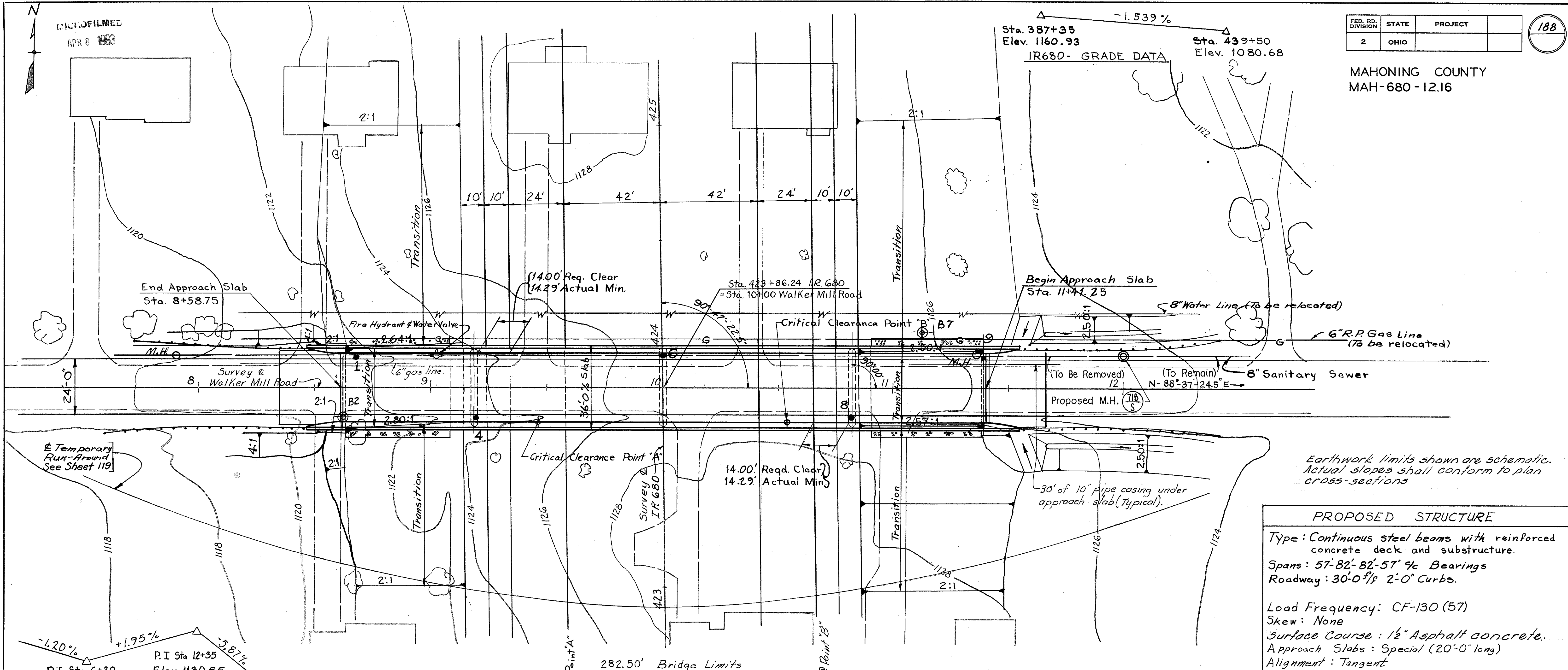


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FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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MAHONING COUNTY
MAH-680-12.16

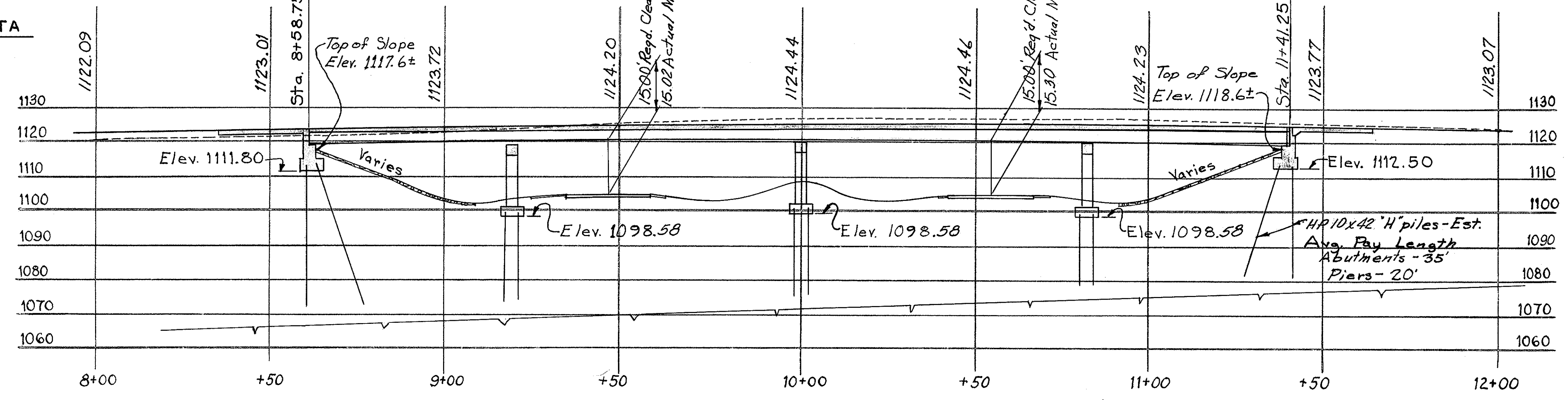


Earthwork limits shown are schematic. Actual slopes shall conform to plan cross-sections

PROPOSED STRUCTURE
 Type: Continuous steel beams with reinforced concrete deck and substructure.
 Spans: 57'-82'-82'-57' 9/16" Bearings
 Roadway: 30'-0" 2'-0" Curbs.
 Load Frequency: CF-130 (57)
 Skew: None
 Surface Course: 1 1/2" Asphalt concrete.
 Approach Slabs: Special (20'-0" long)
 Alignment: Tangent

PI Sta 6+20 Elev. 1118.56 VC=400'
 PI Sta 12+35 Elev. 1130.55 VC=830'

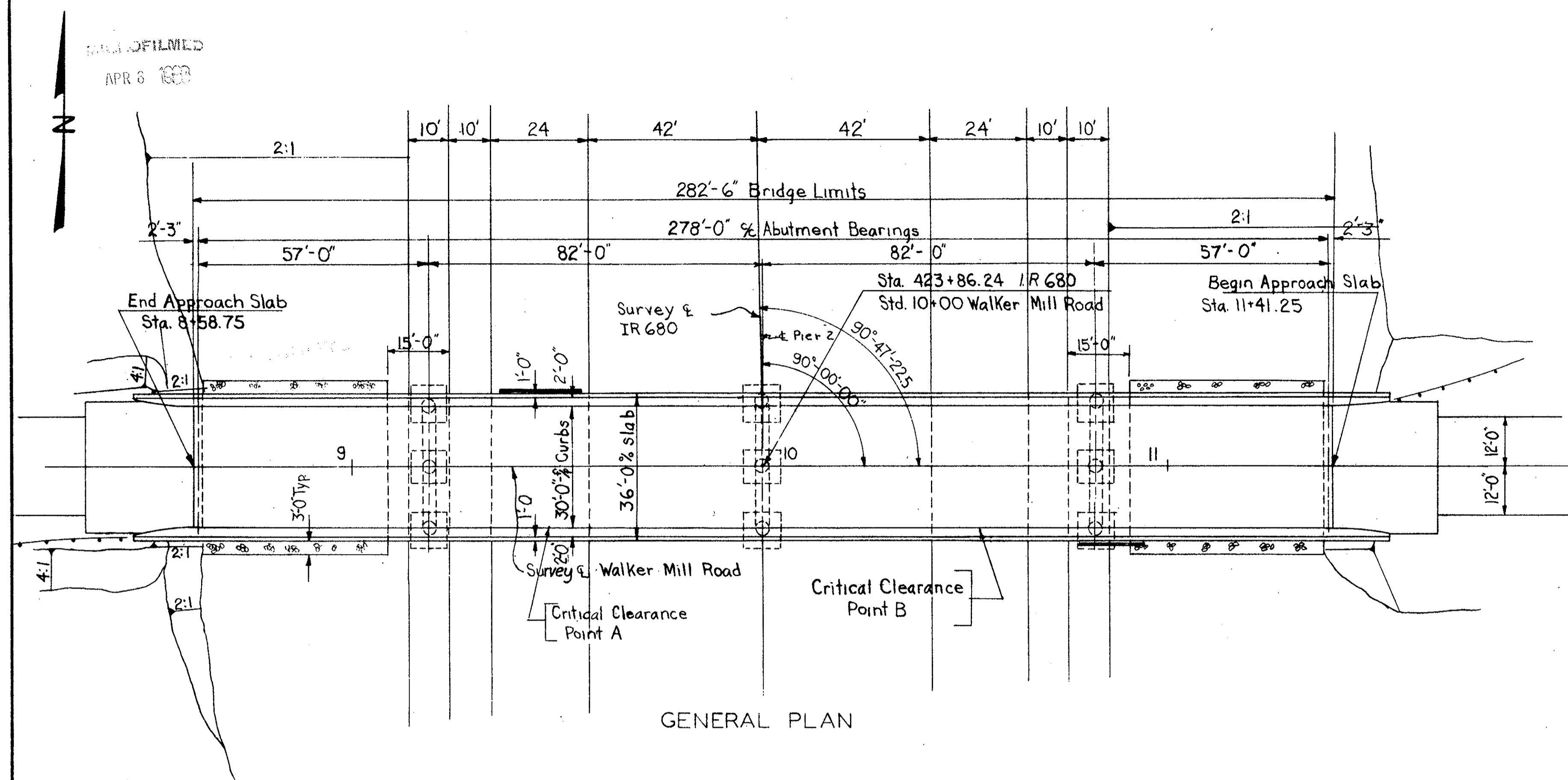
GRADE DATA



1985 A.D.T. 1500 (8% Trucks)

MICHAEL BAKER JR., CONSULTING ENGINEERS
 ROCHESTER, PENNSYLVANIA
SITE PLAN
 BRIDGE NO. MAH 680-1339
 UNDER WALKER MILL ROAD
 STA. 423 + 86.24

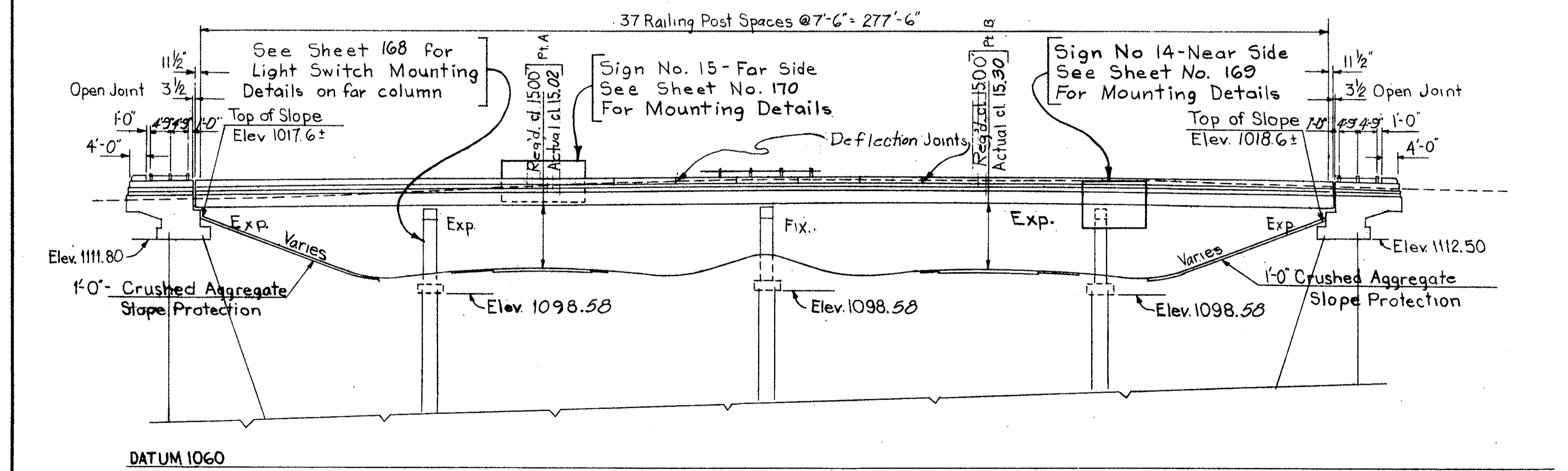
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	F.O.	DWP	DWP	H.J.B.	L.S.H. 1/23/70



ESTIMATED QUANTITIES						
Item	Total	Unit	Description	Superstr.	Abutments	Piers
404	26	Cu.Yd.	Asphalt concrete (10-85 or AC20)	26		
503	362	Cu.Yd.	Unclassified Excavation		200	162
505	L.S.	L.S.	Test Pile			L.S.
507	1860	Lin.Ft.	Steel Piles 4P10 x 42		840	1020
509	110,976	lbs	Reinforcing Steel	79,892	10,956	20,128
511	303	Cu.Yd.	Class C Concrete, Superstructure	303		
511	68	Cu.Yd.	Class C Concrete, Piers above footings			68
511	148	Cu.Yd.	Class C Concrete, Abutments		148	
511	68	Cu.Yd.	Class C Concrete, Pier Footings			68
513	253,300	lbs	* Structural steel	253,300		
514	253,300	lbs	* Field Painting of Structural Steel	253,300		
517	620.84	Lin.Ft.	Bridge Railing, Type I			
518	28	Cu.Yd.	Porous Backfill		28	
518	10	Each	Scuppers including supports	10		
518	61	Lin.Ft.	Helical C.M.P. 707.01 non perf., incl. spec.		61	
518	56	Lin.Ft.	Helical C.M.P. 707.01 perforated		56	
601	470	Sq.Yd.	Crushed Aggregate Slope Protection			470
808	303	Units	Chemical admixtures for conc. Type A, Bord	303		
518	72	Each	Subdrainage for wearing course as per plan		72	
625			See Sheet 151 for Electrical Quantities			
Special	941	Sq.Yd.	Membrane Waterproofing, Sheet type	941		
Special	60	Lin.Ft.	** 10" standard Pipe			60
Special	13	Cu.Yd.	Sand asphalt (See Proposal Note)	13		

GENERAL NOTES
 * 145 lbs. to be paid for by The East Ohio Gas Co. Computed by REB 5-16-67
 ** To be paid for by The East Ohio Gas Co. Checked by H.J.B. 5-17-67

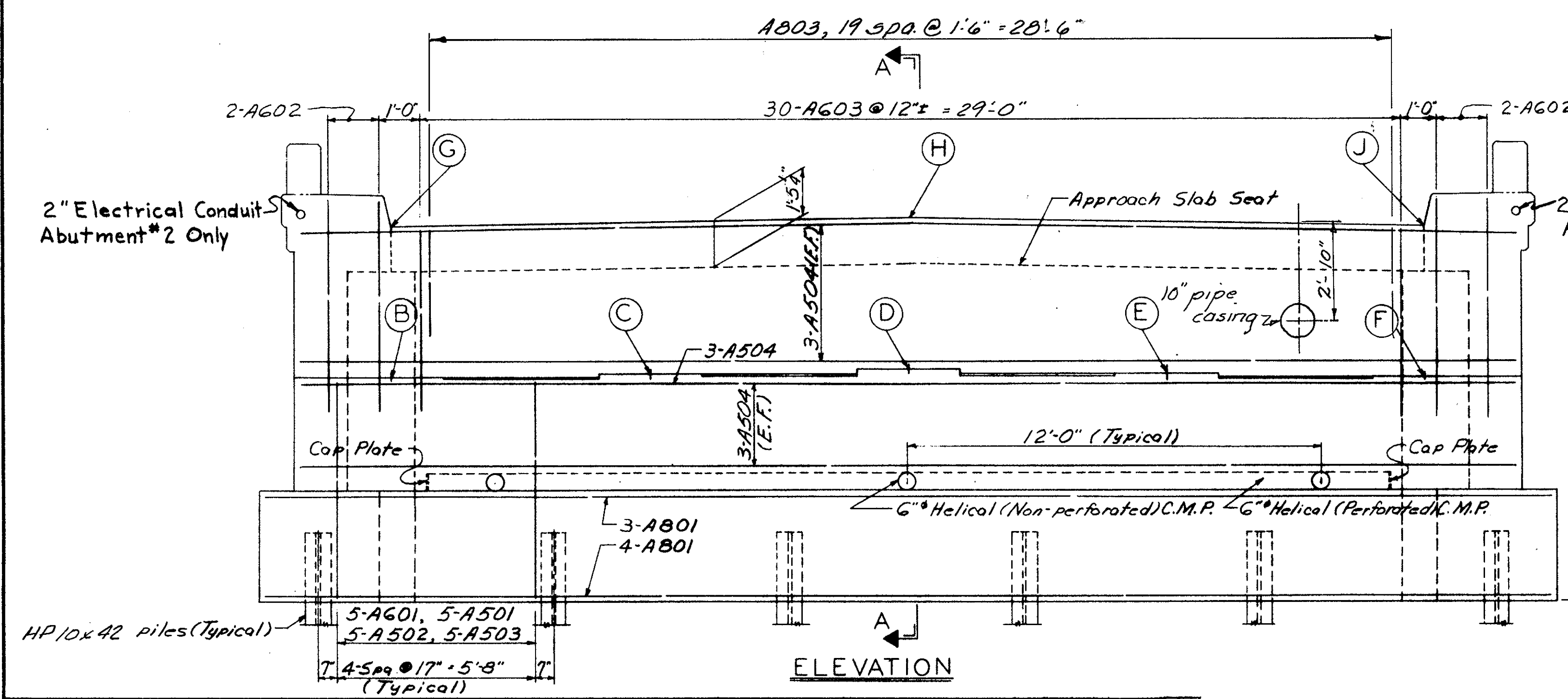
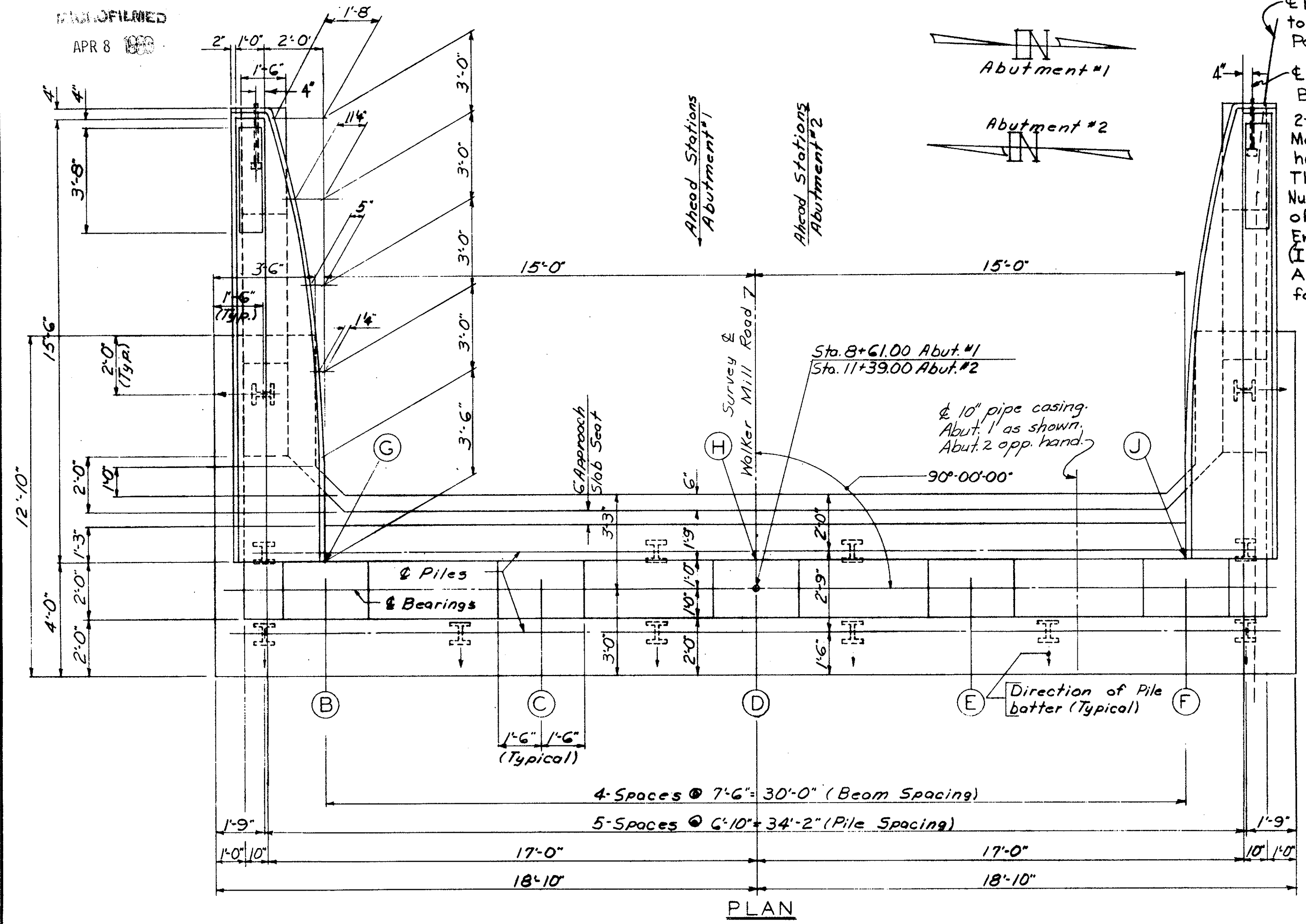
- REFERENCE shall be made to Standard Drawings RB-1-55 revised 2-2-59, BR-1-65 sheet 1 of 2 revised 11-24-65, SD-1-69 dated 6-12-69 and to Supplemental Specifications 808 dated 1-1-71 and 836 dated 1-1-71.
 - DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.
 - DESIGN DATA:
 Design Loading - CF 130 (57)
 Concrete Class C - basic unit stress 1,200 p.s.i., superstructure
 basic unit stress 1,333 p.s.i., substructure
 Structural Steel - A.S.T.M. A36 basic unit stress 20,000 p.s.i.
 Reinforcing Steel - A.S.T.M. A615, A616, A617 Unit stress 20,000 p.s.i. Spiral reinforcement shall be plain bars ASTM A306, A499, A82, or A615
 - PILES shall be driven to a minimum bearing capacity of 28 tons at the abutments and 33 tons at the piers.
 - UTILITY LINES: All the expenses involved in relocating the affected utility lines shall be borne by the Owners. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.
 - STAINLESS STEEL FASTENERS shall be properly passivated to remove surface impurities and shall be furnished with a lustrous finish.
- DECK FINISHING: Texturing of the deck surface as provided in 451.09 shall not be done.



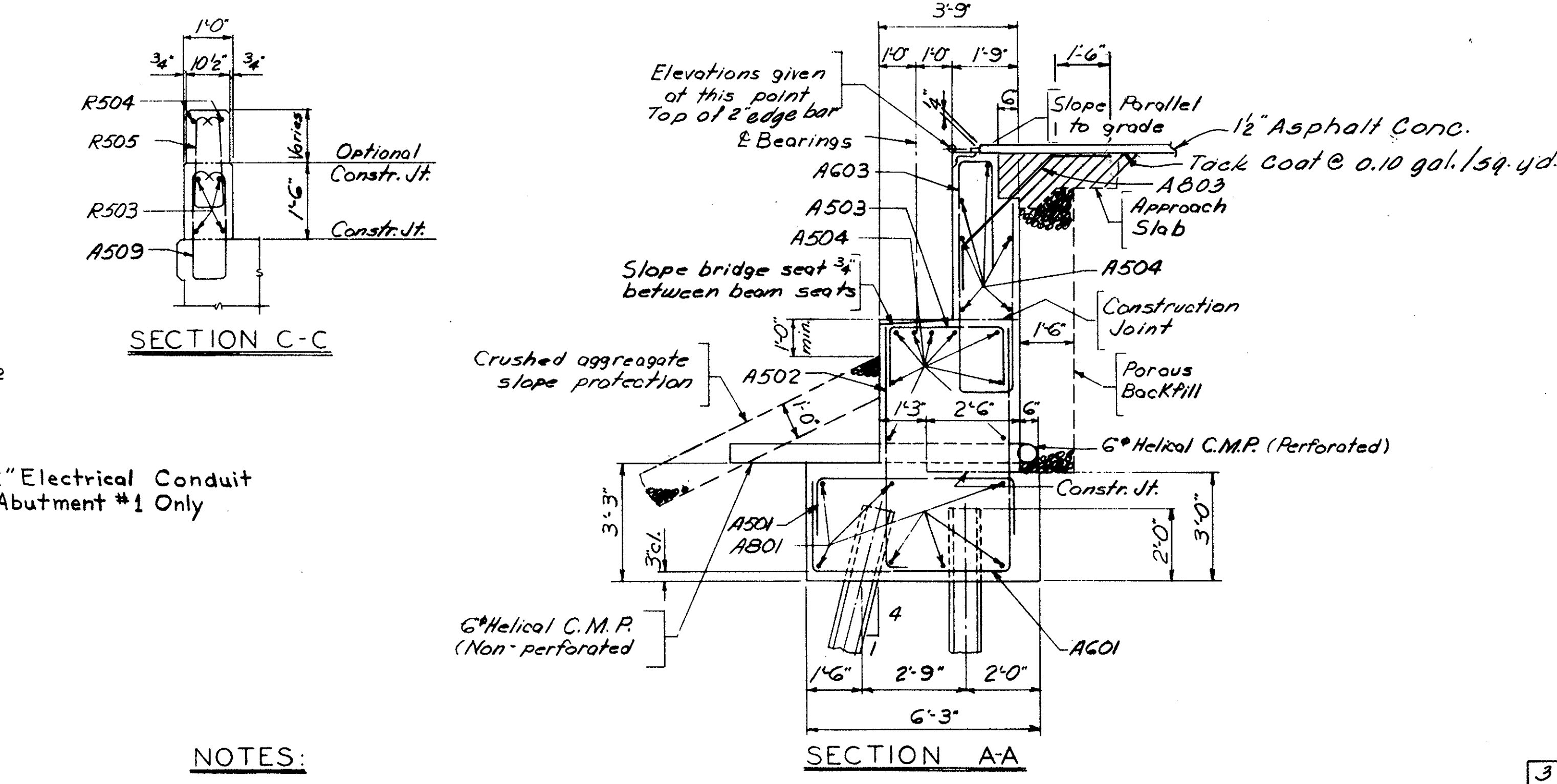
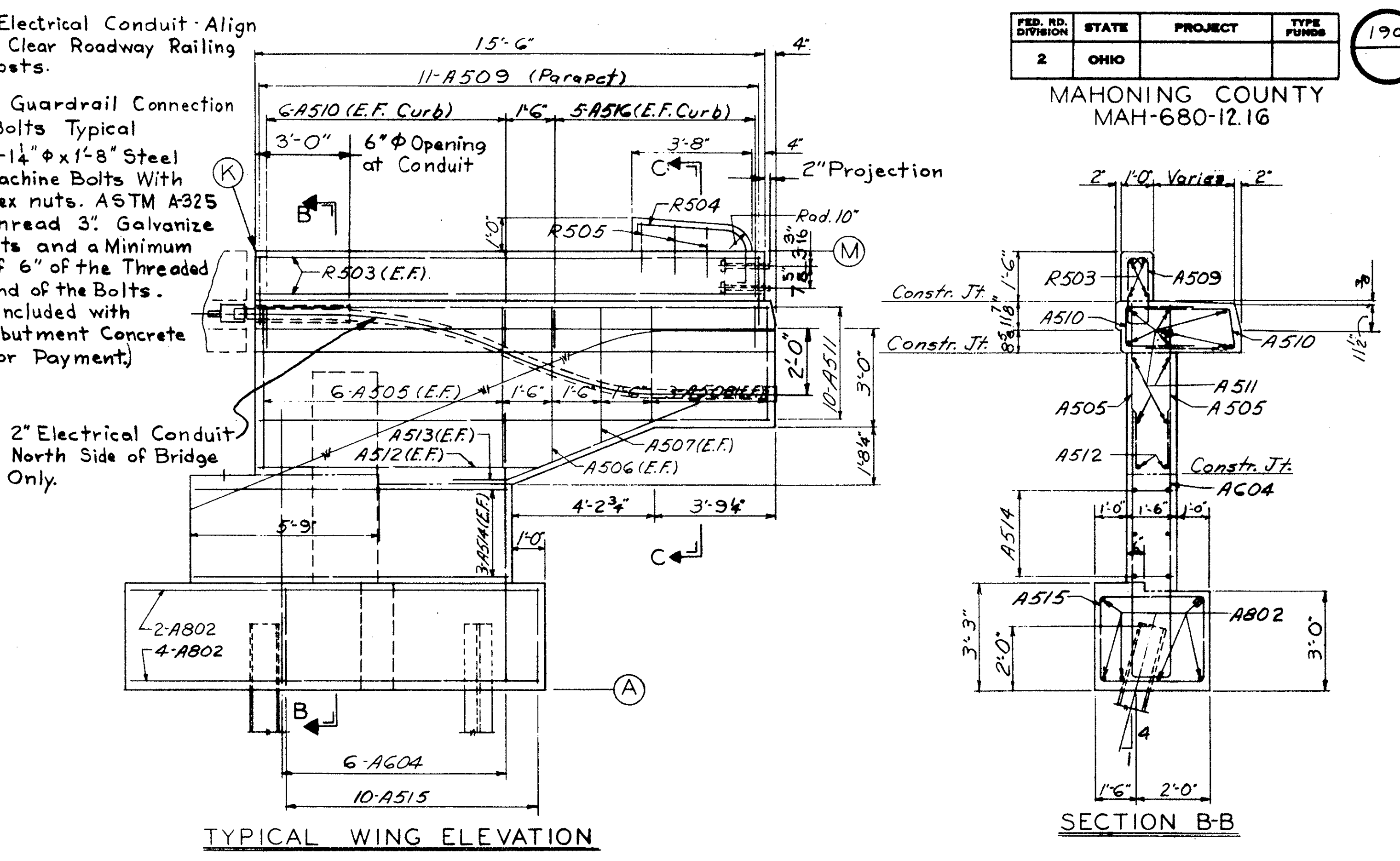
ELEVATION

MICHAEL BAKER JR., CONSULTING ENGINEERS ROCHESTER, PENNSYLVANIA					
GENERAL PLAN & ELEVATION BRIDGE NO MAH 680 1339 UNDER WALKER MILL ROAD					
STA 423+86.24					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
REB	Ks		H.J.B. REB	1/23/70	

MAHONING COUNTY
MAH-680-12.16



ELEVATIONS	A	B	C	D	E	F	G	H	J	K	M
ABUT. NO. 1	1111.80	1118.41	1118.52	1118.64	1118.52	1118.41	1122.91	1123.14	1122.91	1125.29	1125.04
ABUT. NO. 2	1112.50	1119.11	1119.23	1119.35	1119.23	1119.11	1123.63	1123.86	1123.63	1126.01	1125.85



NOTES:

- Concrete and reinforcing steel above parapet construction joint shall be included with Railing, Item 517, for payment.

LEGEND:

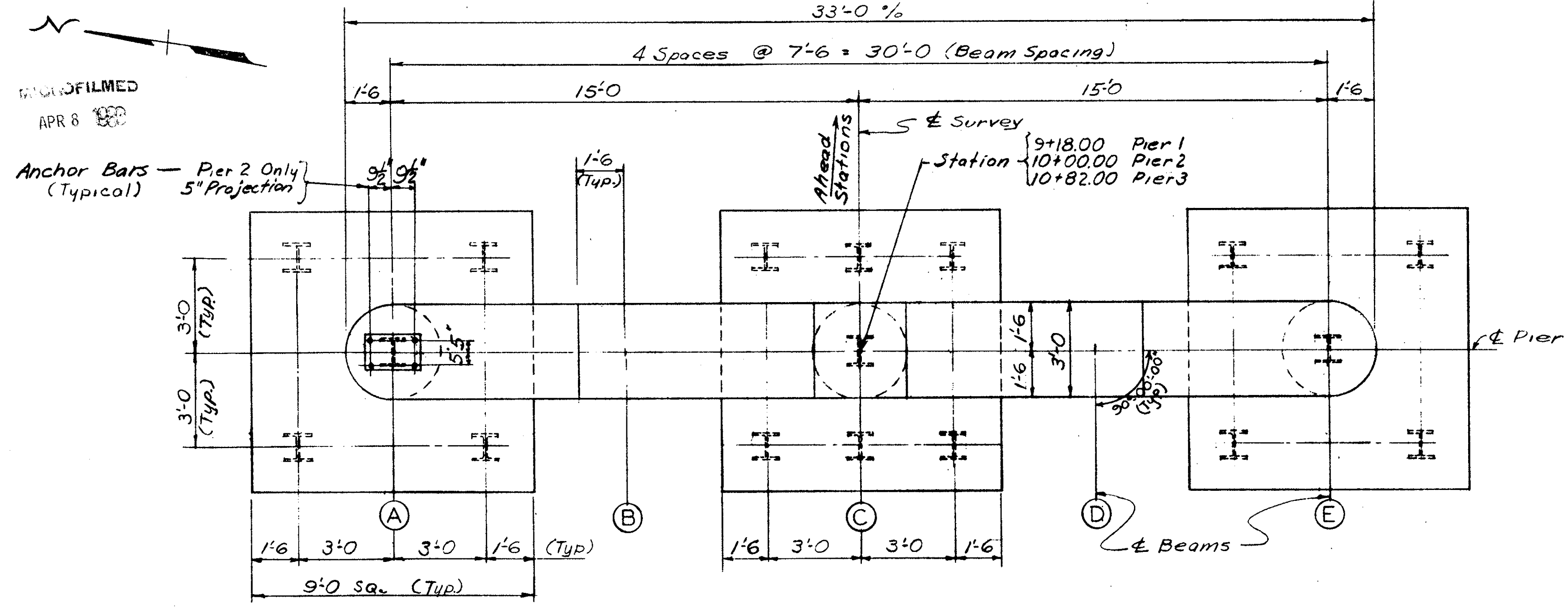
E.F. = Each Face

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ROCHESTER, PENNSYLVANIA

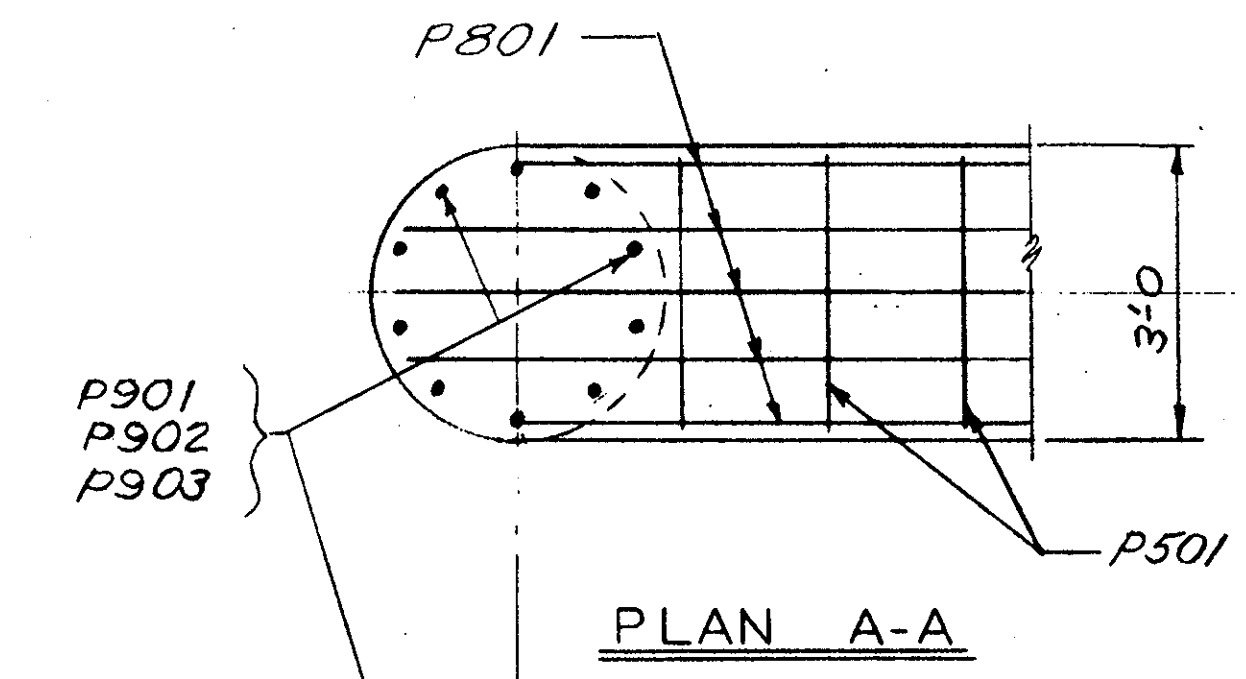
ABUTMENT NO. 1 & NO. 2
BRIDGE NO. MAH-680-1339
UNDER WALKER MILL ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
REB	RJP		H.J.B.	L.G.H.	1/23/70	

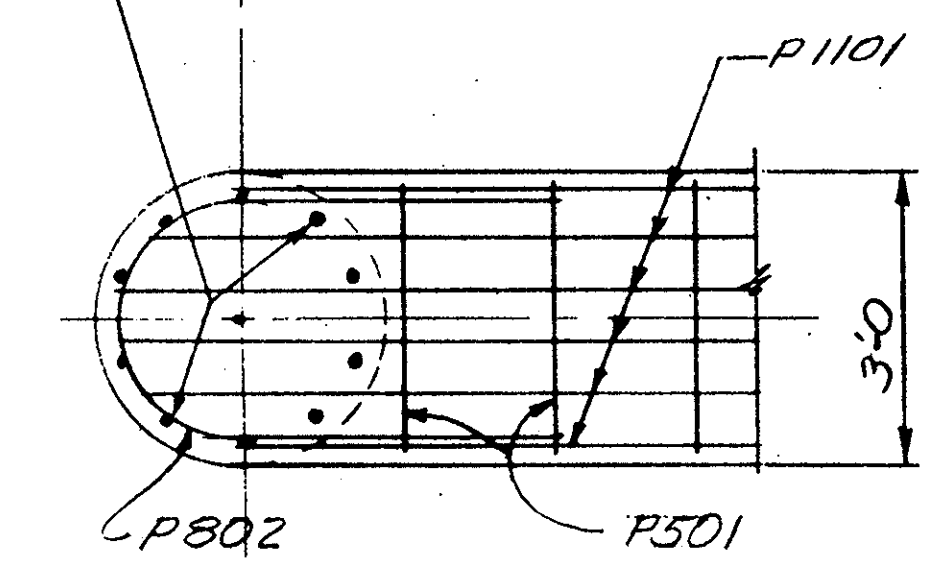
STA. 423+86.24



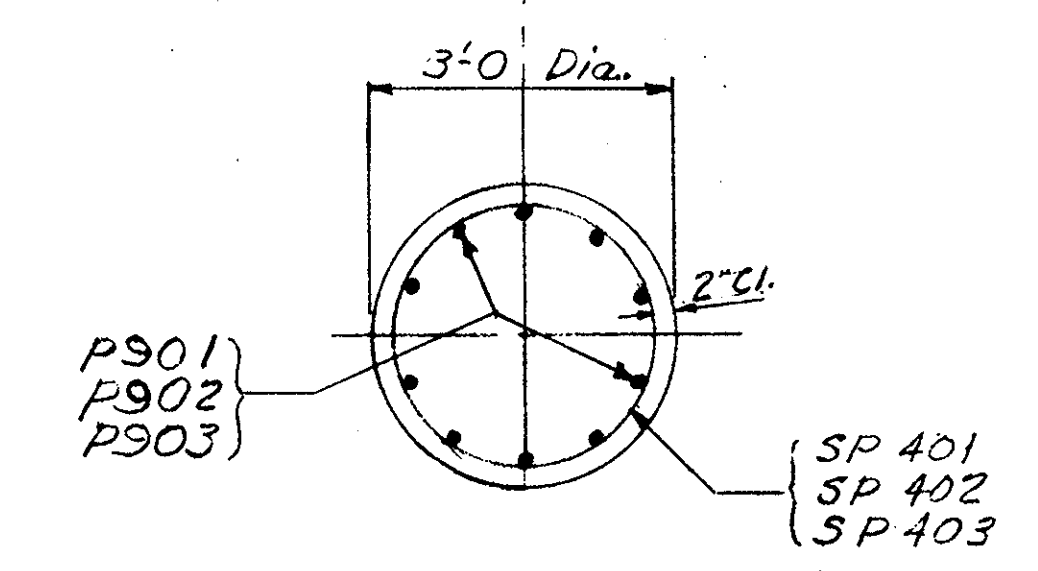
PLAN - PIER NO. 1, 2, & 3



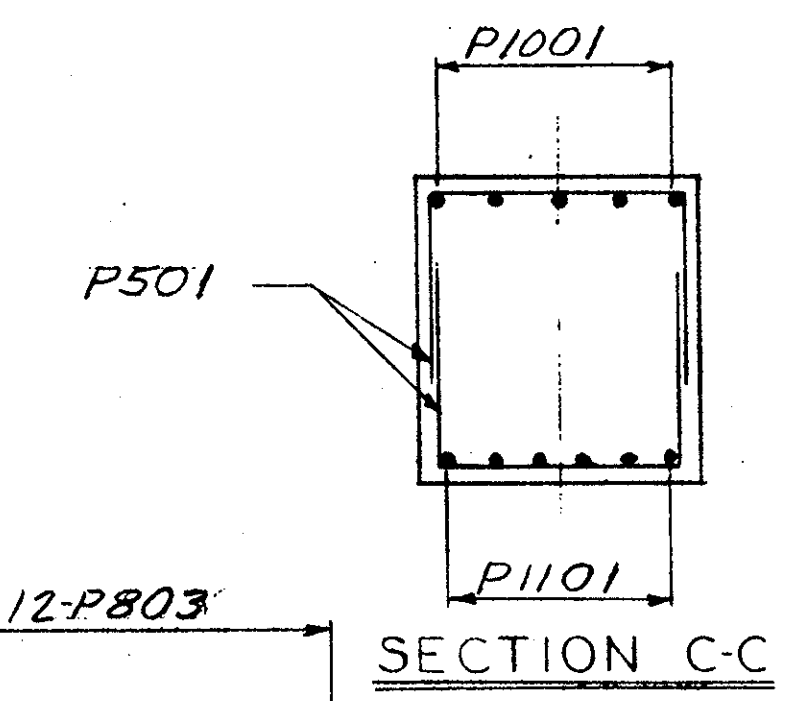
PLAN A-A



SECTION B-B

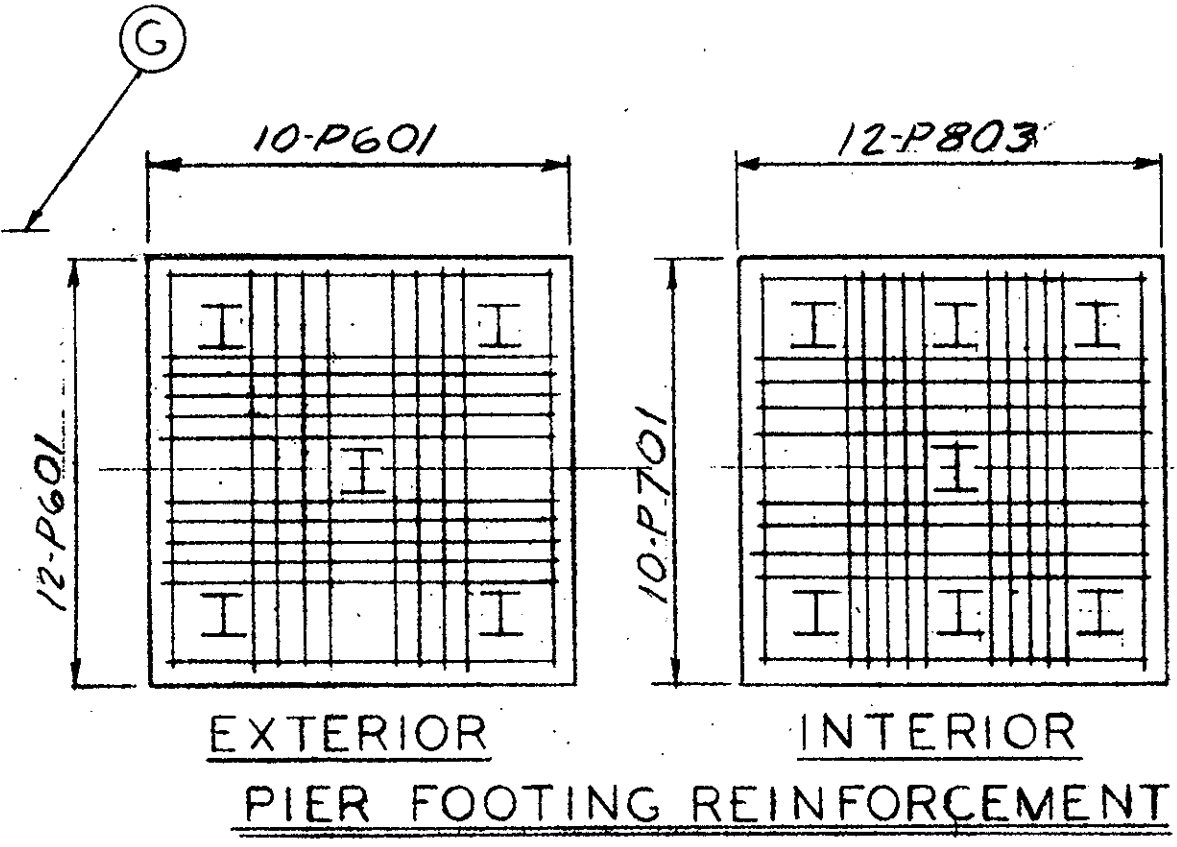
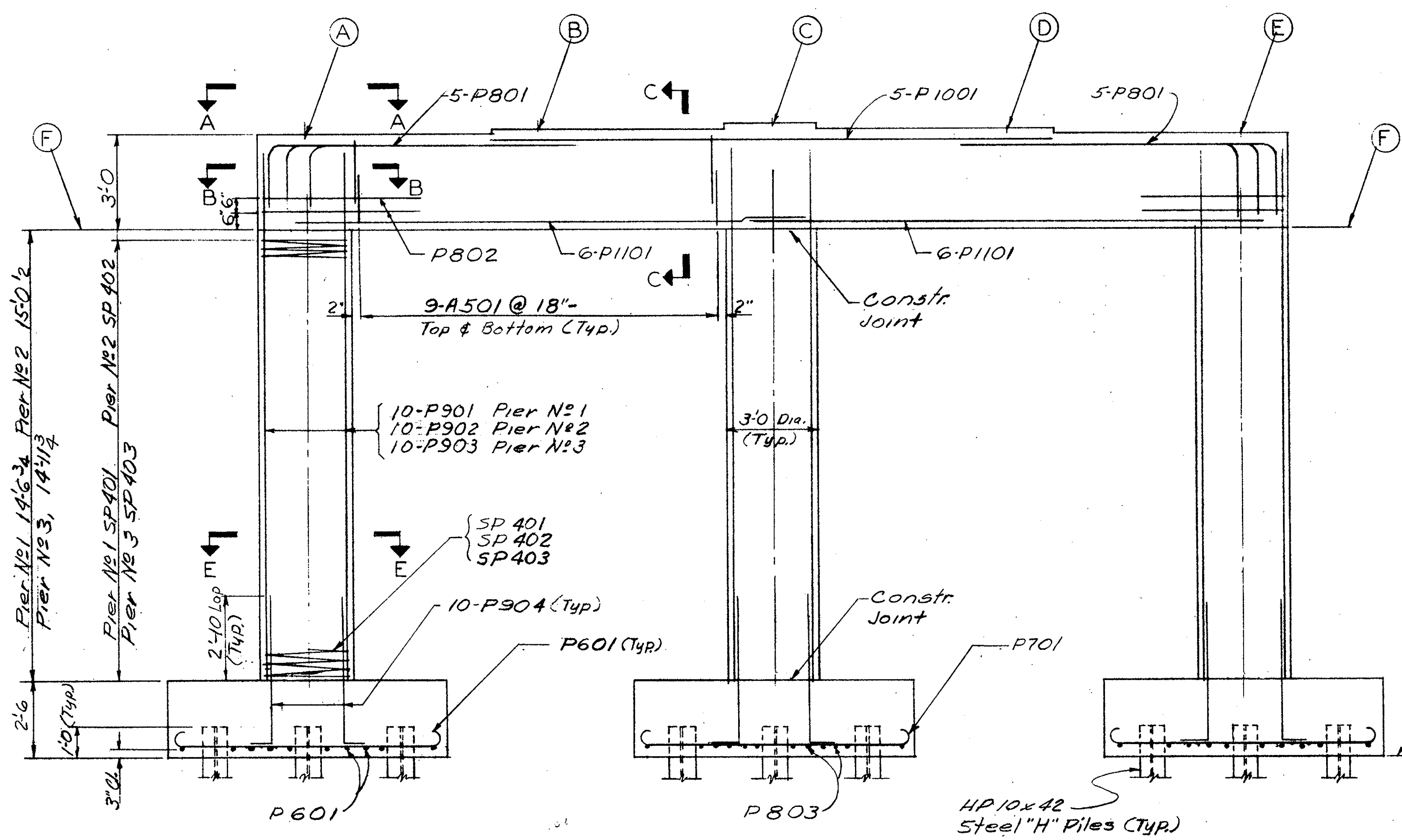


SECTION E-E



SECTION C-C

NOTES:
 • Special care shall be taken in placing reinforcing bars in pier cap No. 2 so that they will not interfere with the placing of the bearing anchor bolts



EXTERIOR INTERIOR
PIER FOOTING REINFORCEMENT

	A	B	C	D	E	F	G
Pier 1	1118.64	1118.76	1118.87	1118.76	1118.64	1115.64	1098.58
Pier 2	1119.12	1119.24	1119.36	1119.24	1119.12	1116.12	1098.58
Pier 3	1119.06	1119.17	1119.29	1119.17	1119.06	1116.06	1098.58

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

PIERS
BRIDGE NO. MAH 680-1339
UNDER WALKER MILL ROAD
STA. 423+86.24

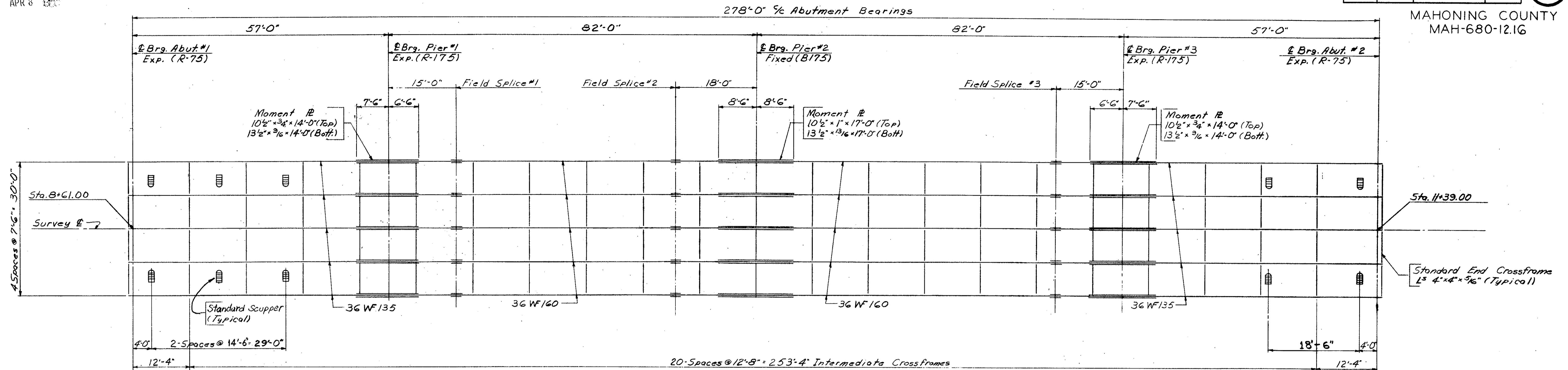
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
REB	aw		H.J.B. REB	1/23/70	

REPRODUCED
APR 8 1970

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

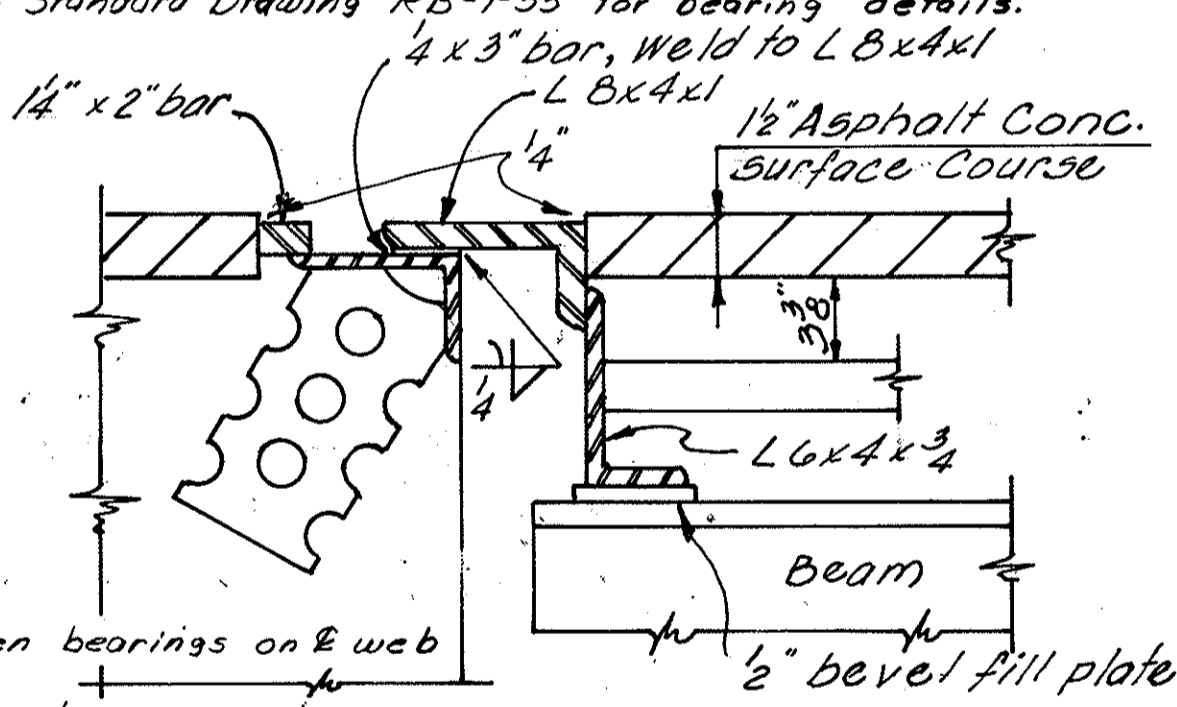
192

MAHONING COUNTY
MAH-680-12.1G



NOTES:

- Refer to Standard Drawing SD-1-69 for end crossframes (8'-0" and less), roadway end dams, curb plate details, beam splices, moment plate welding and scupper details.
- Refer to Standard Drawing RB-1-55 for bearing details.

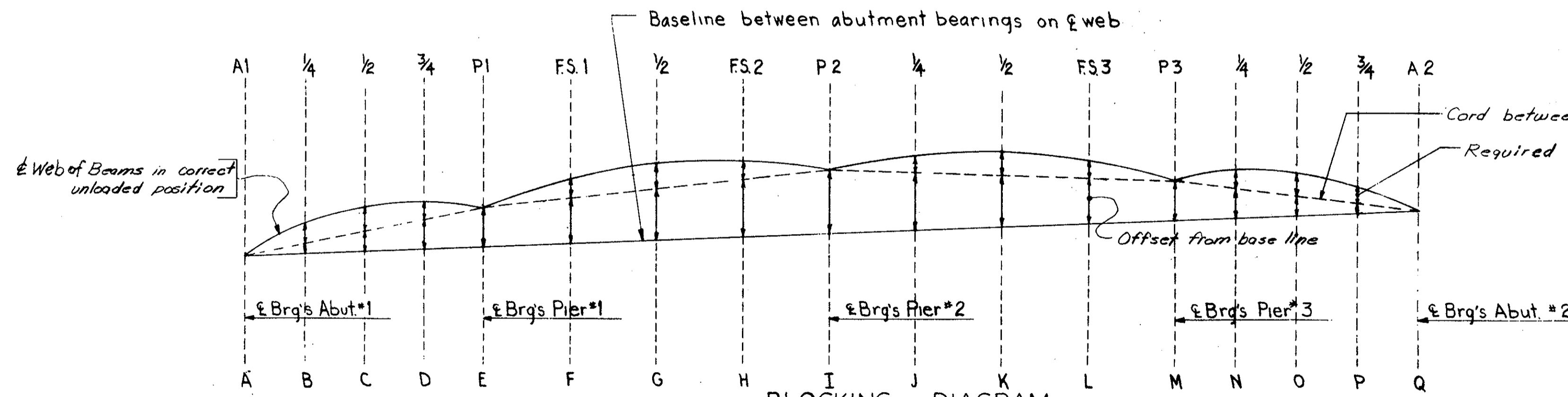


** Elevations shown are to the top of the reinforced concrete deck.

*Construction Elevations adjusted for deflection due to dead load of concrete

**** SCREED ELEVATIONS**

LOCATION	STATION	LEFT CURB		RIGHT CURB	
		FINAL Elev.	CONSTR. ELEV. *	FINAL Elev.	Constr. Elev. *
Abut #1	8+61.00	1122.82	1122.82	1122.82	1122.82
Span 1 - 1/2 pt.	8+89.50	1123.23	1123.25	1123.23	1123.25
Pier #1	9+18.00	1123.56	1123.56	1123.56	1123.56
Field Splice #1	9+33.00	1123.70	1123.72	1123.70	1123.72
Span 2 - 1/2 pt.	9+59.00	1123.90	1123.95	1123.90	1123.95
Field Splice #2	9+82.00	1124.02	1124.04	1124.02	1124.04
Pier #2	10+00.00	1124.08	1124.08	1124.08	1124.08
Span 3 - 1/4 pt.	10+20.50	1124.11	1124.13	1124.11	1124.13
Span 3 - 1/2 pt.	10+41.00	1124.10	1124.15	1124.10	1124.15
Field Splice #3	10+67.00	1124.03	1124.05	1124.03	1124.05
Pier #3	10+82.00	1123.97	1123.97	1123.97	1123.97
Span 4 - 1/2 pt.	11+10.50	1123.78	1123.80	1123.78	1123.80
Abut #2	11+39.00	1123.51	1123.51	1123.51	1123.51



DEFLECTION AND CAMBER

DESCRIPTION	Span # 1				Span # 2				Span # 3				Span # 4				
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Deflection due to weight of steel		1/16	1/16	0		1/16	1/8	1/16		1/16	1/8	1/16		0	1/16	1/16	
Deflection due to remaining dead load		3/16	1/4	1/16		3/16	9/16	1/4		1/4	9/16	3/16		1/16	1/4	3/16	
Adjustment required for vertical curve		3/8	7/16	3/8		9/16	15/16	5/8		1 1/16	15/16	9/16		3/8	7/16	3/8	
Required shop Camber		5/8	3/4	7/16		13/16	1 5/8	15/16		1	1 5/8	13/16		7/16	3/4	5/8	
Offset from Base Line	0	1 3/4	3 9/16	5 5/16	7 1/8	7 3/16	9	10 1/16	10 15/16	10	9	7 1/16	7 1/8	5 5/16	3 9/16	1 3/4	0

For additional end dam details see Standard Drawing SD-1-69, 5ht. 1 of 4

END DAM DETAILS

5/9

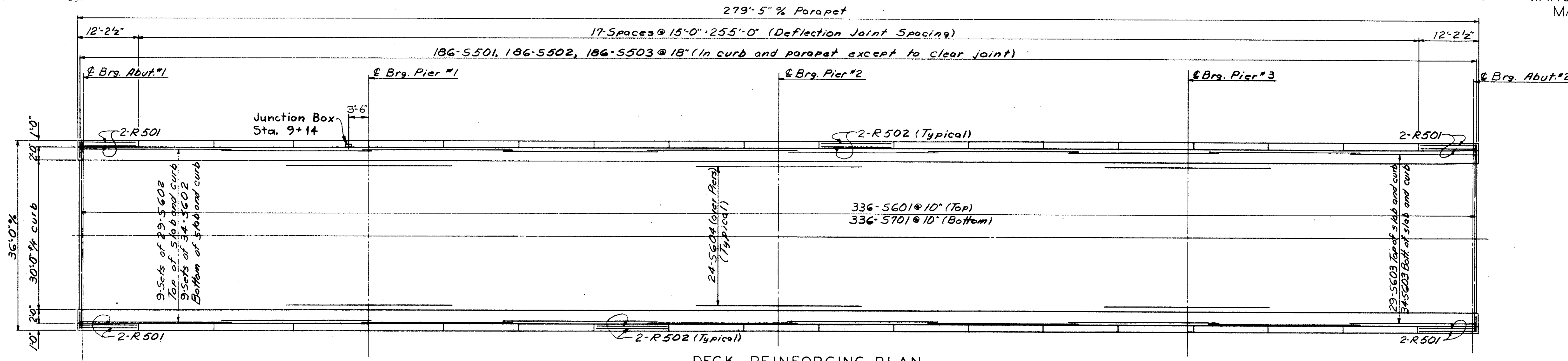
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

FRAMING PLAN
BRIDGE NO. MAH-680-1339
UNDER WALKER MILL ROAD

STA 423+86.24

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
REB	RJP		H.J.B.	2/6/70	

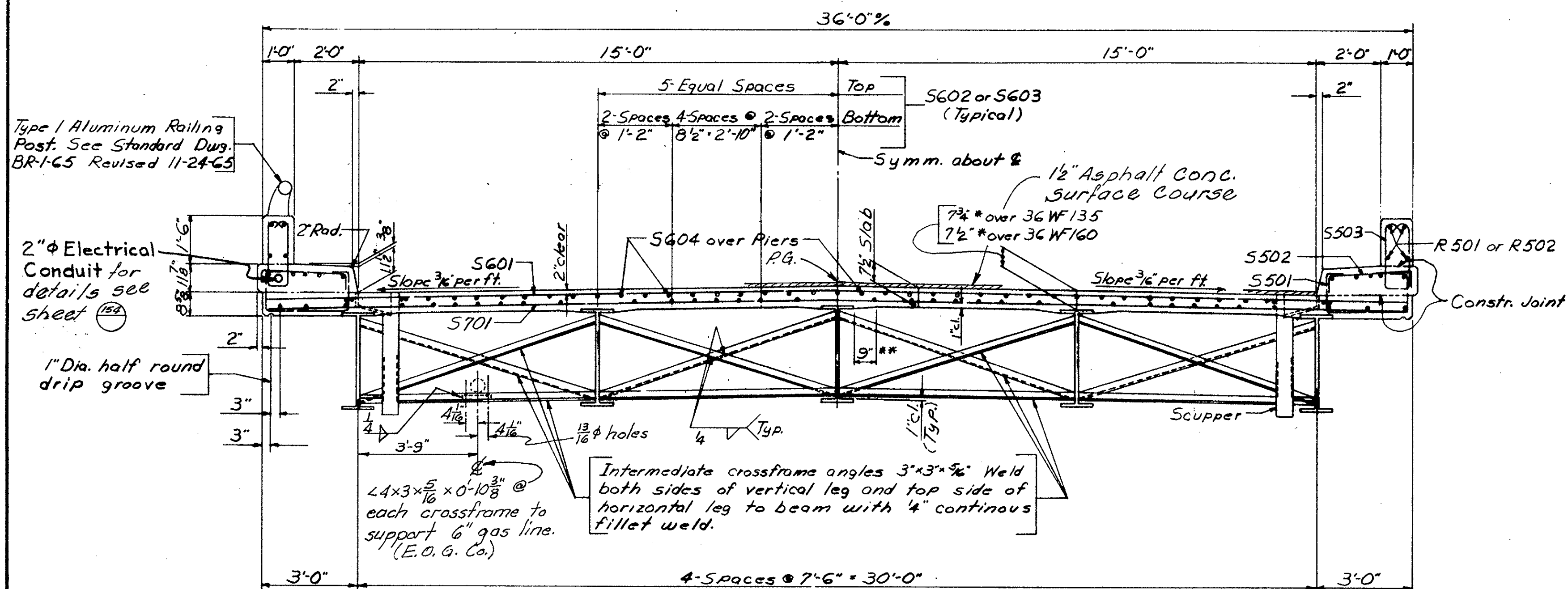
REPRODUCED
APR 8 1970



DECK REINFORCING PLAN

NOTES:

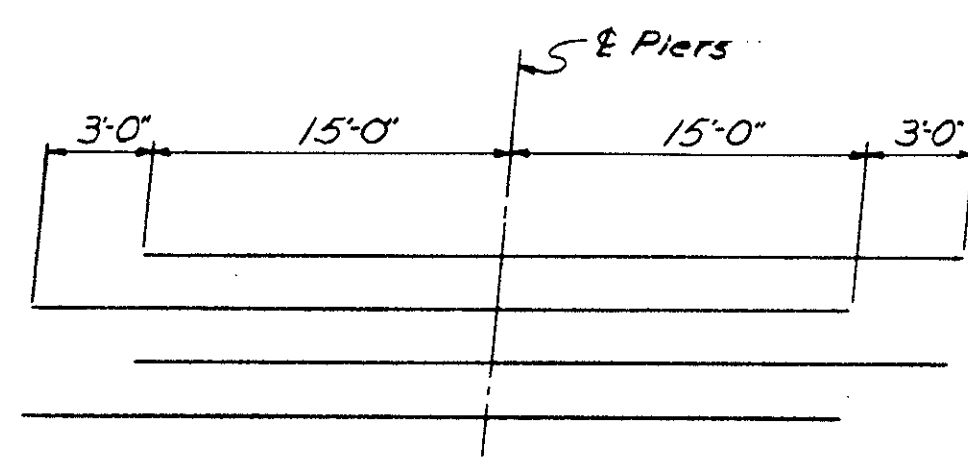
- All concrete shall be class 'C'
- Concrete and reinforcing steel above parapet construction joint shall be included with railing for payment.
- For scupper location see Framing Plan, Sheet 192
- See sheet 192 for scupper, subdrainage and asphalt concrete surface course details.



TYPICAL CROSS SECTION

** A haunch width of 9" shall be used for computing quantities of concrete. However the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.



STAGGER OF S604 BARS

MICHAEL BAKER JR., CONSULTING ENGINEERS ROCHESTER, PENNSYLVANIA					
DECK PLAN BRIDGE NO. MAH-680-1339 UNDER WALKER MILL ROAD					
STA. 423+86.24					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
REB	RJP		H.J.B. REB	4/11/70 1/23/70	