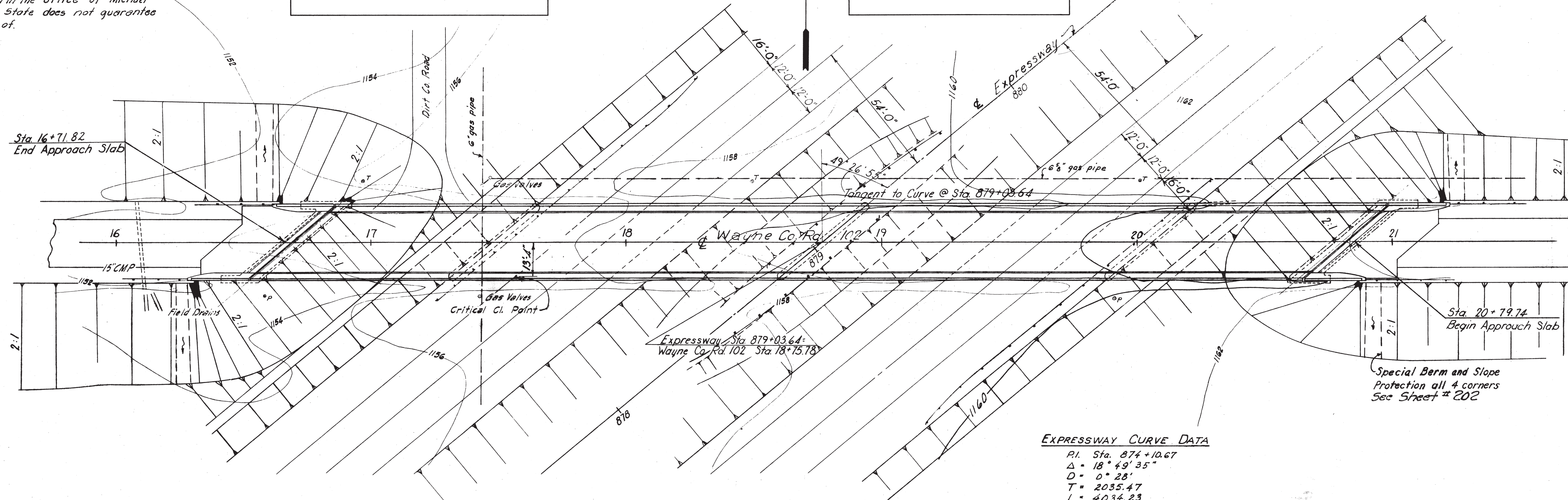
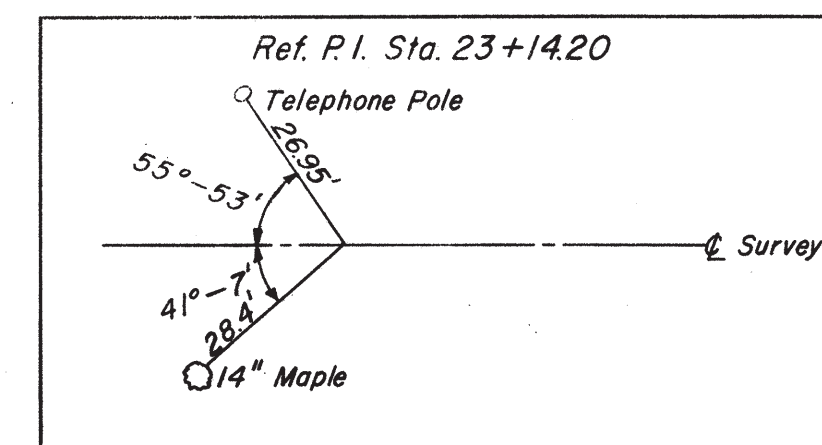
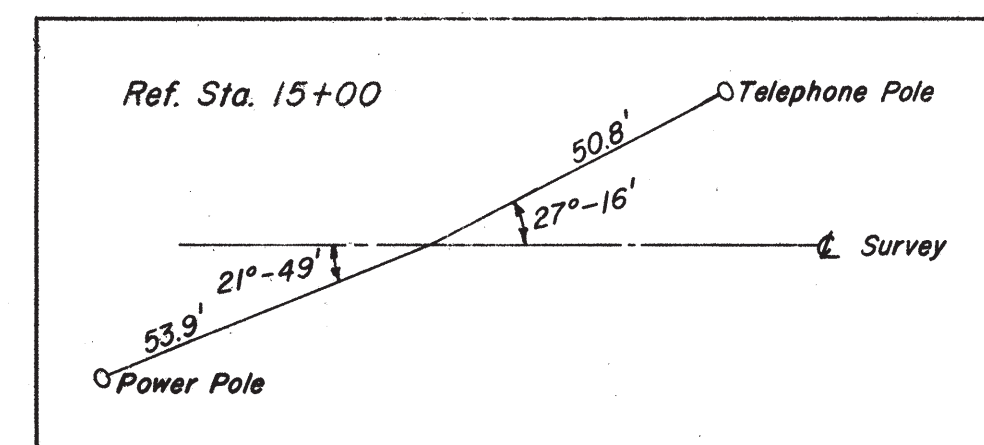


FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-1105 (1)

240A  
271

13.95 MILES NORTH OF ASHLAND  
WAYNE COUNTY  
WAY-1- 1.36

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 office of Michael Baker, Jr., but the State does not guarantee the accuracy thereof.



EXPRESSWAY CURVE DATA

P.I. Sta. 874+10.67  
 $\Delta = 18^\circ 49' 35''$   
 $D = 0^\circ 28'$   
 $T = 2035.47$   
 $L = 4034.23$   
 $E = 167.57$   
 $R = 12,277.67$

This sheet is to be used for construction and replaces Sheet No. 240 of the original plans.

A.V.D. 1975 - 280 Vehicles

PROPOSED STRUCTURE

Type: Continuous steel girder with reinforced concrete deck and substructure.  
Span: 15'-125'-6"-125'-6"-15' c/c Bearings.  
Roadway: 24'-0" flk 2'-0" Safety Curbs  
Load Freq: CF130 (51)  
Wearing Surface: 3" Monolithic Concrete  
Approach Slab: 25' Long (Special Design)  
Skew: 49°26'55" Tangent to Curve @ Sta. 879+03.64  
Alignment: Tangent

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ROCHESTER, PENNSYLVANIA

SITE PLAN

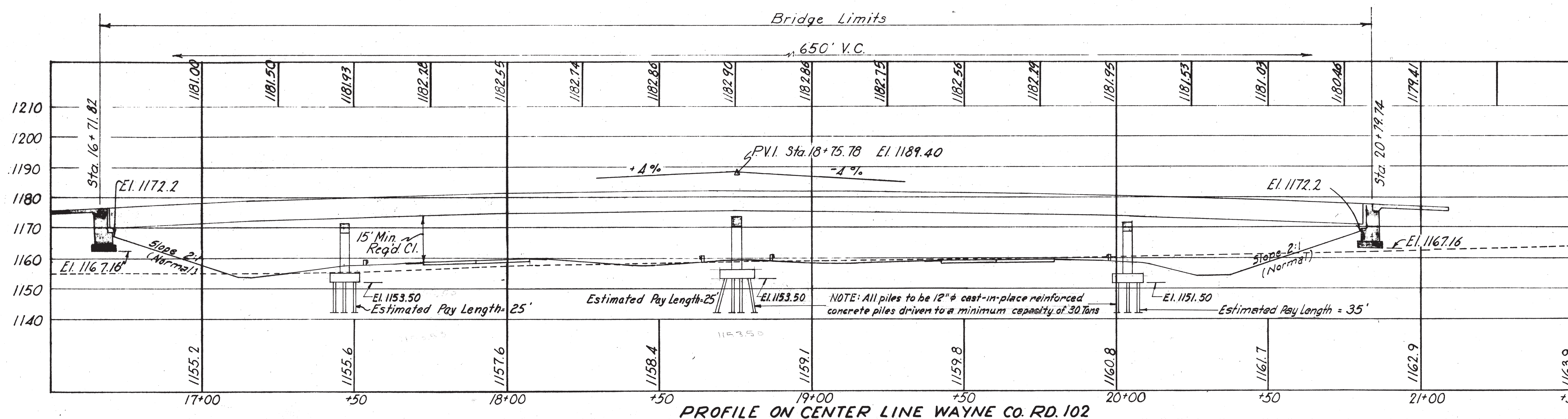
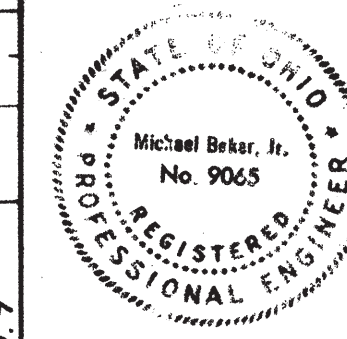
BRIDGE NO. WAY-1-0367

UNDER COUNTY ROAD NO. 102

WAYNE COUNTY STA. 879+03.64

PRESENT	TOPOGRAPHY	PROPOSED	WORK
Surveyed	Drawn	Designed	Drawn
		Checked	Reviewed
		FWL	

Revised 9-13-57

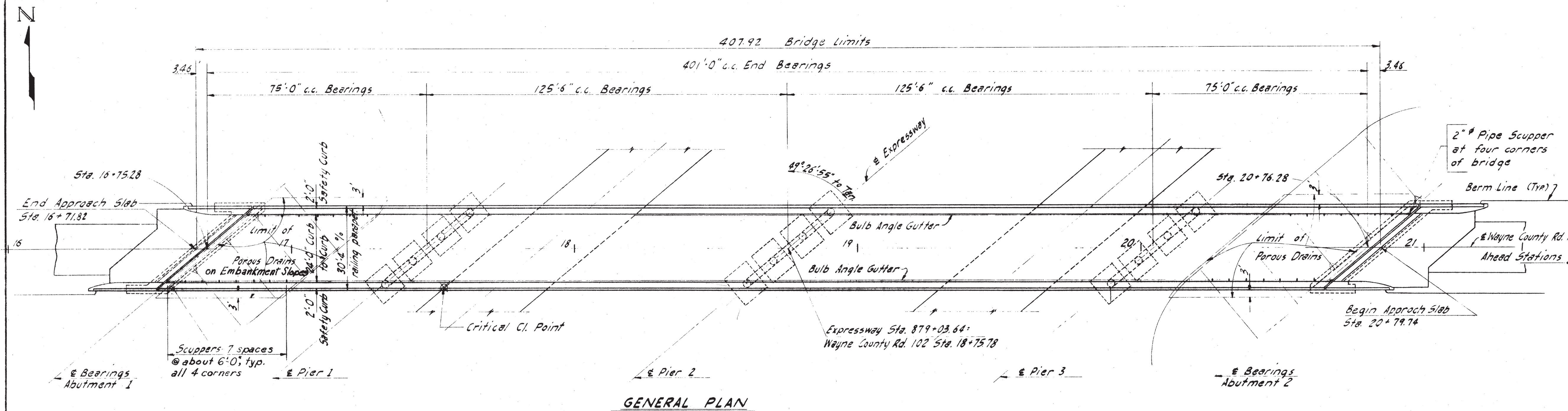




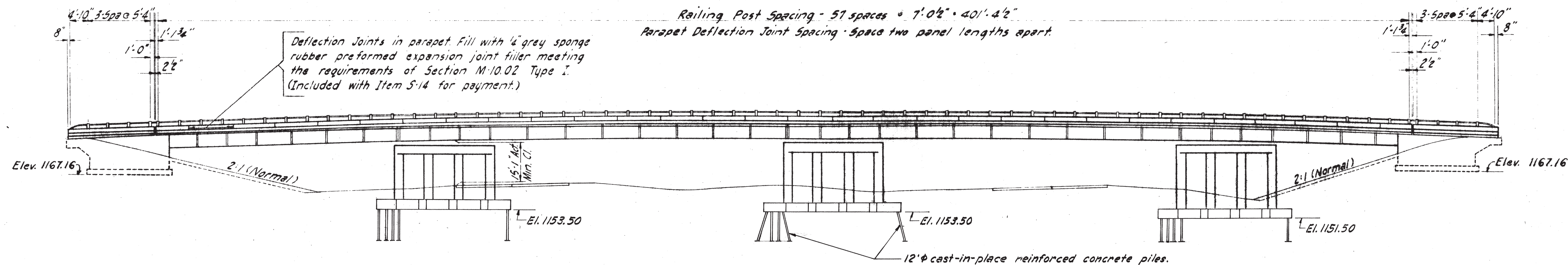
# WAYNE COUNTY WAY-1-136

## GENERAL NOTES:

- 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. 130 (S1)
- Reference shall be made to Standard Drawings R.B. 1-55 (dated 3-1-55), AR-1-57 (dated 4-9-57), and CSB-2-56 Sheet 3 (dated 12-3-56).
- 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.
- Porous Drains, one foot thick, shall be provided at each end of bridge, as indicated on General Plan.
- Excavation Quantity includes the removal of fill material between surface of proposed embankment and bottom of abutment. Backfill behind abutments shall be made with material meeting the requirements of Sec. I-22 and shall be compacted in accordance with requirements for embankment compaction. Payment for backfill shall be included with roadway embankment.
- 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 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.
- All piles shall be driven to a minimum bearing capacity of 30 tons.



GENERAL PLAN



ELEVATION

+4% -4%  
P.I. STA. 18+75.78  
ELEV. 1189.40  
V.C. = 650'  
M.O. = 6.50'

## GRADE DATA

ESTIMATED QUANTITIES									
ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTMENTS	PIERS	GENERAL	As Built	
E-2	437	Cu. Yds.	Unclassified Excavation		300	137		C-3, -328	237
E-2	Lump	Sum	Cofferdams, Cribbs & Sheeting				Lump	C-4, +198	
S-1	382	Cu. Yds.	Class "C" Concrete, Superstructure	382				C-3, -20	76
S-1	96	Cu. Yds.	Class "C" Concrete, Pier Caps & Columns			96		C-3, +21	225
S-1	155	Cu. Yds.	Class "E" Concrete, Abutments above Footings		155			C-3, +6160	159,390
S-1	204	Cu. Yds.	Class "E" Concrete, Footings		63	141		C-3, +7146	537,146
S-4	152,730	Lbs.	Reinforcing Steel	102,600	13,270	36,860		C-3, +7146	537,146
S-7	530,000	Lbs.	Structural Steel	530,000					
S-8	530,000	Lbs.	Field Painting of Structural Steel	530,000					
S-14	898	Lin. Ft.	Railing Aluminum Rail and supports, Concrete Parapet.)				898		
S-29	46	Cu. Yds.	Porous Backfill		46				
S-29	130	Cu. Yds.	Porous Drains on Embankment Slopes				130		
S-16	Lump	Sum	First Test Pile				Lump		
S-18	3360	Lin. Ft.	12" Cast-in-Place Reinforce Concrete Piles.			3360		C-10, -787	2,575

This sheet is to be used for construction and replaces Sheet No. 241 of the original plans.

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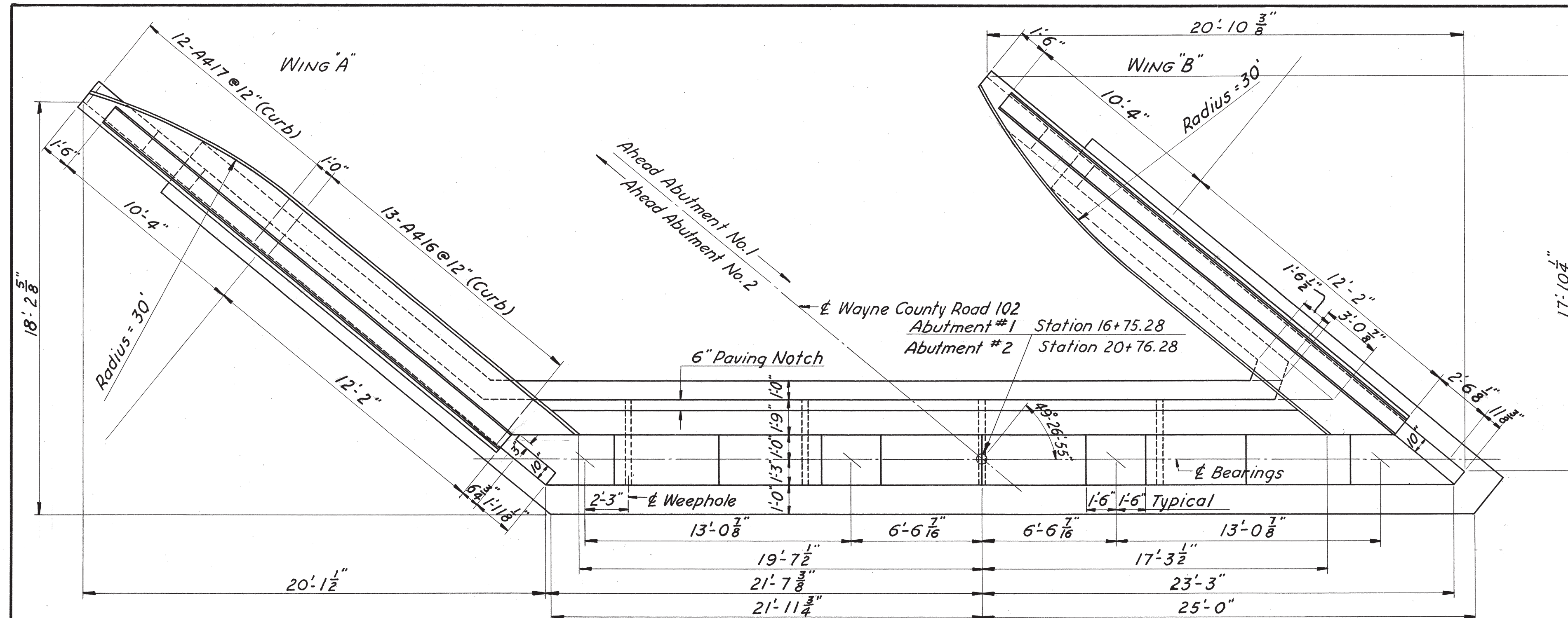
## GENERAL PLAN & ELEVATION

BRIDGE NO. WAY-1-0367  
UNDER COUNTY ROAD NO. 102

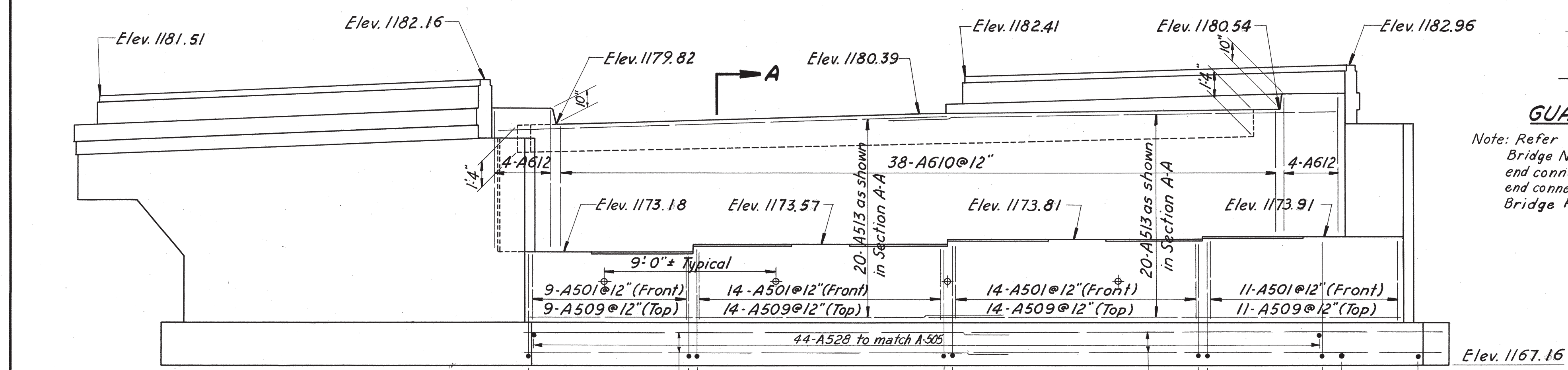
WAYNE COUNTY					STA. 879+03.64	
Designed	Drawn	Traced	Checked	Reviewed-Date	Revised	
FWL	FWL	FWL	FWL	FWL	FWL	9-13-57



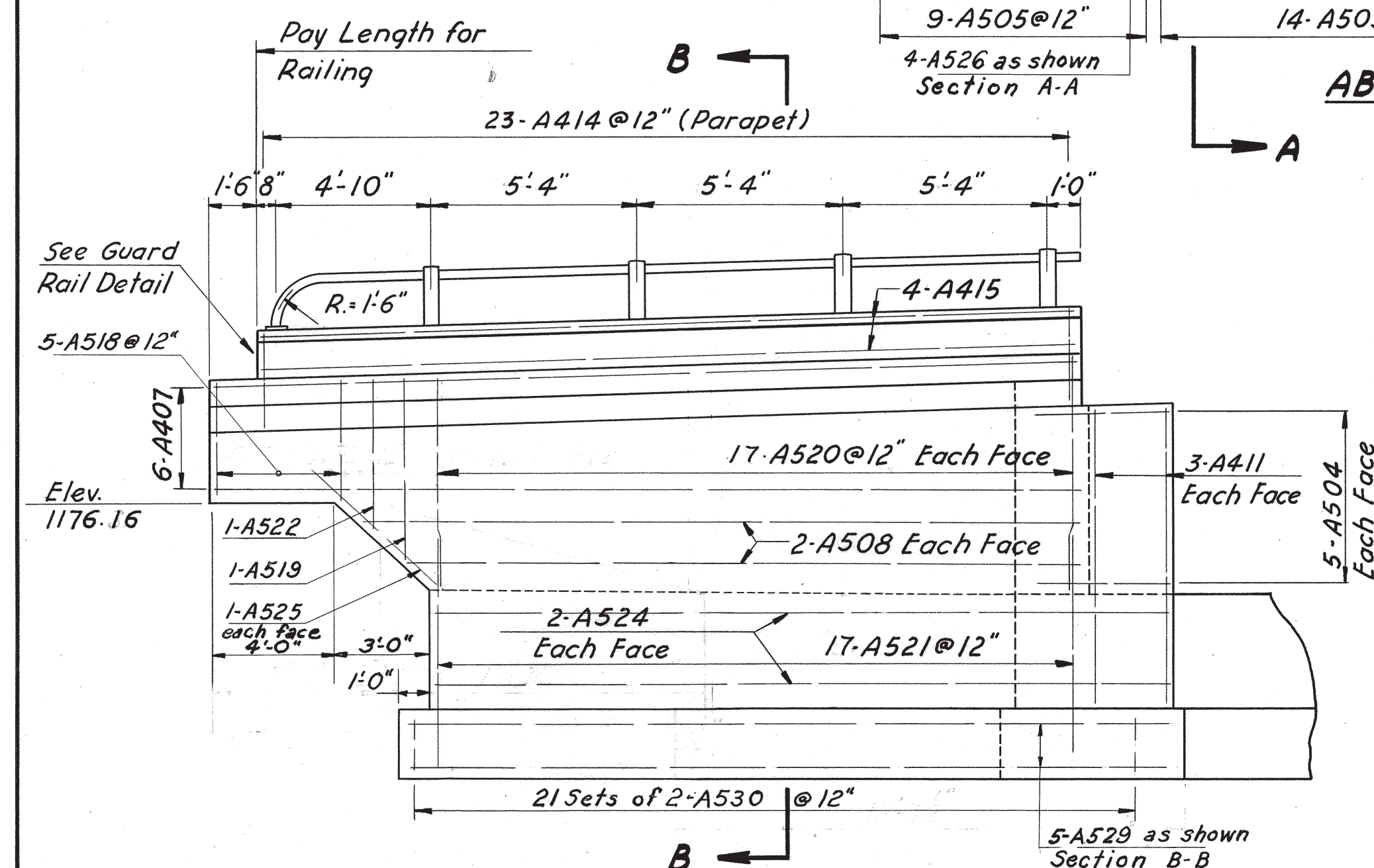




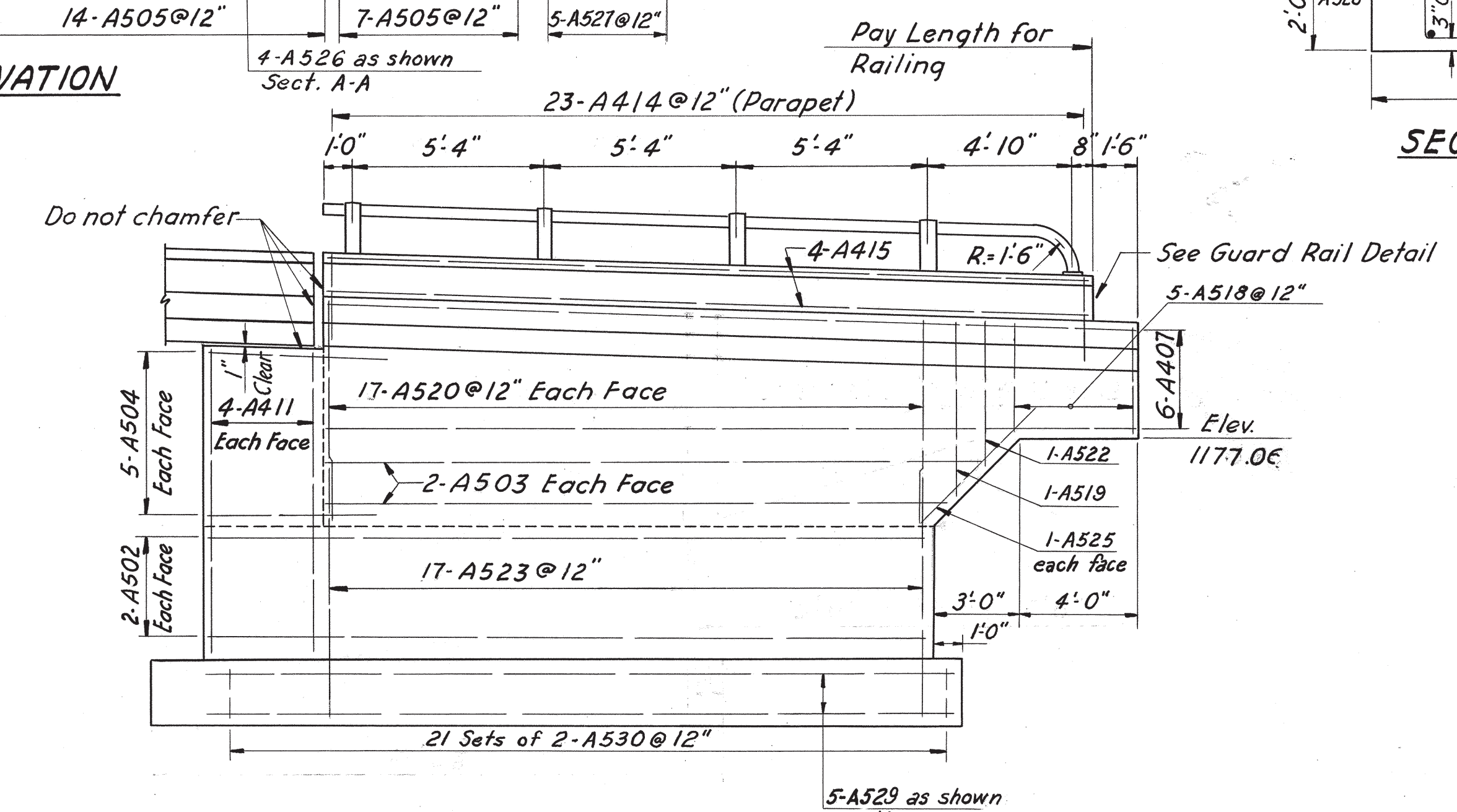
ABUTMENT PLAN



ABUTMENT ELEVATION



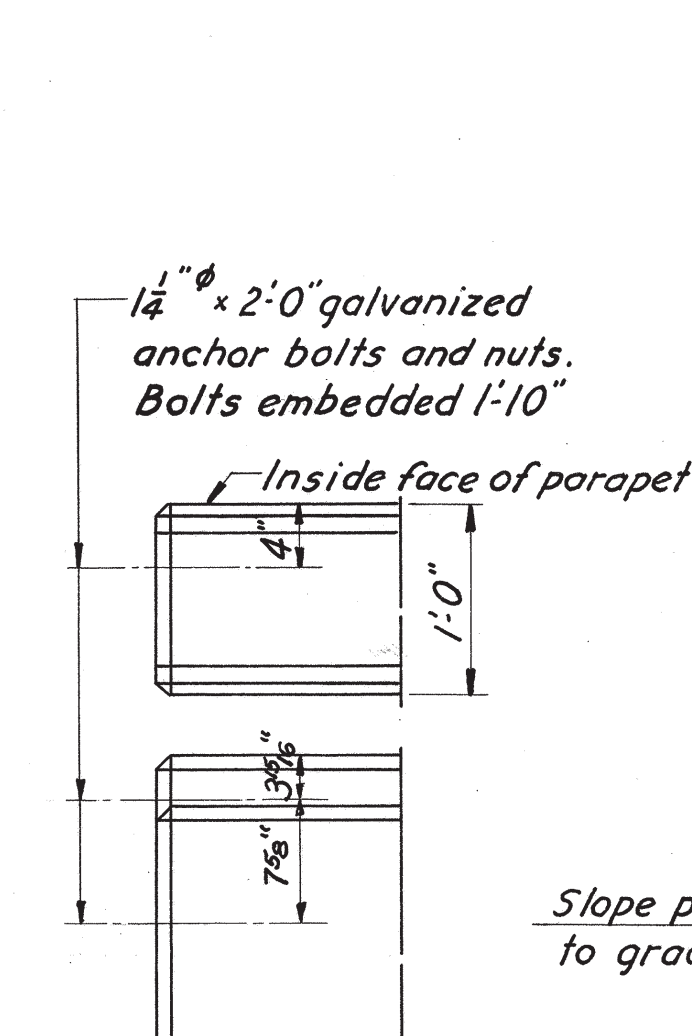
ELEVATION WING A



ELEVATION WING B

NOTES

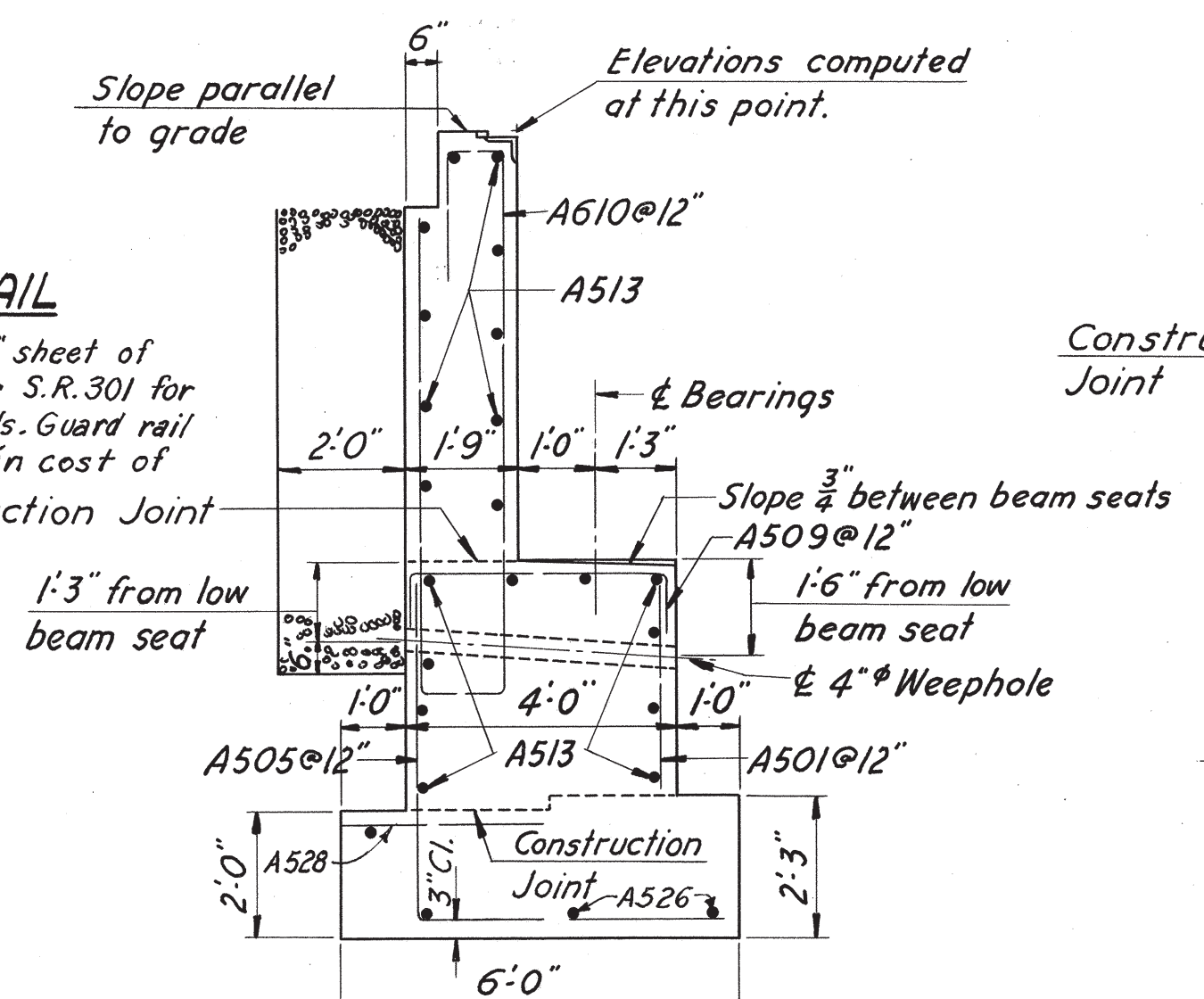
- Porous backfill 2 feet thick full length of abutment shall extend up to the under side of the approach slab and outward to the wings. Excavation therefor, in excess of that required for the abutment, shall be considered as included in the bid price per cu. yd. for porous backfill.
- Clearance of reinforcing steel from face of concrete shall be 2" unless otherwise noted.
- Concrete above bridge seat construction joint shall not be placed until after steelwork is erected.
- 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 for the abutments shall be made.
- Design foundation pressure is 2 1/4 tons per sq. ft.
- All abutment concrete, except parapet, shall be Class "E".



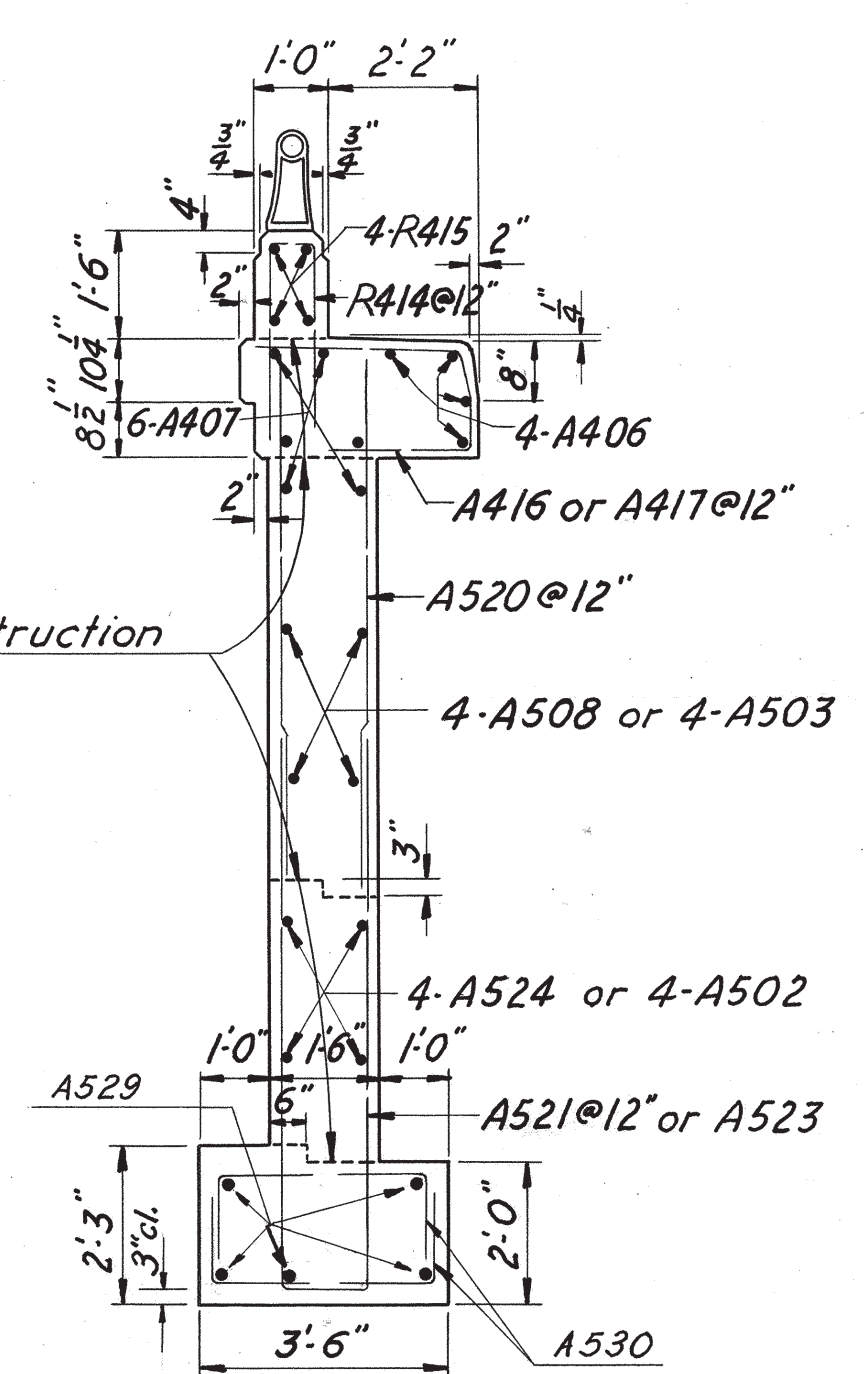
SKETCH SHOWING SLOPE OF BACKWALL (TYPICAL BOTH ABUTMENTS)

GUARD RAIL DETAIL

Note: Refer to "Abutment Details" sheet of Bridge No. WAY-1-0140 under S.R.301 for end connection assembly details. Guard rail end connection to be included in cost of Bridge Railing.



SECTION A-A



SECTION B-B

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

WAYNE COUNTY  
WAY-1-136

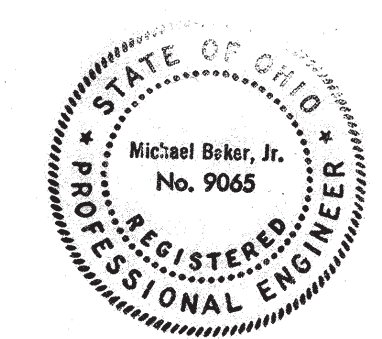
MICHAEL BAKER, JR., CONSULTING ENGINEERS  
ROCHESTER, PENNSYLVANIA

ABUTMENTS

BRIDGE NO. WAY-1-0367  
UNDER COUNTY ROAD NO. 102

WAYNE COUNTY STA. 879 + 03.64

Designed	Drawn	Traced	Checked	Reviewed-Date	Revised
J.D.	J.D.	C.W.C.	F.W.L.		









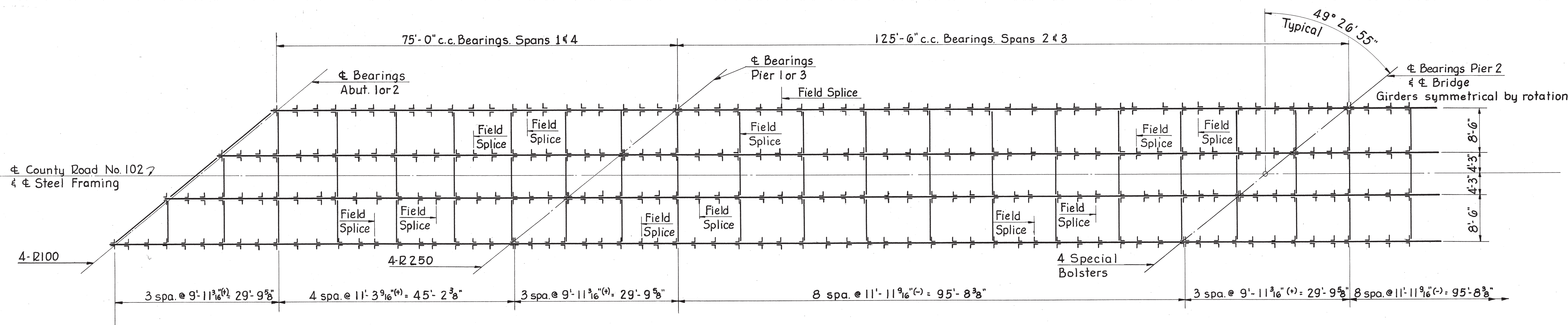
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-1105 (1)	

244  
271

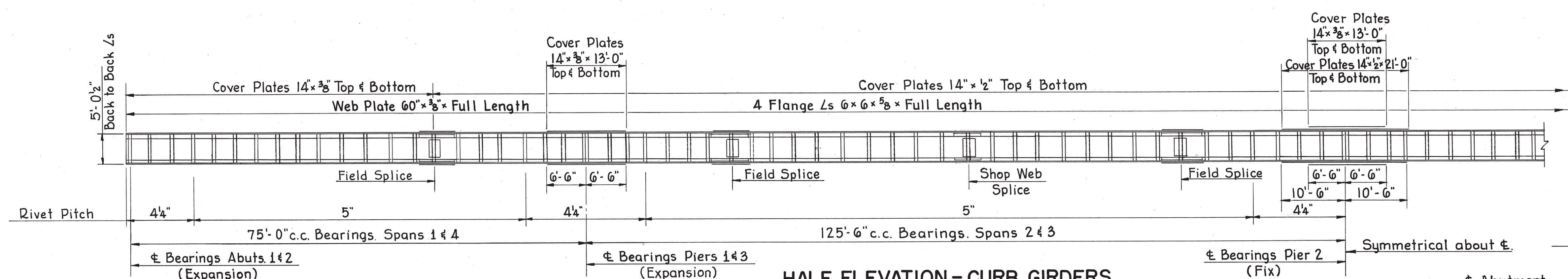
WAYNE COUNTY  
WAY-1- I.36

#### NOTES:

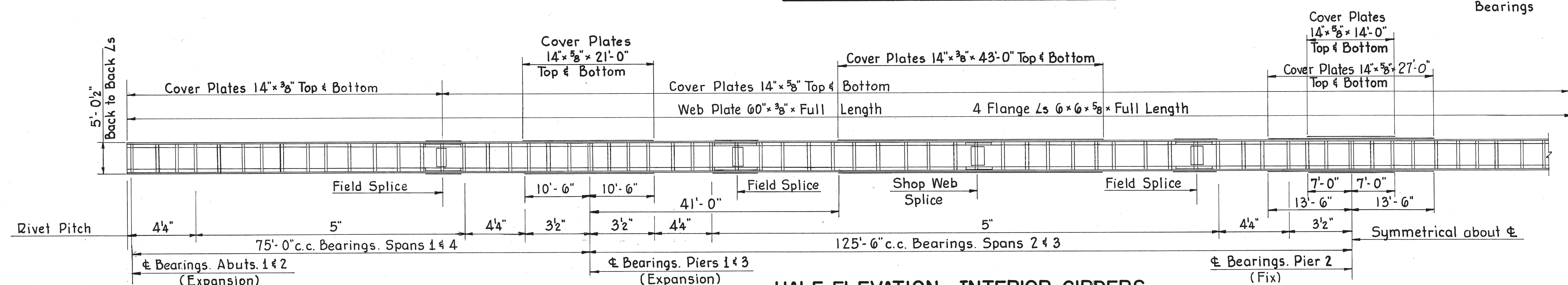
- Abutments and Piers 1 & 3 Bearing Stiffeners are  $Ls\ 5 \times 3\frac{1}{2} \times \frac{1}{2}$  on Fill Plates.
- Pier 2 Bearing Stiffeners are  $Ls\ 5 \times 3\frac{1}{2} \times \frac{5}{8}$  on Fill Plates.
- All intermediate stiffeners are  $Ls\ 5 \times 3\frac{1}{2} \times \frac{3}{8}$  crimped.
- All dimensions shown are horizontal.
- All rivets  $\frac{7}{8}"$ .
- All intermediate crossframes  $Ls\ 3\frac{1}{2} \times 3\frac{1}{2} \times \frac{5}{16}$ .
- All end crossframes  $Ls\ 4 \times 4 \times \frac{5}{16}$ .
- All Stiffeners shall be normal to Girder.



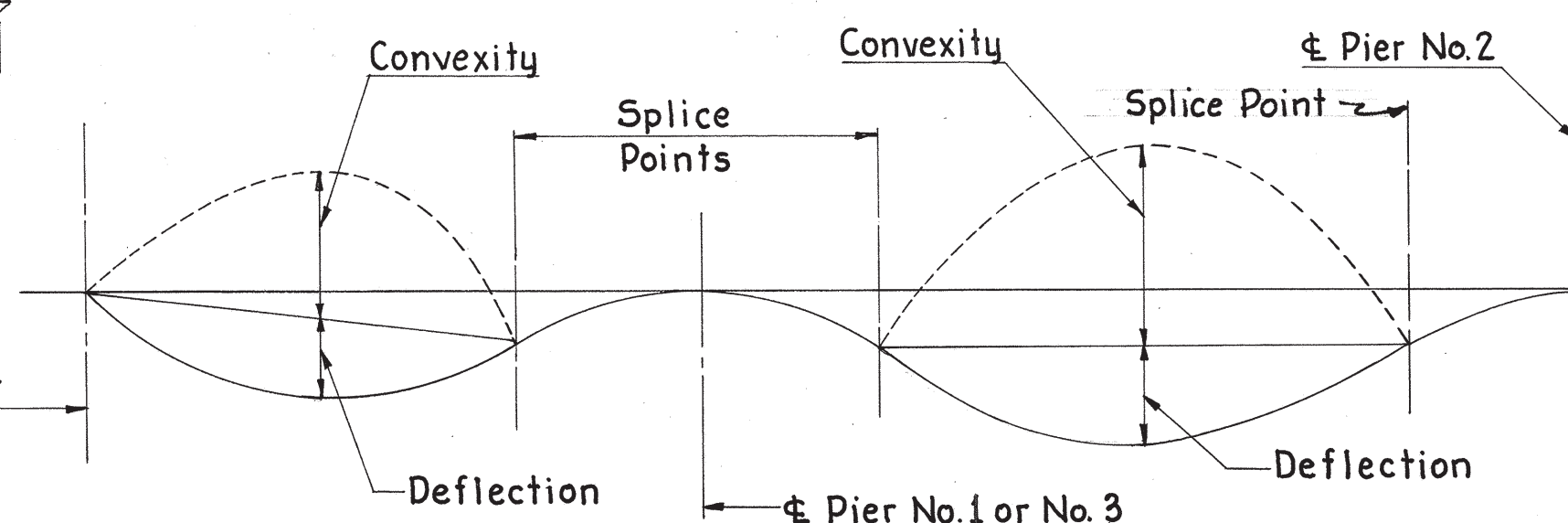
HALF PLAN - STEEL FRAMING



HALF ELEVATION - CURB GIRDERS

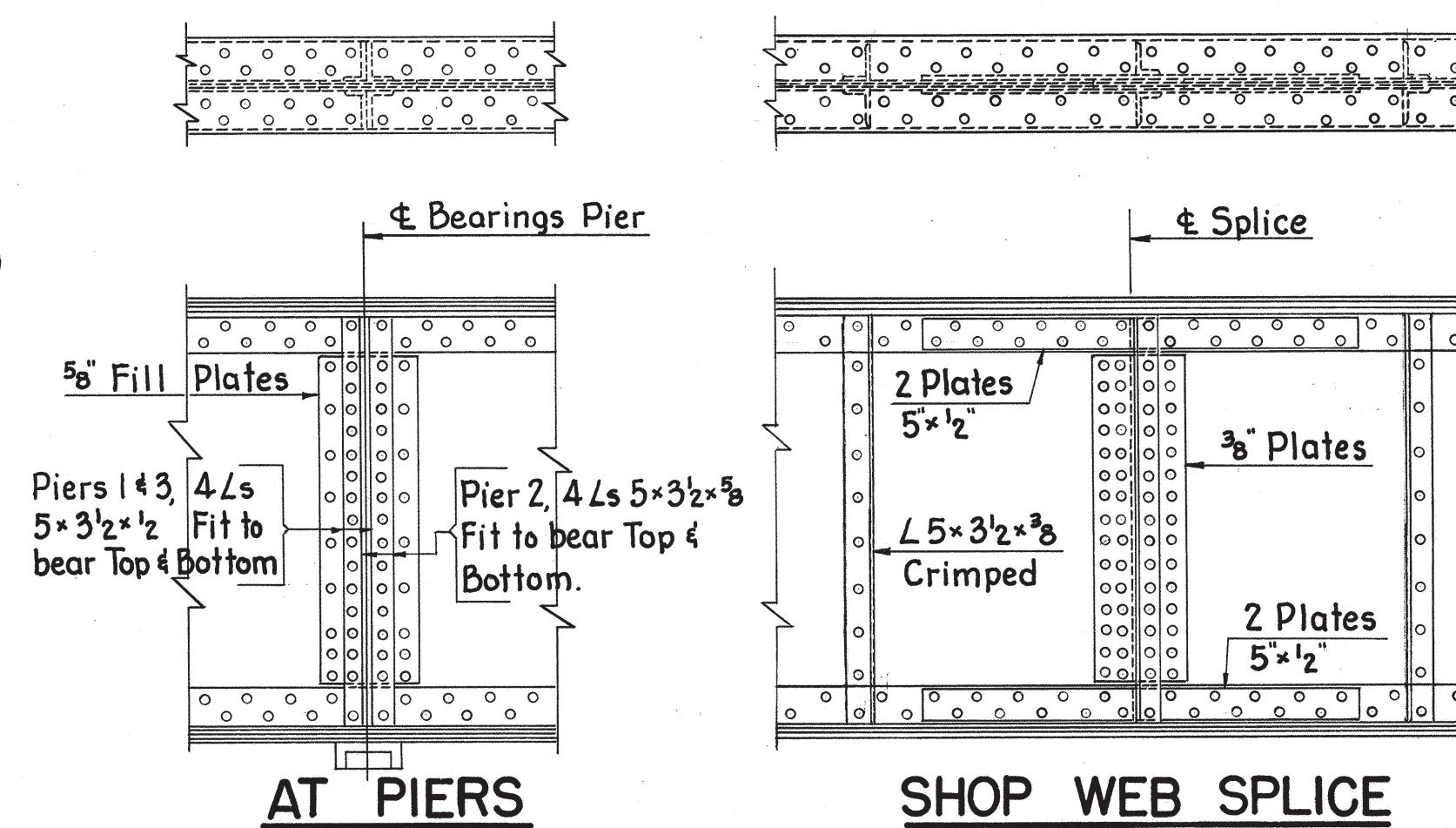
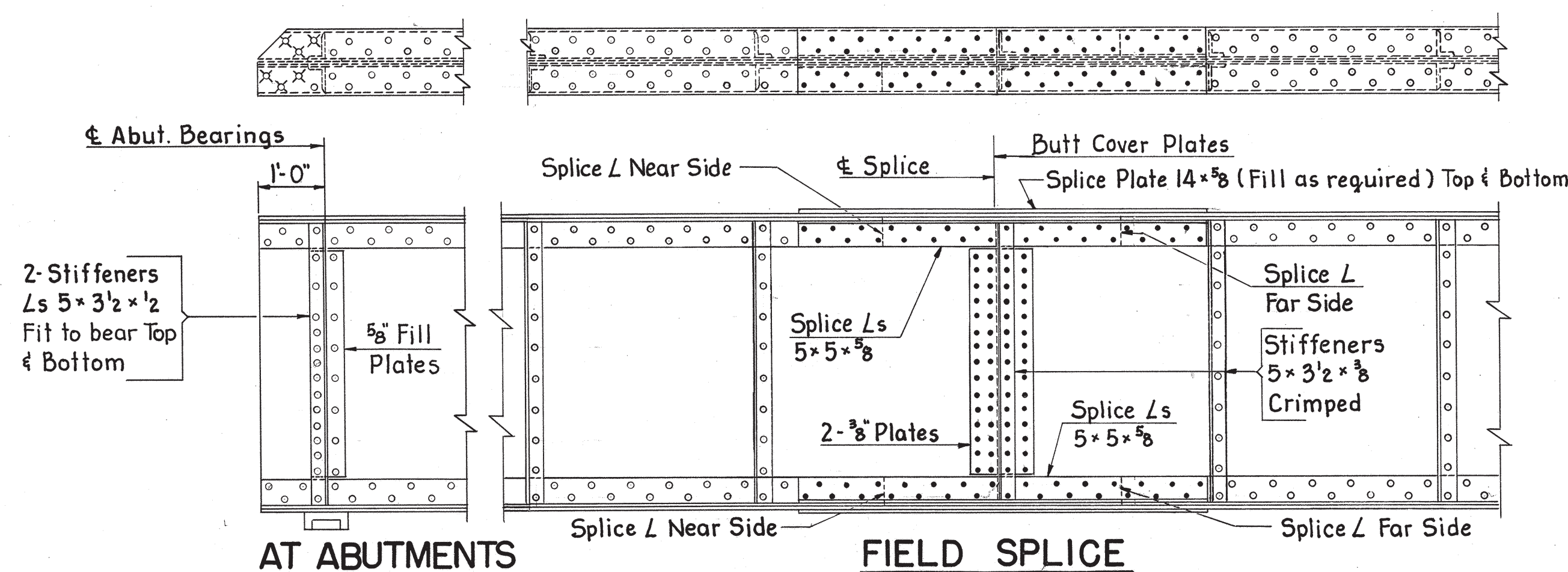


HALF ELEVATION - INTERIOR GIRDERS



CAMBER DIAGRAM

	Curb Girders		Interior Girders	
	End Span	Mid. Span	End Span	Mid. Span
Deflection due to weight of steel.	1/16"	3/16"	1/16"	3/16"
Deflection due to remaining dead load.	1/8"	7/8"	1/8"	1/2"
Convexity required for Vertical Curve.	7/16"	1 1/16"	7/16"	1 1/16"
Sum of Deflection and Convexity.	5/8"	2 1/8"	5/8"	1 3/4"
Required Camber	5/8"	2 1/8"	5/8"	1 3/4"



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ROCHESTER, PENNSYLVANIA

#### STEEL FRAMING

BRIDGE NO. WAY-1-0367  
UNDER COUNTY ROAD NO. 102

WAYNE COUNTY STA. 879+03.64

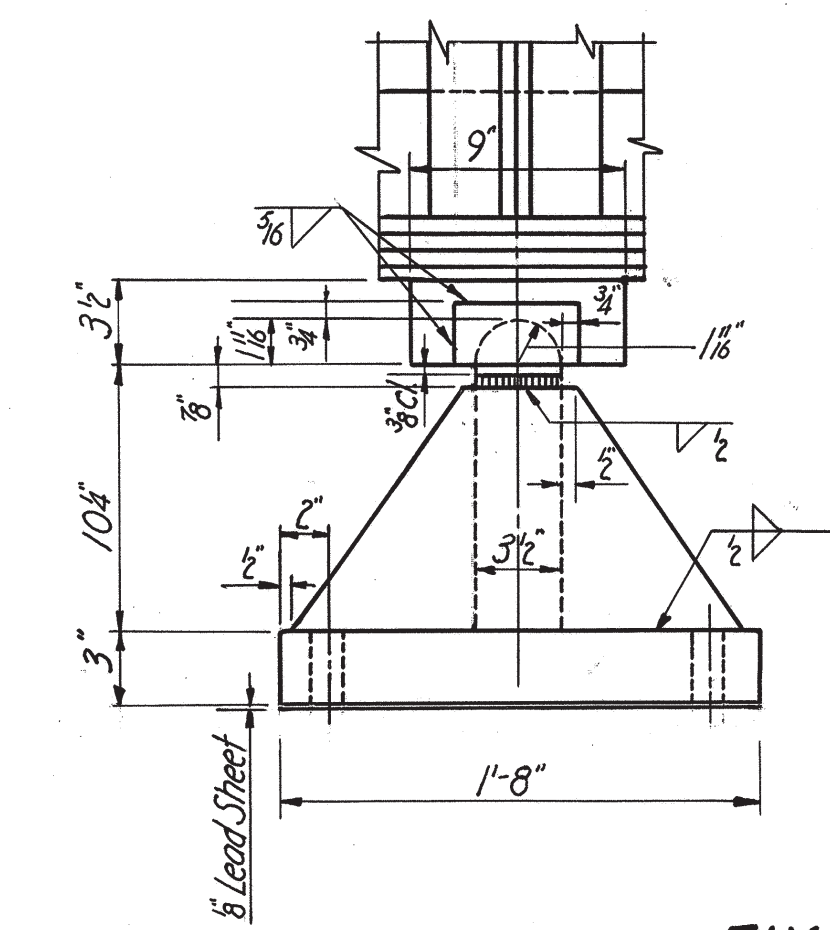
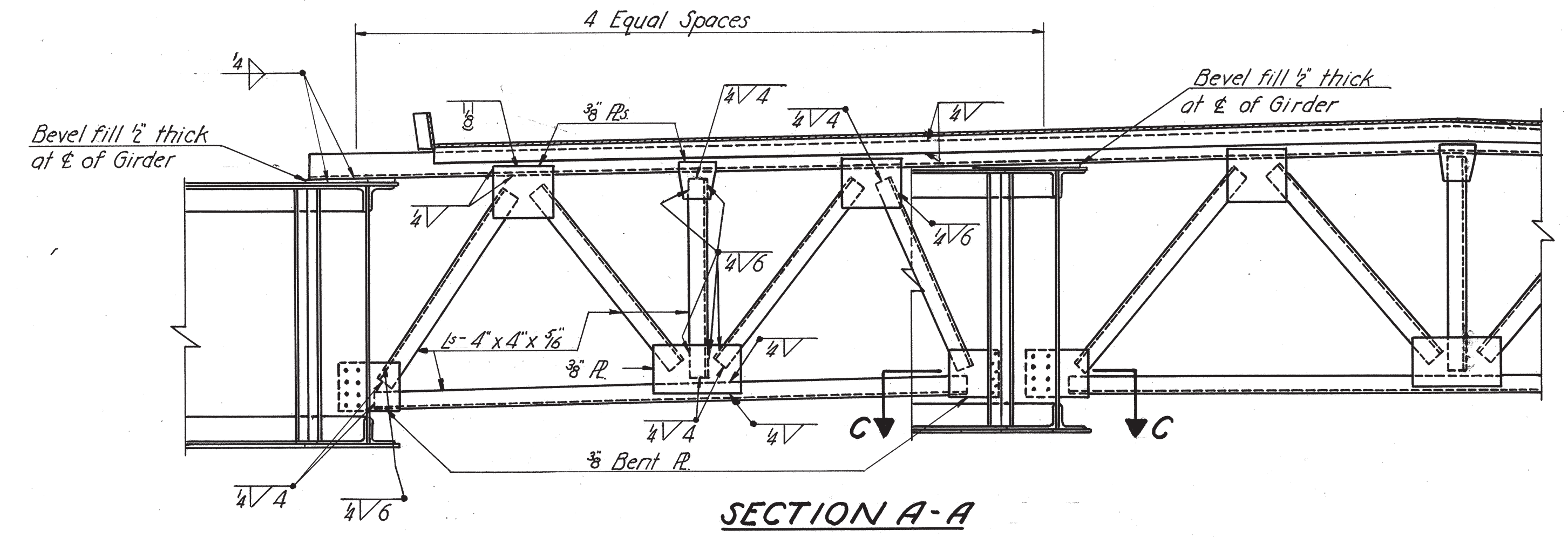
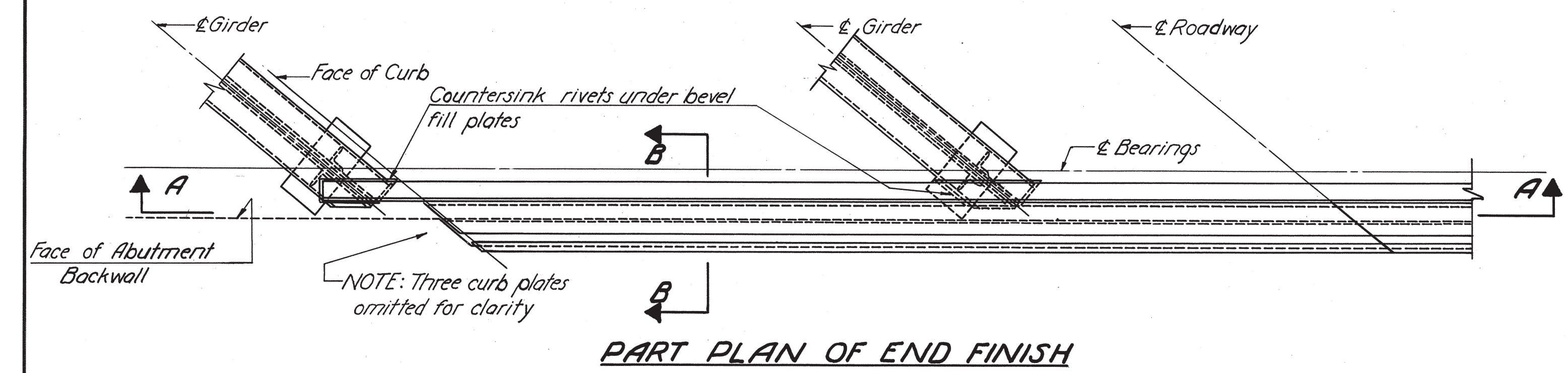
Designed	Drawn	Traced	Checked	Reviewed-Date	Revised
FK	FK	P.T.R.	N.E.		



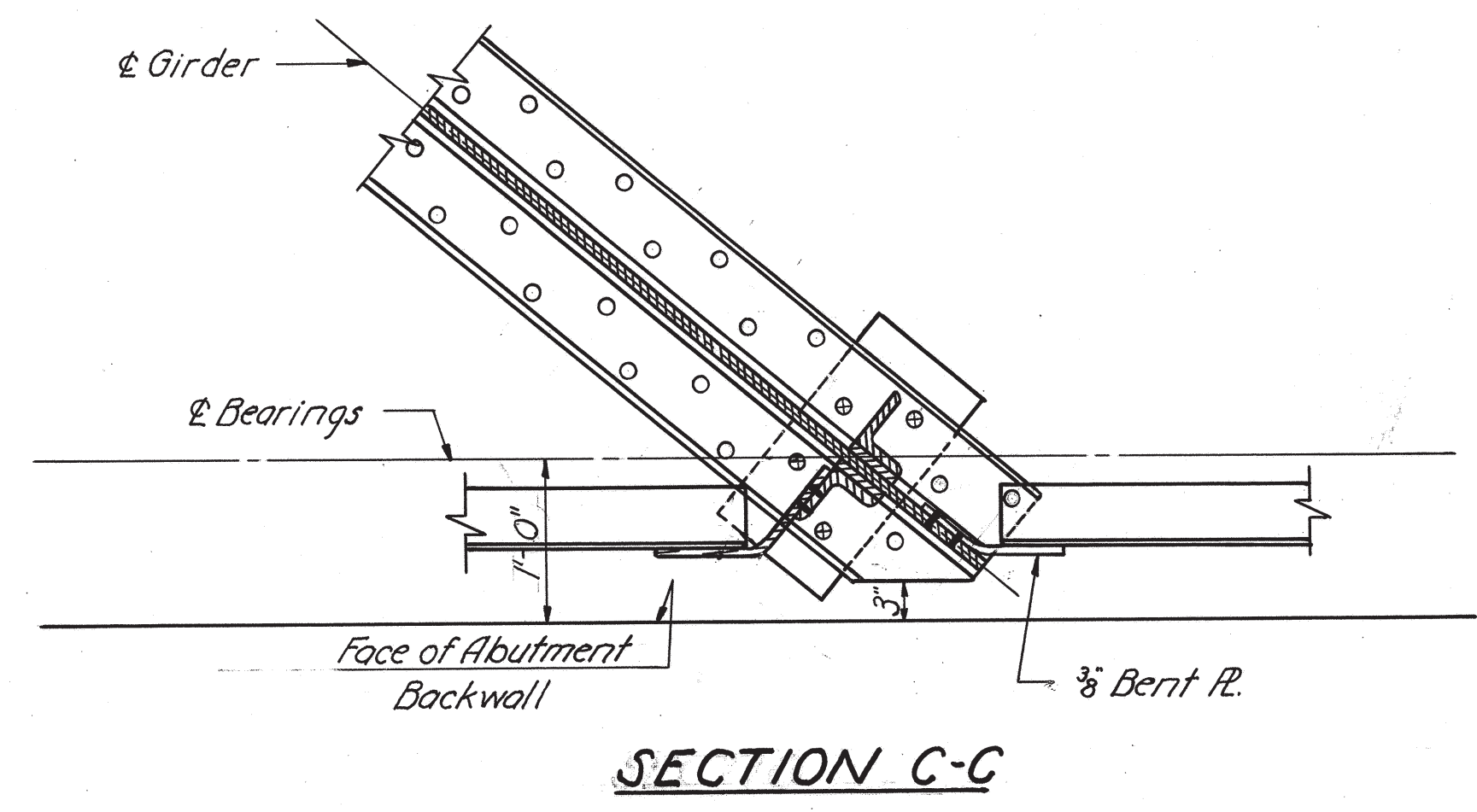
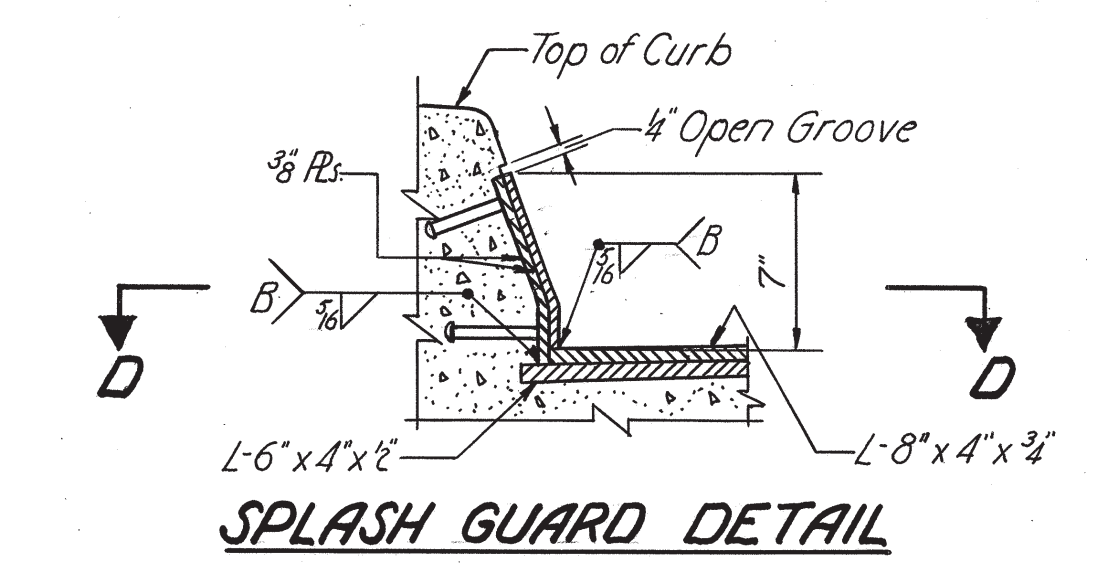
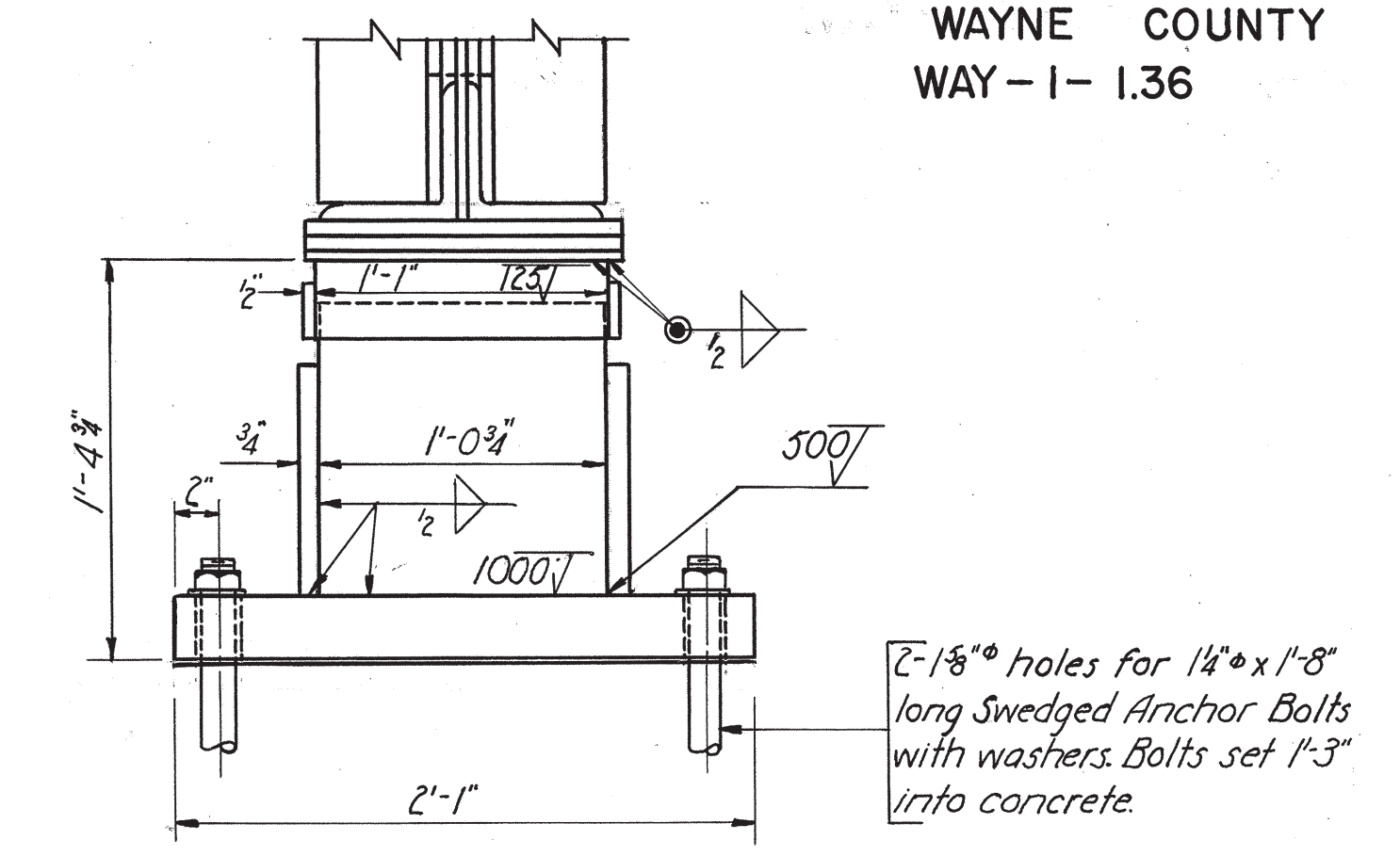




WAYNE COUNTY  
WAY - I - 136



**FIXED SHOE AT PIER NO. 2**  
For Top Bearing Detail refer to Standard Drawing RB-1-55



Provide a joint in the edge bar and in the angle on the center line of the roadway. Additional joints may be provided in them at a minimum spacing of 6'-0". (Joints shall not be welded.)

5/8 x 2 inch bolts at not more than 2'-0 inch c.c. with nuts tack-welded to under side of lower angle. 1 inch holes in upper angle. Center 5/8 inch bolts in 1 inch holes. Apply flake graphite between washers and angles. Turn bolt tight and release one-half turn. Remove bolts as soon as concrete has reasonably set, preferably within two hours to avoid effect of temperature expansion or contraction of superstructure. Fill holes with bituminous material.

This contact surface shall not be painted and shall be lubricated with flake graphite prior to placing of backwall concrete.

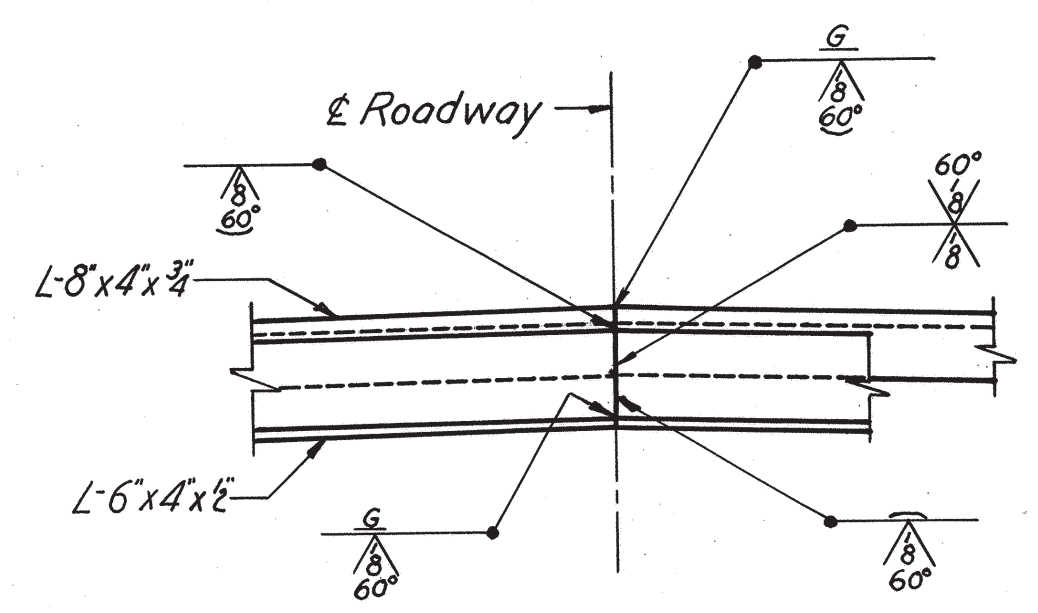
2 inch Maximum 2 1/4 inch Minimum  
Anchor bars 2 inch x 2 inch x 1-6 inch @ 18 inch c.c. placed parallel with longitudinal reinforcing steel.

Omit shop coat on all portions of end finish. Portions in contact with steel or with concrete shall not be painted. All other portions shall be cleaned and given the shop coat in the field as well as the two field coats.

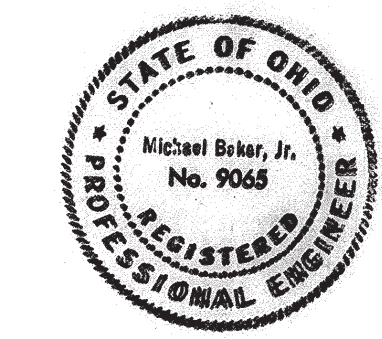
6 inch x 2 inch x 12 inch plates, spaced at approximately 15 inch c.c., except near joints in the angle, where the plates shall be placed within 6 inch of each side of the joint. The holes may be burned in the plate.

Top of backwall form shall be below 2 inch holes in L-6 x 4 x 1/2 inch

**SECTION B-B**



**WELDED BUTT JOINT IN SUPERSTRUCTURE**  
**END FINISH ANGLES AT E OF ROADWAY**



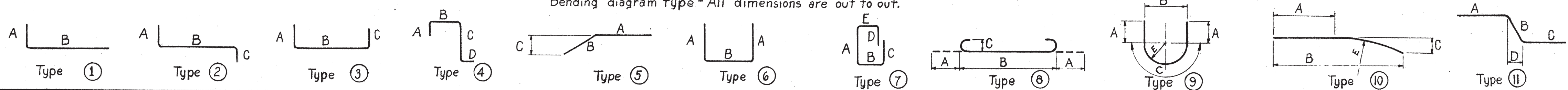
MICHAEL BAKER, JR., CONSULTING ENGINEERS ROCHESTER, PENNSYLVANIA						
<b>END FINISH</b>						
BRIDGE NO. WAY-I-0367						
UNDER COUNTY ROAD NO. 102						
WAYNE COUNTY			STA. 879 + 03.64			
Designed	Drawn	Traced	Checked	Reviewed-Date	Revised	
JFK.	P.D.	P.D.	R.L.F.			



WAYNE COUNTY  
WAY - I - 136

REINFORCING STEEL BAR SCHEDULE

Bending diagram type - All dimensions are out to out.



PIERS													
Mark	Pier1	Pier2	Pier3	Total	Size	Length	Type	A	B	C	D	E	Weight
P1101	48	-	-	48	8	17'-6"	Str.						4463
P1101a	-	48	-	48	8	18'-8"	Str.						4761
P1101b	-	-	48	48	8	19'-6"	Str.						4973
P1102	48	48	48	144	8	17'-7 1/2"	1	10"	6'-3"				5417
P803	6	6	6	18	8	39'-0"	Str.						1874
P804	12	12	12	36	8	12'-7"	1	2'-10"	10'-0"				1209
P805	3	3	3	9	8	27'-0"	Str.						648
P906		56				12'-2"	8	1'-3"	9'-8"				2317
P906a		40				14'-8"	8	1'-3"	12'-2"				1995
P707	96		96		7	11'-4"	8	10"	9'-8"				4446
P508	42	42	42	126	5	7'-1"	6	2'-4"	2'-8"				930
P509	20	20	20	60	5	4'-1"	6	10"	2'-8"				255
P510	4	4	4	12	5	3'-5" + 3'-11"	6	10"	2'-8"				46
P511	10	10	10	30	5	8'-0"	9	1'-11"	2'-8"	4'-2"	1'-4"		250
P512	2	2	2	6	5	39'-0"	Str.						244

ABUTMENTS												
Mark	Total	Size	Length	Type	A	B	C	D	E			Weight
A501	96	5	3'-7"	Str.								358
A512	8	5	19'-6"	Str.								163
A513	8	5	16'-6" + 18'-0"	Str.			4"	each				144
A504	40	5	4'-0"	Str.								167
A505	88	5	9'-11"	1	4'-6"	5'-6"						910
A406	16	4	27'-3"	10	15'-5"	27'-0"	2'-4"		29'-10"			291
A407	24	4	23'-8"	Str.								379
A508	8	5	17'-9" + 19'-0"	Str.			4"	each				153
A509	96	5	10'-0"	6	3'-11"	2'-8"						1001
A610	76	6	18'-2"	7	8'-0"	1'-5"	6'-6"	2'-0"	11"			2,072
A411	28	4	9'-7"	Str.								179
A612	16	6	19'-2"	3	9'-0"	1'-5"	9'-0"					461
A513	80	5	23'-0"	Str.								1,919
*R414	92	4	5'-4"	6	2'-6"	7"						
*R415	16	4	22'-0"	Str.								
A416	52	4	5'-10"	3	2'-10"	1'-2"	2'-4"					202
A417	48	4	1'-7" to 3'-11"	1	6'-2" to 1'-2"	1'-2"	4'-each	Vary	by 2'-2"			88
A518	20	5	7'-10"	6	3'-6"	1'-2"						163
A519	4	5	9'-10"	6	4'-6"	1'-2"						41
A520	136	5	6'-11"	Str.								981
A521	34	5	16'-4"	6	7'-9"	1'-2"						579
A522	4	5	11'-10"	6	5'-6"	1'-2"						49
A523	34	5	17'-10"	6	8'-6"	1'-2"						632
A524	8	5	19'-2"	Str.								160
A525	8	5	5'-6"	Str.								46
A526	16	5	25'-6"	Str.								426
A527	10	5	2'-0" to 4'-0"	Str.			2 each	- vary by	6"			31
A528	88	5	3'-0"	Str.								275
A529	20	5	21'-0"	Str.								438
A530	168	5	5'-6"	6	1'-4"	3'-2"						964

\* Included with Railing for payment.

SUPERSTRUCTURE												
Mark	Total	Size	Length	Type	A	B	C	D	E	Weight		
S701	469	7	30'-0"	Str.								28,759
S701a	68	7	6'-6" + 28'-6"	Str.	2 each Vary by 8"			8"				2,432
S701b	16	7	6'-0"	Str.								196
S602	469	6	30'-0"	Str.								21,133
S602a	68	6	6'-6" + 28'-6"	Str.	2 each Vary by 8"			8"				1,787
S602b	16	6	6'-0"	Str.								144
S603	600	6	40'-0"	Str.								36,048
S603a	60	6	23'-0"	Str.								2,073
S604	69	6	40'-0"	Str.								4,146
S505	808	5	4'-7"	11	2'-10"	1'-3"	10"	3"				3,862
S406	808	4	3'-0"	1	7"	2'-6"						1,619
S507	16	5	24'-0"	Str.								401
* R401	808	4	4'-2"	4	1'-2"	9"	2'-1"	6"				
* R402	216	4	13'-9"	Str.								
* R403	16	4	11'-3"	Str.								

\* Included with Railing 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 coil), expressed as the nearest whole number.

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

1 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.

REPLACEMENT BARS					
Mark	N <sup>o</sup>	Size	Length	Type	Weight
RE 400	1	4	5'-3"	Str.	
RE 500	1	5	5'-7"	Str.	
RE 600	4	6	5'-11"	Str.	
RE 700	2	7	6'-2"	Str.	
RE 800	1	8	6'-6"	Str.	
RE 900	1	9	6'-10"	Str.	
RE 1100	1	11	7'-6"	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 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 digits where four are used, indicate the bar size number. For example, A401 is a no. 4 size bar and A1114 is a no. 11 size bar.

This sheet is to be used for construction and replaces Sheet No. 247 of the original plans.

MICHAEL BAKER, JR., CONSULTING ENGINEERS  
ROCHESTER, PENNSYLVANIA

BAR SCHEDULE  
BRIDGE NO. WAY - I - 0367  
UNDER COUNTY ROAD NO. 102

WAYNE COUNTY					STA. 879 + 03.64	
Designed	Drawn	Traced	Checked	Reviewed-Date	Revised	
-	-	-C.B.-	FOL JPR KLF			9/13/57

