

STATE OF OHIO
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
FREMONT - PORT CLINTON ROAD

I.C.H. 277 SEC. MUDDY CREEK BRIDGE
SANDUSKY COUNTY

RICE TWP. APRIL 1927

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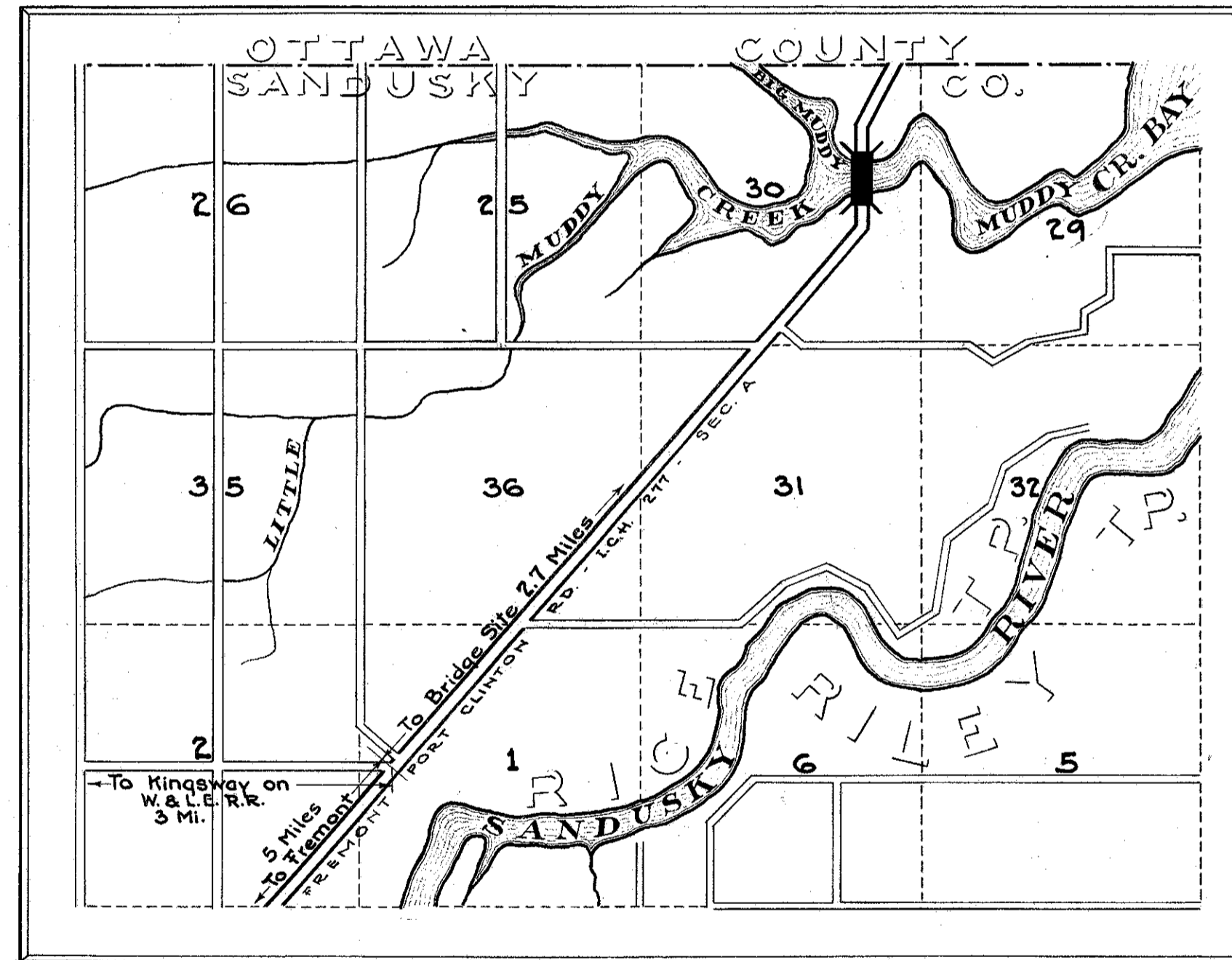
CONVENTIONAL SIGNS

- County Line -----
- Section Line - - - - -
- Center Line - - - - -
- Guard Rail - - - - -
- Fence - - - - -
- Telephone or Telegraph > > > >
- Drain Pipe - - - - -

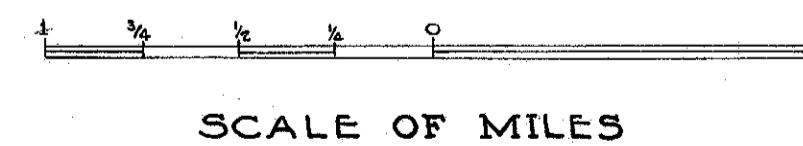
We, the Commissioners of Sandusky County, hereby approve these plans and certify that the bridge site is available for the construction, maintenance and repair of the above bridge.

J. H. Mills
Geo. F. Hinkle
W. H. Deemer
 County Commissioners

Date: _____ 1927.



LOCATION PLAN



BRIDGE SITE SHOWN THUS [black rectangle symbol]
NO DETOUR NECESSARY

The Standard Specifications of the State of Ohio, Division of Highways, in force on date of contract will govern this improvement.

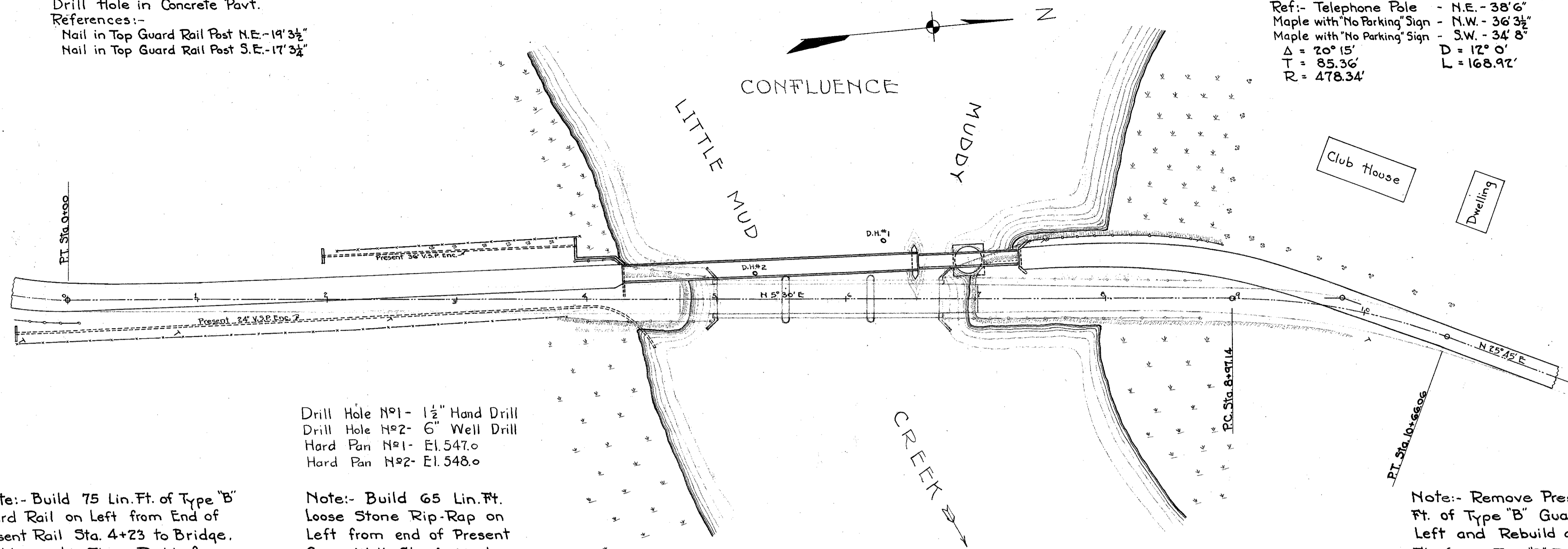
I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway.

- Approved: _____ *L. N. Wismar*
Date: April 30, 1927. Resident Engineer.
- Approved: _____ *M. L. H. ...*
Date: 7-11-1927. Res. Dep. State Highway Commissioner.
- Approved: _____ *J. B. ...*
Date: 8/2/1927. Chief Engr. Bureau of Bridges.
- Approved: _____ *Ros. S. ...*
Date: 8-3-27 1927. Chief Engineer Bureau of Construction
- Approved: _____
Date: _____ 1927. Chief Engineer Bureau of Maintenance
- Approved: _____ *Harry J. ...*
Date: 8-3-1927. State Highway Engineer
- Approved: _____ *St. J. ...*
Date: 8-3-1927. Director of Highways and Public Works.

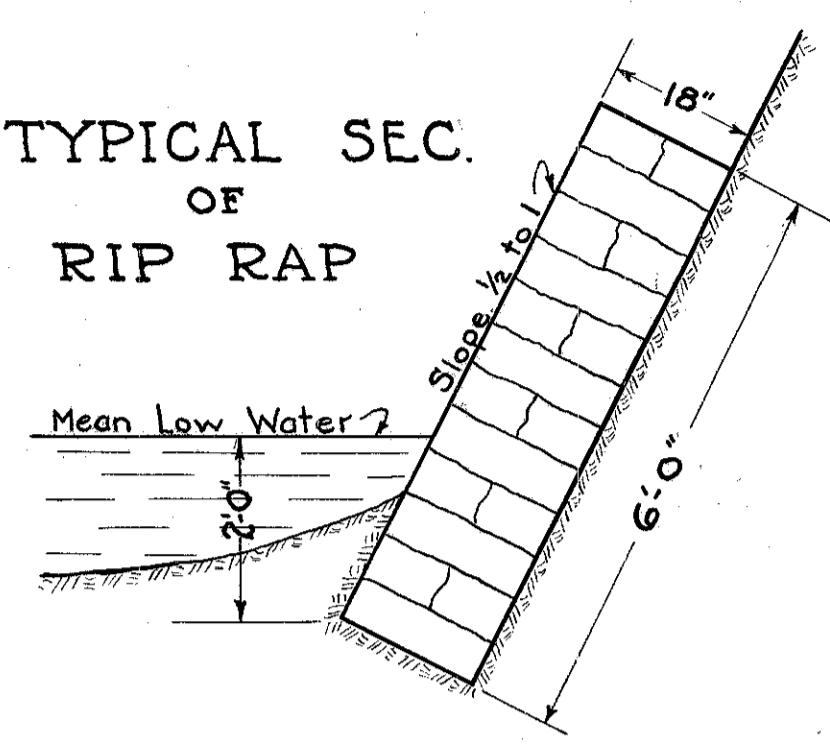
CONSTRUCTION BUREAU
 JUL 13 1927
 GROUND PHOTOLAB

Sta. 0+00 is Sta. 53+91 of Sec. A-1
 Drill Hole in Concrete Pavt.
 References:-
 Nail in Top Guard Rail Post N.E.-19' 3 1/2"
 Nail in Top Guard Rail Post S.E.-17' 3 1/2"

P.I. - Sta. 9+82.5 - Drill Hole in Pavt.
 Ref:- Telephone Pole - N.E. - 38' 6"
 Maple with "No Parking" Sign - N.W. - 36' 3 1/2"
 Maple with "No Parking" Sign - S.W. - 34' 8"
 $\Delta = 20^\circ 15'$
 $T = 85.36'$
 $R = 478.34'$
 $D = 12^\circ 0'$
 $L = 168.92'$



TYPICAL SEC. OF RIP RAP



Drill Hole N#1 - 1 1/2" Hand Drill
 Drill Hole N#2 - 6" Well Drill
 Hard Pan N#1 - El. 547.0
 Hard Pan N#2 - El. 548.0

Note:- Build 75 Lin. Ft. of Type "B" Guard Rail on Left from End of Present Rail Sta. 4+23 to Bridge. Build 100 Lin. Ft. on Right from Sta. 3+98 to Sta. 4+98.

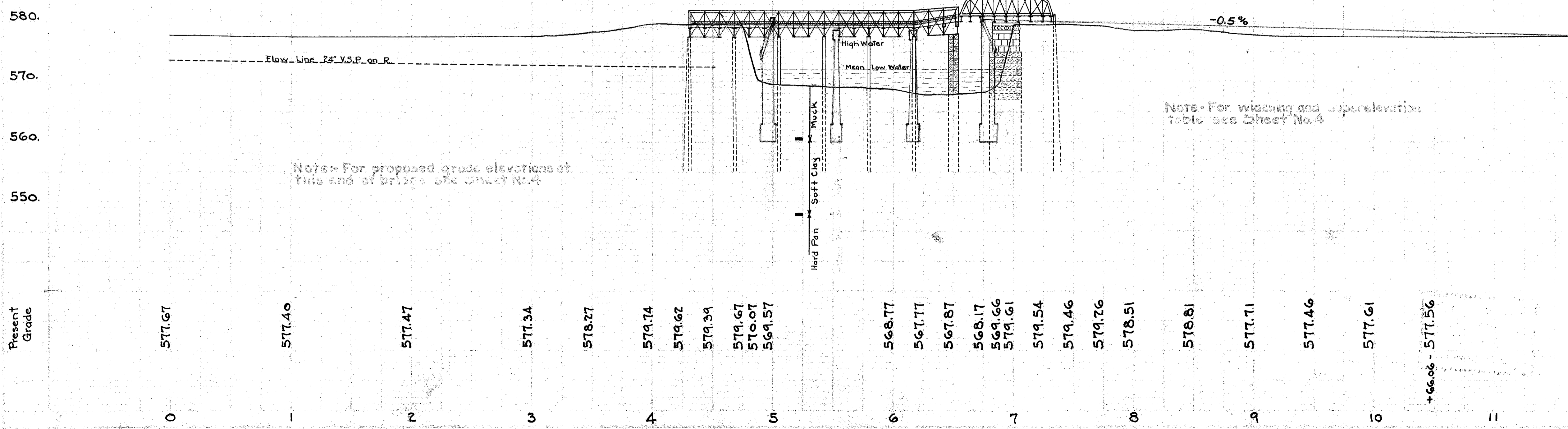
Note:- Build 65 Lin. Ft. Loose Stone Rip-Rap on Left from end of Present Conc. Wall Sta. 4+33 to End of S.W. Wing of New Bridge Sta. 4+98. See Typical Section of Rip Rap on this Page.

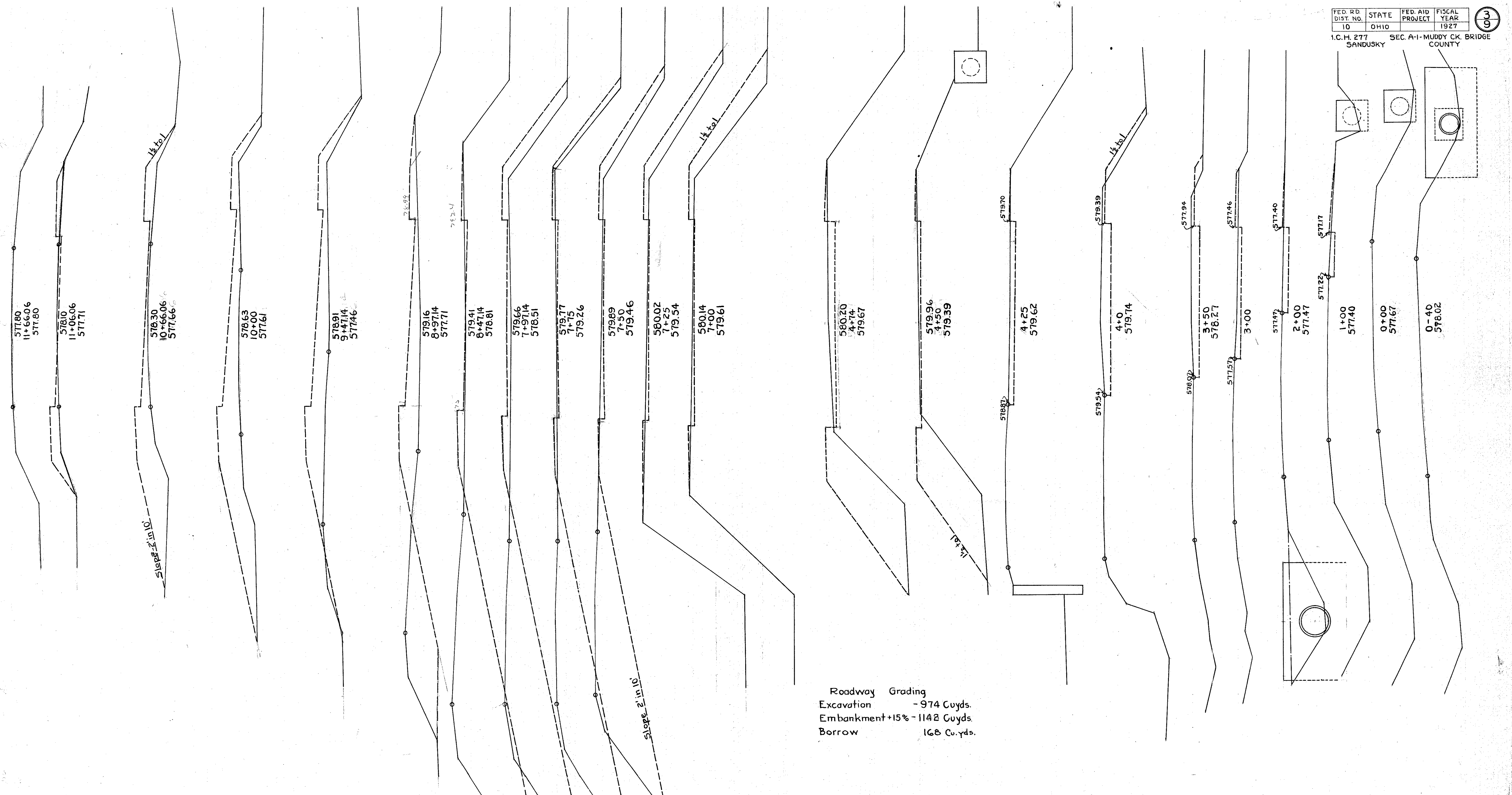
Note:- Remove Present 150 Lin. Ft. of Type "B" Guard Rail on Left and Rebuild adding 50 Lin. Ft. of new Type "B" Rail 5' left of Left Edge of Pavt. from Sta. 6+75 to Sta. 8+75. Build 200 Lin. Ft. 5' Right of Right Edge of Pavt. from Sta. 6+75 to Sta. 8+75.

Note:- Build 85 Lin. Ft. of Rip Rap, on Left, from N. W. Wing of New Bridge to present Rip Rap as directed by Engineer. New Rip Rap to conform to Typical Section shown above.

B.M. Sta. 1+95
 S.E. cor. Conc. Hdwall - L.
 Elev. 577.51

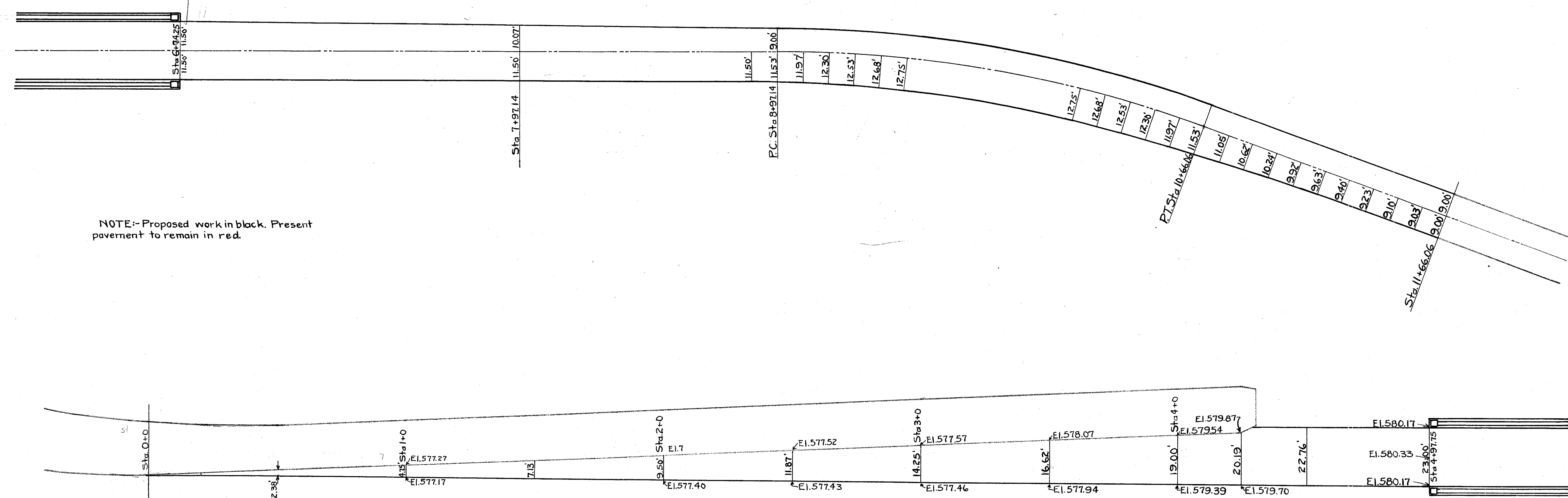
B.M. Sta. 7+40
 N.W. cor. N.W. Wing - Left
 Elev. 580.77





Roadway Grading
Excavation - 974 Cu.yds.
Embankment +15% - 1142 Cu.yds.
Borrow 168 Cu.yds.

Sta.	End Area Cut	End Area Fill	Cubic Yds Cut	Cubic Yds Fill
+66.06	0	0		
11+06.06	2	15	1	14
46.06	0	56	2	66
10+00	0	83	0	170
9+47.14	2	64	2	144
9+31.14	48	46	46	102
8+47.14	163	6	245	48
8+31.14	128	33	269	36
+75	123	9	103	17
+50	120	14	114	11
+25	6	20	49	16
7+0	6	28	11	44
+6+7.14	0	180	4	180
+4+99	0	180	7	116
+74	15	71	9	59
+50	4	62	7	29
+25	10	0	15	2
4+0	21	3	30	4
+50	16	1	21	3
3+0	7	2	22	6
2+0	5	1	13	4
1+0	2	1	4	2
0+0	0	0		



NOTE:- Proposed work in black. Present pavement to remain in red.

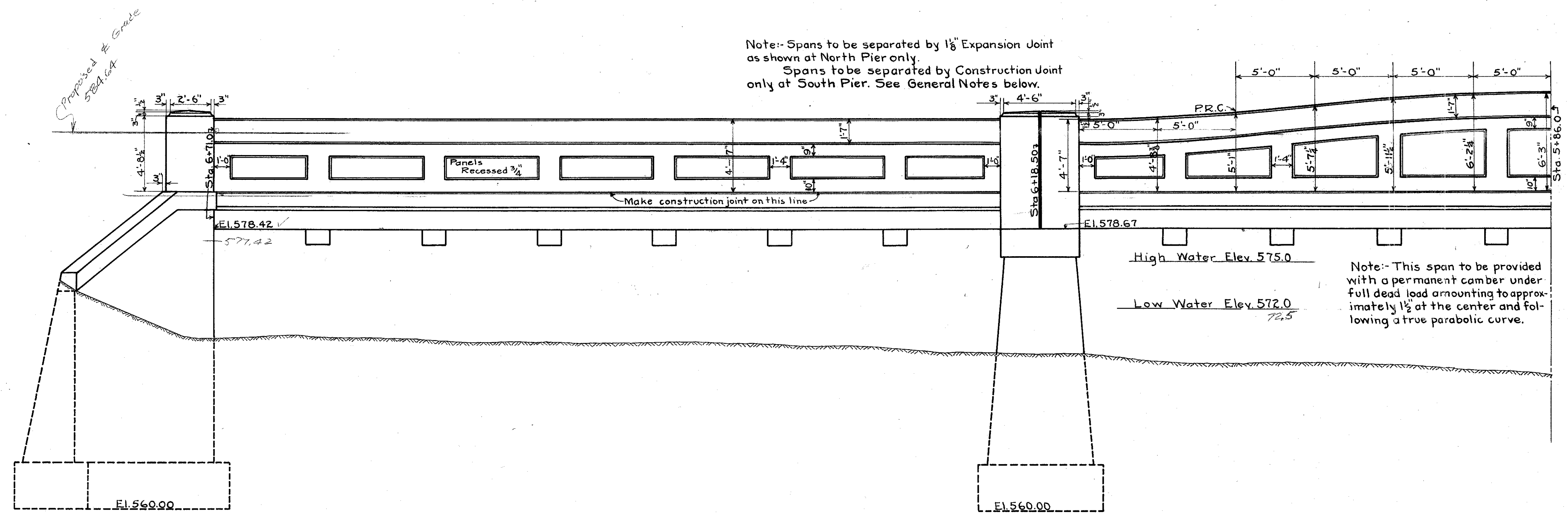
LAYOUT PLAN FOR APPROACHES
SCALE: 1"=20 FT.

STA.	LEFT WIDTH	LEFT GRADE	RIGHT GRADE	RIGHT WIDTH	STA.	LEFT WIDTH	LEFT GRADE	RIGHT GRADE	RIGHT WIDTH
6+74.25	11.50	580.17	580.33	11.50	580.17				
7+97.14	10.07	579.49	579.66	11.50	579.49	+26.06	79.77	78.50	12.75
8+07.14	9.97	79.54	79.61		79.44	+36.06	79.61	78.45	12.53
+17.14	9.86	79.59	79.56		79.39	+46.06	79.46	78.40	12.30
+27.14	9.76	79.65	79.51		79.34	+56.06	79.31	78.35	11.97
+37.14	9.65	79.70	79.46		79.29	PT 10+66.06	79.15	78.30	11.53
+47.14	9.55	79.75	79.41		79.24	+76.06	79.00	78.25	11.05
+57.14	9.44	79.80	79.36		79.19	+86.06	78.85	78.20	10.62
+67.14	9.33	79.86	79.31		79.14	+96.06	78.70	78.15	10.24
+77.14	9.22	79.91	79.26		79.09	11+06.06	78.54	78.10	9.92
+87.14	9.11	79.96	79.21	11.50	79.04	+16.06	78.39	78.05	9.63
PC 8+97.14	9.00	80.01	79.16	11.53	78.99	+26.06	78.24	78.00	9.40
9+07.14		80.07	79.11	11.97	78.94	+36.06	78.09	77.95	9.23
+17.14		80.12	79.06	12.30	78.89	+46.06	77.93	77.90	9.10
+27.14		80.17	79.01	12.53	78.84	+56.06	77.78	77.85	9.03
+37.14		80.23	78.96	12.68	78.79	+66.06	9.00	577.61	577.61
+47.14	9.00	580.28	578.91	12.75	578.74				

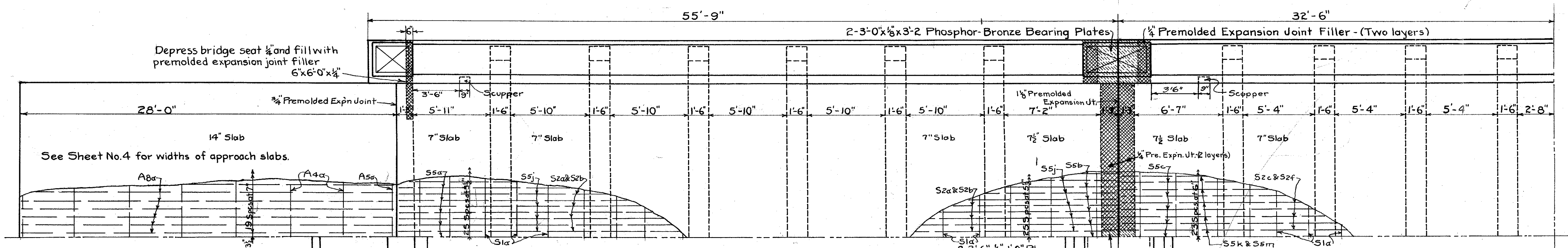
9+82.14
6+74.25
308.24

6+74.25
11+97.14
176.50

CONCRETE GIRDER BRIDGE
MUDDY CREEK
FREMONT-PORT CLINTON ROAD
SANDUSKY COUNTY
LENGTH-176 FT. ROADWAY-24 FT.



HALF WEST SIDE ELEVATION

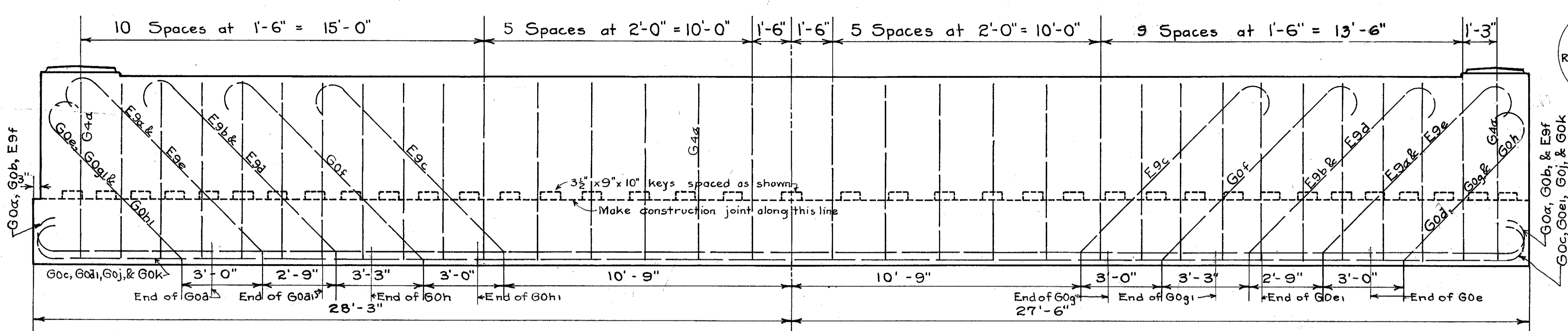


Note:-The fill at the ends of the bridge back of the abutments shall be made from the old concrete removed from the road at the North end of the bridge with the voids flushed full of fine material by means of a stream of water.
Removal of old substructure included in quantity of bridge excavation.

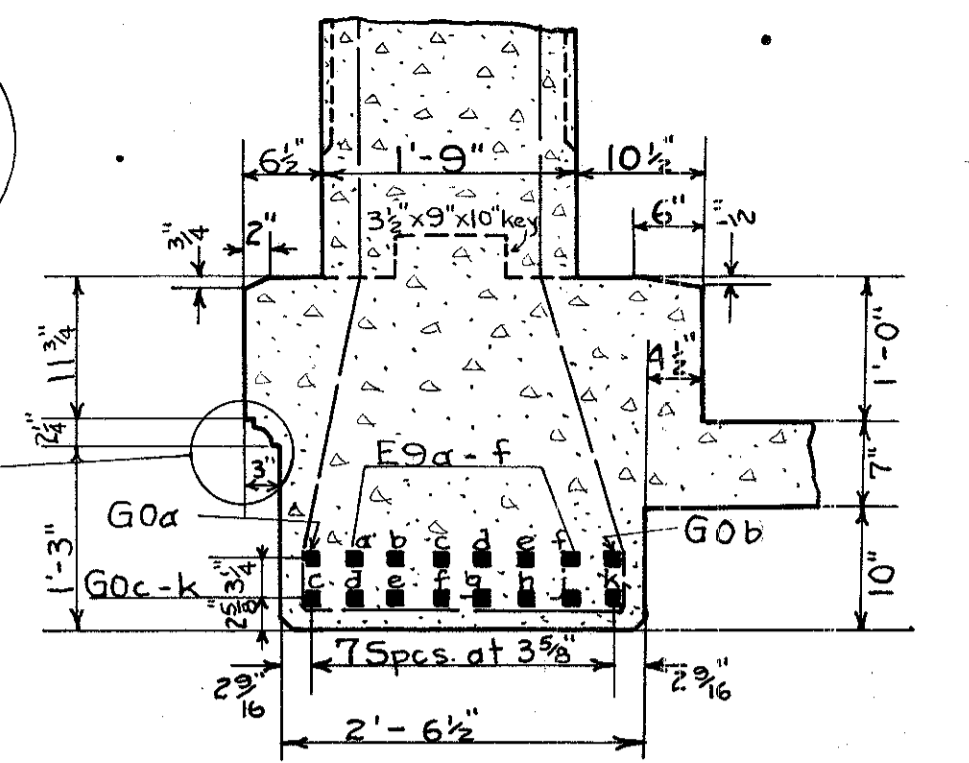
GENERAL NOTES:-
 North Abutment to be fixed end of north span as shown. North Pier to be expansion end for both north and center spans as shown. South Pier to be fixed end for center and south spans with 1/4" premolded expansion joint filler placed at four corners, of size and in position shown at north abutment. South Abutment to be expansion end for south span with two phosphor bronze bearing plates-1'-6"x3/8"x3'-2" placed under each girder with the front edges 6" back of the face of the abutment, and two phosphor bronze bearing plates-1'-0"x3/8"x1'-3" placed at the center of the abutment. The remainder of the abutment top not covered by bearing plates to be covered by 2 layers of 1/4" premolded expansion joint filler.
 All concrete in abutments and piers to be 1:6 1/2 mix. All remaining concrete to be 1:5 mix.
 The tops, inside faces and ends of girders shall be given special rubbed surface finish. The complete outside faces of girders, the tops and sides of curbs, the tops of abutments and wings, and the faces of abutments, wings, and piers down to the finished ground line or to low water line shall be given ordinary surface finish. The payment for this is included in the price per cubic yard of concrete.
 Special care shall be exercised in the curing of concrete, and all concrete from which forms have been removed shall be kept wet as per construction specifications.
 Wearing surface at and adjacent to the scuppers shall be depressed a maximum of 3/4".
 Approach Slab Concrete, included in 1:5 Concrete - not with paving.
 Present structure to remain in place until new bridge is completed.
 Approach Slab reinforcing steel in this project to be paid for per pound.

Note:-If unable to pour floor system and lower part of girder continuously, make construction joint along center line of roadway. If any concrete runs out under beam bulkheads it shall be removed before concrete hardens.

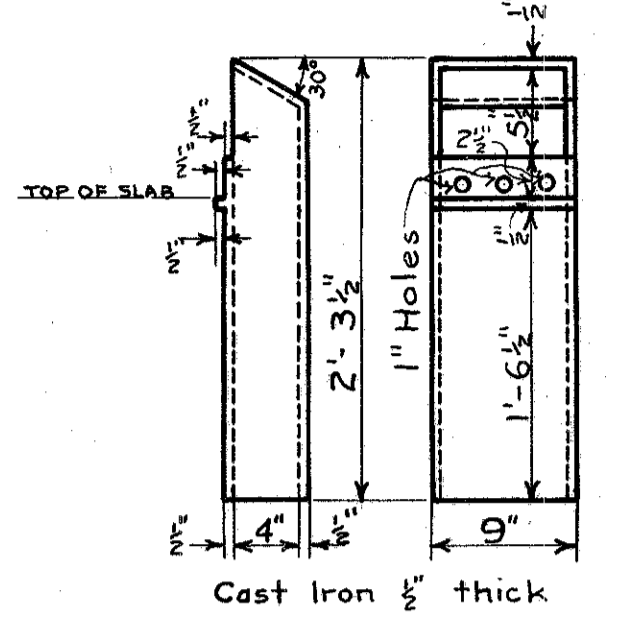
CONCRETE GIRDER BRIDGE
 MUDDY CREEK
 FREMONT-PORT CLINTON ROAD
 SANDUSKY COUNTY
 LENGTH-176 FT. ROADWAY-24 FT.



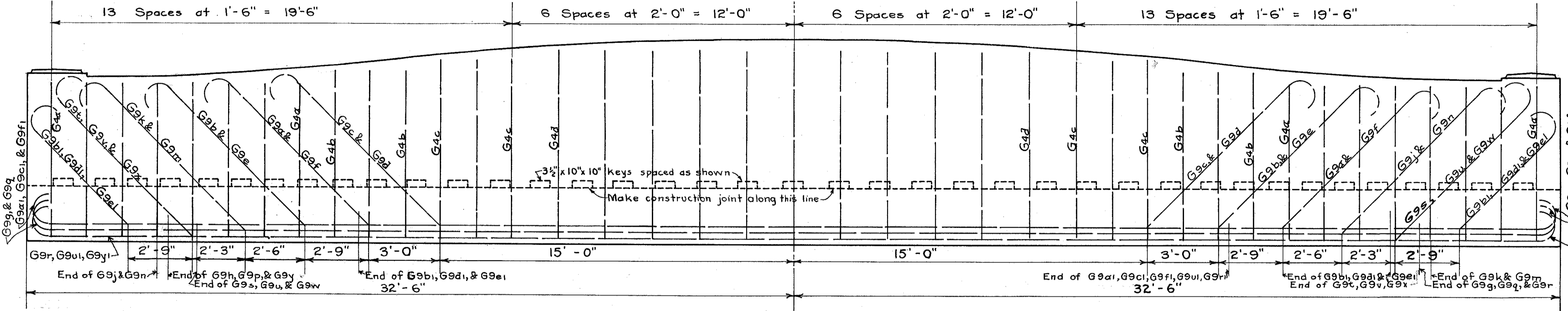
SIDE ELEVATION SHOWING GIRDER REINFORCEMENT - END SPANS



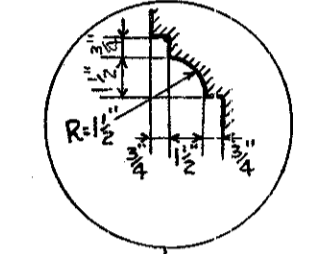
SECTION SHOWING GIRDER BARS IN END SPANS



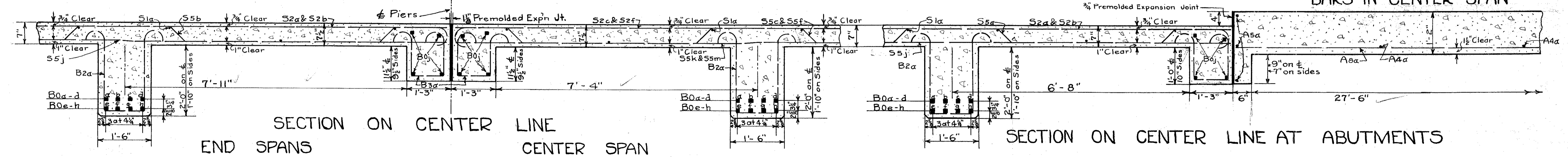
SCUPPER DETAIL



SIDE ELEVATION SHOWING GIRDER REINFORCEMENT - CENTER SPAN

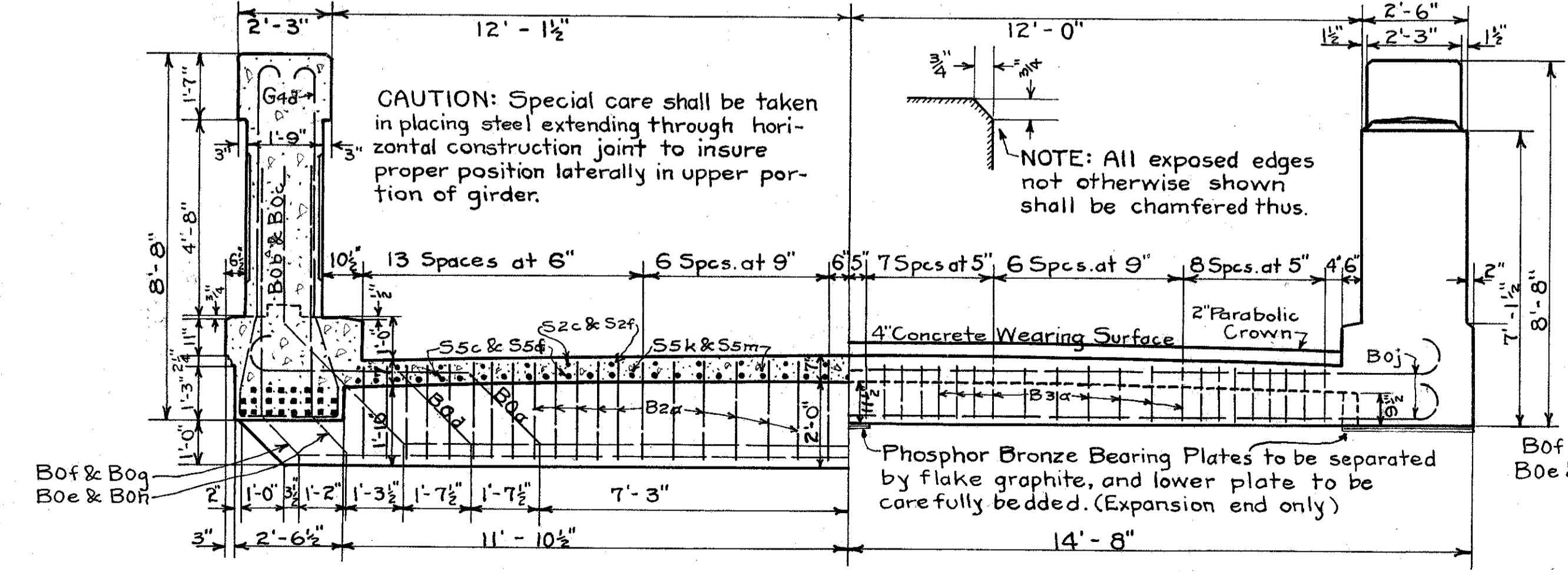


SECTION SHOWING GIRDER BARS IN CENTER SPAN

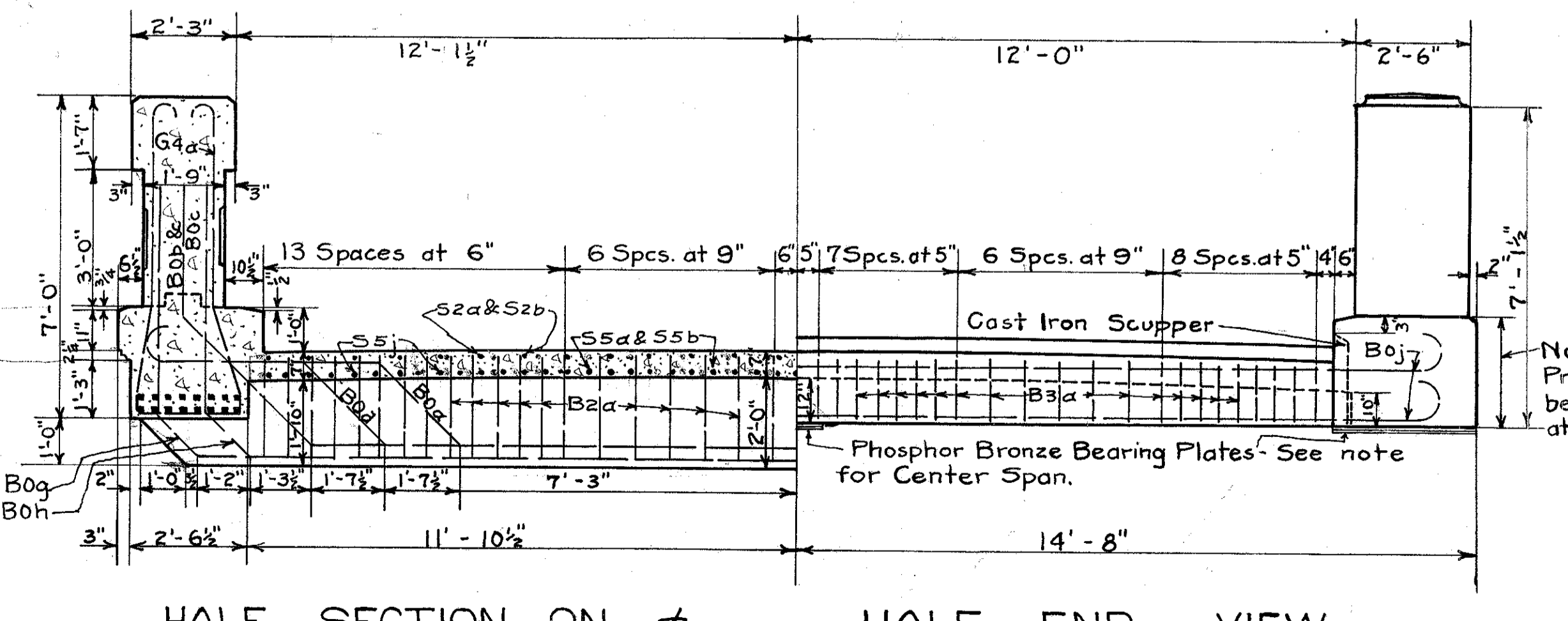


SECTION ON CENTER LINE
END SPANS CENTER SPAN

SECTION ON CENTER LINE AT ABUTMENTS



HALF SECTION ON CENTER
HALF END VIEW SPAN

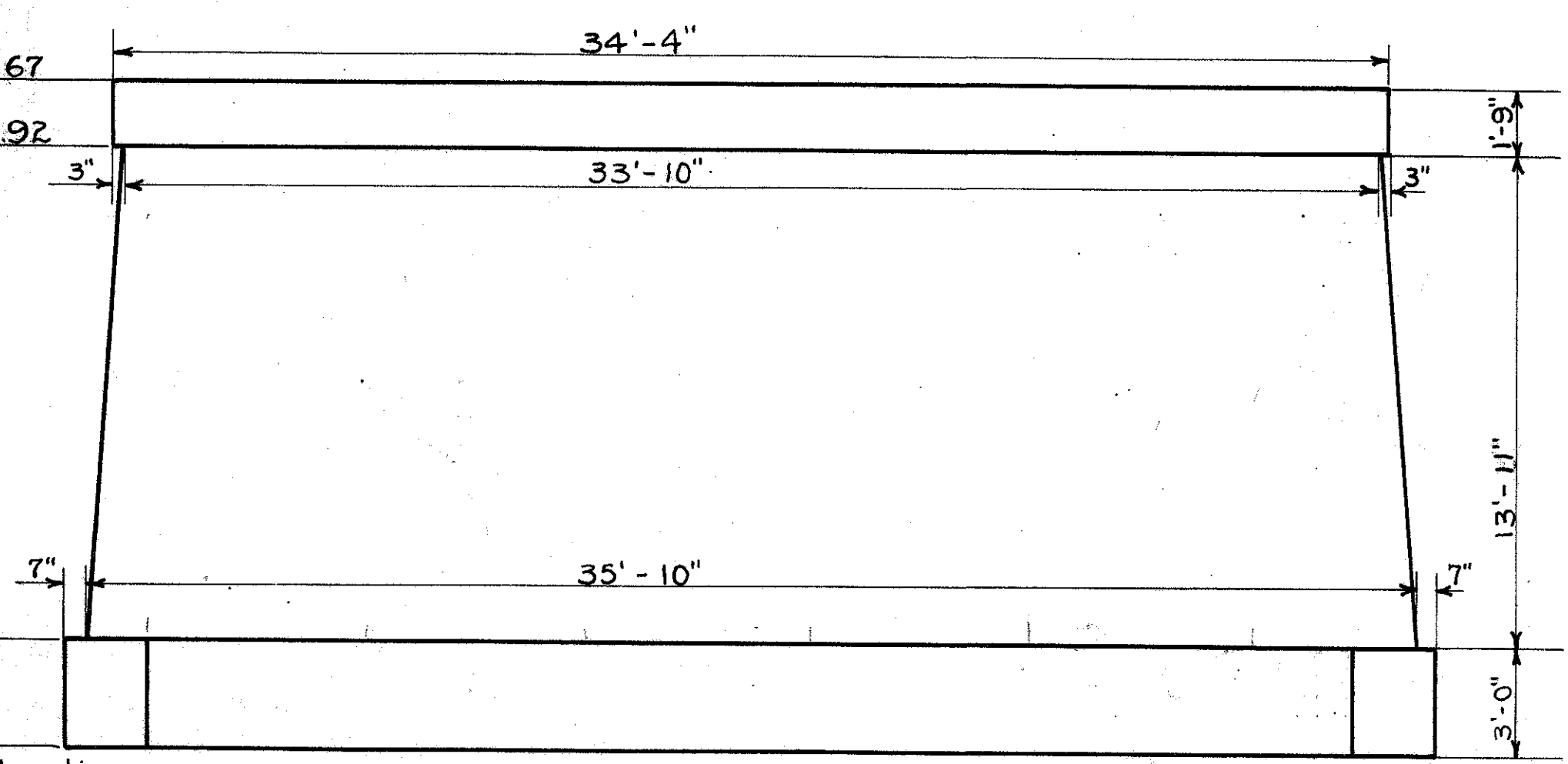
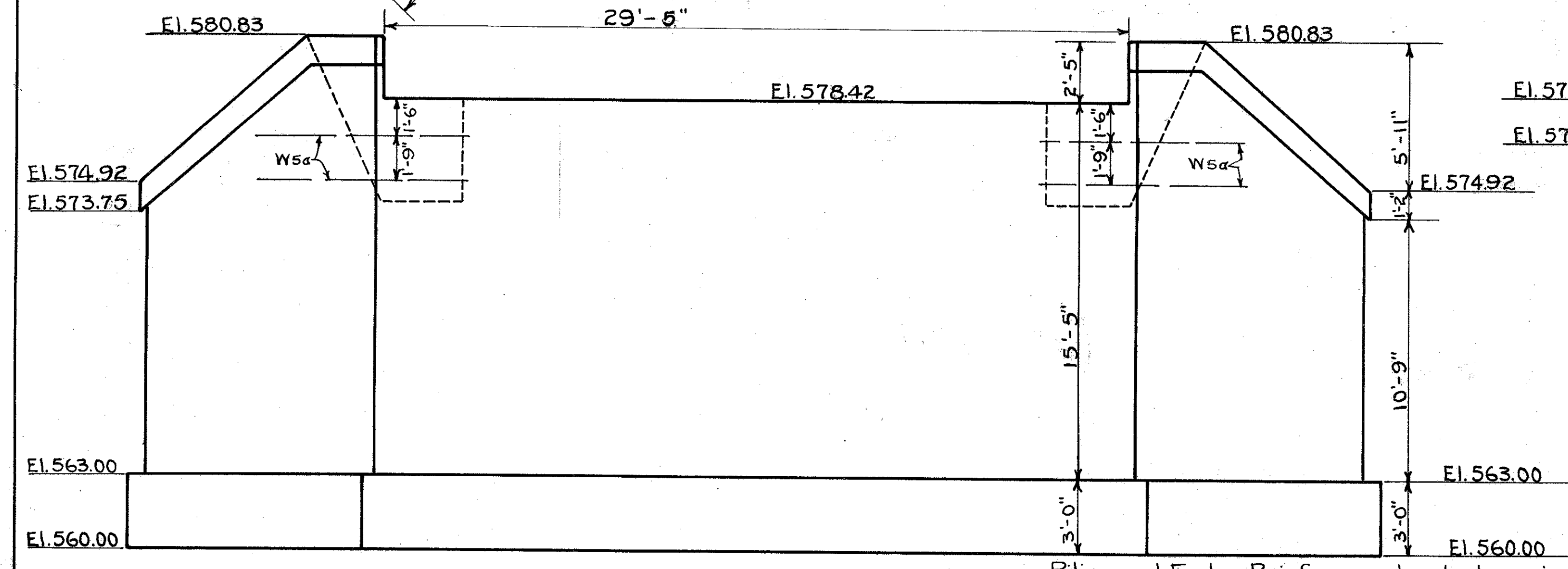
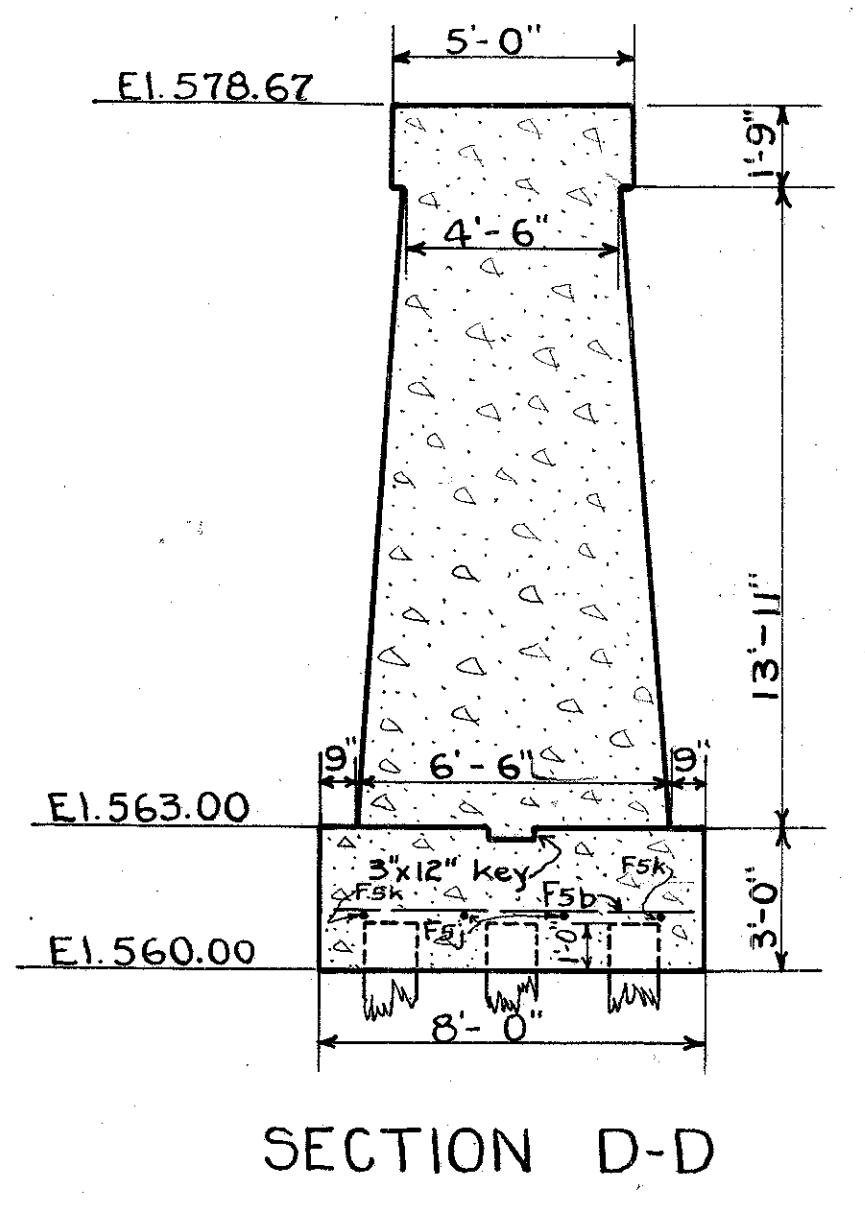
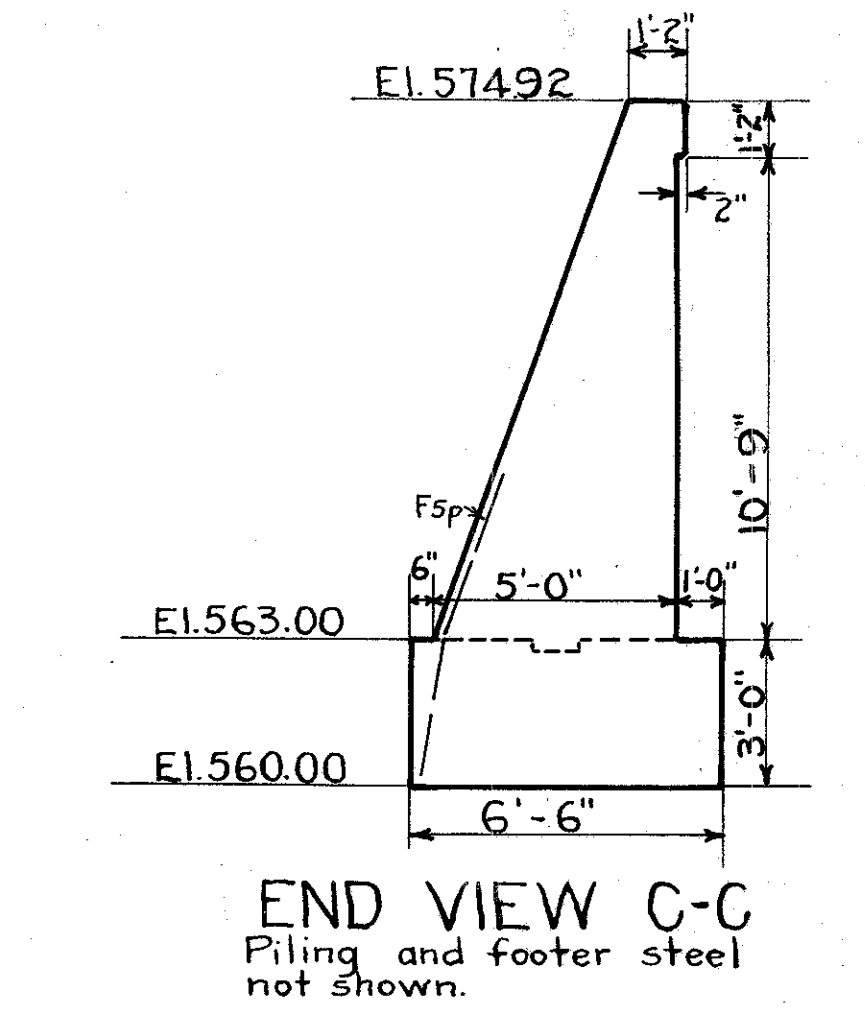
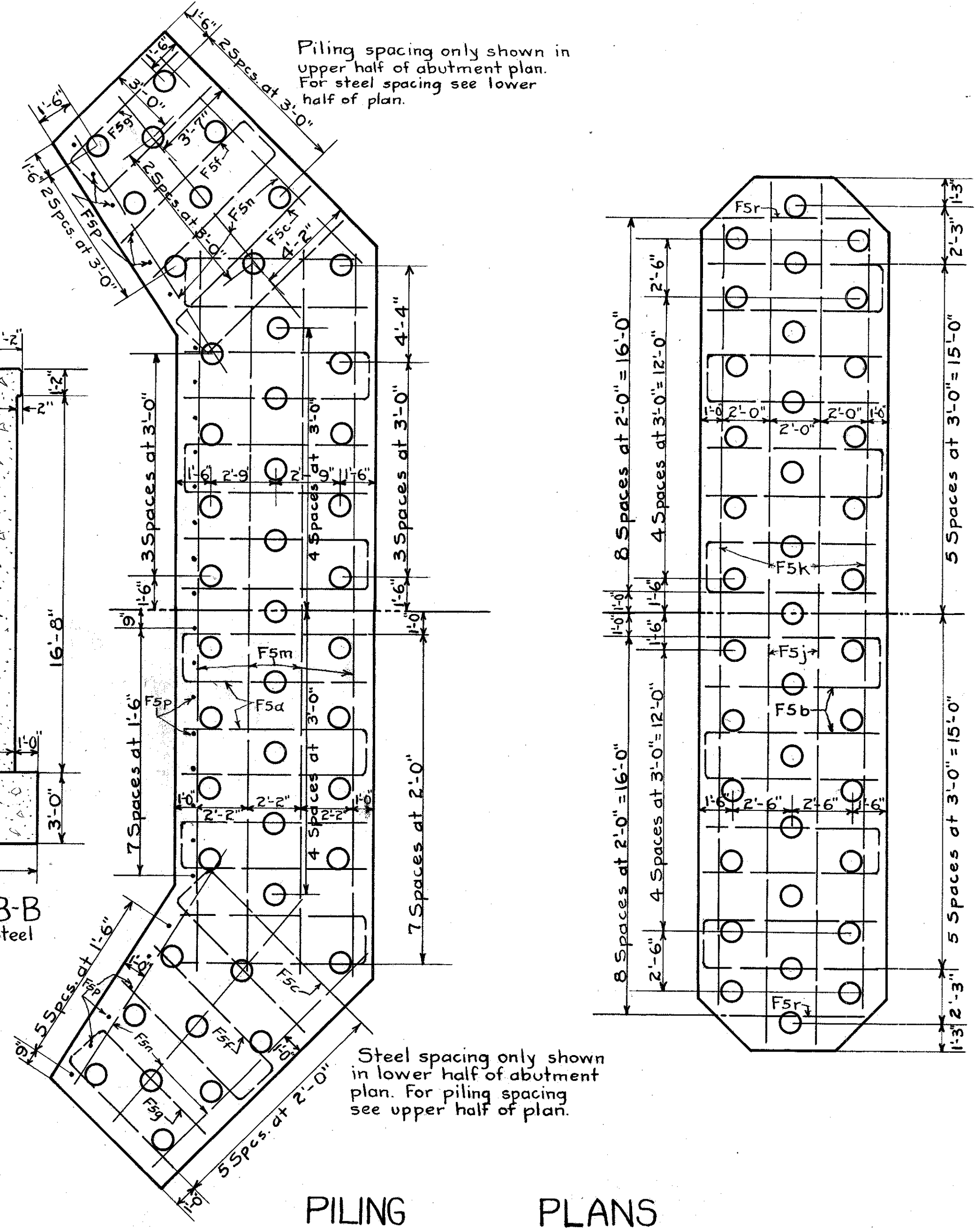
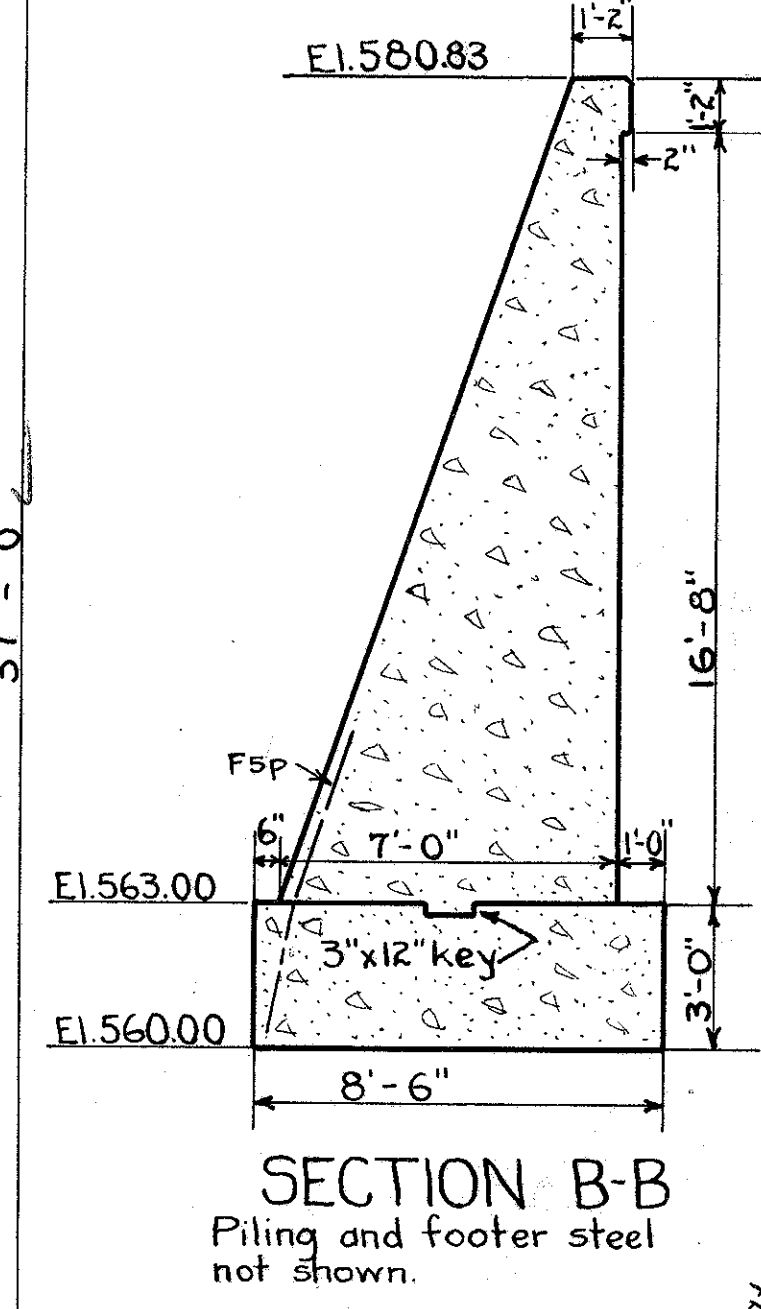
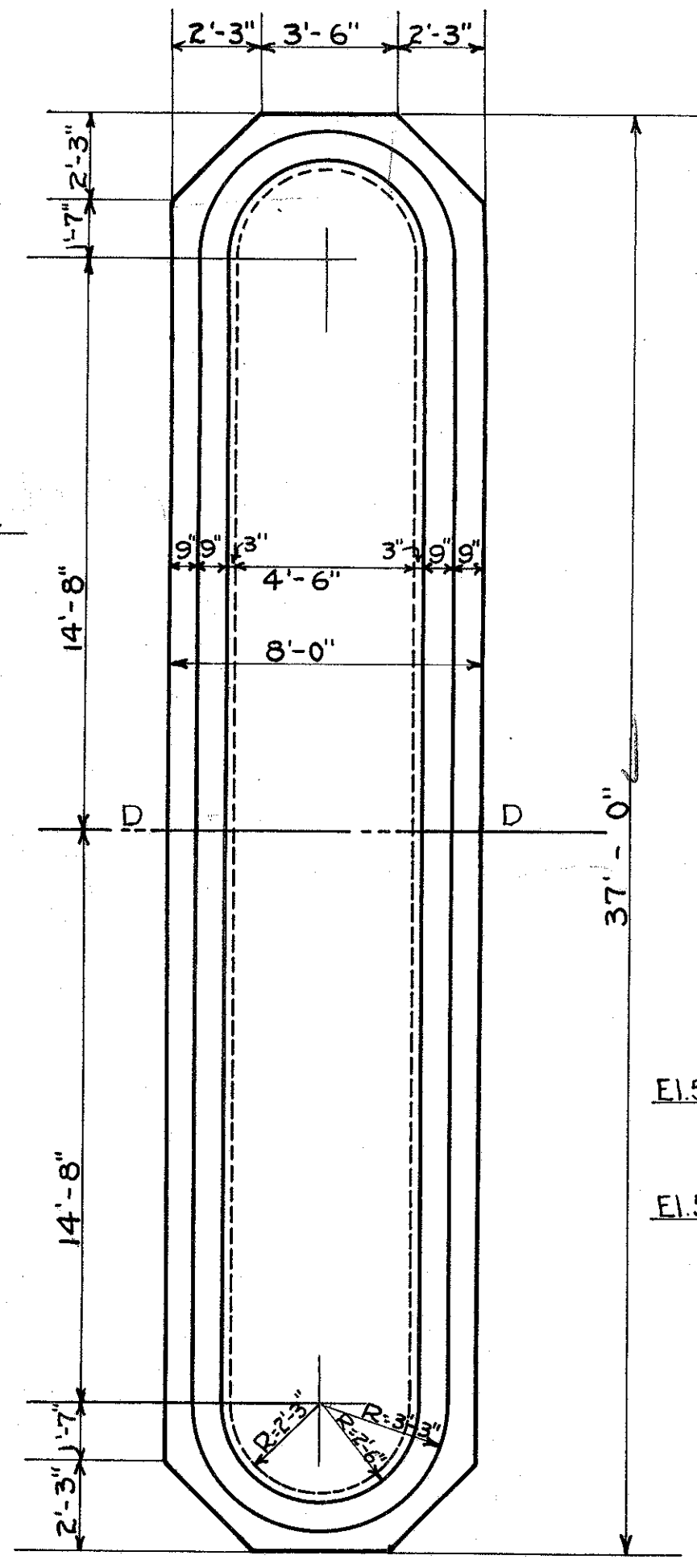
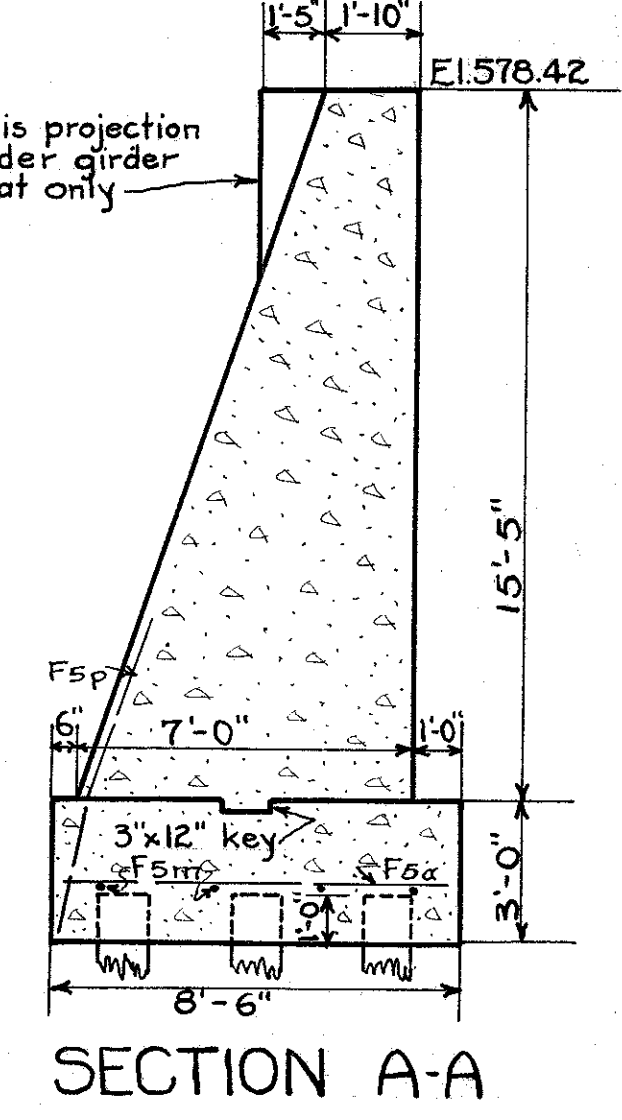
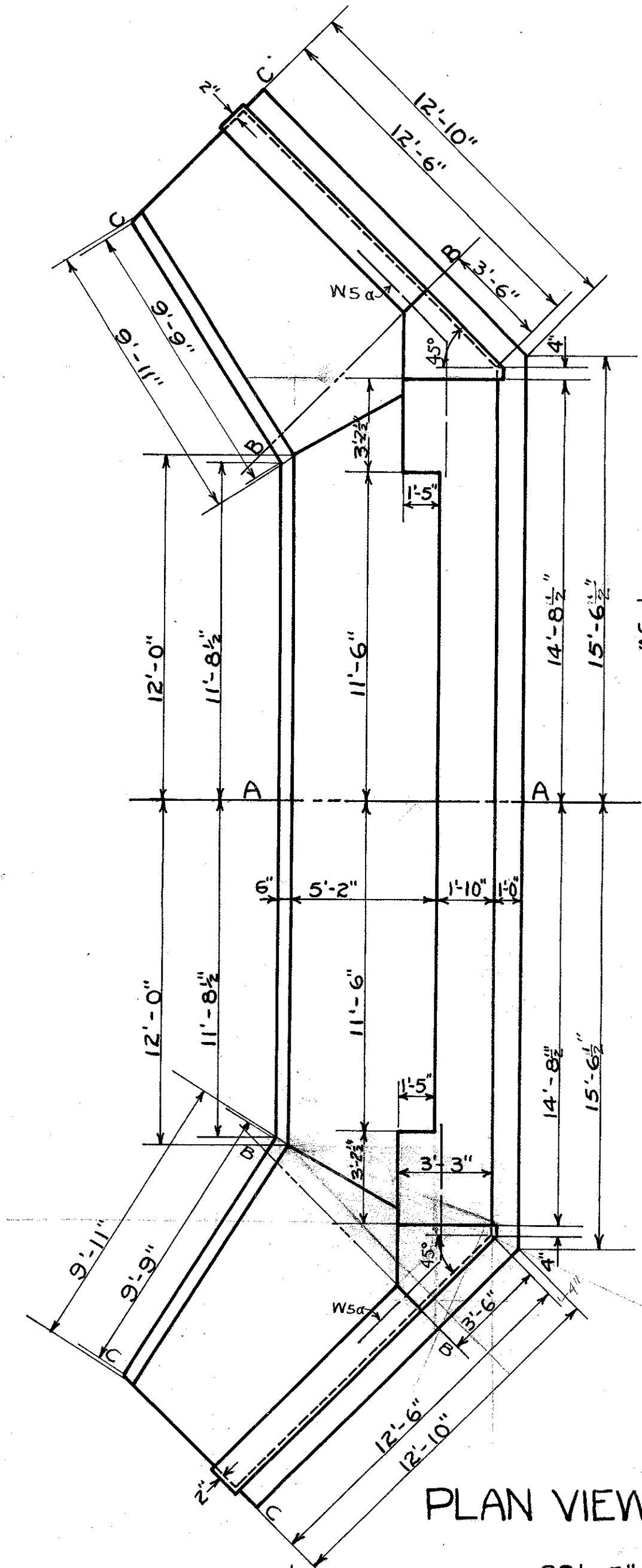


HALF SECTION ON END
HALF END VIEW SPANS

Note: Place 2 layers of 1/4" Premolded Expn joint filler between girder and wing at four corners of bridge.

Phosphor Bronze Bearing Plates - See note for Center Span.

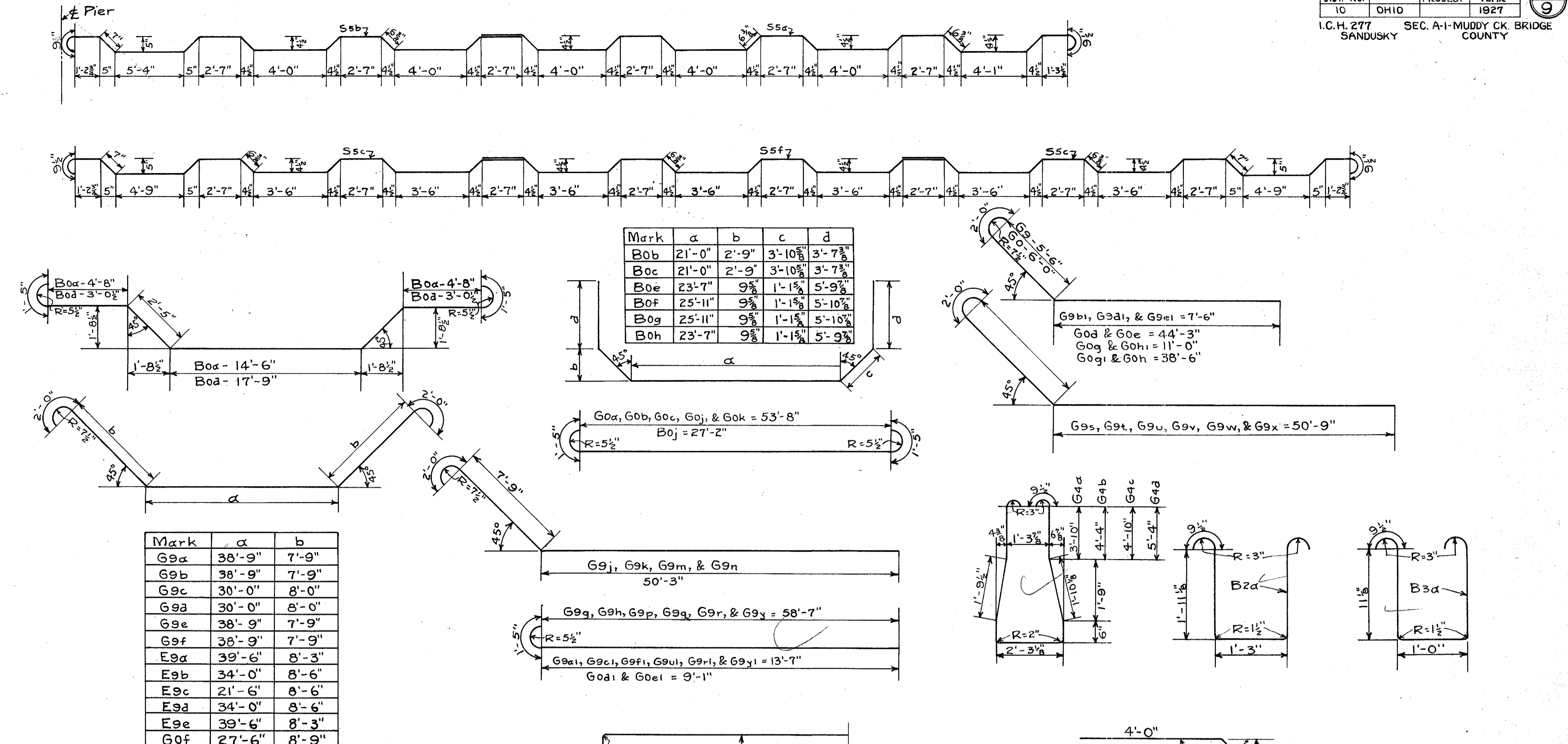
CONCRETE GIRDER BRIDGE
MUDDY CREEK
FREMONT-PORT CLINTON ROAD
SANDUSKY COUNTY
LENGTH-176FT. ROADWAY-24FT.



Piling and Footer Reinforcement not shown in Elevations.

CONCRETE GIRDER BRIDGE
MUDDY CREEK
FREMONT-PORT CLINTON ROAD
SANDUSKY COUNTY
LENGTH-176 FT. ROADWAY-24 FT.

Mark	Size	Length	Num.	Weight	Kind	Location
S1a	3/8" φ	26'-0"	69	675	Straight	Spacer Bars in Slabs
S2a	1/2" φ	24'-9"	52	860	"	Top Slab End Spans
S2b	"	31'-0"	52	1077	"	" " " "
S2c	"	30'-0"	24	481	"	" " Center Spans
S2f	"	35'-6"	24	569	"	" " " "
S5a	3/4" φ	32'-9"	50	2460	Bent	Slab End Spans
S5b	"	26'-3"	50	1971	"	" " " "
S5c	"	25'-9"	46	1779	"	" " Center Span
S5f	"	24'-0"	23	829	"	" " " "
S5j	"	53'-0"	52	4140	Straight	End Spans
S5k	"	30'-0"	24	1081	"	" " Center Span
S5m	"	35'-6"	24	1280	"	" " " "
B0a	1 1/2" □	31'-6"	20	3347	Bent	Beam Bars
B0b	"	36'-0"	20	3825	"	" " " "
B0c	"	36'-0"	20	3825	"	" " " "
B0d	"	31'-6"	20	3347	"	" " " "
B0e	"	37'-6"	20	3985	"	" " " "
B0f	"	40'-0"	20	4250	"	" " " "
B0g	"	40'-0"	20	4250	"	" " " "
B0h	"	37'-6"	20	3985	"	" " " "
B0j	"	30'-0"	24	3825	"	End Supports
B2a	1/2" φ	6'-7"	800	3516	"	Beam Stirrups
B3a	1/2" φ	4'-4"	264	972	"	Stirrups in End Supports
G9a	1 1/2" □	58'-3"	2	501	"	Girder Bars - Center Span
G9al	"	15'-0"	4	258	"	" " " "
G9b	"	58'-3"	2	501	"	" " " "
G9bl	"	15'-0"	4	258	"	" " " "
G9c	"	50'-0"	2	430	"	" " " "
G9cl	"	15'-0"	4	258	"	" " " "
G9d	"	50'-0"	2	430	"	" " " "
G9dl	"	15'-0"	4	258	"	" " " "
G9e	"	58'-3"	2	501	"	" " " "
G9el	"	15'-0"	4	258	"	" " " "
G9f	"	58'-3"	2	501	"	" " " "
G9fl	"	15'-0"	4	258	"	" " " "
G9g	"	60'-0"	2	516	"	" " " "
G9h	"	60'-0"	2	516	"	" " " "
G9j	"	60'-0"	2	516	"	" " " "
G9k	"	60'-0"	2	516	"	" " " "
G9m	"	60'-0"	2	516	"	" " " "
G9n	"	60'-0"	2	516	"	" " " "
G9p	"	60'-0"	2	516	"	" " " "
G9q	"	60'-0"	2	516	"	" " " "
G9r	"	60'-0"	2	516	"	" " " "
G9rl	"	15'-0"	2	129	"	" " " "
G9s	"	60'-0"	2	516	"	" " " "
G9t	"	60'-0"	2	516	"	" " " "
G9u	"	60'-0"	2	516	"	" " " "
G9ul	"	15'-0"	4	258	"	" " " "
G9v	"	60'-0"	2	516	"	" " " "
G9w	"	60'-0"	2	516	"	" " " "
G9x	"	60'-0"	2	516	"	" " " "
G9y	"	60'-0"	2	516	"	" " " "
G9yl	"	15'-0"	2	129	"	" " " "
G0a	1 1/2" □	56'-6"	4	1201	Bent	Girder Bars - End Spans
G0b	"	56'-6"	4	1201	"	" " " "
G0c	"	56'-6"	4	1201	"	" " " "
G0d	"	52'-3"	4	1110	"	" " " "
G0dl	"	10'-6"	4	223	"	" " " "
G0e	"	52'-3"	4	1110	"	" " " "
G0el	"	10'-6"	4	223	"	" " " "
G0f	"	49'-0"	4	1041	"	" " " "
G0g	"	19'-0"	4	404	"	" " " "
G0gl	"	46'-6"	4	988	"	" " " "
G0h	"	46'-6"	4	988	"	" " " "
G0hl	"	19'-0"	4	404	"	" " " "
G0j	"	56'-6"	4	1201	"	" " " "
G0k	"	56'-6"	4	1201	"	" " " "
E9a	1 1/2" □	60'-0"	4	1033	"	" " " "
E9b	"	55'-0"	4	947	"	" " " "
E9c	"	42'-6"	4	732	"	" " " "
E9d	"	55'-0"	4	947	"	" " " "
E9e	"	60'-0"	4	1033	"	" " " "
E9f	"	56'-6"	4	972	"	" " " "
G4a	5/8" φ	16'-0"	160	2670	"	Stirrups - End & Center Spans
G4b	"	17'-0"	12	213	"	" " " "
G4c	"	18'-0"	12	225	"	" " " "
G4d	"	19'-0"	22	436	"	" " " "



NOTE:-Dimensions shown for lengths and bends of reinforcing steel are for center to center of bars not for out to out.

Mark	Size	Length	Num.	Weight	Kind	Location
W5a	3/4" φ	8'-0"	8	96	Bent	Abutments at Wings
F5a	"	18'-0"	16	433	"	Abutment Footers
F5b	"	17'-6"	16	421	"	Pier Footers
F5c	"	17'-0"	4	102	"	Abutment Footers
F5f	"	16'-6"	4	99	"	" " " "
F5g	"	14'-6"	4	87	"	" " " "
F5j	"	36'-6"	4	219	Straight	Pier Footers
F5k	"	32'-0"	4	192	"	" " " "
F5m	"	30'-0"	8	360	"	Abutment Footers
F5n	"	13'-0"	12	234	"	" " " "
F5p	"	13'-6"	28	568	Bent	Abutment Footers
F5r	"	6'-6"	4	39	Straight	Pier Footers
A8a	1" □	27'-6"	80	7480	"	Approach Slabs
A4a	5/8" φ	22'-6"	14	329	"	" " " "
A5a	3/4" φ	22'-6"	6	203	"	" " " "
Total				102080		

CONCRETE GIRDER BRIDGE
MUDDY CREEK
FREMONT-PORT CLINTON ROAD
SANDUSKY COUNTY
LENGTH-176FT. ROADWAY-24FT.

ESTIMATED QUANTITIES	
ROADWAY	
ITEMS	AMOUNTS
EXCAVATION WITHOUT CLASSIFICATION	974 CUYDS.
8" TYPE "A" REINFORCED CONCRETE PAVEMENT	1680 SQYDS.
GUARD RAIL-TYPE "B" - NEW	425 LINFT.
GUARD RAIL-TYPE "B" - REBUILT	150 LIN. FT.
FINISHING SLOPES & DITCHES	970 LIN. FT.
LOOSE STONE RIP RAP	100 SQ. YDS.
BORROW	168 CU. YDS.
BRIDGE	
ITEMS	AMOUNTS
EXCAVATION	800 CUYDS.
PILING ASSUMED LENGTH=15 FT.	2460 LINFT.
CONCRETE 1:5 MIX	365. ² CUYDS.
CONCRETE 1:6½ MIX	620. ² CUYDS.
REINFORCING STEEL	102080 LBS.
CAST IRON SCUPPERS	8 PIECES.
1½" PREMOLDED EXPANSION JOINT	74 SQFT.
¾" PREMOLDED EXPANSION JOINT	92 SQFT.
¼" PREMOLDED EXPANSION JOINT	338 SQFT.
½" PHOSPHOR BRONZE PLATES	363 LBS.
4" CONCRETE WEARING SURFACE	440. ⁸ SQYDS.
REMOVING OLD BRIDGE	LUMP SUM
COFFERDAMS, SHEETING, & PUMPING	LUMP SUM
APPROACH SLAB	143. ¹ SQ. YDS.

CONCRETE GIRDER BRIDGE
 MUDDY CREEK
 FREMONT-PORT CLINTON ROAD
 SANDUSKY COUNTY
 LENGTH-176 FT. ROADWAY-24 FT.