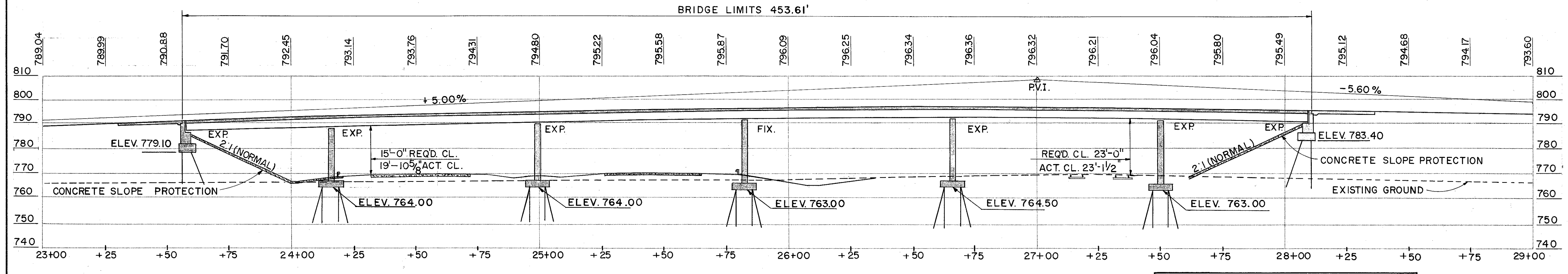
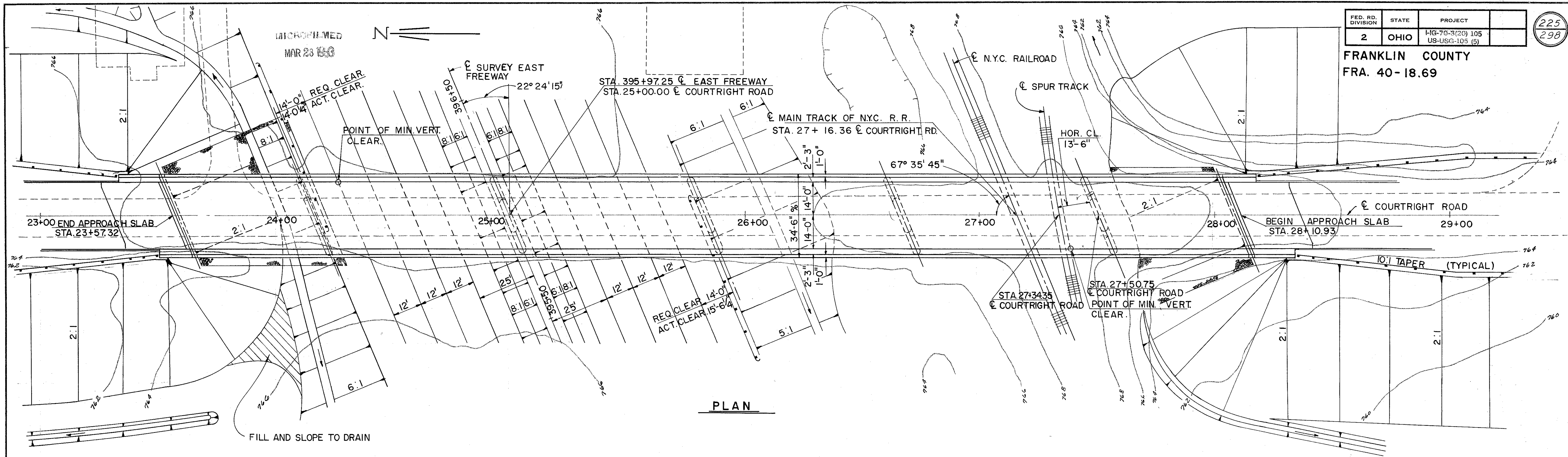


FRANKLIN COUNTY
FRA. 40-18.69



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 in Columbus or in the Division office, but the State does not guarantee the accuracy thereof.

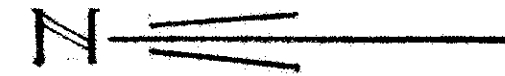
All piles are 12" cast-in-place reinforced concrete piles.
Estimated average pay length for piles:
Abutments = 35'
Piers = 35'

VERTICAL CURVE DATA
COURTRIGHT ROAD
P.V.I. = 27+00 ELEV. 809.57
G₁ = +5.00% G₂ = -5.60%
V.C. = 1000' CORRECTION = 13.25'

PROPOSED STRUCTURE
TYPE: Continuous steel beam with reinforced concrete deck and substructure.
SPANS: 57'-9", 82'-6", 84'-1/2", 84'-1/2", 82'-6" and 57'-9" center to center of bearing.
ROADWAY: 28'-0" face to face of 2'-3" safety curbs.
LOAD FREQUENCY: CF 400 (57)
WEARING SURFACE: 1" monolithic concrete.
APPROACH SLAB: (25' long) #45-1-54
ALIGNMENT: Tangent
SUPERELEVATION: None
SKEW: 22° 24' 15" R.F.

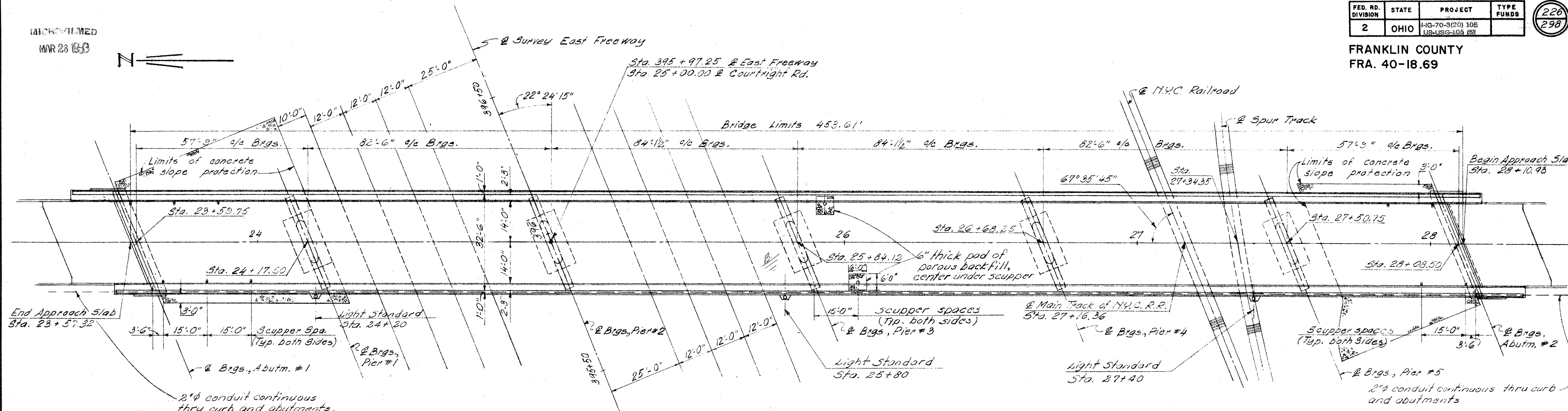
RACKOFF ASSOCIATES ENGINEERS COLUMBUS, OHIO				
SITE PLAN				
BRIDGE NO. FRA. 40-1935 COLUMBUS EAST FREEWAY AND N.Y.C.R.R. UNDER COURTRIGHT ROAD				
FRANKLIN COUNTY			STA. 23+57.32 STA. 28+10.93	
Designed	Drawn	Traced	Checked	Reviewed
L.B.	E.D.A.		N.U.	4-23 1962

MICROFILMED
MAR 23 1963



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	HQ-70-3(20) 108 US-UG-105 (B)	226 298

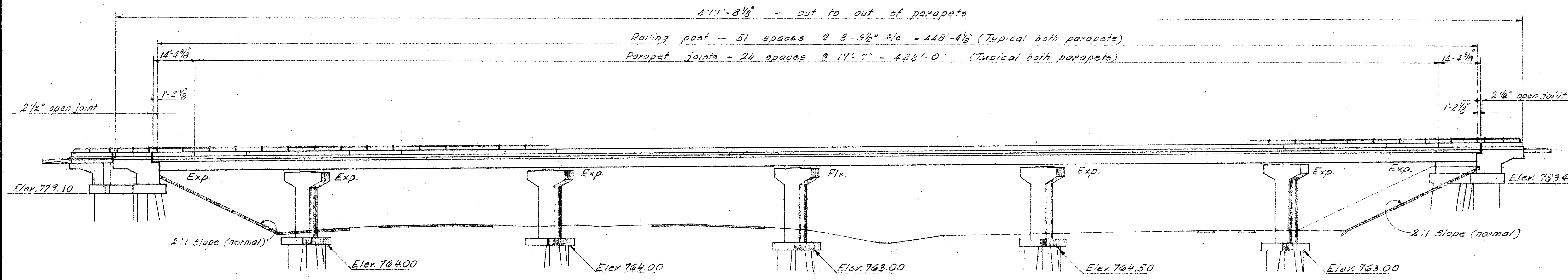
FRANKLIN COUNTY
FRA. 40-18.69



PLAN

NOTE: For additional lighting notes and details, see "Common Details" sheet.

Note: See Abutment Wing Wall Details for Railing Post spacing on Wing Walls.



ELEVATION

RACKOFF ASSOCIATES ENGINEERS COLUMBUS, OHIO					
GENERAL PLAN BRIDGE NO. FRA. - 40-1935 COLUMBUS EAST FREEWAY AND N.Y.C. R.R. UNDER COURTRIGHT ROAD FRANKLIN COUNTY STA. 23+57.32 STA. 28+10.93					
Designed	Drawn	Traced	Checked	Reviewed	Date
L.B.	G.M.		N.U.	lll	4-23 1962

MICROFILMED
MAR 28 1993

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	HQ-70-3(20) 105 US-USG-105 (6)	

227
298

FRANKLIN COUNTY
FRA. 40-18.69

GENERAL NOTES

REFERENCE SHALL BE MADE TO:

- Standard Drawing CSB-2-56, sheets 2 and 3 of 6, revised 2-2-59
- Standard Drawing RB-1-55, revised 2-2-59
- Standard Drawing AR-1-57, revised 4-2-62
- Supplemental Specification S-101, dated 7-12-62 and S-307 revised 10-1-64

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.

SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.

SHEET LEAD shall conform to the requirements of ASTM Designation B 29 without restriction to the Common Desilverized type.

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

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.

CURING of superstructure concrete shall be in accordance with Sec. S-1.21 Method (a) using a continuous application of water. Plastic coated burlap or mats shall not be used.

GRAVEL, if used as the coarse aggregate, shall be in accordance with Sec. M-3.93 instead of M-3.92 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments.

PILES shall be driven to a minimum bearing capacity of 37 tons per pile for the abutments and 42 tons per pile for the piers.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:

- a. The entire superstructure except the top and bottom surfaces of safety curbs and roadway.
- b. The entire surface of piers and abutments except bridge seats, backwalls and the face of spill-through abutments between outside beams.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

UTILITY LINES: All expense 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.

RAILROAD AERIAL LINES will be relocated by the railroad. The Contractor shall use all precautions necessary to see that the lines are not disturbed during the construction stage and shall cooperate with the railroad in the relocation of these lines. The cost of the relocation shall be included in the railroad force account work.

ESTIMATED QUANTITIES								AS BUILT	
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT.	PIER	GEN.		
E-2	lump	sum	Cofferdams, cribs and sheeting				Lump		
E-2	434	cu.yds.	Unclassified excavation		226	208			
S-1	545	cu.yds.	Class "C" concrete, superstructure	545					
S-1	200	cu.yds.	Class "C" concrete, piers above footings			200			
S-1	81	cu.yds.	Class "E" concrete, pier footings			81			
S-1	86	cu.yds.	Class "E" concrete, abutments above footings		86				
S-1	66	cu.yds.	Class "E" concrete, abutments footings		66				
S-4	181,578	lbs.	Reinforcing steel	139,448	9581	32,549			
S-7	525,350	lbs.	Structural steel	525,350					
S-8	525,350	lbs.	Field painting of structural steel	525,350					
S-14	954.52	lin.ft.	Railing (Aluminum rail and supports, concrete parapet)	901.46	53.06				
S-16	lump	sum	First test pile				Lump		
S-18	3990	lin.ft.	12" Cast-in-place reinforced concrete piles		840	3150			
S-25			Electric lighting system - see Lighting Plans, sheets 194 thru 201						
S-29	25	cu.yds.	Porous backfill	1	24				
S-29	12	each	Scuppers, including supports	12					
I-10	740	sq.yds.	Concrete slope protection				740		
Spec	2003	Sq.Yd	Concrete Surface Treatment				2003		
S-101	545	each	Water-reducing, set-retarding admixture	545					

GENERAL NOTES

CONSTRUCTION CLEARANCE of 20'-0" vertically above the top of the railroad rails and 8'-0" horizontally from the center of track shall be maintained at all times.

SHEETING AND BRACING: Before construction is started, eight sets of prints showing details of the sheeting and bracing to be used for excavation adjacent to the railroad tracks shall be submitted to the Director for approval by the Department of Highways and by the Railroad Company.

ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. E-2.04 and E-2.08 of the Construction and Material Specification, subject to the Supervision of the Railroad Company, nothing in Sec. E-2.04, E-2.08 or G-8.07 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks

CONCRETE SURFACE TREATMENT: See sheet 216.

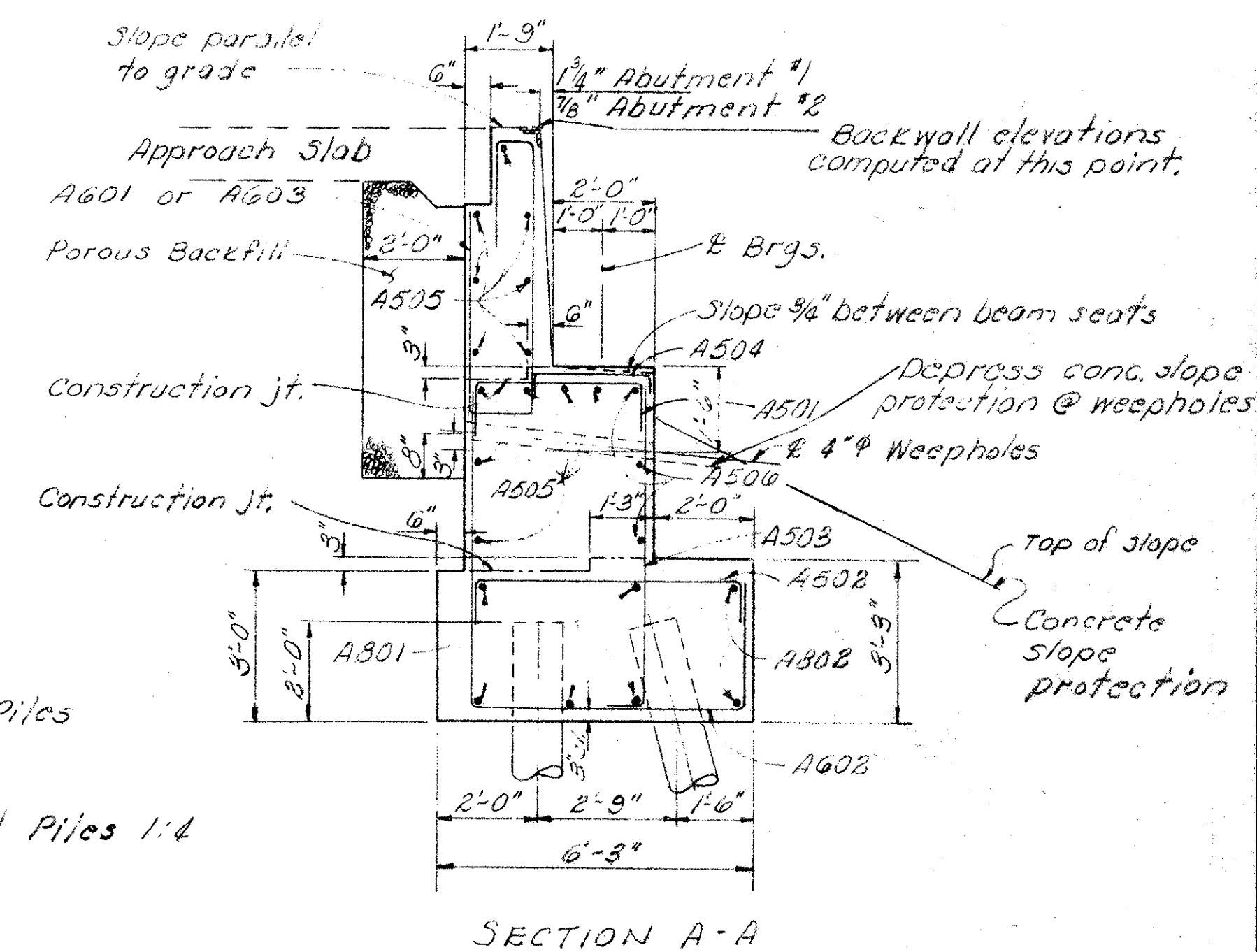
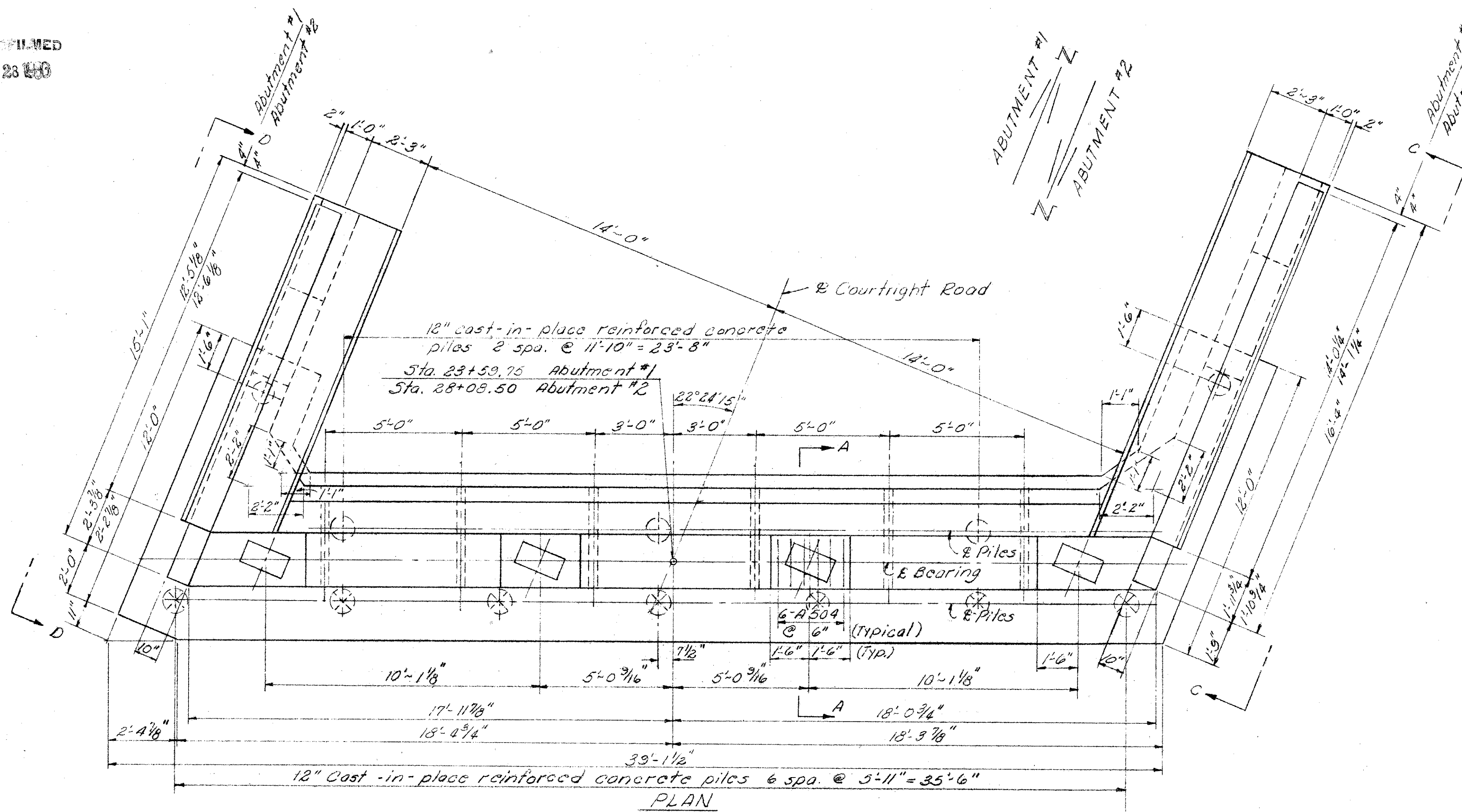
RACKOFF ASSOCIATES ENGINEERS COLUMBUS, OHIO					
GENERAL NOTES AND ESTIMATED QUANTITIES BRIDGE NO. FRA. 40-1935 COLUMBUS EAST FREEWAY AND N.Y.C. R.R. UNDER COURTRIGHT ROAD FRANKLIN COUNTY STA. 23 + 57.32 STA. 28 + 10.93					
Designed	Drawn	Traced	Checked	Reviewed	Date
RAK.	G.M. E.A.		N.U.	bbb	4-23 1962

MICROFILMED
MAR 23 1960

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	H-16-70-3(20) 105 NS-189-100 (B)	

228
298

FRANKLIN COUNTY
FRA. 40-18.69

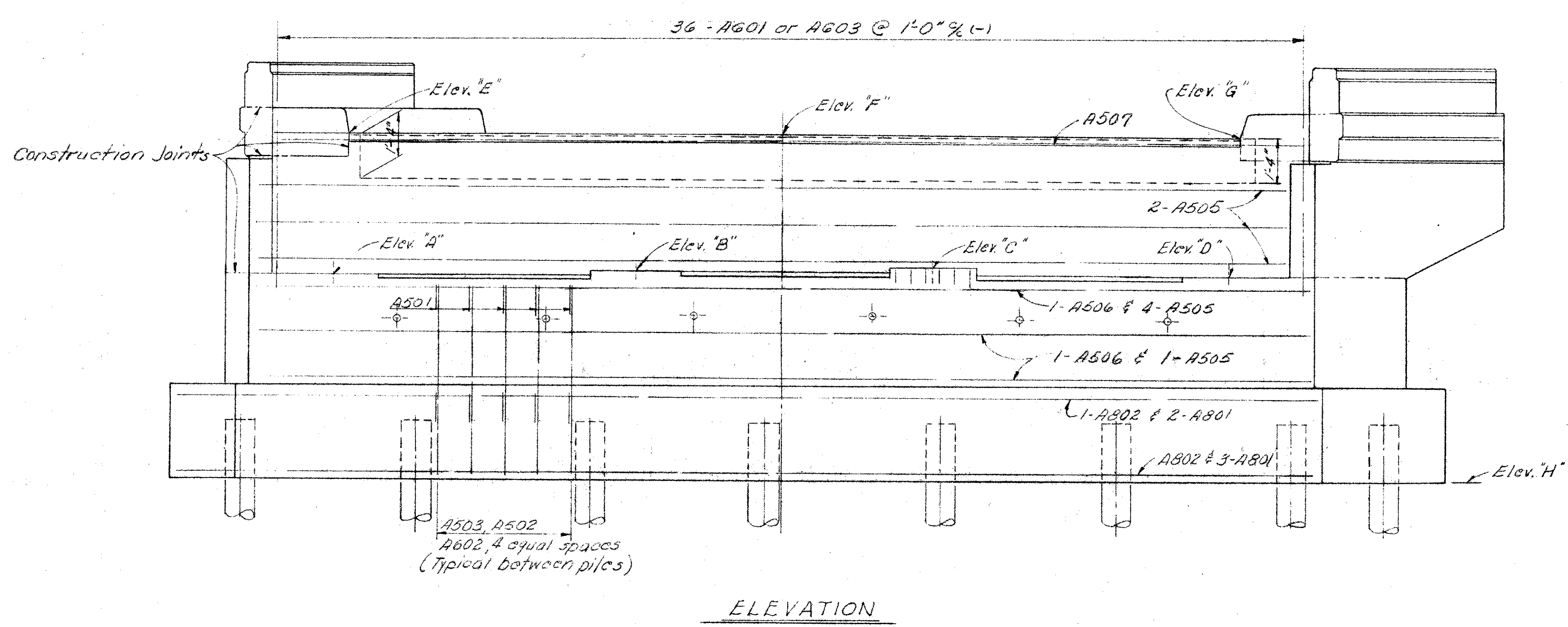


⊙ = Vertical Piles
⊗ = Battered Piles 1:4

Location	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
Abutment #1	786.25	786.52	786.33	786.15	791.14	791.16	790.75	779.10
Abutment #2	790.56	790.55	790.55	790.39	795.22	795.35	795.05	783.40

NOTES:
Porous backfill 2ft. thick, full length of the abutment shall extend upward to the approach slab. Excavation therefor, in excess of that required for the construction of the abutment, shall be considered as paid for in the price per cu. yd. for porous backfill.

The embankment shall be placed and compacted up to the surface of the proposed embankment and to the level of the subgrade for a distance of 200 ft. back of the abutment, after which excavation shall be made for the abutment and the piles driven.



RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

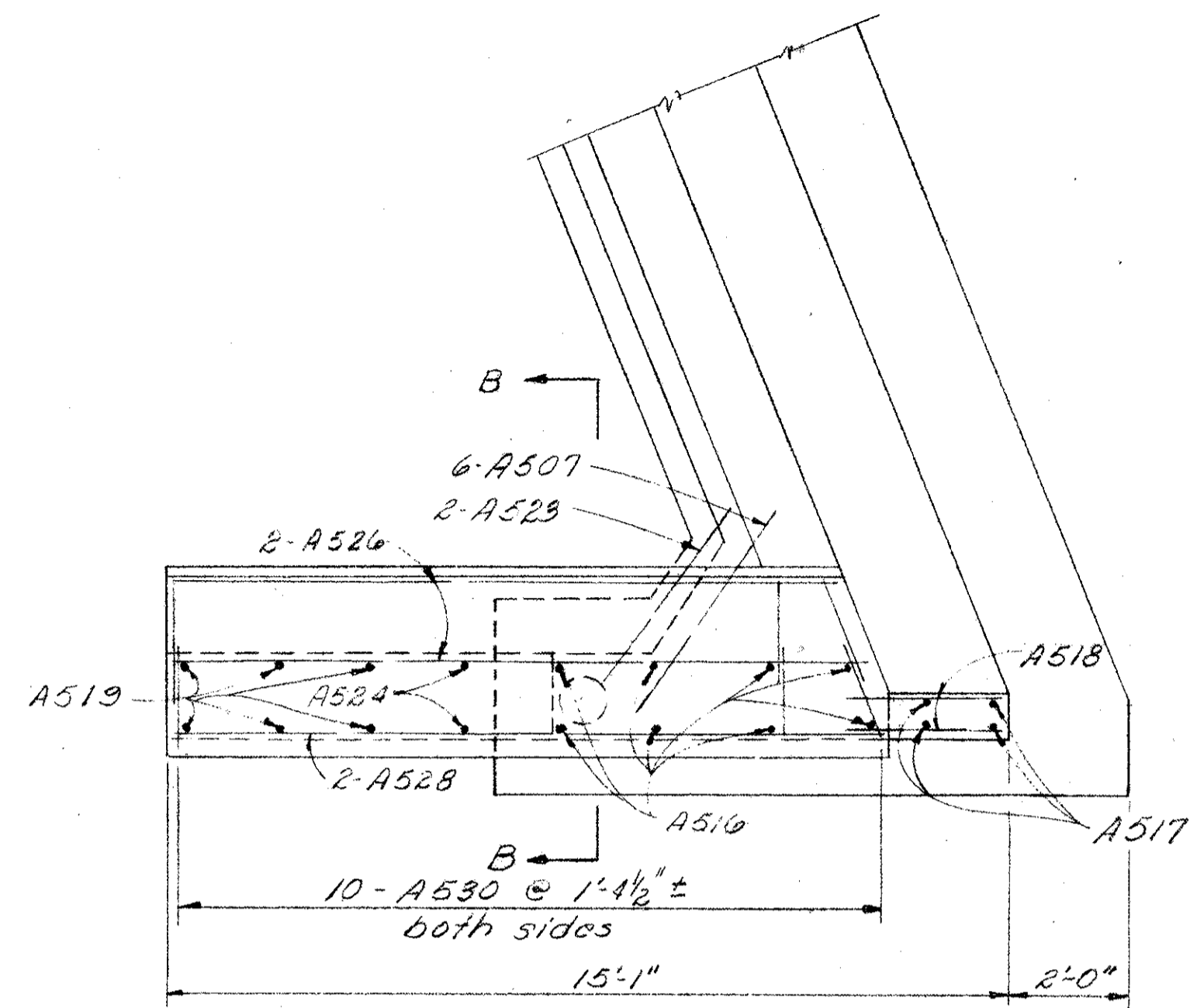
ABUTMENT DETAILS
BRIDGE NO. FRA. -40-1935
COLUMBUS EAST FREEWAY AND N.Y.C. R.R.
UNDER COURTRIGHT ROAD
FRANKLIN COUNTY STA. 23 + 57.32
STA. 28 + 10.93

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
N.U.	E.D.A.		S.H.S.	666	4-23 1962	

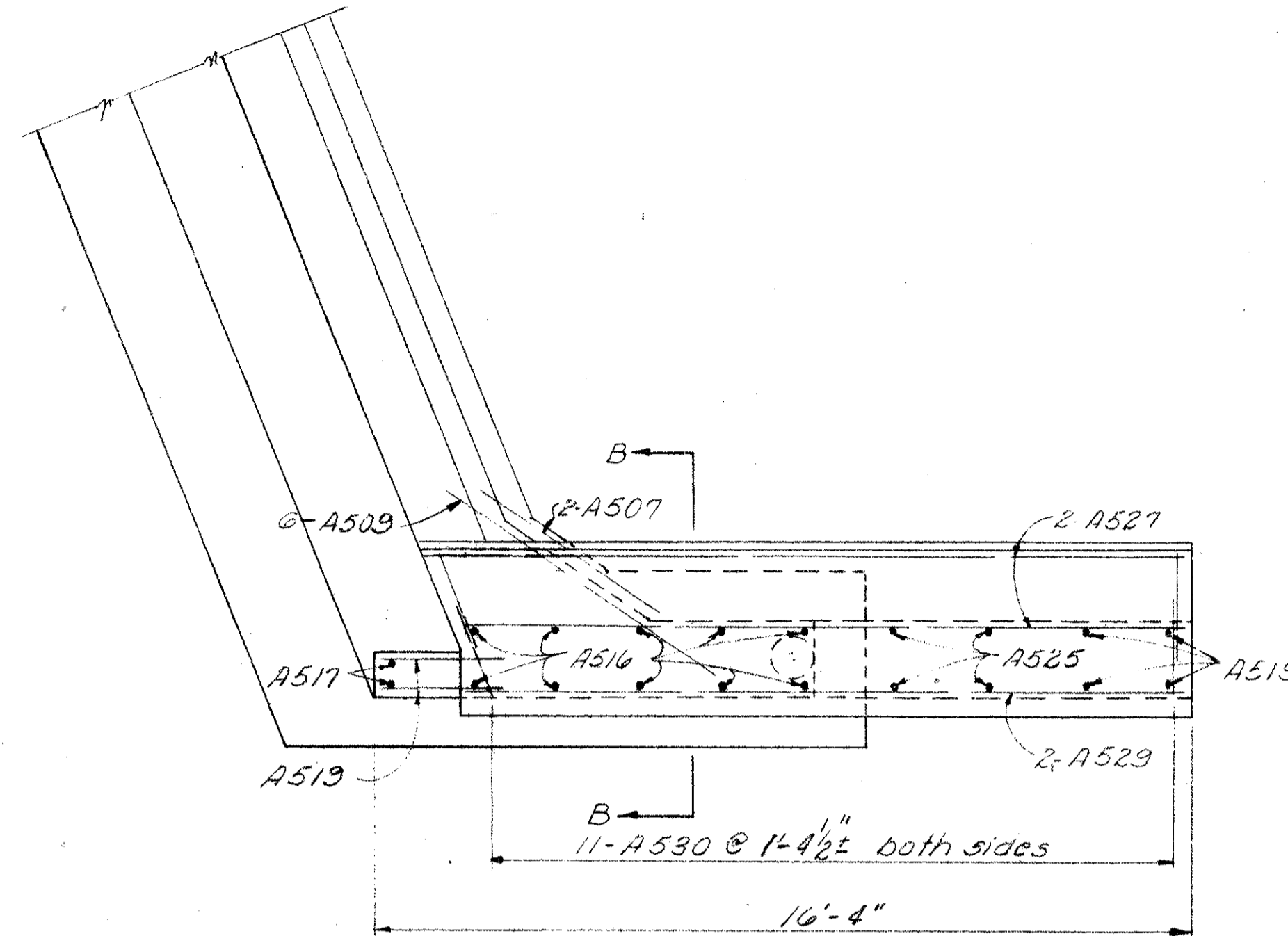
REVISIONS
MAR 23 1966

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	HO-70-3(20) 105 US-105-105 (6)	229 298

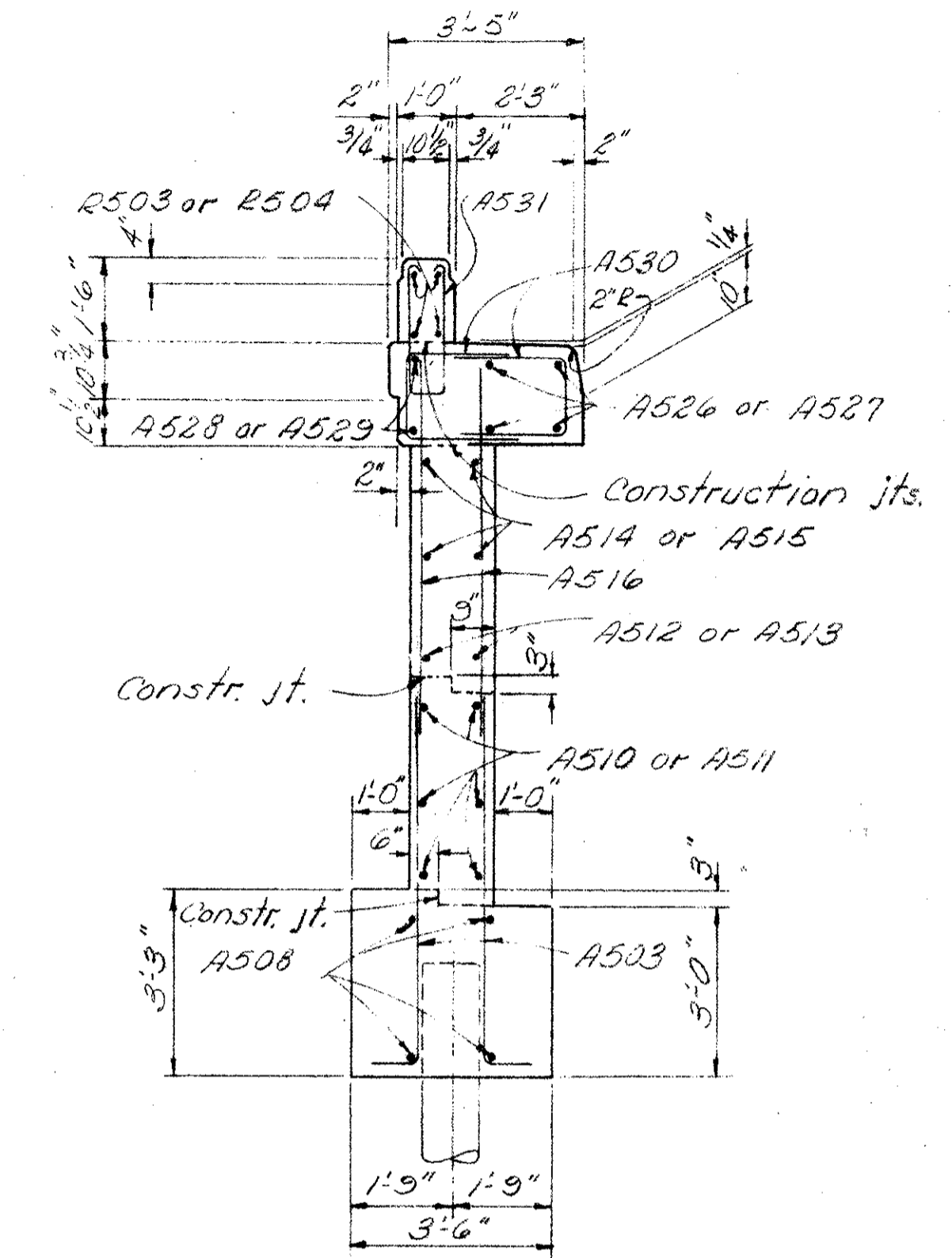
FRANKLIN COUNTY
FRA. 40 -18.69



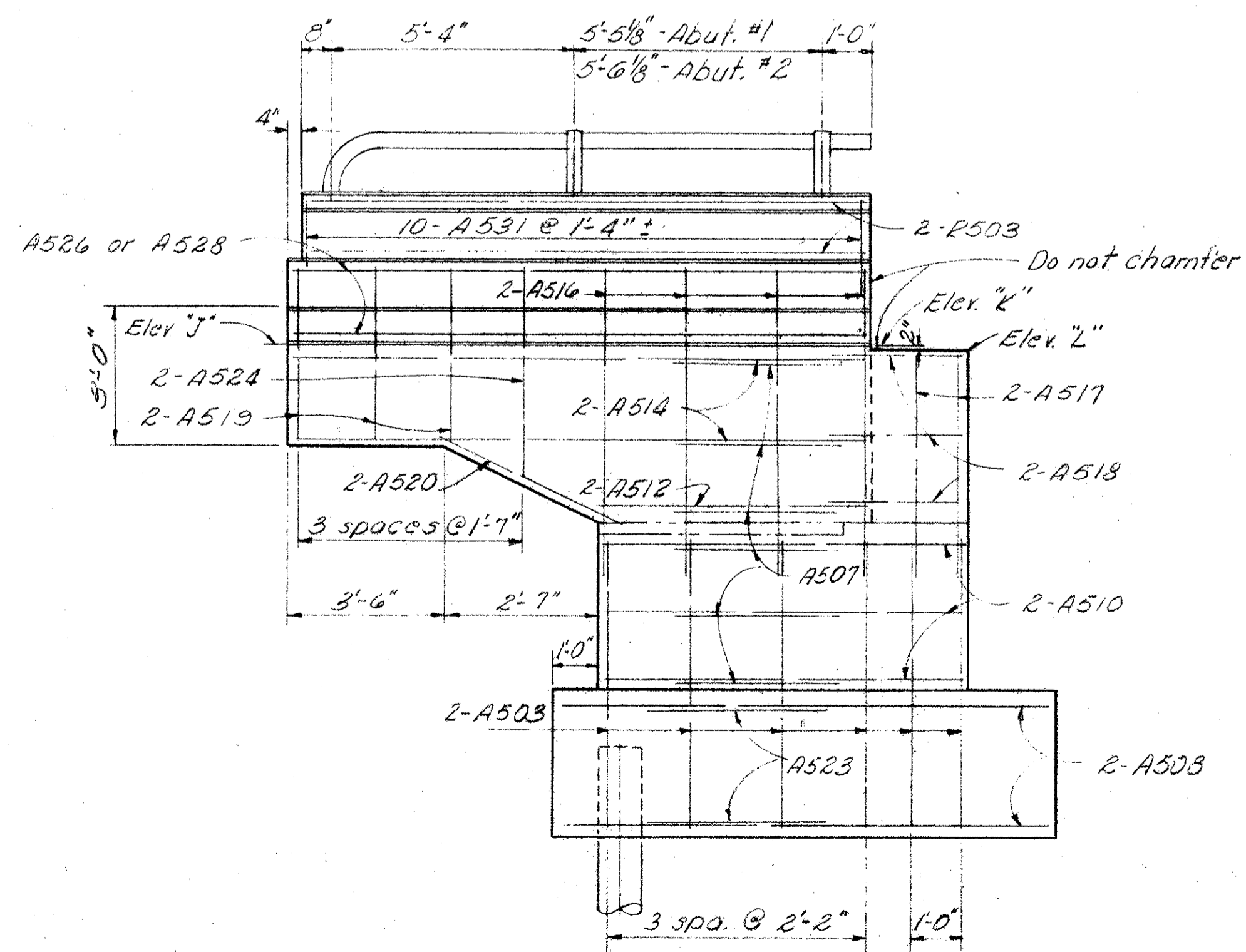
PLAN OF VIEW D-D
Parapet not shown



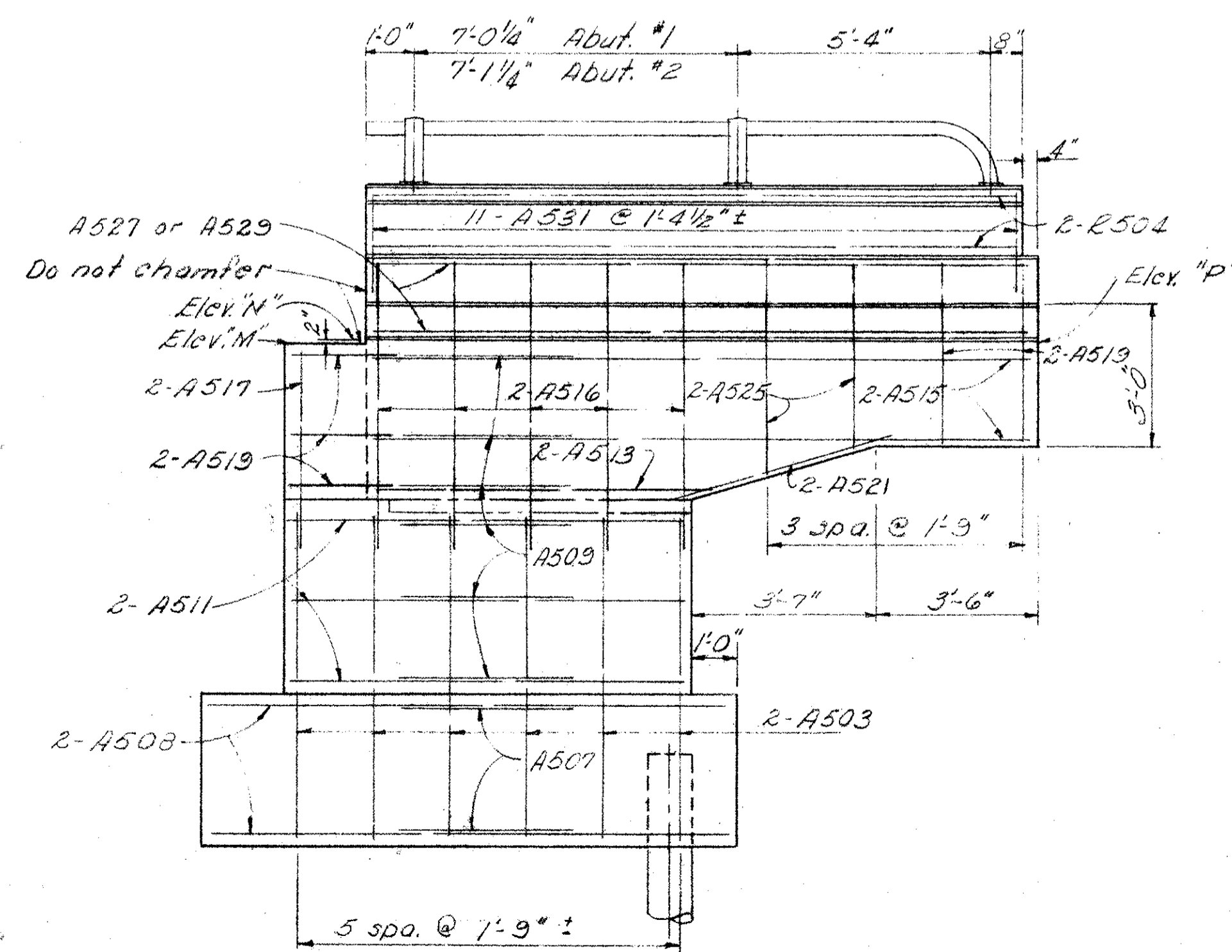
PLAN OF VIEW C-C
Parapet not shown



SECTION B-B



VIEW D-D



VIEW C-C

LOCATION	ELEVATIONS					
	"J"	"K"	"L"	"M"	"N"	"P"
Abutment #1	789.82	790.25	790.15	789.70	789.80	789.30
Abutment #2	794.12	794.31	794.17	793.97	794.11	793.88

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

ABUTMENT DETAILS
BRIDGE NO. FRA. -40-1935
COLUMBUS EAST FREEWAY AND N.Y.C. R.R.
UNDER COURTRIGHT ROAD
FRANKLIN COUNTY STA. 23 + 57.32
STA. 28 + 10.93

Designed	Drawn	Traced	Checked	Reviewed	Date
N.U.	E.D.A.		S.H.S.	lll	4-23 1962

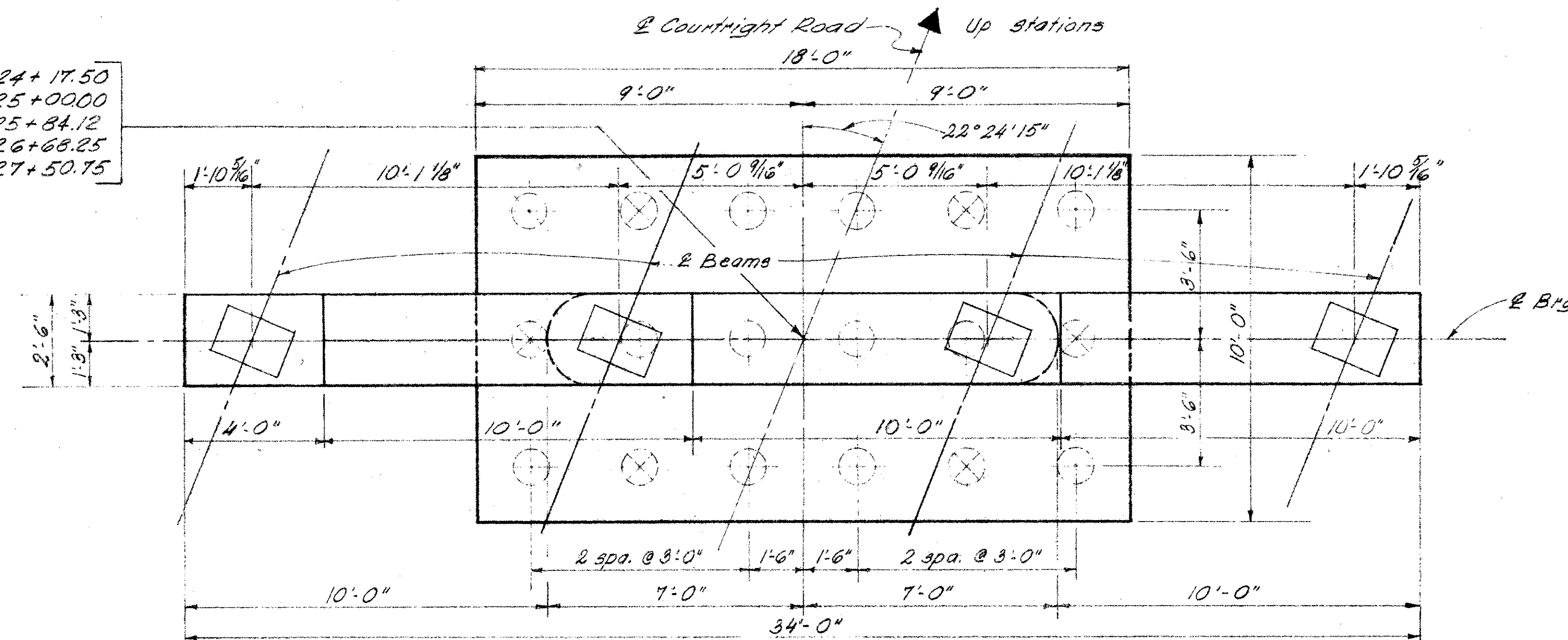
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	4-18-70-3(20) 105 118-115-115 (A)	

230
298

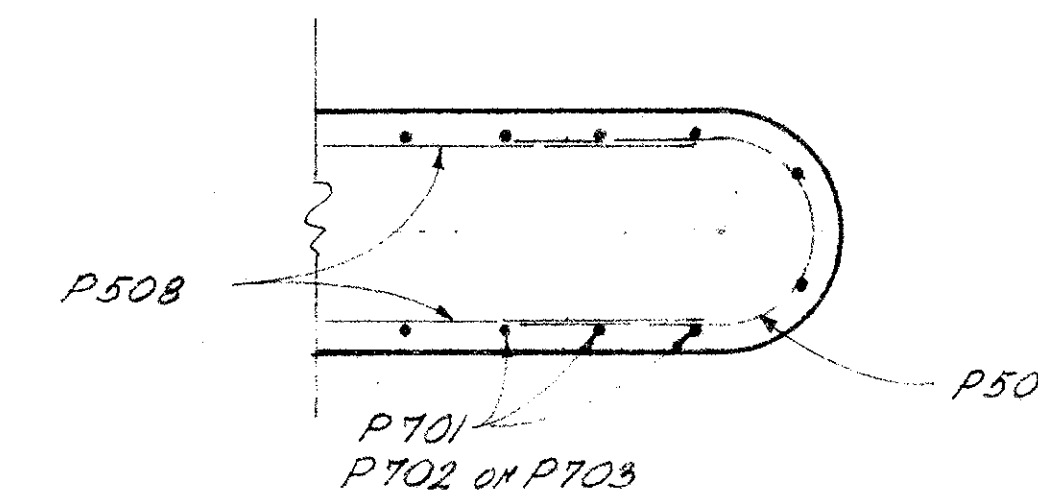
FRANKLIN COUNTY
FRA. 40-18.69

Pier #1 Sta. 24+17.50
Pier #2 Sta. 25+00.00
Pier #3 Sta. 25+84.12
Pier #4 Sta. 26+68.25
Pier #5 Sta. 27+50.75

DATE FILLED
MAR 23 1962

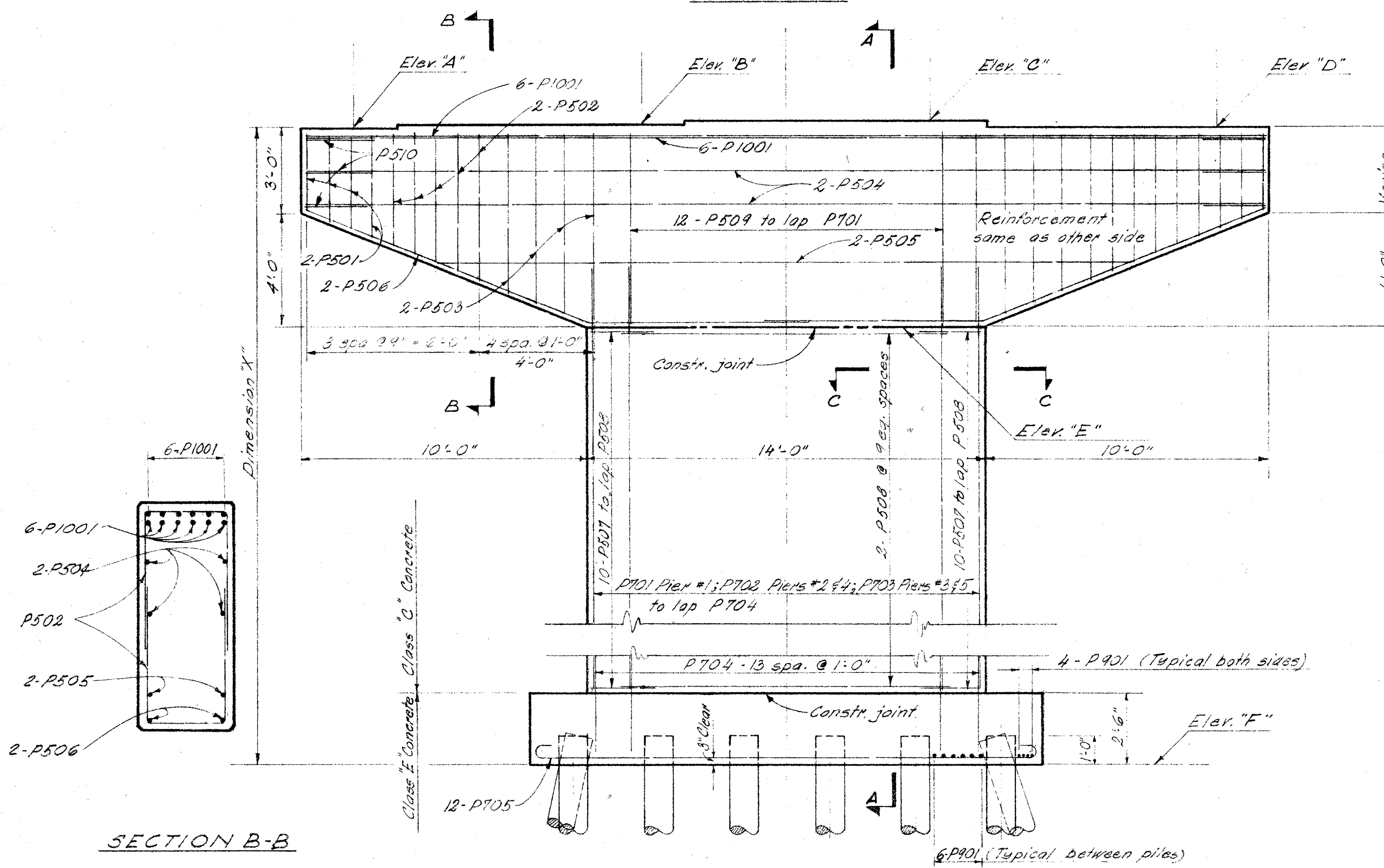


PLAN

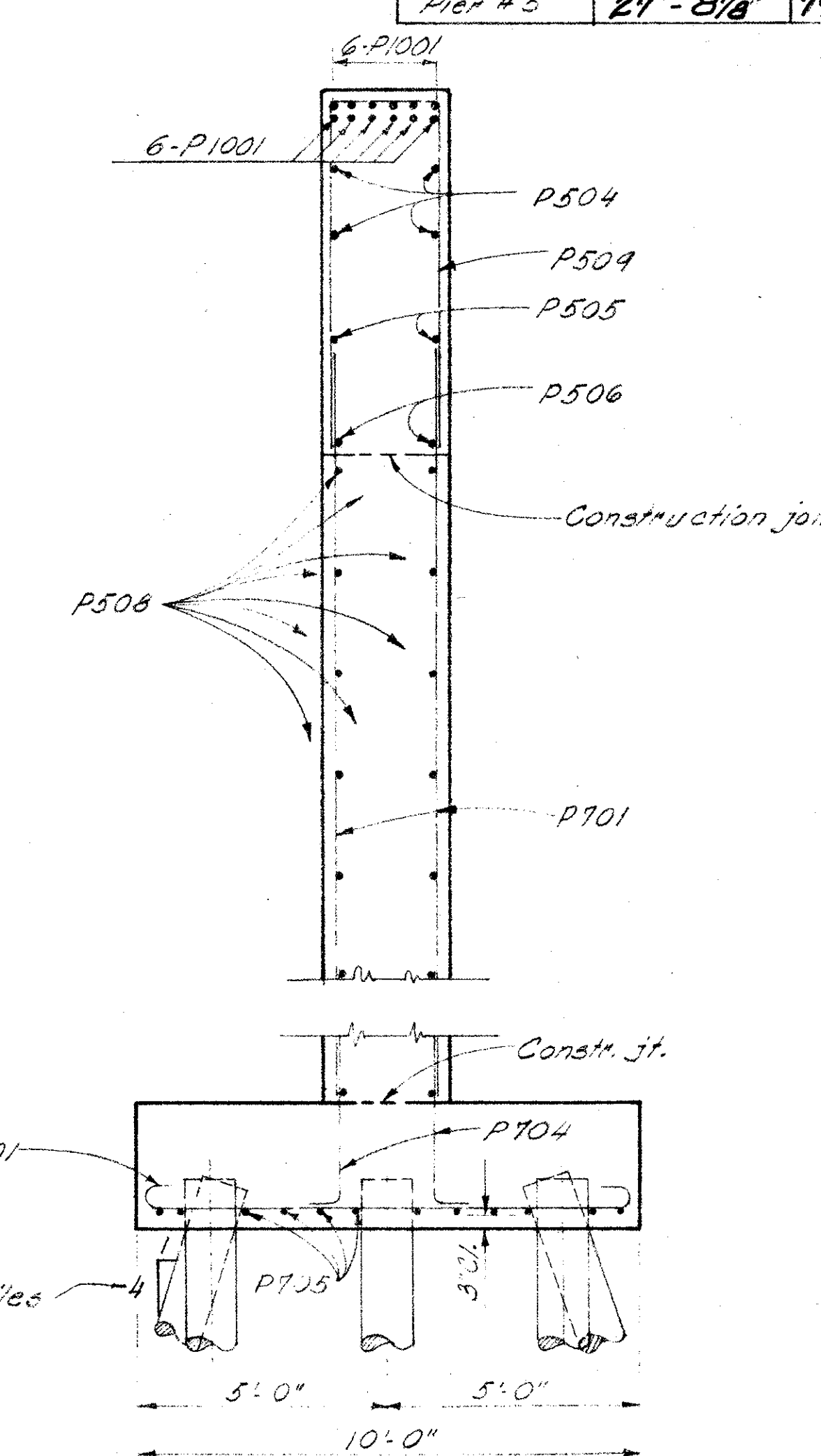


SECTION C-C

LOCATIONS	DIMENSION						ELEVATIONS					
	"X"	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"	
Pier #1	23'-3 3/8"	787.25	787.53	787.64	787.59	780.28	784.00					
Pier #2	25'-2"	789.16	789.38	789.45	789.37	782.16	784.00					
Pier #3	27'-4 1/2"	790.37	790.55	790.58	790.47	783.37	784.50					
Pier #4	26'-3 1/8"	790.82	790.97	790.97	790.83	783.82	784.50					
Pier #5	27'-8 1/8"	790.67	790.78	790.74	790.56	783.59	783.00					



ELEVATION



SECTION A-A

- ⊕ = Vertical piles
- ⊗ = Battered piles

Notes:
Bridges seat reinforcing:
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes at Pier #3.

All pier details and reinforcement are symmetrical about the center line of the pier, unless otherwise noted.

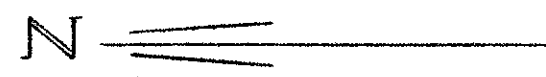
Piers #1 and #5 shall be built after the fills for the abutments have been completed.

Structure Ground Wire, per note on sheet 196, shall be installed in the west side of Pier 3.

RACKOFF ASSOCIATES ENGINEERS		COLUMBUS, OHIO	
PIER DETAILS			
BRIDGE NO. FRA. 40-1935			
COLUMBUS EAST FREEWAY AND N.Y.C. R.R. UNDER COURTRIGHT ROAD			
FRANKLIN COUNTY		STA. 23+57.32 STA. 28+10.93	
Designed	Drawn	Traced	Checked
F.A.	G.M.	RAK	666
Reviewed	Date	Revised	
	4-23 1962		

WORK PREPARED
MAR 23 1960

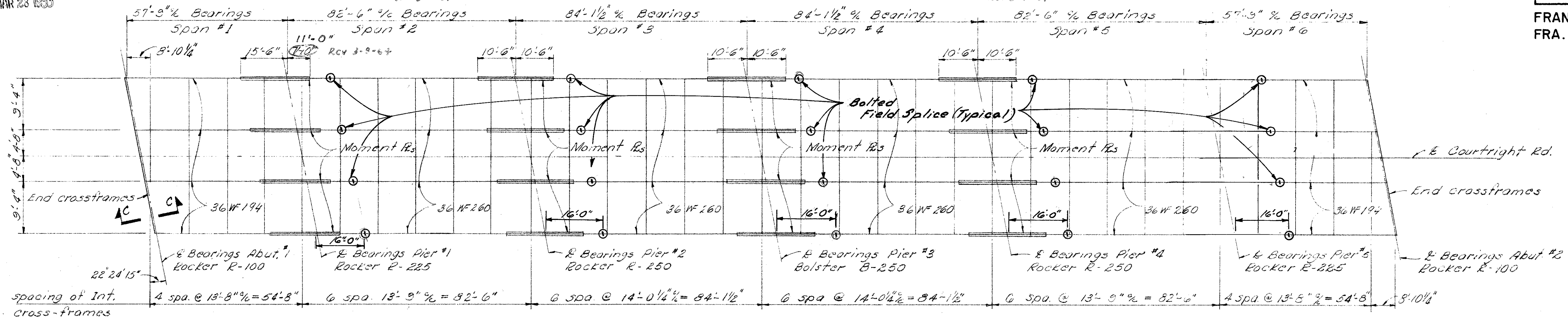
Moment plates at pier 1
top plate $10\frac{1}{2} \times 1$
bottom plate 14×1
REV 3-9-67



Moment plates at piers 2, 3 & 4
top plate $15 \times \frac{1}{2}$
bottom plate $18 \times \frac{1}{2}$
REV 3-9-67

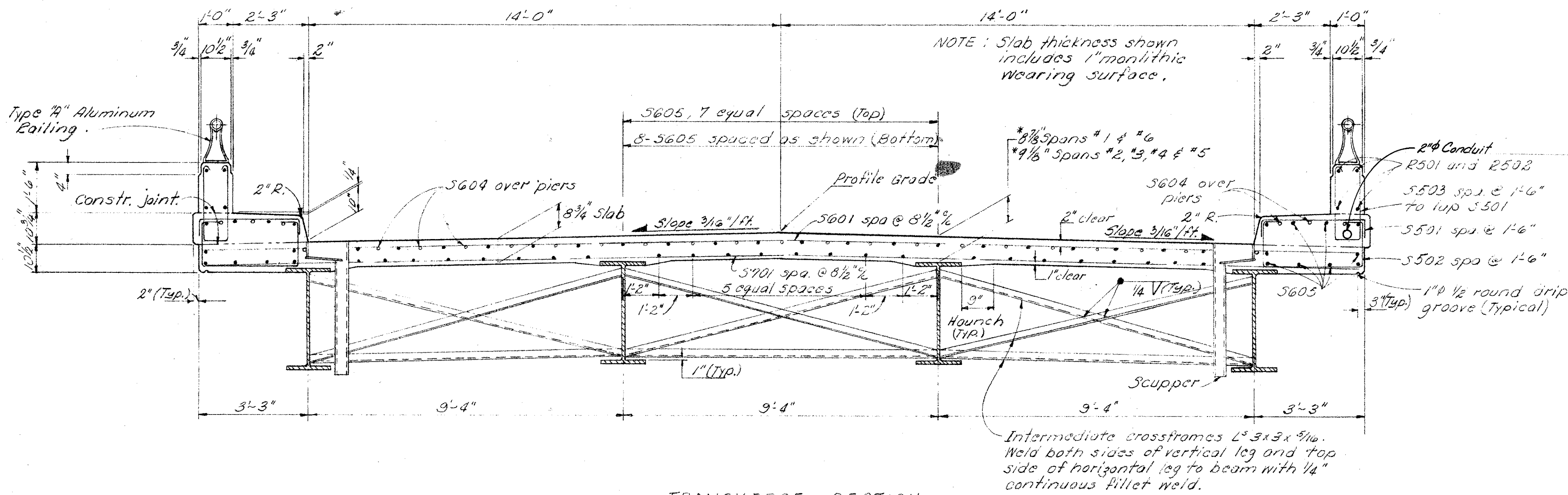
FED. RD. DIVISION 2	STATE OHIO	PROJECT 146-70-3(20) 105 US-105(5)	TYPE FUNDS 231 298
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FRANKLIN COUNTY
FRA. 40-18.69



FRAMING PLAN

NOTE: Refer to sheet 248 for Bolted Beam Splice, Moment Plate Details and Bolt Notes



TRANSVERSE SECTION

NOTE: Slab thickness shown includes 1" monolithic wearing surface.

NOTES:

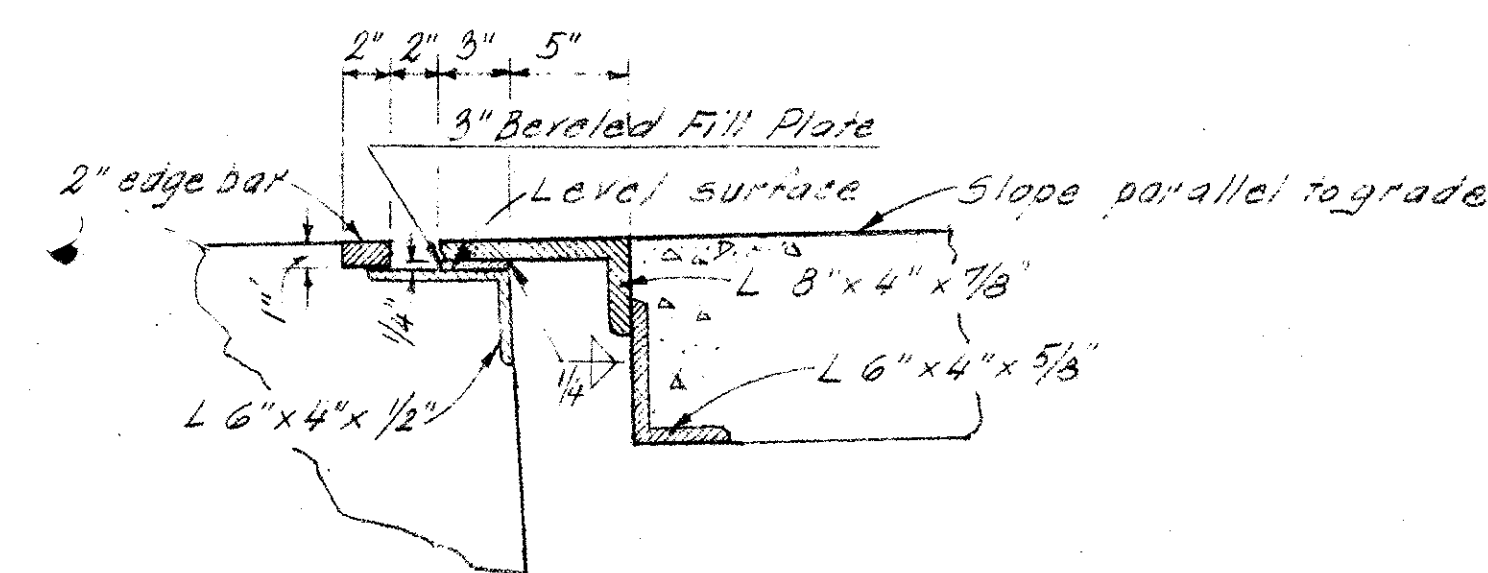
REFERENCE SHALL BE MADE TO:
Standard Drawing USB-2-56 for end crossframes, end dams, scuppers and curb plates.

Standard Drawing RB-1-55 for rollers and bolsters.
Standard Drawing AR-1-57 Type "A" aluminum railing.

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of the steel beams, which is shown as 9" wide, may vary from this dimension with a minimum of 6" and maximum of 12". Maximum slope of haunch shall be one vertical to four horizontal. Payment for deck slab concrete shall be based on the 9" 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.

See General Plan and Elevation for location of scuppers and railing posts.



SECTION C-C

For additional details and end dam for abutment #2 see Standard Drawing USB-2-56

LOCATION	DEFLECTION AND CAMBER					
	SPAN #1 8'x6"		SPAN #2 8'x5"		SPAN #3 8'x4"	
	exterior	interior	exterior	interior	exterior	interior
Deflection due to weight of steel	0	0	1/8	1/8	1/8	1/8
Deflection due to remaining dead load	1/4	1/4	9/16	1/2	7/16	7/12
Convexity required for vertical curve	3/16	3/16	1/8	1/8	1/8	1/8
Sum of deflections and convexity	13/16	13/16	13/16	13/16	13/16	13/16
Required Camber	13/16	13/16	13/16	13/16	13/16	13/16

RACKOFF ASSOCIATES ENGINEERS		COLUMBUS, OHIO	
SUPERSTRUCTURE DETAILS			
BRIDGE NO. FRA.-40-1935			
COLUMBUS EAST FREEWAY AND N.Y.C. R.R. UNDER COURTRIGHT ROAD			
FRANKLIN COUNTY		STA. 23 + 57.32	
		STA. 28 + 10.93	
Designed	Drawn	Traced	Checked
Drawn	E.D.A.	Traced	N.U.
Checked		Reviewed	66
Date	4-23 1962		
Revised			3-8-65