

#3087

MICROFILMED
FEB 10 1987STATE OF OHIO
DEPARTMENT OF HIGHWAYS

LUC-475-3.11

CONVENTIONAL SIGNS

Section Line	-----
Center Line	-----
Corporation Line	-----
Property Line	-----
Fence Line	-----
Township Line	-----
Limited Access and Right of Way	LA-R/W
Right of Way Only	R/W
Existing Right of Way	-----
Guard Rail	-----
Railroads	-----
Pole Lines	-----
Drainage Lines	-----
Trees & Stumps	-----
Limited Access	LA

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LINE DATA

IG-475
Sta. 203+80.25 to Sta. 217+00.00
Net length of Project= 1319.75 LF or 0.249 MI.
Add for Approaches (See Sht. N°2)
Net length of Work

= 30.89 LF

= 1350.64 LF or 0.255 MI.

= 1144 LF or 0.216 MI. Delivery Point: Holland (N.Y.C.R.R.) Average Haul: 1.3 Miles

I-475
Sta. 217+00 to Sta. 315+00
Net length of Project

= 3000.00 LF or 1.856 MI.

= 10574.59 LF

= 20374.59 LF or 3.858 MI.

Net length of Work

IG-475
I-475
SU-1510(I)

Total Net Length of Project = 1319.75 LF + 3000.00 LF + 1144.00 LF = 12,263.75 LF or 2.322 MI.

Total Net Length of Work = 1350.64 LF + 20374.59 LF + 1144.00 LF = 22,869.23 LF or 4.331 MI.

* STANDARD CONSTRUCTION DRAWINGS

DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE
BP-1	6-1-65	GR-5B	6-1-65				
BP-2	6-1-65	GR-G	6-1-65	HW-3	6-1-65		
BP-6	6-1-65	MC-G	6-1-65	HW-E	6-1-65	F5B-1-62	1-15-63
F-2	6-1-65	L-1	6-1-65	MC-4	6-1-65		
F-3	6-1-65	F-1	6-1-65	CB 22-A & D	6-1-65	SD-1-63 Sh. R. 344	11-12-63
FACT-1	6-1-65			CB - 1	6-1-65	SD-2-64	11-25-64
FACT-2	6-1-65	BP-3	6-1-65	CB - 5	6-1-65		
MC-3	5-1-66	MC-1	6-1-65	CB - 6	6-1-65		
BP-7	1-1-66	BP-5	6-1-65	MH - 1	6-1-65	BR-1-65	11-24-65
GR-1	6-1-65	BP-4	6-1-65	MH - 1A	6-1-65		
GR-2A	9-1-65	A-1-54	8-10-65	MH - 2	6-1-65		
GR-5A	6-1-65	HW-1	6-1-65				

Sheets 140, 101, 107
Sheets 178, 189, 211
-- M.F.J. -- 3-5-71 - G.F.J.File No. LUCAS COUNTY LUC-475-3.11
Date of Letting _____
Contract No. _____

19

I-IG-475-7(16)197
SU-1510(I)-GARDEN ROAD, RELOCATED
Any reference to LUC-20
in these plans shall be
considered to read LUC-475.FED. ID. DIVISION STATE PROJECT
OHIO I-IG-475-7(16)197
SU-1510(I)
1 221LUC-475-3.11
LUCAS 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.

1965 SPECIFICATIONS (See Note-Sheet No. 12-A)

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

The Right of Way for this improvement will be provided by the State of Ohio.

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

Approved Date 7-19-65

Approved Date 6-2-66

Approved Date 6-6-66

Approved Date 6-6-66

Approved Date 6-16-66

Approved Date 6-16-66

Approved Date _____

Approved Date 6/16/66

Thomas M. Major
Division Deputy DirectorC. H. Altavilla
Engineer of BridgesR. W. Ricketts
Engineer of Location & DesignJ. E. Shultz
Deputy Director of Design & ConstructionT. M. Board
Deputy Director of Right-Of-WayF. W. Wilson
Deputy Director of Planning & Programming

First Assistant Director

P. M. Maslak
Director of Highways

Sheet Nos. 167, 172, 189, 196, 197, 198 and

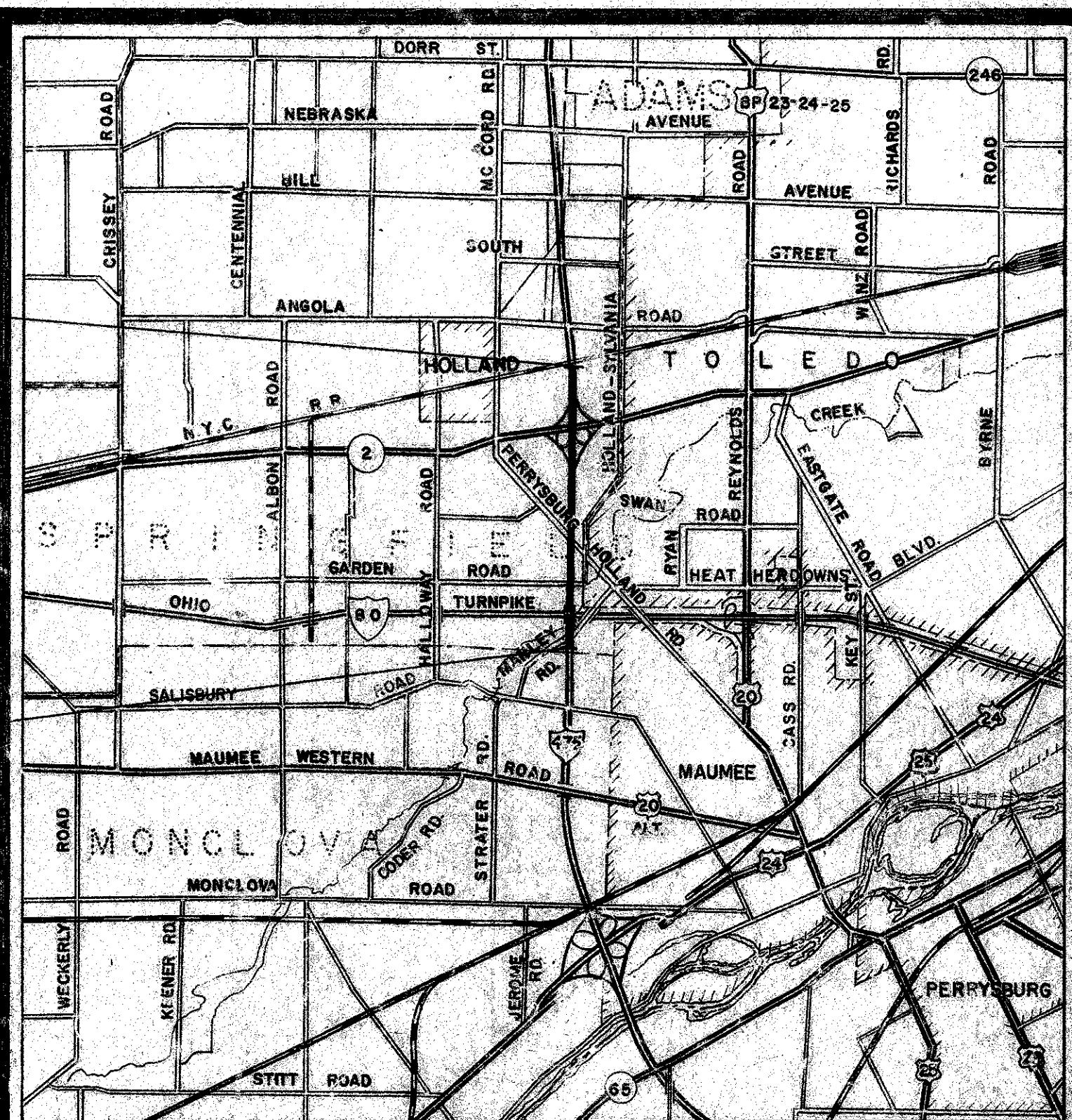
199 Revised 3-9-66

Sheet Nos. 189 and 199 Revised 10-7-66

Sheet Nos. 194, 201, 202, 203 and 204

Revised 11-29-66

Sheet Nos. 147 and 148 Revised 6-12-67 ED-



LOCATION MAP

SCALE OF MILES



Portion to be Improved



Federal Roads



Other Roads



SCALE

Plan



Profile: Horizontal



Profile: Vertical



Cross Sections

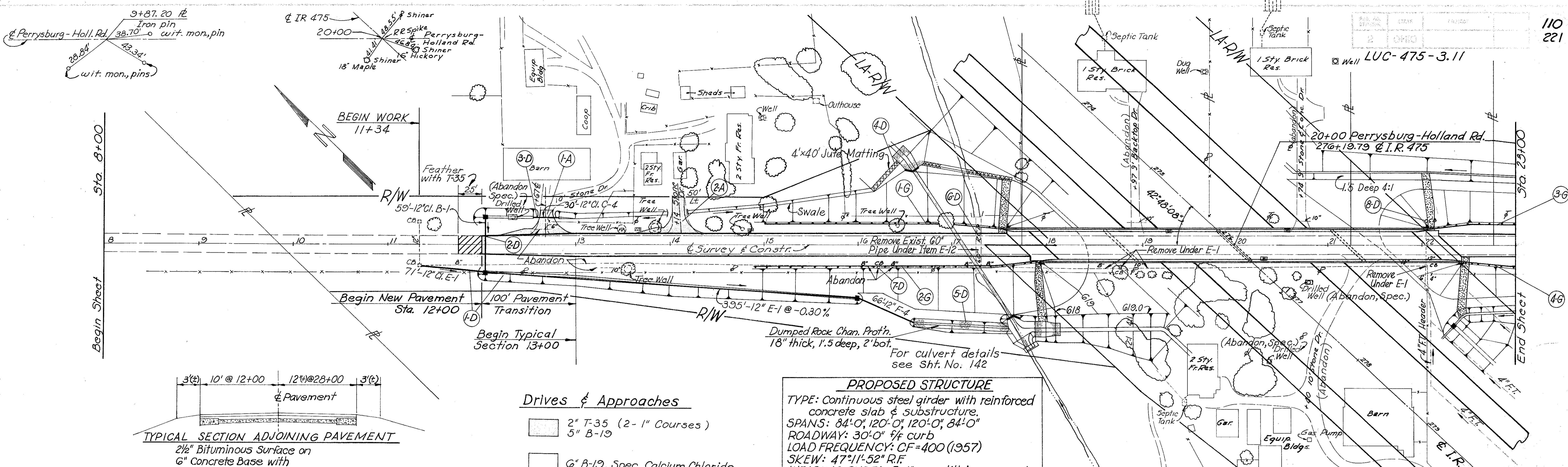


Specification No.	Date	Specification No.	Date
B01	9-2-65		
B06	3-3-66		
B08	2-7-66		
B11	3-29-65		
B25	4-22-65		
1001	3-21-66		
B04	2-21-66		
B28	3-21-66		

PLANS PREPARED BY
CHARLES L. BARBER & ASSOCIATES
CONSULTING ENGINEERS
TOLEDO, OHIOJuly 17, 1965
Date
SignatureDEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE



PROPOSED STRUCTURE

TYPE: Continuous steel girder with reinforced concrete slab & substructure.
SPANs: 84'-0", 120'-0", 120'-0", 84'-0"
ROADWAY: 30'-0" f/f curb
LOAD FREQUENCY: CF=400 (1957)
SKEW: 47°11'-52" R.F.
WEARING SURFACE: 1" monolithic concrete
APPROACH SLABS: 25'-0" long
ALIGNMENT: Tangent
SAFETY CURBS: 2'-3" each side

Bridge Limits
End Appr. Slab Sta. 17+92.44

650

640

630

620

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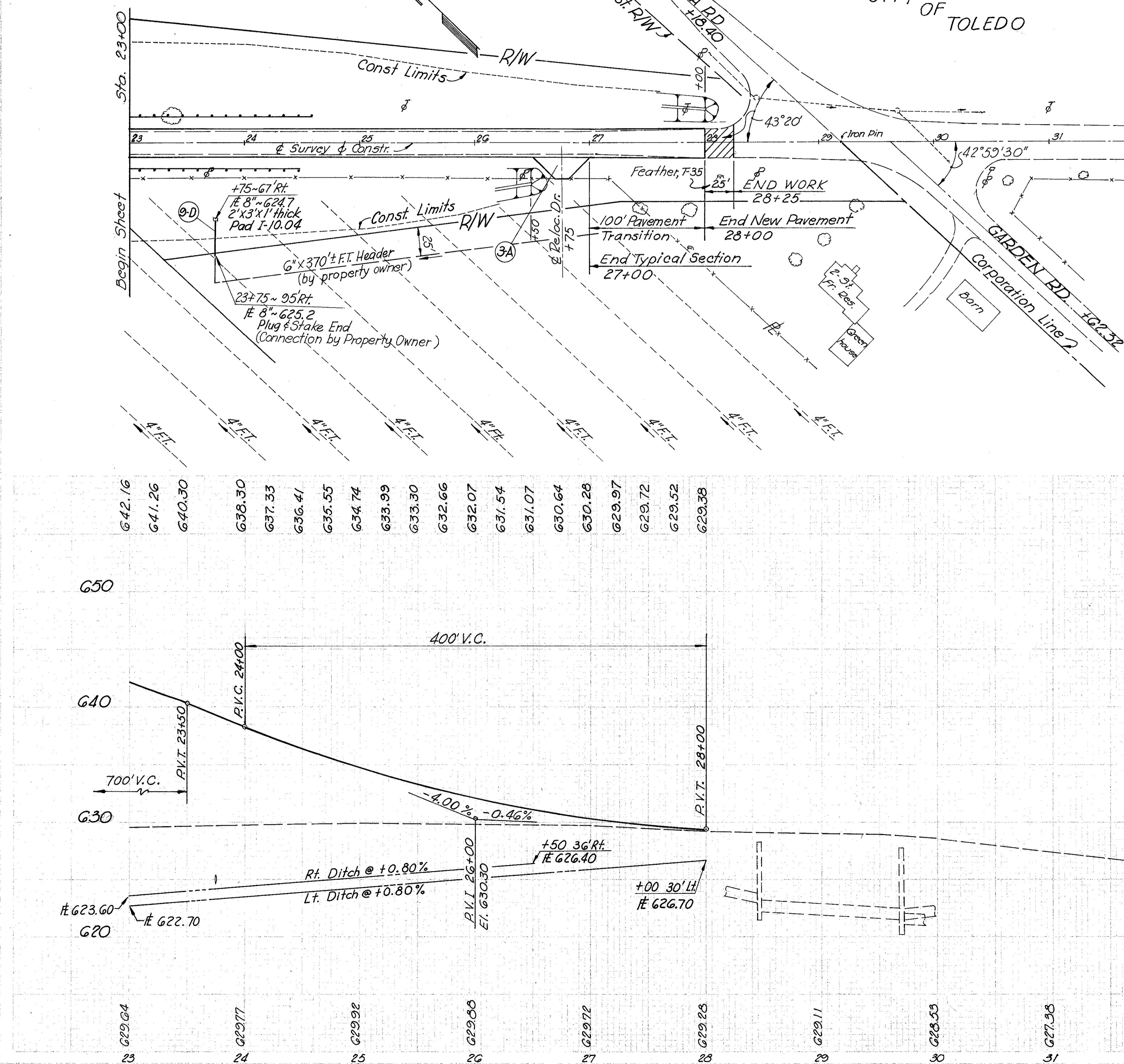
110
221

PERRYSBURG - HOLLAND RD. 8+00 - 23+00

2 OHIO
LUC-475-3.11

e Holland - Sylvania Rd.
"V" in B.M. 8150
Perryburg -
Holland Rd.
29+18.40 brass pin
e Garden Rd.
wit. Mon., pin
43.66' 43.92' 43.94' 43.95'

CITY OF TOLEDO



570.32+00

D DRAINAGE

Ref. No.	Station	Side	I-1	I-8	I-10	I-16	L120	E-12
			Cl.B-1 Cl.G4 Cl.E1 Cl.F-4 Std. * C.P. **	12" 12" 8" 12" 12" Catch Basin	Q.C. C.A.S.P. C.B. aband.	Each CY. SY. Each Sq.Yd.	Pipe Rem. over Joint Mating	Lin.Ft.
1-D 11+34	16+60	Rt.		166	66	1		
2-D 12+05	17+50	Lt.			2			
3-D 12+54	12+80	Lt.		30				
4-D 16+15	16+43	Lt.					18	
5-D 16+60	17+60	Rt.			33			
6-D 17+30		Rt.						G2
7-D 16+22		Rt.				1		
8-D 22+07		LT.				1		
9-D 23+75		Rt.		28	10	1		
Totals			59	30	28	166	10.66	3
					33	1	2	18

* * Crushed Aggr. Slope Prof'n.
* * Dm'd. Rock Chnl. Prof'n.

A DRIVES & APPROACHES

Ref. N°	Location	Side	B-19	T-30	T-35	Spec. Calc. Courses of Hrd
			5' 6" Gal/Sy	2-1" C.Y. Ton		
1-A 12+67	LT. 12'	11	32	5		
2-A 14+14	LT. 12'	14	39	6		
3-A 26+75	Rt. 12'			12	.04	
Totals			37	71	11	.04

ROADWAY

Ref. N°	Station or location	Side	E-1	E-8	I-15	Spec.
			Width	Width	Width	
	From To		Ft.	Ft.	Ft.	
	12+00 28+00		24	3026		
● 12+00	28+00		20		2060	
1-G 15+03.75	17+53.75	LT.				25000
2-G 14+90.50	17+90.50	RT.				30000
3-G 22+02.50	24+59.50	LT.				25000
4-G 22+46.25	24+46.25	RT.				20000
12+35 LT. 20+40 RT. 20+80 RT.						3
Totals			3026	2060	100000	3

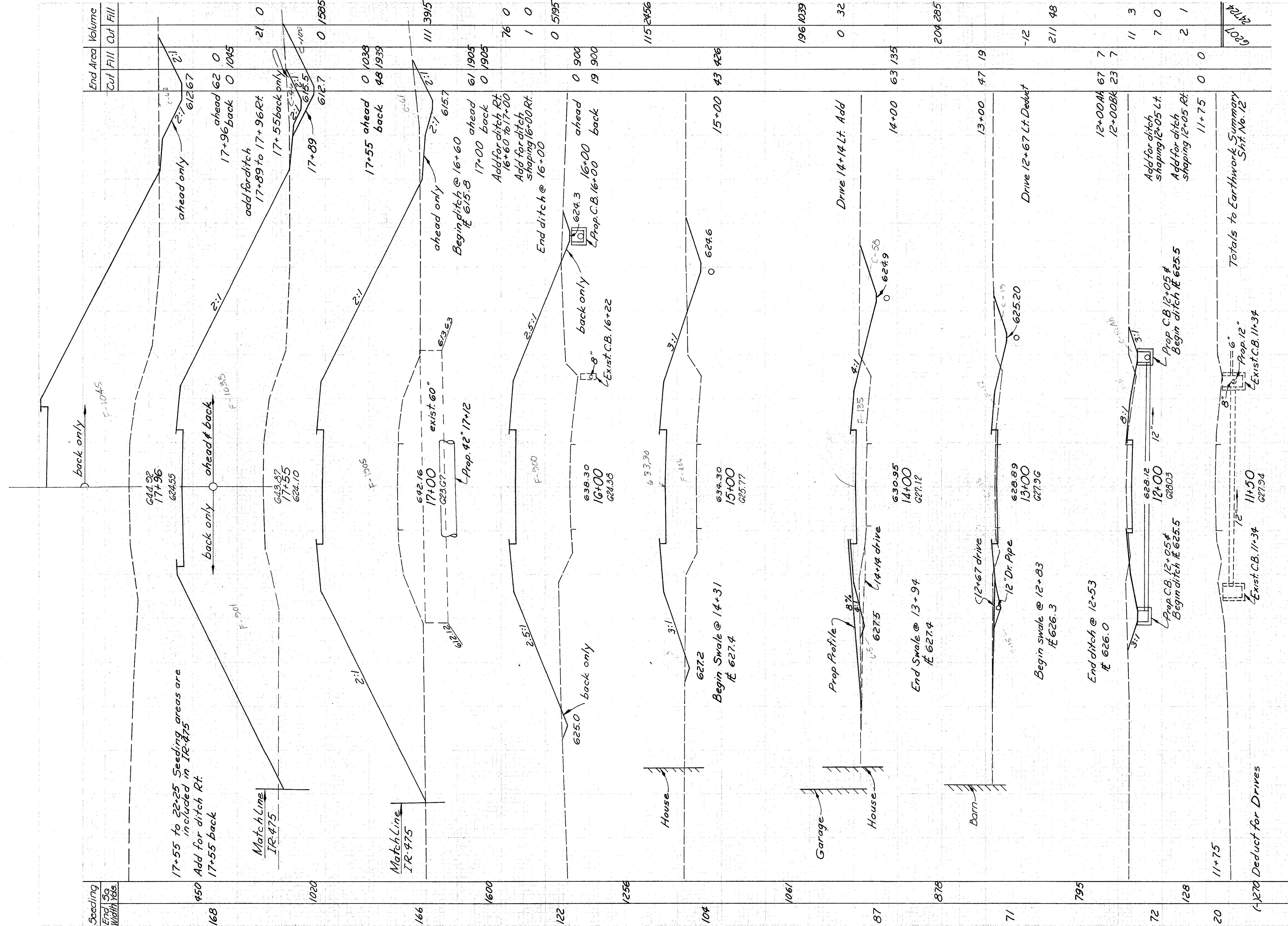
• EXISTING PAVEMENT REMOVED AND DISPOSED OF.

From Sta. To Sta. Lin. Ft.
 12+00 14+16 216
 17+89 22+11 422
 25+11 28+00 289
 Total Length 927

Width 20' x 927 ÷ 9 = 2060 Sq. Yds.

PAVEMENT

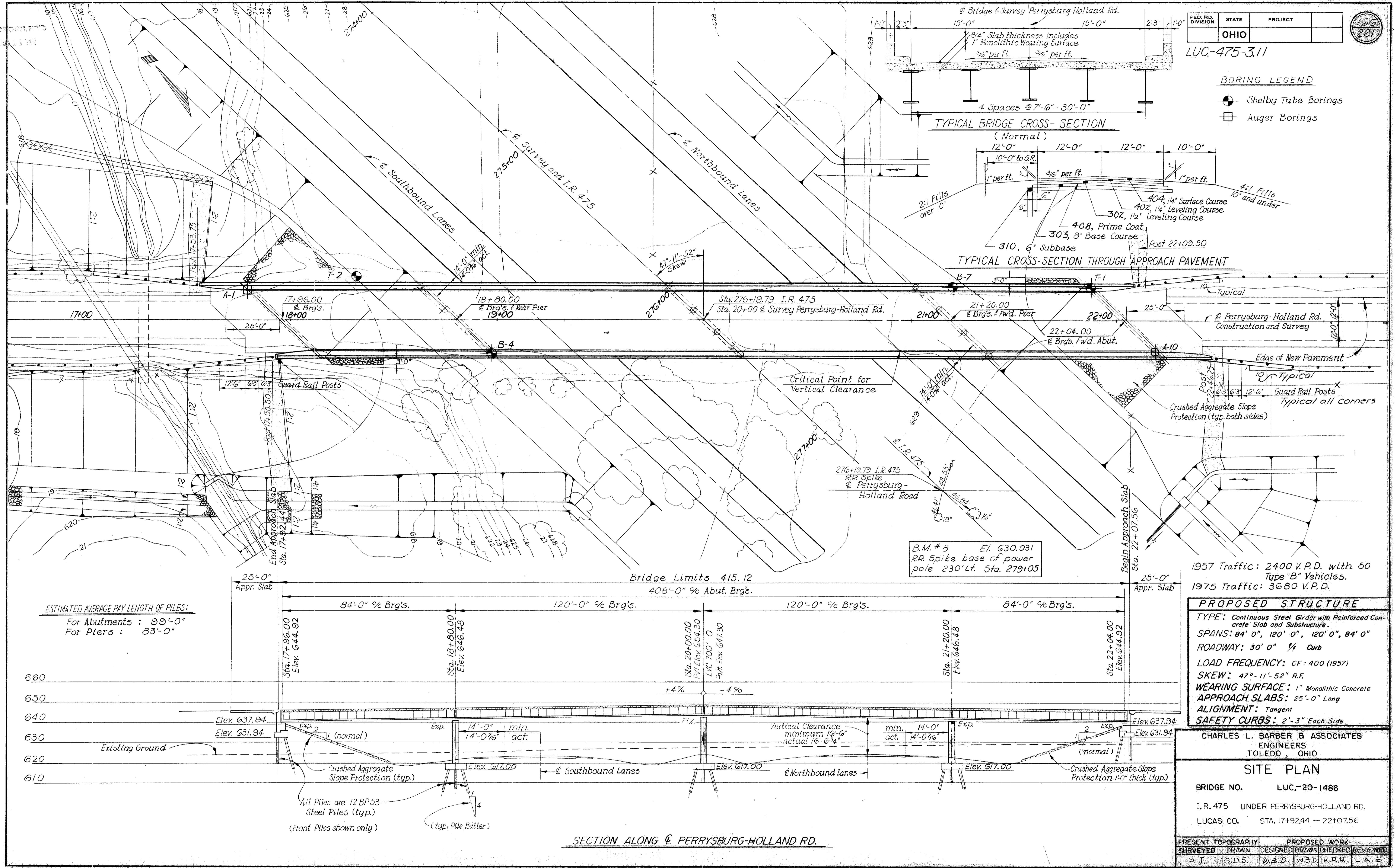
Station	B-20	B-35	I-7	I-22	T-30	T-35
	8" W.B. Mac. Level	1/4" 1 1/2" Appor. Slabs Screen	G" M-27 Subbase	Prime @ 0.4" Surface		
11+75 28+25	S.Y. 3152	C.Y. 231	S.Y. 176	C.Y. 576	C.Y. 1211	107



LUC-475-3.11

<img alt="Hand-drawn topographic map of LUC-475-3.11 showing contour lines, roads, and survey points. The map includes a legend for symbols like 'end ditch', 'spill thru', and 'Match Line'. A table at the bottom left provides survey data for points 684, 103, 542, 69, 1011, 113, 143, 145, 147, 162, 172, 175, 1872, 257, 258, 2622, 2644, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 2910, 2911, 2912, 2913, 2914, 2915, 2916, 2917, 2918, 2919, 2920, 2921, 2922, 2923, 2924, 2925, 2926, 2927, 2928, 2929, 2930, 2931, 2932, 2933, 2934, 2935, 2936, 2937, 2938, 2939, 2940, 2941, 2942, 2943, 2944, 2945, 2946, 2947, 2948, 2949, 2950, 2951, 2952, 2953, 2954, 2955, 2956, 2957, 2958, 2959, 2960, 2961, 2962, 2963, 2964, 2965, 2966, 2967, 2968, 2969, 2970, 2971, 2972, 2973, 2974, 2975, 2976, 2977, 2978, 2979, 2980, 2981, 2982, 2983, 2984, 2985, 2986, 2987, 2988, 2989, 2990, 2991, 2992, 2993, 2994, 2995, 2996, 2997, 2998, 2999, 29900, 29910, 29920, 29930, 29940, 29950, 29960, 29970, 29980, 29990, 29901, 29911, 29921, 29931, 29941, 29951, 29961, 29971, 29981, 29991, 29902, 29912, 29922, 29932, 29942, 29952, 29962, 29972, 29982, 29992, 29903, 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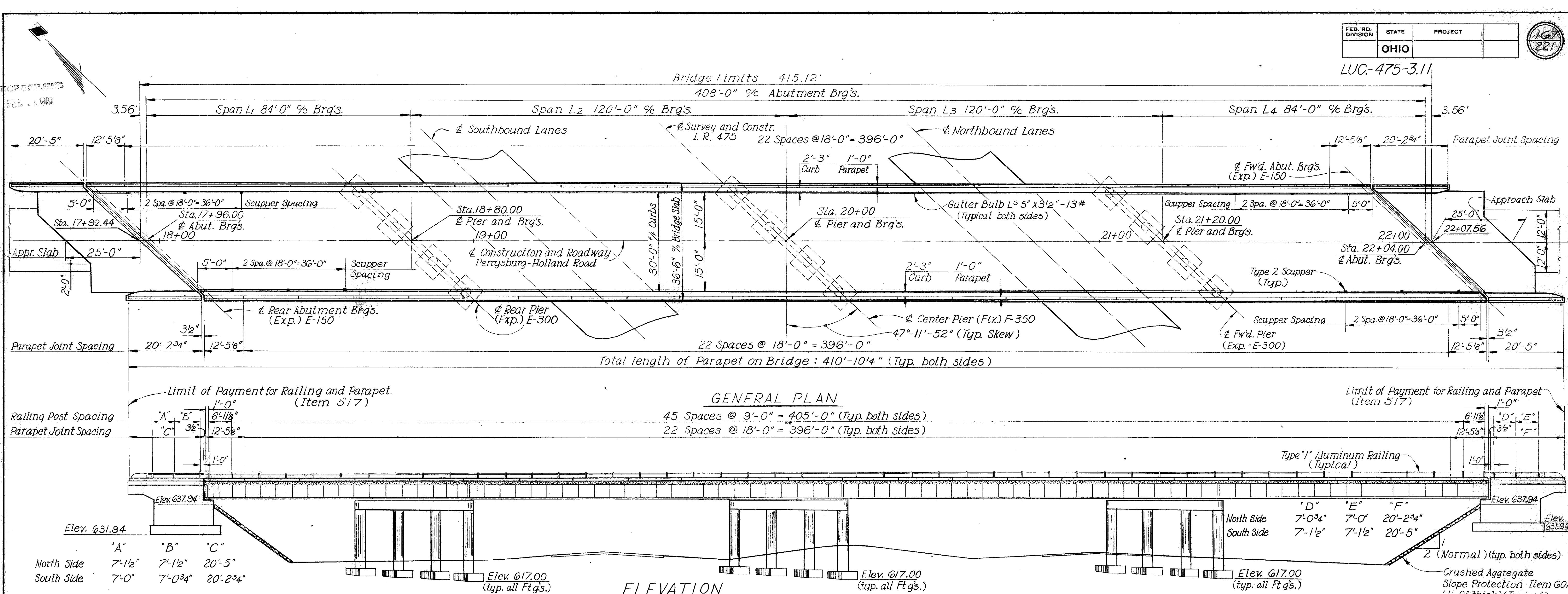
PERRYSBURG - HOLLAND RD. 22+04 to 28+00



FED. RD.
DIVISION
STATE
OHIO

167
221

LUC-475-3.11



* The pile test load and one or more subsequent test loads shall be applied if and where directed by the Engineer.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GENERAL	AS BUILT
503	836	Cu.Yds	Unclassified Excavation.			513	323	
505	Lump	Sum	First Test Pile				Lump	
511	542	Cu.Yds	Class "C" Concrete - Superstructure.	542				
511	109	Cu.Yds	Class "C" Concrete - Pier Caps and Columns.			109		
511	248	Cu.Yds	Class "E" Concrete - Abutments.			248		
511	108	Cu.Yds	Class "E" Concrete - Pier Footings.			108		
808	542	Units	Water-Reducing Set-Retarding Admixture.	542			E-11 -293	1.49
509	(193,451)	Lbs.	Reinforcing Steel.	124,024	17,417	,52,010		
513	544,760	Lbs.	Structural Steel.	544,760				
514	544,760	Lbs.	Field Painting of Structural Steel.	544,760				
517	821.71	Lin.Ft.	Bridge Railing, Type I.	821.71				
825	2000	Sq.Yd.	Concrete surface treatment	1878	122			
506	Lump	Sum	Pile Test Load (*)				Lump	
506	1	Each	Subsequent Pile Test Load (*)			1		
507	9,740	Lin.Ft.	Steel Piles - 12 BP53			2,770	6,970	
518	12	Each	Scupper - including Supports.	12				
518	44	Cu.Yds.	Porous Backfill			44		
518	92	Lin.Ft.	6" Perforated Helical CMP, 707.06 including Specials.			92		
518	64	Lin.Ft.	6" Helical CMP, 707.06 non-perforated			64		
828	88	Lin.Ft.	Joint sealer (end dam)	88				
601	706	Sq.Yds	Crushed Aggregate Slope Protection.			706		

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 9-1-57, together with current revisions thereof.

Design Loading CF 400 (1957)
Concrete Class "C" Basic Unit Stress 1,333 p.s.i.
Concrete Class "E" Basic Unit Stress 1,133 p.s.i.
Structural Steel ASTM A36 - Basic Unit Stress 20,000 p.s.i.
A7 & A373 steel not permitted

Reinforcing Steel intermediate, or hard grade. Basic Unit Stress 20,000 p.s.i. except spiral reinforcement may be plain structural grade with Basic Unit Stress of 18,000 p.s.i.

REFERENCE DRAWINGS Reference shall be made to standard drawings BR-1-65, revised 11-24-65, SD-1-63, Sheets 2, 3 and 4 dated 11-12-63, FSB-1-62 revised 1-15-63, supplemental specifications 811 revised 3-29-63, 808 revised 2-7-66, 825 dated 4-22-65 and 828 dated 3-21-66.

UTILITY LINES All expense involved in relocation (installing) the affected utility lines shall be borne by the owners. The contractor and owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

HIGH-STRENGTH STEEL BOLTS In the final assembly of the parts to be bolted, drift pins shall be placed in a sufficient number of holes (not less than 25% for field erection) to provide and maintain accurate alignment of holes and parts, and sufficient bolts shall be installed and brought to a snug tight condition to bring the parts into complete contact. Bolts shall then be installed in any remaining open holes and tightened to a snug tight fit, after which all bolts shall be tightened completely by calibrated wrenches or by the turn-of-nut method. Drift pins shall then be replaced with bolts, tightened in the same manner.

EXCAVATION QUANTITY

The excavation quantity for the abutments includes the removal of fill material required for construction of the abutments.

WELDING Welding 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. Class "B" welds are shown thus .

DECK SLAB HAUNCH

A typical haunch width of 9" shall be used for computing a quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall not be more than 1:4 for a haunch less than 9" in width.

CONCRETE DECK PLACING

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

MACHINE FINISH

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

ERECTION PROCEDURE

Prior to ordering material for the superstructure, the contractor has to submit to the Director, for approval, three prints of his proposed erection procedure of the plate girder.

REINFORCING 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: A-700 is a No. 7 bar size and P-14S01 indicated a No. 14 size bar.

EMBANKMENT 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 abutments. The approach embankment shall be in place for a minimum period of 6 months prior to excavating for the abutments. If settlement readings indicate that all settlements have ceased the waiting period may be shortened with the approval of the Director.

CHARLES L. BARBER & ASSOCIATES
ENGINEERS
TOLEDO, OHIO

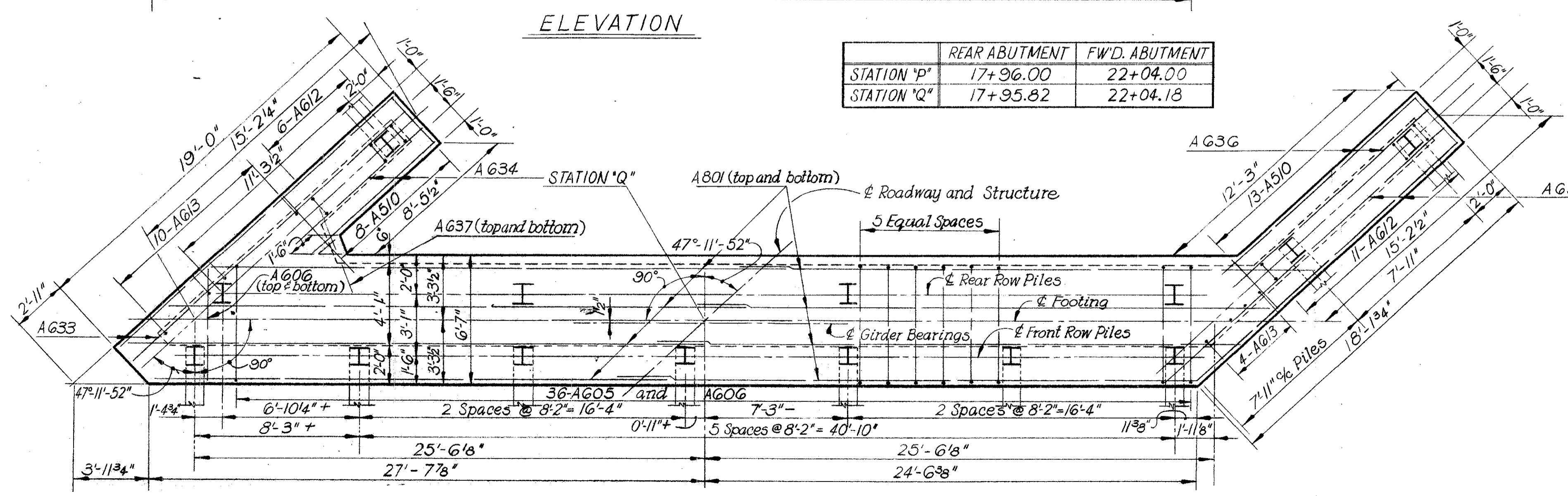
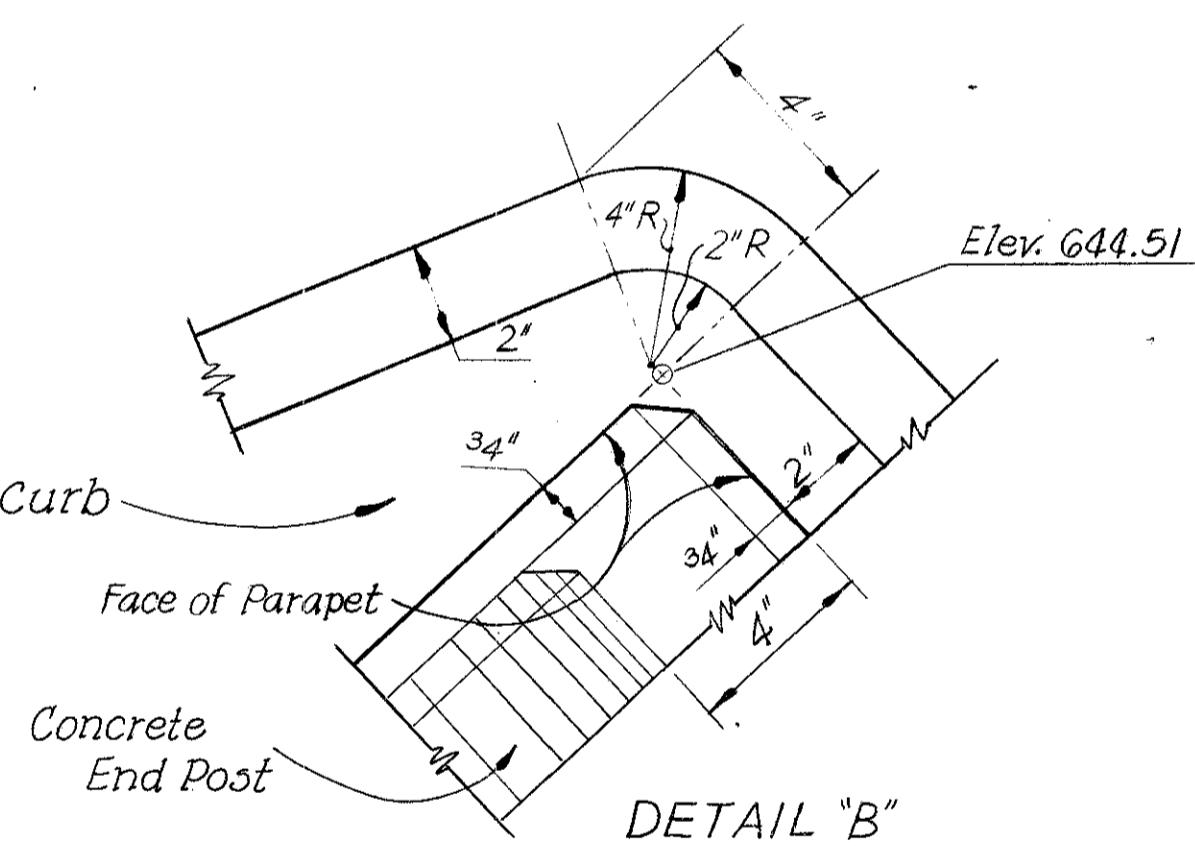
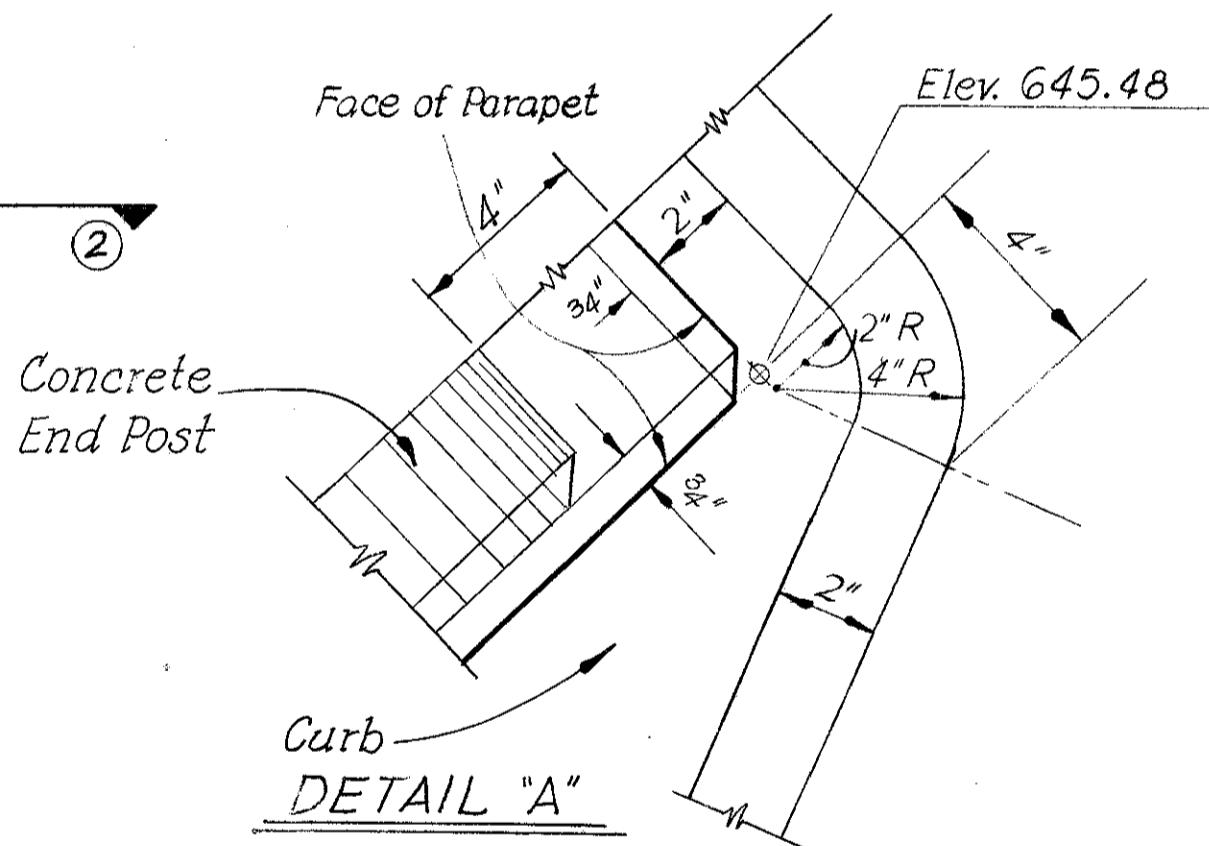
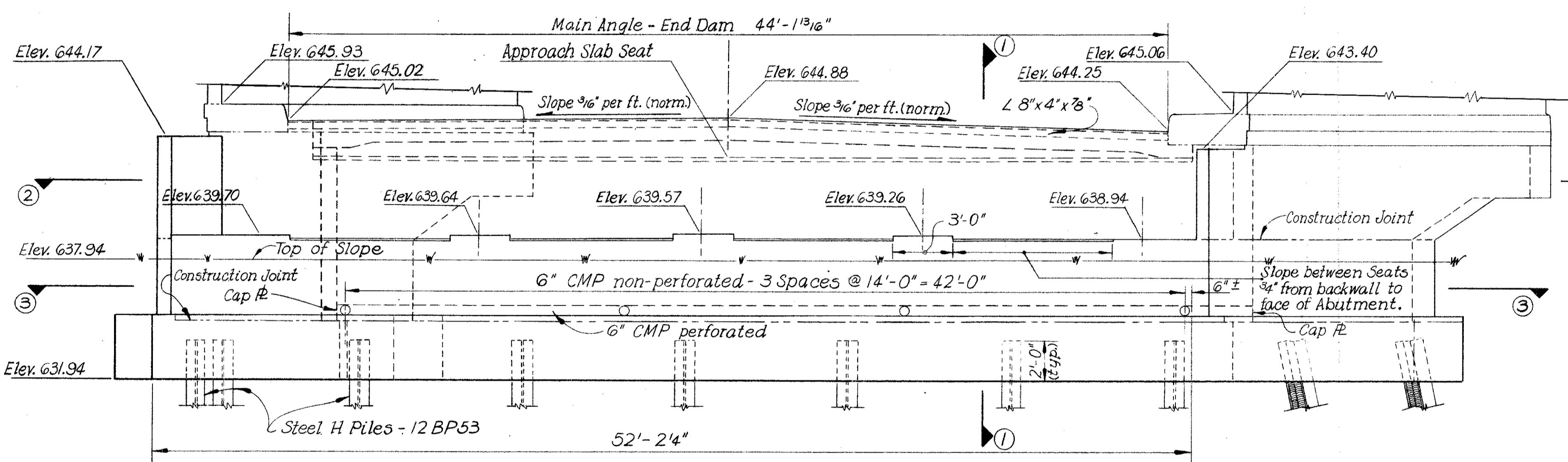
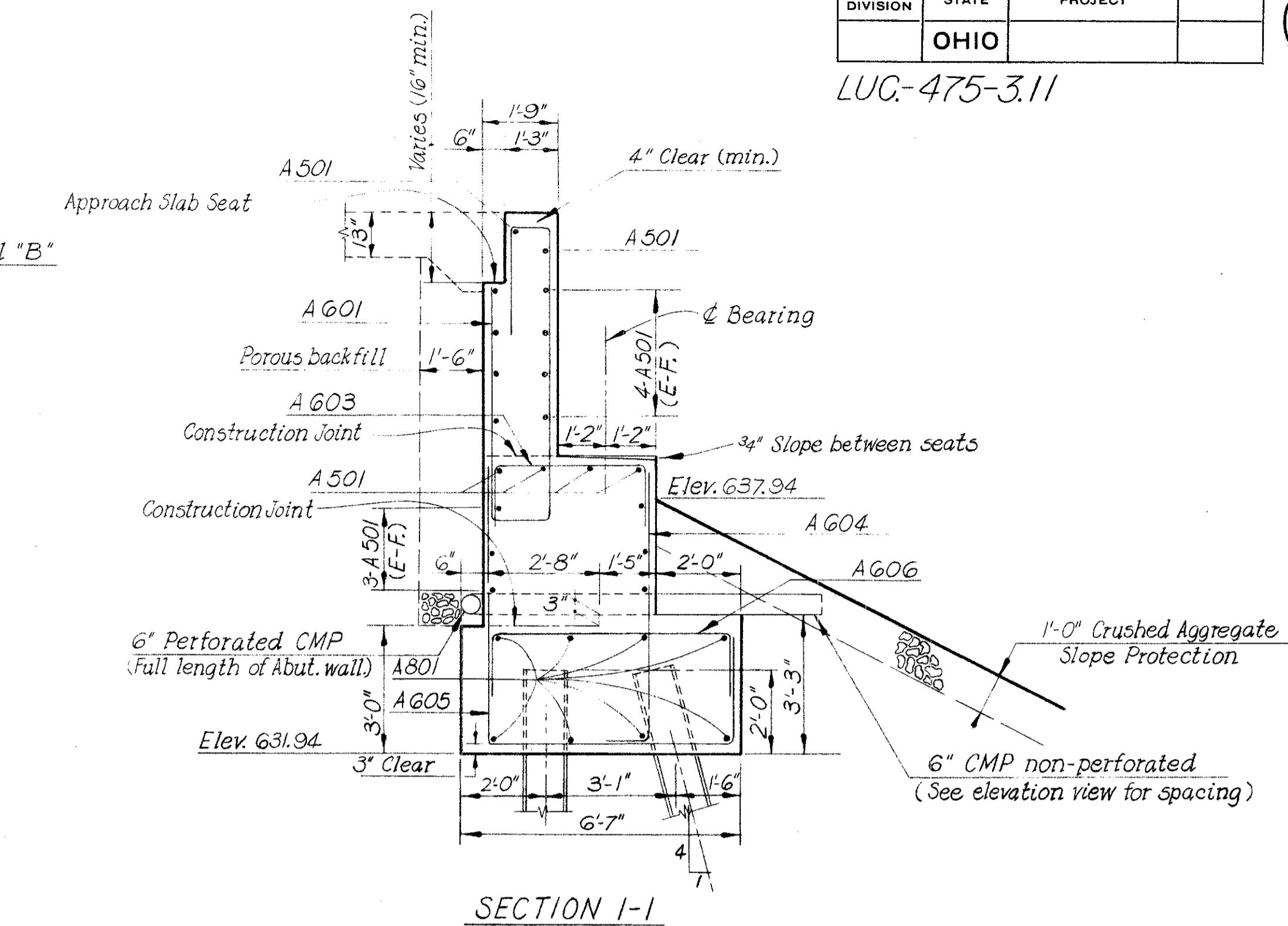
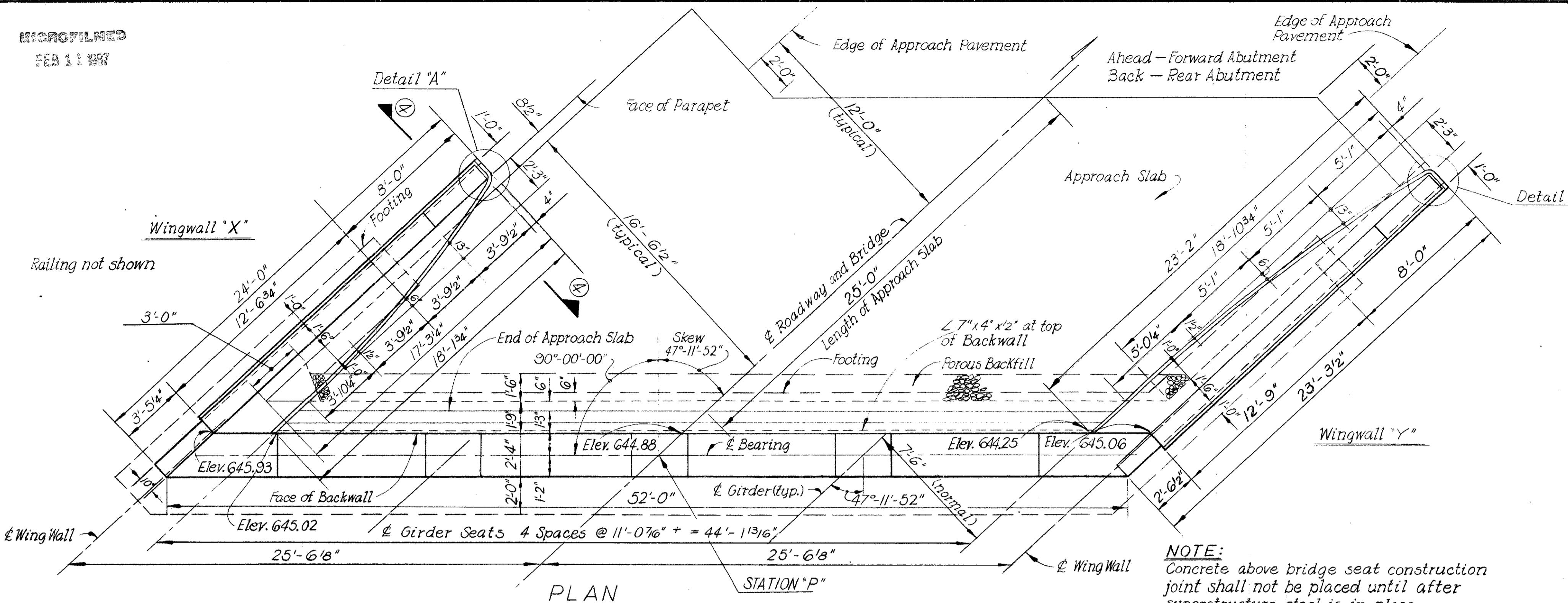
GENERAL PLAN & ELEVATION

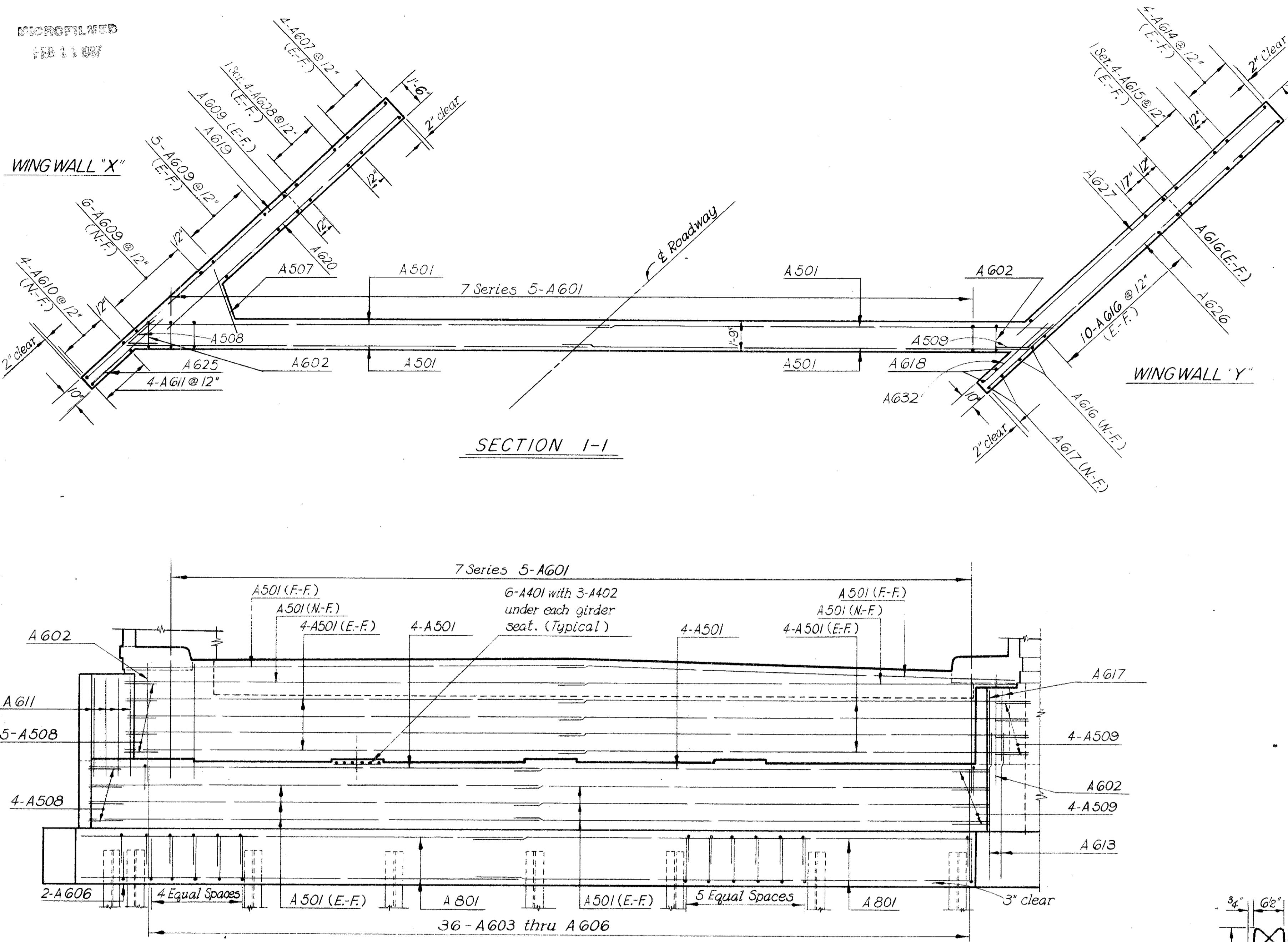
BRIDGE NO. LUC-20-1486

I.R.475 UNDER PERRYSBURG-HOLLAND RD.

LUCAS CO. STA.17-29.69 - 22-07.31

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.B.D	W.B.D	A.F.M	K.R.R	L.A.B	7-20-65	8-26-65

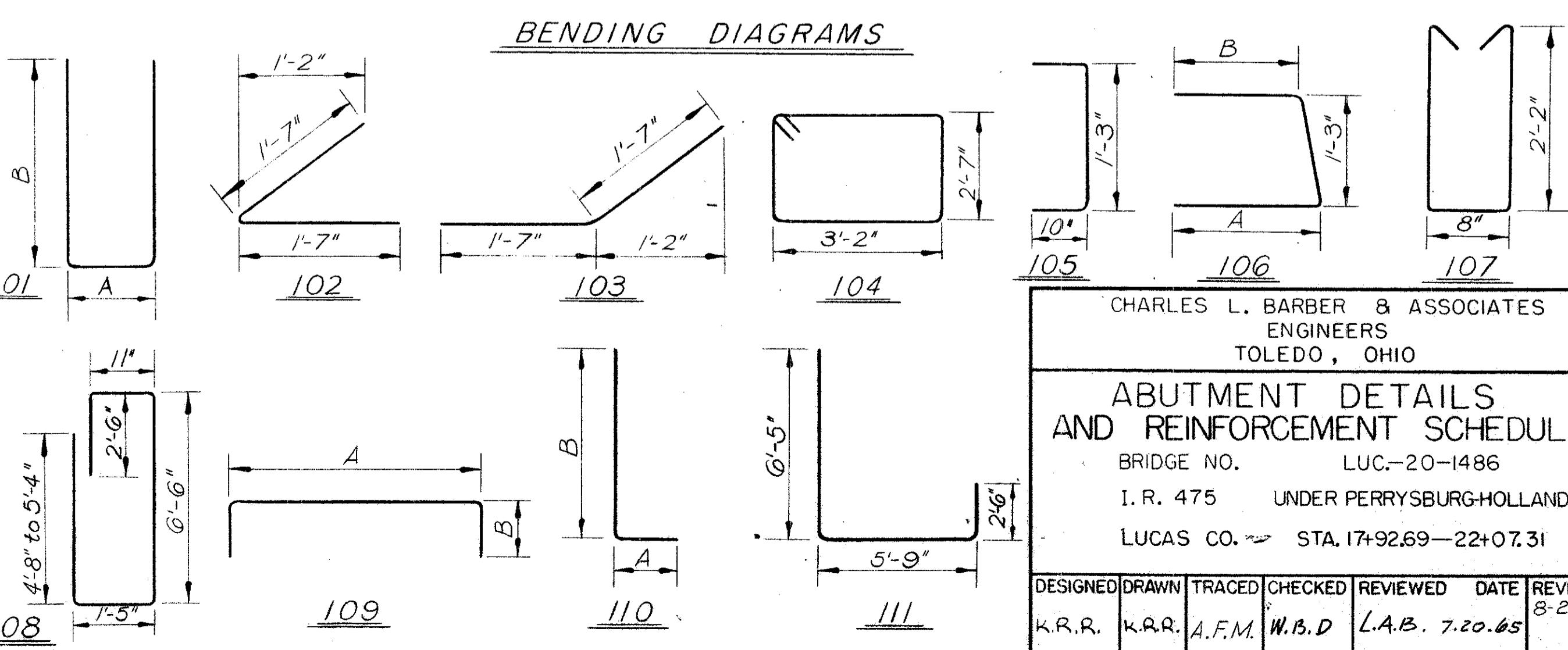




REINFORCEMENT SCHEDULE																			
MARK	NUMBER	LENGTH	TYPE	DIMENSION		SER. INC.	WEIGHT (POUNDS)	MARK	NUMBER	LENGTH	TYPE	DIMENSION		SER. INC.	WEIGHT (POUNDS)				
				A	B							A	B						
A401	60	2'-0"	Str.					80	A607	16	3'-11"	Str.			94				
A402	30	2'-8"	Str.					54	A608	4 Ser. 4	4'-0" to 5'-6"	Str.			114				
R503	12	4'-2"	113					***	A609	36	6'-4"	Str.			342				
R504	8	5'-4"	112					***	A610	8	5'-1"	Str.			61				
A501	80	27'-2"	Str.					2266	A611	8	6'-1"	Str.			73				
A502	8	15'-8"	Str.					131	A612	34	18'-6"	101	1'-2"	8'-8"	945				
A503	8	9'-7"	Str.					80	A613	28	9'-8"	110	1'-0"	8'-8"	407				
A504	8	6'-6"	Str.					54	A614	16	3'-3"	Str.			78				
A505	8	15'-0"	Str.					125	A615	4 Ser. 4	3'-4" to 4'-7"	Str.			95				
A506	8	11'-3"	Str.					94	A616	48	5'-5"	Str.			391				
A507	16	4'-3"	Str.					71	A617	4	4'-3"	Str.			26				
A508	18	3'-2"	102					59	A618	4	5'-3"	Str.			32				
A509	16	3'-2"	103					53	A619	6	23'-8"	Str.			213				
A510	42	12'-6"	104					548	A620	6	17'-7"	Str.			158				
-A511	42	2'-11"	105					128	A621	2	19'-0"	Str.			57				
A512	14	6'-3"	106	2'-7"	2'-5"			91	A622	2	12'-11"	Str.			39				
A513	2 Ser. 3	4'-9" to 5'-9"	106	1'-10" to 2'-4"	1'-8" to 2'-2"	6"		33	A623	2	17'-0"	Str.			51				
A514	2 Ser. 3	2'-9" to 4'-1"	106	0'-10" to 1'-6"	0'-8" to 1'-4"	8"		21	A624	2	10'-11"	Str.			33				
A515	2 Ser. 4	4'-11" to 5'-11"	106	1'-11" to 2'-5"	1'-9" to 2'-3"	4"		45	A625	10	6'-9"	Str.			101				
A516	2 Ser. 4	2'-7" to 4'-7"	106	0'-9" to 1'-9"	0'-7" to 1'-7"	8"		30	A626	4	23'-0"	Str.			138				
A517	56	6'-0"	107					350	A627	4	19'-3"	Str.			110				
A518	4	20'-2"	Str.					84	A628	2	18'-10"	Str.			57				
A519	4	17'-10"	*					74	A629	2	15'-1"	Str.			45				
A520	4	20'-4"	Str.					85	A630	2	16'-7"	Str.			50				
A521	4	22'-10"	*					95	A631	2	12'-10"	Str.			39				
R501	8	19'-11"	Str.					***	A632	8	4'-5"	Str.			53				
R502	8	20'-1"	Str.					***	A633	6	18'-8"	Str.			168				
A601	14 Ser. 5	16'-0" to 16'-8"	108					2'	A634	6	8'-10"	Str.			80				
A602	4	14'-9"	101	1'-5"	6'-8"			89	A635	6	17'-9"	Str.			160				
A603	72	6'-9"	109	3'-9"	1'-6"			730	A636	6	13'-1"	Str.			118				
A604	72	7'-5"	110	1'-0"	6'-5"			802	A637	4	4'-0"	Str.			24				
A605	72	14'-8"	111					1586	A638	32	29'-1"	Str.			2485				
A606	76	8'-9"	109	5'-9"	1'-6"			999							TOTAL POUNDS 17,417				

* Curved to lie within curb.
** Horizontal reinforcement in concrete parapet is included with railing for payment. (Item 517)

For Replacement Bar Schedule, see sheet No. 172



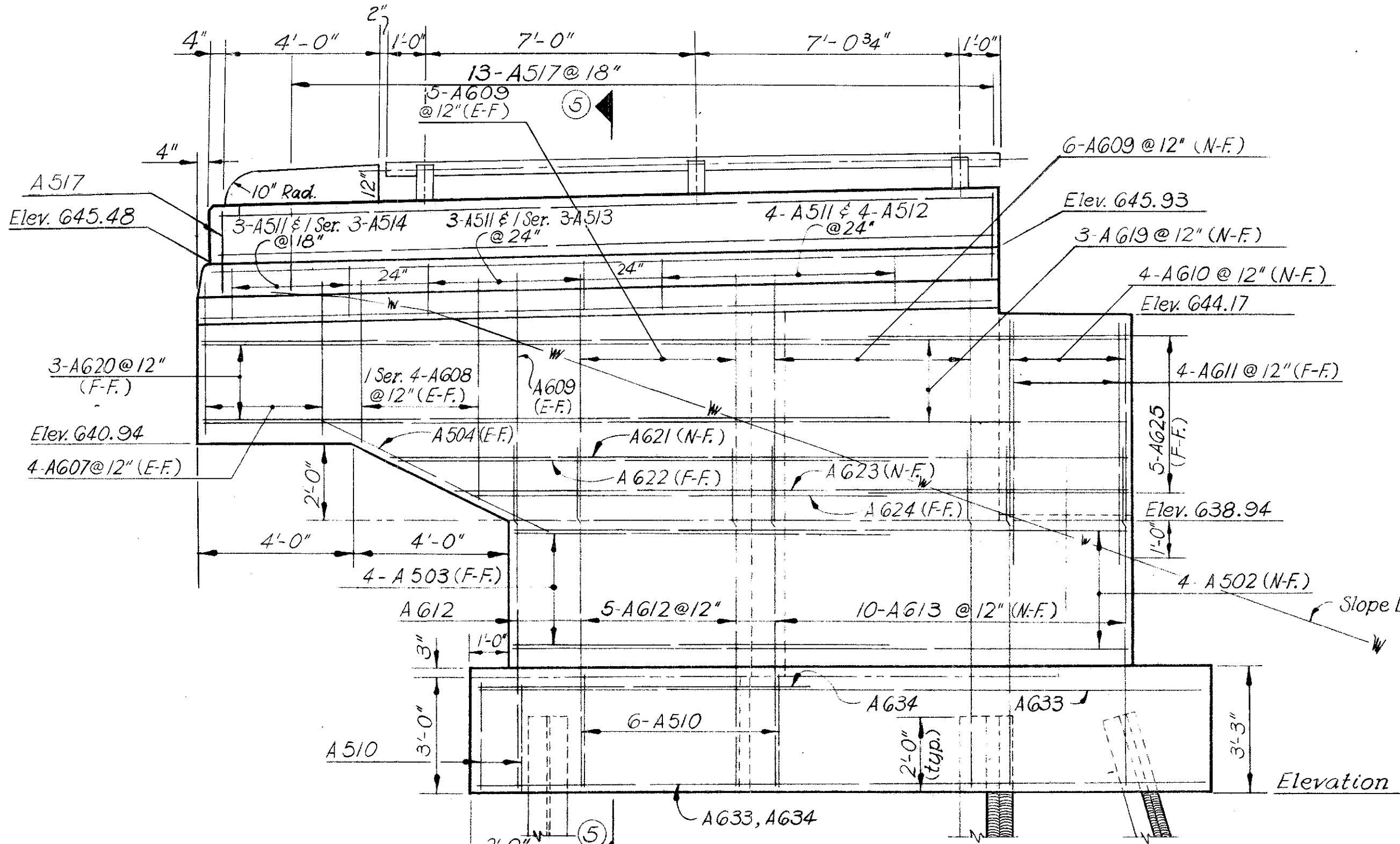
MICROFILMED
LEO BIEBER

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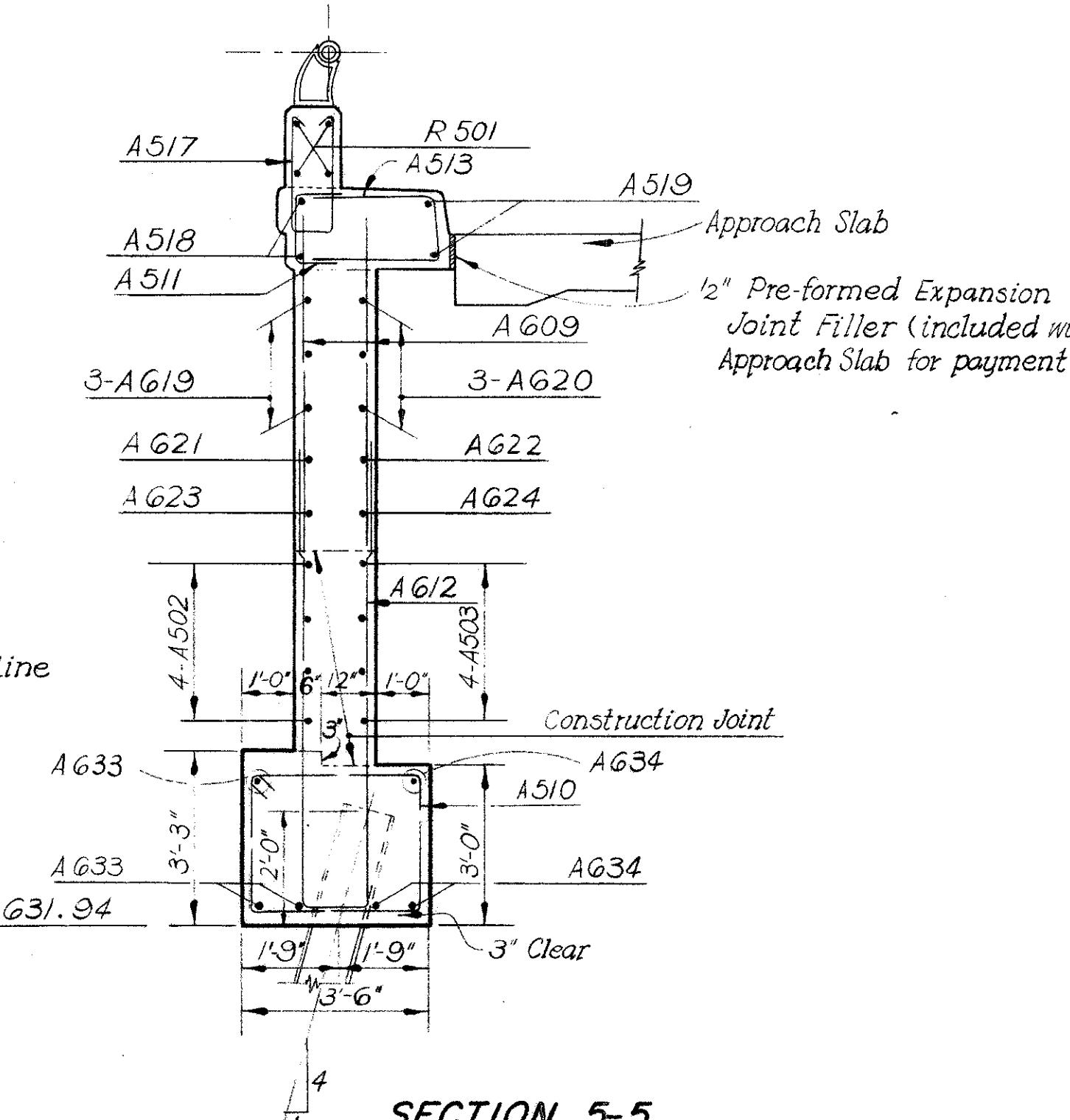
FED. RD. DIVISION	STATE	PROJECT	
	OHIO		

70
21

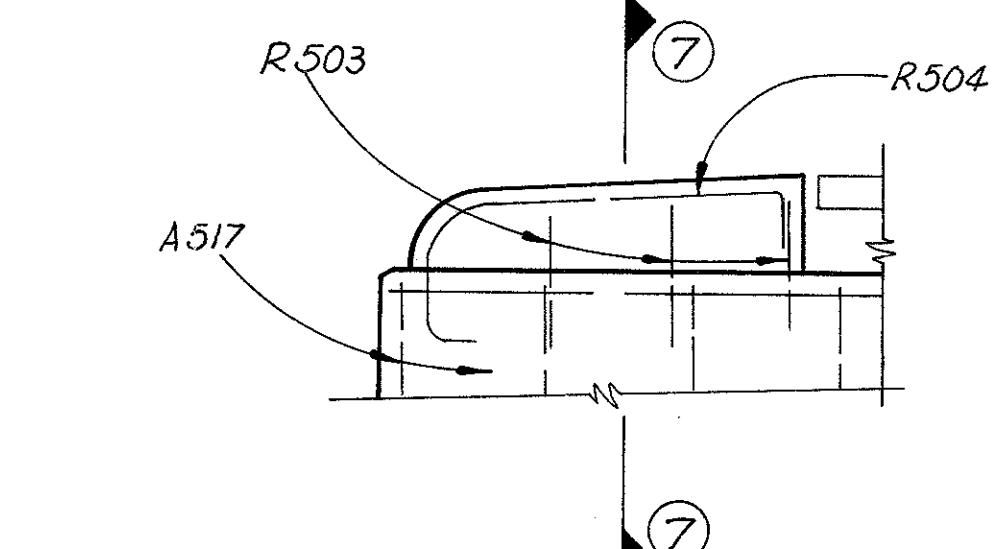
LUC-475-3.11



ELEVATION WING WALL "X"
(SHOWING REINFORCEMENT)



SECTION 5-5

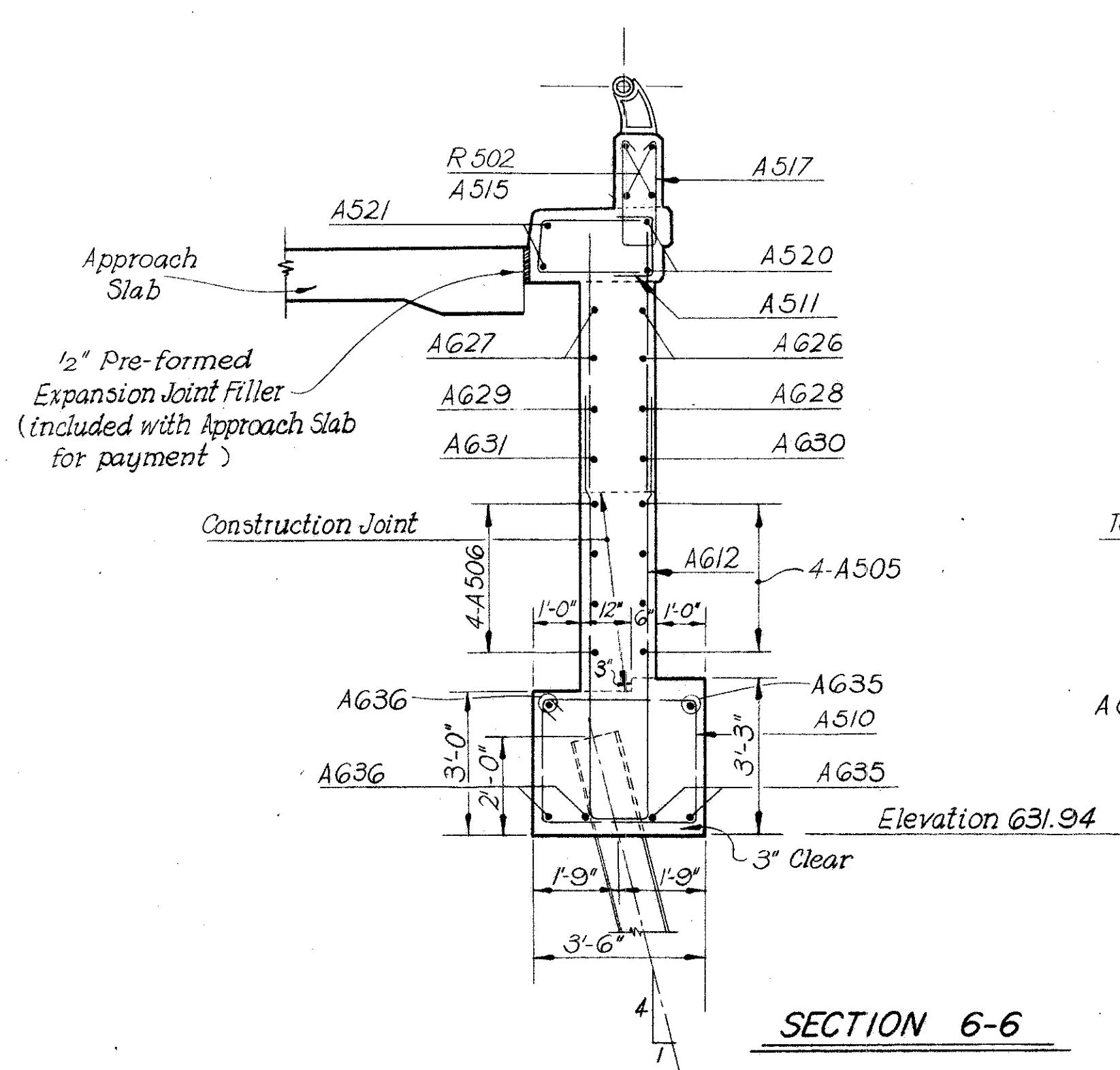


CONCRETE END-POST DETAIL

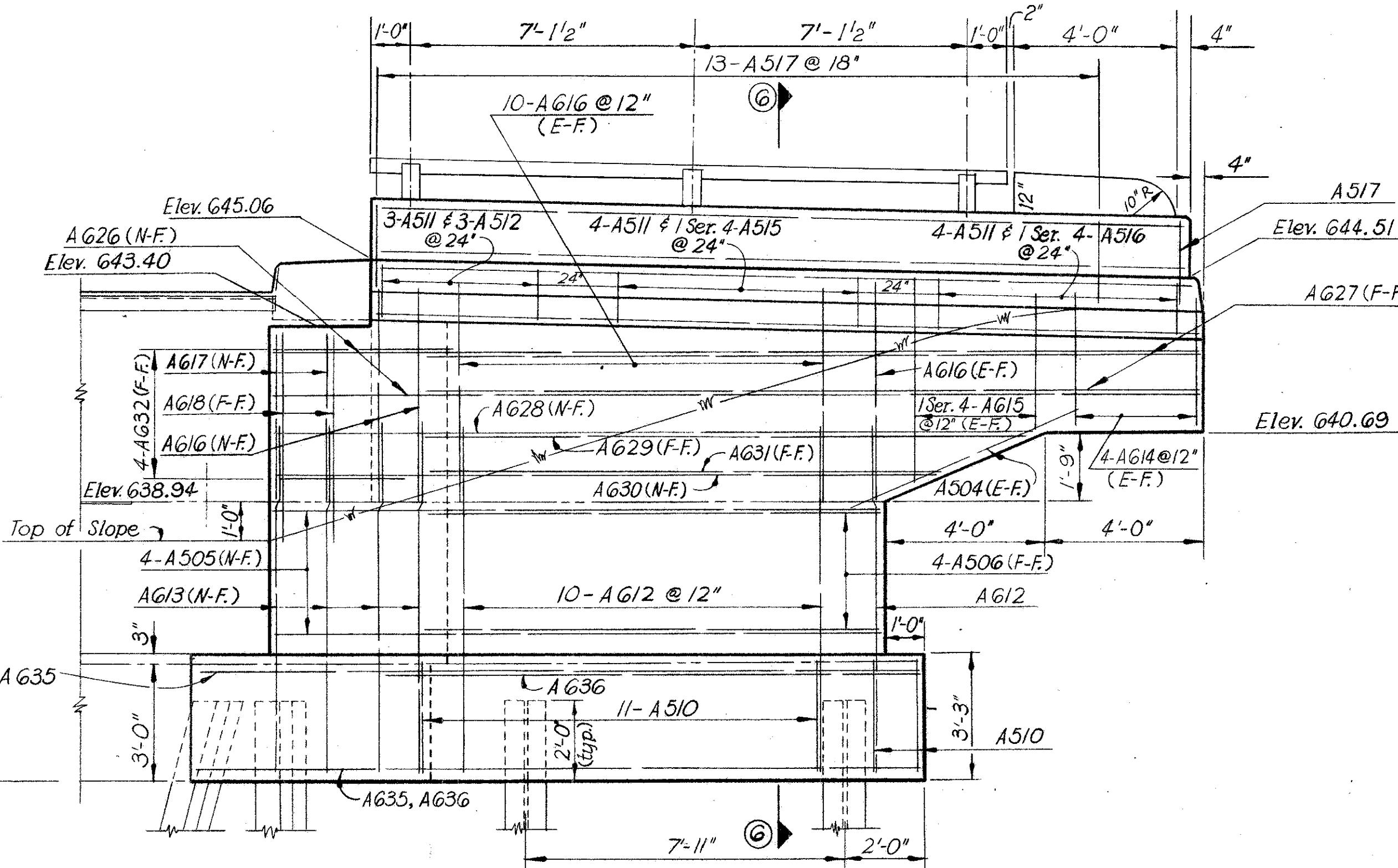
SECTION 7-7

NOTES:

1. Reinforcement bars shall clear the face of Concrete by 2 inches, unless otherwise noted.
 2. The contractor shall exercise special care in the placement of bridge seat reinforcing steel so as to clear the anchor rod locations at girder locations.
 3. Porous backfill, 1'-6" thick, full length of abutment back wall shall extend up to the underside of the approach slab. Excavation therefor in excess of that required for construction of the footing shall be considered as paid for in the bid price per cu. yd. paid for porous backfill, Item 518.
 4. All piles shall be 12BP53 Steel H piles.
 5. Batter in piles where shown shall be 1/in 4 normal.
 6. N-F. denotes Near Face.
 7. F-F. denotes Far Face.
 8. E.F. denotes Each Face.
 9. For other details, see sheet No. 168
 10. For Reinforcement Schedule, see sheet No. 169



SECTION 6-6



ELEVATION WING WALL
(SHOWING REINFORCEMENT)

CHARLES L. BARBER & ASSOCIATES
ENGINEERS
TOLEDO, OHIO

ABUTMENT DETAILS

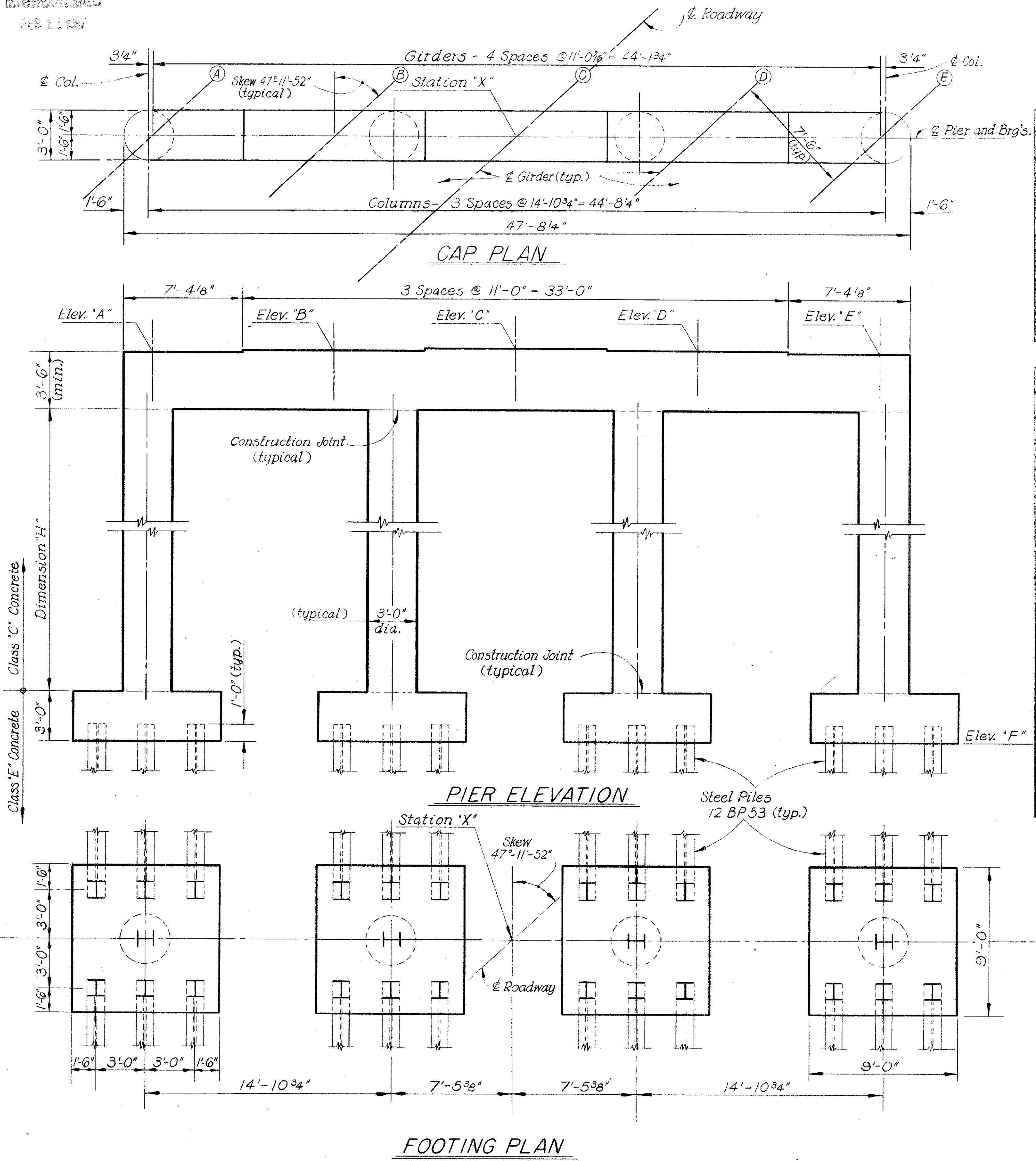
BRIDGE NO. LUC. 20-1486

I.R. 475 UNDER PERRYSBURG-HOLLAND RD.

LUCAS CO. STA. 17+92.69 — 22+07.31

SIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.R.	K.R.R.	A.F.M.	W.B.O.	L.A.B. 7.20.65		8-26-65

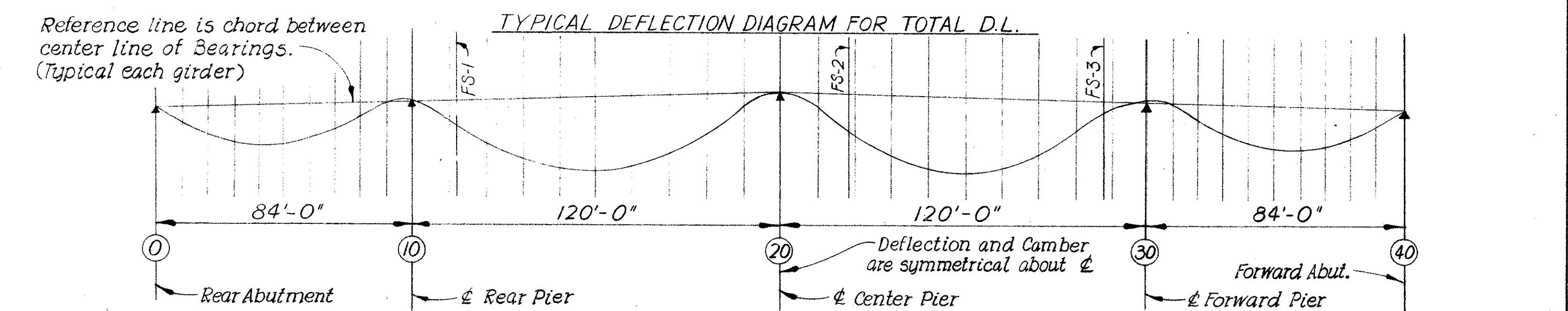
LUC-475-3.11



	ELEV. 'A'	ELEV. 'B'	ELEV. 'C'	ELEV. 'D'	ELEV. 'E'	ELEV. 'F'	Station 'X'	Dimension "H"
Rear Pier	640.53	640.77	641.00	640.99	640.97	617.00	18+80.00	17'-0⅜
Center Pier	641.16	641.29	641.40	641.29	641.16	617.00	20+00.00	17'-8"
Forward Pier	640.97	640.99	641.00	640.77	640.53	617.00	21+20.00	17'-0⅜

DEFLECTION AND CAMBER SCHEDULE (IN INCHES) - (FOR TENTH POINTS OF SPANS)																					
EXTERIOR GIRDER																					
1	2	3	4	5	6	7	8	9	10	11	FS-1 (FS-3)	12	13	14	15	16	17	18	FS-2	19	20
Deflection due to Steel Weight.	1/16"	1/8"	3/16"	3/16"	1/8"	1/16"	1/32"	0	0	3/32"	5/32"	1/4"	3/8"	1/2"	7/16"	1/32"	3/8"	3/32"	3/16"	1/16"	0
Deflection due to remaining D.L.	5/32"	5/16"	3/8"	1/32"	3/8"	9/32"	3/16"	1/16"	0	0	7/32"	5/16"	9/16"	13/16"	1/32"	3/4"	7/16"	3/8"	1/8"	0	
Deflection due to total D.L.	3/8"	7/16"	2/16"	5/8"	3/16"	1/4"	1/4"	1/16"	0	0	5/16"	1/2"	13/16"	1/2"	17/16"	1/8"	5/8"	9/16"	3/6"	0	
Camber required for convexity.	1/2"	13/16"	1"	13/16"	1/4"	1/32"	1/16"	0	1/2"	1/8"	1/96"	2"	25/16"	27/16"	23/16"	19/16"	13/16"	0			
Sum of total D.L. deflection and convexity.	7/8"	1/4"	19/16"	1/516"	1/32"	17/16"	1/4"	3/4"	3/8"	0	9/16"	1/58"	23/8"	33/16"	31/16"	4/8"	35/16"	23/16"	2/8"	1"	0
Camber required.	7/8"	1/4"	19/16"	1/516"	1/32"	17/16"	1/4"	3/4"	3/8"	0	9/16"	1/58"	23/8"	33/16"	31/16"	4/8"	35/16"	23/16"	2/8"	1"	0

INTERIOR GIRDER																						
1	2	3	4	5	6	7	8	9	10	11	FS-1 (FS-3)	12	13	14	15	16	17	18	FS-2	19	20	
Deflection due to Steel Weight.	1/16"	1/8"	3/16"	3/16"	1/8"	1/16"	1/32"	0	0	3/32"	5/32"	1/4"	3/8"	1/2"	7/16"	1/32"	3/8"	3/32"	3/16"	1/16"	0	
Deflection due to remaining D.L.	1/8"	14"	5/16"	3/8"	5/16"	1/4"	1/8"	1/16"	0	0	1/8"	1/4"	7/16"	23/32"	7/8"	15/16"	27/32"	5/8"	3/8"	5/16"	1/8"	0
Deflection due to total D.L.	3/16"	38"	1/2"	9/16"	1/2"	38"	3/16"	1/8"	0	0	1/4"	3/8"	11/16"	1/16"	13/8"	1/38"	15/16"	1/1"	9/16"	12"	3/16"	0
Camber required for convexity.	1/2"	13/16"	1"	13/16"	1/4"	1/32"	1/16"	0	1/2"	1/8"	1/96"	2"	25/16"	27/16"	23/16"	19/16"	13/16"	0				
Sum of total D.L. deflection and convexity.	11/16"	19/16"	1/2"	13/4"	13/4"	19/16"	13/16"	13/16"	38"	0	3/4"	1/2"	21/4"	31/16"	31/16"	33/4"	33/16"	24"	21/16"	1/1"	0	
Camber required.	11/16"	19/16"	1/2"	13/4"	13/4"	19/16"	13/16"	13/16"	38"	0	3/4"	1/2"	21/4"	31/16"	31/16"	33/4"	33/16"	24"	21/16"	1/1"	0	



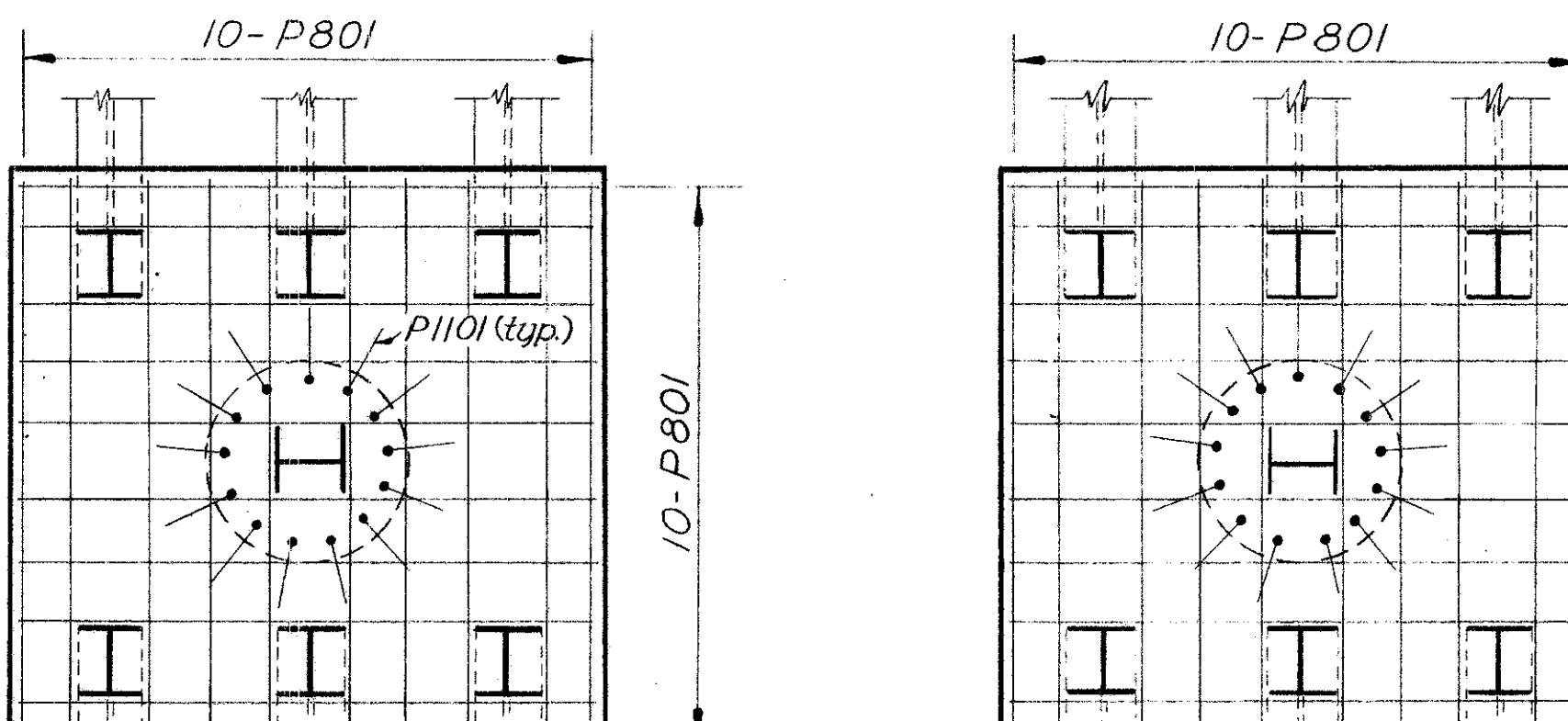
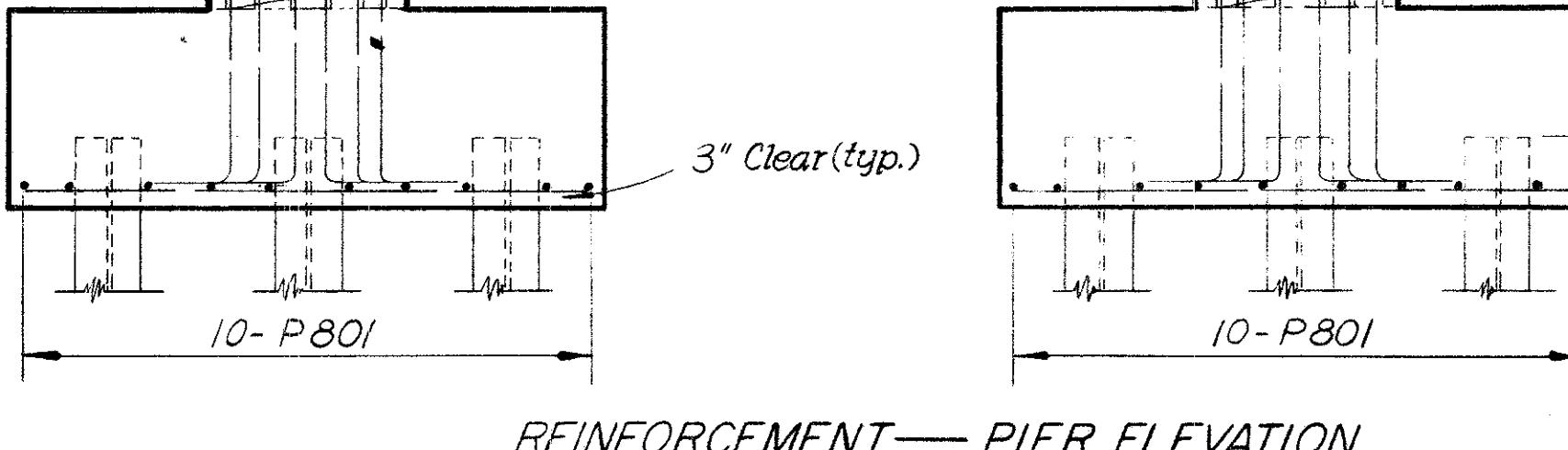
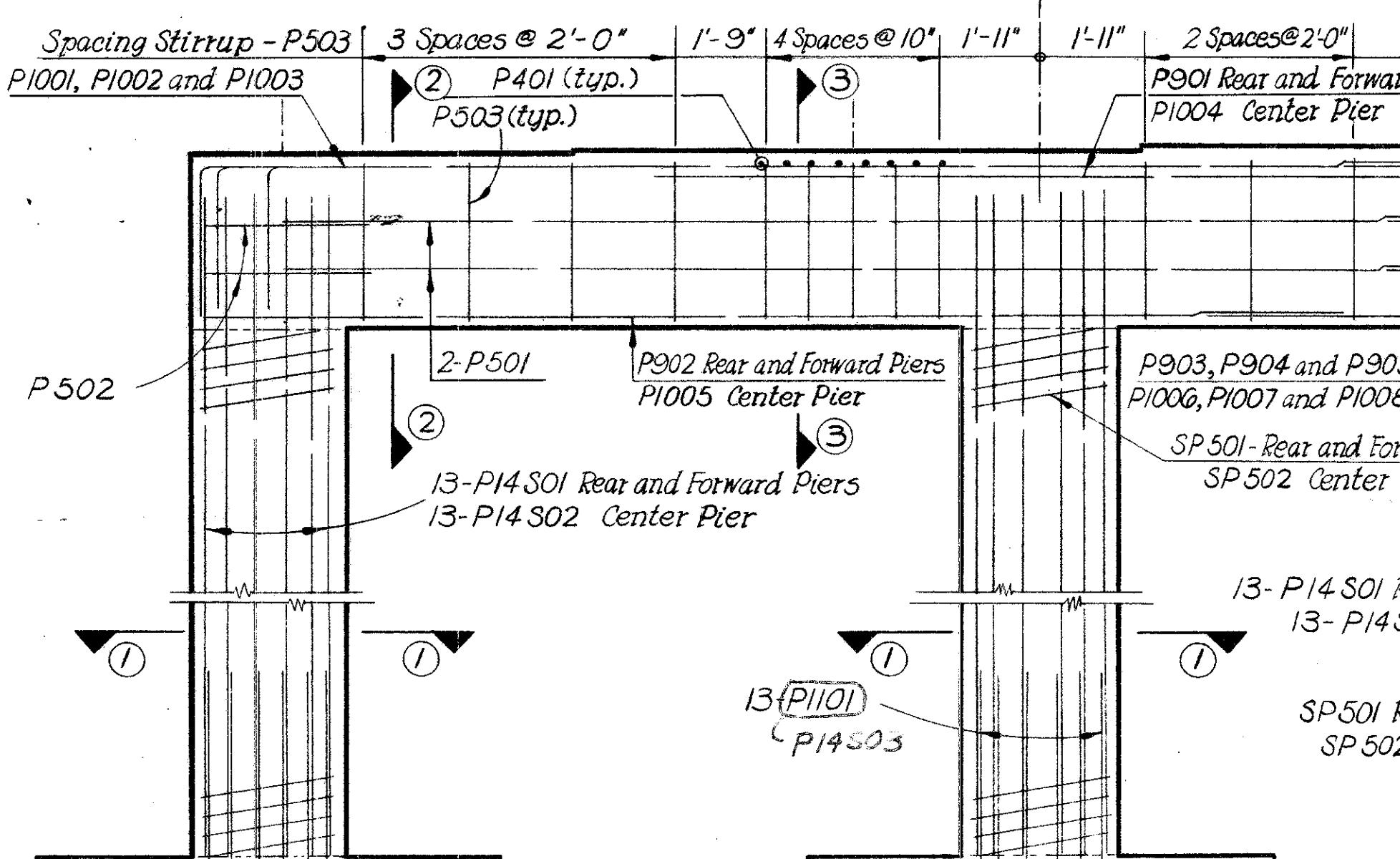
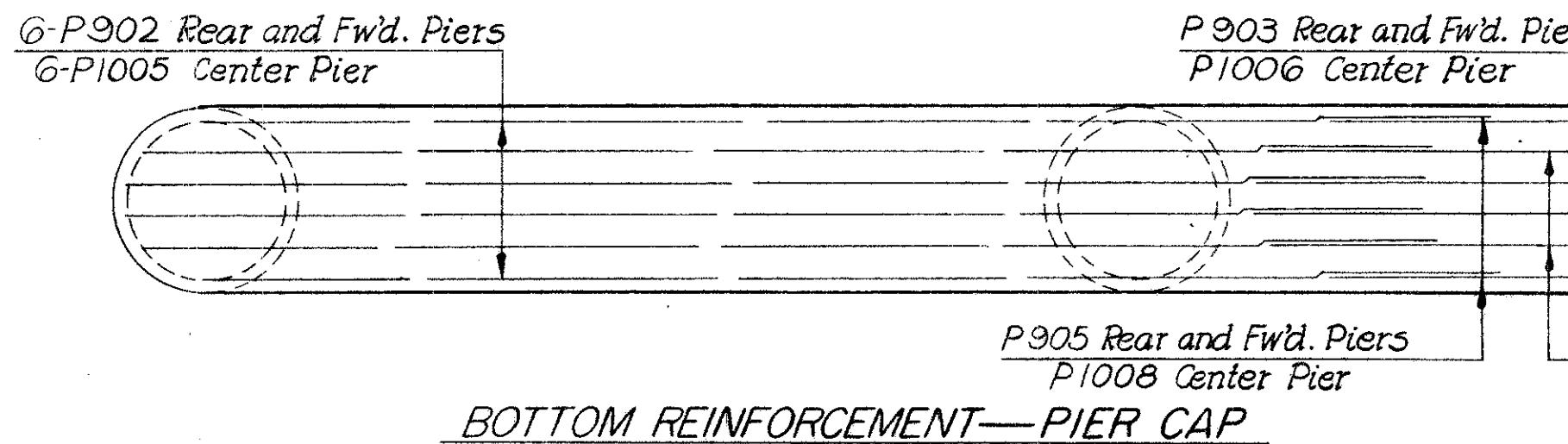
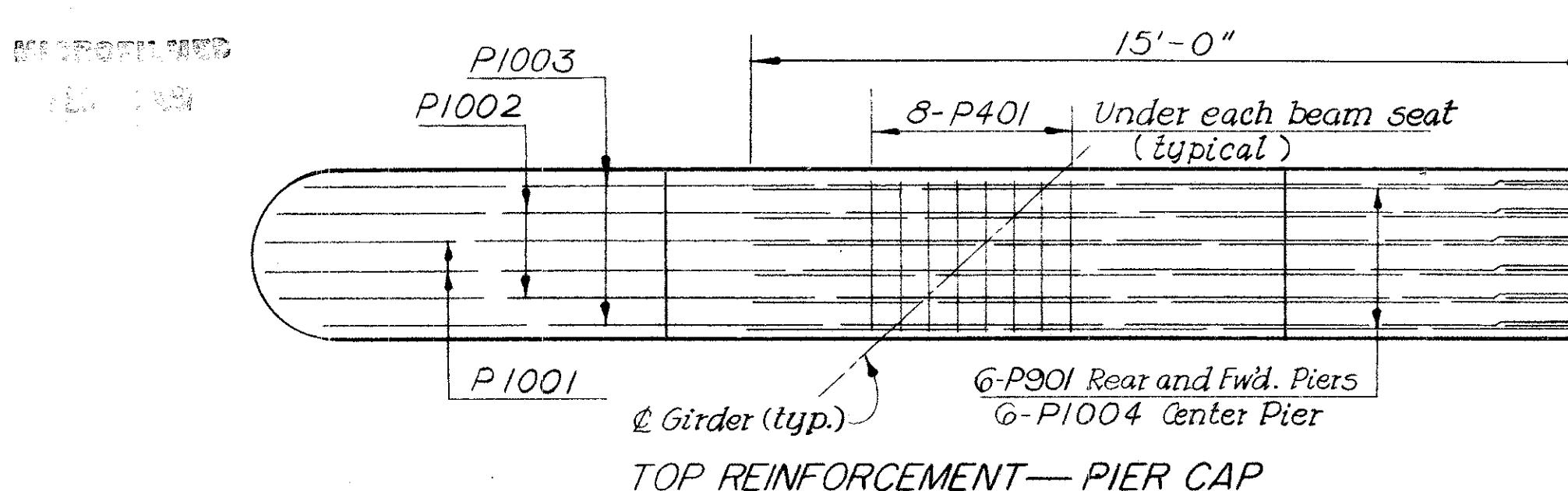
STRUCTURAL NOTES

- All intermediate stiffeners shall have contact bearing with the compression flange of the girder, but may have a clearance of not more than 1/8" from the tension flange. In shop painting, care shall be taken to make certain that paint is forced through from one side to the other of the 1/8" opening.
- For Expansion and Fixed Bearing, see Std. Dwg. FSB-162 revised 1-15-63. They are included in Item 513 of the Estimated Quantities for Payment.
- Material dimensions are common to top and bottom of girder.
- All shop welding shall be Class "A" welding and shall conform with A.W.S. specifications.
- Bulb Angle Gutter, including supports, splices, bolts and welds, are included in Item 513 of the Estimated Quantities for Payment.
- Shop Web Splices may be located as required by available plate length, and should be controlled in the same manner as the Shop Flange Splices. If additional Shop Splices are necessary, their location and detail shall be submitted to the Director for approval prior to ordering the material and shall conform with shown details for "Joint Preparation for Submerged Arc Weldments" on sheet 173.
- All Scuppers shall be in accordance with those for a Type 2 Scupper for a Monolithic Wearing Surface on Std. Dwg. SD-163, dated 11-12-63.

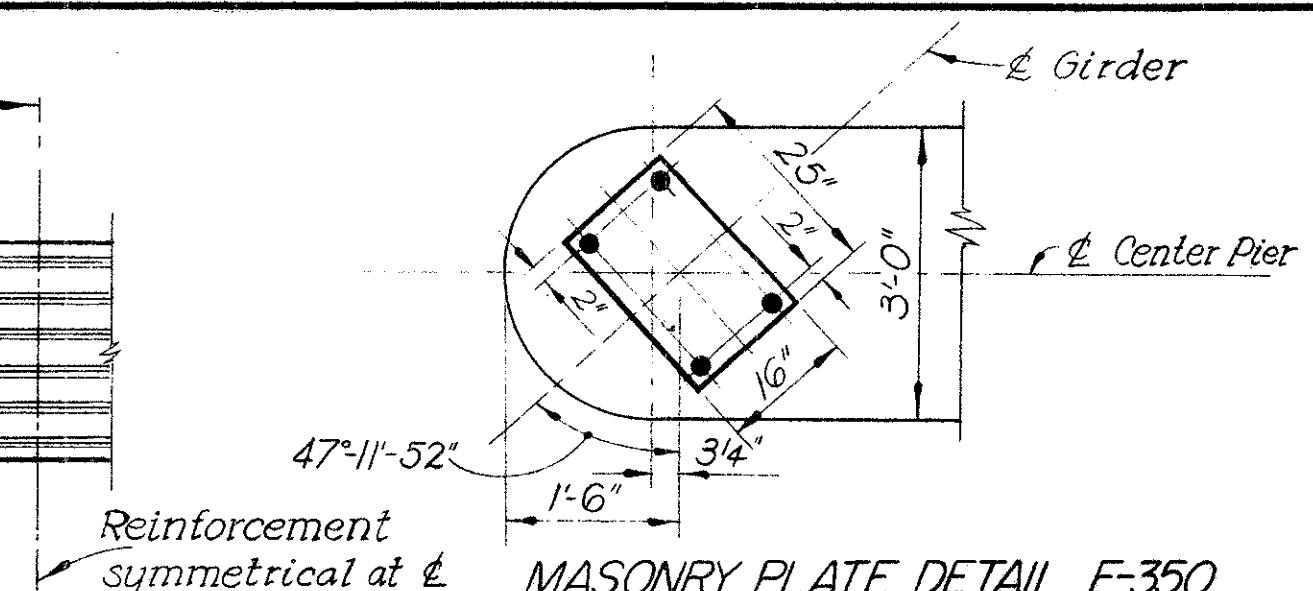
For Pier Reinforcement Details,
See Sheet No. 172

PIER GEOMETRY, CAMBER DIAGRAM & STRUCTURAL NOTES				
BRIDGE NO. LUC-20-1486				
I. R. 475 UNDER PERRYSBURG-HOLLAND RD.				
LUCAS CO. STA. 17+92.69—22+07.31				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE REVISED
W.B.O	W.B.D	A.F.M	K.R.R	L.A.B. 7-20-65

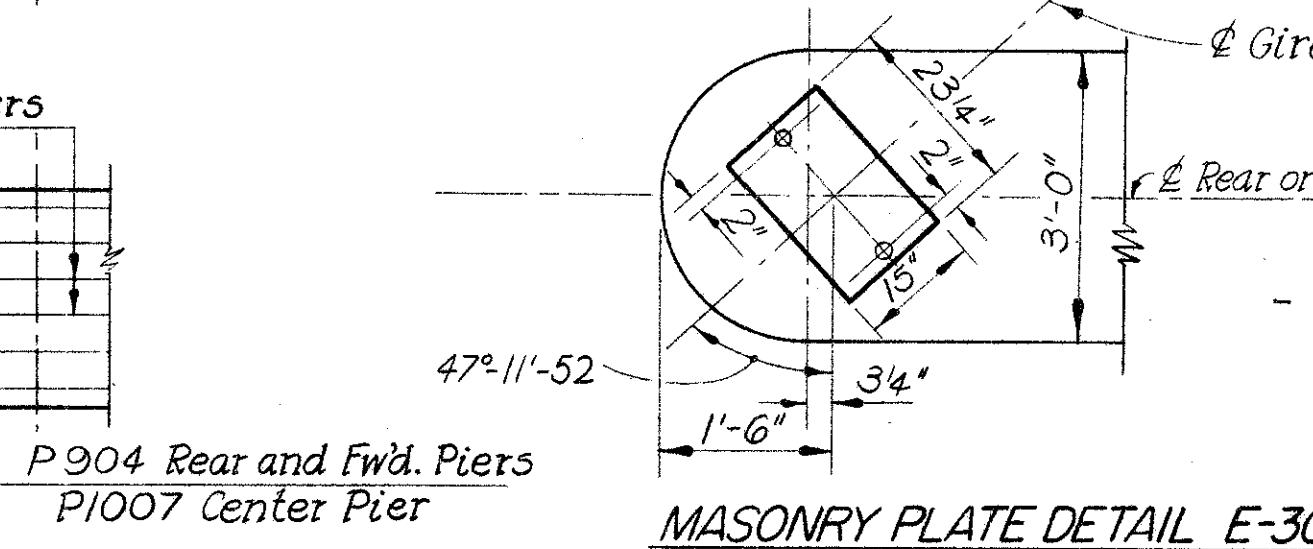
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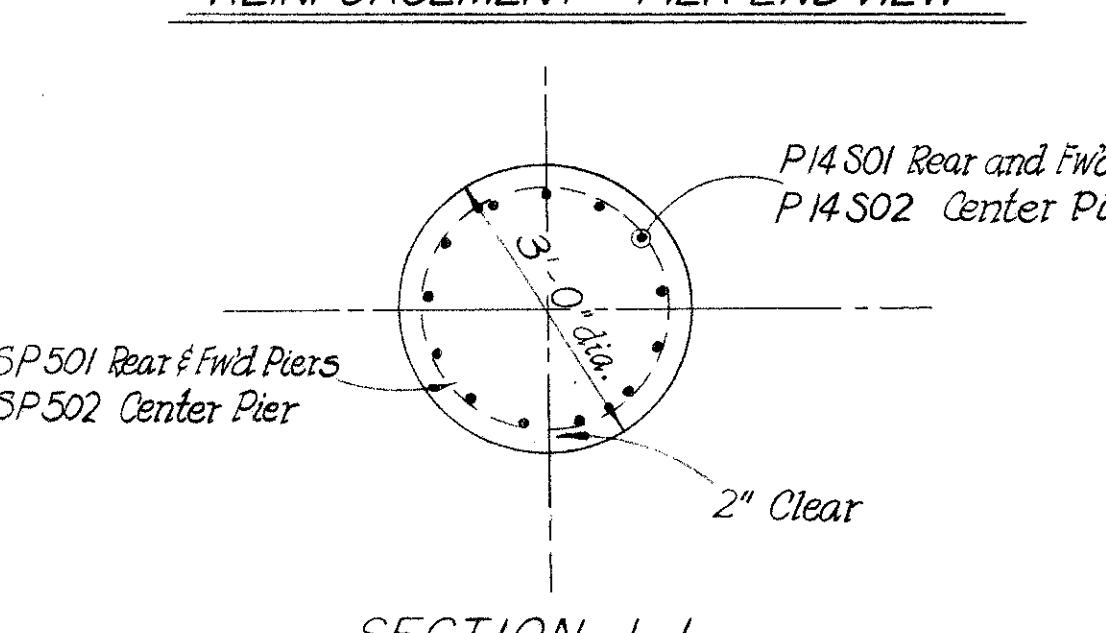
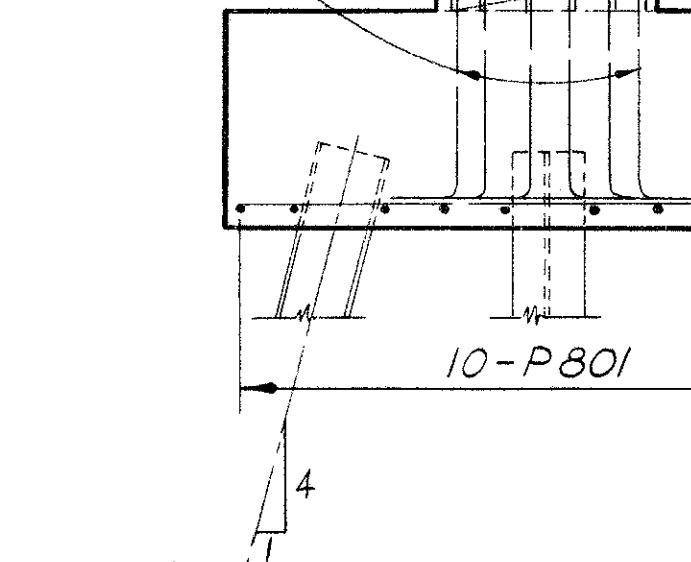
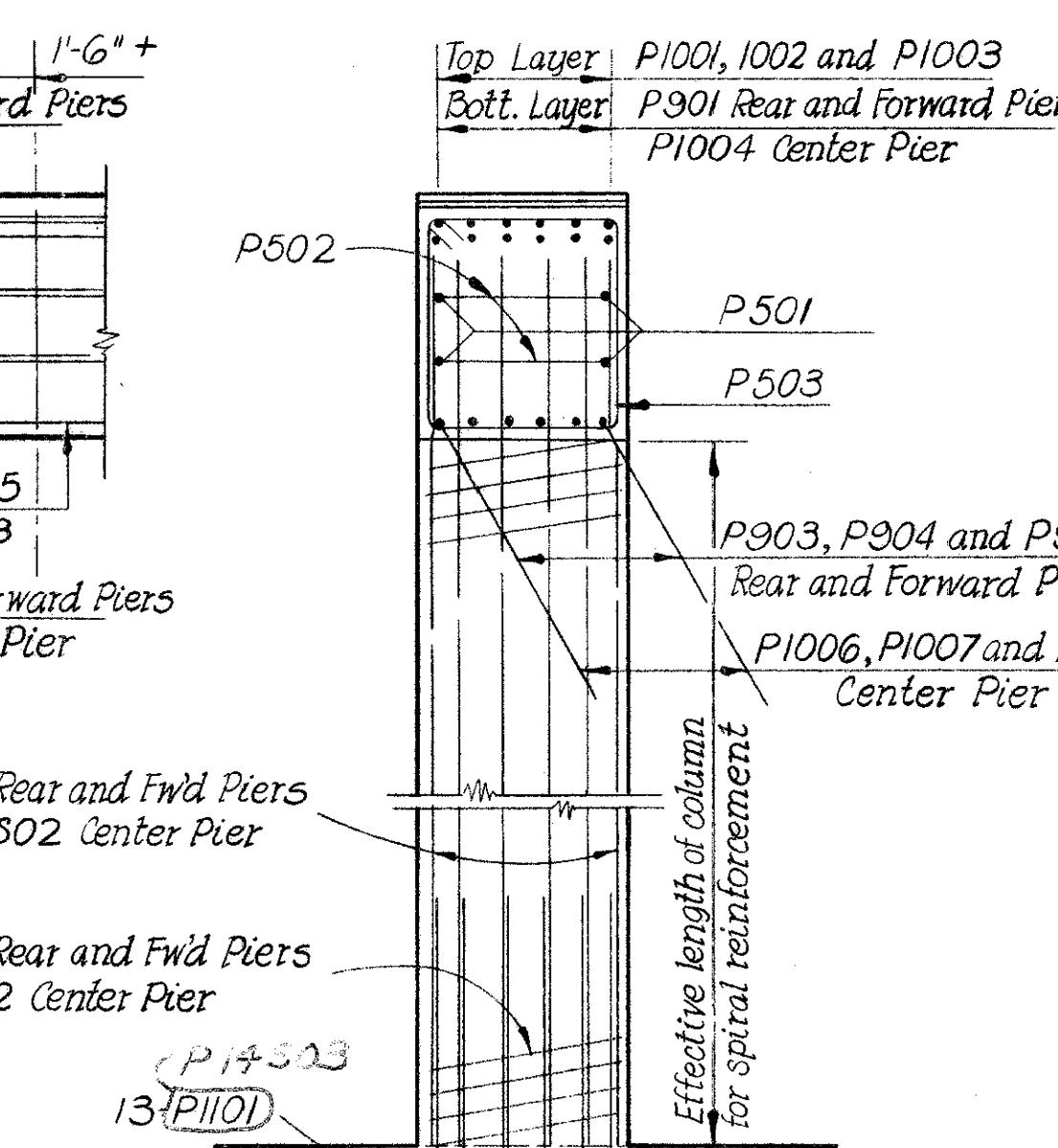
REINFORCEMENT — PIER FOOTINGS



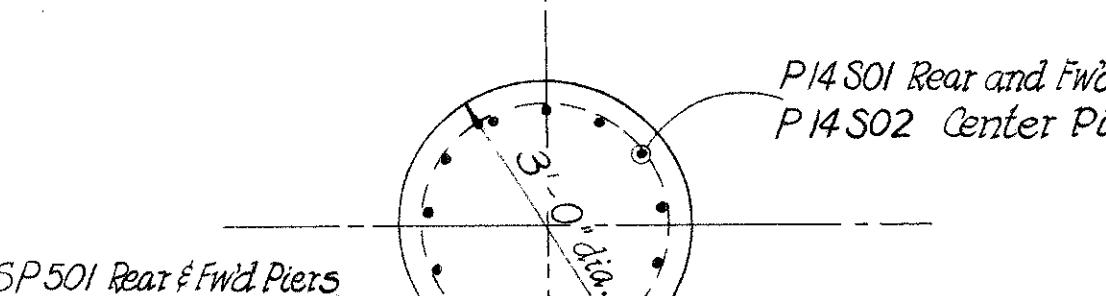
MASONRY PLATE DETAIL F-350



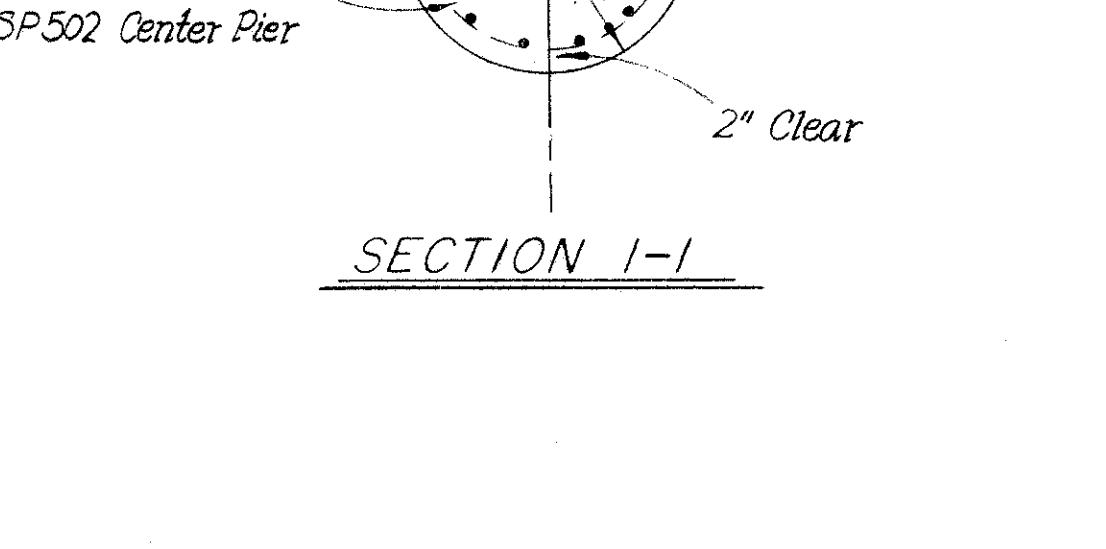
MASONRY PLATE DETAIL E-300



SECTION 1-1



SECTION 2-2

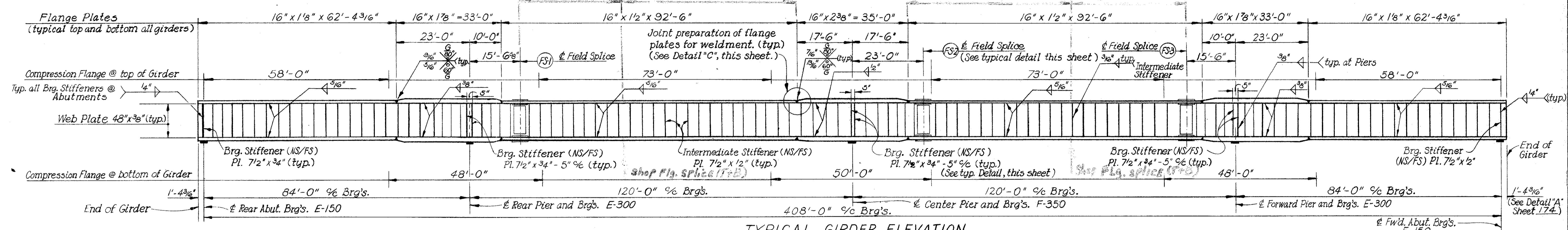


SECTION 3-3

MARK	NUMBER			LENGTH	TYPE	WEIGHT (POUNDS)
	REAR PIER	CENTER PIER	FORWARD PIER			
P401	40	40	40	120	2'-6"	Str.
P501	8	8	8	24	23'-2"	Str.
P502	4	4	4	12	7'-2"	Bent
P503	25	25	25	75	12'-7"	Bent
P801	80	80	80	240	8'-6"	Str.
P901	6			12	30'-0"	Str.
P902	6			12	20'-9"	Str.
P903	2			4	29'-3"	Str.
P904	2			4	28'-9"	Str.
P905	2			4	26'-9"	Str.
P1001	4	4	4	12	28'-2"	Bent
P1002	4	4	4	12	27'-11"	Bent
P1003	4	4	4	12	26'-11"	Bent
P1004				6	3'-0"	Str.
P1005				6	21'-3"	Str.
P1006	2			2	29'-2"	Str.
P1007	2			2	28'-8"	Str.
P1008	2			2	26'-8"	Str.
PI4S01	52	52	52	156	7'-2"	Bent
PI4S02	52			52	104	Str.
PI4S03	52	52	52	156	20'-2"	Str.
SP501	32	42	17.03	49	8	1/2"
SP502	32	42	17.66	51	4	1/2"
SP503						
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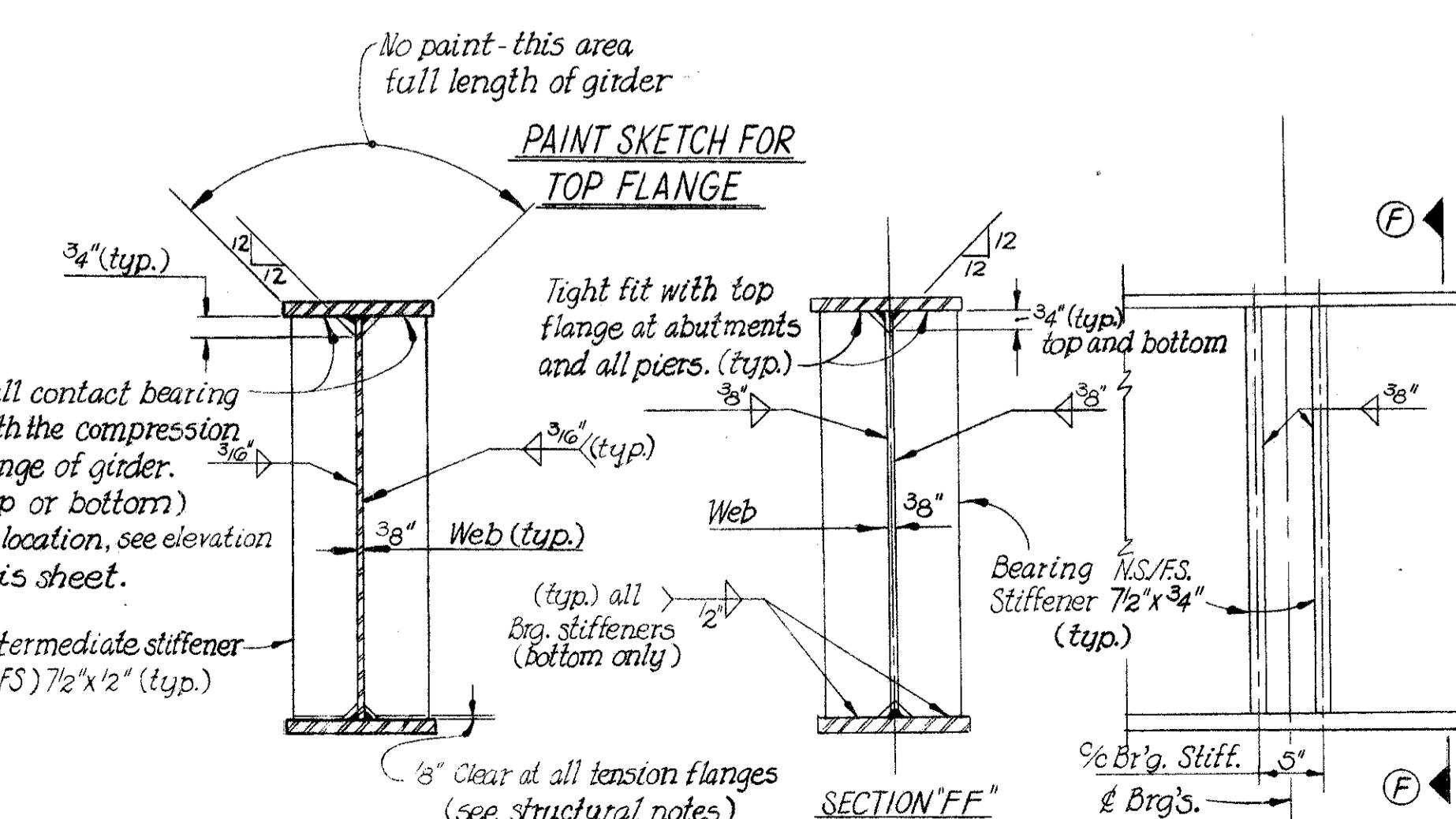
LUC-475-3.11

FRAMING PLAN



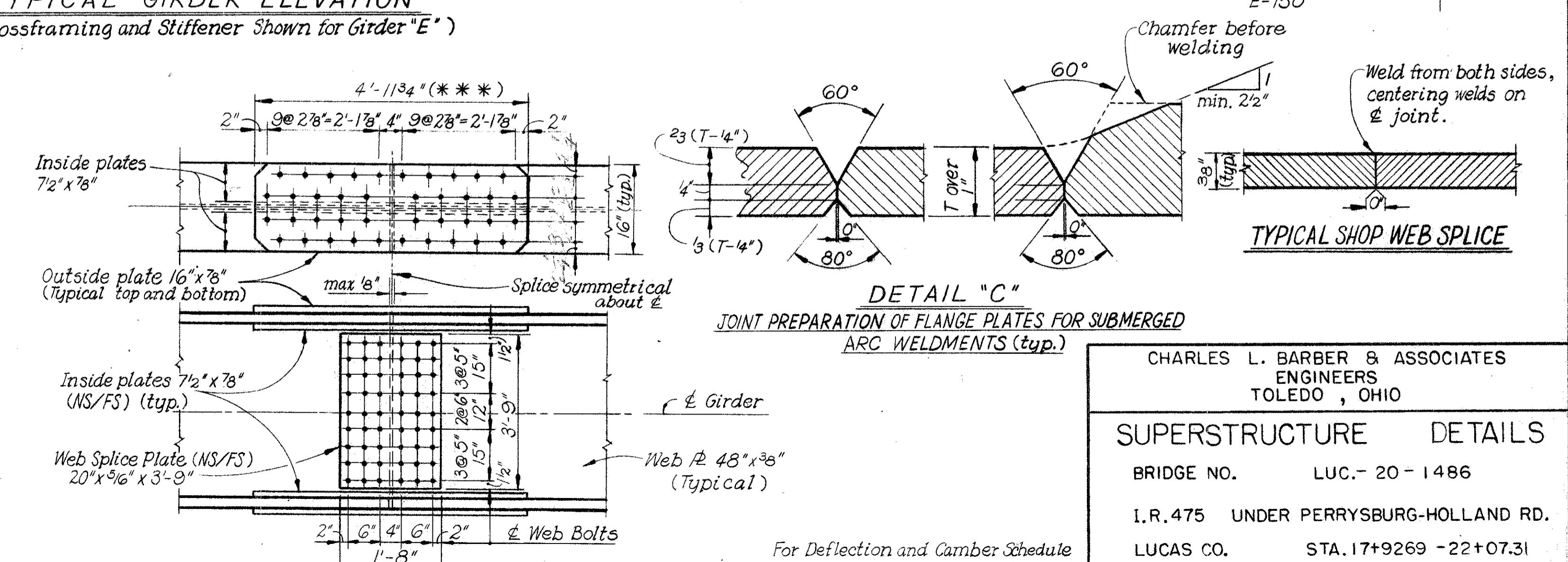
TYPICAL GIRDER ELEVATION

(Crossframing and Stiffener Shown for Girder "E")



INTERMEDIATE STIFFENER

TYPICAL BEARING STIFFENER AT PIERS



TYPICAL SPLICING DETAIL FS-1, FS-2 and FS-3

(All bolts are 1" ϕ HS-Bolts)
(* * *) For detailing only used 5'-0", see Framing Sheet 175

For Deflection and Camber Schedule
and Structural Notes, see sheet No. 171

CHARLES L. BARBER & ASSOCIATES
ENGINEERS
TOLEDO, OHIO

SUPERSTRUCTURE DETAILS

BRIDGE NO. LUC.- 20 - 1486

I.R.475 UNDER PERRYSBURG-HOLLAND RD.

LUCAS CO. STA. 17+9269 -22+07.31

NED DRAWN TRACED CHECKED REVIEWED DATE REVISED
.D W.B.D. A.F.M. K.R.R. L.A.B. 7.20.65

MICROFILMERS

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For reinforcement at
this corner see Detail "F"
this sheet.

1 Series 42 - S60
@ 9" (top)

1 Series 42 - S70
@ 9" (bottom)

495 S-601 @ 9" % Top (typ.)
495 S-701 @ 9" % Bottom (typ)

£ Bridge and Roadway

Vertical leg of End-Dam
Angle and end of slab. -

Rear Abutment

3.

408'-0" % Abutment Br

Reinforcing Steel of Bridge Deck Symmetrical by Rotation about Centerline of Center Pier.

£ Center Pier

PART PLAN-DECK SLAB REINFORCEMENT

This technical drawing illustrates a bridge girder section, specifically a skewed girder, with various dimensions and structural features labeled:

- Width:** The total width of the girder is indicated as $6' - 1\frac{1}{2}''$.
- Vertical Legs:** The vertical legs of the end crossframe are labeled as $1\frac{1}{2}''$ thick.
- Slab Edge:** The top edge of the slab is labeled "Edge of Slab".
- Bottom Flange:** The bottom flange is labeled "Roadway".
- Skew Angles:** The skew angle of the girder is given as $47^\circ 11' 52''$, and the angle between the girder and the roadway is $90^\circ 00'$.
- Dimensions:** Other dimensions shown include a height of $11' 9''$ for the vertical leg, a total height of $18' 3''$ for the girder, and a width of $12' 8\frac{1}{4}''$ at the base.
- Labels:** Labels include "S606 (top) S702 (bott) typ.", "S607 (top) S703 (bott) typ.", and "Abut. Br".

L Girder and Face of Curb

Technical sketch illustrating the construction of a curb and gutter assembly. The sketch shows a cross-section of the curb and the underlying girder.

- The curb is labeled "1/4" V 3".
- The face of the curb is labeled "1/2 Fill as Required".
- The girder is labeled "1/4" V.
- The thickness of the curb is indicated as "1/4" (typ.)".
- The height of the curb is indicated as "1/4" 3".
- The width of the curb is indicated as "7' 6" (Normal)".
- The label "LS 3" x 3" x 5/16" is present near the girder.

CEMENT

GIRDER

(*) Nominal Dimension

Bev. Fill $1\frac{1}{2}'' \pm$ (typ.)

$\frac{8}{3}$

$10\frac{5}{8}''$ (**)

$\frac{1}{4}''$

Plate $\frac{3}{8}$ " thick

$\frac{1}{4}''V$

$\frac{1}{4}''V$

$L5\frac{8}{8}''x4''x\frac{7}{8}$

$L5\frac{6}{8}''x4''x\frac{5}{8}$

$5''$ wide bevel fill

Bearing Stiffener Plate $7\frac{1}{2}''x\frac{3}{4}$ " (typ.)

$\frac{1}{4}''V$

$\frac{1}{4}''V$

$L5\frac{4}{8}''x4''x\frac{5}{16}$

$L5\frac{4}{8}''x4''x\frac{5}{16}$

45°

Plate $\frac{3}{8}$ " thick

C

C

$1''$ Clear (typ.)

$C = 11'-0\frac{7}{16}'' (\pm)$

(measured parallel to end dam)

TYP. END CROSSFRAME PANEL

If $5\frac{8}{8}$ " ϕ erection bolts are used

Face

GIRDER SEAT AT ABUTMENT & DETAIL "A"

REINFORCEMENT DETAIL AT CORNER OF SLAB
DETAIL "F"

INTERMEDIATE CROSSFRAME (TYPICAL)

DETAIL F

10'8" (typ.)
* *

Aluminum Type 1
Railing (typ.)

Construction Joint
(typical)

Type 2 Scupper
(typical)

1'-0" 2'-3"

2"

1'-6"

2"

1/2"

10'

Slab thickness 8'4"
includes 1" monolithic
wearing surface

Gutter Bulb L^o
5"x 3 1/2"-13# (typ.)

1/2" x 1/2" Bar

2" (typ.)

6" dia. Std. Pipe O

Girder Spacing (normal)

This technical drawing illustrates a detailed view of a balcony railing system. The railing is labeled as 'Aluminum Type 1 Railing (typ.)'. A 'Construction Joint (typical)' is shown along the railing's length. A 'Type 2 Scupper (typical)' is depicted as a drain opening. The slab thickness is specified as 8'4", which includes a 1" monolithic wearing surface. A 'Gutter Bulb L^o' is shown at the edge of the slab. A '1/2" x 1/2" Bar' is attached to the railing. The girder spacing is noted as 'normal'. Horizontal dimensions include 1'-0", 2'-3", 2", 1'-6", 2", 1/2", 10', and 15'-0". Vertical dimensions include 2" (typ.) and 2". A note at the bottom right indicates a '6" dia. Std. Pipe O'.

Face of
 36'-6" % Bridge Slab

E Bridge and Roadway
 Reinforcing Steel
 Symmetrical about E Bridge

Slope 3/16" per ft.

15'-0"

5 Equal Spaces
 S602 top (typ.)

2 Spaces @ 1'-2" 4 Spaces @ 8'2" 2 Spaces @ 1'-2"
 S602 bottom (typ.)

S603, S604 and S605 (over piers only)
 S601 @ 9" % (typ.)

S504 @ 1'-6" % -
 2" clear *

1" clear

9" Haunch

C701 @ 9" %

1" clear (typ.)

Crosstubes L 5 3"x3"x5/16" (typ.)

4 Spaces @ 7'-6" = 30'-0"

SECTION "CC"
(Work together with Detail "A")

S502 In Intermediate Panels.
S503 In End Panels of Parapet.

S501 @ 1'-6" c/c
(Railing not shown)

S603 (over Rear and Forward Piers only)
S604 and S605 (over Center Pier only)

Face of End Crosstreme
Face of Backwall

Ls 4"x4"x5/16"
Ls 4"x4"x5/16" Strut "a"

Clip Strut "a" horizontal leg as required to clear brg. stiffener

1 dia. half round drip groove

2' - 3" 1' - 0" 2"

**604 and S605
piers only)
S1@ 9" % (typ.)**

S505 @ 1'-6" %

604 @ 1'-6" %

clear *

ear

3"

4
1
2
5
1-2"

BENDING DIAGRAMS

S504: A top flange of width 2'-9" and height 6". The main section has a height of 11'-4".

S505: A top flange of width 6" and height 11'-4". The main section has a height of 8".

S501: A top flange of width 2'-2" and height 8".

** 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. Deduction shall be made for volume of encased steel plates as per Sec. S-1.25 of the construction and Material Specifications.

For Replacement Bar Schedule,
See Sheet No. 172

-Item B28 Joint Sealer,
including bond breaker
for the bottom only.

CHARLES L. BARBER & ASSOCIATES
ENGINEERS
TOLEDO . OHIO

UPPERSTRUCTURE DETAILS

BRIDGE NO. 1 UC-20-1486

I.R.475 UNDER PERRYSBURG-HOLLAND RD.

SEARCHED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISE
D.	W.B.D.	A.F.M.	K.R.R.	L.A.B.	7-20-65	8-26-65

MICROFIL MILD
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ED. RD. DIVISION	STATE	PROJECT	
	OHIO		

175
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LUC-475-3.11

Intermediate Crossframe Spacing

DETAILED FRAMING PLAN WITH INTERMEDIATE STIFFENER

CHARLES L. BARBER & ASSOCIATES
ENGINEERS
TOLEDO, OHIO

SUPERSTRUCTURE DETAILS

BRIDGE NO. LUC.- 20 - 1486

R.475 UNDER PERRYSBURG-HOLLAND RD.

LUCAS CO. STA. 17+92.69 - 22+07.31

DRAWN TRACED CHECKED REVIEWED DATE REVISE

SIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
B.D.	W.B.D.	A.F.M.	K.R.R.	L.A.B.	7-20-65	

LUC-475-3.11

