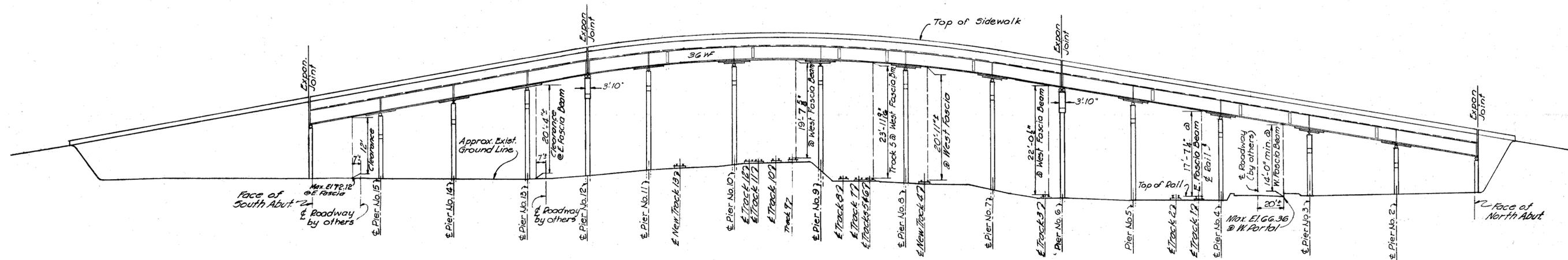


*: Alignment of new relocated Tracks No. 13 and No. 14 to be established in a manner so as to clear Piers Nos. 11, 10 and 9 as located on this Dwg

PLAN SCALE 1" = 40'

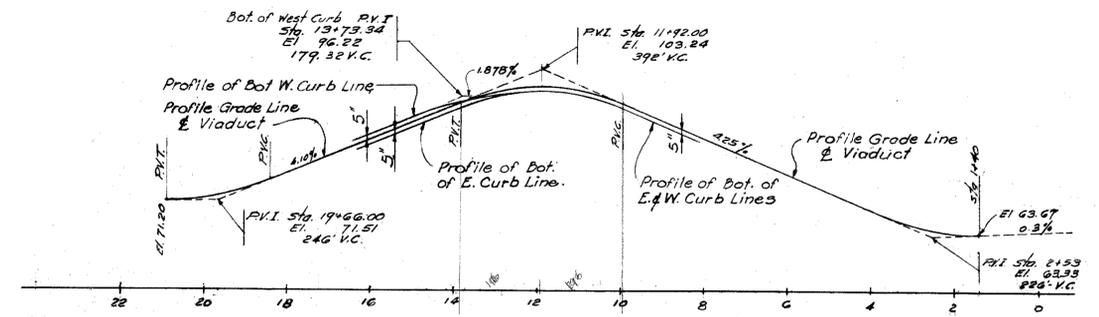
LEGEND
• Denotes 6" leader

NOTES:
Widths of Piers Shown on Plan refer to the Top Struts of the Piers. Horizontal clearances to Tracks given on Plan, are from extreme end of Pier Strut to Track. Stationing of Piers are to E of Piers or E Bearings of Abutments measured along E Viaduct.



ELEVATION SCALE HOR. 1" = 40' VERT. 1" = 10'

NOTE:
Vertical clearances of Tracks are measured from top of Rails along E of Rail shown, to underside of Steel work.



NOTE:
For alignment of Wall at West Arthur Ave see Sh. No. 23

PROFILE OF VIADUCT SCALE HOR. 1" = 200' VERT. 1" = 20'

Rates of grade, lengths of Vertical Curves and stationing are measured along E Viaduct.



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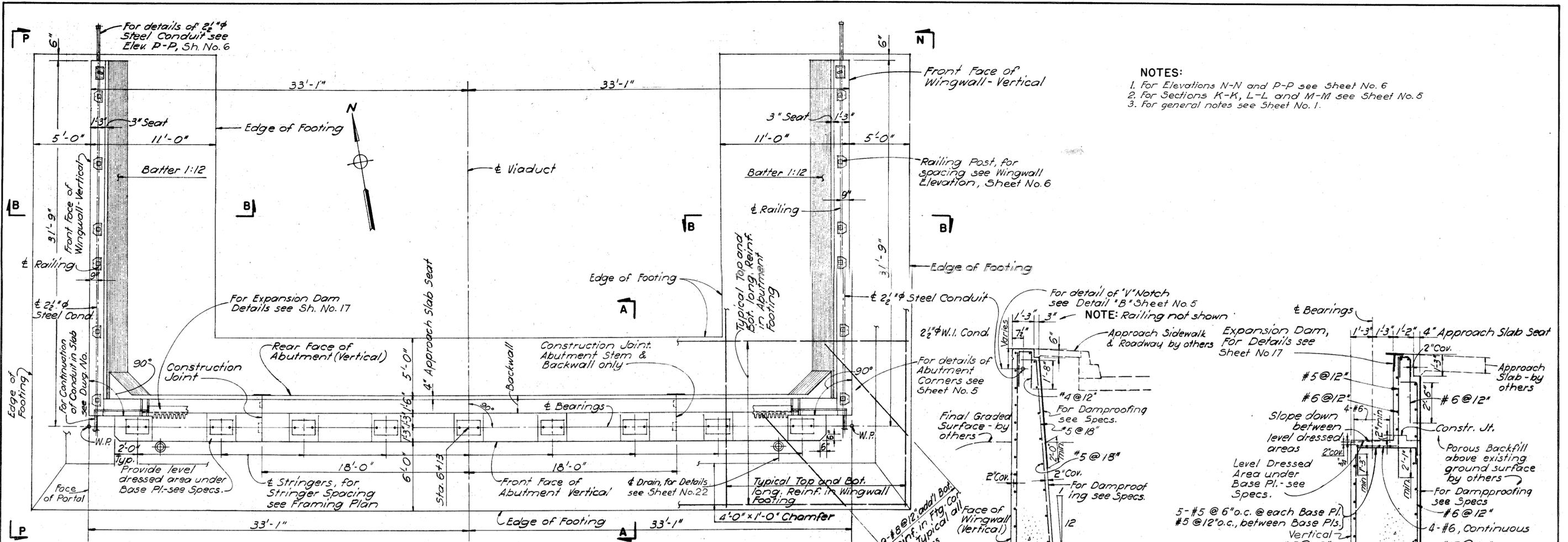
SO. THIRTY FIFTH ST. VIADUCT
OVER C.&N.W. RAILWAY

ALIGNMENT AND CLEARANCES

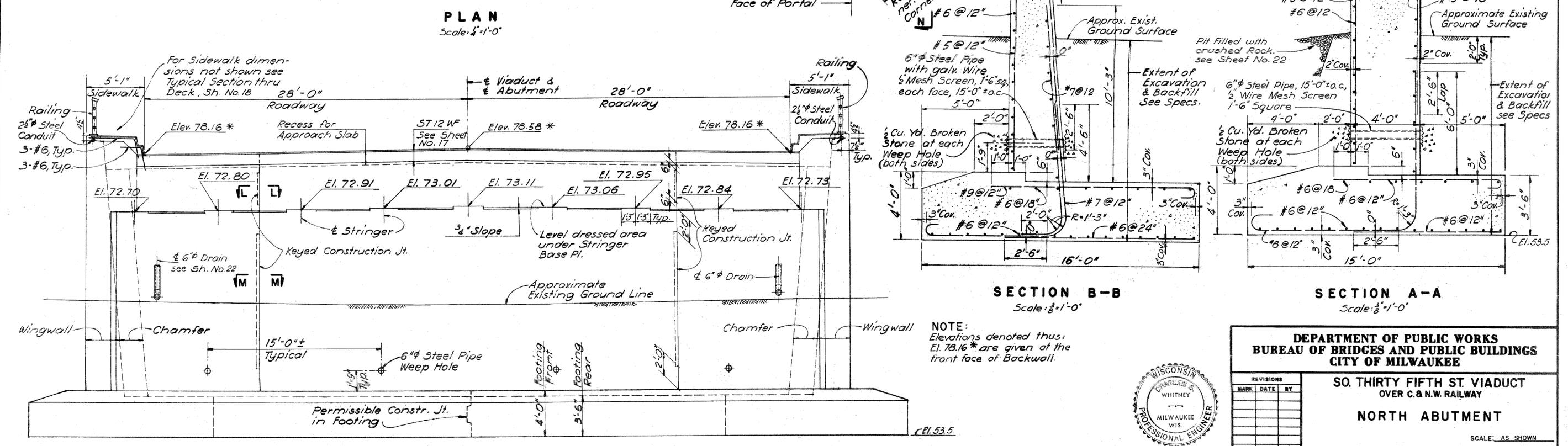
SCALE: AS SHOWN
SHEET NUMBER 2

APPROVED: _____
DATE 4-15-57 SET OF 24 SHEETS

DATE 4-16-57 JOB NO. 669-006



NOTES:
 1. For Elevations N-N and P-P see Sheet No. 6
 2. For Sections K-K, L-L and M-M see Sheet No. 5
 3. For general notes see Sheet No. 1.



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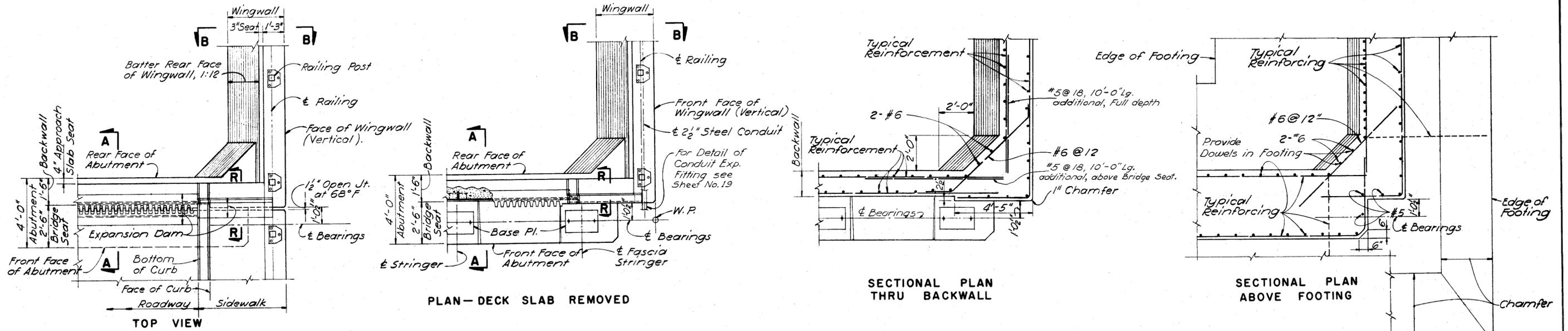
**SO. THIRTY FIFTH ST. VIADUCT
 OVER C. & N.W. RAILWAY**

NORTH ABUTMENT

SCALE: AS SHOWN
 SHEET NUMBER **3**

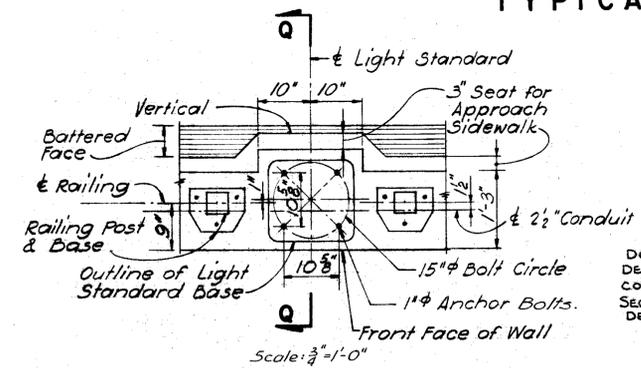
APPROVED:—
George C. Whitely DATE 4-15-59 SET OF 24 SHEETS
George C. Whitely DATE 4-16-59 JOB NO. 669-006

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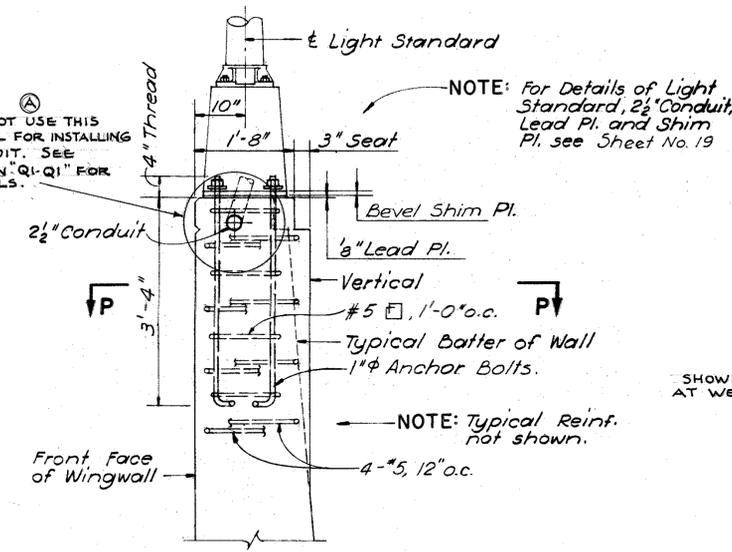


TYPICAL DETAILS OF CORNER OF ABUTMENT AND WINGWALL

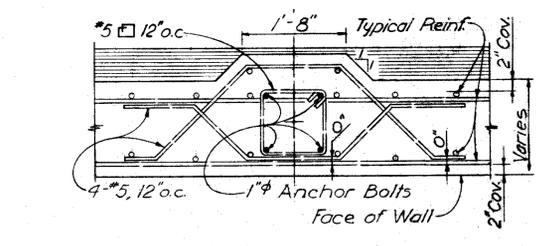
EAST CORNER OF NORTH ABUTMENT SHOWN
OTHER CORNERS OF NORTH AND SOUTH ABUTMENTS SIMILAR
Scale: 3/8"=1'-0"



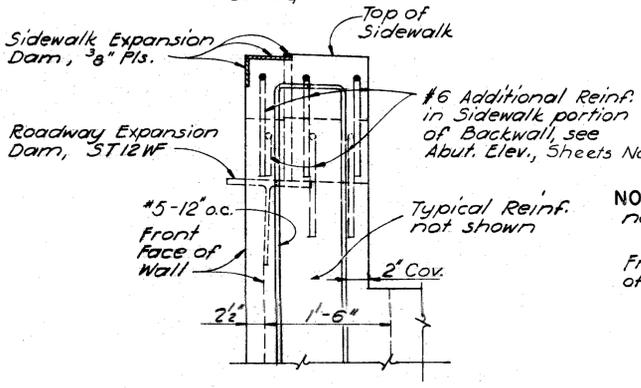
DETAIL 'A'
PLAN OF WINGWALL AT
LIGHT STANDARD
Scale: 3/8"=1'-0"



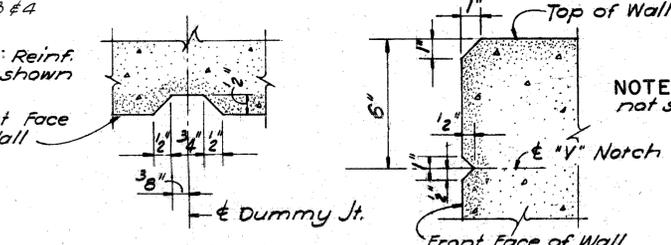
SECTION Q-Q
Scale: 3/8"=1'-0"



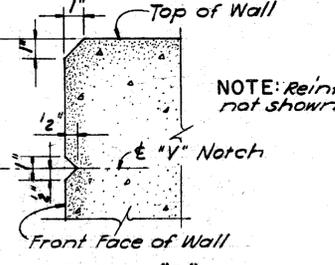
SECTION P-P
Scale: 3/8"=1'-0"



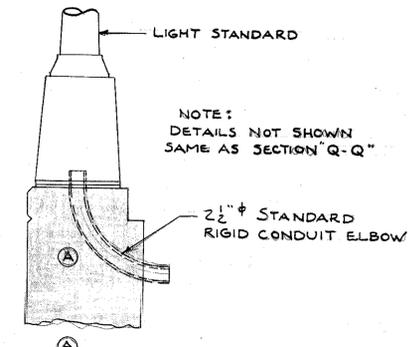
SECTION R-R
Scale: 1"=1'-0"



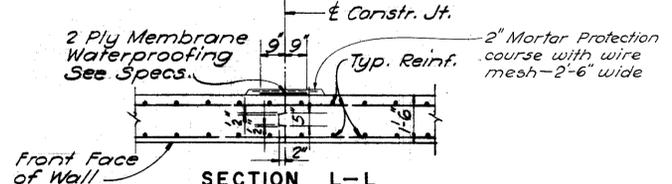
**DUMMY JOINT
IN WINGWALLS**
1/2 Full size



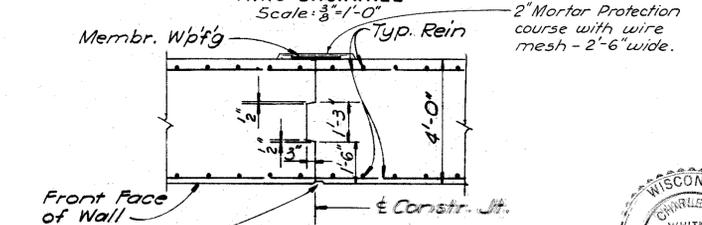
DETAIL 'B'
DETAIL OF TOP OF
WINGWALL
Scale: 3/8"=1'-0"



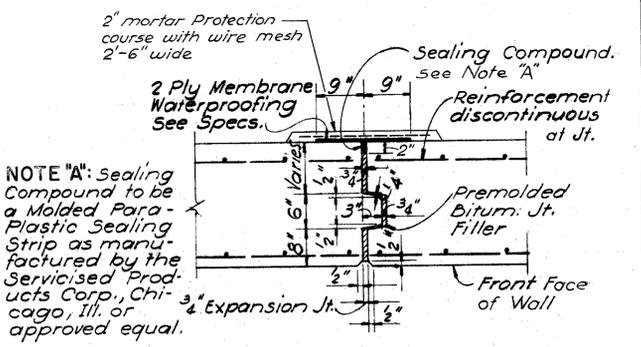
SECTION 'Q1-Q1'
SHOWING PLACING OF CONDUIT FOR LIGHTPOLE
AT WEST ARTHUR AVE. RETAINING WALL ONLY
Scale: 1/2"=1'-0"



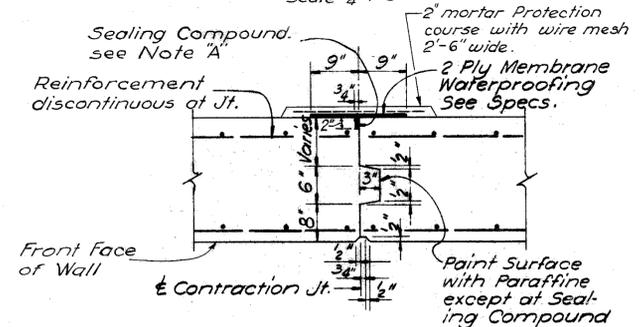
**SECTION L-L
THRU BACKWALL**
Scale: 3/8"=1'-0"



**SECTION M-M
THRU STEM**
Scale: 3/8"=1'-0"



**EXPANSION JOINT
THRU S.E. WINGWALL**
Scale: 3/8"=1'-0"



**CONTRACTION JOINT
THRU WINGWALLS**
Scale: 3/8"=1'-0"



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DEPARTMENT OF PUBLIC WORKS BUREAU OF BRIDGES AND PUBLIC BUILDINGS CITY OF MILWAUKEE	
SO. THIRTY FIFTH ST. VIADUCT OVER C.&N.W. RAILWAY	
ABUTMENT DETAILS	
SCALE: AS SHOWN SHEET NUMBER 5	APPROVED:— <i>George C. Fisher</i> DATE 4-15-59 SET OF 24 SHEETS <i>Spivey</i> DATE 4-16-59 JOB NO. 669-006

For location of Sections L-L & M-M see Sheets Nos. 3 & 4.

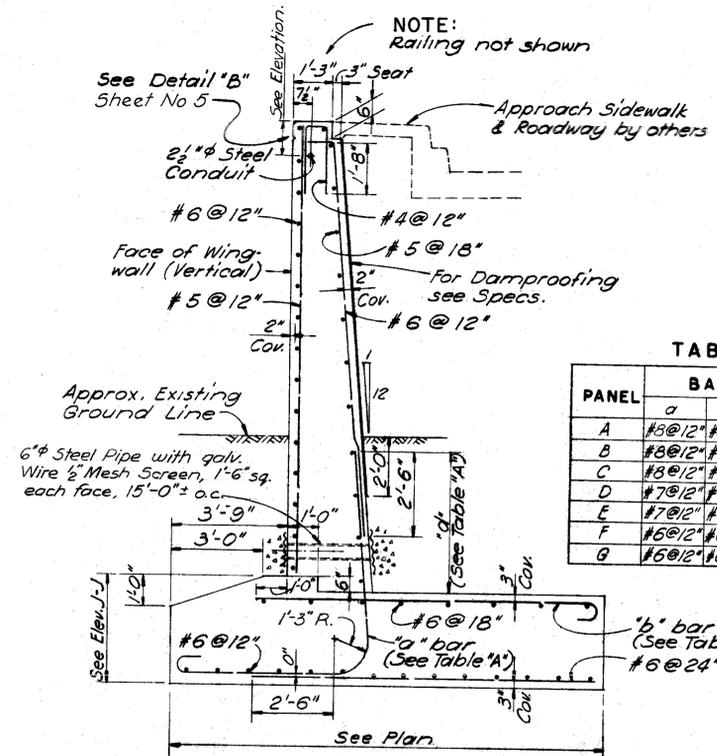
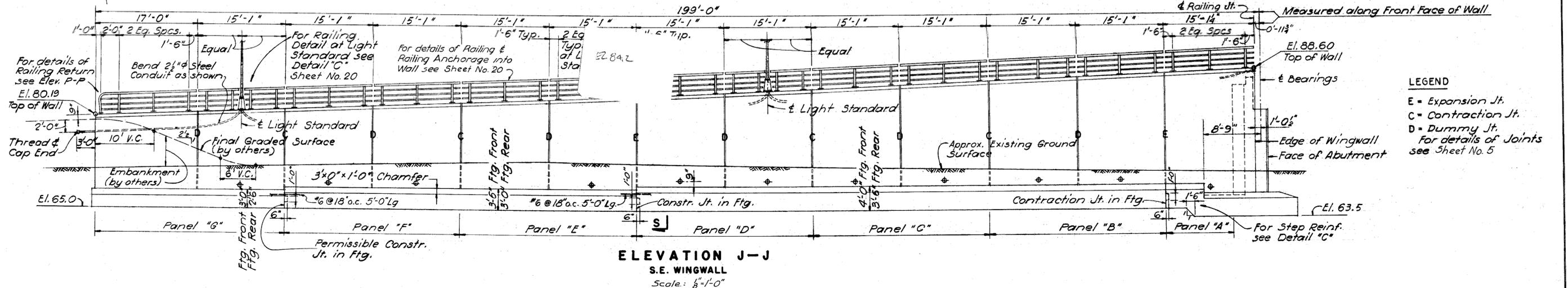
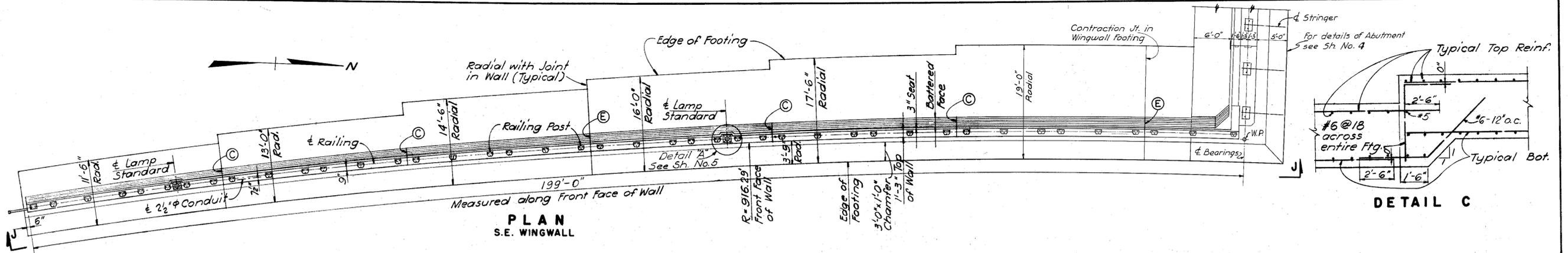
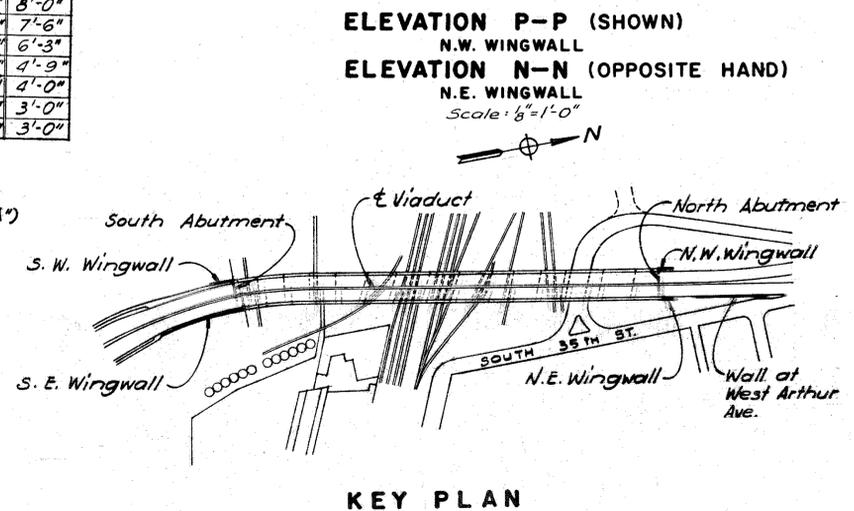
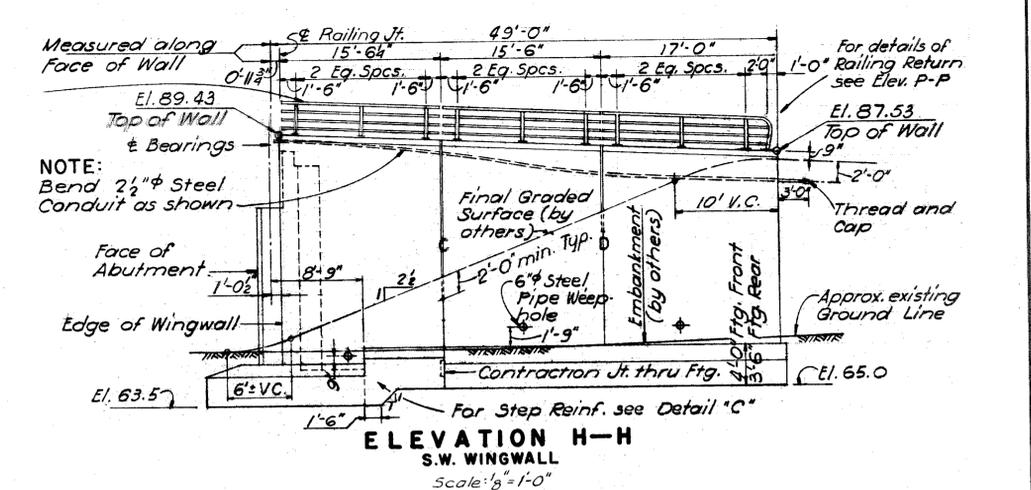
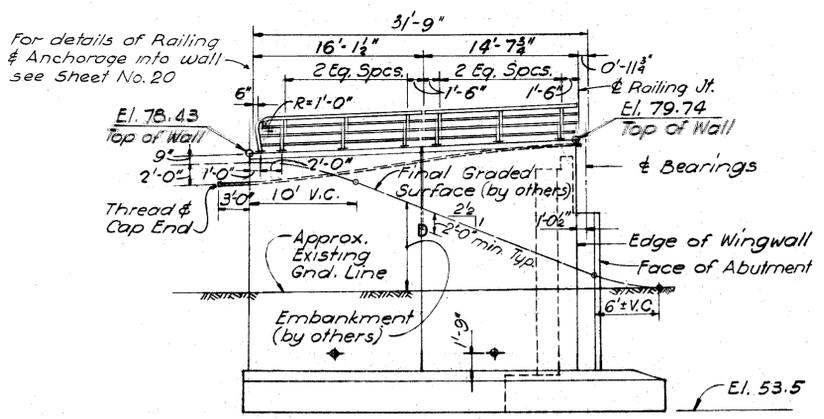


TABLE A

PANEL	BAR		"d"
	a	b	
A	#8@12"	#8@12"	8'-0"
B	#8@12"	#8@12"	7'-6"
C	#8@12"	#8@12"	6'-3"
D	#7@12"	#7@12"	4'-9"
E	#7@12"	#6@12"	4'-0"
F	#6@12"	#6@12"	3'-0"
G	#5@12"	#6@12"	3'-0"



MAX. DESIGN BEARING PRESSURE ON SOIL IN TONS PER SQ. FT.

STRUCTURE	AVERAGE	MAX EDGE
S. Abutment	1.4	1.8
S.W. Wingwall	1.3	1.5
S.E. Wingwall	1.2	1.4
N. Abutment	1.5	2.1
N.W. Wingwall	1.5	2.4
N.E. Wingwall	1.5	2.4
Wall at W. Arthur Ave.	0.6	0.8

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SO. THIRTY FIFTH ST. VIADUCT
OVER C.&N.W. RAILWAY

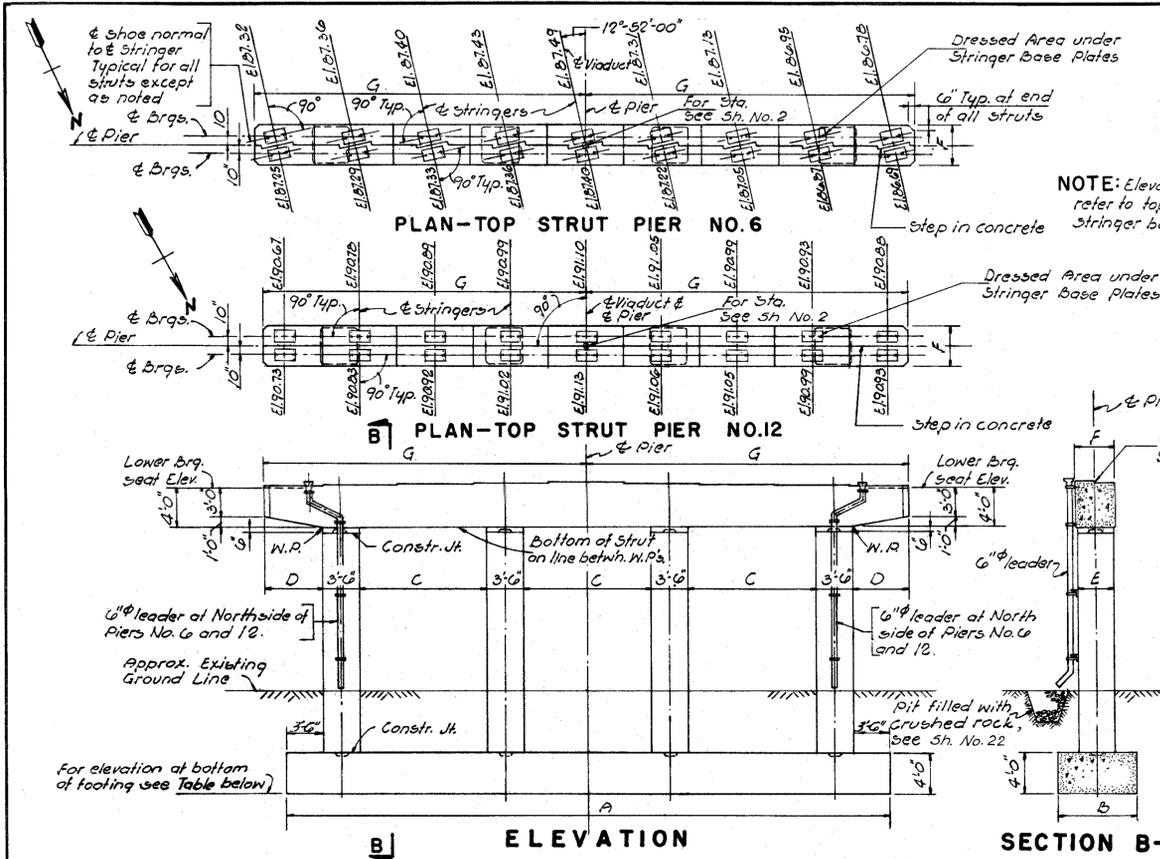
WINGWALLS

SCALE: AS SHOWN
SHEET NUMBER 6

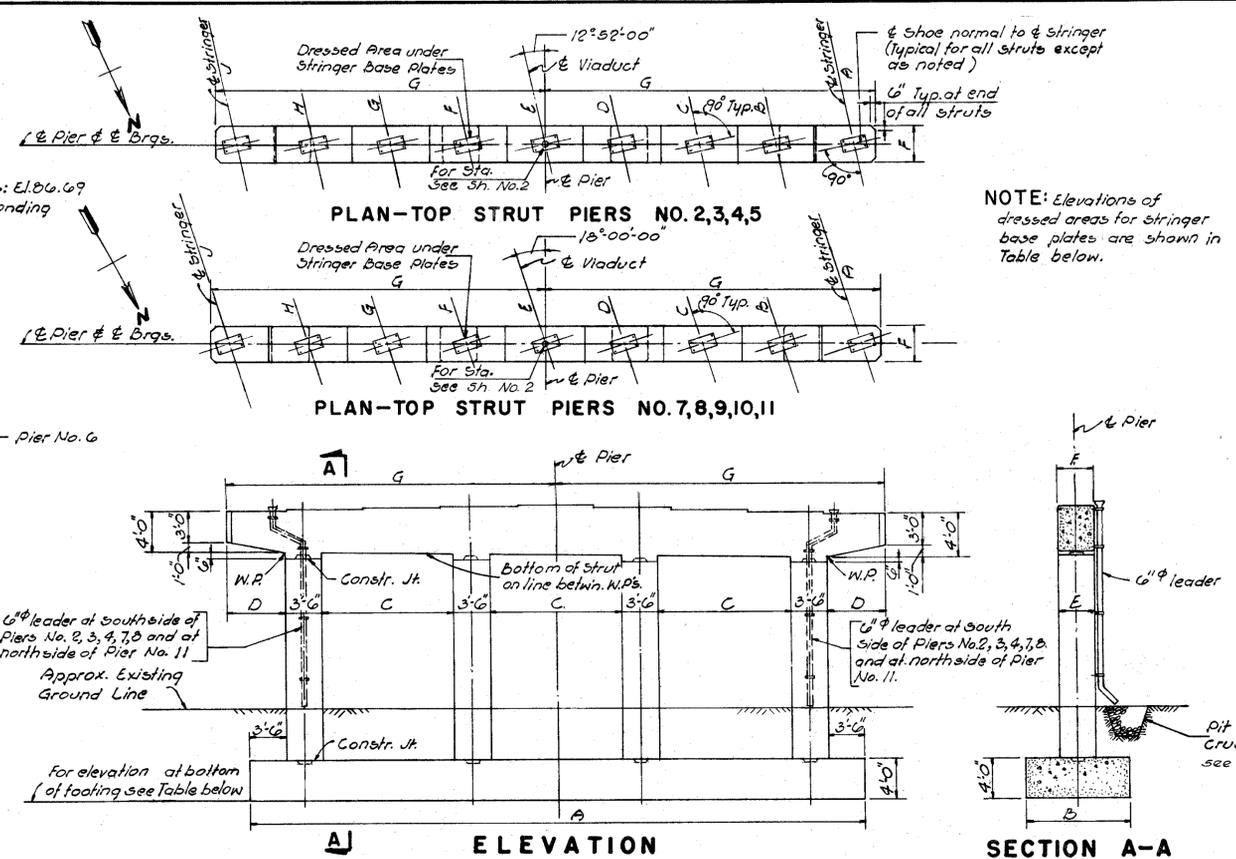
APPROVED: *George C. Nelson* DATE 4-15-52 SET OF 24 SHEETS
Charles C. Whitney DATE 4-16-52 JOB NO. 669-006



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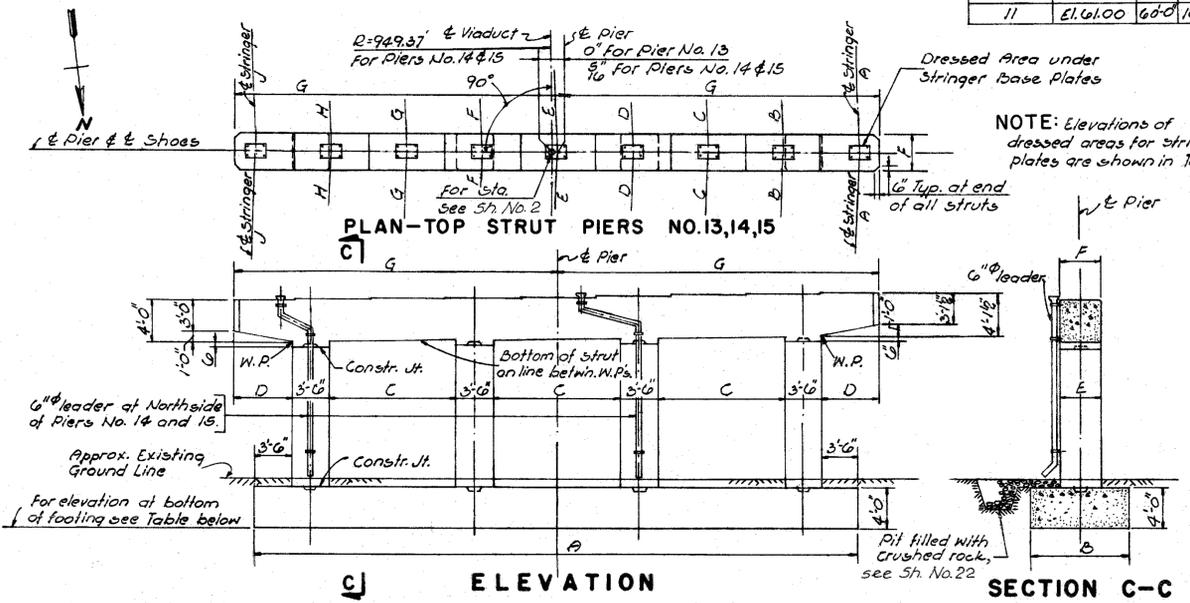
NOTE: Elevations indicated on Plan Views thus: E1.04.09 refer to top of dressed area for the corresponding Stringer base plate.



NOTE: Elevations of dressed areas for stringer base plates are shown in Table below.

PIER NO.	ELEVATION AT BOTTOM OF FOOTING	PIER DIMENSIONS						FOOTING PRESSURES		
		A	B	C	D	E	F	G	Max. Avg. Press. 5x7	Max. Edge Press. 5x7
6	E1.58.00	5'9"	7'6"	12'8"	5'7 1/2"	3'6"	3'10"	3'7 1/2"	1.7	1.9
12	E1.61.00	5'7 1/2"	7'6"	12'3"	5'6"	3'6"	3'4 1/2"	3'0 1/2"	1.8	1.9

PIER NO.	ELEVATION AT BOTTOM OF FOOTING	PIER DIMENSIONS						ELEVATIONS OF DRESSED AREA FOR STRINGER BASE PLATES										FOOTING PRESSURES	
		A	B	C	D	E	F	G	A	B	C	D	E	F	G	H	J	Max. Avg. Press. 5x7	Max. Edge Press. 5x7
2	E1.56.50	5'9"	10'0"	12'8"	5'7 1/2"	3'6"	3'6"	3'7 1/2"	E1.74.02	E1.75.02	E1.75.20	E1.75.36	E1.75.54	E1.75.56	E1.75.52	E1.75.49	E1.75.42	1.8	2.0
3	E1.56.20	5'9"	11'6"	12'8"	5'7 1/2"	3'10"	3'4 1/2"	3'7 1/2"	E1.78.04	E1.78.26	E1.78.44	E1.78.62	E1.78.80	E1.78.76	E1.78.72	E1.78.68	E1.78.60	1.7	2.1
4	E1.58.00	5'9"	9'6"	12'8"	5'7 1/2"	3'6"	3'6"	3'7 1/2"	E1.80.97	E1.81.20	E1.81.38	E1.81.55	E1.81.73	E1.81.69	E1.81.64	E1.81.62	E1.81.53	1.8	2.0
5	E1.56.40	5'9"	10'0"	12'8"	5'7 1/2"	3'6"	3'6"	3'7 1/2"	E1.84.07	E1.84.31	E1.84.49	E1.84.67	E1.84.85	E1.84.81	E1.84.77	E1.84.73	E1.84.63	1.8	2.0
7	E1.57.00	6'0"	10'0"	12'8"	5'9 1/2"	3'6"	3'6"	3'8 1/2"	E1.88.98	E1.89.21	E1.89.41	E1.89.61	E1.89.82	E1.89.79	E1.89.77	E1.89.76	E1.89.68	1.8	2.0
8	E1.62.00	6'0"	10'0"	12'8"	5'9 1/2"	3'6"	3'6"	3'8 1/2"	E1.91.28	E1.91.60	E1.91.77	E1.91.94	E1.92.10	E1.92.08	E1.92.00	E1.91.98	E1.91.88	1.8	2.0
9	E1.58.50	6'0"	14'0"	12'8"	5'9 1/2"	3'10"	3'4 1/2"	3'8 1/2"	E1.92.91	E1.93.10	E1.93.23	E1.93.37	E1.93.50	E1.93.41	E1.93.32	E1.93.24	E1.93.10	1.9	2.2
10	E1.62.00	6'0"	10'0"	12'8"	5'9 1/2"	3'6"	3'6"	3'8 1/2"	E1.93.04	E1.93.19	E1.93.29	E1.93.39	E1.93.48	E1.93.35	E1.93.23	E1.93.11	E1.92.94	1.8	2.0
11	E1.61.00	6'0"	10'0"	12'8"	5'9 1/2"	3'6"	3'6"	3'8 1/2"	E1.92.34	E1.92.43	E1.92.50	E1.92.50	E1.92.57	E1.92.41	E1.92.27	E1.92.11	E1.91.98	1.8	2.0



NOTE: Elevations of dressed areas for stringer base plates are shown in Table below.

- NOTES:
1. Mark this drawing with Sheet No. 8
 2. For location and spacing of all stringers see Sheet No. 9
 3. For location of downleaders on the piers see also Sheets No. 2 and No. 22
 4. For general notes see Sheet No. 1

PIER NO.	ELEVATION AT BOTTOM OF FOOTING	PIER DIMENSIONS						ELEVATIONS OF DRESSED AREA FOR STRINGER BASE PLATES										FOOTING PRESSURES	
		A	B	C	D	E	F	G	A	B	C	D	E	F	G	H	J	Max. Avg. Press. 5x7	Max. Edge Press. 5x7
13	E1.58.00	5'9"	10'0"	12'3"	5'6"	3'6"	3'6"	3'0 1/2"	E1.89.25	E1.89.23	E1.89.18	E1.89.14	E1.89.10	E1.88.99	E1.88.88	E1.88.78	E1.88.65	1.8	2.0
14	E1.63.00	5'9"	9'6"	12'3"	5'6"	3'10"	3'4 1/2"	3'0 1/2"	E1.92.09	E1.92.09	E1.92.07	1.8	2.2						
15	E1.63.50	5'9"	9'6"	12'3"	5'6"	3'6"	3'6"	3'0 1/2"	E1.84.04	E1.84.26	E1.84.19	E1.84.04	E1.83.93	E1.83.82	E1.83.72	E1.83.61	E1.83.49	1.6	1.8



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SO. THIRTY FIFTH ST. VIADUCT
OVER C. & N.W. RAILWAY

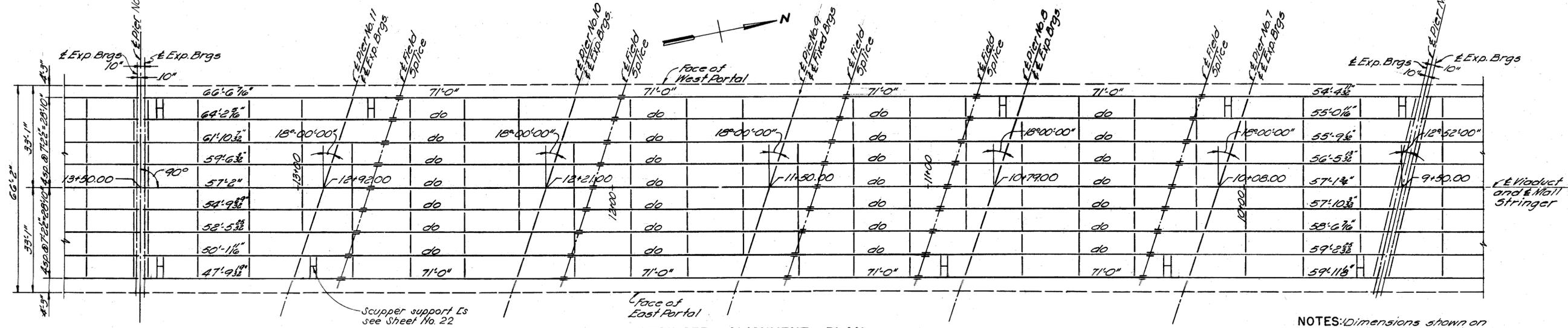
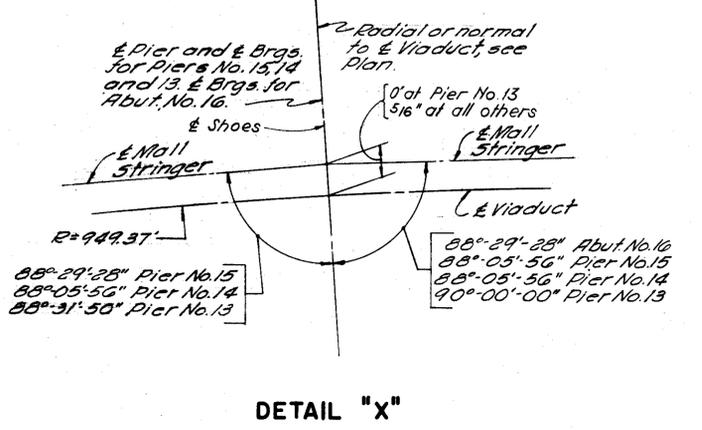
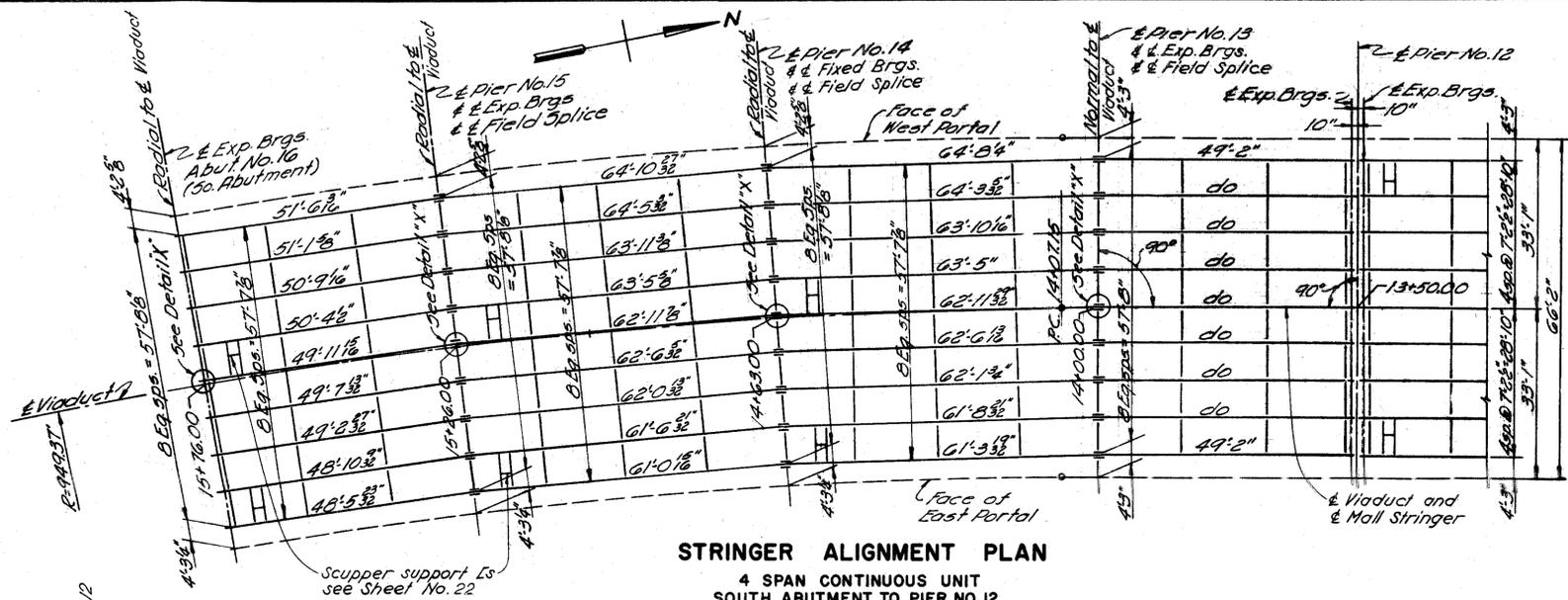
PIERS

SCALE: 1" = 1'-0"

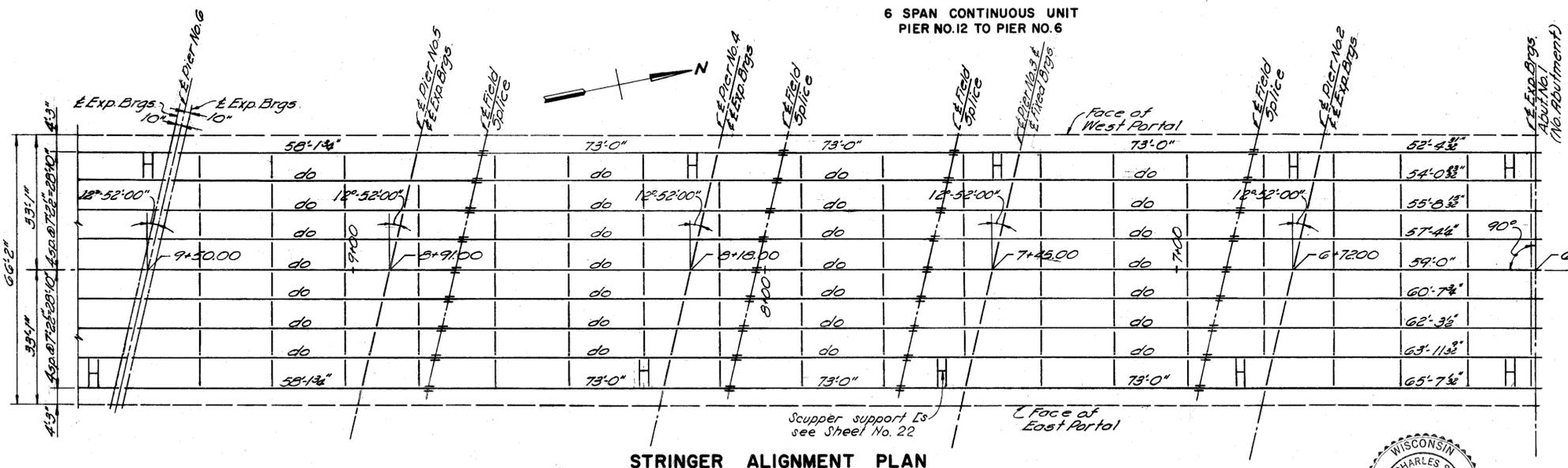
SHEET NUMBER 7

APPROVED: *George L. Johnston* DATE 4-15-59 SET OF 24 SHEETS

BY: *Charles S. Whitney* DATE 4-16-59 JOB NO. 689-006



NOTES: Dimensions shown on stringers indicate span length, c to c. Brgs. measured horiz.
2. For general notes see Sheet No. 1



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SO. THIRTY FIFTH ST. VIADUCT
OVER C. & N.W. RAILWAY

STRINGER ALIGNMENT PLAN

SCALE: 1/16" = 1'-0"

SHEET NUMBER **9**

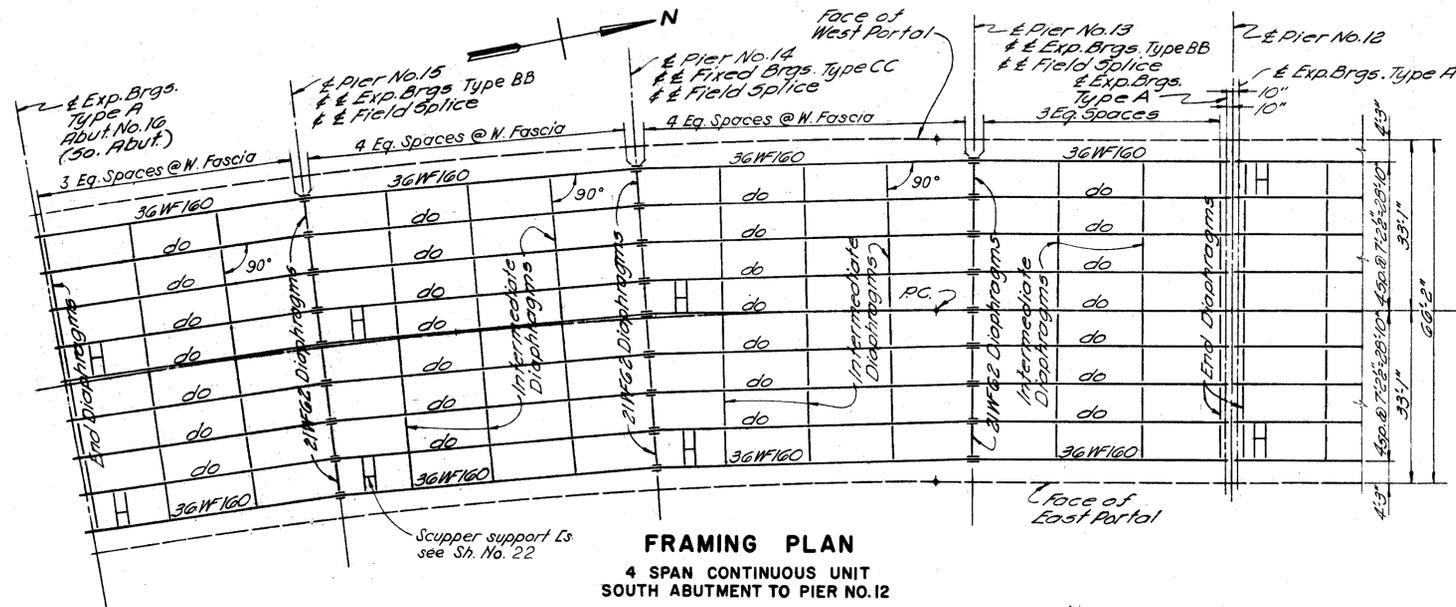
APPROVED:—
George C. Ashton DATE 4-15-59 SET OF 24 SHEETS
Lewis Sheehane DATE 4-16-59 JOB NO. 669-006

REVISIONS
MARK DATE BY



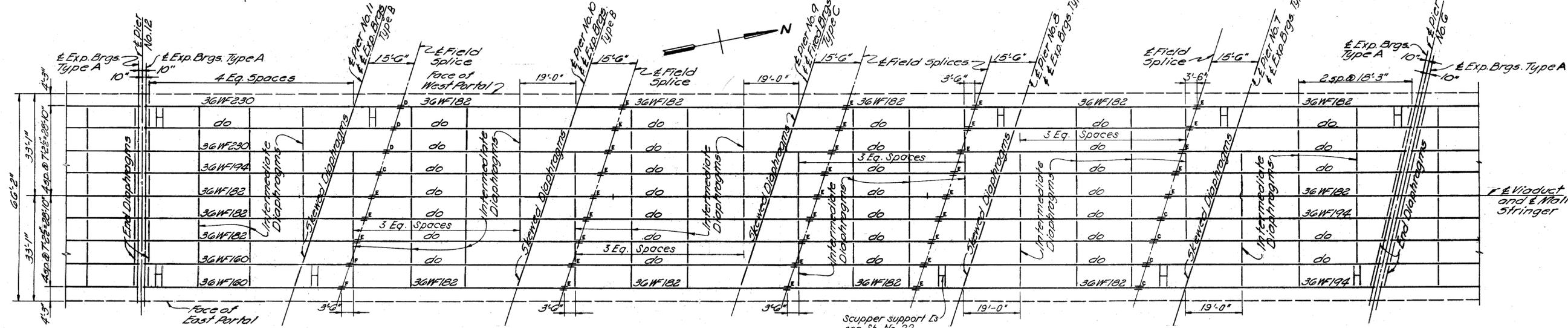
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By *A. Whitney*

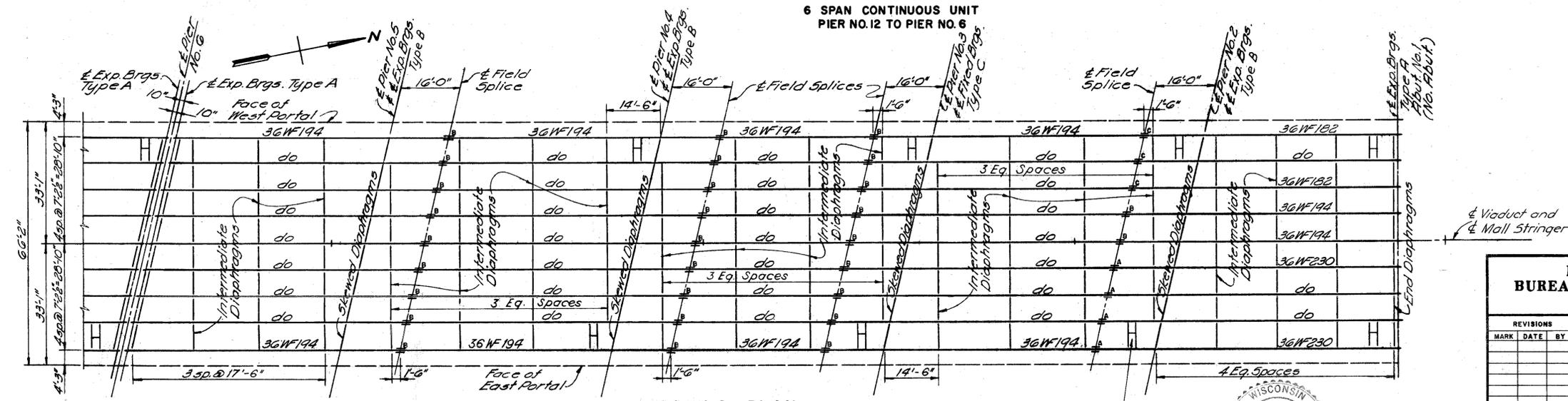


NOTES:
 All intermediate diaphragms, end diaphragms, and skewed diaphragms of Piers are 13L 92.7, except diaphragms over Piers No. 13, 14 and 15. For exceptions see Framing Plan.
 Letters A, B, C, D, E and F shown at Field Splices indicates type of splice to be used. For details of these splices see Sh. No. 15.
 For details of Bearing shoes see Sh. No. 15.

FRAMING PLAN
 4 SPAN CONTINUOUS UNIT
 SOUTH ABUTMENT TO PIER NO. 12



FRAMING PLAN
 6 SPAN CONTINUOUS UNIT
 PIER NO. 12 TO PIER NO. 6



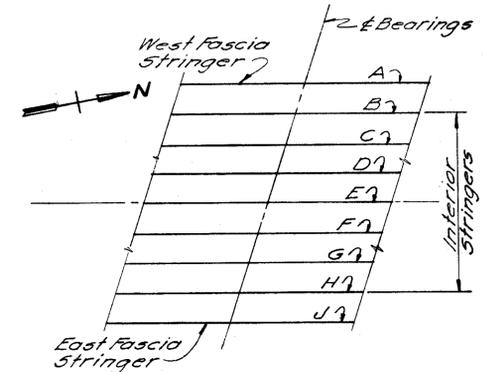
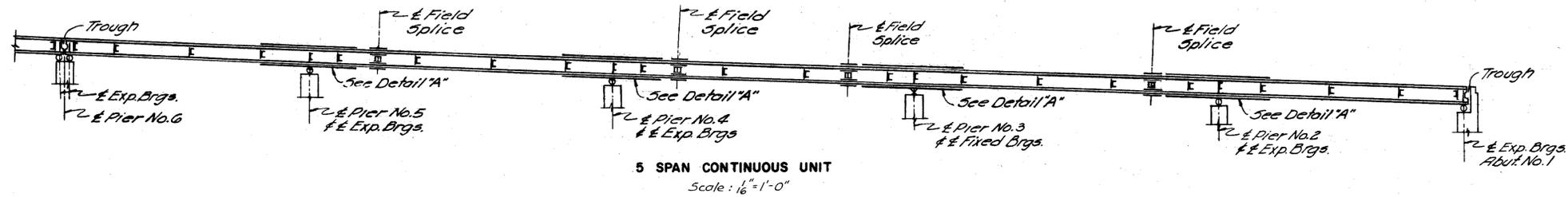
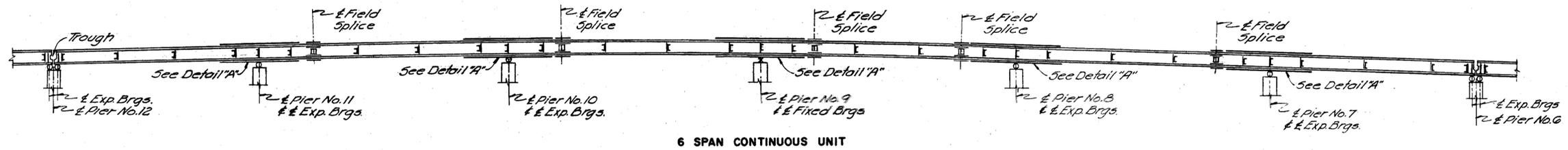
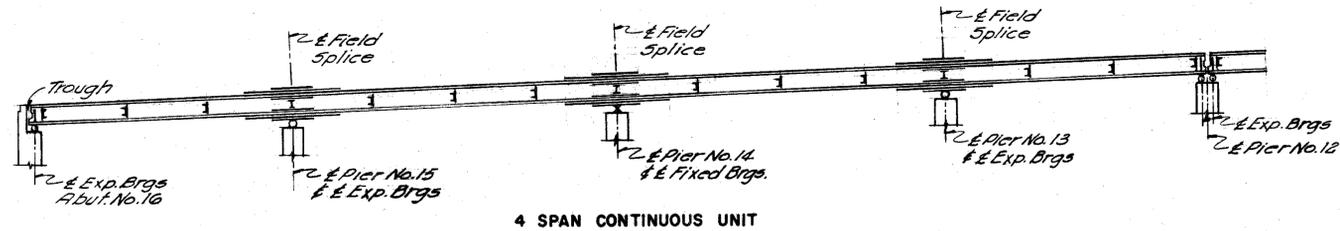
FRAMING PLAN
 5 SPAN CONTINUOUS UNIT
 PIER NO. 6 TO NORTH ABUTMENT

Typical scupper supports, for details and location see Sheet No. 22.

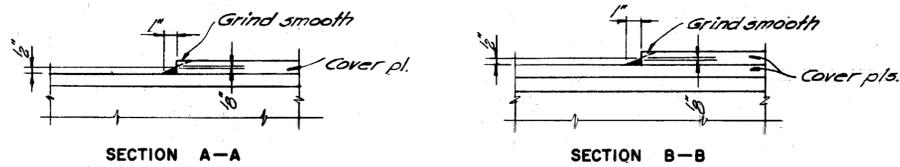


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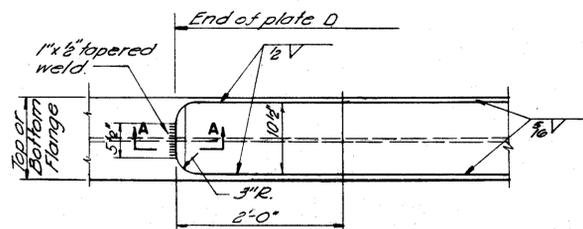
DEPARTMENT OF PUBLIC WORKS BUREAU OF BRIDGES AND PUBLIC BUILDINGS CITY OF MILWAUKEE		
SO. THIRTY FIFTH ST. VIADUCT OVER C. & N.W. RAILWAY		
FRAMING PLAN		
SCALE: 1/8" = 1'-0" SHEET NUMBER 10		
REVISIONS MARK DATE BY	APPROVED:— <i>George C. Deaton</i> DATE 4-15-59 SET OF 24 SHEETS <i>George C. Deaton</i> DATE 4-16-59 JOB NO. 669-006	



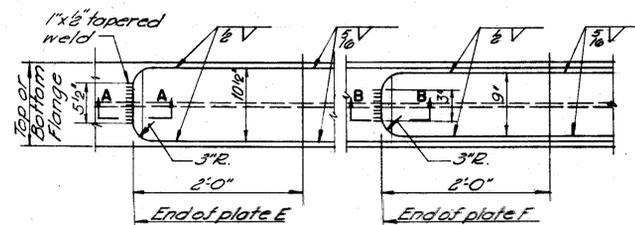
KEY PLAN
SHOWING DESIGNATION OF STRINGERS FOR LOCATION OF COVER PLATES



Scale: 2" = 1'-0"



TYPICAL FOR INTERIOR AND FASCIA STRINGERS WITH SINGLE COVER PLATES



TYPICAL FOR FASCIA STRINGERS WITH DOUBLE COVER PLATES

DETAIL "Z"
COVER PLATE WELDING DETAILS

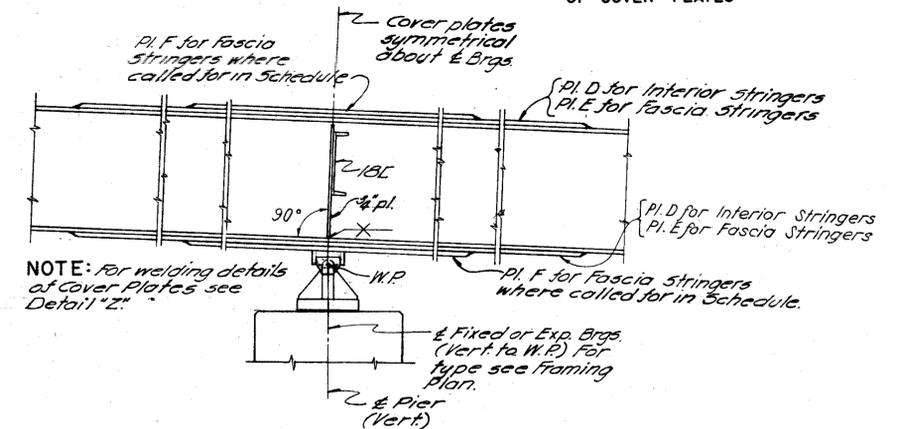
Scale: 1" = 1'-0"

SCHEDULE OF TOP AND BOTTOM WELDED COVER PLATES AT PIERS

Location	Interior Stringers		Fascia Stringers	
	Plates D (10 1/2" wide)	Plates E (10 1/2" wide)	Plates F (9" wide)	
Abut. No. 1	None	None	None	
Pier No. 2	B & C 1" x 25'-0"	A 1 1/4" x 25'-0"	None	
	D & E 1" x 23'-0"	J 1 1/4" x 22'-0"		
	F, G & H 3/8" x 19'-0"			
Pier No. 3	1 1/8" x 24'-0"	1 1/8" x 24'-0"	1 1/8" x 15'-6"	
Pier No. 4	1 1/8" x 24'-0"	1 1/8" x 24'-0"	1 1/8" x 15'-6"	
Pier No. 5	1" x 23'-0"	1 1/8" x 22'-6"	1 1/8" x 15'-6"	
Pier No. 6	None	None	None	
Pier No. 7	1" x 24'-0"	A 1 1/4" x 24'-6"	A None	
		J 1 1/8" x 23'-6"	J 1 1/8" x 16'-0"	
Pier No. 8	1 1/8" x 25'-0"	1 1/8" x 24'-6"	1 1/8" x 16'-0"	
Pier No. 9	1 1/8" x 25'-0"	1 1/8" x 24'-6"	1 1/8" x 16'-0"	
Pier No. 10	B, C, D & E 1 1/8" x 25'-0"	A 1 1/8" x 24'-6"	A 1 1/8" x 16'-0"	
	F, G & H 1 1/4" x 26'-0"	J 1 1/8" x 25'-6"	J 1 1/8" x 17'-0"	
Pier No. 11	B & C 3/8" x 19'-0"	A 1 1/4" x 22'-0"	None	
	D, E & F 1" x 24'-0"			
	G 1 1/8" x 24'-0"	J 1 1/8" x 24'-0"		
	H 1 1/8" x 24'-0"			
Pier No. 12	None	None	None	
Pier No. 13				
Pier No. 14	Special Details see Sp. No. 14			
Pier No. 15				
Abut. No. 16	None	None	None	

NOTES:

- See Key Plan for location of Stringers A to J incl.
- Indicates cover plate is to be used at all interior stringers B to H incl.
- Indicates cover plate is to be used at both fascia stringers A and J.



NOTE: For welding details of cover plates see Detail "Z".

DETAIL "A"
SHOWING COVER PLATE DETAILS FOR INTERIOR AND FASCIA STRINGERS AT PIERS
Scale: 1/2" = 1'-0"



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REVISIONS		
MARK	DATE	BY

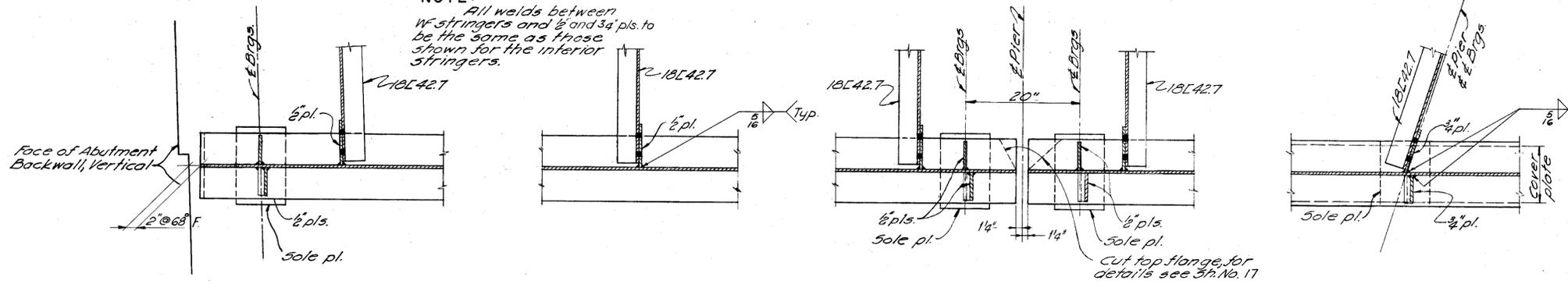
DEPARTMENT OF PUBLIC WORKS
BUREAU OF BRIDGES AND PUBLIC BUILDINGS
CITY OF MILWAUKEE

SO. THIRTY FIFTH ST. VIADUCT
OVER C. & N.W. RAILWAY
COVER PLATE DETAILS
AND
STRINGER ELEVATIONS

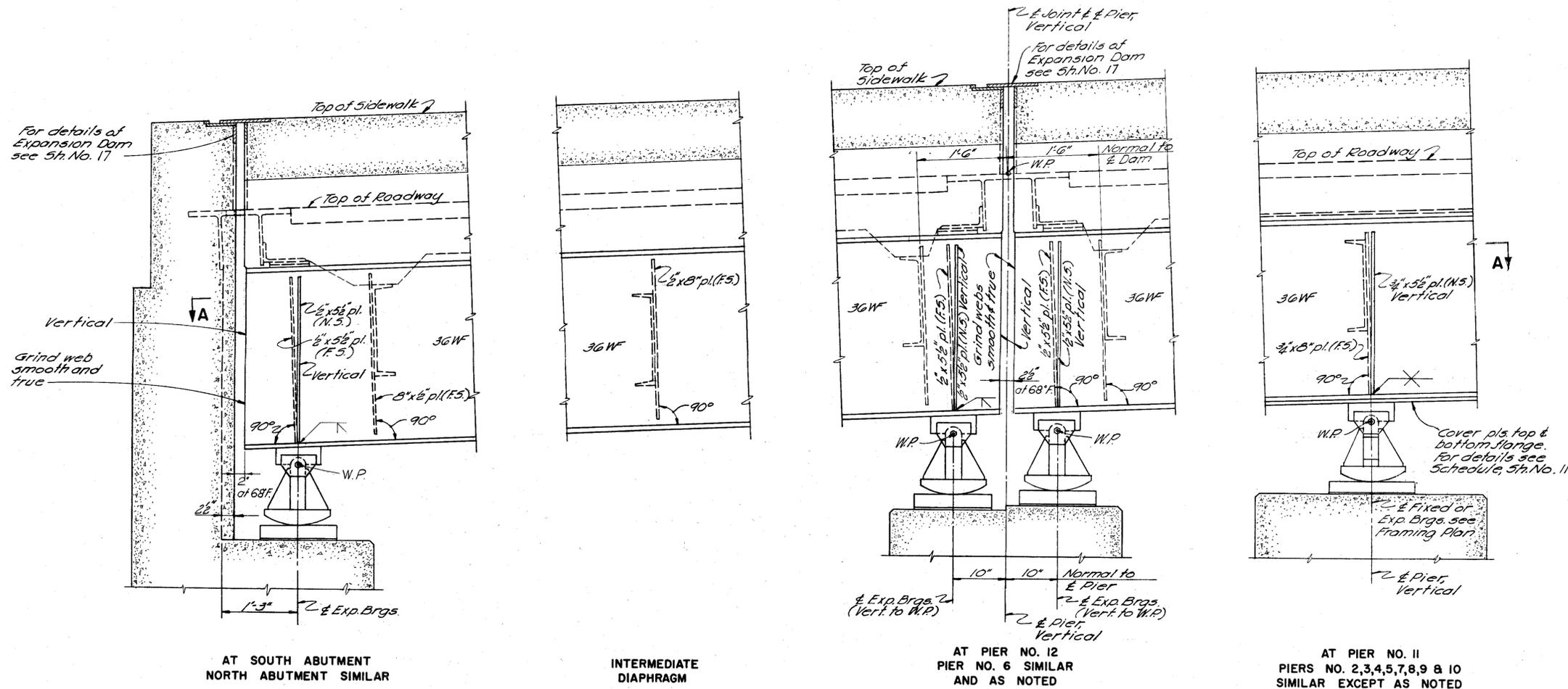
SCALE: AS SHOWN

APPROVED: *George C. Ashton* DATE 4-15-59 SET OF 24 SHEETS
DeWitt DATE 4-16-59 JOB NO. 669-006

NOTE:
All welds between
W stringers and 1/2" and 3/4" pls. to
be the same as those
shown for the interior
stringers.



SECTION A-A



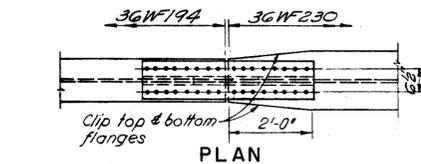
TYPICAL DETAILS OF FASCIA STRINGERS

NOTE:
For stringer details at piers
No. 13, 14 and 15 see Sh. No. 14

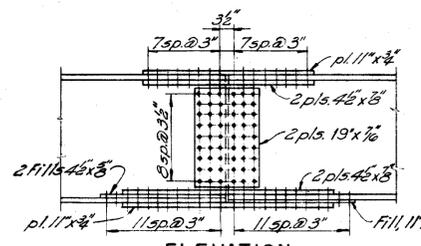


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NEW YORK MILWAUKEE
By *C. S. Whitney*

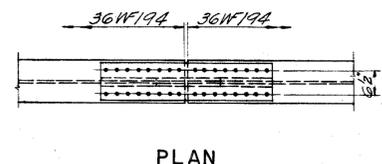
DEPARTMENT OF PUBLIC WORKS BUREAU OF BRIDGES AND PUBLIC BUILDINGS CITY OF MILWAUKEE		
SO. THIRTY FIFTH ST. VIADUCT OVER C.&N.W. RAILWAY		
FASCIA STRINGER DETAILS		
SCALE: 1" = 1'-0"		
SHEET NUMBER 13		
APPROVED:—		
<i>George P. Johnston</i> DATE 4-15-59 SET OF 24 SHEETS		
<i>George P. Johnston</i> DATE 4-16-59 JOB NO. 669-006		



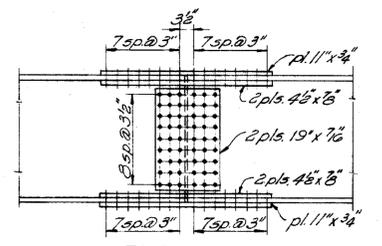
PLAN



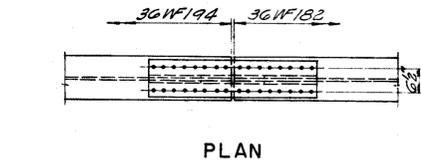
ELEVATION TYPE A



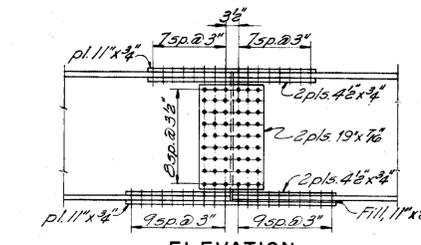
PLAN



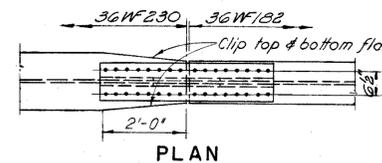
ELEVATION TYPE B



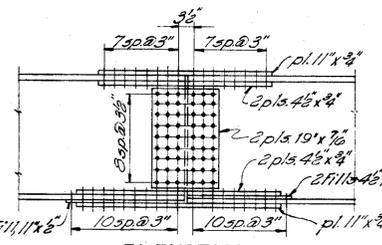
PLAN



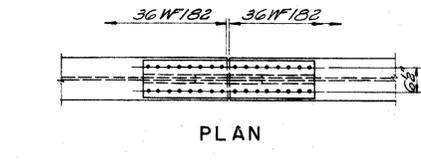
ELEVATION TYPE C



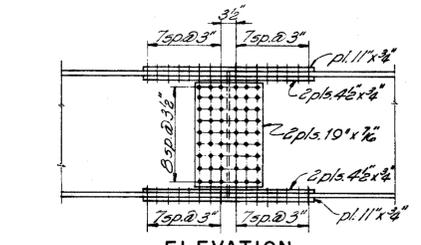
PLAN



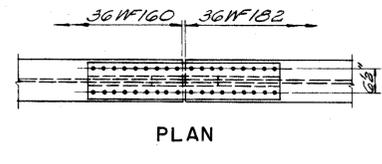
ELEVATION TYPE D



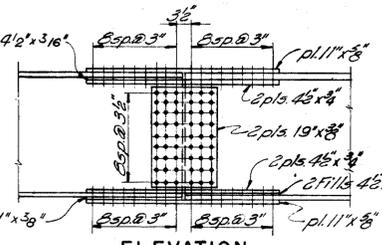
PLAN



ELEVATION TYPE E



PLAN

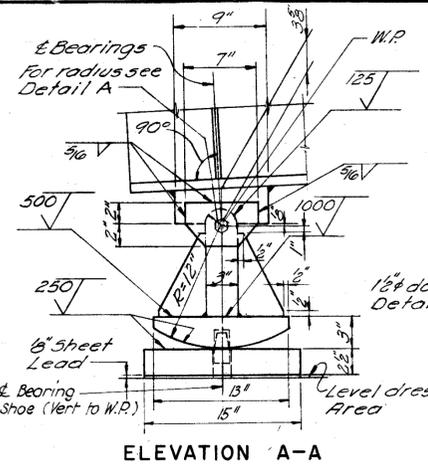


ELEVATION TYPE F

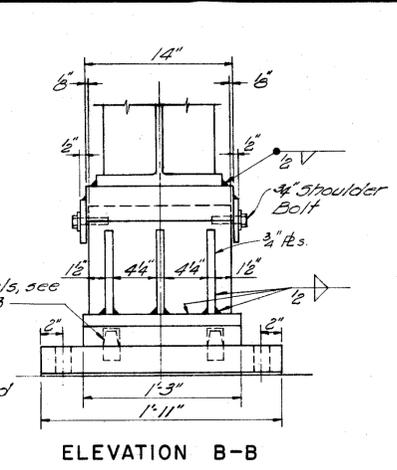
TYPICAL DETAILS OF STRINGER SPLICES

- Scale: 1/2"=1'-0"
- NOTES:
1. For location of type A, B, C, D, E and F splices see Sheet No. 10
 2. All rivets 5/8" φ
 3. All holes 1 1/8" φ

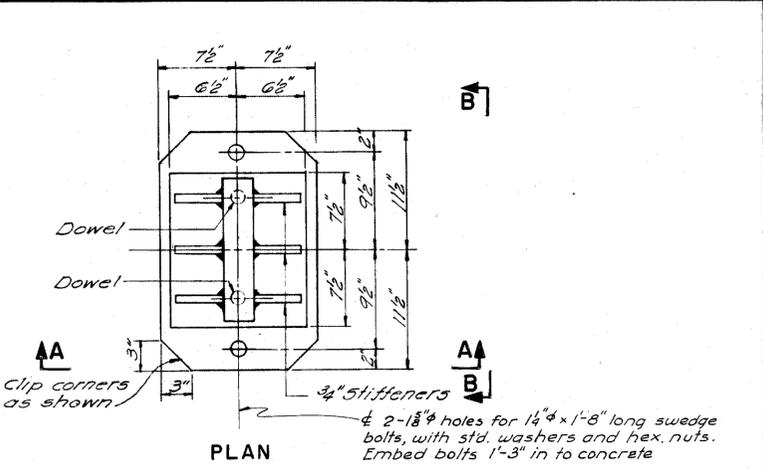
125 Denotes finish in micro inches R.M.S. Value.



ELEVATION A-A

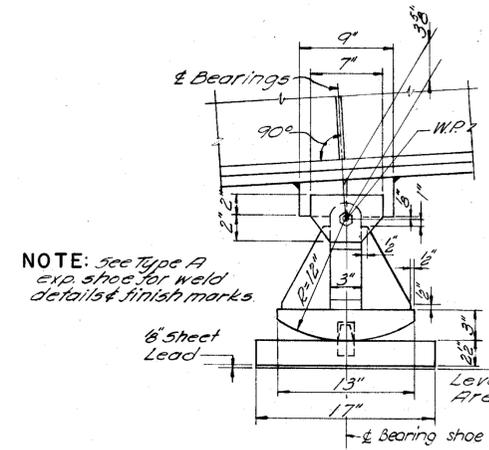


ELEVATION B-B

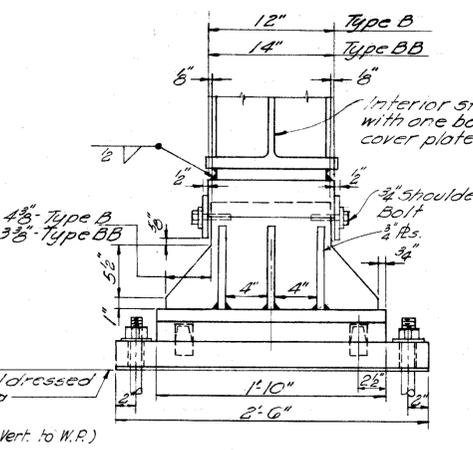


PLAN

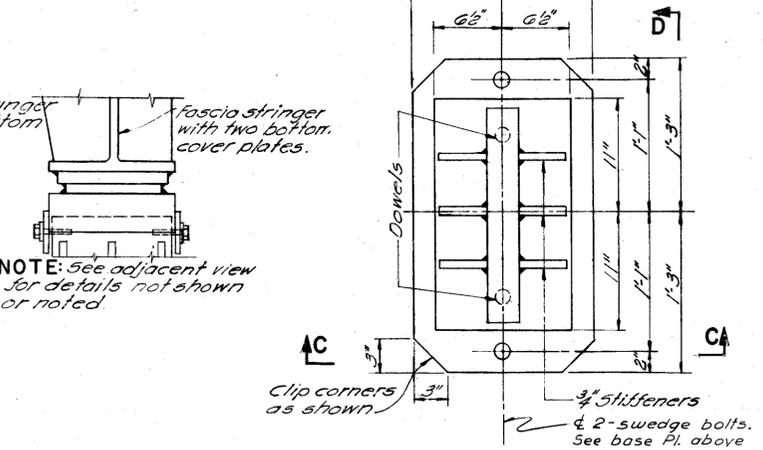
TYPE A EXPANSION SHOE DETAILS



ELEVATION C-C

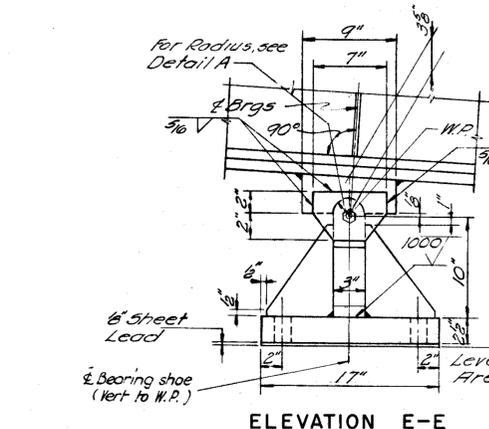


ELEVATION D-D

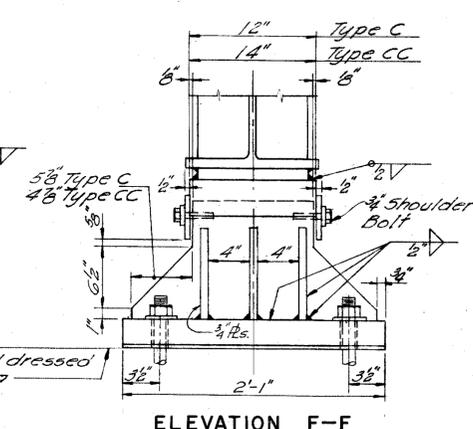


PLAN

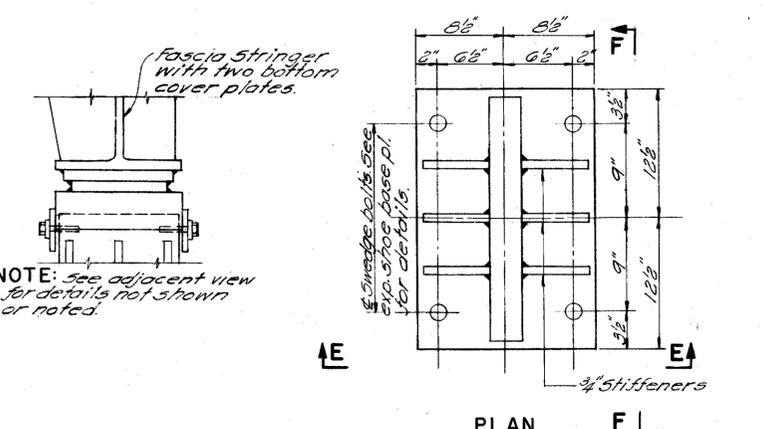
TYPES B AND BB EXPANSION SHOE DETAILS



ELEVATION E-E

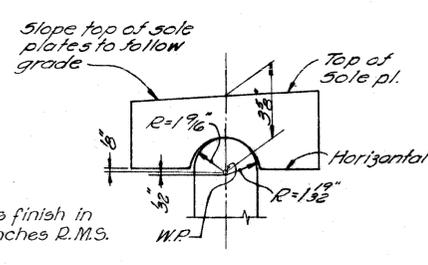


ELEVATION F-F

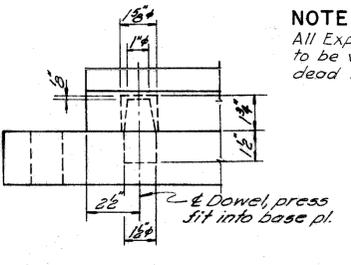


PLAN

TYPES C AND CC FIXED SHOE DETAILS



DETAIL A



DETAIL B

Scale: 1 1/2"=1'-0"

NOTE: All Expansion Shoe Rockers to be vertical under full dead load at 68°F.



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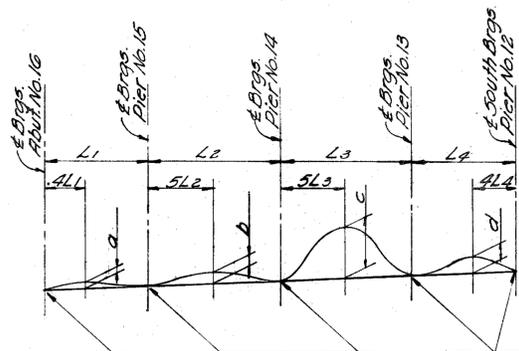
DEPARTMENT OF PUBLIC WORKS
BUREAU OF BRIDGES AND PUBLIC BUILDINGS
CITY OF MILWAUKEE

SO. THIRTY FIFTH ST. VIADUCT
OVER C.&N.W. RAILWAY
STRINGER SPLICES
AND
BEARING SHOES

SCALE: AS SHOWN
SHEET NUMBER 15

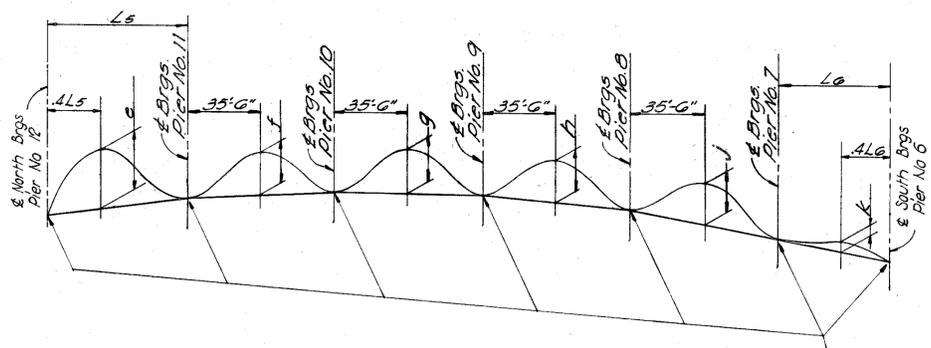
APPROVED:—
George P. Johnston DATE 4-15-57 SET OF 24 SHEETS
Charles S. Whitney DATE 4-16-57 JOB NO. 669-006

REVISIONS	MARK	DATE	BY



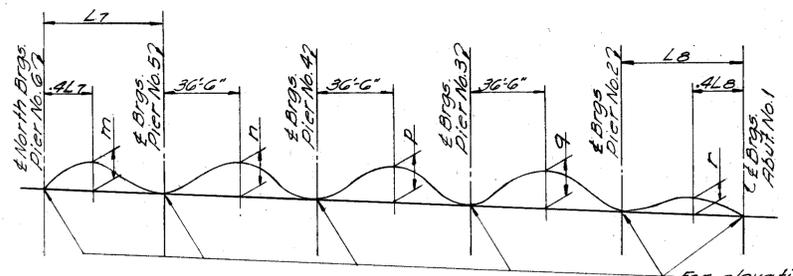
4 SPAN CONTINUOUS UNIT
SOUTH ABUTMENT TO PIER NO. 12

For Elevation at top of stringer flanges, see table below



6 SPAN CONTINUOUS UNIT
PIER NO. 12 TO PIER NO. 6

For Elevation at top of stringer flanges see table below



5 SPAN CONTINUOUS UNIT
PIER NO. 6 TO NORTH ABUTMENT

For elevations at top of stringer flanges, see table below

C A M B E R D I A G R A M S

CAMBER VALUES — 4 SPAN CONTINUOUS UNIT, SOUTH ABUTMENT TO PIER NO. 12

LOCATION	STRINGER A				STRINGER B				STRINGER C				STRINGER D				STRINGER E				STRINGER F				STRINGER G				STRINGER H				STRINGER J			
	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d
Deflection due to weight of steel	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10
Deflection due to remaining D.L.	4	3	3	3	4	3	3	3	4	3	3	3	4	3	3	3	4	3	3	3	4	3	3	3	4	3	3	3	4	3	3	3	4	3	3	3
Convexity reqd. for Vertical Curve	0	0	3/4	7/16	0	0	3/4	7/16	0	0	3/4	7/16	0	0	3/4	7/16	0	0	3/4	7/16	0	0	3/4	7/16	0	0	3/4	7/16	0	0	3/4	7/16	0	0	3/4	7/16
Total required camber	3/16	7/16	1 1/16	1 1/16	4	5/16	3/16	1 1/16	4	5/16	3/16	1 1/16	4	5/16	3/16	1 1/16	4	5/16	3/16	1 1/16	4	5/16	3/16	1 1/16	4	5/16	3/16	1 1/16	4	5/16	3/16	1 1/16	4	5/16	3/16	1 1/16

CAMBER VALUES — 6 SPAN CONTINUOUS UNIT, PIER NO. 12 TO PIER NO. 6

LOCATION	STRINGER A					STRINGER B					STRINGER C					STRINGER D					STRINGER E					STRINGER F					STRINGER G					STRINGER H					STRINGER J				
	e	f	g	h	j	e	f	g	h	j	e	f	g	h	j	e	f	g	h	j	e	f	g	h	j	e	f	g	h	j	e	f	g	h	j	e	f	g	h	j					
Deflection due to weight of steel	1/8	1/16	3/16	1/16	1/16	1/8	1/16	3/16	1/16	1/16	1/8	1/16	3/16	1/16	1/16	1/8	1/16	3/16	1/16	1/16	1/8	1/16	3/16	1/16	1/16	1/8	1/16	3/16	1/16	1/16	1/8	1/16	3/16	1/16	1/16	1/8	1/16	3/16	1/16	1/16	1/8	1/16	3/16	1/16	1/16
Deflection due to remaining D.L.	1/2	5/16	7/16	3/16	7/16	1/2	5/16	7/16	3/16	7/16	1/2	5/16	7/16	3/16	7/16	1/2	5/16	7/16	3/16	7/16	1/2	5/16	7/16	3/16	7/16	1/2	5/16	7/16	3/16	7/16	1/2	5/16	7/16	3/16	7/16	1/2	5/16	7/16	3/16	7/16					
Convexity reqd. for Vertical Curve	1/16	1/8	1/8	1/8	1/8	0	3/8	1/8	1/8	1/8	0	3/8	1/8	1/8	1/8	0	3/8	1/8	1/8	1/8	0	3/8	1/8	1/8	1/8	0	3/8	1/8	1/8	1/8	0	3/8	1/8	1/8	1/8	0	3/8	1/8	1/8	1/8					
Total required camber	1 1/16	2	2 3/16	2 3/16	2 3/16	5/16	1 1/16	1 1/16	2 1/16	2	5/16	1 1/16	1 1/16	2 1/16	2	5/16	1 1/16	1 1/16	2 1/16	2	5/16	1 1/16	1 1/16	2 1/16	2	5/16	1 1/16	1 1/16	2 1/16	2	5/16	1 1/16	1 1/16	2 1/16	2	5/16	1 1/16	1 1/16	2 1/16	2					

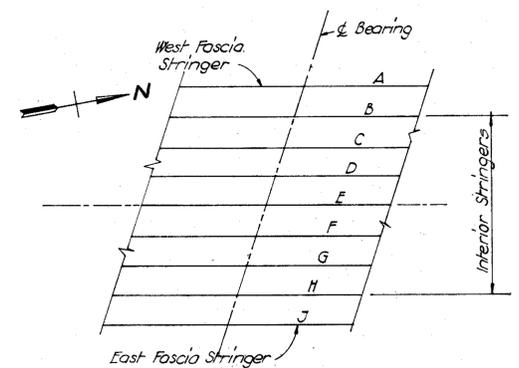
CAMBER VALUES — 5 SPAN CONTINUOUS UNIT, PIER NO. 6 TO NORTH ABUTMENT

LOCATION	STRINGER A					STRINGER B					STRINGER C					STRINGER D					STRINGER E					STRINGER F					STRINGER G					STRINGER H					STRINGER J				
	m	n	p	q	r	m	n	p	q	r	m	n	p	q	r	m	n	p	q	r	m	n	p	q	r	m	n	p	q	r	m	n	p	q	r	m	n	p	q	r					
Deflection due to weight of steel	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10					
Deflection due to remaining Dead Load	3/8	7/16	7/16	7/16	3/16	4	4	4	4	5/16	4	4	4	4	5/16	4	4	4	4	5/16	4	4	4	4	5/16	4	4	4	4	5/16	4	4	4	4	5/16	4	4	4	4	5/16					
Convexity reqd. for Vertical Curve	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Total required camber	7/16	1 1/16	1 1/16	1 1/16	1 1/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16	4 5/16										

ELEVATIONS AT TOP OF STRINGER FLANGES AT & BEARINGS

STRINGER	Abut. No. 16	Pier No. 15	Pier No. 14	Pier No. 13	Pier No. 12 South	Pier No. 11 North	Pier No. 10	Pier No. 9	Pier No. 8	Pier No. 7	Pier No. 6 South	Pier No. 5 North	Pier No. 4	Pier No. 3	Abut. No. 1			
A	86.97	89.02	91.60	93.93	95.40	95.44	96.95	97.73	97.44	98.07	98.63	91.32	91.25	88.78	85.68	82.57	79.47	77.24
B	86.86	88.91	91.49	93.83	95.46	95.50	97.02	97.83	97.53	98.24	98.84	91.50	91.43	88.96	85.85	82.75	79.65	77.35
C	86.75	88.80	91.38	93.84	95.51	95.56	97.08	97.93	97.71	98.41	99.04	91.68	91.60	89.13	86.03	82.93	79.83	77.46
D	86.64	88.70	91.28	93.80	95.57	95.62	97.14	98.03	97.84	98.58	99.24	91.86	91.78	89.31	86.21	83.11	80.00	77.57
E	86.54	88.59	91.17	93.75	95.62	95.68	97.20	98.12	97.97	98.74	99.45	92.03	91.96	89.49	86.38	83.28	80.18	77.67
F	86.43	88.48	91.06	93.65	95.52	95.57	97.04	98.00	97.88	98.70	99.43	91.99	91.92	89.45	86.35	83.25	80.14	77.57
G	86.32	88.37	90.96	93.54	95.41	95.46	96.89	97.88	97.80	98.64	99.42	91.96	91.88	89.41	86.31	83.21	80.11	77.46
H	86.22	88.26	90.85	93.43	95.30	95.36	96.73	97.76	97.71	98.59	99.40	91.92	91.85	89.38	86.27	83.17	80.07	77.35
J	86.11	88.16	90.74	93.32	95.19	95.25	96.57	97.63	97.62	98.54	99.38	91.88	91.81	89.34	86.24	83.13	80.03	77.24

NOTE: Elevations given above refer to top of stringer flange 1/2" below top of asphalt surfacing of roadway.



KEY PLAN
Showing designation of stringers for camber



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DEPARTMENT OF PUBLIC WORKS
BUREAU OF BRIDGES AND PUBLIC BUILDINGS
CITY OF MILWAUKEE

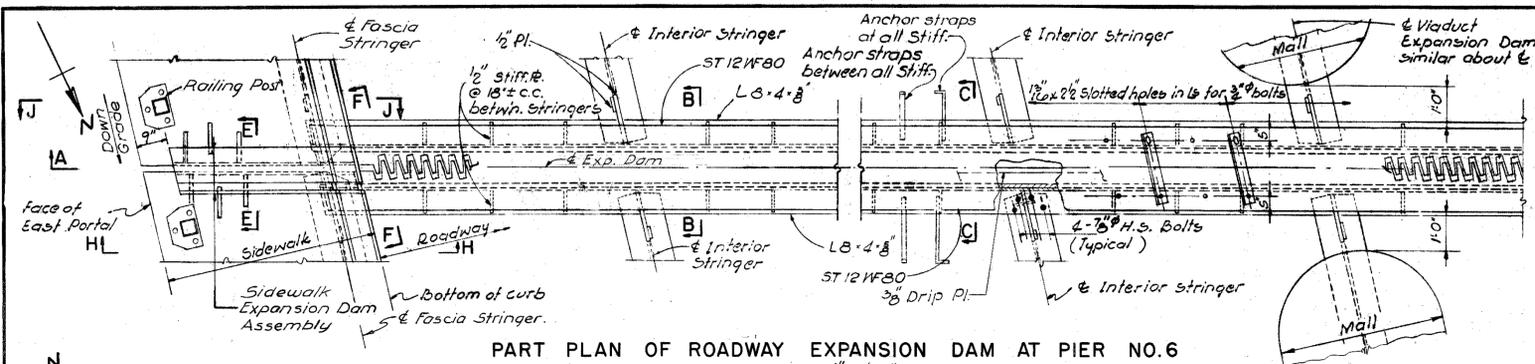
SO. THIRTY FIFTH ST. VIADUCT
OVER C. & N.W. RAILWAY
TOP FLANGE ELEVATIONS
AND
CAMBER DETAILS
SCALE: _____

REVISIONS
MARK DATE BY

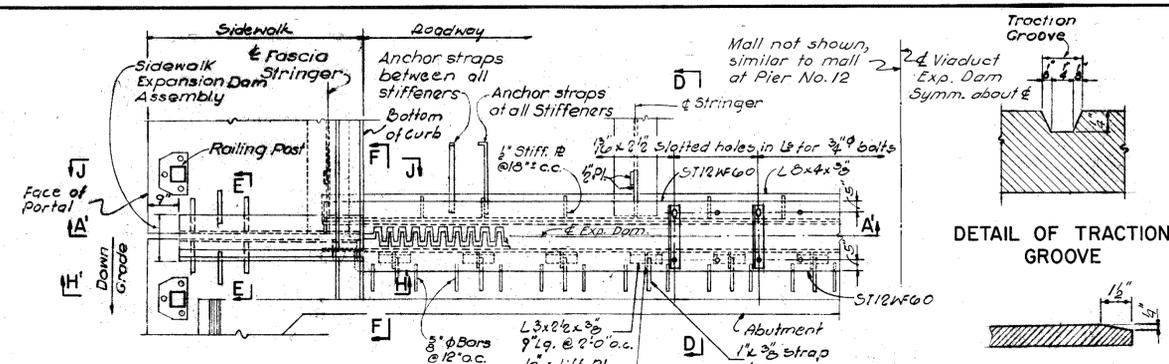
APPROVED: _____
DATE 4-15-57 SET OF 24 SHEETS

SHEET NUMBER 16

DATE 4-16-57 JOB NO. 669-006

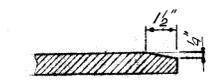


PART PLAN OF ROADWAY EXPANSION DAM AT PIER NO.6
Scale: 1/2"=1'-0"

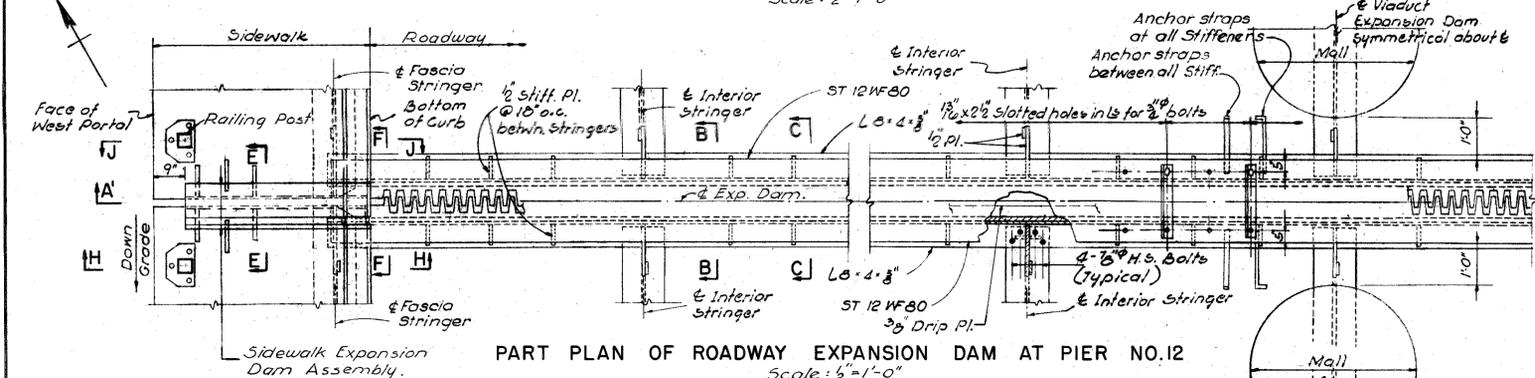


PART PLAN OF ROADWAY EXPANSION DAM AT ABUTMENTS
Scale: 1/2"=1'-0"

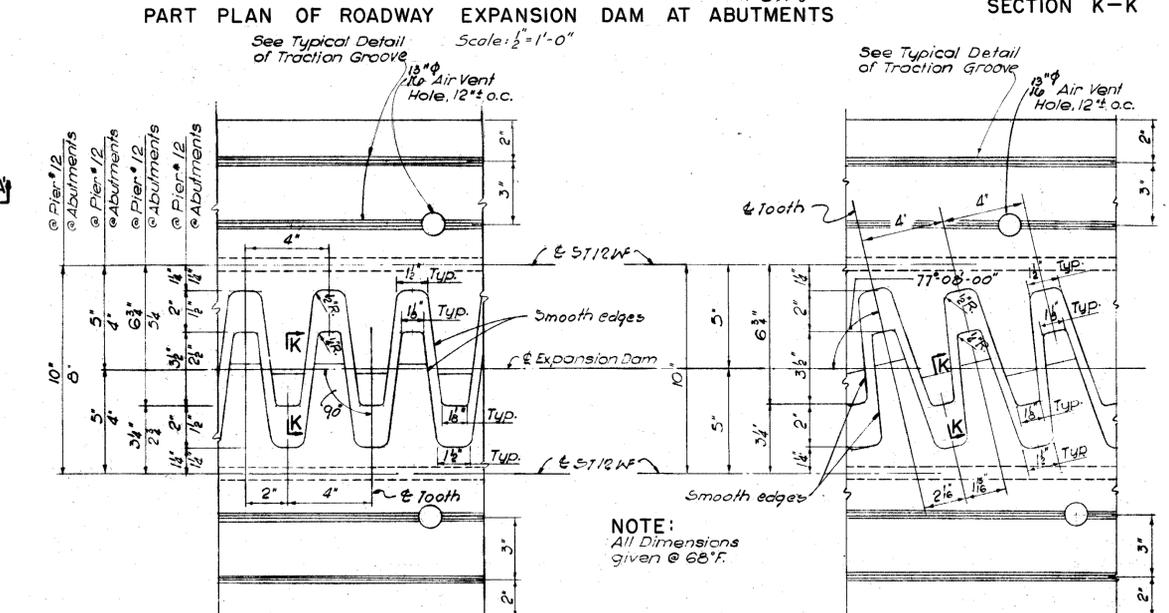
DETAIL OF TRACTION GROOVE



SECTION K-K

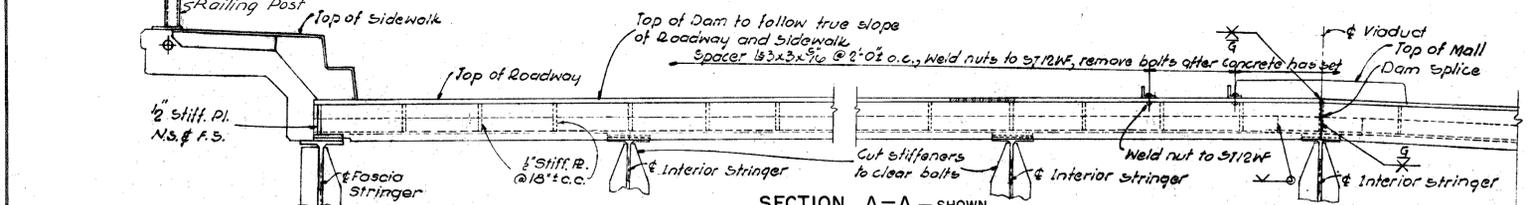


PART PLAN OF ROADWAY EXPANSION DAM AT PIER NO.12
Scale: 1/2"=1'-0"

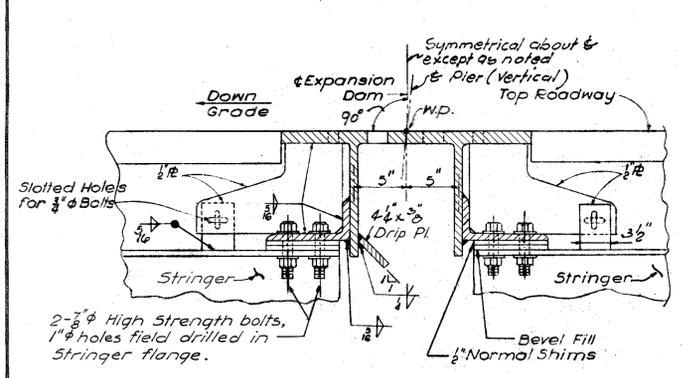


TOOTH DETAIL AT PIER NO.12 AND ABUTMENTS
Scale: 3/4"=1'-0"

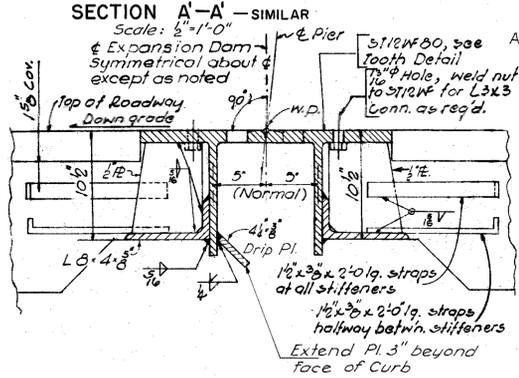
TOOTH DETAIL AT PIER NO.6



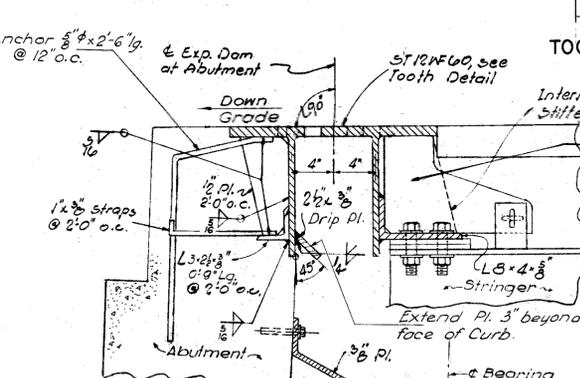
SECTION A-A - SHOWN
SECTION A'-A' - SIMILAR
Scale: 1/2"=1'-0"



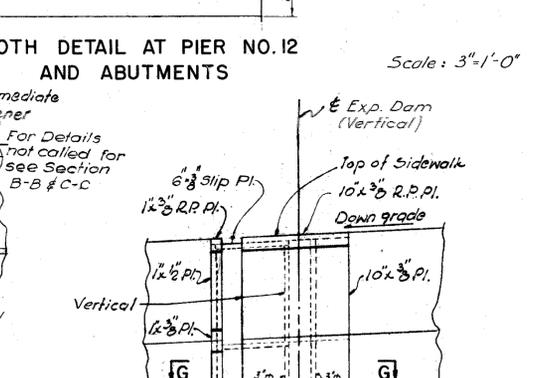
SECTION B-B



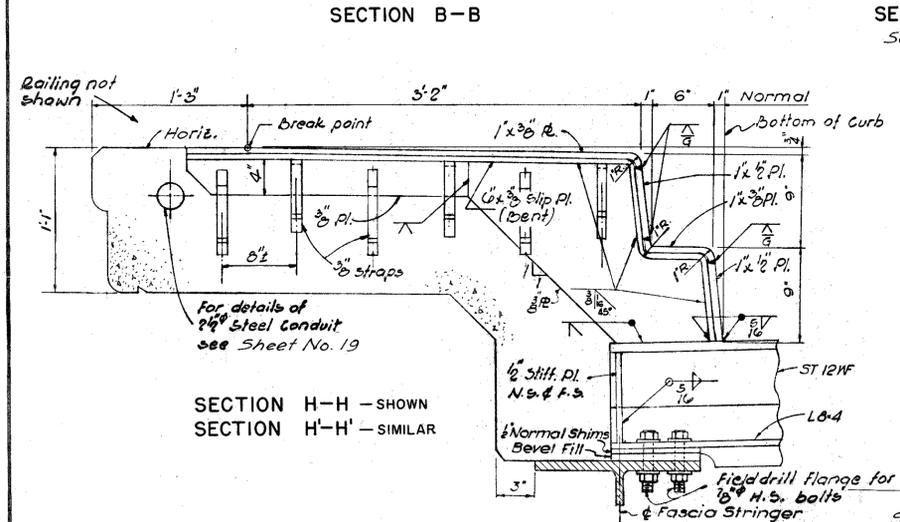
SECTION C-C
Scale: 1/2"=1'-0"



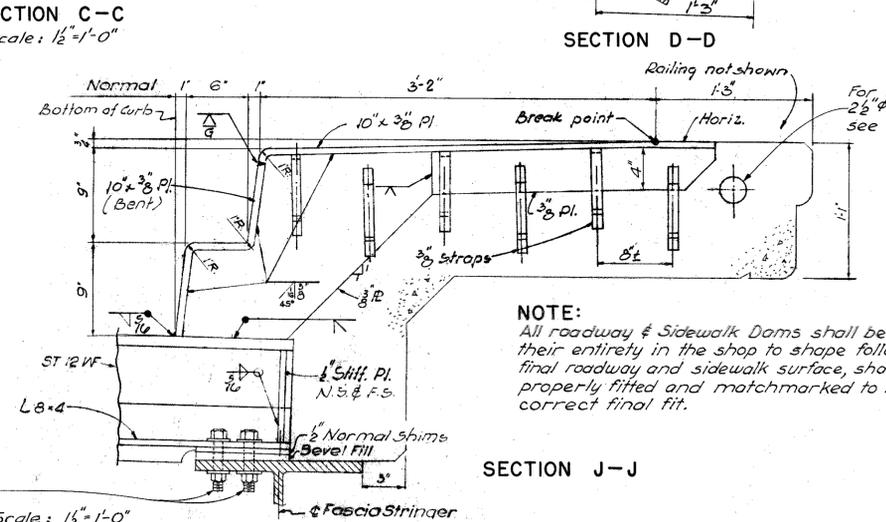
SECTION D-D



SECTION E-E
Scale: 1/2"=1'-0"



SECTION H-H - SHOWN
SECTION H'-H' - SIMILAR



SECTION J-J
Scale: 1/2"=1'-0"

NOTE:
All roadway & Sidewalk Dams shall be assembled in their entirety in the shop following the true, final roadway and sidewalk surface, shall be properly fitted and matchmarked to insure correct final fit.



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SO. THIRTY FIFTH ST. VIADUCT
OVER C. & N.W. RAILWAY

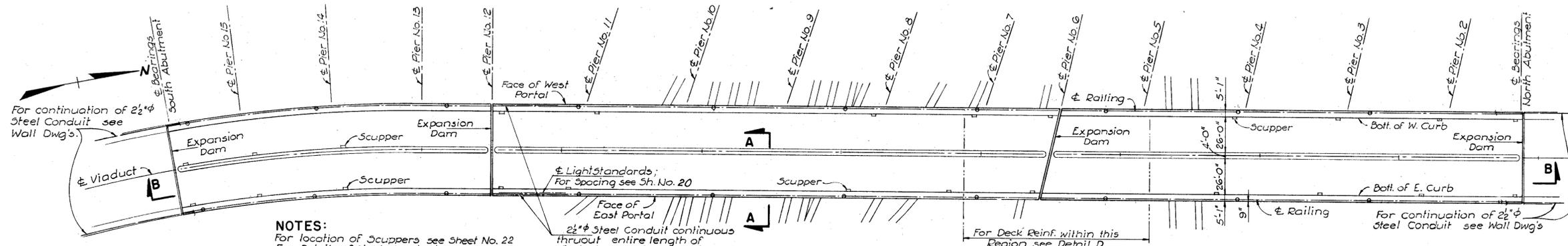
EXPANSION DAM DETAILS

SCALE: AS SHOWN
SHEET NUMBER 17

APPROVED:—
DATE 4-15-59 SET OF 24 SHEETS

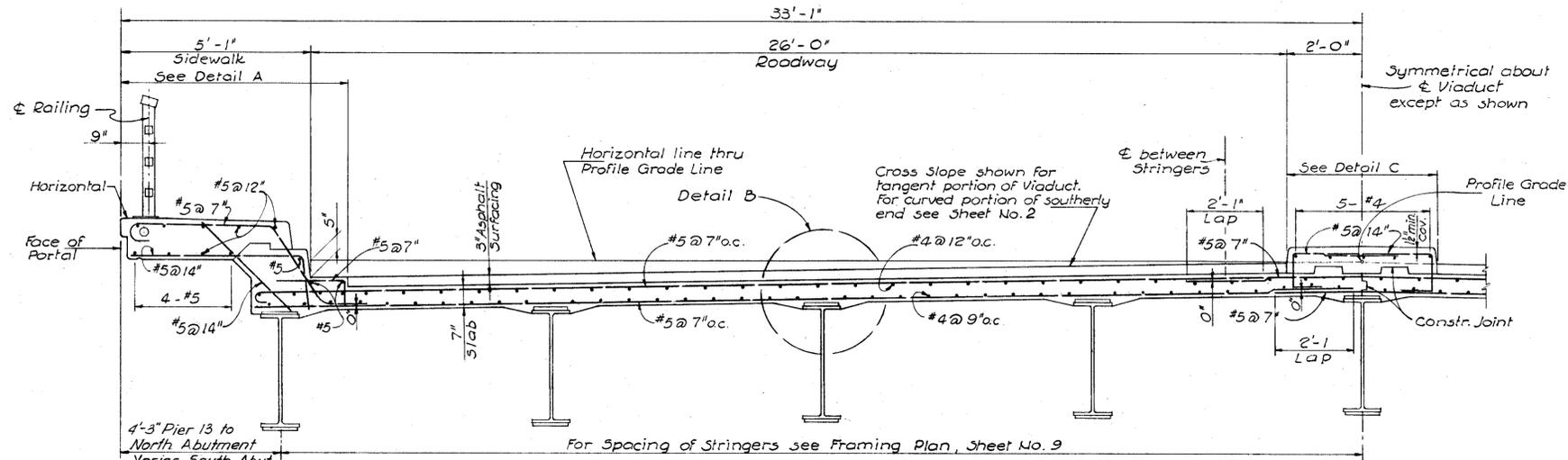
DATE 4-16-59 JOB NO. 669-006

REVISIONS	MARK	DATE	BY



NOTES:
 For location of Scuppers see Sheet No. 22
 For Details of Light Standards see Sh. No. 19
 For Spacing of Light Standards see Sh. No. 20
 For Details of Expansion Dams see Sh. No. 17
 2 1/2" Steel Conduit continuous thruout entire length of Viaduct; provide expansion sleeves at all Expansion Dams, (See Detail, Sh. No. 19)

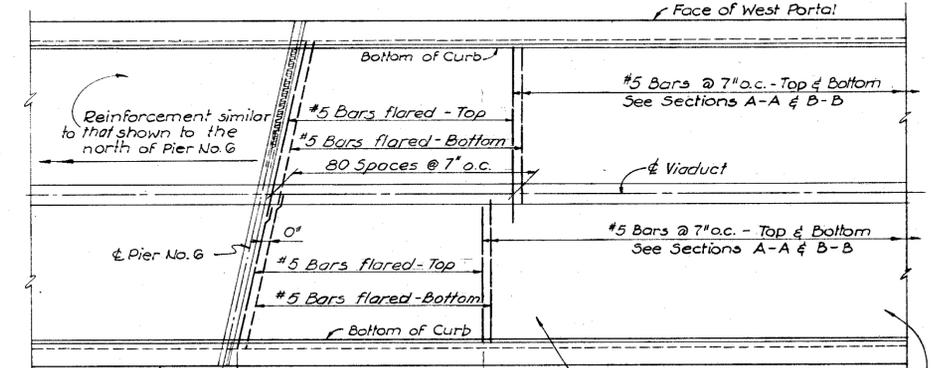
PLAN
 Scale: 1" = 40'-0"



SECTION A-A

Scale: 1/2" = 1'-0"

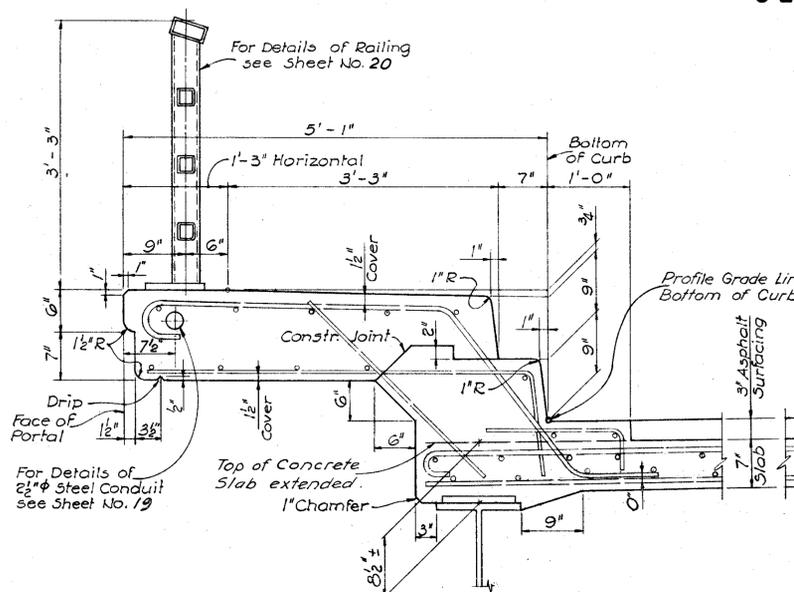
NOTE:
 For Size and Spacing of Reinforcement adjacent to Pier No. 6 see Detail D
 All other deck Reinforcement as shown. For extra reinforcement at Scuppers, Light Standards, transverse Construction Joints etc. see Sheet No. 19



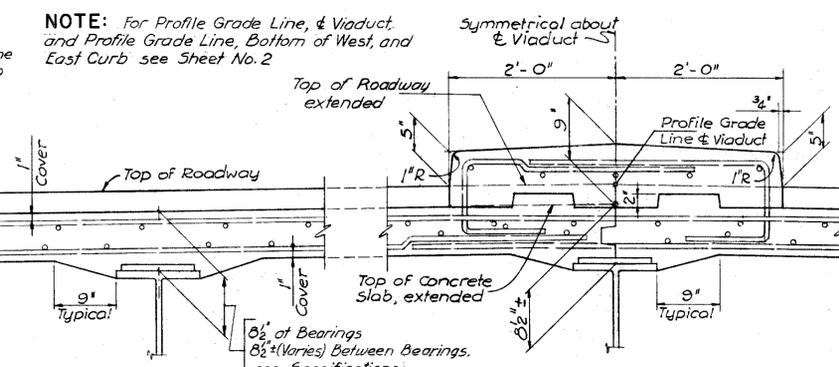
DETAIL D

(Showing Slab Reinforcement between Piers No. 7 and 5)
 Scale: 1/8" = 1'-0"

NOTE: Longitudinal Reinforcement not shown same as in Sections A-A & B-B

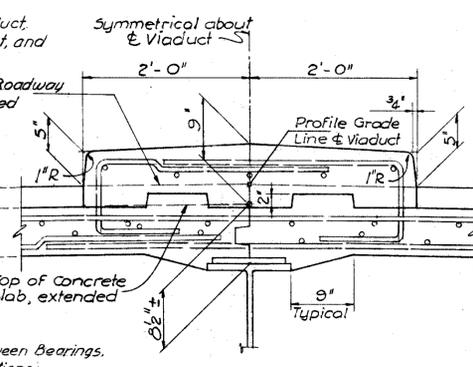


DETAIL A
 EAST SIDEWALK SHOWN
 WEST SIDEWALK OPPOSITE HAND

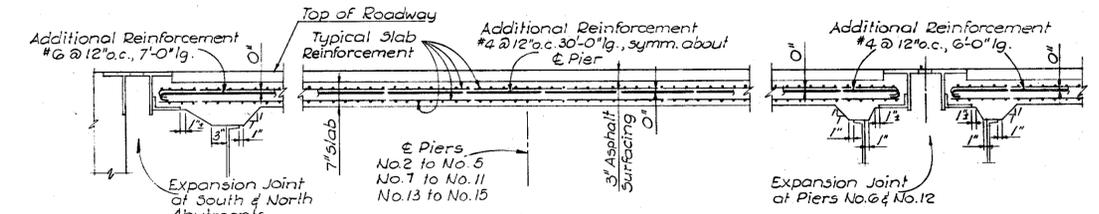


DETAIL B
 TYPICAL DETAIL AT STRINGER

SCALE: 1" = 1'-0"

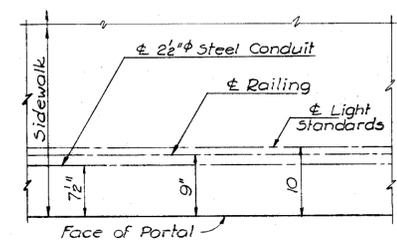


DETAIL C
 AT MEDIAN



SECTION B-B

TYPICAL LONGITUDINAL SECTION
 (showing additional Reinforcement in top of Slab at Piers and Abutments)
 Not to Scale



DETAIL X

Plan showing centerline Location of Light Standards, 2 1/2" Steel Conduit and Railing. Typical for West and East Sidewalks.

NOTES:
 For general notes see Sheet No. 1
 Work this Sheet with Sheet No. 19
 For Details of Roadway Exp. Dams see Sheet No. 17

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SO. THIRTY FIFTH ST. VIADUCT
OVER C. & N.W. RAILWAY
CONCRETE DECK SLAB

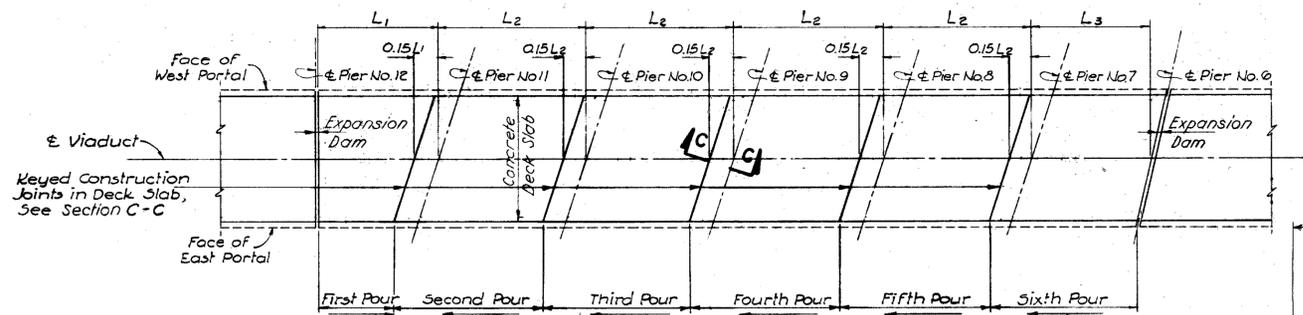
SCALE: AS SHOWN
 SHEET NUMBER **18**

APPROVED:—
George C. Arlt DATE 4-15-59 SET OF 24 SHEETS
Reuben J. Schmeck DATE 4-16-59 JOB NO. 669-006

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 BY *A. Whitney*

WISCONSIN
 CHARLES E. WHITNEY
 MILWAUKEE WIS.
 PROFESSIONAL ENGINEER

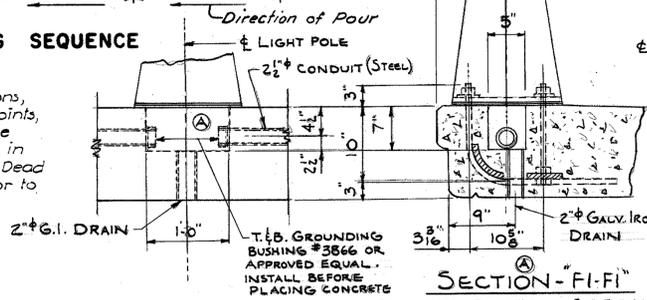
REVISIONS	MARK	DATE	BY



PLAN SHOWING SLAB POURING SEQUENCE

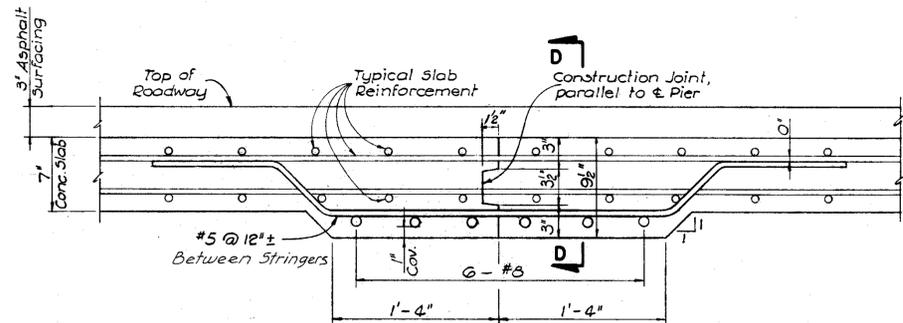
NOTE:

Deck Slab shall be placed in sections, between transverse construction joints, in the numerical order and in the direction indicated on the plan, in order that the major portion of Dead Load deflection may occur prior to placing concrete over each pier.



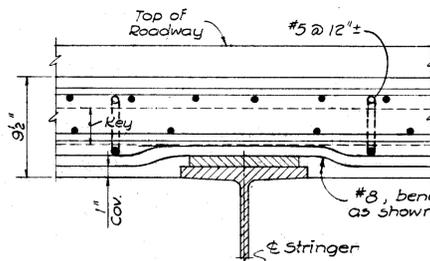
SECTION F-I-F

SHOWING RECESS IN SIDEWALK USE THIS DETAIL AT ALL LIGHTPOLES

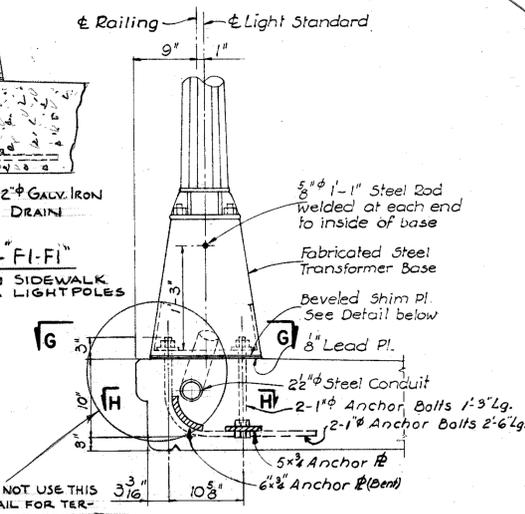


SECTION C-C

TRANSVERSE CONSTRUCTION JOINT DETAILS

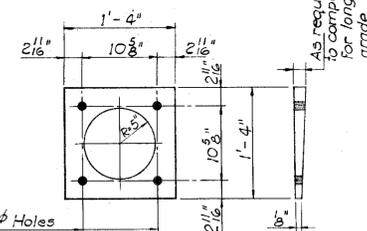


SECTION D-D



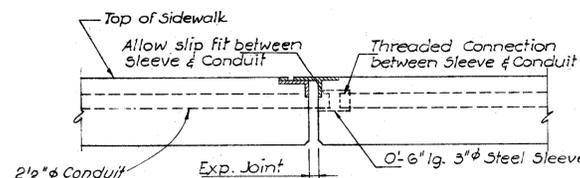
SECTION F-F

DO NOT USE THIS DETAIL FOR TERMINATING CONDUIT

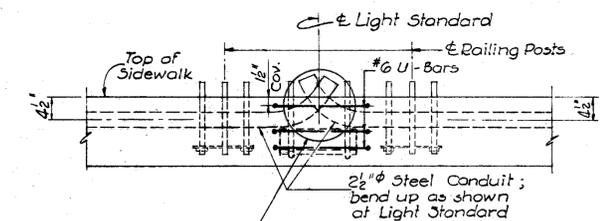


SECTION G-G
BEVELED SHIM PLATE

LIGHT STANDARD DETAILS



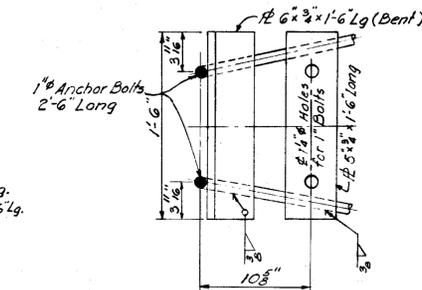
PLAN SHOWING DETAIL OF 2 1/2" CONDUIT AT EXPANSION DAM



ELEVATION E-E

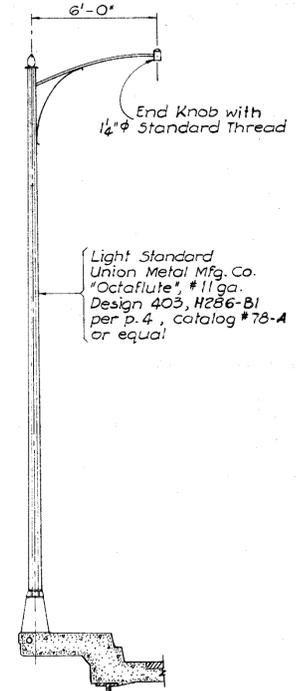
Scale: 3/4" = 1'-0"

DO NOT USE THIS DETAIL FOR TERMINATING CONDUIT BELOW LIGHTPOLES. SEE SECTION F-I-F



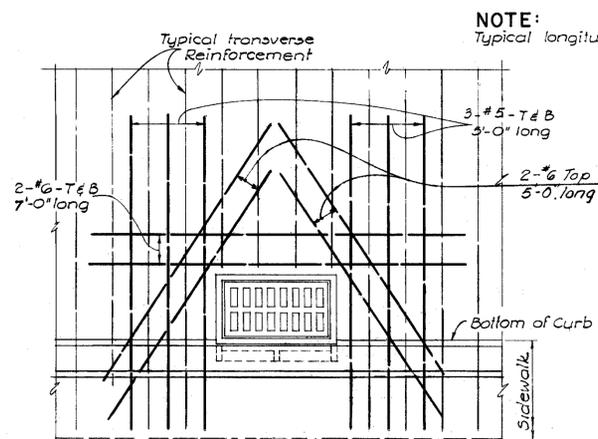
SECTION H-H

Scale: 1/2" = 1'-0"

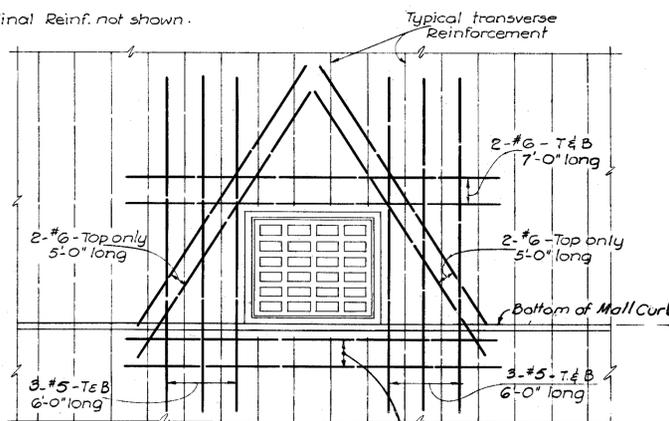


TYPICAL LIGHT STANDARD

Scale: 1/4" = 1'-0"



SCUPPER AT SIDEWALK



SCUPPER AT MEDIAN

ADDITIONAL REINFORCEMENT AT SCUPPERS

NOTE: Cut typical Bottom Reinforcement at Scuppers. Cut and hook typical Top Reinforcement at Scuppers.

Scale: 3/4" = 1'-0"



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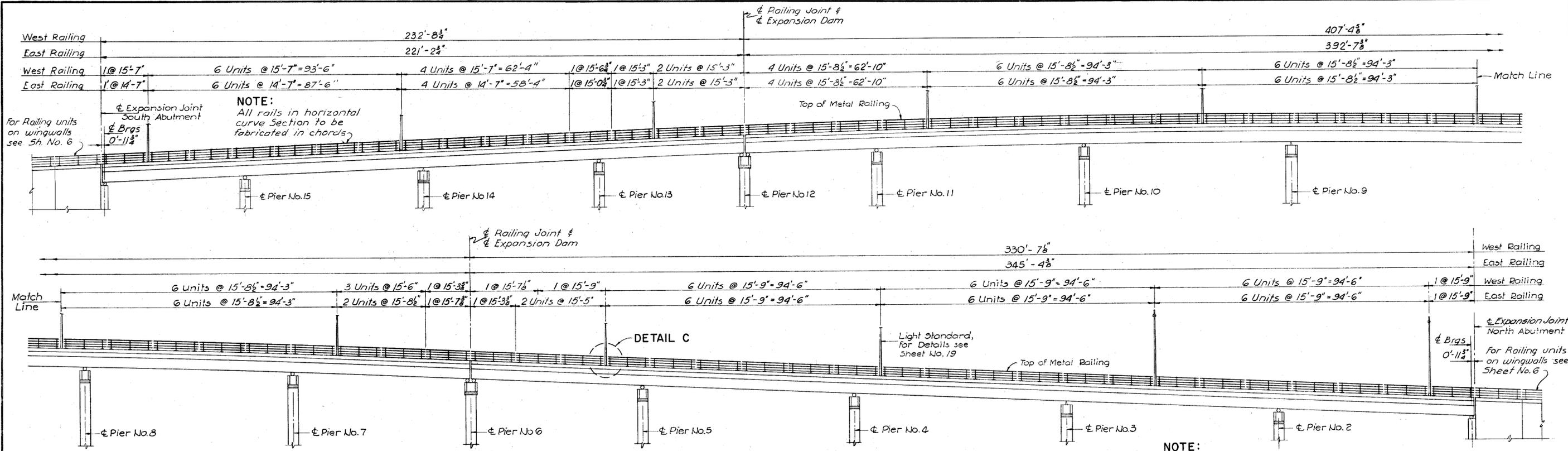
REVISIONS		
MARK	DATE	BY
(A)	3-25-60	J.J.M.

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CITY OF MILWAUKEE

SO. THIRTY FIFTH ST. VIADUCT
OVER C.&N.W. RAILWAY
MISCELLANEOUS CONCRETE
DECK SLAB DETAILS

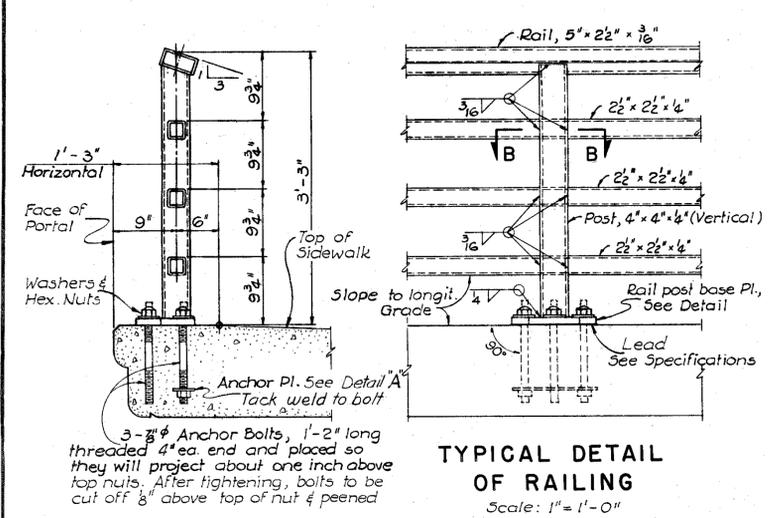
SCALE: AS SHOWN
SHEET NUMBER 19

APPROVED:—
George C. Nelson DATE 4-15-59 SET OF 24 SHEETS
George C. Nelson DATE 4-16-59 JOB NO. 669-006

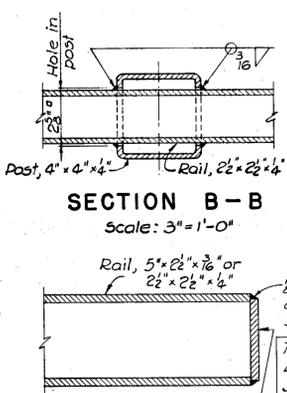


ELEVATION OF EAST RAILING LOOKING WEST SHOWN
 ELEVATION OF WEST RAILING LOOKING WEST SIMILAR AND AS NOTED
 Scale: 1/8" = 1'-0"

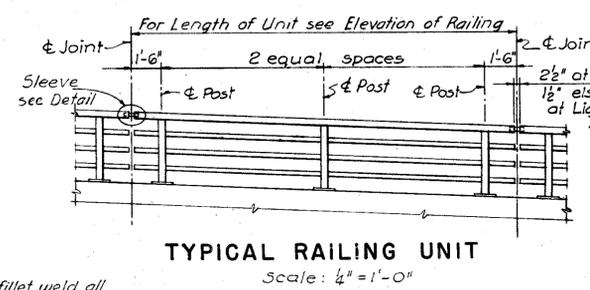
NOTE:
 All Railing Dimensions are measured in a horizontal plane along ϵ Railing.



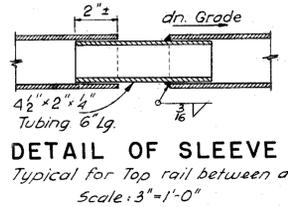
TYPICAL DETAIL OF RAILING
 Scale: 1" = 1'-0"



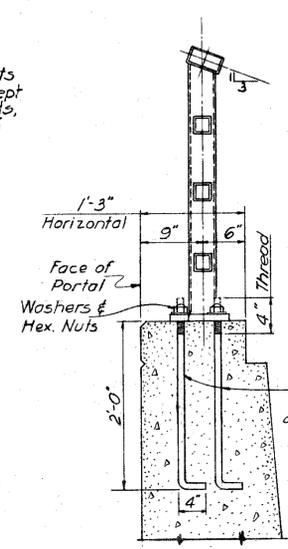
SECTION B-B
 Scale: 3" = 1'-0"



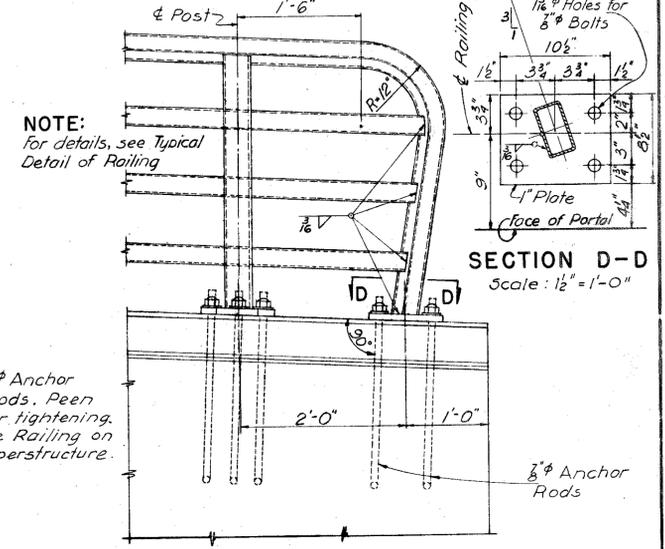
TYPICAL RAILING UNIT
 Scale: 1/2" = 1'-0"



DETAIL OF SLEEVE
 Typical for Top rail between all units
 Scale: 3" = 1'-0"

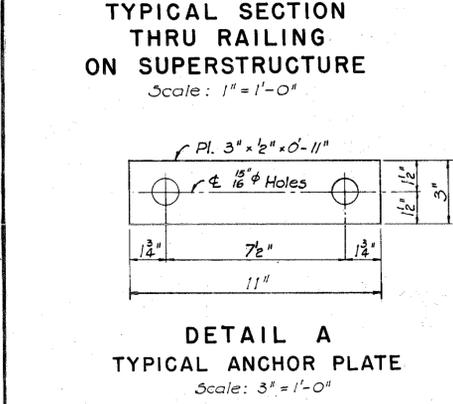


TYPICAL SECTION THRU RAILING ON WINGWALL
 Scale: 1" = 1'-0"

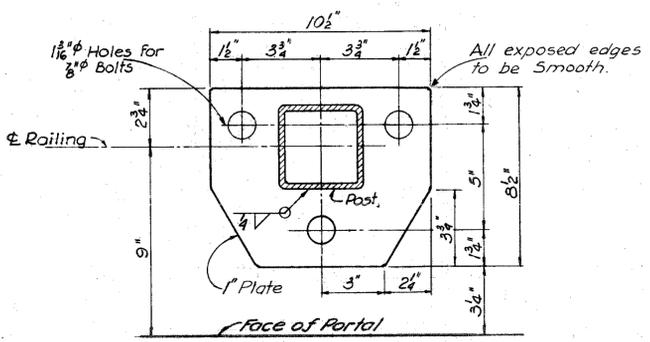


NOTE:
 For details, see Typical Detail of Railing

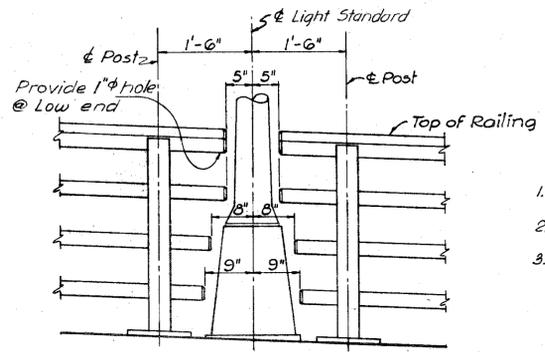
END DETAIL ON WINGWALL
 Scale: 1" = 1'-0"



DETAIL A
 TYPICAL ANCHOR PLATE
 Scale: 3" = 1'-0"



TYPICAL BASE PLATE FOR RAILING POST
 Scale: 3" = 1'-0"



DETAIL C
 RAILING DETAIL AT LIGHT STANDARD
 Scale: 3/8" = 1'-0"

- NOTES:
1. Dimensions for tubing are outside dimensions.
 2. Shop or field welding may be used in fabrication of Railing.
 3. All railings to be fabricated and erected so that rails are parallel to each other and to top of fascia and the posts are truly vertical.



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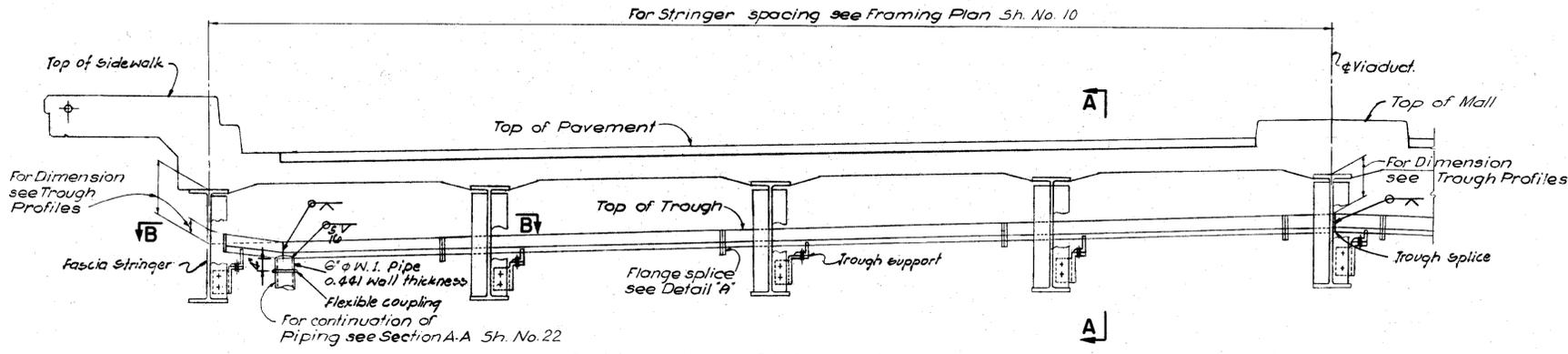
SO. THIRTY FIFTH ST. VIADUCT
 OVER C. & N.W. RAILWAY

RAILING DETAILS

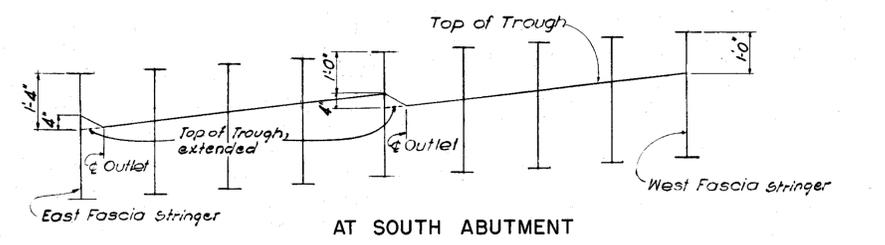
SCALE: AS SHOWN
 SHEET NUMBER 20

APPROVED: _____
 DATE 4-15-57 SET OF 24 SHEETS

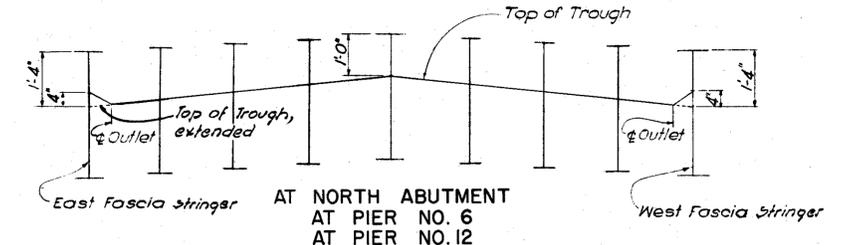
DATE 4-16-57 JOB NO. 689-006



TYPICAL ELEVATION OF TROUGH
 TROUGH AT PIERS NO. 6, 12 AND NORTH ABUTMENT - SHOWN
 TROUGH AT SOUTH ABUTMENT - SIMILAR
 Scale: 1/2" = 1'-0"

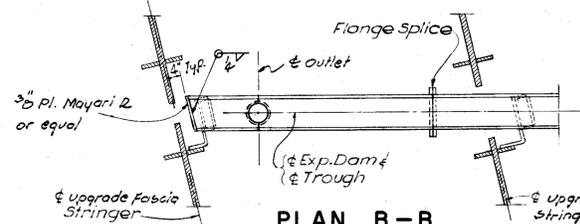


AT SOUTH ABUTMENT

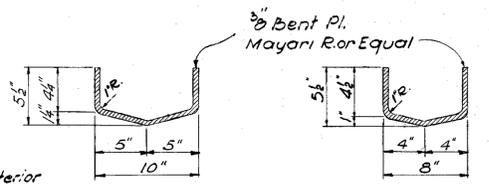


AT NORTH ABUTMENT
 AT PIER NO. 6
 AT PIER NO. 12

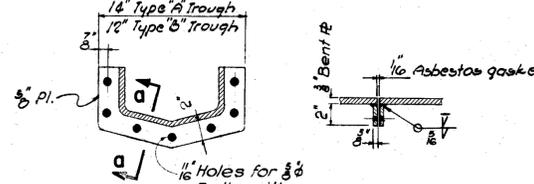
TROUGH PROFILES
 Scale: Hor. 1/2" = 1'-0"
 Ver. 1/2" = 1'-0"



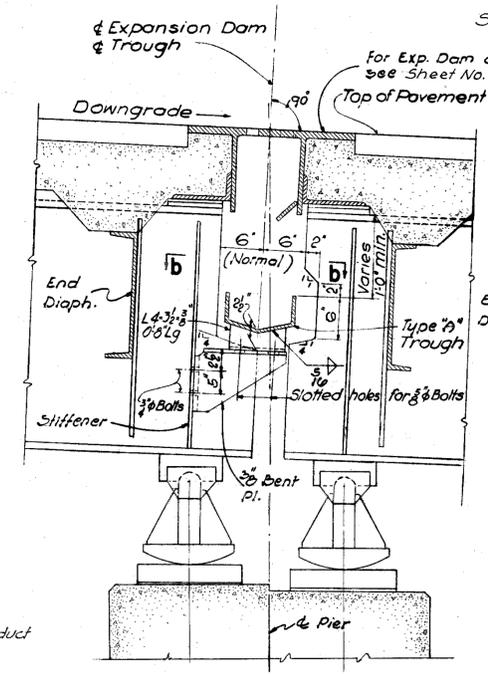
PLAN B-B
 AT PIER NO. 6 - SHOWN
 TROUGH CONNECTION AT PIER NO. 12
 AND ABUTMENTS - SIMILAR
 Scale: 1/2" = 1'-0"



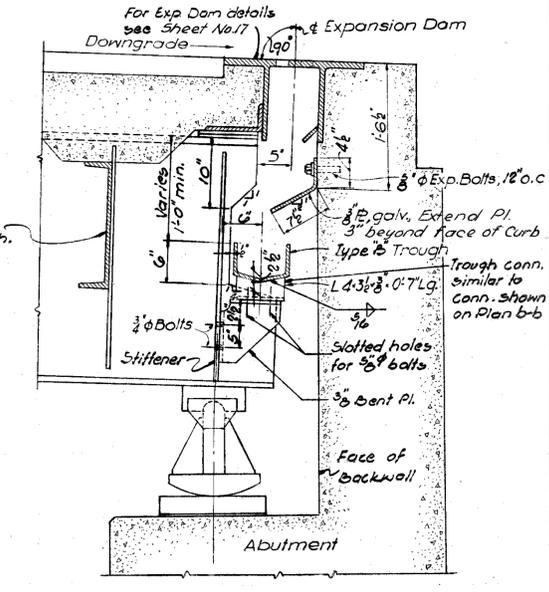
TYPICAL TROUGH SECTIONS
 TYPE "A" TROUGH
 AT PIERS NO. 6 AND 12
 TYPE "B" TROUGH
 AT ABUTMENTS
 All material Galvanized after fabrication.



FLANGE SPLICE DETAIL
 DETAIL "A" SECTION a-a



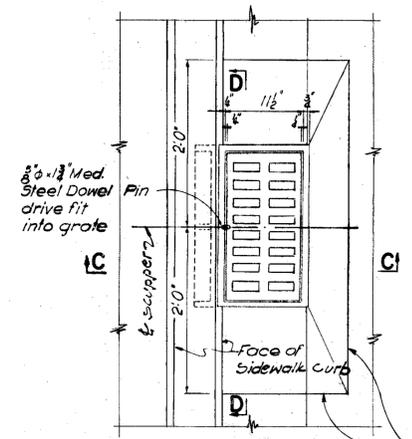
SECTION A-A AT PIERS



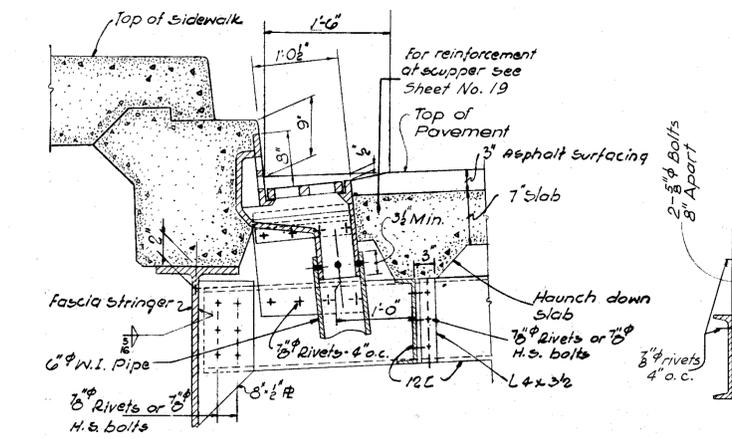
SECTION A-A AT ABUTMENTS

Scale: 1" = 1'-0"

NOTE:
 Scupper at Sidewalk Curb
 Scupper Pattern No. 2496-163A &
 Grate Pattern No. 2496-163B
 as originally made for Holton St. Viaduct
 Scupper and Grate
 Material shall be cast steel
 conforming to A.S.T.M. Spec.
 A 27-52T, Grade 65-35

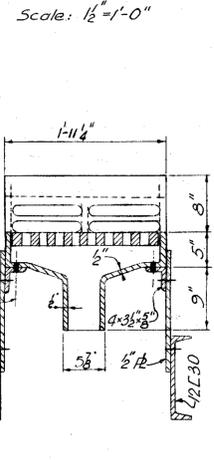


PLAN
 For location of Scuppers
 see 5hs No. 18 & 22

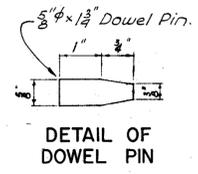


SECTION C-C

DETAILS OF SCUPPER AT OUTSIDE GUTTER LINE
 21 Scuppers Req'd.

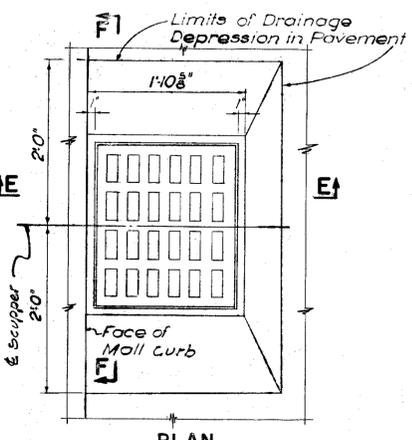


SECTION D-D

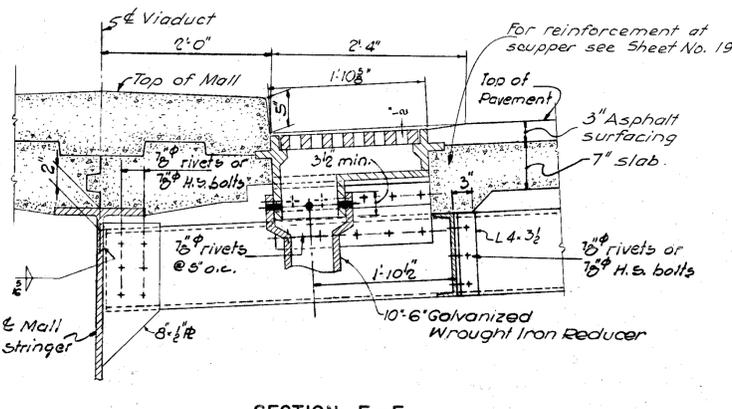


DETAIL OF DOWEL PIN

Scale: 1" = 1'-0"

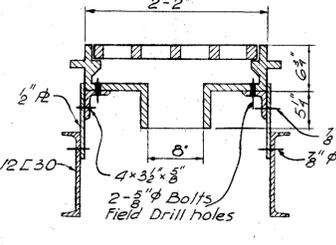


PLAN
 For location of Scuppers
 see Sheets No. 18 & 22



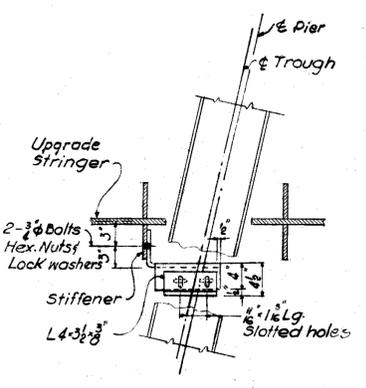
SECTION E-E

DETAILS OF SCUPPER AT MALL
 3 Scuppers Req'd.



SECTION F-F

NOTE:
 Scupper at Mall Curb
 Neenah Heavy
 Duty Scuppers No.
 R-4004-Type "C" or Equal
 Scupper and Grate
 Material shall be Cast
 Steel, conforming to
 A.S.T.M. Spec. A 27-52T
 Grade 65-35



PLAN b-b
 Scale: 1" = 1'-0"

- NOTES:**
1. For General Notes see Sheet No. 1.
 2. Work this Sheet with Sheet No. 22
 3. For location of scuppers see Sheet No. 18
 4. All Drainage Material including drain pipes, troughs, U-bolts, nuts and washers shall be hot-dipped galvanized after shop fabrication.

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 CITY OF MILWAUKEE**

**SO. THIRTY FIFTH ST. VIADUCT
 OVER C. & N.W. RAILWAY**

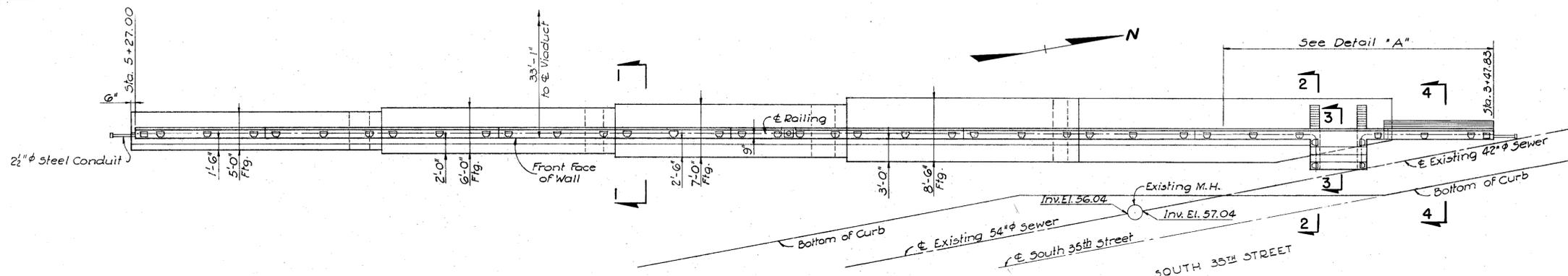
SCUPPERS AND TROUGHs

SCALE: AS SHOWN
 SHEET NUMBER 21

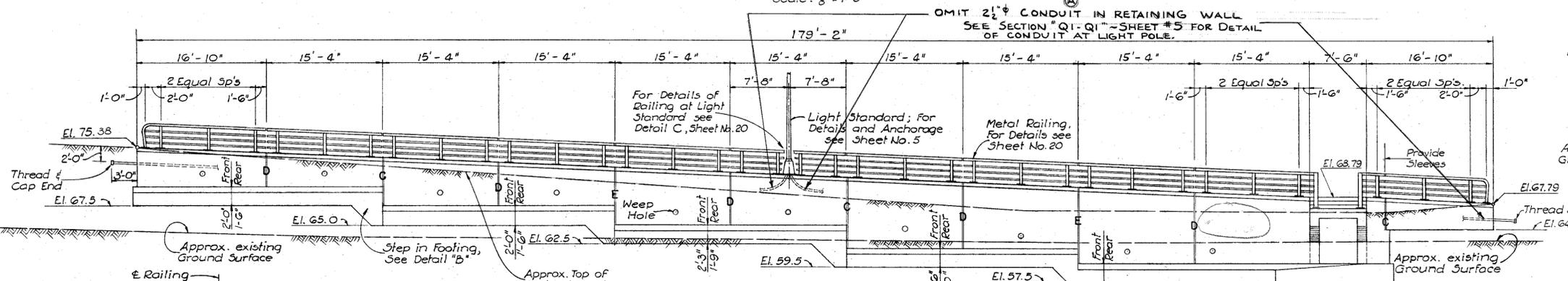
APPROVED: _____
 DATE 4-15-57 SET OF 24 SHEETS

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 NEW YORK MILWAUKEE

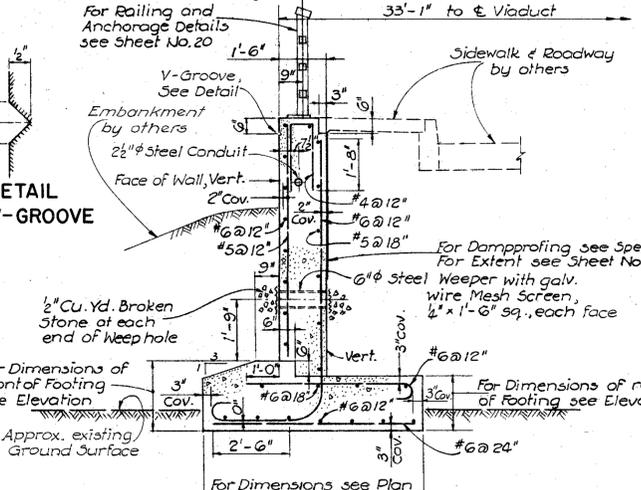
DATE 4-16-57 JOB NO. 659-006



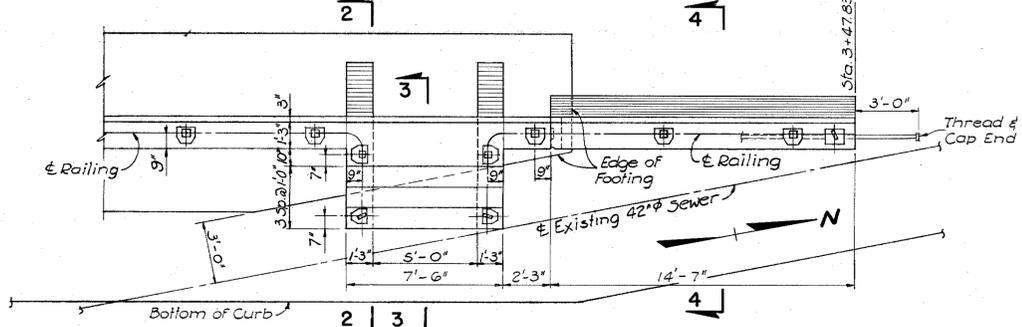
PLAN
Scale: 1/8" = 1'-0"



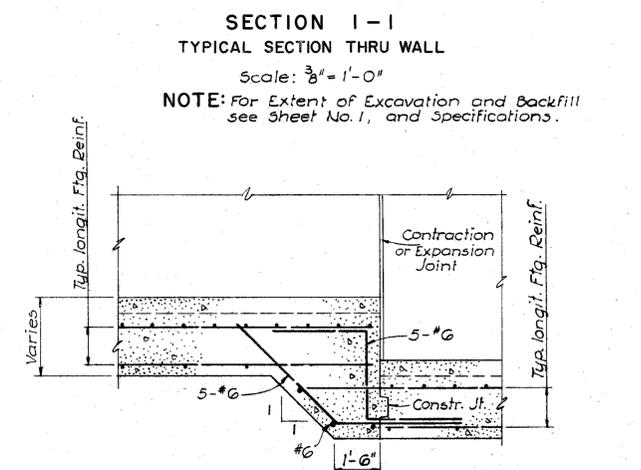
ELEVATION
Scale: 1/8" = 1'-0"



DETAIL OF V-GROOVE

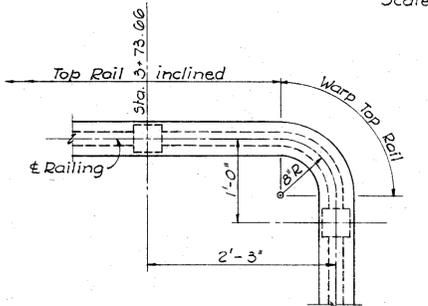


DETAIL "A"
Scale: 1/4" = 1'-0"

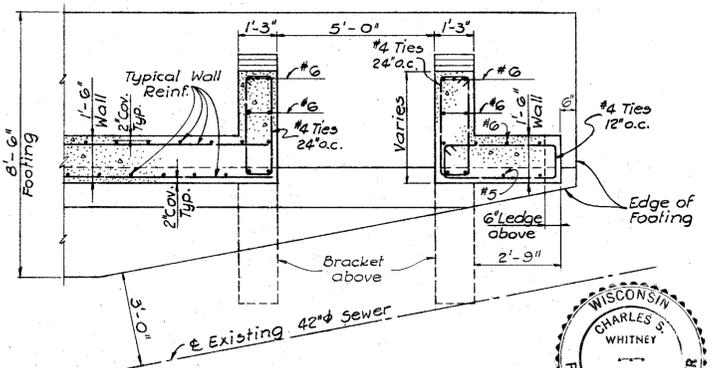


SECTION 1-1
TYPICAL SECTION THRU WALL
Scale: 3/8" = 1'-0"

NOTE: For Extent of Excavation and Backfill see Sheet No. 1, and Specifications.

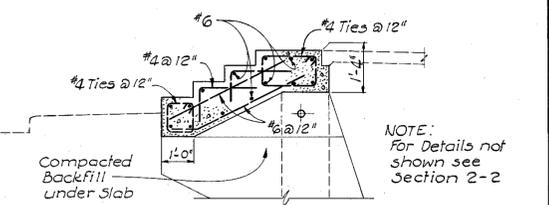


DETAILS OF RAILING AT STAIR
Scale: 1" = 1'-0"



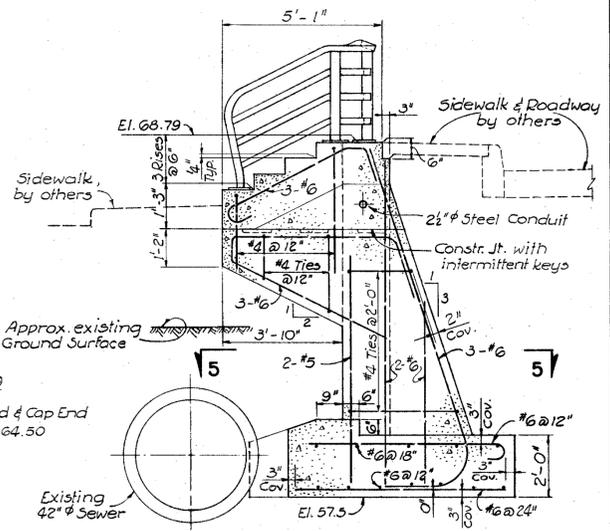
SECTIONAL PLAN 5-5
Scale: 3/8" = 1'-0"

NOTE: For General Notes see Sheet No. 1.

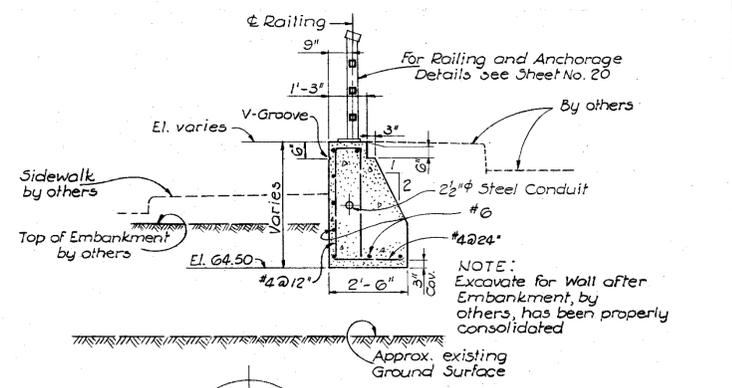


SECTION 3-3
Scale: 3/8" = 1'-0"

NOTE: For Details not shown see Section 2-2



SECTION 2-2
Scale: 3/8" = 1'-0"



SECTION 4-4
Scale: 3/8" = 1'-0"



AMMANN & WHITNEY
CONSULTING ENGINEERS
NEW YORK MILWAUKEE
By *Ch. Whitney*

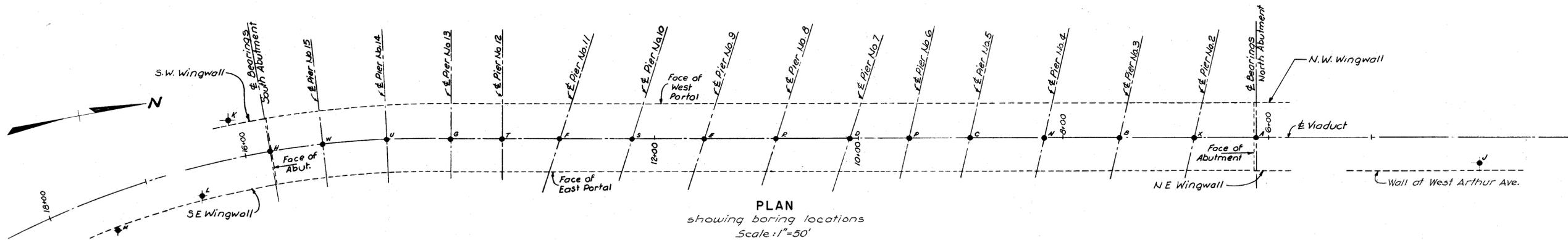
**DEPARTMENT OF PUBLIC WORKS
BUREAU OF BRIDGES AND PUBLIC BUILDINGS
CITY OF MILWAUKEE**

**SO. THIRTY FIFTH ST VIADUCT
OVER C.&N.W. RAILWAY
RETAINING WALL
AT
WEST ARTHUR AVENUE**

SCALE: AS SHOWN
SHEET NUMBER **23**

REVISIONS	MARK	DATE	BY
1	A	3-25-60	J.J.M.

APPROVED: _____
DATE 4-15-59 SET OF 24 SHEETS
DATE 4-16-59 JOB NO. 669-006



PLAN
showing boring locations
Scale: 1"=50'

Boring No.	Gr. El.	Soil Description	Soil Description	Boring No.	Gr. El.	Soil Description	Soil Description	Boring No.	Gr. El.	Soil Description	Soil Description	Boring No.	Gr. El.	Soil Description	Soil Description	Boring No.	Gr. El.	Soil Description	Soil Description
E	73.0	Fill (Cinders & Gravel)	66.5	71.72	73.0	Fill	63.0	D	67.0	Fill (Cinders)	63.0	71.72	67.0	Fill	63.0	P	66.5	Fill	62.5
71.72	66.5	Soft Brown Sandy clay	61.5	71.36	63.0	Loose Cinders & Gravel	63.5	71.72	67.0	Soft Brown clay (Little Gravel)	58.5	71.36	63.0	Loose Br. Sand & Gravel (Some clay)	58.5	71.72	66.5	Black Muck & Coarse Gravel (dense)	60.0
71.36	61.5	Very Dense Brown Sand & Gravel	58.5	71.00	63.0	Loose Br. Sand & Gravel (Some clay)	58.5	71.00	67.0	Stiff Brown sandy clay	55.0	71.00	63.0	Dense Br. Sand & Gravel	56.0	71.36	66.5	Loose Br. Sand & Gravel (dense)	60.0
71.00	58.5	Tough Gray clay	44.0	70.64	63.0	Tough Gray clay (Same Gravel)	44.0	70.64	67.0	Tough Gray clay	46.5	70.64	63.0	Very Stiff Brown clay & Gravel	53.0	71.00	66.5	Loose Muck & Coarse Gravel (dense)	60.0
70.64	44.0	Tough Gray clay	38.0	70.28	63.0	Tough Gray clay	38.0	70.28	67.0	Stiff Gray clay	37.5	70.28	63.0	Very Stiff Brown clay & Gravel	53.0	71.00	66.5	Loose Br. Sand & Gravel (dense)	60.0
70.28	38.0	Tough Gray clay	30.0	70.00	63.0	Tough Gray clay	30.0	70.00	67.0	Stiff Gray clay (Some Gravel)	32.5	70.00	63.0	Very Hard Gray Sandy clay	28.0	71.00	66.5	Loose Br. Sand & Gravel (dense)	60.0
70.00	30.0	Tough Gray clay	26.0	70.00	63.0	Tough Gray clay	26.0	70.00	67.0	Tough Gray clay	26.5	70.00	63.0	Very Hard Gray Sandy clay	28.0	71.00	66.5	Loose Br. Sand & Gravel (dense)	60.0
70.00	26.0	Tough Gray clay	19.0	70.00	63.0	Tough Gray clay	19.0	70.00	67.0	Tough Gray clay	19.0	70.00	63.0	Very Hard Gray Sandy clay	28.0	71.00	66.5	Loose Br. Sand & Gravel (dense)	60.0
70.00	19.0	Tough Gray clay	14.0	70.00	63.0	Tough Gray clay	14.0	70.00	67.0	Tough Gray clay	14.0	70.00	63.0	Very Hard Gray Sandy clay	28.0	71.00	66.5	Loose Br. Sand & Gravel (dense)	60.0
70.00	14.0	Tough Gray clay	7.0	70.00	63.0	Tough Gray clay	7.0	70.00	67.0	Tough Gray clay	7.0	70.00	63.0	Very Hard Gray Sandy clay	28.0	71.00	66.5	Loose Br. Sand & Gravel (dense)	60.0
70.00	7.0	Tough Gray clay	3.0	70.00	63.0	Tough Gray clay	3.0	70.00	67.0	Tough Gray clay	3.0	70.00	63.0	Very Hard Gray Sandy clay	28.0	71.00	66.5	Loose Br. Sand & Gravel (dense)	60.0
70.00	3.0	Tough Gray clay		70.00	63.0	Tough Gray clay		70.00	67.0	Tough Gray clay		70.00	63.0	Very Hard Gray Sandy clay	28.0	71.00	66.5	Loose Br. Sand & Gravel (dense)	60.0

NOTES:
Legend: S - Denotes Sample No.
B - Denotes blows per 12" on sampler
Weight of Hammer on all borings - 140 lbs.
Drop of Hammer on all borings - 30 in.
Casing Where used indicated thus

Borings taken from April 9, 1957 to June 5, 1957 by the "Milaegeer Well Drilling Co." Milwaukee, Wisconsin under the supervision of the "Department of Public Works, City of Milwaukee, Wisconsin."

BORING LOGS
Vert. Scale: 1"=10'



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DEPARTMENT OF PUBLIC WORKS
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SO. THIRTY FIFTH ST. VIADUCT
OVER C.&N.W. RAILWAY

TEST BORINGS

SCALE: AS SHOWN
SHEET NUMBER 24

APPROVED: _____
DATE 4-15-59 SET OF 24 SHEETS

DATE 4-16-59 JOB NO. 669-006