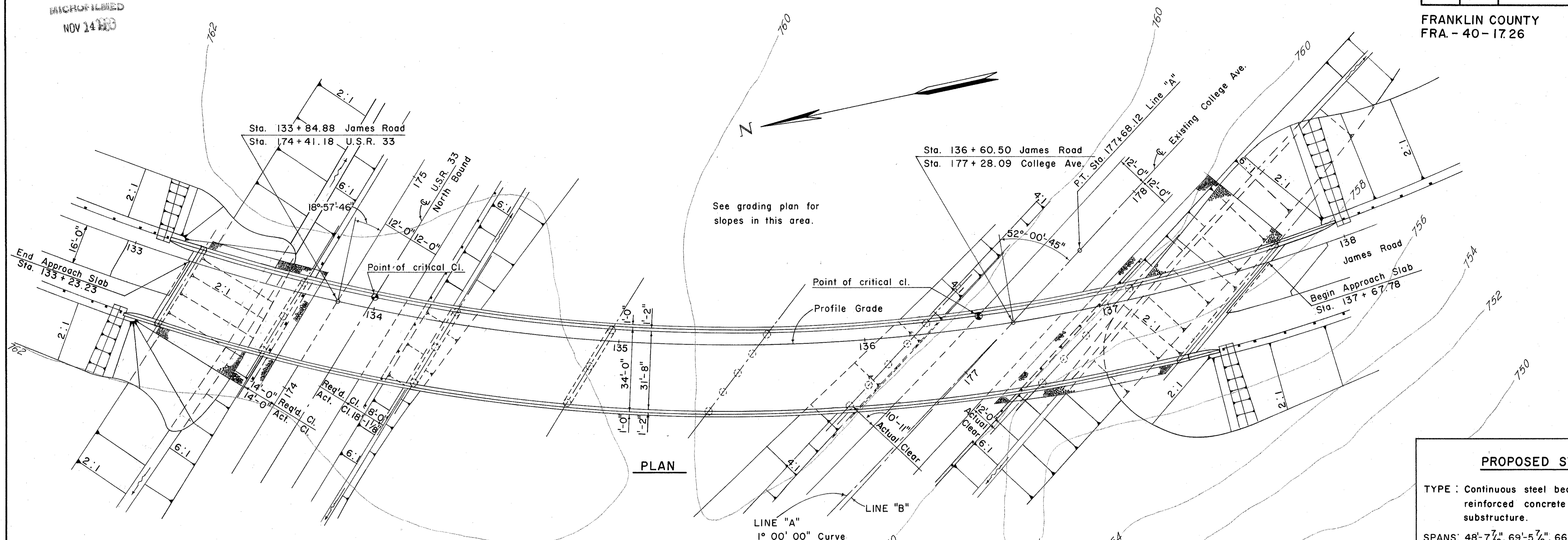
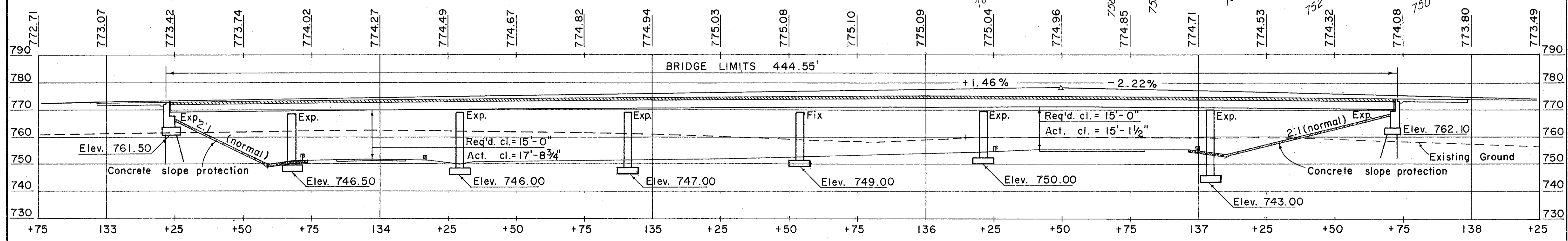


MICROFILMED
NOV 14 1963



PLAN



PROFILE

All piles shall be 12" ϕ Cast-in-place reinforced concrete piles.
Estimated average pay length of abutment piles = 25 feet.

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, the accuracy of which the State does not guarantee, may be examined in the office of the Bureau of Bridges in Columbus or in the Division office.

VERTICAL CURVE DATA-N.B. U.S.R.33		VERTICAL CURVE DATA-COLLEGE AVE.		VERTICAL CURVE DATA-JAMES RD.		HORIZONTAL CURVE DATA-JAMES RD.	
P.V.I. = Sta. 171+50.00 Elev.=753.09		P.V.I. = Sta. 173+50.0 Elev.= 763.72		P.V.I. = Sta. 136+50.0 Elev.=778.18		P.I. Sta. 136+02.30	$L_s = 400'$
$G_1 = +1.78\%$	$G_2 = -0.30\%$	$G_1 = +3.71\%$	$G_2 = -2.13\%$	$G_1 = +1.46\%$	$G_2 = -2.22\%$	$D_c = 8^\circ 00'$	$\theta_s = 16^\circ$
V.C. = 600'		V.C. = 800'		V.C. = 700'		$R_c = 716.197'$	$P = 9.28'$
						$\Delta = 79^\circ 04' 32''$	$K = 199.480'$
						$\Delta_c = 47^\circ 04' 32''$	L.T. = 267.764'
						$T_c = 311.973'$	S.T. = 134.332'
						$L_c = 588.444'$	$T_s = 798.296'$
						$E_c = 64.992'$	$E_s = 224.500'$

PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and substructure.
 SPANS: $48'-7\frac{7}{16}"$, $69'-5\frac{7}{8}"$, $66'-11\frac{3}{4}"$, $68'-7\frac{1}{16}"$, $64'-8"$, $69'-5\frac{5}{16}"$, $43'-5\frac{5}{16}"$ center to center of bearings along reference chord connecting \odot bearings of abutments.
 ROADWAY: 34'-0" face to face of concrete parapets.
 LOAD FREQUENCY: CF=400 (57)
 WEARING SURFACE: 1" monolithic concrete
 APPROACH SLAB: Special, 25' long
 ALIGNMENT: $8^\circ 00'$ Curve
 SUPERELEVATION: 0.083 ft. per ft.

SKEW: $\left\{ \begin{array}{l} 18^\circ 57' 46'' \text{ L.F. over N.B. U.S.R. 33} \\ 52^\circ 00' 45'' \text{ L.F. over Existing College Ave.} \end{array} \right.$

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

SITE PLAN
BRIDGE NO. FRA.-33-2288
SOUTH BOUND JAMES OVER N.B. U.S.R. 33 AND EXISTING COLLEGE AVE.
FRANKLIN COUNTY STA. 133+23.23
STA. 137+67.78

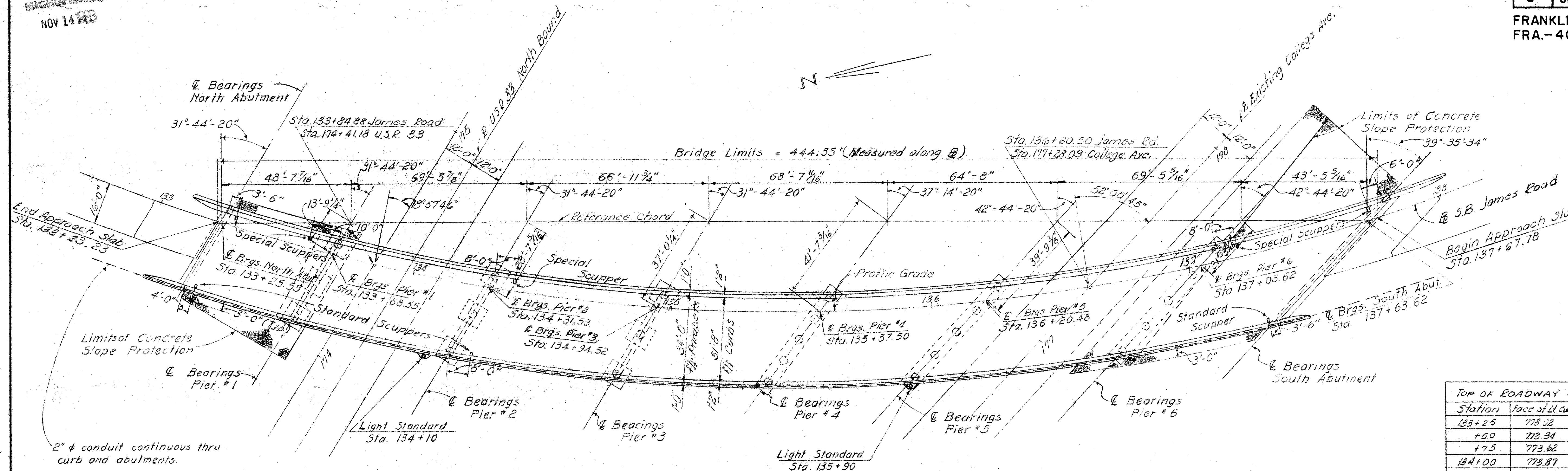
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.B.	M.R.	R.A.K.	llt		10.15 62	

RECEIVED
NOV 14 1963

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

401
435

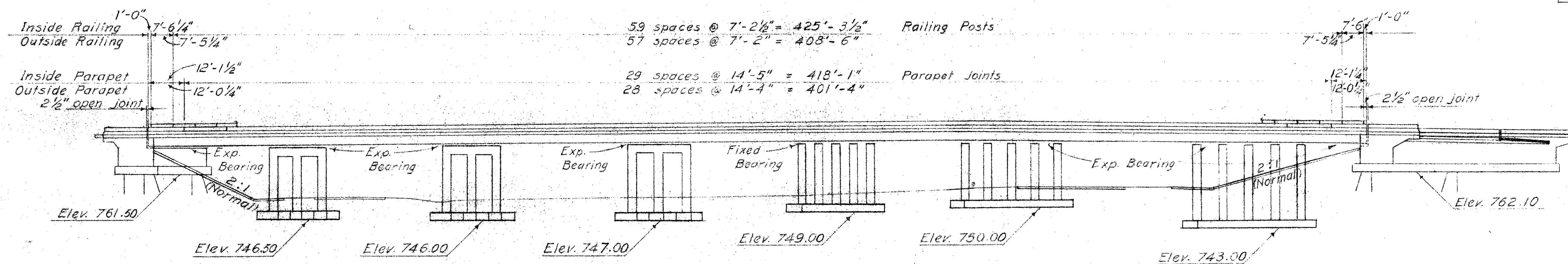
FRANKLIN COUNTY
FRA.-40-17.26



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

PLAN

TOP OF ROADWAY SLAB ELEVATIONS			
Station	Face of Lt. Curb	Profile Grade	Face of Rt. Curb
133+25	773.02	773.42	774.01
+50	773.34	773.74	774.33
+75	773.62	774.02	775.21
134+00	773.87	774.27	775.46
+25	774.09	774.49	775.68
+50	774.27	774.67	775.86
+75	774.42	774.82	776.01
135+00	774.54	774.94	776.13
+25	774.63	775.03	776.22
+50	774.68	775.08	776.27
+75	774.70	775.10	776.29
136+00	774.69	775.09	776.28
+25	774.64	775.04	776.23
+50	774.56	774.96	776.15
+75	774.45	774.85	776.04
137+00	774.31	774.71	775.90
+25	774.13	774.53	775.72
+50	773.92	774.32	775.51
+75	773.68	774.08	775.27



ELEVATION

Note: Only end piles shown.

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

GENERAL PLAN AND ELEVATION
BRIDGE NO. FRA - 33-2288
SOUTH BOUND JAMES OVER N.B.
U.S.R. 33 AND EXISTING COLLEGE AVE.
FRANKLIN COUNTY STA. 133 + 23.23
STA. 137 + 67.78

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.B.	EDA.		RAK.	lll	10.15	
	M.R.				62	

MICROFILMED
NOV 14 1962

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

402
135

FRANKLIN COUNTY
FRA - 40 - 17.26

GENERAL NOTES

REFERENCE SHALL BE MADE TO:

- Standard Drawing CSB-2-56, sheets 2 and 3, 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 7-12-1962

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.

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

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 3 tons per sq. ft.

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.

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 A.S.T.M. 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.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the entire superstructure except the top and bottom surfaces of curbs and roadway. They shall also apply to the entire surface of piers and abutments, except bridge seats, backwalls and the face of spill-through abutments between outside beams.

MACHINE FINISH: At the Contractor's option, the concrete deck may be finished by the use of a finishing machine.

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.

CONCRETE SURFACE TREATMENT: See sheet 355.

ESTIMATED QUANTITIES								AS. BUILT	
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN.		
E-2	860	Cu.Yds.	Unclassified excavation		319	541			
E-2	Lump	Sum	Cofferdams, cribs and sheeting						
S-1	490	Cu.Yds.	Class "C" concrete, superstructure	490					
S-1	172	Cu.Yds.	Class "C" concrete, piers above footings			172			
S-1	152	Cu.Yds.	Class "E" concrete, pier footings			152			
S-1	123	Cu.Yds.	Class "E" concrete, abutments above footings		123				
S-1	91	Cu.Yds.	Class "E" concrete, abutment footings		91				
S-3	9	lin. ft.	Waterproofing, premolded sealing strip		9				
S-4	193,308	Lbs.	Reinforcing steel	129,188	12,479	51,641			
S-7	441,000	Lbs.	Structural steel	441,000					
S-8	441,000	Lbs.	Field painting of structural steel	441,000					
S-14	928.39	lin. ft.	Railing (aluminum railing and supports with concrete parapets)	867.69	60.70				
S-16	Lump	Sum	First test pile						
S-18	650	lin. ft.	12" Cast-in-place reinforced concrete piles		650				
S-29	49	Cu.Yds.	Porous backfill		49				
S-29	8	Each	Scuppers	8					
S-25			Electric lighting system - see Lighting Plans.						
I-10	800	Sq.Yds.	Concrete slope protection		800				
S-101	490	Each	Water-reducing, set-retarding admixture	490					
Special	2007	Sq.Yd.	Concrete Surface Treatment				2007		

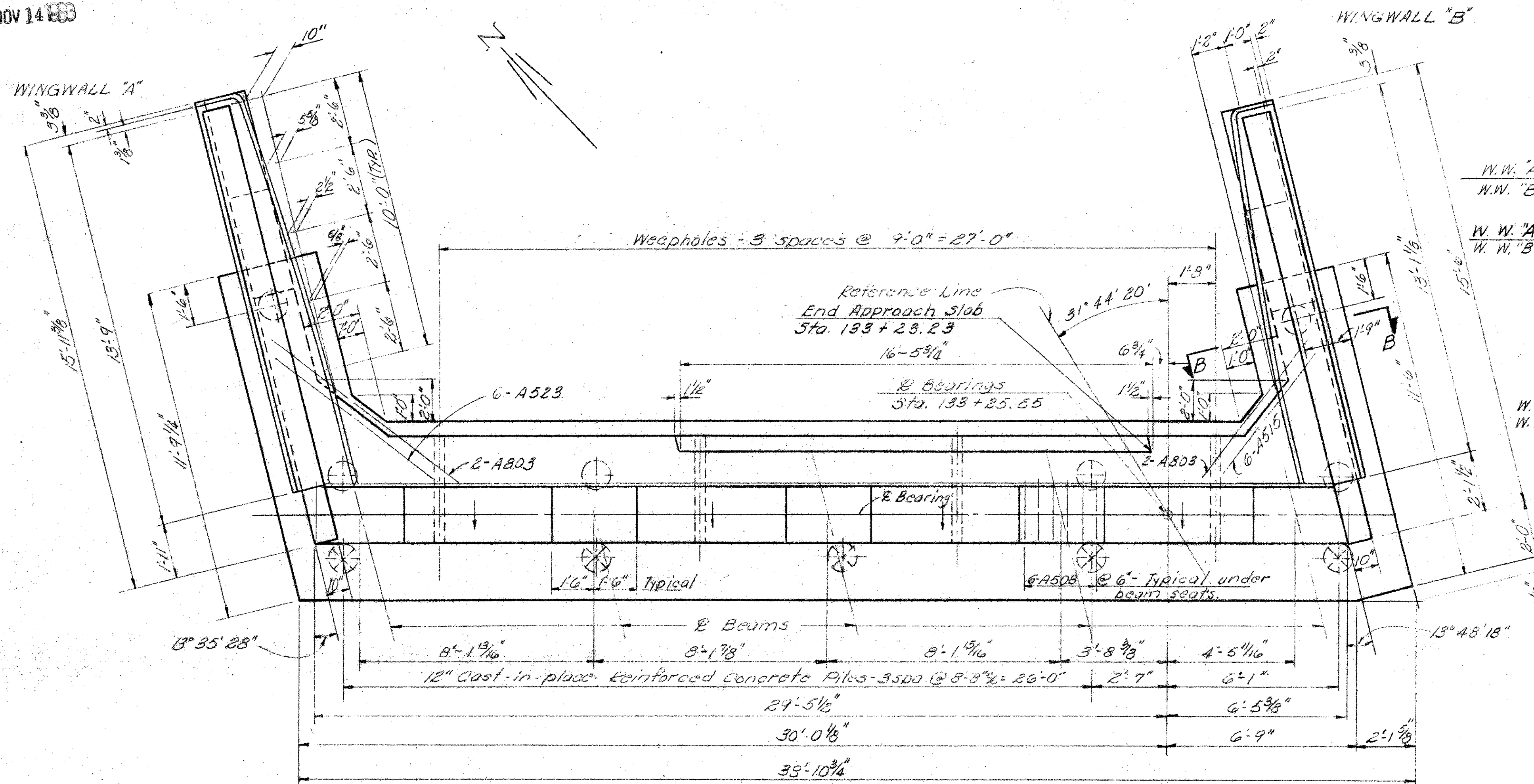
RACKOFF ASSOCIATES ENGINEERS COLUMBUS, OHIO						
GENERAL NOTES AND ESTIMATED QUANTITIES BRIDGE NO. FRA - 33 - 2288 SOUTH BOUND JAMES OVER N.B. U.S.R. 33 AND EXISTING COLLEGE AVE. FRANKLIN COUNTY STA. 133 + 23.23 STA. 137 + 67.78						
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
R.A.K.	M.R.		L.B.	llb	10.15 62	

MICROFILMED
NOV 14 1983

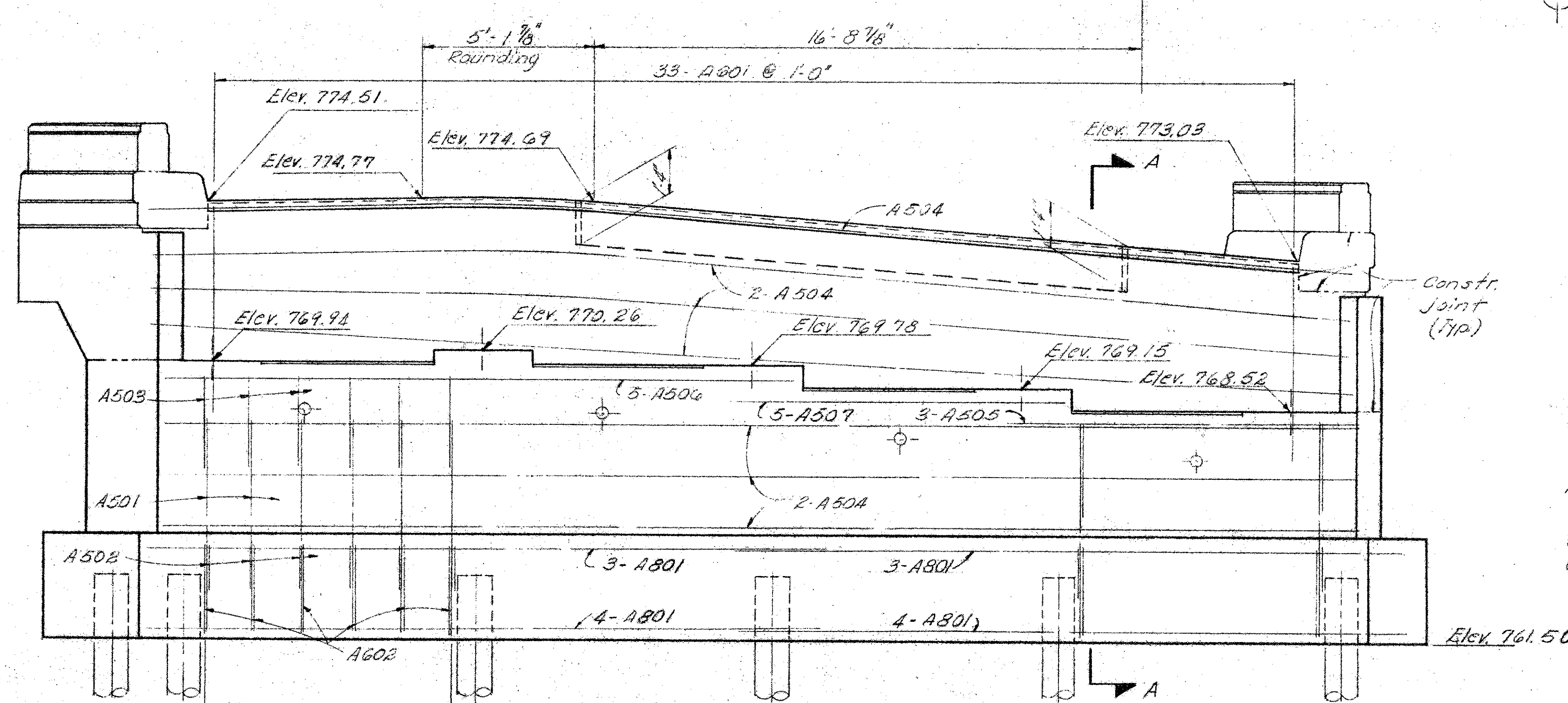
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

FRANKLIN COUNTY
FRA-40-1726

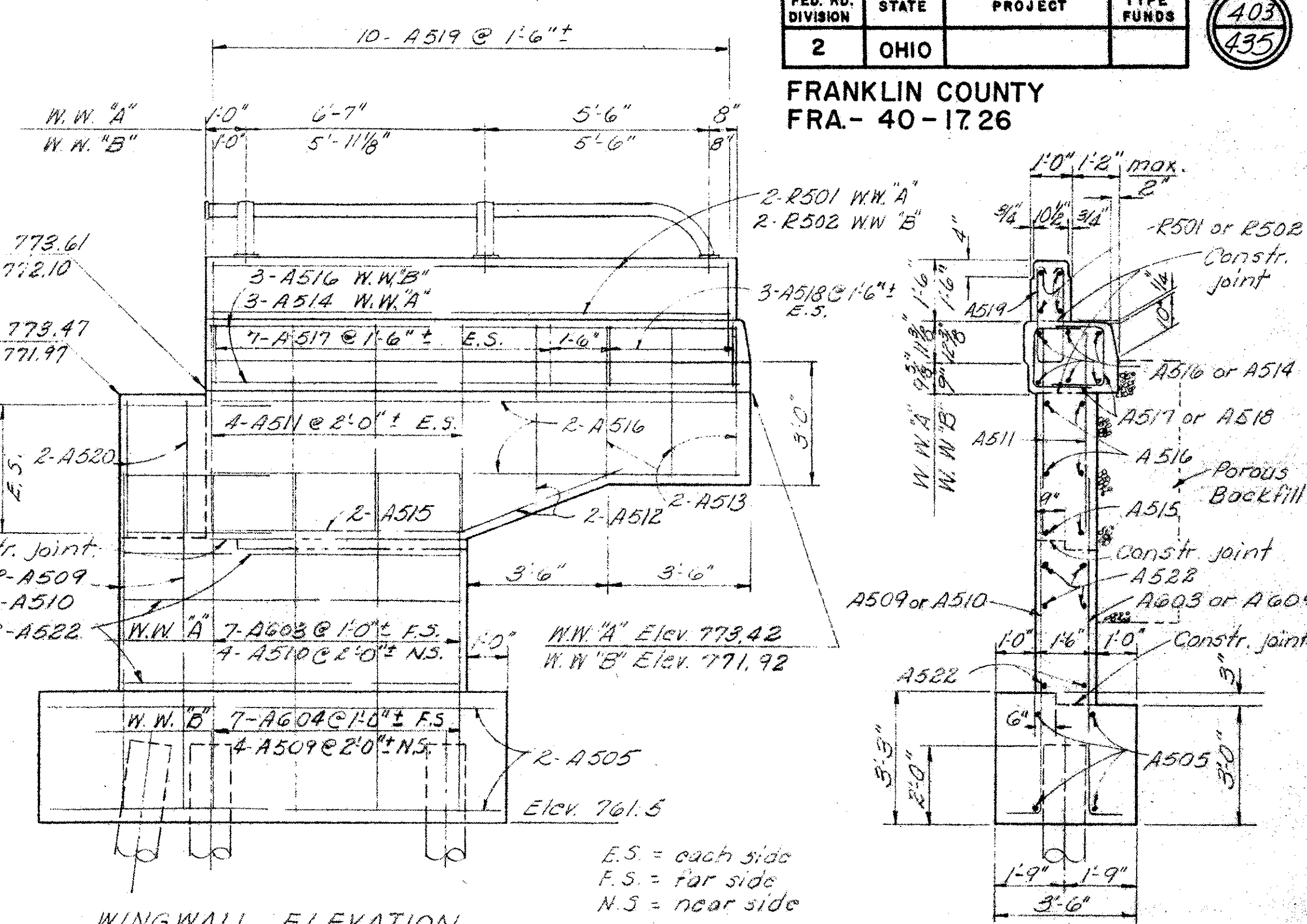
403
435



PLAN



ELEVATION



WINGWALL ELEVATION

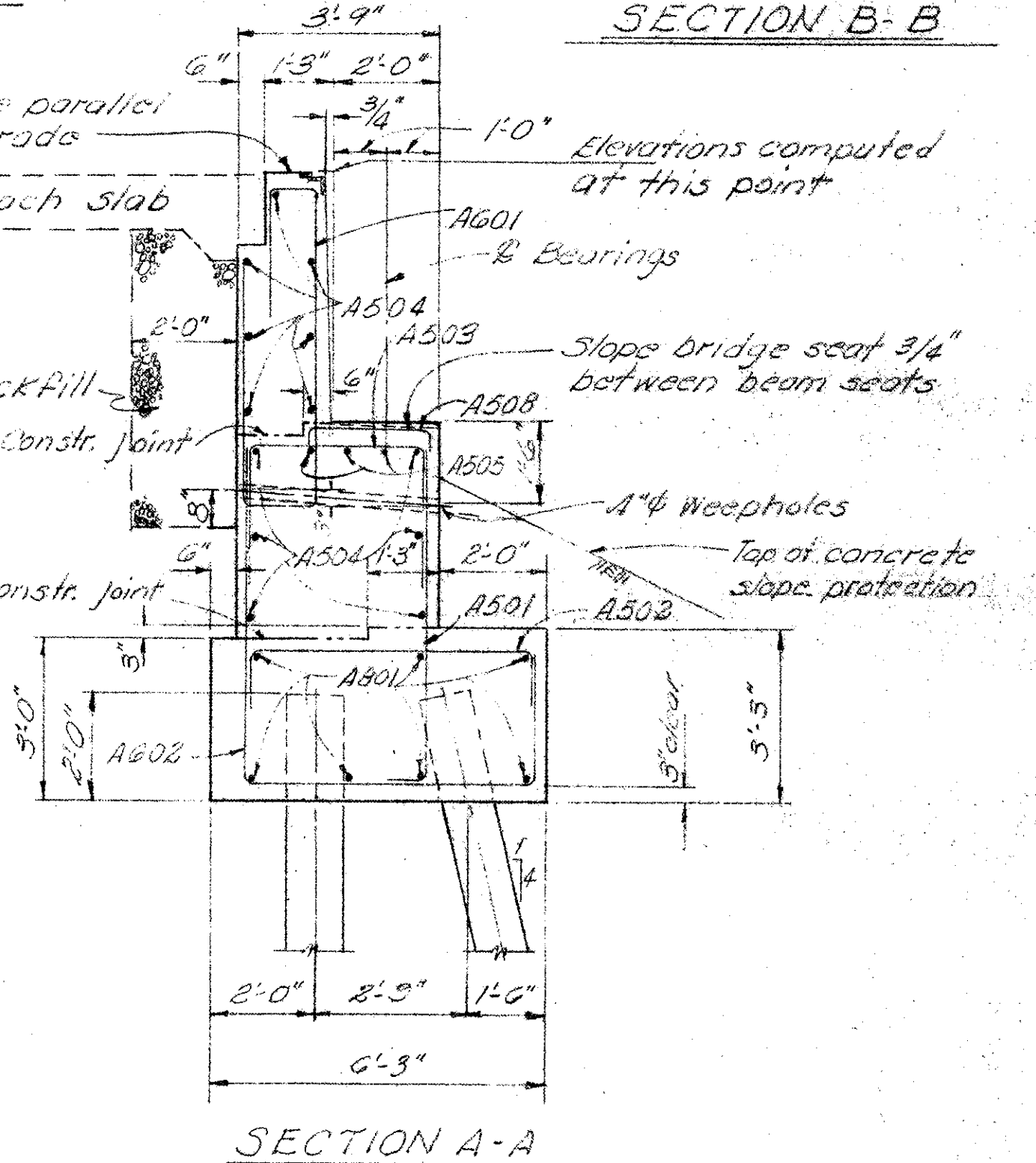
SECTION B-B

- ⊗ = Buttered piles 4:1
- ⊕ = Vertical Piles

NOTE:
Procedure: The embankment 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 abutment, after which excavation shall be made for the abutments and piles driven.

Porous Backfill two feet thick, full length of the abutment and along wingwalls shall extend upward to the approach slab or the finished ground surface. Excavation therefor, in excess of that required for construction of the abutment, shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.

CONCRETE for the abutments shall be Class "E" concrete.



SECTION A-A

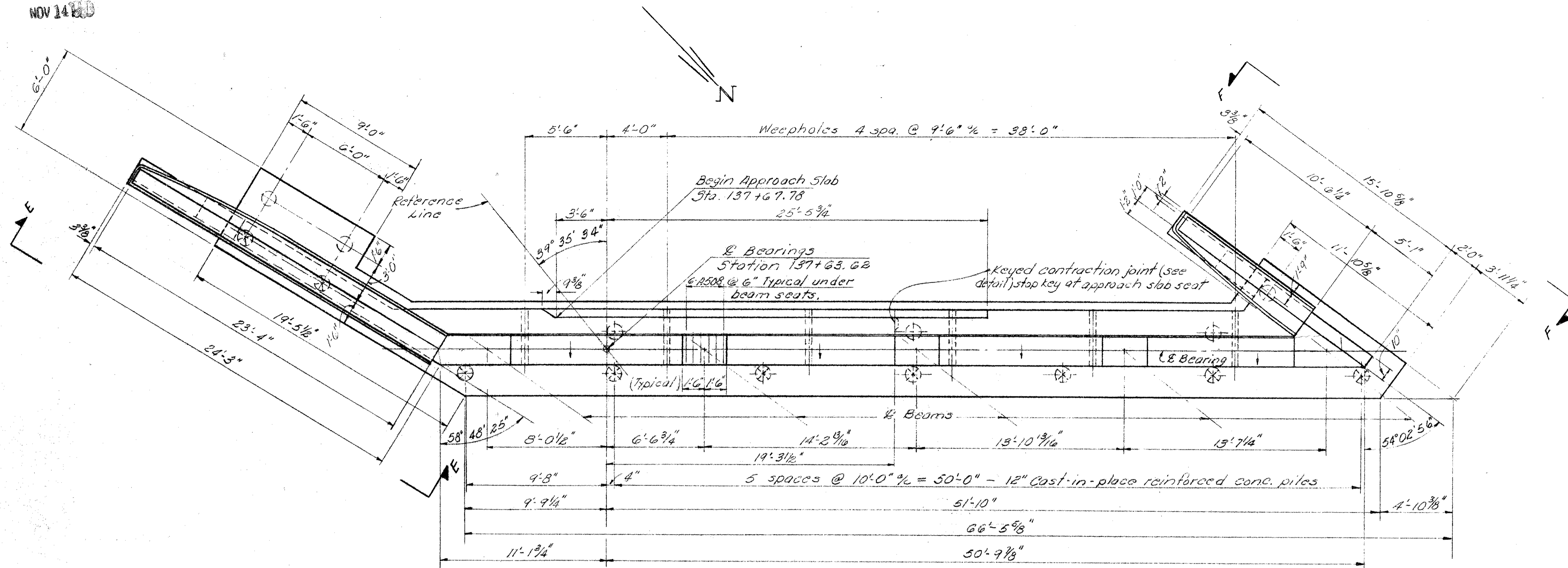
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ABUTMENT DETAILS BRIDGE NO. FRA-33-2288 SOUTH BOUND JAMES OVER N.B. U.S.R. 33 AND EXISTING COLLEGE AVE. FRANKLIN COUNTY STA. 137+23.23 STA. 137+67.78					
Designed	Drawn	Traced	Checked	Reviewed	Date
L.B.	EDA.		R.A.K.	666	10.15.62

MICROFILMED
NOV 14 1980

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

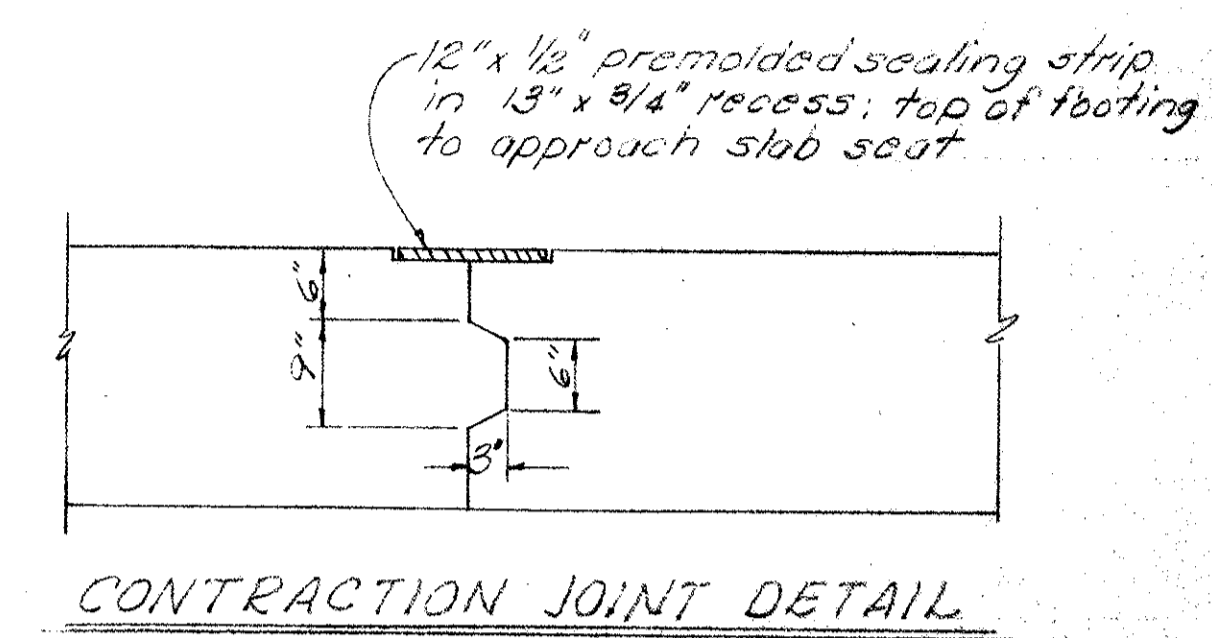
404
435

FRANKLIN COUNTY
FRA-40-17.26

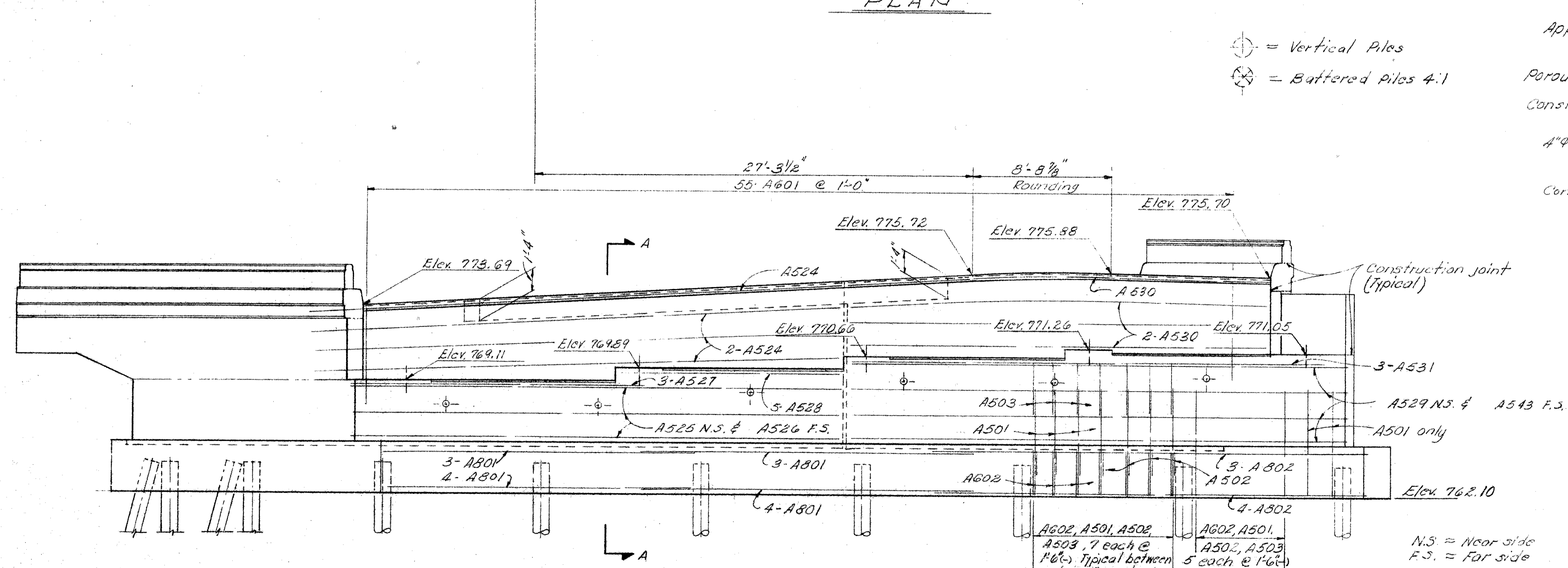


PLAN

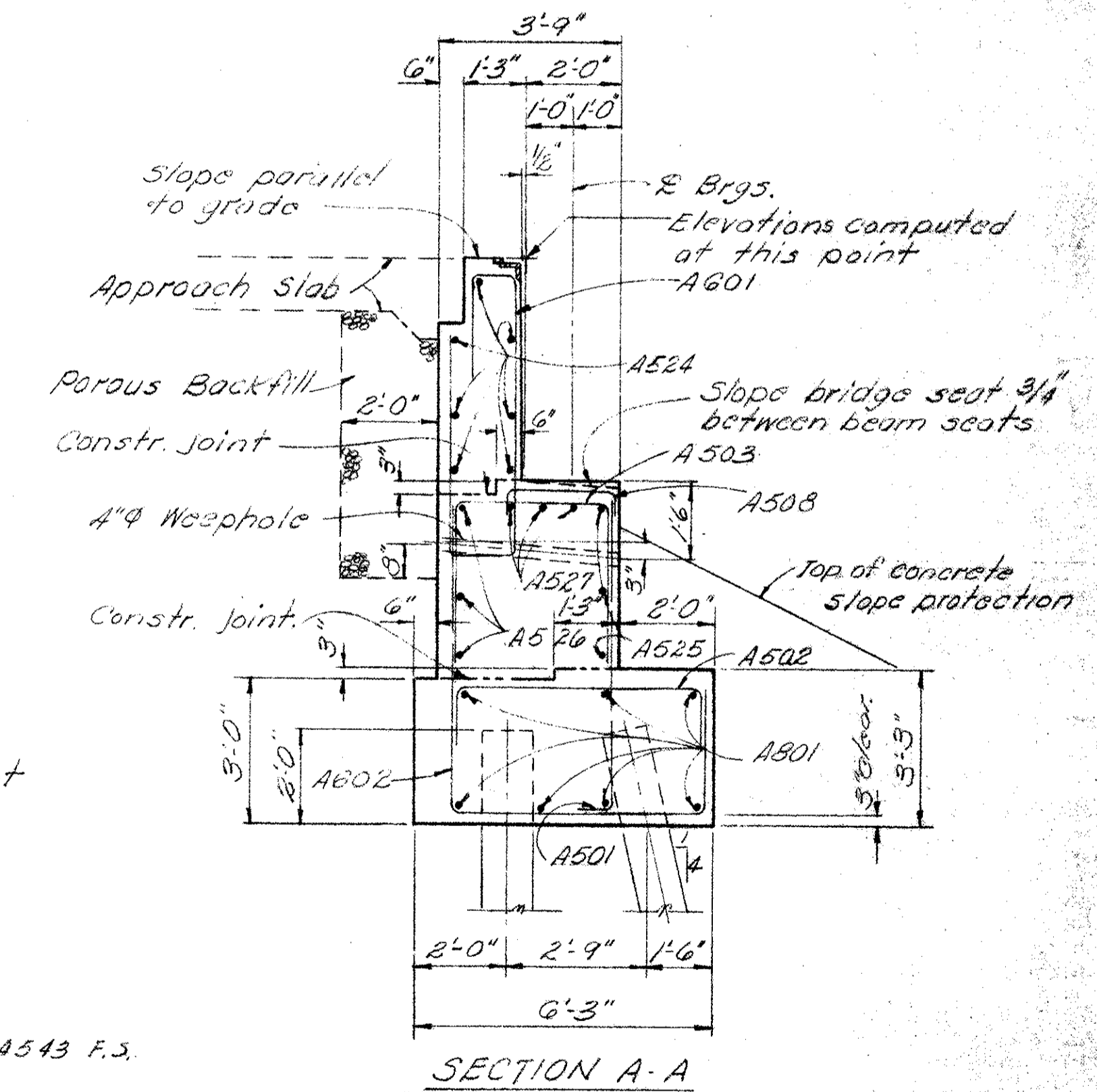
- ⊙ = Vertical Piles
- ⊗ = Battered Piles 4:1



CONTRACTION JOINT DETAIL



ELEVATION



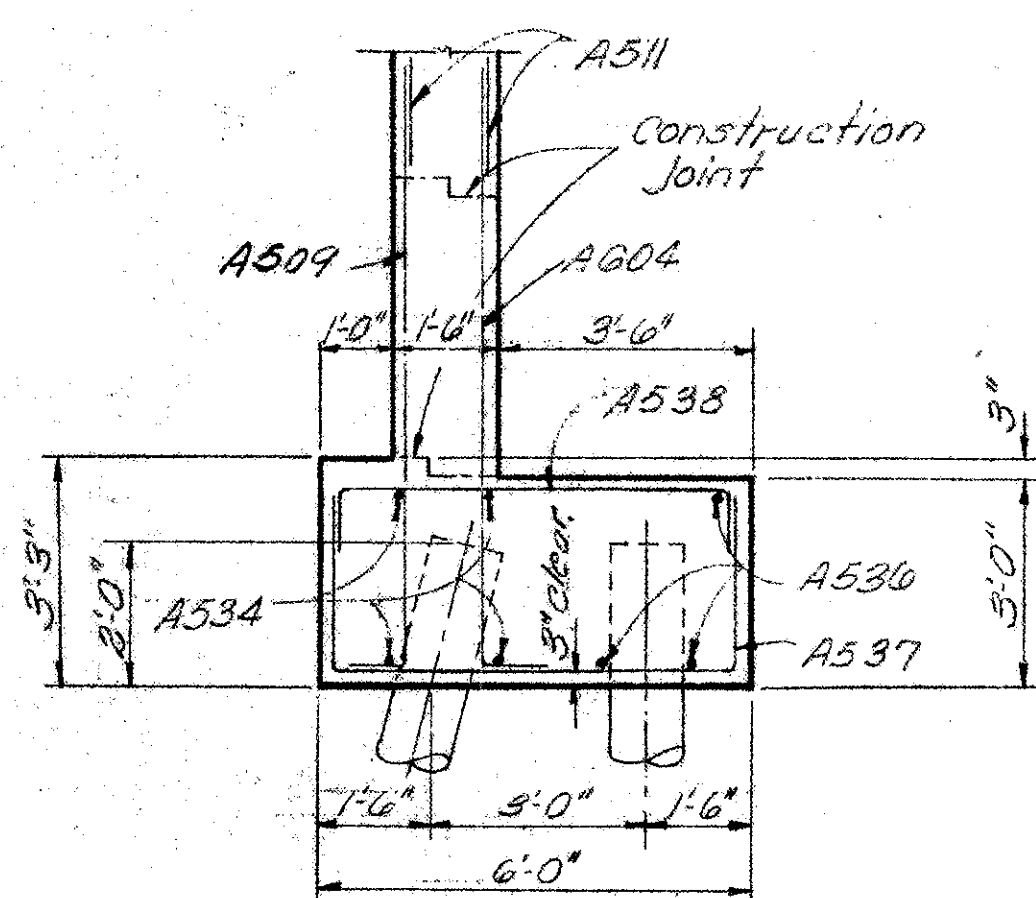
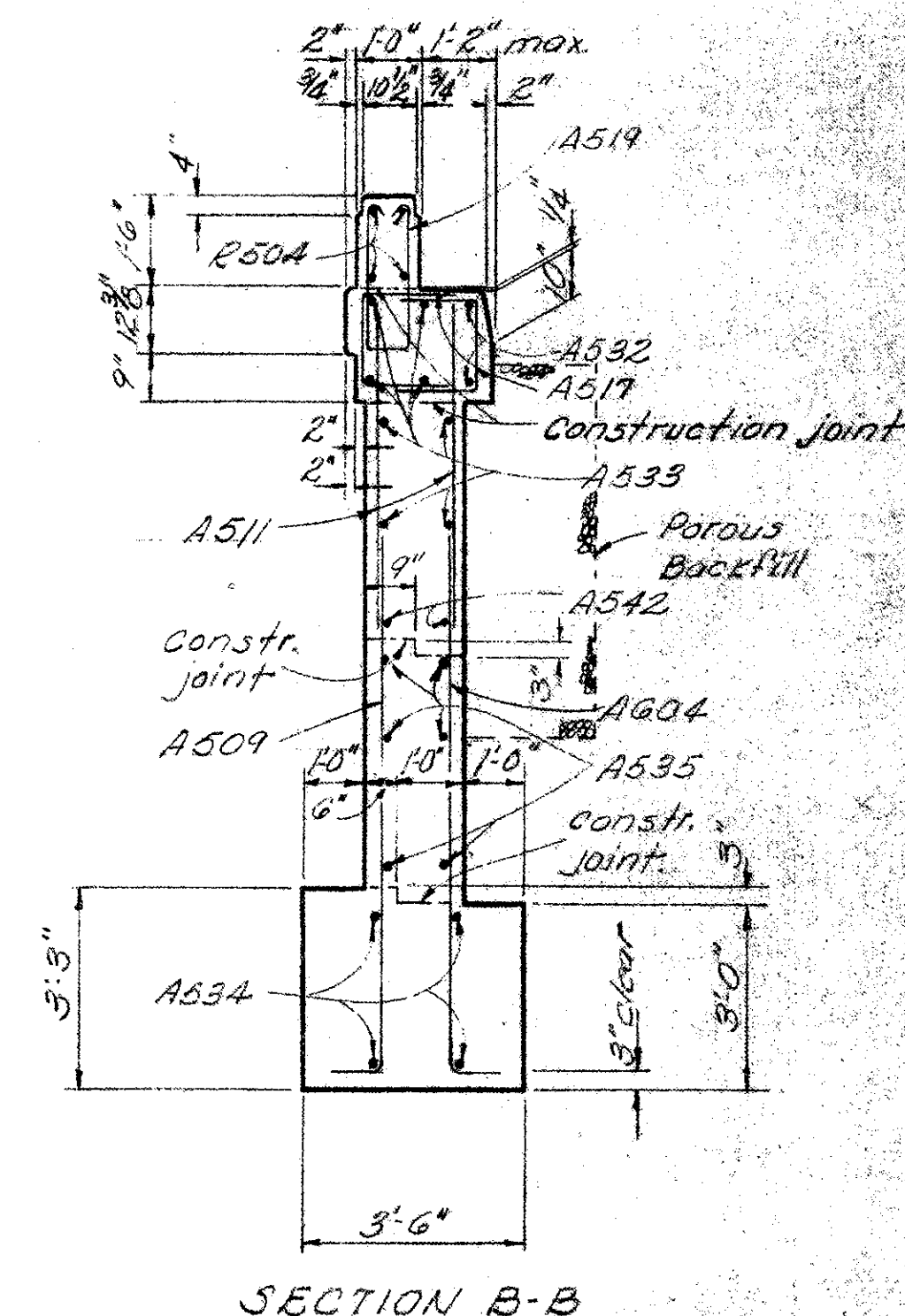
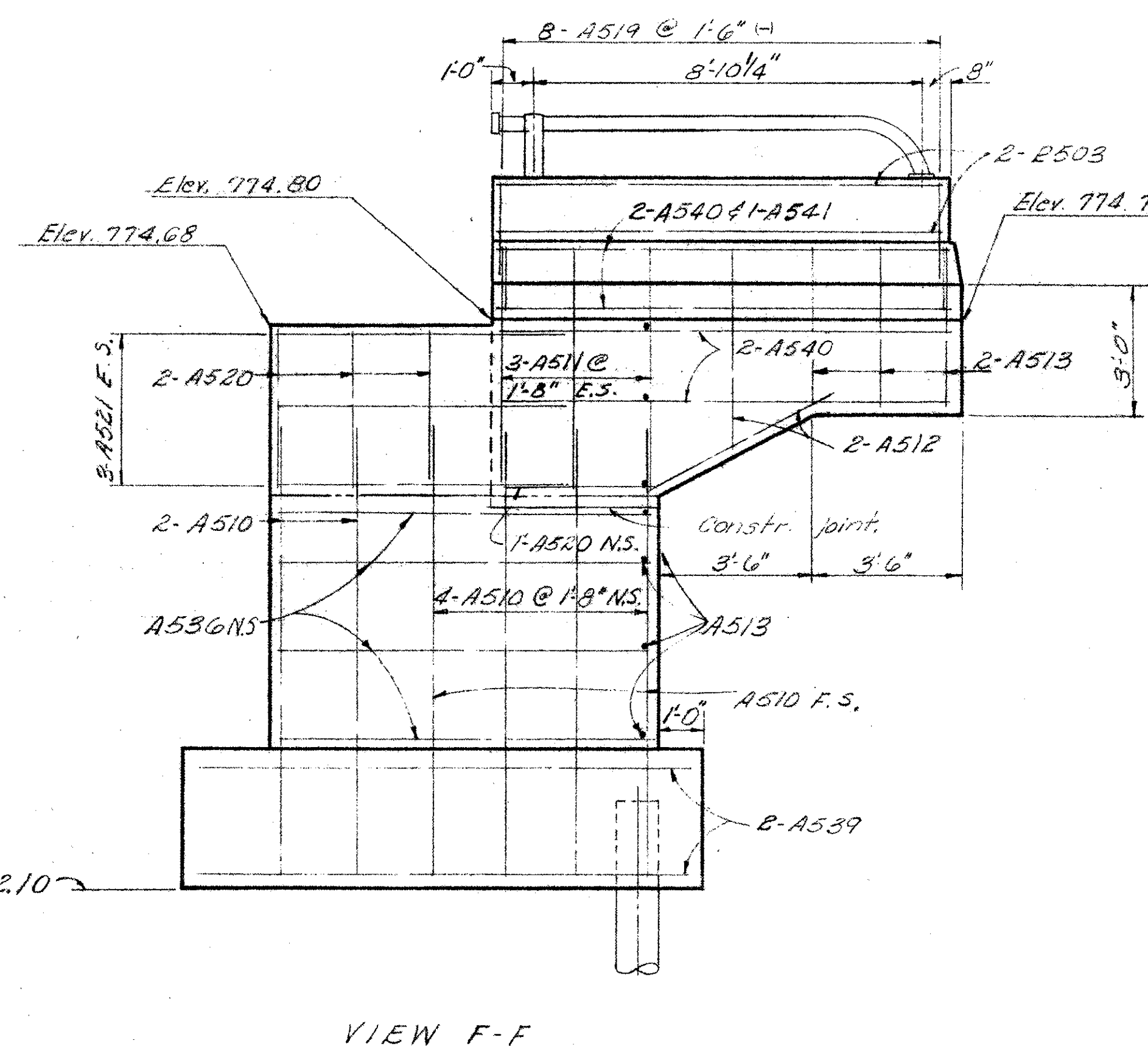
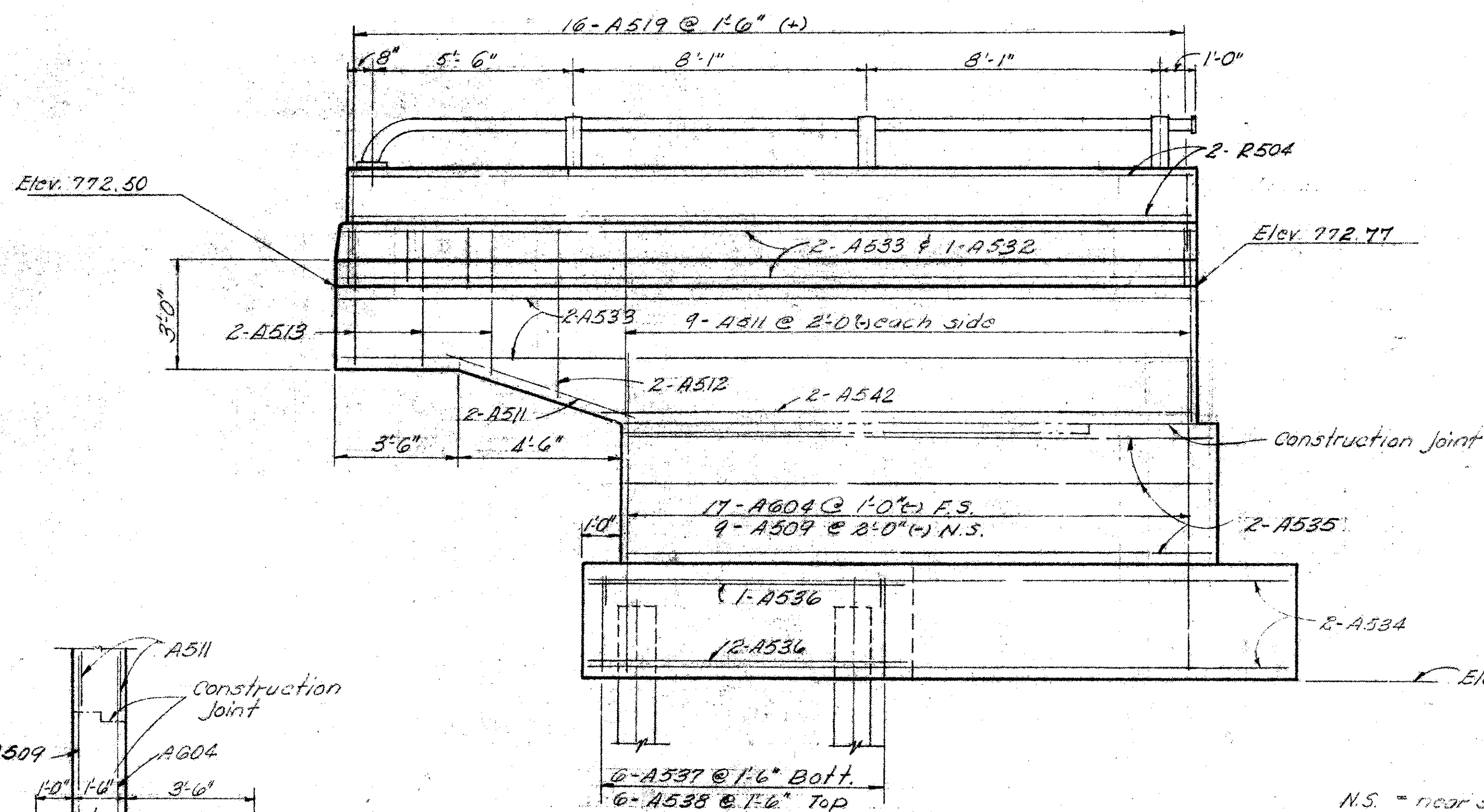
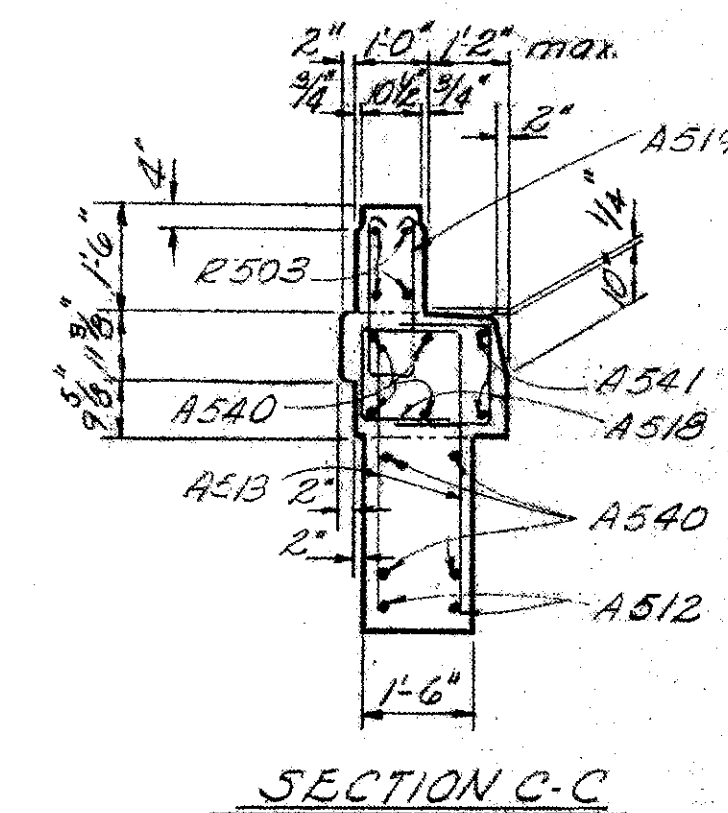
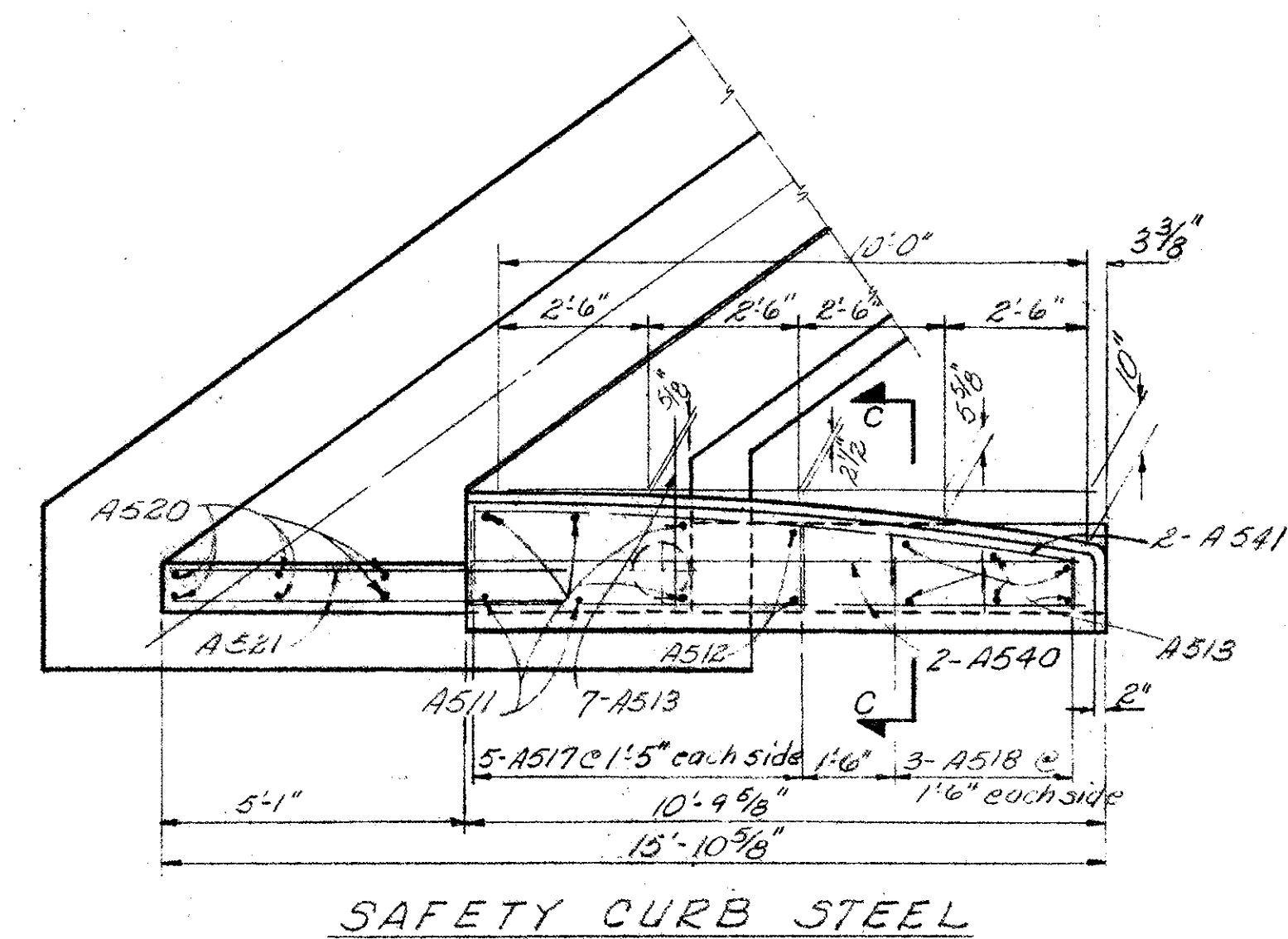
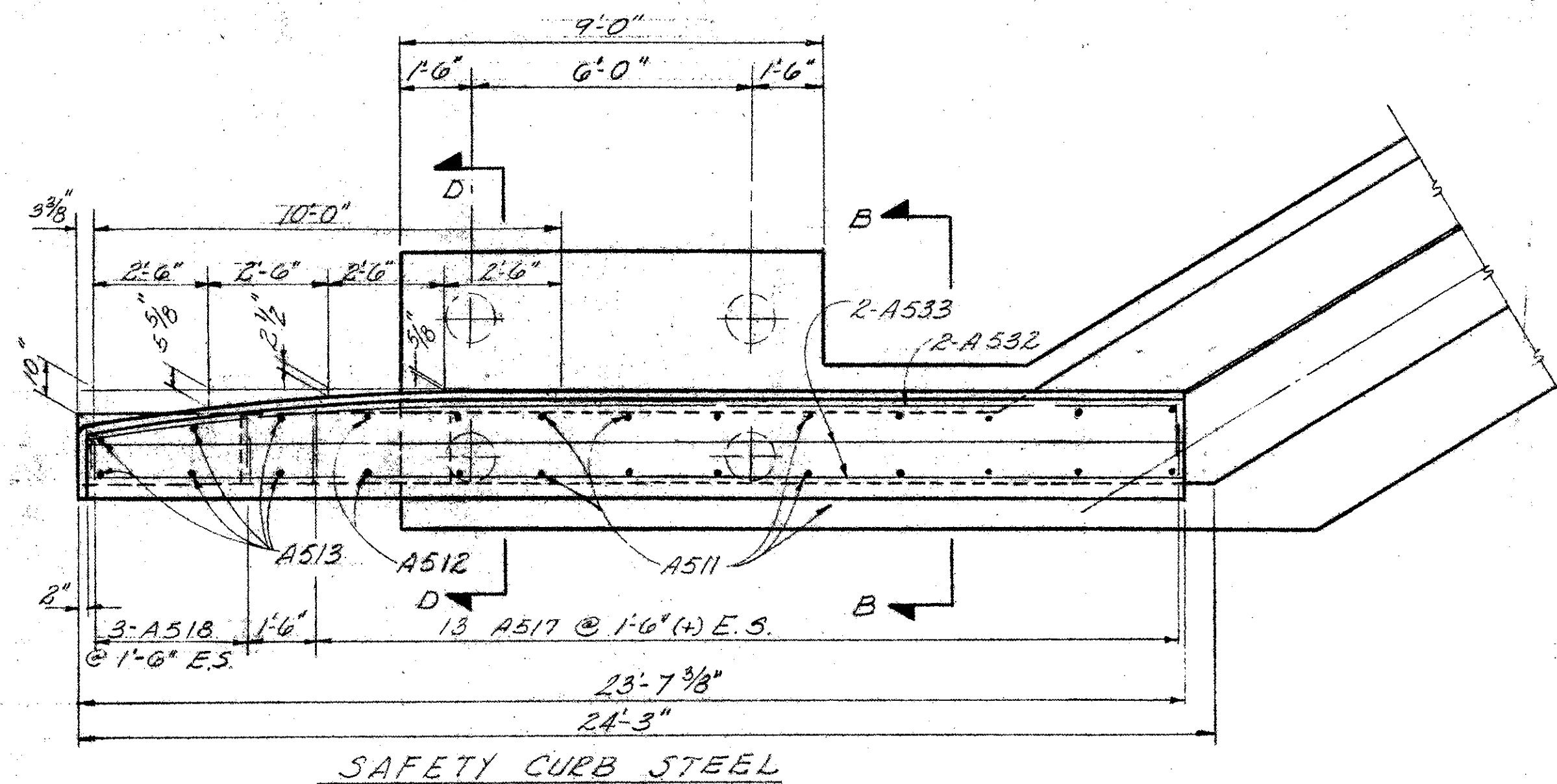
SECTION A-A

N.S. = Near side
F.S. = Far side

A602, A501, A502
A503, 7 each @ 1'-6" Typical between piles, except as noted.

A602, A501, A502, A503
A502, A503
5 each @ 1'-6"

RACKOFF ASSOCIATES ENGINEERS COLUMBUS, OHIO						
ABUTMENT DETAILS						
BRIDGE NO. FRA-33-2288						
SOUTH BOUND JAMES OVER N.B. USR. 33 AND EXISTING COLLEGE AVE.						
FRANKLIN COUNTY						
					STA. 133+23.23	
					STA. 137+67.78	
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.B.	E.D.A.		RAK.	666	10.15 62	



SECTION D-D
Details not show same as Section B-B

N.S. = near side
F.S. = far side
E.S. = each side

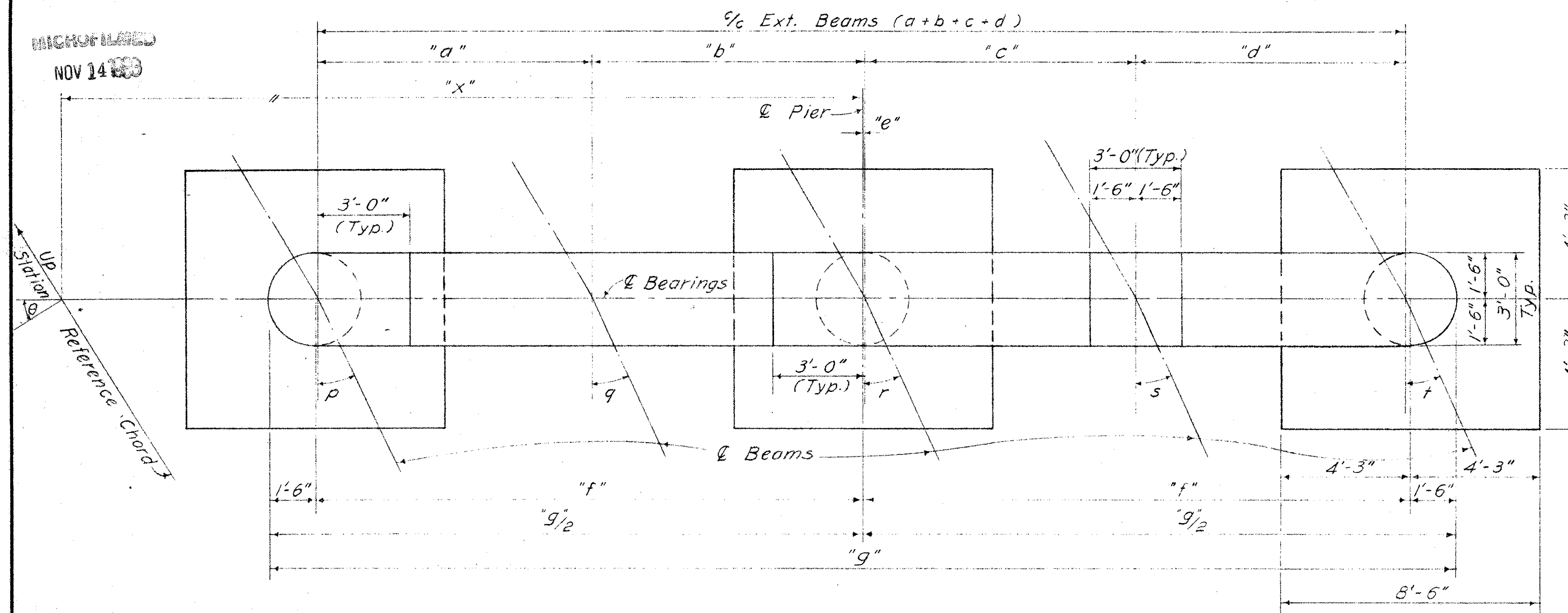
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ABUTMENT DETAILS					
BRIDGE NO. FRA - 33 - 2288					
SOUTH BOUND JAMES OVER N.B.					
U.S.R. 33 AND EXISTING COLLEGE AVE.					
FRANKLIN COUNTY STA. 133 + 23.23					
STA. 137 + 67.78					
Designed	Drawn	Traced	Checked	Reviewed	Date
L.B.	E.D.A.		R.A.K.	bbc	10.15.62

MICROFILMED
NOV 14 1963

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

FRANKLIN COUNTY
FRA.-40-17.26

406
435



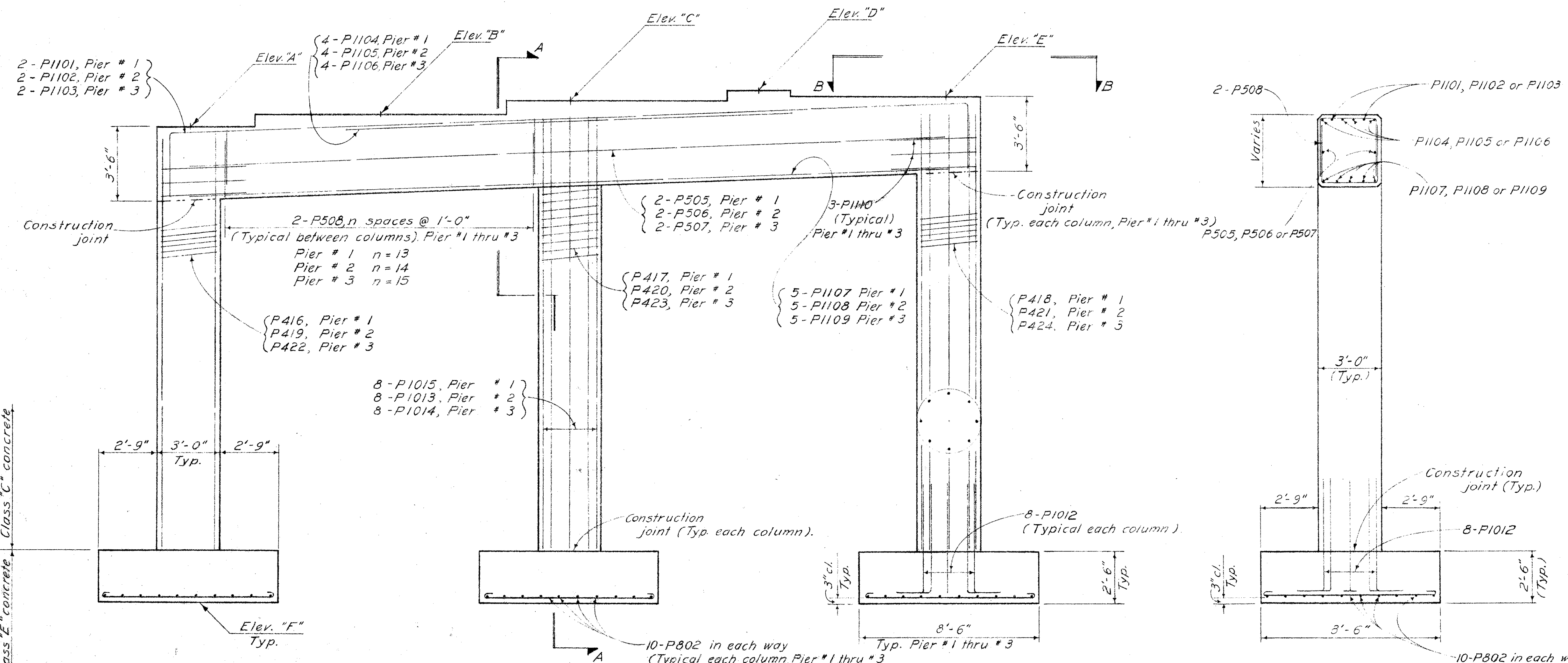
PLAN
Pier #1, #2, #3.

ANGLES						
Location	θ	p	q	r	s	t
Pier # 1	31°44'20"	16°02'09"	15°51'17"	15°40'39"	15°30'16"	15°20'06"
Pier # 2	31°44'20"	20°18'15"	20°04'15"	19°50'34"	19°37'11"	19°24'07"
Pier # 3	31°44'20"	25°22'44"	25°04'47"	24°47'16"	24°30'09"	24°13'27"

ELEVATIONS						
Location	"A"	"B"	"C"	"D"	"E"	"F"
Pier # 1	768.68	769.31	769.94	770.43	770.10	746.50
Pier # 2	769.12	769.76	770.39	770.87	770.65	746.00
Pier # 3	769.50	770.14	770.78	771.27	770.95	747.00

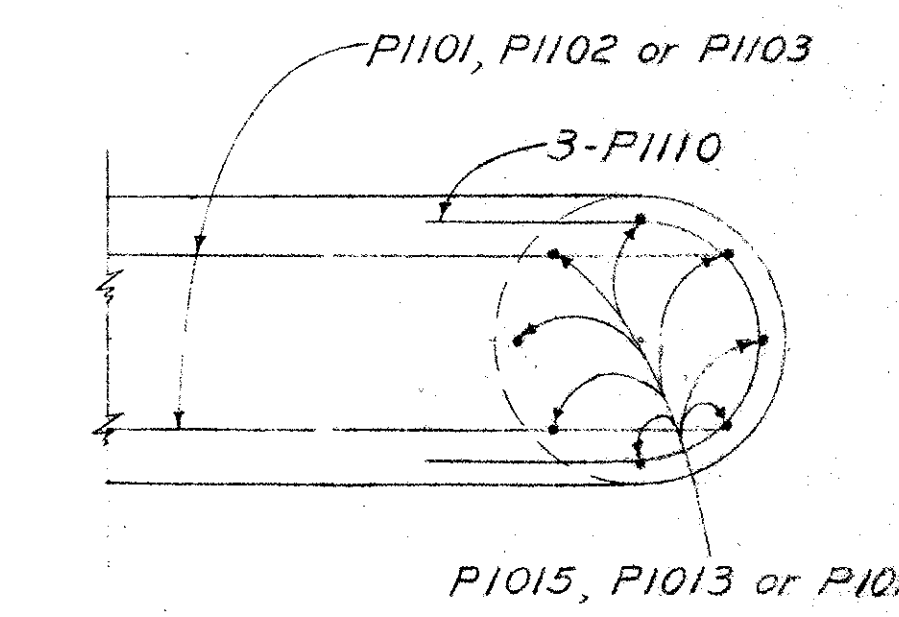
DIMENSIONS									
Location	x	a	b	c	d	a+b+c+d	e	f	g
Pier # 1	25'-9 ³ / ₄ "	8'-3 ¹ / ₁₆ "	8'-3 ⁹ / ₁₆ "	8'-3 ¹ / ₂ "	8'-3 ³ / ₈ "	33'-2 ¹ / ₈ "	3 ¹ / ₁₆ "	16'-8 ¹ / ₂ "	36'-5"
Pier # 2	41'-0 ⁵ / ₁₆ "	8'-7"	8'-6 ¹ / ₄ "	8'-6 ⁵ / ₈ "	8'-6 ³ / ₈ "	34'-2 ³ / ₄ "	3 ³ / ₈ "	17'-2 ¹ / ₂ "	37'-5"
Pier # 3	49'-11 ¹ / ₄ "	8'-11 ⁵ / ₁₆ "	8'-11"	8'-10 ³ / ₄ "	8'-10 ¹ / ₁₆ "	35'-7 ¹ / ₂ "	3 ¹ / ₁₆ "	17'-11"	38'-10"

Rockers and Bolsters shall be set normal to the beams down station.



ELEVATION
Pier #1, #2, #3.

SECTION A-A



SECTION B-B

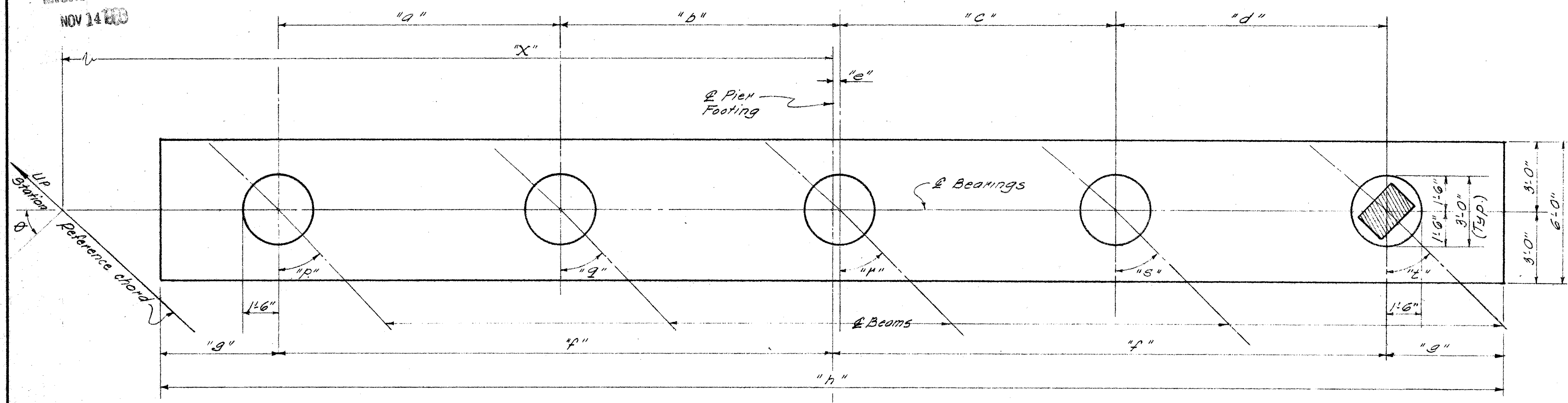
RACKOFF ASSOCIATES ENGINEERS COLUMBUS, OHIO	
PIER DETAILS BRIDGE NO. FRA.-33-2288 SOUTH BOUND JAMES OVER N.B. U.S.R. 33 AND EXISTING COLLEGE AVE. FRANKLIN COUNTY STA. 133 + 23.23 STA. 137 + 67.78	
Designed	Drawn
Traced	Checked
Revised	Date
H. H. M. R.	L. B. bbb
10.15	9-11-64
62	

NOV 14 1960

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

FRANKLIN COUNTY
FRA - 40 - 17.26

407
435

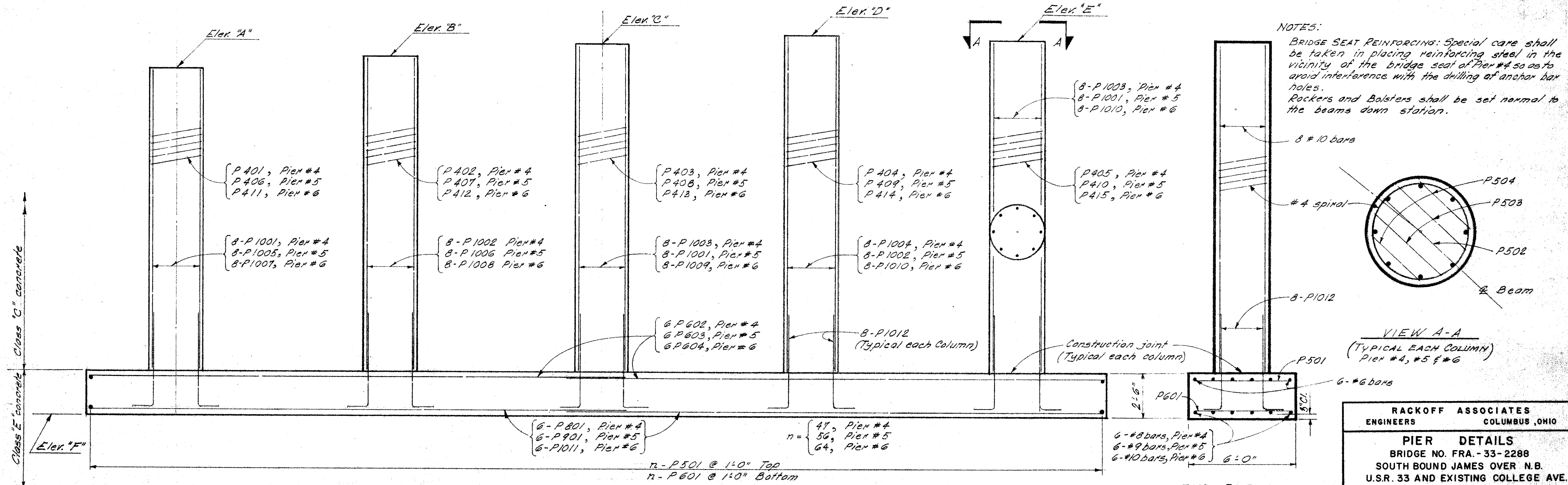


PLAN
PIER #4, #5 & #6

ANGLES						
LOCATION	"θ"	"P"	"q"	"r"	"s"	"t"
Pier #4	37°14'20"	35°58'57"	35°33'56"	35°09'36"	34°45'53"	34°22'48"
Pier #5	42°44'20"	46°37'46"	46°01'00"	45°25'26"	44°50'59"	44°17'36"
Pier #6	42°44'20"	52°35'29"	51°46'04"	50°58'37"	50°12'59"	49°29'03"

ELEVATIONS						
LOCATION	"A"	"B"	"C"	"D"	"E"	"F"
Pier #4	769.81	770.46	771.11	771.61	771.30	749.00
Pier #5	769.48	770.15	770.83	771.35	771.06	750.00
Pier #6	769.08	769.81	770.53	771.10	770.86	743.00

DIMENSIONS									
Location	"x"	"a"	"b"	"c"	"d"	"e"	"f"	"g"	"h"
Pier #4	56'-5 5/8"	10'-1"	10'-0 1/4"	9'-11 1/2"	9'-10 1/2"	1'-2"	19'-11 1/2"	3'-6"	46'-11"
Pier #5	56'-9 1/8"	12'-0 3/4"	11'-10 3/8"	11'-9 1/2"	11'-6 1/4"	3'-3/4"	23'-6 5/8"	4'-0"	55'-1 7/8"
Pier #6	40'-8 3/8"	13'-11 3/4"	13'-8 1/8"	13'-4 3/8"	13'-1 7/8"	6'-1 1/2"	27'-1"	4'-9"	63'-8"



ELEVATION
PIER #4, #5 & #6

END ELEVATION.

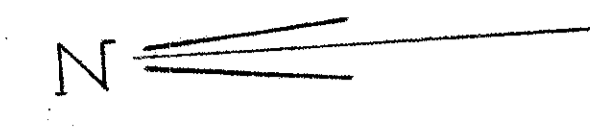
NOTES:
BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat of Pier #4 so as to avoid interference with the drilling of anchor bar holes.
Rockers and Bolsters shall be set normal to the beams down station.

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

PIER DETAILS
BRIDGE NO. FRA - 33-2288
SOUTH BOUND JAMES OVER N.B.
U.S.R. 33 AND EXISTING COLLEGE AVE.
FRANKLIN COUNTY STA. 133 + 23.23
STA. 137 + 67.78

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
H. H.	G. M.		L. B.	666	10.15.62	

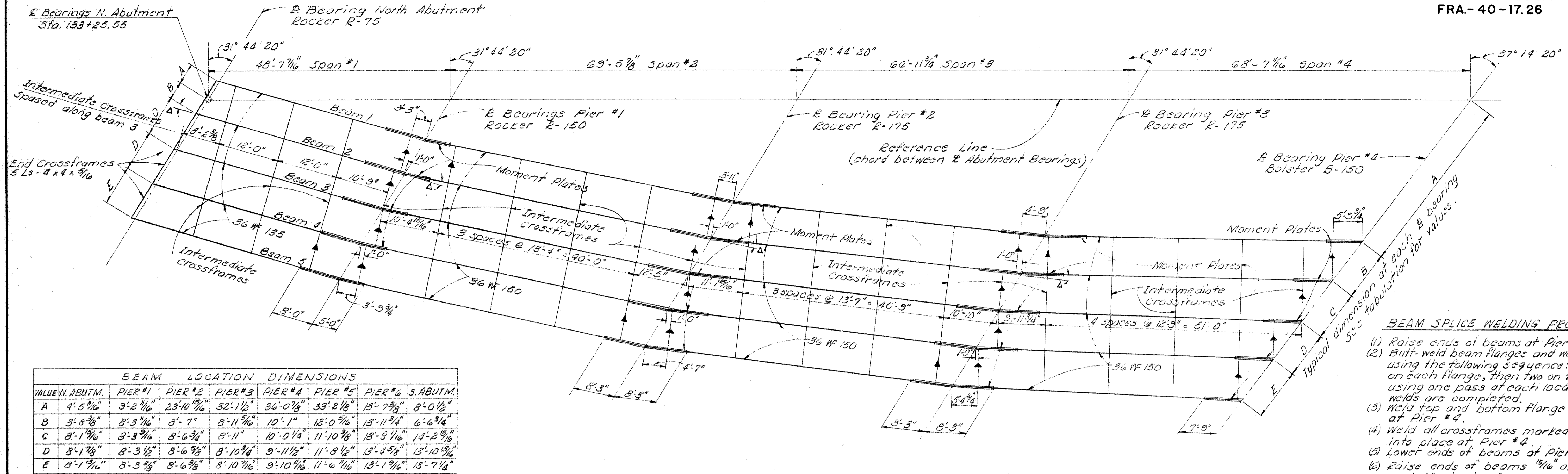
NOV 14 1960



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

408
435

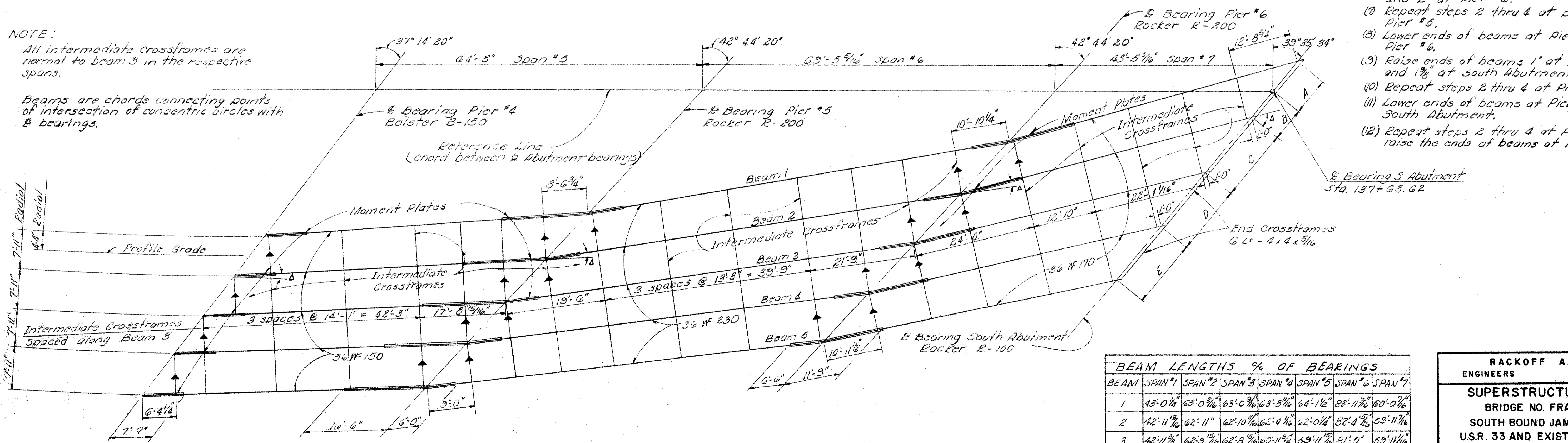
FRANKLIN COUNTY
FRA-40-17.26



BEAM LOCATION DIMENSIONS							
VALUE	N. ABUTM.	PIER #1	PIER #2	PIER #3	PIER #4	PIER #5	S. ABUTM.
A	4'-5 1/16"	9'-2 1/16"	23'-10 1/16"	32'-1 1/2"	36'-0 1/8"	33'-2 1/8"	13'-7 3/8"
B	3'-8 3/8"	8'-3 1/16"	8'-7"	8'-11 5/16"	10'-1"	12'-0 5/16"	13'-11 3/4"
C	8'-1 1/16"	8'-3 3/16"	8'-6 3/4"	8'-11"	10'-0 1/8"	11'-10 7/8"	13'-8 1/16"
D	8'-1 1/16"	8'-3 1/2"	8'-6 3/8"	8'-10 3/8"	9'-11 1/2"	11'-8 1/2"	13'-4 5/8"
E	8'-1 1/16"	8'-3 3/8"	8'-6 3/8"	8'-10 1/16"	9'-10 1/16"	11'-6 1/16"	13'-1 9/16"

NOTE:
All intermediate crossframes are normal to beam 3 in the respective spans.

Beams are chords connecting points of intersection of concentric circles with bearings.



- BEAM SPICE WELDING PROCEDURE**
- (1) Raise ends of beams at Pier #3 1/8".
 - (2) Butt-weld beam flanges and webs at Pier #4 using the following sequence: make one pass on each flange, then two on the web; repeat using one pass of each location until welds are completed.
 - (3) Weld top and bottom flange moment plates at Pier #4.
 - (4) Weld all crossframes marked with ▲ into place at Pier #4.
 - (5) Lower ends of beams at Pier #3.
 - (6) Raise ends of beams 1/16" at Pier #2 and 2" at Pier #6.
 - (7) Repeat steps 2 thru 4 at pier #3 and Pier #5.
 - (8) Lower ends of beams at Pier #2 and Pier #6.
 - (9) Raise ends of beams 1" at Pier #1 and 1 1/2" at south Abutment.
 - (10) Repeat steps 2 thru 4 at Pier #2 and Pier #6.
 - (11) Lower ends of beams at Pier #1 and South Abutment.
 - (12) Repeat steps 2 thru 4 at Pier #1 (Do not raise the ends of beams at North Abutment)

BEAM LENGTHS % OF BEARINGS							
BEAM	SPAN #1	SPAN #2	SPAN #3	SPAN #4	SPAN #5	SPAN #6	SPAN #7
1	43'-0 1/4"	63'-0 3/16"	63'-0 3/16"	63'-8 1/16"	64'-1 1/2"	88'-11 7/16"	60'-0 1/16"
2	42'-11 3/8"	62'-11"	62'-10 1/16"	66'-4 1/16"	62'-0 1/16"	82'-4 1/16"	59'-11 7/16"
3	42'-11 3/8"	62'-9 15/16"	62'-8 3/16"	60'-11 9/16"	59'-11 15/16"	81'-0"	59'-11 15/16"
4	42'-10 1/2"	62'-8 3/8"	62'-7 1/16"	59'-7 1/8"	58'-0 3/8"	79'-8 1/16"	59'-11 1/4"
5	42'-10 1/2"	62'-7 3/8"	62'-5 3/16"	58'-4 1/8"	56'-2 1/16"	78'-6 1/16"	59'-11 7/8"

STEEL FRAMING PLAN

RACKOFF ASSOCIATES ENGINEERS
COLUMBUS, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE NO. FRA-33-2288
SOUTH BOUND JAMES OVER N.B. U.S.R. 33 AND EXISTING COLLEGE AVE.
FRANKLIN COUNTY
STA. 133 + 23.23
STA. 137 + 67.78

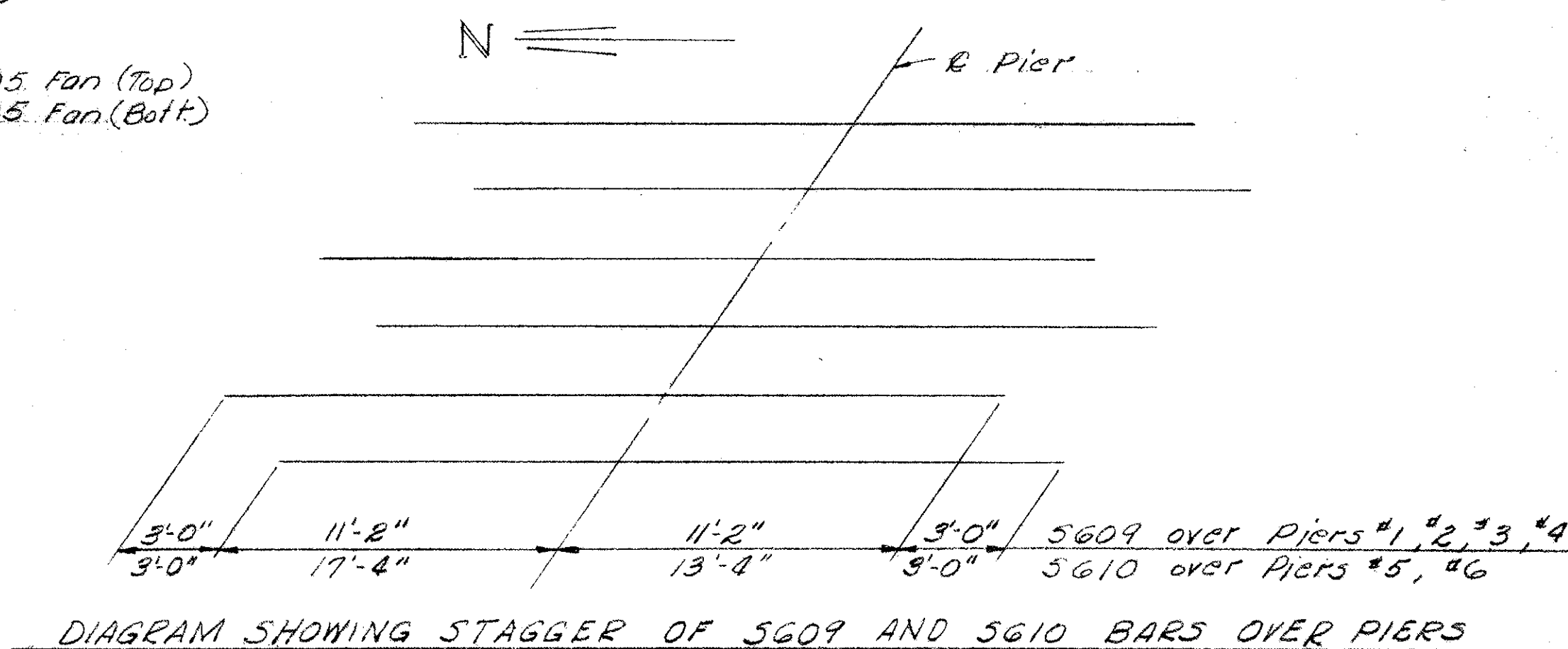
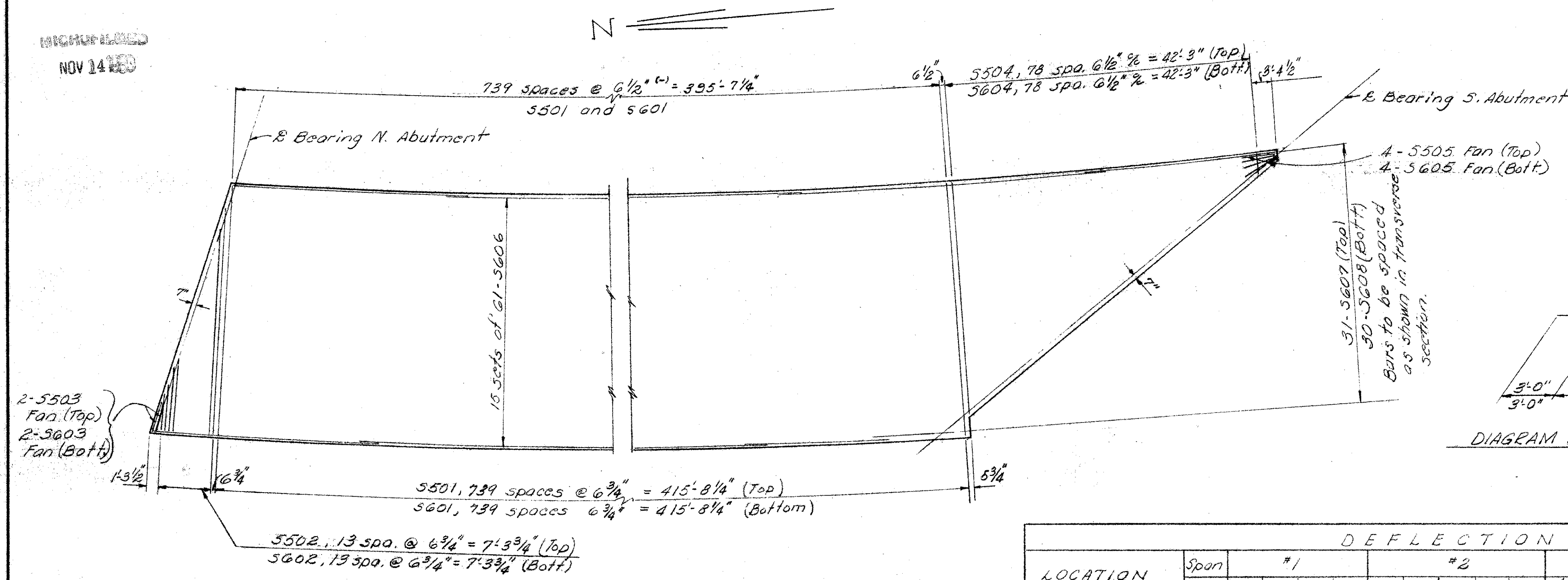
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L.B.	E.D.A.	R.A.K.	bbb		10.15.62	

NOV 14 1960

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

409
435

FRANKLIN COUNTY
FRA-40-17.26



PLACEMENT OF SLAB REINFORCING

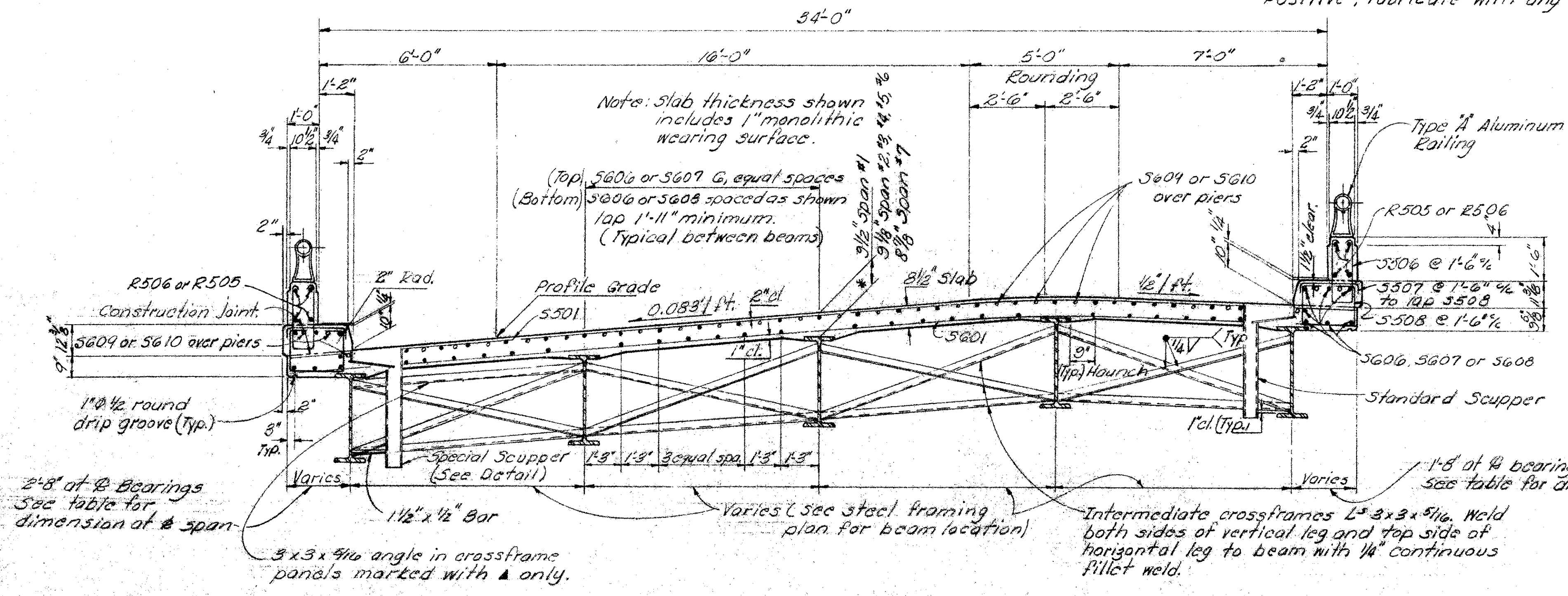
LOCATION	Span	DEFLECTION AND CAMBER																																
		#1					#2					#3					#4					#5					#6					#7		
Deflection due to weight of steel	Beam	1/2	3	4	5	1	2	3	4	5	2 1/2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Deflection due to remaining D.L.		0	0	0	0	1/16	1/16	1/16	1/16	1/16	1/16	1/16	1/16	1/16	1/16	1/16	1/16	1/16	1/16	0	0	0	0	0	1/4	3/16	3/16	3/16	3/16	0	0	0	0	0
Convexity req'd. for v.c. and super-elevation		1/16	1/16	1/16	1/16	1/4	1/4	1/4	1/4	1/4	3/16	3/16	3/16	1/4	1/4	1/4	3/16	3/16	1/8	1/16	1/16	1/16	1/16	1/16	5/8	5/8	3/16	3/16	1/2	3/16	1/4	1/4	1/4	
Sum of deflection and convexity		-3/16	-3/16	1/8	1/4	-3/8	-3/8	-3/8	1/4	5/8	-3/8	1/4	5/8	-3/8	-3/8	-5/16	3/16	3/16	-3/8	-3/8	-3/8	1/4	1/2	-1/16	-4/16	-5/8	5/16	15/16	-3/8	-3/8	3/16	9/16		
Required camber		-1/8	-1/8	3/16	5/16	-1/16	-1/16	-1/16	9/16	15/16	-1/8	1/2	7/8	-1/16	-1/16	0	1/16	13/16	-1/4	-5/16	-5/16	5/16	9/16	3/16	1/8	1/8	11/16	1 5/8	-1/8	-1/8	7/16	19/16		

If required camber is zero and sum of deflection and convexity is:
 Negative, fabricate with any natural camber down.
 Positive, fabricate with any natural camber up.

REFERENCE SHALL BE MADE TO:
 Standard Drawing OSB-2-56 for end crossframes, end dams, scuppers and curb plates.
 Standard Drawing RB-1-55 for rockers and bolsters.
 Standard Drawing AR-1-57 for Type "A" aluminum railing.

DECK SLAB HAUNCH: The haunch in the super-elevated deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12" on the low side and between 9" and 12" on the high side. Except on the side, the maximum slope shall not exceed 3 inches per foot. 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.



TYPICAL RADIAL TRANSVERSE SECTION

DISTANCE FROM BEAM TO FASCIA AT	BEAM #1	BEAM #5
SPAN N ²		
1	2'-4 1/8"	1'-11 1/16"
2	1'-11 5/8"	2'-3 7/8"
3	1'-11 5/8"	2'-3 7/8"
4	1'-11 1/16"	2'-2 7/8"
5	1'-11 5/16"	2'-4 3/8"
6	1'-5 1/8"	2'-8 1/4"
7	2'-0 3/8"	2'-3 1/4"

RACKOFF ASSOCIATES
 ENGINEERS COLUMBUS, OHIO

SUPERSTRUCTURE DETAILS
 BRIDGE NO. FRA-33-2288
 SOUTH BOUND JAMES OVER N.B.
 U.S.R. 33 AND EXISTING COLLEGE AVE.
 FRANKLIN COUNTY STA. 133+23.23
 STA. 137+67.78

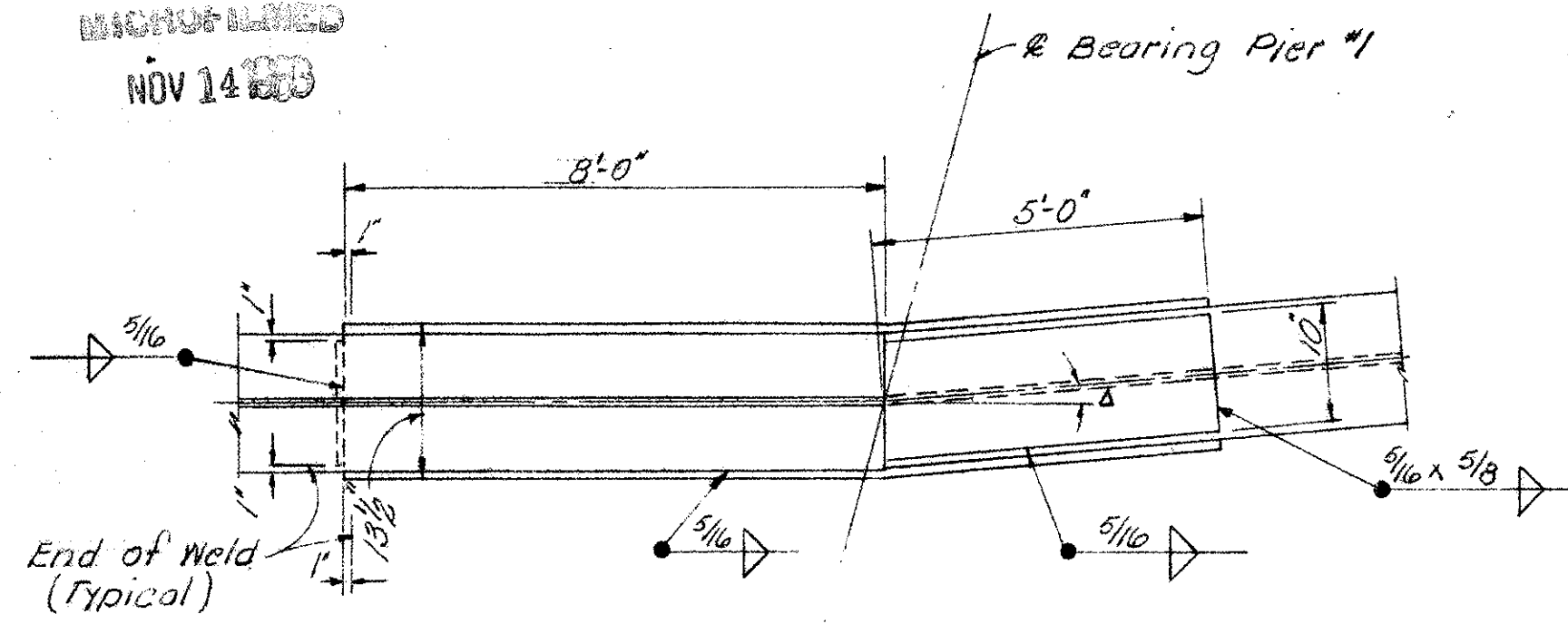
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
L.B.	E.D.A.		R.A.K.	666	10.15.62	

UNRECORDED
NOV 14 1963

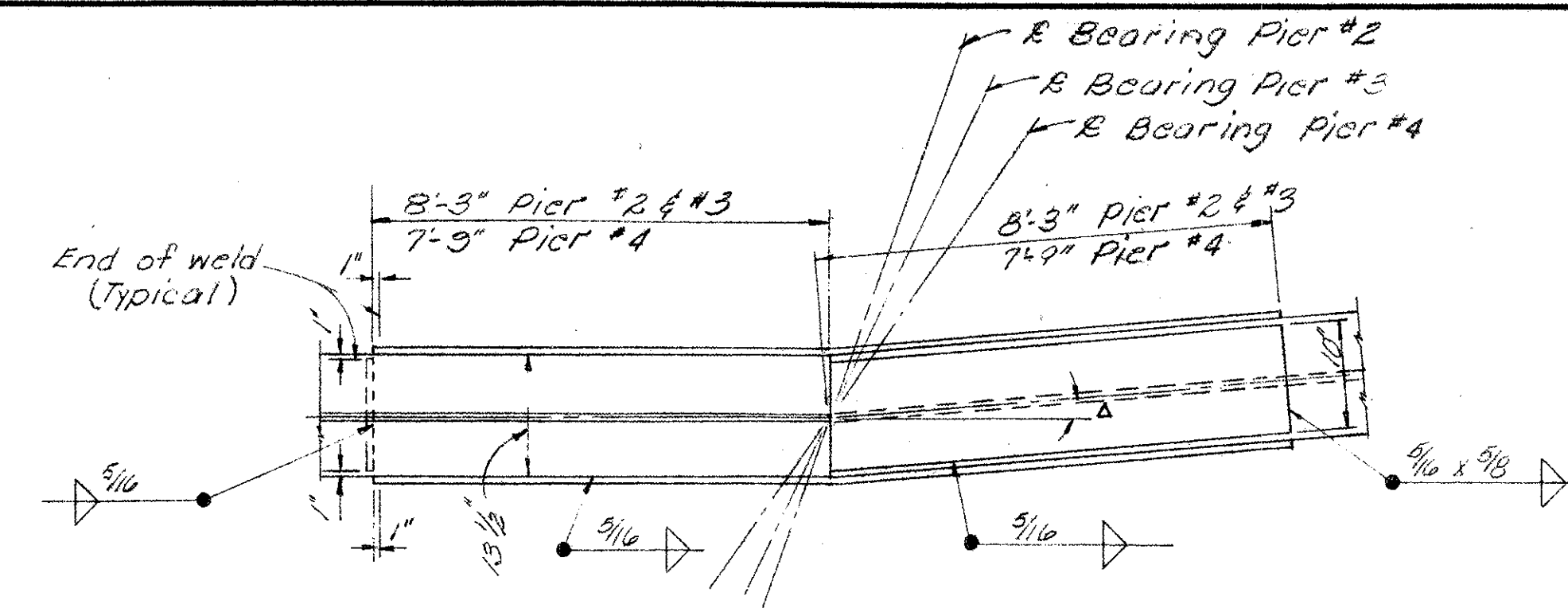
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

410
435

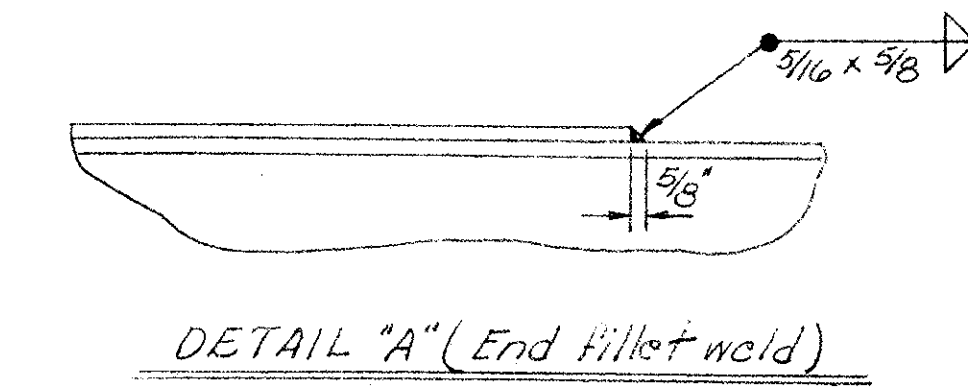
FRANKLIN COUNTY
FRA-40-17.26



SECTION A-A



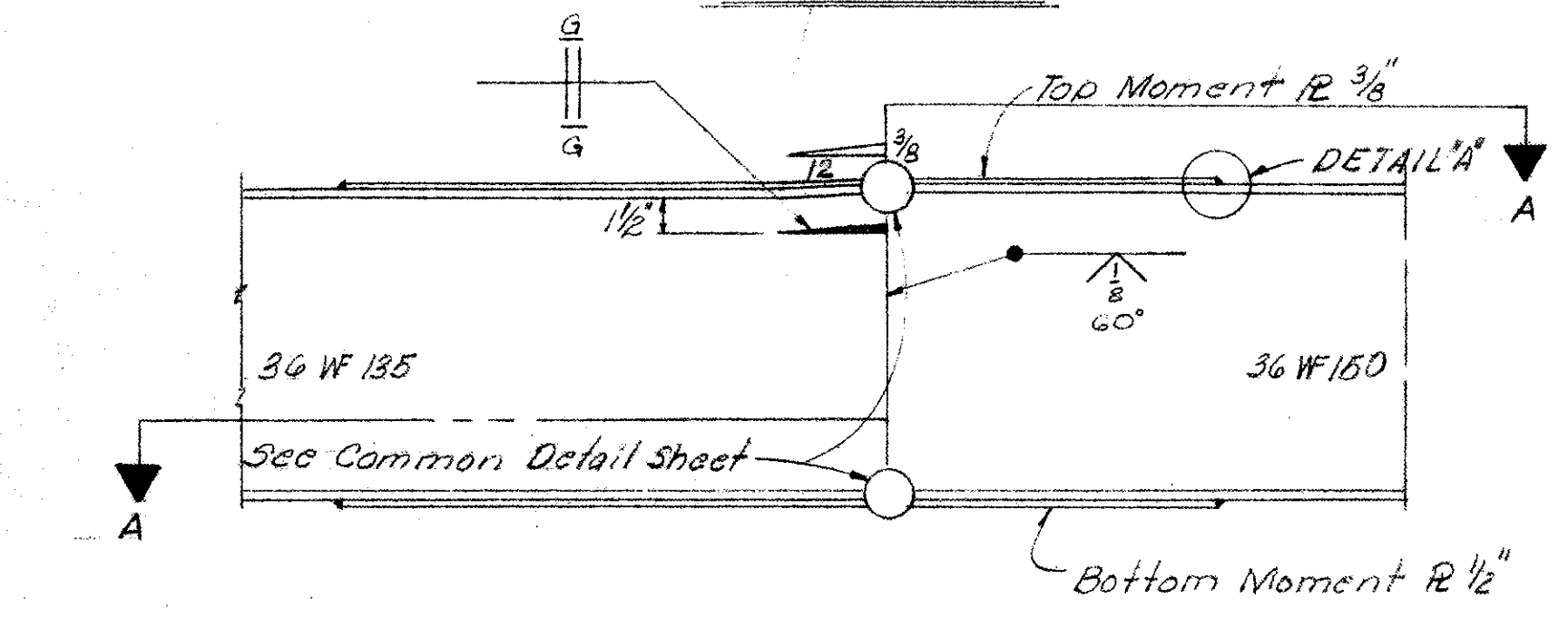
SECTION B-B



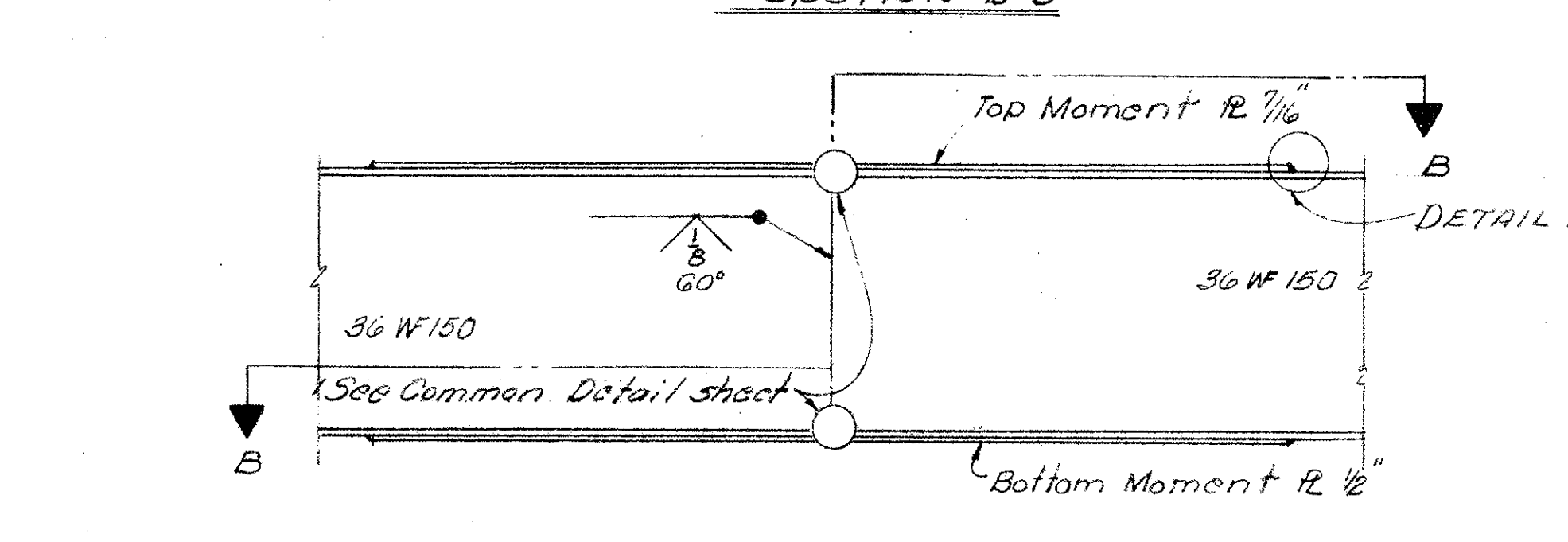
DETAIL A (End fillet weld)

NOTE:

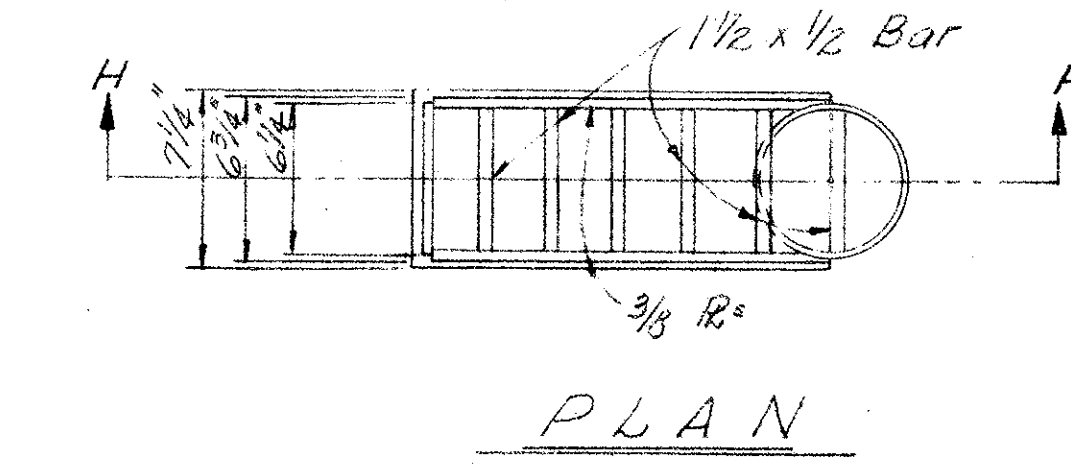
If beams having depths differing by more than 1/8" are to be spliced by butt welding, the depth of the smaller-depth beam shall be increased by splitting the web longitudinally at a distance of 1/2" below the bottom of the top flange and for a distance sufficient to allow the flange to be bent up at a slope of not more than 3/8" per foot, after which the split in the web shall be completely welded with full depth penetration and ground flush.



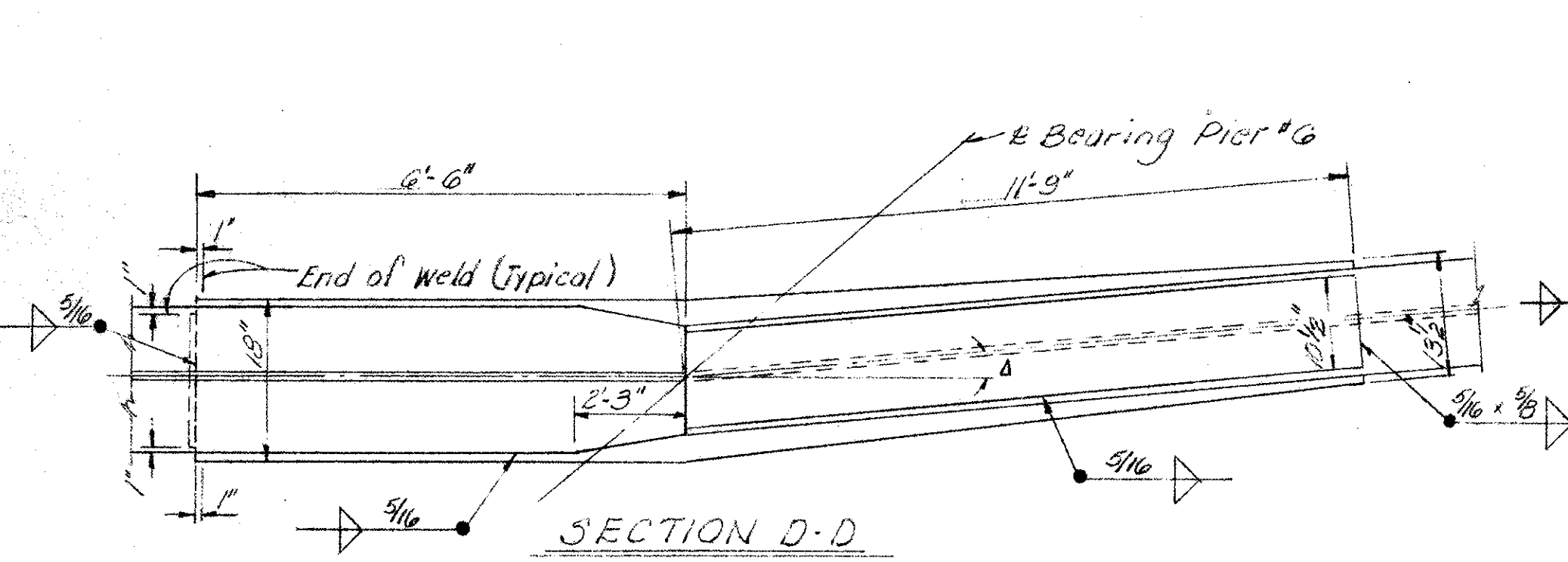
BEAM SPLICE AT PIER #1



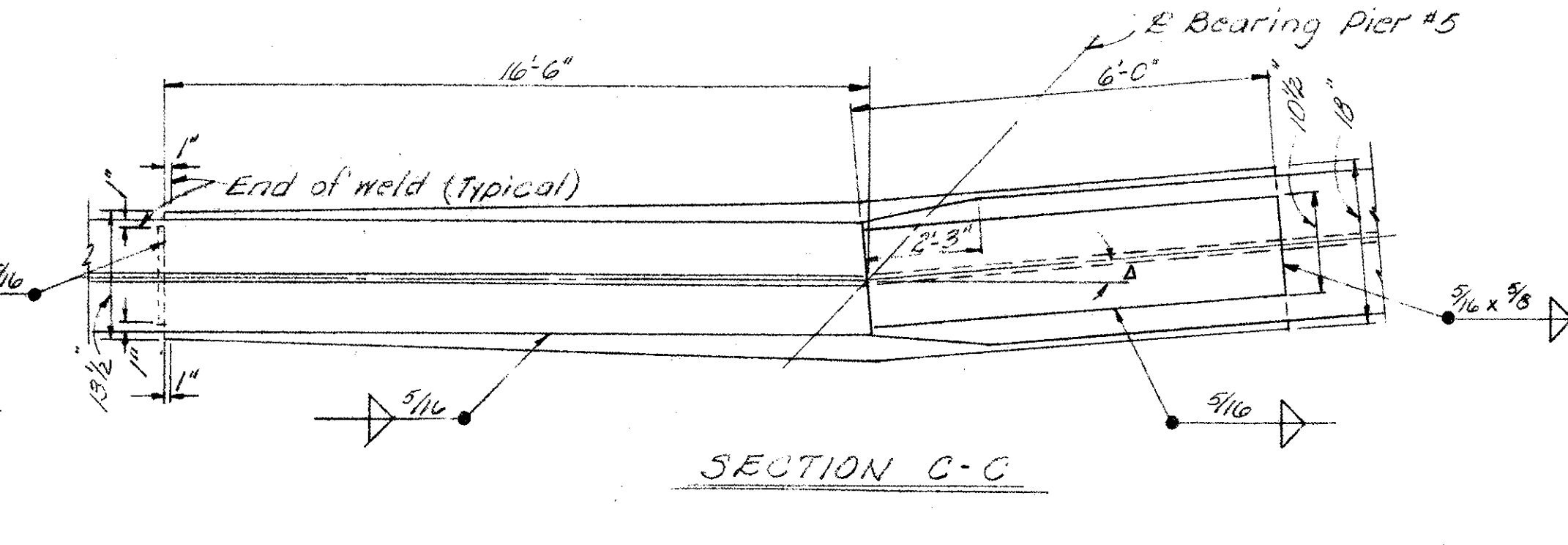
BEAM SPLICE AT PIERS #2, #3 AND #4



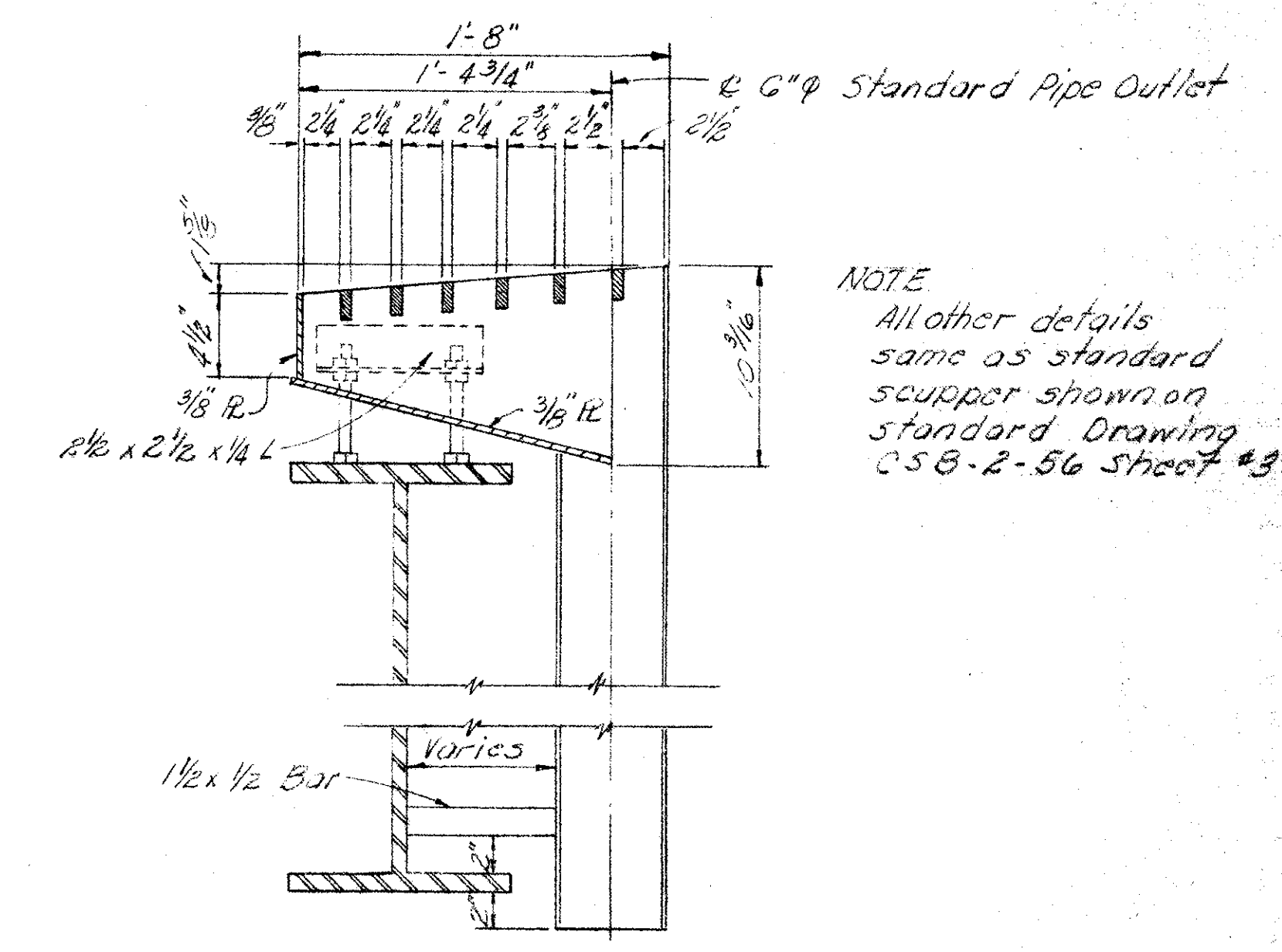
PLAN



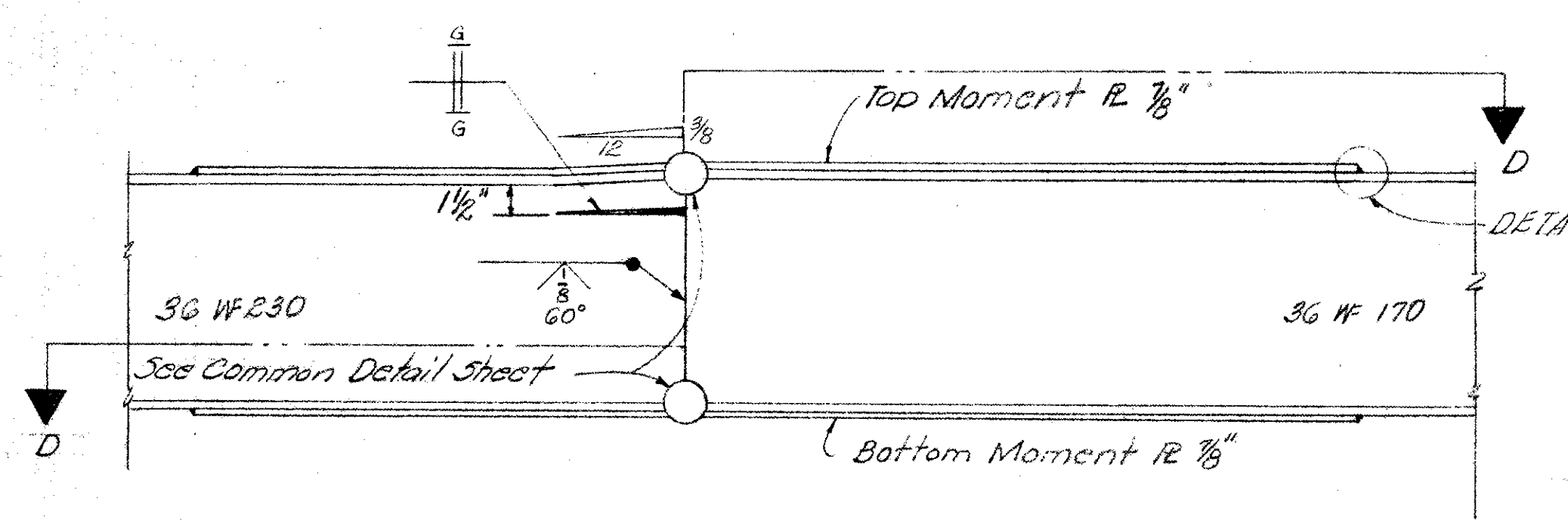
SECTION D-D



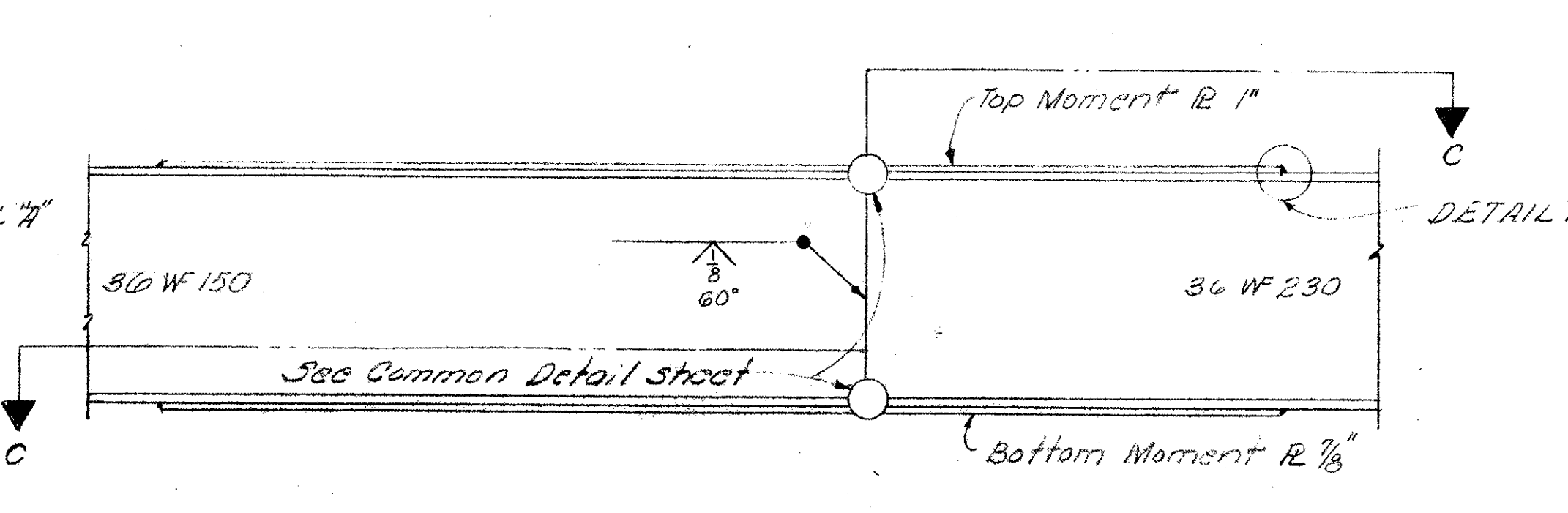
SECTION C-C



NOTE
All other details same as standard scupper shown on standard Drawing CSB-2-56 sheet #3



BEAM SPLICE AT PIER #6



BEAM SPLICE AT PIER #5

SECTION H-H
SPECIAL SCUPPERS DETAIL

ANGULAR OFFSETS OF BEAMS AT BEARINGS (Δ)								
℄ Bearing	N. Abut.	Pier #1	Pier #2	Pier #3	Pier #4	Pier #5	Pier #6	S. Abut.
Beam Line 1	16° 02' 09"	4° 16' 06"	5° 04' 29"	5° 06' 13"	5° 08' 49"	5° 57' 43"	5° 47' 50"	55° 14' 32"
Beam Line 2	15° 51' 17"	4° 12' 58"	5° 00' 32"	4° 59' 09"	4° 57' 04"	5° 45' 01"	5° 40' 07"	54° 17' 25"
Beam Line 3	15° 40' 39"	4° 09' 55"	4° 56' 42"	4° 52' 20"	4° 45' 50"	5° 33' 11"	5° 33' 01"	53° 22' 52"
Beam Line 4	15° 30' 16"	4° 06' 55"	4° 52' 58"	4° 45' 44"	4° 35' 06"	5° 22' 00"	5° 26' 25"	52° 30' 38"
Beam Line 5	15° 20' 06"	4° 04' 01"	4° 49' 20"	4° 39' 21"	4° 24' 43"	5° 11' 27"	5° 20' 17"	51° 40' 35"

Angular offsets (Δ) at abutments are measured from normal to ℄ bearing.

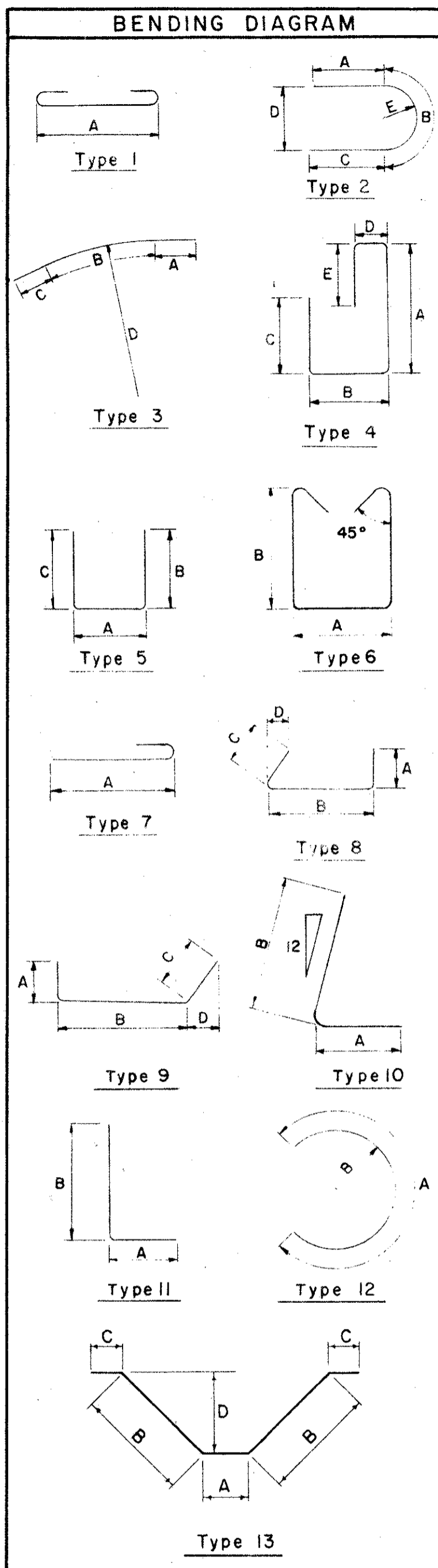
RACKOFF ASSOCIATES ENGINEERS COLUMBUS, OHIO					
SUPERSTRUCTURE DETAILS BRIDGE NO. FRA-33-2288 SOUTH BOUND JAMES OVER N.B. U.S.R. 33 AND EXISTING COLLEGE AVE. FRANKLIN COUNTY STA. 133+23.23 STA. 137+67.78					
Designed	Drawn	Traced	Checked	Reviewed	Date
L.B.	EDA.		R.A.K.	666	10.15 62

NOV 14 1960

REINFORCING STEEL LIST

FED. RD. DIVISION	STATE	PROJECT	411 435
2	OHIO		

FRANKLIN COUNTY
FRA.-40-17.26



MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F
ABUTMENTS										
A 501	66	7-0	482	II	0-9	6-5				
A 502	64	7-8	512	S	5-5	1-3	1-3			
A 503	64	9-8	645	S	3-5	3-3	3-3			
A 504	13	36-4	493	S						
A 505	11	11-0	126	S						
A 506	5	18-9	98	S						
A 507	5	9-9	51	S						
A 508	60	3-7	224	S	2-2	0-10	0-10			
A 509	17	8-11	158	II	0-9	8-4				
A 510	18	10-10	203	II	0-9	10-3				
A 511	42	5-0	219	S						
A 512	14	4-3	62	S						
A 513	43	3-7	161	S						
A 514	6	13-6	84	S						
A 515	10	5-10	61	S						
A 516	14	12-9	186	S						
A 517	64	4-2	278	S	1-5	1-6	1-6			
A 518	24	2-10	71	S	1-5	0-10	0-10			
A 519	44	5-7	256	S	0-8	2-2				
A 520	15	3-3	51	S						
A 521	6	6-3	39	S						
A 522	12	8-0	100	S						
A 523	6	7-0	44	S						
A 524	7	33-5	244	S						
A 525	3	30-4	95	S						
A 526	3	36-0	113	S						
A 527	3	19-6	61	S						
A 528	5	14-0	73	S						
A 529	4	31-5	131	S						
A 530	7	26-8	195	S						
A 531	3	29-8	93	S						
A 532	2	23-2	48	S						
A 533	8	23-1	193	S						
A 534	4	20-0	83	S						
A 535	6	16-0	100	S						
A 536	7	8-6	62	S						
A 537	6	10-7	66	S	5-8	2-7	2-7			
A 538	6	6-11	43	S	5-8	0-9	0-9			
A 539	4	11-6	48	S						
A 540	8	10-3	86	S						
A 541	2	10-4	22	S						
A 542	2	15-5	32	S						
A 543	4	27-3	114	S						
A 601	88	14-10	1,961	4	6-2	1-4	4-8	0-10	2-6	
A 602	64	14-1	1,354	5	5-5	2-7	6-5			
A 603	7	11-1	117	II	0-11	10-4				
A 604	24	9-5	339	II	0-11	8-8				
A 801	28	20-7	1,539	S						
A 802	7	31-2	583	S						
A 803	4	7-6	80	S						
		TOTAL	12,479							

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F
PIERS										
P 501	167	5-8	987	S						
P 502	15	4-4	68	S	2-7	1-0	1-0			
P 503	30	4-1	128	S	2-4	1-0	1-0			
P 504	30	3-4	104	S	1-7	1-0	1-0			
P 505	2	33-5	70	S						
P 506	2	34-5	72	S						
P 507	2	35-10	75	S						
P 508	180	8-5	1,580	S	2-8	3-0	3-0			
P 601	167	5-8	1,421	S						
P 602	12	24-3	437	S						
P 603	12	28-5	512	S						
P 604	12	32-8	589	S						
P 801	12	24-6	785	S						
P 802	180	10-2	4,886	I	8-0					
P 901	12	28-10	1,176	S						
P 1001	24	18-1	1,867	S						
P 1002	16	18-8	1,285	S						
P 1003	16	19-5	1,337	S						
P 1004	8	19-11	686	S						
P 1005	8	16-9	577	S						
P 1006	8	17-5	600	S						
P 1007	8	23-4	803	S						
P 1008	8	24-1	829	S						
P 1009	8	24-10	855	S						
P 1010	16	25-2	1,733	S						
P 1011	12	33-4	1,721	S						
P 1012	192	6-7	5,439	II	1-5	5-6				
P 1013	24	20-2								
		to 21-8	2,160	S	Vary with 3 sets by 9" increments					
P 1014	24	19-6								
		to 21-0	2,091	S	Vary with 3 sets by 9" increments					
P 1015	24	19-2								
		to 20-7	2,053	S	Vary with 3 sets by 8 1/2" increments					
P 1101	2	40-7	431	S	34-11	3-2	3-2			
P 1102	2	41-7	442	S	35-11	3-2	3-2			
P 1103	2	42-11	456	S	37-3	3-2	3-2			
P 1104	4	16-9	356	S						
P 1105	4	17-3	367	S						
P 1106	4	17-11	381	S						
P 1107	5	33-5	888	S						
P 1108	5	34-5	914	S						
P 1109	5	35-10	952	S						
P 1110	18	10-10	1,036	2	3-7	3-8	3-7	2-4	1-2	
			43,149							
			SPIRAL 8,492							
			TOTAL 51,641							

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F
SUPERSTRUCTURE										
S 501	740	35-8	27,528	S						
S 502	14	4-4 to 33-7	277	S	Vary by 2'-3" increments					
S 503	2	5-0	10	S						
S 504	79	3-10 to 33-1	1521	S	Vary by 4 1/2" increments					
S 505	4	5-0	21	S						
S 506	581	5-5	3,282	6	0-8	2-1				
S 507	579	2-11	1,761	5	1-10	0-8	0-8			
S 508	579	5-0	3,019	4	1-8	1-3	0-8	1-3	0-8	
S 601	740	35-8	39,643	S						
S 602	14	4-4 to 33-7	399	S	Vary by 2'-3" increments					
S 603	2	5-0	15	S						
S 604	79	3-10 to 33-1	2,190	S	Vary by 4 1/2" increments					
S 605	4	5-0	30	S						
S 606	915	29-6	40,543	S						
S 607	31	7-8 to 30-9 1/2	895	S	Vary by 9 1/4" increments					
S 608	30	7-8 to 30-7 1/2	863	S	Vary by 9 1/2" increments					
S 609	112	25-4	4,262	S						
S 610	56	33-8	2,832	S						
L 401	8	4-9	25	II	2-0	2-10				
L 402	14	7-9	72	II	1-1	2-8	0-9	1-11		
		TOTAL	129,188							
RAILING										
R 501	4	13-4	-	S						
R 502	4	12-8	-	S						
R 503	4	10-1	-	S	Included with railing for payment					
R 504	4	22-11	-	S						
R 505	16	11-9	-	S						
R 506	228	14-0	-	S						
REPLACEMENT BARS										
RE 401	1	5-3	-	12	5-3	1-3 1/2				
RE 501	3	5-7	-	S						
RE 601	5	5-11	-	S						
RE 801	1	6-6	-	S						
RE 901	1	6-10	-	S						
RE 1001	2	7-3	-	S						
RE 1101	1	7-7	-	S						

SPIRAL REINFORCEMENT							
MARK	NO.	LENGTH	CORE	PITCH	TURNS	SPACERS	WEIGHT
P 401	1	18.14	32	4 1/2	51	4	330
P 402	1	18.79	32	4 1/2	53	4	343
P 403	1	19.44	32	4 1/2	55	4	356
P 404	1	19.94	32	4 1/2	56	4	363
P 405	1						