

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

I-1105(17)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-1105(17)	247

MICROFILMED
DEC 24 1986

No PID
C No. 570530

ASD-I-8.44
MONTGOMERY & PERRY TOWNSHIPS
ASHLAND COUNTY

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.

ASHLAND COUNTY
ASD -I-8.44

494

CONVENTIONAL SIGNS

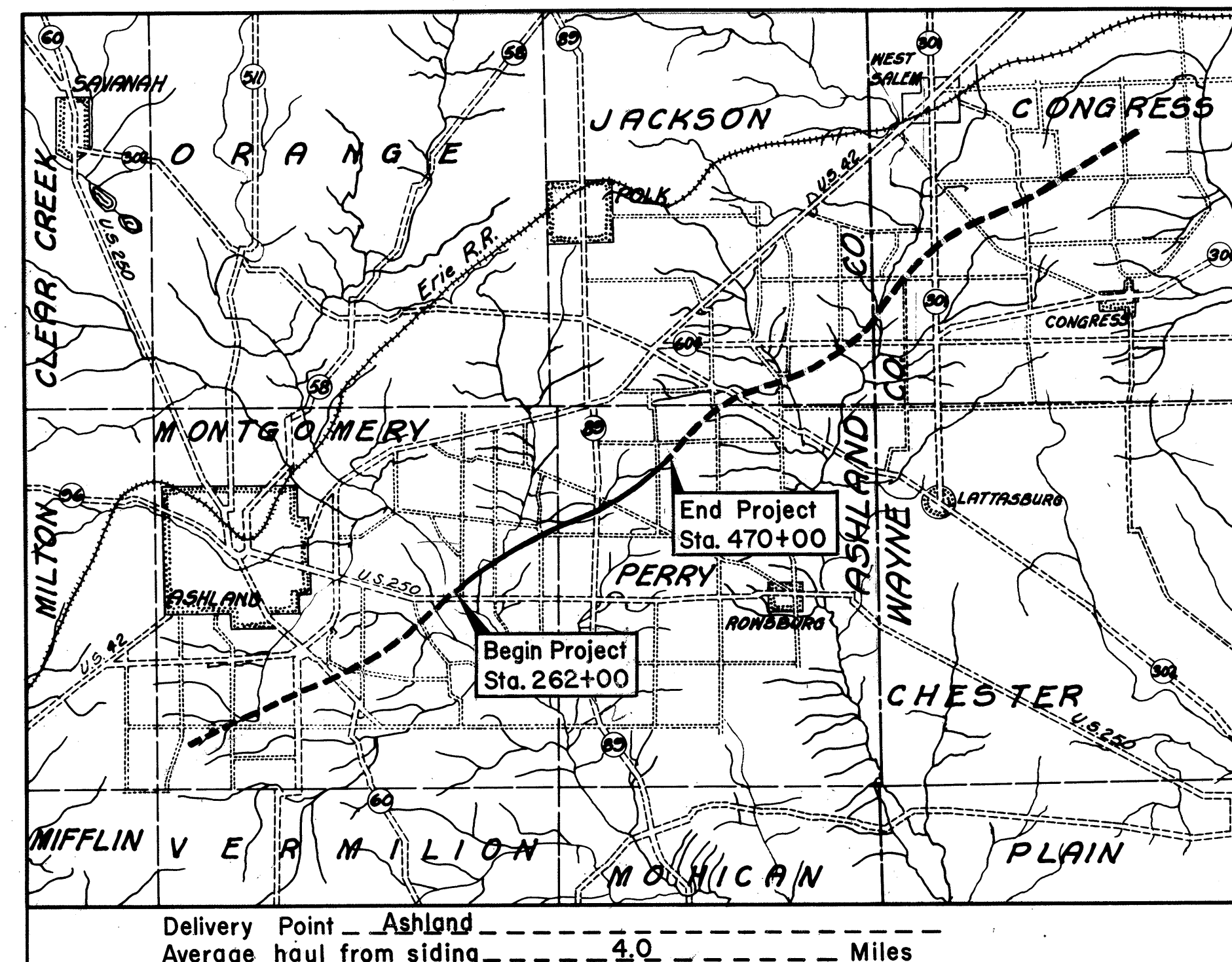
State Line	
County Line	
Township Line	
Section Line	
Center Line	
Corporation Line	
Fence Line	
Guard Rail (existing)	
Guard Rail (proposed)	
Steam Railroad	
Power Poles	
Telephone Poles	
Trees (existing)	

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LINE DATA

Begin Project	Sta. 262+00	
End Project	Sta. 470+00	
Net Length of Project	20,800.00	Lin. Ft. or 3.939 Miles
Net Length of Work	20,980.00	Lin. Ft.
Add for Approaches (See Sheet No. 8)	13,459.32	Lin. Ft.
Total Length of Work	34,439.32	Lin. Ft. or 6.523 Miles



LOCATION MAP
SCALE OF MILES

Portion to be Improved
Portion Under Separate Contract
State Roads
Other Roads

SCALE

Plan _____ 1"=100'
Profile: Horizontal _____ 1"=100'
Profile: Vertical _____ 1"=10'

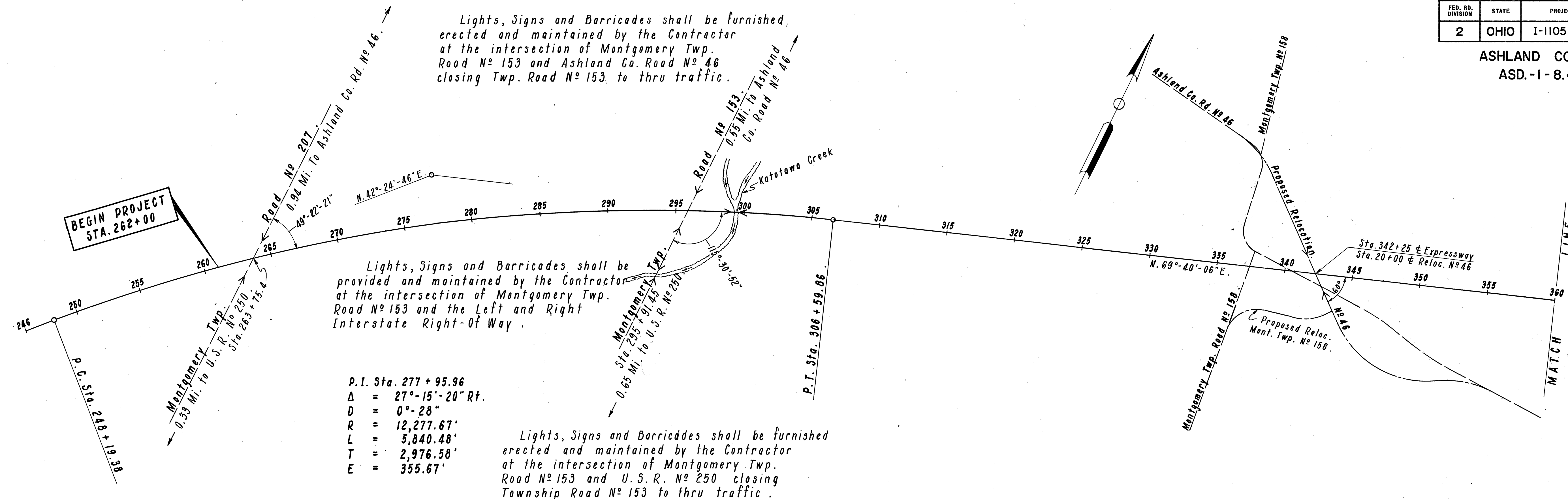
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181	181 A	11-13-57
182	182 A	11-13-57
183	183 A	11-13-57
226	226 A	11-13-57
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DEC 24 1986

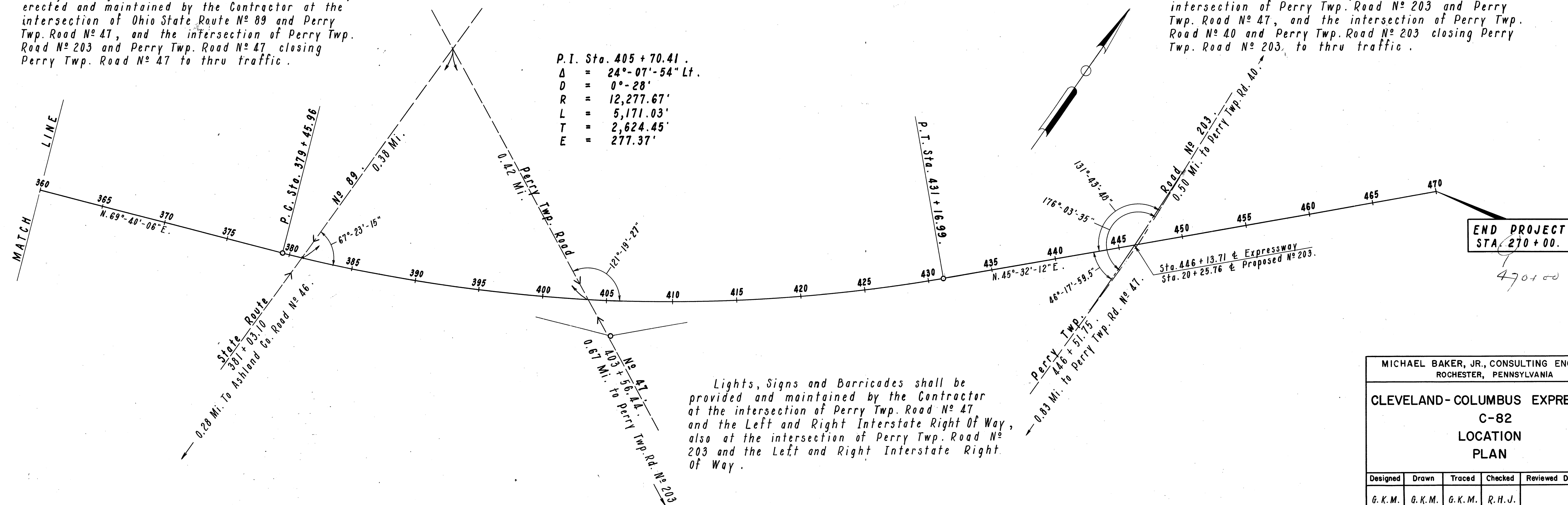
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	1-1105 (17)

2
247

ASHLAND COUNTY
ASD.-I-8.44



Lights, Signs and Barricades shall be furnished, erected and maintained by the Contractor at the intersection of Ohio State Route No 89 and Perry Twp. Road No 47, and the intersection of Perry Twp. Road No 203 and Perry Twp. Road No 47 closing Perry Twp. Road No 47 to thru traffic.



MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

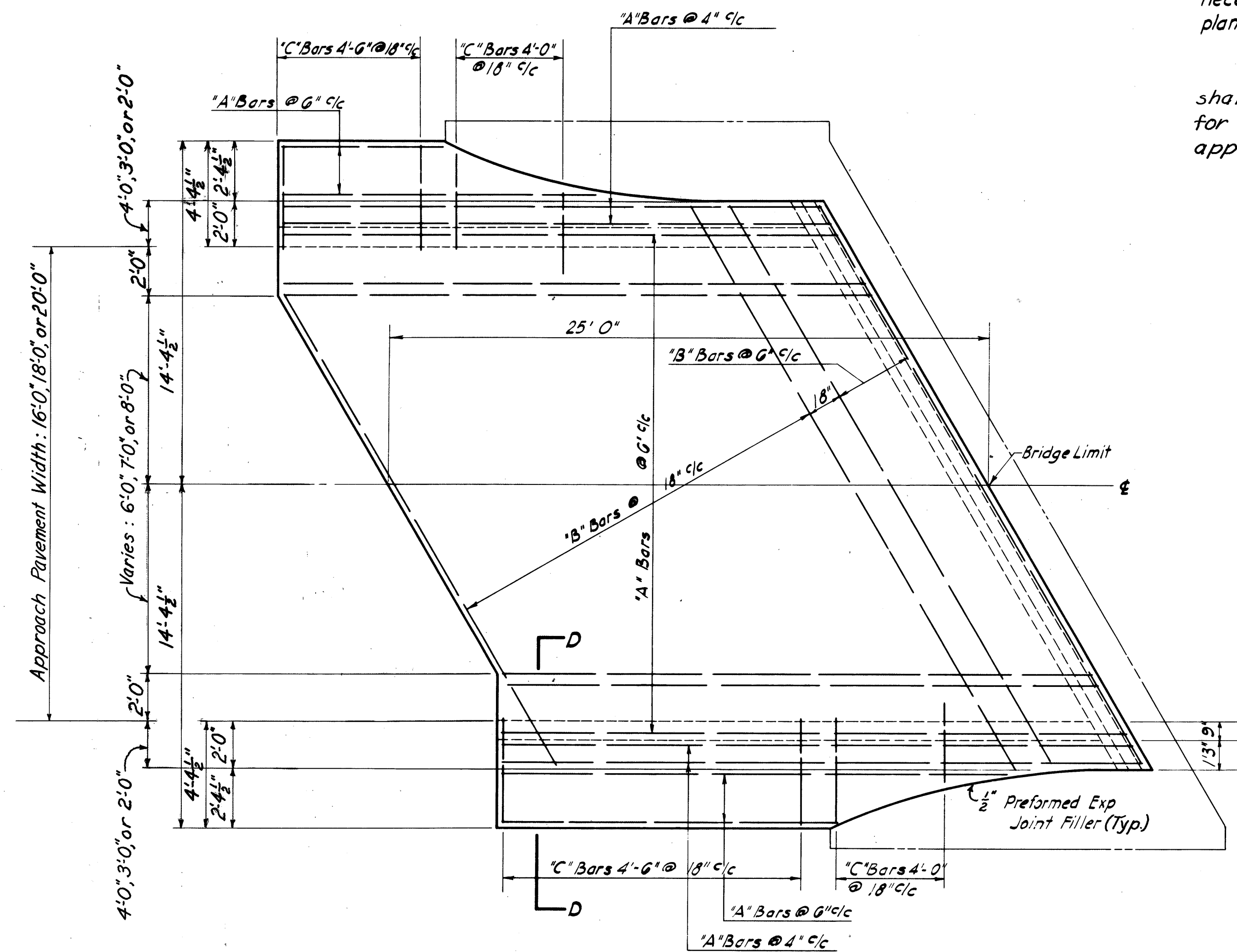
CLEVELAND-COLUMBUS EXPRESSWAY
C-82
LOCATION
PLAN

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
G. K. M.	G. K. M.	G. K. M.	R. H. J.		

ASHLAND COUNTY
ASD -1-8.44

NOTE: Refer to Standard Drawing AS-1-54 (dated 7-1-54, revised 12-1-54) for typical sections and details of approach slabs. Standards to be modified as necessary to accommodate reinforcing plan as shown. Concrete to be Class 'C'.

Preformed Exp. joint filler shall be included in the price bid for Item I-7 reinforced concrete approach slabs.

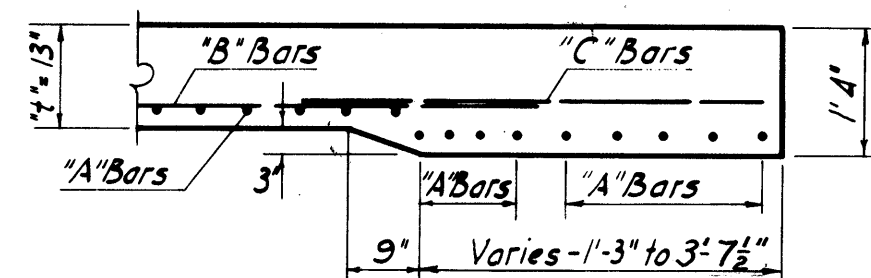


APPROACH SLAB DETAIL

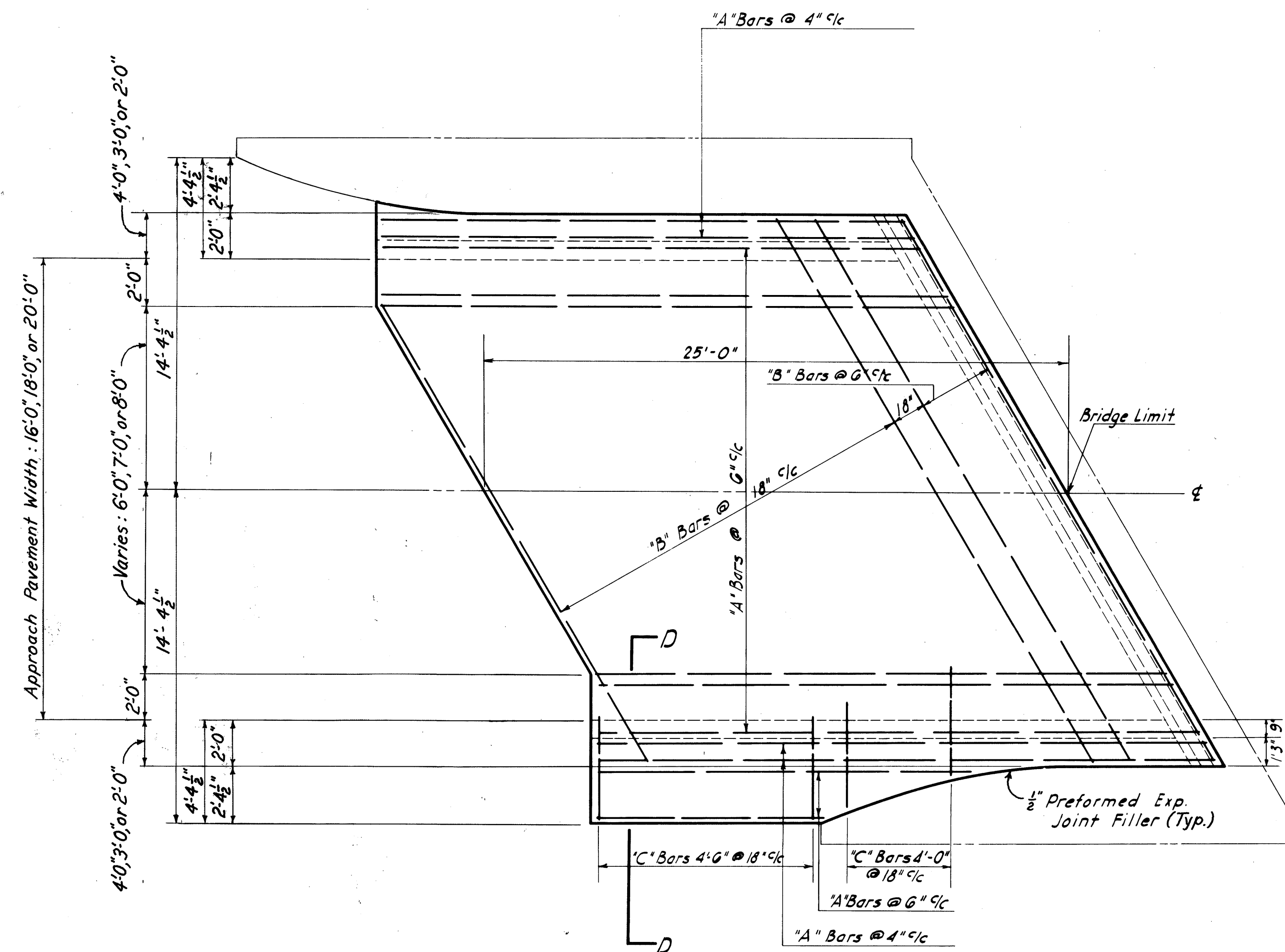
NOTE:

- 'A' Bars - #8
- 'B' Bars - #5
- 'C' Bars - #5

'C' Bars shall be placed normal to the center line of roadway



SECTION 'DD'



APPROACH SLAB DETAIL

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

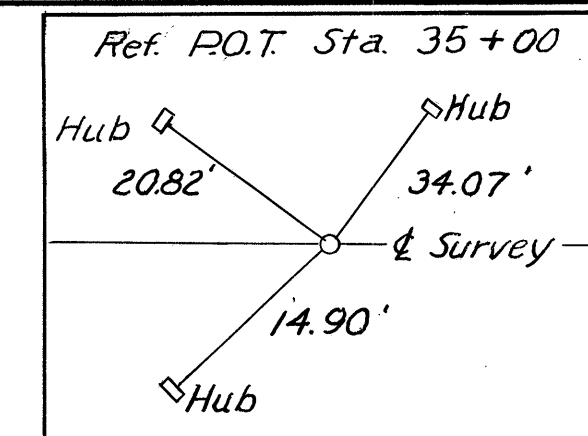
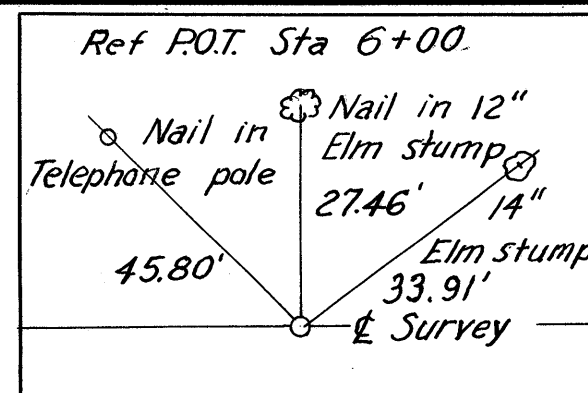
CLEVELAND-COLUMBUS EXPRESSWAY
C-82
TYPICAL APPROACH SLAB DETAILS
FOR CROSS ROAD BRIDGES

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
H.C.	R.N.	R.N.	H.M.			

MICROFILMED
DEC 29 1986

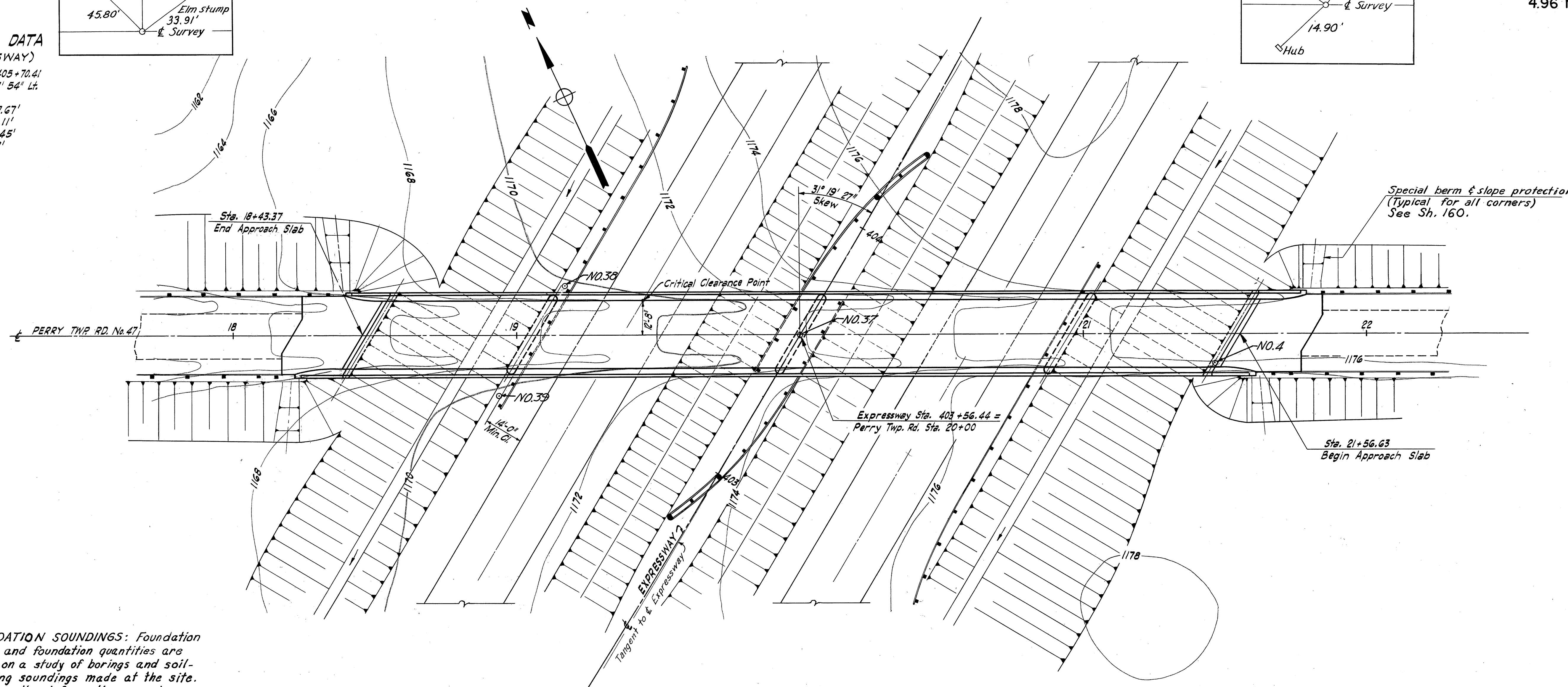
CURVE DATA (EXPRESSWAY)

P.I. Sta. 405+70.41
 $\Delta = 24^\circ 07' 54''$ Lt.
 $D = 0^\circ 28'$
 $R = 12,277.67'$
 $L = 5,172.11'$
 $T = 2624.45'$
 $E = 277.37'$

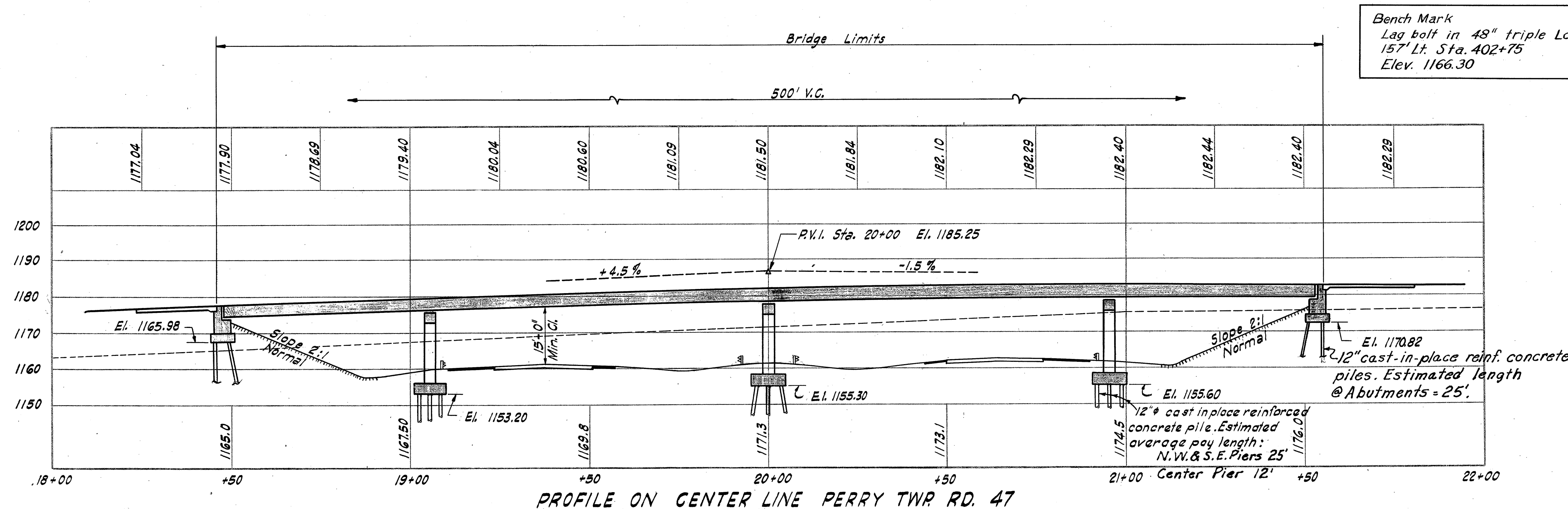


FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	I-1105 (17)	

4.96 MI.± EAST OF ASHLAND
ASHLAND COUNTY
ASD-1-8.44



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



Bench Mark
Lag bolt in 48" triple Locust
157' Lt. Sta. 402+75
Elev. 1166.30

Perry Twp. Rd. No. 47 A. D. T. 40 (1975)

PROPOSED STRUCTURE

TYPE: Continuous Steel beams with reinforced concrete deck and substructure.
SPANS: 58.0' 96.0' 96.0' 58.0' % Bearings
ROADWAY: 24'-0" 7/4 of 2'-0" Safety Curb.
LOAD FREQUENCY: G.F. = 30 (50)
WEARING SURFACE: 1" Monolithic Concrete
APPROACH SLAB: Special Design (25' Long)
SKEW: 31° 19' 27" L.F. to tangent
ALIGNMENT: Tangent

MICHAEL BAKER, JR. CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

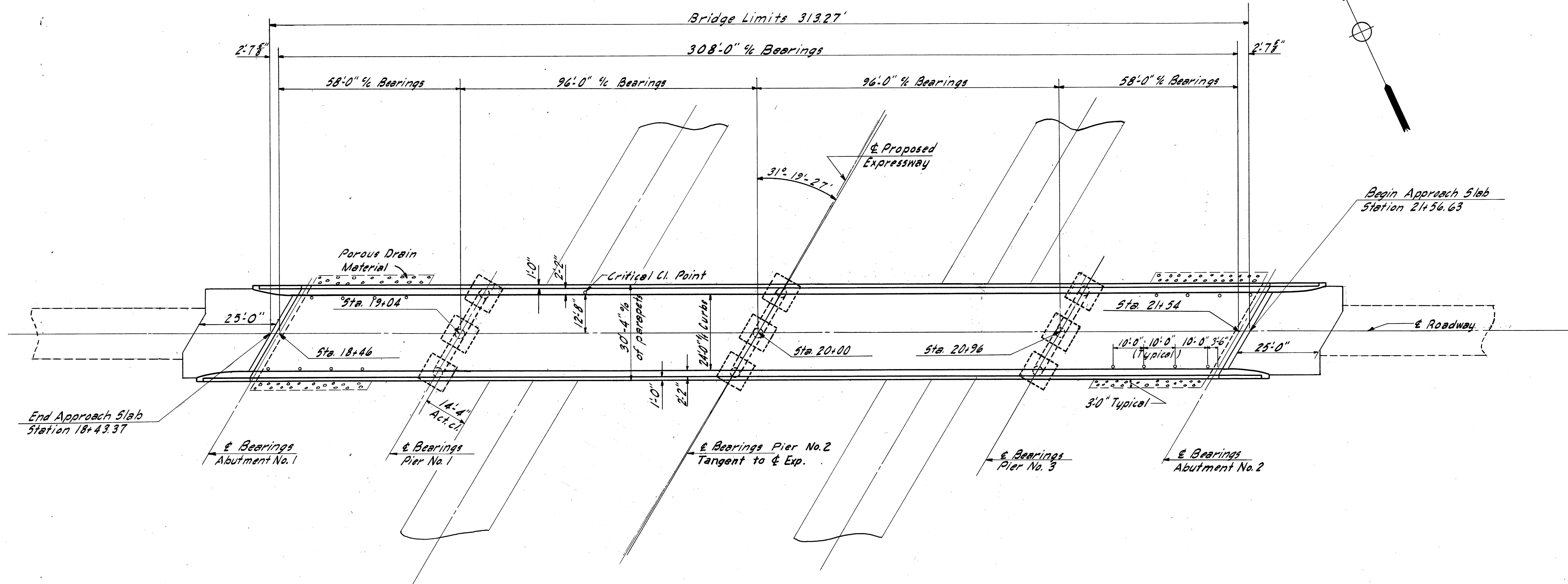
SITE PLAN BRIDGE NO. ASD-1-1113 UNDER PERRY TWP RD. 47 ASHLAND COUNTY

SCALE 1"=20'		STA. 403+56.44			
PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
		Y.G.	W.A.U.	D.E.B.	H.P.H. 8/19/57

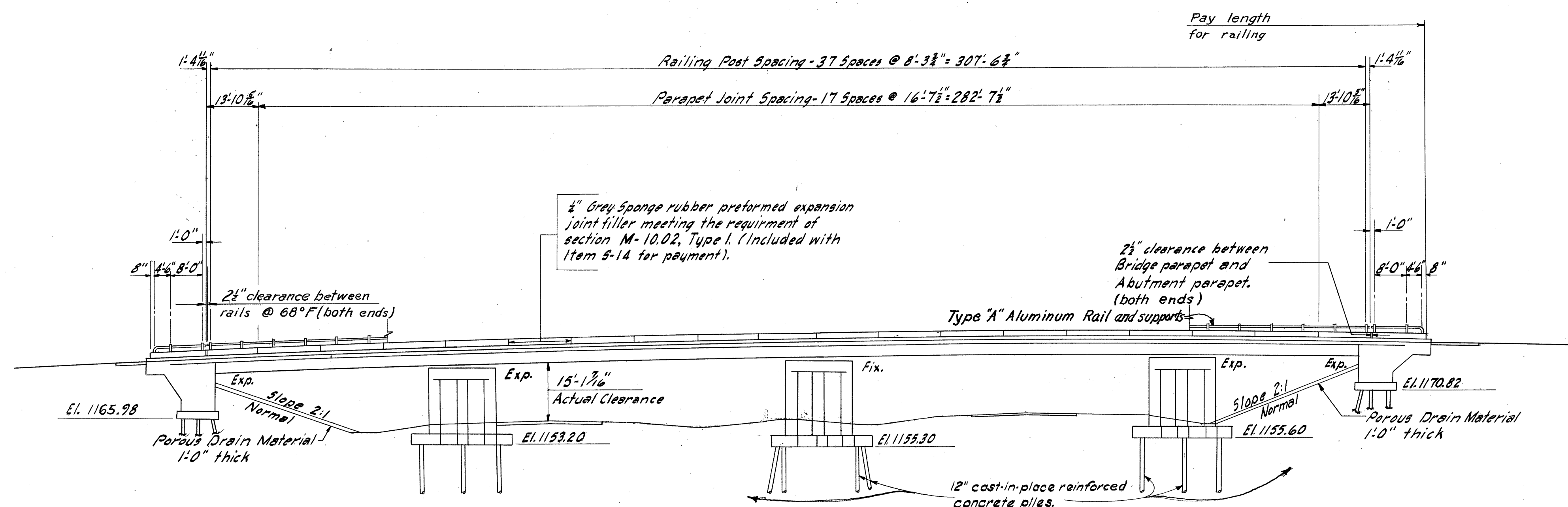
ASHLAND COUNTY
ASD.-1-8.44

GENERAL NOTES

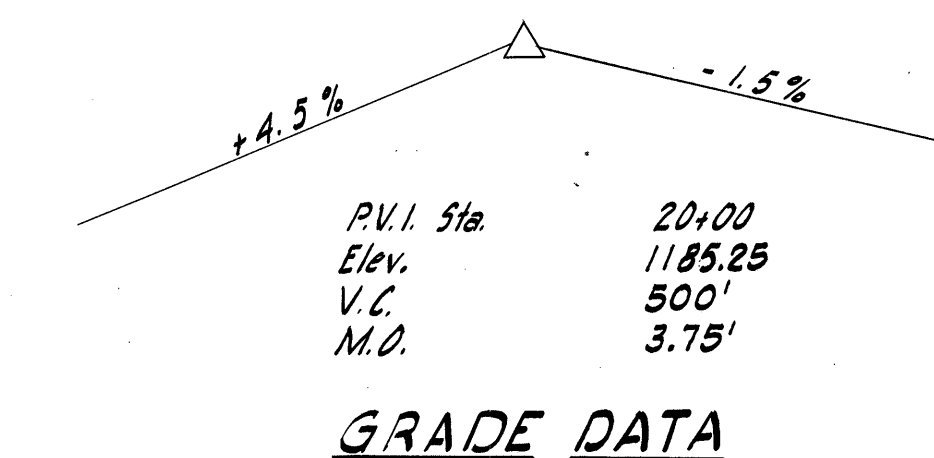
- Reference shall be made to Standard Drawings C 5 B-2-56, sheets 2 & 3 of 6 dated 12-3-56, RB-1-53 dated 3-1-53, AR-1-57 dated 4-9-57 and to Supplemental Specification S-114 revised 8-1-57.
- Design Specification: This structure conforms to the requirements of "Design Specification for Highway Structures" of the State of Ohio, Department of Highways, dated 10-1-51, together with revisions thereof, dated 7-15-52, 4-1-54 and 2-1-55.
- Loading: C.F. = 30 (51).
- Excavation Quantity includes the removal of fill material between surface of proposed embankment and bottom of abutment.
- Welding of structural steel shall be Class "A", except as shown. Any welds shown as field welds may, at the option of the Contractor, be made in the shop.
- Porous drain material, as shown in the General Plan, shall be provided at each end of bridge. The material shall be placed one foot thick and shall extend across the slope area for approximately three feet beyond the edge of the superstructure.
- Welded Steel: The steel for the 36 WF 230 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-7.4 (a) of the "Construction and Material Specifications") or to A-373.
- Piles shall be driven to a minimum bearing capacity of 30 tons per pile for the piers.
- Embankments to be placed to subgrade elevation for a distance of approximately 200 feet beyond the bridge limits as early as practical in the construction procedure and before work is begun on Abutments or Piers 1 and 3. Abutments should be placed as late as practical, with a minimum time lapse of 30 days between completion of the embankment and starting of work on the abutments.



GENERAL PLAN



ELEVATION

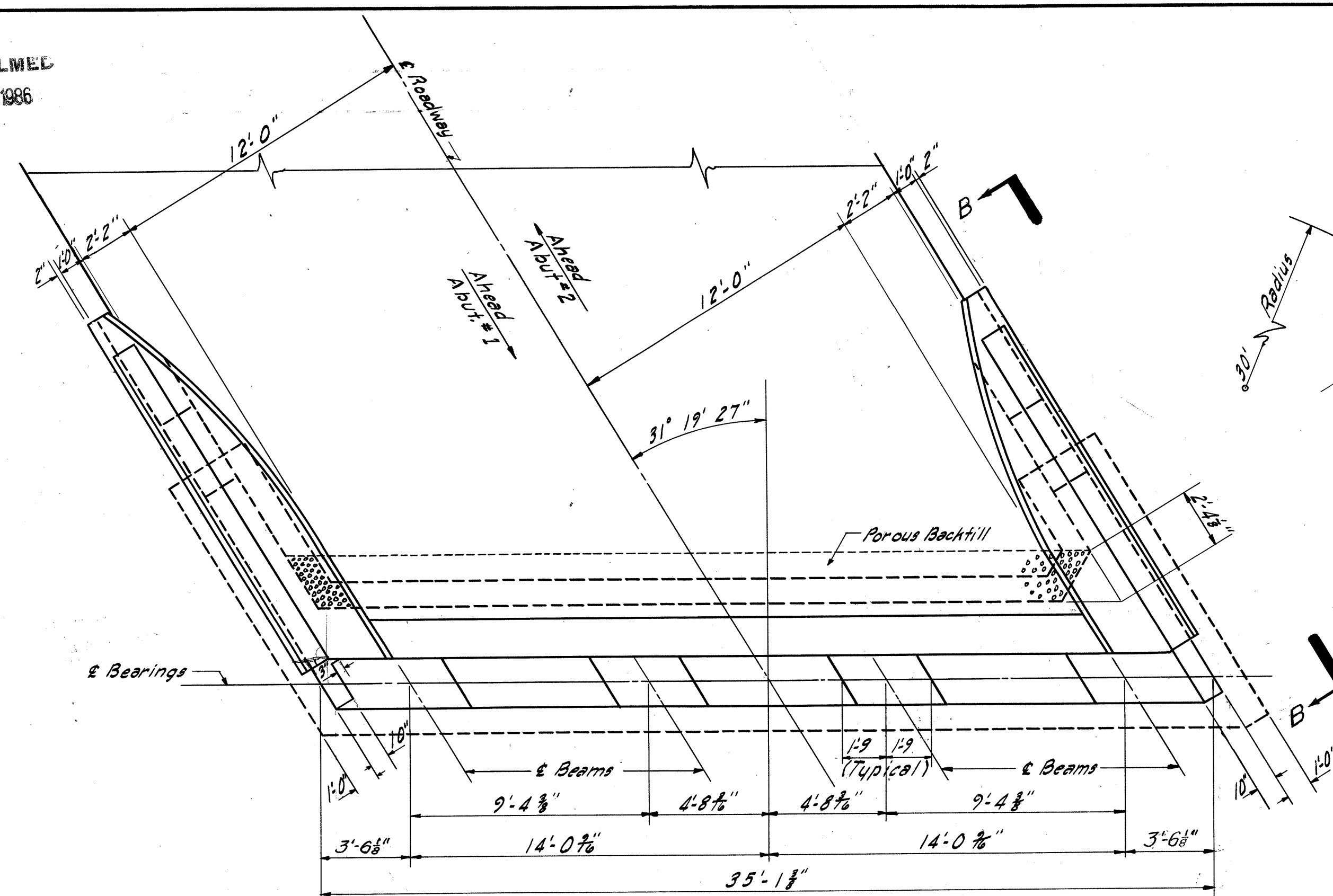


MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

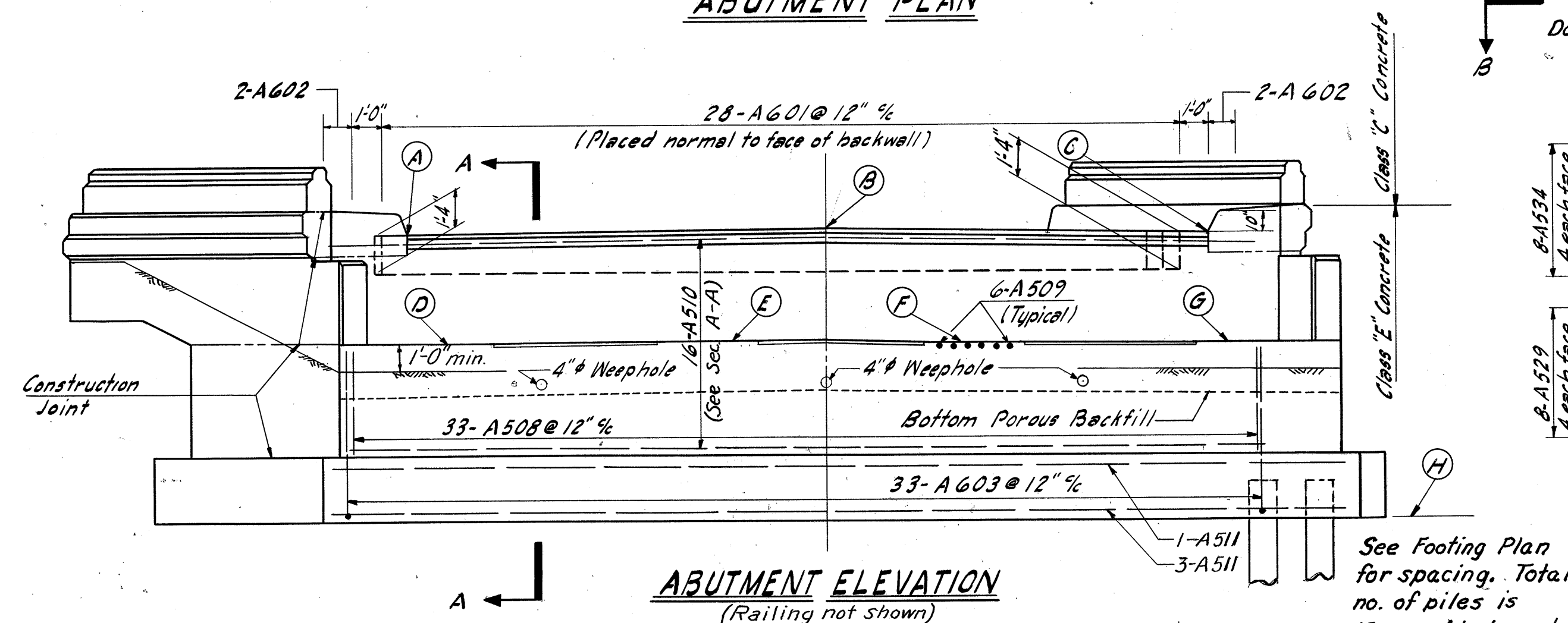
GENERAL PLAN & ELEVATION

BRIDGE NO. ASD-I-1113
UNDER PERRY TWP. RD. 47

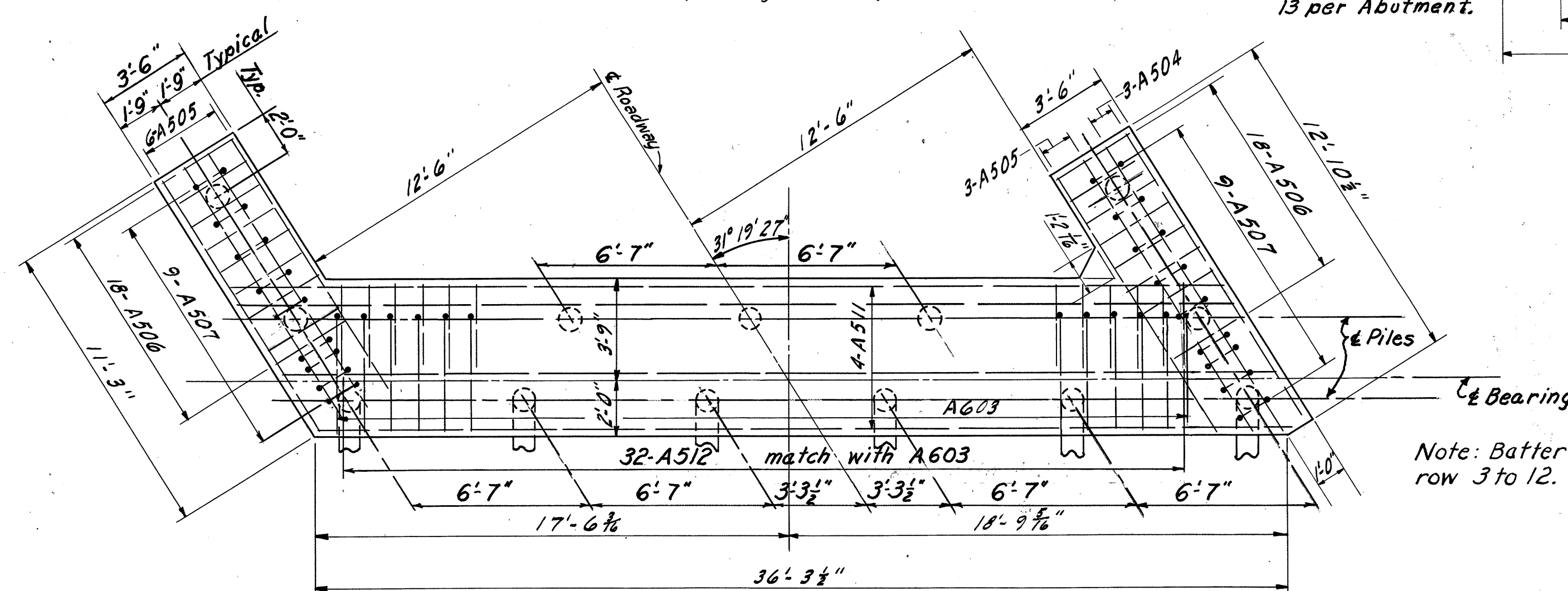
ASHLAND COUNTY				STA. 403+56.44	
Designed	Drawn	Traced	Checked	Reviewed-Date	Revised
G.S.W.	A.C.M.	A.C.M.	D.E.B.	4/9/57	



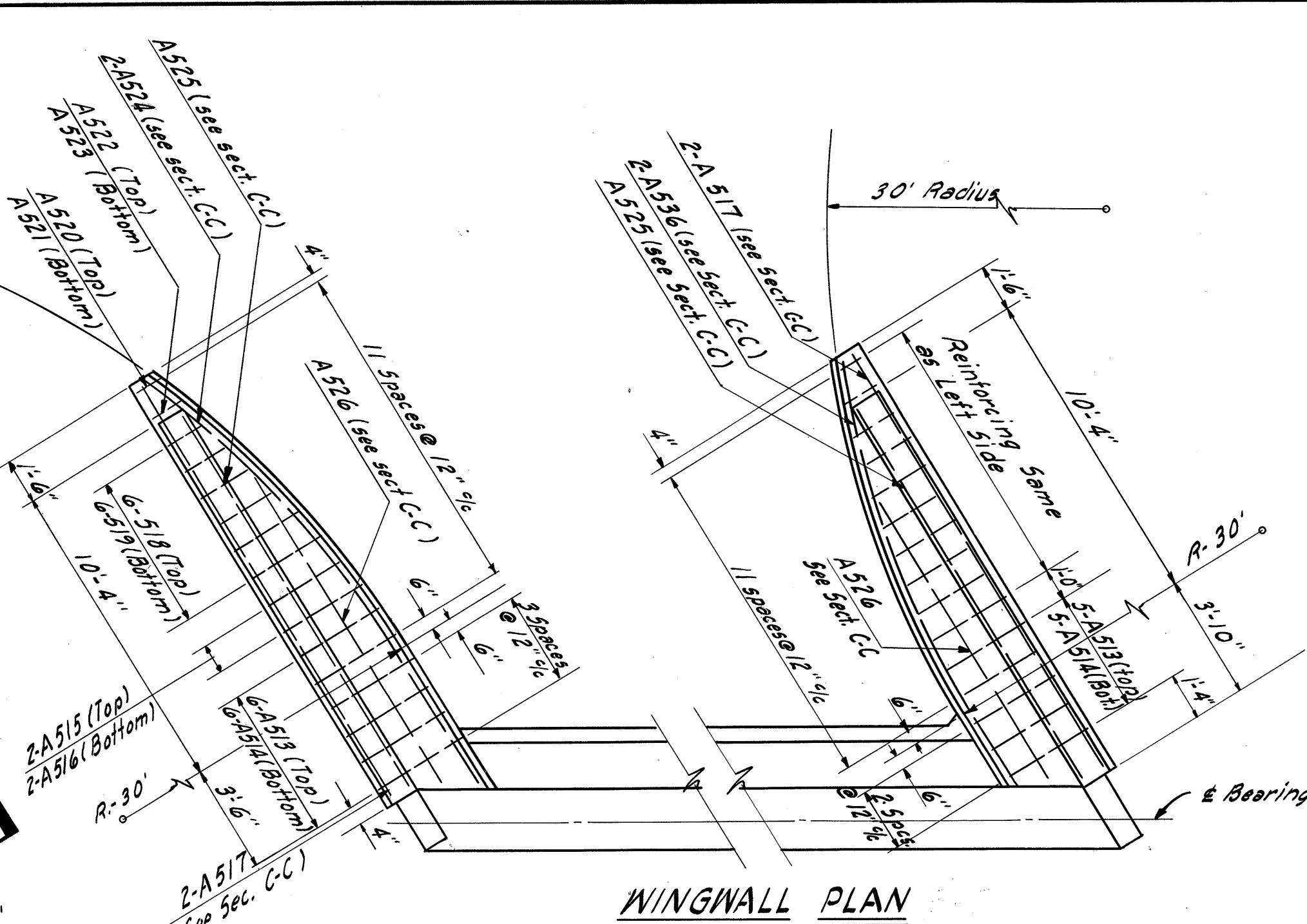
ABUTMENT PLAN



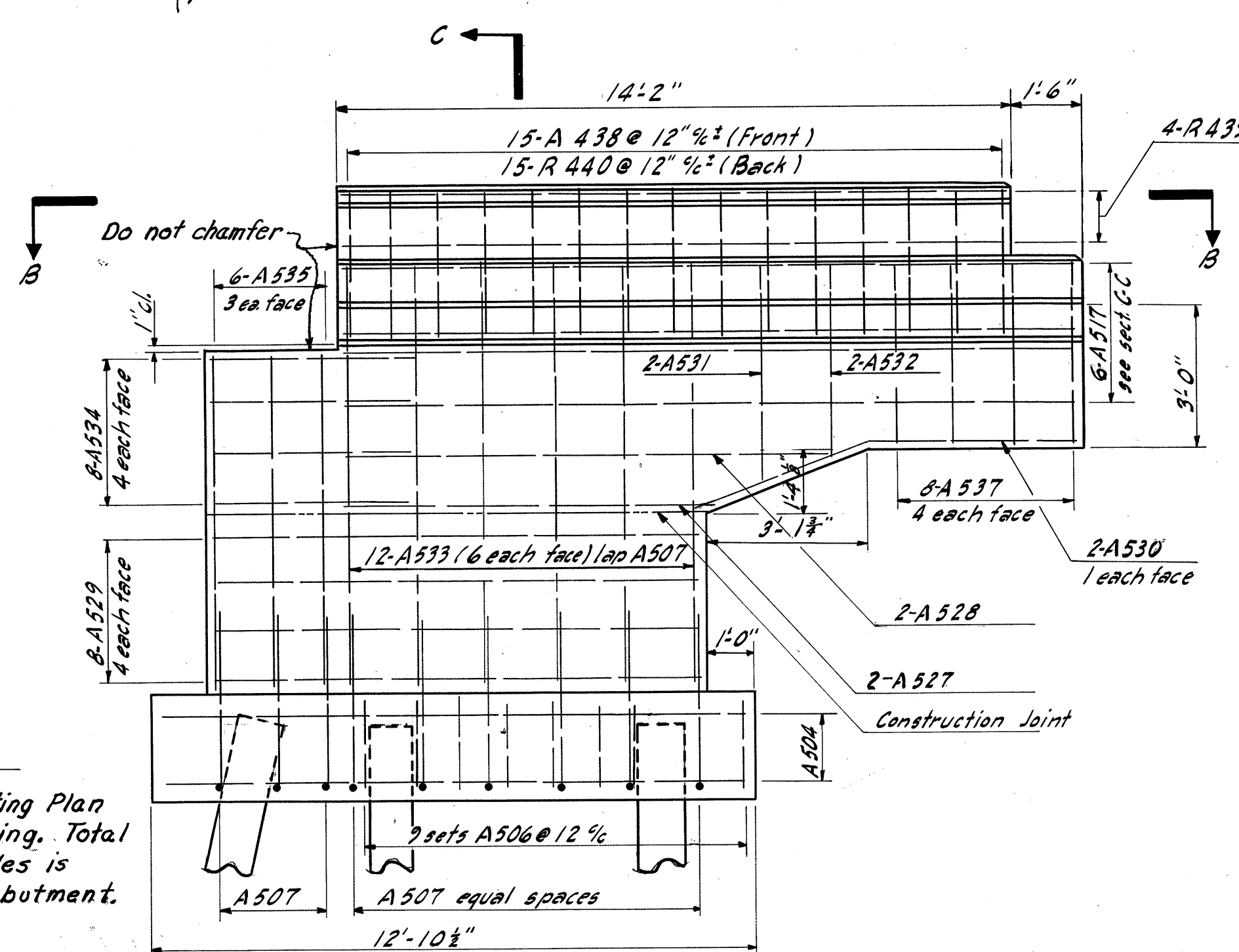
ABUTMENT ELEVATION
(Railing not shown)



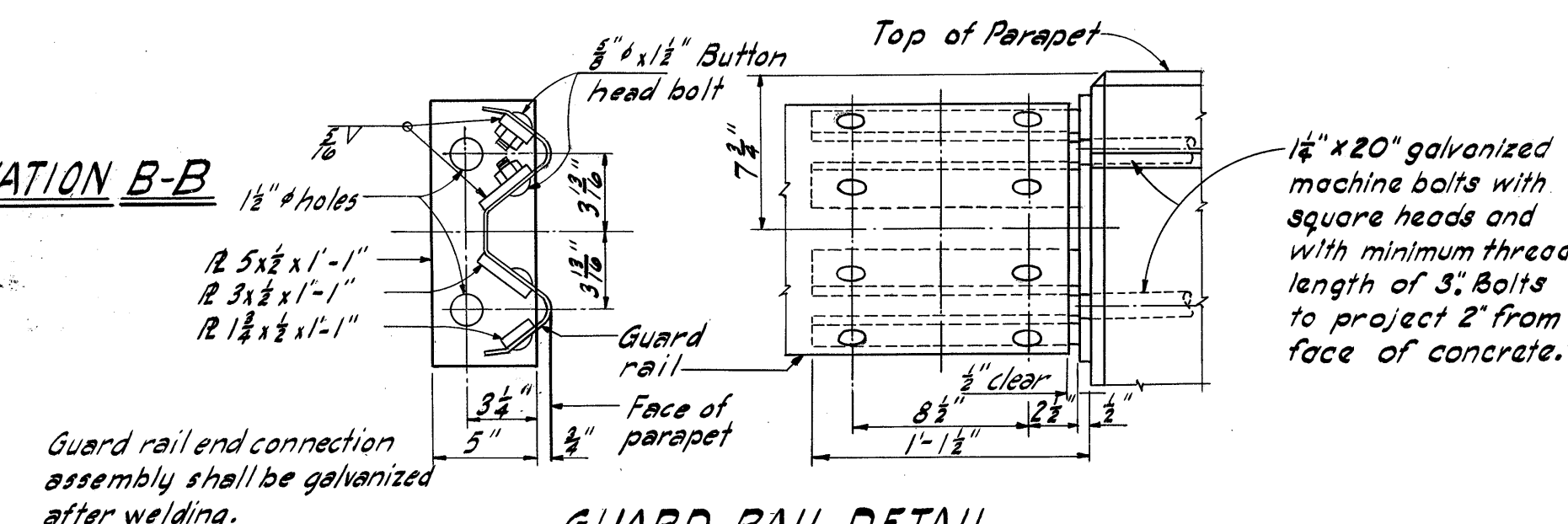
FOOTING PLAN



WINGWALL PLAN

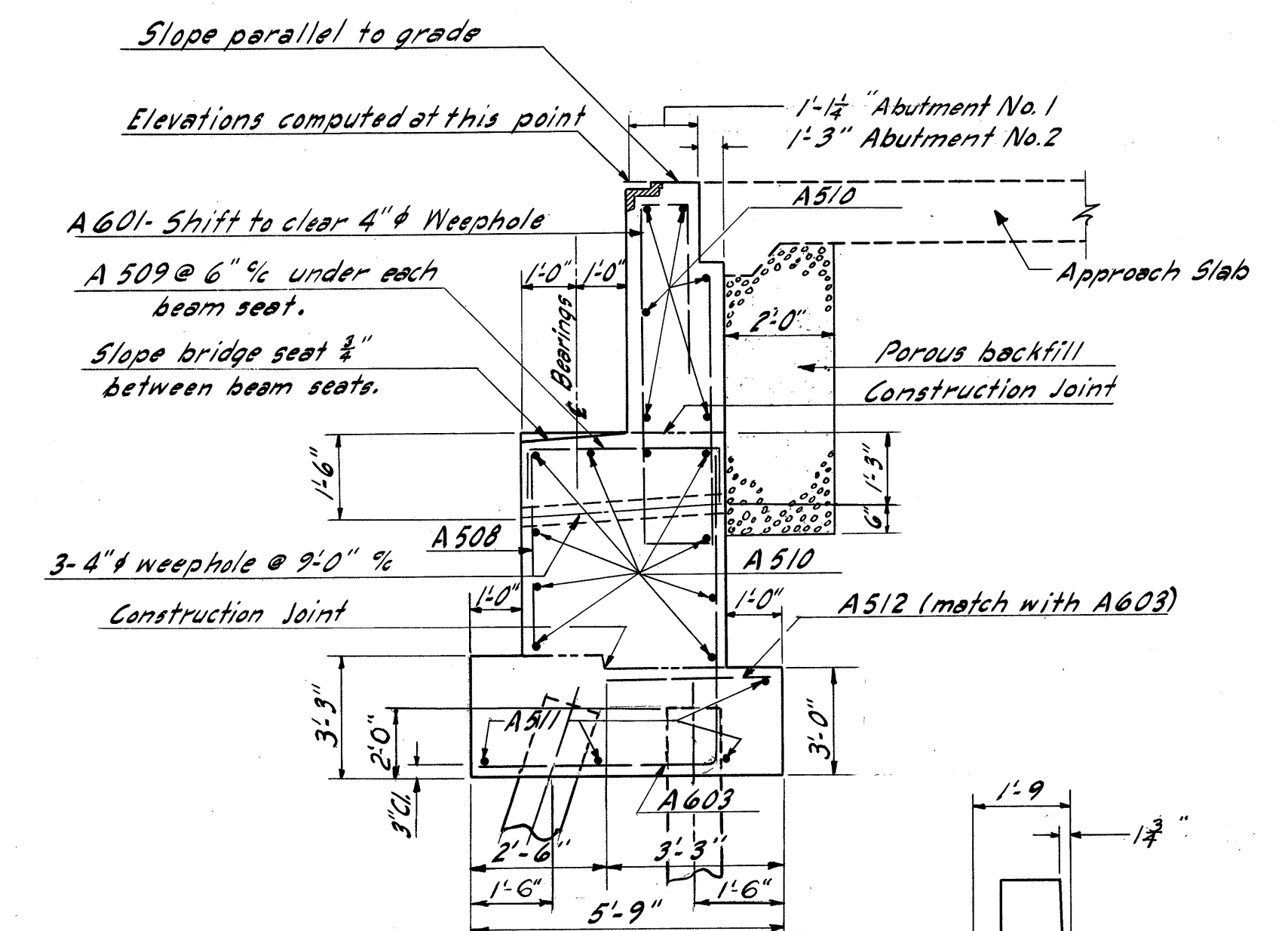


WINGWALL ELEVATION B-B

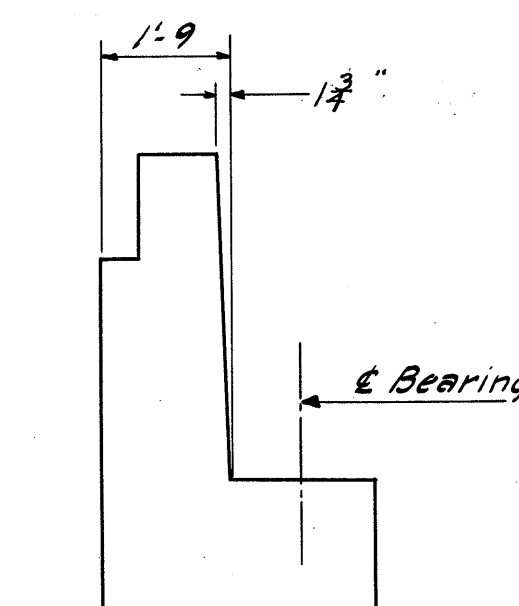


GUARD RAIL DETAIL
(As seen from pavement side)

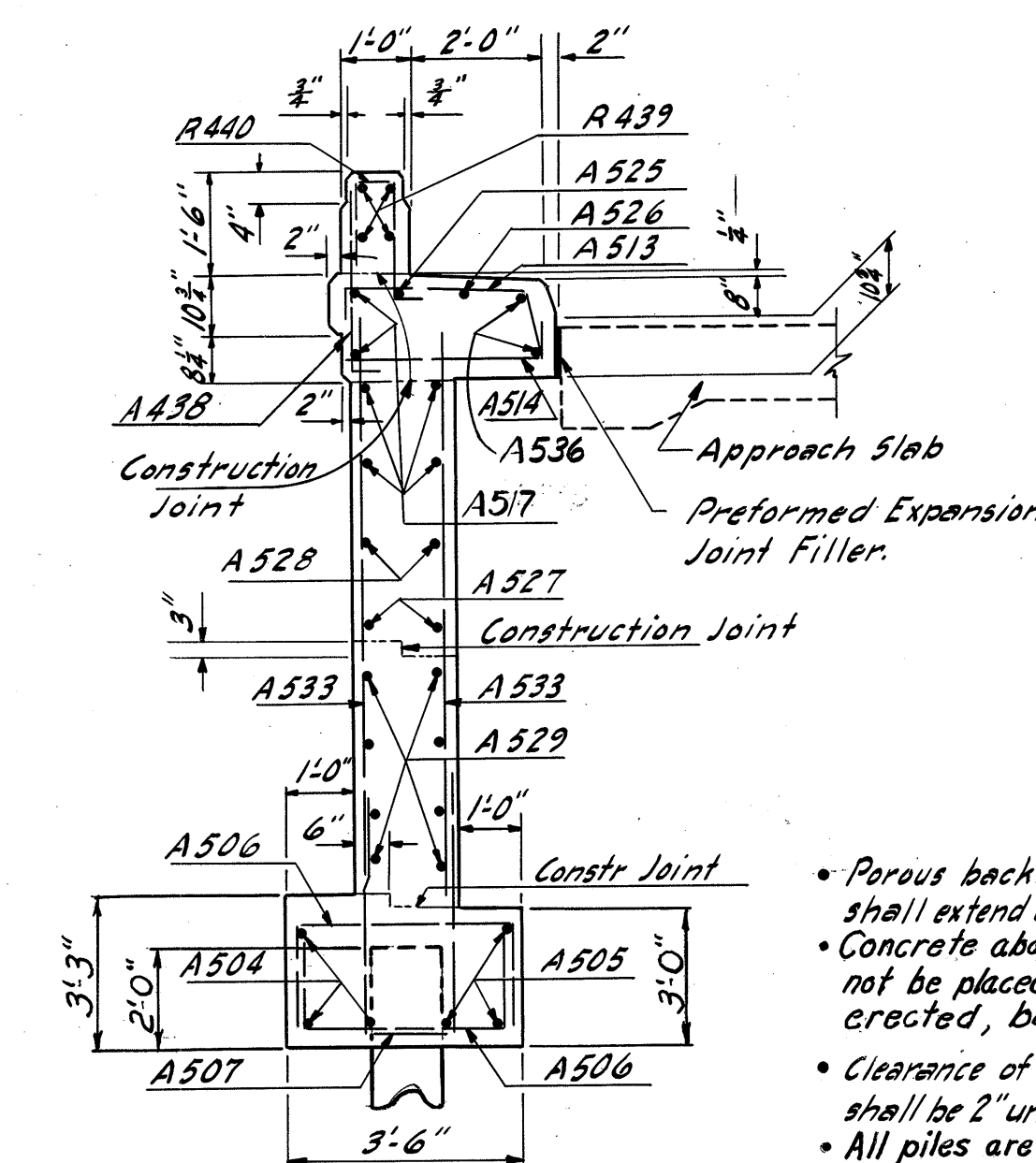
TABLE OF ELEVATIONS								
LOCATION	A	B	C	D	E	F	G	H
Abut No. 1	1177.29	1177.73	1177.78	1172.95	1173.24	1173.40	1173.44	1165.52
Abut No. 2	1182.17	1182.38	1182.22	1177.79	1177.93	1177.95	1177.84	1170.81



SECTION A-A



BACKWALL SLOPE
(Abutment No. 1 on 4)



SECTION C-C

NOTES

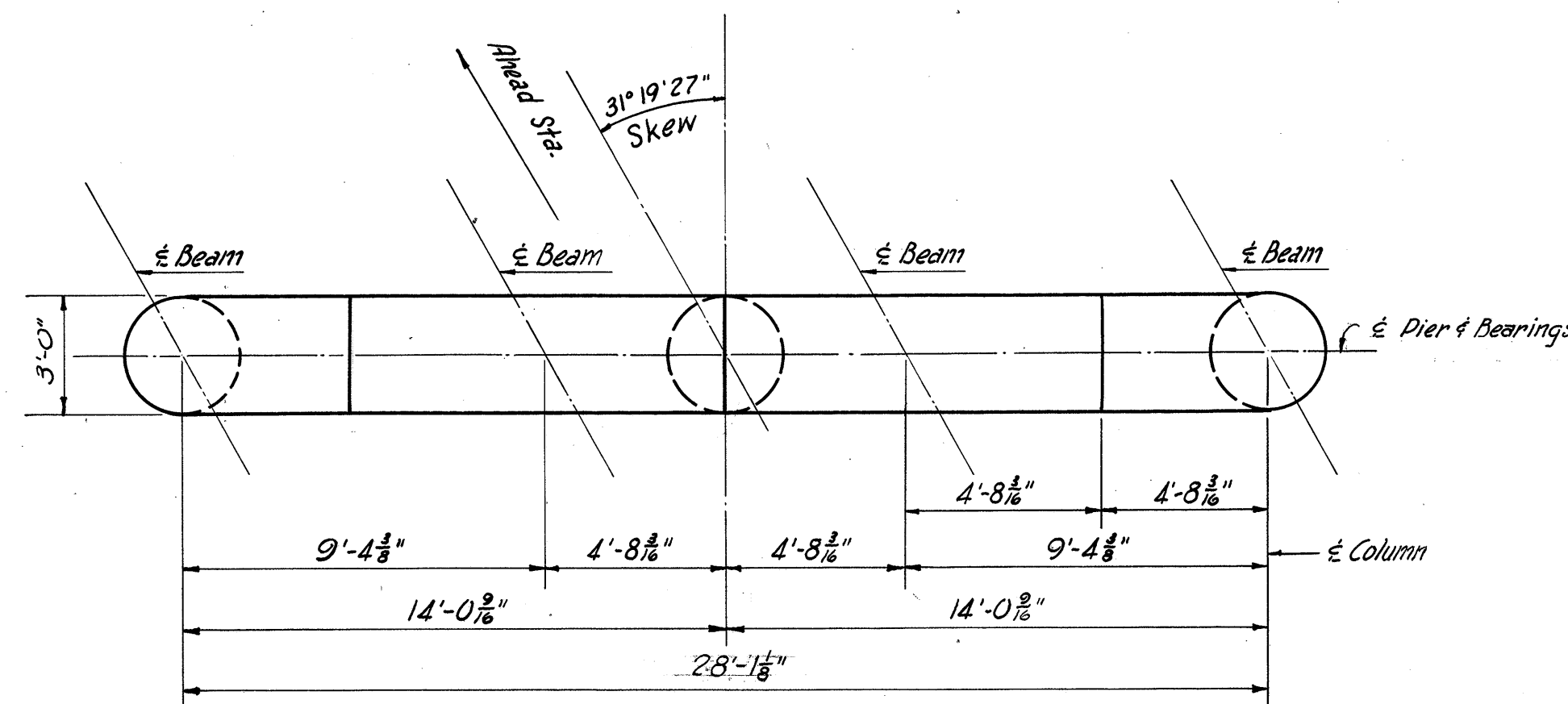
- Porous backfill 2 feet thick full length of abutment shall extend up to the underside of approach slab.
- Concrete above bridge seat construction joint shall not be placed until after the steelwork is erected, but before placing the deck slab.
- Clearance of reinforcing steel from face of concrete shall be 2" unless otherwise shown.
- All piles are 12" cast-in-place reinf. concrete piles driven to a minimum bearing capacity of 30 tons each.
- Steel end finish shall be used as a template for the top of the backwall.
- Procedure: The embankment shall be placed and compacted to subgrade elevation, after which excavation shall be made for the abutment.
- All abutment concrete shall be Class "E" except Parapet which shall be Class "C".
- Guard rail end connection to be included in cost of Bridge Railing.

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ROCHESTER, PENNSYLVANIA

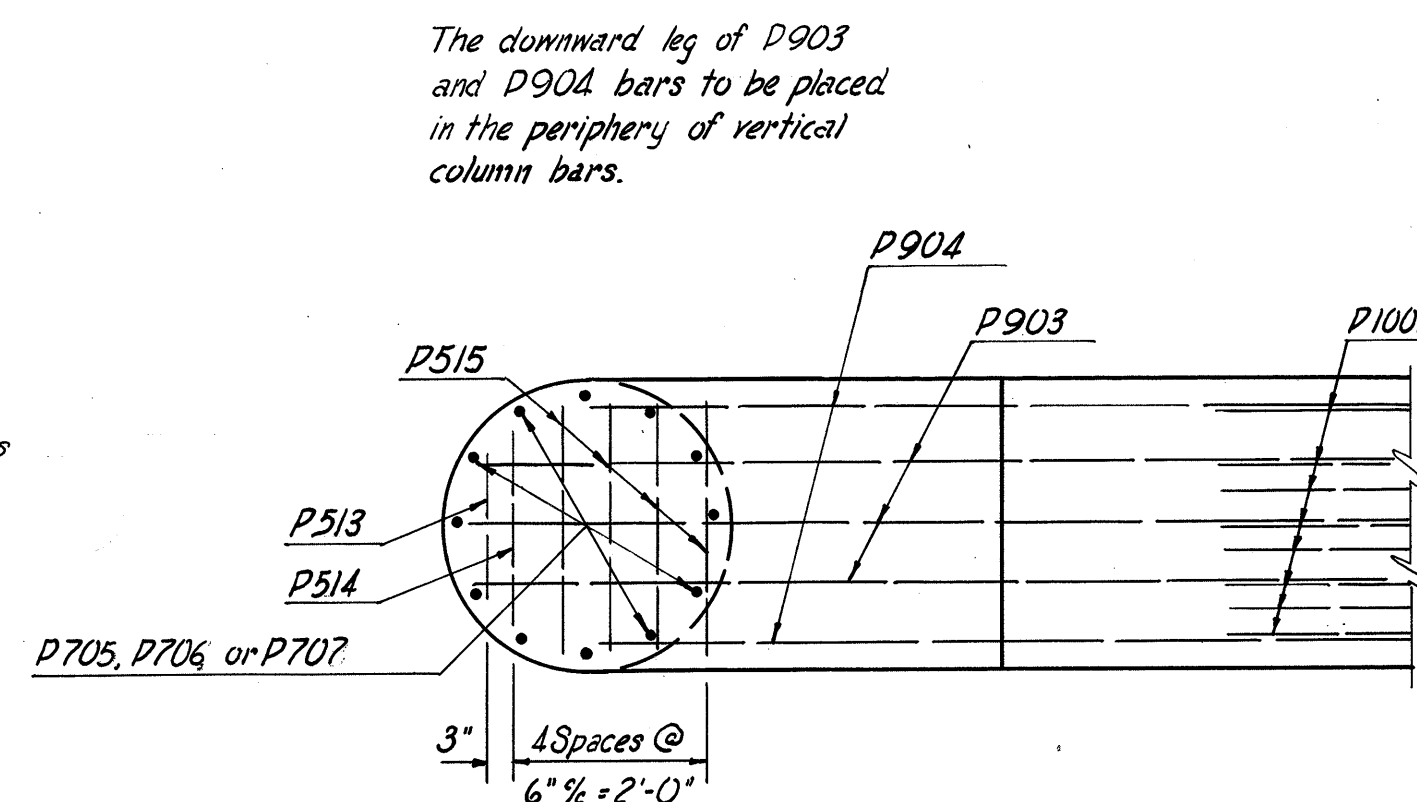
ABUTMENT
BRIDGE NO. ASD-I-1113
UNDER PERRY TWP. RD. 47

ASHI AND COUNTY	STA. 403+56.44
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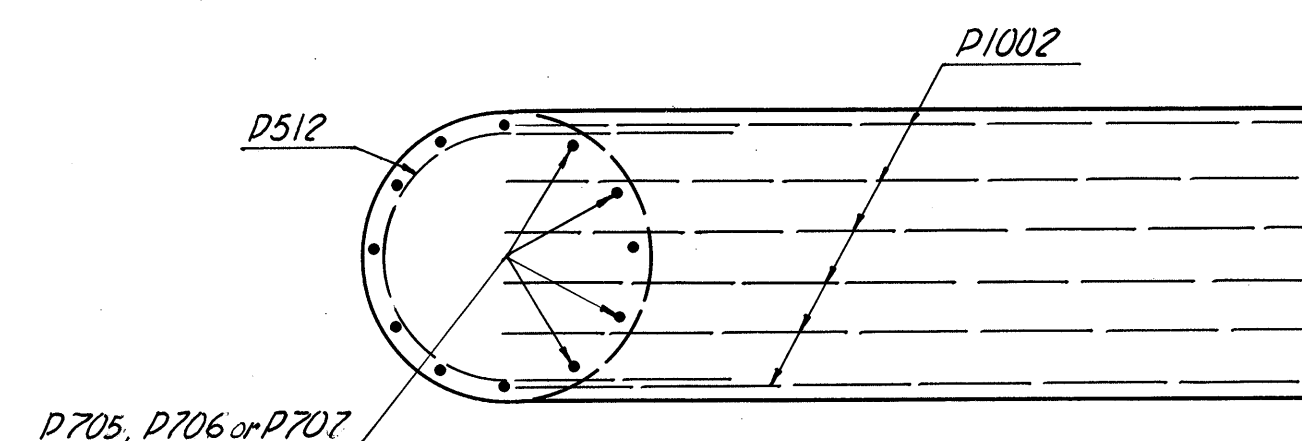
Designed	Drawn	Traced	Checked	Reviewed-Date	Revised
G.S.W.	G.S.W.	A.C.M.	D.E.B.	HCH 8/19/57	



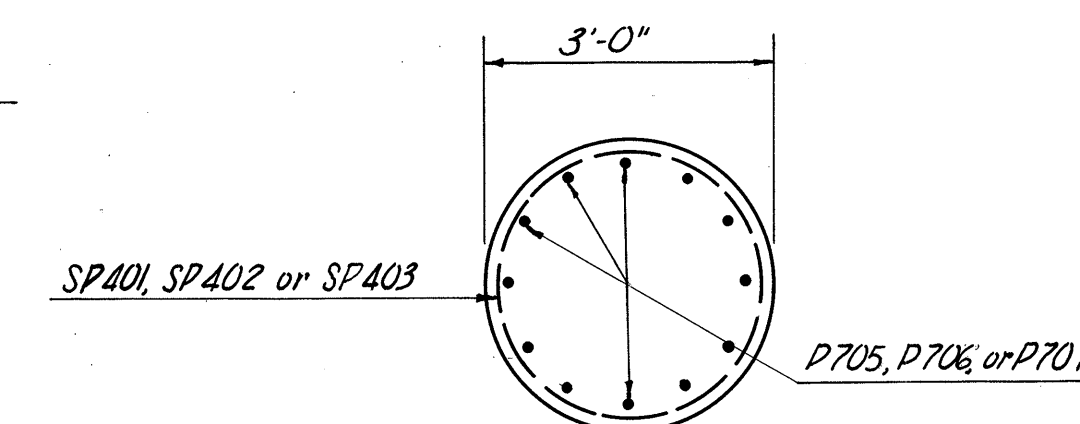
PLAN OF PIER CAP



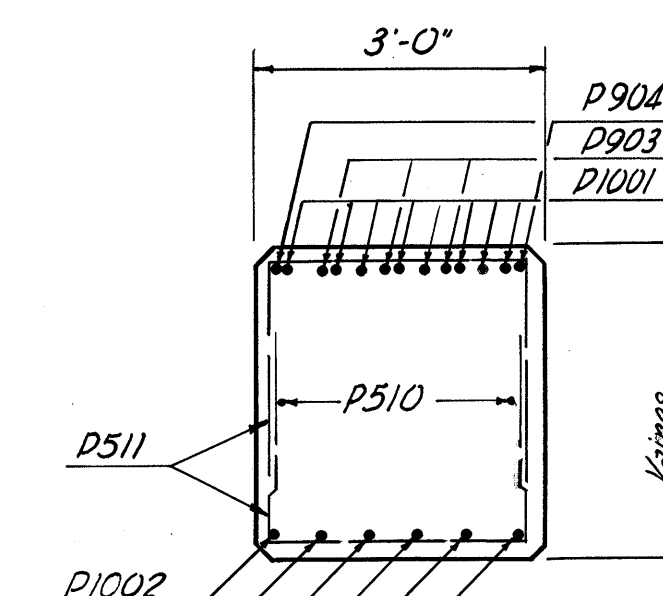
SECTION A-A



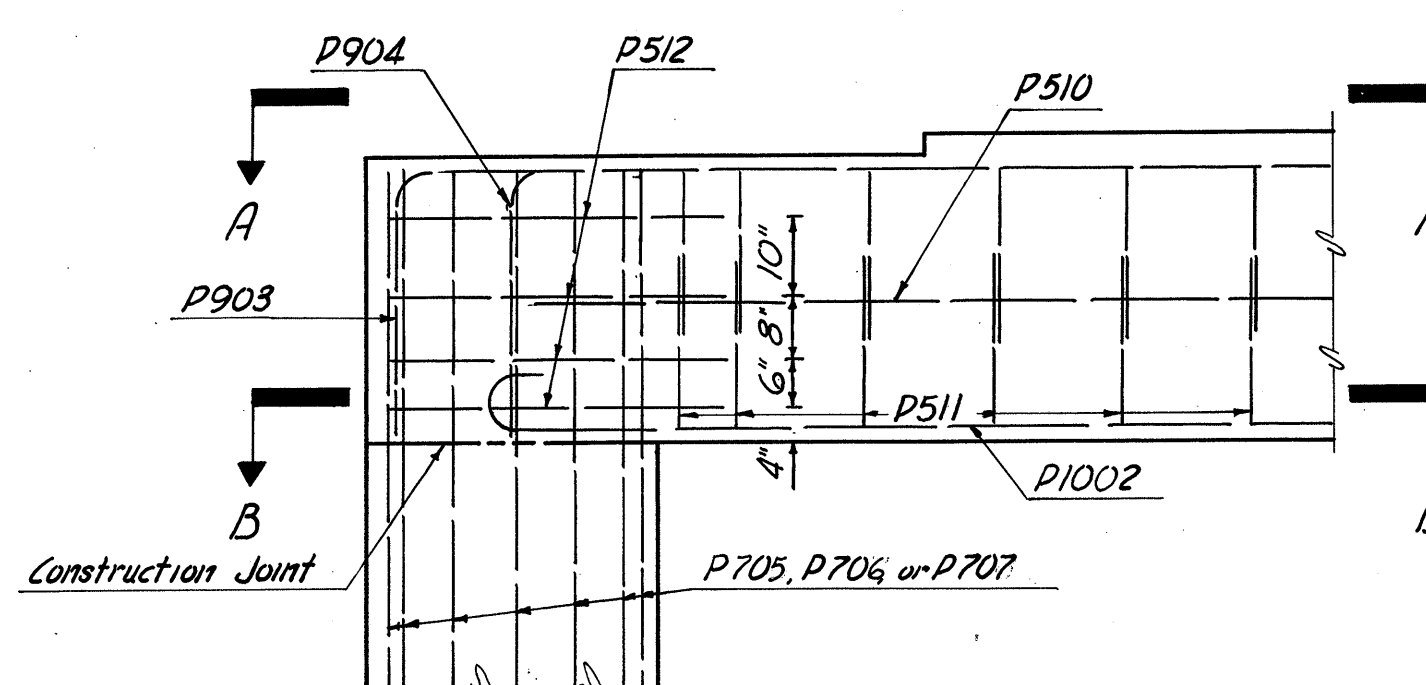
SECTION B-B



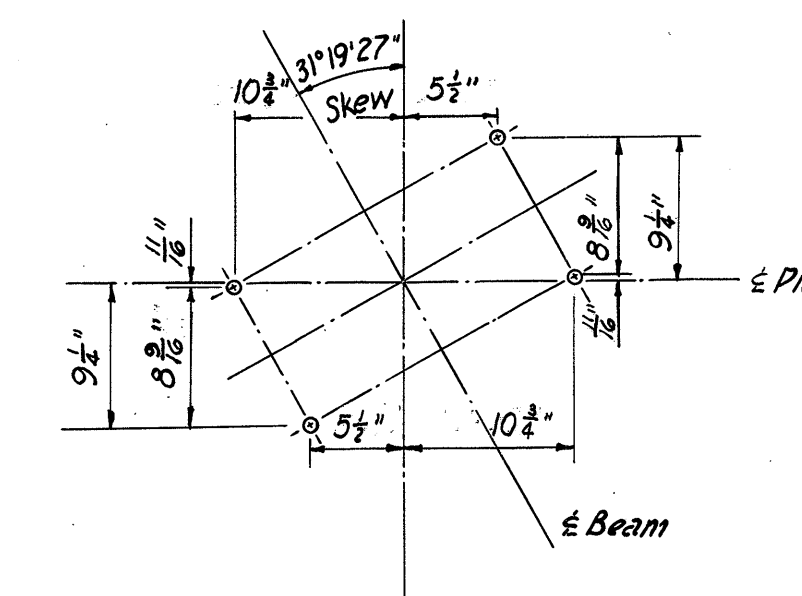
SECTION C-C



SECTION D-D



PARTIAL ELEVATION

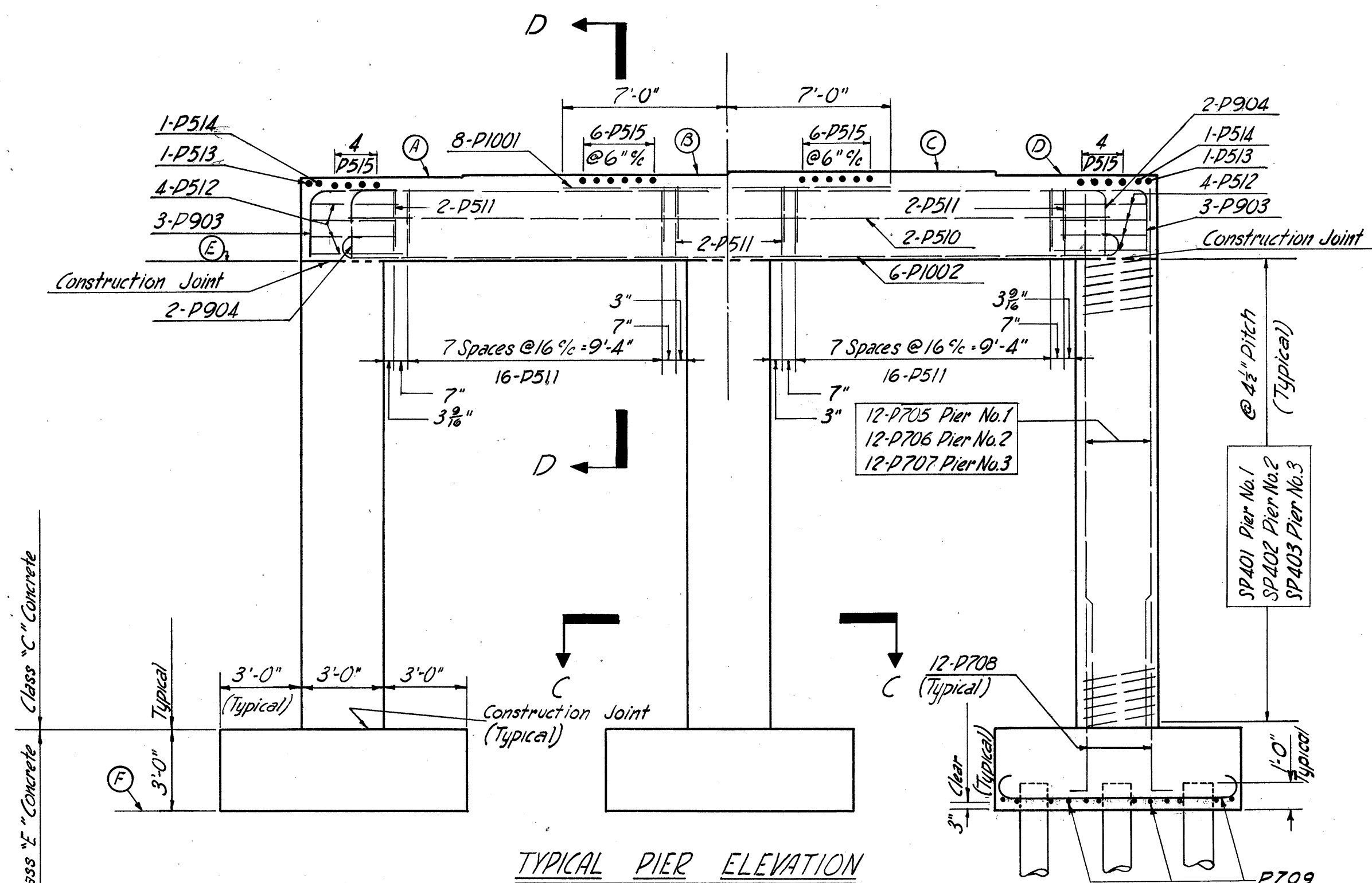


ANCHOR BOLT LAYOUT
PIER 2 ONLY

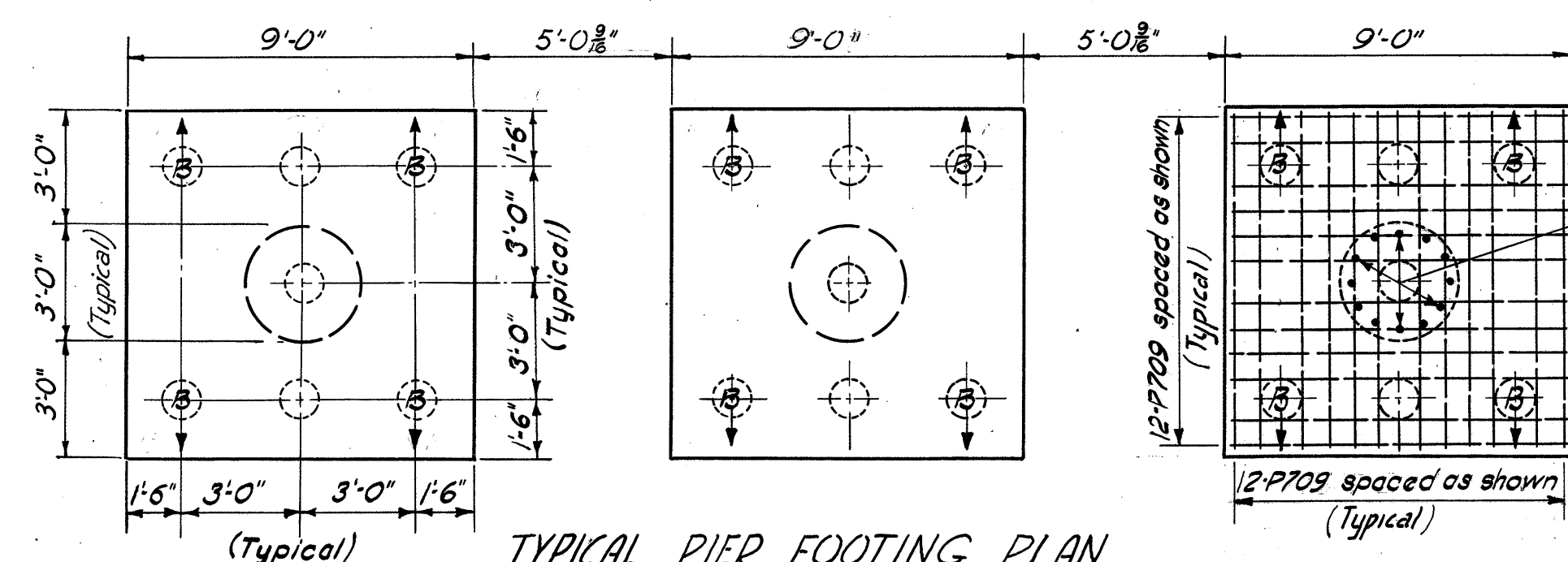
PIER NOTES

Clearance of reinforcing steel shall be 2" from face of concrete unless otherwise shown.

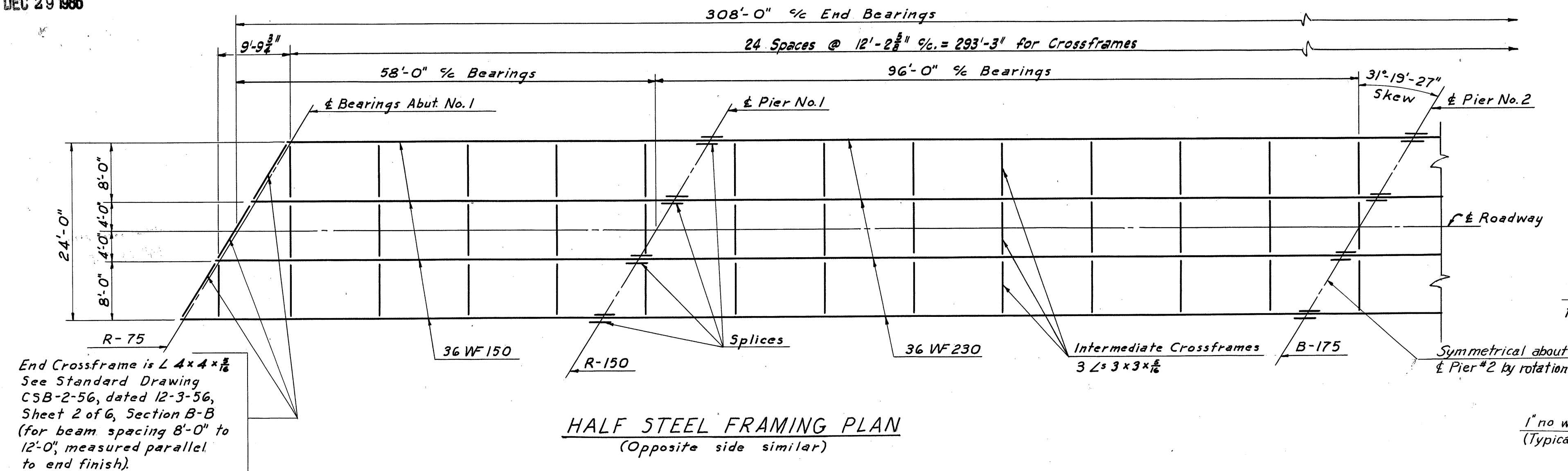
Special care shall be taken in placing reinforcing steel in the bridge seat so that it will not interfere with drilling of anchor bolt holes.



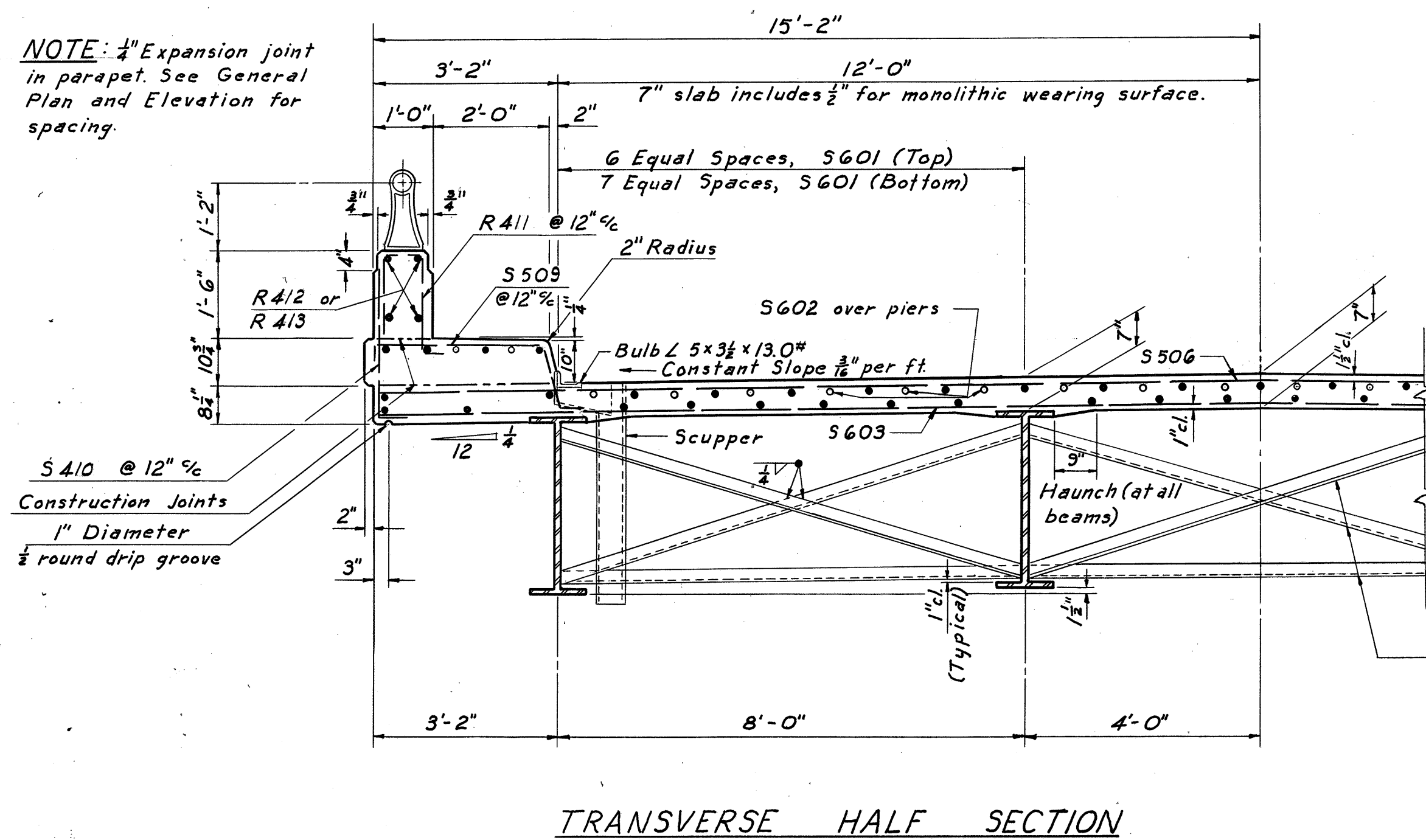
TYPICAL PIER ELEVATION



ASHLAND COUNTY
ASD -1- 8.44



NOTE: 1/4" Expansion joint in parapet. See General Plan and Elevation for spacing.



BEAM SPLICE WELDING PROCEDURE

1. Raise end of beam at Pier 2 - 4".
2. Butt-weld beam flanges and web at Pier 1 using the following sequence: make one pass on each flange, then one on the web, repeat until welds are complete.
3. Weld top and bottom flange moment plates at Pier 1.
4. Lower end of beam at Pier 2.
5. Make splices at Piers 2 and 3 in the same manner raising the ends of the beams 4" at Pier 3 and 1" at abutment 2.

Intermediate crossframe L 3 x 3 x 3/4". Weld both sides of vertical leg and top side of horizontal leg to beam with 1/4" continuous fillet weld.

DECK CONSTRUCTION PROCEDURE

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 normal to the center line of bridge and are located near the center of any span.

DECK SLAB PLAN

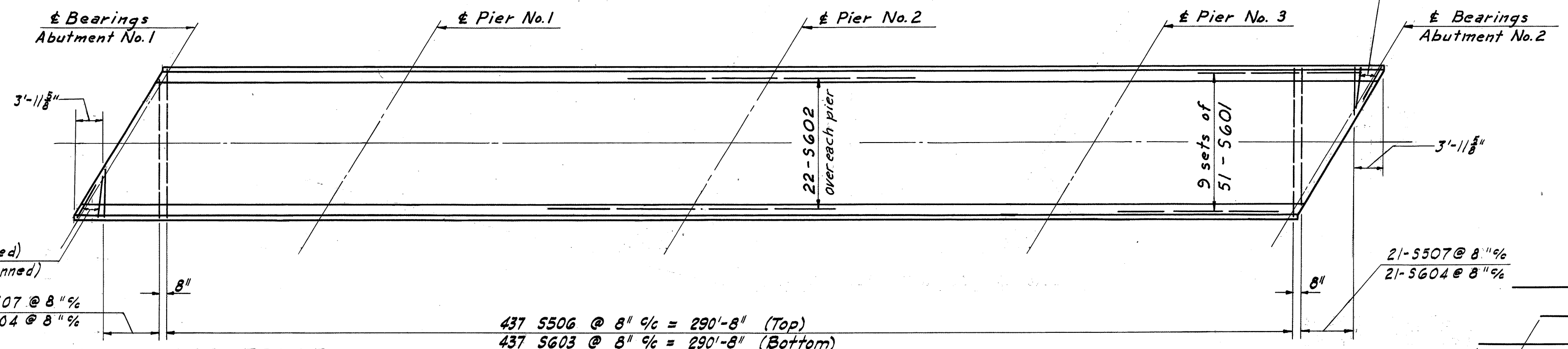
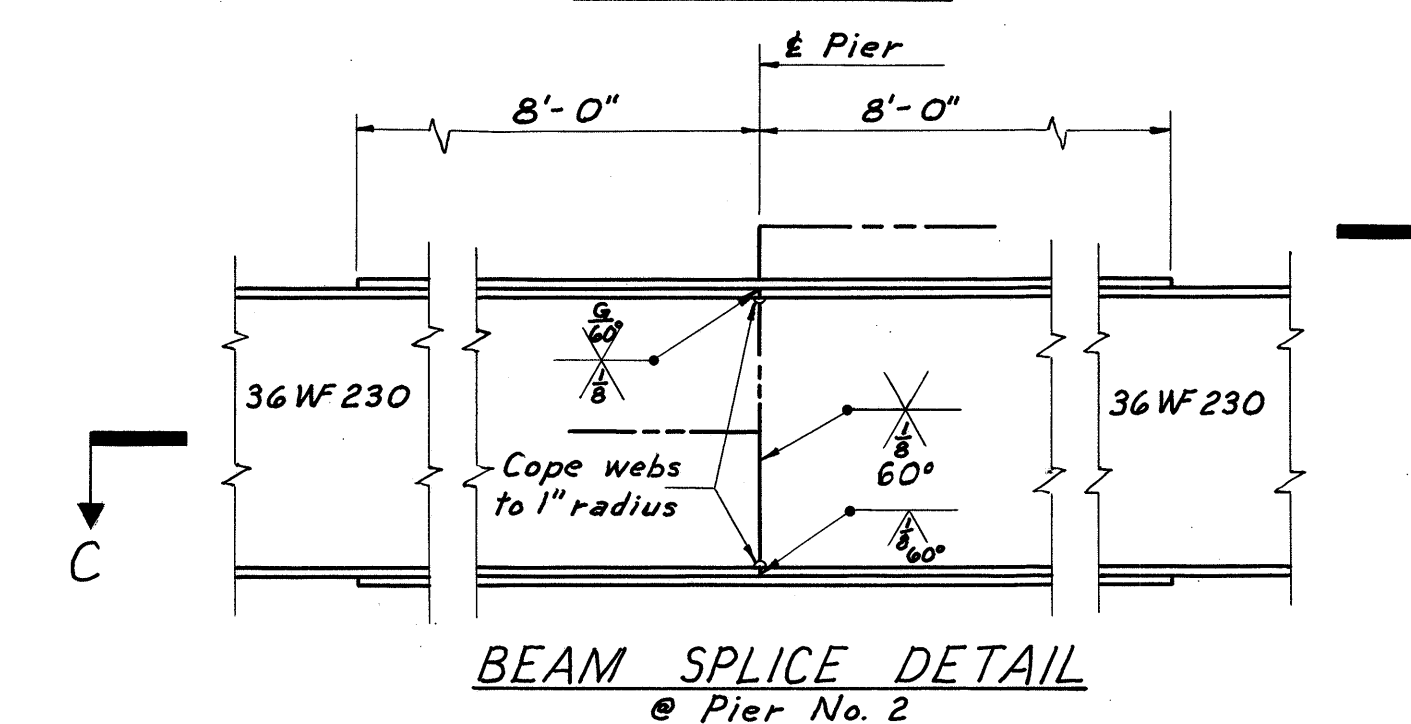
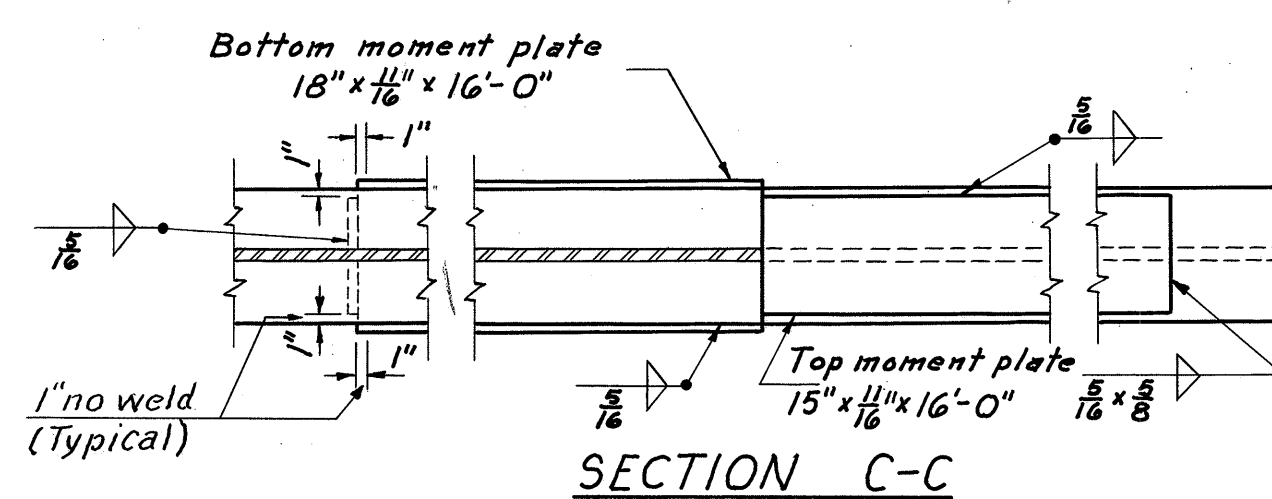
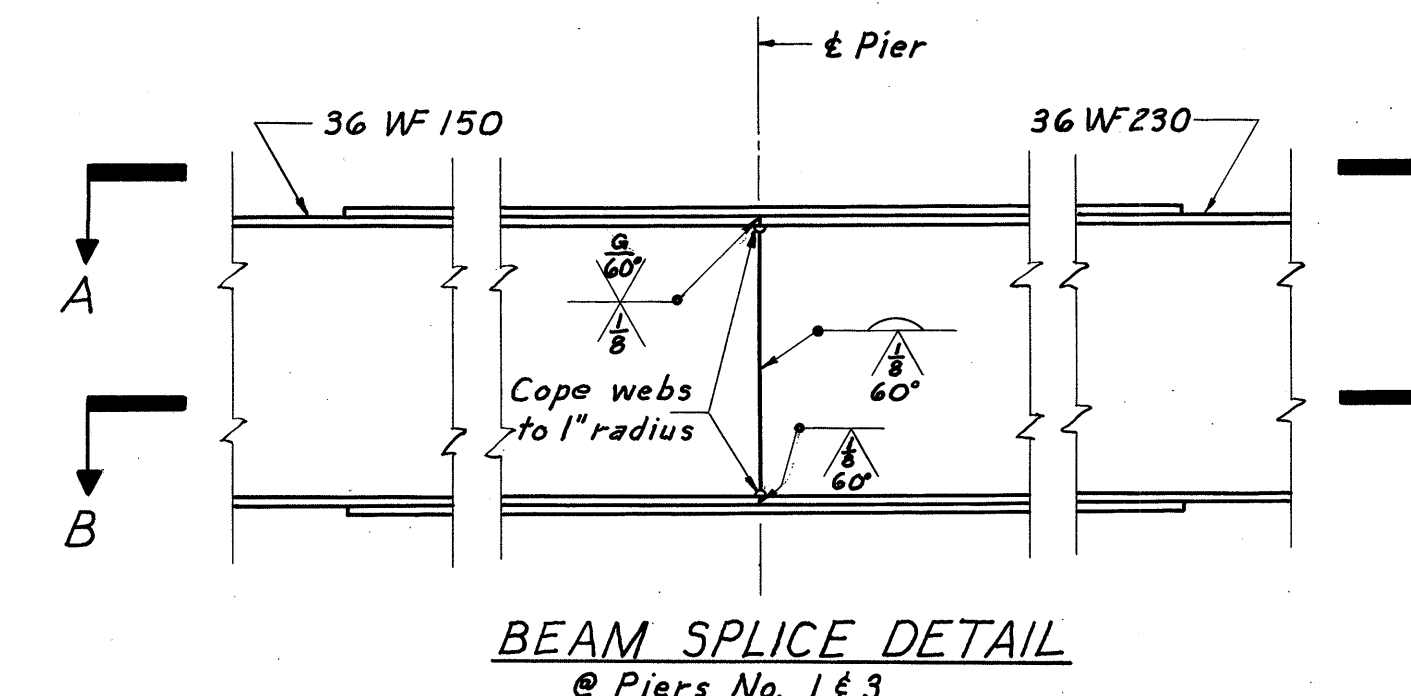
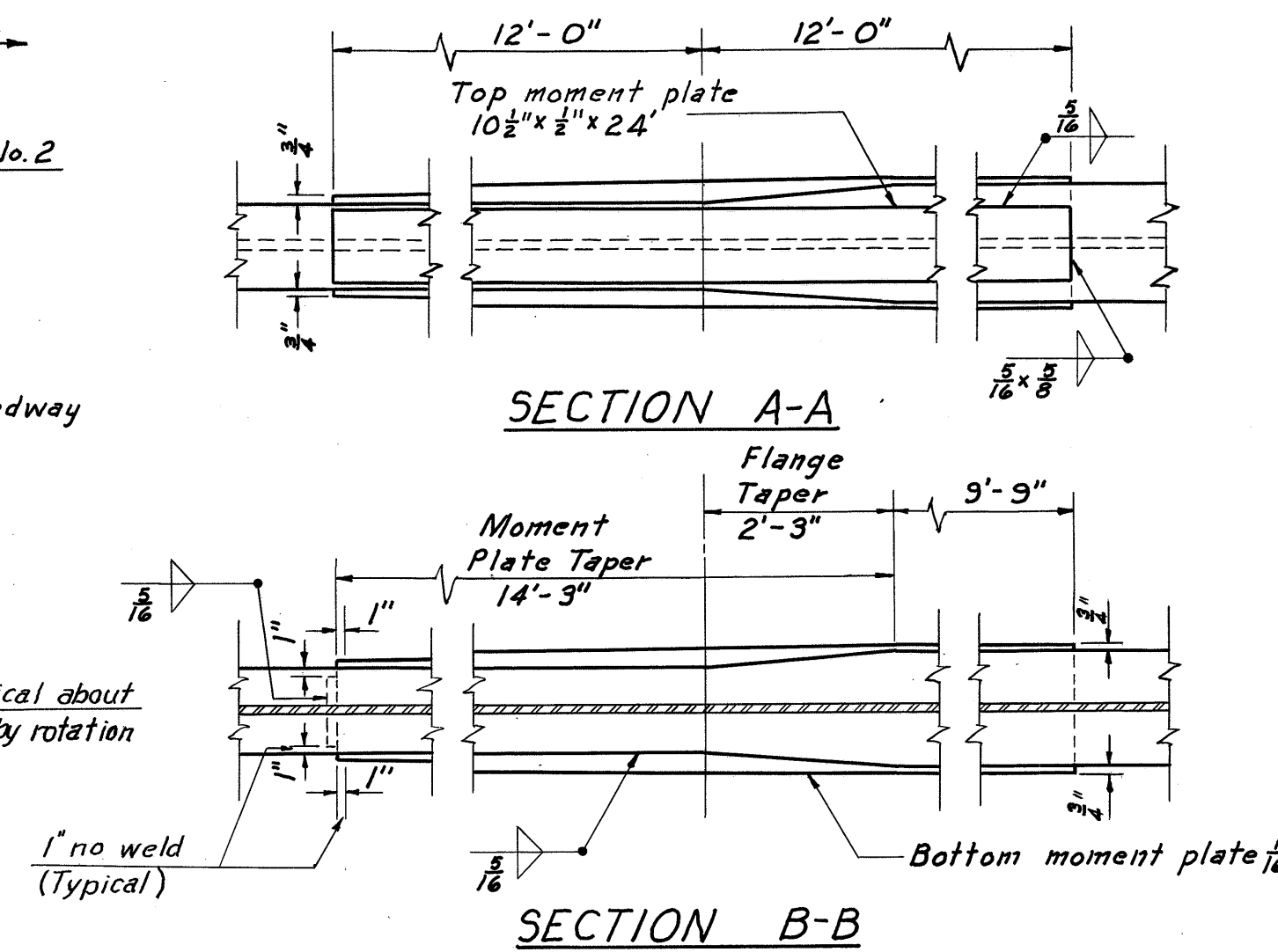
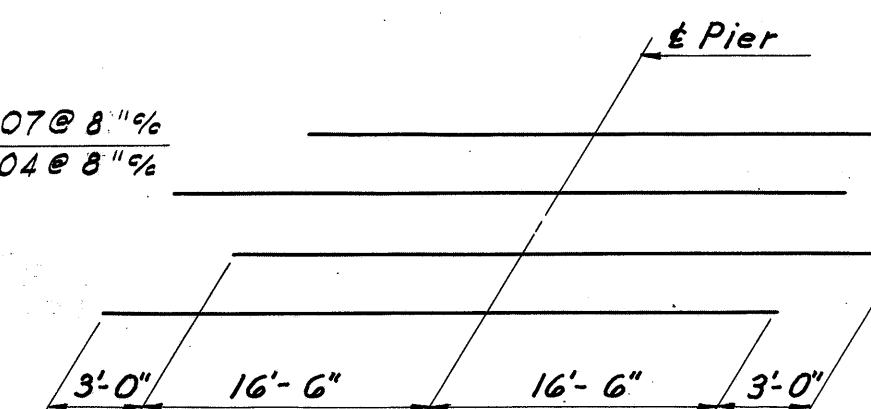


DIAGRAM SHOWING STAGGER OF S 602 OVER PIERS



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

LOCATION	OUTSIDE BEAMS		INSIDE BEAMS	
	SPANS 1 & 4	SPANS 2 & 3	SPANS 1 & 4	SPANS 2 & 3
Deflection due to weight of steel	0"	1/4"	0"	1/4"
Deflection due to remaining dead load	1/4"	1 1/2"	3/8"	1"
Convexity required for vertical curve	5/8"	1 1/4"	3/8"	1 1/4"
Sum of deflection and convexity	3/8"	3 3/8"	1 1/8"	2 1/8"
Required camber	1"	3 3/8"	1"	2 1/8"

Note: Where no camber is specified, beams shall be fabricated with any natural camber or bowed side up.

NOTES

- Refer to Standard Drawing CSB-2-56 Sheet 2 of 6 for details of end finish.
- Refer to Standard Drawing CSB-2-56 Sheet 3 of 6 for gutter, scuppers and curb plate details.
- Refer to Standard Drawing RB-1-55 for details of Rockers and Bolsters.
- Concrete and reinforcing steel above parapet construction joints included with railing for payment.
- Joints in End Finish: A welded butt joint in the end finish, at the center line of roadway, will be required for that portion of the end finish attached to the Superstructure. The portion attached to the backwall shall be placed in segments which shall be closely butted, with one of the joints at the apex of the crown, but shall not be welded.
- Concrete shall be Class "C".

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ROCHESTER, PENNSYLVANIA

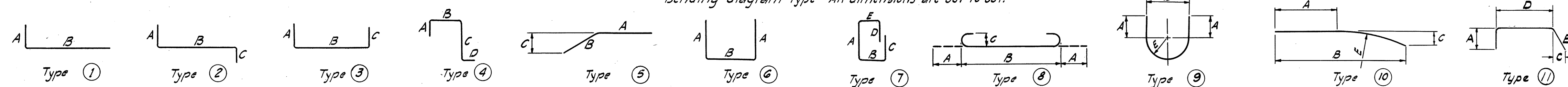
SUPERSTRUCTURE
BRIDGE NO. ASD-1-1113
UNDER PERRY TWP. RD. 47

ASHLAND COUNTY					STA. 403+56.44
Designed	Drawn	Traced	Checked	Reviewed-Date	Revised
GSW	JEH	JEH	D.E.B.	8/19/57	

ASHLAND COUNTY
ASD-1-8.44

REINFORCING STEEL BAR SCHEDULE

Bending diagram type - All dimensions are out to out.



PIERS										
MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P1001	24	10	14'-0"	Str.						1446 Lbs
P1002	18	10	30'-11"	8	1'-5"	28'-1"				2394
P903	18	9	13'-11"	1	2'-7"	11'-6"				852
P904	12	9	12'-7"	1	2'-7"	10'-2"				513
P705	36	7	17'-10"	Str.						1,312
P706	36	7	17'-8"	Str.						1,300
P707	36	7	18'-6"	Str.						1,361
P708	108	7	5'-8"	1	4'-11"	1'-0"				1,269
P709	216	7	10'-4"	8	10"	8'-8"	4 1/2"			4,561
P510	6	5	28'-1"	Str.						176
P511	120	5	6'-10"	6	2'-2"	2'-8"				855
P512	24	5	7'-4"	9	1'-10"	2'-4"			1'-2"	184
P513	6	5	2'-11"	6	8"	1'-9"				18
P514	6	5	3'-4"	6	8"	2'-2"				21
P515	60	5	3'-10"	6	8"	2'-8"				240

ABUTMENTS										
MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A601	56	6	16'-3"	7	6'-6"	1'-5"	5'-0"	2'-11"	1'-1"	1,367 Lbs
A602	8	6	17'-3"	7	6'-6"	1'-5"	6'-6"	1'-11"	1'-5"	207
A603	66	6	10'-10"	1	4'-5"	6'-6"				1073
A504	6	5	12'-6"	Str.						78
A505	18	5	10'-11"	Str.						205
A506	72	5	7'-3"	6	2'-2"	3'-2"				545
A507	36	5	10'-5"	6	4'-9"	1'-2"				394
A508	66	5	3'-4"	Str.						229
A509	48	5	5'-2"	6	1'-0"	3'-5"				259
A510	32	5	34'-8"	Str.						1,157
A511	8	5	37'-1"	Str.						309
A512	66	5	3'-0"	Str.						207
A513	22	5	4'-2"	11	6"	1'-2"	2"	2'-8"		96
A514	22	5	3'-3"	1	6"	2'-10"				75
A515	8	5	4'-0"	11	6"	1'-2"	2"	2'-6"		33
A516	8	5	3'-1"	1	6"	2'-8"				26
A517	24	5	15'-4"	Str.						384
A518	24	5	2'-8" to 4'-0"	11	6"	1'-2"	2"	D: 1'-2" to 2'-6" *		83
A519	24	5	1'-9" to 3'-1"	1	6"	B: 1'-4" to 2'-8" *				60
A520	4	5	1'-10"	11	6"	1'-2"	2"	4"		8
A521	4	5	1'-1"	1	6"	6"				4
A522	4	5	2'-3"	11	6"	1'-2"	2"	9"		9
A523	4	5	1'-3"	1	6"	11"				5
A524	4	5	16'-9"	10	4'-10"	16'-6"	2'-4"	29'-8 3/4"		70
A525	4	5	14'-6"	Str.						60
A526	4	5	11'-0"	Str.						46
A527	8	5	7'-7"	Str.						63
A528	8	5	10'-3"	Str.						86
A529	32	5	10'-4"	Str.						345
A530	8	5	8'-0"	5	4'-6"	3'-7"	1'-4 1/2"			67
A531	8	5	4'-5"	Str.						37
A532	8	5	3'-9"	Str.						31
A533	48	5	8'-8"	Str.						434
A534	32	5	4'-4"	Str.						145
A535	24	5	7'-1"	Str.						177
A536	4	5	14'-8"	10	2'-9"	14'-5"	2'-4"	29'-8 3/4"		61
A537	32	5	3'-6"	Str.						117
A438	60	4	2'-11"	1	5"	2'-7"				117
R439	16	4	13'-10"	Str.						Included with railing
R440	60	4	3'-9"	4	1'-3"	8"	1'-8"	5"		for payment
* 6- each vary by 3"										
Total Weight										8674 Lbs

SUPERSTRUCTURE										
MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S601	459	6	36'-1"	Str.						24,876 Lbs.
S602	66	6	36'-0"	Str.						3,569
S603	437	6	30'-0"	Str.						19,691
S604	42	6	28'-11" to 7'-0"	Str.	each vary by 1'-1 1/2"					1,133
S605	8	6	7'-0"	Str.						84
S506	437	5	30'-0"	Str.						13,674
S507	42	5	28'-11" to 7'-0"	Str.	each vary by 1'-1 1/2"					787
S508	8	5	7'-0"	Str.						58
S509	618	5	4'-4"	4	6"	2'-8"	1'-0"	6"		2,793
S410	618	4	2'-11"	1	2'-7"	5"				1,204
R411	618	4	3'-8"	4	1'-2"	8"	1'-8"	5"		Included
R412	136	4	16'-3"	Str.						with railing
R413	16	4	13'-5"	Str.						for payment
										</

SPIRAL NOTES

The "length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.

The "No. of Turns" shown in the steel list for the spiral bars is the "length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 5-4.

1/2 closed coils shall be provided at ends of each spiral unit.

Four steel channel, tee or angle spacers, weighing approximately 0.68 Lbs. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 Lbs. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTS.	PIERS	GENERAL
E-2	393	Cu. Yd.	Unclassified Excavation		193	200	
5-1	276	Cu. Yd.	Class "C" Concrete, Superstructure	276			
5-1	69	Cu. Yd.	Class "C" Concrete, Pier caps & columns			69	
5-1	100	Cu. Yd.	Class "E" Concrete, Abutments above footing		100		
5-1	139	Cu. Yd.	Class "E" Concrete, Footings		60	79	
5-4	93,783	Lbs	Reinforcing Steel	67,870	8,674	17,239	
5-7	328,400	Lbs	Structural Steel	328,400			
5-8	328,400	Lbs	Field Painting of Structural Steel	328,400			
5-14	676	Lin. Ft.	Railing (Aluminum Rail & Supports, Concrete Parapet)				676
516	Lump	Sum	First Test Pile				Lump
518	1950	Lin. Ft.	12" Cast in place Reinforced Concrete piles		650	1300	
5-29	22	Cu. Yd.	Porous Backfill		22		
5-29	118	Cu. Yd.	Porous Drains on Embankment Slopes				118

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE1001	1	10	7'-2"	Str.	
RE902	1	9	6'-10"	Str.	
RE703	1	7	6'-3"	Str.	
RE604	3	6	5'-11"	Str.	
RE505	2	5	5'-7"	Str.	
RE406	1	4	5'-3"	Str.	

REPLACEMENT BARS:

If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test sample as provided in section 5-4.02 need not be furnished and replacement bars will not be required.

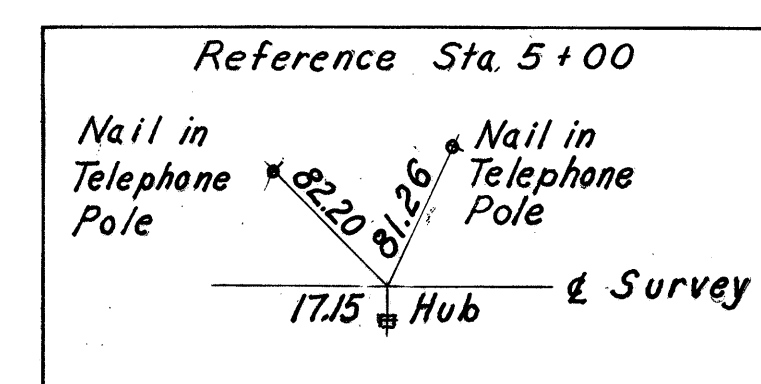
BAR SIZE:

Bar size is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A401 is a no. 4 size bar and A1014 is a no. 10 size bar.

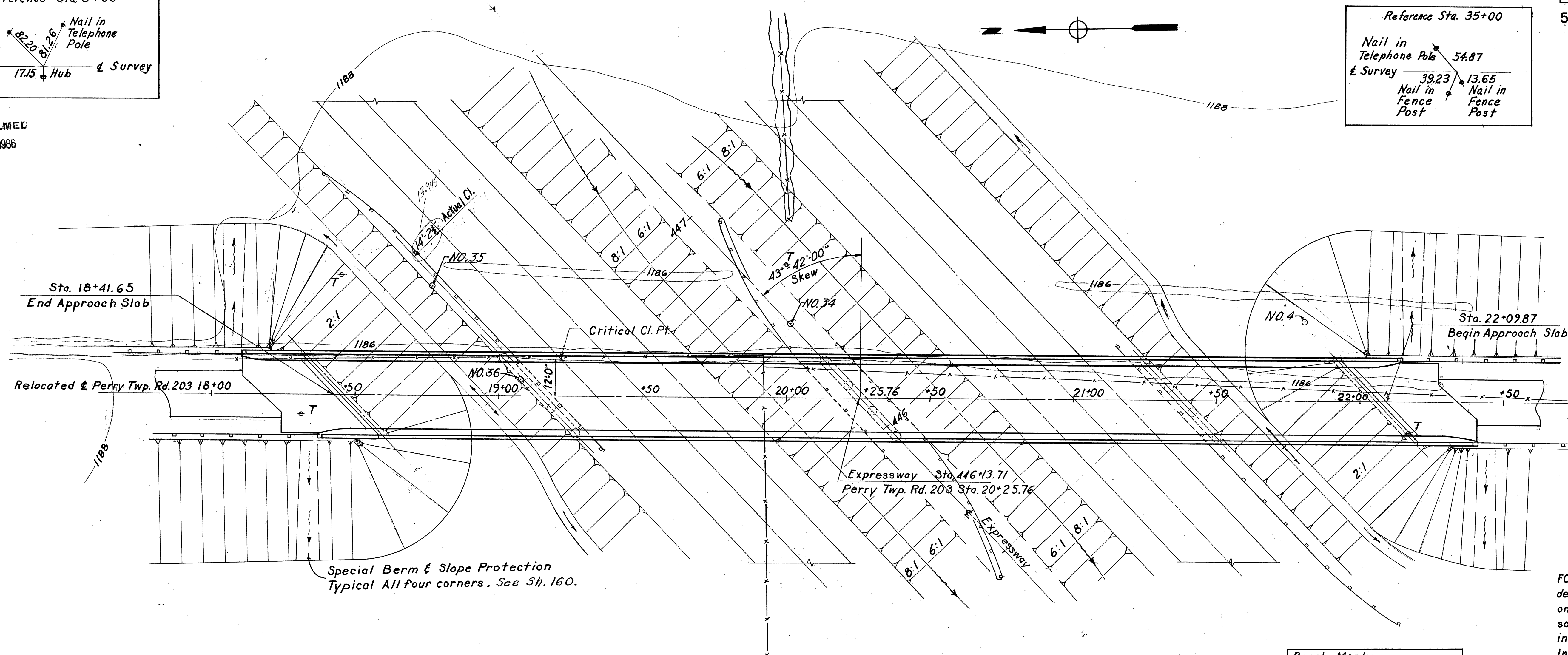
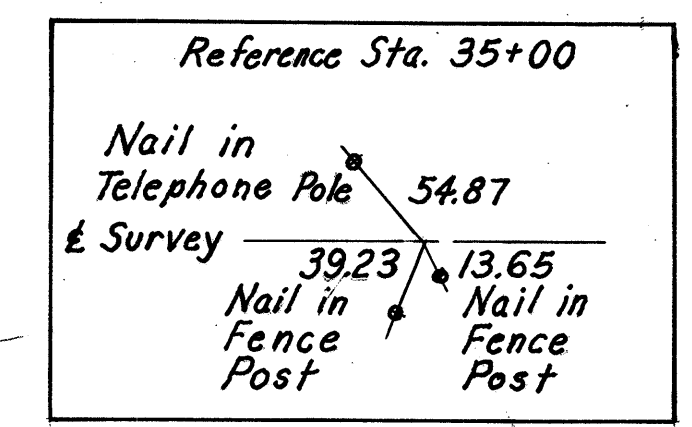
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIAREINFORCING STEEL LIST
& ESTIMATED QUANTITIES
BRIDGE NO. ASD-1-1113
UNDER PERRY TWP. RD. 47

ASHLAND COUNTY				STA. 403+56.44	
Designed	Drawn	Traced	Checked	Reviewed-Date	Revised
G.S.W.	E.F.T.	E.F.T.	D.E.B.	1/8/84 8/19/57	

5.75 MI. ± EAST OF ASHLAND
ASHLAND COUNTY
ASD-I-8.44



MICROFILMED
DEC 29 1986

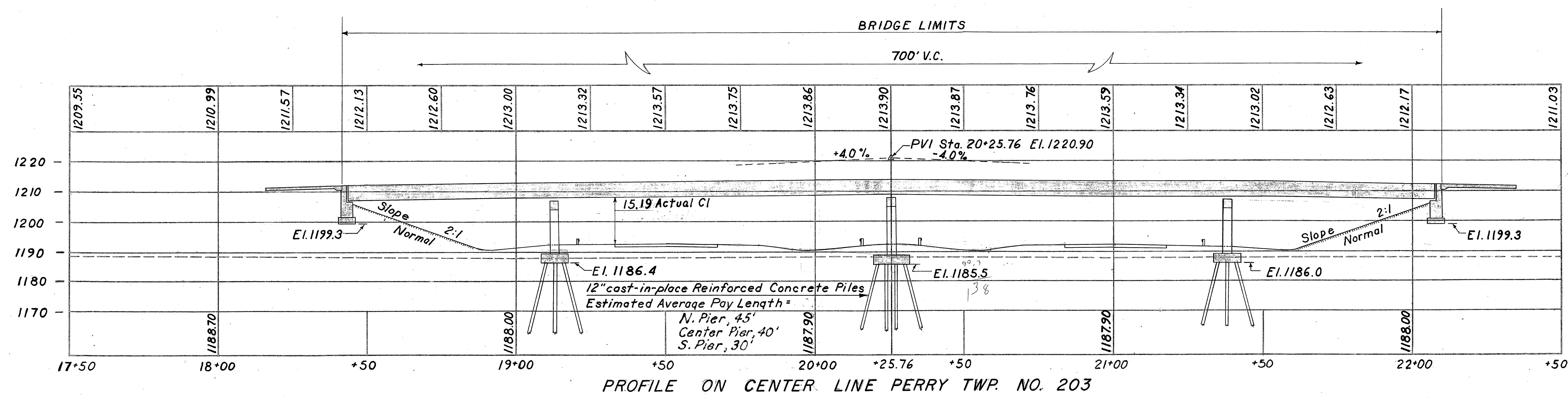


Bench Mark:
Log bolt in root of 40' Maple,
250' Lt. Sta. 444+66
Elevation 1187.37

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

Perry Twp. Rd. 203 A.D.T. 120 (1975)

Preliminary Design
6-12-57 Y.G.



PROPOSED STRUCTURE

TYPE: Continuous steel girders with reinforced concrete deck and substructure.

SPANS: 68.0'-113.0'-113.0'-68.0' c.c. Brgs.

ROADWAY: 24'-0" 2'-0" Safety curbs

LOAD FREQ: C.F. = 30 (51)

SKIEW: 43°42'00" R.F.

WEARING SURFACE: 1/2" Mono. Concrete

APPROACH SLAB: Special Design (25' long)

ALIGNMENT: Tangent

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ROCHESTER, PENNSYLVANIA

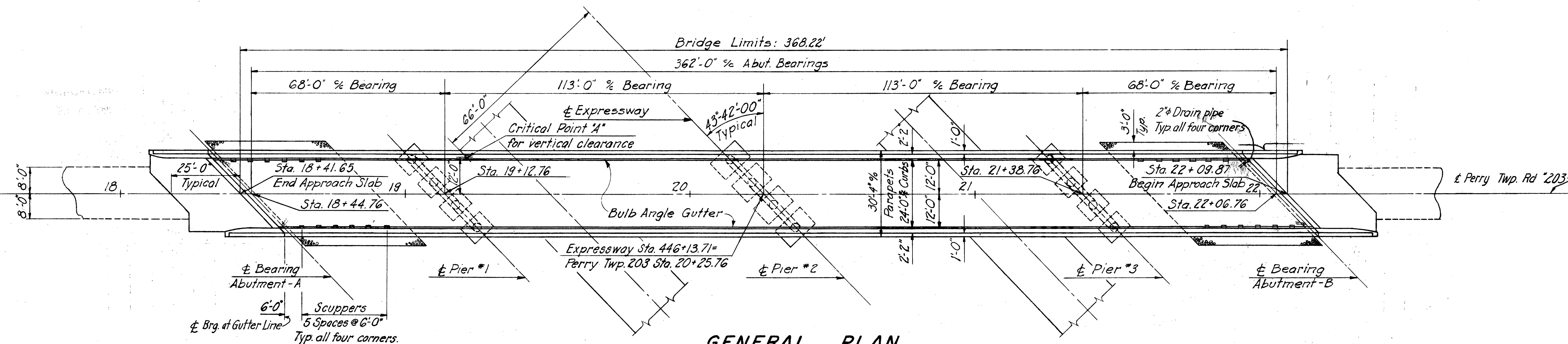
SITE PLAN

BRIDGE No. ASD-I-1191
UNDER PERRY TWP. RD. 203

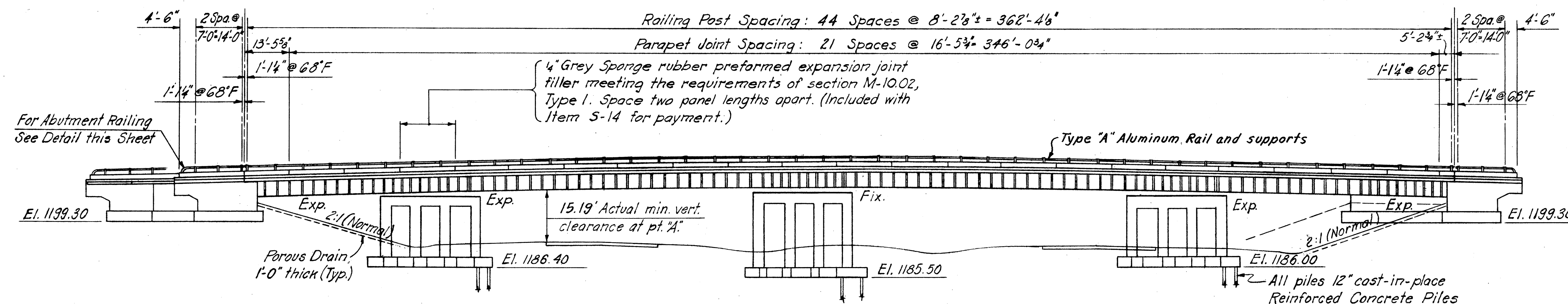
ASHLAND CO. STA. 446+13.71

PRESENT	TOPOGRAPHY	PROPOSED	WORK
Surveyed	Drawn	Designed	Drawn
			Checked
			L.D.M.
			J.F.G.
			Reviewed
			BOL

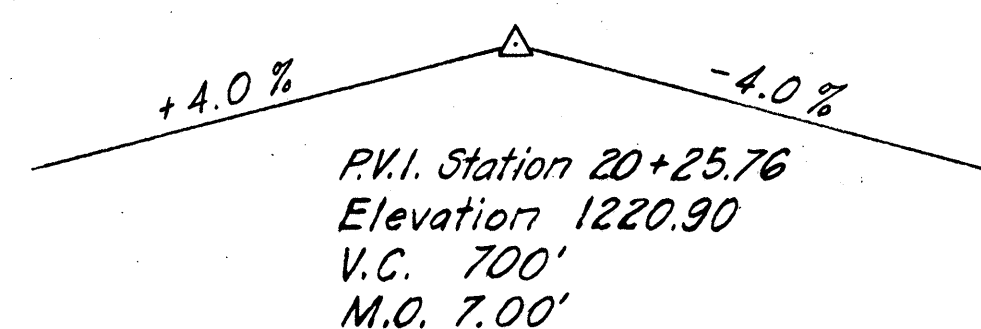
ASHLAND COUNTY
ASD. -1-8.44



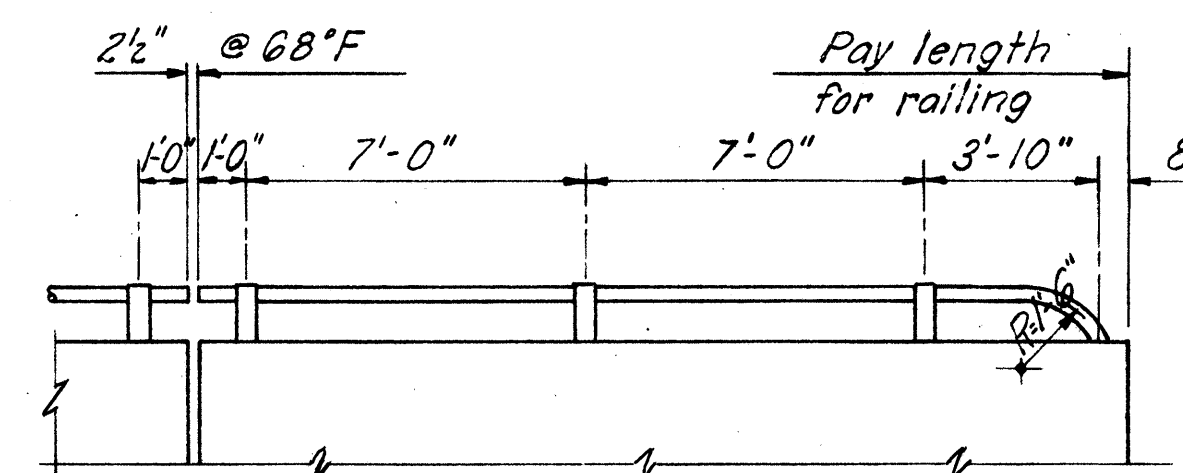
GENERAL PLAN



ELEVATION



CURVE DATA



ABUTMENT RAILING DETAIL

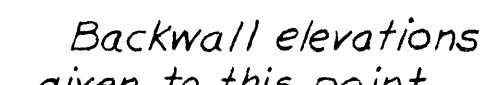
- *Design Specifications*: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways dated 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54 and 2-1-55.
- *Loading*: $C.F. = 30(51)$.
- *Reference* shall be made to *Standard Drawings CSB-2-56, Sheets 2 & 3 of 6, dated 12-3-56, RB-1-55 dated 3-1-53, AR-1-57 dated 4-9-57, and to Supplemental Specifications 3-114 revised 8-1-57.*
- *Porous drain material* as shown on *General Plan*, shall be provided at each end of bridge. The material shall be placed one foot thick.
- *Welding of Structural Steel* shall be Class "A". Any welds shown as field welds may, at the option of the contractor, be made in the shop.
- *Piles* shall be driven to a minimum bearing capacity of 40 tons for the piers.
- *Excavation Quantity* includes the removal of fill material between surface of proposed embankment and bottom of abutment. *abutments shall be made with material meeting*
- *Embankments* to be placed to subgrade elevation for a distance of approximately 200 feet beyond the bridge limits as early as practical in the construction procedure and before work is begun on Abutments or Piers 1 and 3. Abutments should be placed as late as practical, with a minimum time lapse of 30 days between completion of the embankment and starting of work on the abutments.

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL PLAN & ELEVATION
BRIDGE NO. ASD - 1 - 1191
UNDER PERRY TWP. 203

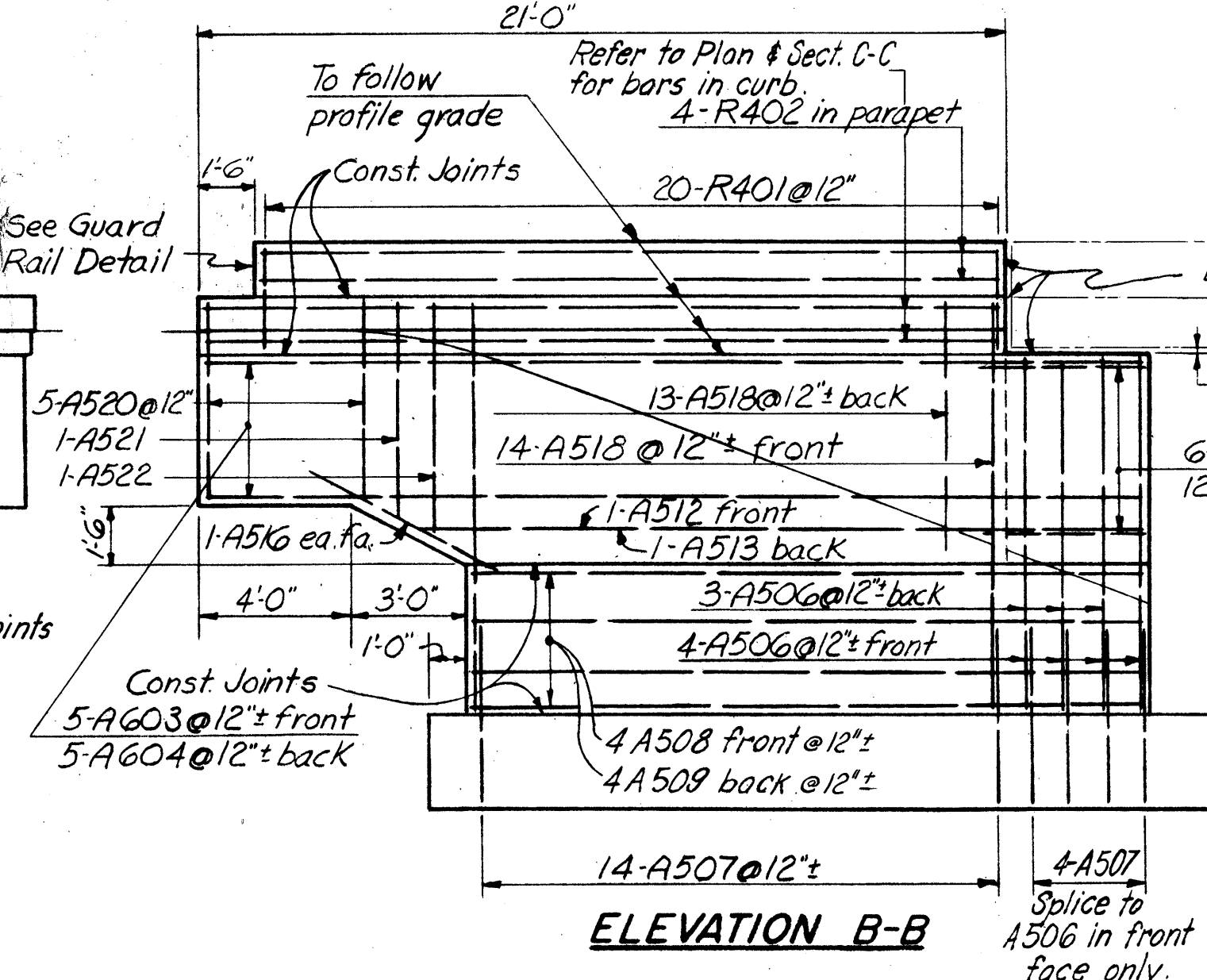
ASHLAND COUNTY	STA. 446+13.71
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Designed	Drawn	Traced	Checked	Reviewed-Date	Revised
H.M.C.	E.J.E.	E.J.E.	W.T.H.	B.O.L. 7.23.57	



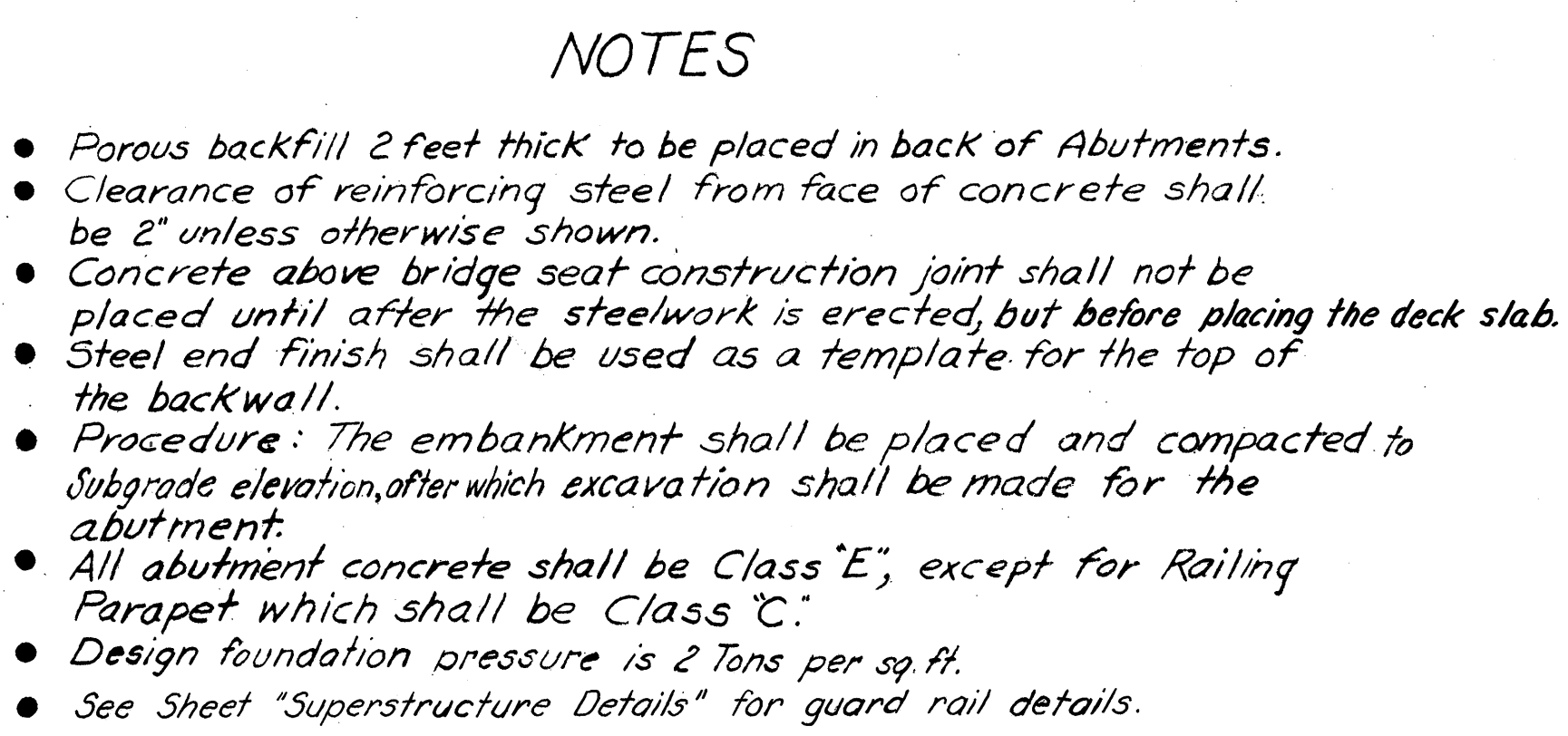
SECTION A-A

SECTION C-C



ELEVATION B-B

ELEVATION D-D



NOTES

- Porous backfill 2 feet thick to be placed in back of Abutments.
- Clearance of reinforcing steel from face of concrete shall be 2" unless otherwise shown.
- Concrete above bridge seat construction joint shall not be placed until after the steelwork is erected, but before placing the deck slab.
- Steel end finish shall be used as a template for the top of the backwall.
- Procedure: The embankment shall be placed and compacted to Subgrade elevation, after which excavation shall be made for the abutment.
- All abutment concrete shall be Class "E", except for Railing Parapet which shall be Class "C".
- Design foundation pressure is 2 Tons per sq. ft.
- See Sheet "Superstructure Details" for guard rail details.

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ABUTMENT DETAILS
BRIDGE NO. ASD - 1 - 1191
UNDER PERRY TWP. 203

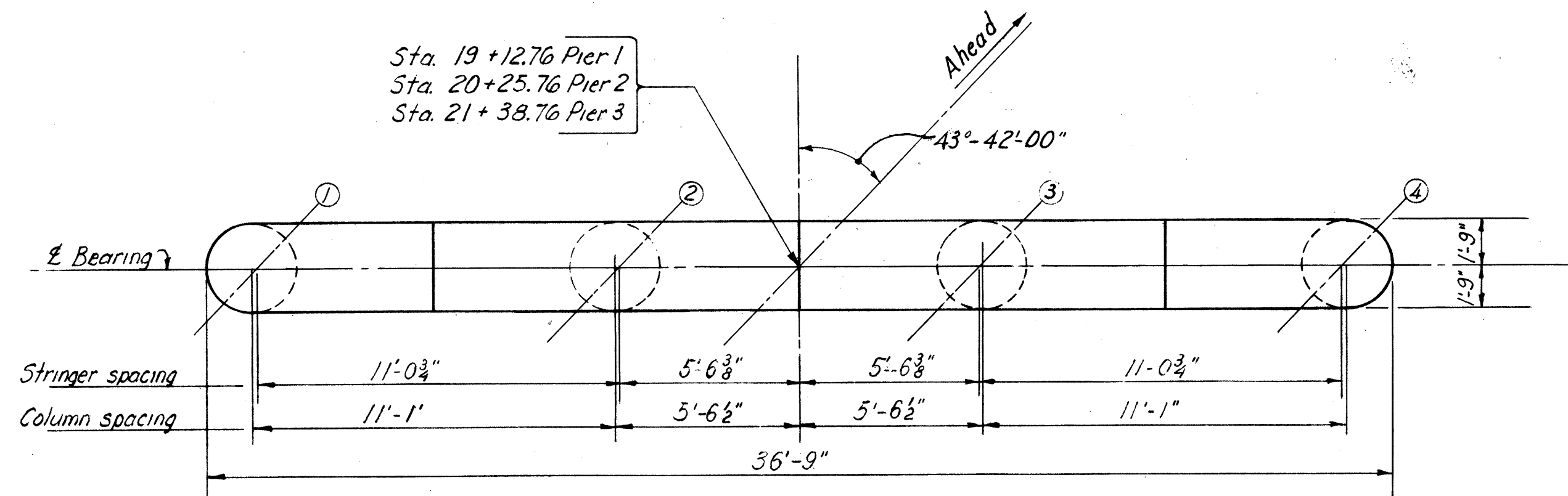
ASHLAND COUNTY STA. 446+13.71

Designed	Drawn	Traced	Checked	Reviewed-Date	Revised
RBS	Rur	Rur	HMC	B.O.L. 7.23.57	

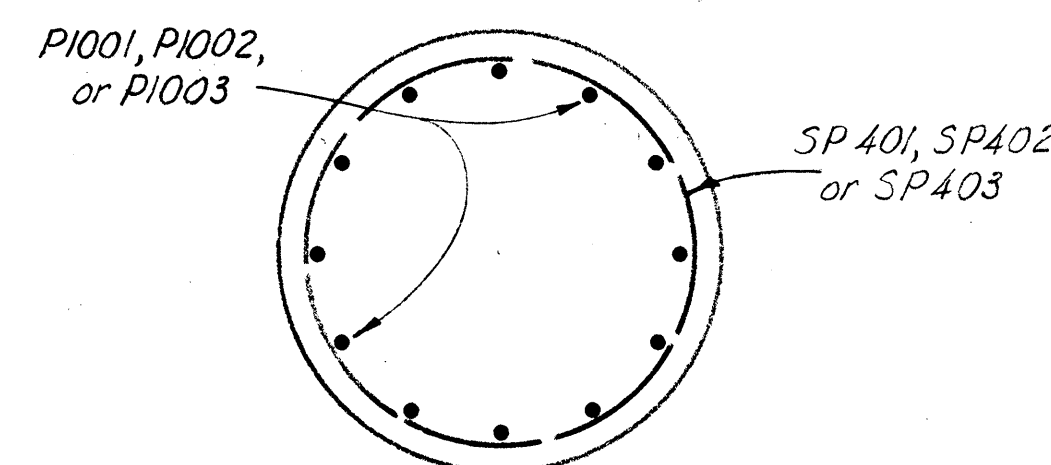
ASHLAND COUNTY
ASD - I-8.44

NOTES

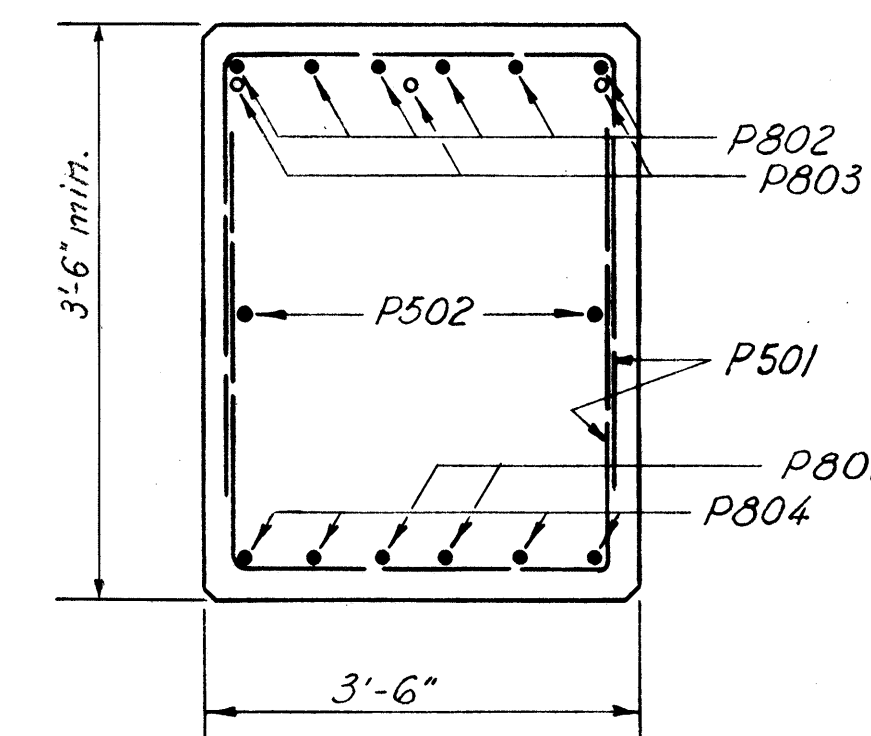
- Clearance of Reinforcing Steel from face of concrete shall be 2" unless otherwise shown.
- Special care shall be taken in placing reinforcing steel in the bridge seat so that it will not interfere with the drilling of anchor bolt holes.



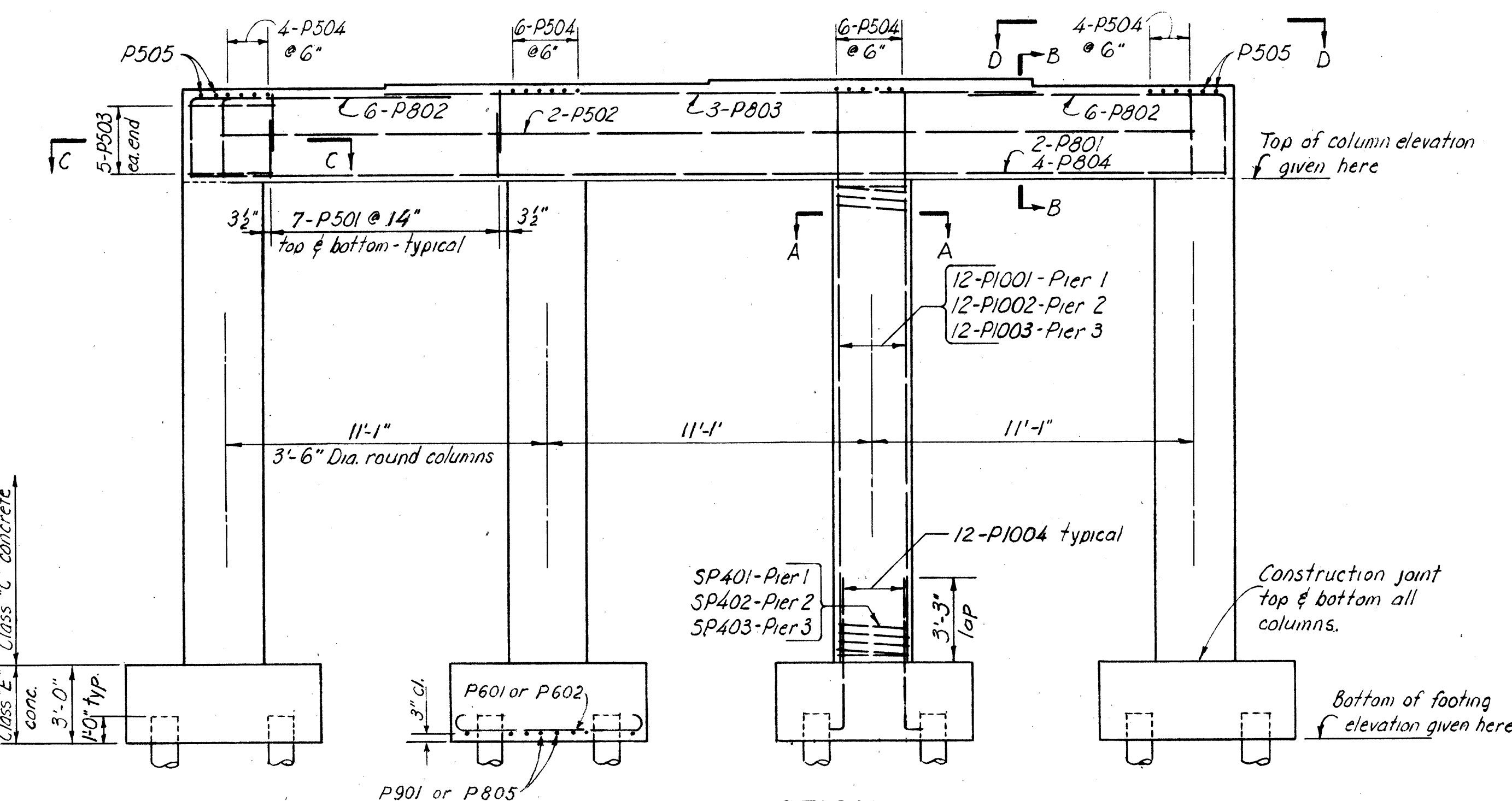
PIER CAP PLAN



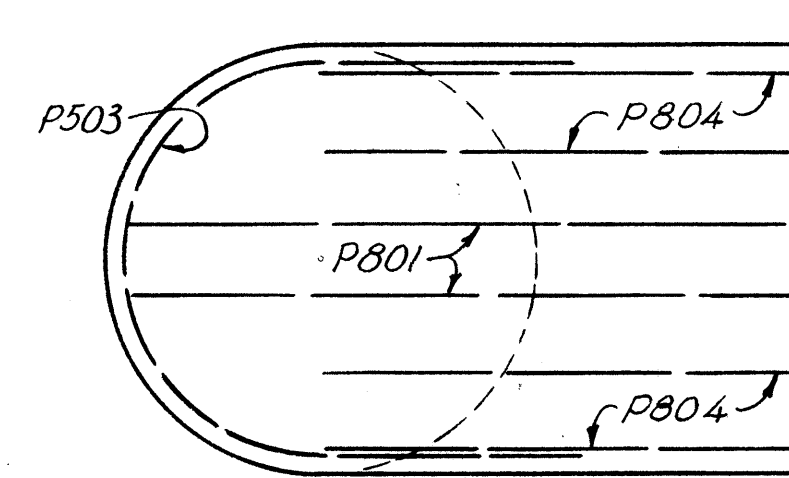
SECTION A-A



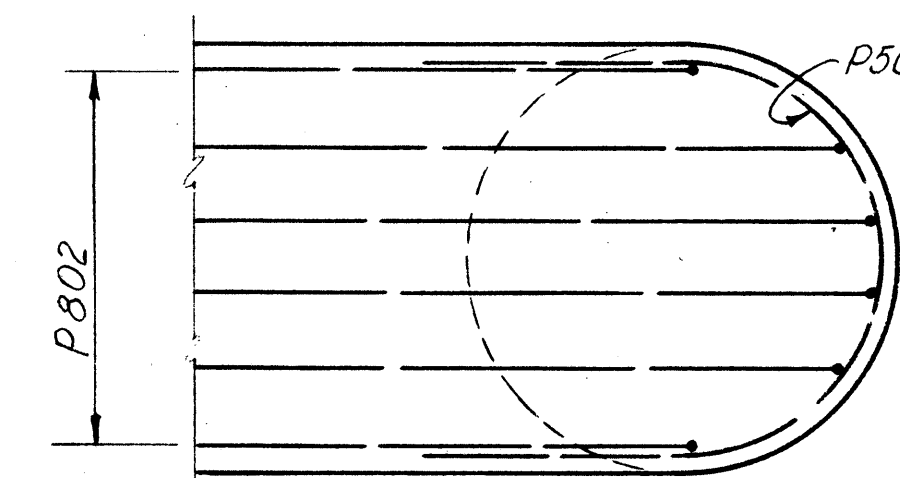
SECTION B-B



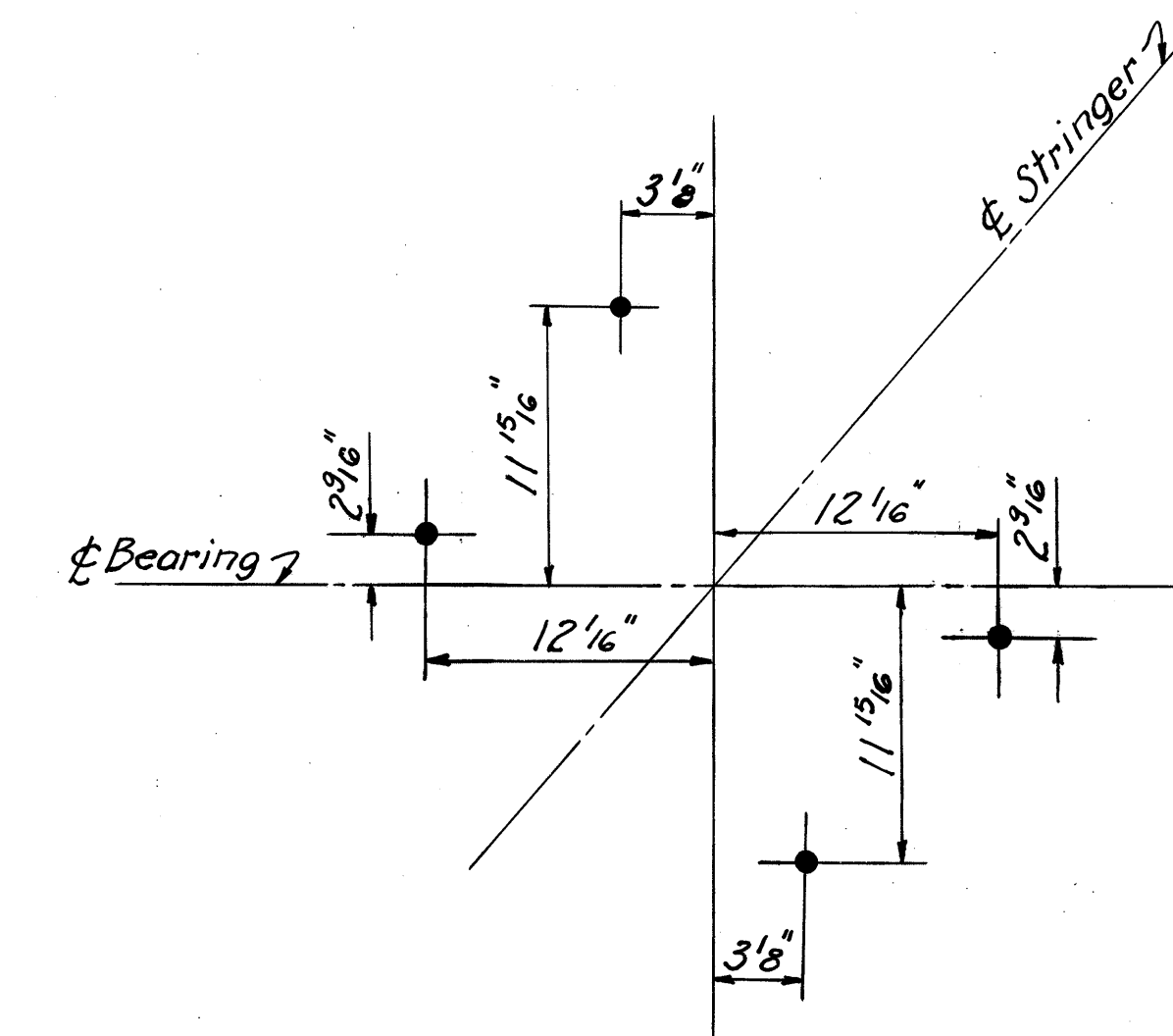
PIER ELEVATION



SECTION C-C



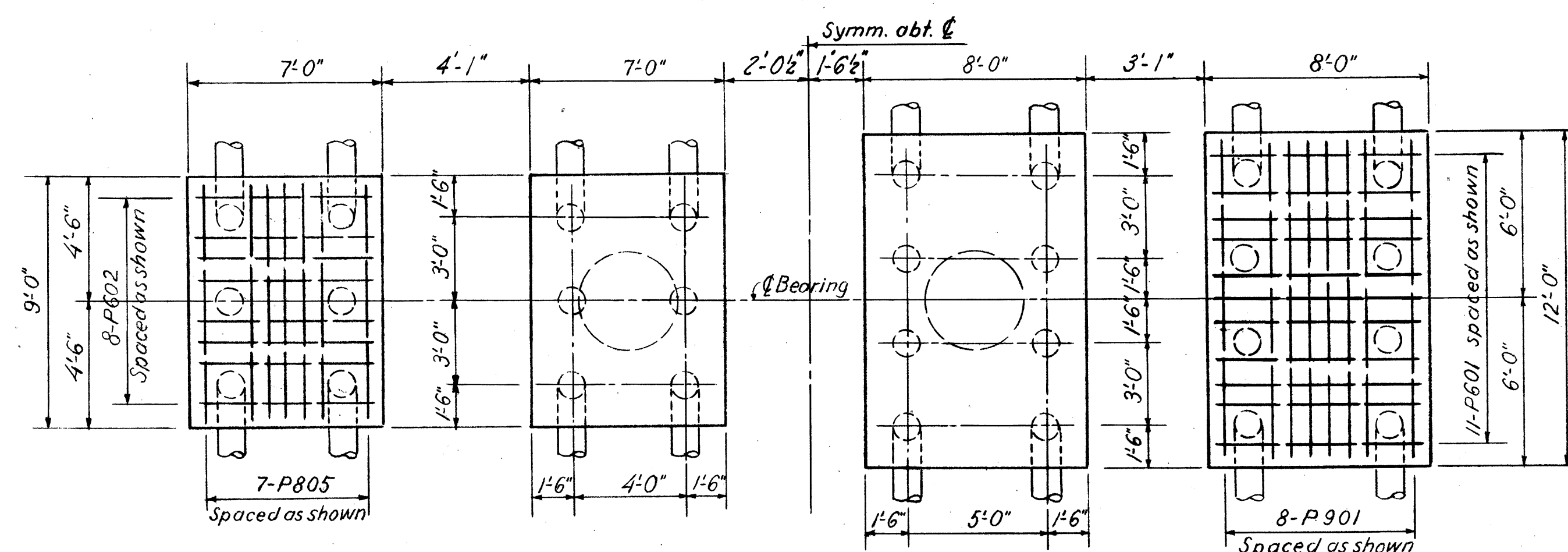
SECTION D-D



**ANCHOR BOLT LAYOUT
PIER 2**

TABLE OF ELEVATIONS

	BEARING AREAS				TOP OF COLUMN	BOTT. OF FOOTING
	1	2	3	4		
Pier 1	1206.18	1206.41	1206.51	1206.48	1202.68	1186.40
Pier 2	1206.95	1207.13	1207.13	1206.95	1203.45	1185.50
Pier 3	1206.48	1206.51	1206.41	1206.18	1202.68	1186.00



PIERS 1 & 3

PIER 2

FOOTING PLAN

All piles to be 12" x cast-in-place concrete piles driven to a safe bearing load of 40 Tons. Batter piles 3" in 12" as shown on Footing Plan.

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PIERS
BRIDGE NO. ASD - I-1191
UNDER PERRY TWP. 203

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Designed	Drawn	Traced	Checked	Reviewed-Date	Revised
JFG	Rcw	Rcw	C.K.M.	Bo.L. 7.23.57	

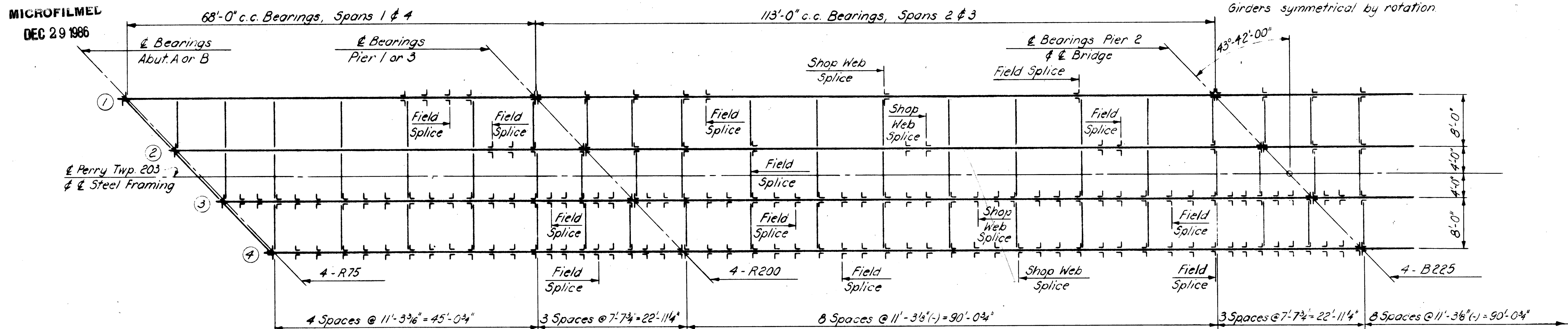
MICROFILMED
DEC 29 1986

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	I-1105 (17)	226A 247

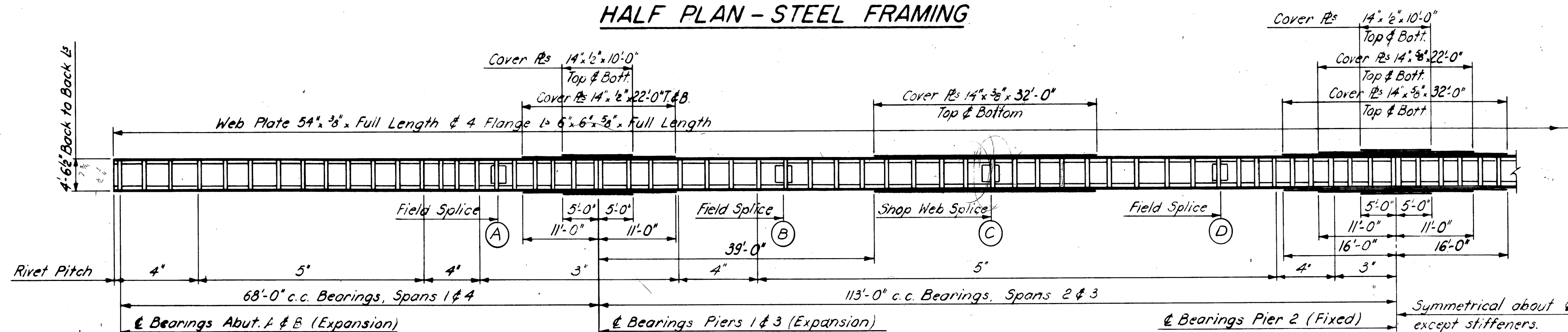
ASHLAND COUNTY
ASD - I - 8.44

NOTES:

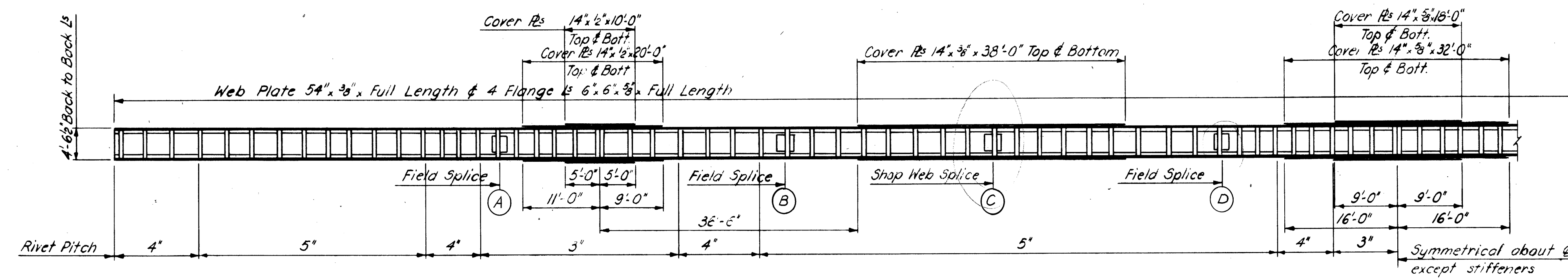
- Abutments and Piers 1 & 3 Bearing Stiffeners are $1\frac{1}{2} \times 3\frac{1}{2} \times \frac{3}{8}$ on Fill Plates.
- Pier 2 Bearing Stiffeners are $1\frac{1}{2} \times 3\frac{1}{2} \times \frac{3}{8}$ on Fill Plates.
- All intermediate stiffeners are $1\frac{1}{2} \times 3\frac{1}{2} \times \frac{3}{8}$ crimped, except at splice points.
- All dimensions shown are horizontal.
- All rivets $\frac{7}{8}"$.
- All intermediate crossframes are $1\frac{1}{2} \times 3\frac{1}{2} \times \frac{3}{8}$.
- All end crossframes are $1\frac{1}{2} \times 4 \times \frac{3}{8}$.
- All Stiffeners shall be normal to Girder.



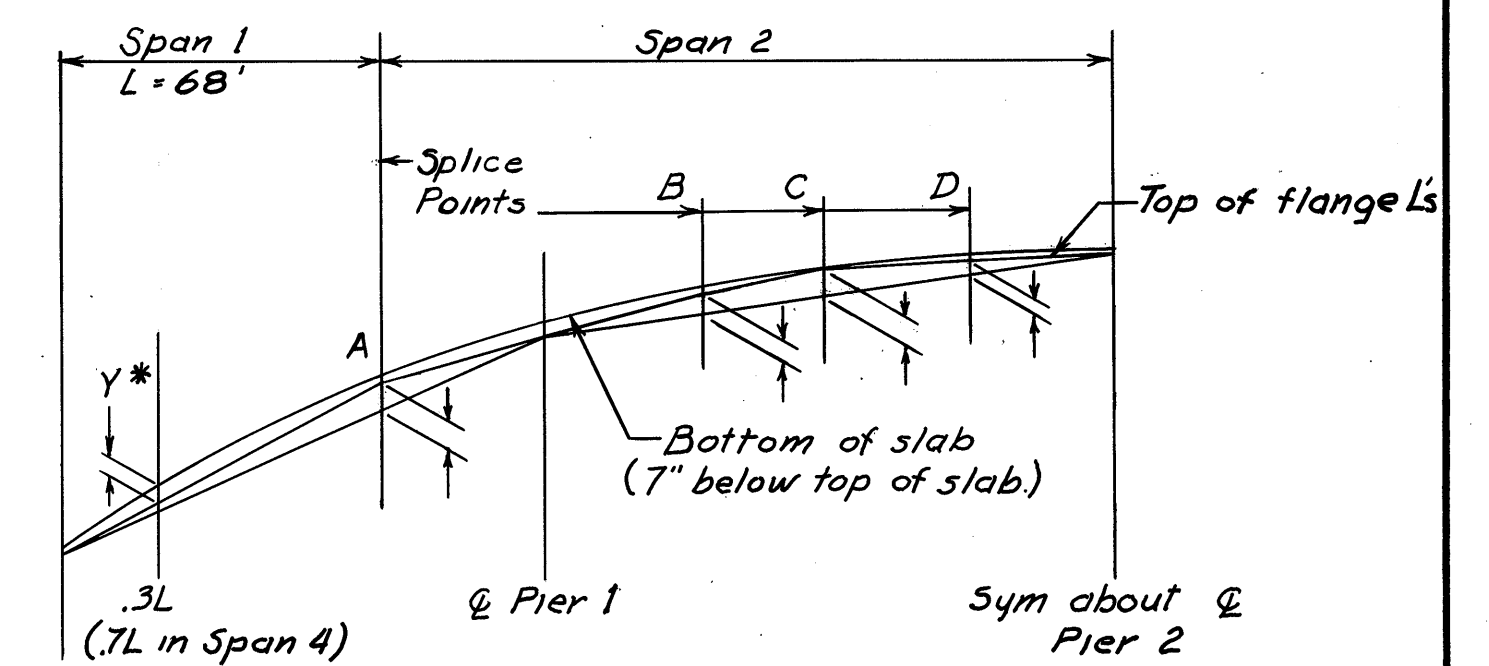
HALF PLAN - STEEL FRAMING



HALF ELEVATION - CURB GIRDERS



HALF ELEVATION - INTERIOR GIRDERS



DEFLECTION AND CAMBER	CURB GIRDER				INTERIOR GIRDER			
	3L	A	B	C	3L	A	B	C
Deflection due to weight of steel	0"	0	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{16}$	0	$\frac{1}{8}$	$\frac{1}{4}$
Deflection due to remaining dead load	$\frac{3}{16}$	$\frac{1}{8}$	$\frac{13}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{5}{8}$
Convexity required for vertical curve	$\frac{1}{8}$	$\frac{11}{16}$	$\frac{13}{16}$	$\frac{2}{16}$	$\frac{2}{16}$	$\frac{1}{8}$	$\frac{13}{16}$	$\frac{2}{16}$
Sum of Deflection of Convexity	$\frac{1}{16}$	$\frac{9}{16}$	$\frac{3}{4}$	$\frac{9}{16}$	$\frac{2}{16}$	$\frac{5}{8}$	$\frac{2}{16}$	$\frac{3}{8}$
Required Camber	$\frac{9}{16}$	$\frac{3}{4}$	$\frac{9}{16}$	$\frac{2}{16}$	$\frac{5}{8}$	$\frac{2}{16}$	$\frac{3}{16}$	$\frac{2}{16}$

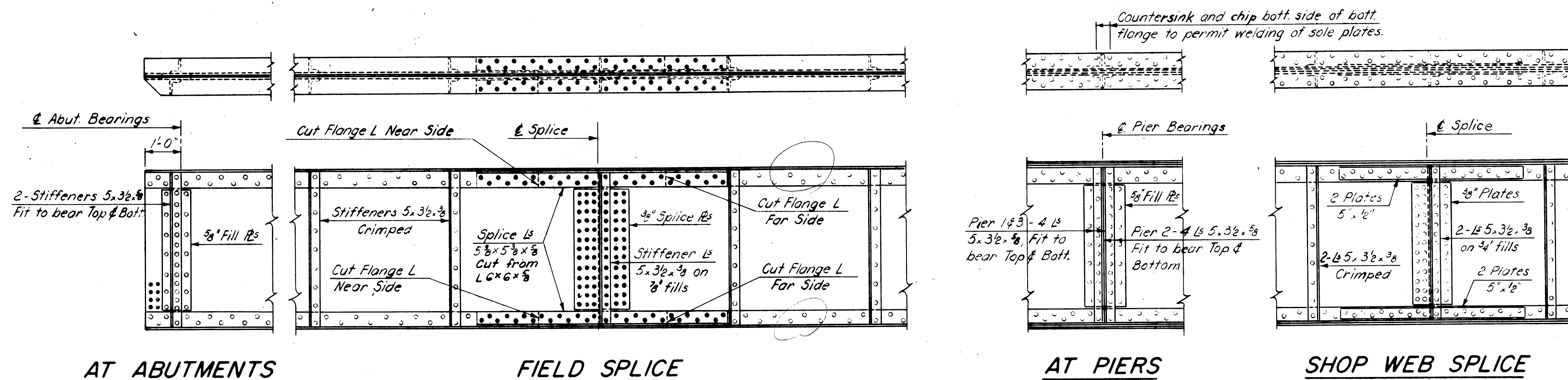
Note: Girders to be cambered at splice points to compensate for D.L. deflections and vertical curvature.

This sheet is to be used for construction and replaces Sheet No. 226 of the original plans.
11-13-57

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE
BRIDGE NO. ASD - I - 1191
UNDER PERRY TWP. 203

ASHLAND COUNTY				STA. 446+13.71		
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
H.M.C.	J.R.S.	J.R.S.	J.F.G.	B.S.L.	1.2.57	11-13-57

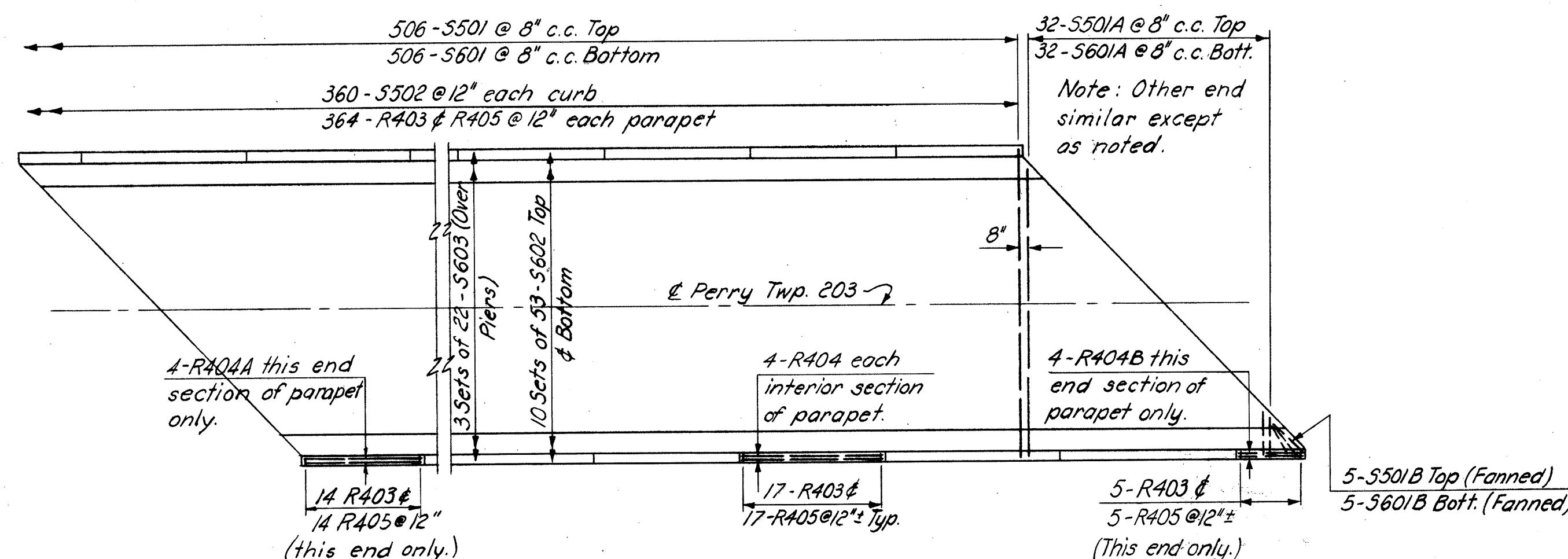


MICROFILMED
DEC 29 1986

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	I-1105(17)	

ASHLAND COUNTY
ASD.-I-8.44

227
247



PART PLAN OF DECK

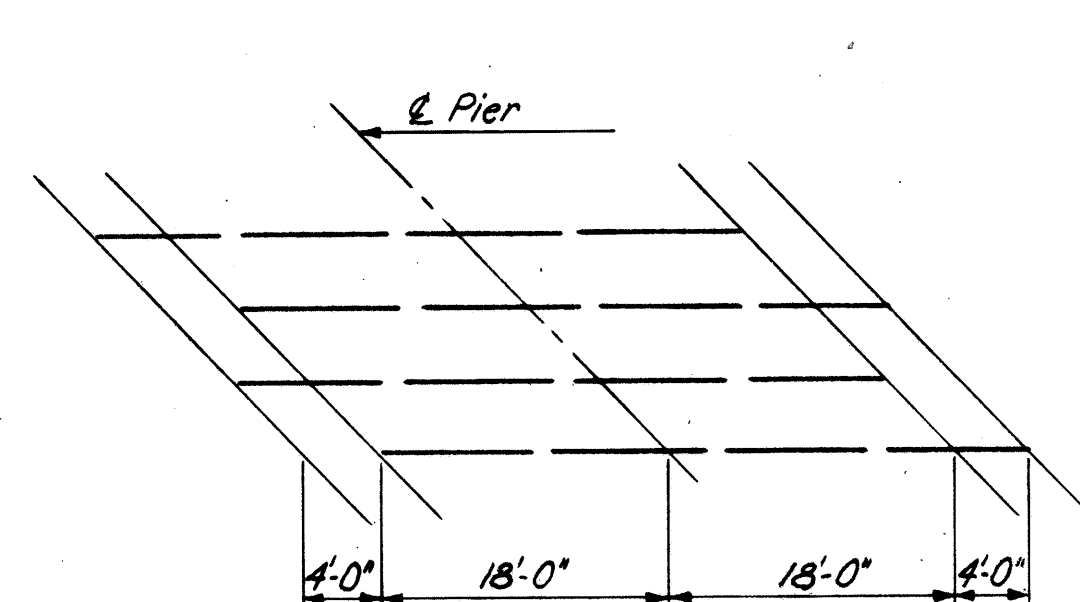
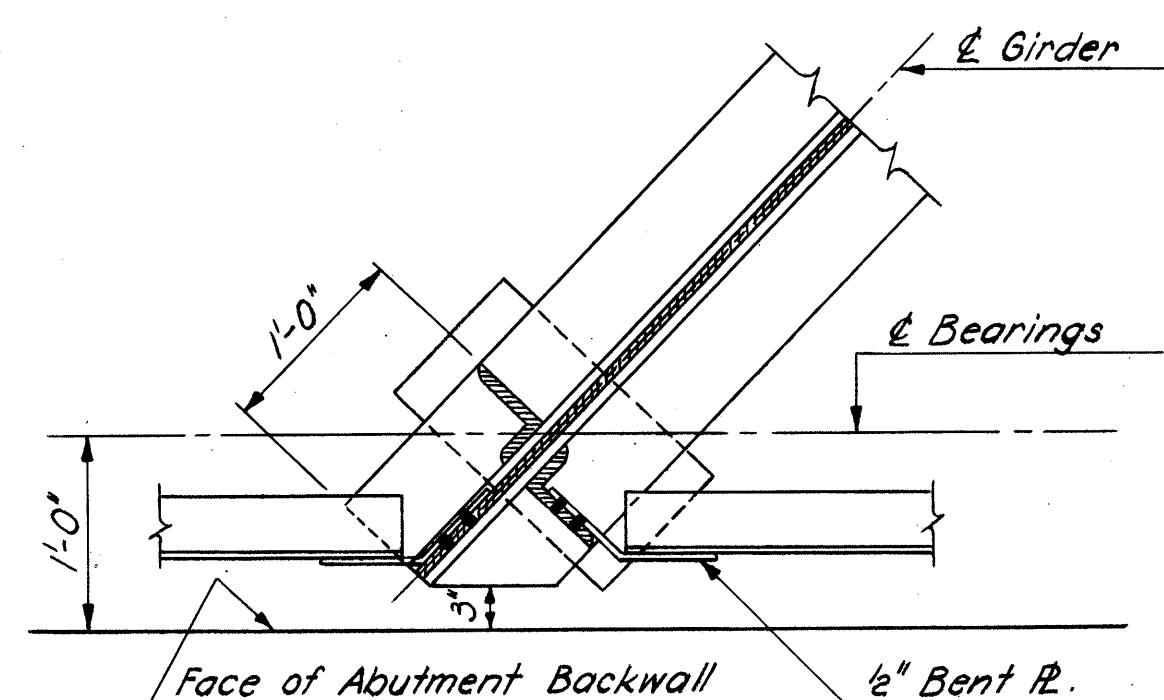
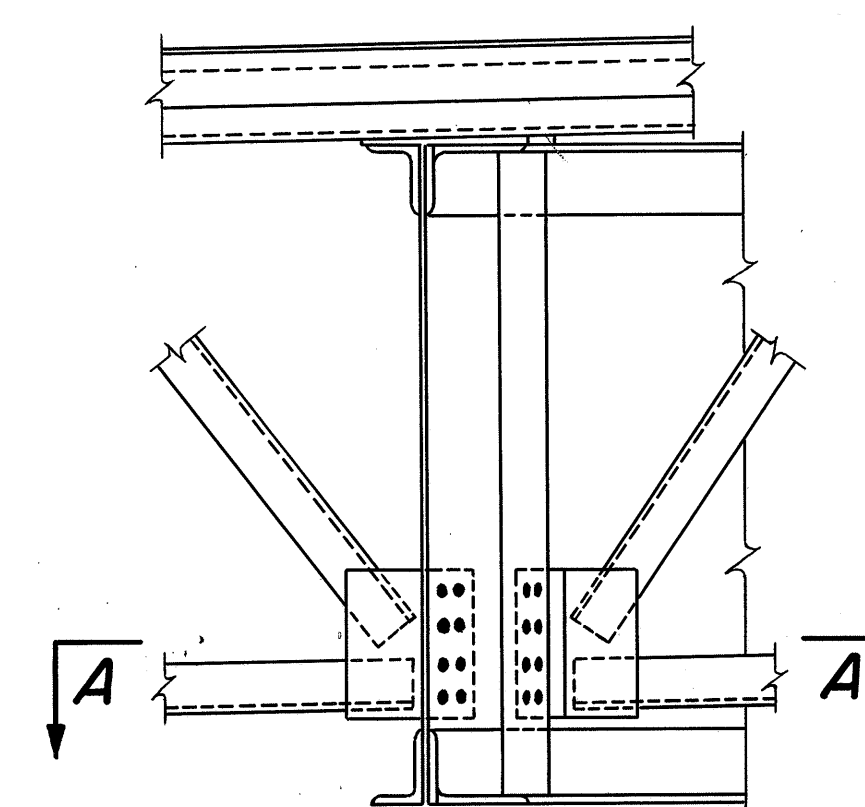


DIAGRAM SHOWING
STAGGER OF S603 BARS



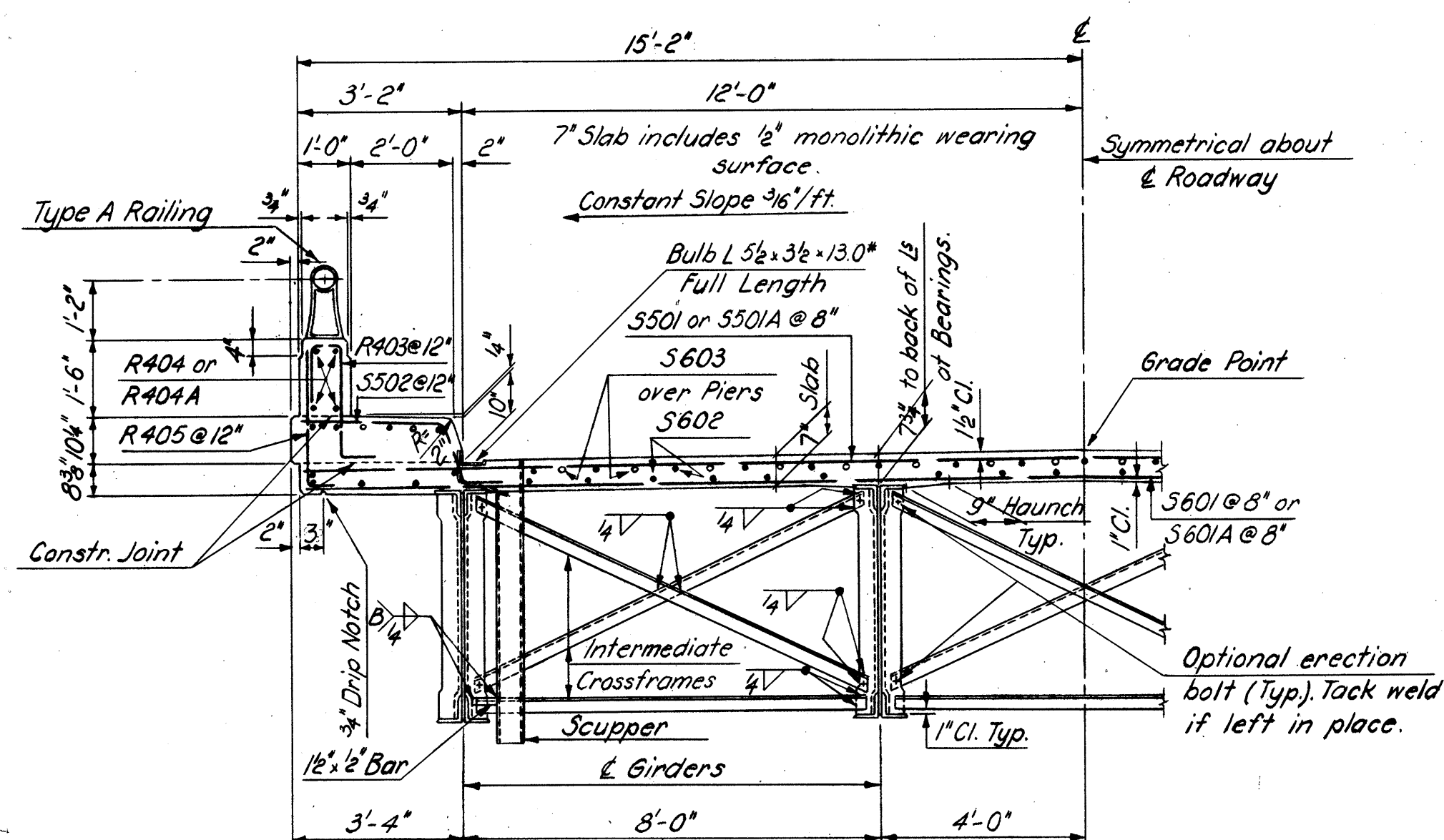
SECTION A-A



PART ELEVATION OF END FINISH

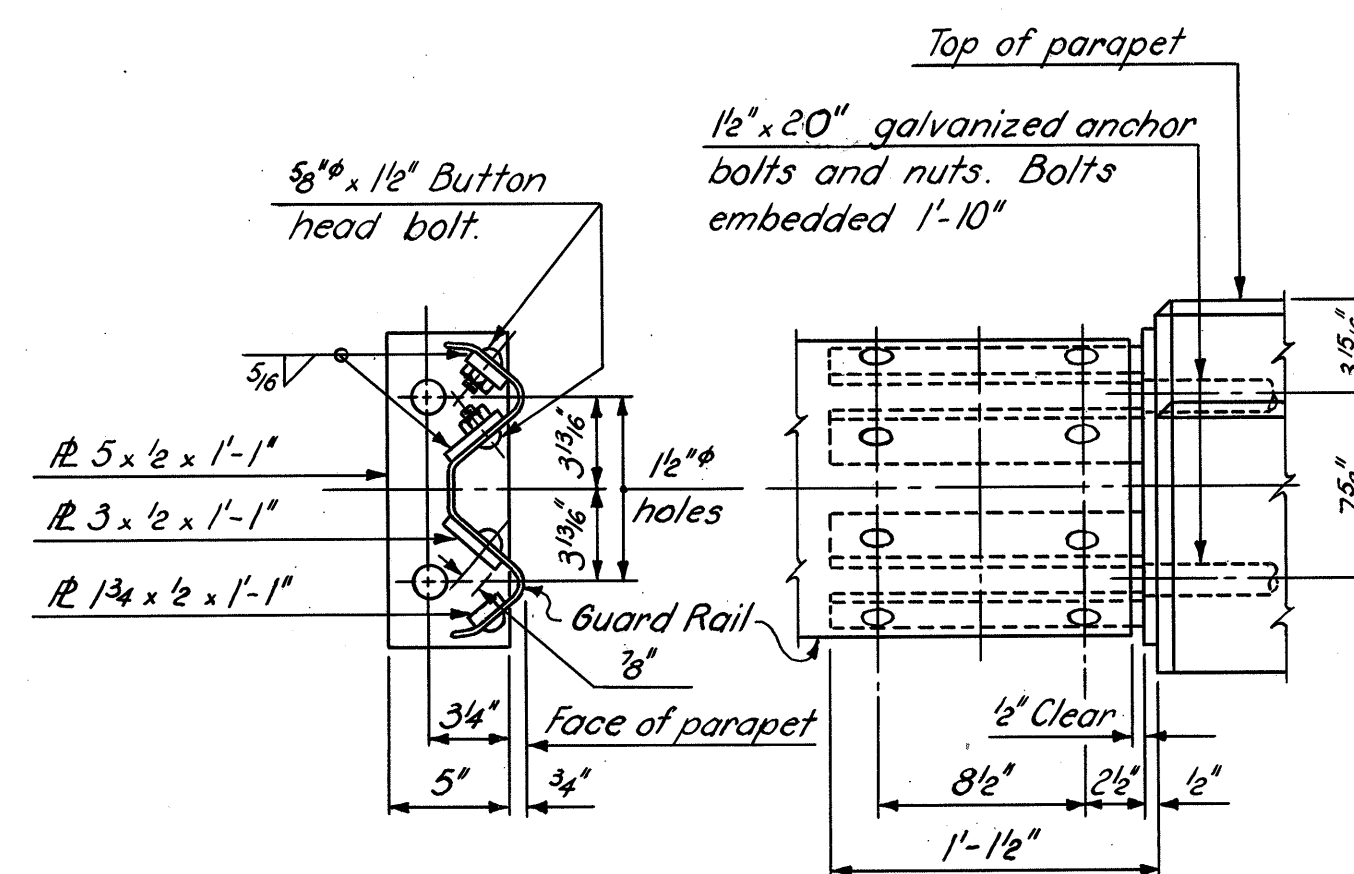
NOTES

- Refer to standard drawing CSB-2-56, sheets 2 & 3 of 6, dated 12-3-56, for details of End Finish, Gutters, Scuppers, Curb & Pipe Drains, and end cross frames.
- Refer to standard drawing RB-1-55 for details of Rockers and Bolsters.
- Refer to standard drawing AR-1-57 for Aluminum Railing (Type A) and Concrete Parapet details.
- Concrete and reinforcing steel above parapet construction joints included with railing for payment.
- Concrete shall be Class "C".
- See General Plan for spacing of scuppers and railing.
- 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 normal to the centerline of bridge and are located near the center of any span.



TYPICAL HALF SECTION

NOTE: Guard Rail end connection assembly shall be galvanized after welding.



GUARD RAIL DETAIL

Guard rail end connection to be included in cost of Bridge Railing.

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE DETAILS
BRIDGE NO. ASD - I - 1191
UNDER PERRY TWP. 203

ASHLAND COUNTY STA. 446+13.71

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
W.T.H.	J.R.S.	J.R.S.	H.M.C.	B.O.L.	7.23.57	

ASHLAND COUNTY
ASD - I - 8.44

REINFORCING STEEL BAR SCHEDULE														
Bending diagram types - All dimensions are out to out														
PIERS														
MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT				
P501	126	5	7'-10"	6	2'-4"	3'-2"				1029 #				
P502	6	5	33'-3"	Str.						208				
P503	30	5	8'-8"	9	1'-10"	3'-2"	5'-0"		1'-7"	271				
P504	60	5	6'-2"	6	1'-6"	3'-2"				385				
P505	12	5	2'-6"	Str.						31				
P601	44	6	8'-10"	8	8"	7'-6"	6"	8"		584				
P602	64	6	7'-10"	8	8"	6'-6"	6"	8"		753				
P801	6	8	36'-3"	Str.						581				
P802	36	8	12'-11"	1	3'-3"	9'-8"				1242				
P803	9	8	22'-0"	Str.						529				
P804	12	8	33'-3"	Str.						1065				
P805	56	8	10'-8"	8	1'-1"	8'-6"	10"	1'-1"		1595				
P901	32	9	14'-0"	8	1'-3"	11'-6"	11'-4"	1'-3"		1523				
P1001	48	10	16'-6"	Str.						3408				
P1002	48	10	18'-2"	Str.						3753				
P1003	48	10	16'-11"	Str.						3494				
P1004	144	10	7'-0"	1	1'-0"	6'-0"				4337				
SPIRAL BARS														
MARK	TOTAL	SIZE	LENGTH	PITCH	No. of TURNS	CORE DIA.	WEIGHT							
SP401	4	1/2"	13'-3"	4 1/2"	38	38"	1149							
SP402	4	1/2"	14'-11"	4 1/2"	43	38"	1283							
SP403	4	1/2"	13'-8"	4 1/2"	39	38"	1181							
											28,400			

ABUTMENTS														
MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT				
R401	80	4	5'-11"	6	2'-8"	7"	To be included in							
R402	16	4	19'-2"	Str.						Rolling for Payment				
A-403	8	4	18'-7"	10	6'-9"	18'-5"	2'-0"			39 #				
A-404	20	4	9'-6"	Str.						127				
A-405	2	4	20'-8"	Str.						28				
A-406	36	4	6'-3"	6	2'-9"	1'-3"				150				
A-407	44	4	3'-3" to 6'-9"	6	1'-2 1/2"	1'-3"	Each vary by 2"			147				
A-501	10	5	42'-6"	Str.						443				
A-502	124	5	7'-6"	6	1'-6"	4'-6"				970				
A-503	16	5	17'-6"	Str.						292				
A-504	4	5	20'-6"	Str.						86				
A-505	12	5	12'-0"	Str.						150				
A-506	22	5	8'-9"	Str.						201				
A-507	68	5	8'-8"	6	3'-9"	1'-2"				615				
A-508	8	5	16'-6"	Str.						138				
A-509	16	5	12'-3"	Str.						204				
A-510	8	5	15'-6"	Str.						129				
A-511	16	5	6'-3"	Str.						104				
A-512	2	5	18'-6"	Str.						39				
A-513	4	5	14'-9"	Str.						62				
A-514	2	5	17'-3"	Str.						36				
A-515	80	5	7'-0"	1	3'-6"	3'-6"				584				
A-516	8	5	5'-6"	Str.						46				
A-517	40	5	4'-3"	Str.						177				
A-518	108	5	10'-1"	Str.						1136				
A-519	66	5	3'-3"	Str.						224				
A-520	20	5	10'-9"	6	4'-10"	1'-1"				224				
A-521	4	5	11'-9"	6	5'-4"	1'-1"				49				
A-522	4	5	12'-9"	6	5'-10"	1'-1"				53				
A-523	36	5	40'-0"	Str.						1502				
A-601	76	6	10'-6"	1	5'-6"	5'-0"				1199				
A-602	78	6	17'-6"	7	7'-3"	1'-4"	6'-0"	2'-0"	11"	2050				
A-603	10	6	24'-0"	Str.						360				
A-604	20	6	19'-6"	Str.						586				
A-605	10	6	23'-0"	Str.						345				
											12,560 #			

SUPERSTRUCTURE														
MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT				
R403	752	4	4'-2"	4	1'-2"	6"	2'-0"	6"		To be included				
R404	168	4	16'-2"	Str.						in Rolling for				
R404A	8	4	13'-1"	Str.						Payment				
R404B	8	4	4'-10"	Str.										
R405	752	4	3'-2"	1	6"	2'-8"								
S501	506	5	30'-0"	Str.						15,833				
S501A	64	5	6'-4" to 28'-3"	Str.	2 each - Vary by 8 1/2"					1154				
S501B	10	5	8'-0"	Str.						83				
S502	728	5	4'-8"	11	2'-9"	3"	1'-2"	9"		3543				
S601	506	6	30'-0"	Str.						22,800				
S601A	64	6	6'-4" to 28'-3"	Str.	2 each - Vary by 8 1/2"					1662				
S601B	10	6	8'-0"	Str.						120				
S602	530	6	38'-0"	Str.						30,250				
S603	66	6	40'-0"	Str.						3965				
											79,410 #			

SPIRAL NOTES

The "length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the cap.

The "No. of Turns" shown in the steel list for the spiral bars is the length divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4.

1/2 closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers weighing approximately 0.68 lbs. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lbs. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

ESTIMATED QUANTITIES									
ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTS.	PIERS	GENERAL		
E-2	397	Cu.Yd.	Unclassified Excavation		317	80			
S-1	327	Cu.Yd.	Class "C" Concrete, Superstructure	327					
S-1	111	Cu.Yd.	Class "C" Concrete, Pier Caps & Columns			111			
S-1	133	Cu.Yd.	Class "E" Concrete, Abutments above Footings		133				
S-1	160	Cu.Yd.	Class "E" Concrete, Footings		63	97			
S-4	120,370	Lbs.	Reinforcing Steel	79,410	12,560	28,400			
S-7	402,300	Lbs.	Structural Steel	402,300					
S-8	402,300	Lbs.	Field Painting of Structural Steel	402,300					
S-14	808	Lin.Ft.	Railing (Aluminum Rail & Supports, Concrete Parapet and Guard Rail Connectors)				808		
S-16	Lump Sum		First Test Pile				Lump		
S-18	3320	Lin.Ft.	12' cast-in-place Reinforced Concrete Piles			3320			
S-29	35	Cu.Yd.	Porous Backfill		35				
S-29	133	Cu.Yd.	Porous Drain on Embankment Slopes				133		

REPLACEMENT BARS					
MARK	No.	SIZE	LENGTH	TYPE	WEIGHT
RE 401	1	4	5'-3"	Str.	
RE 501	2	5	5'-7"	Str.	
RE 601	4	6	5'-11"	Str.	
RE 801	1	8	6'-6"	Str.	
RE 901	1	9	6'-10"	Str.	
RE 1001	1	10	7'-3"	Str.	

REPLACEMENT BARS

If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section S-4.02 need not be furnished and replacement bars will not be required.

BAR SIZE

Bar size is indicated in the bar mark. The first digit where three digits are used and the first two where four are used, indicates the bar size number. For example, A401 is a no. 4 bar and A1114 is a no. 11 size bar.

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

REINFORCING STEEL LIST
& ESTIMATED QUANTITIES
BRIDGE NO. ASD - I - 1191
UNDER PERRY TWP. 203

ASHLAND COUNTY STA. 446+13.71

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
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