

MICROFILMED
MAR 18 1985

STATE OF OHIO

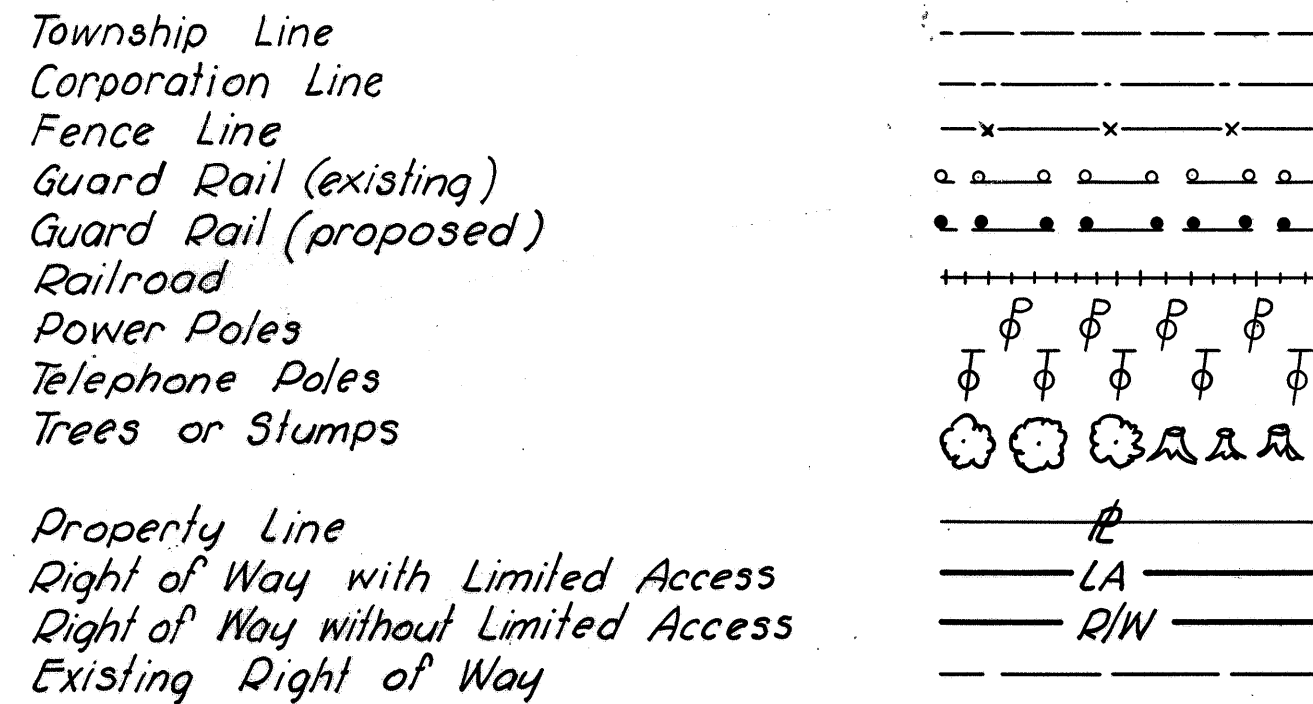
JAN 3 1964
GROUND PHOTOLAB

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-FG-1042(G)	

1
161

ERI 6-7.31

CONVENTIONAL SIGNS



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LINE DATA

F-1042(G): Sta. 638+00 to 722+00 = 8,400.00 Lin. Ft.
 Sta. 748+00 to 844+00 = 9,600.00 Lin. Ft.
 Length of Project F-1042(G) = 18,000.00 Lin. Ft. or 3.409 Miles
 FG-1042(G): Sta. 722+00 to 748+00 = 2,600.00 Lin. Ft.
 Length of Project FG-1042(G) = 2,600.00 Lin. Ft. or 0.492 Miles
 Total Length of Project = 20,600.00 Lin. Ft. or 3.901 Miles

Sta. 637+00 to 722+00, U.S.G. = 8,500.00 Lin. Ft.
 Sta. 748+00 to 845+00, U.S.G. = 9,700.00 Lin. Ft.
 Sta. 35+75 to 63+00, S.R.4 = 2,725.00 Lin. Ft.
 Sta. 42+00 to 61+79.79, Campbell St. = 1,979.79 Lin. Ft.
 Length of Work F-1042(G) = 22,904.79 Lin. Ft. or 4.338 Miles
 Sta. 722+00 to 748+00, U.S.G. = 2,600.00 Lin. Ft.
 Length of Work FG-1042(G) = 2,600.00 Lin. Ft. or 0.492 Miles
 Total Length of Work = 25,504.79 Lin. Ft. or 4.830 Miles

DEPARTMENT OF HIGHWAYS
ERI 6-7.31
ERIE COUNTY
 PERKINS TOWNSHIP
 GRADE SEPARATION WITH BALTIMORE & OHIO RAILROAD COMPANY

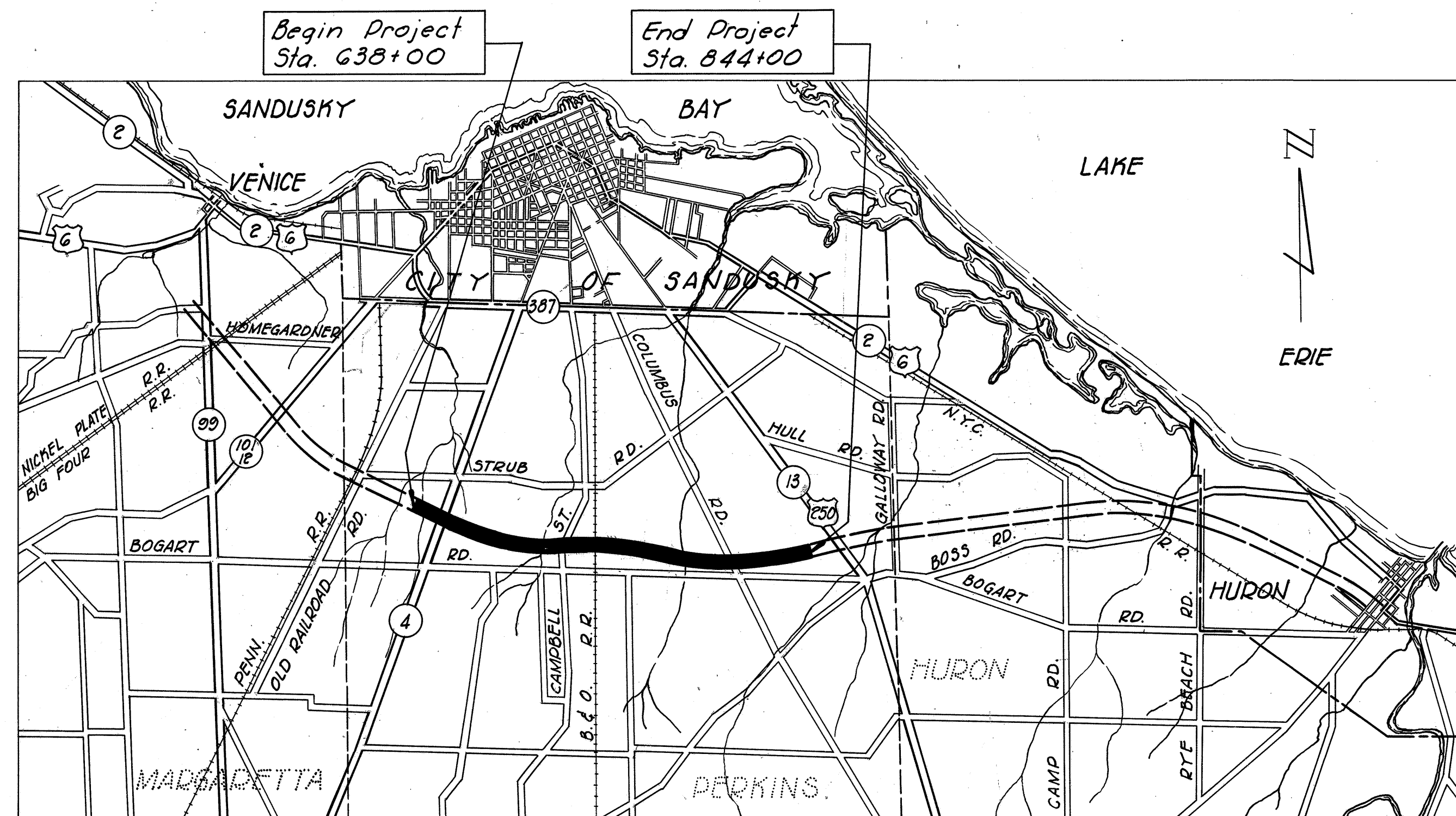
F-FG-1042(G)

LIMITED ACCESS
 This improvement is especially designed for through traffic and has been declared a limited access highway or freeway by action of the Director of Highways in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

The Standard Specifications of the State of Ohio, Department of Highways, including changes and Supplemental Specifications listed in the proposal shall govern this improvement.

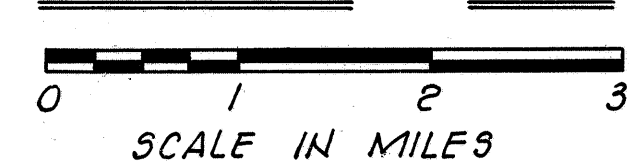
The right of way for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of this highway and that provisions for the maintenance and safety of traffic will be as set forth on these plans and estimates.



Delivery Point: B&O RR at Bogart Road

LOCATION PLAN



Portion to be improved...
 State Roads.....
 Other Roads.....

Average Haul: 1.2 Miles

Revision on sheet 50 (6-20-61) AREB.

Plan
 Profile: Horizontal
 Profile: Vertical
 Cross Section

SURVEY AND PLANS BY
 SANZENBACHER, MILLER AND BRIGHAM
 TOLEDO, OHIO

JAN 3 1964
 GROUND PHOTOLAB

DEPARTMENT OF COMMERCE
 BUREAU OF PUBLIC ROADS

Approved _____
 Division Engineer Date _____

STANDARD CONSTRUCTION DRAWINGS

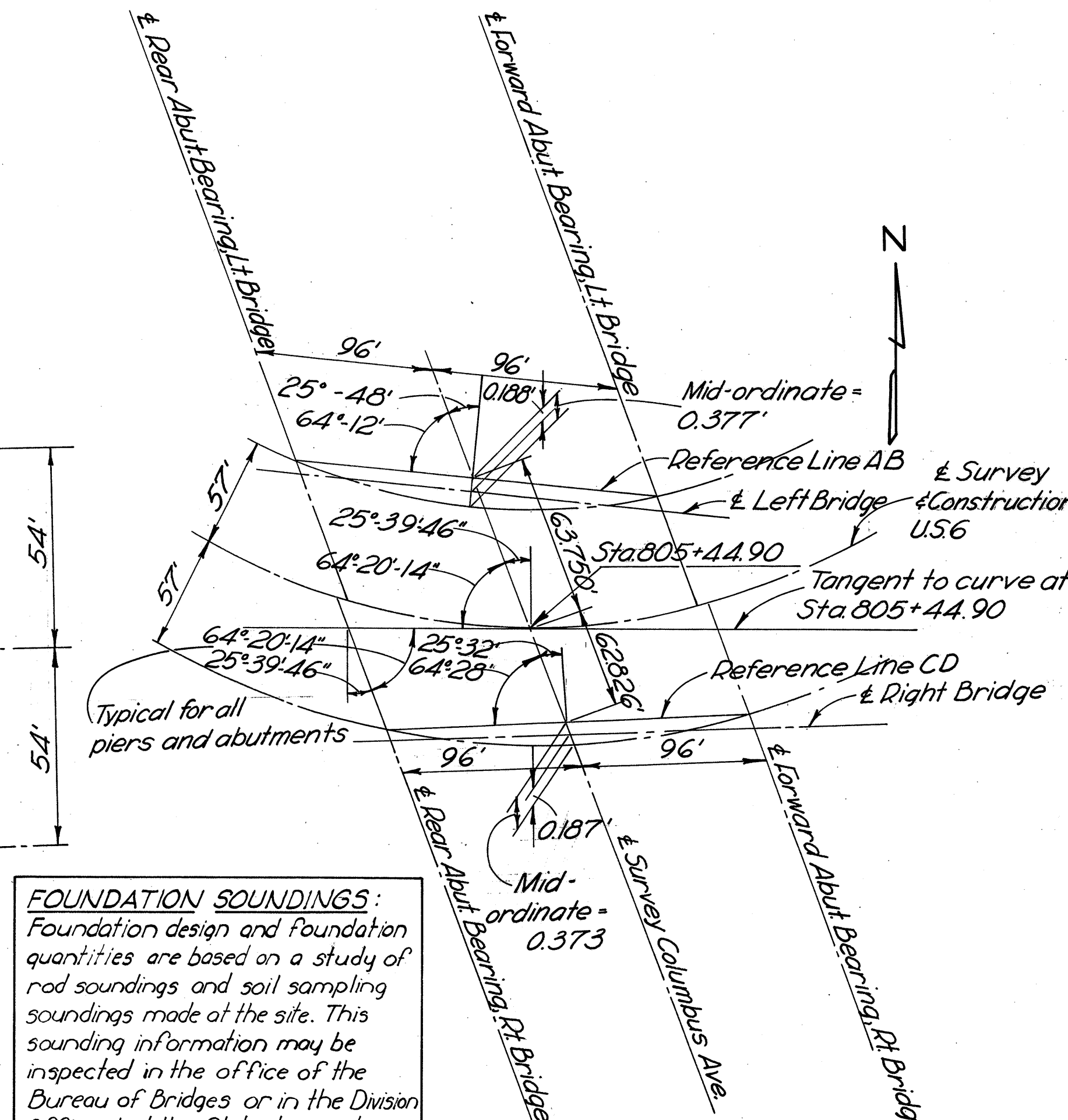
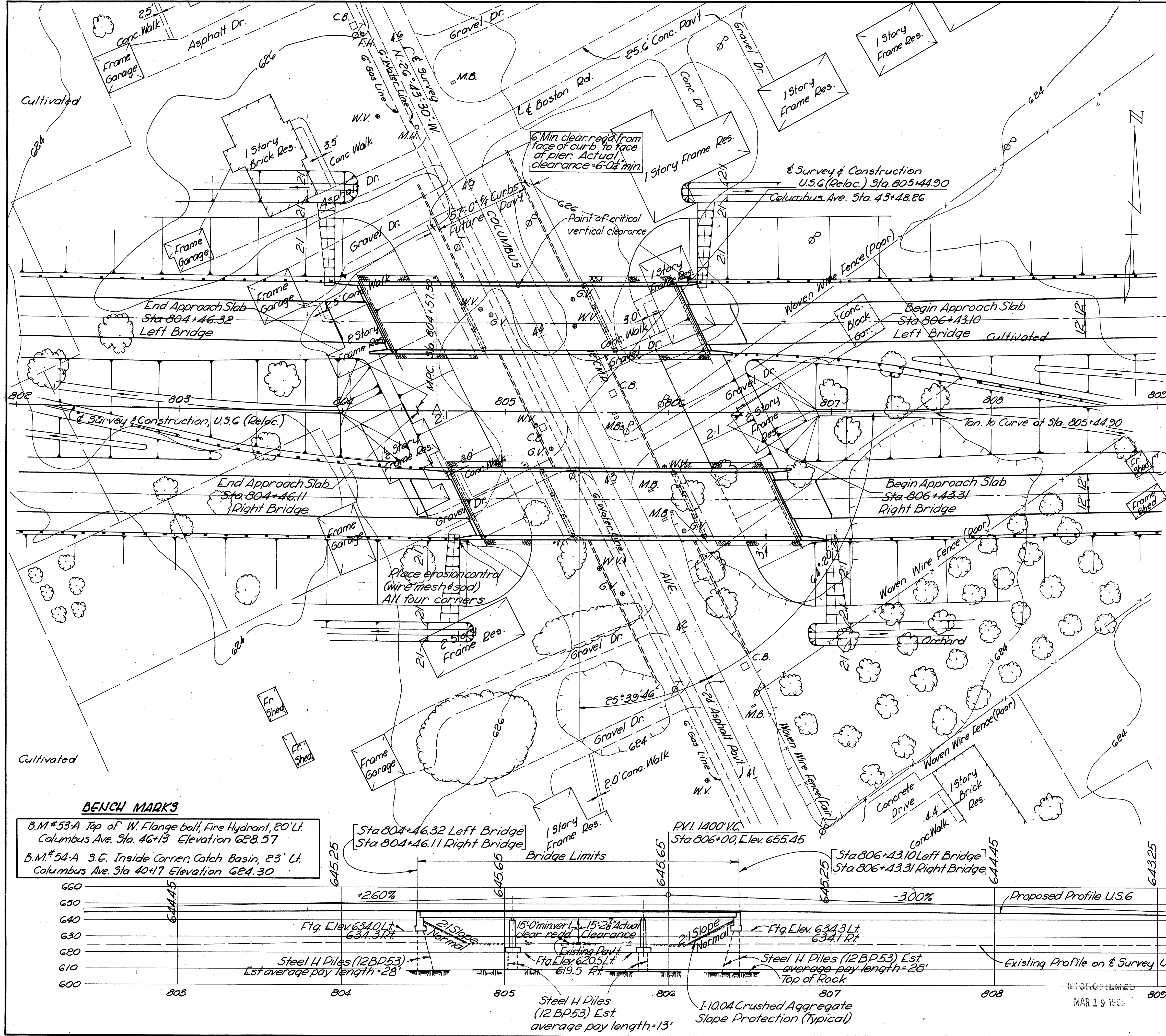
AS-1-54	12-1-54	L-3	4-1-50	5-27 PC.3	2-20-45	I-15 No.1	5-21-59
RB-1-55	2-2-59	L-3-A	4-1-50	3-27 PC.4	1-4-54	I-15 No.2-A	8-17-60
AR-1-57	2-2-59	RT-1	7-15-58	SP-53	11-25-58	I-21-23	8-1-56
CSB-2-56	Shfts. 223	2-2-59	T-35	1-2-56	1-1,2,3,4 & 5	4-24-58	G-7.07
F-2	10-1-58	B-T-50-70-71E	10-1-47	I-B.C.B. P.2-A&B	3-2-59	HW-A&B	7-15-57
F-3	9-1-59	B-T-71R	3-2-53	I-B.C.B. No.4	7-1-58	HW-C	7-15-57
DR-1	1-3-55	LJ No.1	7-1-55	I-B.C.B. No.6	1-26-59	I-B.C.B. No.5	7-1-58
L-1	4-1-50	TJ	9-12-60	I-12	7-1-54		

SUPPLEMENTAL SPECIFICATIONS

S-101	12-2-59
B-219	Rev. 3-12-59
M-206.G(b)	5-25-56
18	Rev. 6-15-59
I-124	1-11-56

FILE NO.	ERI 6-7.31
Date of Letting	196
Contract No.	

ERI 6-731
4.4 Miles West of Huron



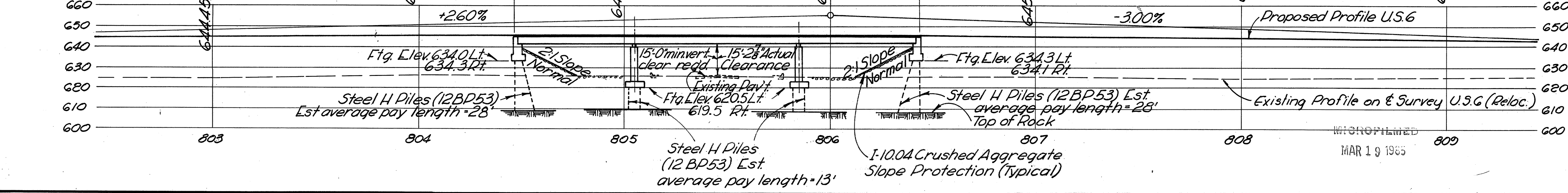
FOUNDATION SOUNDINGS:
Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges or in the Division Office, but the State does not guarantee the accuracy thereof.

CURVE DATA
 $\Delta = 27^{\circ}08'30''$ Lt.
 $D = 0^{\circ}28'$
 $R = 12,277.67'$
 $T = 2963.71'$
 $L = 5816.07'$
 $E = 352.37'$
 $PC = 775+49.46$
 $PI = 805+13.17$
 $PT = 833+65.53$
 $MPC = 804+57.50$

PROPOSED STRUCTURES
 Type: Continuous steel beam with reinf. concrete deck Reinf. Concrete Pier Bents and Stub Abutments
 Spans: 56'-0", 80'-0", 56'-0" % Brgs.
 Roadway: 42'-0" % of parapets
 Left & Right Bridges
 Load Frequency: CF-400 (57)
 Skew: 25°-48' R/L Left Bridge, 25°-32' R/L Right Bridge
 Wearing Surface: 1" Monolithic Concrete
 Approach Slabs: AS-1-54 (25'-0" Long)
 Alignment: 0°-28' Curve Left No Super-elevation

Design Year Traffic
ADT (1979) = 3200

BENCH MARKS
 B.M.#53-A Top of W. Flange bolt, Fire Hydrant, 20' Lt. Columbus Ave. Sta. 46+13 Elevation 628.57
 B.M.#54-A S.E. Inside Corner, Catch Basin, 23' Lt. Columbus Ave. Sta. 40+17 Elevation 624.30



SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

SITE PLAN
 BRIDGE NO. ERI 6-1048 LEFT AND RIGHT OVER COLUMBUS AVENUE
 ERIE CO. LEFT STA. 804+46.32 to 806+43.10
 RIGHT STA. 804+46.11 to 806+43.31
 SCALE: 1"=30'

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
S.M.B.	T.H.B.B.	J.W.B.	T.W.D.	S.J.L.	F.C.H.
					9-23-60

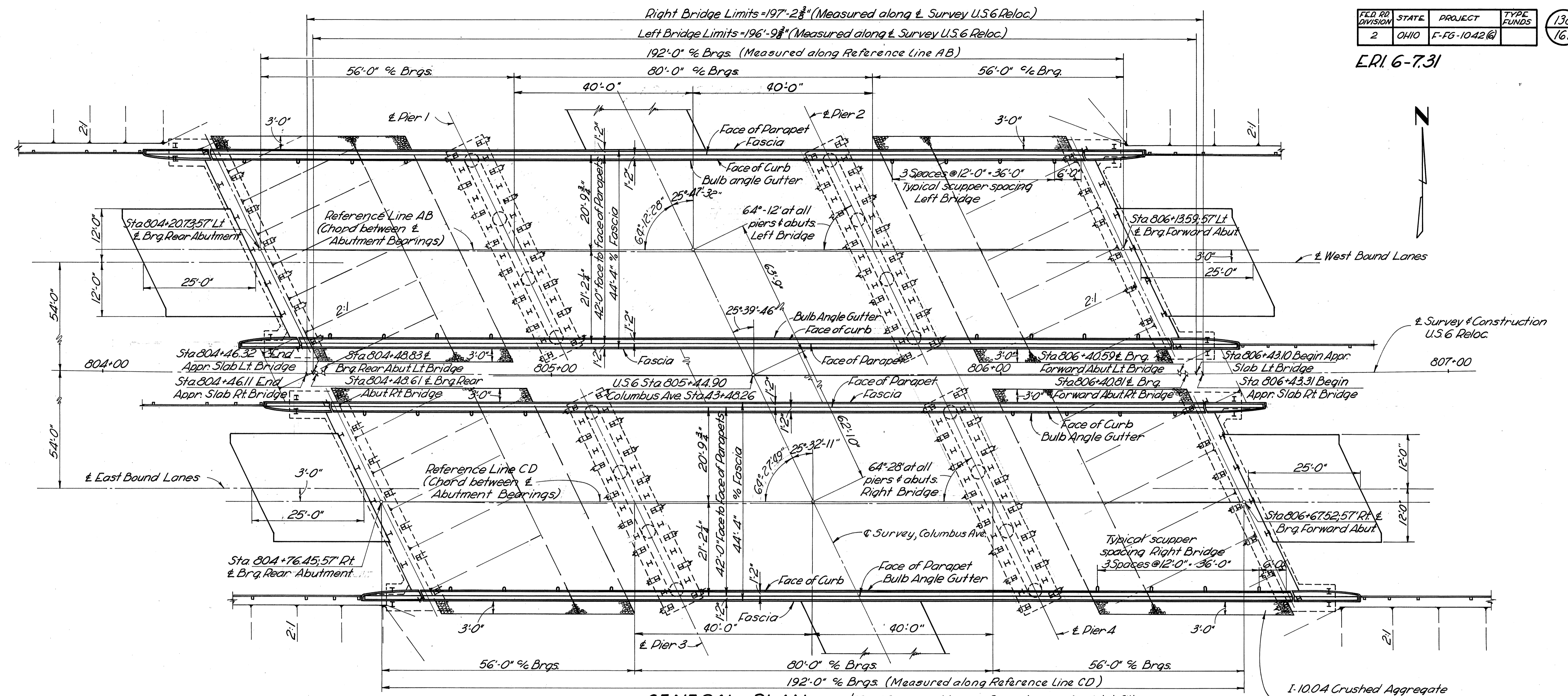
ER-2-1096

MAR 19 1965

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-FG-1042(6)	

138
161

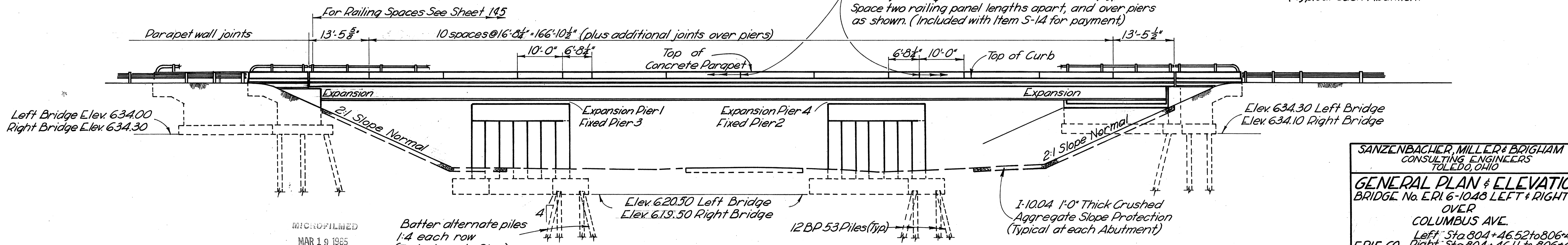
ERI 6-731



GENERAL PLAN

1/2" Gray Sponge rubber preformed expansion joint filler meeting the requirements of Section M-10.02, Type 1. Space two railing panel lengths apart, and over piers as shown. (Included with Item S-14 for payment)

1-10.04 Crushed Aggregate Slope Protection (Typical each Abutment)



GENERAL ELEVATION

SANZENBACHER, MILLER & BRIGHAM CONSULTING ENGINEERS TOLEDO, OHIO				
GENERAL PLAN & ELEVATION BRIDGE No. ERI 6-1048 LEFT & RIGHT OVER COLUMBUS AVE. Left: Sta 804+46.52 to 806+43.10 Right: Sta 804+46.11 to 806+43.31				
DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED				
LG	LG	JEC	TFH	BJH FCM 9/23/60

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MAR 19 1965

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	139
2	OHIO	F-FG-1042(6)		161

ERI 6-7.31

REFERENCE shall be made to Standard Drawings AS-1-54 "Reinforced Concrete Approach Slabs," revised 12-1-54, CSB-2-56 "Continuous Steel Beam Bridge" (sheets 2 and 3 of 6 sheets), revised 2-2-59; AR-1-57, "Aluminum Railing with Concrete Parapet," revised 2-2-59, and to Supplemental Specification S-101 dated 12-2-59.

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.

EXCAVATION AND BACKFILL: Excavation quantity includes the removal of fill material between the surface of proposed embankment and the bottom of the footings. Backfill behind the abutments shall be compacted in accordance with the requirements for embankment compaction.

PROCEDURE: The embankments shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutments and the piles driven.

PILES shall be driven with a hammer of not less than 11,000 ft lbs. per blow to firm contact with rock. If the length of penetration is approximately equal to the depth of rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-13.05 is not less than the following value for a pile hammer of the indicated energy rating:

For the abutment piles:
 50 tons per pile using an 11,000 ft. lb. hammer
 42 tons per pile using a 15,000 ft. lb. or greater hammer
 For the pier piles:
 58 tons per pile using an 11,000 ft. lb. hammer
 47 tons per pile using a 15,000 ft. lb. or greater hammer

If the energy rating is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 23 tons per pile for the abutment piles and 25 tons per pile for the pier piles.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections between transverse construction joints, which are parallel to the transverse reinforcing steel and are located near the center of any span.

STRUCTURAL STEEL: See Proposal regarding A-373 steel.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the contractor be made in the shop. Class "B" welds are shown thus B.

ESTIMATED QUANTITIES - TWO BRIDGES

Item	Total	Unit	Description	Abutments				Piers				Superstructure		General	
				Lt. Rear	Lt. Fw'd.	Rt. Rear	Rt. Fw'd.	1	2	3	4	Left	Right		
E-2	1124	Cu.Yds.	Unclassified excavation	162	162	162	162	119	119	119	119				
S-1	498	Cu.Yds.	Class "C" concrete, superstructures									249	249		
S-1	146	Cu.Yds.	Class "C" concrete, pier caps & columns					36	36	37	37				
S-1	388	Cu.Yds.	Class "E" concrete, abutments	97	97	97	97								
S-1	180	Cu.Yds.	Class "E" concrete, pier footings					45	45	45	45				
S-4	234,948	Lbs.	Reinforcing steel	5,478	5,479	5,479	5,479	17,433	17,474	17,812	17,792	71,261	71,261		
S-7	566,000	Lbs.	Structural steel									283,000	283,000		
S-8	566,000	Lbs.	Field painting of structural steel, as per plan									283,000	283,000		
S-14	878	Lin. Ft.	Railing (aluminum rail and supports, concrete parapet)									439	439		
S-16	Lump	Sum	First test pile												Lump
S-18	3560	Lin. Ft.	Steel piles 12 BP 53	500	500	500	500	390	390	390	390				
S-29	64	Cu.Yds.	Porous backfill	16	16	16	16								
S-29	32	Each	Scuppers									16	16		
I-10	1044	Sq. Yds.	Crushed aggregate slope protection												1044

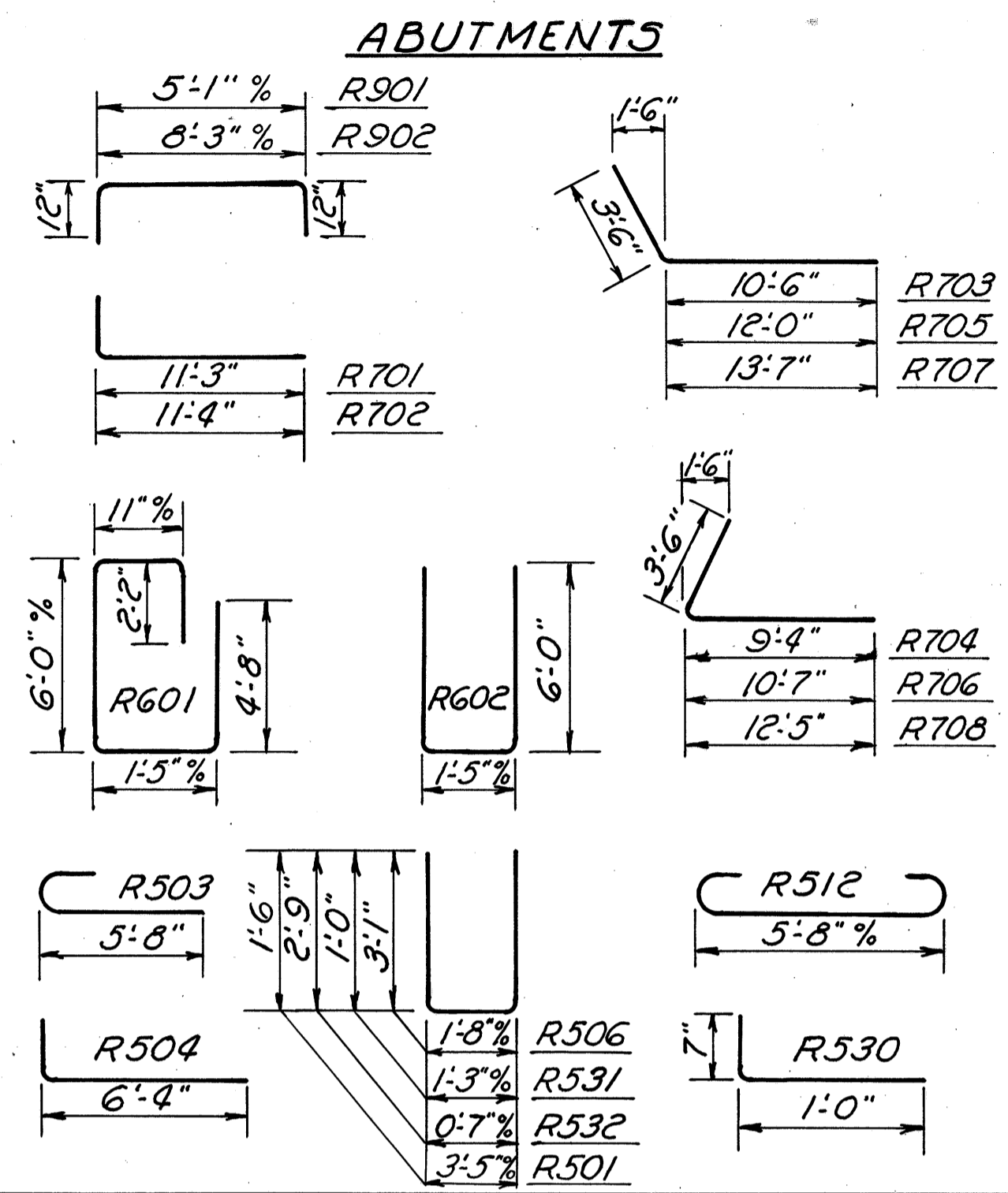
MICROFILMED
MAR 19 1965

SANZENBACHER, MILLER & BRIGHAM CONSULTING ENGINEERS TOLEDO, OHIO				
ESTIMATED QUANTITIES & GENERAL NOTES				
BRIDGE No. ERI 6-1048 LEFT & RIGHT OVER COLUMBUS AVENUE				
Left Sta. 804+46.32 to 806+43.10				
ERIE CO. Right Sta. 804+46.11 to 806+43.31				
DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED				
RJH	JEC	JEC	TFH	BJH FCM 9-23-60

ERI. 6-7.31

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shape	Mark	No.	Length	Weight	Shape	Mark	No.	Length	Weight	Shape	Mark	No.	Length	Weight	Shape
ABUTMENTS					PIERS					Bending Diagrams									
										ABUTMENTS									
R901	24	7'-1"	578	B	F1101	168	7'-6"	6,694	B										
R902	24	10'-3"	836	B															
										PIERS									
R701	28	12'-1"	692	B	F1001	64	7'-1"	1,951	B										
R702	24	12'-2"	597	B	F1003	24	22'-9"	2,319	B										
R703	12	13'-10"	339	B	F1004	24	37'-5"	3,864	B										
R704	12	12'-7"	309	B															
R705	4	15'-4"	125	B															
R706	4	13'-10"	113	B	F701	296	8'-10"	5,344	B										
R707	8	16'-11"	277	B															
R708	8	15'-8"	256	B															
R601	108	14'-6"	2,352	B	F601	148	7'-2"	1,593	S										
R602	78	13'-1"	1,333	B															
R501	244	6'-2"	1,369	B	P1101	42	17'-7"	3,924	S										
R502	48	27'-5"	1,373	S	P1105	20	17'-10"	1,895	S										
R503	164	6'-3"	1,069	B	P1106	20	32'-3"	3,827	S										
R504	152	6'-10"	1,083	B	P1107	32	28'-1"	4,775	B										
R505	152	6'-7"	1,044	S	P1108	16	29'-0"	2,465	S										
R506	144	7'-7"	1,139	B															
R507	64	24'-11"	1,663	S															
R508	48	17'-3"	864	S	P1001	16	17'-7"	1,211	S										
R509	4	30'-2"	126	S	P1002	16	17'-9"	1,222	S										
R510	4	13'-11"	58	S	P1003	16	18'-9"	1,291	S										
R511	4	7'-3"	30	S	P1004	16	18'-7"	1,279	S										
R512	48	6'-10"	342	B															
R513	32	11'-4"	378	S															
R514	16	8'-0"	134	S	P801	16	8'-7"	367	B										
R515	32	2'-7"	86	S															
R516	16	6'-6"	108	S	P501	16	22'-10"	381	S										
R517	16	6'-7"	110	S	P502	192	8'-1"	1,619	B										
R518	28	11'-3"	329	S															
R519	24	11'-4"	284	S															
R520	24	9'-11"	248	S															
R521	8	13'-3"	111	S															
R522	48	3'-6"	176	S															
R523	8	15'-4"	128	S															
R524	8	15'-2"	127	S															
R525	24	4'-3"	106	S															
R526	8	13'-3"	111	S															
R527	8	13'-8"	114	S															
R528	8	12'-5"	104	S															
R529	8	12'-0"	100	S															
R530	76	1'-6"	119	B															
R531	68	3'-0"	213	B															
R532	76	5'-10"	462	B															
R533	16	13'-1"	*	S															
R534	16	12'-3"	*	S															



SUPERSTRUCTURES

5701	464	43'-8"	41,414	S	5501	516	4'-11"	2,646	B
5702	4	2'-8"	22	S	5502	516	2'-10"	1,525	B
5703	4	4'-2"	34	S	5503	352	4'-8"	1,713	B
5704	4	5'-9"	47	S	5504	32	13'-1"	*	S
5705	4	7'-3"	59	S	5505	32	6'-4"	*	S
5706	4	8'-10"	72	S	5506	32	9'-8"	*	S
5707	4	10'-4"	84	S	5507	128	16'-4"	*	S
5708	4	11'-11"	97	S					
5709	4	13'-6"	110	S					
5710	4	15'-0"	123	S					
5711	4	16'-7"	136	S					
5712	4	18'-2"	149	S					
5713	4	19'-8"	161	S					
5714	4	21'-3"	174	S					
5715	4	22'-10"	187	S					
5716	4	24'-3"	198	S					
5717	4	25'-11"	212	S					
5718	4	27'-5"	224	S					
5719	4	29'-0"	237	S					
5720	4	30'-7"	250	S					
5721	4	32'-1"	262	S					
5722	4	33'-8"	275	S					
5723	4	35'-2"	288	S					
5724	4	36'-9"	300	S					
5725	4	38'-4"	313	S					
5726	4	39'-10"	326	S					
5727	4	41'-5"	339	S					
5728	24	25'-6"	1,251	S					

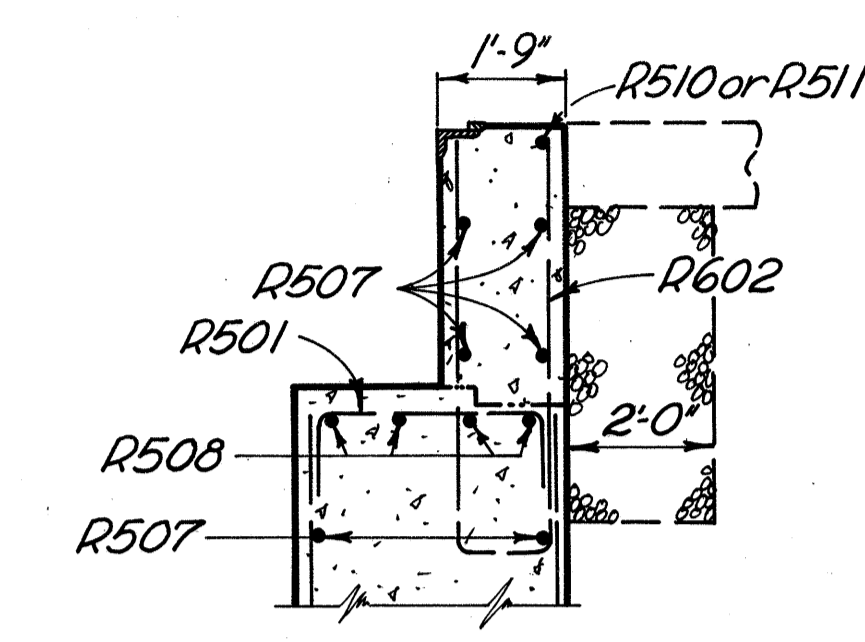
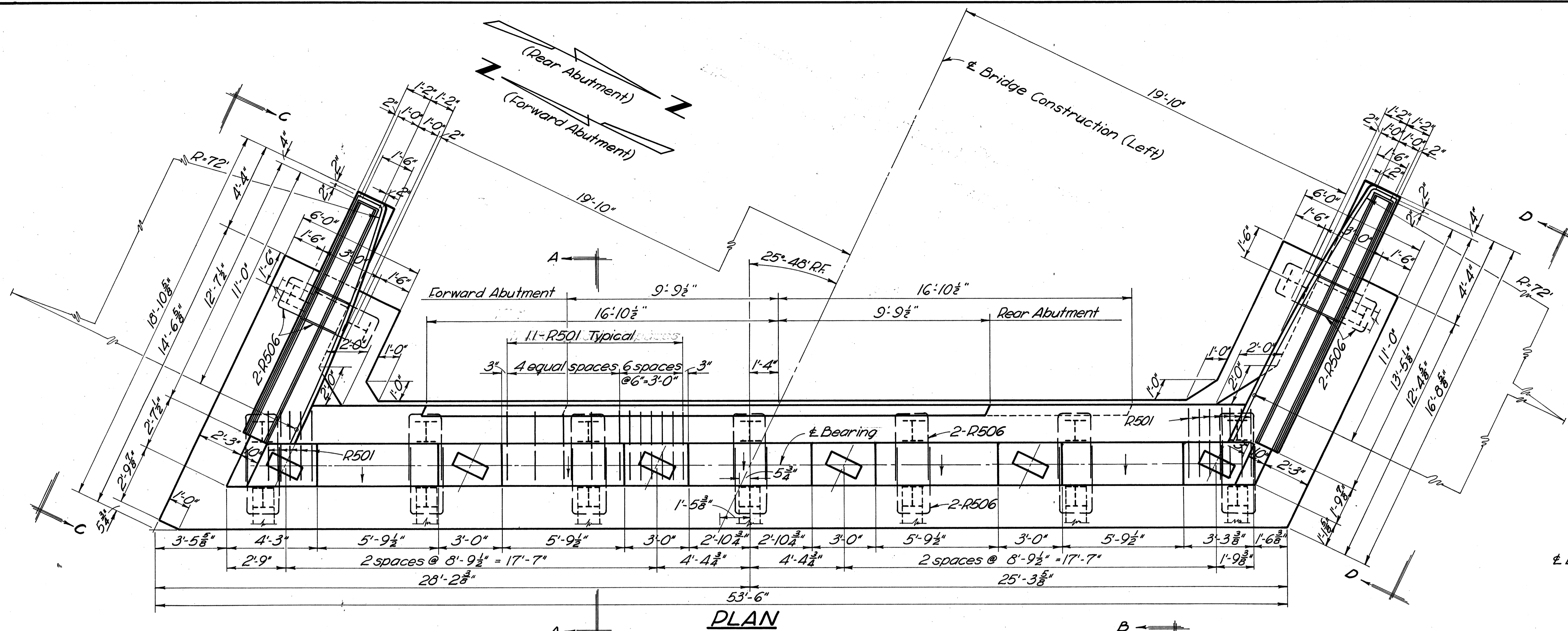
REPLACEMENT BARS

5601	464	43'-8"	30,433	S	RE1101	2	7'-7"	5
5602	1092	29'-3"	47,975	S	RE1001	2	7'-3"	5
5603	136	32'-0"	6,537	S	RE901	1	6'-10"	5
5604	4	2'-8"	16	S	RE801	1	6'-6"	5
5605	4	4'-2"	24	S	RE701	3	6'-3"	5
5606	4	5'-9"	35	S	RE601	5	5'-11"	5
5607	4	7'-3"	44	S	RE501	2	5'-7"	5
5608	4	8'-10"	53	S	RE401	1	5'-3"	5
5609	4	10'-4"	62	S				
5610	4	11'-11"	72	S				
5611	4	13'-6"	81	S				
5612	4	15'-0"	90	S				

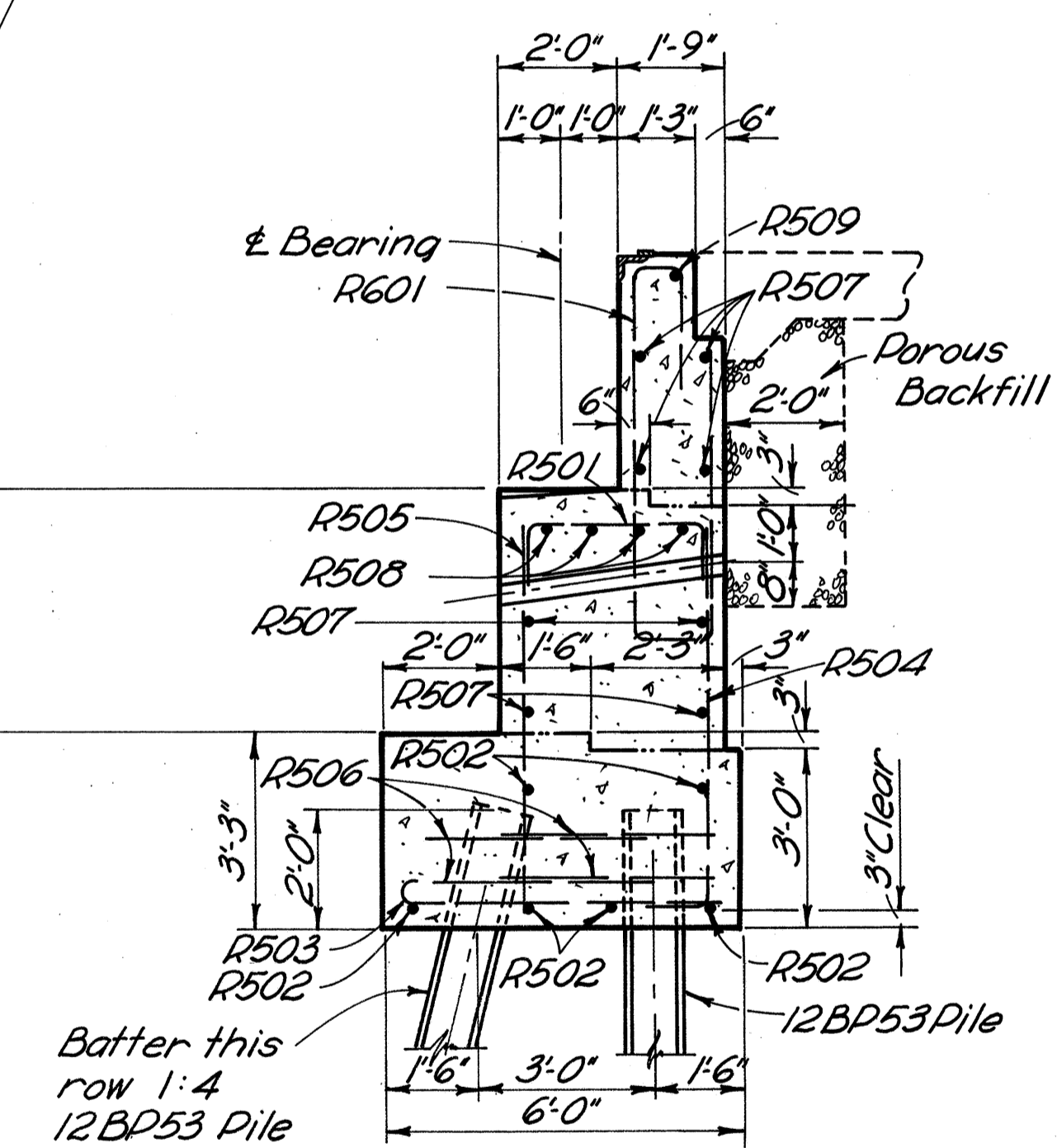
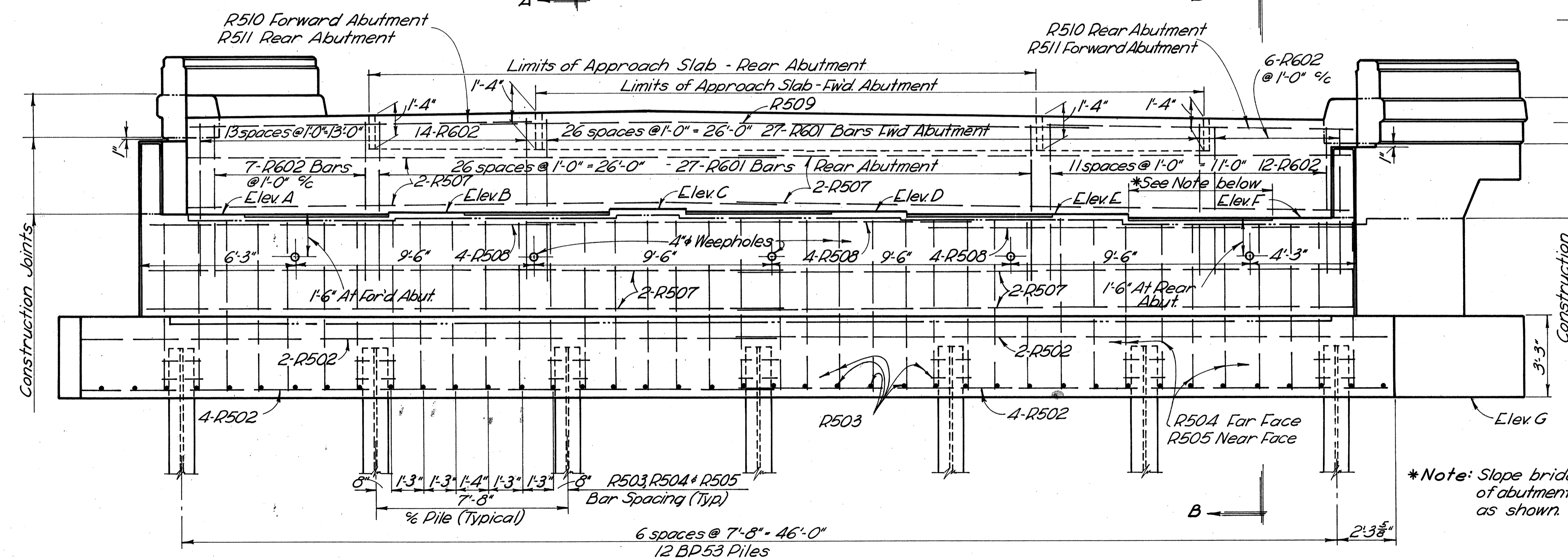
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-FG-1042 (6)	

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SECTION B-B



SECTION A-A

Note: Special care shall be taken in placing reinforcing bars below beam seat so that they will not interfere with the bearing plate anchor bars.

ELEVATION

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MAR 19 1965

LOCATION	ELEVATIONS						
	A	B	C	D	E	F	G
Fwd Abutment	641.41	641.52	641.64	641.72	641.59	641.45	634.30
Rear Abutment	641.28	641.38	641.49	641.37	641.23	641.08	634.00

*Note: Slope bridge seat 3/4" to face of abutment between beams as shown.

SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

ABUTMENTS
BRIDGE No. ERI 6-1048 LEFT
OVER
COLUMBUS AVENUE

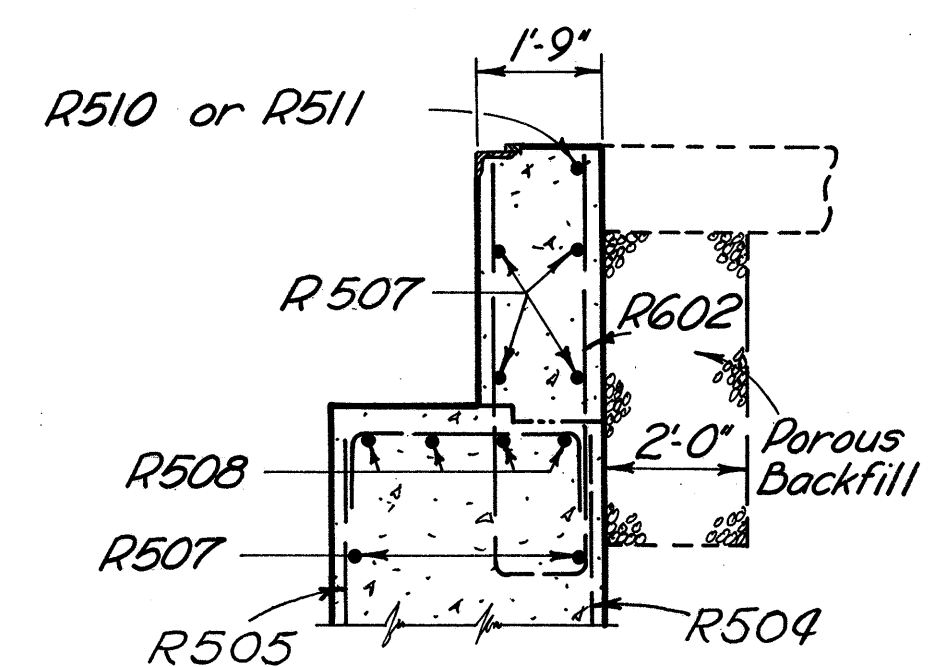
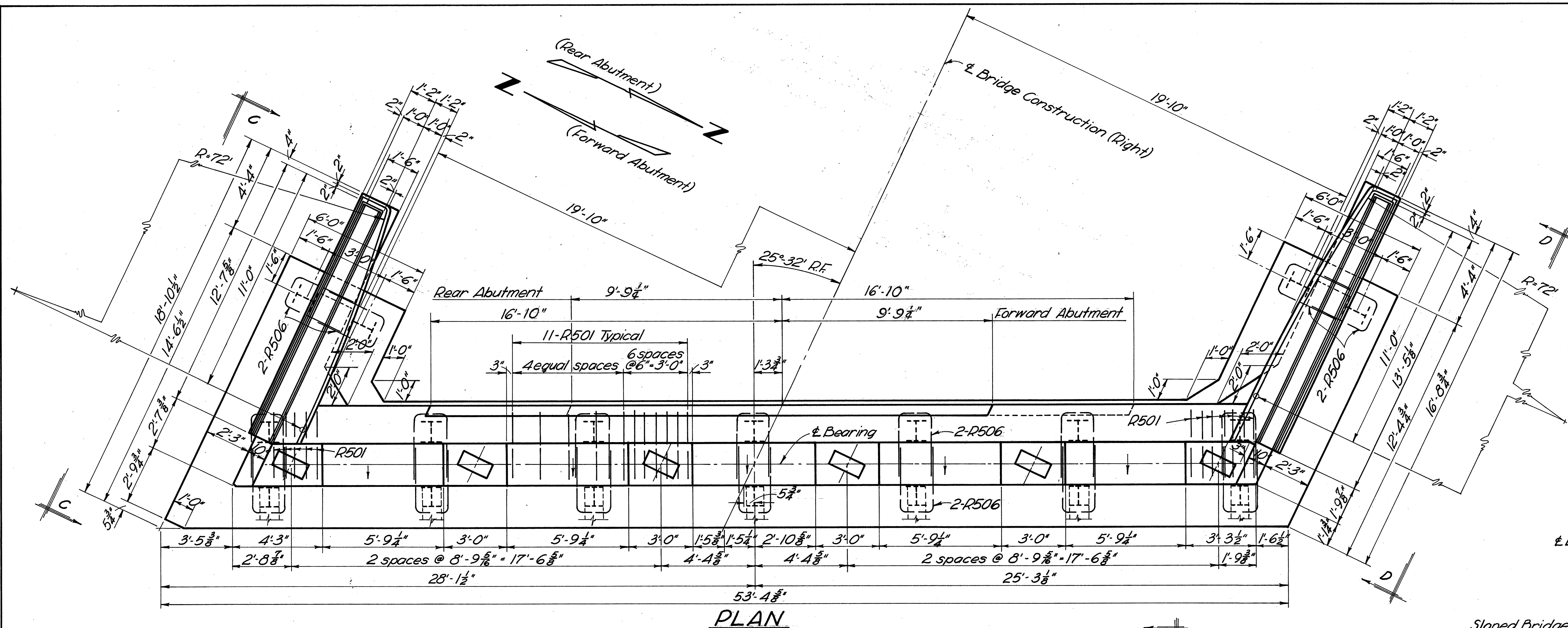
ERI CO. Sta. 804+46.32 to Sta. 806+43.10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJH	RJH	JEC	TFH	BJH	FCM 9-23-60	

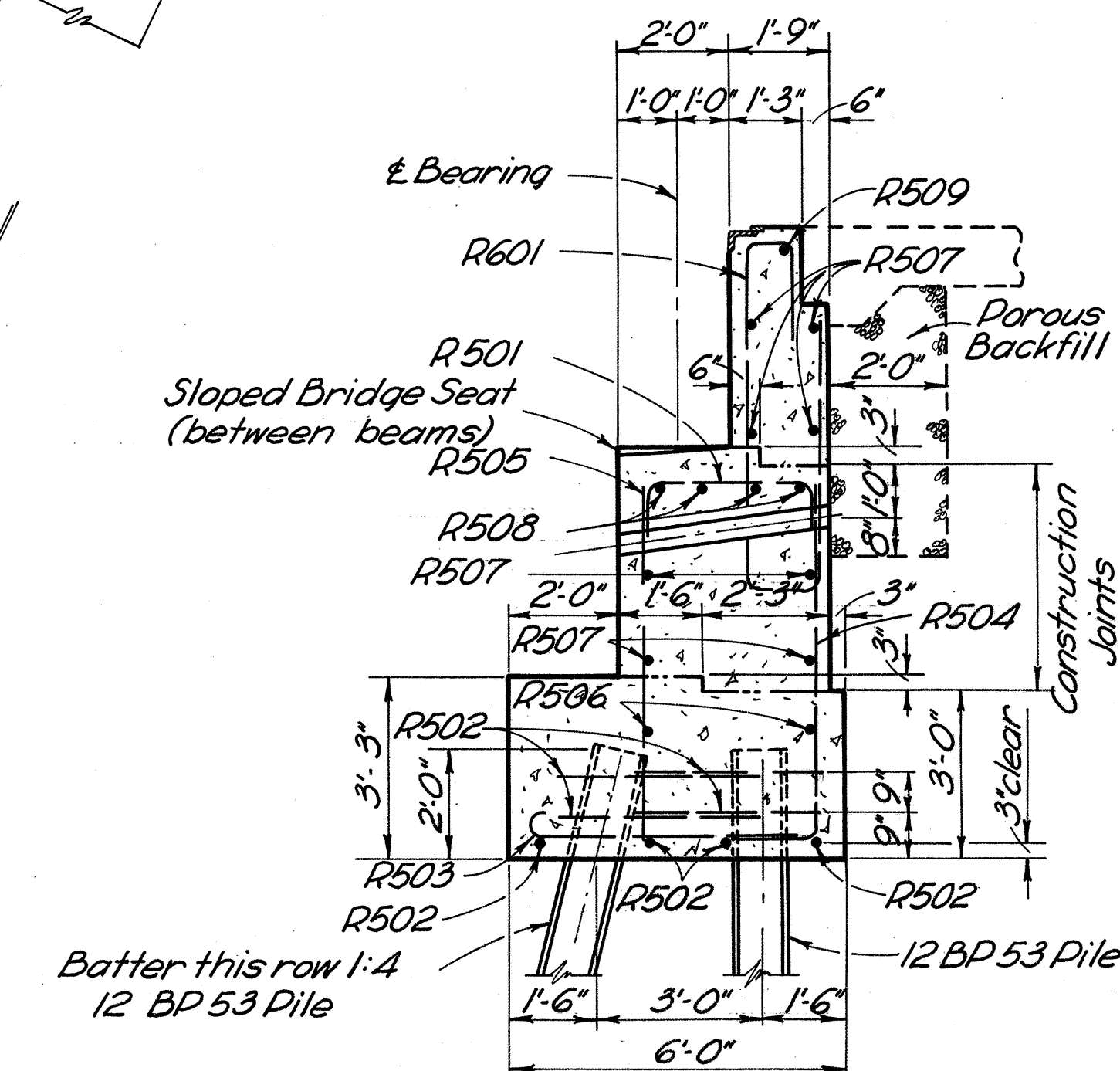
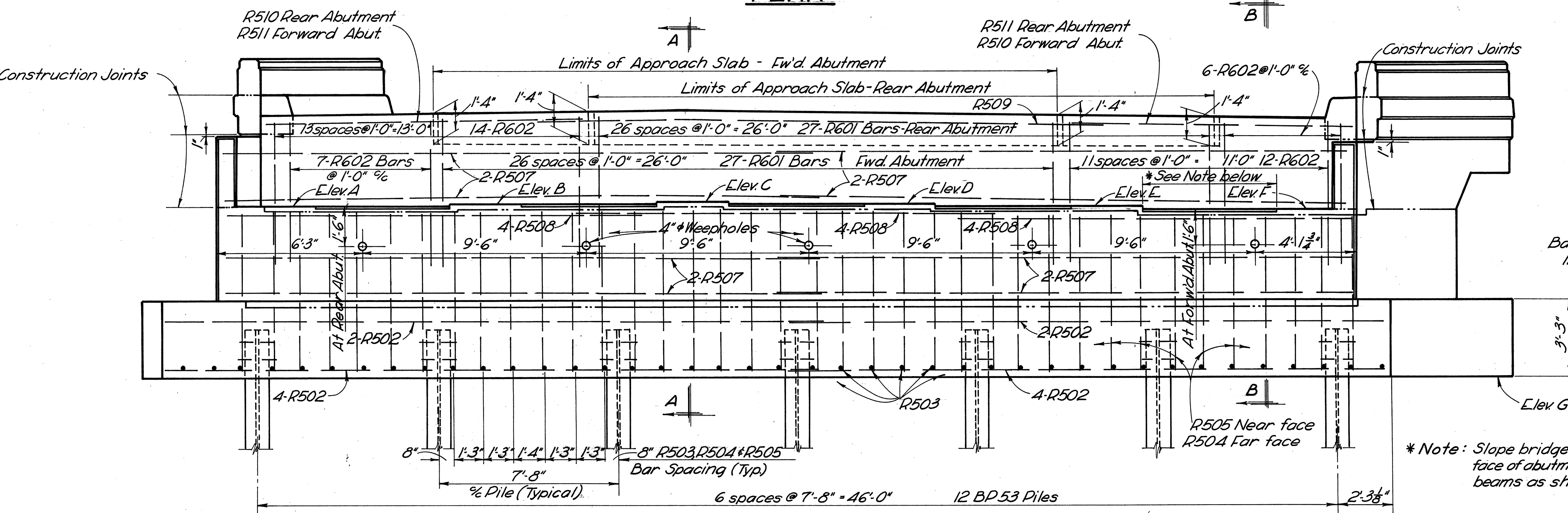
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-FG-1042(6)	

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ERI.6-7.31



SECTION B-B



SECTION A-A

Note: Special care shall be taken in placing reinforcing bars below beam seat so that they will not interfere with the bearing plate anchor bars.

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MAR 19 1965

ELEVATION

LOCATION	ELEVATIONS						
	A	B	C	D	E	F	G
Fwd. Abutment	641.32	641.43	641.54	641.43	641.28	641.14	634.10
Rear Abutment	641.38	641.50	641.61	641.69	641.56	641.42	634.30

* Note: Slope bridge seat 3/4" to face of abutment between beams as shown.

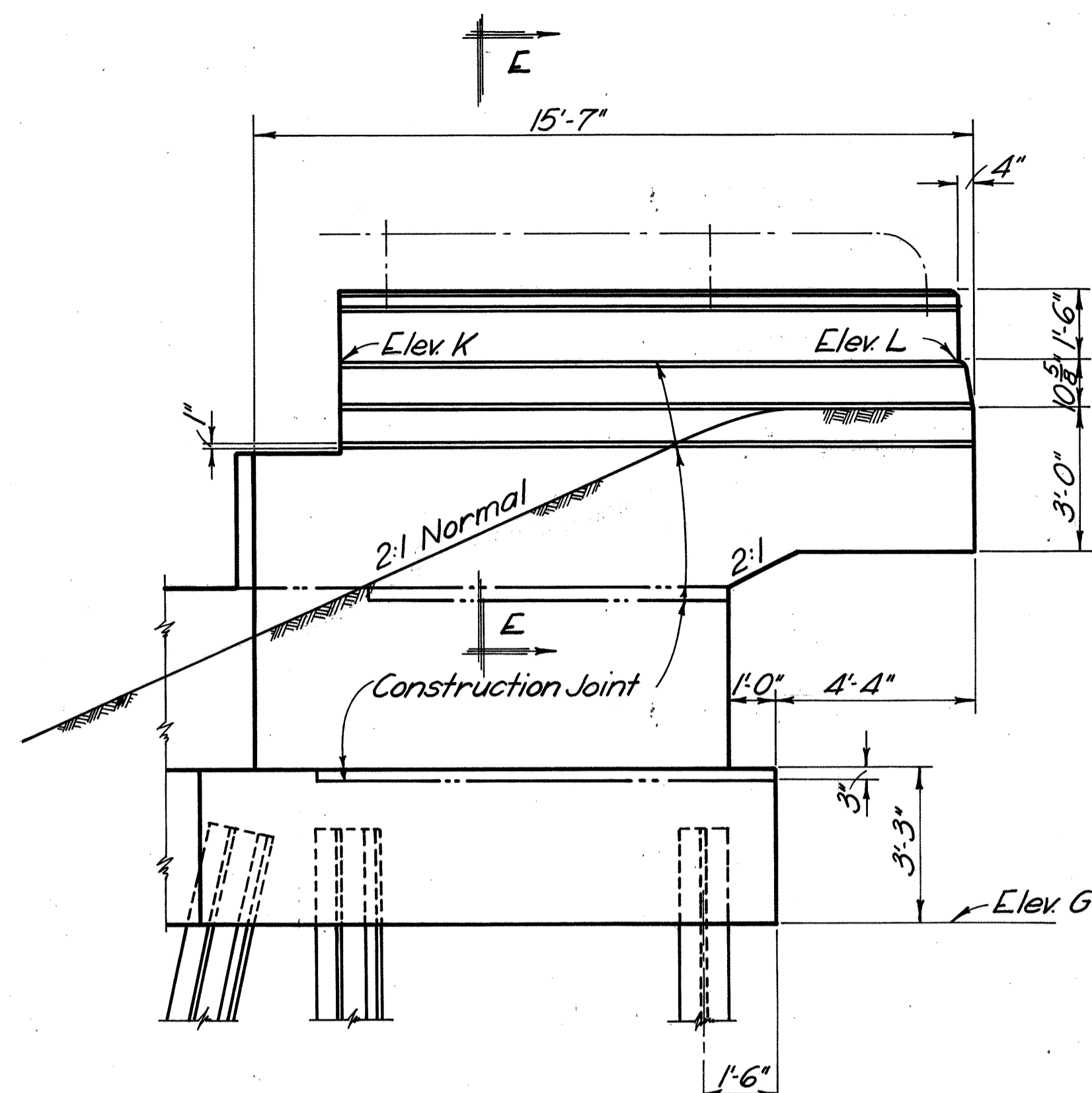
SANZENBACHER MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

ABUTMENTS
BRIDGE No. ERI. 6-1048 RIGHT
OVER
COLUMBUS AVENUE

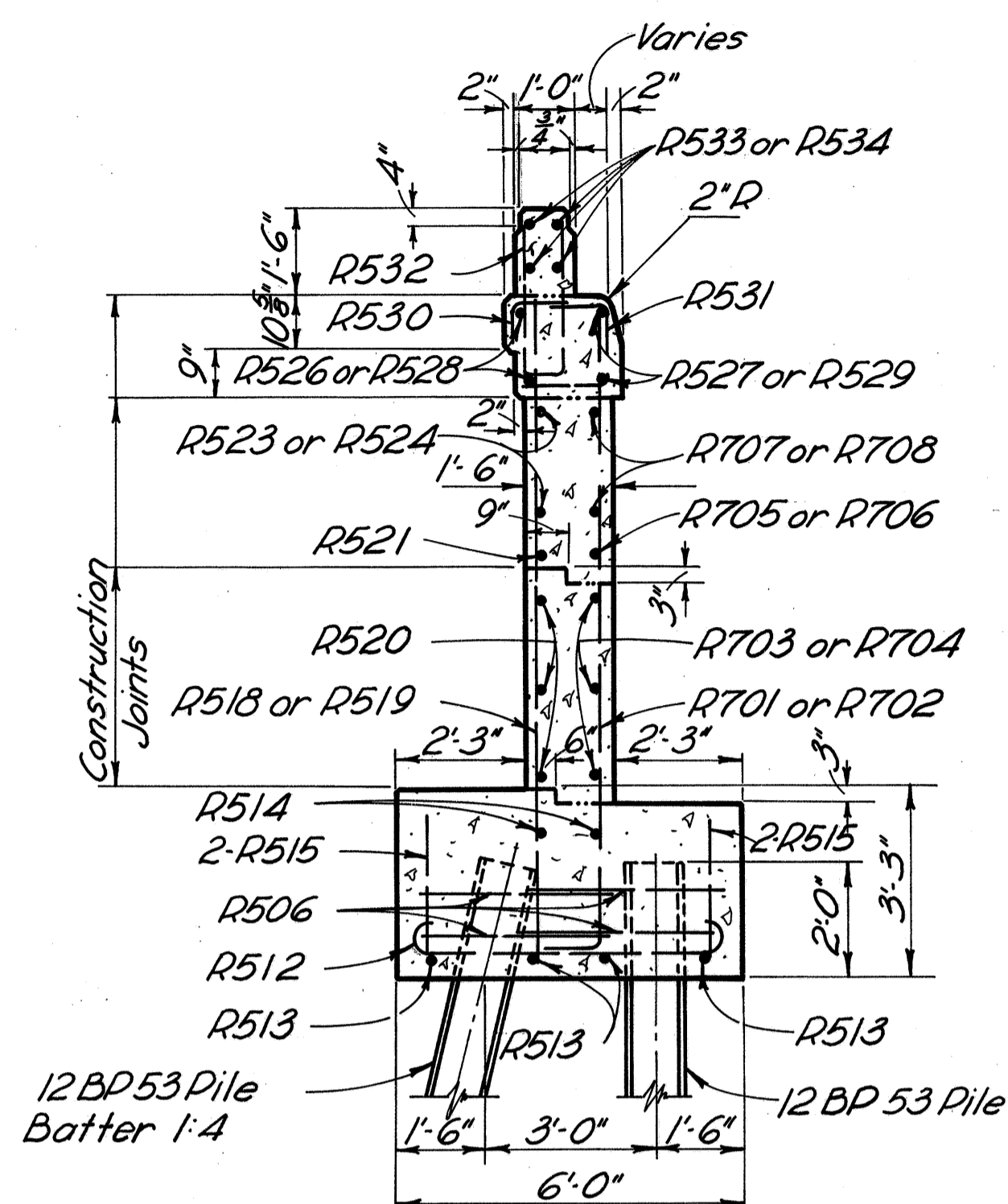
Sta 804+46.11 to
Sta 806+43.31

ERIC CO.

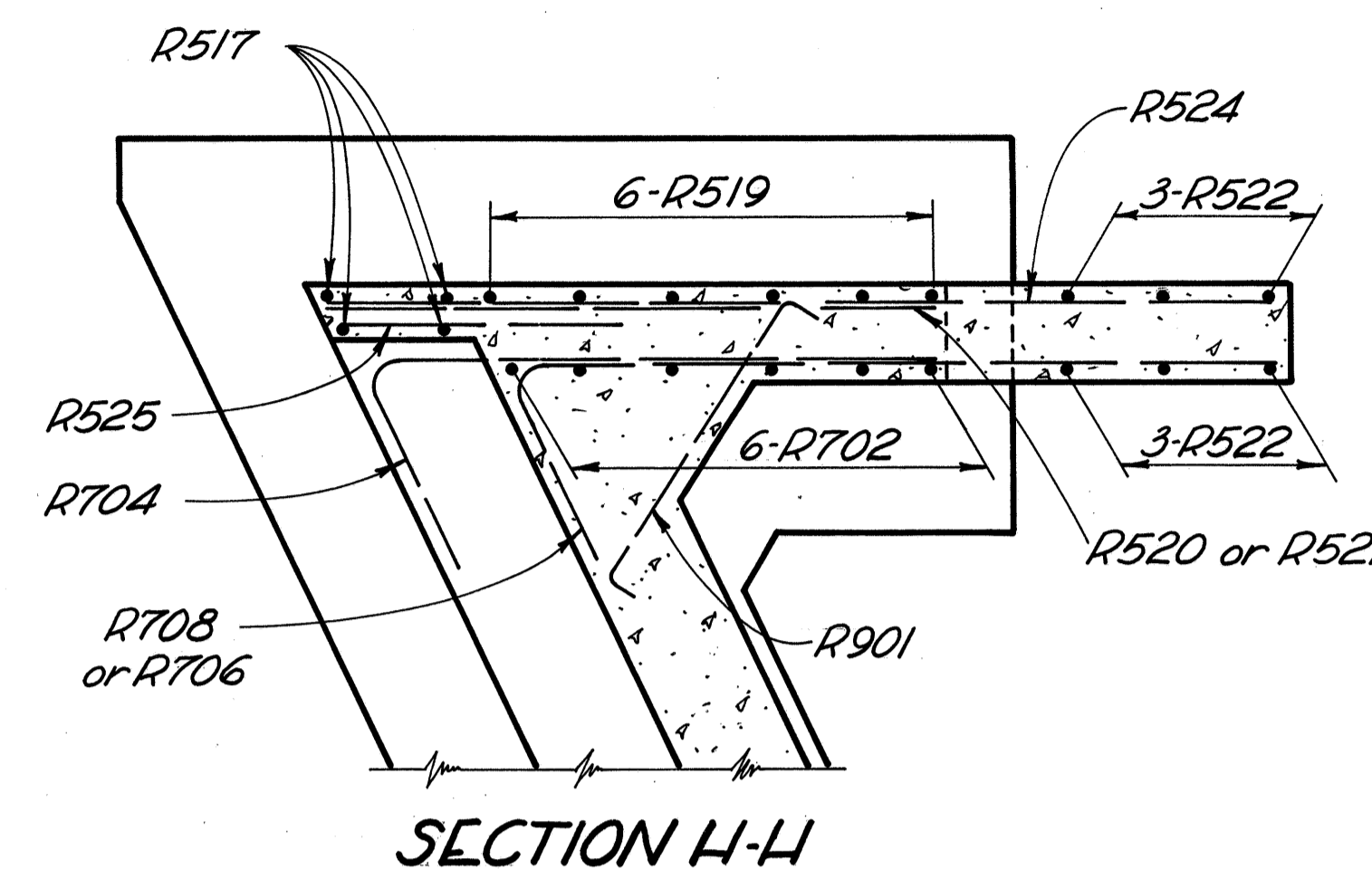
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJH	RJH	JEC	HDP	BJH	FCM	3-23-60



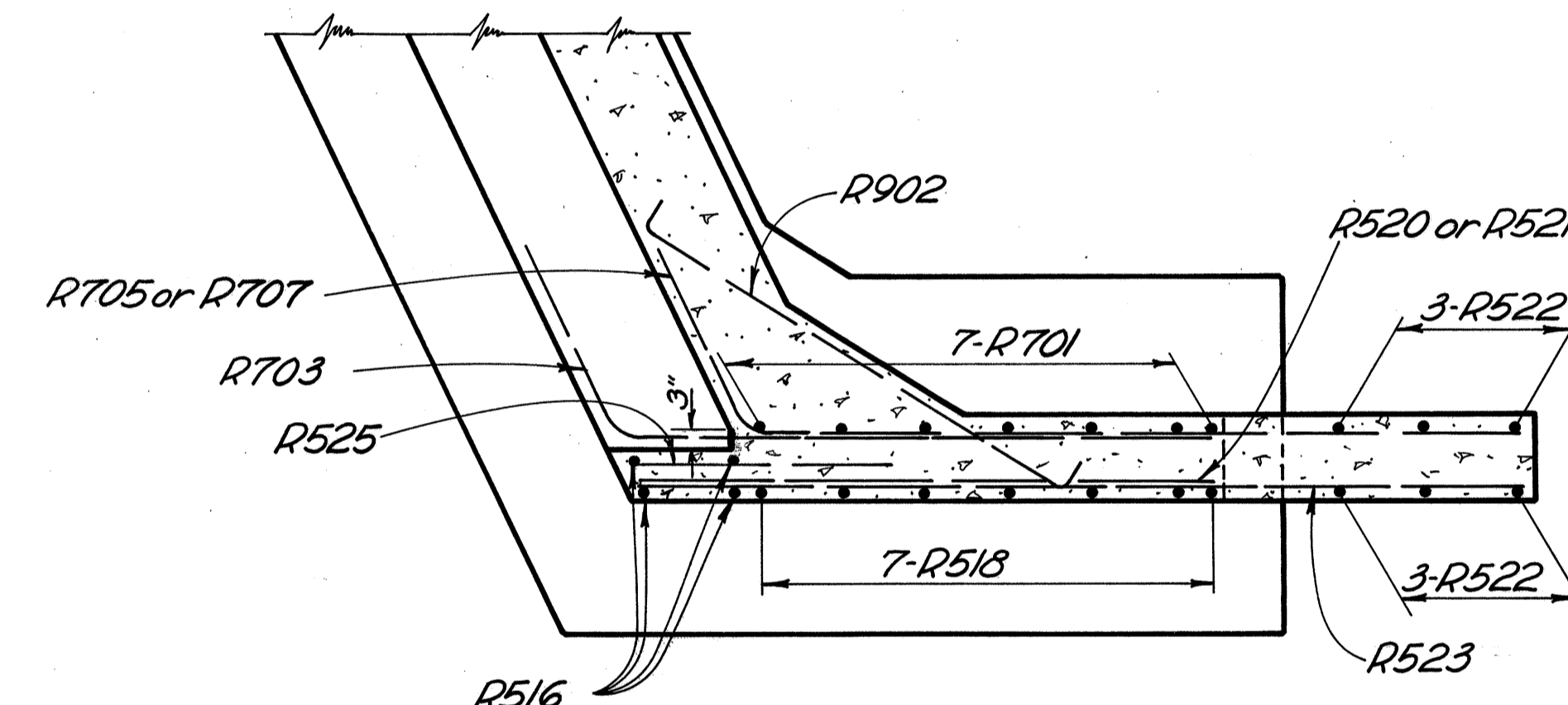
WINGWALL ELEVATION (CONSTRUCTION DETAILS)



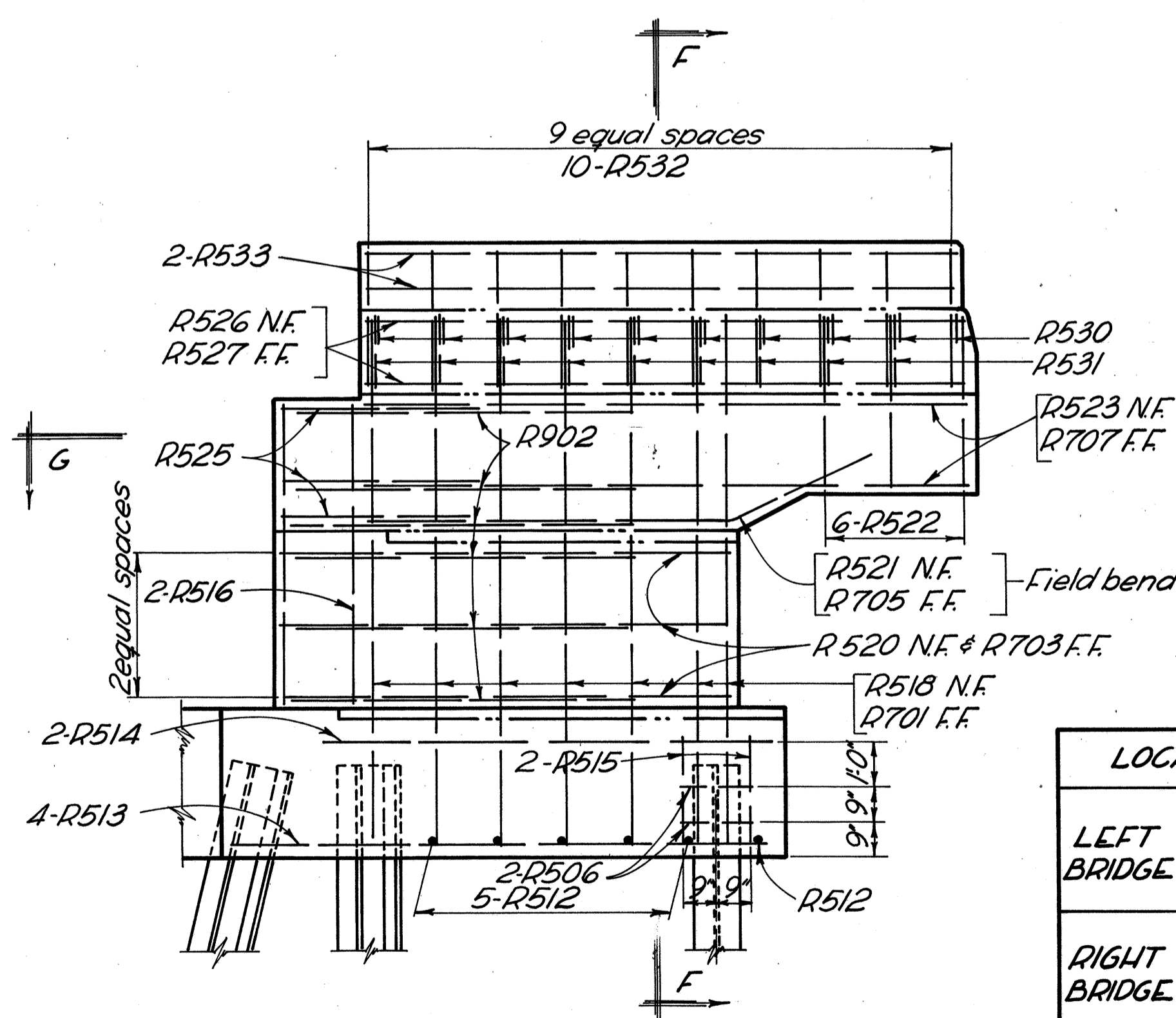
SECTION F-E



SECTION H-H



SECTION G-G



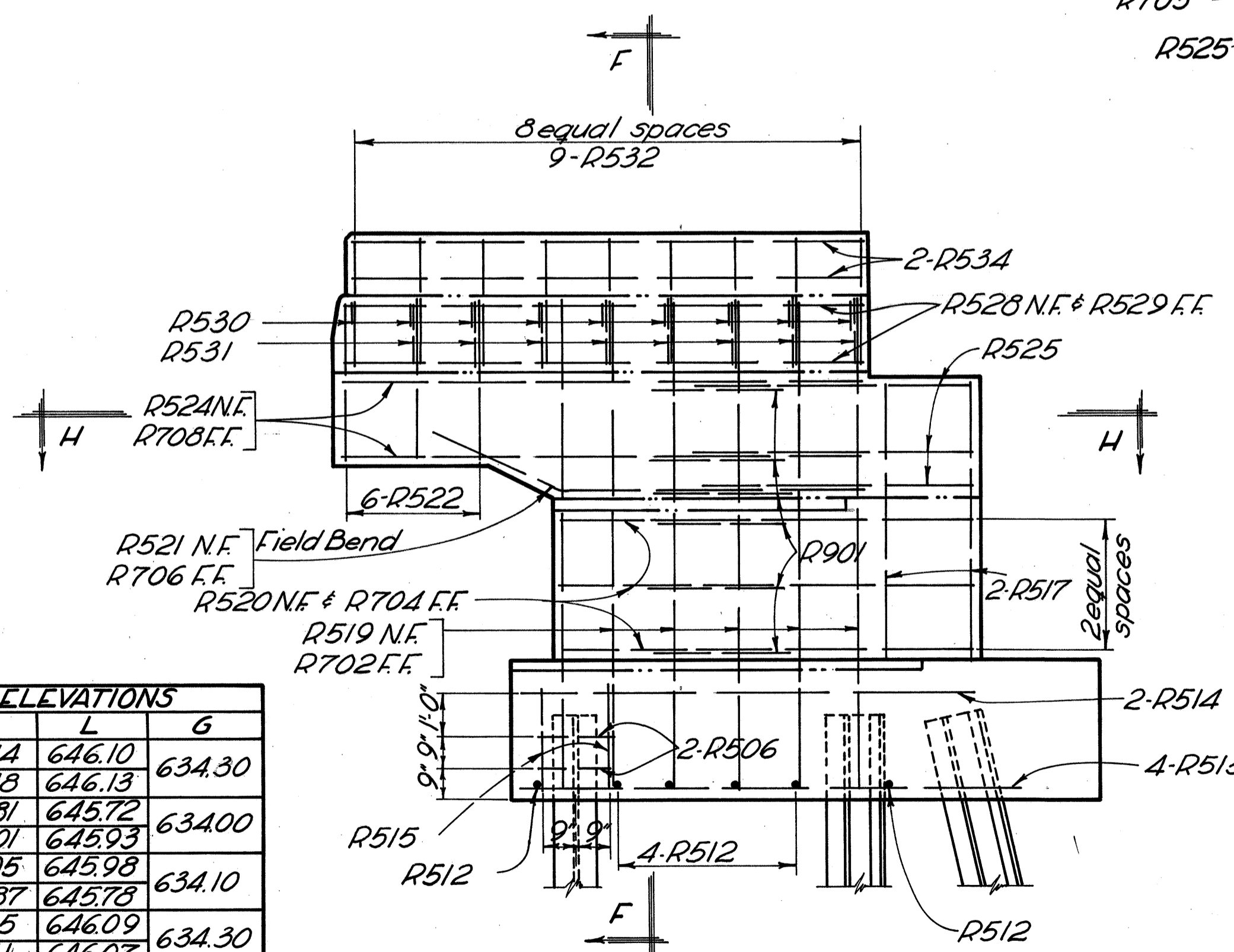
WINGWALL ELEVATION-REINFORCING BAR DETAILS

VIEW D-D (See Sheets 141 & 142)

MAR 19 1965

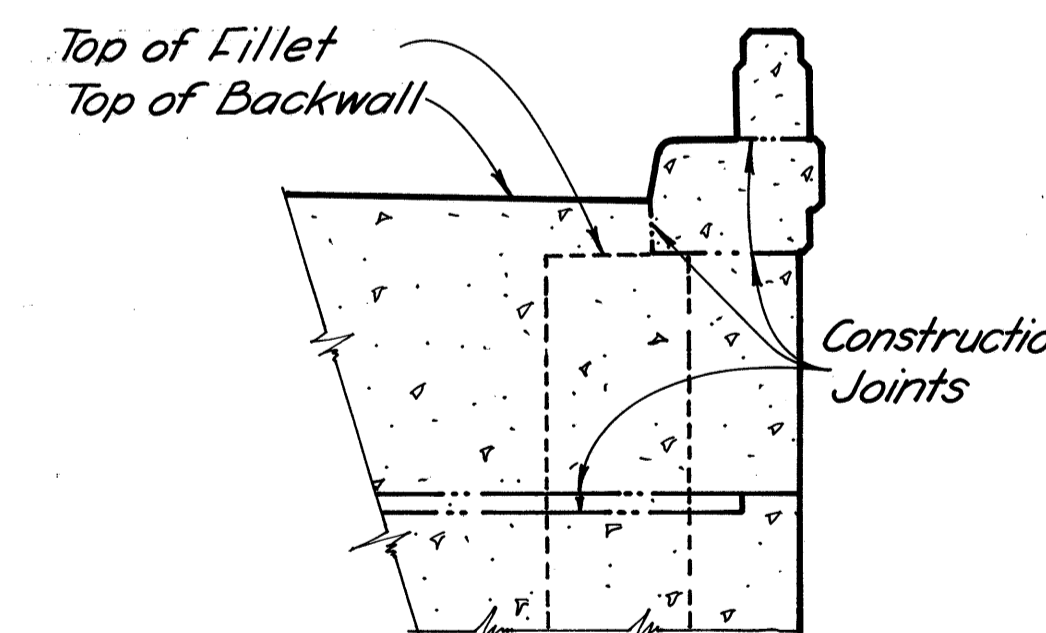
LOCATION	ELEVATIONS			
	K	L	G	
LEFT BRIDGE	Lt. Fwd. WW	646.14	646.10	634.30
	Rt. Fwd. WW	646.13	646.13	
RIGHT BRIDGE	Lt. Rear WW	645.81	645.72	634.00
	Rt. Rear WW	646.01	645.93	
LEFT BRIDGE	Lt. Fwd. WW	646.05	645.98	634.10
	Rt. Fwd. WW	645.87	645.78	
RIGHT BRIDGE	Lt. Fwd. WW	646.15	646.09	634.30
	Rt. Rear WW	646.11	646.07	

Lt. Fwd. - Left Forward
Rt. Fwd. - Right Forward
WW - Wingwall



WINGWALL ELEVATION REINFORCING BAR DETAILS

VIEW CC (See Sheets 141 & 142)



SECTION E-E

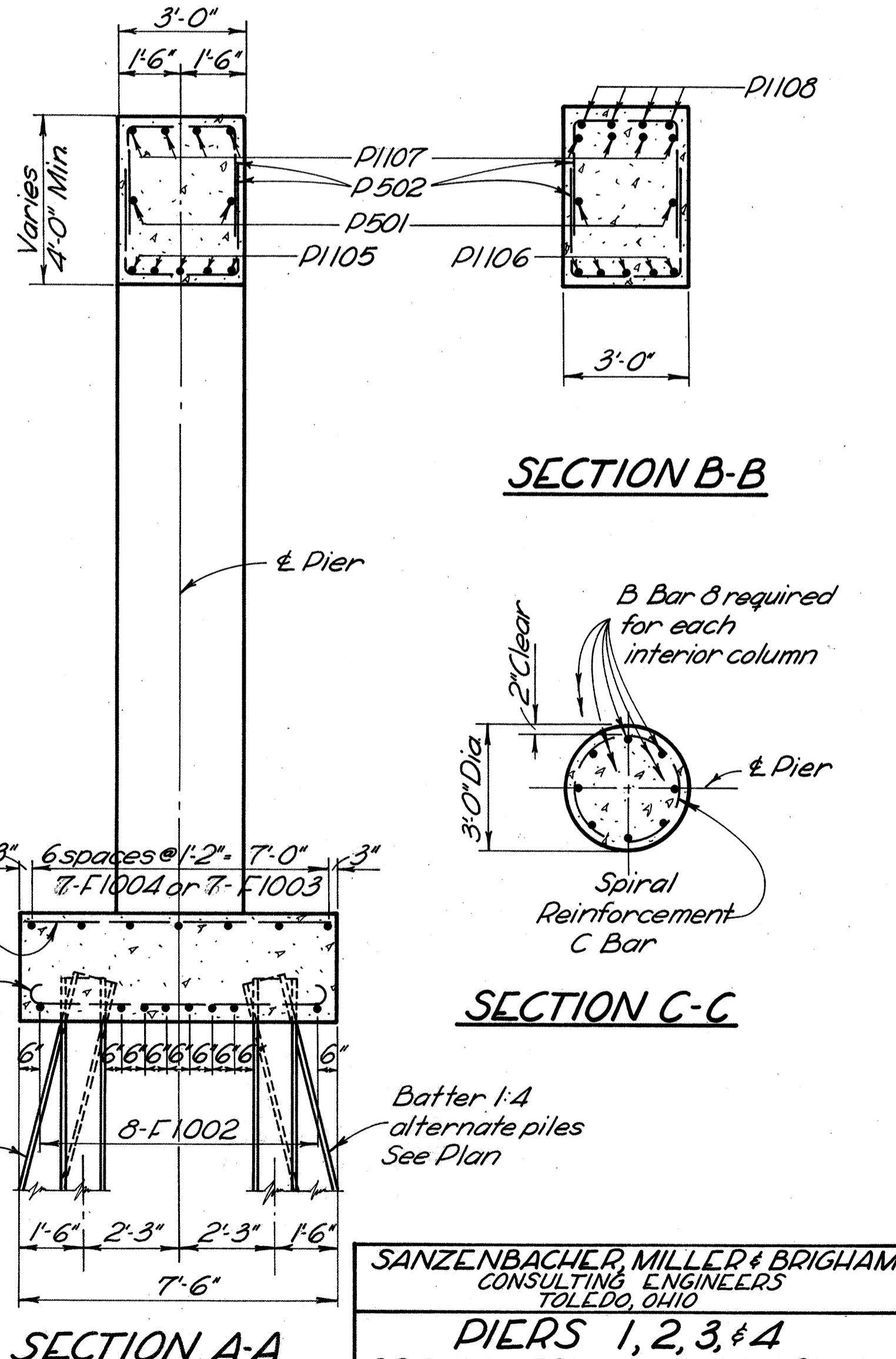
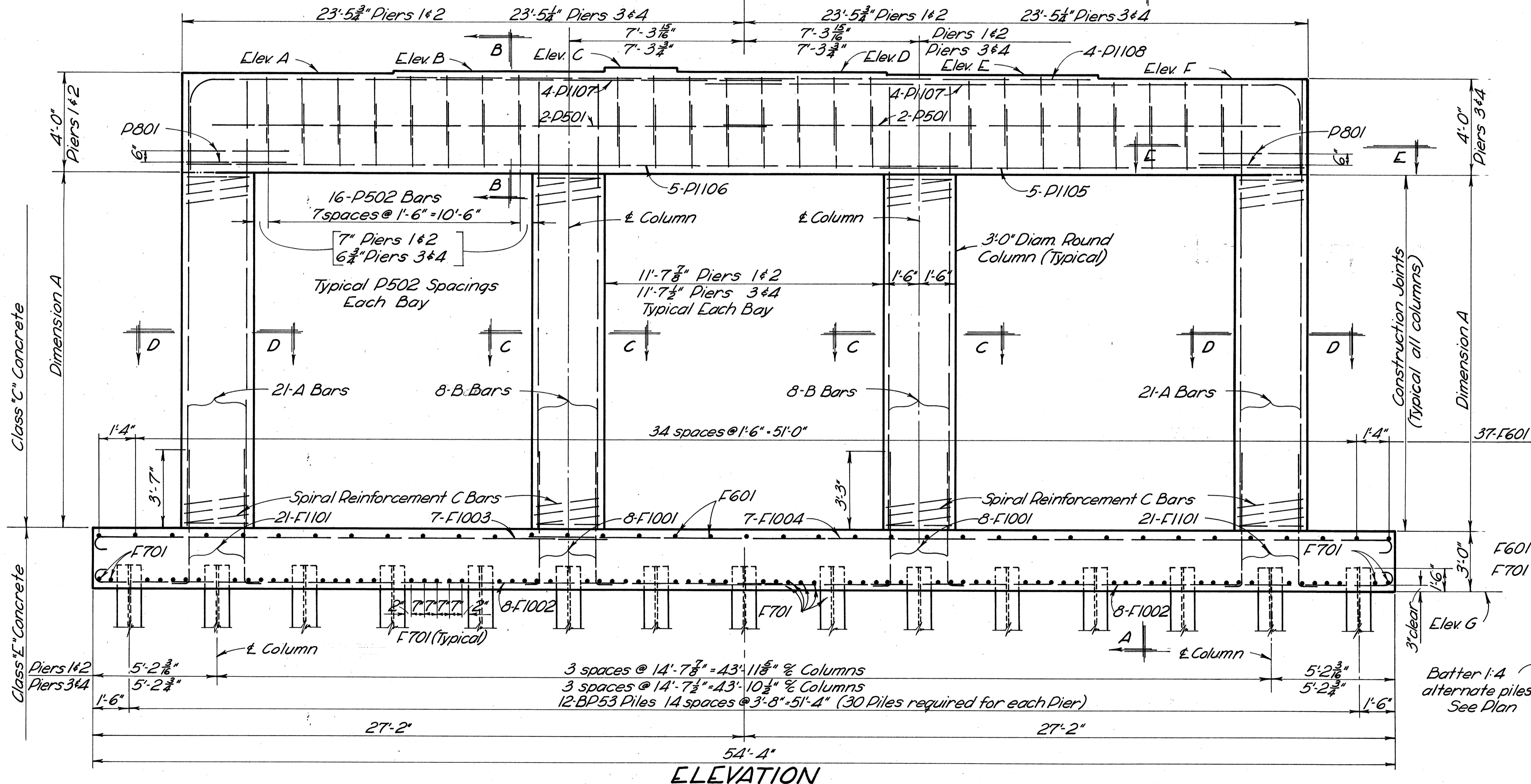
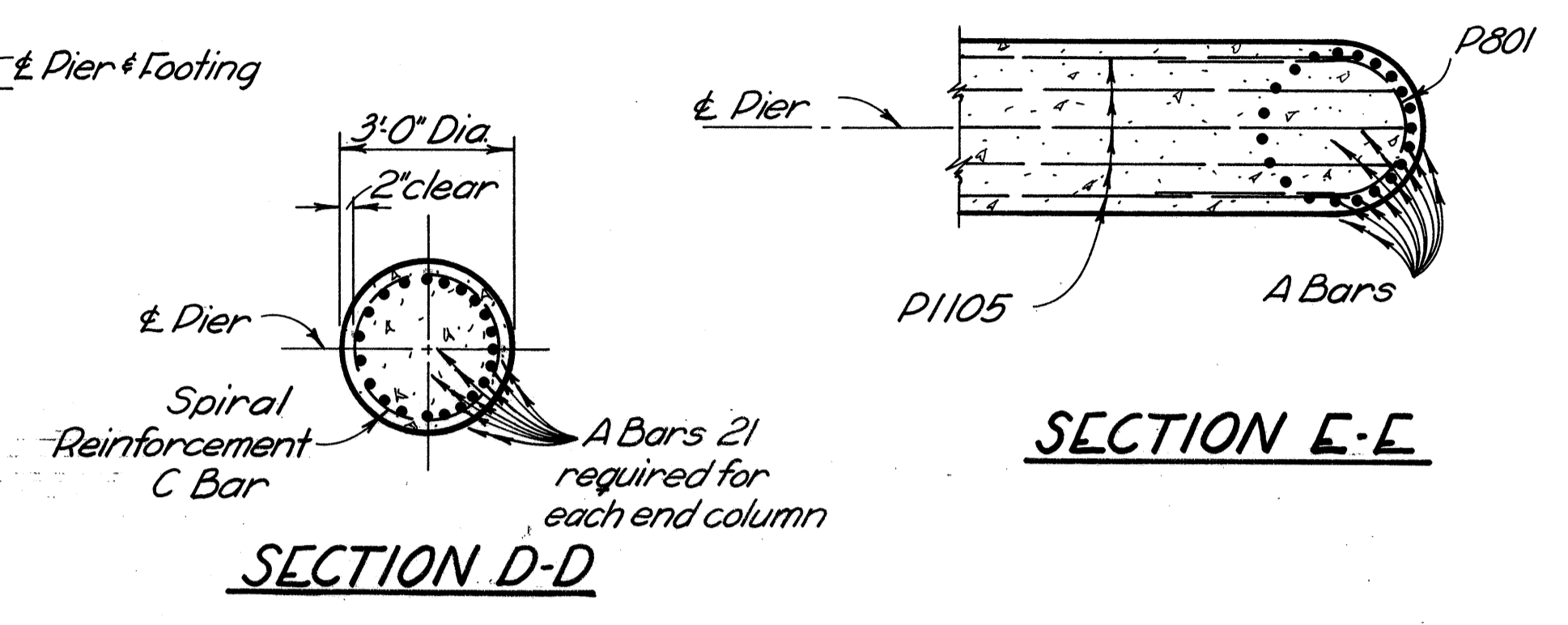
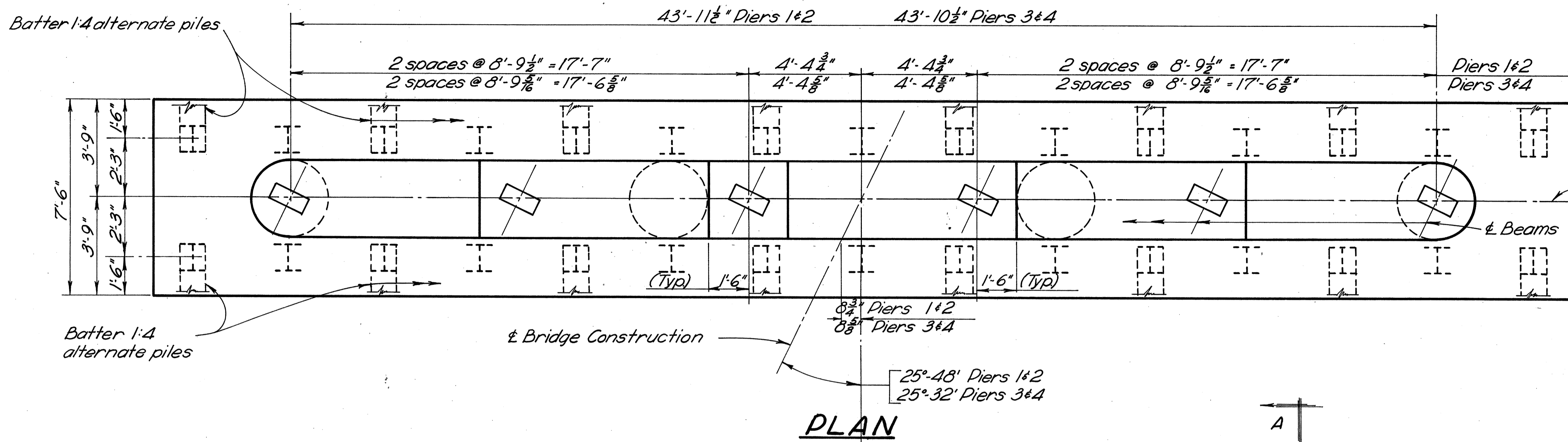
N.F. = Near Face
F.F. = Far Face

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TOLEDO OHIO

ABUTMENTS
BRIDGE No. ERI 6-1048 LEFT & RIGHT
OVER
COLUMBUS AVENUE
Left Sta 804+46.32 to 806+43.10
Right Sta 804+46.11 to 806+43.31

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJH	RJH	JEC	HDP	BJH	FCM 9-23-60	

ERI 6-731



Special care shall be taken in placing reinforcing steel in the pier caps so that it will not interfere with bearing plate anchor bars.

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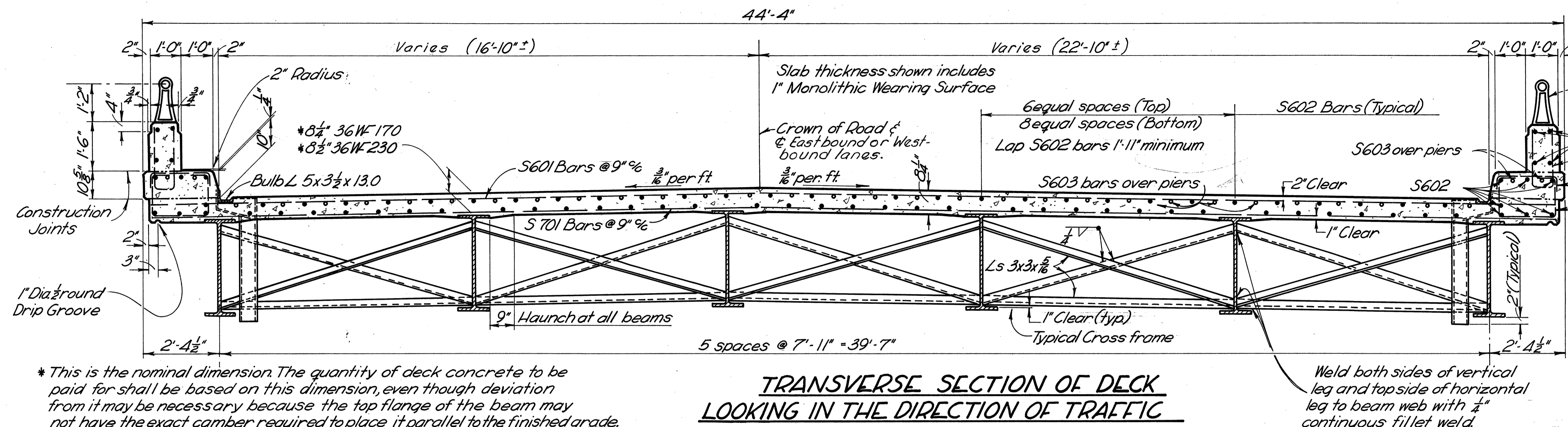
PIER NUMBER	ELEVATIONS							DIMENSION	BARS		
	A	B	C	D	E	F	G		A	B	C
PIER#1	641.25	641.38	641.52	641.62	641.51	641.40	620.50	13'-9"	P1101	P1001	SP401
PIER#2	641.47	641.59	641.71	641.81	641.68	641.55	620.50	13'-11 1/2"	P1102	P1002	SP402
PIER#3	641.55	641.67	641.80	641.71	641.59	641.47	619.50	14'-11 1/2"	P1103	P1003	SP403
PIER#4	641.42	641.54	641.65	641.55	641.42	641.28	619.50	14'-9 3/4"	P1104	P1004	SP404

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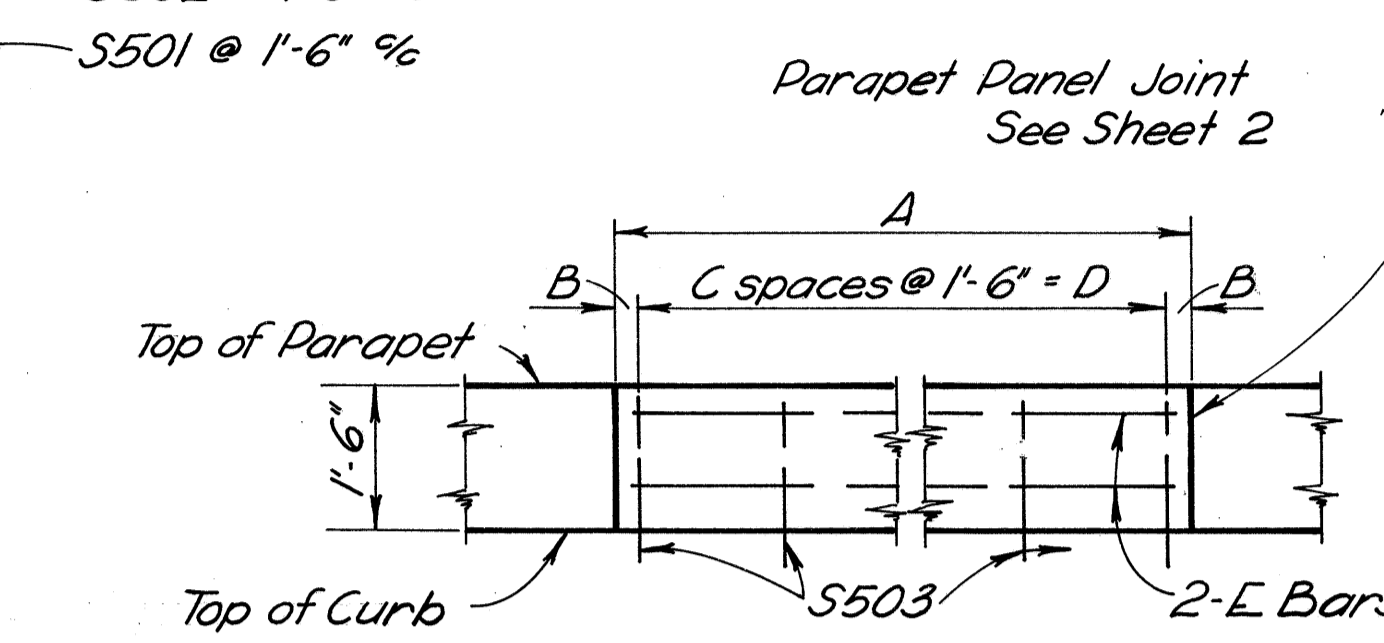
PIERS 1, 2, 3 & 4
BRIDGE No. ERI 6-1048 LEFT & RIGHT
OVER
COLUMBUS AVENUE
Left Sta 804+46.32 to 806+43.10
Right Sta 804+46.11 to 806+43.31

DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISION
RJH RJH JEC HDD BJH
FCM 9-23-60

ERI 6-731



Type "A" Railing Post Standard Drawing AR-1-57
E Bar } See Railing Parapet Details this Sheet
S503 }
S502 @ 1'-6" @
S501 @ 1'-6" @

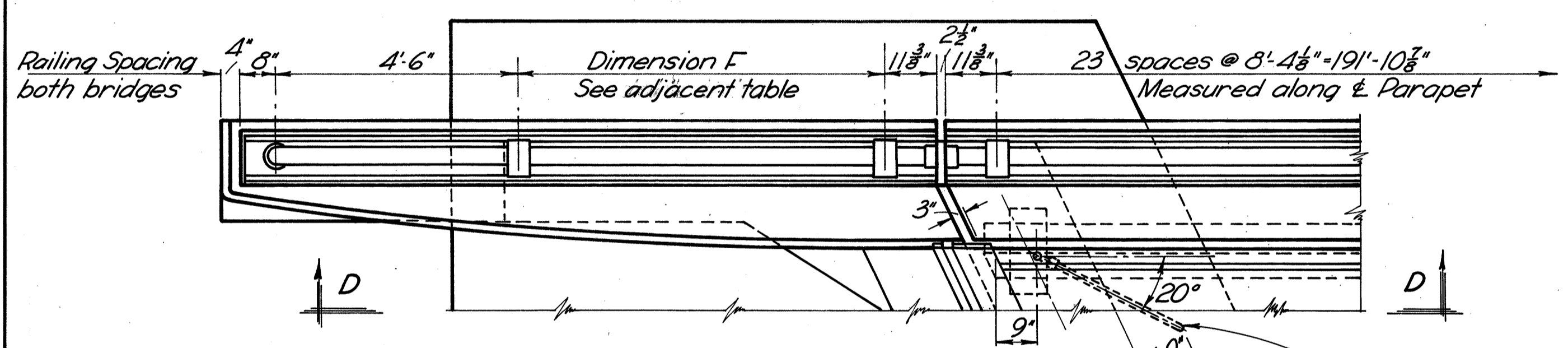


PARAPET WALL DETAILS

* 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 required to place it parallel to the finished grade.

TRANSVERSE SECTION OF DECK
LOOKING IN THE DIRECTION OF TRAFFIC

Weld both sides of vertical leg and top side of horizontal leg to beam web with 1/4" continuous fillet weld.



PLAN AT ABUTMENT

2" Standard Pipe Drain. Use standard elbow and coupling. Included in Item S-7 Structural Steel for payment.

Wing Wall	F
Left Rear	7'-3 3/4"
Right Rear	6'-6 3/8"
Left Forward	6'-6 3/8"
Right Forward	7'-3 3/4"
Left Rear	7'-3 3/4"
Right Rear	6'-6 1/4"
Left Forward	6'-6 1/4"
Right Forward	7'-3 3/4"

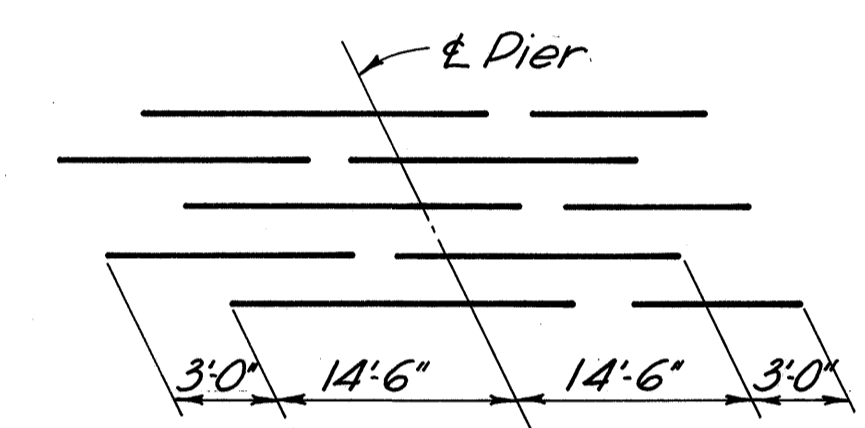
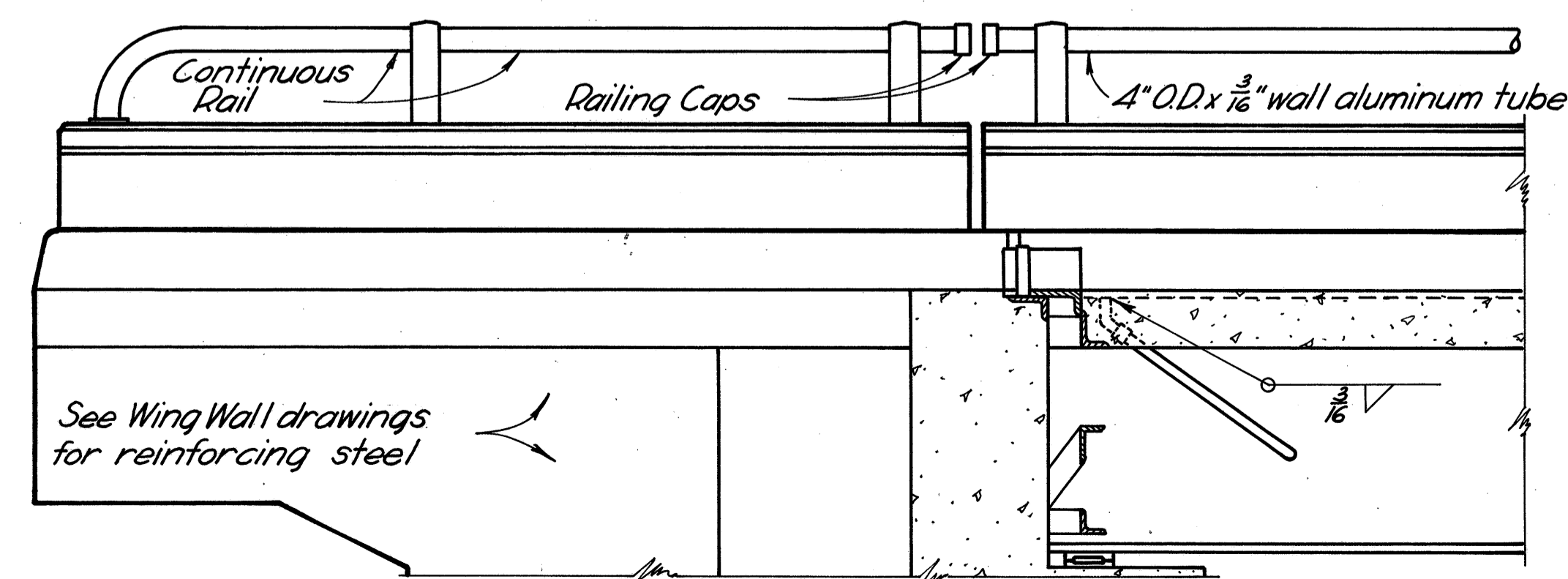


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

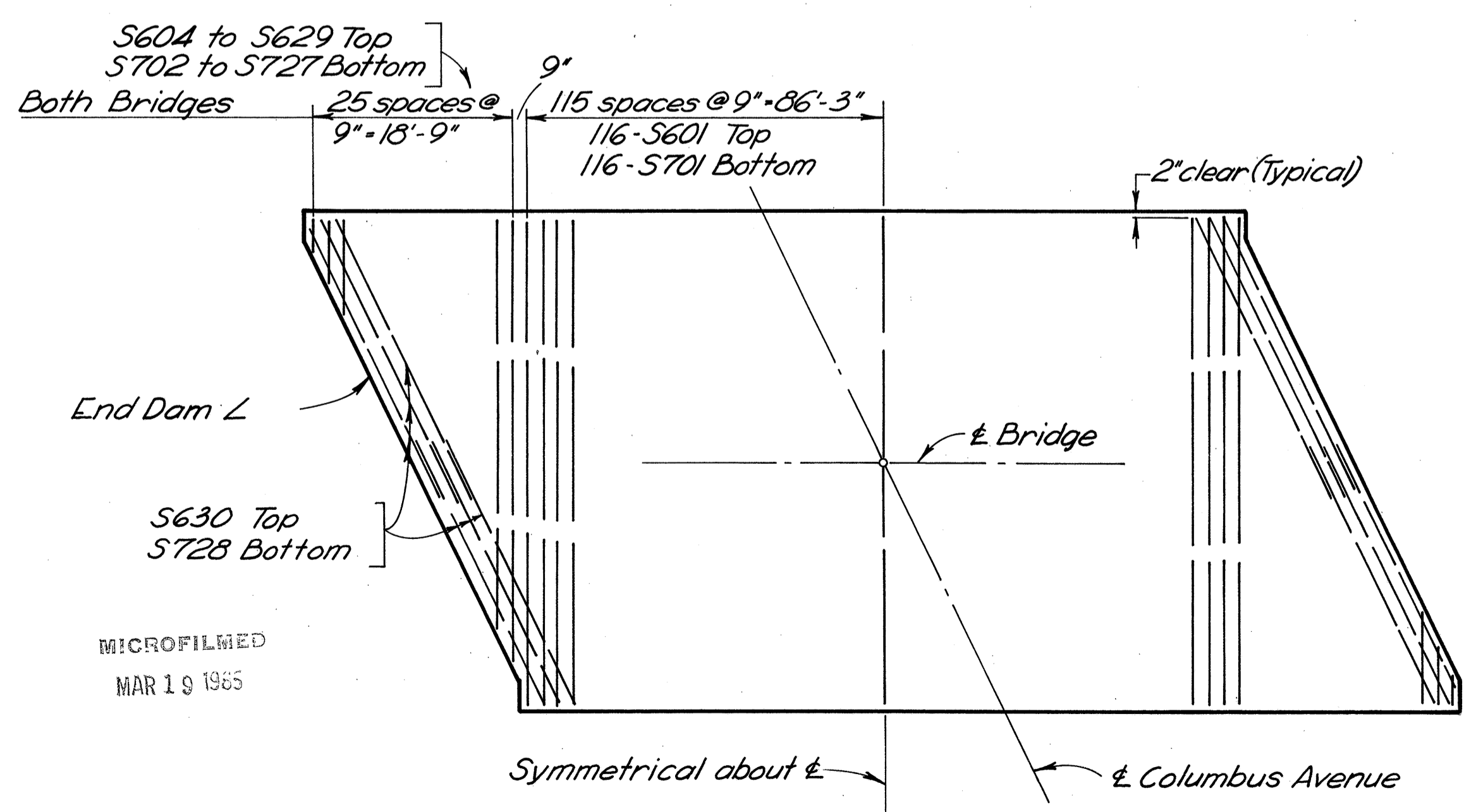
Parapet Wall Dimensions & Bars						
Panel See Sheet 2	A	B	C	D	No. of S503	E Bars
Intermediate	16'-8 1/4"	10 1/8"	10	15'-0"	11	S507
Pier	6'-8 1/4"	4 1/2"	4	6'-0"	5	S505
Pier	10'-0"	6"	6	9'-0"	7	S506
End	13'-5 3/8"	8 1/8"	8	12'-0"	9	S504
End	13'-5 1/4"	8 3/4"	8	12'-0"	9	S504

Note:
Refer to Standard Drawing CSB-2-56 sheet 2 or 3 of 6 for the following details:

- Roadway End Dam
- Welded Butt Joint in Superstructure End Dam Angles
- Gutter Supports
- Abutment Bearing Plates
- Curb Plate Details



SECTION D-D



SLAB TRANSVERSE REINFORCING STEEL

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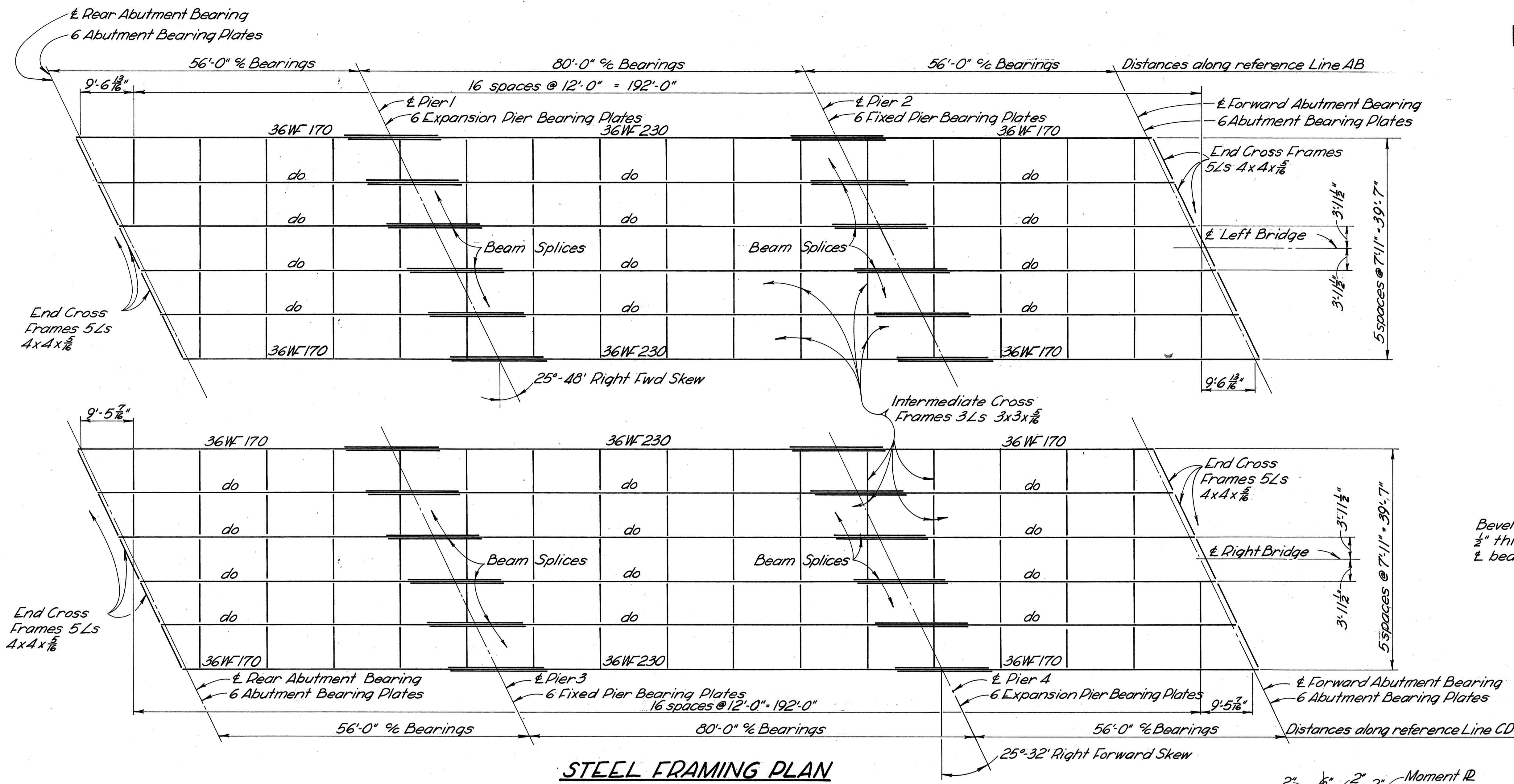
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CONSULTING ENGINEERS
TOLEDO, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE No. ERI 6-1048 LEFT & RIGHT
OVER
COLUMBUS AVENUE

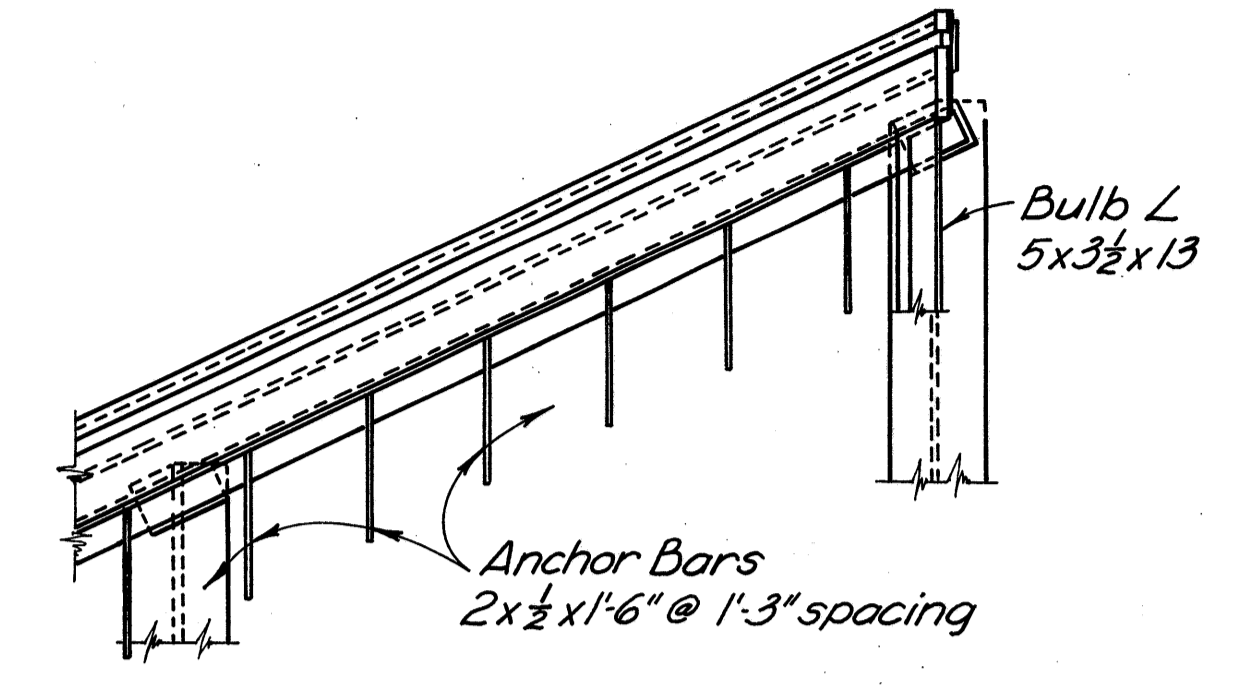
Left Sta 804+46.32 to 806+43.10
Right Sta 804+46.11 to 806+43.31

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJH	RJH	JEC	HDP	BJH	FCM 9-23-60	

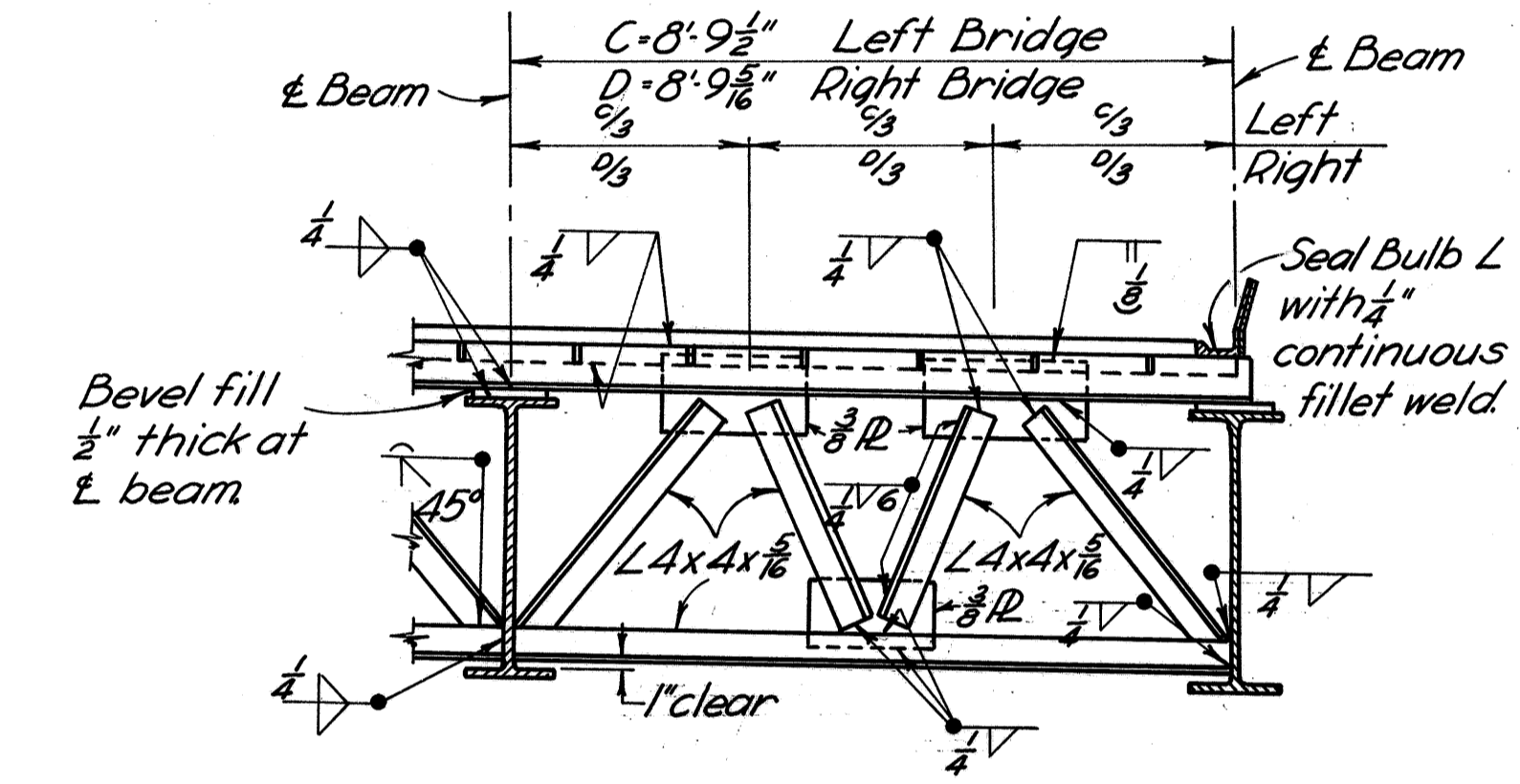
ERI 6-7.31



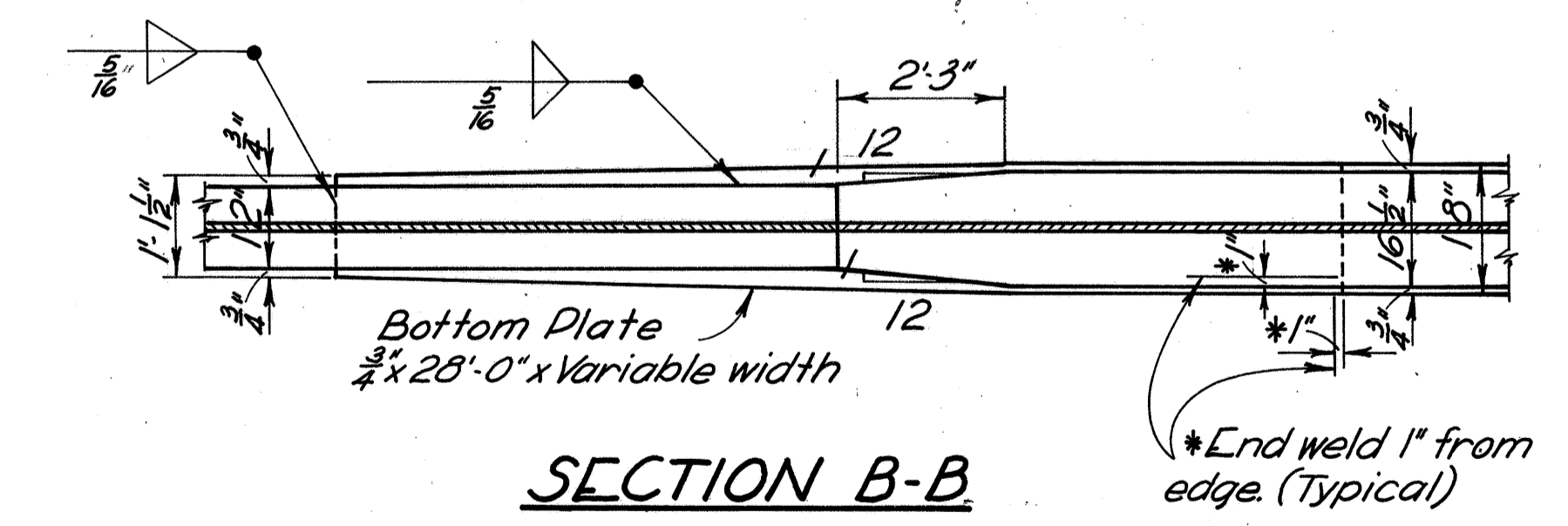
STEEL FRAMING PLAN



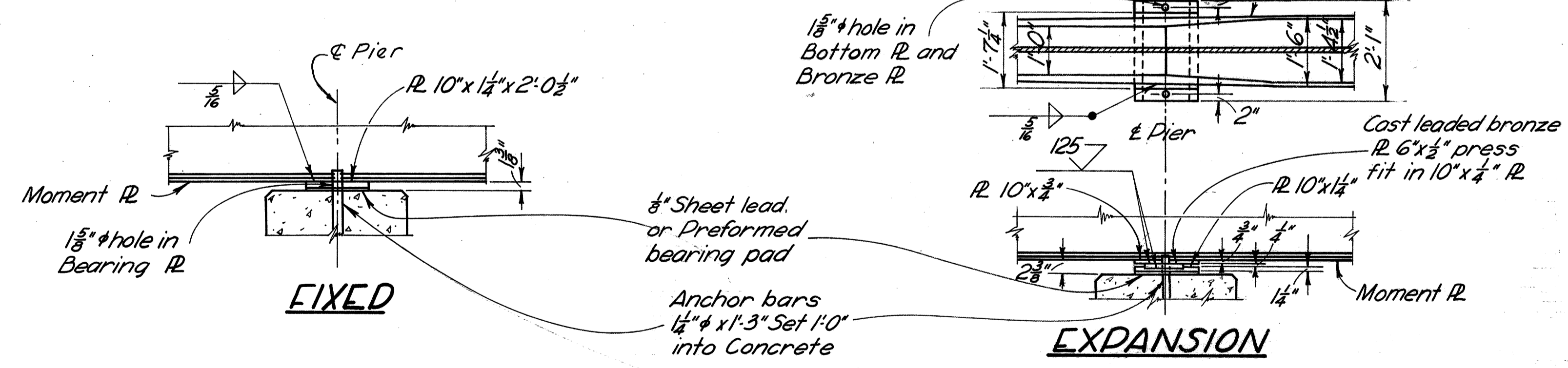
PART END DAM PLAN



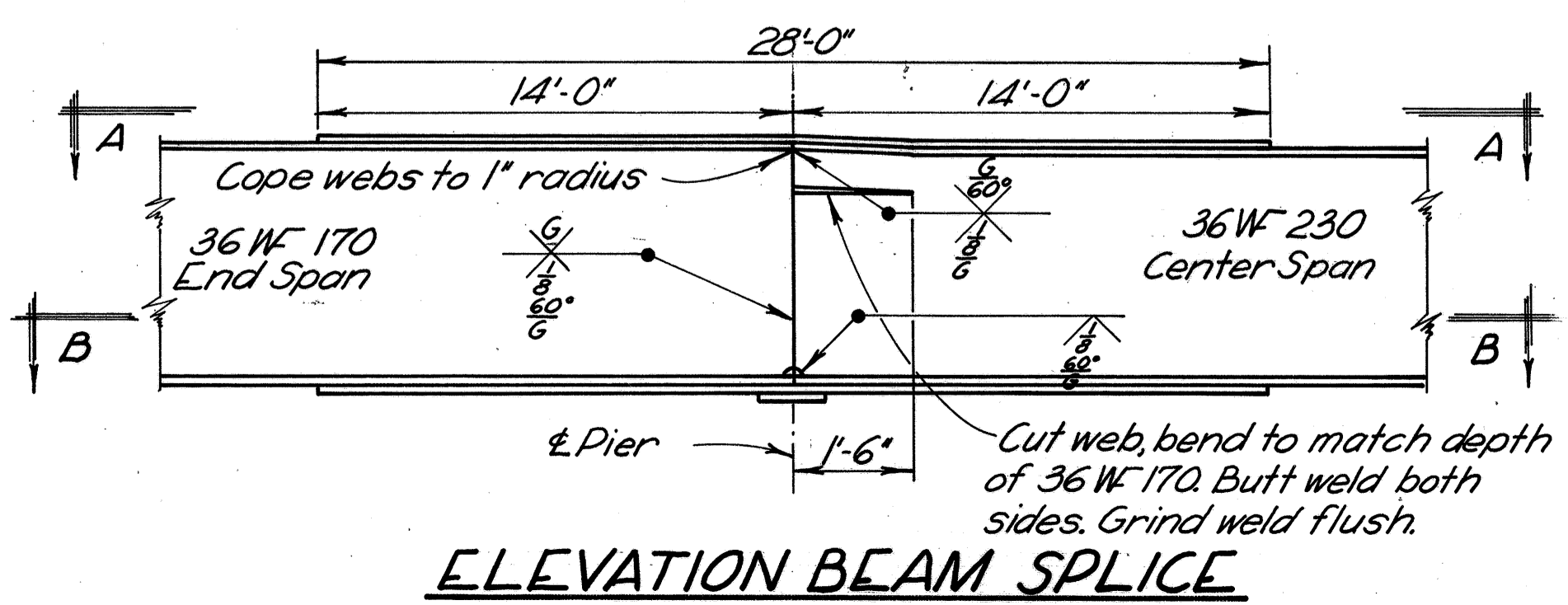
PART END DAM ELEVATION



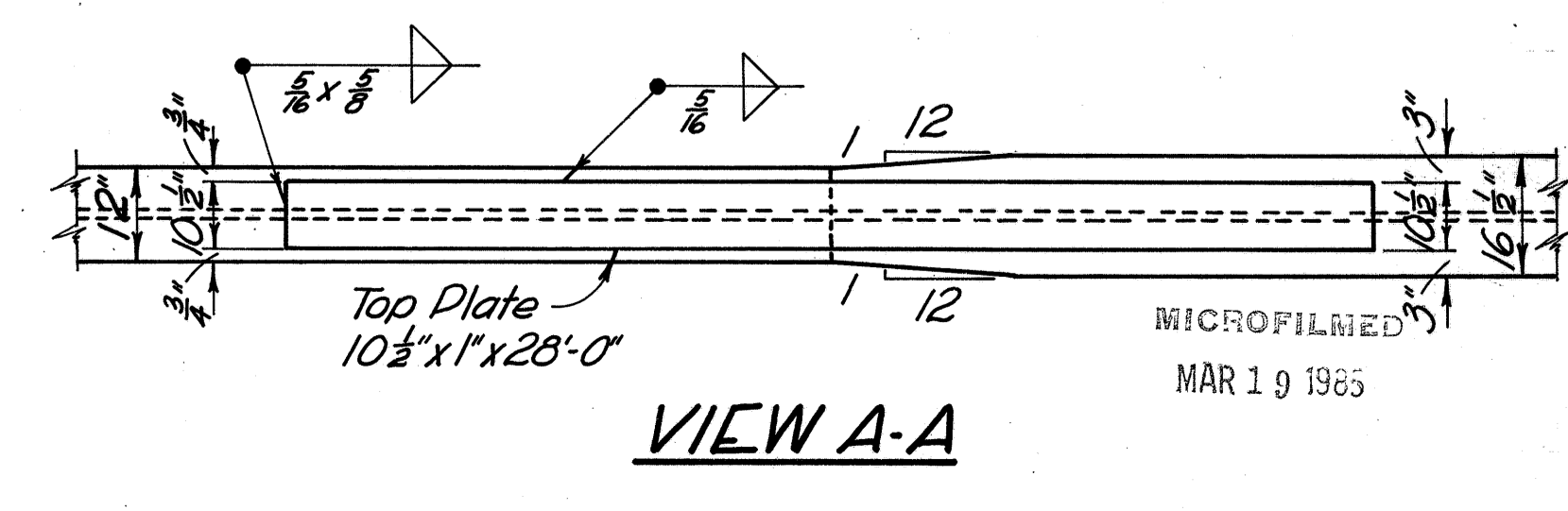
SECTION B-B



PIER BEARING PLATE DETAILS



ELEVATION BEAM SPLICE



VIEW A-A

Cambering of beams is required in accordance with the following table:

LOCATION	Interior Beams			Exterior Beams		
	Span 1	Span 2	Span 3	Span 1	Span 2	Span 3
Deflection due to weight of steel	1/8"	5/8"	1/8"	1/8"	5/8"	1/8"
Remaining dead load deflection	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Camber for Vertical Curve	7/8"	3/8"	7/8"	7/8"	3/8"	7/8"
Total Camber	3/8"	7/8"	3/8"	3/8"	7/8"	3/8"
Required Shop Camber	None	1"	None	None	1"	None

PAINTING

After erection and after the shop coat has been cleaned and where necessary, repainted in accordance with Sec. 5 8.04, an additional coat of the same paint as used in the shop shall be applied over the outside face of the outside steel beams and all sides of the bottom flange.

BEAM SPLICE WELDING PROCEDURE

1. Raise the abutment ends of beams 1/8"
2. Butt-weld the beam flanges and web, using the following sequence: make two passes on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3. Weld the bottom and top moment plates.
4. Lower the beam ends to final position.

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TOLEDO, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE No. ERI 6-1043 LEFT & RIGHT
OVER
COLUMBUS AVENUE
Left Sta 804+46.32 to 806+43.10
ERIC CO. Right Sta 804+46.11 to 806+43.31

DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED

RJH	RJH	JEC	HDD	BJH	F.C.M.	9/28/60
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