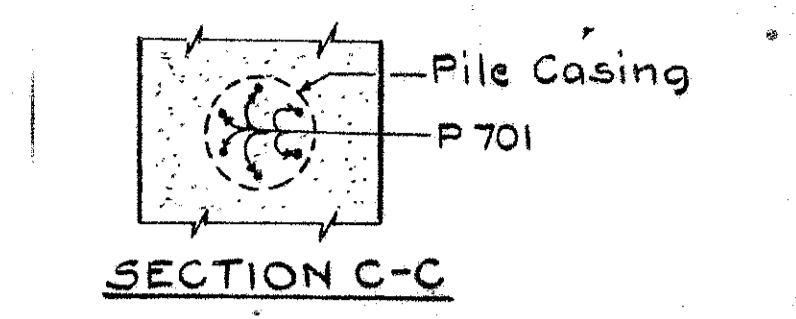
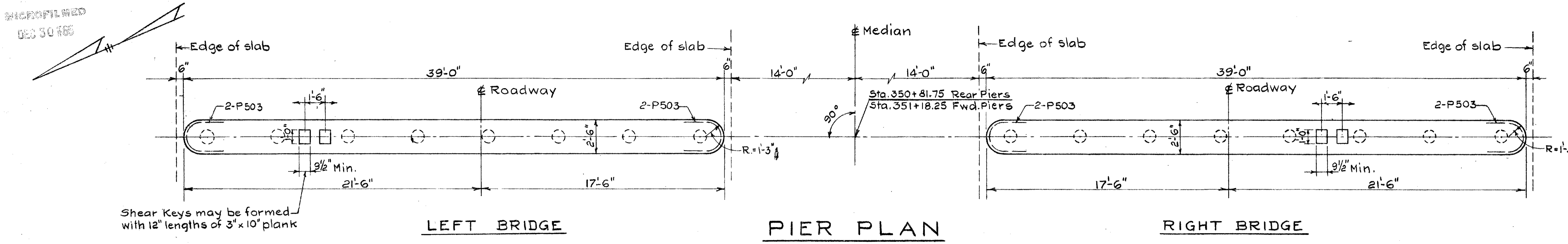
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.T.C.	L.P.	L.P.	F.H.B.	M.K.	1/30/70	

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DES 30185

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

374
432

PIK-32-3.21



See Standard Drawing P-1-54 for details of Pier-Pile Encasement.

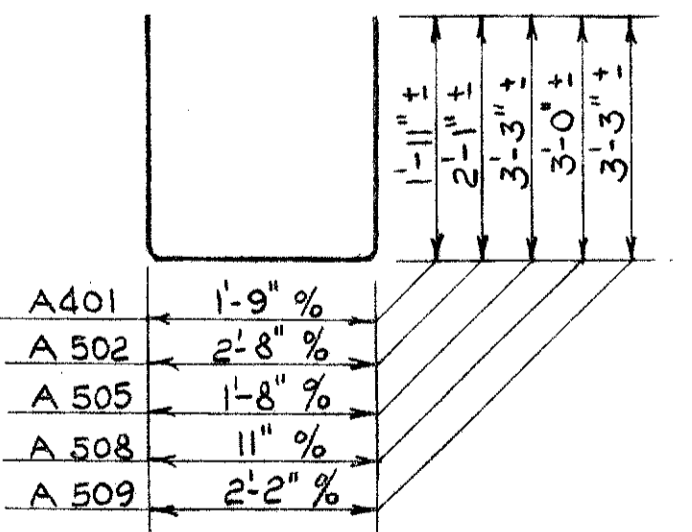
LEFT BRIDGE

ELEVATION

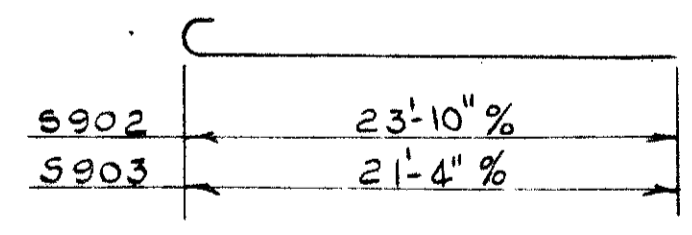
RIGHT BRIDGE

REINFORCING STEEL LIST

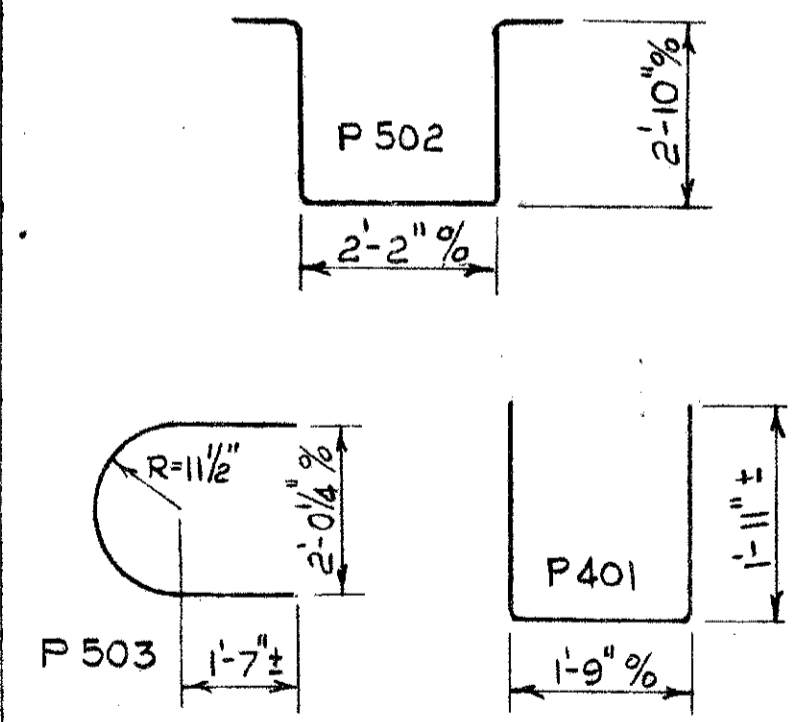
Bar Number	Number required	Length	Shape	Weight	Bending Diagram
ONE ABUTMENT					
A 1001	8	20'-11"	—	720	
A 801	8	24'-1"	—	514	
A 501	8	23'-7"	—	197	
A 502	68	6'-7"	□	467	
A 503	4	20'-1"	—	84	
A 504	12	5'-4"	—	67	
A 505	16	7'-11"	□	132	
A 506	2	12'-8"	—	26	
A 507	8	5'-1"	—	42	
A 508	12	6'-8"	—	83	
A 509	12	8'-5"	□	105	
A 510	2	8'-8"	—	18	
A 401	28	5'-5"	□	101	
TOTAL ONE ABUTMENT				2,556	
TOTAL FOUR ABUTMENTS				10,224	



Bar Number	Number required	Length	Shape	Weight	Bending Diagram
ONE SUPERSTRUCTURE					
S 1001	72	21'-8"	—	6713	
S 1002	36	12'-7"	—	1949	
S 1003	34	8'-1"	—	1183	
S 901	164	26'-2"	—	14,591	
S 902	40	25'-1"	C	3411	
S 903	40	22'-7"	C	3071	
S 904	20	23'-4"	—	1587	
S 905	20	18'-2"	—	1235	
S 701	178	20'-11"	—	7610	
S 601	126	20'-9"	—	3927	
S 602	38	21'-8"	—	1237	
S 603	19	22'-2"	—	635	
TOTAL ONE SUPERSTRUCTURE				47,147	
TOTAL TWO SUPERSTRUCTURES				94,294	



Bar Number	Number required	Length	Shape	Weight	Bending Diagram
ONE PIER					
P 1001	8	21'-5"	—	737	
P 901	8	19'-8"	—	535	
P 701	48	4'-0"	—	392	
P 501	4	19'-1"	—	80	
P 502	30	9'-0"	□	282	
P 503	4	6'-4"	C	26	
P 401	32	5'-5"	□	116	
TOTAL ONE PIER				2,168	
TOTAL FOUR PIERS				8,672	
REPLACEMENT STEEL					
RE 1001	2	8'-2"	—		
RE 901	3	7'-10"	—		
RE 801	1	7'-6"	—		
RE 701	1	7'-2"	—		
RE 601	1	6'-11"	—		
RE 501	1	6'-7"	—		
RE 401	1	5'-5"	□		



BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A 501 is a No. 5 size bar and P 1001 is a No. 10 size bar.

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249 S. Paint Street Chillicothe, Ohio

PIER DETAILS AND REINFORCING STEEL LIST
BRIDGE No. PIK-32-0669 L&R.
S.R. 32 OVER CARTER'S RUN
PIKE COUNTY S.R. 32
SCALE: STA. 350+51.75 TO STA. 351+48.25

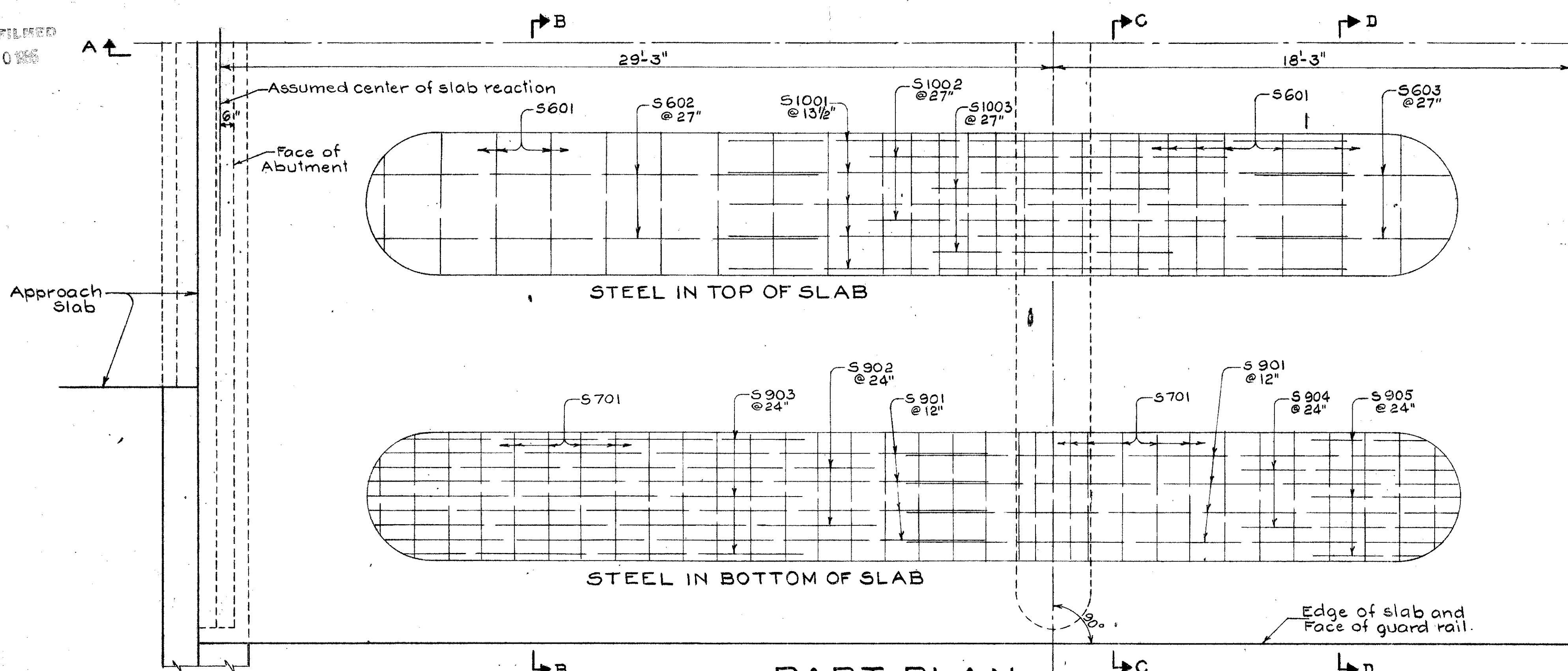
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.I.C.	L.P.	L.P.	FHS	JK	1/30/70	

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DEC 30 1956

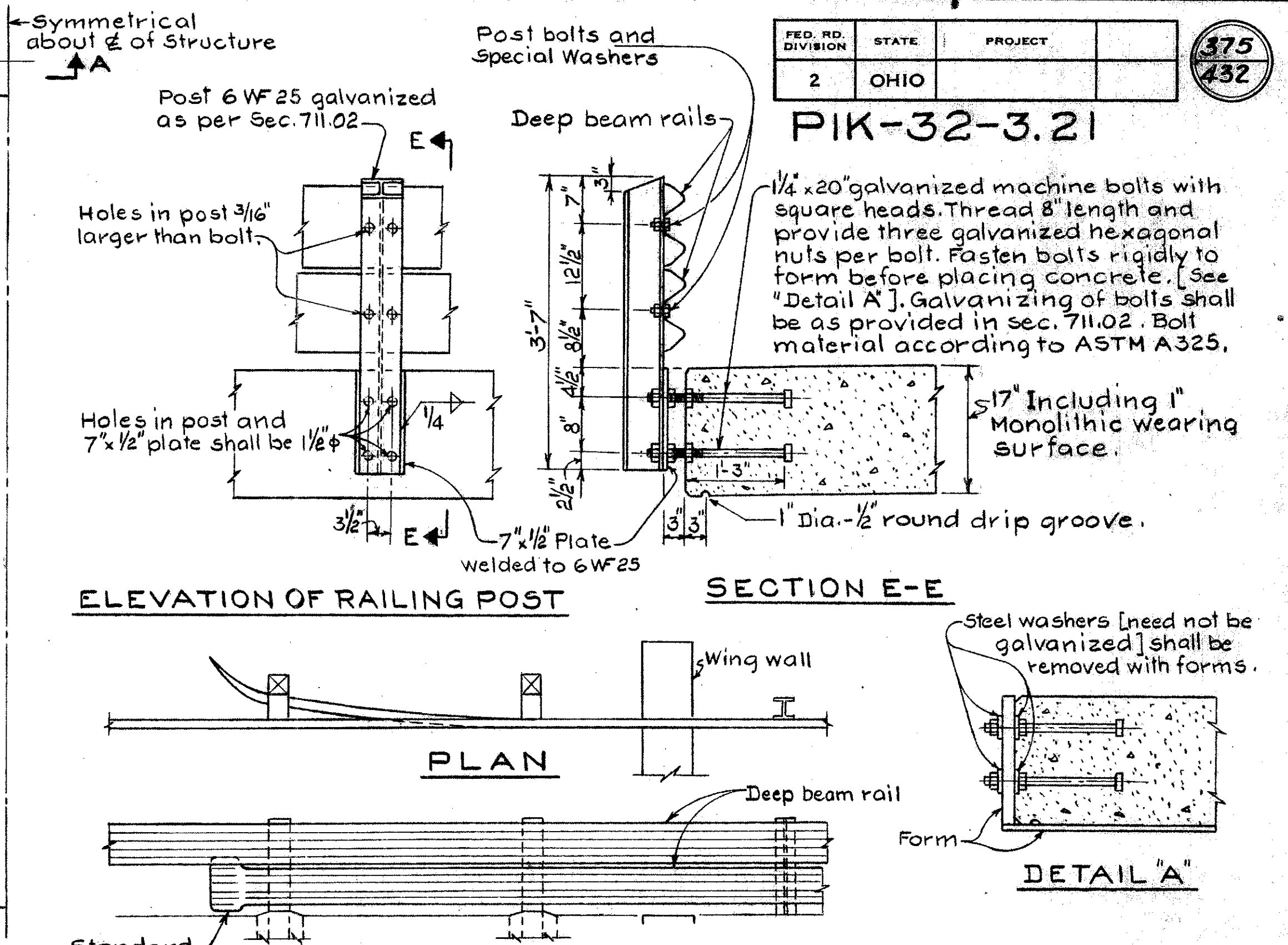
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

375
432

PIK-32-3.21

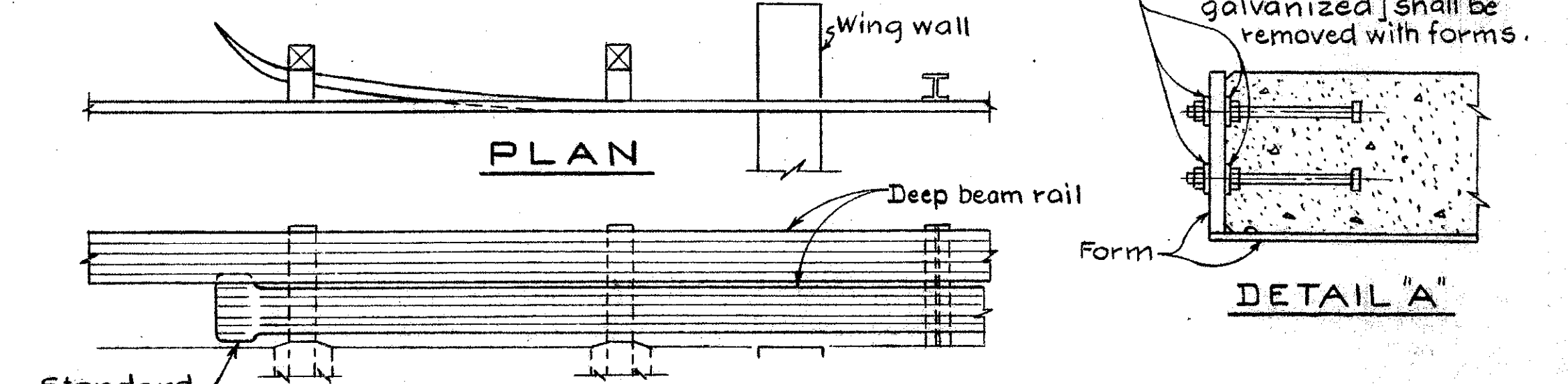


PART PLAN



ELEVATION OF RAILING POST

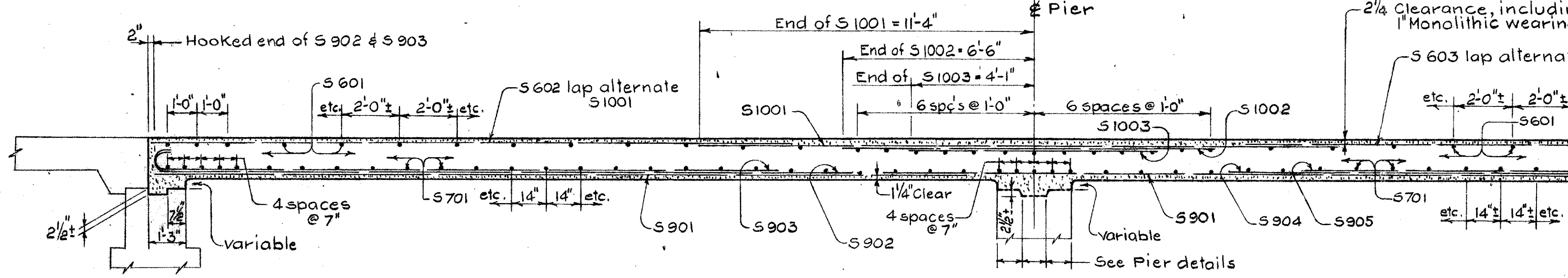
SECTION E-E



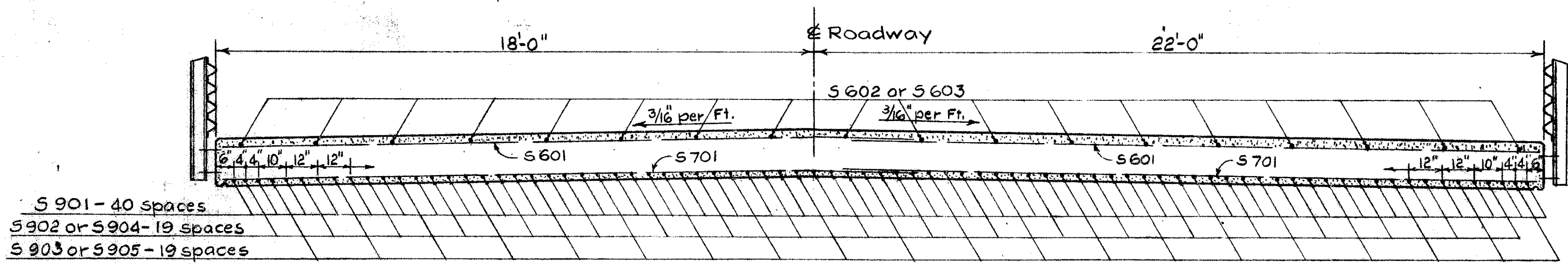
TERMINATION OF LOWER RAIL

See Std. Dwg. GR-3
1 1/8" x 1 5/8" oval hole, same shape as post bolt shoulder
8 ga.
3"

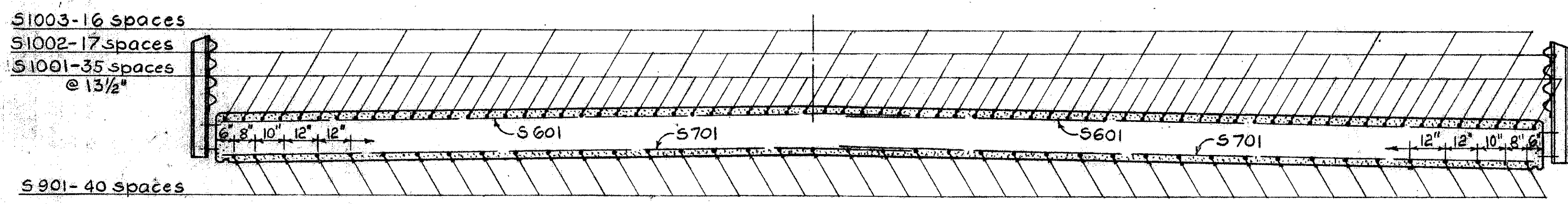
CONSTRUCTION JOINT



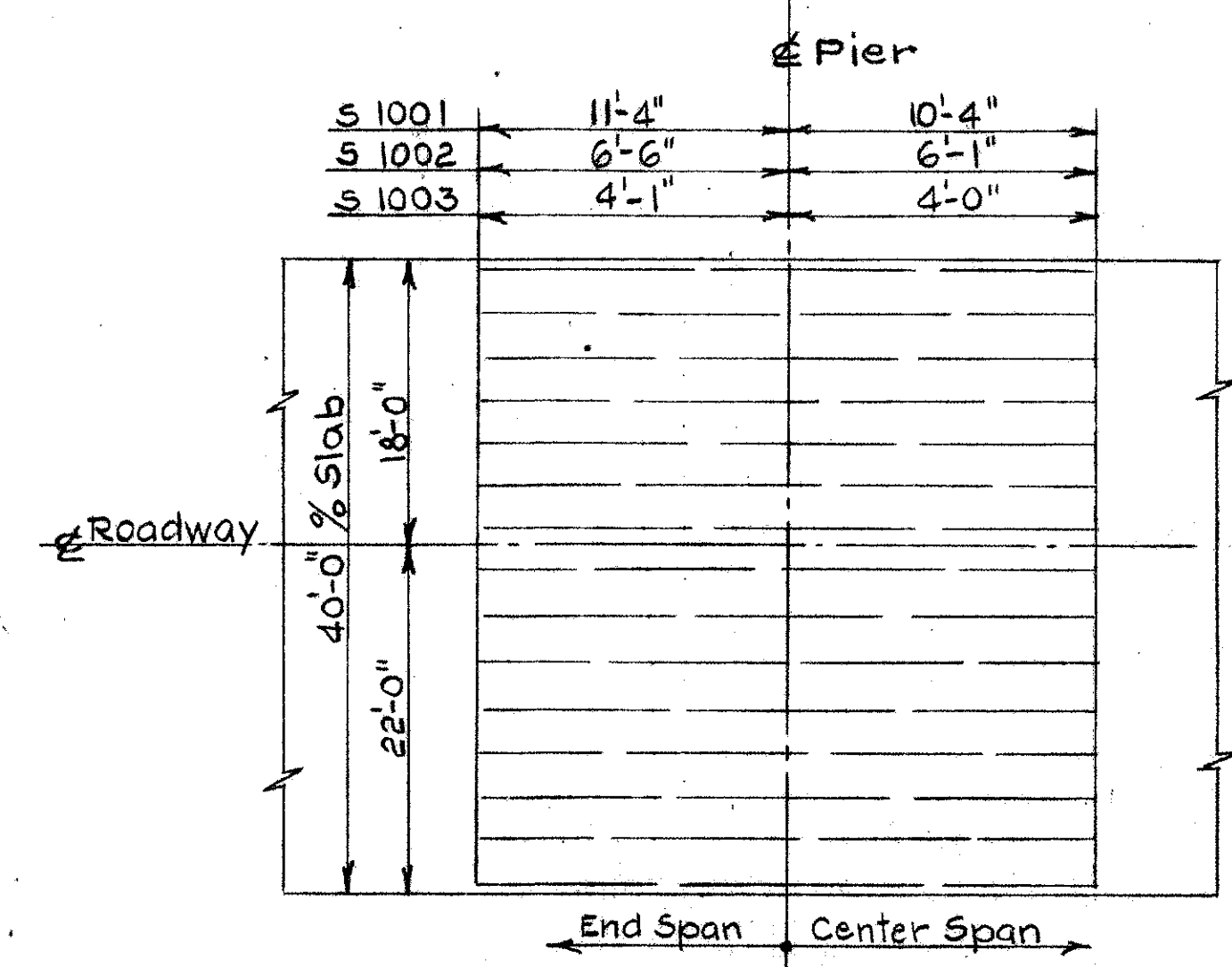
SECTION A-A



SECTION B-B AND D-D



SECTION C-C



PLACEMENT DIAGRAM FOR S1001, S1002 AND S1003 BARS [OVER PIERS]

NOTES
CONSTRUCTION JOINT: One construction joint in bridge slab shall be placed on transverse centerline of middle span or 1'-0" ± off transverse centerline if necessary to miss railing posts and transverse reinforcing bars. One longitudinal joint will be permitted on centerline of roadway.
CAMBER of 1/800 of the span shall be provided in each span [in addition to that required for conformance with the profile of the highway] to allow for dead load deflection. This is the amount of camber required before falsework is released. To obtain this, proper allowance shall be made for the deflection of falsework members.

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SUPERSTRUCTURE DETAILS BRIDGE No. PIK-32-0669 R.&L. S.R.-32 OVER CARTER'S RUN PIKE COUNTY STA. 350+51.75 TO STA. 351+48.25					
SCALE	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED
	W.I.C.	L.P.	L.P.	F.H.S.	J.H.
DATE					
					1/30/70