

PIKE & ROSS COUNTIES

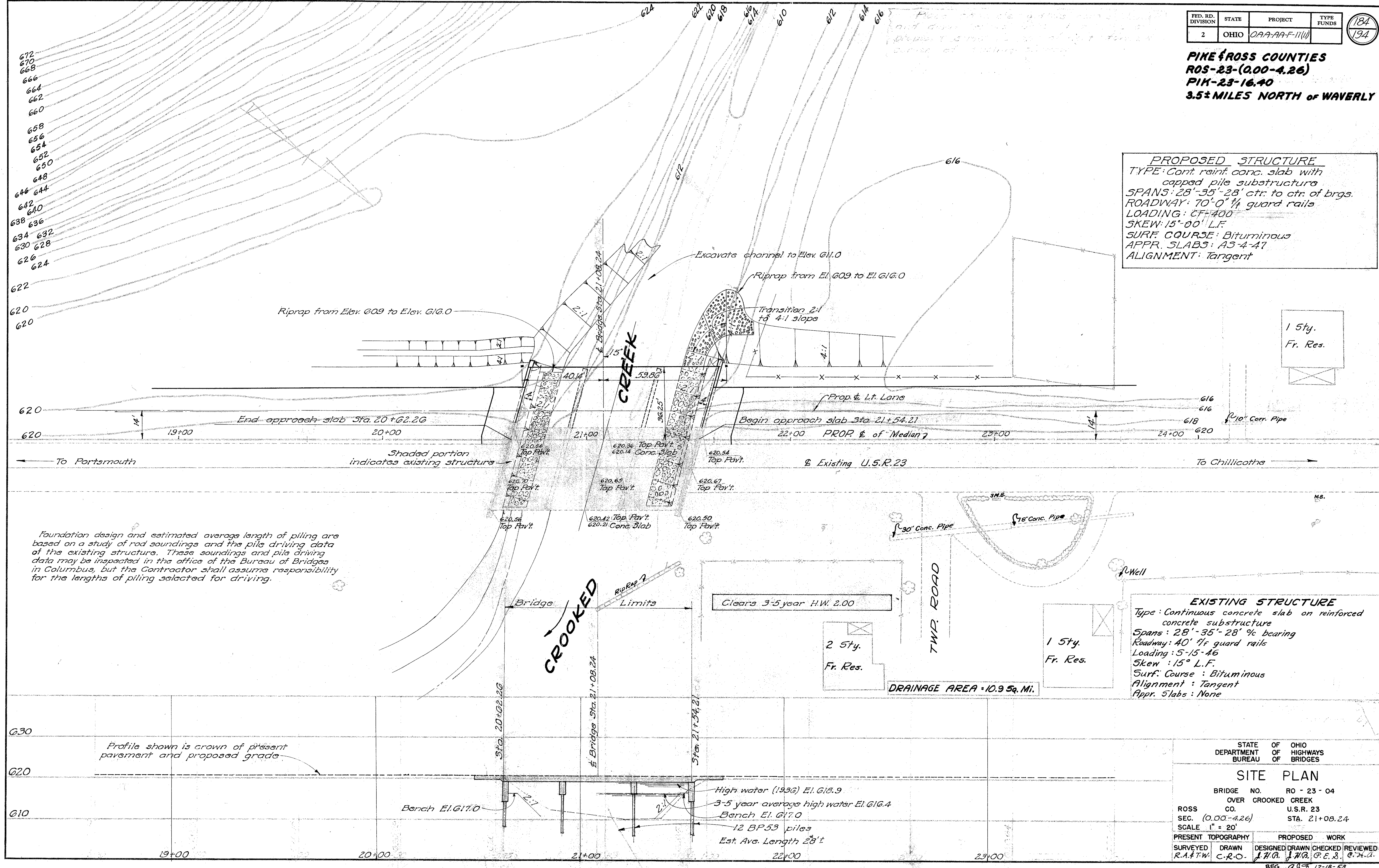
ROS-23-(0.00-4.26)

PIK-23-16.40

3.5± MILES NORTH of WAVERLY

PROPOSED STRUCTURE

TYPE: Cont. reinf. conc. slab with capped pile substructure
SPANS: 28'-35'-28' ctr. to ctr. of brgs.
ROADWAY: 70'-0" 1/4 guard rails
LOADING: CF-400
SKEW: 15°-00' L.F.
SURF. COURSE: Bituminous
APPR. SLABS: A3-4-47
ALIGNMENT: Tangent



1 Sty.

Fr. Res.

2 Sty.

Fr. Res.

1 Sty.

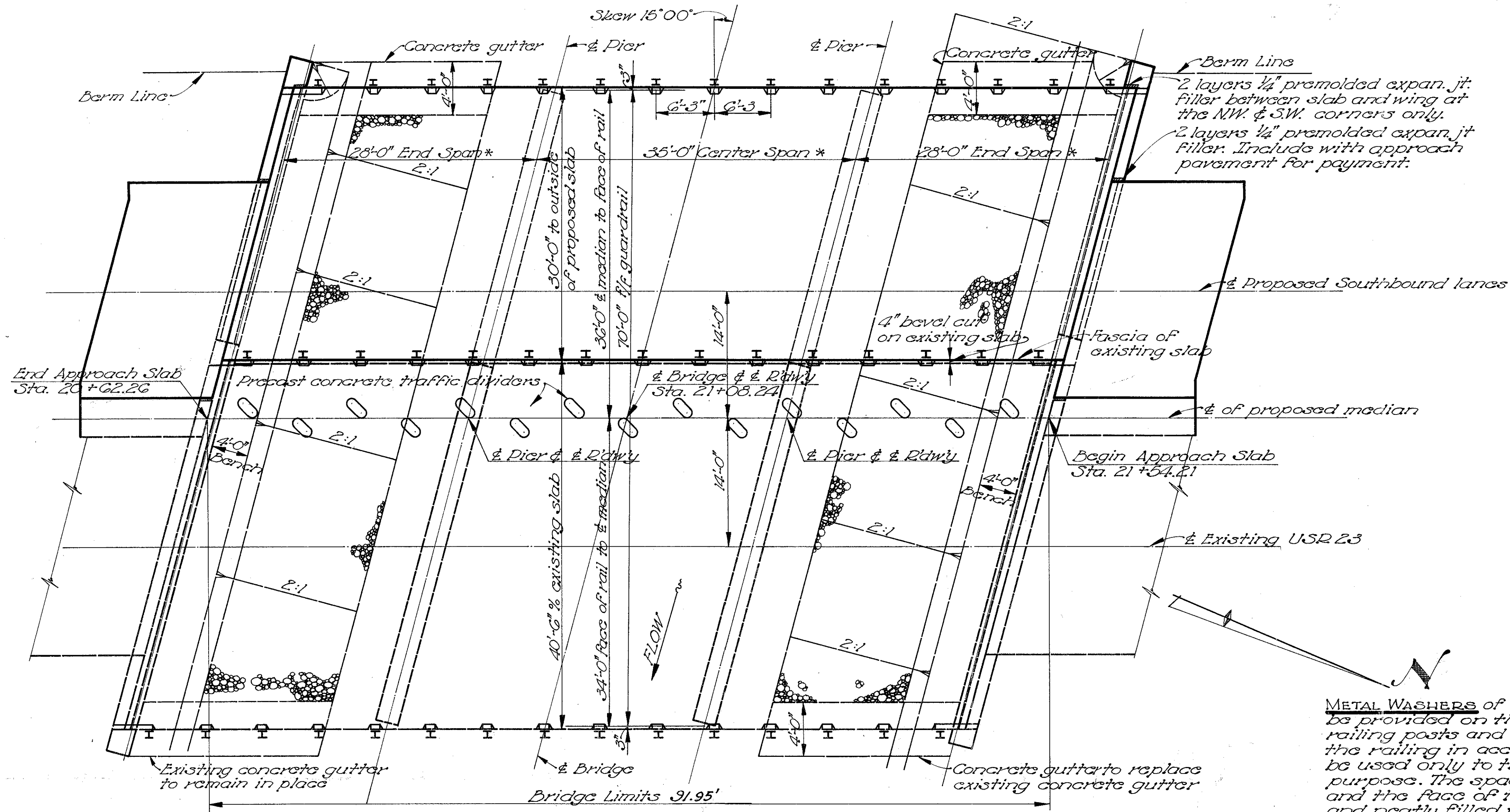
Fr. Res.

DRAINAGE AREA - 10.9 Sq. Mi.

PIKE & ROSS COUNTIES
PIK-23-16.40
ROS-23-(0.00-4.26)

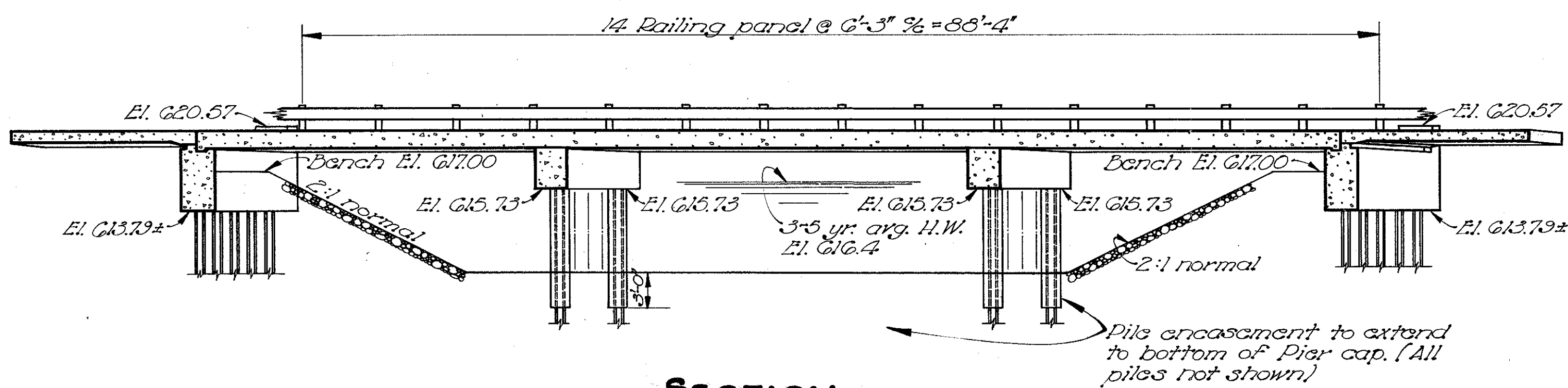
PAINTING: Existing guard rails and posts shall be spot-painted with one prime coat where the paint has been damaged due to construction or weathering. Two field coats of paint shall then be applied. Painting shall be according to Item 5-8 except that the paint shall be applied by brushing. Spray application will not be permitted.

ESTIMATED QUANTITIES									
Item	Total	Unit	Description	Super	Abutts	Piers	Gen'l		
E-2	43	Cu.yd.	Unclassified excavation		43				
E-3	171	Cu.yd.	Channel excavation				171		
S-1	160	Cu.yd.	Glass "C" concrete, superstructure and pier caps.	141		19			
S-1	32	Cu.yd.	Glass "C" concrete, abutments		32				
S-3	303	Sq.yd.	Type "C" waterproofing	303					
S-4	4043	Lbs	Reinforcing steel	34667	3284	2472	130		
S-9	12	Sq.Ft.	1/4" premolded expansion joint Filler	12					
S-14	92.66	Lin.Ft.	Railing (Type I-15.13 with steel posts) re-created (except painting)	92.66					
S-16	Lump	Sum	First test pile				Lump		
S-18	660	Lin.Ft.	Steel piling, 12 BP 53	280	400				
S-22	Lump	Sum	Removal of portions of existing structure				Lump		
S-23	91	each	Dowel holes	91					
S-8	185.12	Lin.Ft.	Painting I-15.13 guard rail and posts	185.12					
I-10	355	Sq.yd.	Type "A" riprap				355		
I-14	40	Lin.Ft.	Concrete gutter				40		
T-36	25	Cu.yd.	Asphaltic concrete surface course Type "A" or "C" (70-80)	25					
Special	15	Each	Pre-cast concrete traffic dividers	15					



GENERAL PLAN

* Dimensions shall be adjusted in the field so that new extensions of abutments and piers shall line up with the existing abutments and piers.



SECTION

On & between proposed Southbound lanes

GENERAL NOTES

REFERENCE shall be made to Std. Dwg. I-21, revised 1-2-61.

PROPOSED WORK:

- Remove railing and railing posts from west side of existing structure and store for erection on new structure.
- Bevel west edge of existing slab and remove a portion of the existing wearing surface along the west edge of the deck, as per plan.
- Remove existing abutments to limits shown on plan.
- Provide abutment and pier extensions.
- Provide new reinforced concrete deck extension.

- Provide waterproofing and asphaltic concrete surface course over the new deck and a portion of the existing deck.
- Provide traffic dividers.
- Paint re-erected railing and railing posts.

MAINTENANCE OF TRAFFIC: Two-way traffic shall be maintained over the existing bridge at all times, but it shall be so diverted by barricades or other means as to come no closer than 10 ft. to the edge of slab of proposed extension. Temporary guardrail shall be erected 10 ft. from edge of slab.

METAL WASHERS of approximately 3" diameter shall be provided on the anchor bolts, between the railing posts and the fascia of the deck to hold the railing in accurate alignment. Washers shall be used only to the extent necessary for this purpose. The space between each railing post and the face of the concrete shall be thoroughly and neatly filled with "Leadite" or approved equiv-

REMOVAL OF PORTIONS OF EXISTING STRUCTURE: Existing superstructure and substructure to remain in place except where removal is necessary for new construction. Guardrail and posts removed from existing structure shall be re-erected on outer edge of widened structure. (Include for payment with Item S-14, "Railing, re-erected.") Existing riprap at northwest corner of existing structure and concrete gutter on spill-through slope on northeast corner to be removed. (Include for payment with Item S-22, "Removal of portions of existing structure.") All removed materials except as noted above shall become the property of the contractor.

EXCAVATION QUANTITY for North Abutment includes the removal of fill material between top of earth bench and bottom of abutment crossbeam.

PILING shall be driven with a hammer of not less than 7000* energy per blow, to firm contact with rock which shall be considered as attained when the capacity according to the formula in Sec. 3-18.05 is at least 50 tons per pile for the pier piles and 40 tons for the abutment piles if a 7000* hammer is used, or 40 tons for the pier piles and 30 tons for the abutment piles if a 15000* hammer is used and if the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report. If the energy rating of the hammer is between these values, the required formula capacity shall be determined by interpolation. (The design load is 35 tons per pile for the pier piles and 25 tons for the abutment piles.)

CHANNEL EXCAVATION shall include removal of drift under existing bridge. Existing spill-through slopes, where washed out, shall be replaced with compacted embankment to bottom of riprap.

alent, to exclude moisture. Payment for washers and filling shall be considered as included in the contract price per linear foot of railing re-erected.

PRECAST CONCRETE TRAFFIC DIVIDERS shall be manufactured and installed as described on Std. Dwg. I-21 and in Proposal Note # 40

GENERAL NOTES (CONTINUED)

JACKING UNDER EXISTING SLAB: An upward force shall be applied to the mid spans of existing slab, at a distance of 2 ft. from the 4 in. bevel, by means of a hydraulic jack. This force shall not exceed 12 tons or be less than 10 tons from the time that the concrete for the extension is placed until the shoring for the extension is removed. The payment for jacking is included in Item S-1, "Glass 'C' concrete, superstructure and pier caps."

FALSE-WORK SUPPORT: Pier cap shall not be used to support falsework for slab.

GRAVEL, if used as the coarse aggregate, shall be according to Sec. M-3.93 instead of M-3.91 for "Glass 'C' concrete, superstructure and pier caps."

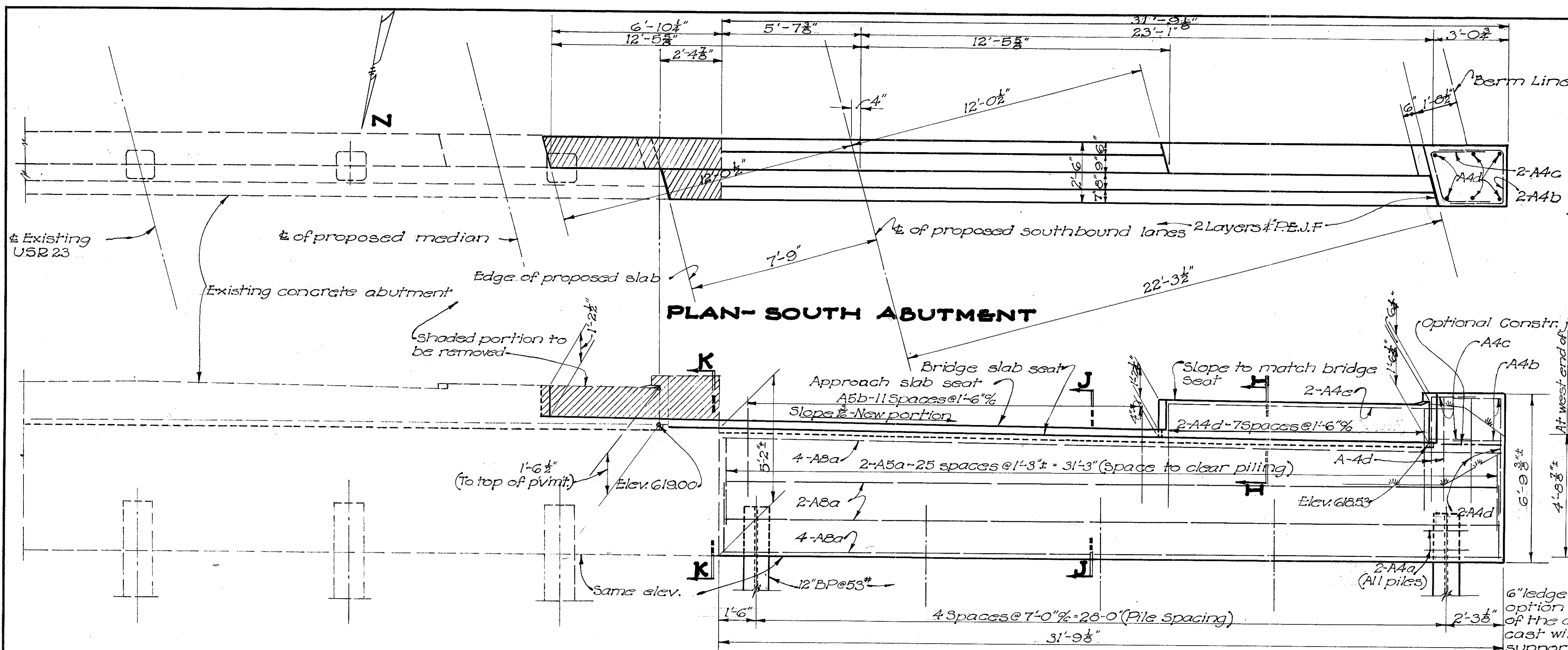
SURFACE FINISH OF CONCRETE: Fascia of new deck slab shall receive a rubbed surface finish. All other exposed surfaces of new concrete shall be governed by the provisions of Item S-1.

CONCRETE GUTTERS shall be 4 ft wide and 6 in. thick, and shall be depressed 9 in. at the center. They shall be placed at the southeast, northeast and northwest corner of the bridge. They shall extend from face of abutment down to Elev. 603 and shall be centered under edge of deck. Reinforcing bars No. 4 at 1'-6" centers in both directions, are included in price per linear foot.

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES AND RAILROAD CROSSINGS					
GENERAL PLAN, ELEVATION NOTES & ESTIMATED QUANTITIES					
BRIDGE No. RO-23-04 OVER CROOKED CREEK					
ROSS COUNTY Sec. 205-23(0.00-4.26) STA. 21+06.24					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
L.K.J.	L.K.J.	J.G.V.	680	9.9.7	12-18-53

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	186 194
2	OHIO	0AA-AA-F-11(11)		

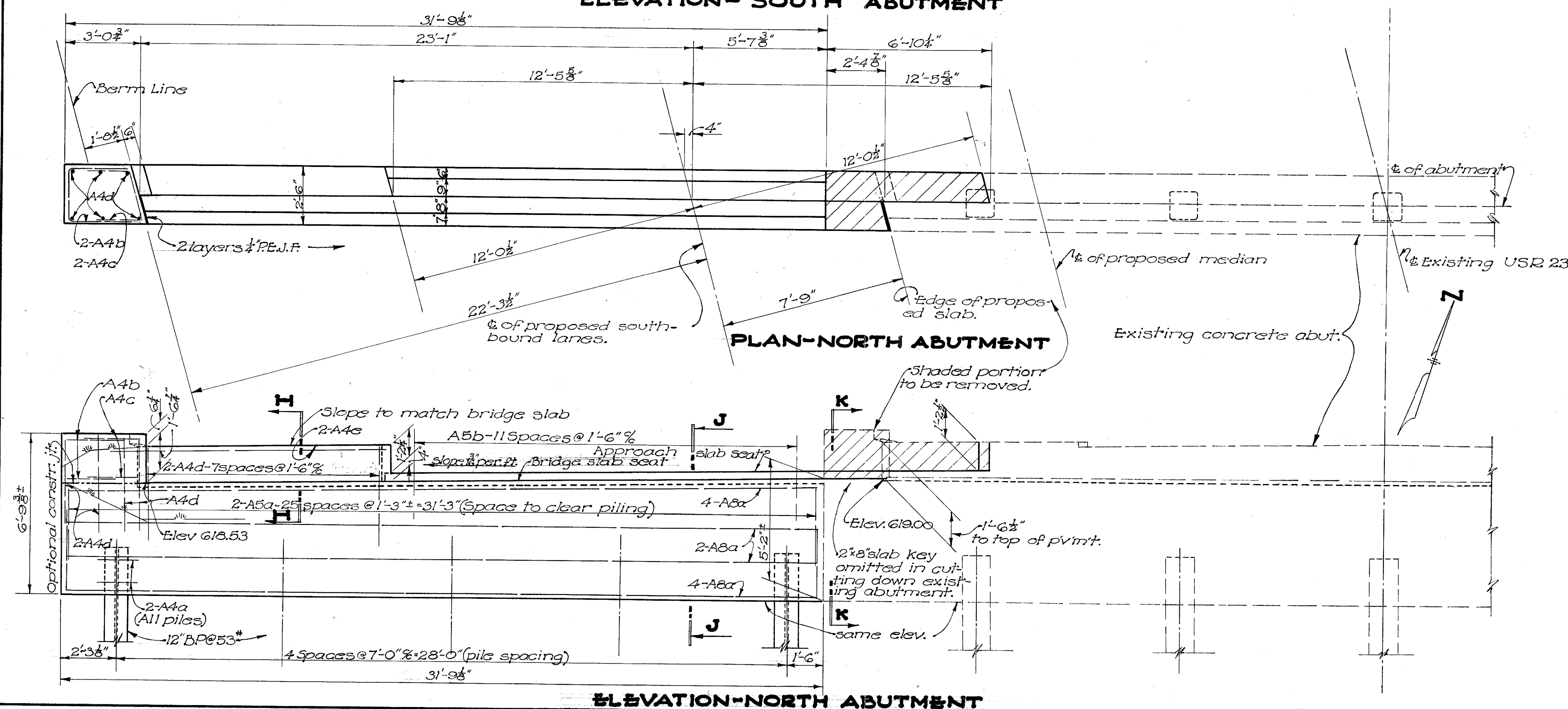
PIKE & ROSS COUNTIES
PIK-23-16.40
ROS-23-(0.00-4.26)



SECTION H-H

SECTION J-J

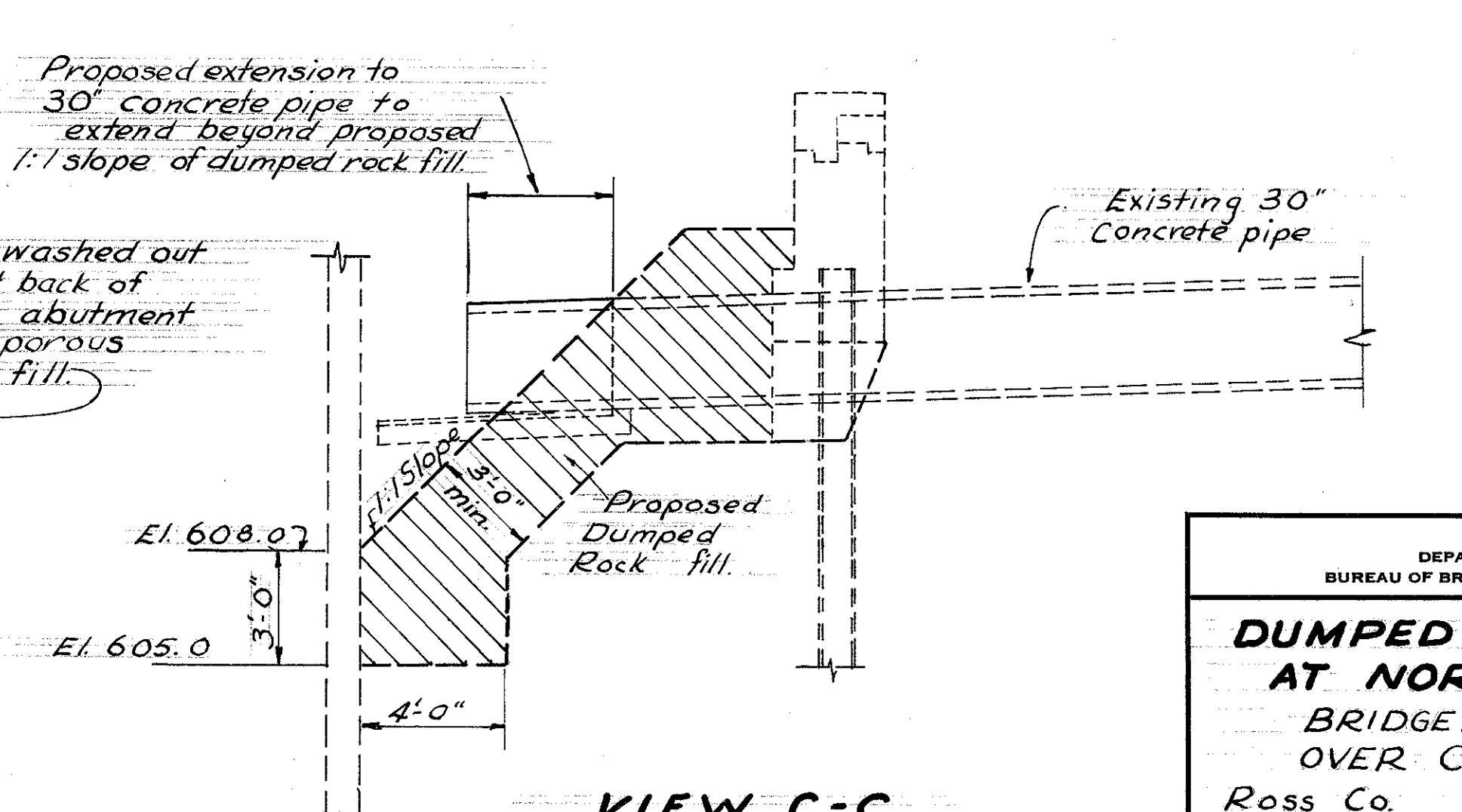
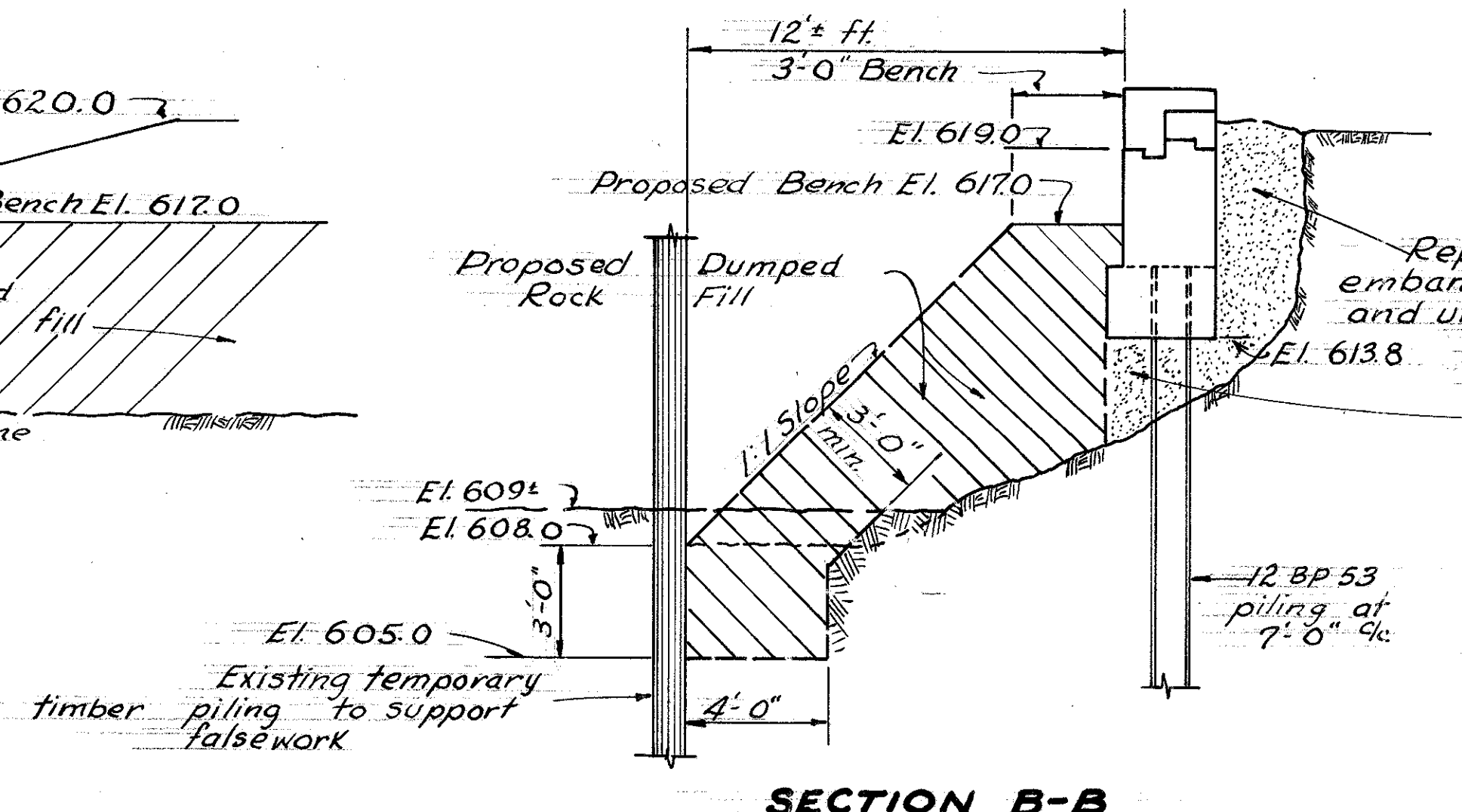
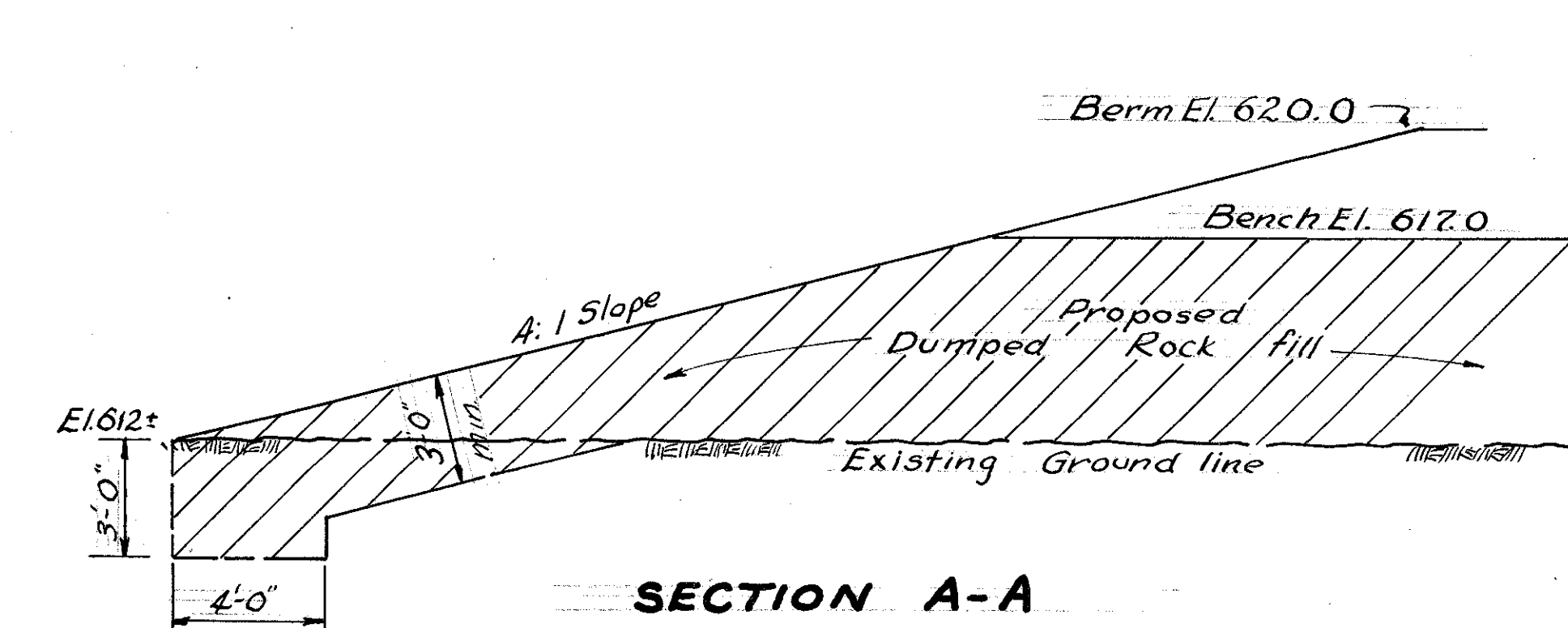
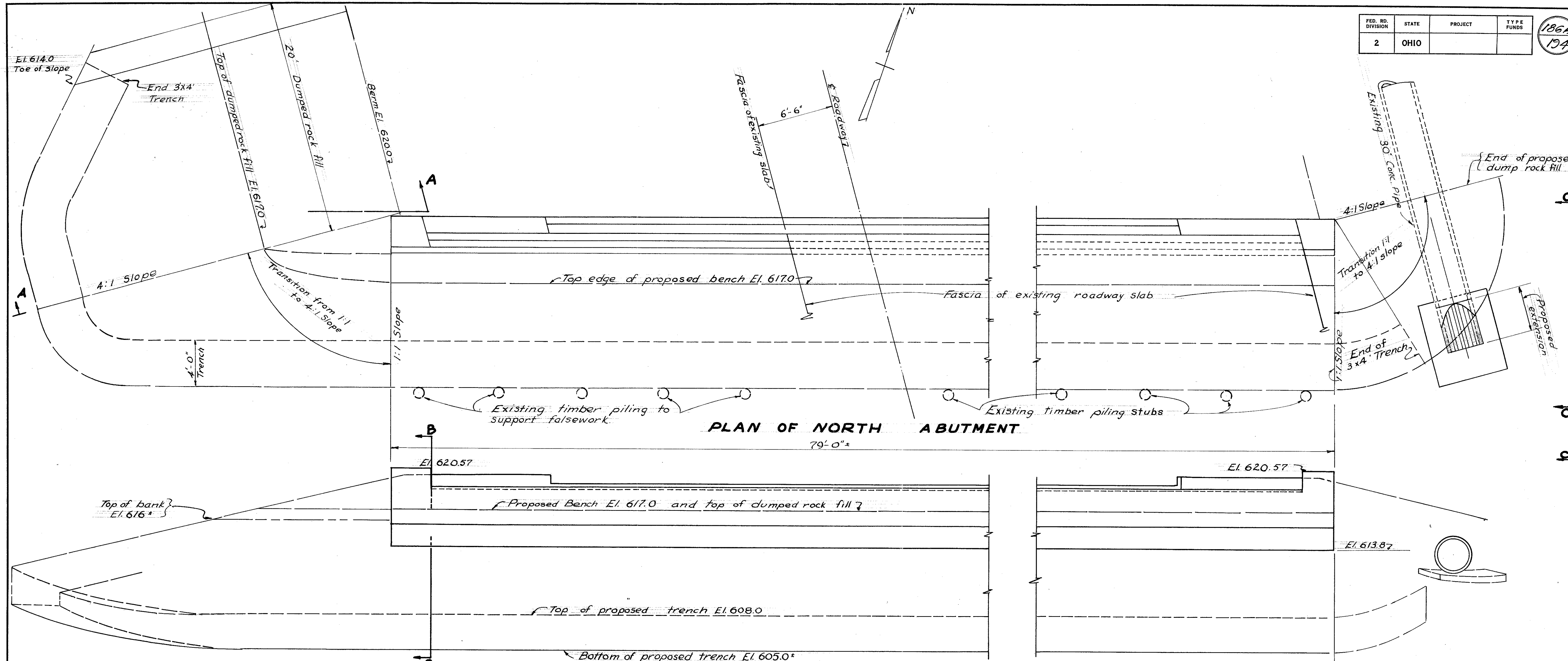
SECTION K-K
SECTION K'-K'
 (opposite hand)



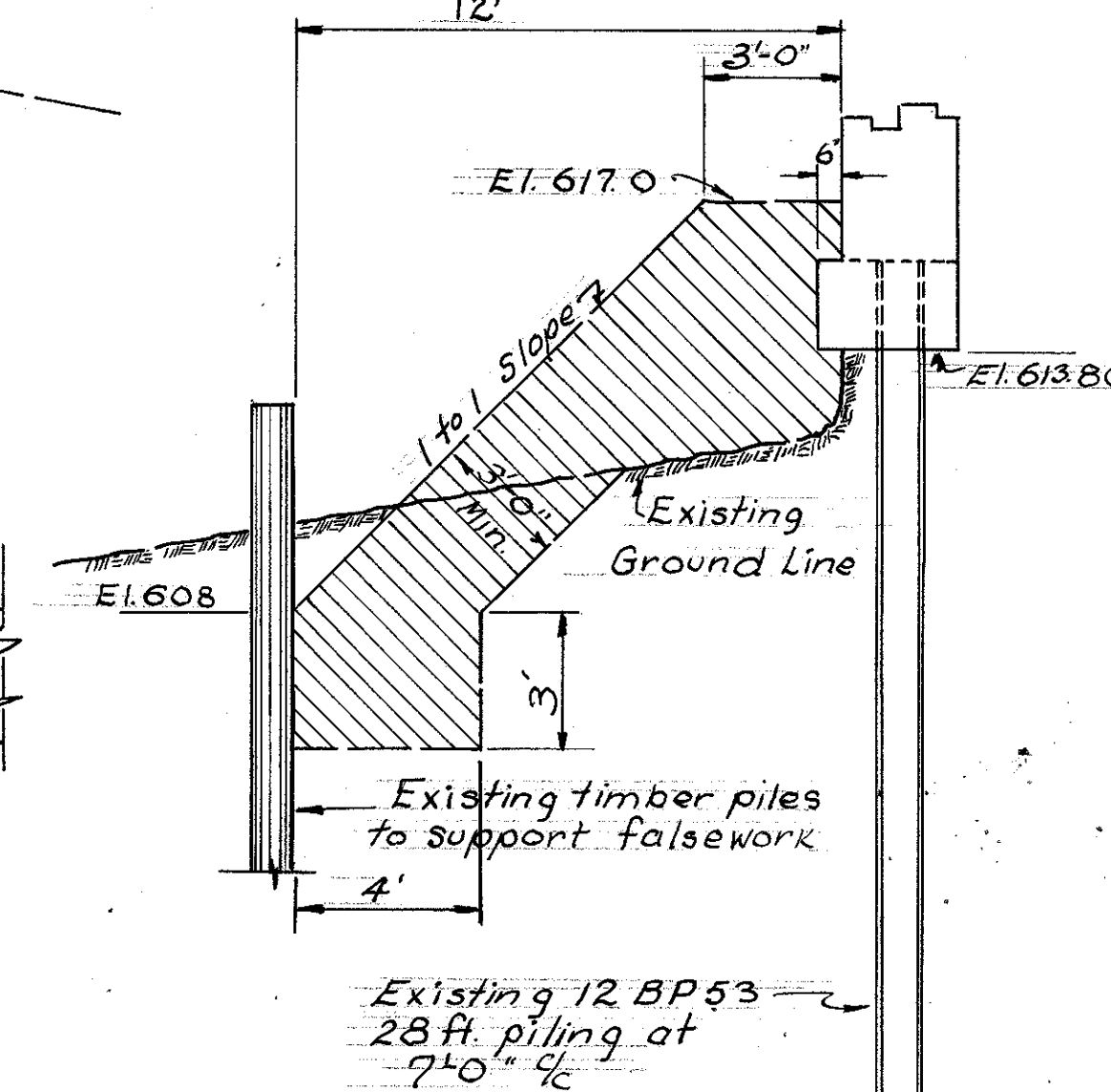
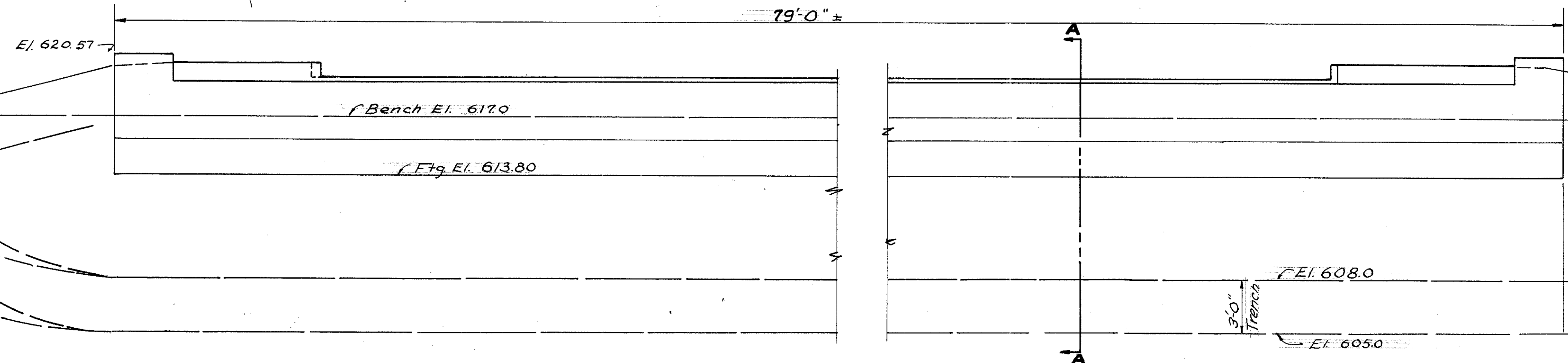
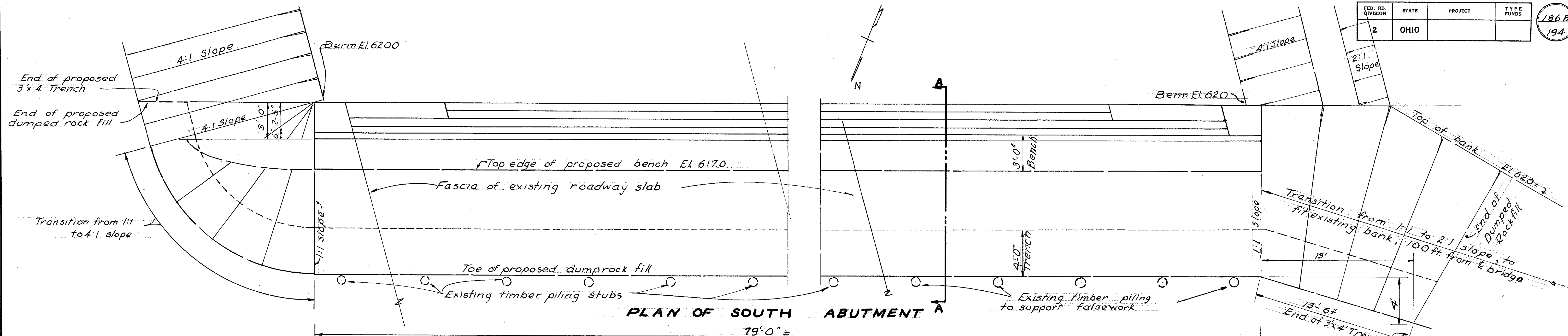
NOTES:

- Reinforcing steel shall be 2" clear from face of concrete unless otherwise specified.
- Reinforcing steel in portions of existing abutments to be removed, shall be left in place to the extent that it extends 8" above new approach slab seat. It shall be carefully cleaned before new concrete is poured.
- All earth fill around abutments shall be made full height of earth bench. Excavation shall then be made for abutment cap, after which piling shall be driven.
- Vertical faces of abutments of new structure shall be built flush with corresponding faces of existing structure.

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES AND RAILROAD CROSSINGS						
ABUTMENT DETAILS BRIDGE NO. RO-23-04 OVER CROOKED CREEK						
ROSS COUNTY				STA. 21+08.24		
SEC. ROS-23-(0.00-4.26)						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.K.J.	L.K.J.	R.G.B.	BFG	12-18-53		



STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES AND RAILROAD CROSSINGS							
DUMPED ROCK FILL AT NORTH ABUTMENT BRIDGE NO. RO-23-04 OVER CROOKED CREEK Ross Co. STA. 21+08.24 SEC. ROS-23 (00-426)							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
K.E.D.	K.E.D.	J.S.M.	R.H.N.		9/8/20	sa	



WORK REQUIRED

- Excavate a trench 3 ft. deep and 4 ft. wide along the toe of the proposed dump rock fill in front of the abutments and around the abutment wing walls.
- Fill the trench and form an embankment with dumped rock fill along the front face of the abutments with a 3 ft. bench width at Elev. 617.0 and embankment slope of 1 to 1.
- Replace eroded sections of earth back and under abutments with porous backfill.
- Extend trench and dumped rock fill around the northwest wing wall and along the roadway a distance of 20 ft. with a transition from a 1:1 slope along abutment face to a 4:1 slope along roadway berm.
- Add a 4 ft. section of 30" concrete pipe to the existing pipe at the northeast wing as directed by the Engineer and continue trench and dumped rock fill bank protection around the wing wall as shown on plan.
- Continue trench and dumped rock fill around the southeast wing wall as shown on plan.
- Reconstruct a portion of the bank at the southwest corner, excavate 3 ft. by 4 ft. trench, fill trench and protect bank with a 3 ft. layer of dumped rock fill as indicated on south abutment plan.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION
5-29	20	cu.yd.	Porous backfill
1-10	500	cu.yd.	Dumped rock fill

EXPLANATORY NOTE

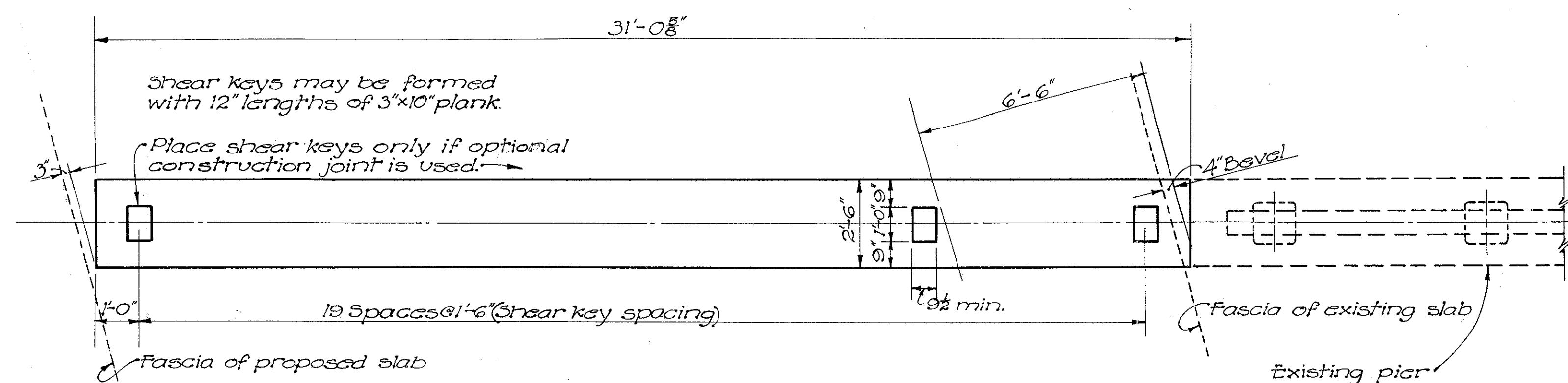
These drawings, Sheets 186 A and 186 B provide details for making repairs necessary because of flood damage in June 1954. Flood waters washed away embankment in front of, and from under, the capped pile abutments. At the time of the flood, construction of a 30 ft. widening of the existing bridge was partially completed.

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES AND RAILROAD CROSSINGS					
DUMPED ROCK FILL AT SOUTH ABUTMENT					
BRIDGE NO-R0-23-04 OVER CROOKED CREEK ROSS COUNTY STA. 21+08.24 SEC. R05-23-(0.0-4.26)					
DESIGNED KED	DRAWN KED	TRACED JSM	CHECKED R/M	REVIEWED A. J. F. 6/28/54	DATE 6/28/54

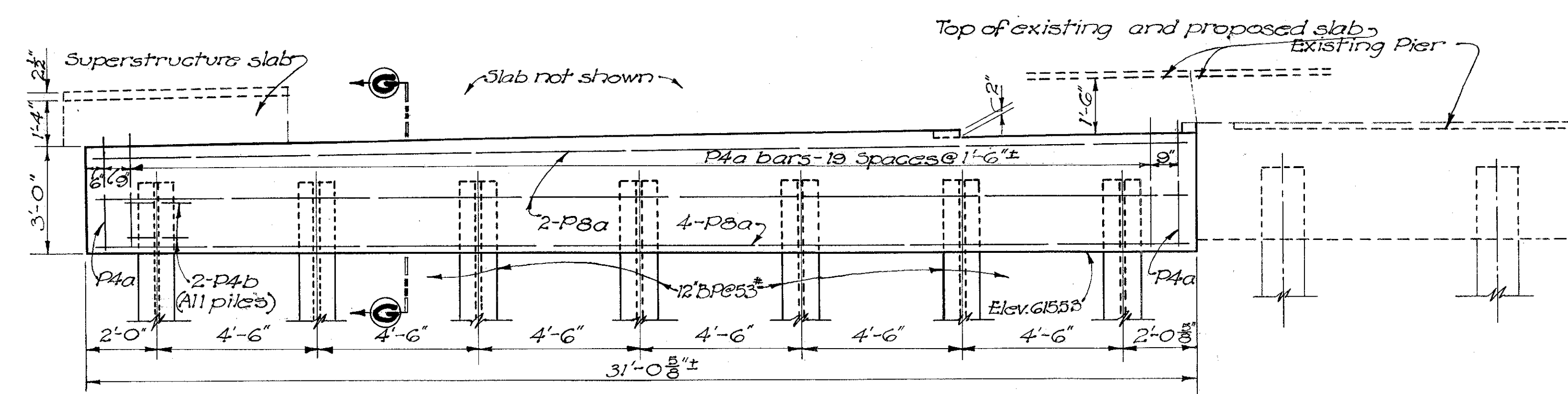
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	0AA-AA-F-1(11)	

187
194

PIKE & ROSS COUNTIES
PIK-23-16.40
ROS-23-(0.00-4.26)

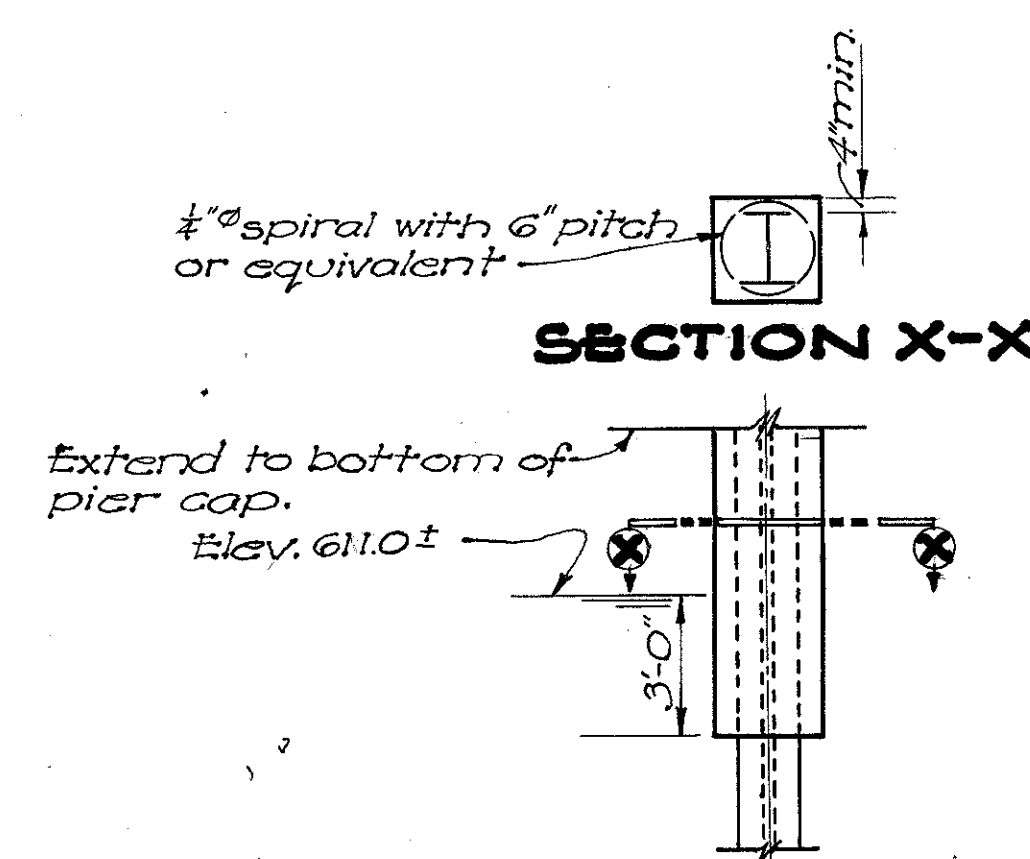


PLAN

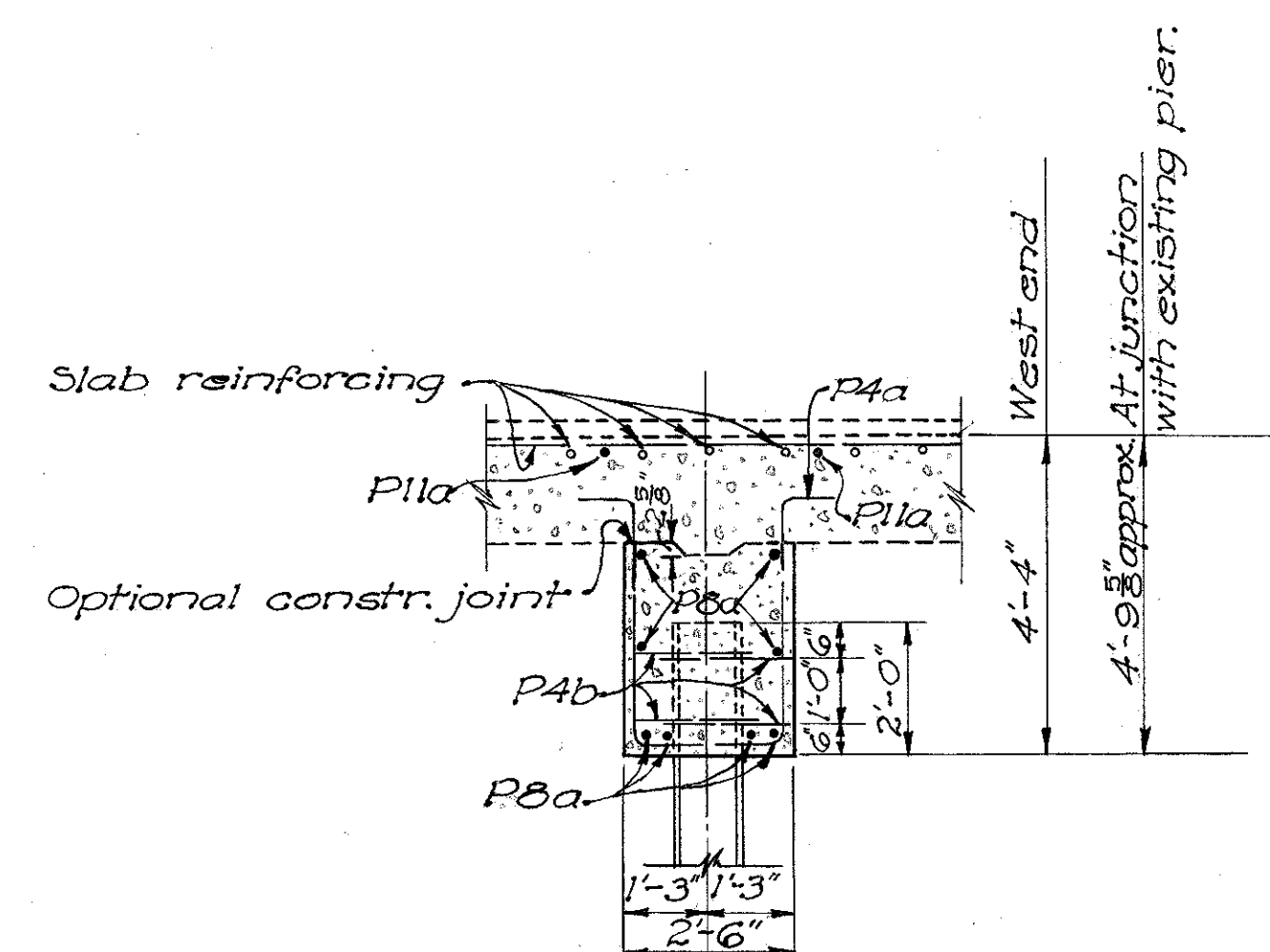


ELEVATION

(PILE ENCASUREMENT NOT SHOWN)



DETAIL OF PILE ENCASUREMENT



SECTION G-G

REINFORCING STEEL LIST																																														
MARK	NO	LENGTH	WEIGHT	SHR	BENDING DIAGRAM		MARK	NO	LENGTH	WEIGHT	SHR																																			
SUPERSTRUCTURE							PIERS																																							
S10a	56	25'-1"	6044	ST.			P11a	4	30'-8"	652	ST.																																			
S10b	28	13'-1"	1576	ST.			P8a	16	30'-8"	1310	ST.																																			
S10c	26	9'-4"	1044	ST.																																										
S9a	90	32'-7"	9970	ST.			P4a	44	10'-8"	314	BT.																																			
S9b	30	24'-5"	2491	BT.			P4b	56	5'-3"	196	BT.																																			
S9c	28	21'-7"	2055	BT.																																										
S9d	15	22'-6"	1148	ST.																																										
S9e	14	18'-3"	869	ST.																																										
S6a	30	18'-6"	834	ST.			NOTE In the reinforcing steel bar marking the numeral following the first letter is the Bar Number, which indicates the size of the bar.																																							
S6b	15	16'-2"	364	ST.																																										
S6c	60	30'-8"	2764	ST.																																										
S6d	09	26'-0"	4257	ST.																																										
S6e	09	6'-5"	1051	ST.																																										
D5a	91	2'-0"	190	ST.			REPLACEMENT <table><tr><td>RE11</td><td>1</td><td>7'-7"</td><td>40</td><td>ST.</td></tr><tr><td>RE10</td><td>1</td><td>7'-3"</td><td>31</td><td>ST.</td></tr><tr><td>RE9</td><td>1</td><td>6'-10"</td><td>23</td><td>ST.</td></tr><tr><td>RE8</td><td>1</td><td>6'-6"</td><td>17</td><td>ST.</td></tr><tr><td>RE6</td><td>1</td><td>5'-11"</td><td>9</td><td>ST.</td></tr><tr><td>RE5</td><td>1</td><td>5'-7"</td><td>6</td><td>ST.</td></tr><tr><td>RE4</td><td>1</td><td>5'-3"</td><td>4</td><td>ST.</td></tr></table>					RE11	1	7'-7"	40	ST.	RE10	1	7'-3"	31	ST.	RE9	1	6'-10"	23	ST.	RE8	1	6'-6"	17	ST.	RE6	1	5'-11"	9	ST.	RE5	1	5'-7"	6	ST.	RE4	1	5'-3"	4	ST.
RE11	1	7'-7"	40	ST.																																										
RE10	1	7'-3"	31	ST.																																										
RE9	1	6'-10"	23	ST.																																										
RE8	1	6'-6"	17	ST.																																										
RE6	1	5'-11"	9	ST.																																										
RE5	1	5'-7"	6	ST.																																										
RE4	1	5'-3"	4	ST.																																										
ABUTMENTS																																														
A8a	24	31'-4"	2008	ST.																																										
A5a	104	8'-4"	904	BT.																																										
A5b	24	2'-6"	63	ST.																																										
A4a	40	5'-3"	140	BT.																																										
A4b	4	6'-8"	18	BT.																																										
A4c	4	6'-2"	16	BT.																																										
A4d	44	3'-6"	103	ST.																																										
A4e	4	12'-0"	32	ST.																																										

NOTE

In the reinforcing steel bar marks the numeral following the first letter is the bar number which indicates the size of the bar.

NOTES:

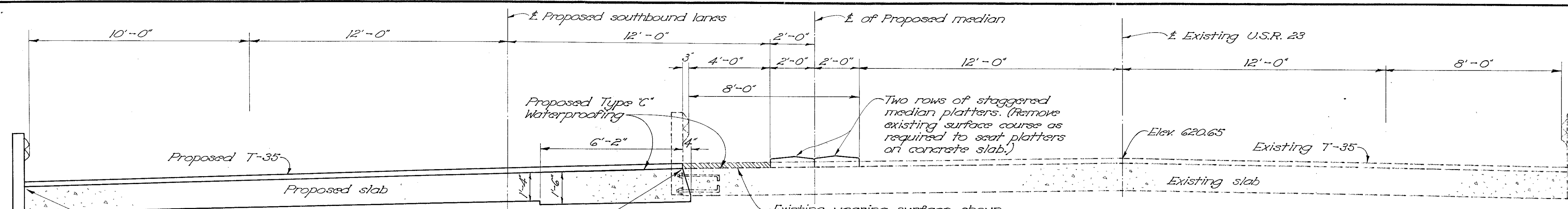
Reinforcing steel shall be 2" clear from face of concrete unless otherwise noted.

Shape of pile encasement shall match the shape of existing piles. Encasement shall be placed after the piles are driven and may be placed in water as per Item 5-1.18, care being taken to remove all dirt between the piles and forms. Payment for encasement and for necessary excavation shall be included in the price per linear foot of piles.

Faces of new piers shall be built flush with faces of existing piers.

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES AND RAILROAD CROSSINGS			
PIER DETAILS AND REINFORCING STEEL LIST			
BRIDGE NO. RO-23-04 OVER CROOKED CREEK			
ROSS COUNTY		STA. 21+08.24	
SEC. ROS-23-(0.00-4.26)			
DESIGNED	DRAWN	TRACED	CHECKED
L.K.J.	L.K.J.	R.G.B.	C.J.D.
APPROVED		DATE	REVISED
BFG		9.9.53	12-18-53

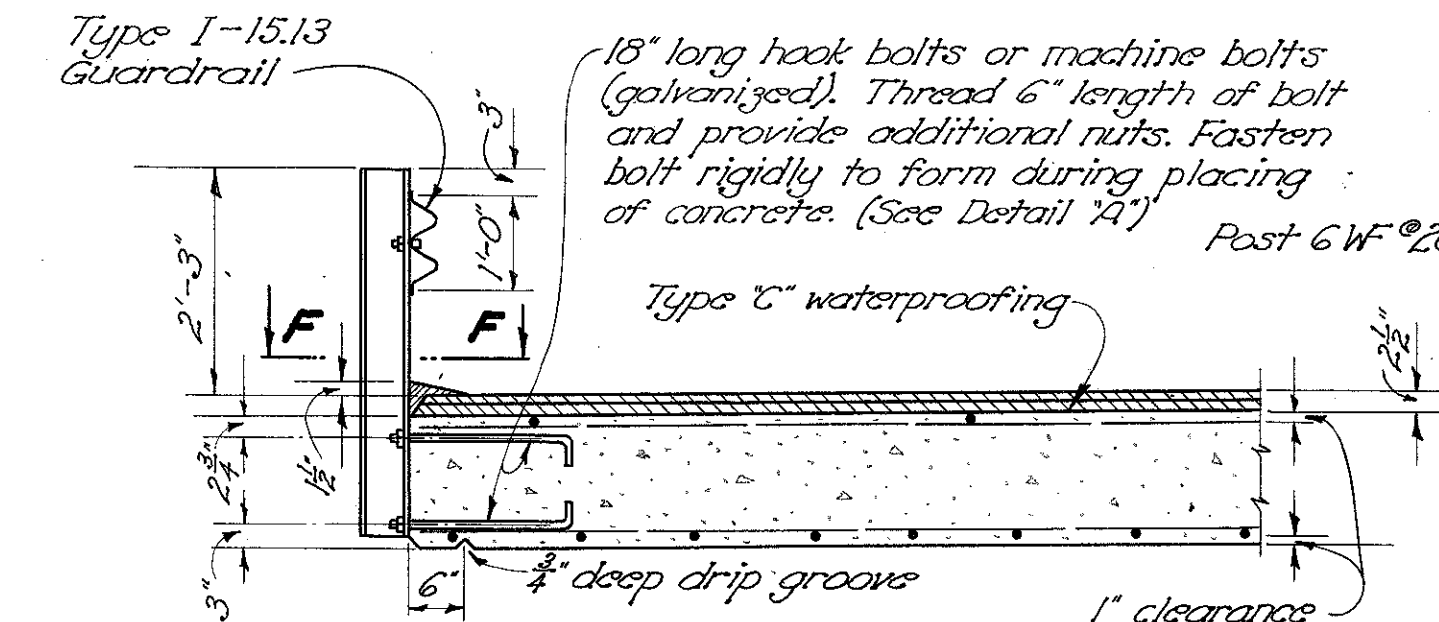
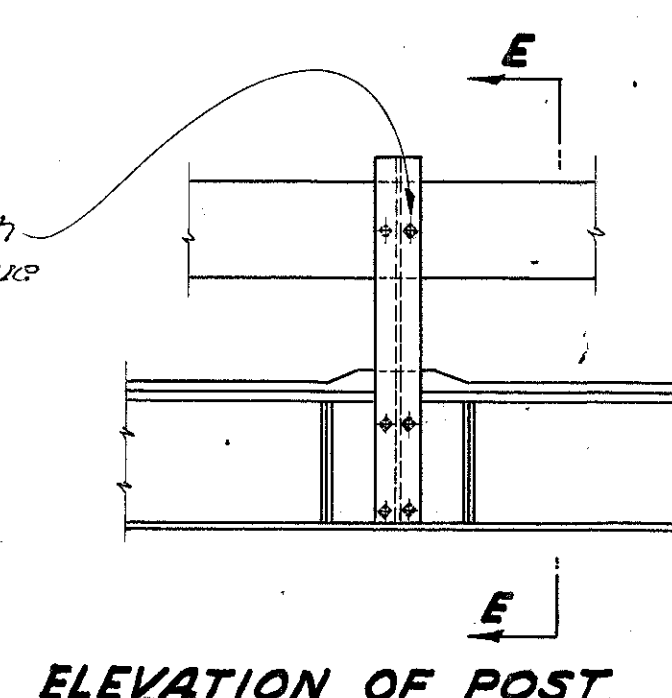
**PIKE & ROSS COUNTIES
PIK-23-16.40
ROS-23-(0.00-4.26)**



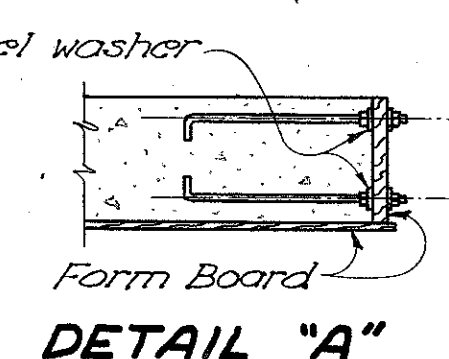
TOP OF PROPOSED CONCRETE SLAB:
Along west edges, at Elev. 619.86.
Along junction, flush with existing slab.

PROPOSED CROSS-SECTION at E

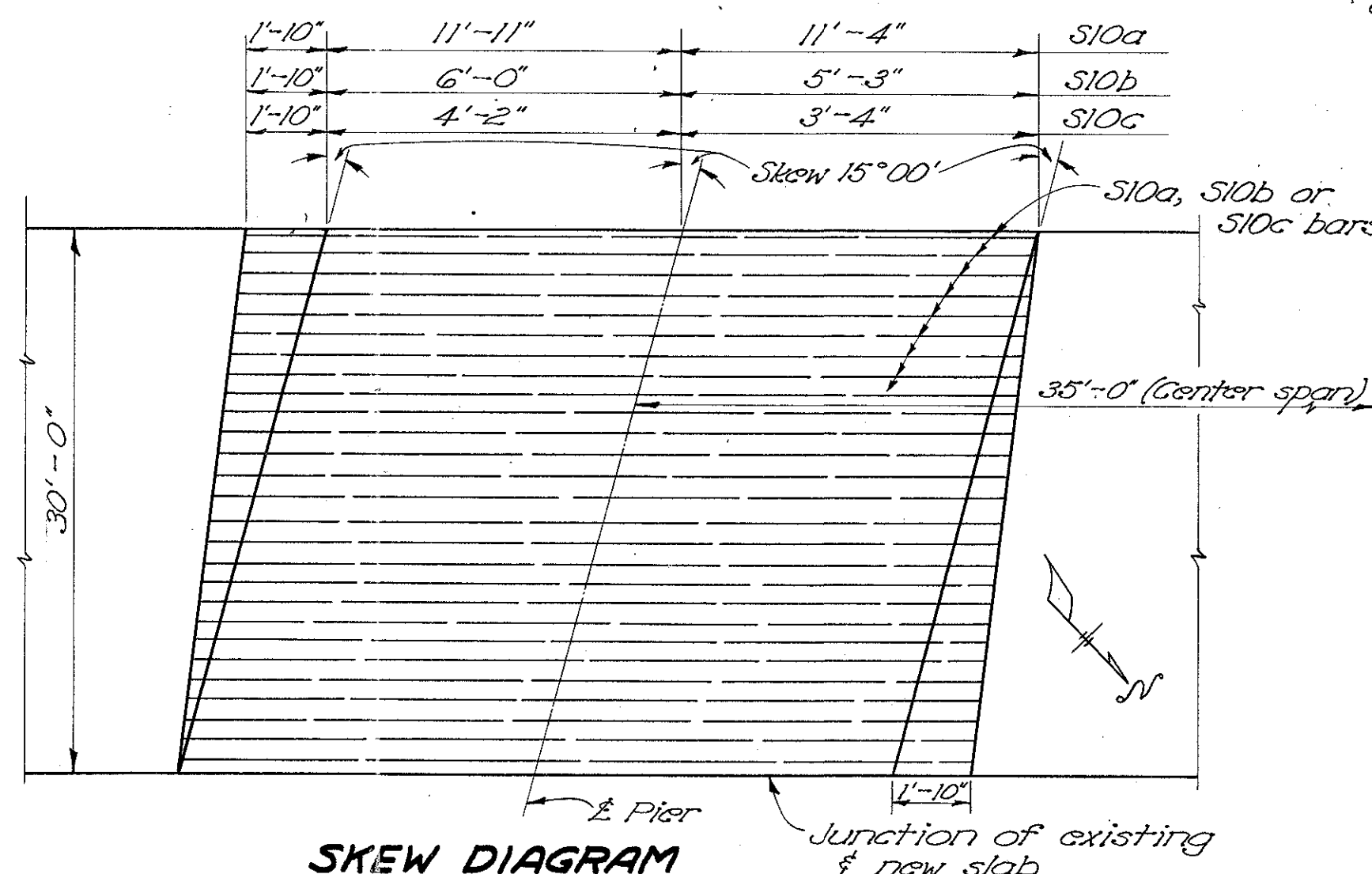
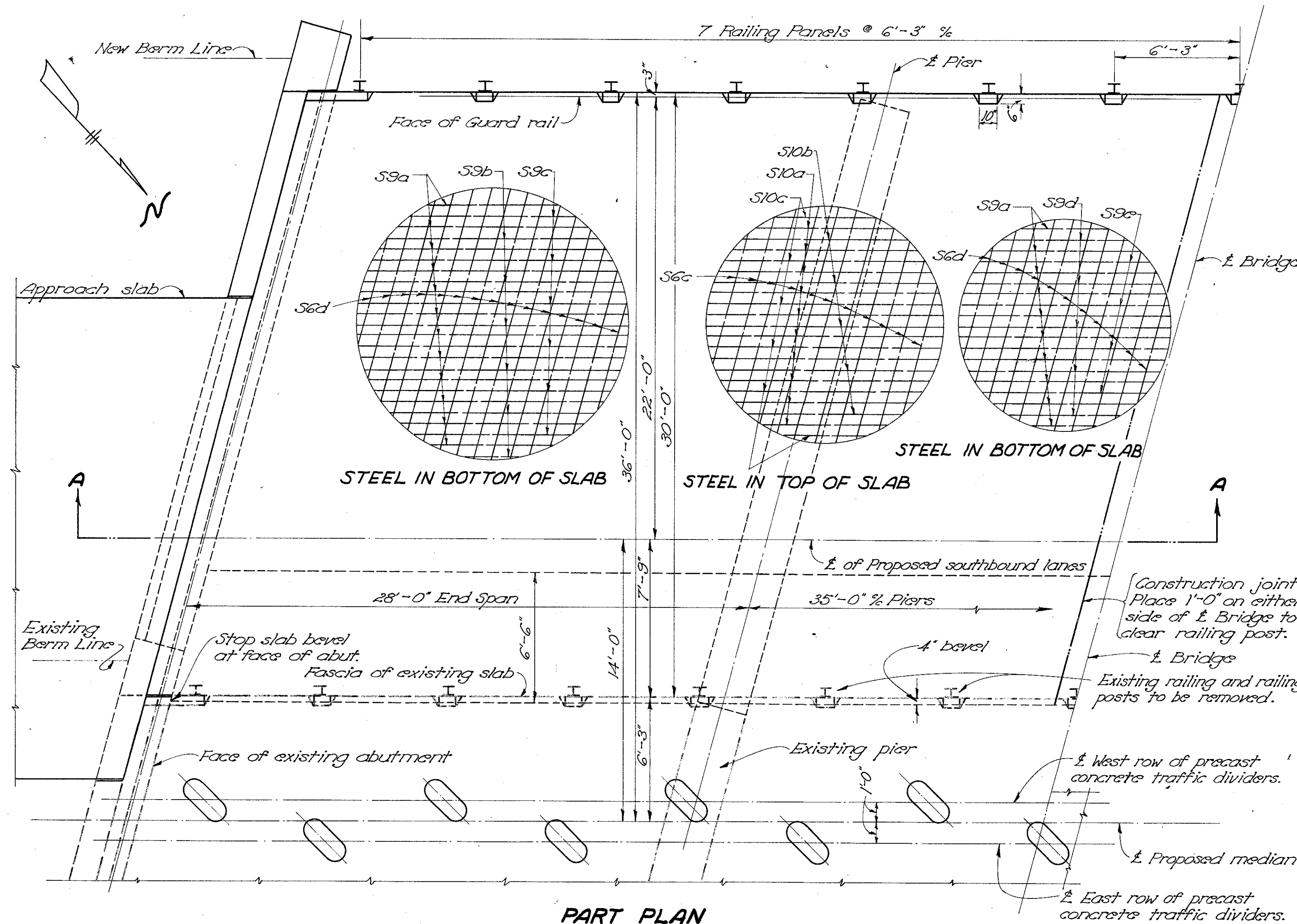
Bolt 1", 3/4" or 5/8" with ultimate shear value of not less than 24,000 lbs. Hole in post 1/2" larger than bolt.



SECTION F-F

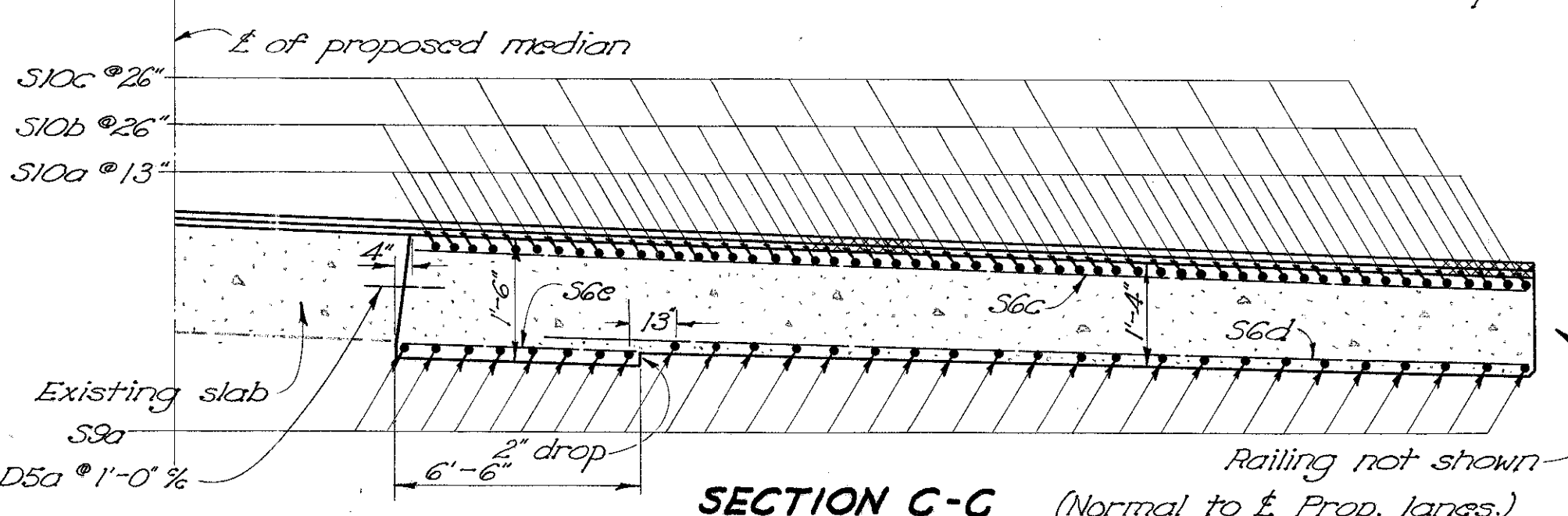
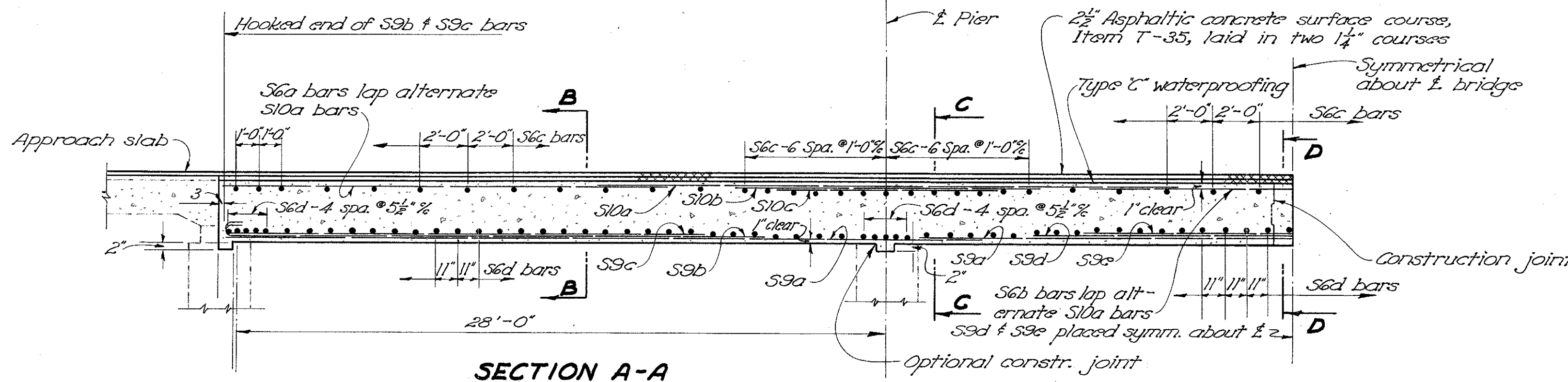
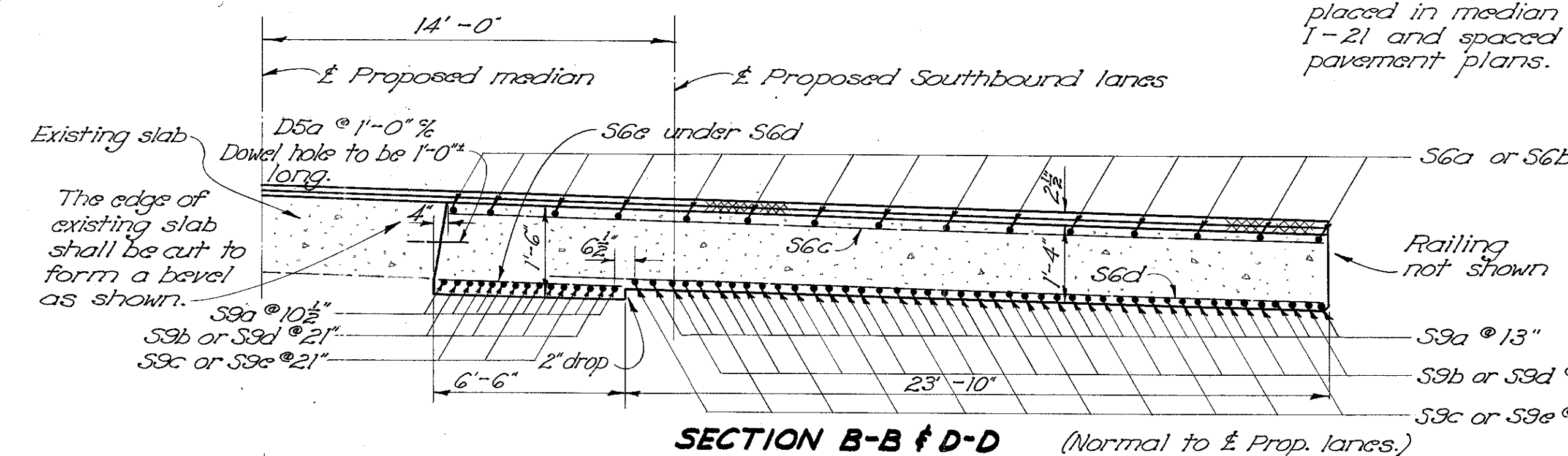


DECK CONSTRUCTION JOINT



NOTES:
Existing Type I-15.13 Guardrail and railing posts shall be dismantled and placed at west side of new slab. Existing anchor bolts shall be left in place.

Precast concrete traffic dividers shall be placed in median as shown on Std. Drawing I-21 and spaced as shown on approach pavement plans.



STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES AND RAILROAD CROSSINGS					
SUPERSTRUCTURE DETAILS					
BRIDGE NO. RO-23-04 OVER CROOKED CREEK					
Ross County Sec. - ROS-23-(0.00-4.26) Sta. 21+08.24					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
L.K.I.	L.K.I.	J.P.	C.H.	B.F.G.	12-18-53