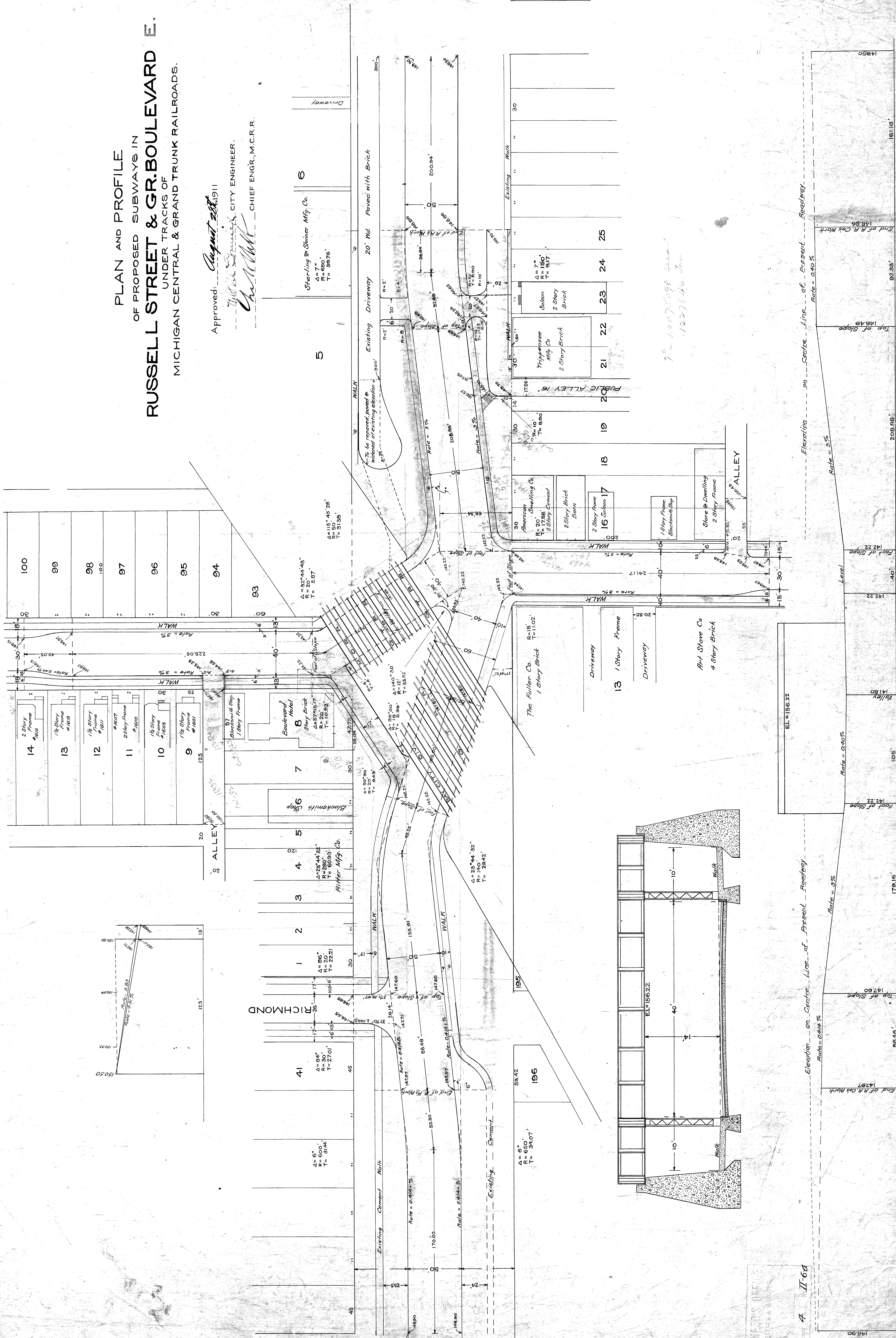


PLAN AND PROFILE
 OF PROPOSED SUBWAYS IN
RUSSELL STREET & GR. BOULEVARD E.
 UNDER TRACKS OF
 MICHIGAN CENTRAL & GRAND TRUNK RAILROADS.

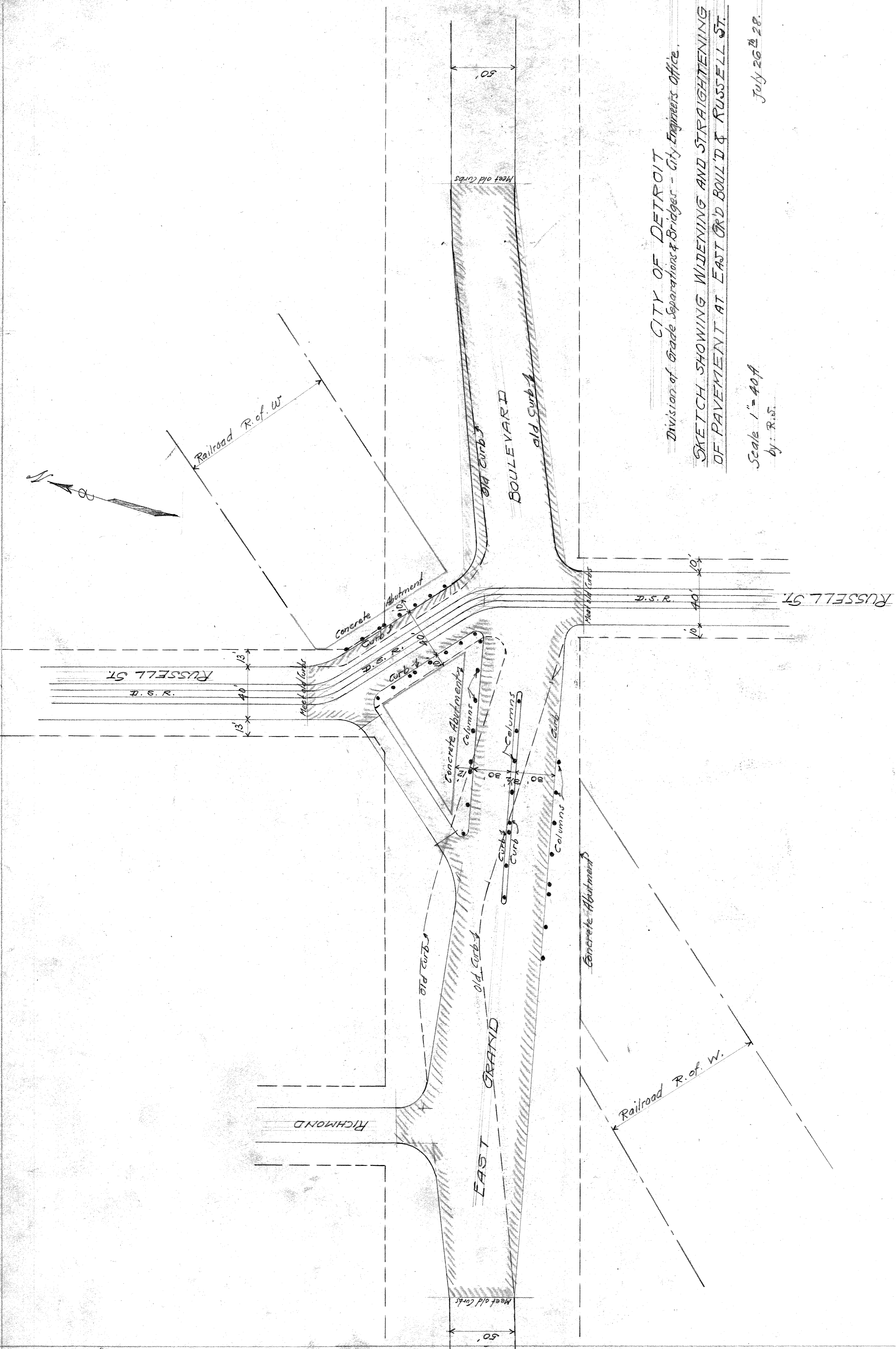
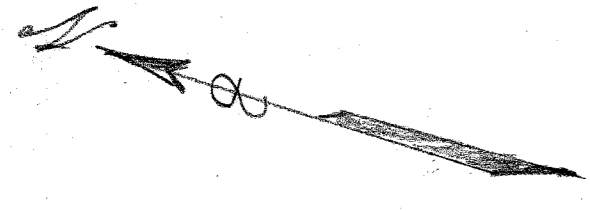
Approved: *August 28th 1911*
William S. ... CITY ENGINEER.
Charles M. ... CHIEF ENGR., M.C.R.R.



LONGITUDINAL SECTION
 HOR. SCALE ONE INCH = 40 FT.
 VER. " " " " 10 "

City Engineers Office
 File X 093-7

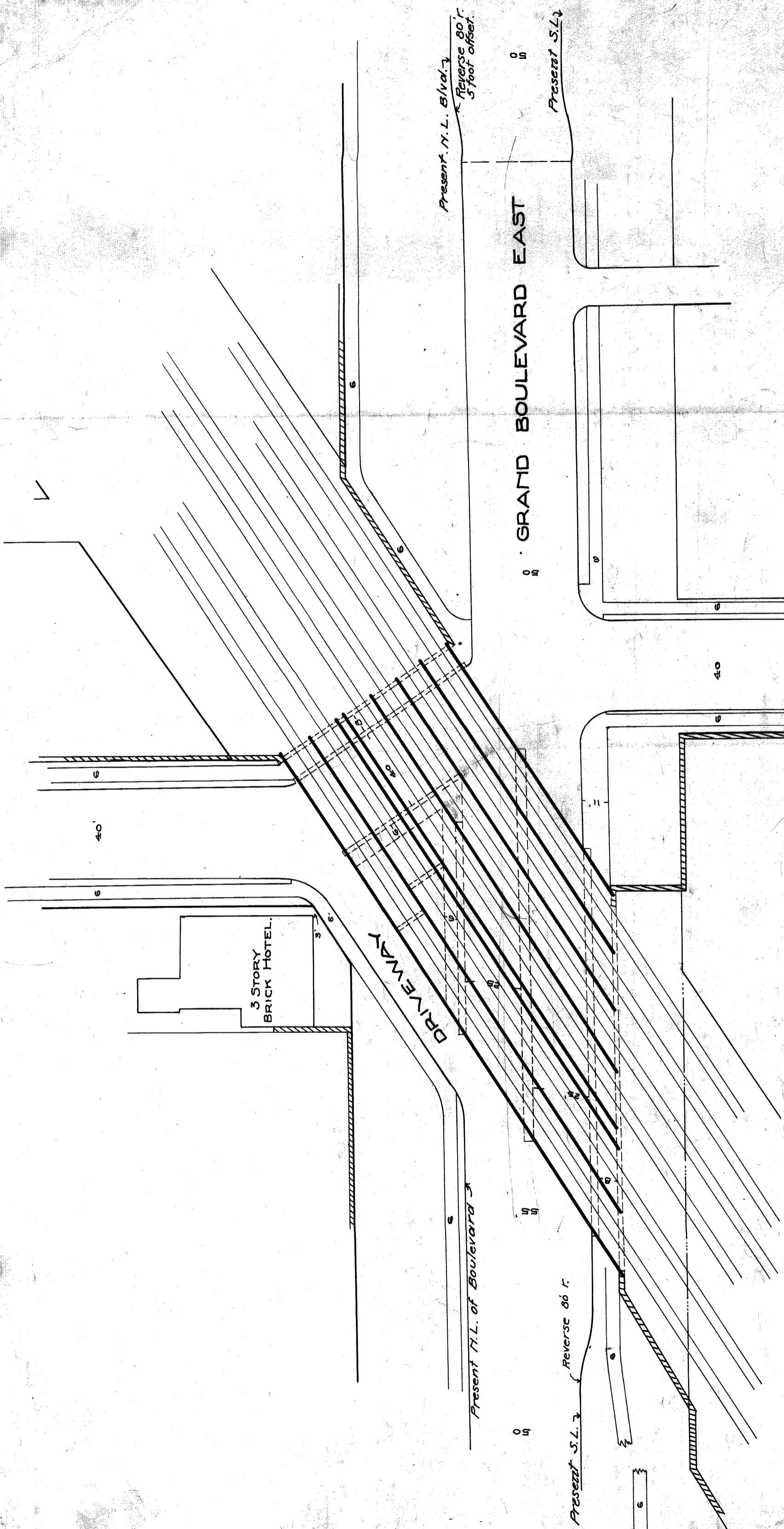
Drawn by J. W. Reed, Aug. 1911.



CITY OF DETROIT
 Division of Grade Separations & Bridges - City Engineers Office.
 SKETCH SHOWING WIDENING AND STRAIGHTENING
 OF PAVEMENT AT EAST GRAND BOULEVARD & RUSSELL ST.

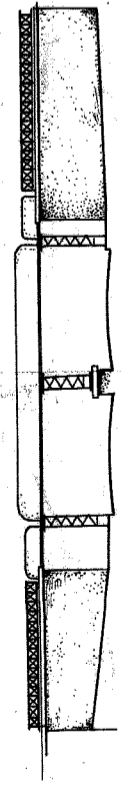
Scale 1" = 40'
 by R.S.

July 26th 28.

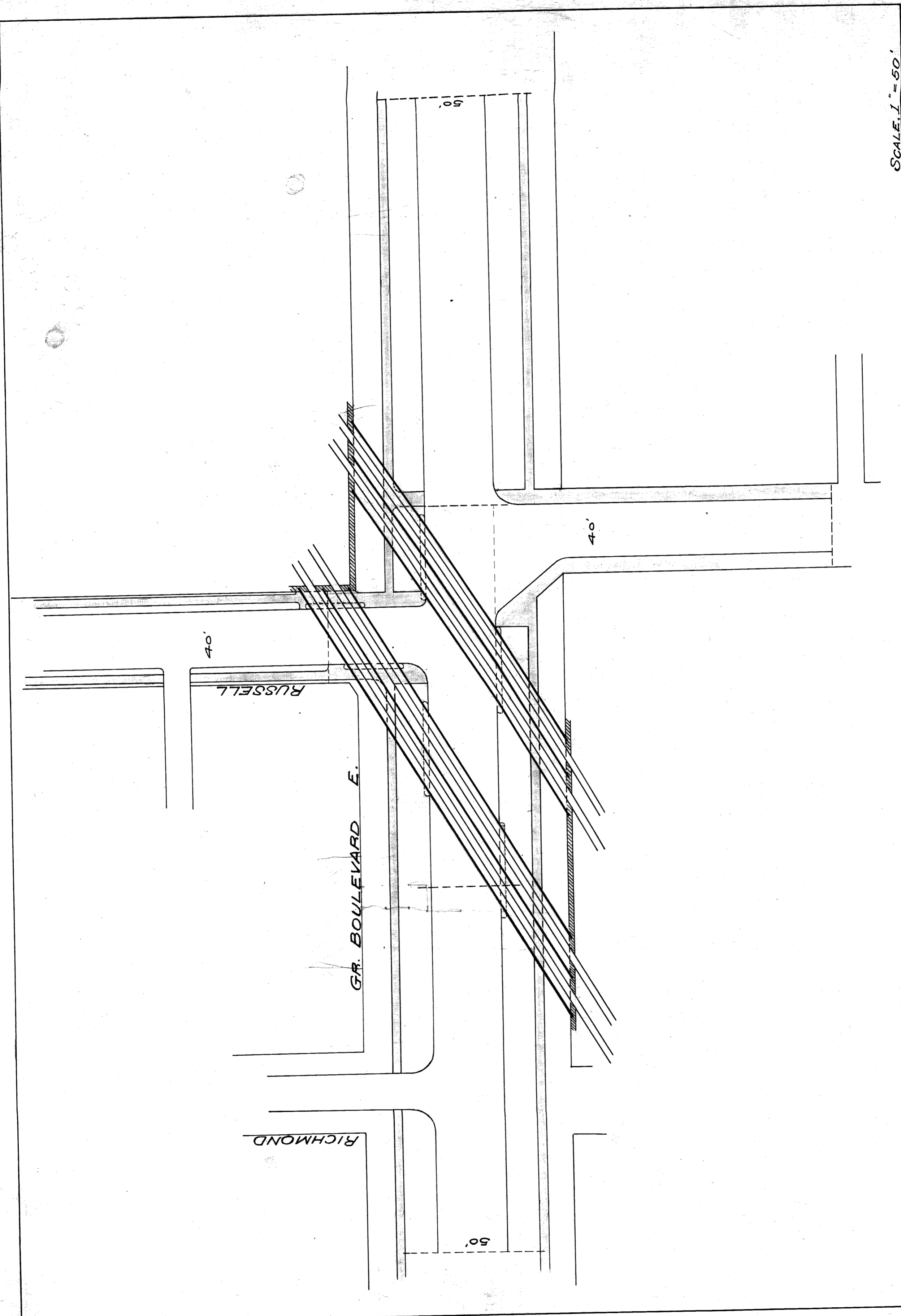


PLAN
 OF PROPOSED SUBWAY
 IN GRAND BOULEVARD EAST
 AND RUSSELL STREET
 UNDER G.T.R.R. AND B.C.
 DIVN. OF M.C.R.R.

SCALE 1" = 40'



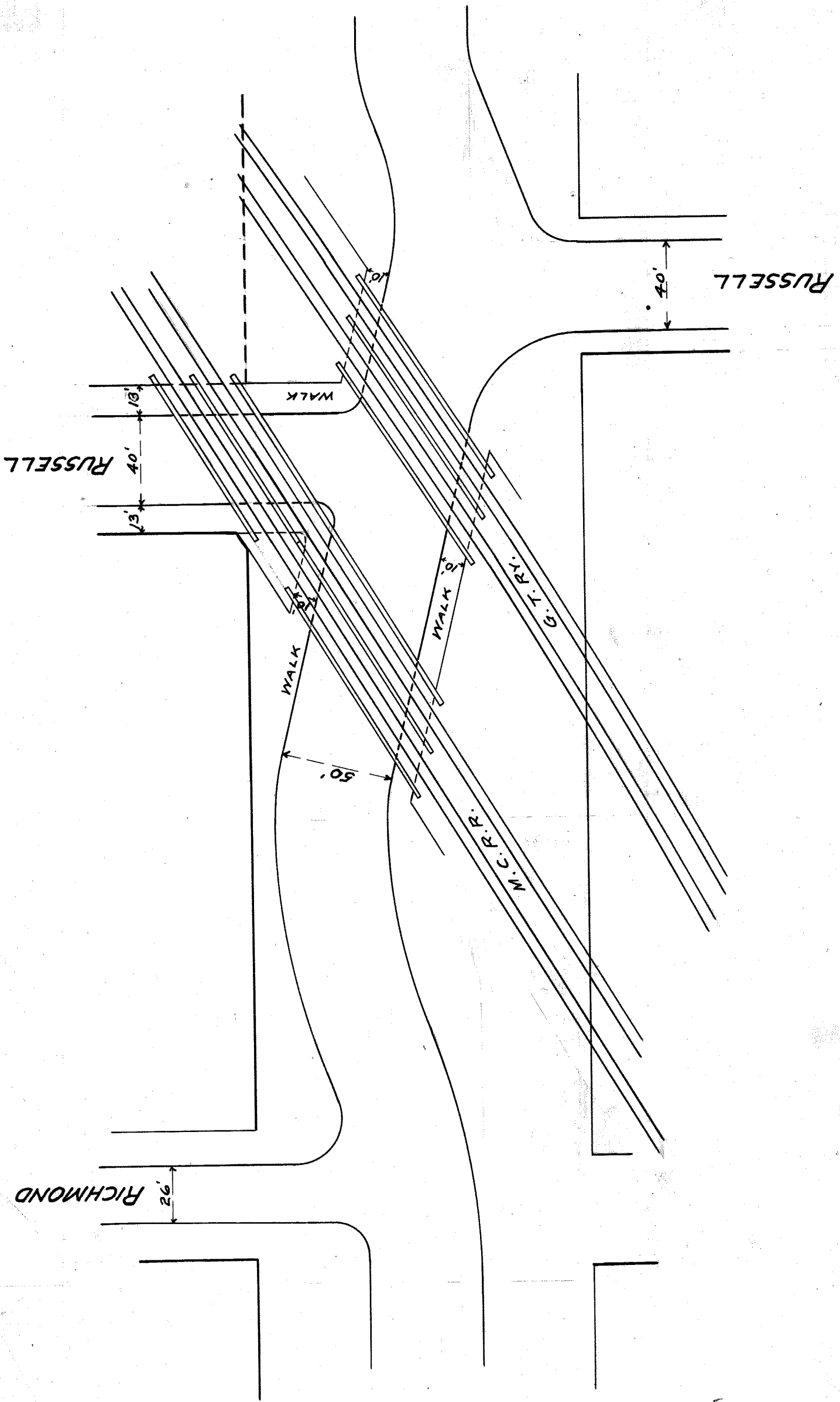
ELEVATION LOOKING WEST ON THE BLVD.



SCALE, 1" = 50'

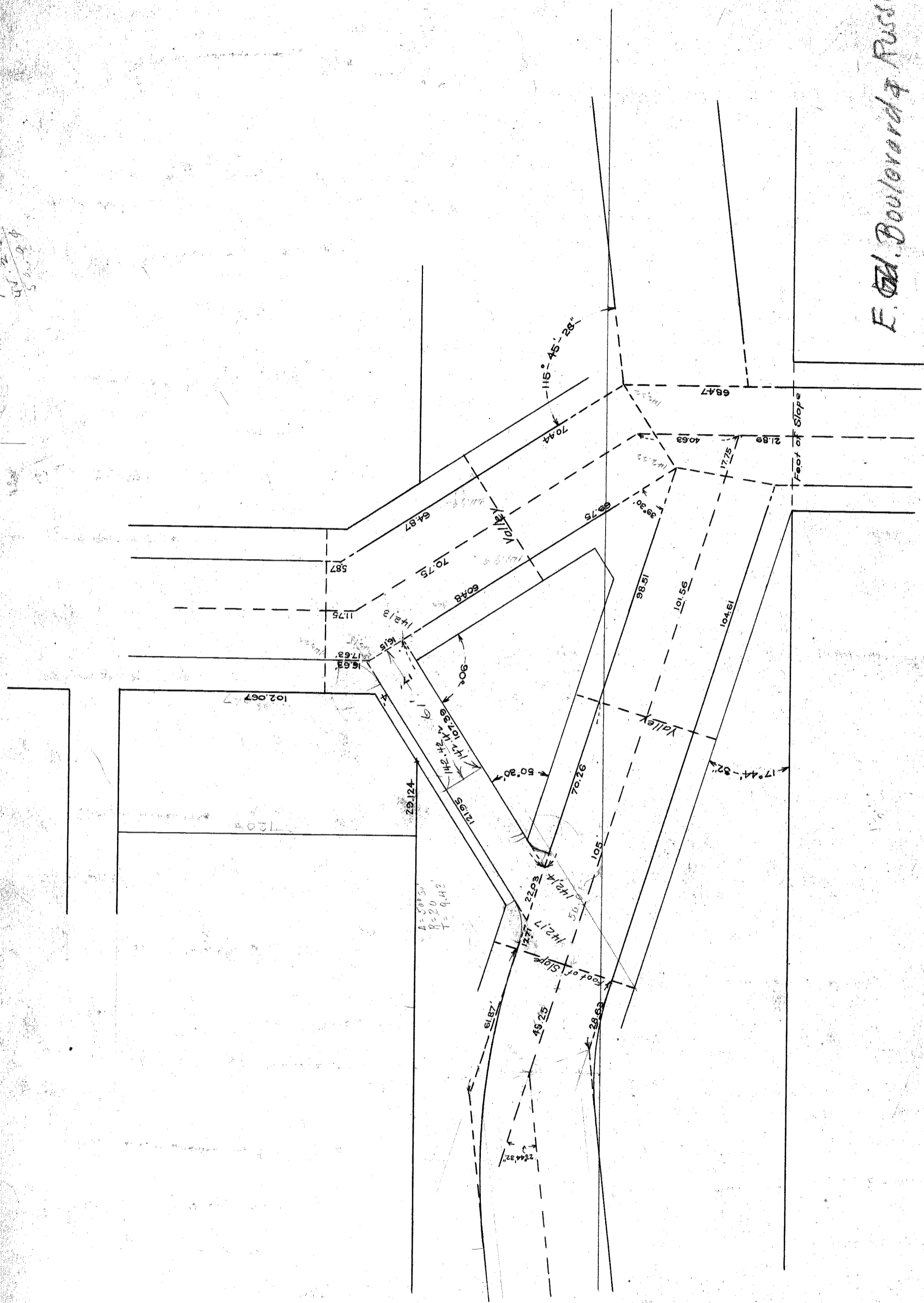
City Engineer's Office.

File XU 93-4



5-36 NX 21/7

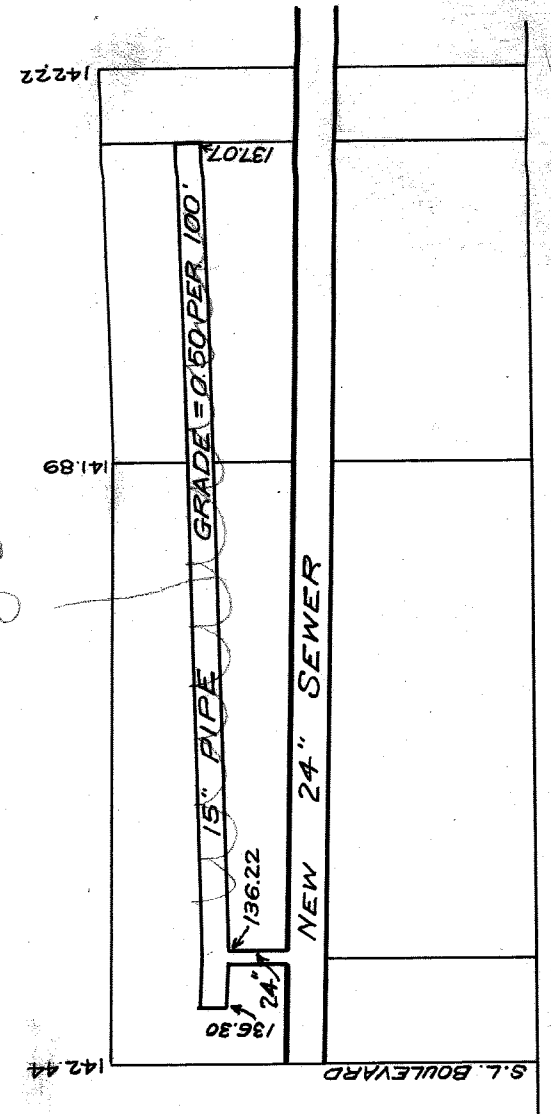
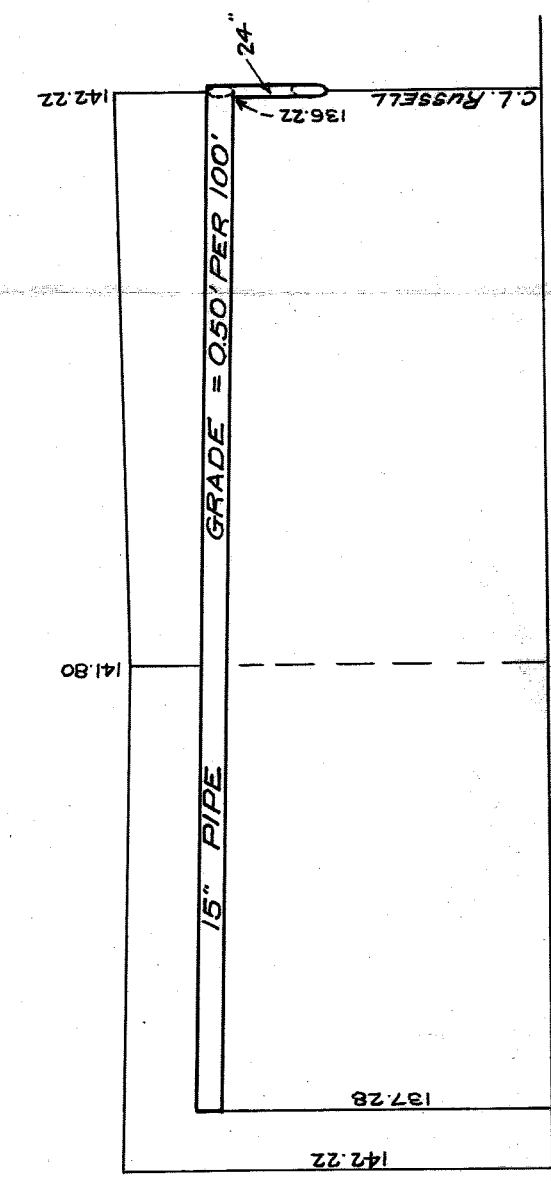
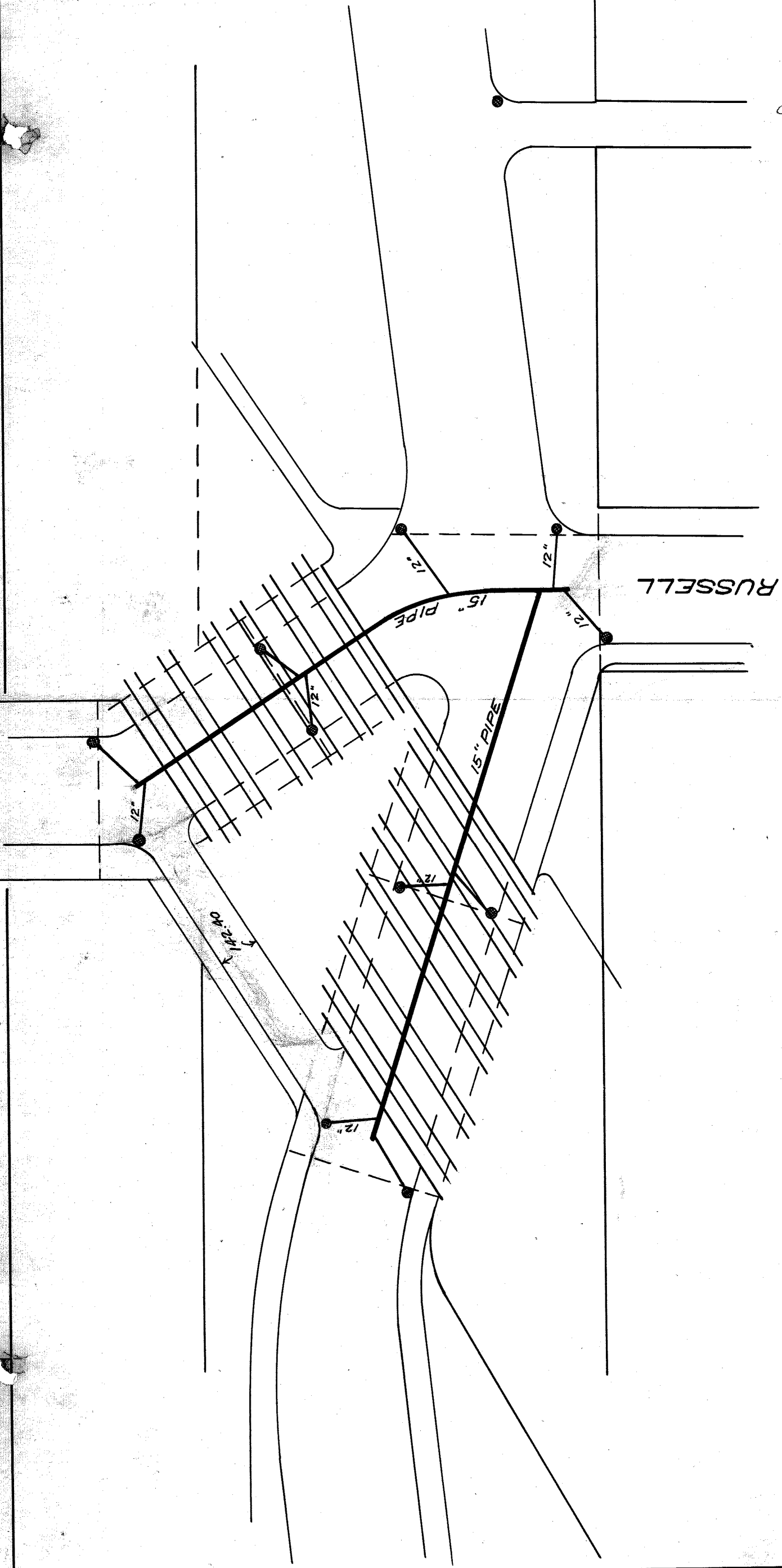
$\frac{98.26}{41.25} = 2.38$
 $\frac{41.25}{50.04} = 0.82$



$A = 50^{\circ}30'$
 $B = 20'$
 $T = 9.42$

E. Blvd. Boulevard Russell

File XU 93-6



J.W.R. DEC. 1911.
 CITY ENGINEER'S OFFICE...

VER. SCALE, 1" = 10'
 HOR. " 1" = 40'

File X093-8

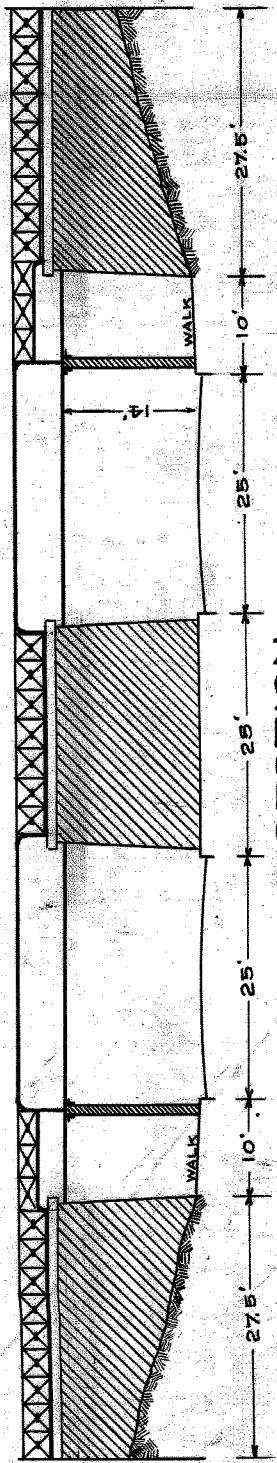
PLAN
 OF PROPOSED SUBWAY
 IN GRAND BOULEVARD EAST
 AND RUSSELL STREET
 UNDER G.T.R.R. AND B.C.
 DIVN. OF M.C.R.R.

FREIGHT HOUSE

GR. BOULEVARD EAST

RUSSELL

NOTE: PROPERTY COLORED YELLOW OWNED BY M.C.R.R.

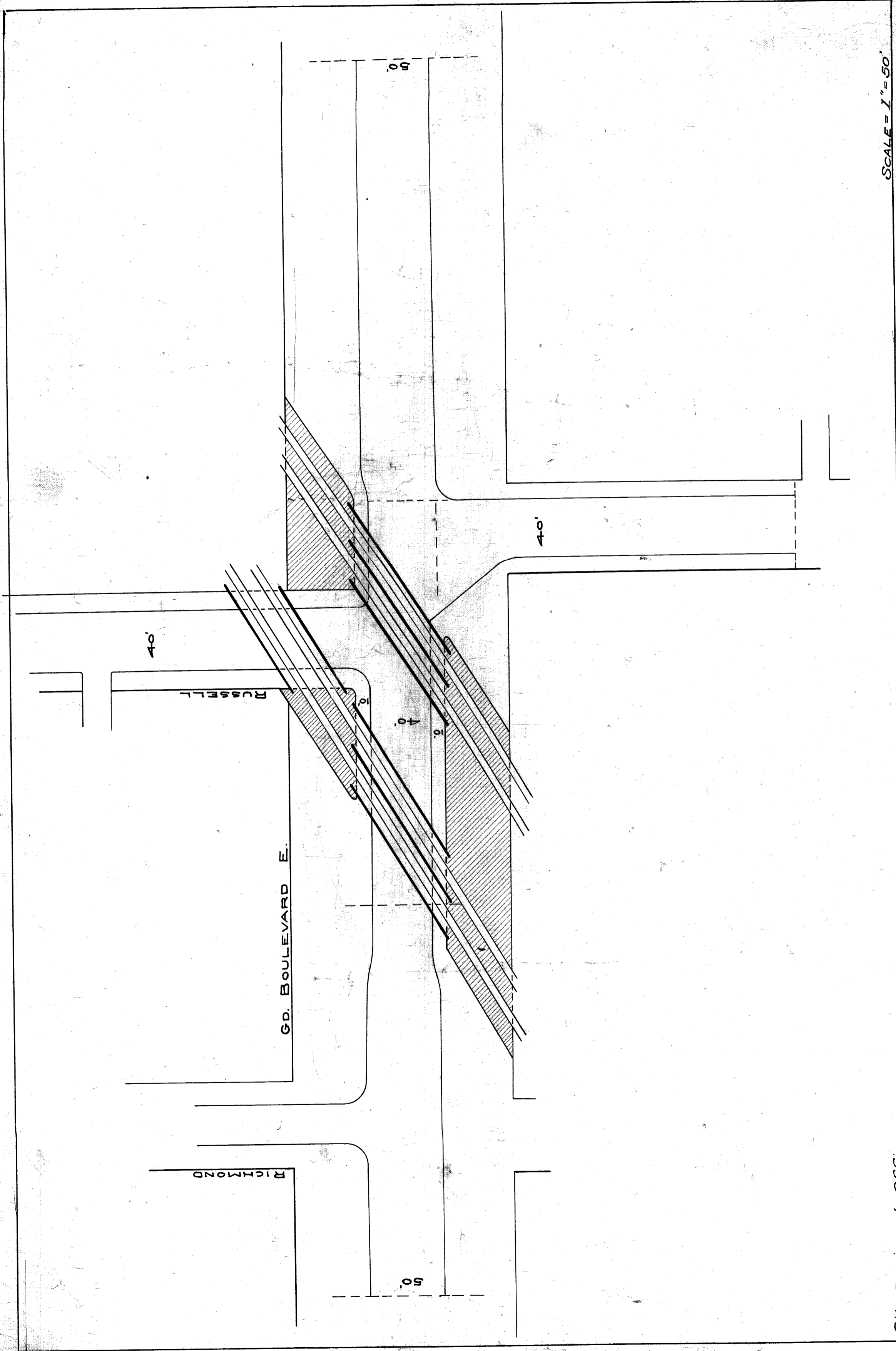


SCALE, 1" = 20 FT.

CITY ENGINEER'S OFFICE.

SCALE, 1" = 50 FT.

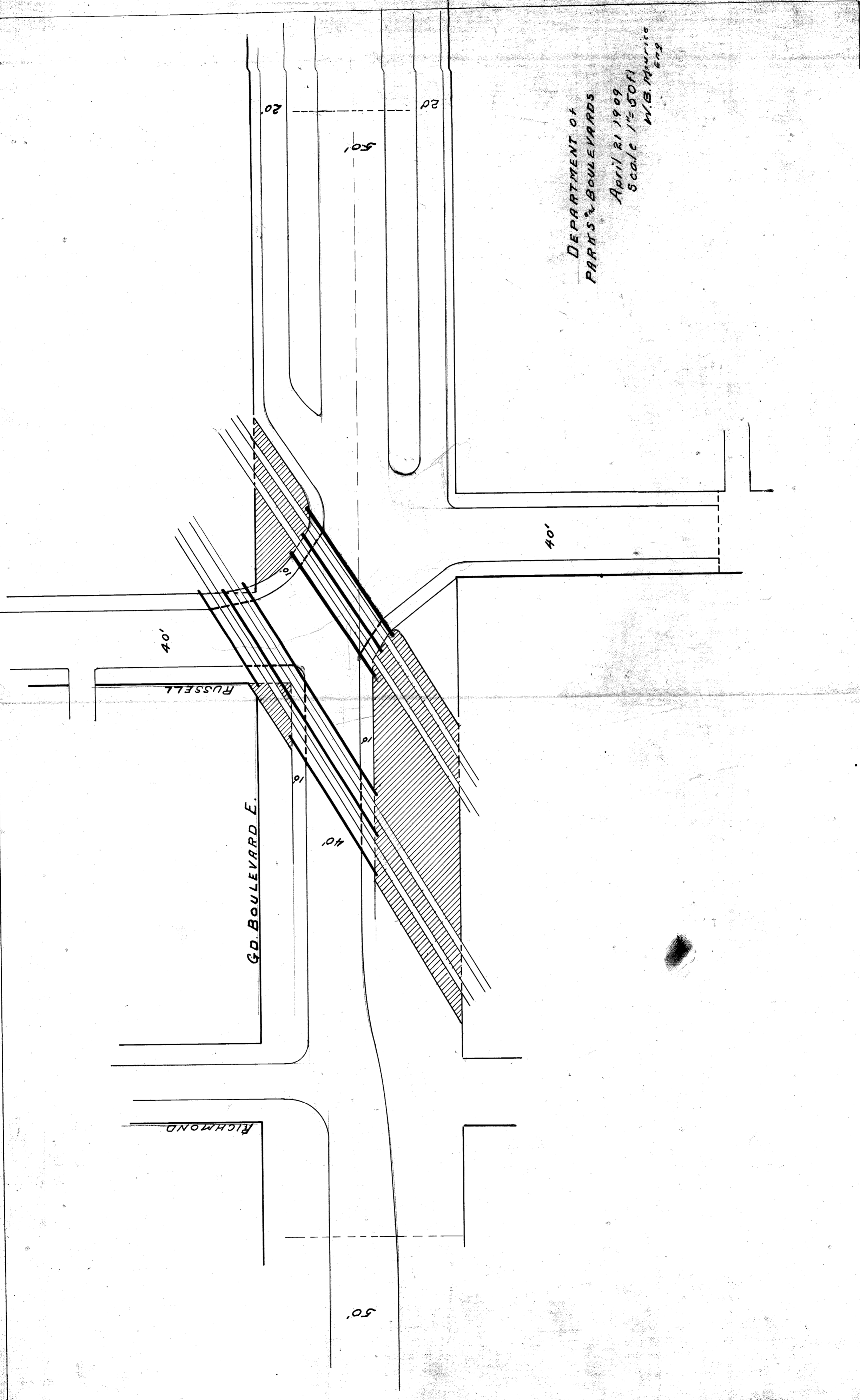
File XU 93-9



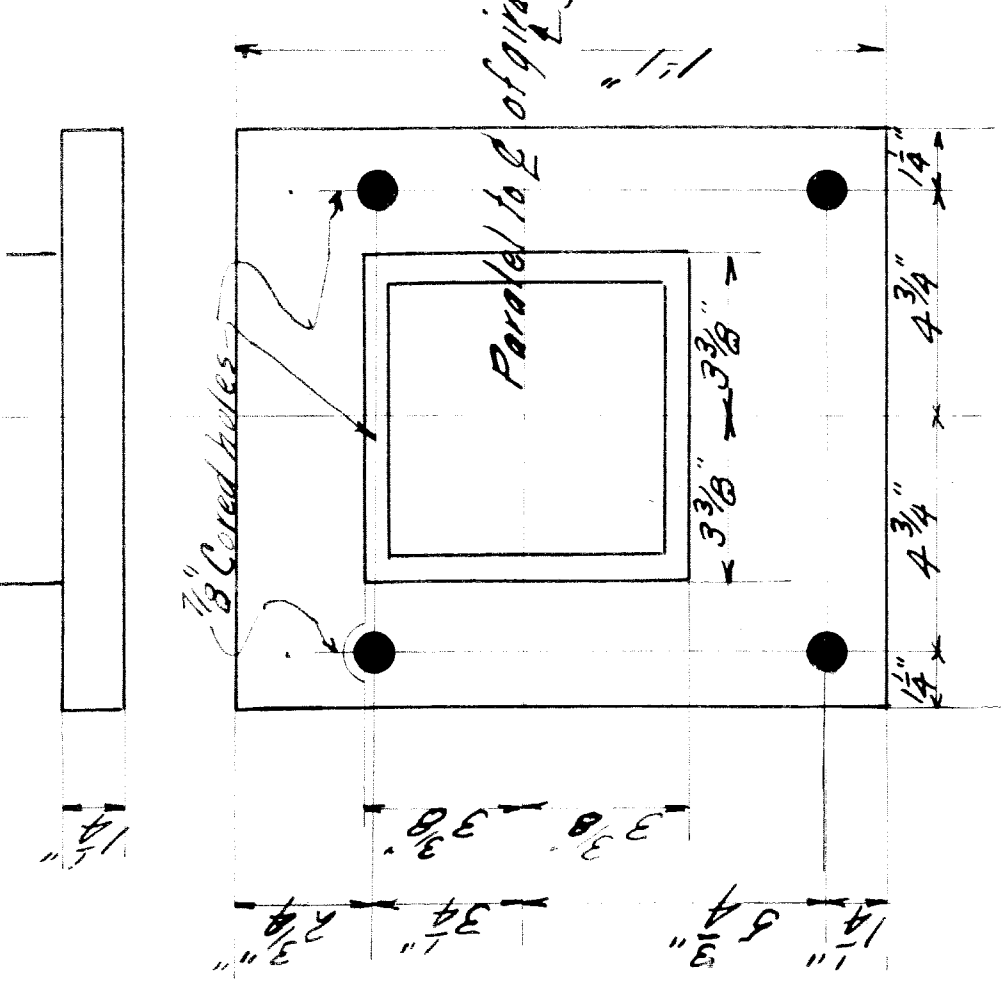
City Engineer's Office

SCALE = 1" = 50'

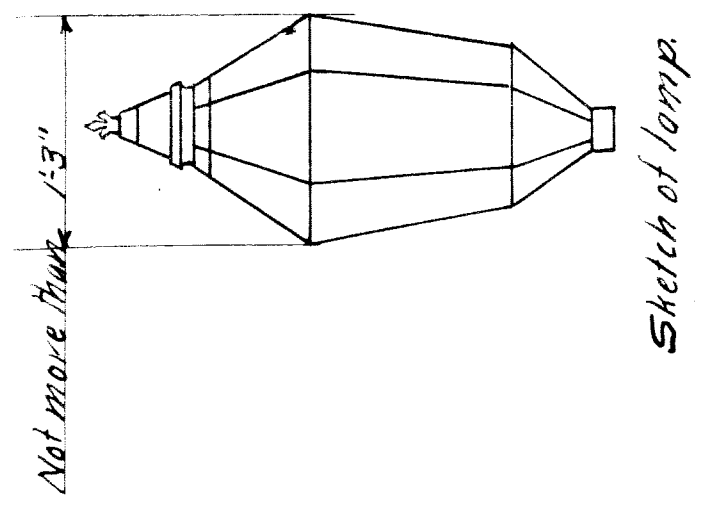
File XU 93-11



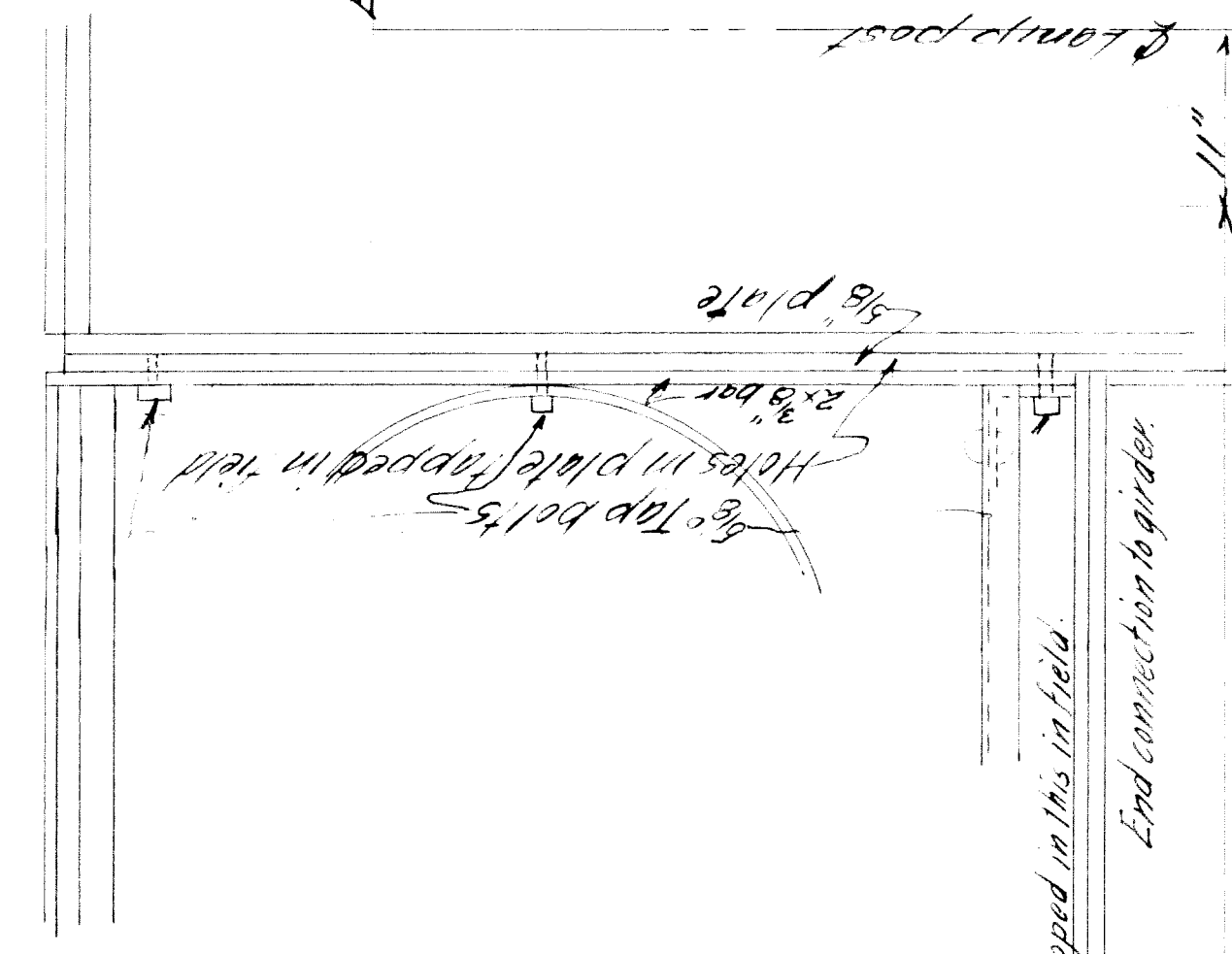
DEPARTMENT OF
PARKS & BOULEVARDS
April 21 1909
Scale 1"=50ft
W.B. Maurice
Eng



Detail of special base for lamp post
Scale - 3"=1'-0"

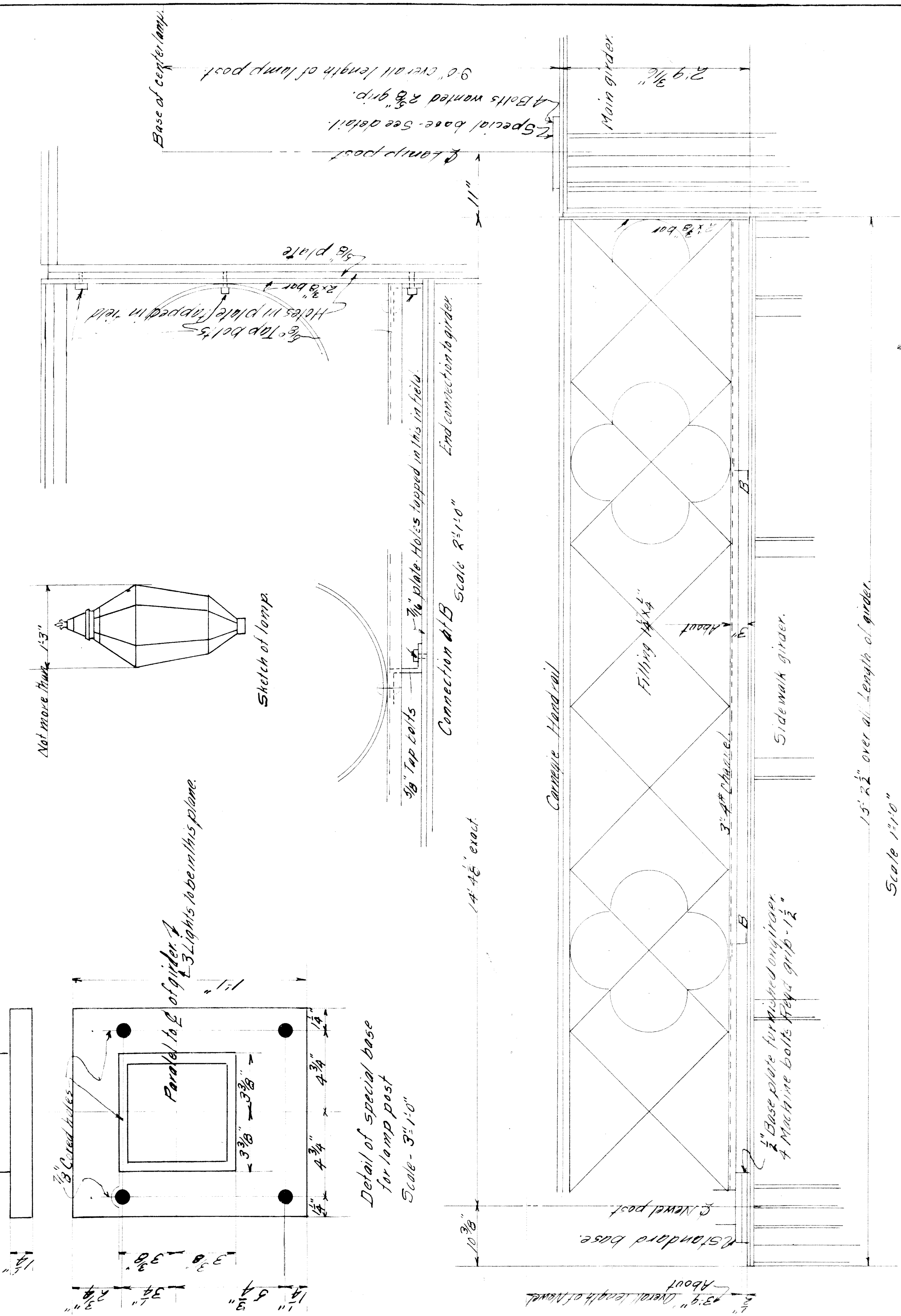


Sketch of lamp



Connection at B Scale 2"=1'-0"

Base of center lamp.
9'-0" overall length of lamp post.
Special base - See detail.
A Bolts wanted 2" x 5" grip.



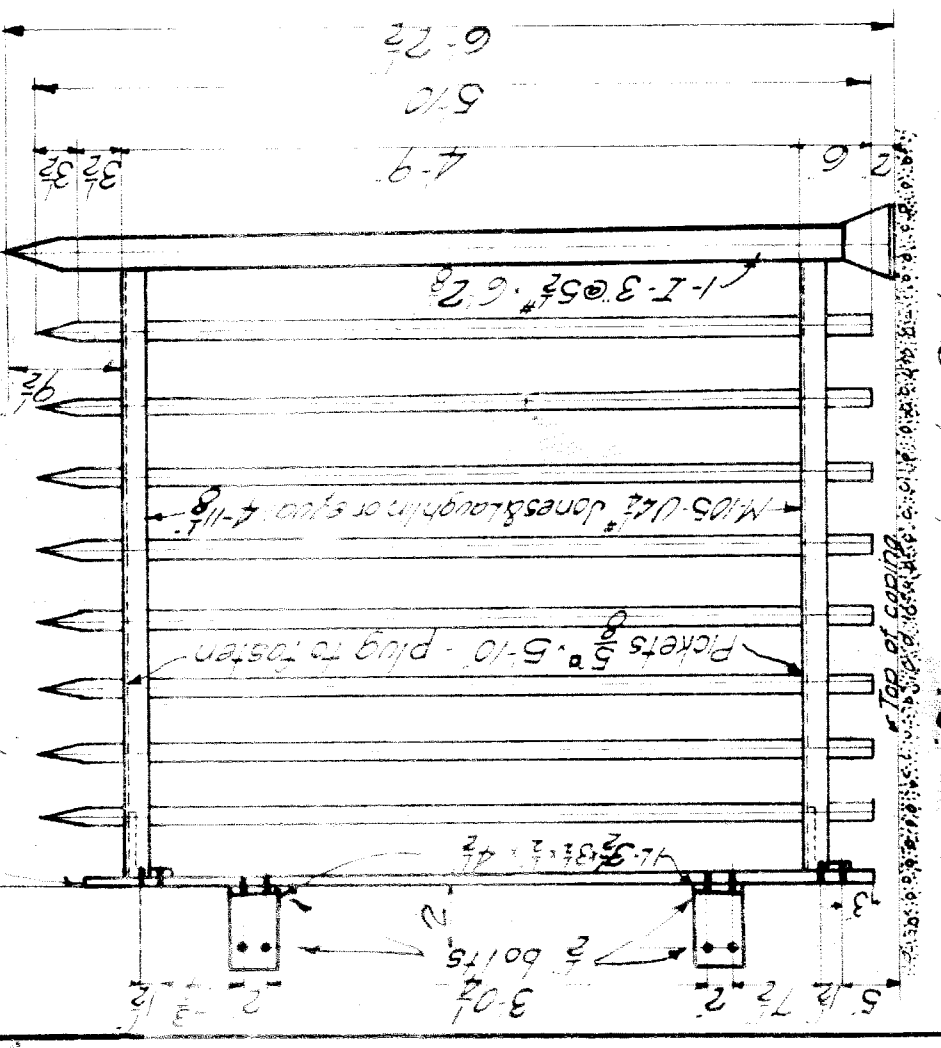
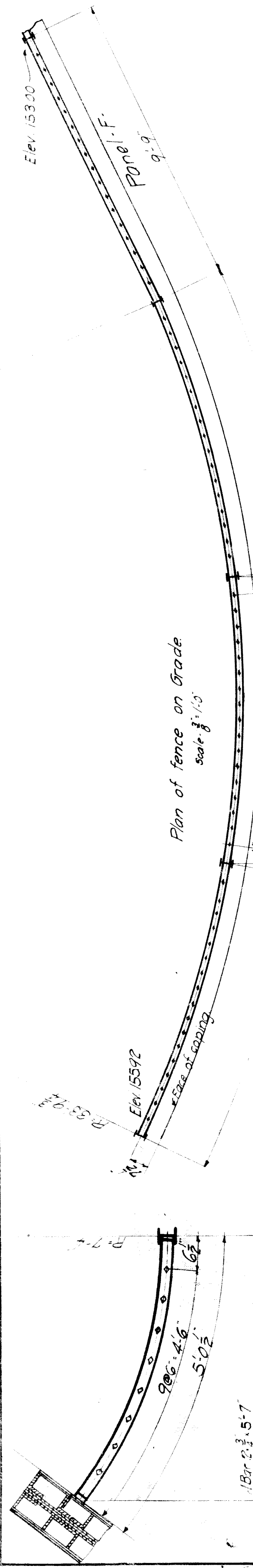
Scale 1 1/2"=1'-0"

M.C.R.R. - DIV. BAY CITY
Bridge 643 E. Gr Boulevard Detroit
Details of Railing

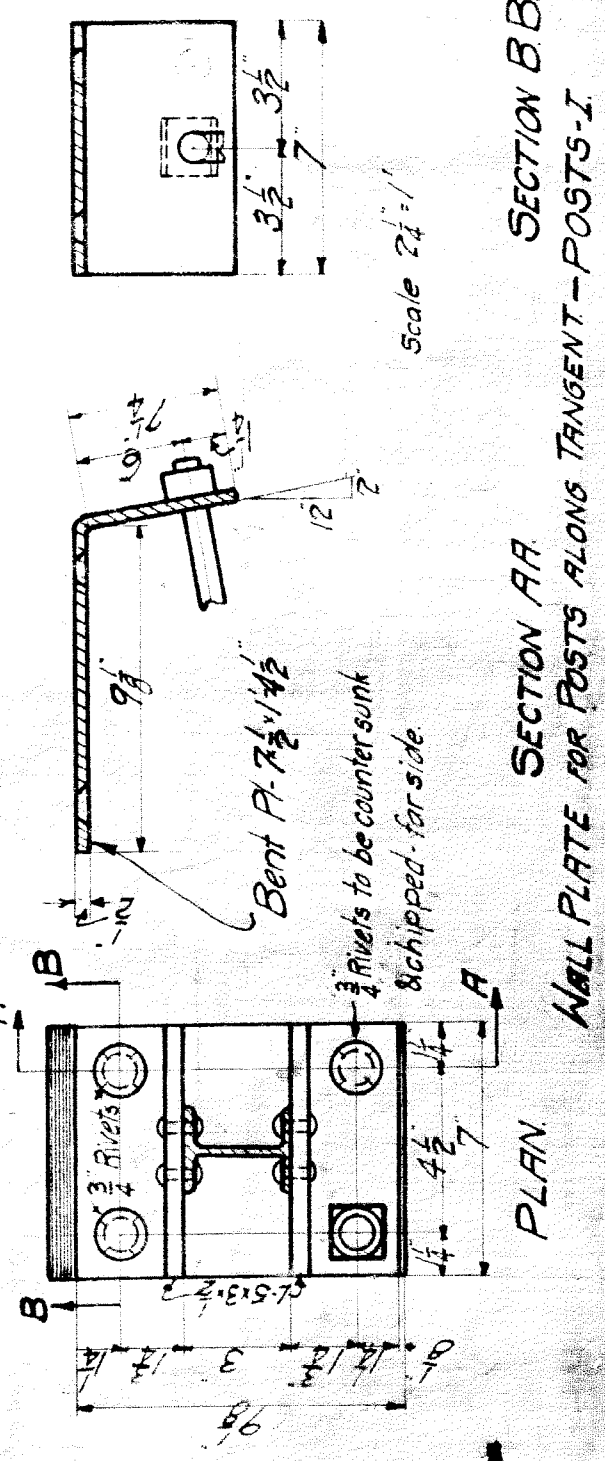
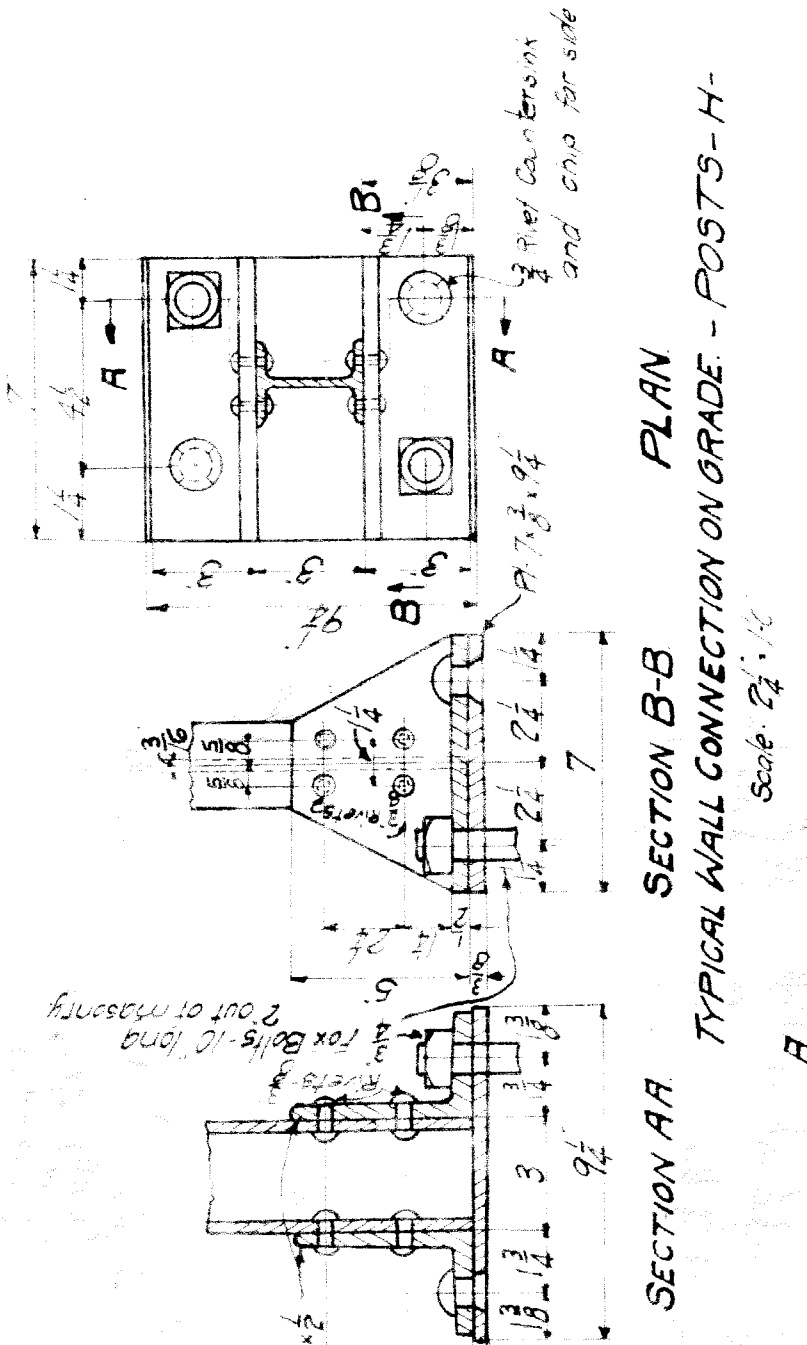
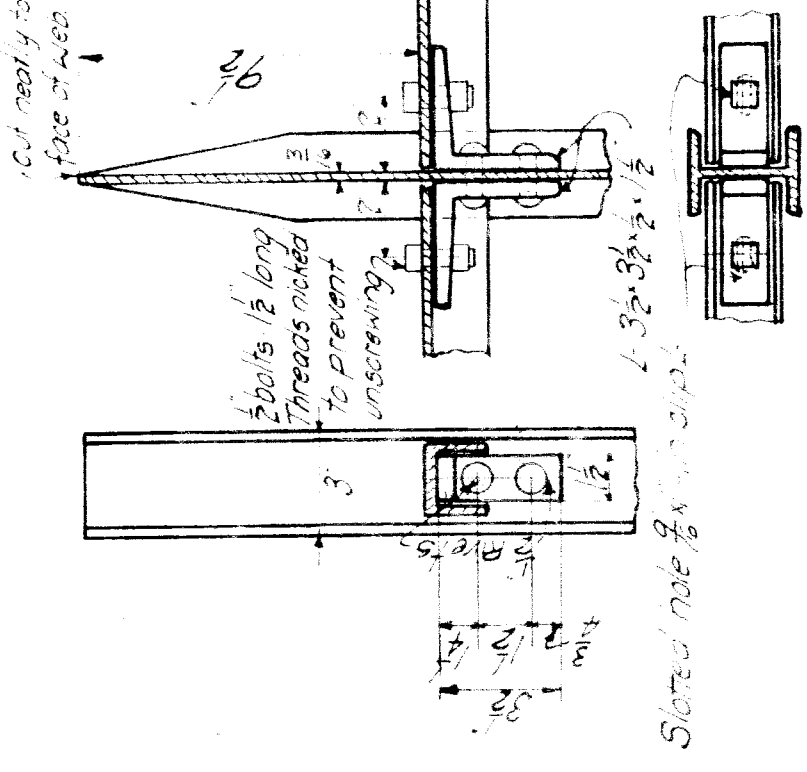
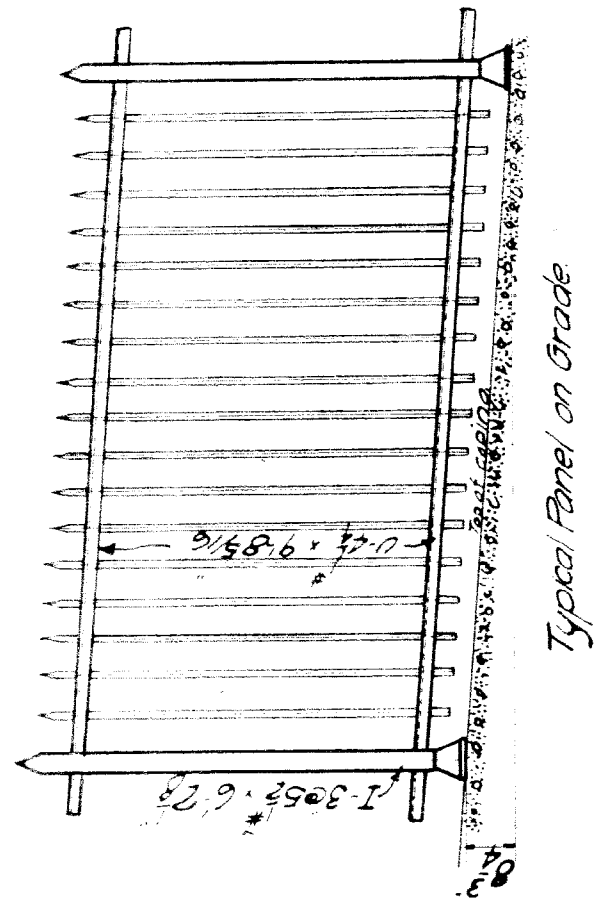
- 6 Lamps wanted as shown.
- 2 - 14' Lengths of railing wanted - Catalogue #7 - Chester B.A. bree - Style 5
- 2 - Newel posts wanted - " " #7 " " - Capital.
- 2 - Lamp posts wanted - " " #7 " " - " 3 lights.
- Connections & bolts for fastening Rail & posts to girders

Note - All bolts to have Hex nuts and heads

Approved Bridge Engineer
Drawn by J.H. 9/9/1911
Checked by



Panel-D - connecting to girder.
 Wanted as shown
 Scale $\frac{3}{8}'' = 1'-0''$



Marking Diagram

- Material Required
- 1 Panel - D
 - 3 Panels - E
 - 1 Panel - F
 - 39 Panels - G
 - 95 - 3/4" Fox Bolts - 10" long
 - 190 - 1/2" Bolts - 1 1/2" long
 - 12 - 3/8" Bolts - 2"
 - 5 Posts - H -
 - 39 " " " " - I -

Material, Medium Steel
 Manufacturers' Standard
 Steel
 Paint 1 coat of red lead

M.C.R.R.-DIV.-BAY CITY
 Bridge 643 E GR BOULEVARD, DETROIT,
 FENCE ON SW WALL

Approved: *A. J. Sullivan* Bridge Engineer.
 Scale $\frac{3}{8}'' = 1'-0''$
 Drawn by *W. J. Apr 30 1912*
 Checked by *V.P.T. May 19 1912*
 Chief Engineer Traced by *W. Apr 30 1912*

Revised _____ of _____ Sheet _____ of _____

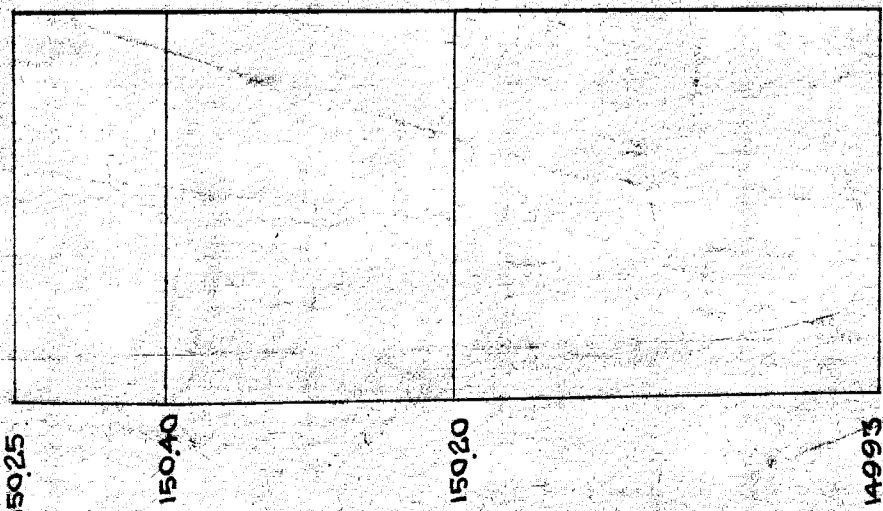
PROFILE OF NORTH CURB OF NORTH DRIVE

PROFILE OF SOUTH CURB OF SOUTH DRIVE

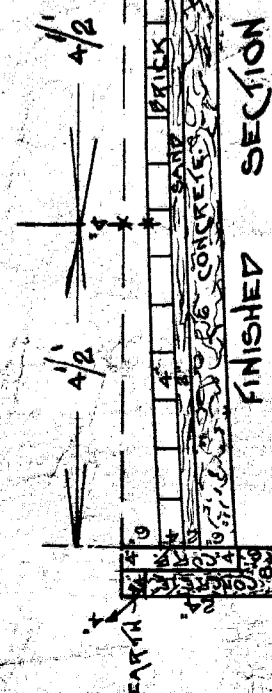
DEPT. PARKS $\frac{7}{16}$ BLVD.
PLAN AND PROFILE
OF PROPOSED BRICK PAVEMENT ON
EAST GRAND BLVD.

FROM ST ARBIN TO DEQUINDRE
NOR 111-30 FT
M.F. HURLBY, COMM.
S.S. MURPHY, CIVIL ENGR.
A.C. 24-1918.

SCALE 1/8" = 10 FT

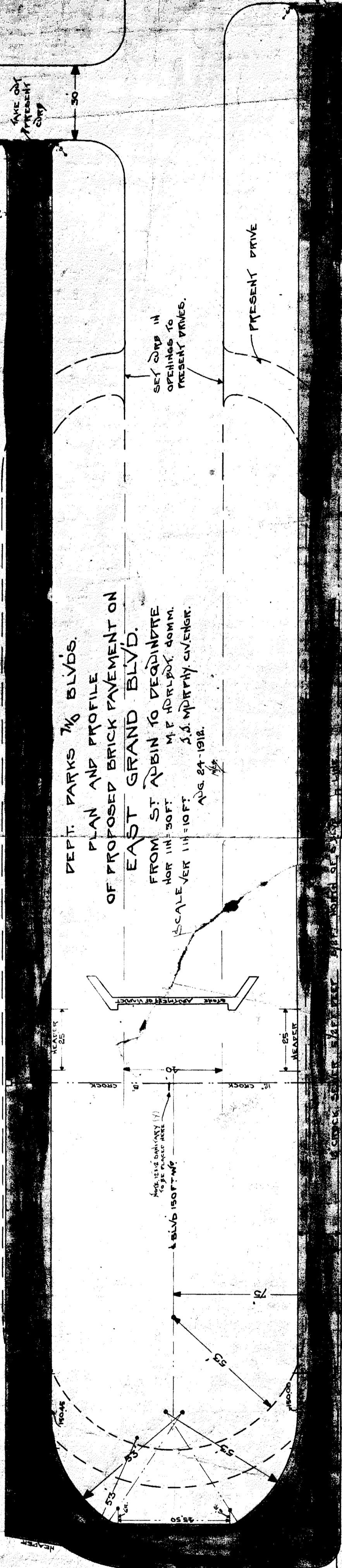
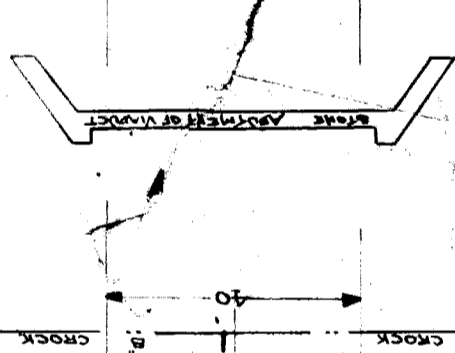
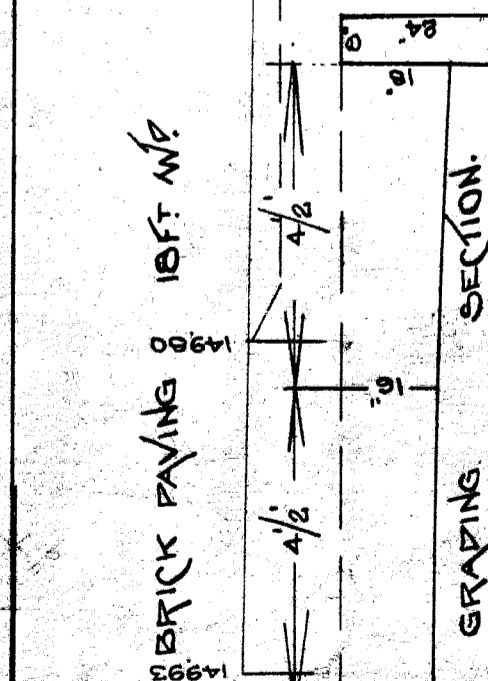


CROSS SECTION



BRICK PAVING 15 FT WIDE

GRAVING SECTION



14902

14873

14879

14862

14902

14879

14911

14914

14875

14839

14847

14874

EAST GR BLVD 150 FT WIDE

ST ARBIN AVE 60 FT

ST ARBIN AVE 50 FT

54770

65690

15025

15040

15020

14965

14845

14838

14834

26
HAVE OUT
PRESENT
CURB

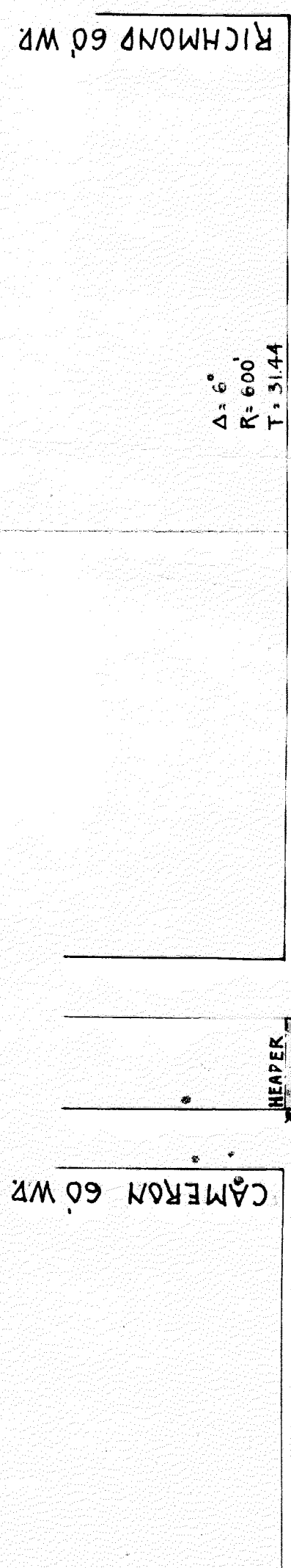
15
HAVE OUT
PRESENT
CURB

30

PRESENT DRIVE

SEE CURB IN
OPENINGS TO
PRESENT DRIVES.

T. F. TRAKS

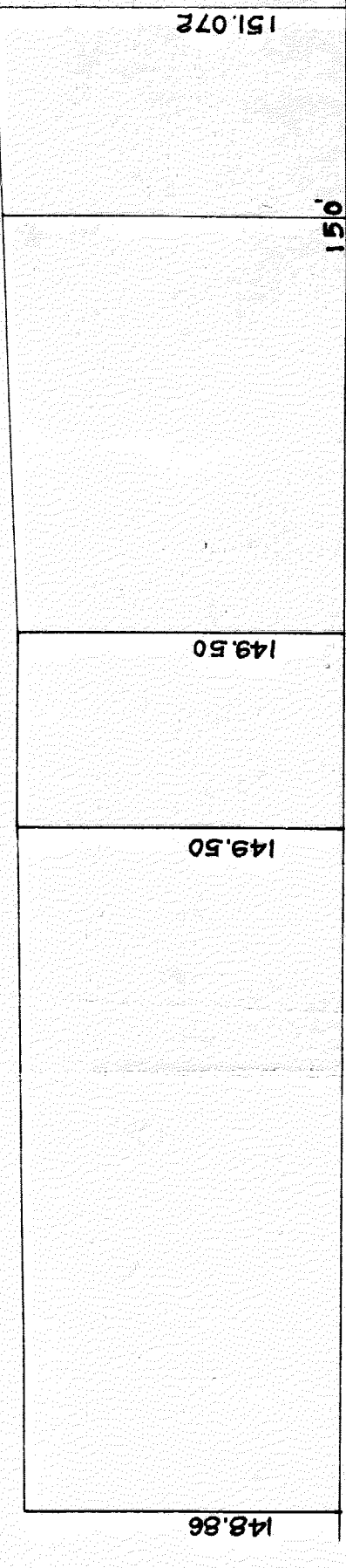


DEPT. OF PARKS AND BLVD'S.
 PLAN AND PROFILE
 OF PROPOSED BRICK PAVEMENT ON
EAST GRAND BOULEVARD
 ON THE EAST AND WEST SIDES OF
RUSSELL ST. SUBWAY

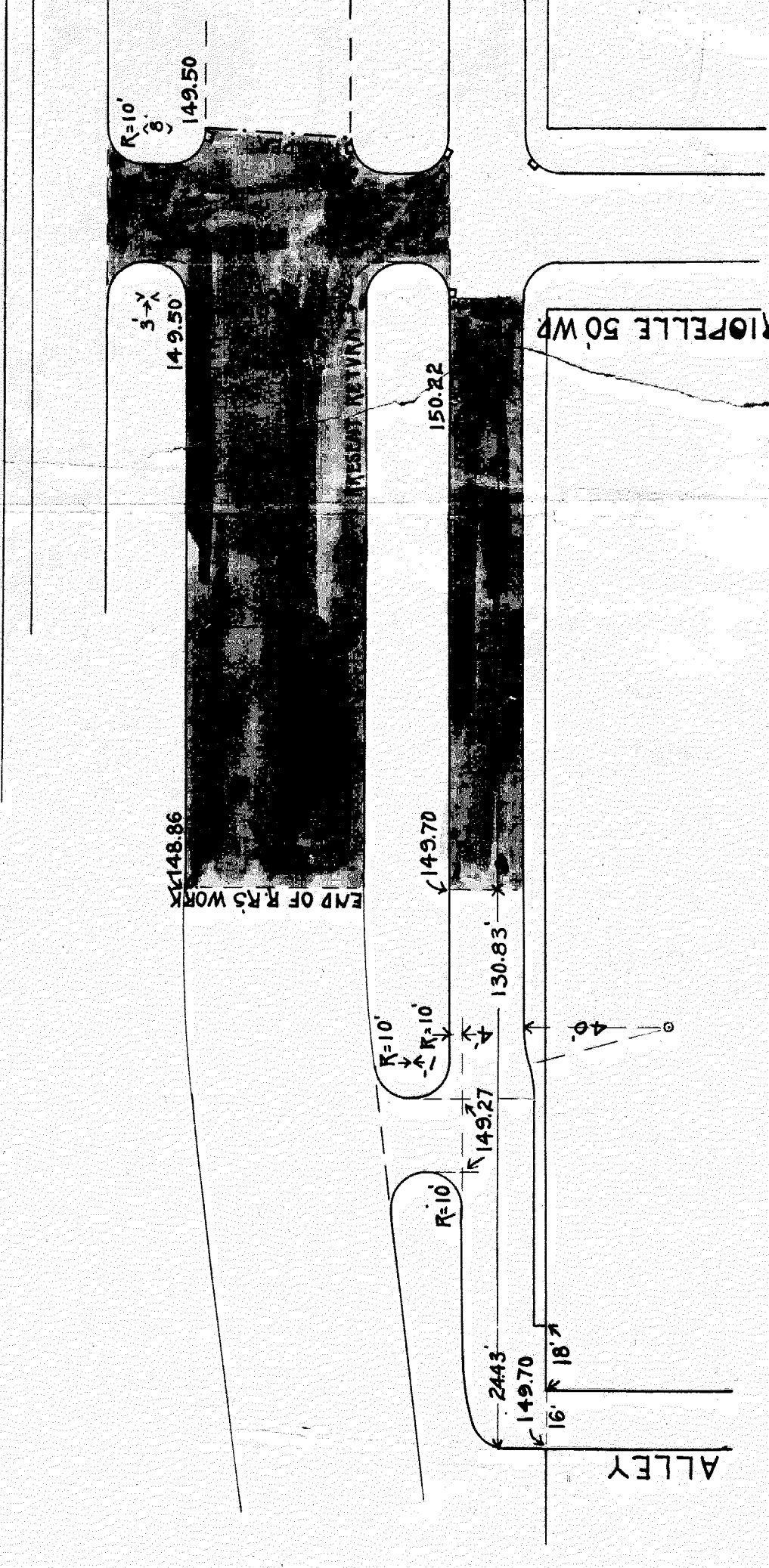
HOR. SCALE ONE INCH = 40 FT.
 VER. " " " " = 10 "

1912
 M. P. HURLEVT. COMMISSIONER
 J. J. MURPHY, CIV. ENGR.

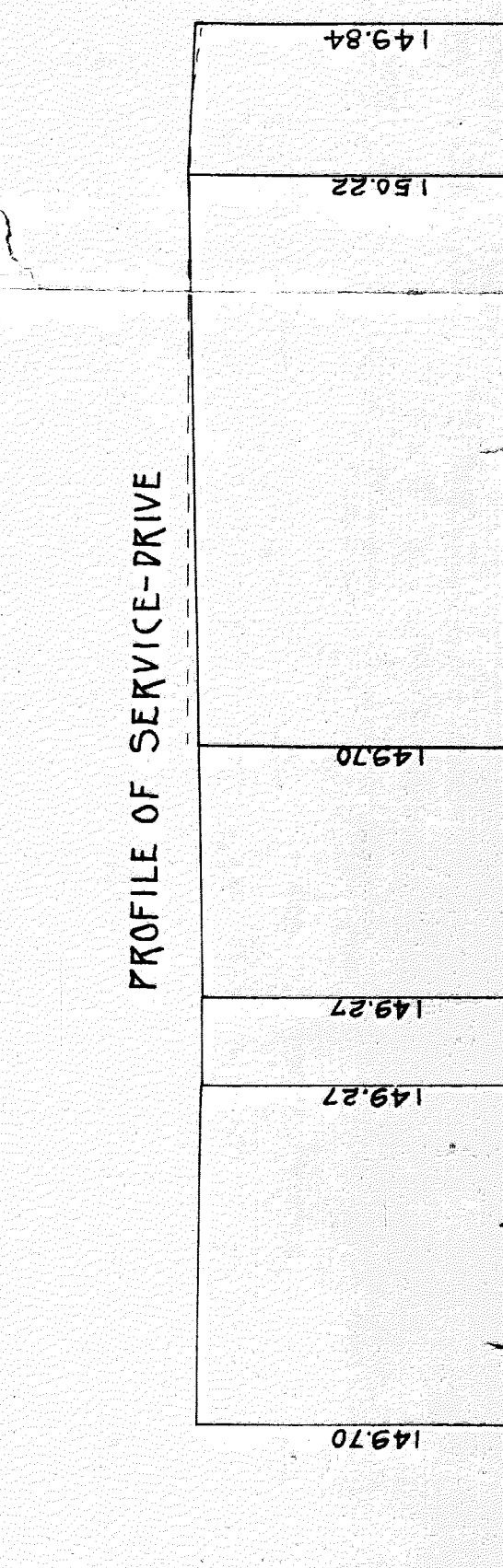
ELEV. ON CENTER LINE OF PRESENT ROADWAY



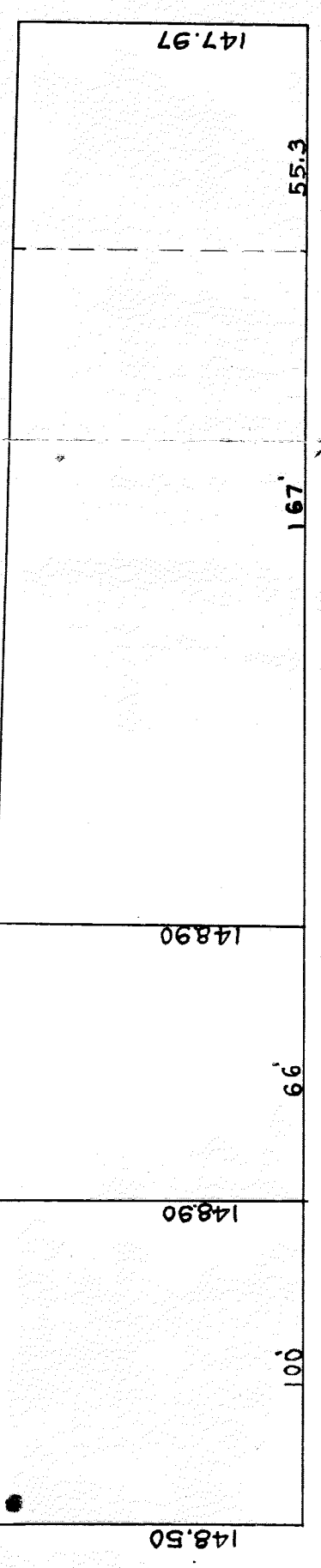
PROFILE OF CENTER ROADWAY
 E. GR. BLV7.



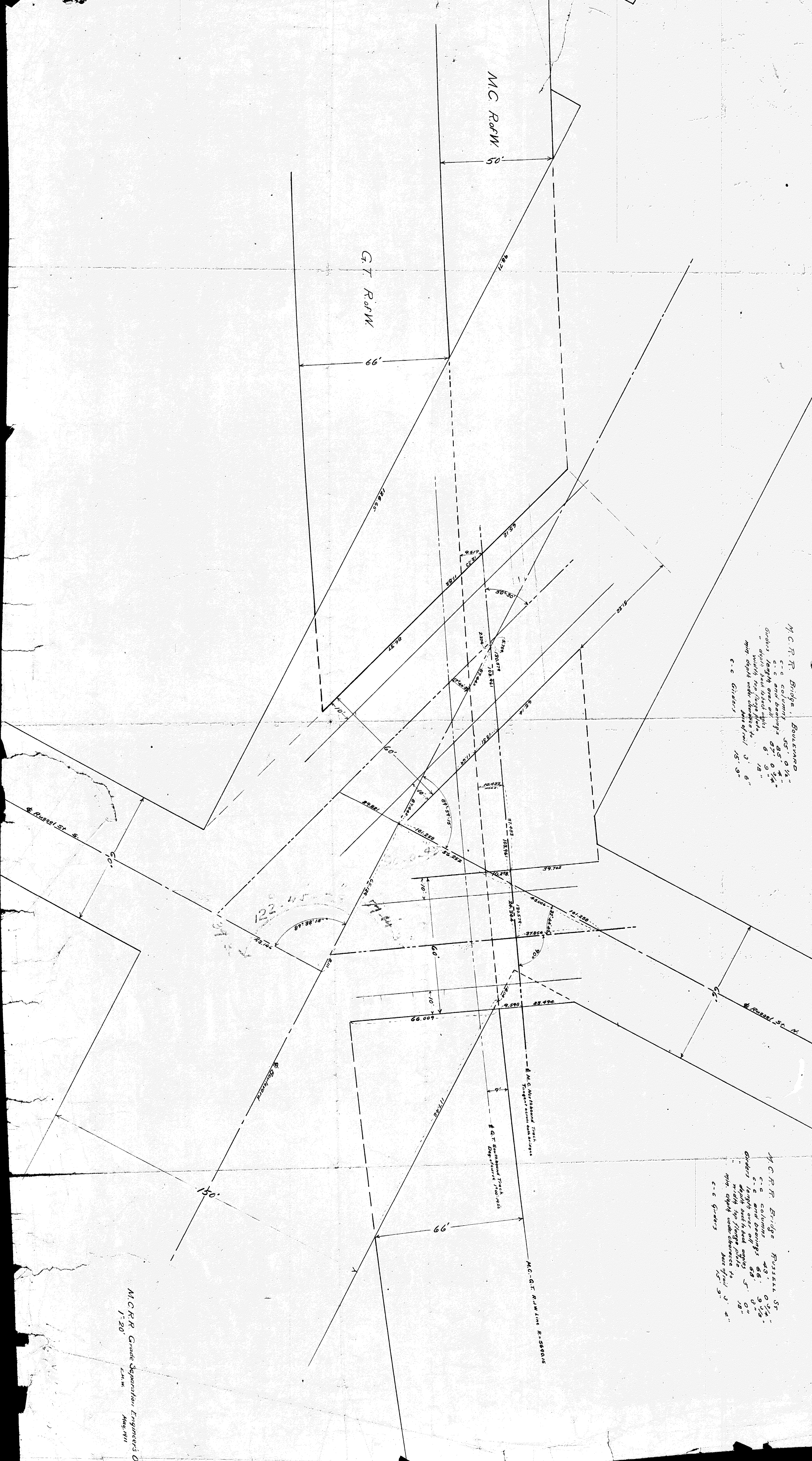
PROFILE OF SERVICE-DRIVE



ELEVATION ON CENTER LINE OF PRESENT ROADWAY



PROFILE

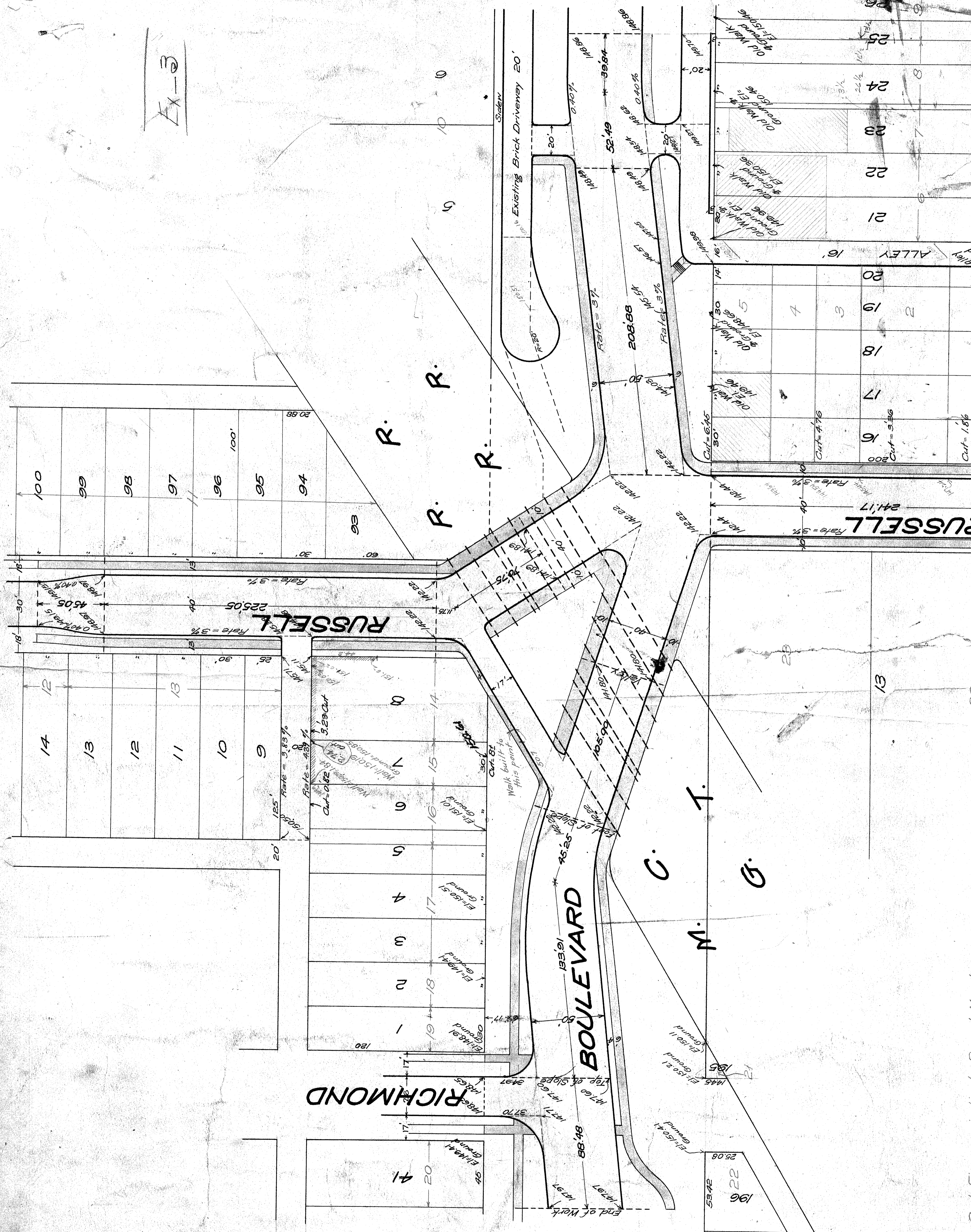


M.C.R.R. Bridge, Boulevard
 c-c columns 55' 0 1/4"
 c-c and beams 85' 4"
 Girders length over all 87' 0 1/4"
 " depth back to back angles 6' 9"
 " width top flange plate 18"
 min. depth under clearance to base of rail 3' 6"
 c-c Girders 15' 9"

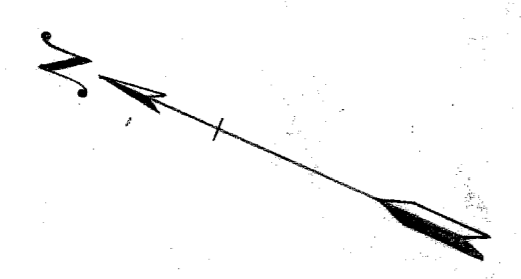
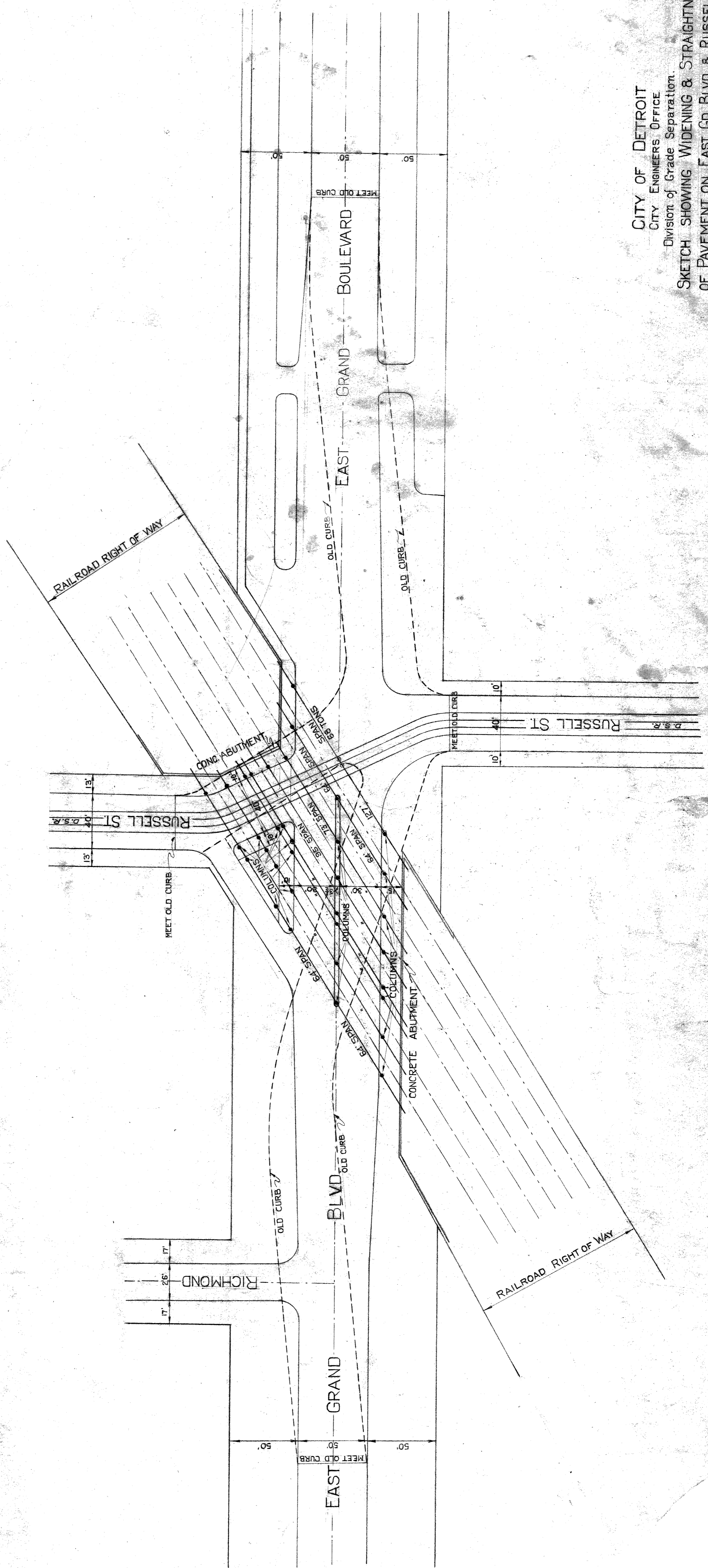
M.C.R.R. Bridge Russell St
 c-c columns 43' 0 3/4"
 c-c and beams 66' 9 1/2"
 Girders length over all 68' 5" 0"
 " depth back to back angles 6' 9"
 " width top flange plate 18"
 min. depth under clearance to base of rail 3' 4"
 c-c Girders 15' 9"

M.C.R.R. Grade Separation, Engineer's Office
 1-20
 2:41:11
 May, 1911

EX-3



Large Red Figures indicate Parcel Numbers



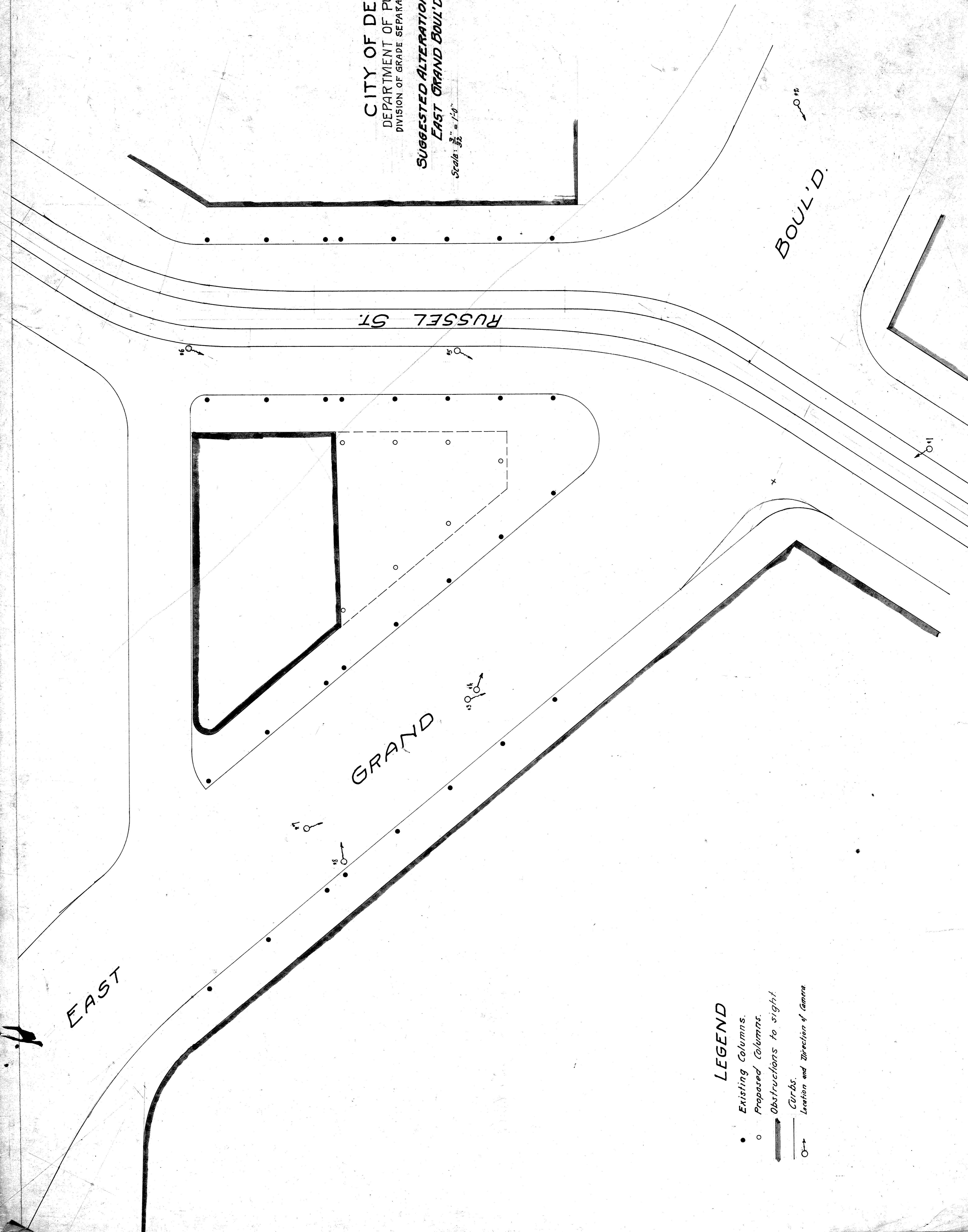
CITY OF DETROIT
 CITY ENGINEERS OFFICE
 Division of Grade Separation
 SKETCH SHOWING WIDENING & STRAIGHTENING
 OF PAVEMENT ON EAST GRD BLVD & RUSSELL ST.

SCALE 1" = 40'
 DRAWN BY

AUG. 1928.

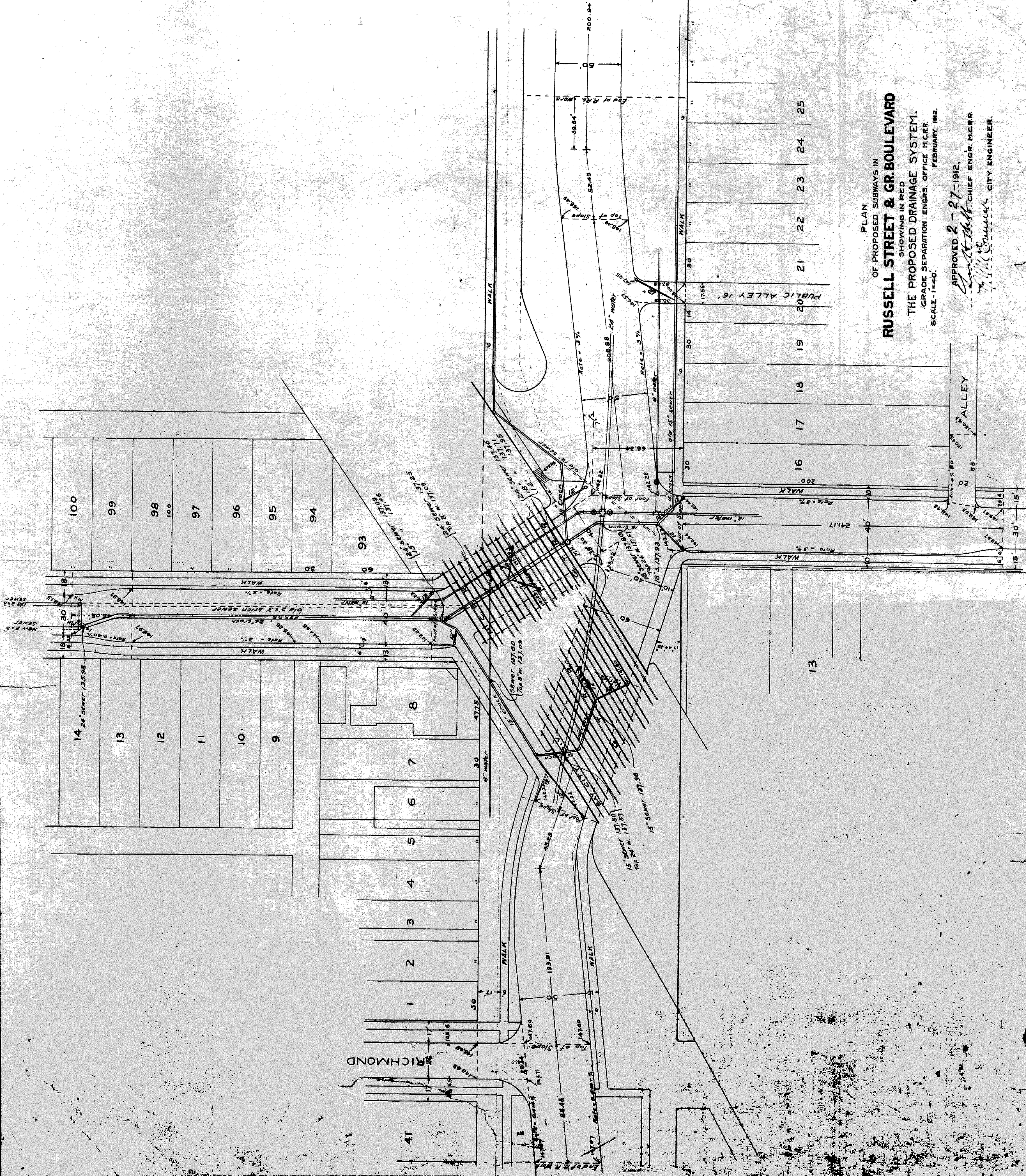
File XU 93-17

CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF GRADE SEPARATIONS AND BRIDGES
SUGGESTED ALTERATIONS OF EXISTING VIADUCT
EAST GRAND BOUL'D & RUSSEL ST.
 Scale: $\frac{3}{32}'' = 1'-0''$
 Nov. 10th 1921



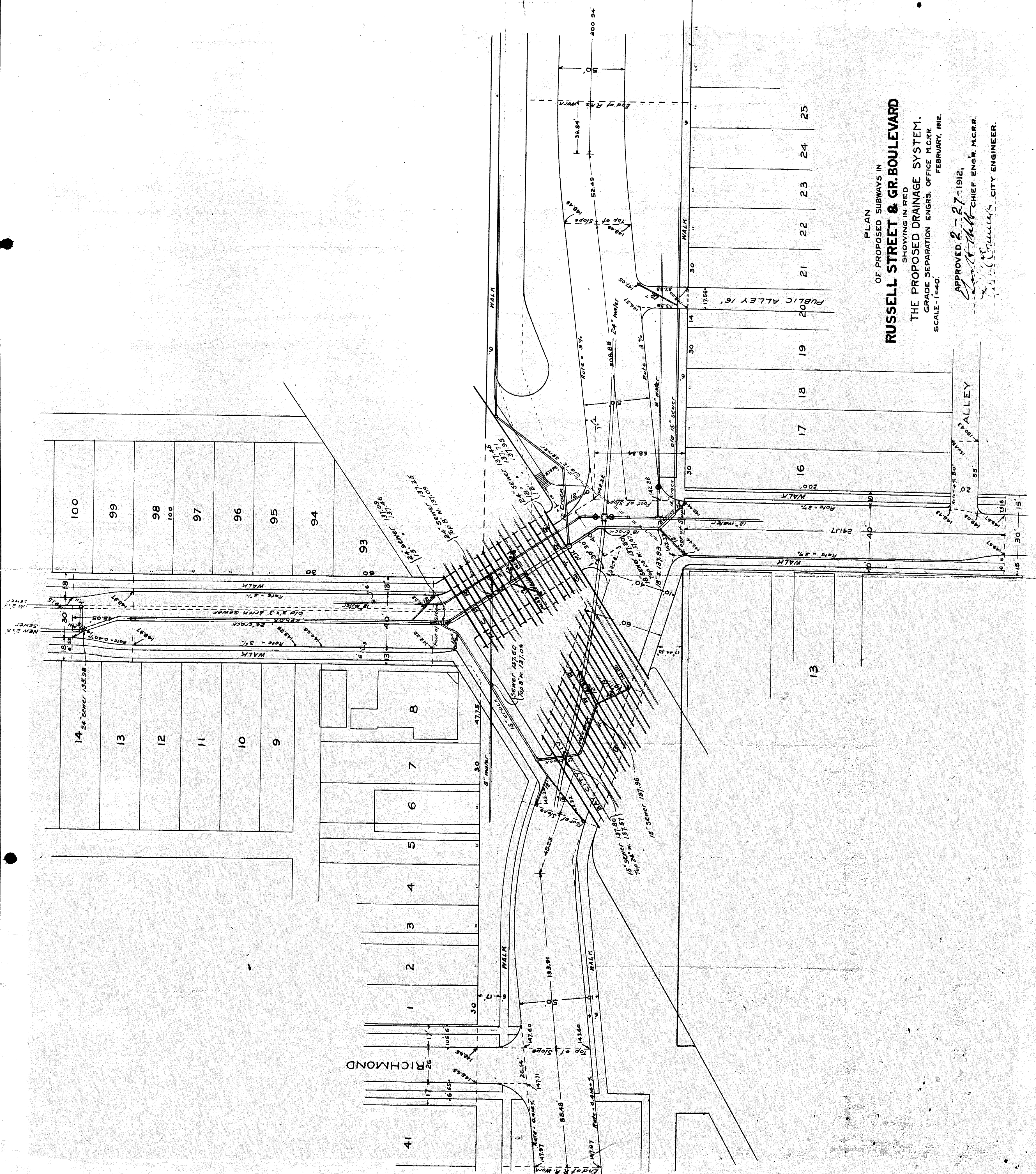
LEGEND

- Existing Columns.
- Proposed Columns.
- Obstructions to sight.
- Curbs.
- Location and Direction of Camera.



PLAN
 OF PROPOSED SUBWAYS IN
RUSSELL STREET & GR. BOULEVARD
 SHOWING IN RED
 THE PROPOSED DRAINAGE SYSTEM.
 GRADE SEPARATION ENGRS. OFFICE M.C.R.R.
 SCALE - 1"=40'
 FEBRUARY, 1912.

APPROVED *2-27-1912*
John H. Miller CHIEF ENGR. M.C.R.R.
W. J. Connelly CITY ENGINEER.



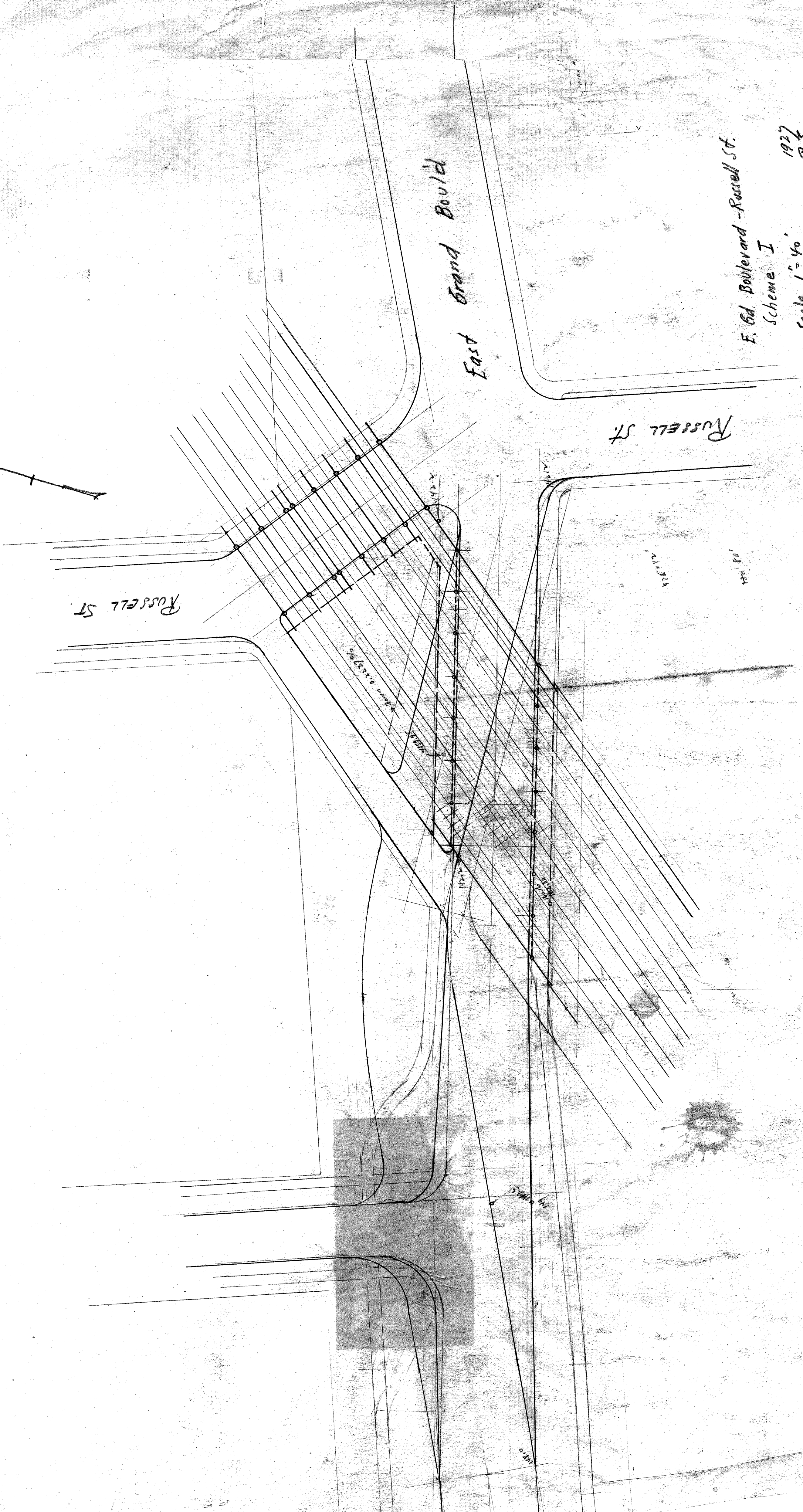
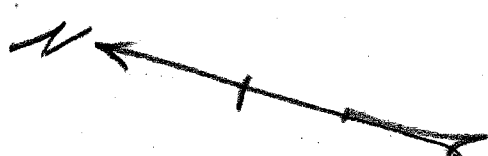
PLAN
 OF PROPOSED SUBWAYS IN
RUSSELL STREET & GR. BOULEVARD
 SHOWING IN RED
 THE PROPOSED DRAINAGE SYSTEM.
 GRADE SEPARATION ENGRS. OFFICE M.C.R.R.
 SCALE - 1"=40'
 FEBRUARY, 1912.

APPROVED *[Signature]* 2-27-1912.
 CHIEF ENGR. M.C.R.R.
 CITY ENGINEER.

15	30	15
16	30	15
17	30	15
18	30	15
19	30	15
20	30	15
21	30	15
22	30	15
23	30	15
24	30	15
25	30	15

ALLEY

RICHMOND

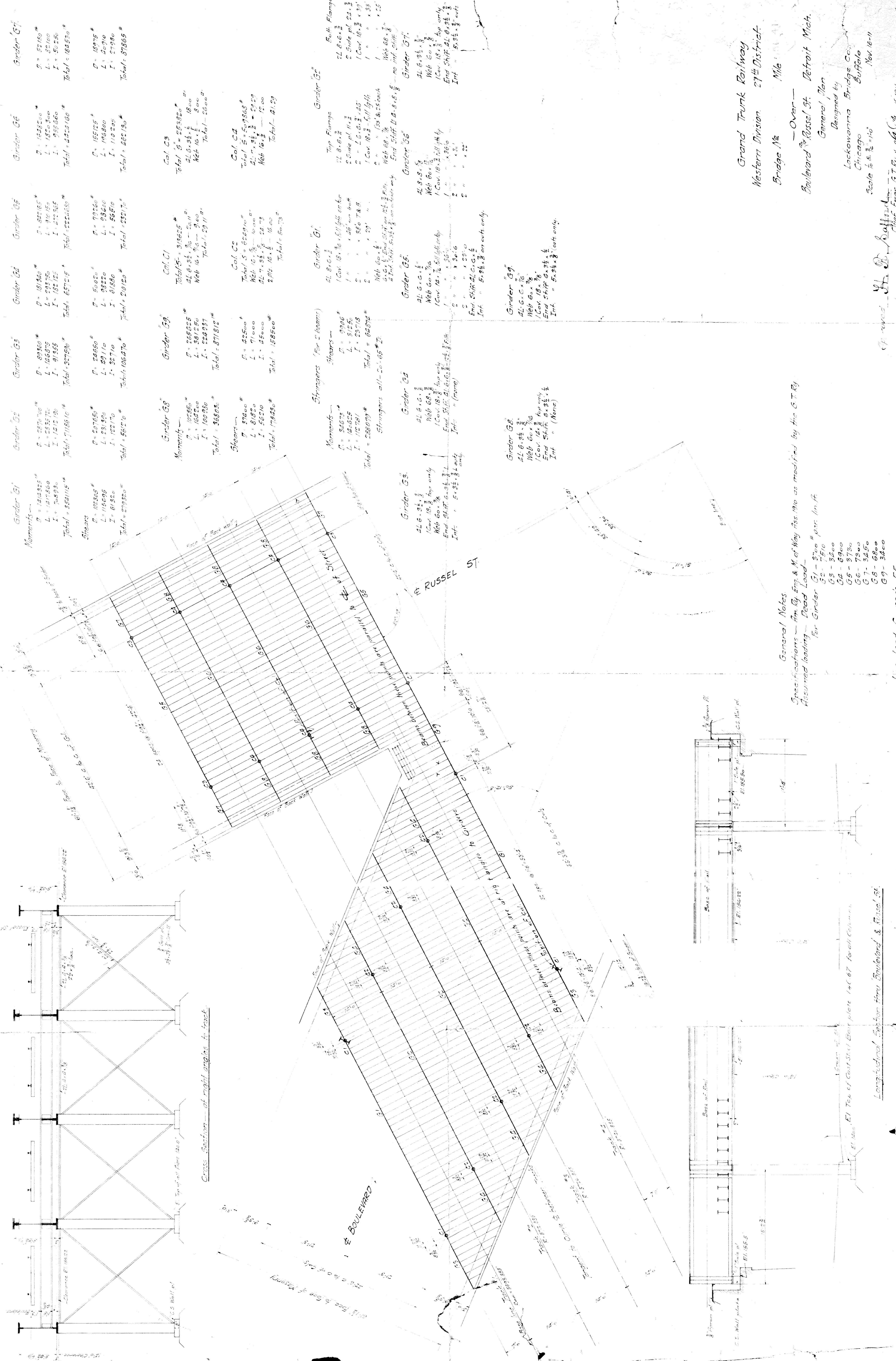


RUSSELL ST.

East Grand Blvd

Russell St

E. Bd. Boulevard - Russell St.
Scheme I
Scale 1" = 40'
1927
R.S.



Girder G1
Moments —
D = 121,825 #
L = 121,825 #
I = 2,850,000 #
Total = 354,115 #
Strainers
D = 107,305 #
L = 116,695 #
I = 81,526 #
Total = 219,326 #

Girder G2
D = 89,940 #
L = 121,825 #
I = 9,135 #
Total = 211,900 #
Strainers
D = 207,650 #
L = 21,116 #
I = 32,710 #
Total = 106,476 #

Girder G3
D = 131,540 #
L = 211,825 #
I = 182,125 #
Total = 672,215 #
Strainers
D = 50,000 #
L = 9,220 #
I = 8,850 #
Total = 20,070 #

Girder G4
D = 131,540 #
L = 211,825 #
I = 182,125 #
Total = 672,215 #
Strainers
D = 50,000 #
L = 9,220 #
I = 8,850 #
Total = 20,070 #

Girder G5
D = 155,125 #
L = 196,800 #
I = 27,936 #
Total = 452,160 #
Strainers
D = 70,260 #
L = 23,200 #
I = 29,570 #
Total = 123,030 #

Girder G6
D = 155,125 #
L = 196,800 #
I = 27,936 #
Total = 452,160 #
Strainers
D = 70,260 #
L = 23,200 #
I = 29,570 #
Total = 123,030 #

Girder G7
D = 155,125 #
L = 196,800 #
I = 27,936 #
Total = 452,160 #
Strainers
D = 70,260 #
L = 23,200 #
I = 29,570 #
Total = 123,030 #

Girder G8
D = 155,125 #
L = 196,800 #
I = 27,936 #
Total = 452,160 #
Strainers
D = 70,260 #
L = 23,200 #
I = 29,570 #
Total = 123,030 #

Girder G9
D = 155,125 #
L = 196,800 #
I = 27,936 #
Total = 452,160 #
Strainers
D = 70,260 #
L = 23,200 #
I = 29,570 #
Total = 123,030 #

General Notes
Specifications — Am. Ry. Eng. & M. of Way Ass. 1910 as modified by the G.T.R.
Assumed loading — Dead Load —
For Girder
G1 — 3700 # per lin ft.
G2 — 4500 #
G3 — 3400 #
G4 — 2700 #
G5 — 2730 #
G6 — 7500 #
G7 — 5450 #
G8 — 6800 #
G9 — 3400 #

Longitudinal Section from Boulevard & Russel St.

Lino Lead Coopers E50

Scale 1/8" = 1'-0"

Nov. 16-11

Chief Eng. G.T.R.

Buffalo, N.Y.

Lockovanna Bridge Co.
Chicago

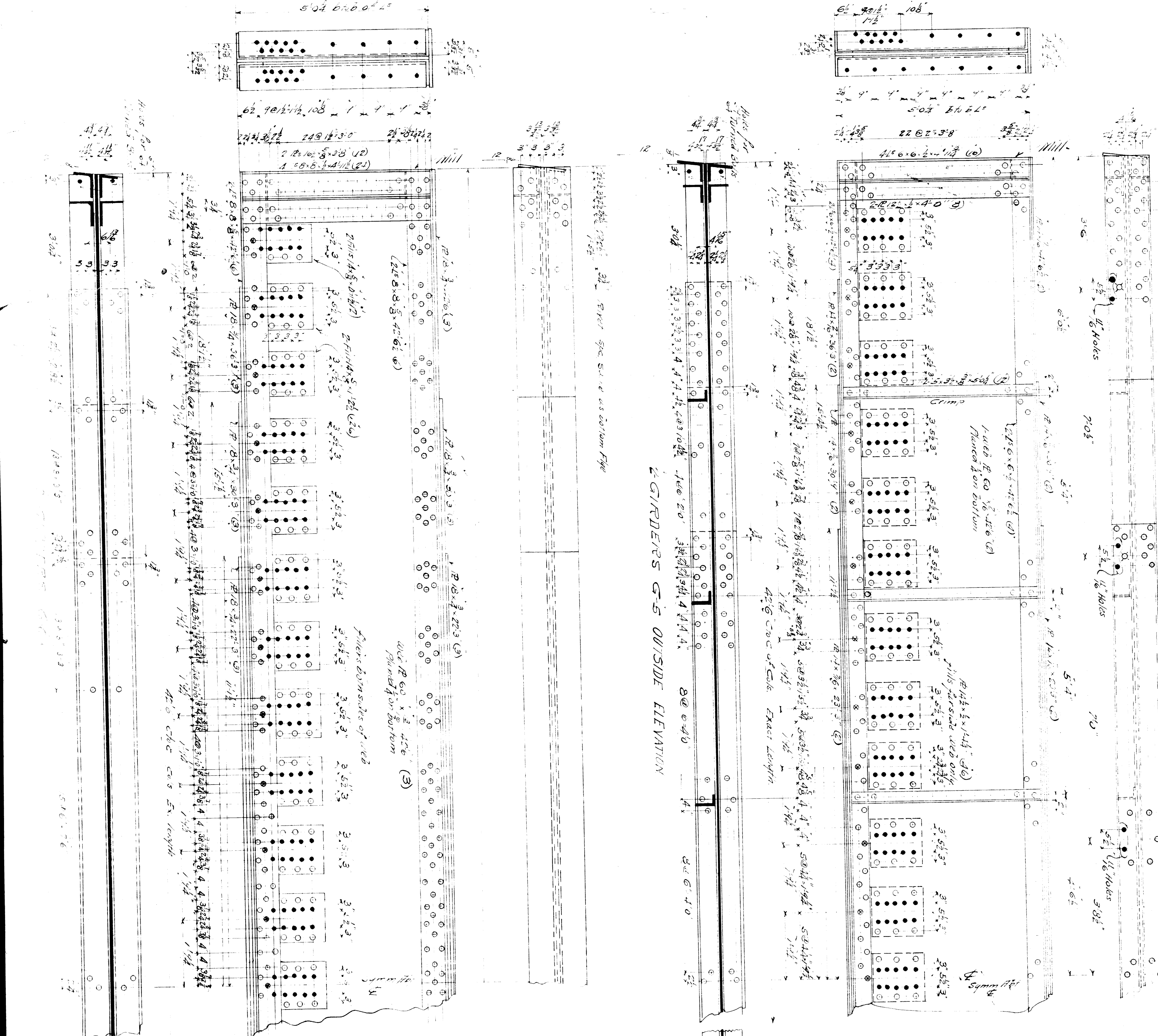
General Plan
Designed by

Over —
Boulevard & Russel St. Detroit Mich.

Bridge No. _____ Mile _____

Western Division 27th District

Grand Trunk Railway



APPROVED

CHIEF ENGINEER

GRAND TRUNK RAILWAY
 ERICSSON ENGINEERING & RAILROAD
 DETROIT MICH

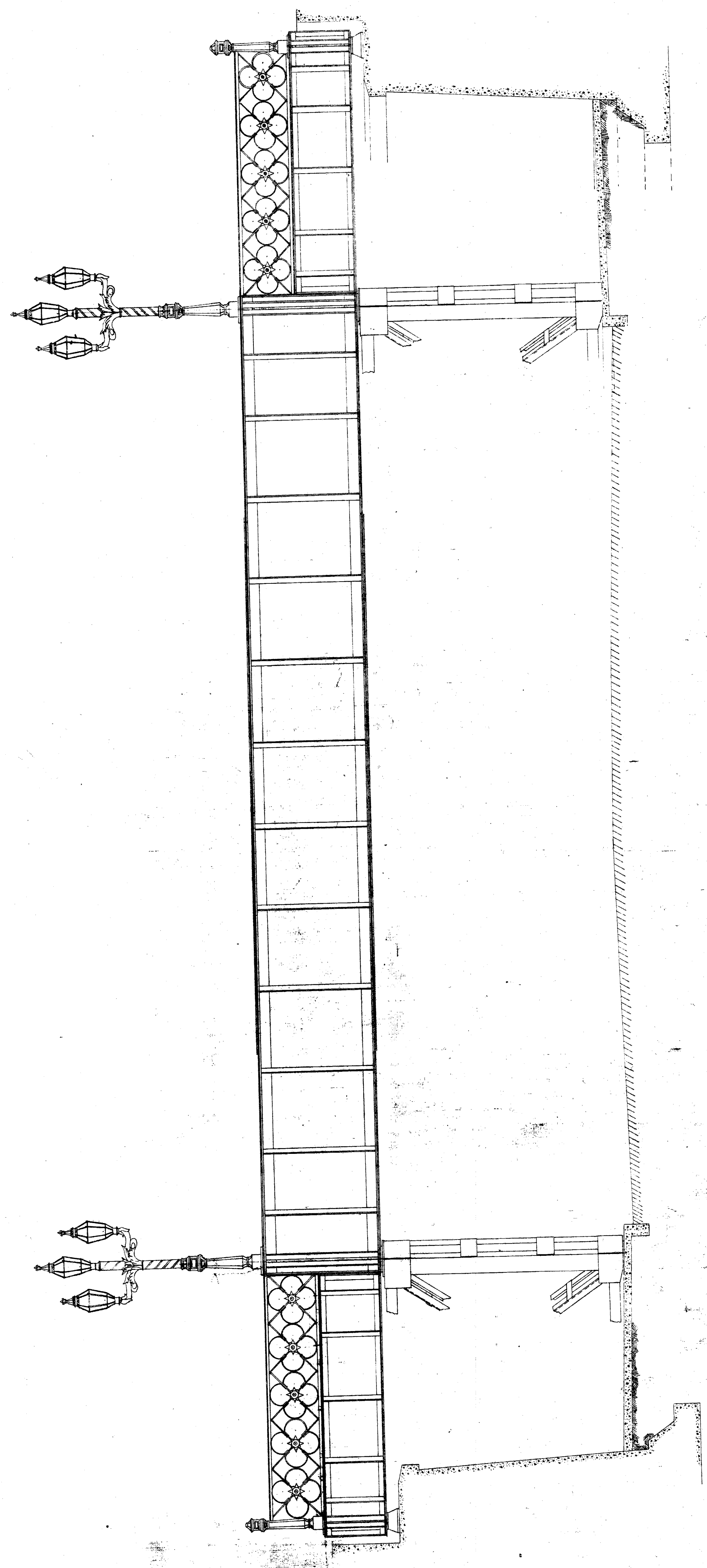
GEN'L NOTES
 Rivets & 7/16 Hex Nuts
 Furnished by the Railway
 All Parts in contact with
 the steel shall be galvanized
 or painted with a suitable
 preservative.
 All holes in steel members
 shall be countersunk.

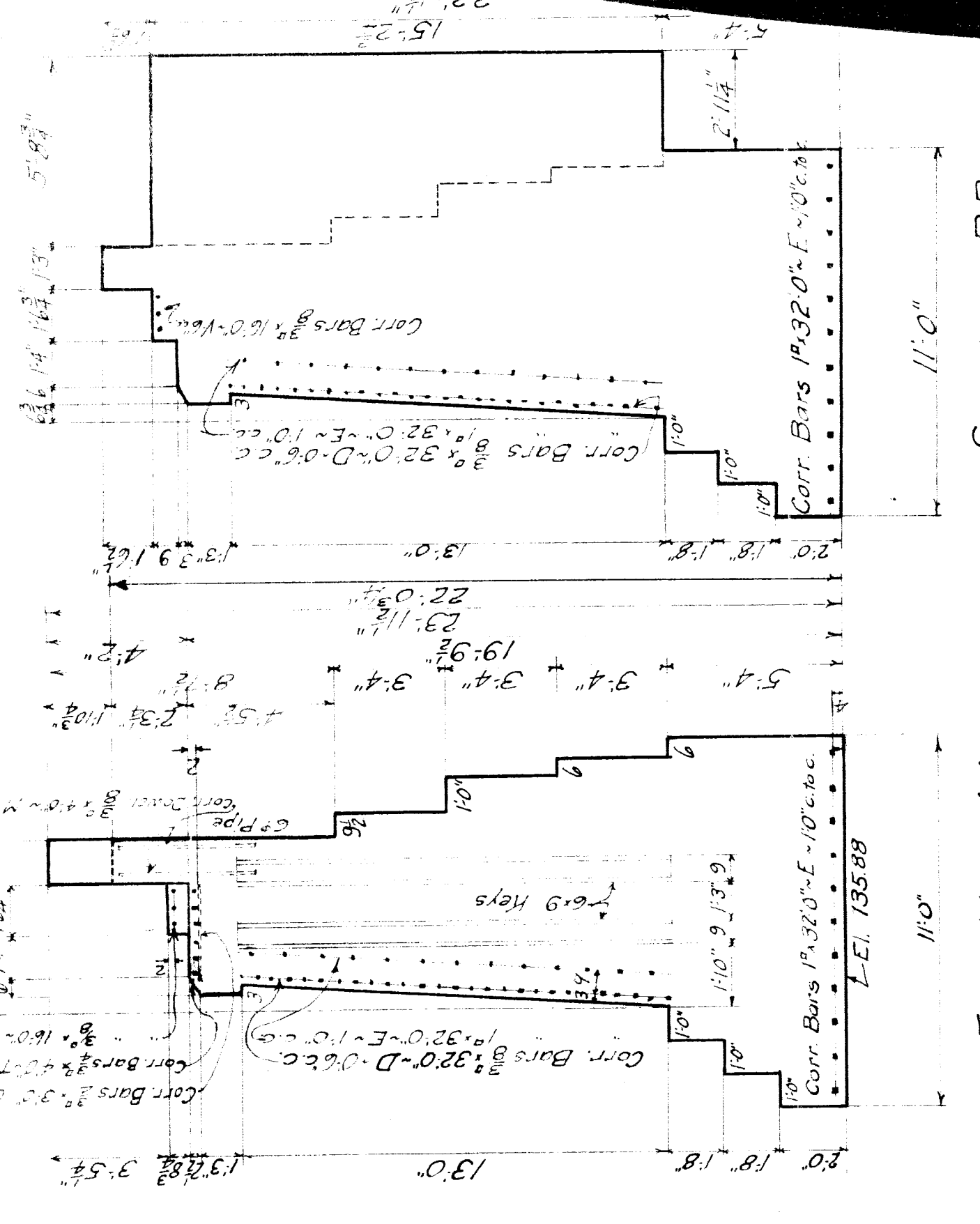
GIRDERS G-6 AS SHOWN
 GIRDER G-6 opp hand
 Outside Elevation

703

33

M. C. R. R. - Div. - Bay City
Bridge & Gr. Boulevard
General Drawing





SECTION BB

END VIEW AA

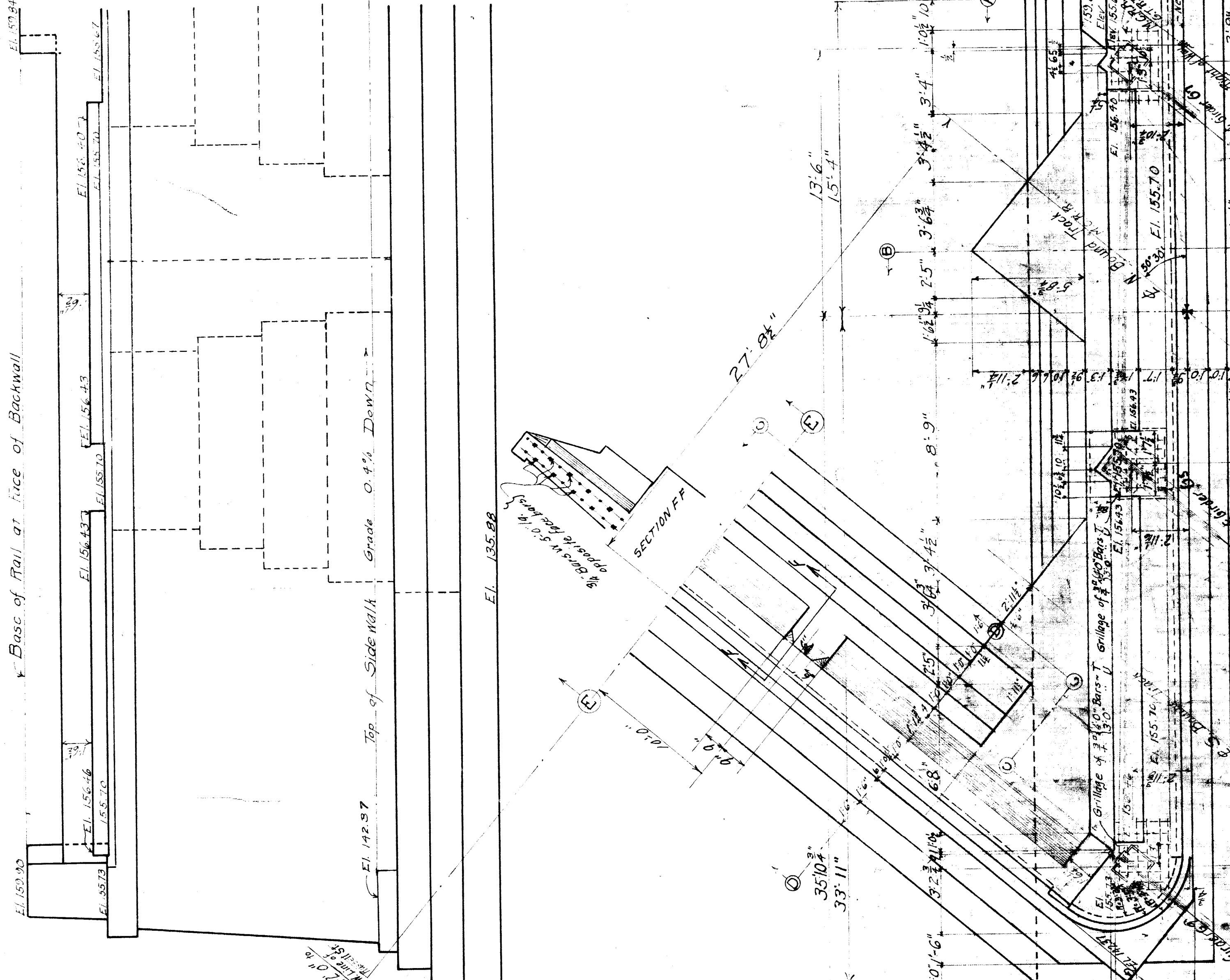
NOTES

MAKE CONCRETE 1-PART CEMENT, 2-PARTS SAND FOR TOP 6" OF BRIDGE SLAB.
 3 PARTS BROKEN STONE FOR NEXT 16" DOWN
 FOR PIERS, RET. WALL AND ROAD

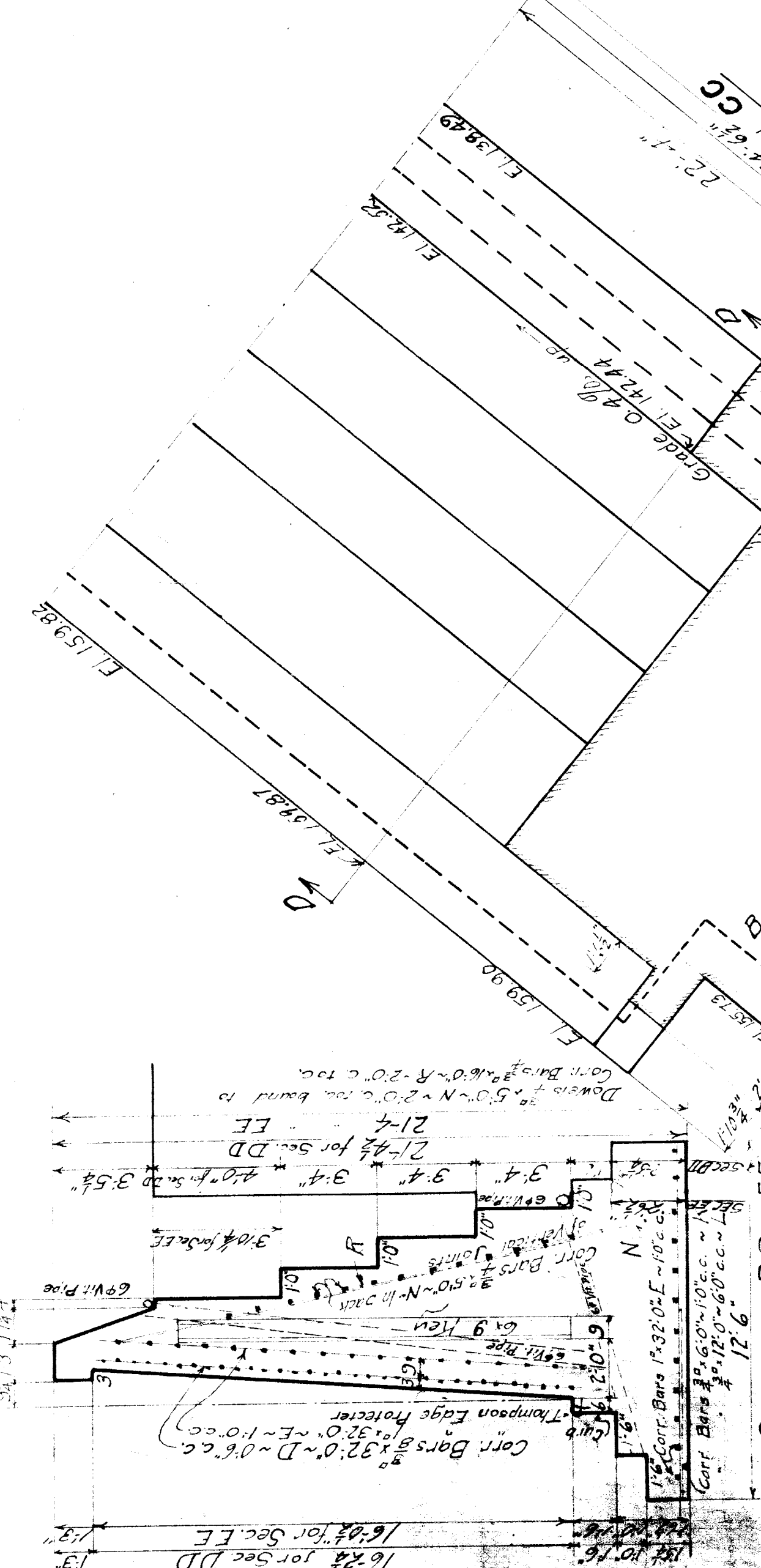
CONTENTS:
 ABUTMENT 260 CU. YDS.
 RETAINING WALL 1.14
 PIERS 2-CTR PIERS @ 14' 28" - 4-SIDE PIER @ 75-30 CU. YDS.

WRAP INTERSECTIONS SECURELY WITH #14 WIRE.
 LAP LONG BARS 2'-6" AT SPLICES, WRAPPING SECURELY WITH 24 TURNS OF #14 WIRE.
 KEYS 6'-9" AND EXTRA BARS 4" x 5'-0" IN BACK OF VERTICAL JOINTS.

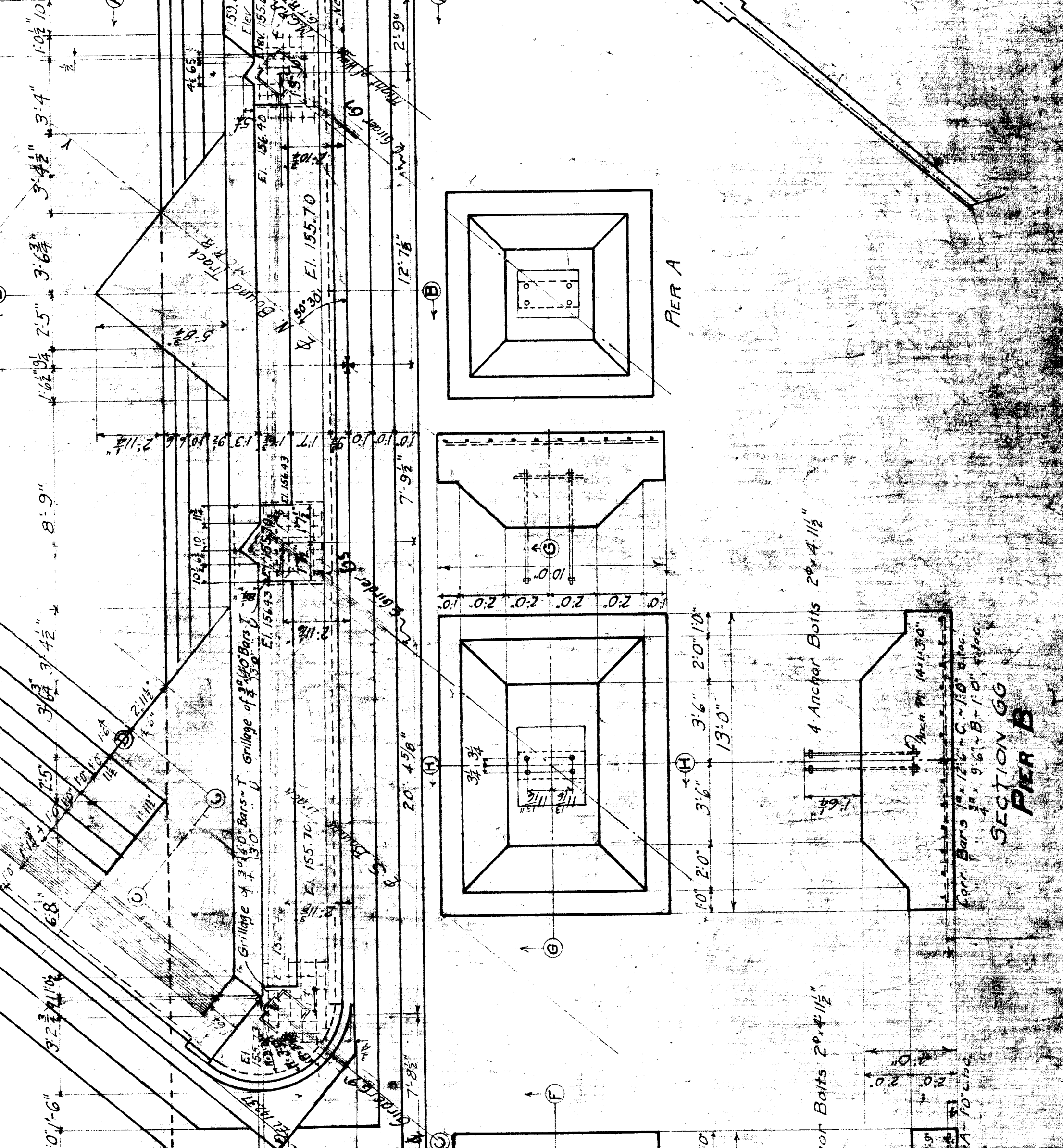
RUN EACH SECTION CONTINUOUS FROM TOP OF FOOTING TO UNDER COPING W/ TRIBUT. JOINTS.
 PAINT BACKS OF WALLS WITH 1-COAT SARGO PRIMER AND 1-COAT SARGO #1
 RUB FACE OF ABUTMENT AND RETAINING WALL AS SOON AS JOINTS ARE REMOVED.
 SPACE VERTICAL JOINTS IN MULTIPLES OF 160", FINISHING ON FACE WITH
 A 3/4" x 1/2" TRIANGULAR MOLDING. RUN REINFORCING IN FACE
 CONTINUOUS ACROSS THESE JOINTS.
 BUILD COPING OF RETAINING WALLS IN 8'-0" SECTIONS.
 FINISHING AT THE JOINTS WITH TRIANGULAR MOLDING.
 MARK OFF FACE OF COPING ON ABUTMENT
 INTO CORRESPONDING 8'-0" PANELS.
 THE MC EAST PIERS ON BOTH SIDES OF
 THE ROADWAY ARE TO BE BUILT BY THE
 GRAND TRUNK R.R. CONTINUOUS WITH THEIR
 WEST PIERS. M.C.R.R. TO FURNISH
 DIMENSIONS AND ELEVATIONS IN FIELD.
 Anchor Bolts to be set by M.C.R.R.
 Grillage of #3 @ 40 Bars - U



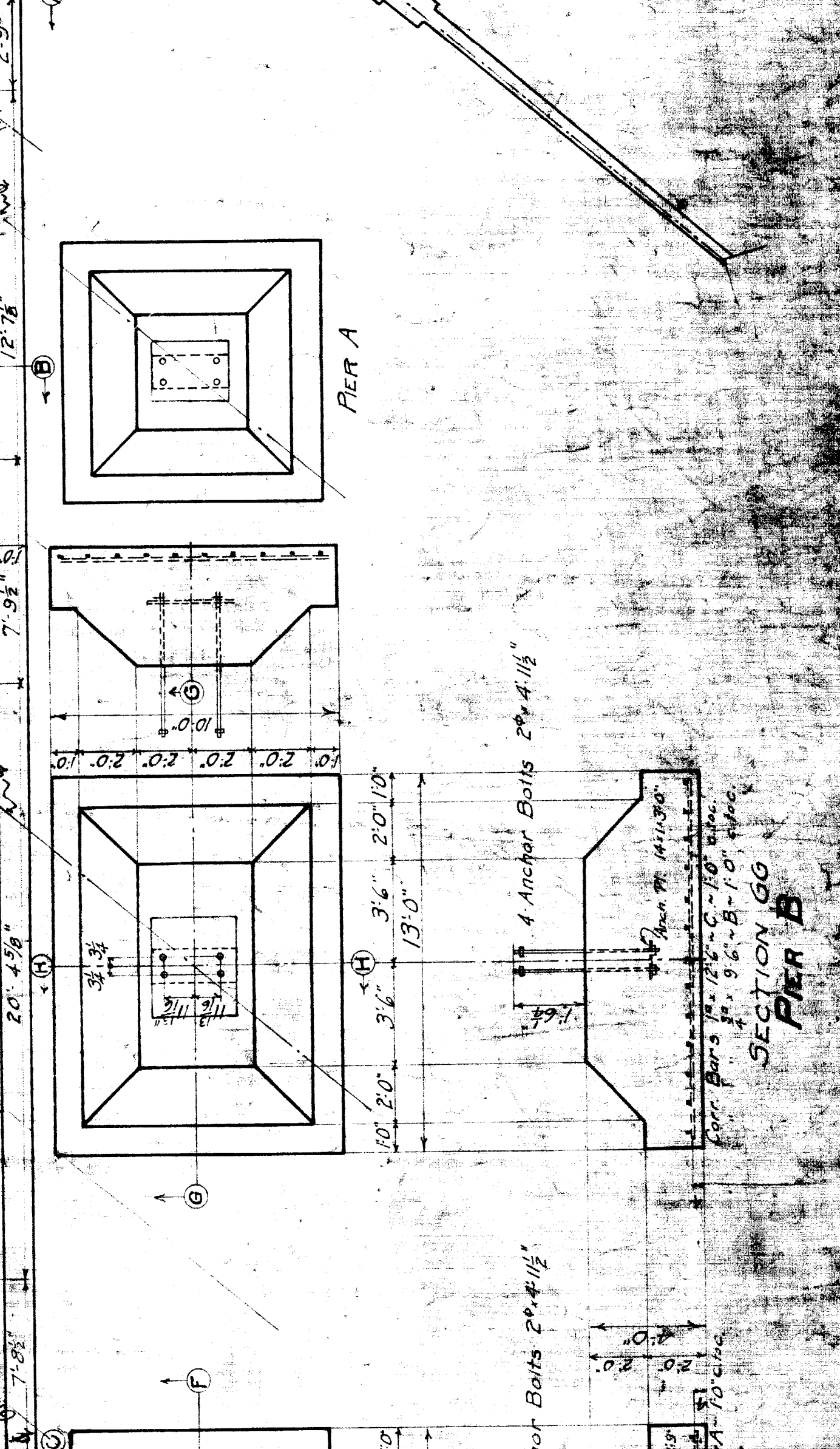
Base of Rail at face of Backwall



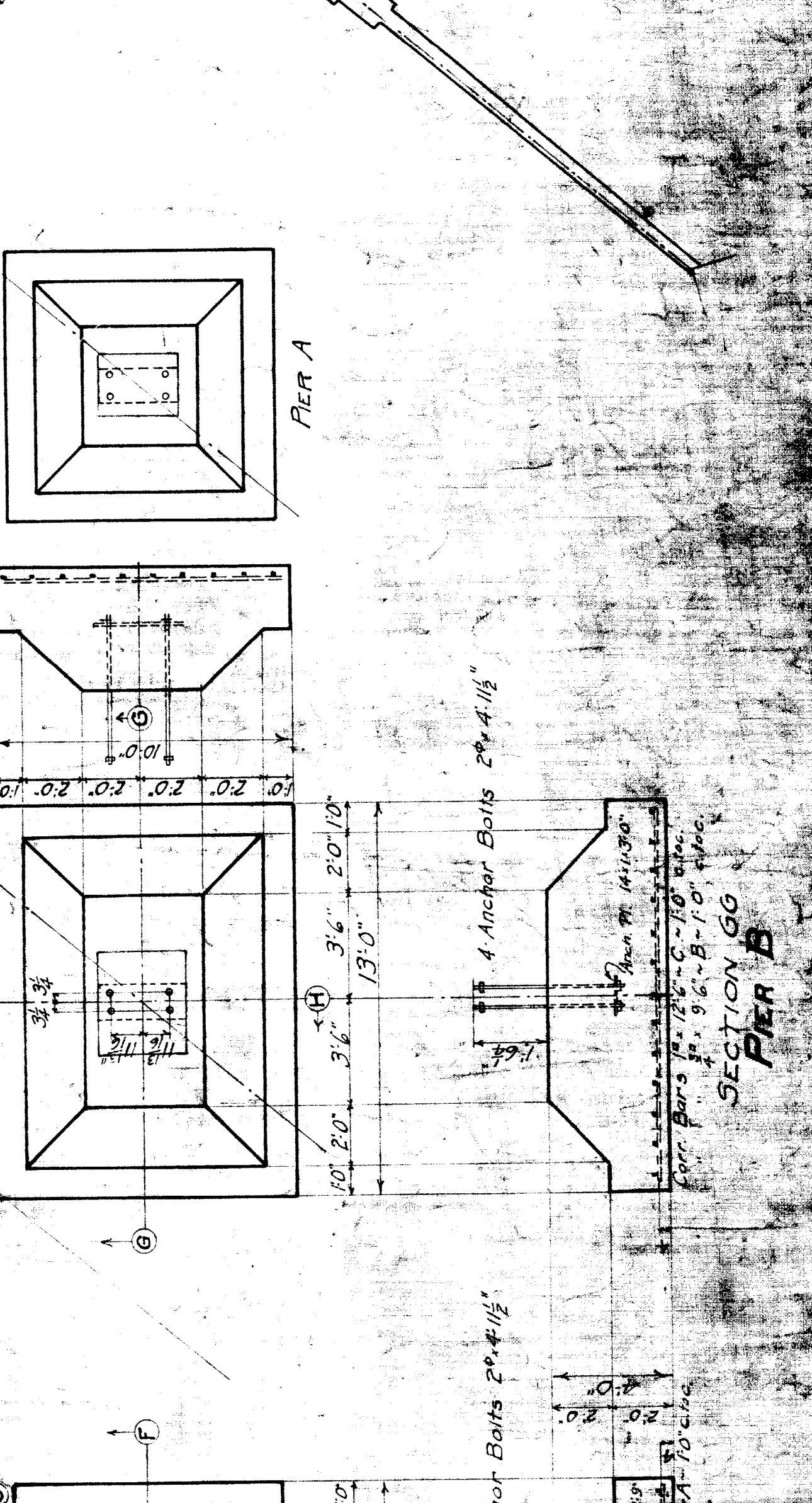
SECTION AND REAR ELEVATION CC



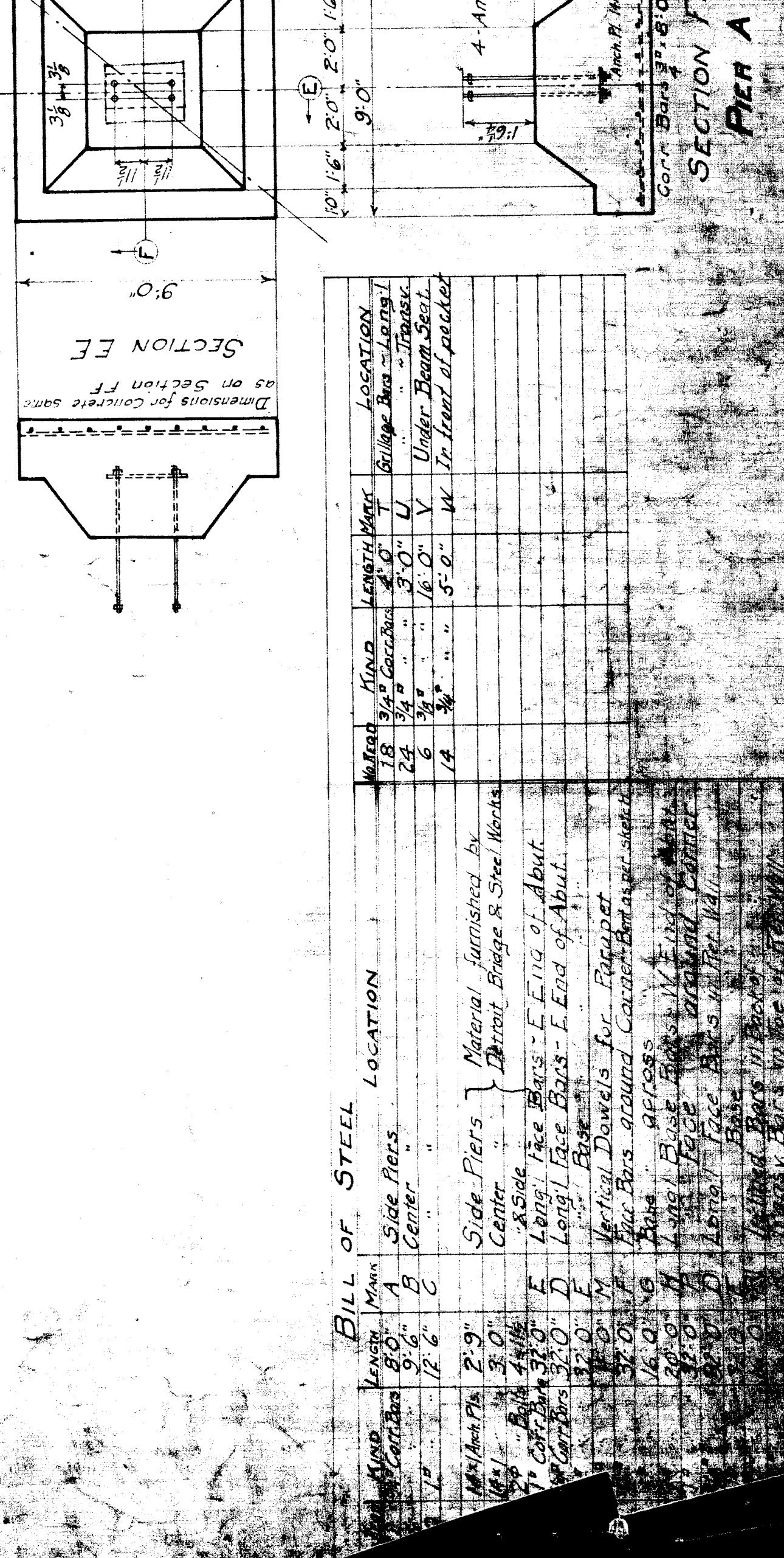
SECTION FF



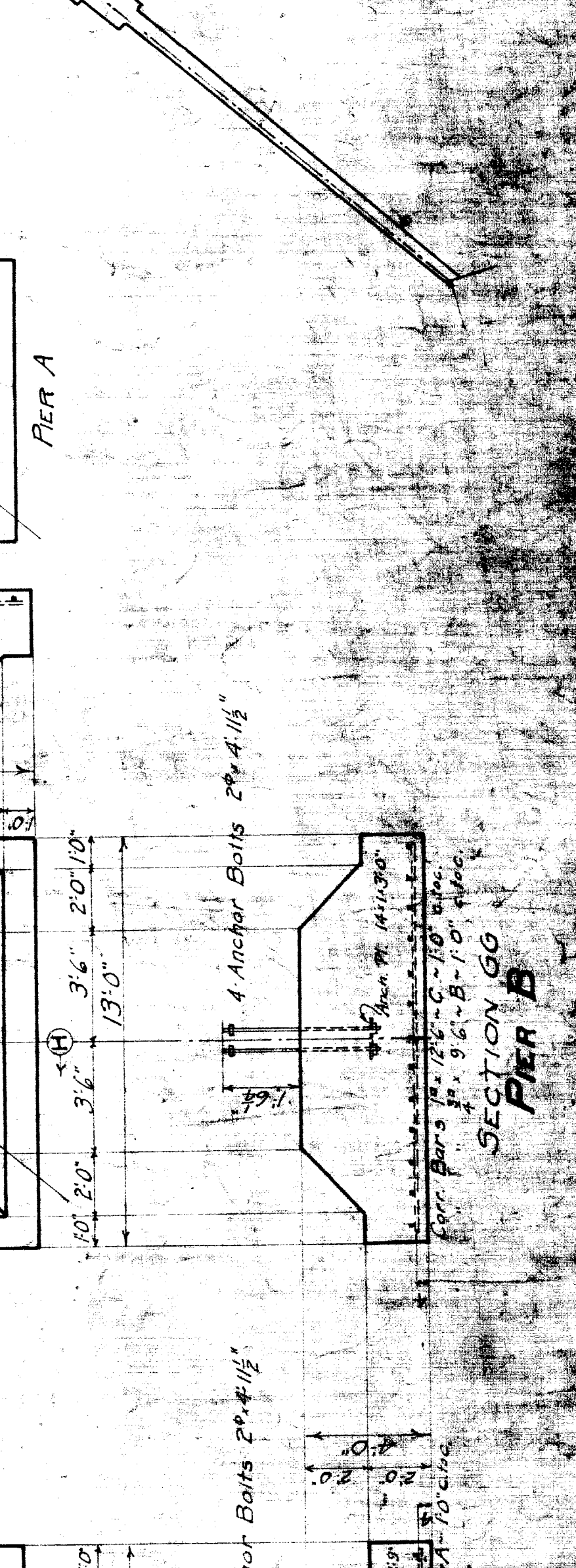
SECTION EE



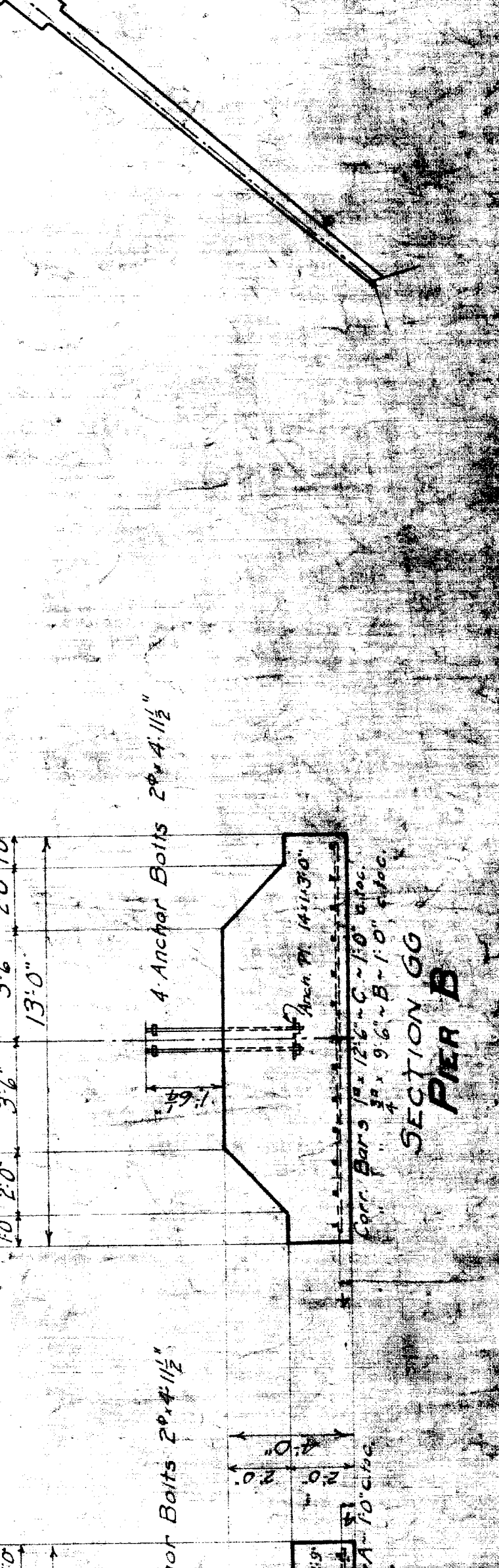
SECTION FF



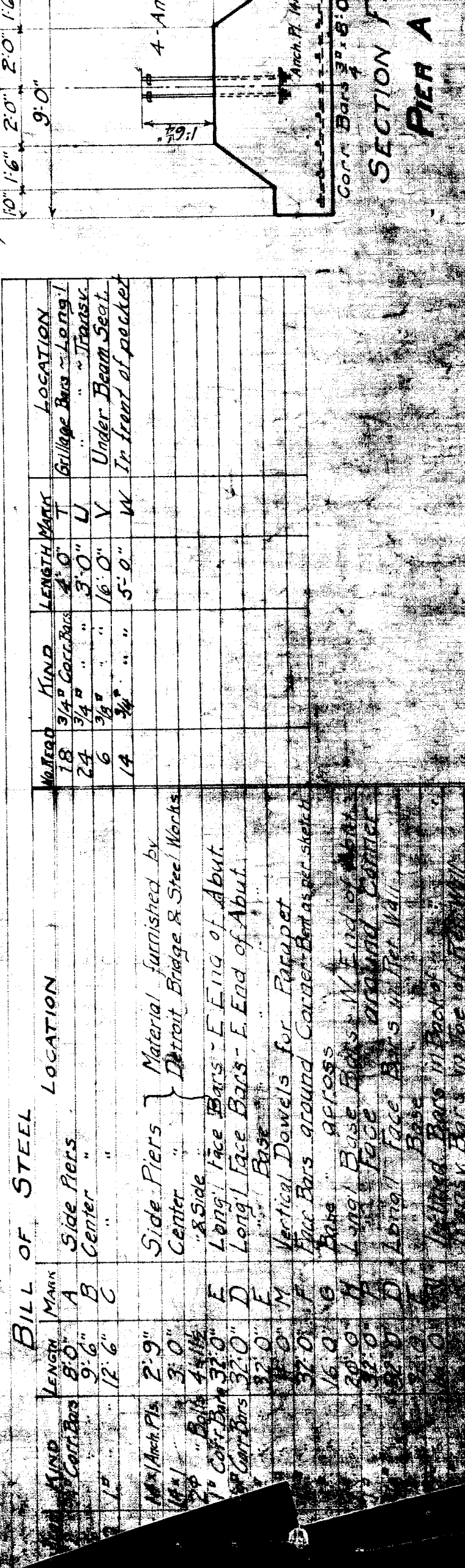
SECTION GG



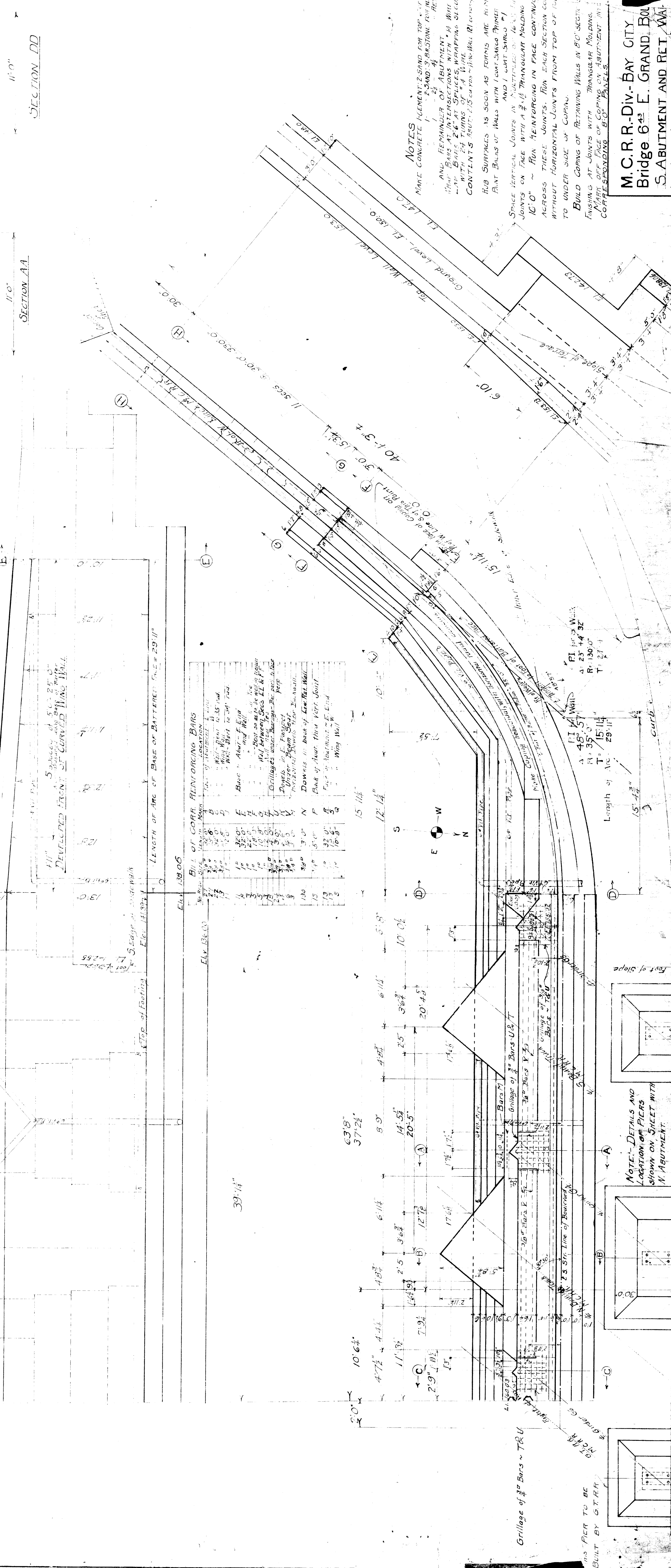
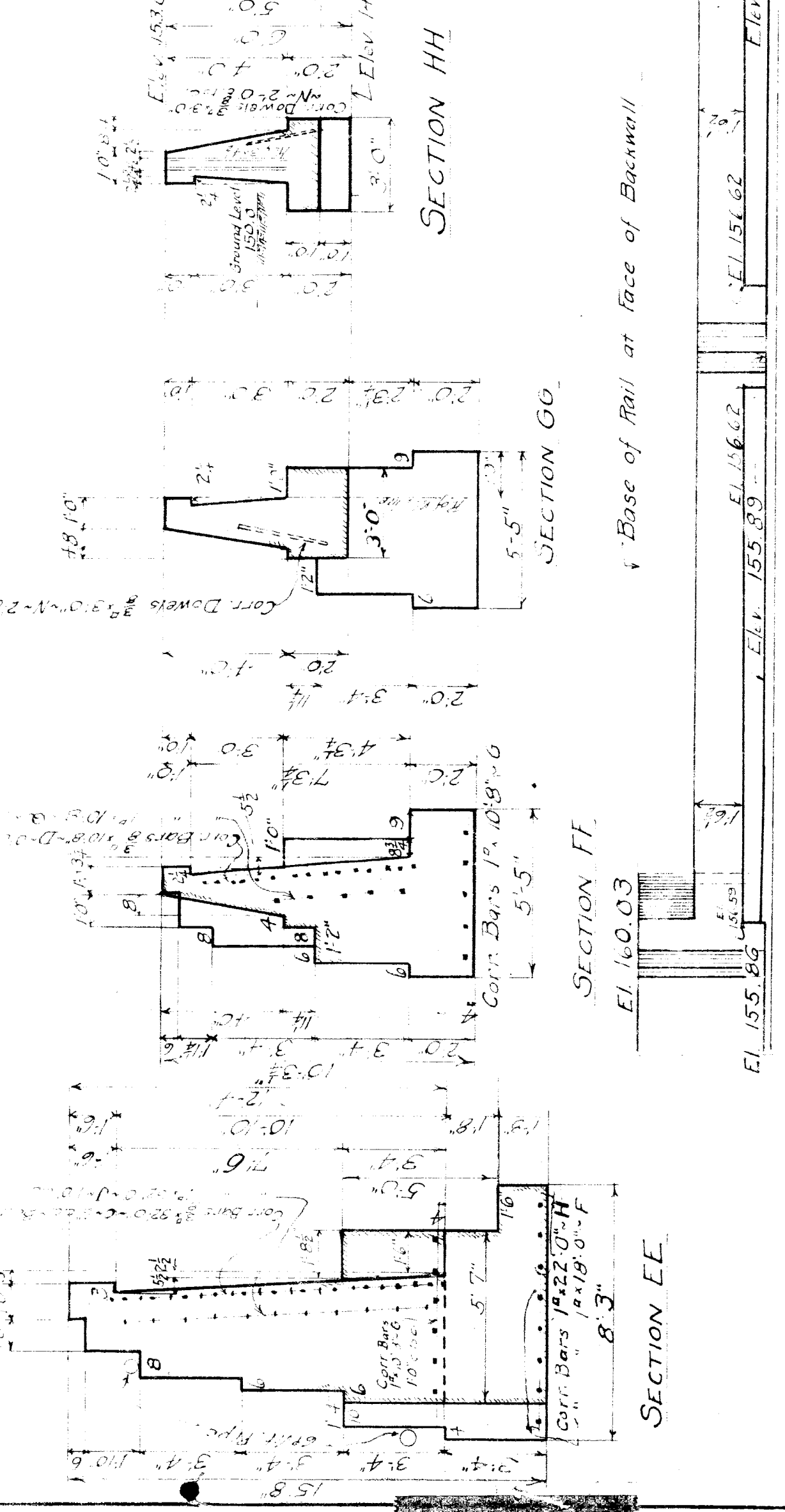
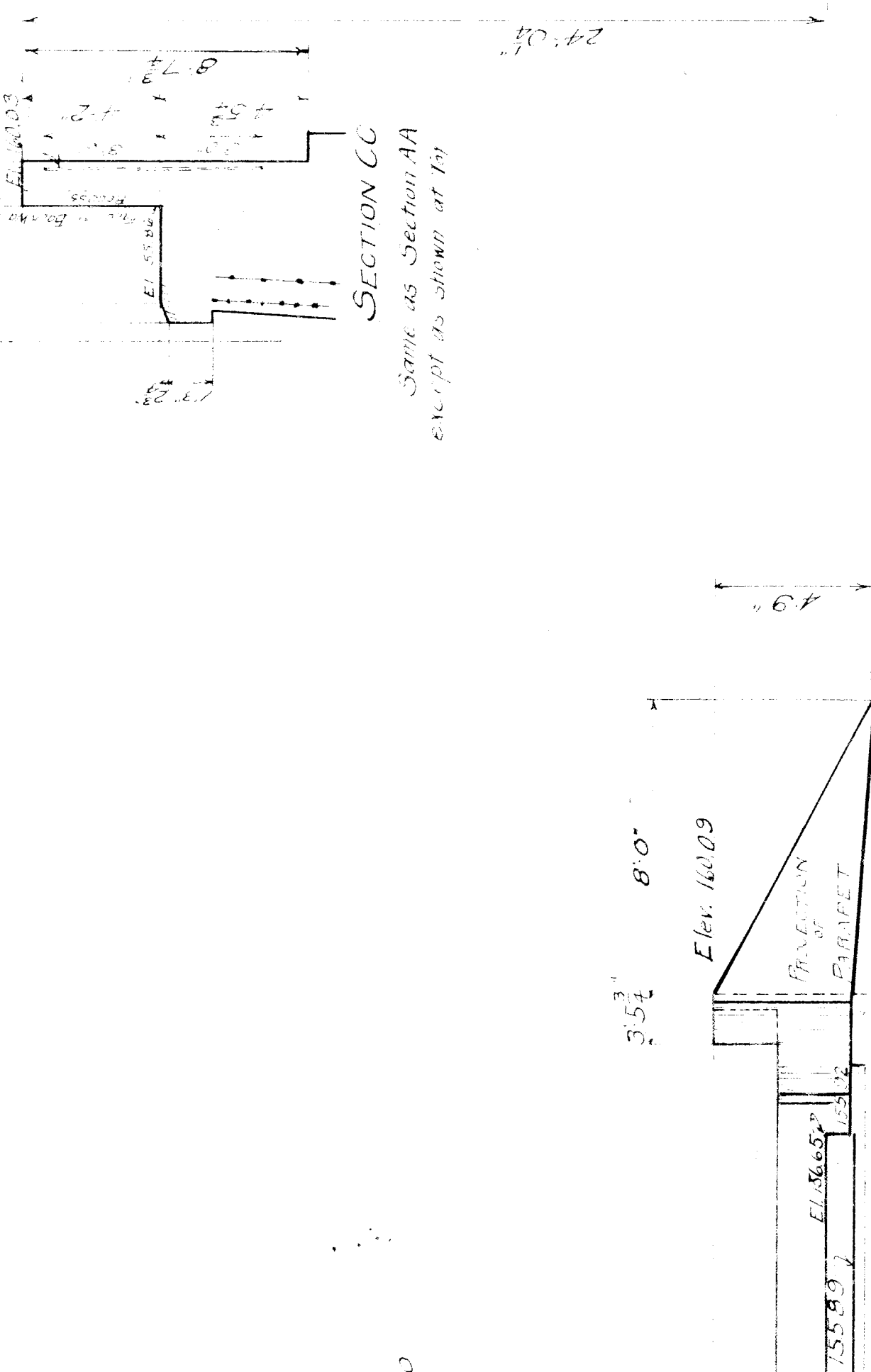
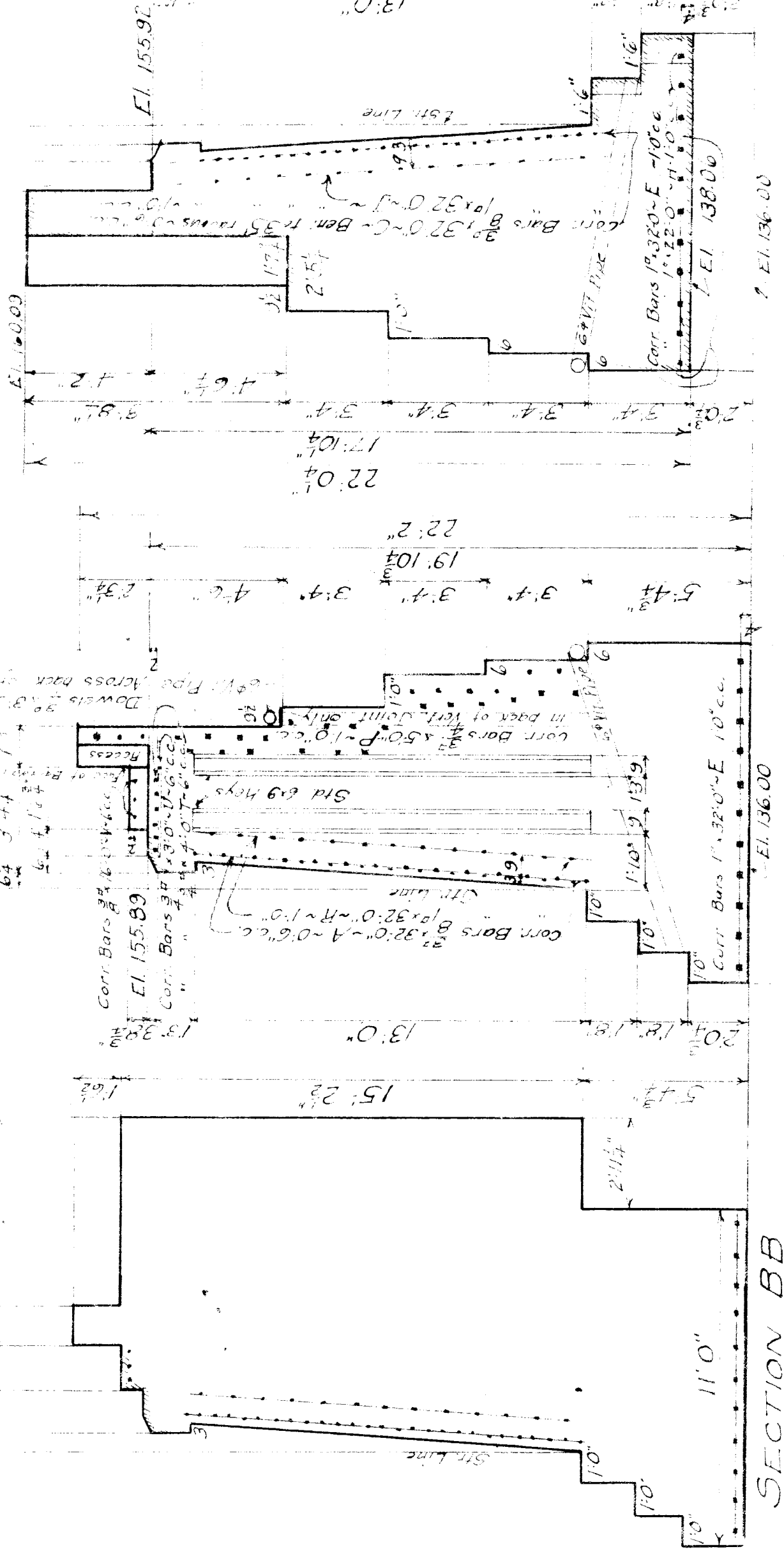
PIER A



PIER B



Size	Quantity	Location
#8	18	Top of Deck
#10	24	Top of Deck
#11	6	Top of Deck
#12	14	Top of Deck
#16	20	Top of Abutment
#18	30	Top of Abutment



BILL OF CORR. REINFORCING BARS

No.	Bar	Location	Length of Reinforcing Bar
1	3/8"	Wing Wall	12.0'
2	3/8"	Wing Wall	12.0'
3	3/8"	Wing Wall	12.0'
4	3/8"	Wing Wall	12.0'
5	3/8"	Wing Wall	12.0'
6	3/8"	Wing Wall	12.0'
7	3/8"	Wing Wall	12.0'
8	3/8"	Wing Wall	12.0'
9	3/8"	Wing Wall	12.0'
10	3/8"	Wing Wall	12.0'
11	3/8"	Wing Wall	12.0'
12	3/8"	Wing Wall	12.0'
13	3/8"	Wing Wall	12.0'
14	3/8"	Wing Wall	12.0'
15	3/8"	Wing Wall	12.0'
16	3/8"	Wing Wall	12.0'
17	3/8"	Wing Wall	12.0'
18	3/8"	Wing Wall	12.0'
19	3/8"	Wing Wall	12.0'
20	3/8"	Wing Wall	12.0'
21	3/8"	Wing Wall	12.0'
22	3/8"	Wing Wall	12.0'
23	3/8"	Wing Wall	12.0'
24	3/8"	Wing Wall	12.0'
25	3/8"	Wing Wall	12.0'
26	3/8"	Wing Wall	12.0'
27	3/8"	Wing Wall	12.0'
28	3/8"	Wing Wall	12.0'
29	3/8"	Wing Wall	12.0'
30	3/8"	Wing Wall	12.0'
31	3/8"	Wing Wall	12.0'
32	3/8"	Wing Wall	12.0'
33	3/8"	Wing Wall	12.0'
34	3/8"	Wing Wall	12.0'
35	3/8"	Wing Wall	12.0'
36	3/8"	Wing Wall	12.0'
37	3/8"	Wing Wall	12.0'
38	3/8"	Wing Wall	12.0'
39	3/8"	Wing Wall	12.0'
40	3/8"	Wing Wall	12.0'
41	3/8"	Wing Wall	12.0'
42	3/8"	Wing Wall	12.0'
43	3/8"	Wing Wall	12.0'
44	3/8"	Wing Wall	12.0'
45	3/8"	Wing Wall	12.0'
46	3/8"	Wing Wall	12.0'
47	3/8"	Wing Wall	12.0'
48	3/8"	Wing Wall	12.0'
49	3/8"	Wing Wall	12.0'
50	3/8"	Wing Wall	12.0'
51	3/8"	Wing Wall	12.0'
52	3/8"	Wing Wall	12.0'
53	3/8"	Wing Wall	12.0'
54	3/8"	Wing Wall	12.0'
55	3/8"	Wing Wall	12.0'
56	3/8"	Wing Wall	12.0'
57	3/8"	Wing Wall	12.0'
58	3/8"	Wing Wall	12.0'
59	3/8"	Wing Wall	12.0'
60	3/8"	Wing Wall	12.0'
61	3/8"	Wing Wall	12.0'
62	3/8"	Wing Wall	12.0'
63	3/8"	Wing Wall	12.0'
64	3/8"	Wing Wall	12.0'
65	3/8"	Wing Wall	12.0'
66	3/8"	Wing Wall	12.0'
67	3/8"	Wing Wall	12.0'
68	3/8"	Wing Wall	12.0'
69	3/8"	Wing Wall	12.0'
70	3/8"	Wing Wall	12.0'
71	3/8"	Wing Wall	12.0'
72	3/8"	Wing Wall	12.0'
73	3/8"	Wing Wall	12.0'
74	3/8"	Wing Wall	12.0'
75	3/8"	Wing Wall	12.0'
76	3/8"	Wing Wall	12.0'
77	3/8"	Wing Wall	12.0'
78	3/8"	Wing Wall	12.0'
79	3/8"	Wing Wall	12.0'
80	3/8"	Wing Wall	12.0'
81	3/8"	Wing Wall	12.0'
82	3/8"	Wing Wall	12.0'
83	3/8"	Wing Wall	12.0'
84	3/8"	Wing Wall	12.0'
85	3/8"	Wing Wall	12.0'
86	3/8"	Wing Wall	12.0'
87	3/8"	Wing Wall	12.0'
88	3/8"	Wing Wall	12.0'
89	3/8"	Wing Wall	12.0'
90	3/8"	Wing Wall	12.0'
91	3/8"	Wing Wall	12.0'
92	3/8"	Wing Wall	12.0'
93	3/8"	Wing Wall	12.0'
94	3/8"	Wing Wall	12.0'
95	3/8"	Wing Wall	12.0'
96	3/8"	Wing Wall	12.0'
97	3/8"	Wing Wall	12.0'
98	3/8"	Wing Wall	12.0'
99	3/8"	Wing Wall	12.0'
100	3/8"	Wing Wall	12.0'

NOTES

NAME CONCRETE ELEMENT: 2 SAND FOR TOP 1.75 FT. AND REMAINDER OF ABUTMENT WITH #4 WITH CURB BARS AT INTERSECTIONS WITH #4 WITH CURB BARS AT SPICES, WRAPPING SLOPE WITH #4 REINFORCING IN FACE CONTINUA WITH #5 REINFORCING IN FACE WALL REINFORCING.

HUB SURFACES AS SHOWN AS FORMS ARE FINISH.

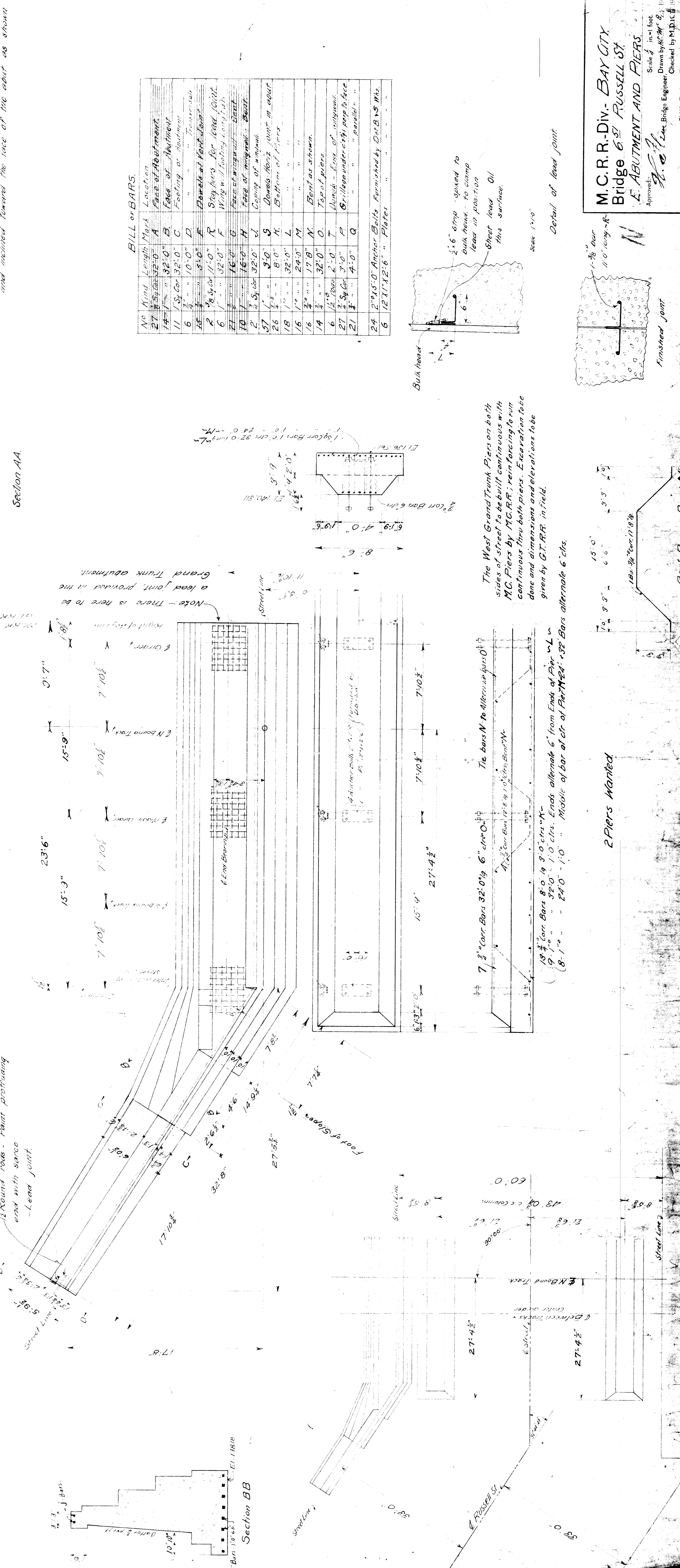
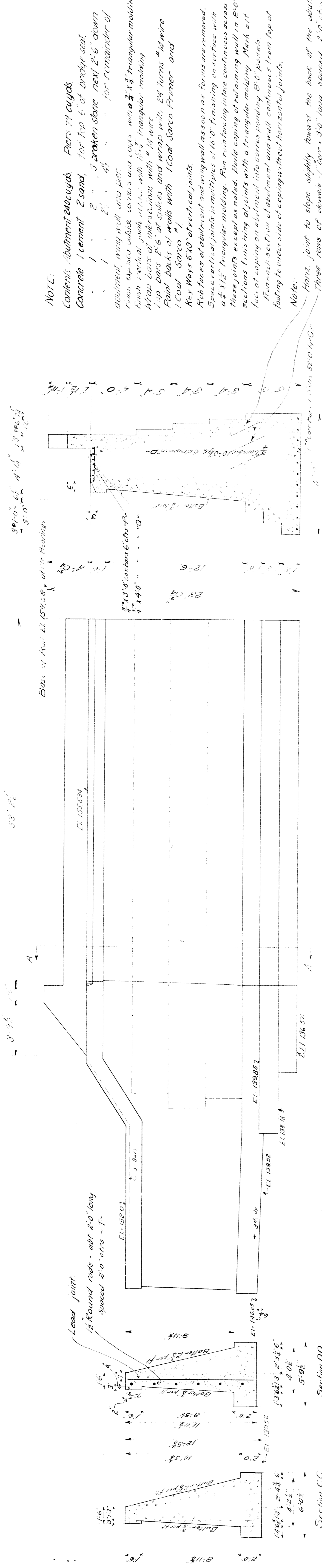
SPACE VERTICAL JOINTS IN MULTIPLE WALLS TO BE FINISHED WITH 1" WIDE TRAPANGULAR MOLDING 2" ACROSS THESE JOINTS. RUN EACH SECTION EACH WITHOUT HORIZONTAL JOINTS FROM TOP OF WALL TO UNDER SIDE OF COPING.

BUILD CORNICE OF RETAINING WALLS IN 8" SECTION FINISHING AT JOINTS WITH TRAPANGULAR MOLDING. MARK OFF FACE OF COPING ON ABUTMENT AND CORRESPONDING 8" PANELS.

M. C. R. R. Div. - BAY CITY
Bridge 6⁴³ E. GRAND BOUL
S. ABUTMENT AND RET. WALL

NOTE: DETAILS AND LOCATION OF PIERS SHOWN ON SHEET WITH W. ABUTMENT.

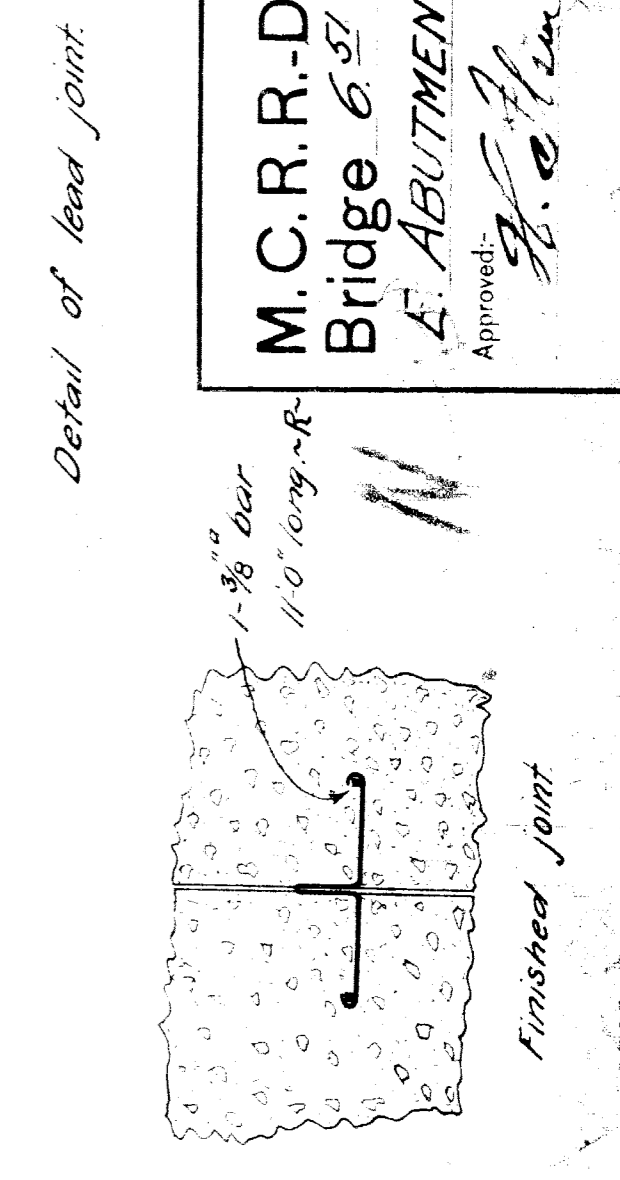
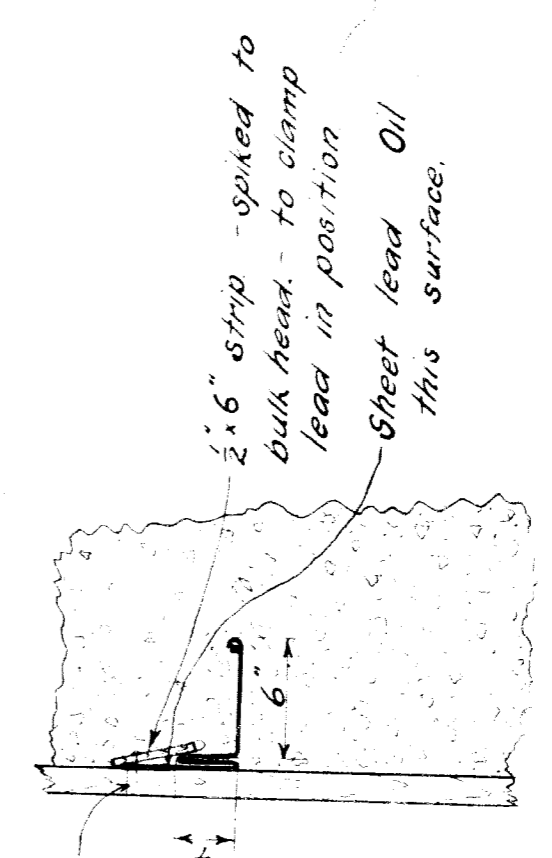
PIER TO BE BUILT BY G.T.R.R.



NOTE:
 Contents Abutment 240cyds Piers 74 cu yds.
 Concrete 1 cement 2 sand, for top 6" of bridge seat.
 1" 2" 3" broken stone next 2'-6" down
 abutment, wing wall and pier.
 Finish exposed outside corners and edges with a 1/2" triangular masonry.
 Finish vertical joints with 1/2" triangular masonry.
 Wrap bars 2'-6" at joints with #14 wire.
 Paint backs of walls with 1 coat Sarco Primer and
 1 coat Sarco #1.
 Key Ways 6"x3" at vertical joints.
 Rub faces of abutment and wing wall as soon as forms are removed.
 Space vertical joints in multiples of 16'-0". Finishing on set face with
 a 1/2" triangular masonry. Run reinforcing in these continuous across
 these joints except as noted. Build coping of retaining wall in 8'-0"
 sections finishing at joints with a triangular masonry. Mark out
 face of coping at abutment into cores pending 8' panels.
 Run each section of abutment and wall continuous from top of
 footing to near side of coping without horizontal joints.
Note:
 Horiz. joint to slope slightly toward the back of the abut.
 Three rows of concrete 1' diam. 3'-0" long spaced 2'-0" apart
 and inclined toward the face of the abut as shown

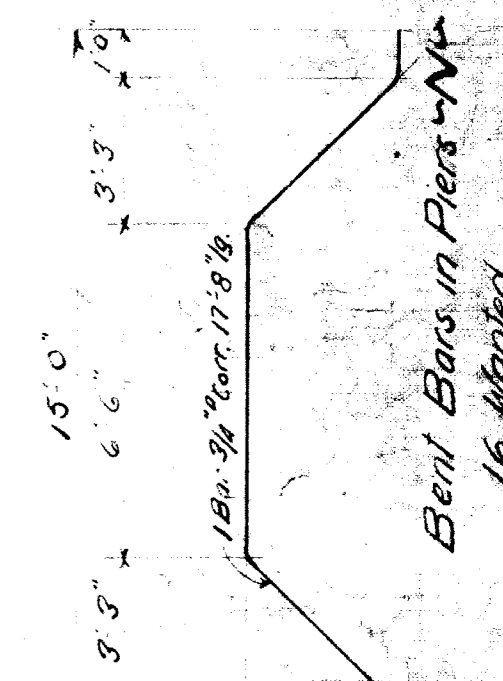
BILL OF BARS

No	Kind	Length	Mark	Location
27	5/8"	32'-0"	A	Face of Abutment
14	1/2"	32'-0"	B	Face of Abutment
11	3/8"	32'-0"	C	Face of Abutment
6	3/8"	10'-0"	D	" " " " " " " "
15	3/8"	8'-0"	E	Downside of Vent-Joint
12	3/8"	11'-0"	F	Stay bars for lead joint
6	1/2"	32'-0"	G	Wing wall footing longitudinal
7	1/2"	32'-0"	H	Face of wing wall - Bent
10	1/2"	16'-0"	I	Face of wing wall - Bent
2	3/8"	32'-0"	J	Coping of wing wall
27	3/8"	32'-0"	K	Coping of wing wall
26	3/8"	8'-0"	L	Dennis Horiz joint in abut.
18	1/2"	32'-0"	M	" " " " " " " "
16	3/8"	24'-0"	N	" " " " " " " "
14	3/8"	32'-0"	O	Bent as shown
6	1/2"	32'-0"	P	Top of piers
27	3/8"	32'-0"	Q	Deck - End of wing wall
21	3/8"	4'-0"	R	Brilligge under deck - top to face
				" " " " " " " "
				" " " " " " " "
24	2"x10"	Anchor Bolts		Furnished by Det. B. & S. Wks.
6	12"x12"	Plates		" " " " " " " "

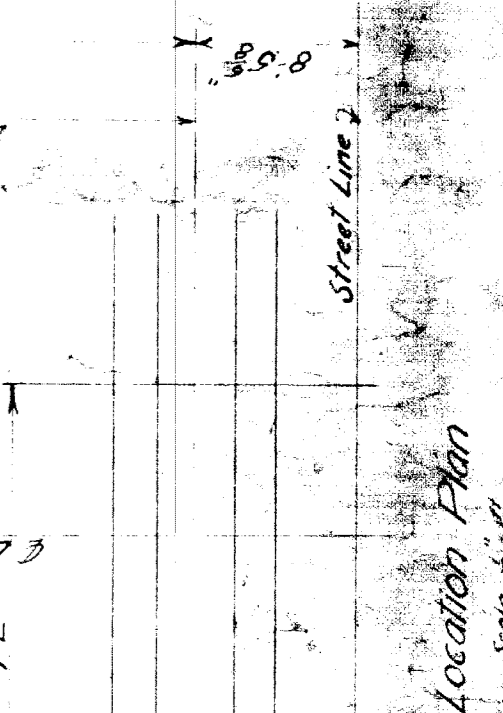


M. C. R. R. - Div. - BAY CITY
 Bridge 637 RUSSELL ST.
 APPROVED: *[Signature]*
 Scale 1/4" = 1'-0"
 Drawn by: *[Signature]*
 Checked by: M. D. K.
 Chief Engineer, Traged by
 Remedy: *[Signature]*

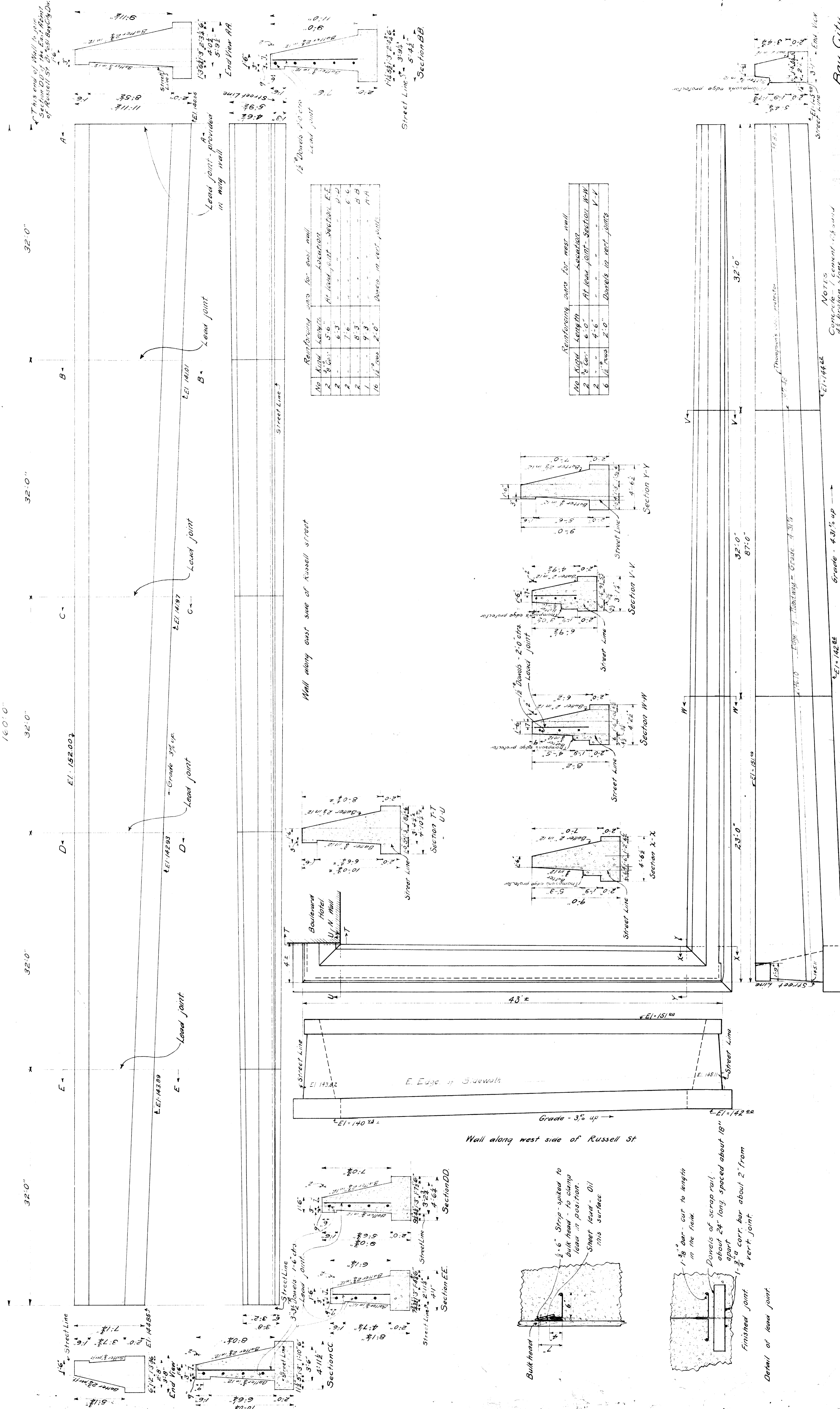
The West Grand Trunk Piers on both sides of street to be built continuous with M.C. Piers by M.C.R.R.; reinforcing to run continuous thru both piers. Excavation to be done and dimensions and elevations to be given by G.T.R.R. in field.



2 Piers Wanted
 Bent Bars in Piers 16 Wanted



2 Piers Wanted
 Bent Bars in Piers 16 Wanted



No	Kind	Length	Location
2	3/8 Cor.	5'-6"	At lead joint - Section E-E
2	"	6'-3"	" " " " - Section U-U
2	"	7'-6"	" " " " - Section V-V
2	"	8'-3"	" " " " - Section W-W
1	1/2" Rod	9'-3"	" " " " - Section X-X
10	1/2" Rod	2'-0"	Dowels in vert. joints

No	Kind	Length	Location
2	3/8 Cor.	6'-0"	At lead joint - Section W-W
2	"	4'-6"	" " " " - Section V-V
6	1/2" Rod	2'-0"	Dowels in vert. joints

Wall along east side of Russell street

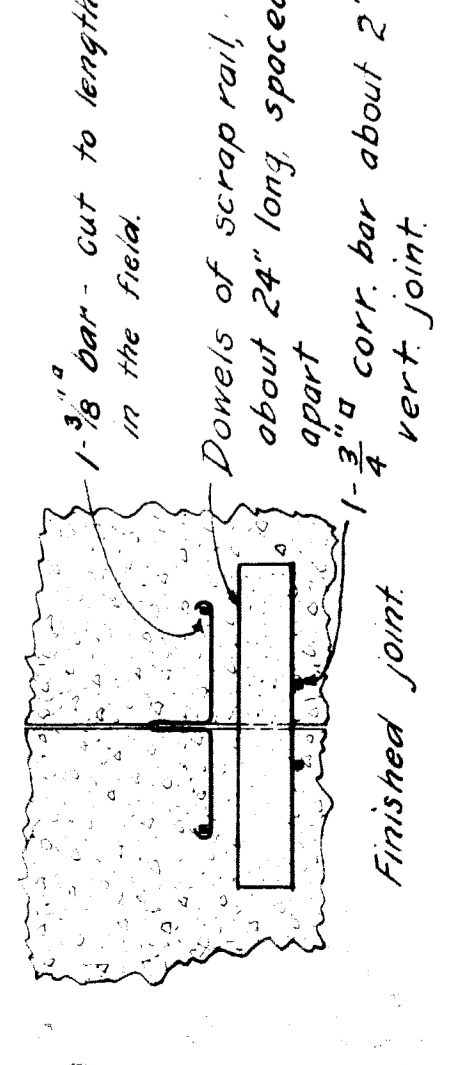
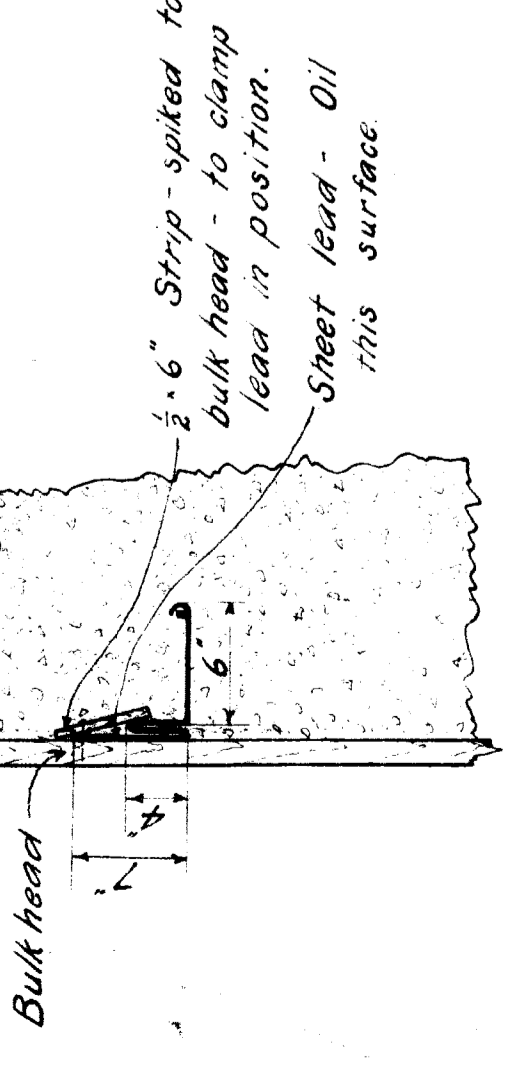
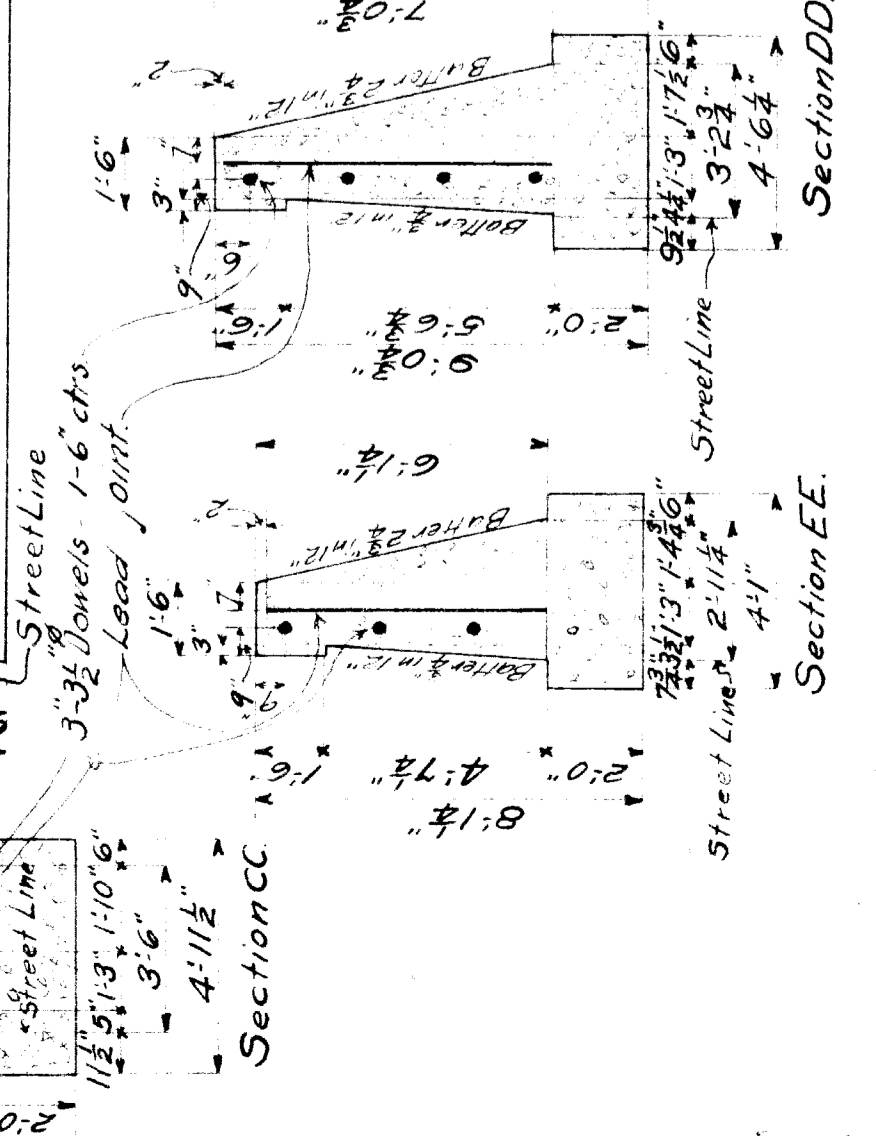
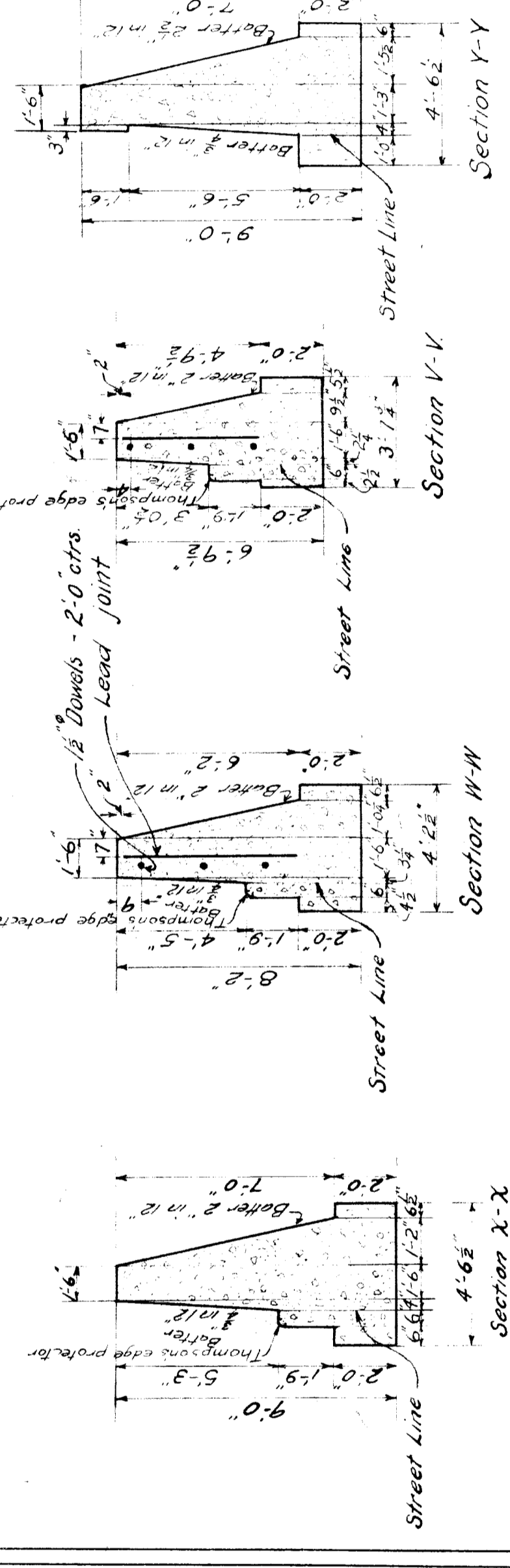
Wall along west side of Russell St

NOTES

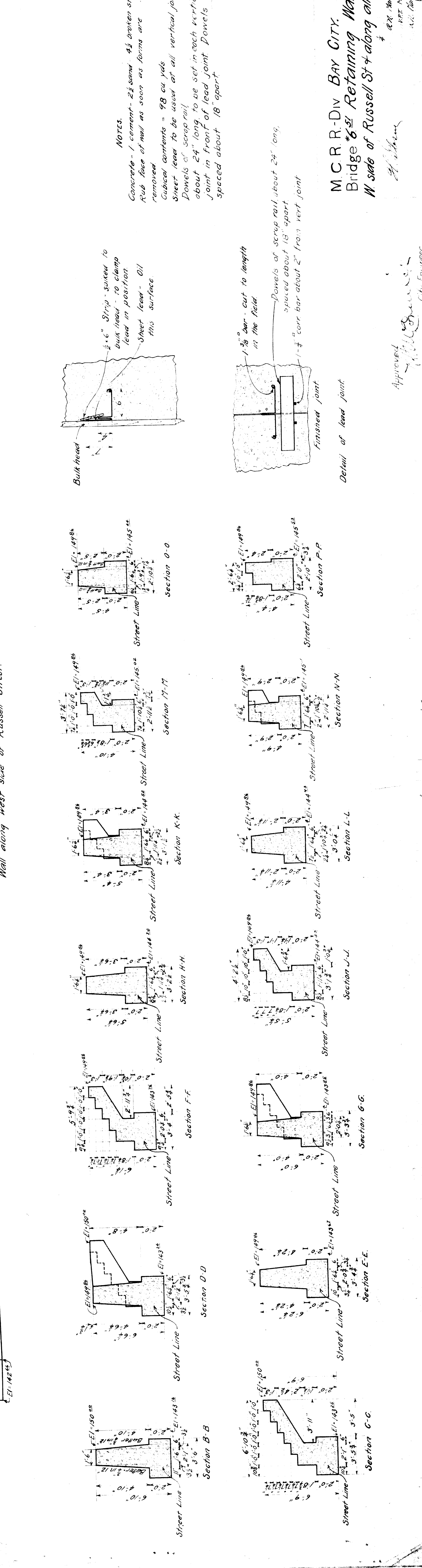
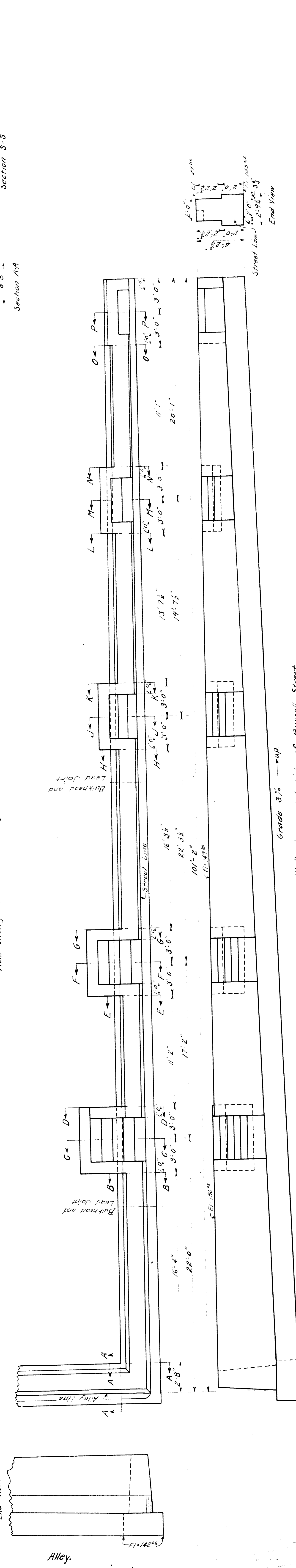
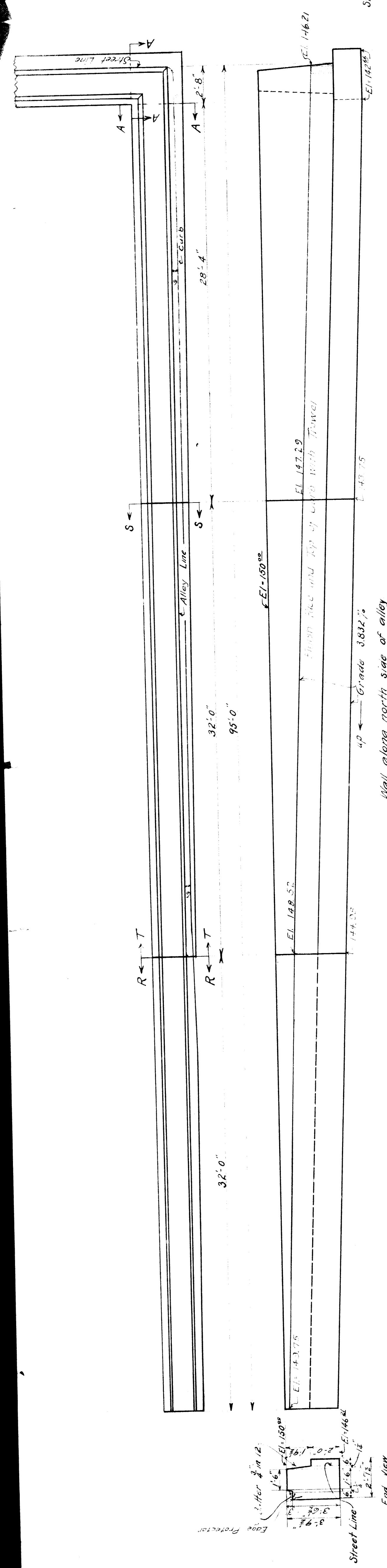
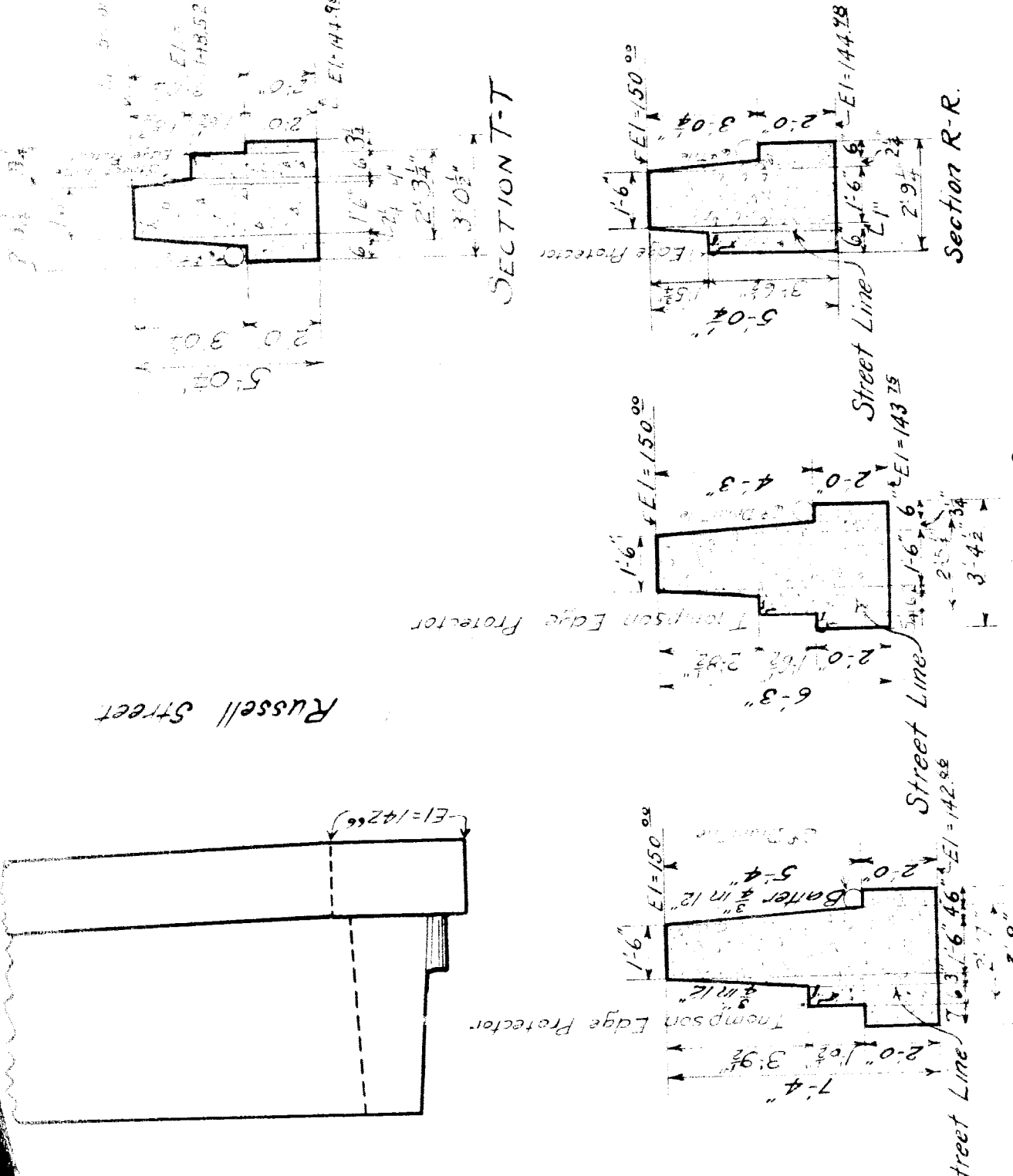
- Concrete - 1 cement - 3 sand
- 3/8 broken stone
- 4" broken stone
- Use hammer wall as per as form
- Cubic contents
- East wall - 165 cu yds. West wall - 100 cu yds
- Mark off face of casting on retaining wall in 8'-0" sections
- Sheet lead to be used at all vertical joints
- Dowels of scrap rail, about 24" long to be set in each vertical joint in front of lead joint. Dowels spaced about 18" apart

Bay City
#651 Retaining Walls
on E & W side of Russell St.

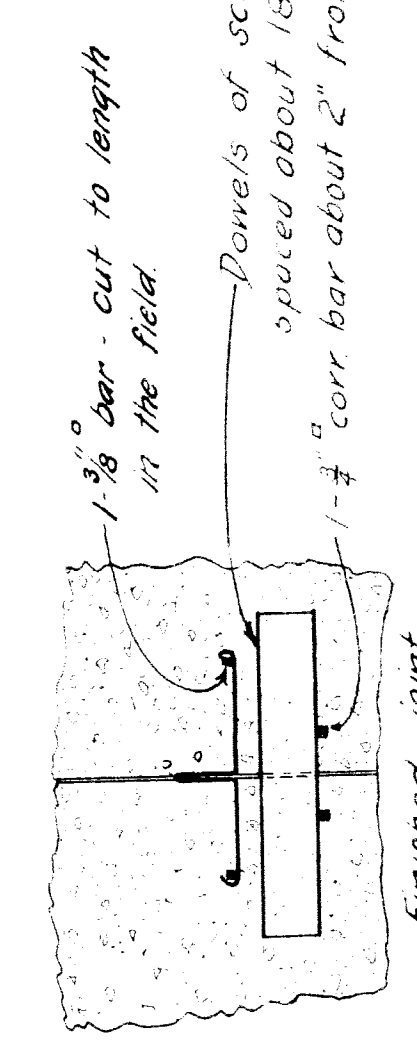
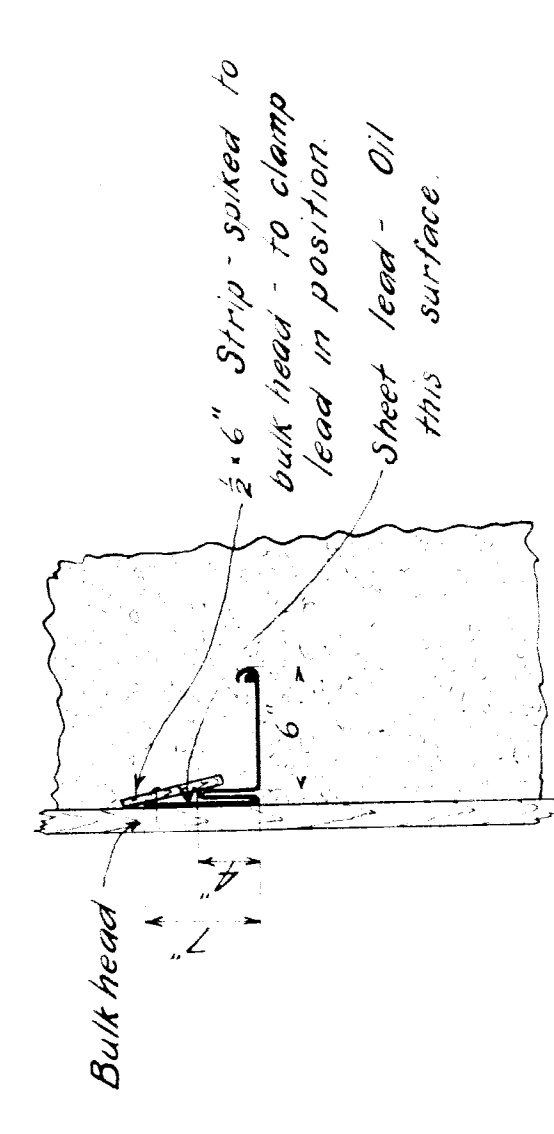
F. O. Kelly



Detail of lead joint

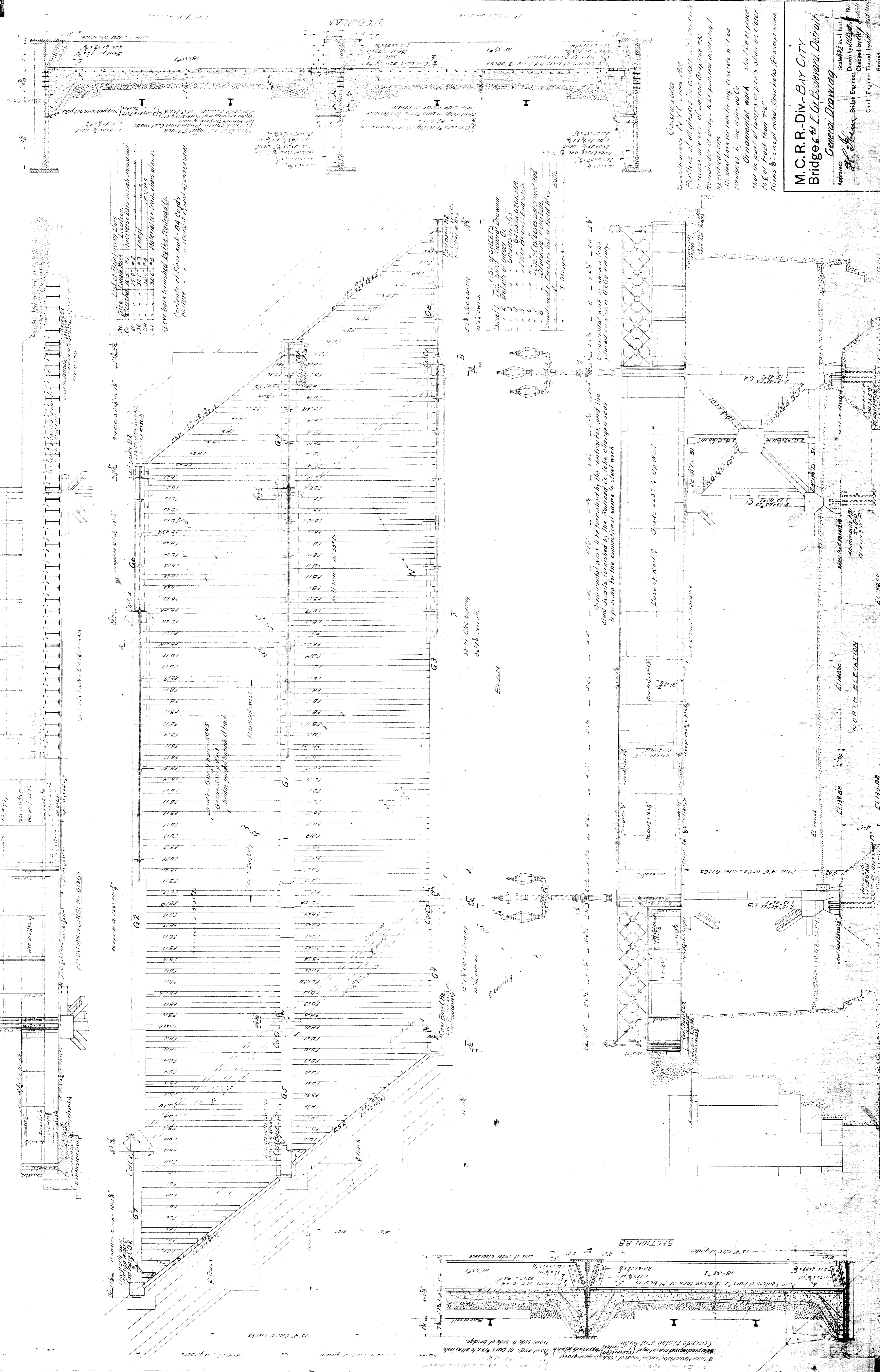


NOTES:
Concrete - 1 cement - 2 1/2 sand - 4 1/2 broken stone.
Rub face of wall as soon as forms are removed.
Cubical contents = 98 cu yds
Sheet leads to be set in each vertical joint in front of lead joint. Dowels spaced about 18" apart.



M.C.R.R.-DIV BAY CITY.
Bridge #62 Retaining Wall.
W side of Russell St + along alley.

Approved
City Engineer



List of Reinforcing Bars

No.	Size	Length	Location
1	1/2"	15'-0"	Top of Deck
2	1/2"	15'-0"	Bottom of Deck
3	1/2"	15'-0"	Top of Deck
4	1/2"	15'-0"	Bottom of Deck
5	1/2"	15'-0"	Top of Deck
6	1/2"	15'-0"	Bottom of Deck
7	1/2"	15'-0"	Top of Deck
8	1/2"	15'-0"	Bottom of Deck
9	1/2"	15'-0"	Top of Deck
10	1/2"	15'-0"	Bottom of Deck
11	1/2"	15'-0"	Top of Deck
12	1/2"	15'-0"	Bottom of Deck
13	1/2"	15'-0"	Top of Deck
14	1/2"	15'-0"	Bottom of Deck
15	1/2"	15'-0"	Top of Deck
16	1/2"	15'-0"	Bottom of Deck
17	1/2"	15'-0"	Top of Deck
18	1/2"	15'-0"	Bottom of Deck
19	1/2"	15'-0"	Top of Deck
20	1/2"	15'-0"	Bottom of Deck

- LIST OF SHEETS
- 1. This Sheet - General Drawing
 - 2. Details of larger G's
 - 3. " " " " " " " " " " " "
 - 4. " " " " " " " " " " " "
 - 5. " " " " " " " " " " " "
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 - 19. " " " " " " " " " " " "
 - 20. " " " " " " " " " " " "

General Notes

Specifications - NYC - 1916

Particulars of materials in contract with CONTRACTOR to receive one copy of Detroit Graphite Co. specifications.

Remainder of bridge shall be painted according to specifications.

All steel bars for reinforcing concrete will be furnished by the Reinforced Concrete Co.

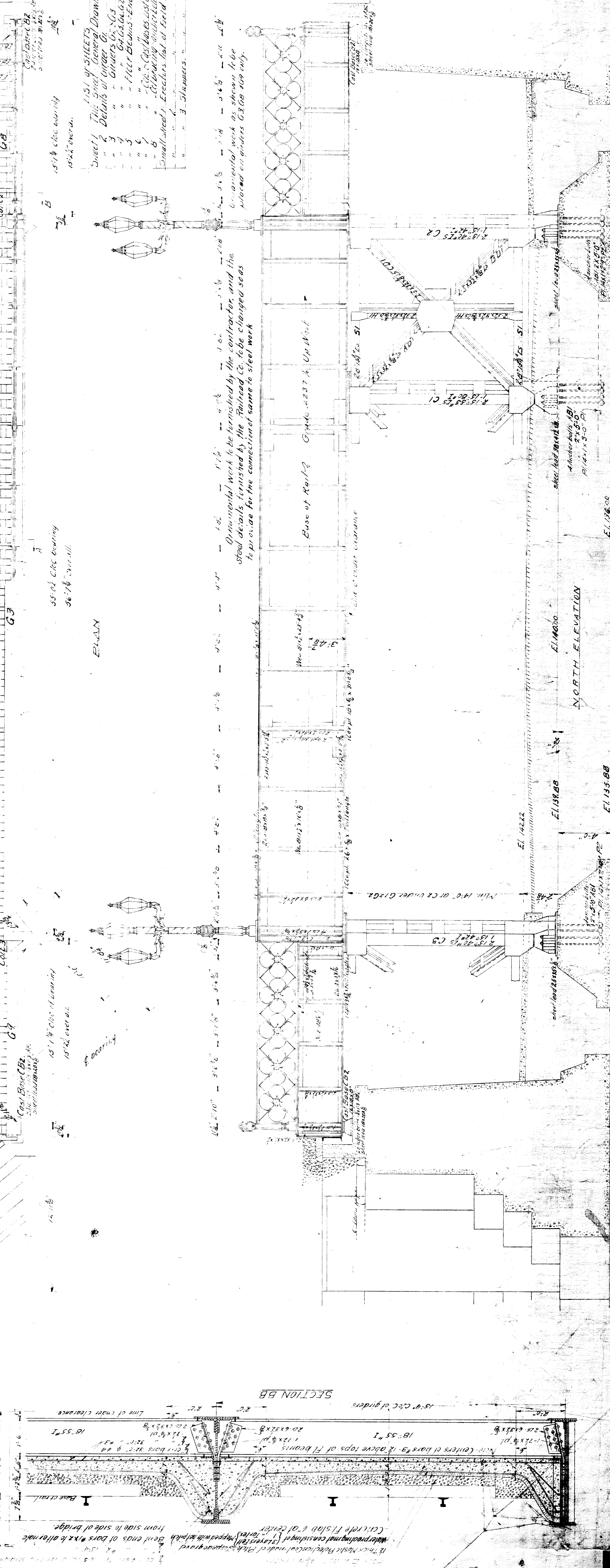
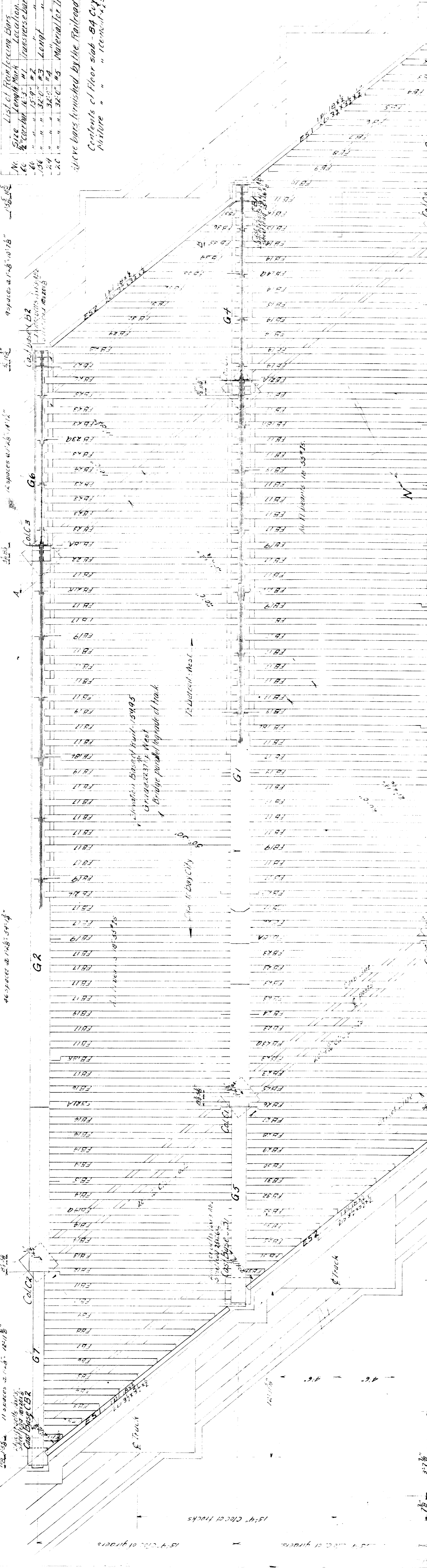
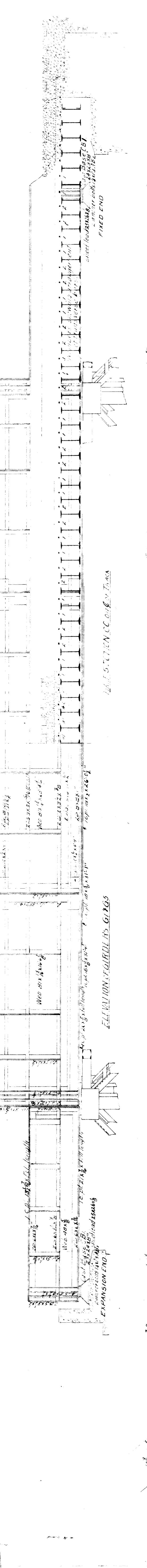
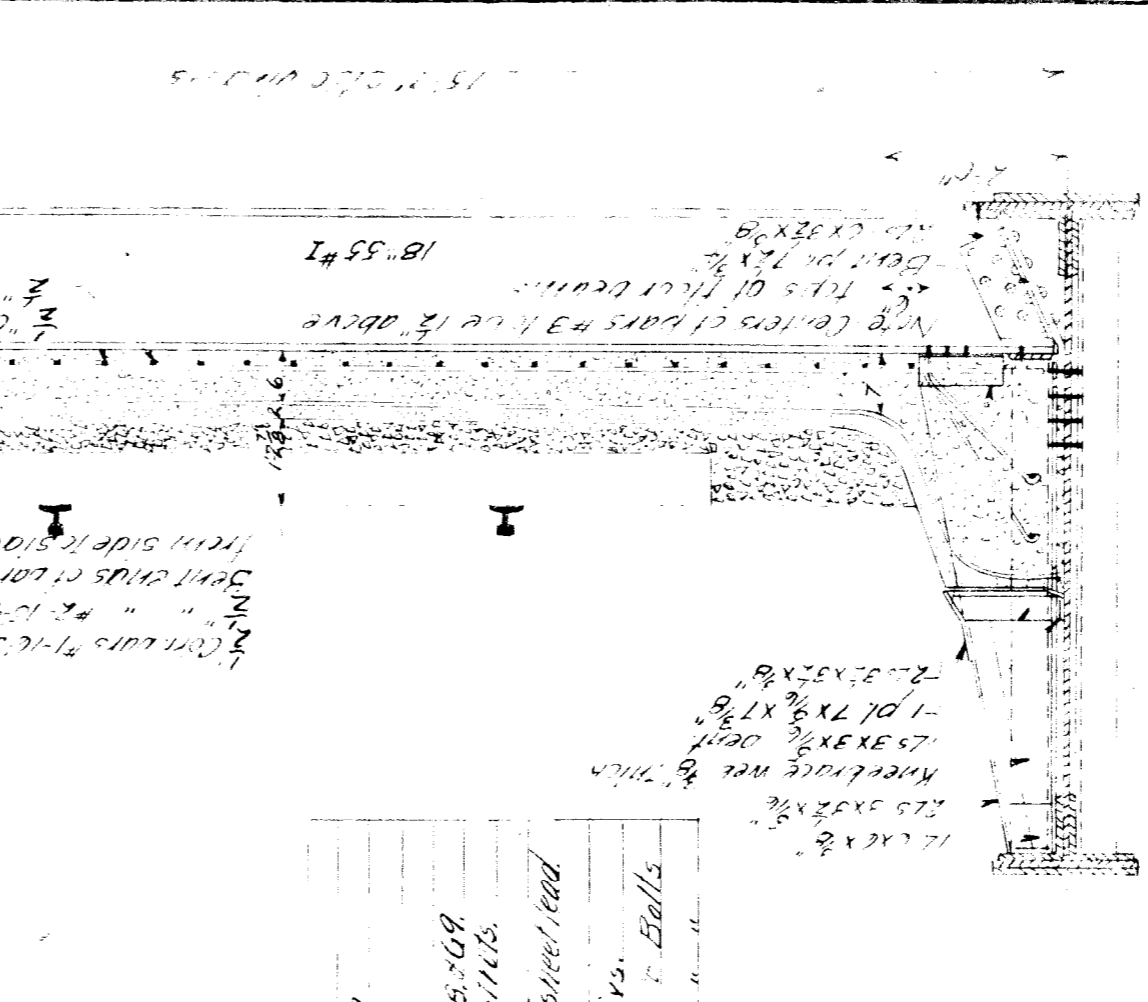
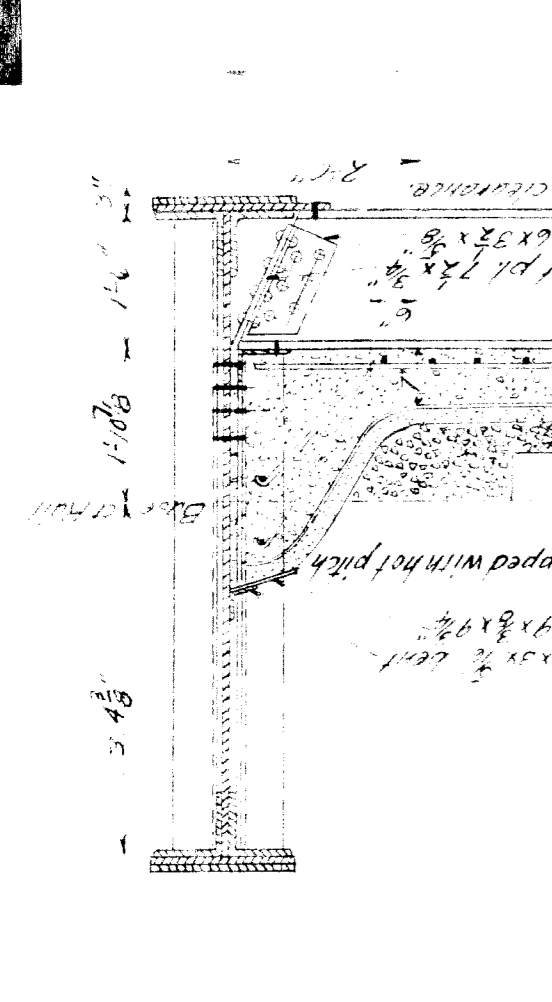
Ornamental work shall be set in place that no part of bars or posts shall be closer to E.O. track than 7'-6"

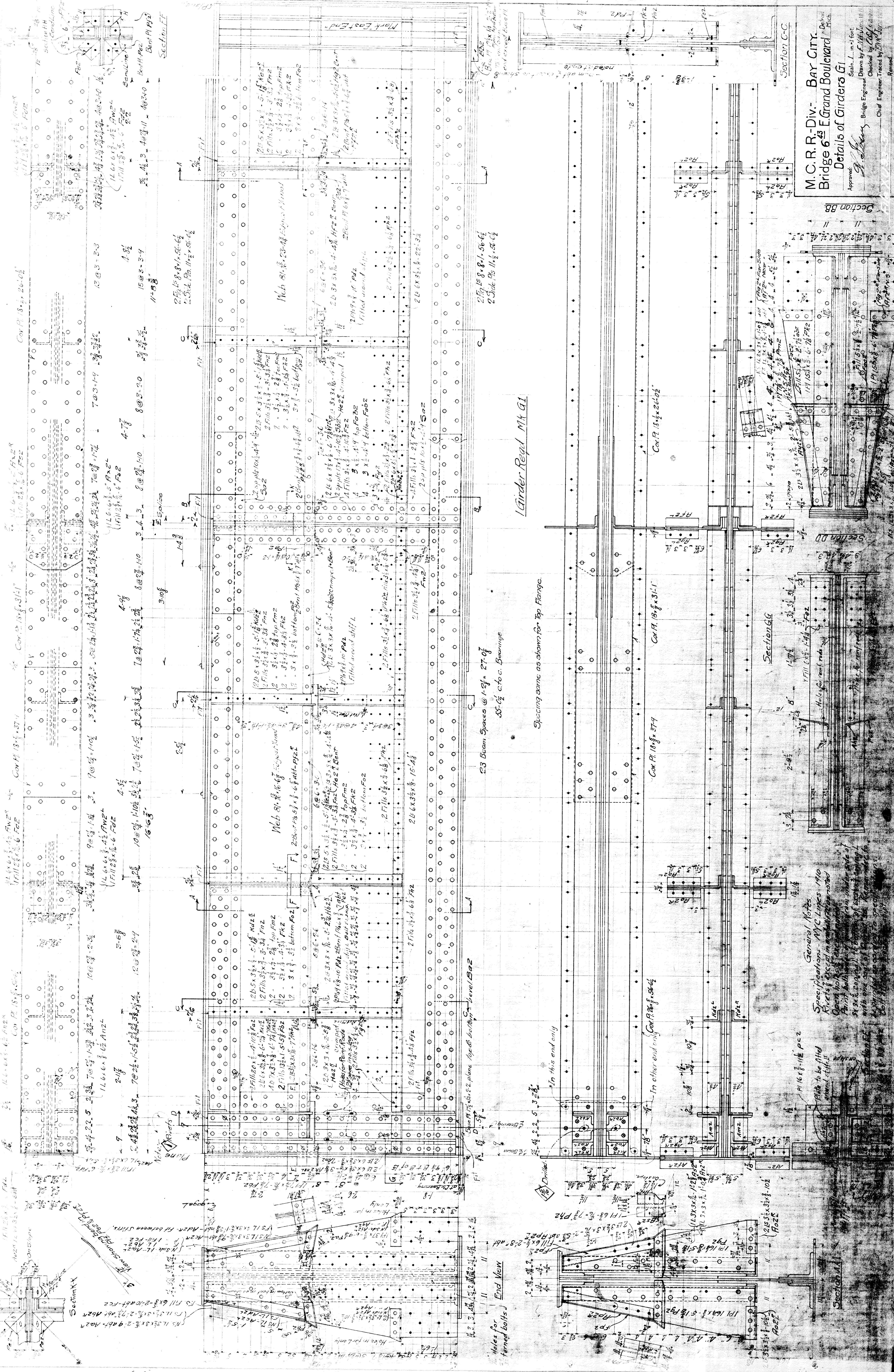
Fires to be except noted. Open holes to be except noted.

M.C.R.R. Div-Bay City
 Bridge at E. Grand Blvd. Detroit

General Drawing

Approved: *[Signature]* Chief Engineer
 Checked by: *[Signature]* Bridge Engineer
 Drawn by: *[Signature]* Draftsman
 Scale: 1/4" = 1'-0"
 Date: 1916





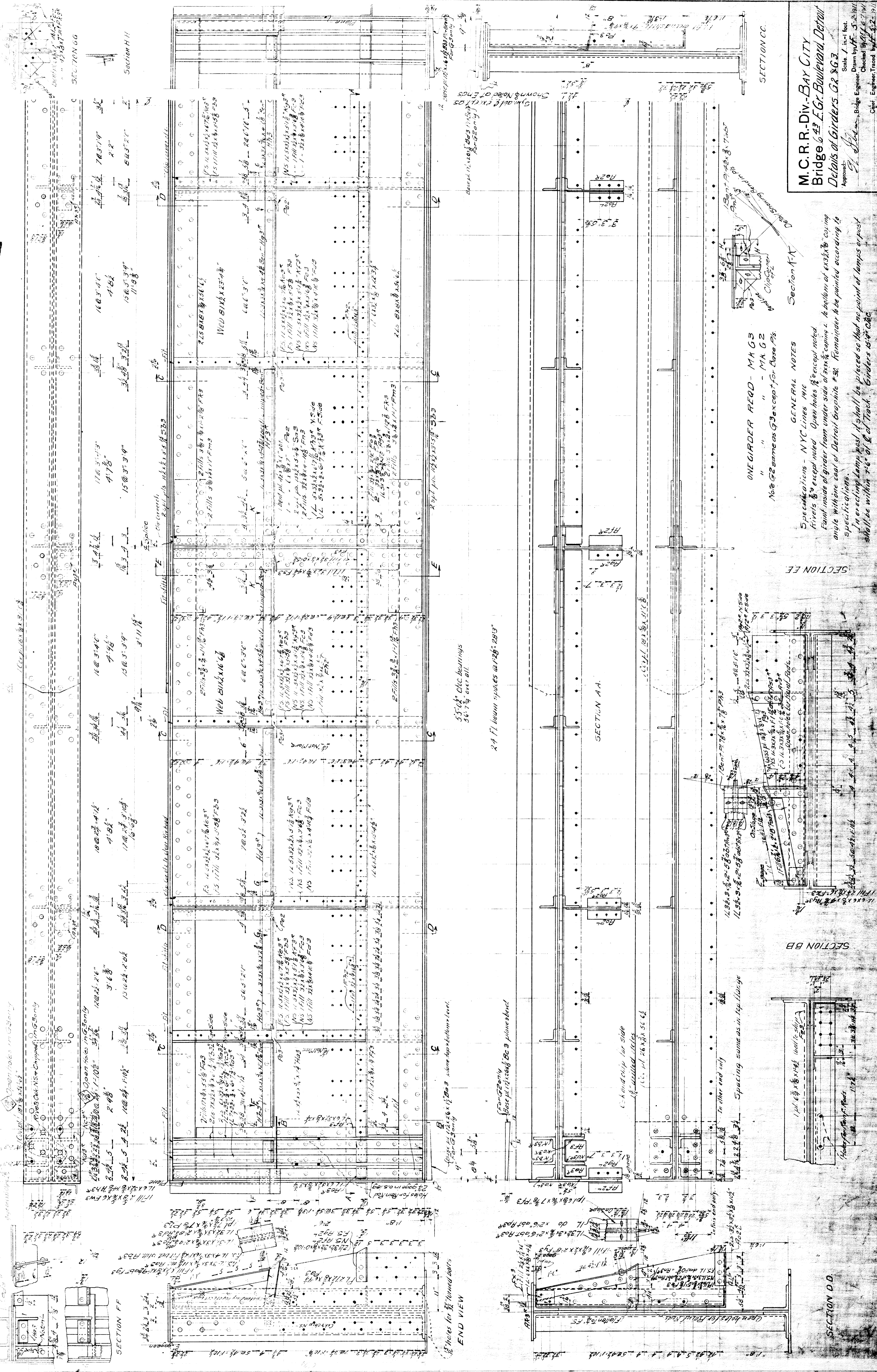
Spacing same as shown for Top Flange.

23 Beam Spaces @ 1'-0" = 27'-0"

55'-0" c/c to c. Beams

General Notes
 Specifications - NYC Lines 1910
 Rivets - except in special notes
 Open hole -
 Paint -
 with one coat of
 zinc chromate primer
 and one coat of
 black enamel
 on the inside of
 stiffeners.

Section AA
 Section BB
 Section CC
 Section DD
 Section EE
 Section FF
 Section GG
 Section HH
 Section II
 Section JJ
 Section KK
 Section LL
 Section MM
 Section NN
 Section OO
 Section PP
 Section QQ
 Section RR
 Section SS
 Section TT
 Section UU
 Section VV
 Section WW
 Section XX
 Section YY
 Section ZZ



M. C. R. DIV.-BAY CITY
Bridge 643 E. Gr. Boulevard Detroit
Details of Girders G2 & G3
 Approved: *J. J. Sullivan*
 Scale: 1" = 1' foot
 Drawn by: J. E. 5-2-1941
 Checked by: J. E. 6-7-1941
 Chief Engineer: Traced by: J. E. 7-1-1941

GENERAL NOTES

Specifications - NYC Lines 1410
 Rivets & except noted Open holes & except noted
 Paint inside of girder from under side of 3/32" caps & 1/8" bottom of 1/2" x 3/8" cutting
 angle with one coat of Detroit Graphite #30. Remainder to be painted according to
 specifications.
 In erecting lamp post it shall be placed so that no point of lamp or post
 shall be within 7' 6" of End Track. Girders 15' 8" apart.

SECTION CC
 160' 3" 4" 110' 3" 4" 110' 3" 4"
 4' 8" 4' 8" 4' 8"
 150' 3" 3" 150' 3" 3"
 3' 11" 6"

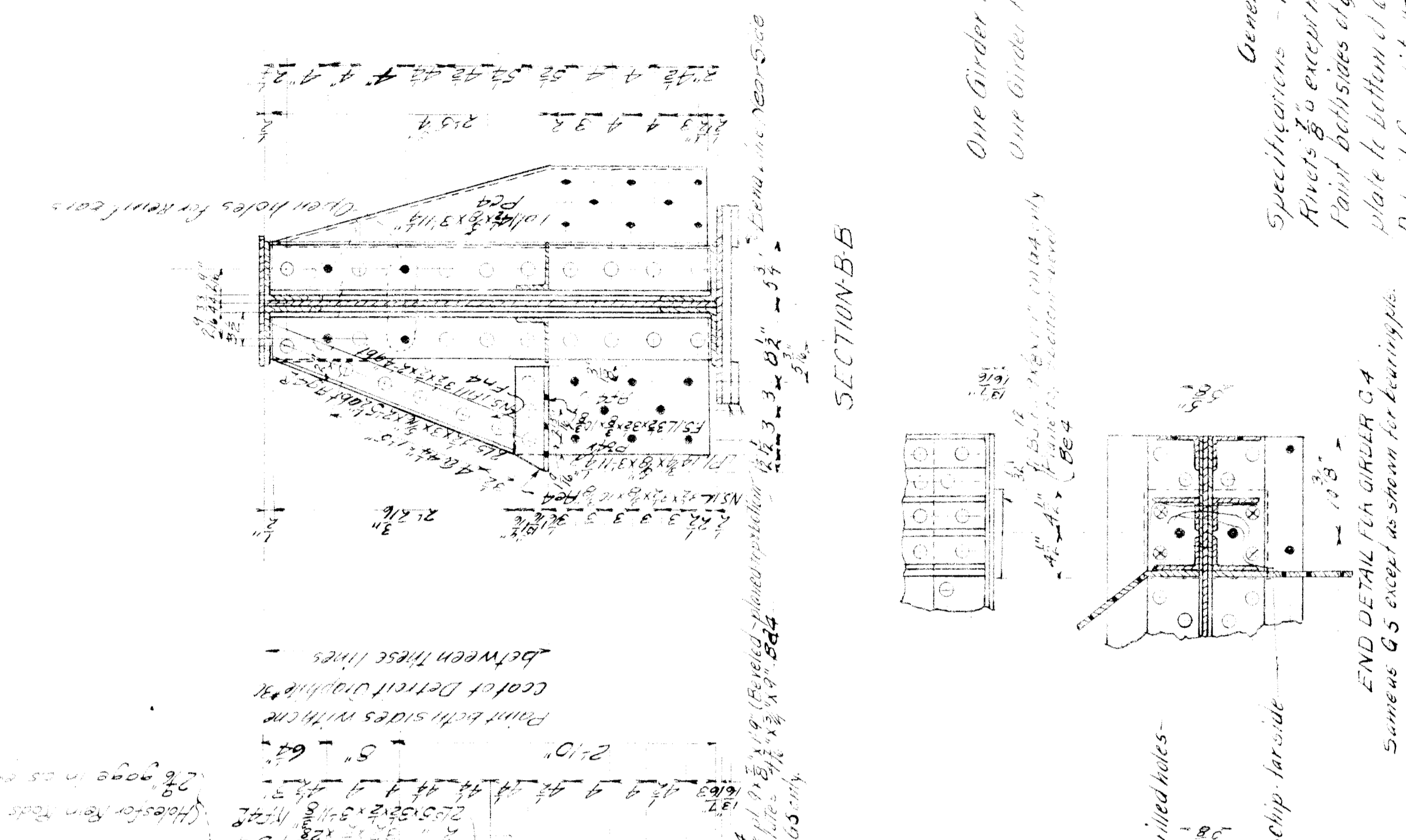
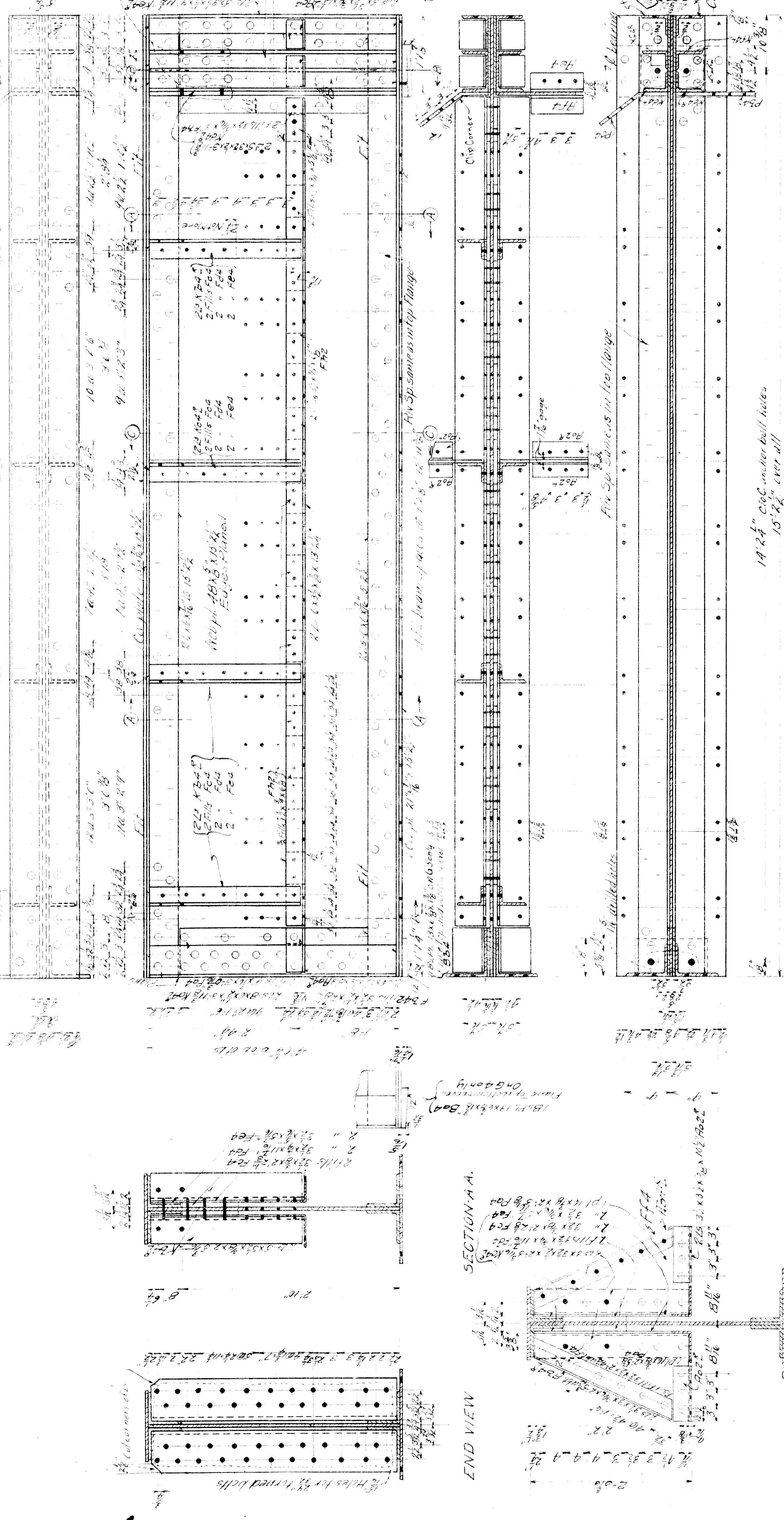
SECTION EE
 55' 0" C&C bearings
 56' 3/4" over all

SECTION FF
 100' 3" 4" 110' 3" 4" 110' 3" 4"
 4' 8" 4' 8" 4' 8"
 150' 3" 3" 150' 3" 3"
 3' 11" 6"

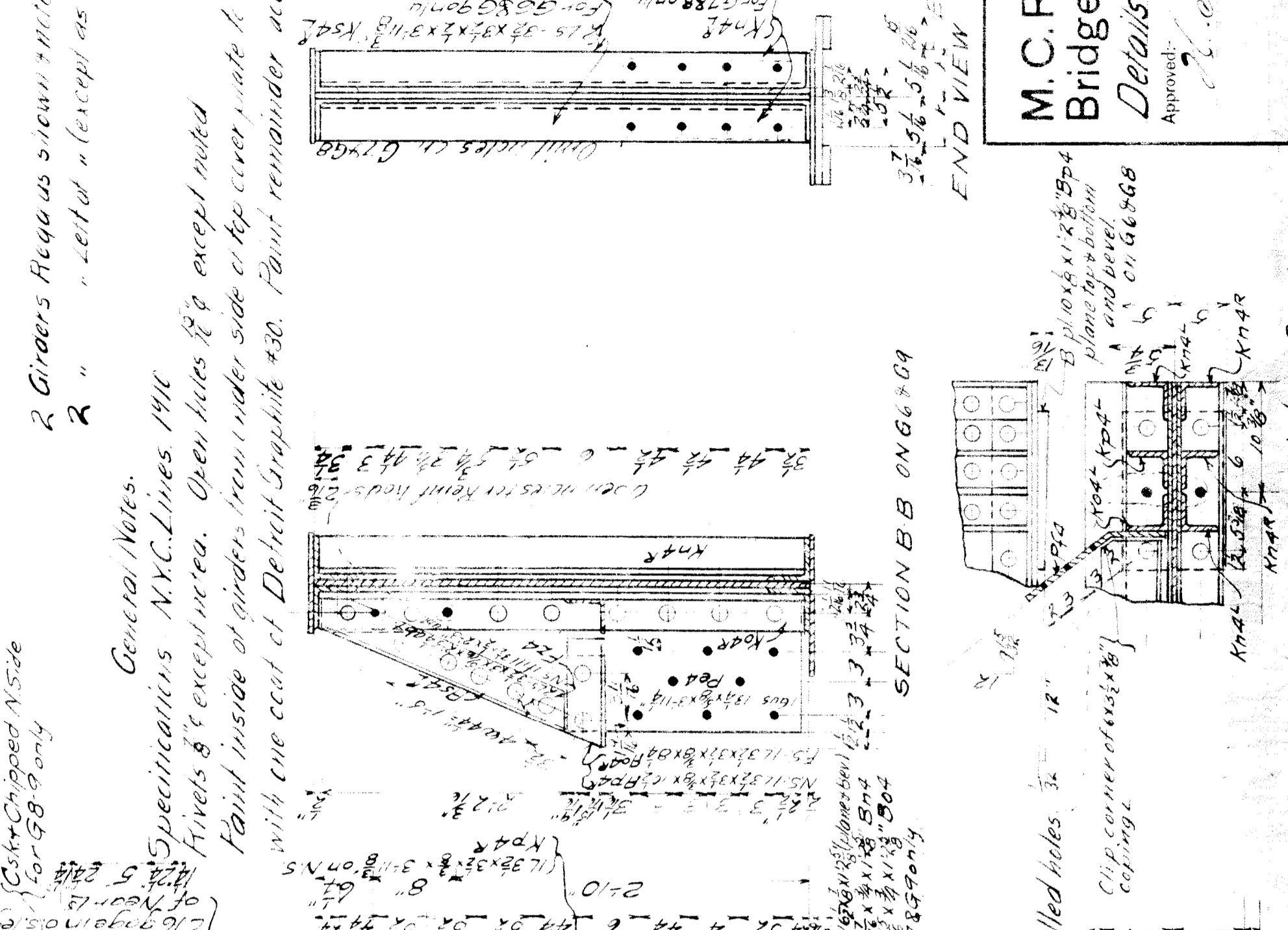
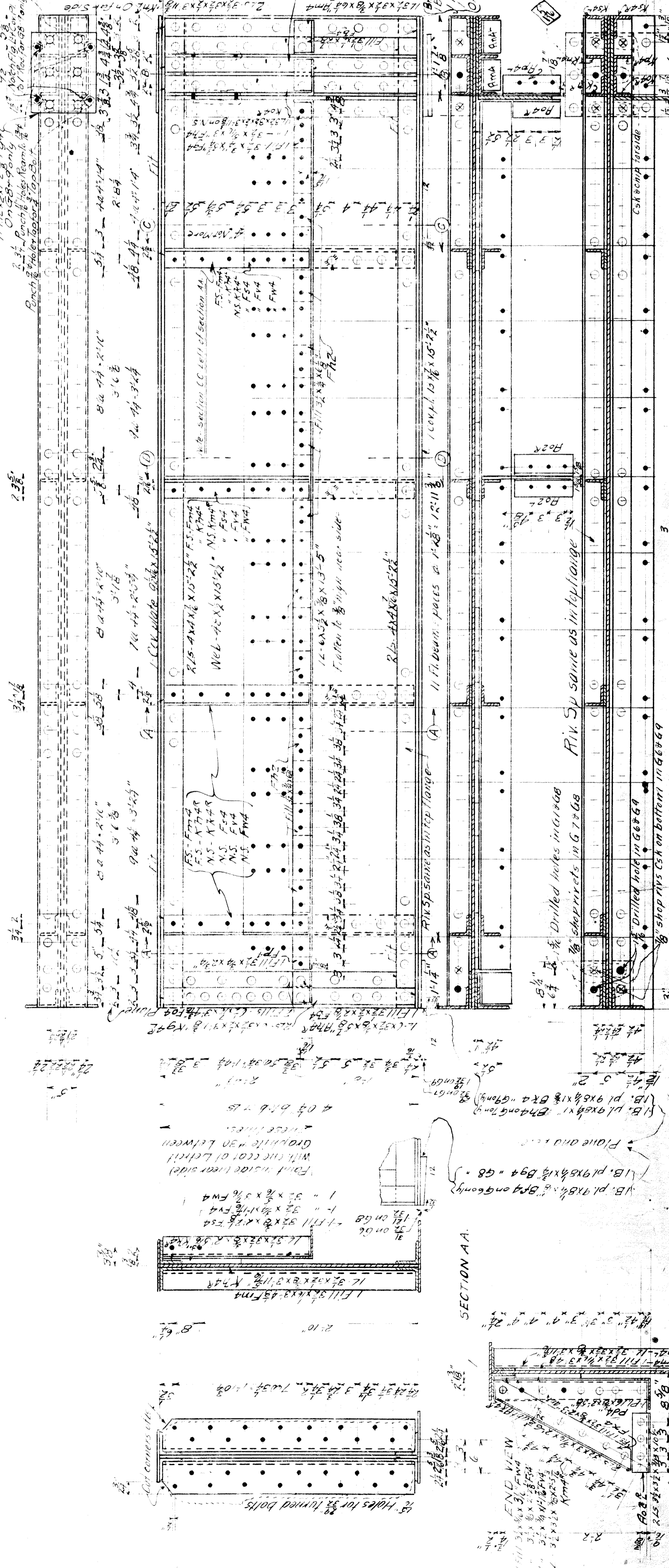
SECTION AA
 2" A Fl beam splices at 15' 8" 20' 3"

SECTION BB
 Spacing same as in top flange

SECTION DD
 1 1/2" x 3 1/2" x 1/4" wall in edge

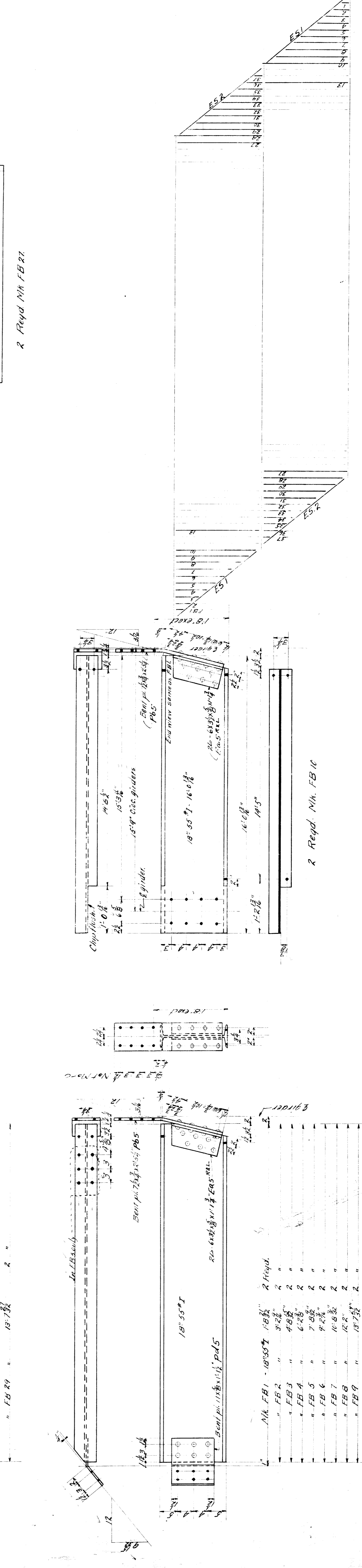
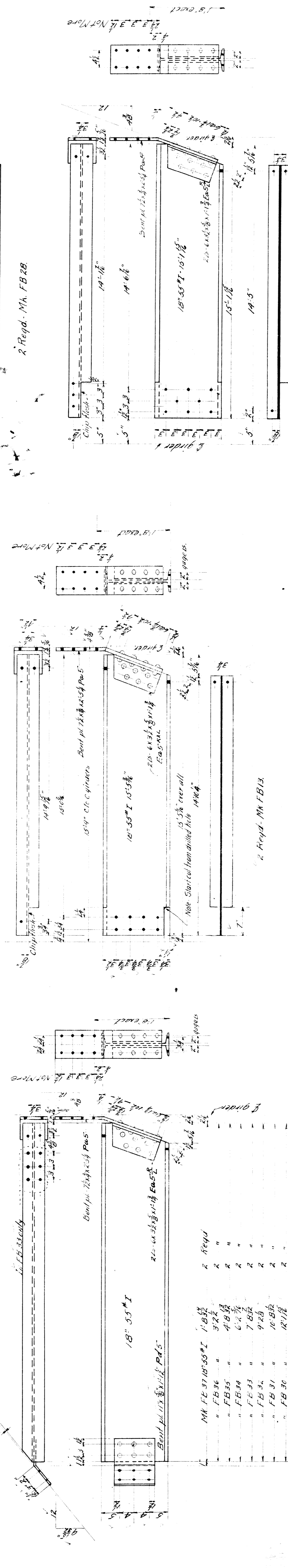
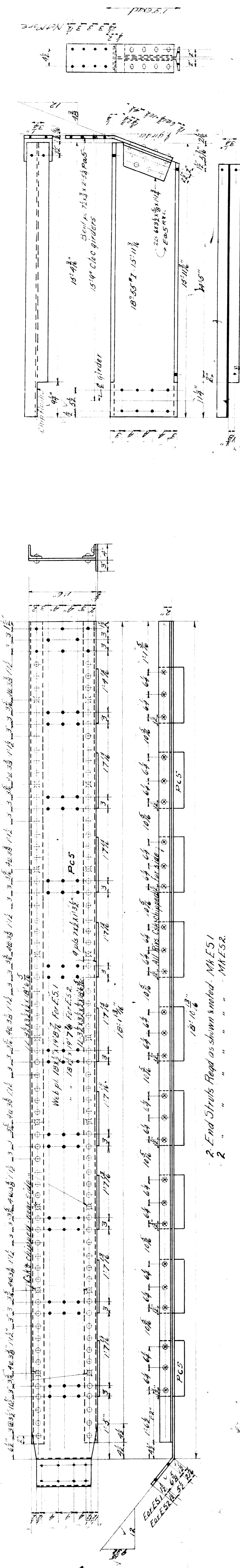


General Notes:
 Specifications - NYC Lines 1910
 Rivets & connections as shown & except noted
 Paint inside of girders from under side of top cover plate to bottom of web, coping & with one coat of Detroit Greenish Blue. Paint remainder according to Specifications.



General Notes:
 Specifications - NYC Lines 1910
 Rivets & connections as shown & except noted
 Paint inside of girders from under side of top cover plate to bottom of web, coping & with one coat of Detroit Greenish Blue. Paint remainder according to Specifications.

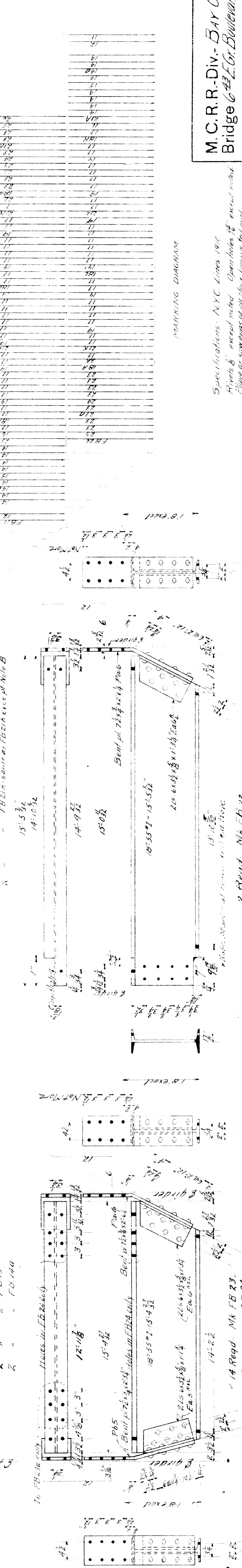
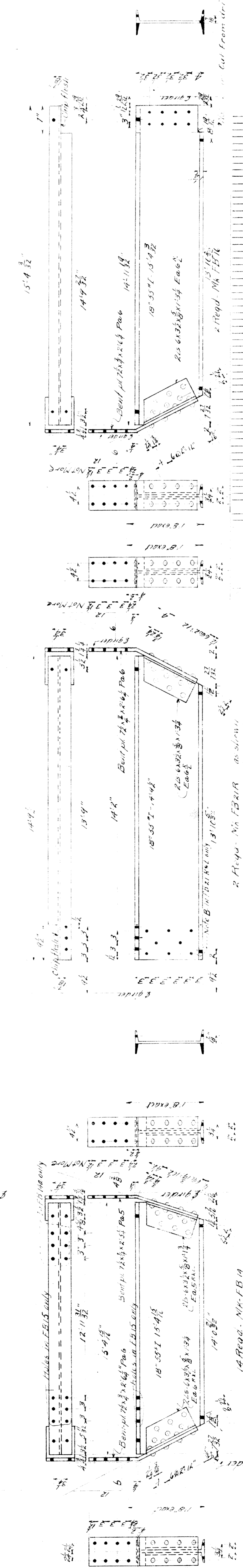
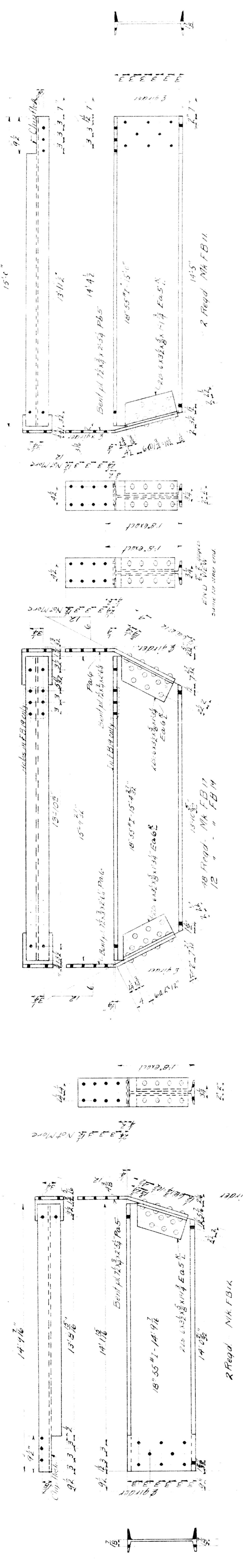
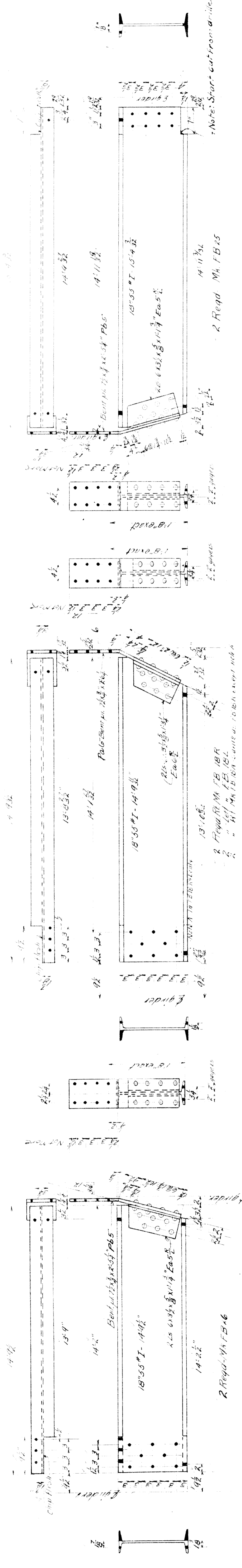
M.C.R.-Div.-BAY CITY
 Bridge 63 E. Gr. Boulevard, Detroit.
 Details of Slewback Girders.
 Scale: 1/4" = 1'-0"
 Bridge Engineer: J. J. C. M. C. B. 1910
 Chief Engineer: J. J. C. M. C. B. 1910



MARKING DIAGRAM

Specifications - NYC Lines 1910
 Fillets to be excepted Open holes 1/8" except noted
 Plane of supports of all floor beams to level

M.C.R.R.-DIV.-BAY CITY
 Bridge 6.43 E. Gr. Boulevard Detail
 Approved: *[Signature]*
 Scale: 1" = 1' feet
 Drawn by: J.F. 53/134
 Checked by: G.H. 67/101
 Chief Engineer: Traced by J.F. 33/134
 Revised



MARKING DIAGRAM

1	11
2	11
3	11
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100	11

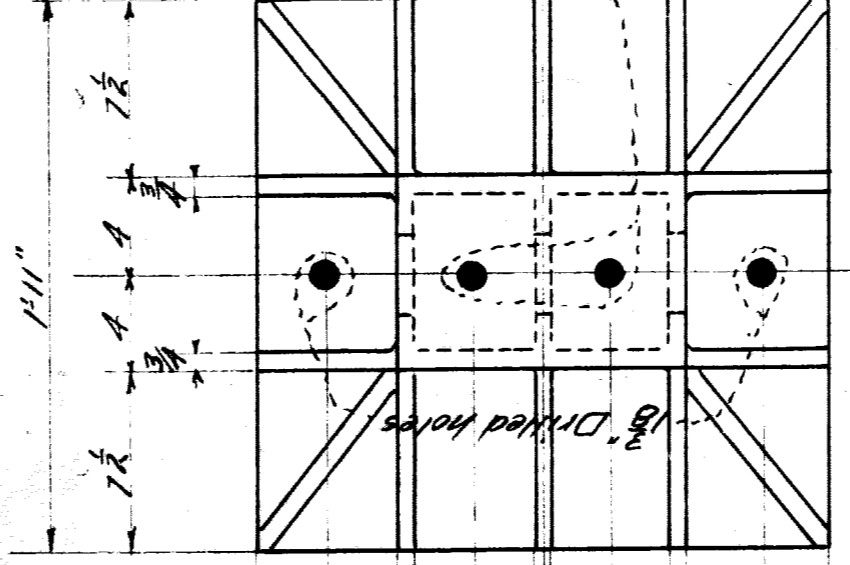
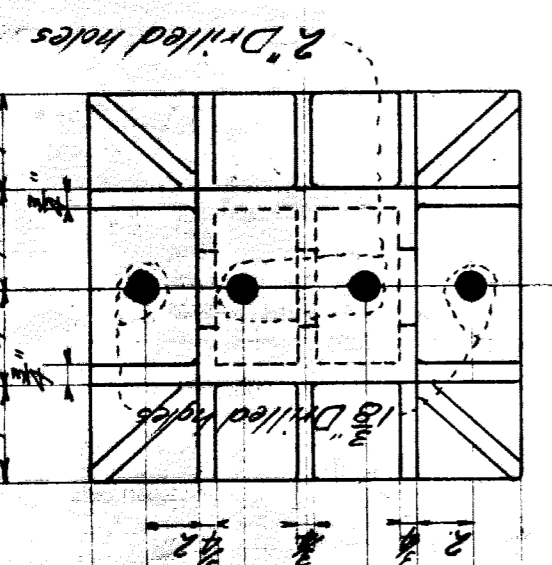
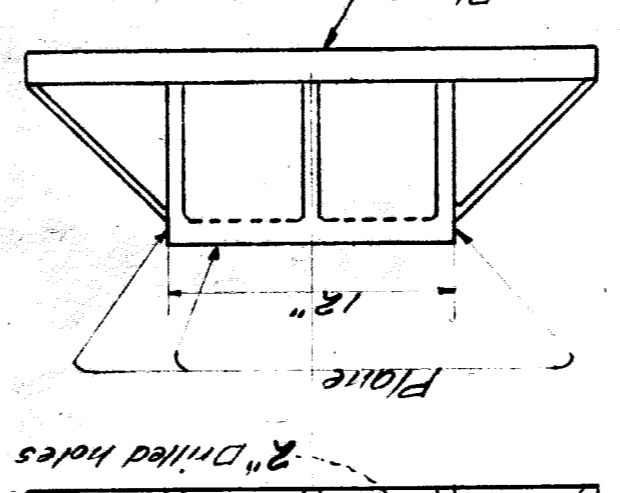
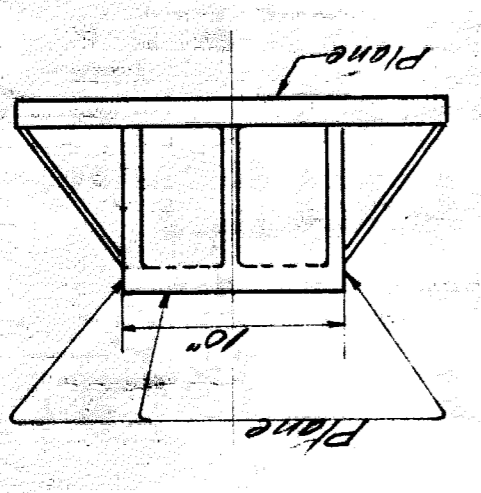
Specifications: N.Y.C. Lines 1910
 Holes to be excavated Openings to be excavated
 Plane or some other drill floor beams to level

M. C. R. R. DIV. - Box C1
 Bridge 63 For Emulsion
 Dept. of Columns

Specifications - NYC Lines 1910
 Rivets to except noted Open Holes to except noted

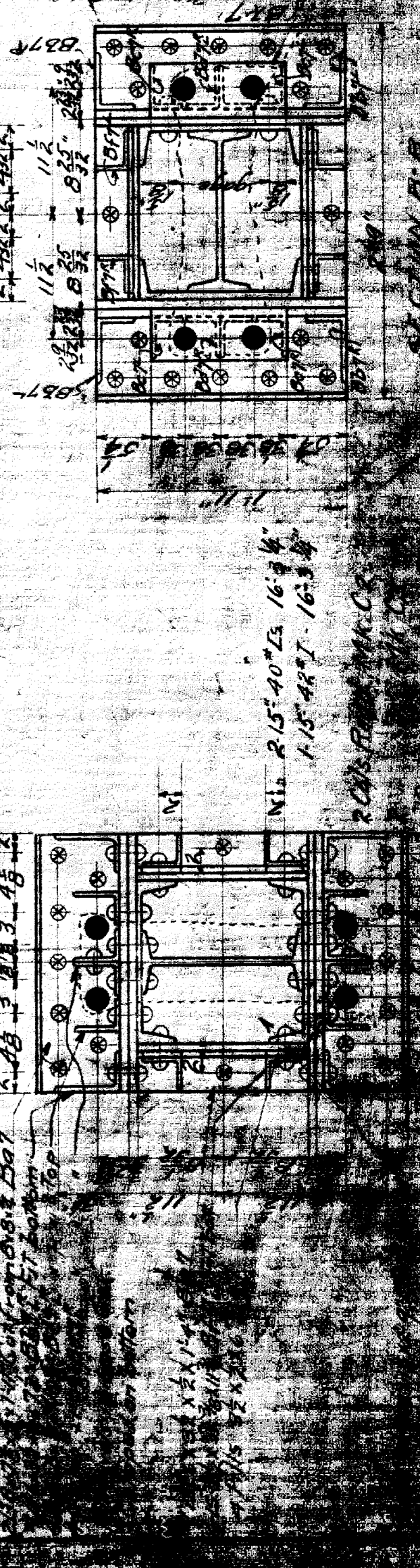
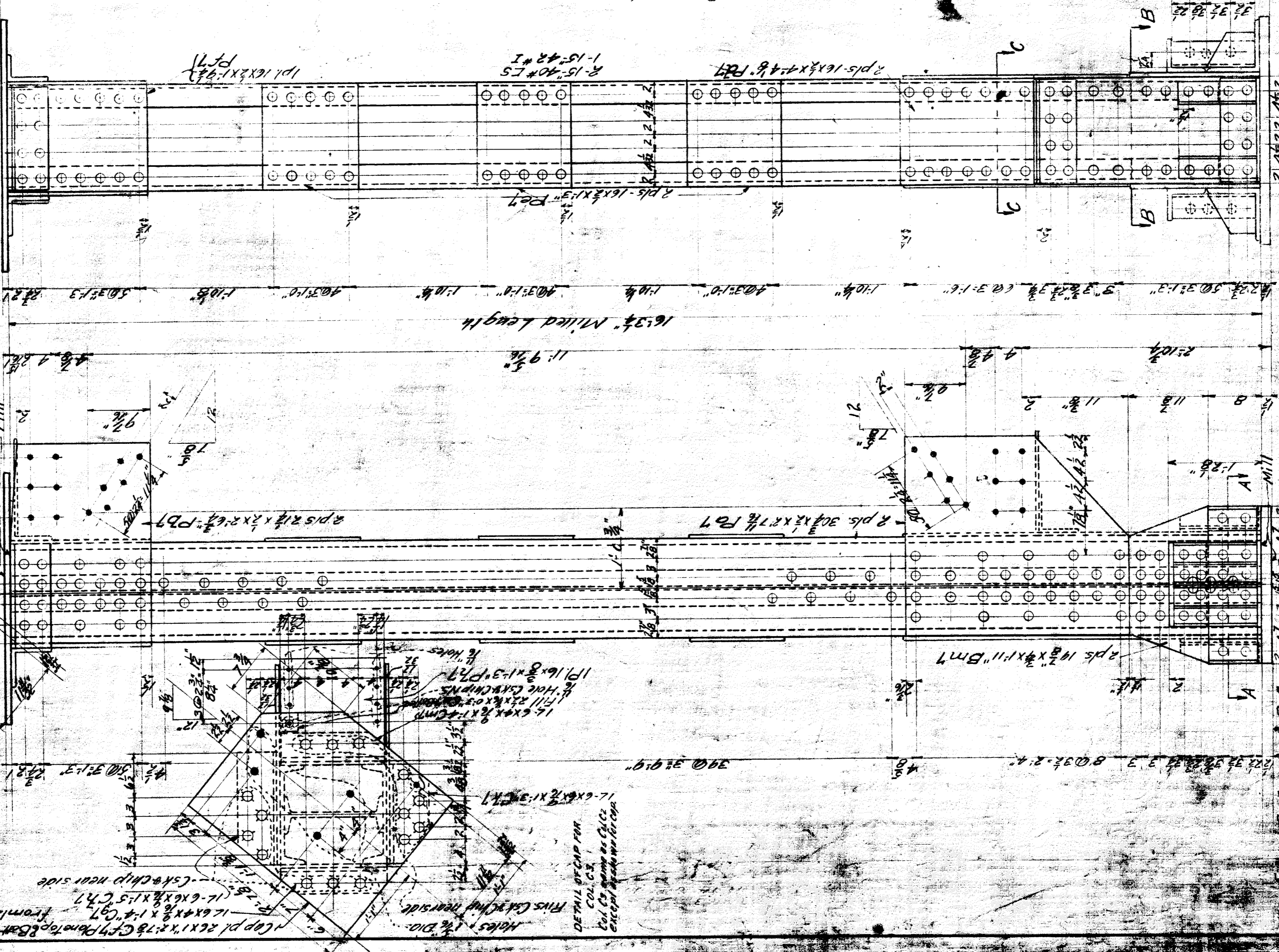
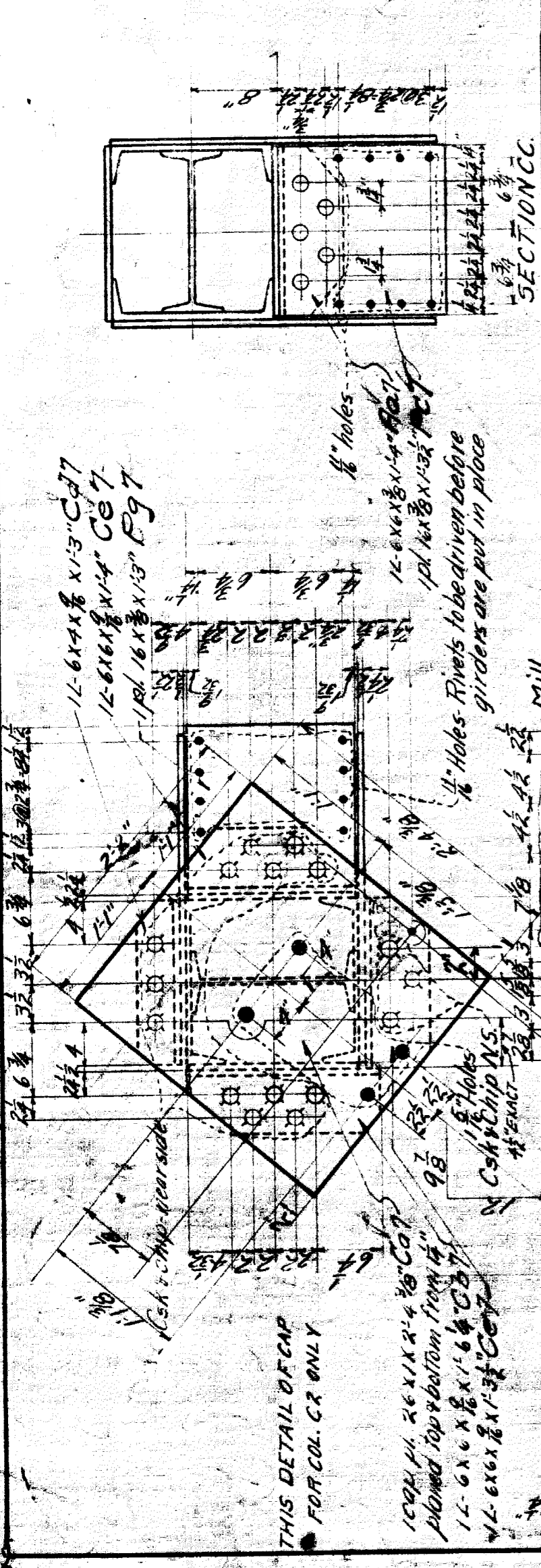
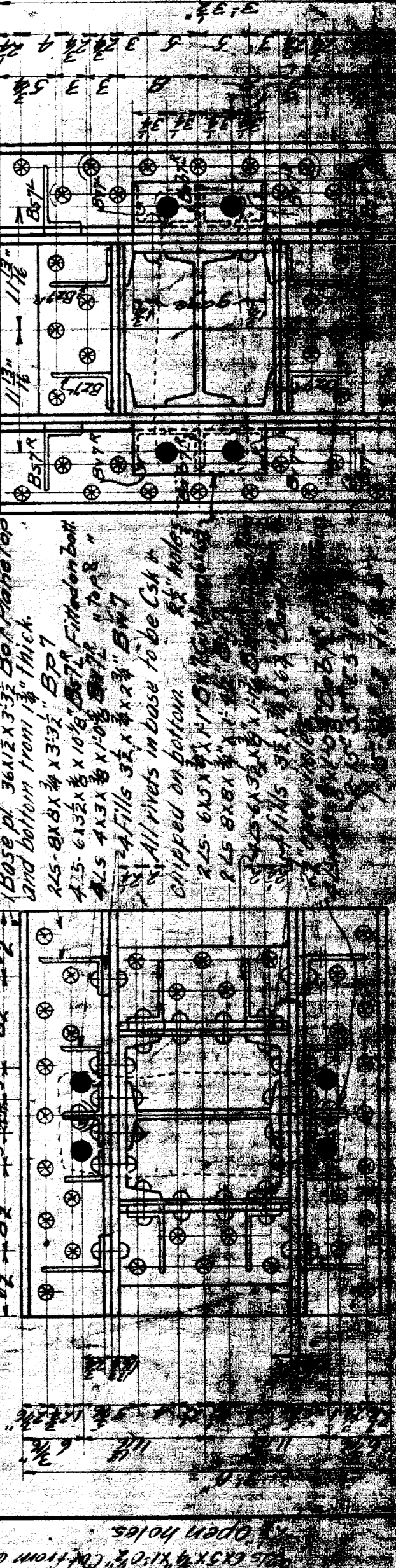
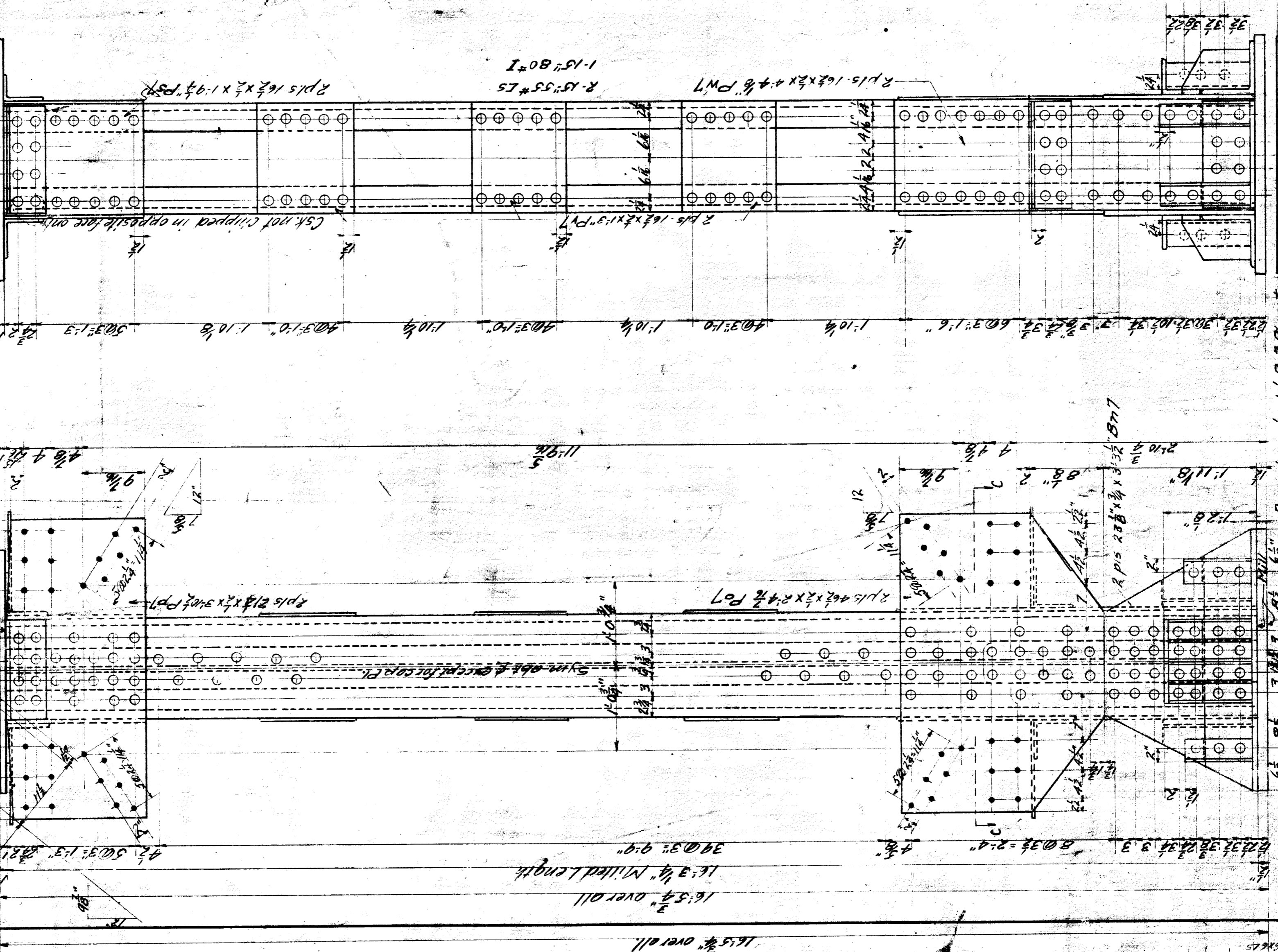
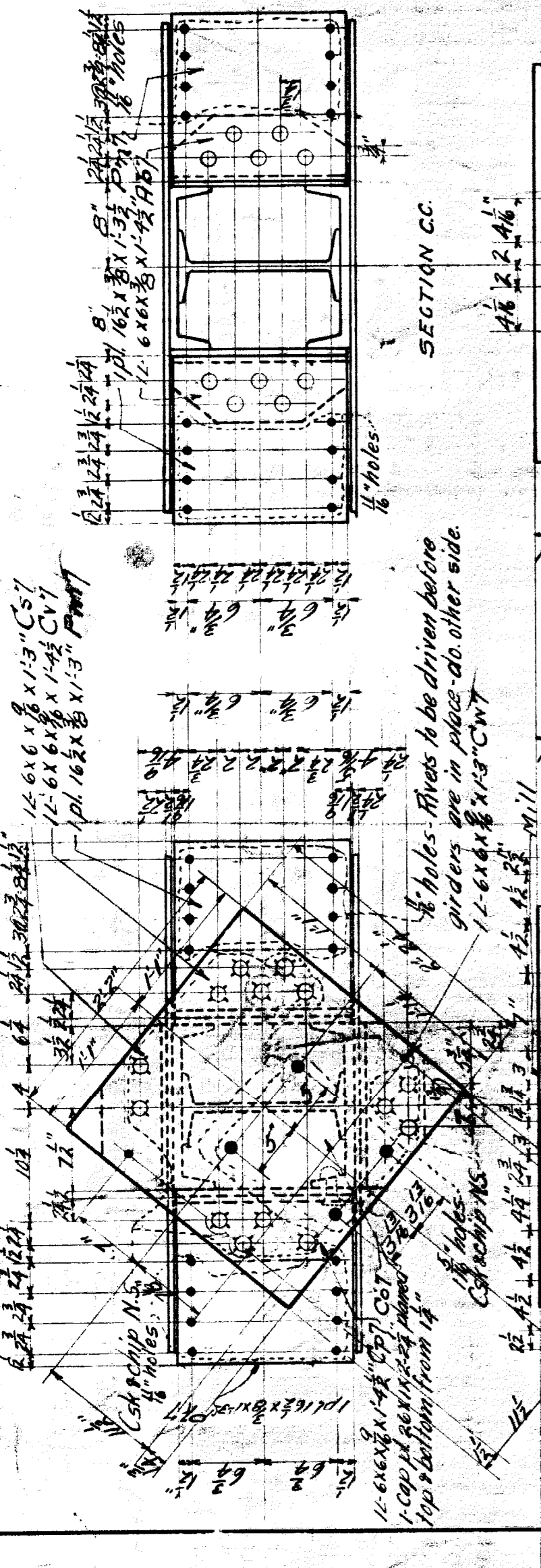
2 Pcs. Steel Lead
 2 1/2" x 1/8" - Bases CBI
 2 1/2" x 1/8" - Coils C1
 2 1/2" x 1/8" - " C2, C3

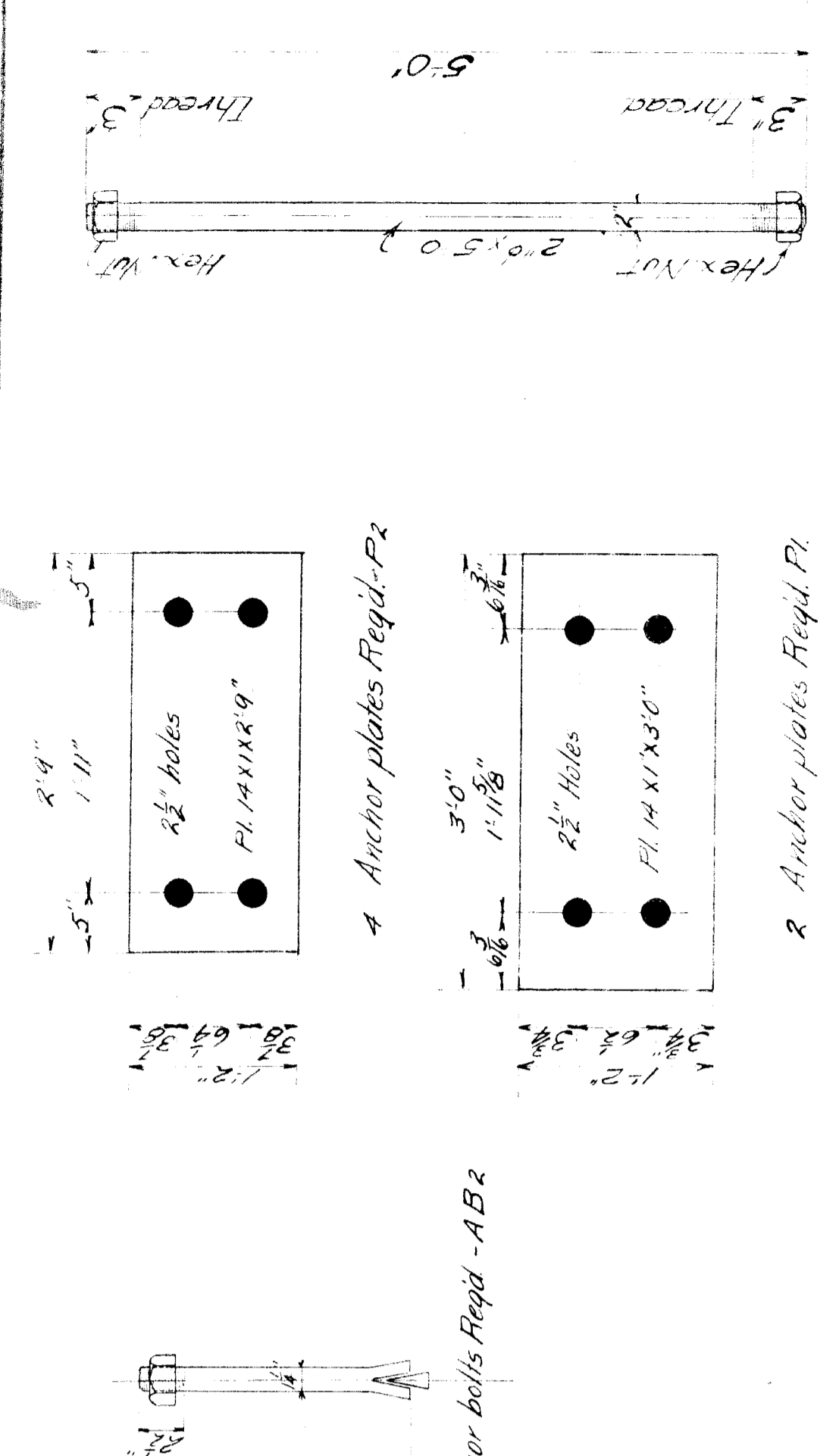
710X693



4 CAST STEEL BASES REQD - MK CBI

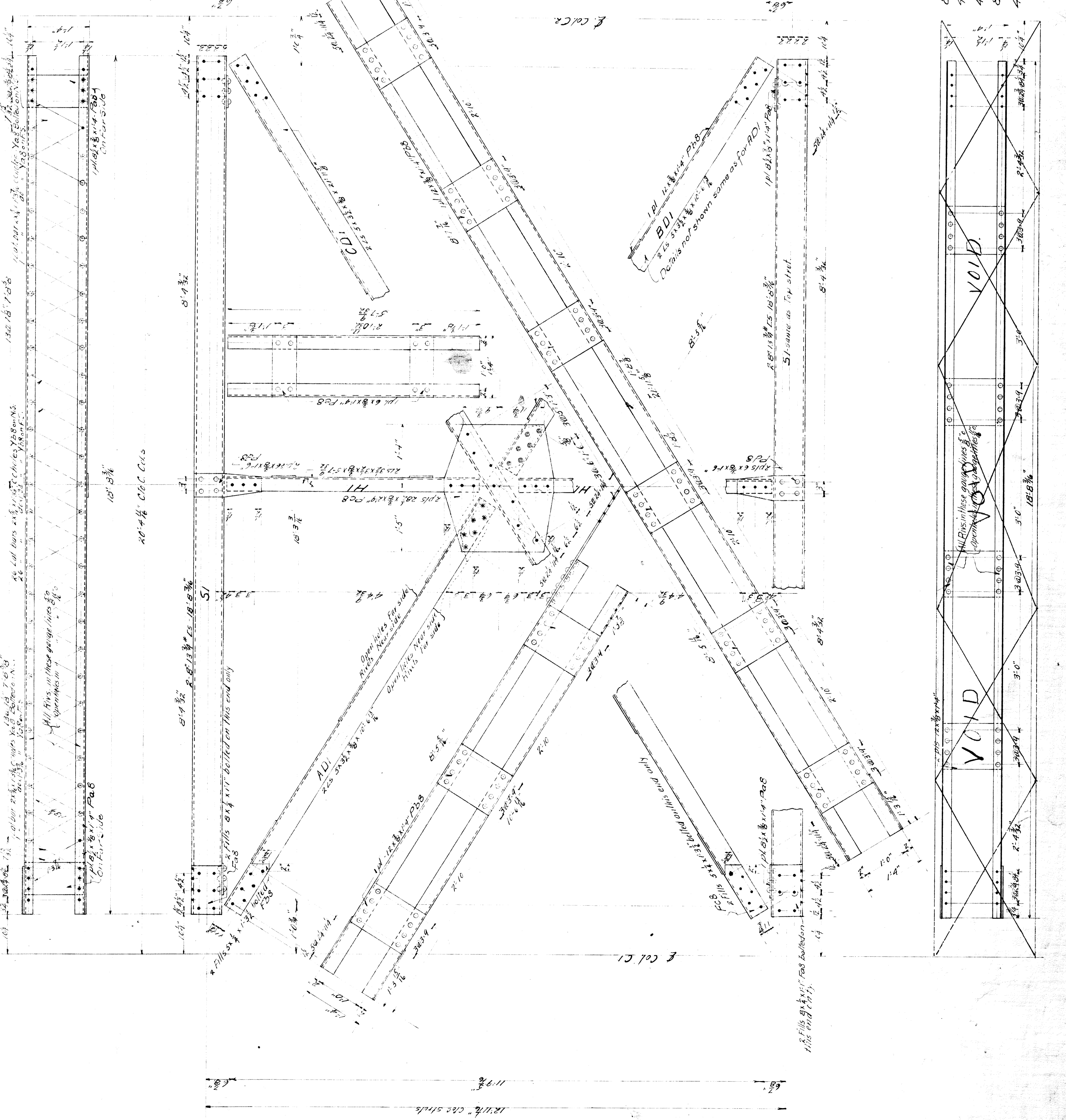
2 CAST STEEL BASE REQD - MK CBI





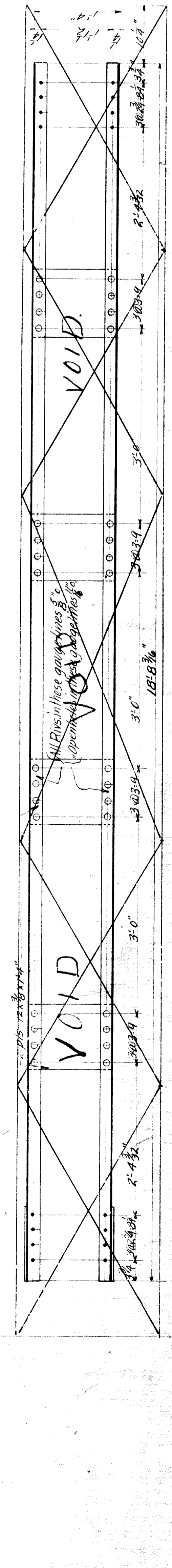
24 Anchor bolts Req'd - AB

Note: Anchor plates to be shipped three weeks from date commencing of contract.



Specifications - NYC Lines 1910
Holes 3/8" except noted. Open holes 1/2" except noted.

- 8 Struts Req'd Mark 51
- 4 Diagonals " " ADI
- 4 " " " BDI
- 8 Hangers " " HI
- 4 Diagonals " " CDI



M. C. R. R. - DIV. - BAY CITY
Bridge 613 E. G. Boulevard, Detroit

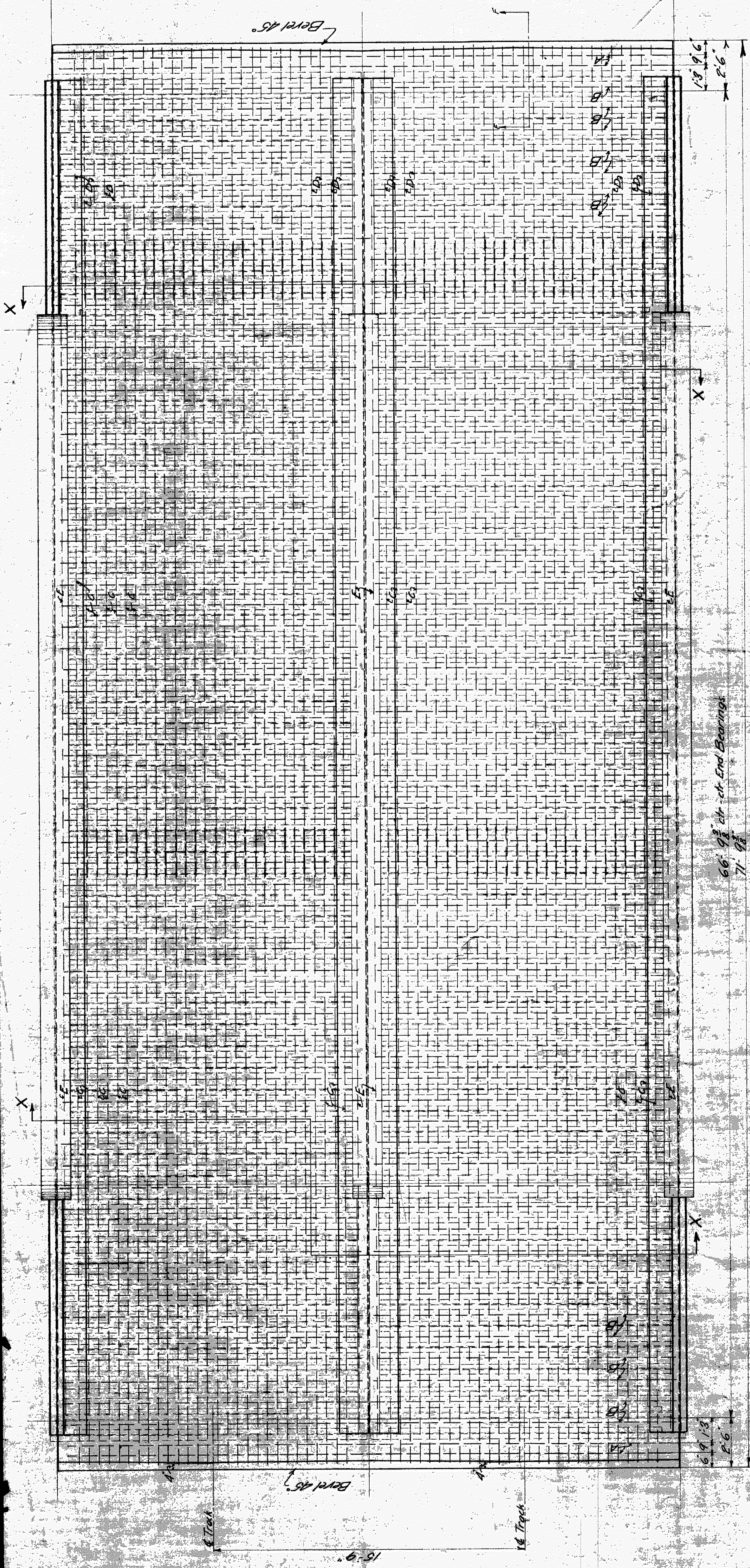
Details of Col Bracing - anchor bolts shown etc.

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

Drawn by: H. J. [unclear] 5-15-1911
Checked by: [unclear] 5-15-1911

Chief Engineer: [unclear], Bridge Engineer

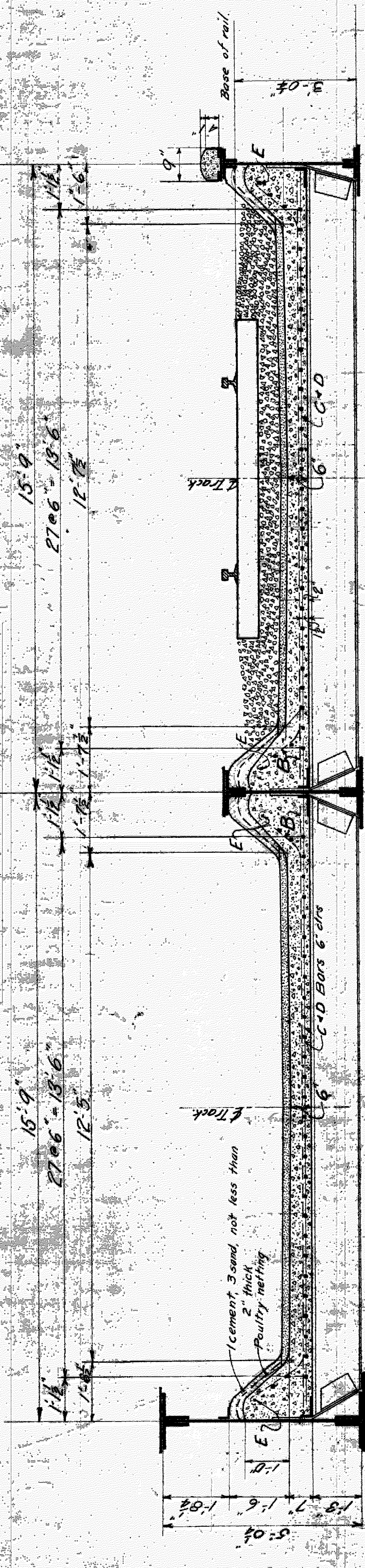
Approved: [unclear] 5-15-1911
Revised: [unclear]



Concrete: 1 Cement, 2 Sand, 3 Broken Stone.
 Contents 57 cu yds.
 Tie all intersections with #14 wire.
 Splices 2'-6" long wrapped with 24 turns #14 wire.

No.	Kind	Length	Mark
A	1/2 Sq Corr.	37'-0"	A
126	"	16'-0"	B
112	"	32'-0"	C
56	"	12'-6"	D
9	"	32'-0"	E

66 9 1/2" ch. at End Beams
 71 9 1/2"

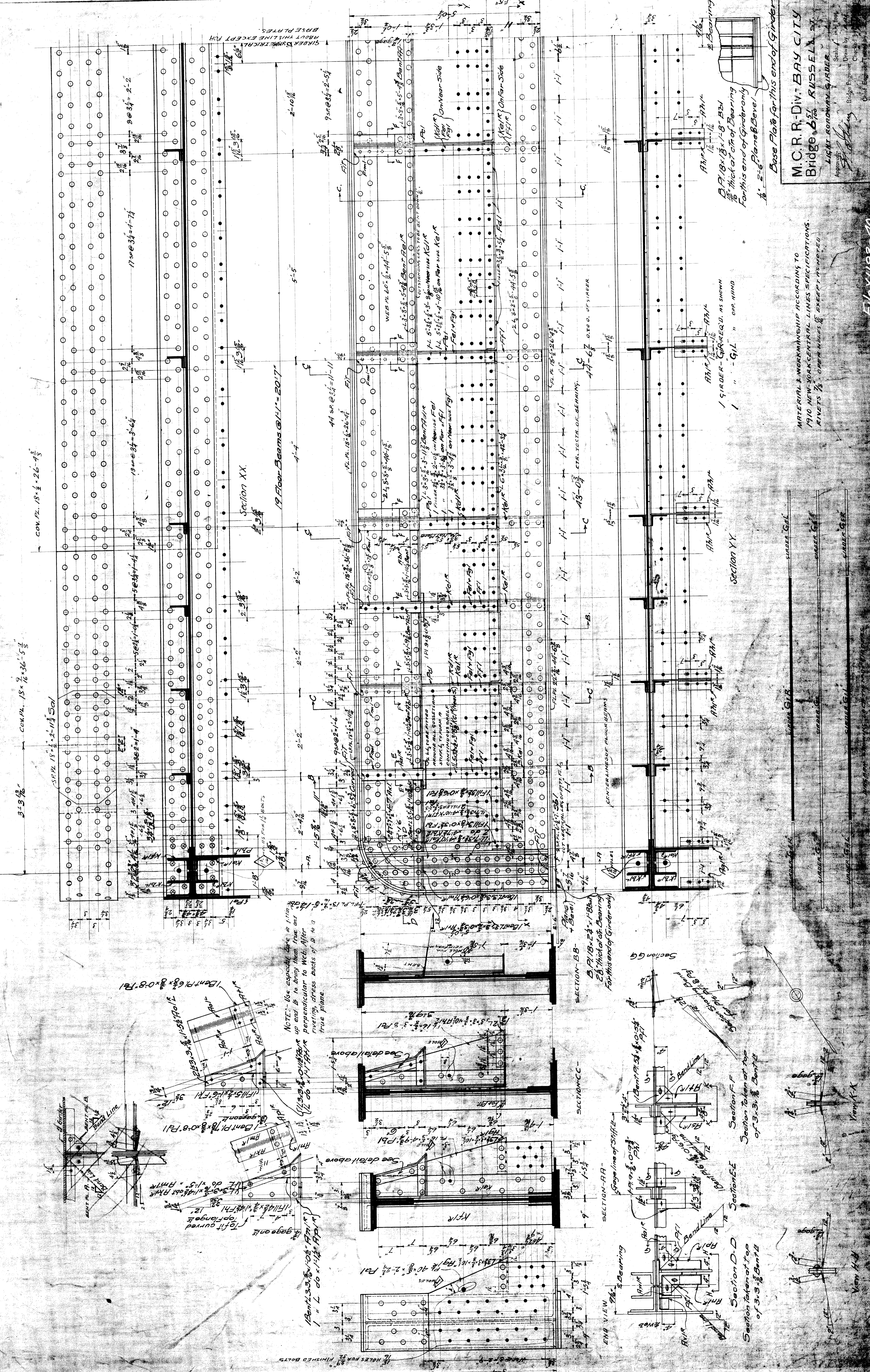


Bars B 1'-1" dia. between floor beams.
 Straight - Bent ends alternate

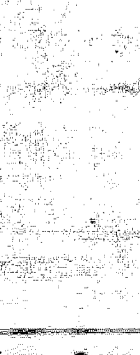
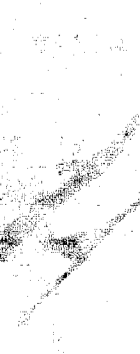
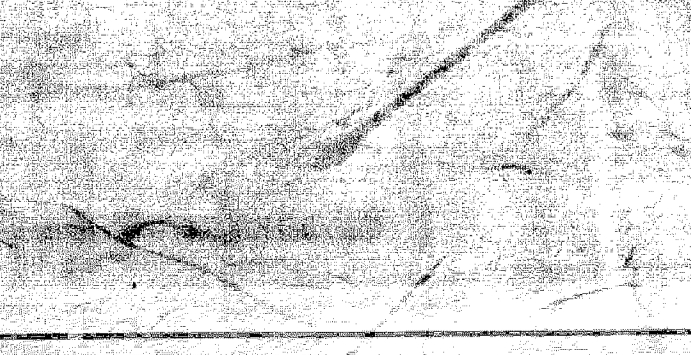
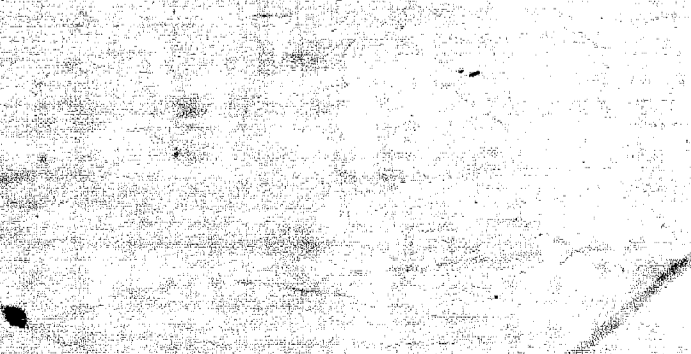
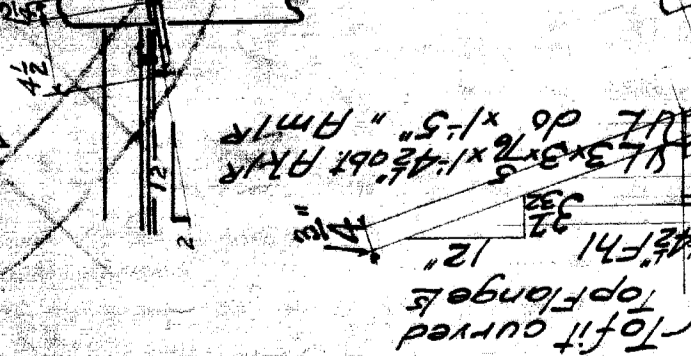
Section X-X
 Scale 1/4" = 1'-0"



Cement 3 sand not less than 2" max. spacing
 Poultry netting



NOTE: Use especially care in fitting up end B to bring them true and perpendicular to Web. After riveting, dress ends of B to a true plane.



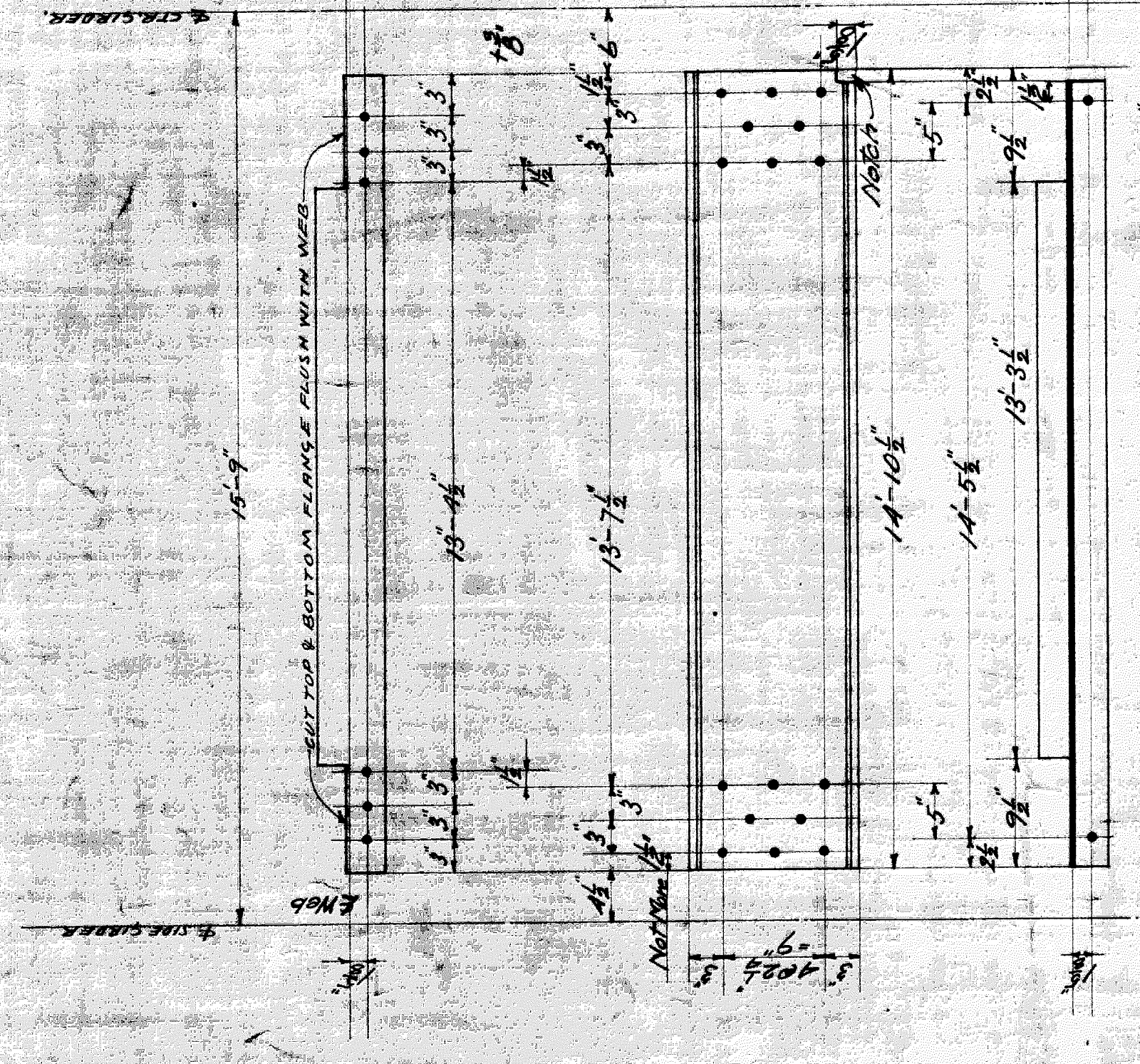
M.C.R.R. DIV. BAY CITY
Bridge 651 RUSSELL ST
LIGHT FORWARD GIRDER
Scale: 1/8" = 1'-0"
Drawn by: [Signature]
Checked by: [Signature]
1910 NEW YORK CENTRAL LINES SPECIFICATIONS.
RIVETS 3/8" OPEN HOLES 5/8" EXCEPT AS NOTED

MATERIAL & WORKMANSHIP ACCORDING TO
1910 NEW YORK CENTRAL LINES SPECIFICATIONS.
RIVETS 3/8" OPEN HOLES 5/8" EXCEPT AS NOTED

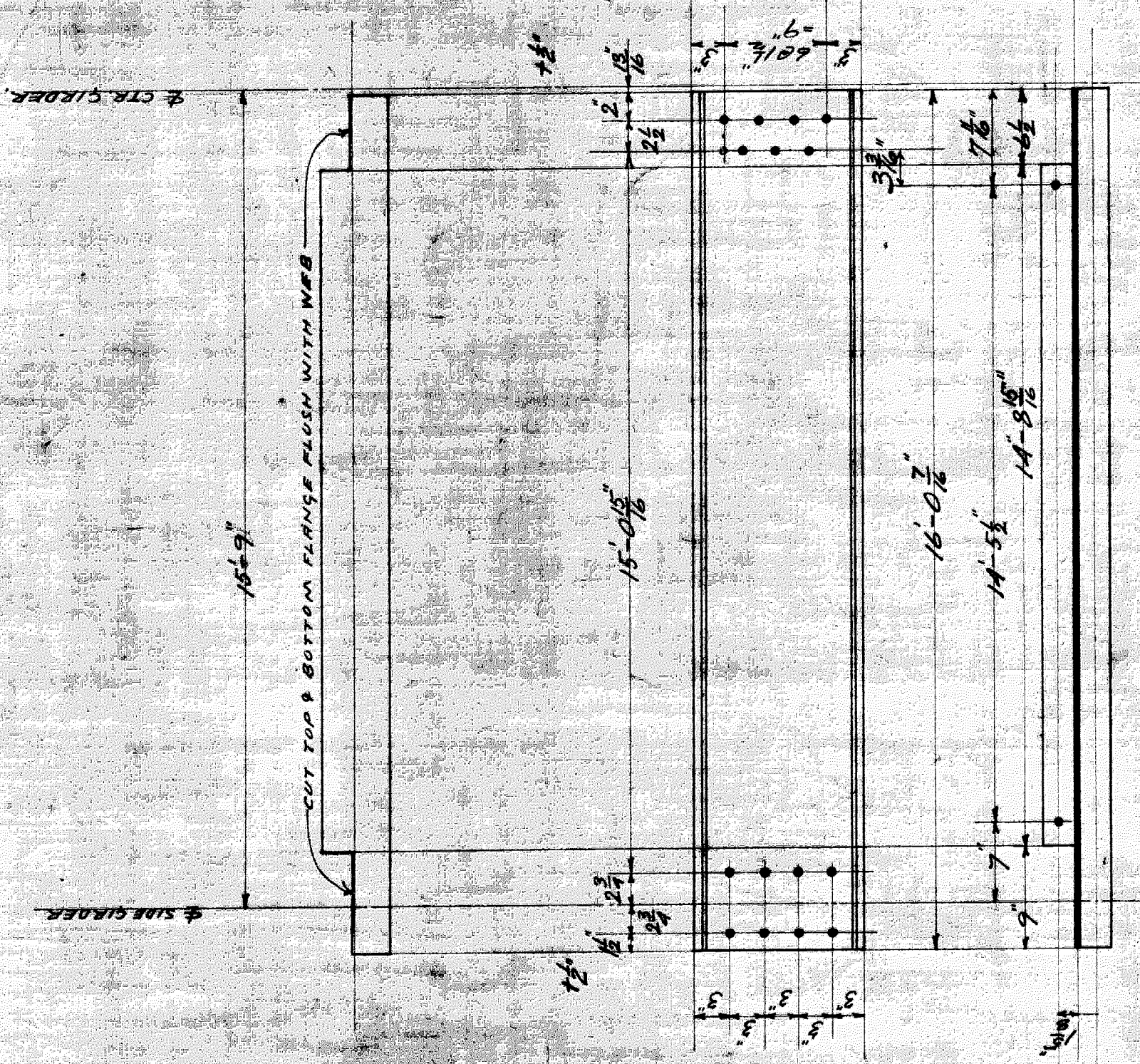
SECTION XX
19 Floor Beams @ 1' = 20.7"
SECTION YY
SECTION ZZ

SECTION-AA
SECTION-BB
SECTION-CC
SECTION-DD
SECTION-EE
SECTION-FF

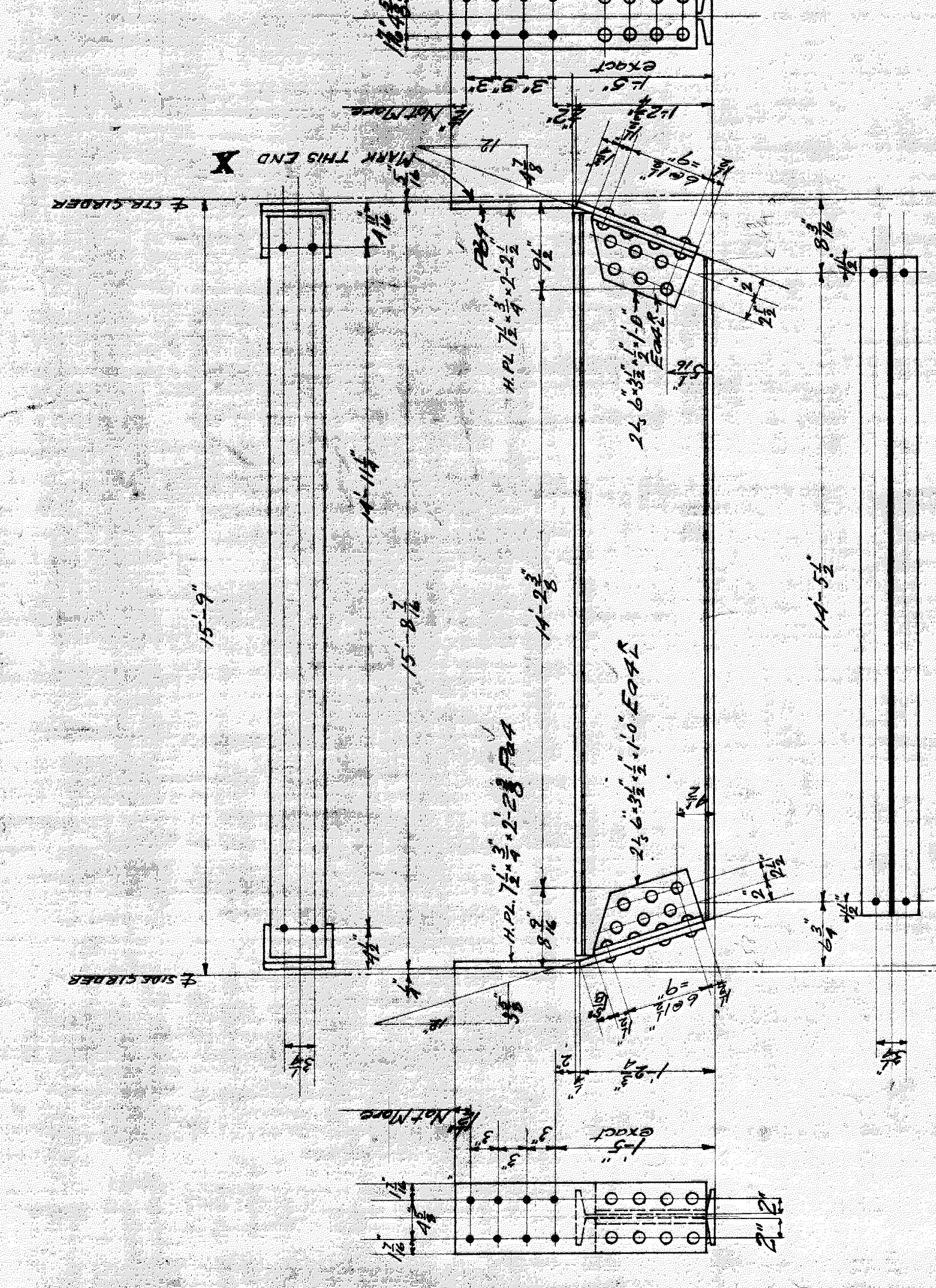
File X93-40



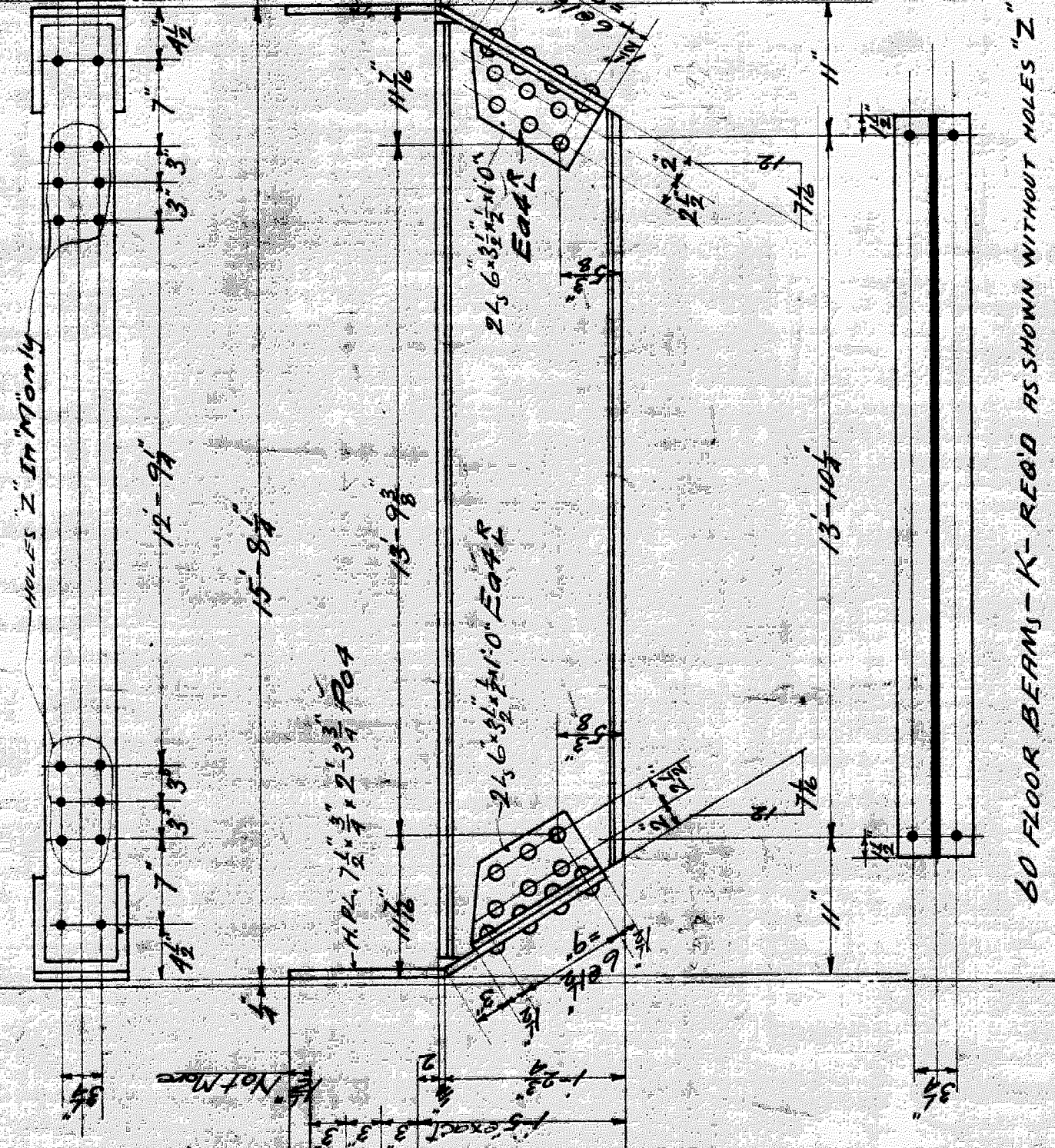
4 FLOOR BEAMS-D - REQ'D 15'-60" I 14-10 1/2



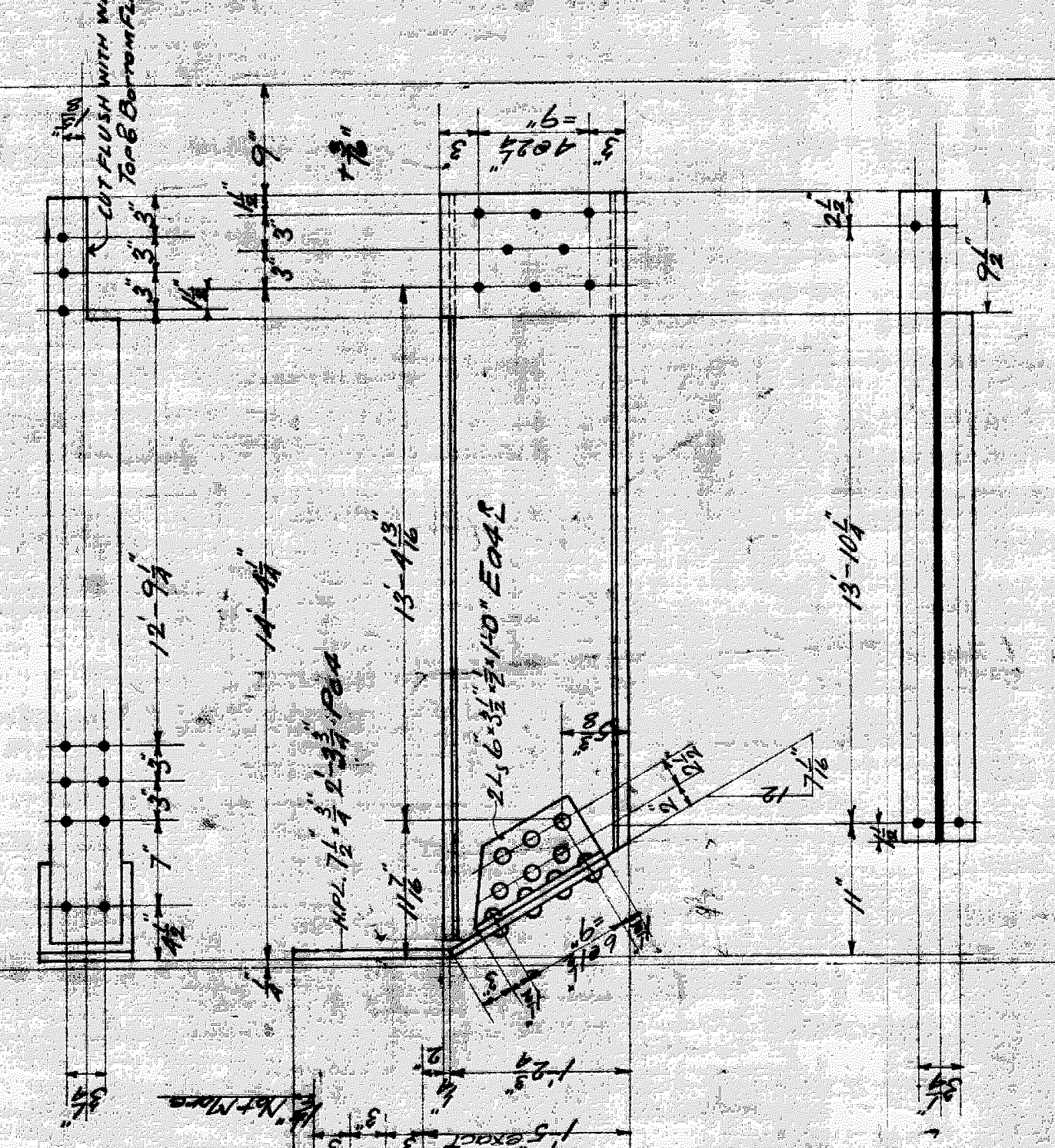
2 FLOOR BEAMS-F - REQ'D AS SHOWN 15'-60" I 16-0 1/2



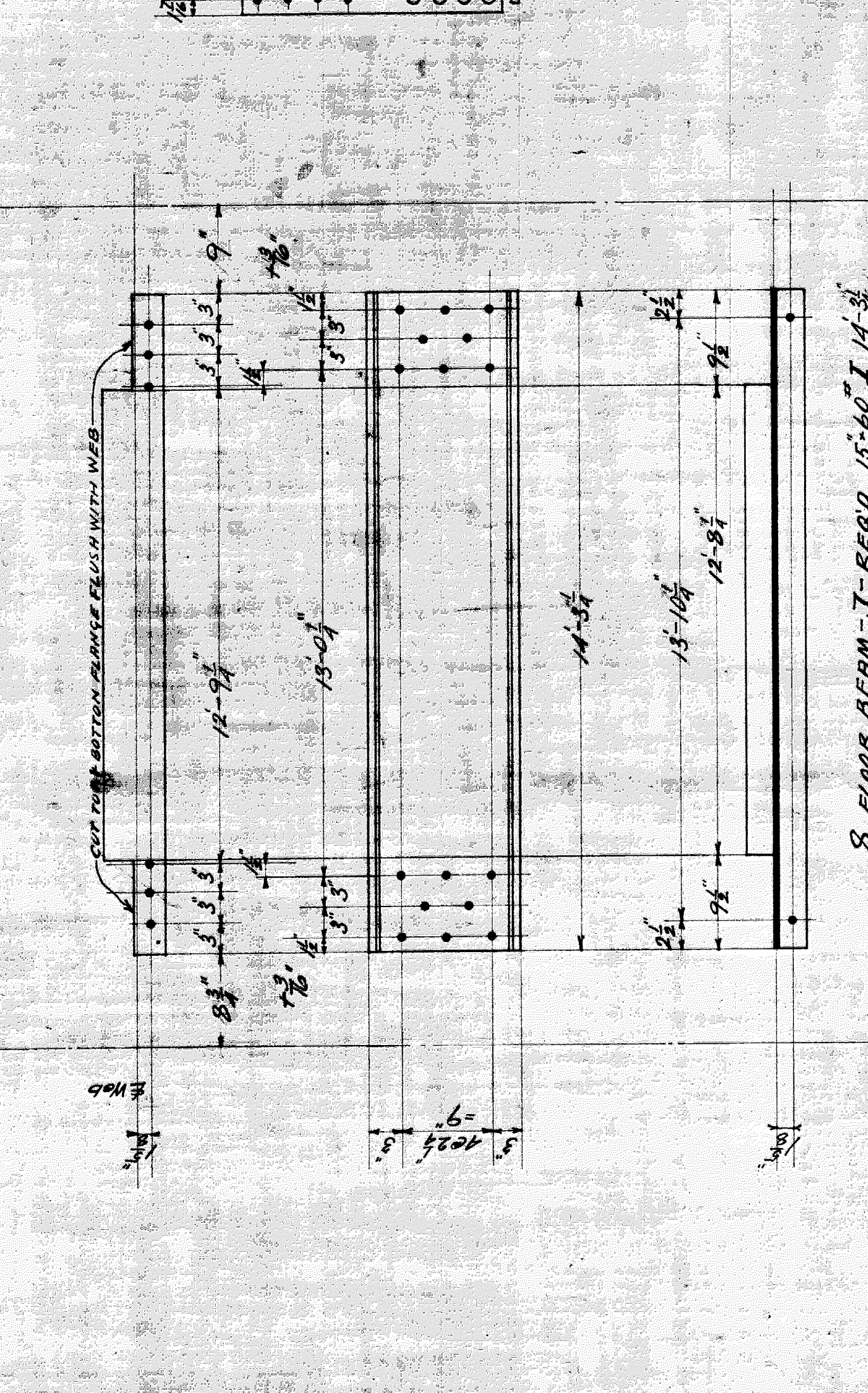
36 FLOOR BEAMS-E - REQ'D 15'-60" I 15-5 1/2



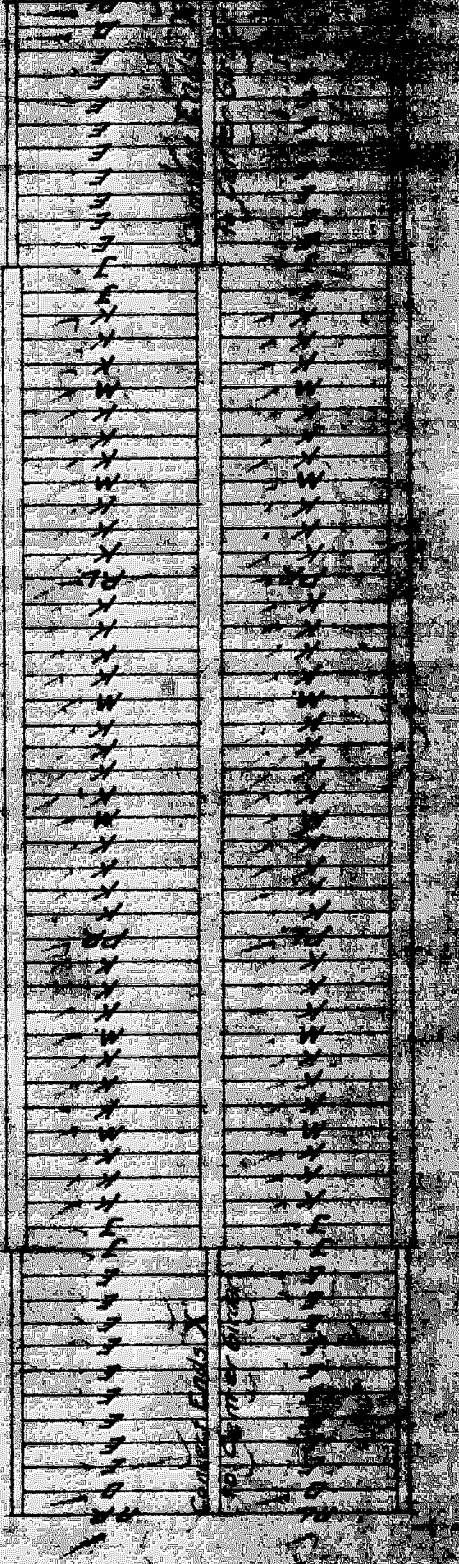
2 FLOOR BEAM-K - REQ'D AS SHOWN WITHOUT HOLES 15'-60" I 15-5 1/2



2 FLOOR BEAM-M - REQ'D AS SHOWN 15'-60" I 14-10 1/2



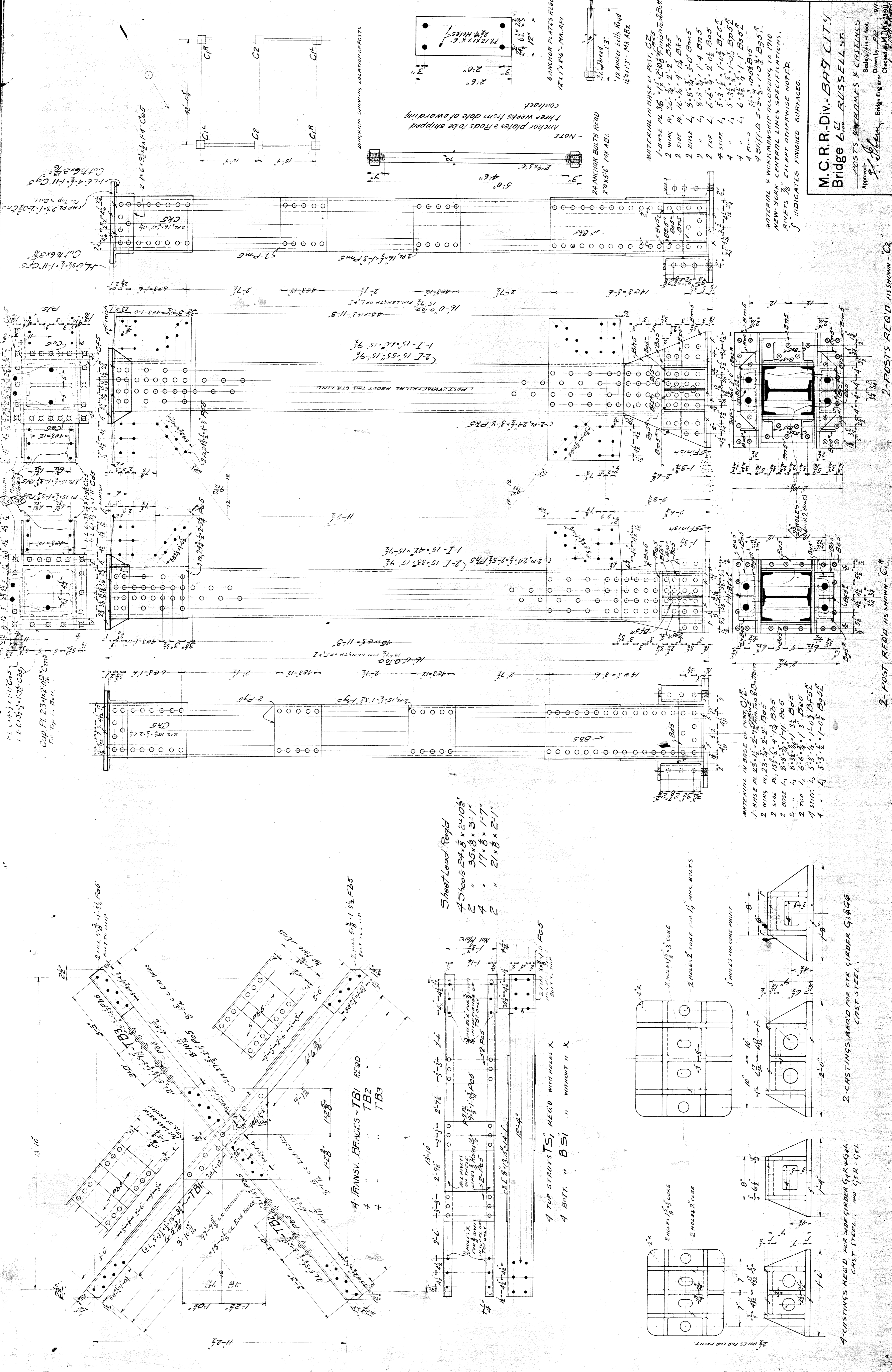
2 FLOOR BEAM-O - REQ'D AS SHOWN 15'-60" I 14-10 1/2



M. C. R. R. - Div. - BRIDGE CITY
 Bridge 655 AVENUE ST.

INTERNATIONAL WORKMANSHIP ACCORDING TO
 1910 AMERICAN CENTRAL LINES SPECIFICATIONS
 TOLERANCES TO BE MAINTAINED
 ALL DIMENSIONS TO BE MAINTAINED

W. B. BROWN
 CIVIL ENGINEER



NOTE -
Anchor plates & rods to be shipped three weeks from date of ordering

ANCHOR BOLTS REQ'D
2" X 5" MK AB1

GANCHOR PLATES REQ'D
12" X 12" X 3/4" MK API

MATERIAL IN BASE OF POST, C2

- 1-BASE PL 36" X 1/2" X 2'-10 3/4" FINISH TO BE 685 R
- 2 WINK PL 24" X 3/4" X 2'-2" B75
- 2 SIDE PL 12" X 1/2" X 4'-14" B75
- 2 BASE L 8" X 5 1/2" X 3'-0" B75
- 2 " L 8" X 5 1/2" X 1'-4" B75
- 4 TOP L 5" X 3 1/2" X 2'-0 1/2" B75
- 4 STIFF L 5" X 3 1/2" X 1'-0 1/2" B75
- 4 " L 5" X 3 1/2" X 1'-0 1/2" B75
- 4 " L 5" X 3 1/2" X 1'-0 1/2" B75
- 4 STIFF L 5" X 3 1/2" X 1'-0 1/2" B75 R

MATERIAL & WORKMANSHIP ACCORDING TO 1910 NEW YORK CENTRAL LINES SPECIFICATIONS.

RIMETS 7/8" EXCEPT OTHERWISE NOTED.

f INDICATES FINISHED SURFACES.

M.C.R.R.-Div.-BAG CITY
Bridge 6700 RUSSELL ST.

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

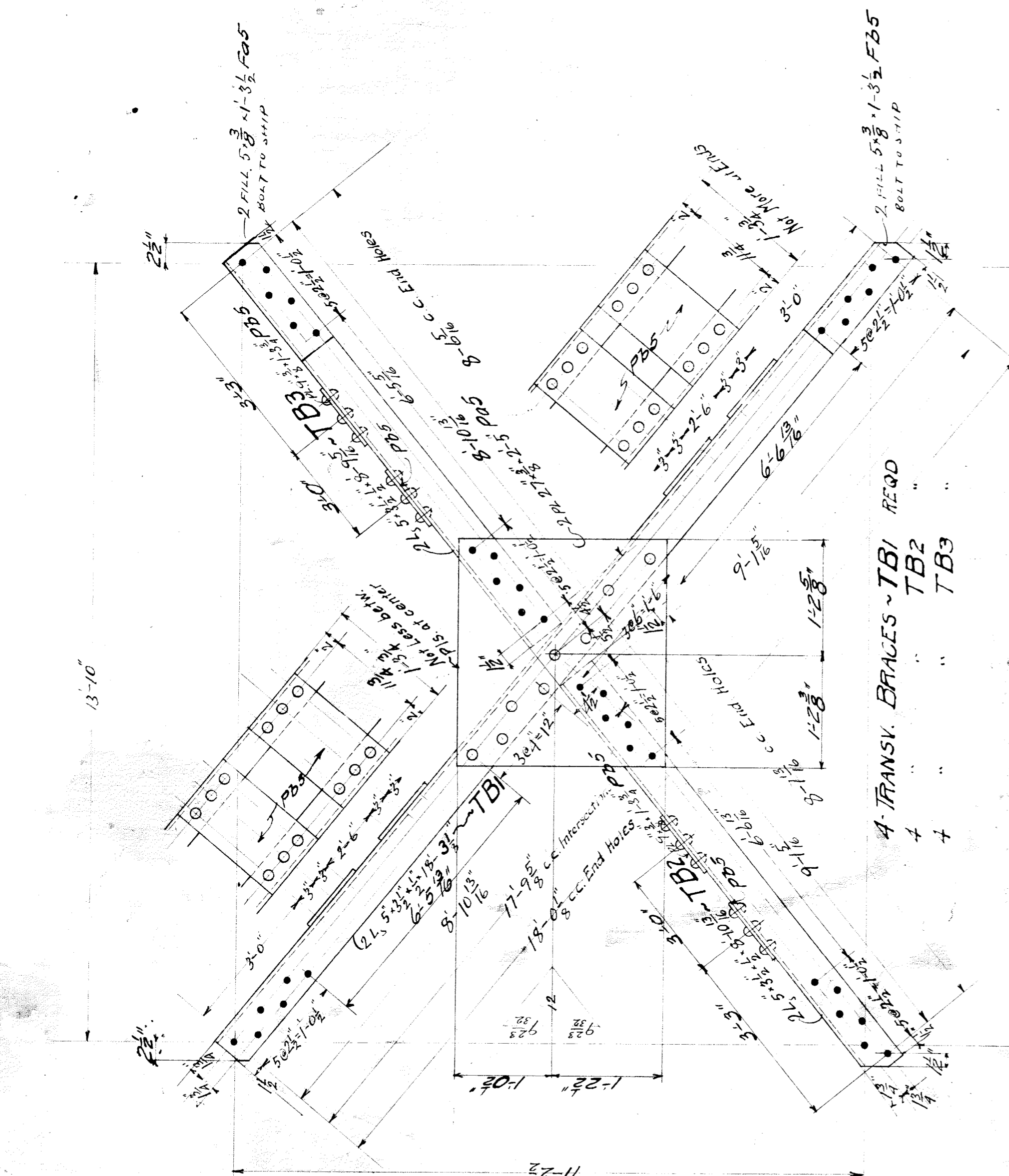
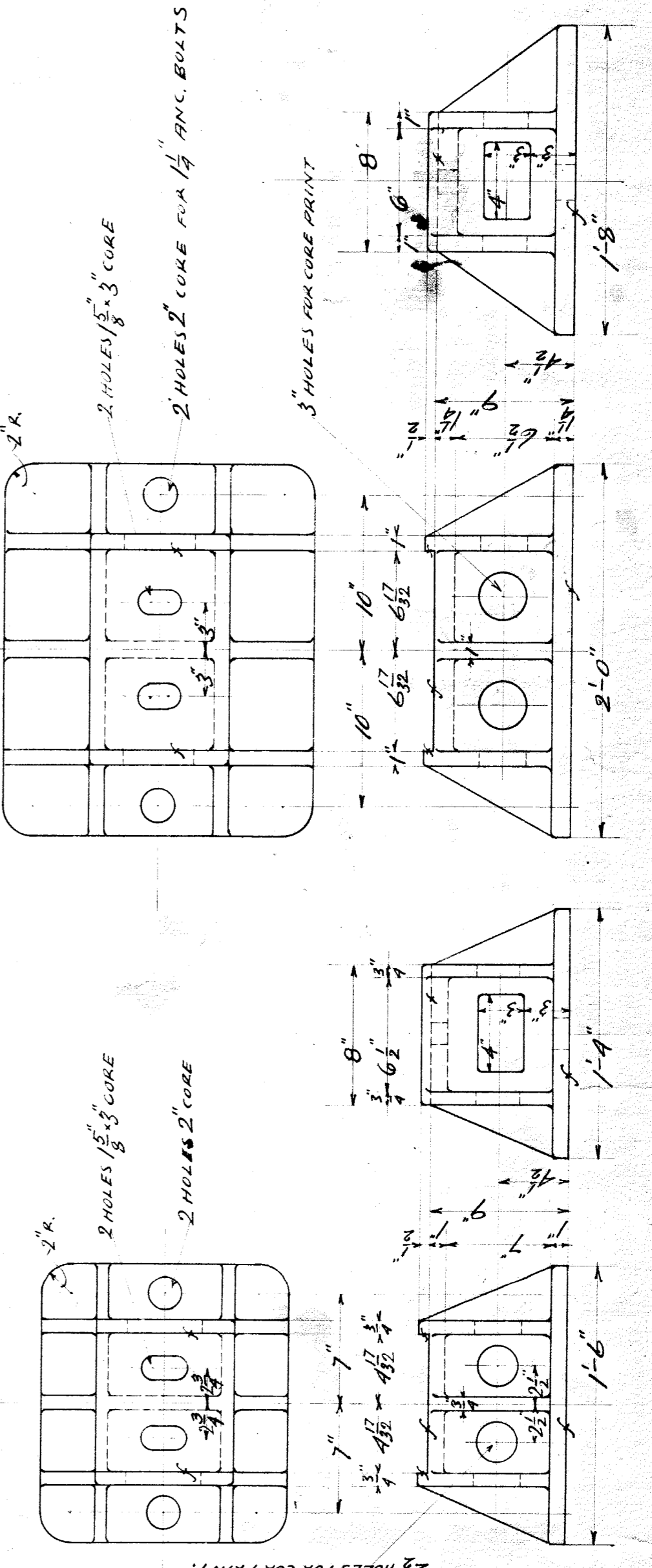
Approved: _____
 Bridge Engineer: _____
 Checked by: _____
 1911

1-L 6" X 3/4" X 1'-11" CG5
 1-L 6" X 3/4" X 1'-28" CGD
 Cop Pl. 23" X 142" O.B. CM5
 Fin. Top & Bolt.

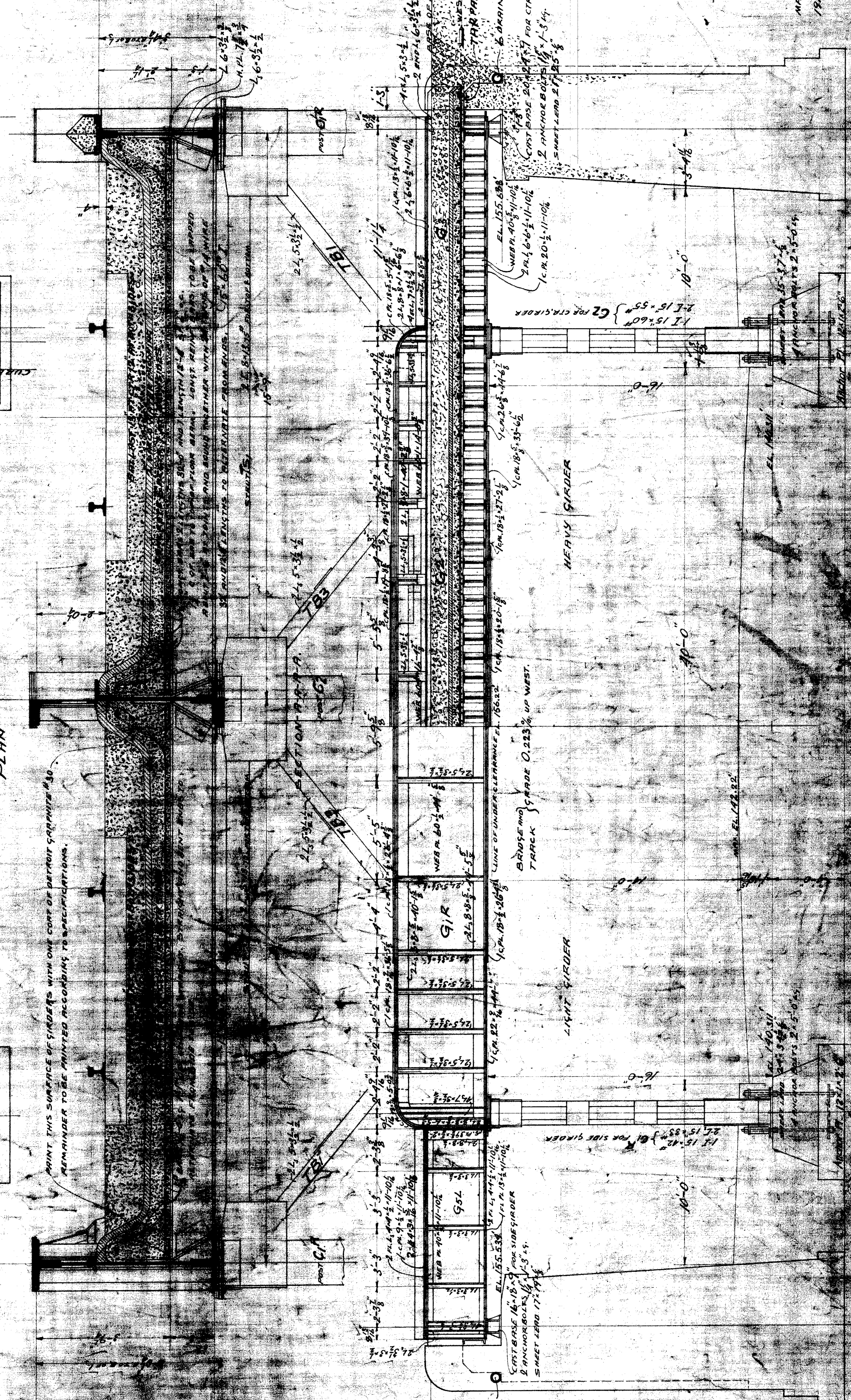
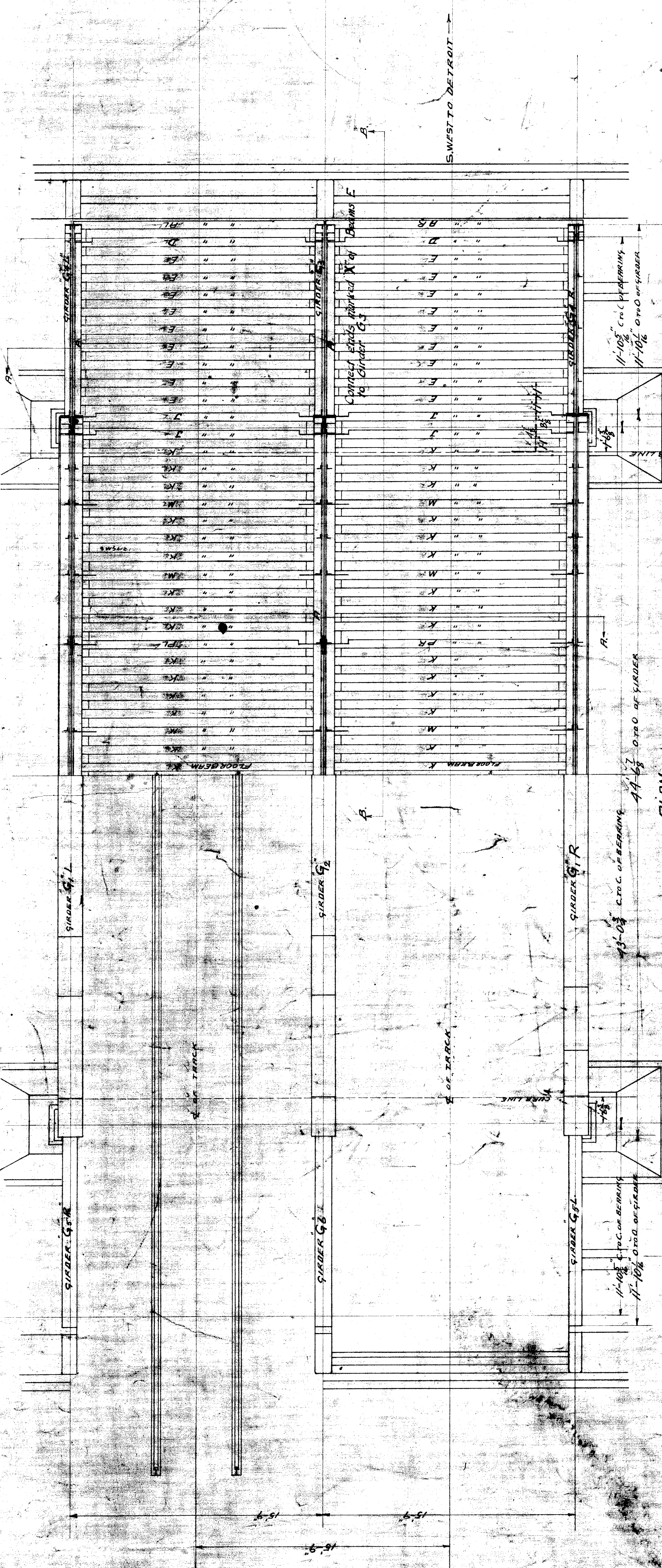
Sheet Lead Req'd

- 4 Sheets 24" X 8" X 2'-10 3/4"
- 2 " 35" X 8" X 3'-1"
- 2 " 17" X 8" X 1'-7"
- 2 " 21" X 8" X 2'-1"

1 TOP STRUTS (TS1) REQ'D WITH HOLES X
 1 BOTTOM (BS1) " WITHOUT " X



2-POST REQ'D AS SHOWN - C1
 2- " " OPA HANO - C1



PORTIONS OF ALL GIRDERS AND BEAMS IN CONTACT WITH CONCRETE
TO RECEIVE COAT OF DETROIT GRAPHITE #30
REMAINER TO BE PAINTED ACCORDING TO SPECIFICATIONS

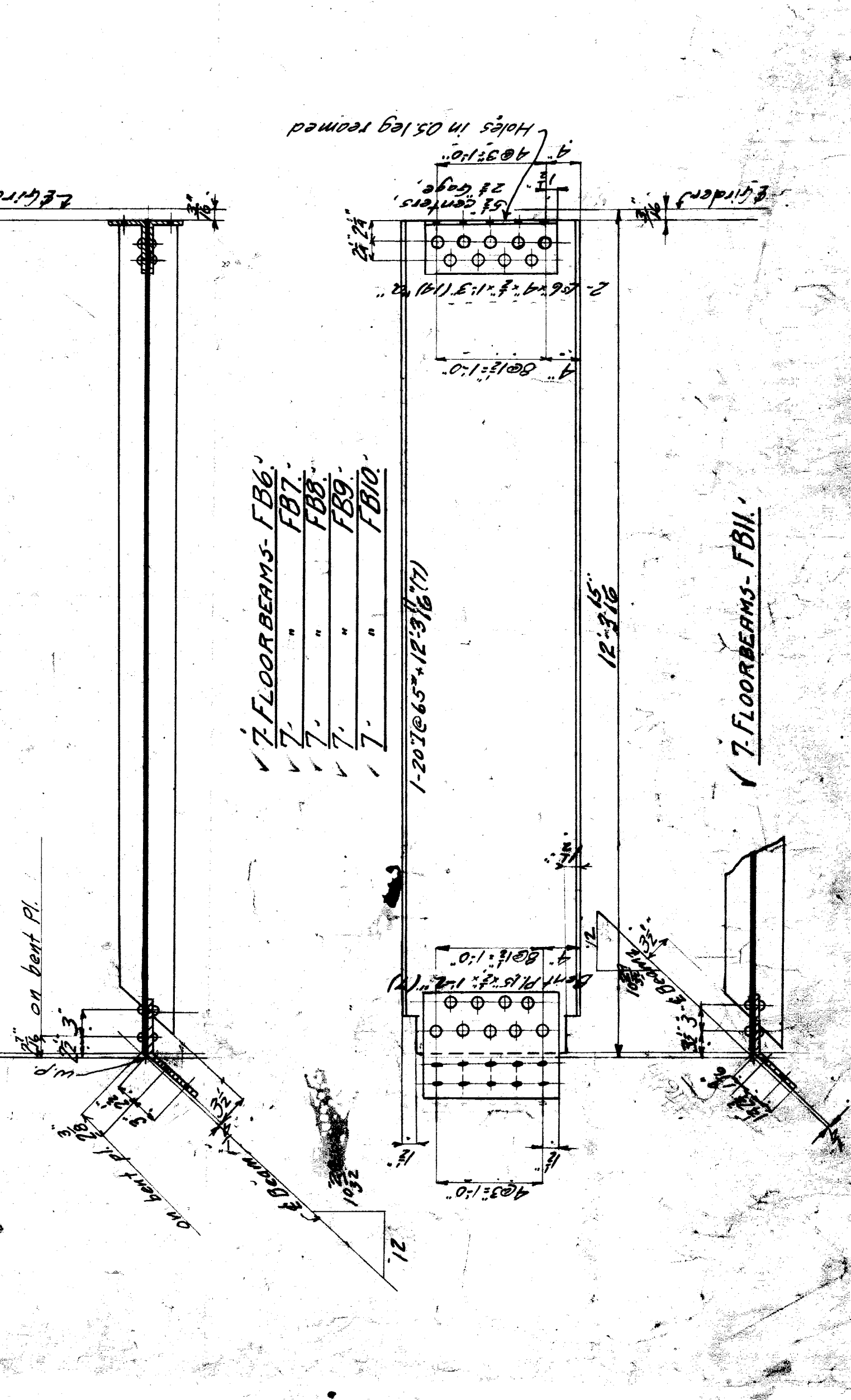
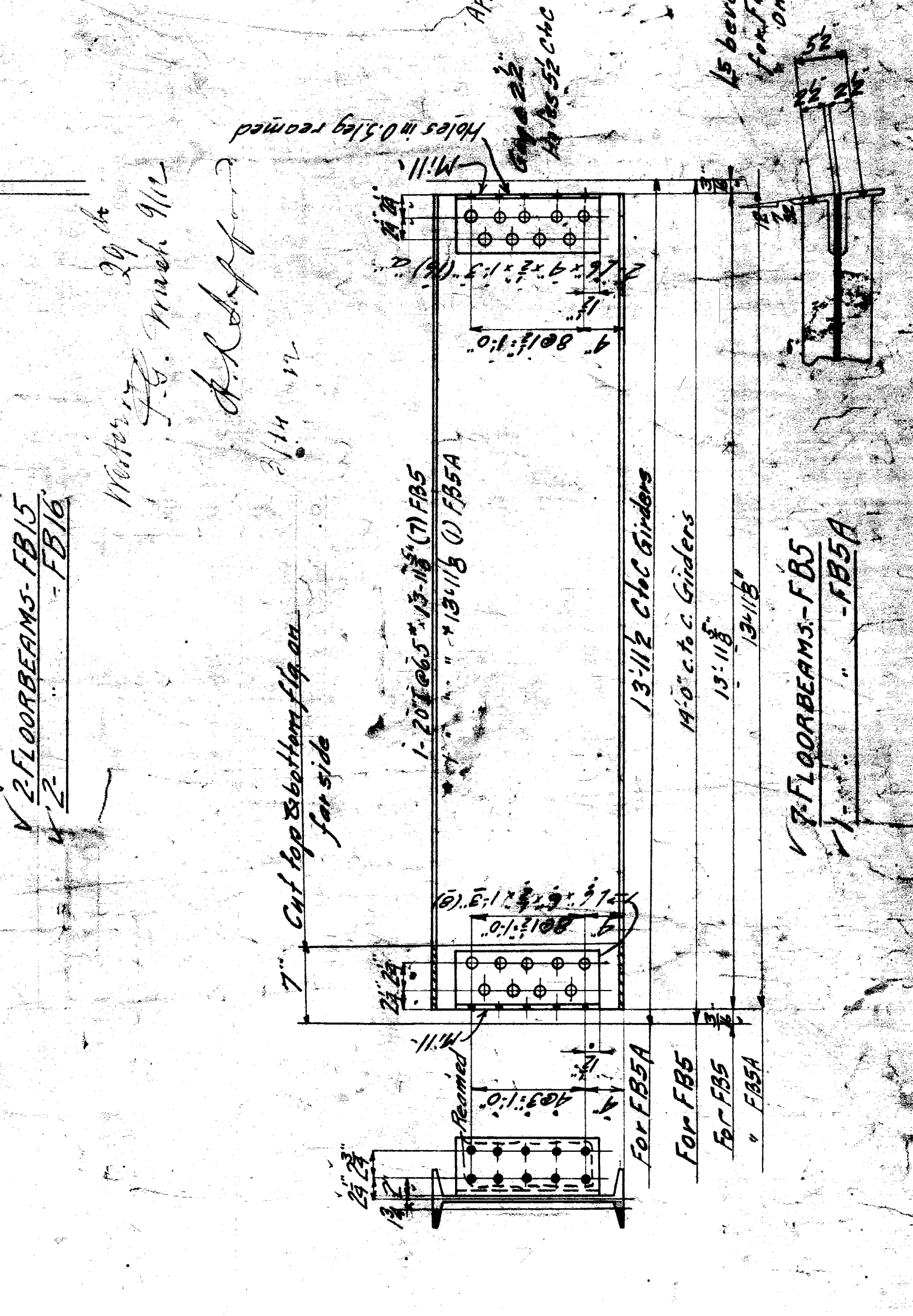
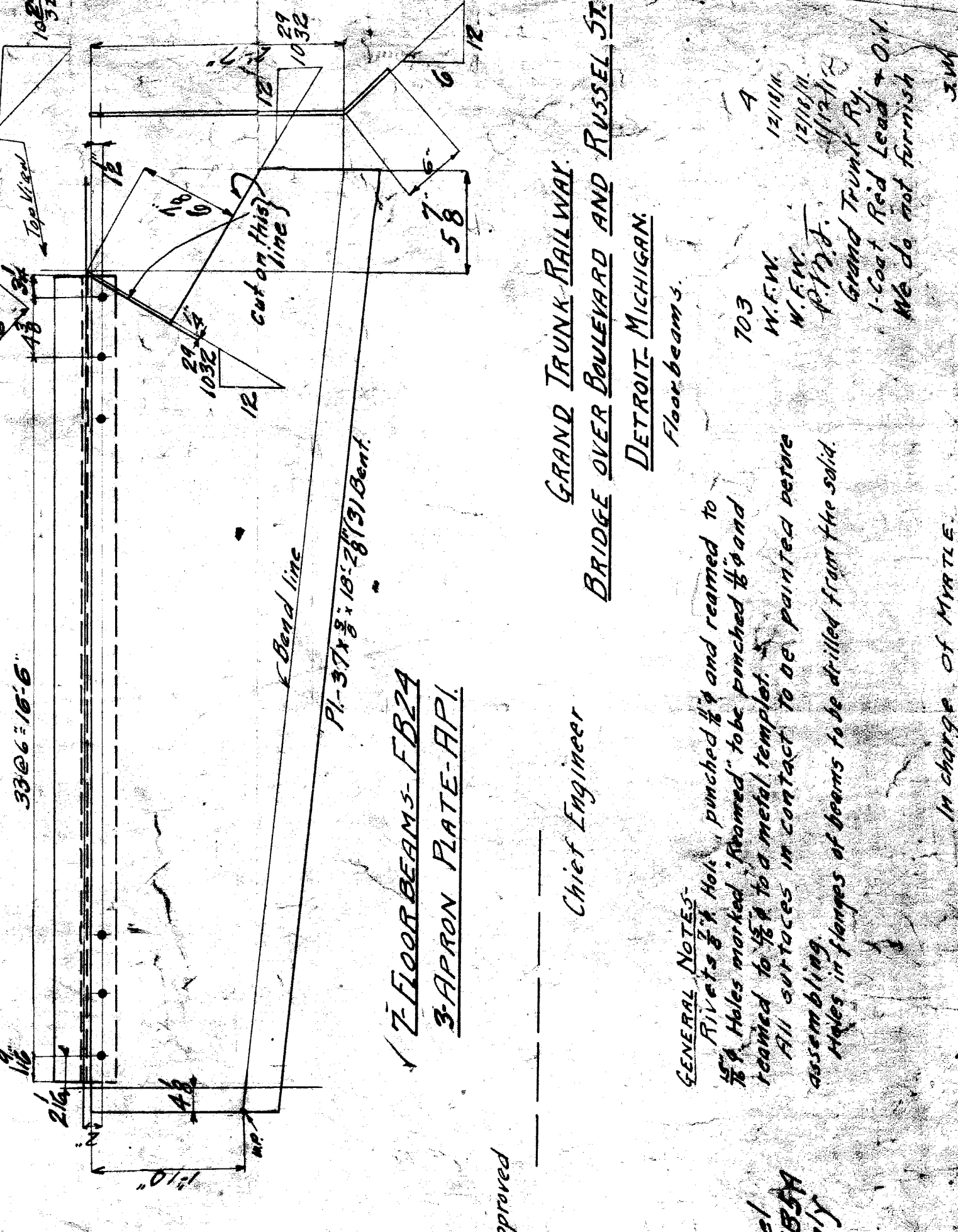
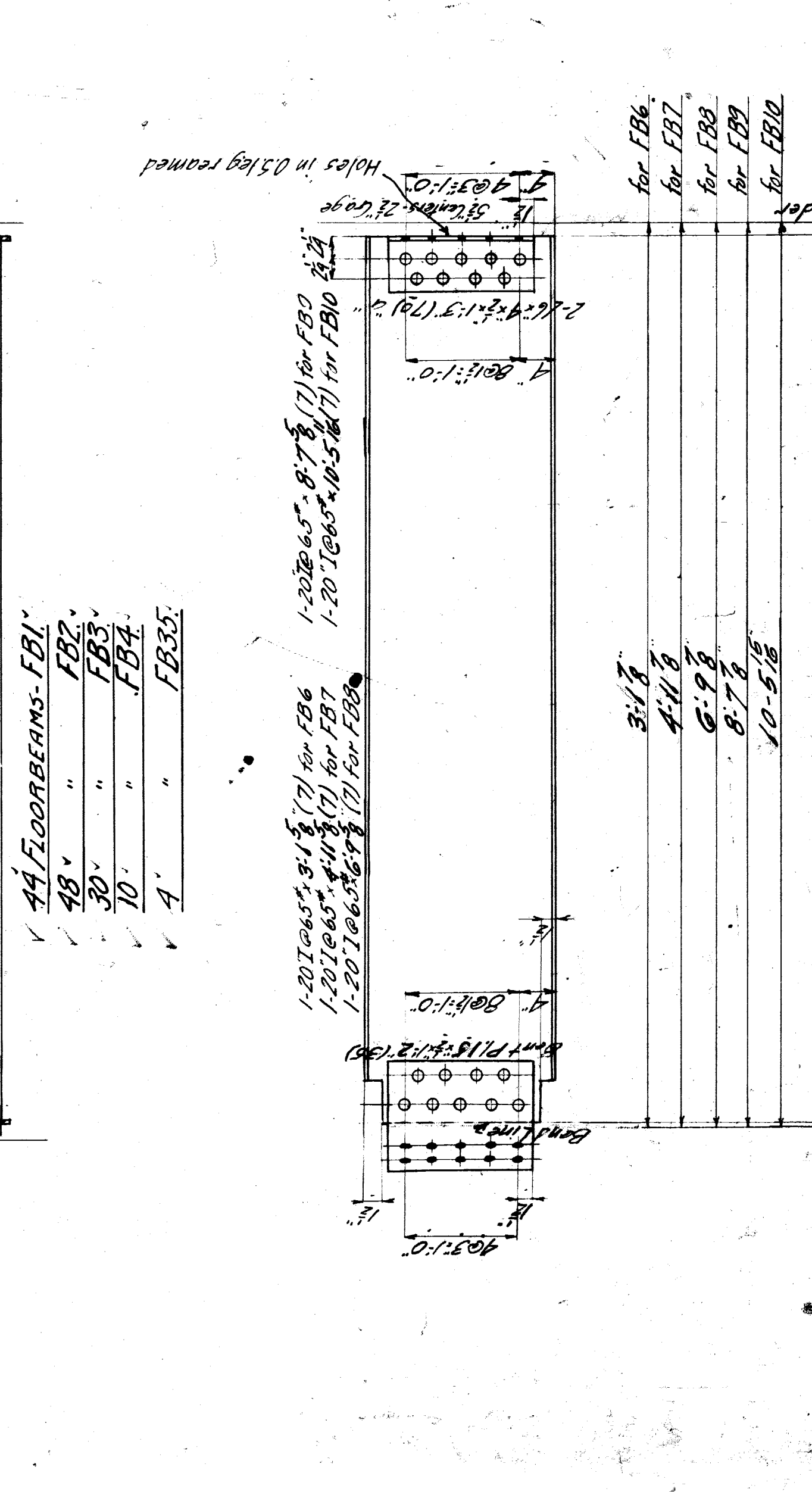
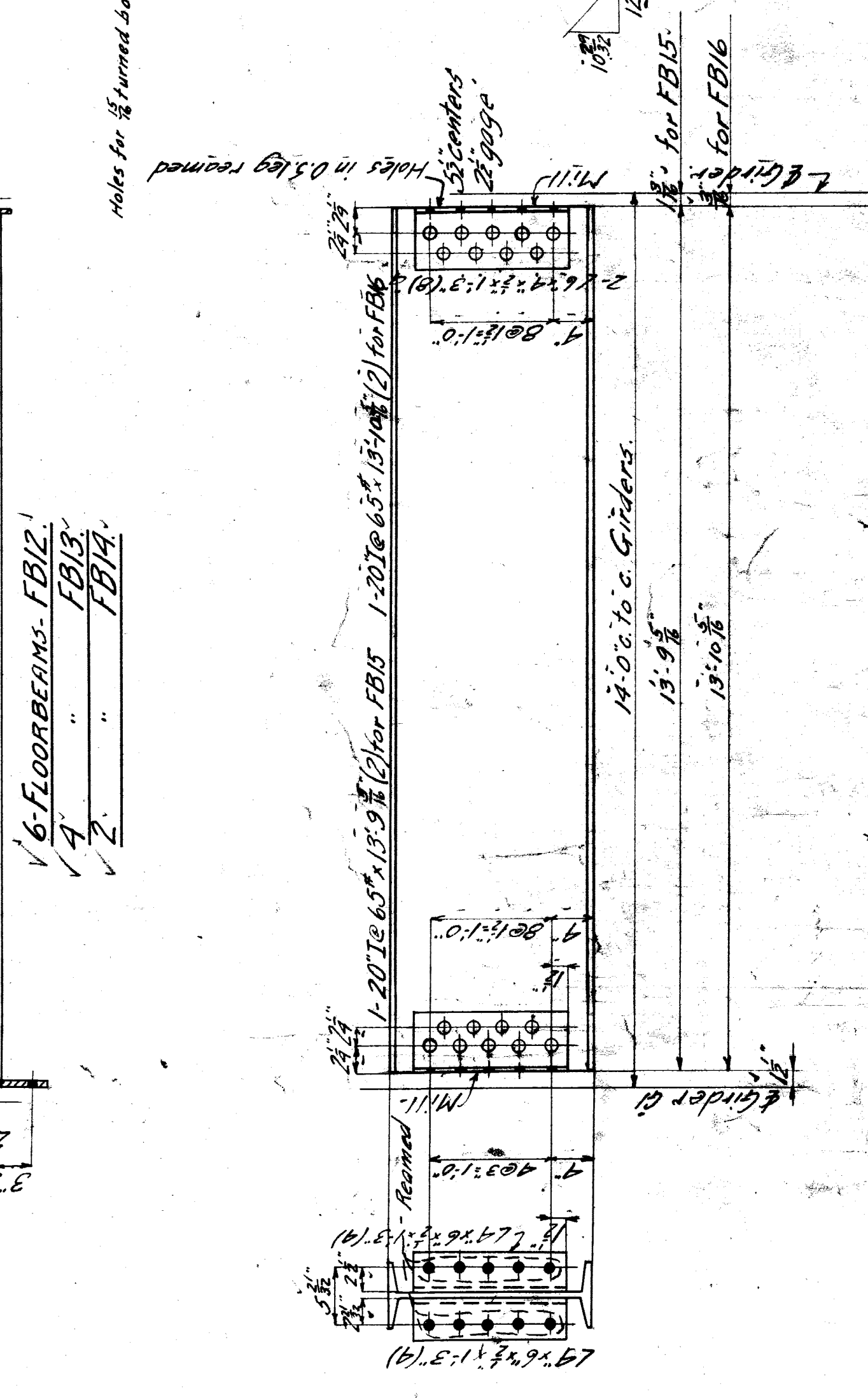
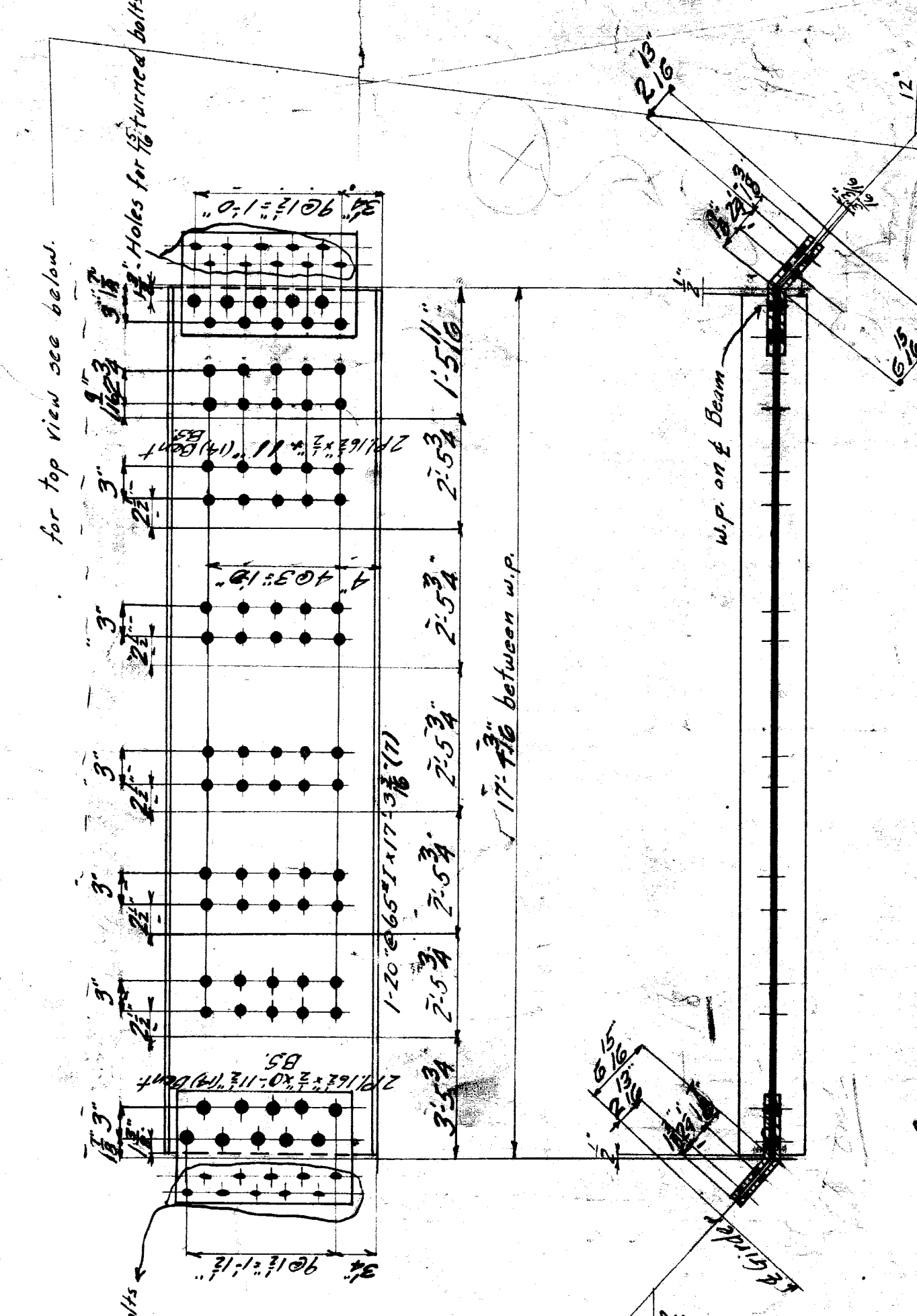
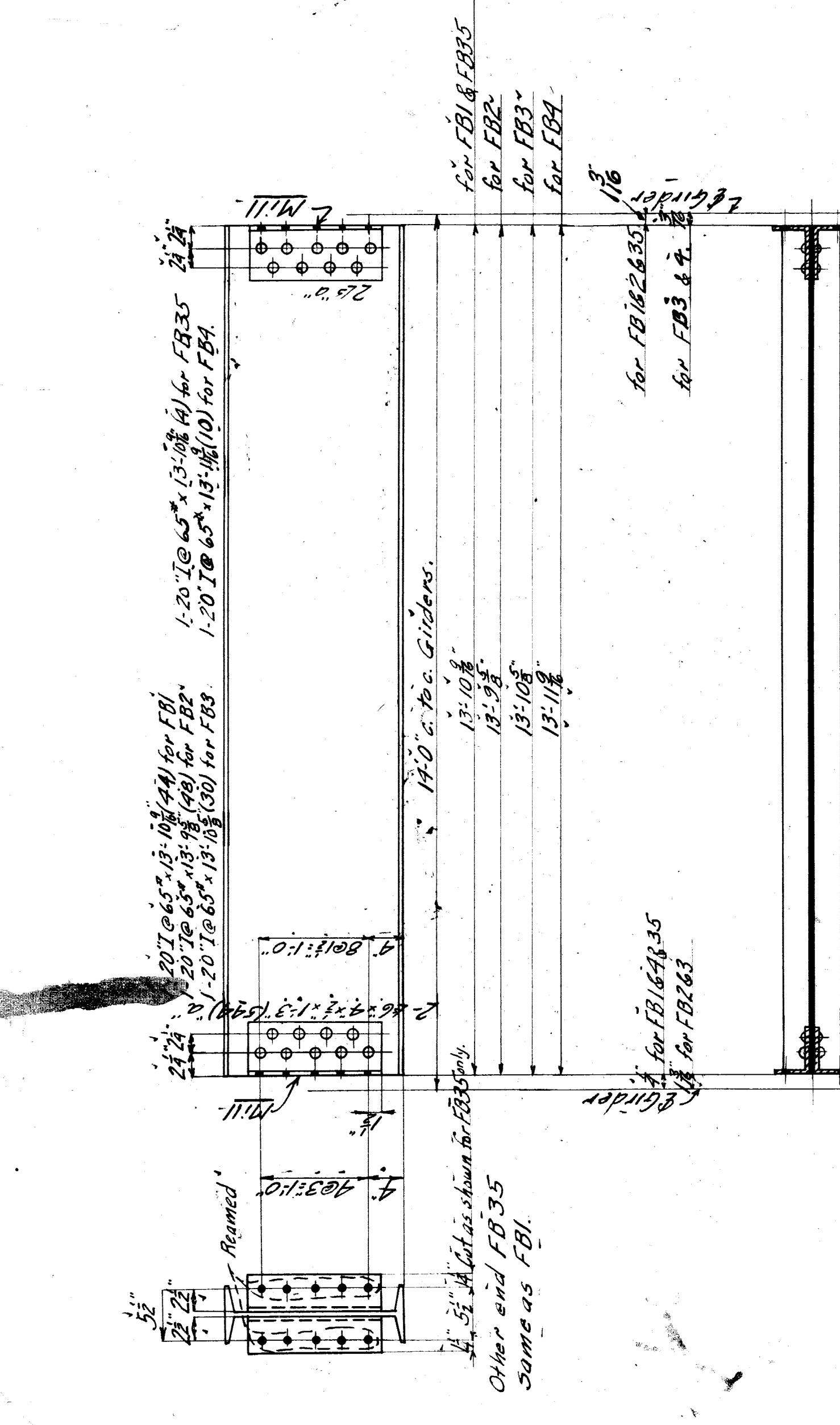
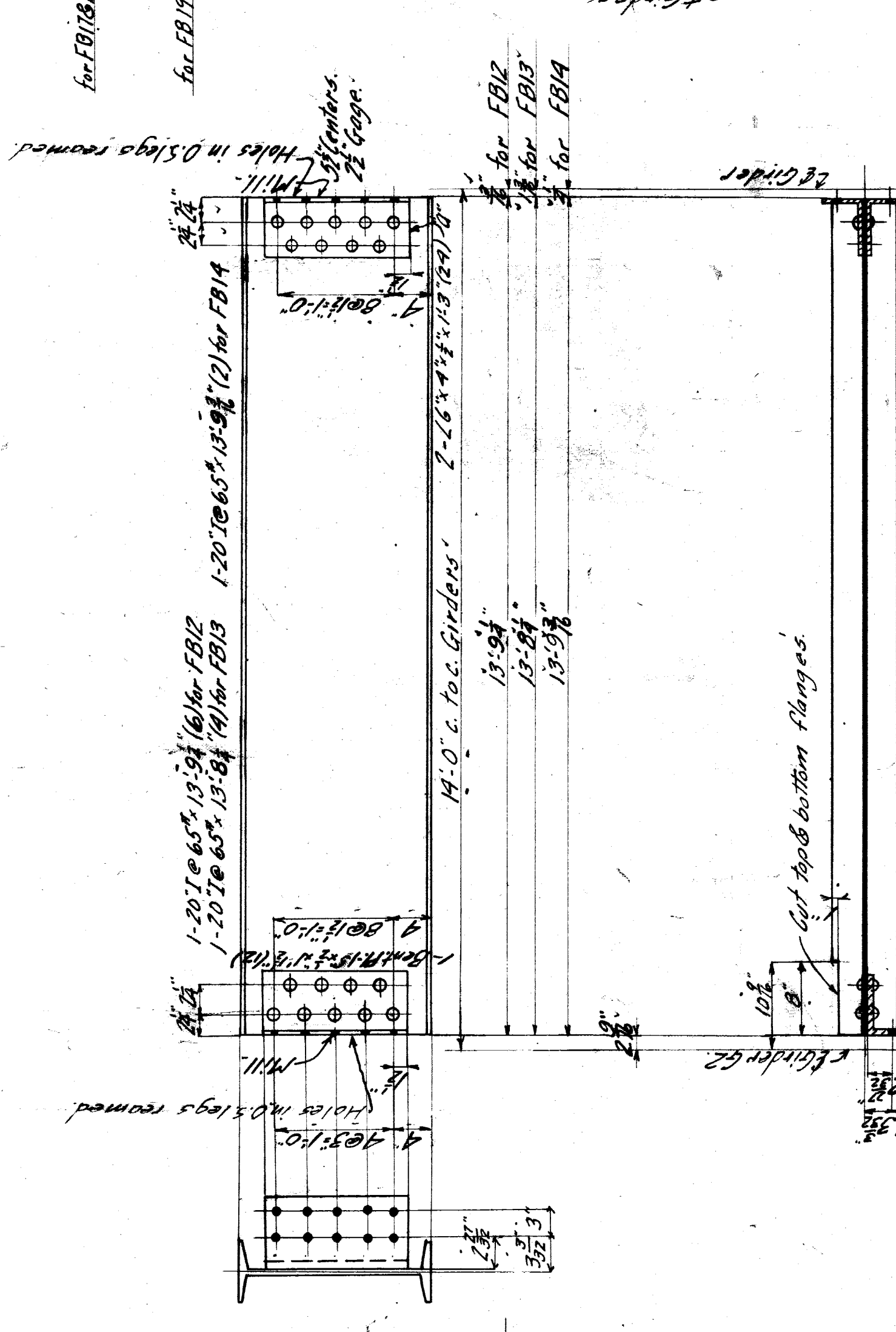
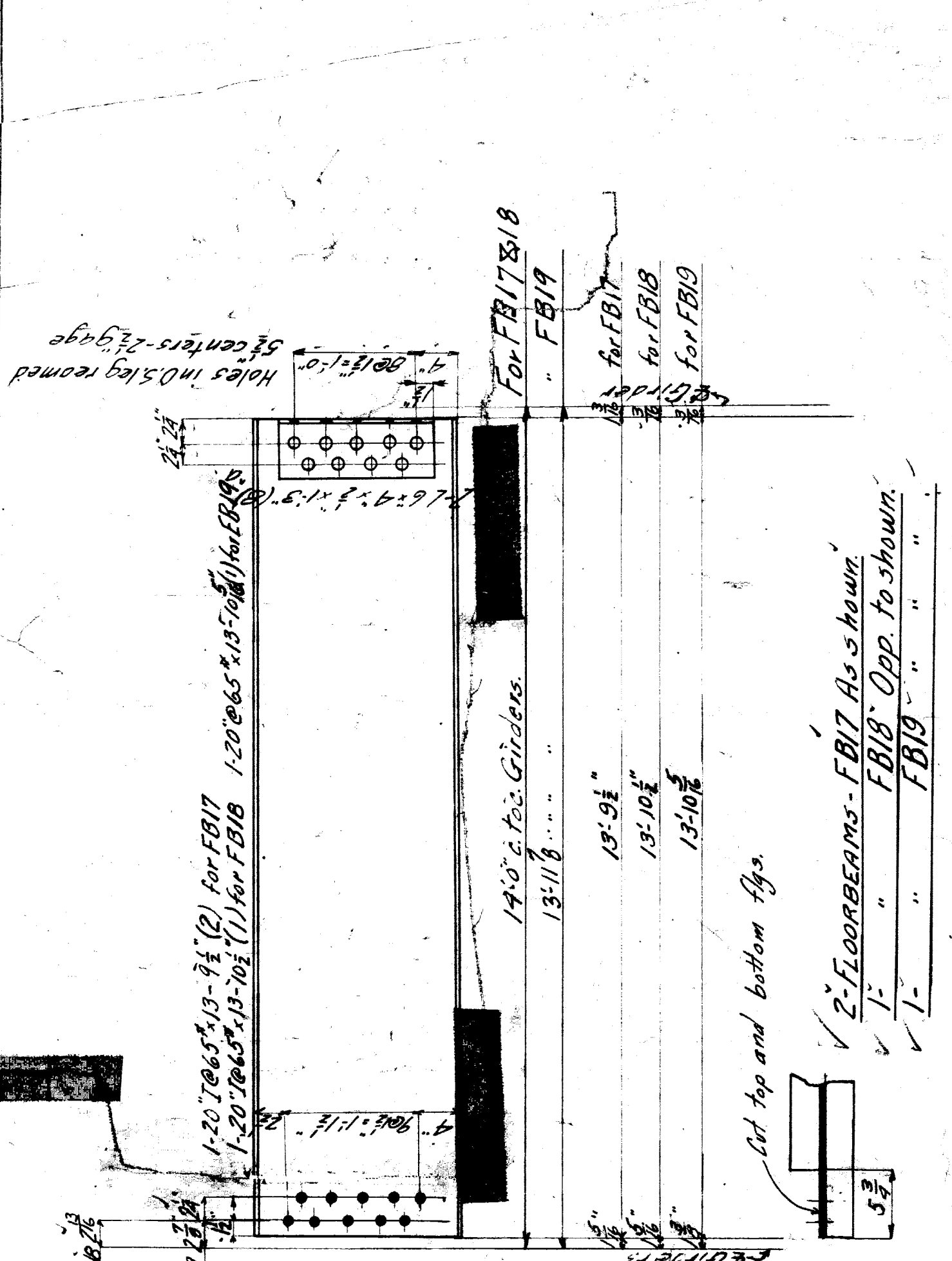
PAINT THIS SURFACE OF GIRDERS WITH ONE COAT OF DETROIT GRAPHITE #30
REMAINER TO BE PAINTED ACCORDING TO SPECIFICATIONS.

- LIST OF DRAWINGS
- 1 LIGHT ROADWAY GIRDERS ... GIR 1 G1L 134 BARS LONG 3 3/8" x 5/8" LONG
- 2 HEAVY " " " GIR 2 G2 " 8" x 12 1/2" "
- 3 LIGHT MAINSIDEWALK " GIR 3 G3 R, G4 L, G5 R, G6 L 134 " PARTIALLY 1/2" x 6" LONG
- 4 FLOOR BEAMS
- 5 LIGHT HEAVY POSTS AND BEARINGS & FASTENINGS

MATERIAL & WORKMANSHIP ACCORDING TO
1810 NEW YORK CAPITAL LINES SPECIFICATION

M. C. R. R. DIV. - BAY-CITY
Bridge 656 RUSSELL ST.

GENERAL ENGINEER & ARCHITECT
As of 1900
A. J. RUSSELL
1810 NEW YORK CAPITAL BLDG., DETROIT, MICH.



GRAND TRUNK RAILWAY
BRIDGE OVER BULLWARD AND RUSSEL ST
DETROIT MICHIGAN
Floor beams.

Chief Engineer

Approved

GENERAL NOTES
1. All holes in 0.5 leg reamed to 1/2" diameter.
2. All surfaces in contact to be painted with assembly oil.
3. Holes in flanges of beams to be drilled from the solid.
4. 1-Coat Red Lead - 0.1
5. We do not furnish
6. In charge of Material

15' level
for FB11
only

Approved

Chief Engineer

GRAND TRUNK RAILWAY
BRIDGE OVER BULLWARD AND RUSSEL ST
DETROIT MICHIGAN
Floor beams.

Chief Engineer

Approved

GENERAL NOTES
1. All holes in 0.5 leg reamed to 1/2" diameter.
2. All surfaces in contact to be painted with assembly oil.
3. Holes in flanges of beams to be drilled from the solid.
4. 1-Coat Red Lead - 0.1
5. We do not furnish
6. In charge of Material

Approved

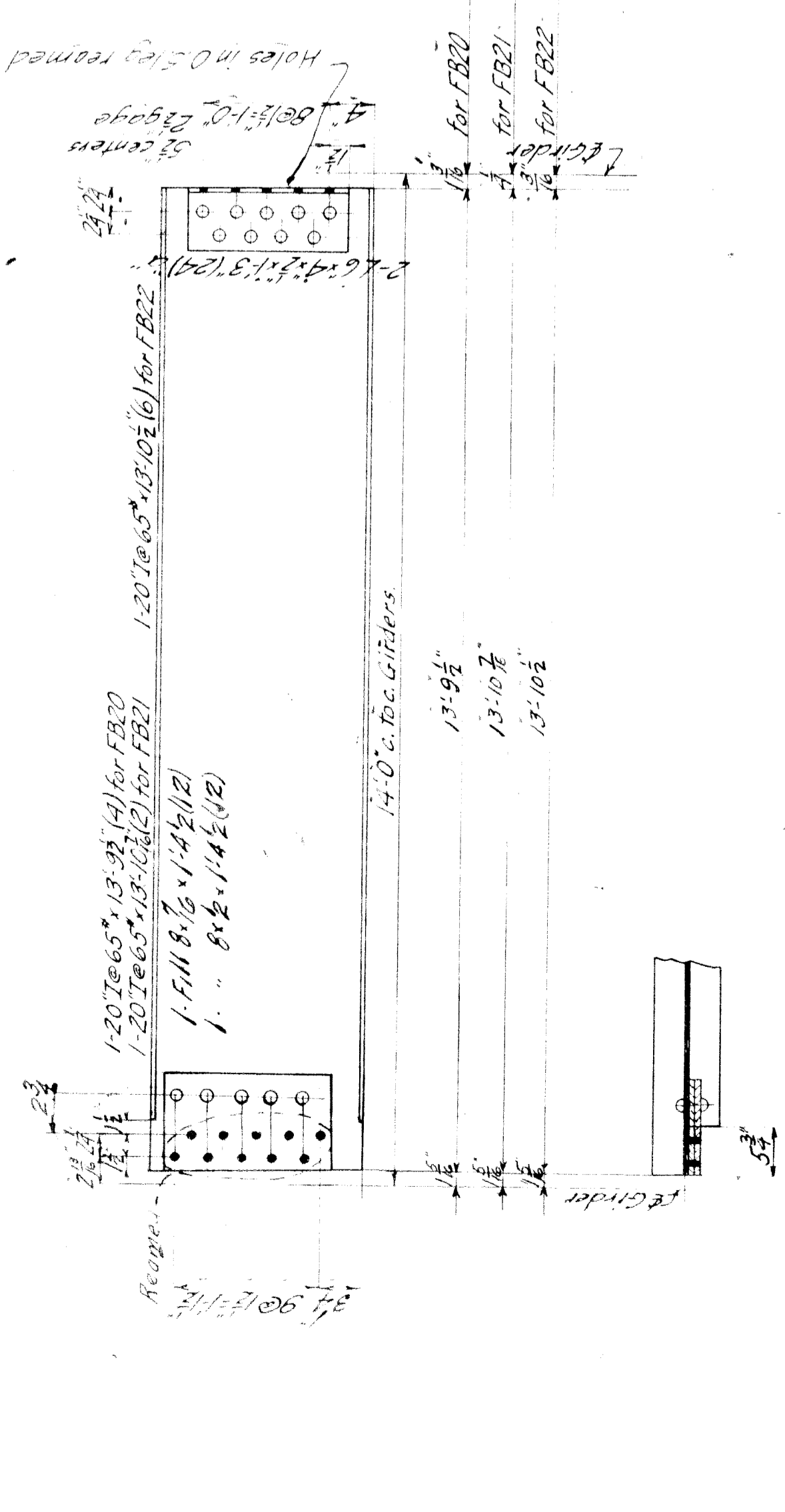
Chief Engineer

GRAND TRUNK RAILWAY
BRIDGE OVER BULLWARD AND RUSSEL ST
DETROIT MICHIGAN
Floor beams.

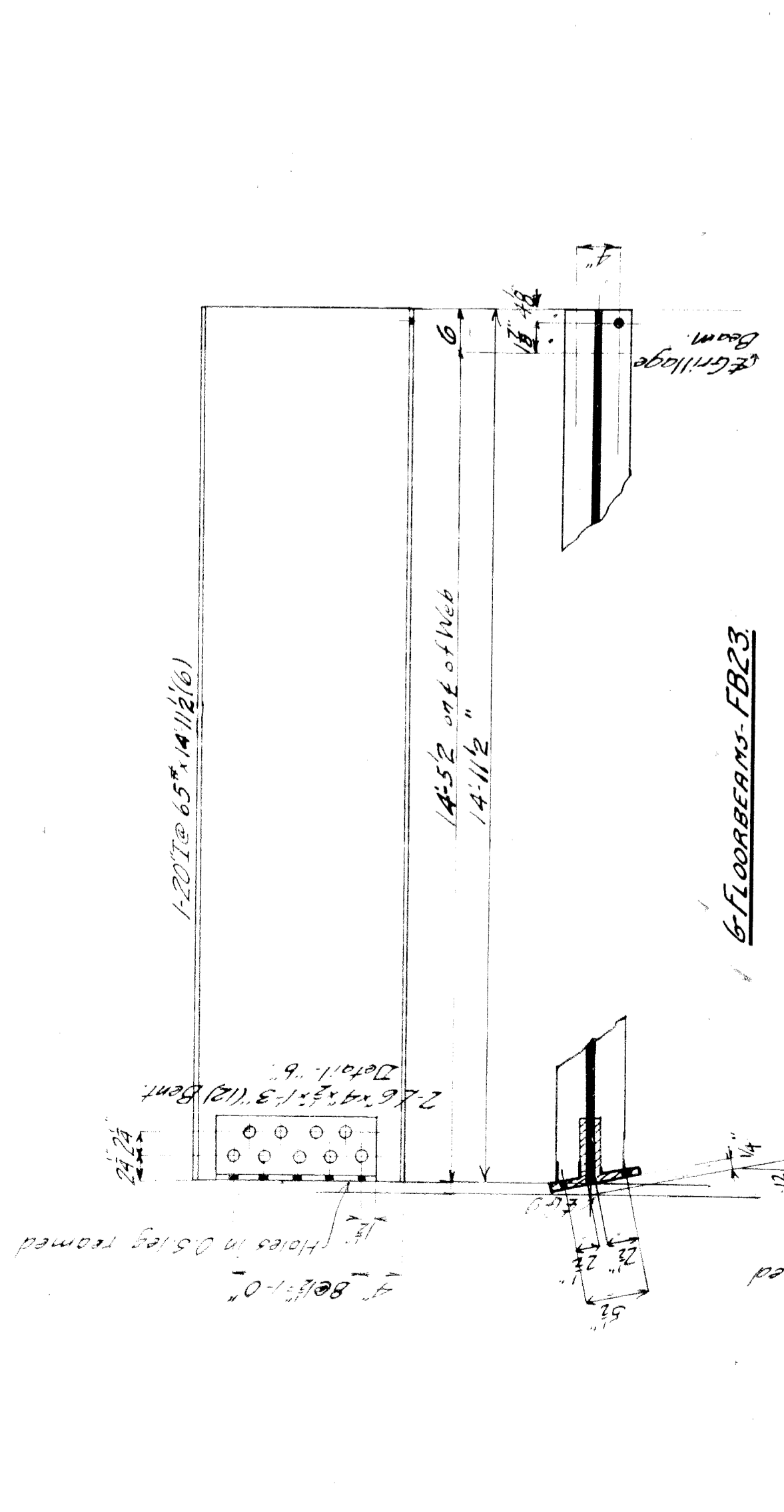
Chief Engineer

Approved

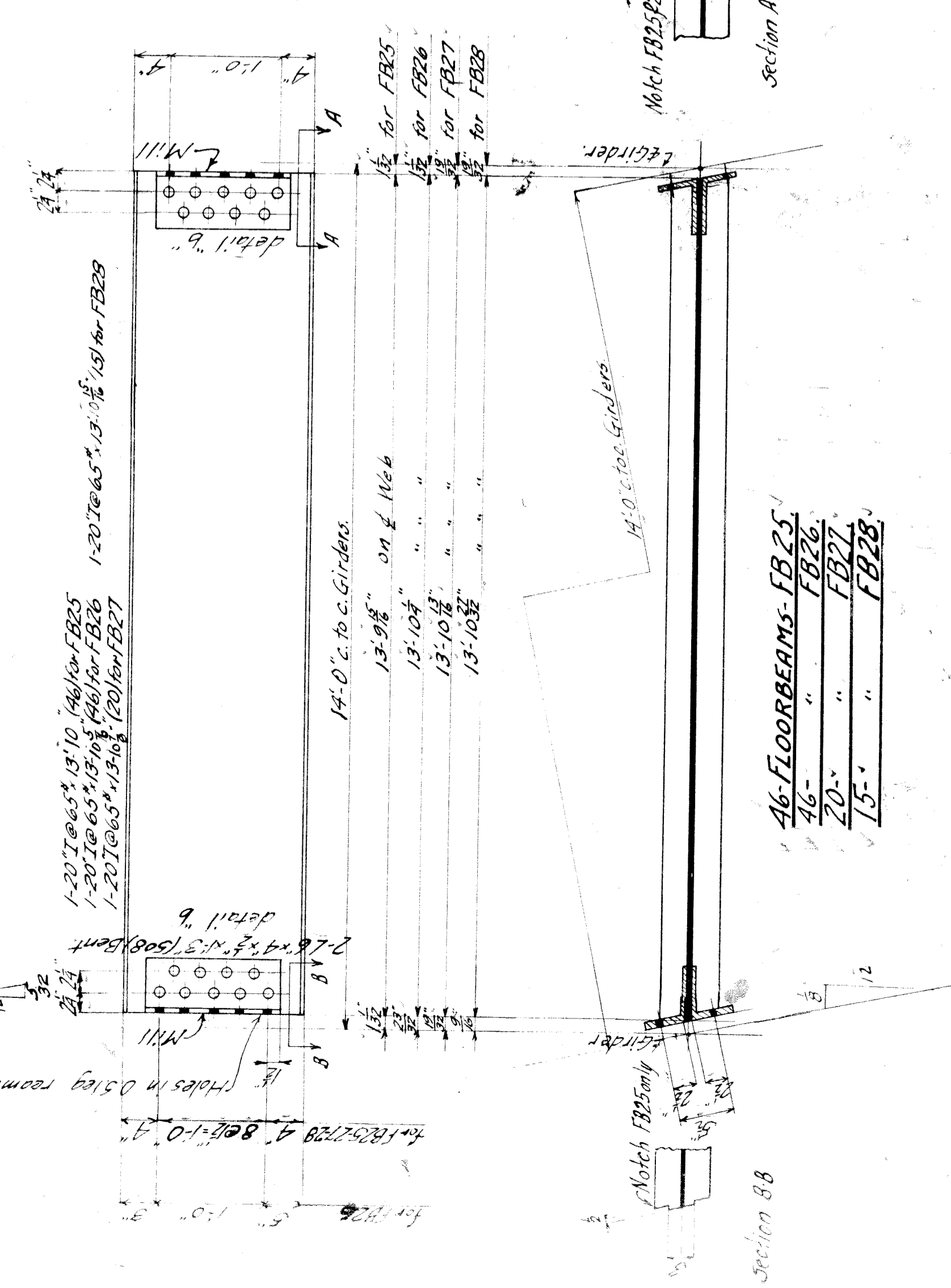
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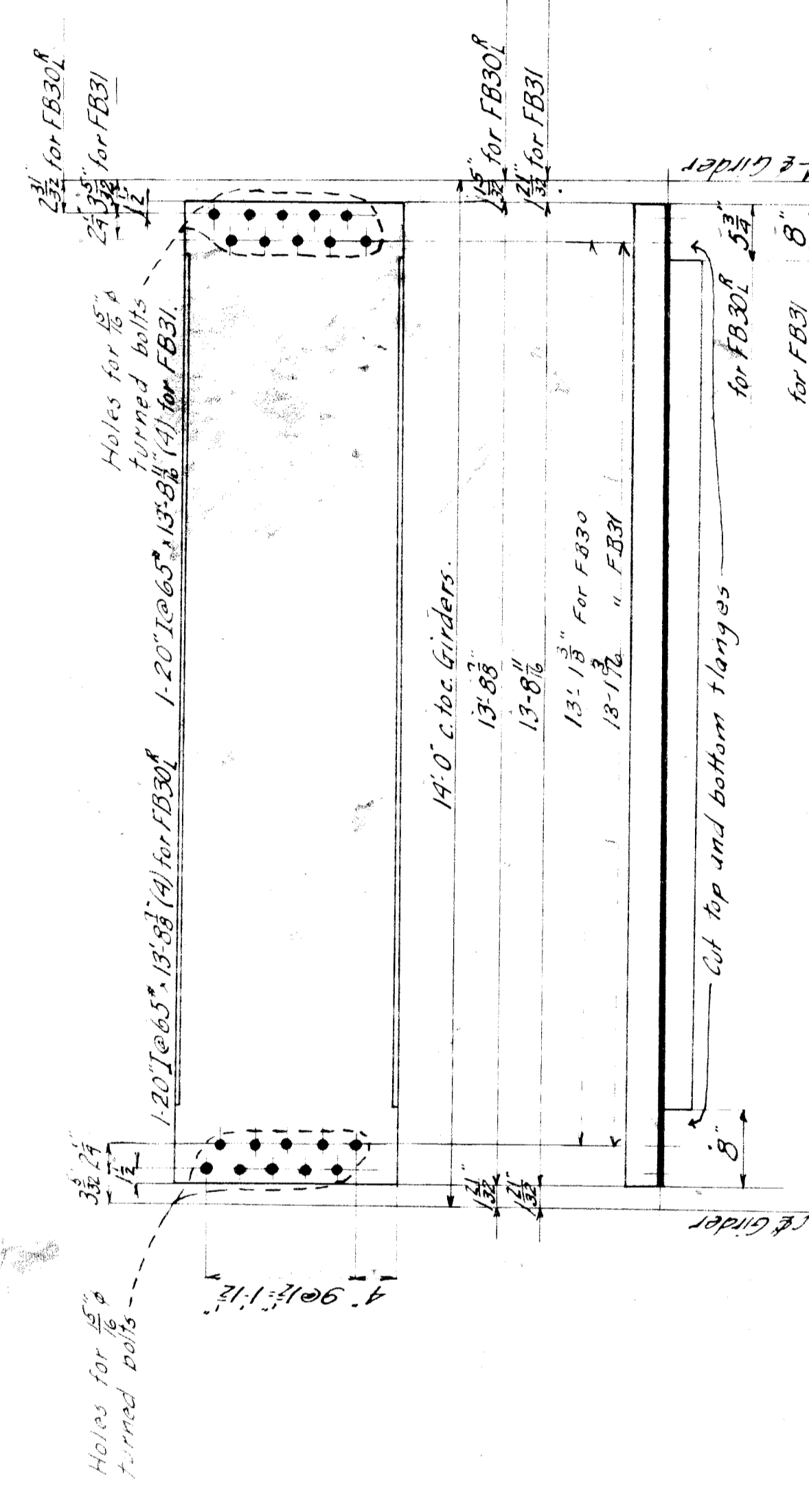
4-FLOORBEAMS-FB20 as shown
2- " FB21 " "
6- " FB22 opp to shown



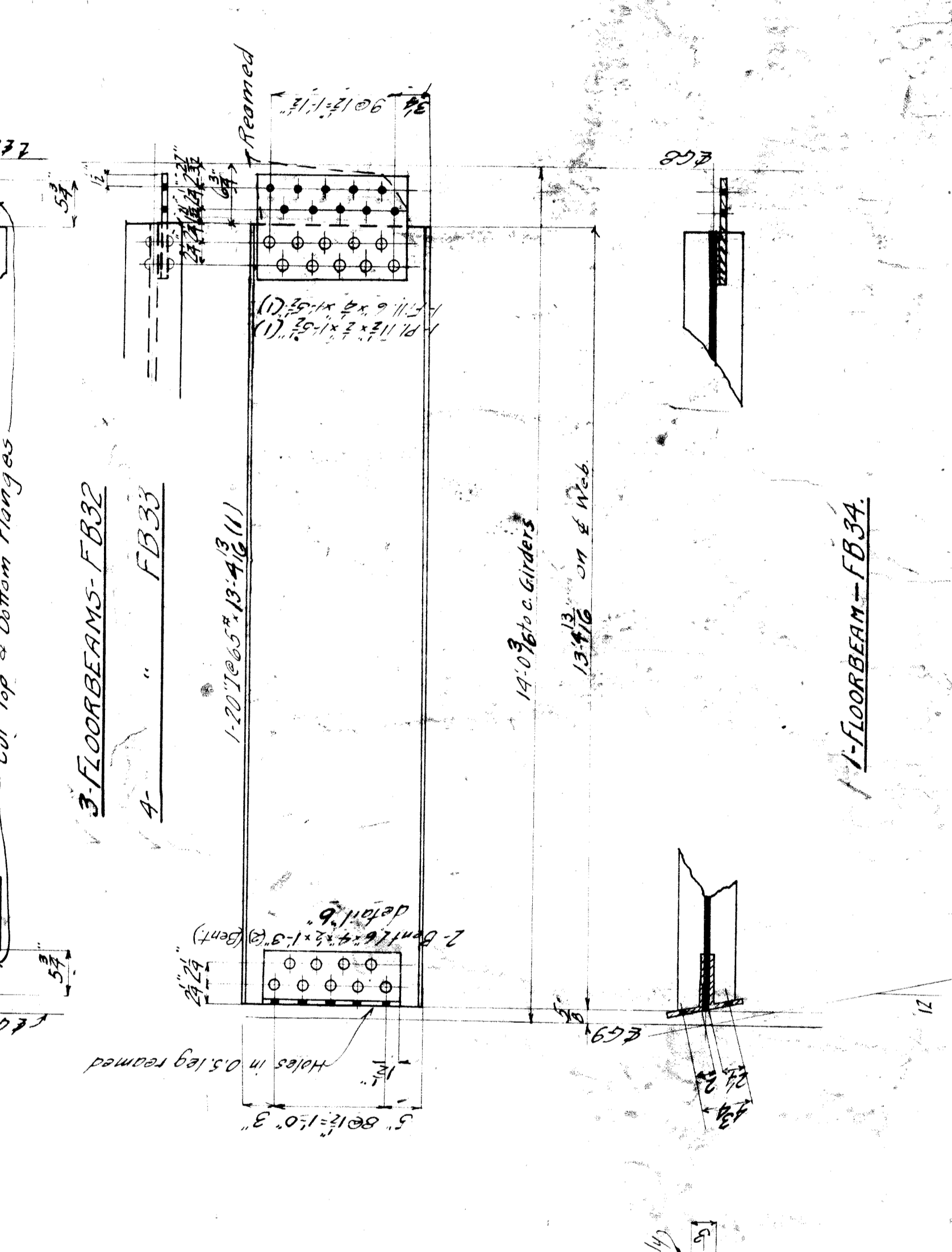
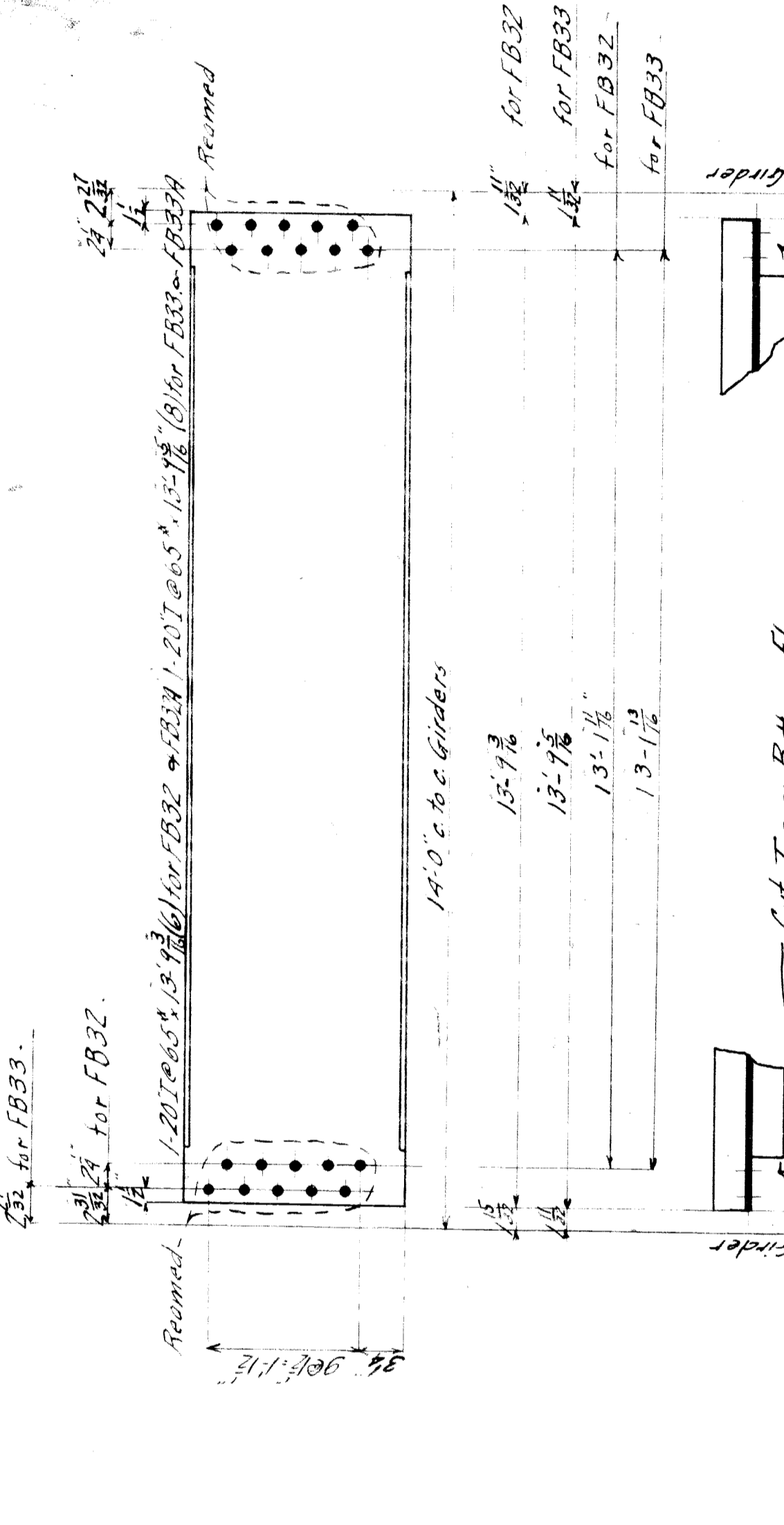
6-FLOORBEAMS-FB23



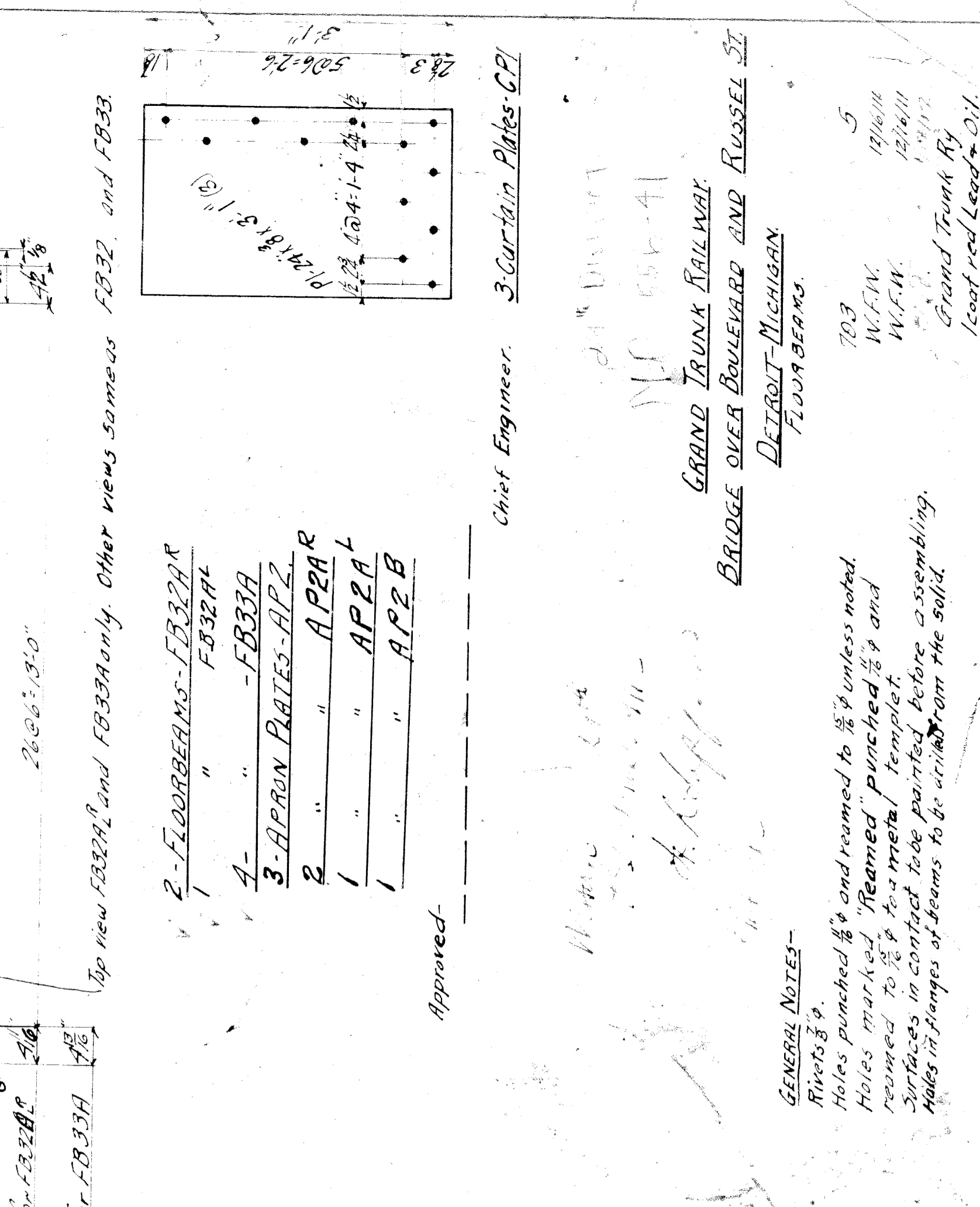
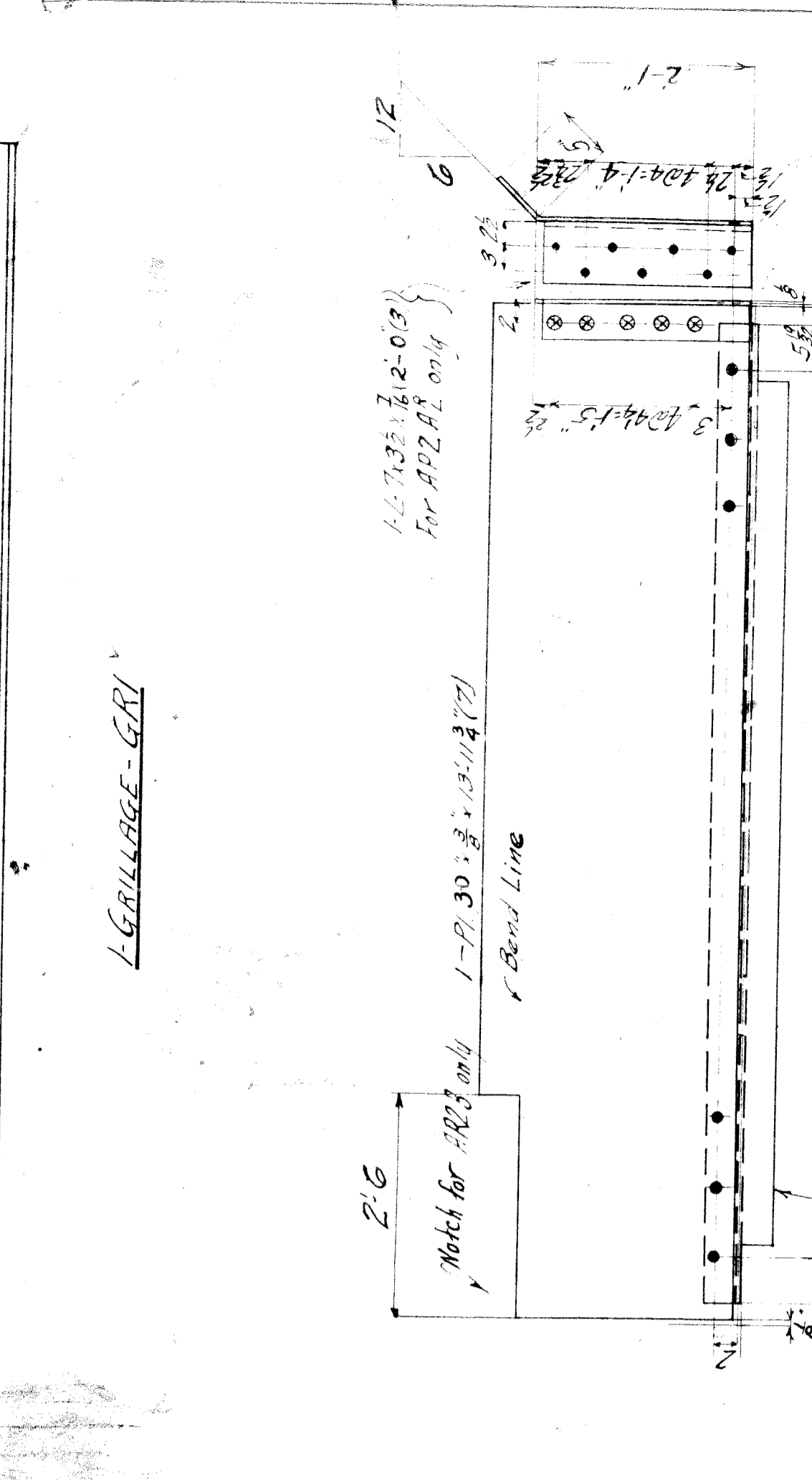
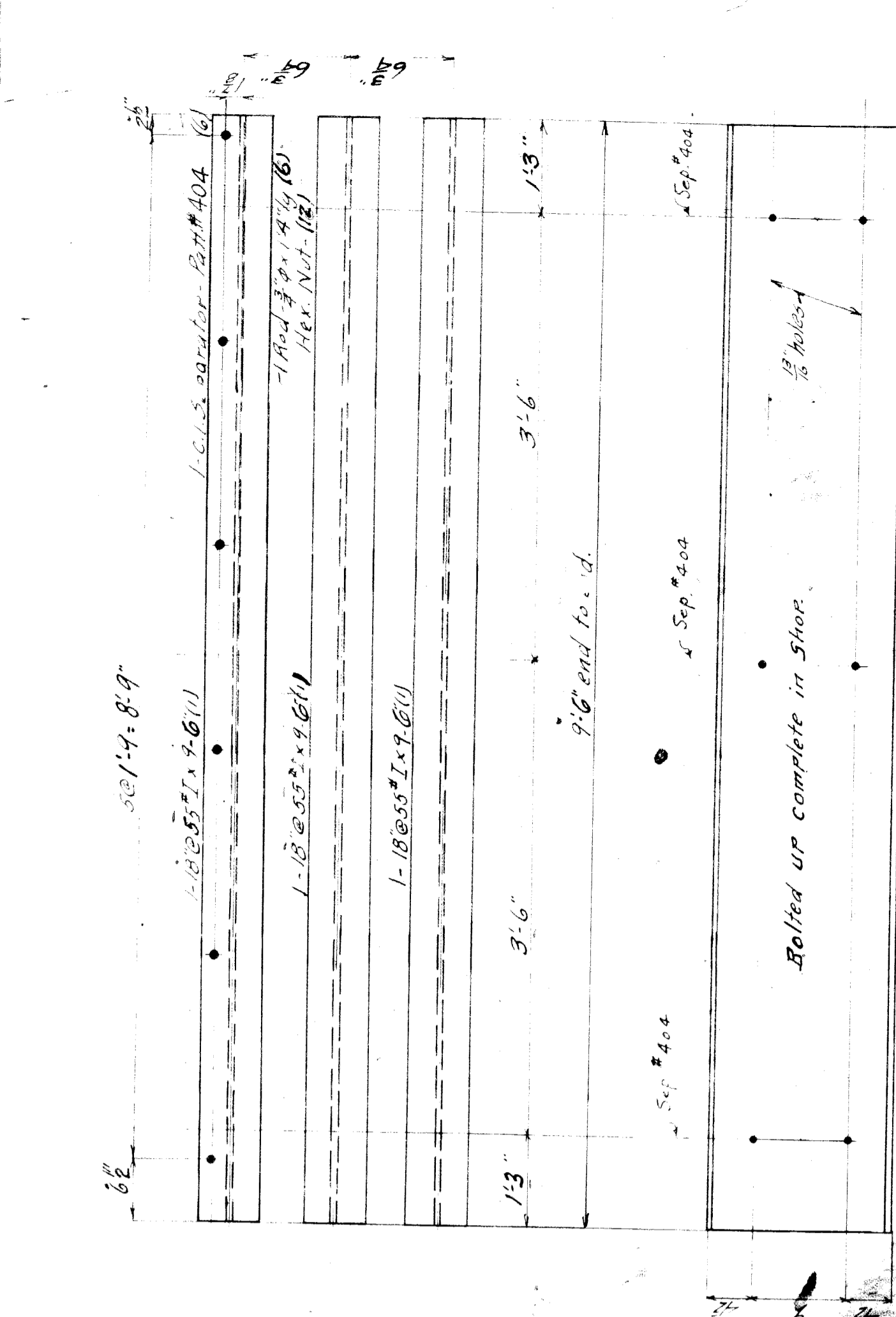
46-FLOORBEAMS-FB25
46- " FB26
20- " FB27
15- " FB28



2-FLOORBEAMS-FB30 as shown
2- " FB31 opp to shown
4- " FB32 as shown



1-FLOORBEAM-FB34



2-FLOORBEAMS-FB37
4- " FB38
2- " FB39
1- " FB40
1- " FB41
1- " FB42

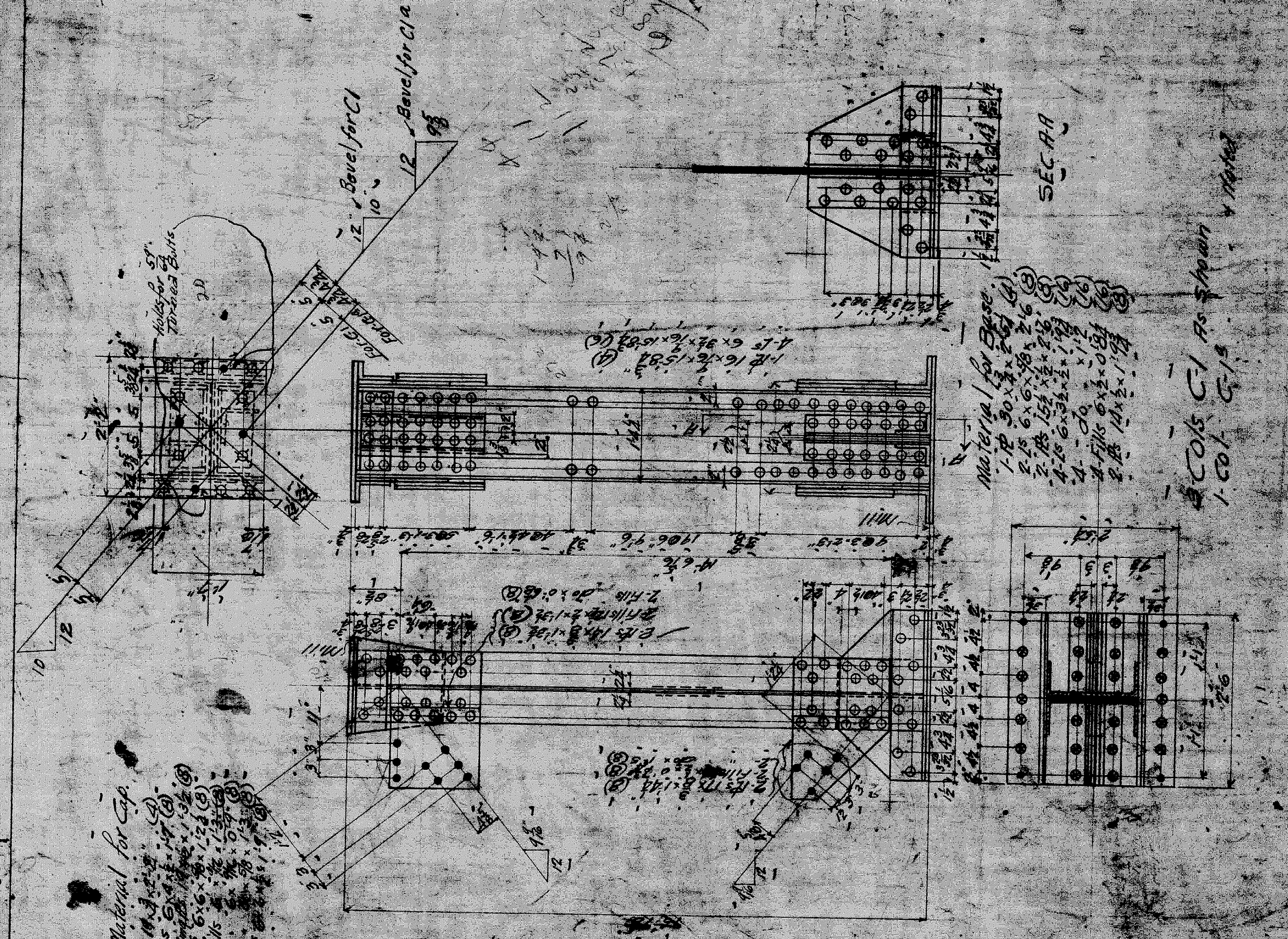
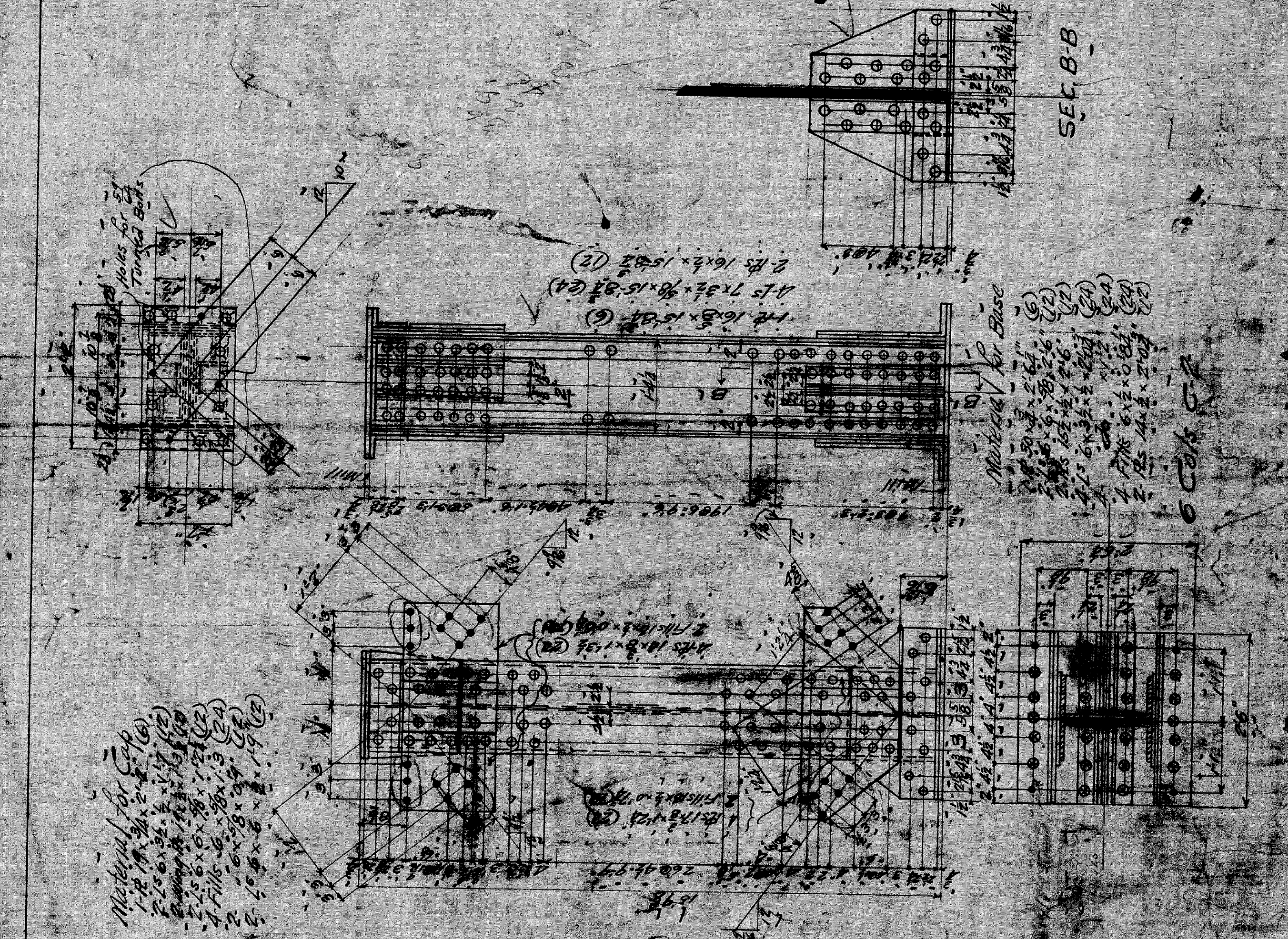
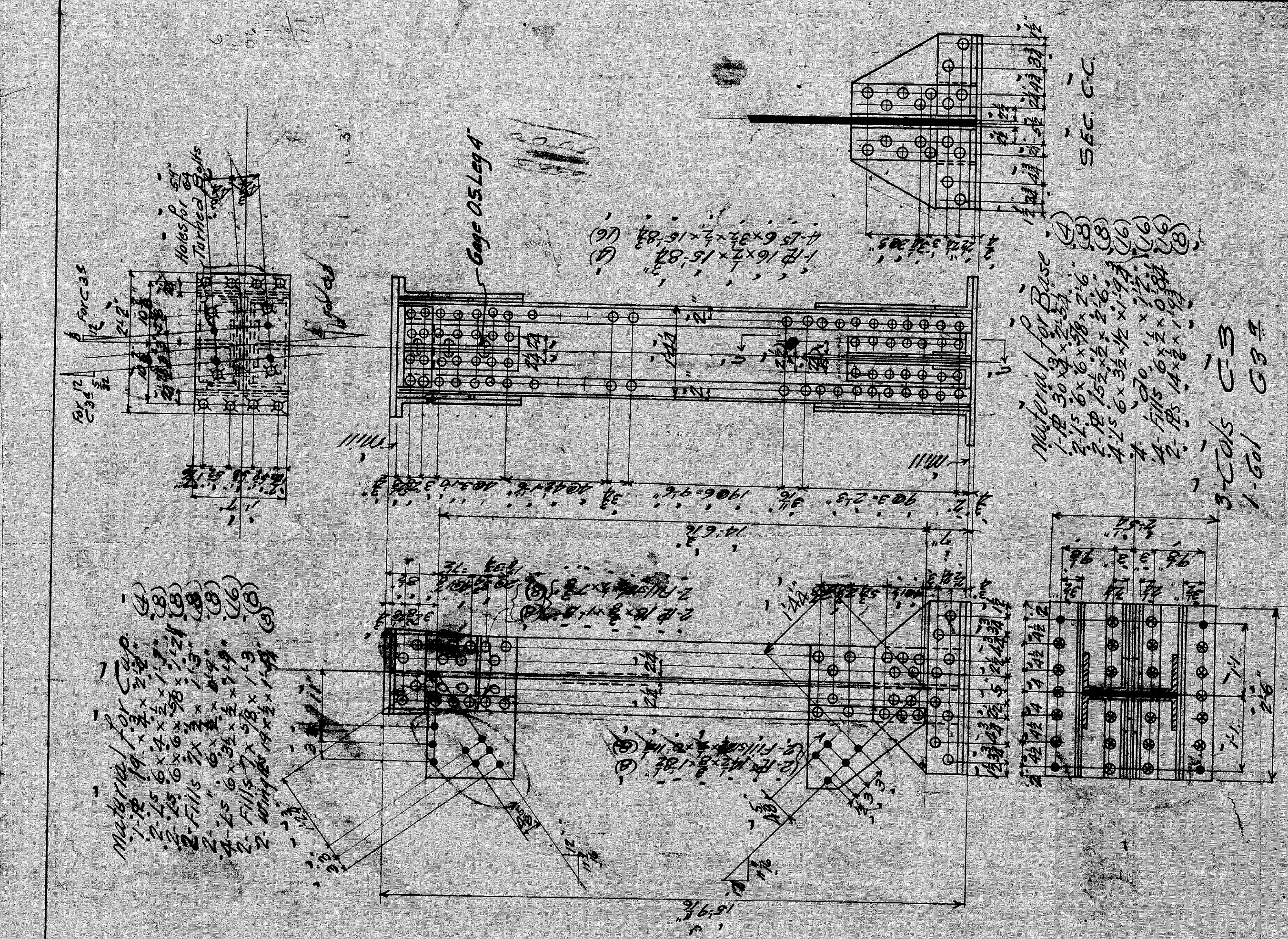
Chief Engineer. 3-Curtain Plates-CPI

GRAND TRUNK RAILWAY
BRIDGE OVER BOULEVARD AND RUSSELL ST
DETROIT-MICHIGAN
FLOORBEAMS.

GENERAL NOTES-
Rivets 3/4"
Holes punched 1/4" and reamed to 3/4" unless noted.
Holes marked, reamed, punched 3/4" and reamed to 1/2" for a metal template.
Surfaces in contact to be painted before assembling.
Holes in flanges of beams to be drilled from the solid.

Grand Trunk Ry
Coast and Lead Co. D. I.
We do not furnish.

Rev 2/20/14 Top of FB34 in charge of Myrtle.

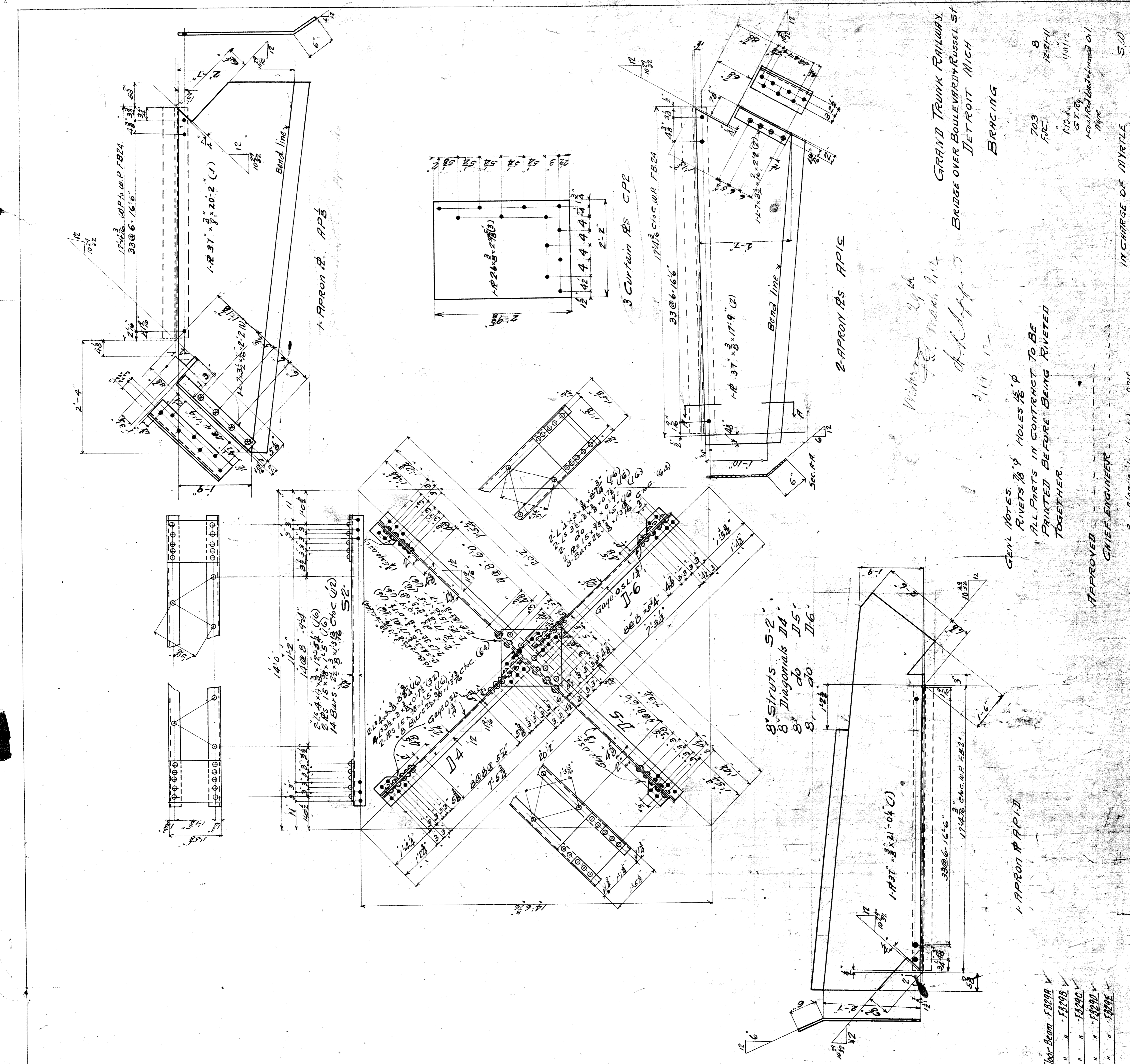


GRAND TRUNK RAILWAY
 Bridge over Boulevard & River in
 1 DETROIT MICH.
 COLUMNS.

Vertical
 29/08
 26/21/12

GENERAL NOTES:
 1. All poles except
 for lateral connections to
 be painted, to be painted by
 all parties in contract to be
 painted before being raised
 Hollow concrete
 103
 57 m

File X 93-48



GRAND TRUNK RAILWAY
 BRIDGE OVER BOULEVARD BY RUSSEL ST
 DETROIT MICH
 BRACING

APPROVED
 CHIEF ENGINEER

GEN'L NOTES:
 RIVETS 8/4 HOLES 45/8"
 ALL PARTS IN CONTRACT TO BE
 PRINTED BEFORE BEING RIVETED
 TOGETHER.

- | |
|------------------------|
| I Floor Beam - FB20A ✓ |
| I " " - FB20B ✓ |
| I " " - FB20C ✓ |
| I " " - FB20D ✓ |
| I " " - FB20E ✓ |

8' Struts S-1
 8' Diagonals D-1
 8' " D-2
 8' " D-3

Punched here to metal
 Punched here to metal
 Punched here to metal

15'-11 1/2" x 14'-10 1/2" (C)
15'-11 1/2" x 14'-10 1/2" (C)
15'-11 1/2" x 14'-10 1/2" (C)
15'-11 1/2" x 14'-10 1/2" (C)

*Widney 29/6
 J. T. Main 9/2
 K. A. Coffey
 3/11/12*

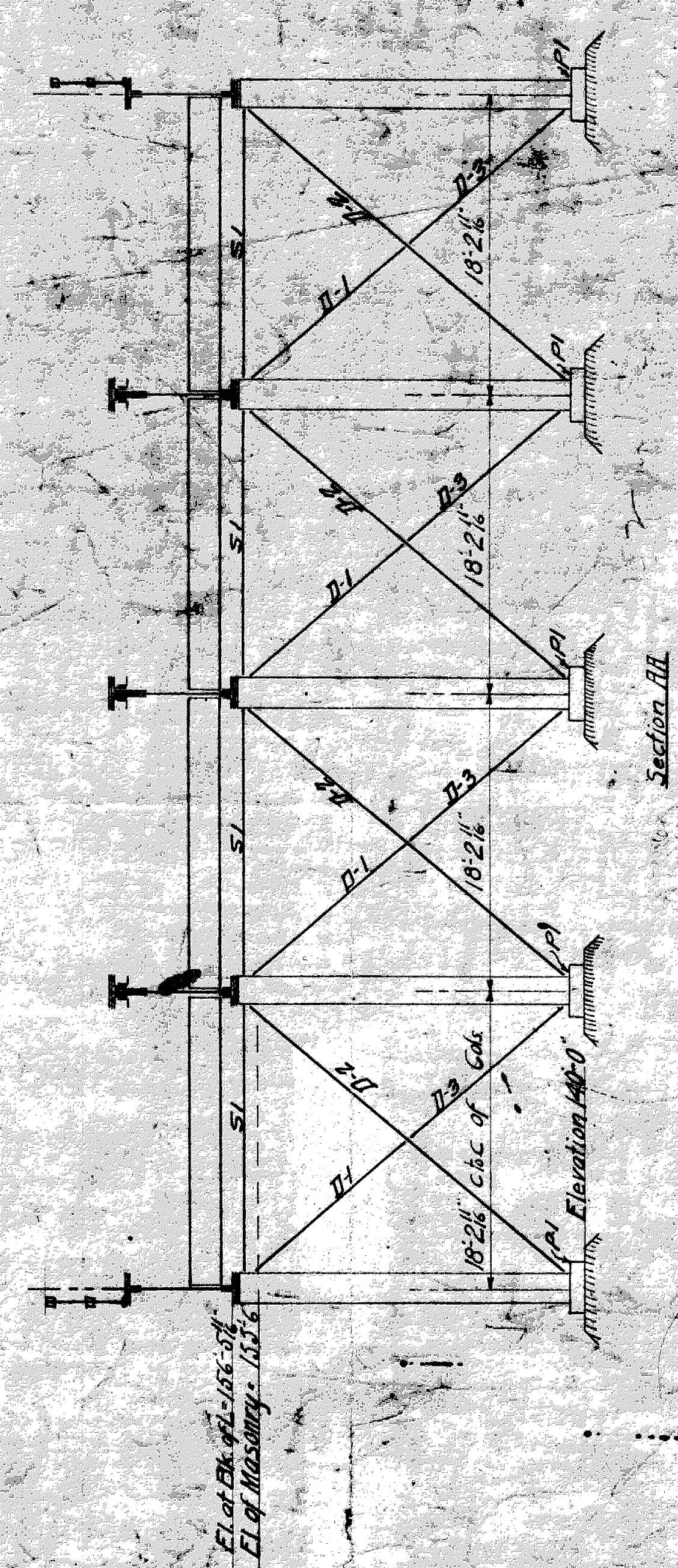
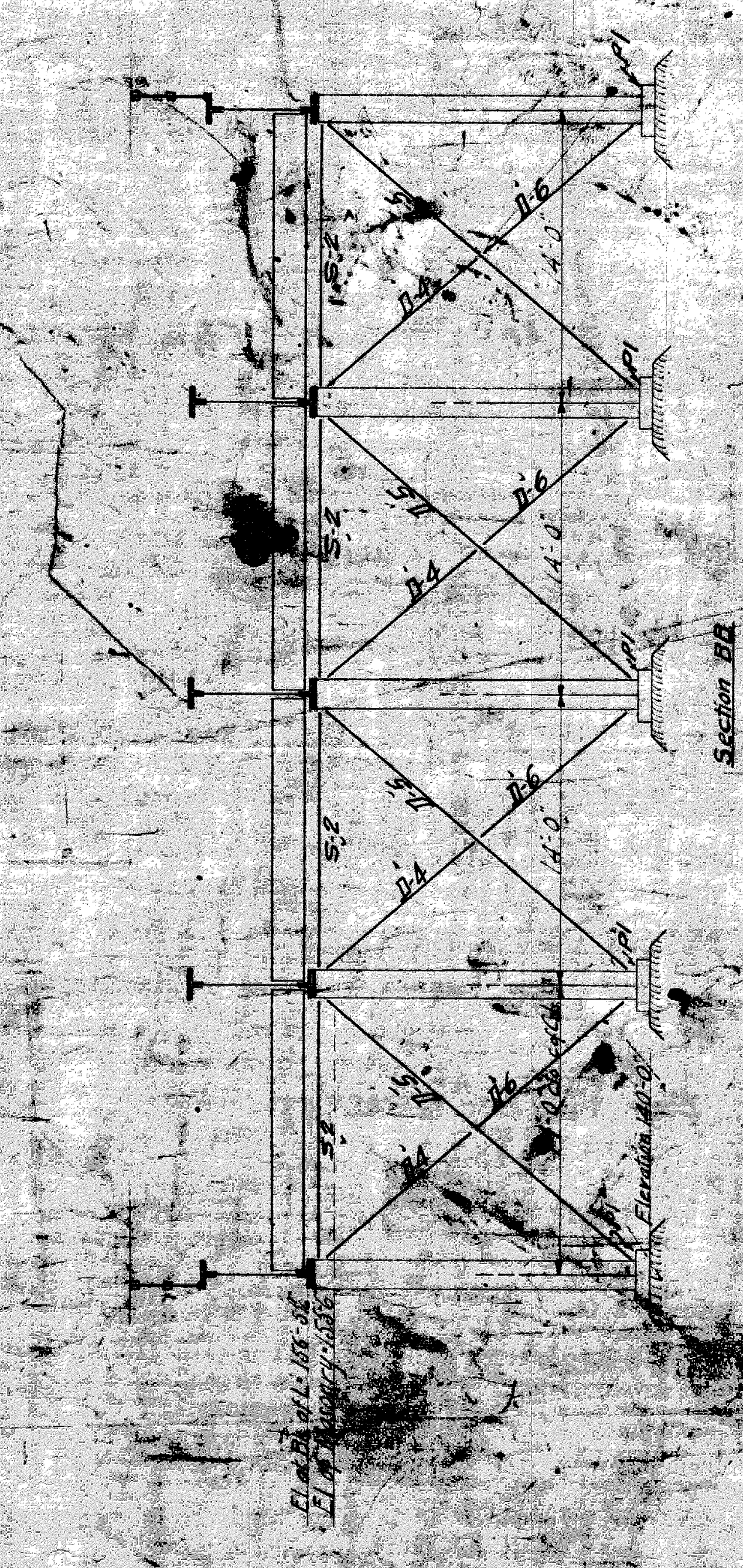
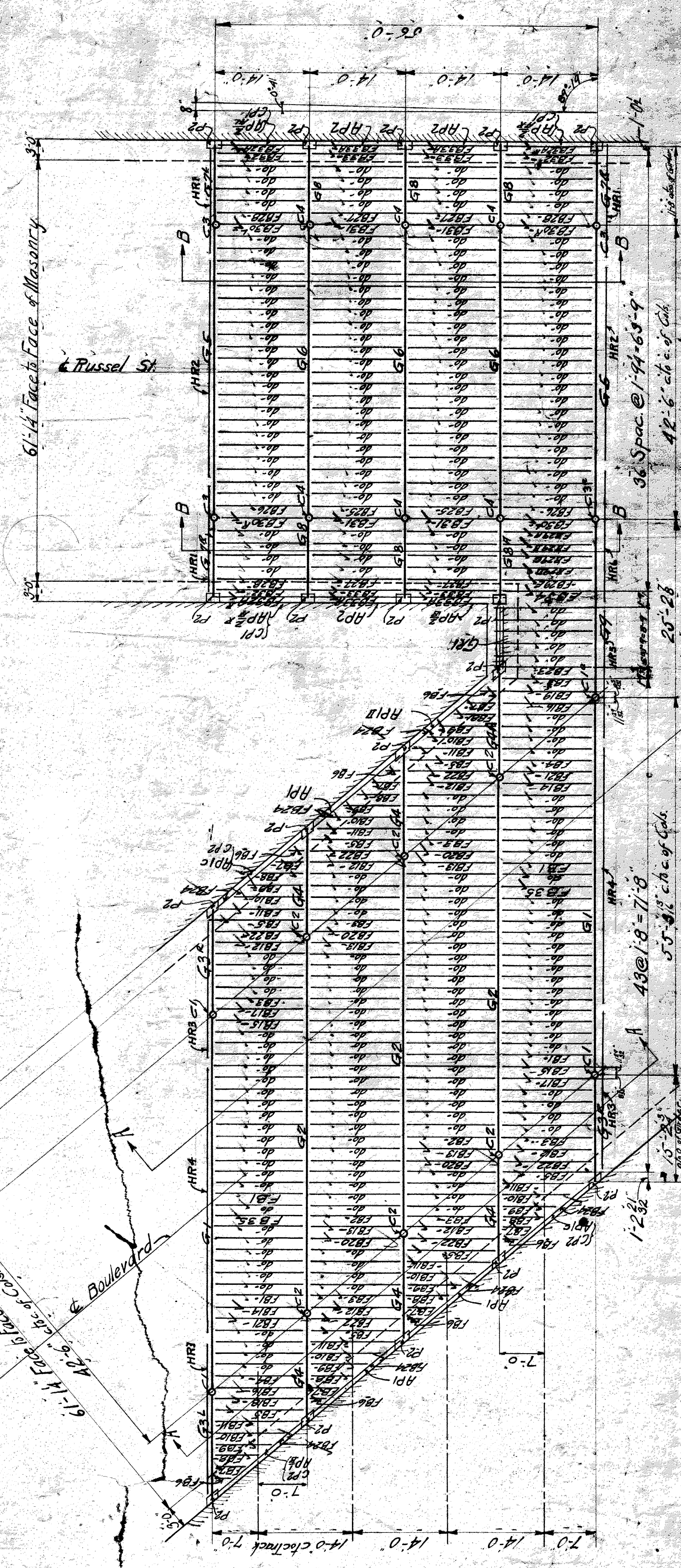
2 APRON AS AP 1 & 2

1 APRON AS AP 2

3 CURTAIN RS CP 2

1 APRON AP 1 & 2

17'-4 3/8" CIRCULAR FB 2A
 33'-6" CIRCULAR FB 2A



61'-14" Face to Face of Masonry
 49'-6" ch.c of Cols
 & Boulevard

61'-14" Face to Face of Masonry
 & Russel St

EL of Bk of 1st-1st-01
 EL of Masonry - 15.5'

Approved

Working
 E. J. Kelly

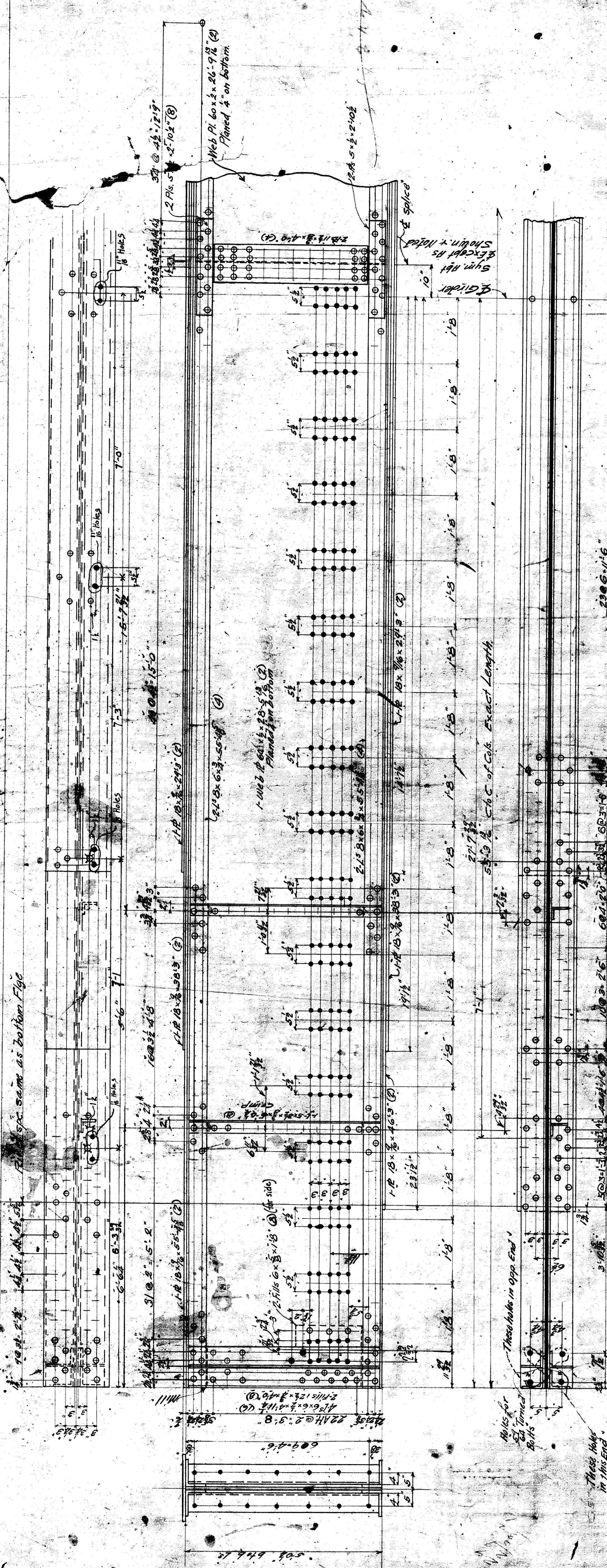
Chief Engineer

Grand Trunk Co.
 Western Division
 Boulevard Bridge
 Detroit, Mich.
 CRECTION DIVISION

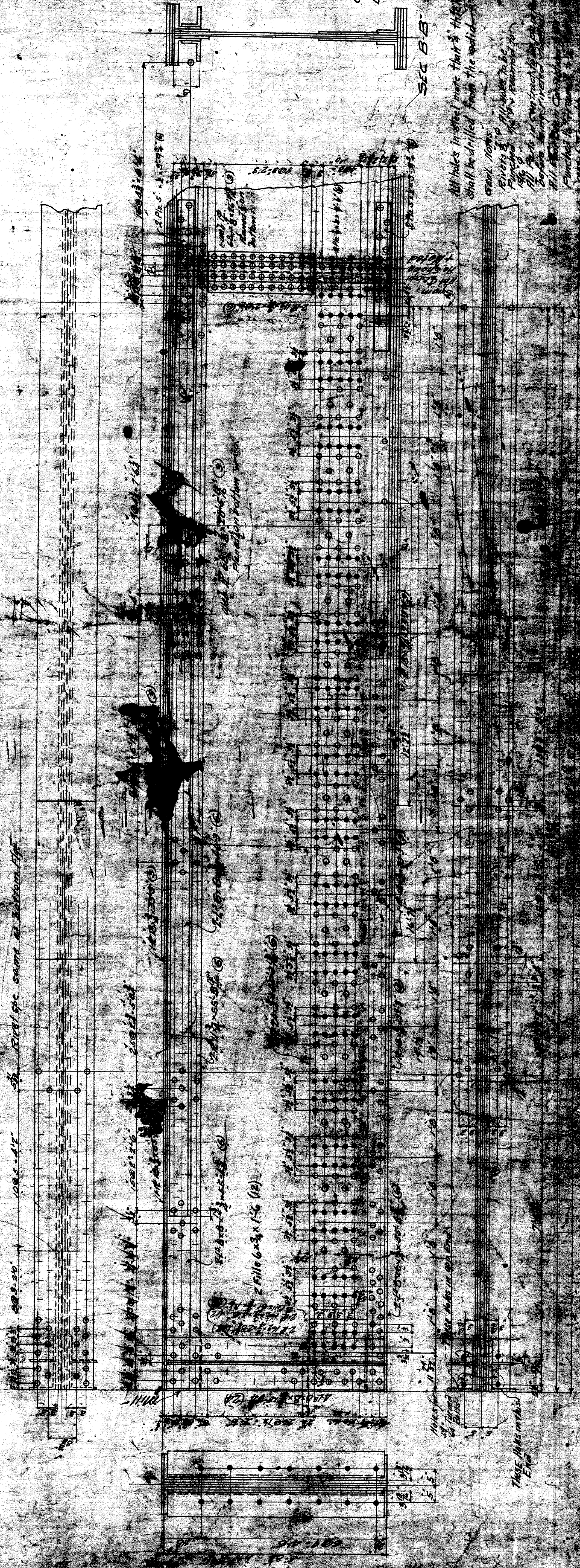
703

CKM
 Grand

File XJ03-50



2 Girders G-1 (Outside Elevation)



All holes in steel more than 4" thick shall be drilled from the solid.

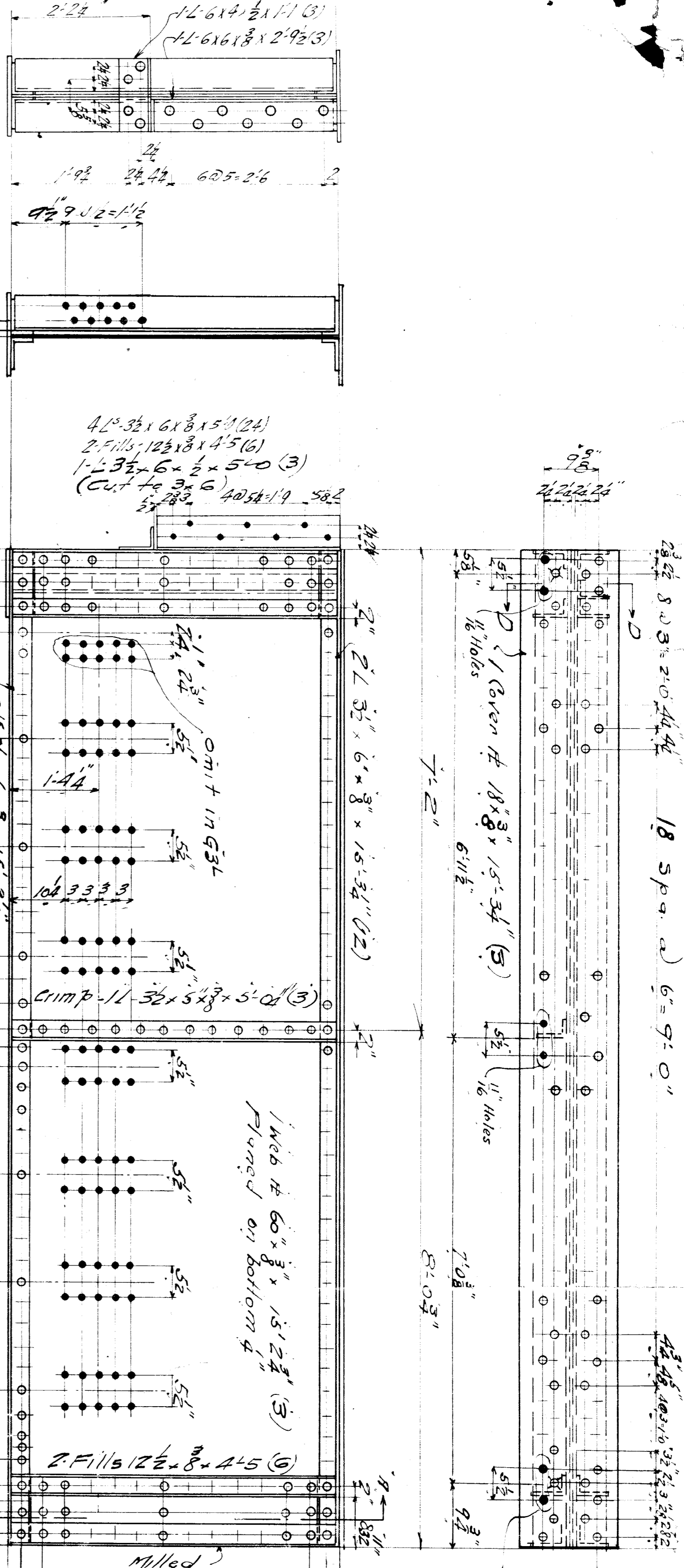
GENERAL NOTES:
 Rivets to be punched with a minimum of 1/8" clearance to the hole.
 All rivets in connection with the bridge shall be punched with a minimum of 1/8" clearance to the hole.
 Rivets to be punched with a minimum of 1/8" clearance to the hole.

3/10/12

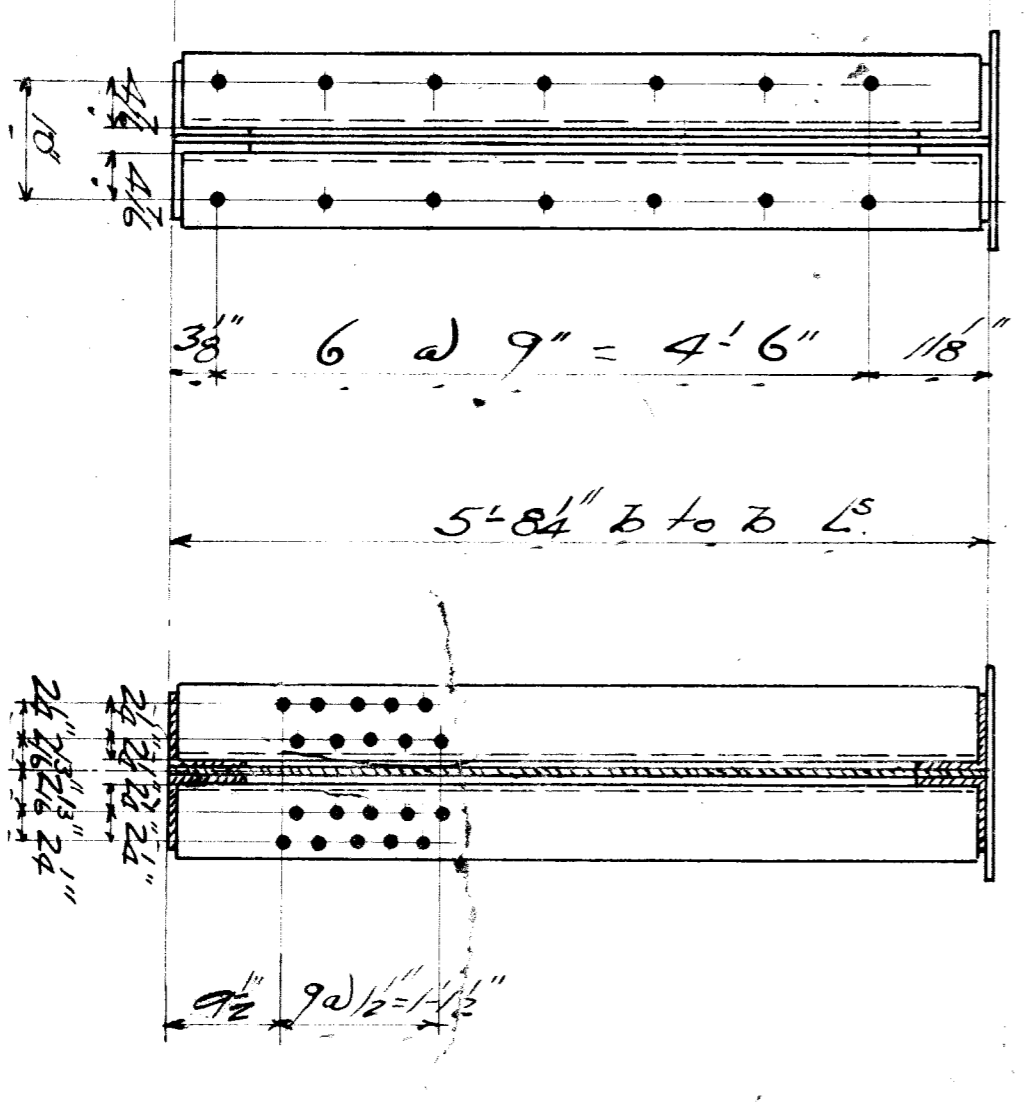
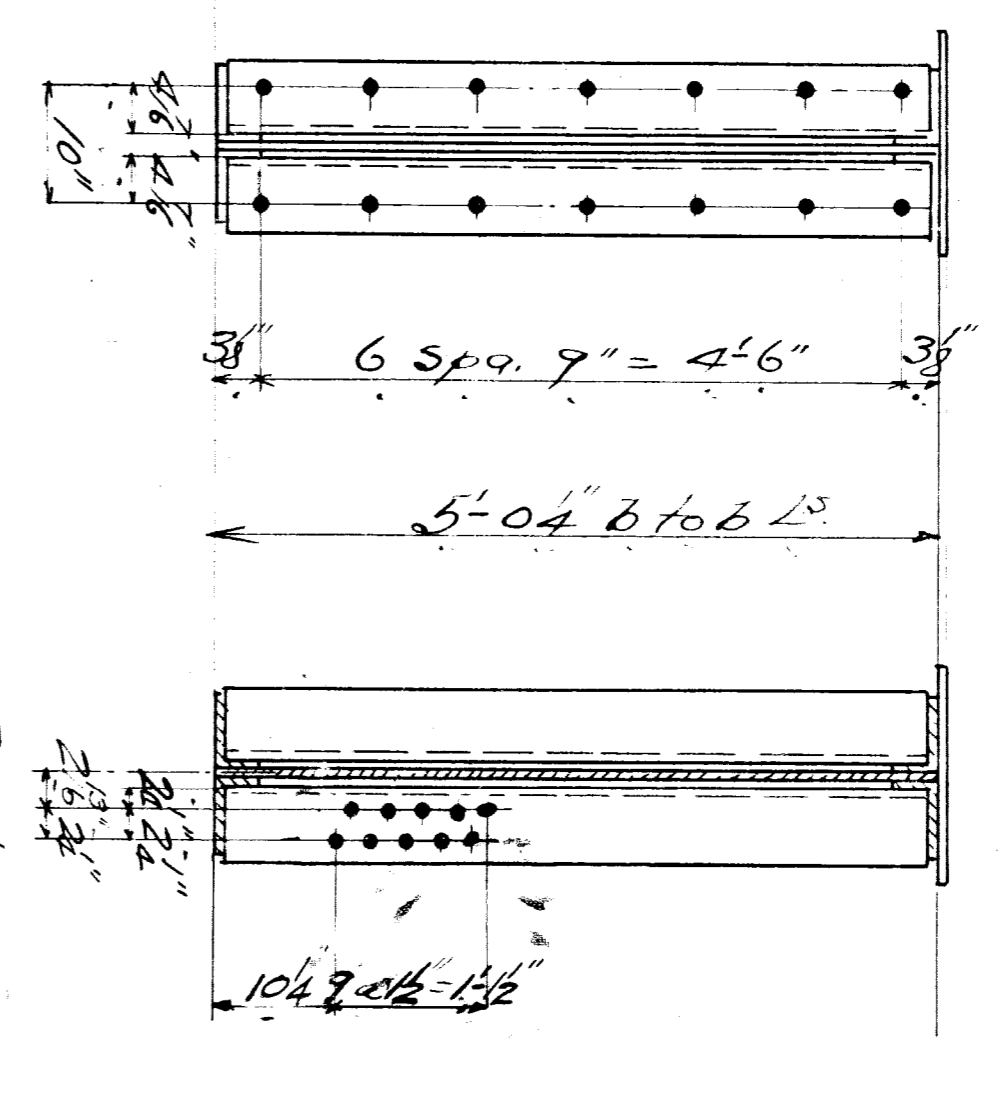
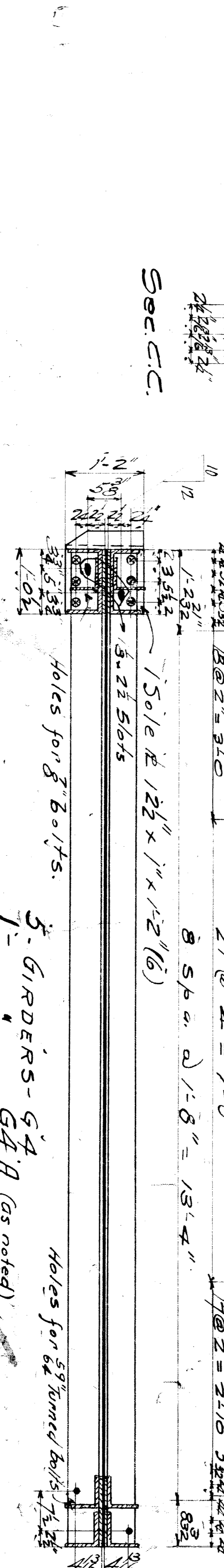
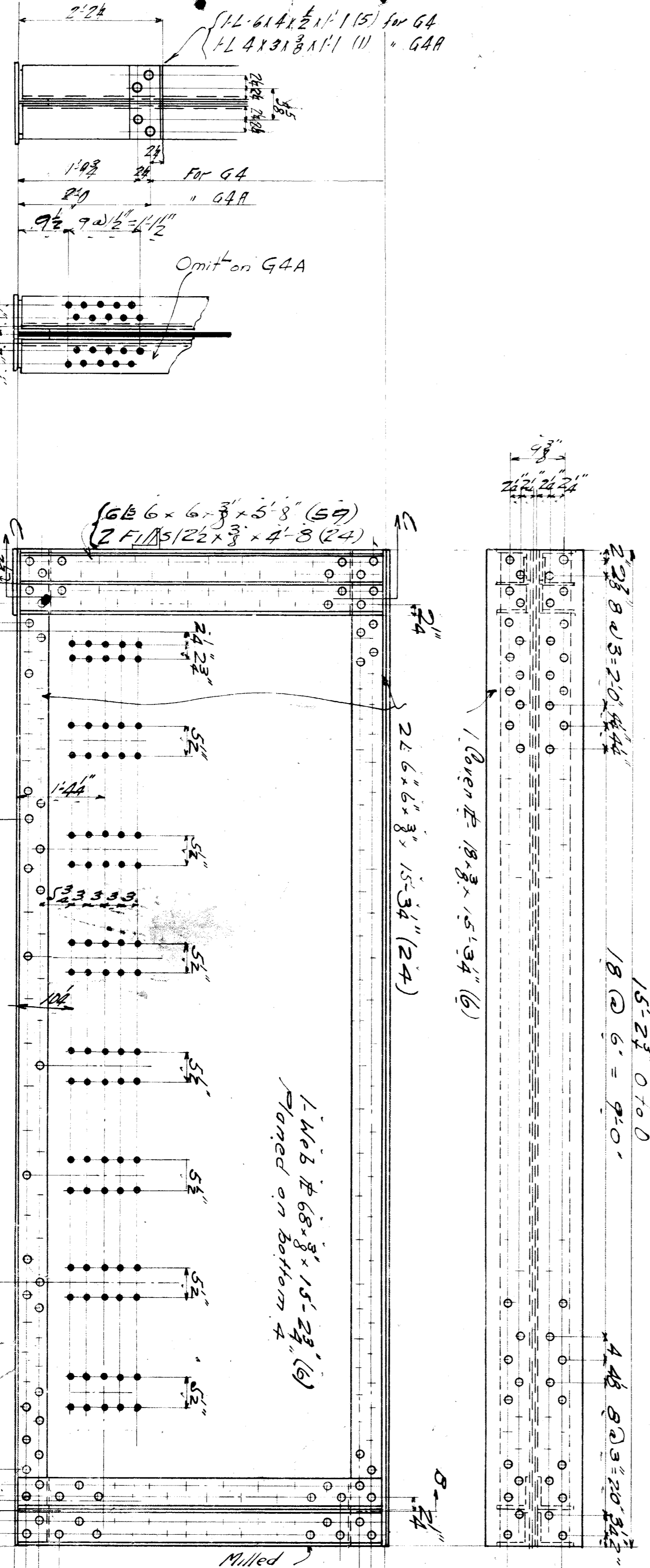
APPROVED

GRAND TRUNK COMPANY
 BRIDGE OVER BOULEVARD
 DETROIT, MICH.

SHOWN IN FIG.



2 GIRDERS G3S (RIGHT)
1 GIRDERS G3S (LEFT)
OUTSIDE ELEVATION



General Notes
1. Rivets 8" All holes to be punched
2. Rivets 8" and rounded to 78° All floor
beams corners to be punched to 60° and
rounded to 60° to a metal form before
All bolts in contact to be painted before assembly.

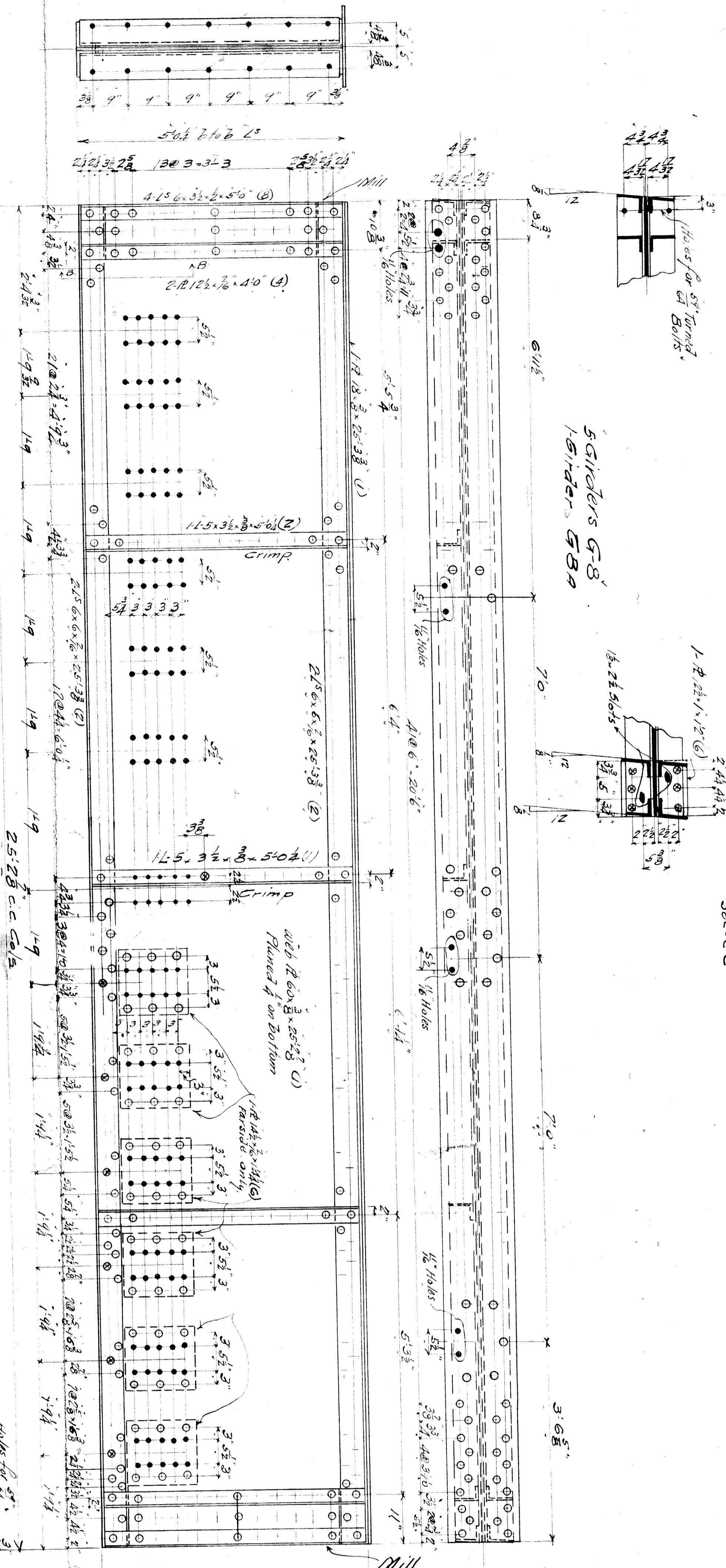
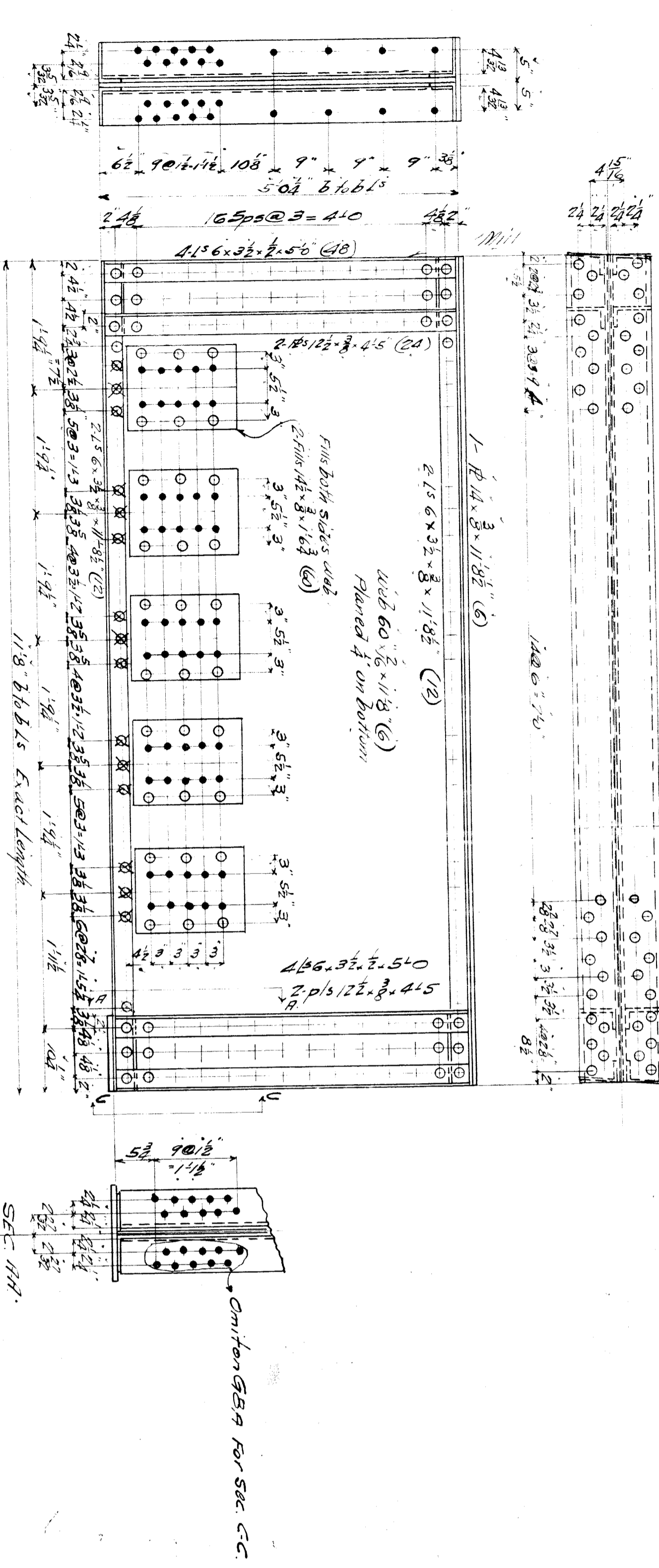
Approved _____
Chief Engineer

Grand Trunk Railway
Western Division 294th Street
Bridge Over Boulevard & Russell St
Detroit Mich.

GIRDERS, G3S, G4

703
Middell
12-18-11

SM 01-87



1-GIRDER G-9
OUTSIDE ELEVATION

APPROVED

CHIEF ENGINEER

GEN'L NOTES:
Girders G-8 & G-9 HILL HOLES to be punched
1/4" ROUNDED TO 1/8"
All girders in contract to be painted
before being riveted together.
All floor beam connections to be
punched 1/4" ROUNDED TO 1/8" RADIUS

GRAND TRUNK RAILWAY
BRIDGE OVER BOULEVARD RUSSELL ST
DETROIT MICH.
GIRDERS G-8 & G-9

