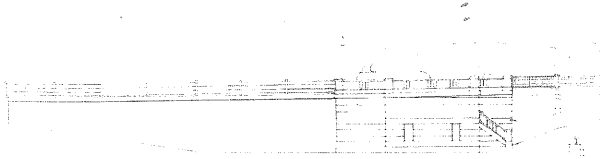
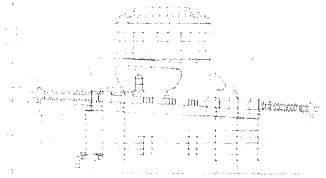

RT. Ruby Street
Double leaf Trunnion
SEC. Bascule Br.



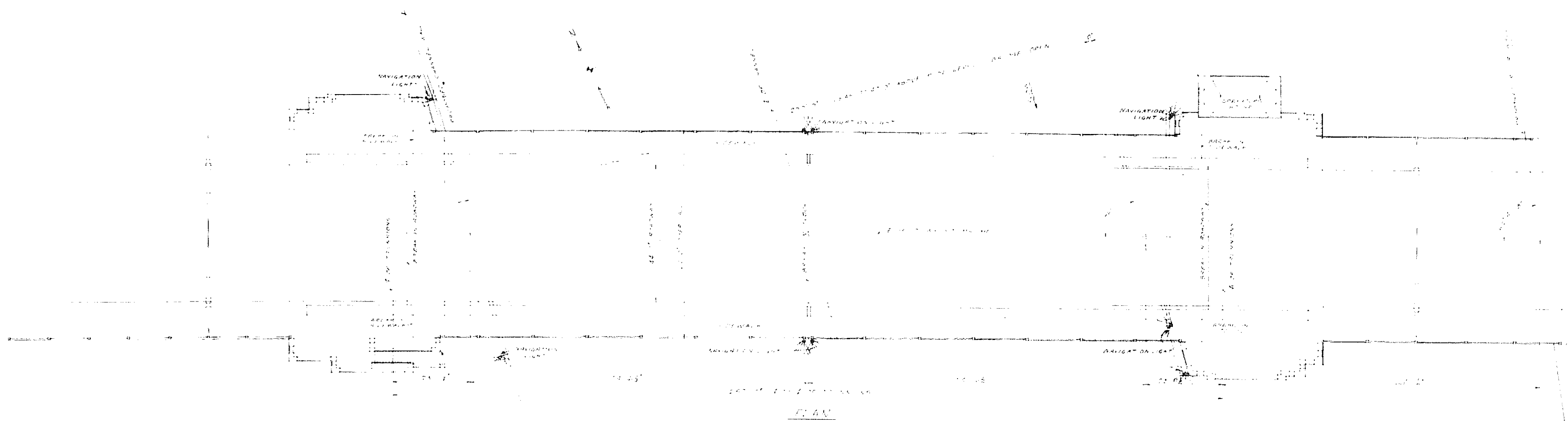


LIST OF DRAWINGS

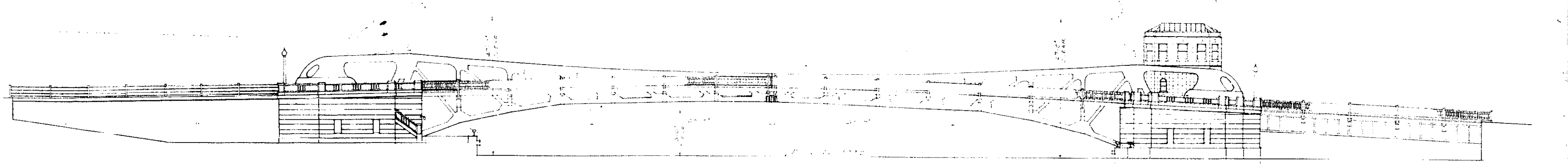
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS

THE SCHERZER ROLLING LIFT BRIDGE CO.

SHEET NO. 1343 1



PLAN



ELEVATION

LIST OF DRAWINGS

1 GENERAL PLAN
2 LOCATION PLAN
3 EAST PIER
4 EAST PIER
5 EAST PIER
6 EAST PIER
7 OPERATOR'S HOUSE AND EAST PIER DETAILS
8 OPERATOR'S HOUSE DETAILS
9 WEST ABUTMENT
10 WEST ABUTMENT
11 EAST ABUTMENT (DETAILS OF WEST ABUTMENT)
12 WEST ABUTMENT
13 WEST ABUTMENT DETAILS
14 STRESS SHEET - BASCULE SPAN
15 STRESS SHEET - FIXED PARTS
16 CLEARANCE DIAGRAM
17 TRUNNION SUPPORTS
18 TRUNNION SUPPORTS
19 CROSS GIRDER F_0
20 MACHINERY ENCLOSURE PLATFORMS & STAIRS
21 WALKS AND STAIRS
22 CURB DETAILS AND BREAK IN SIDEWALK
23 SIDEWALK STRINGERS AND TRUSS GUARD
24 ANCHORAGE GIRDERS AND COLUMNS
25 APPROACH GIRDERS
26 APPROACH FLOOR BEAMS F_H
27 FLOOR DETAILS - FIXED PARTS
28 MACHINERY SUPPORTS
29 BASCULE TRUSSES - 0 TO 0
30 BASCULE TRUSSES - 0 TO 1
31 BASCULE TRUSSES 1 TO 2
32 BASCULE TRUSSES 3 TO 5
33 BASCULE TRUSSES 6 TO 8
34 COUNTERWEIGHT SUPPORTS
35 COUNTERWEIGHT SUPPORTS
36 COUNTERWEIGHT SUPPORTS
37 FLOOR DETAILS AND FLOOR CASTINGS
38 FLOOR BEAMS F_3 TO F_8
39 FLOOR BEAMS F_1 AND F_9
40 HORIZONTAL GIRDER AND BRACING M_0L
41 ORNAMENTAL RAILING
42 CENTER LOCK AND SUPPORTS
43 CENTER LOCK CASTINGS
44 COUNTERWEIGHT - EAST LEAF
45 COUNTERWEIGHT - WEST LEAF
46 OPERATING MACHINERY
47 MACHINERY DETAILS
48 TRUNNIONS AND BEARINGS
49 WIRING DIAGRAM
50 WIRING DIAGRAM
51 CONTROL DESK AND ROADWAY LIGHTS
52 MECHANICAL INDICATOR ETC.
53 WATER MAINS AND CONNECTIONS
54 ALTERATIONS TO PUMPING STATION

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved Sept. 13, 1933
[signature]
Managing Engineer
Approved Sept. 13, 1933
[signature]
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approved
Bridge Engineer
Approved
Chief Engineer

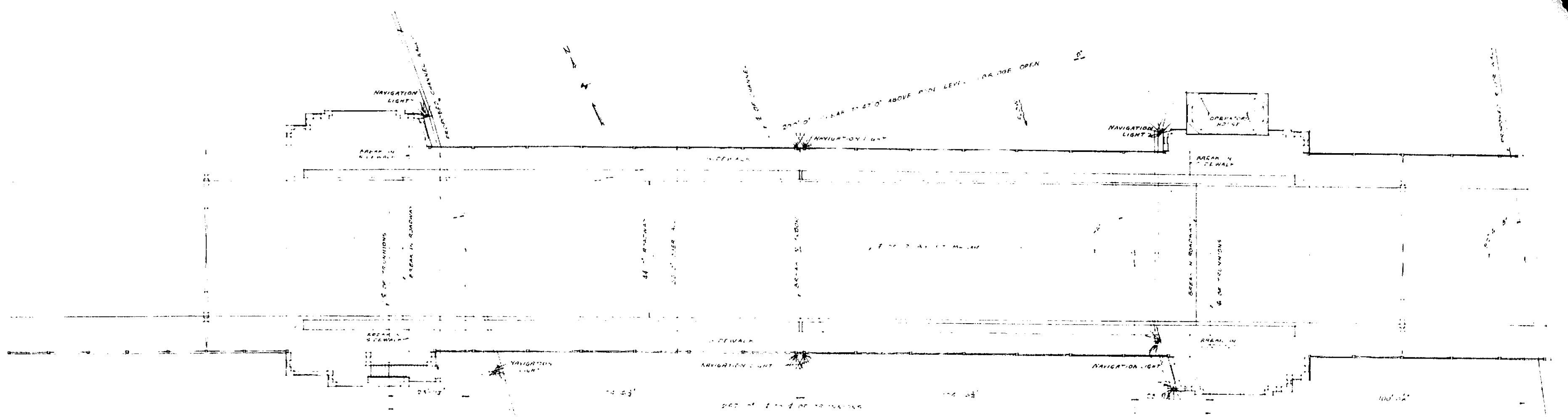
GENERAL PLAN
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST JOLIET ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

DRAWN BY P.L.D.
TRACED BY F.D.
CHECKED BY P.L.B.
REVISED APRIL 28, 1933, JULY 31, 1933, AUG. 21, 1933
SCALE 1/16" = 1'0"
DATE FEB 23 1933

SHEET NO. 1343-1

ACCESSION No.



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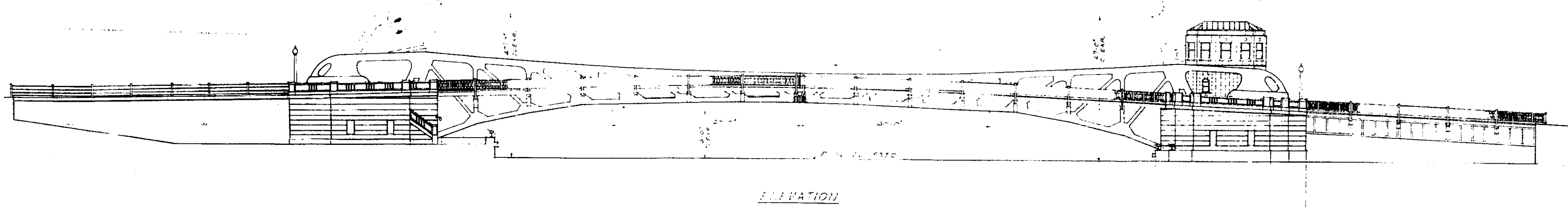

ELEVATION

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4 EAST PIER
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9 WEST ABUTMENT
10 WEST ABUTMENT
11 EAST ABUTMENT (DETAILS OF WEST ABUTMENT)
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13 WEST ABUTMENT DETAILS
14 STRESS SHEET - BASCULE SPAN
15 STRESS SHEET - FIXED PARTS
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18 TRUNNION SUPPORTS
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25 APPROACH GIRDERS
26 APPROACH FLOOR BEAMS F_H
27 FLOOR DETAILS - FIXED PARTS
28 MACHINERY SUPPORTS
29 BASCULE TRUSSES - 0 TO 6
30 BASCULE TRUSSES - 0 TO 1
31 BASCULE TRUSSES - 1 TO 2
32 BASCULE TRUSSES - 3 TO 5
33 BASCULE TRUSSES - 6 TO 6
34 COUNTERWEIGHT SUPPORTS
35 COUNTERWEIGHT SUPPORTS
36 COUNTERWEIGHT SUPPORTS
37 FLOOR DETAILS AND FLOOR CASTINGS
38 FLOOR BEAMS F_3 TO F_8
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52 MECHANICAL INDICATOR ETC.
53 WATER MAINS AND CONNECTIONS
54 ALTERATIONS TO PUMPING STATION

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept. 13, 1933
[signature]
Managing Engineer
Approved: Sept. 13, 1933
[signature]
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended: ____
Bridge Engineer
Approved: ____
Chief Engineer

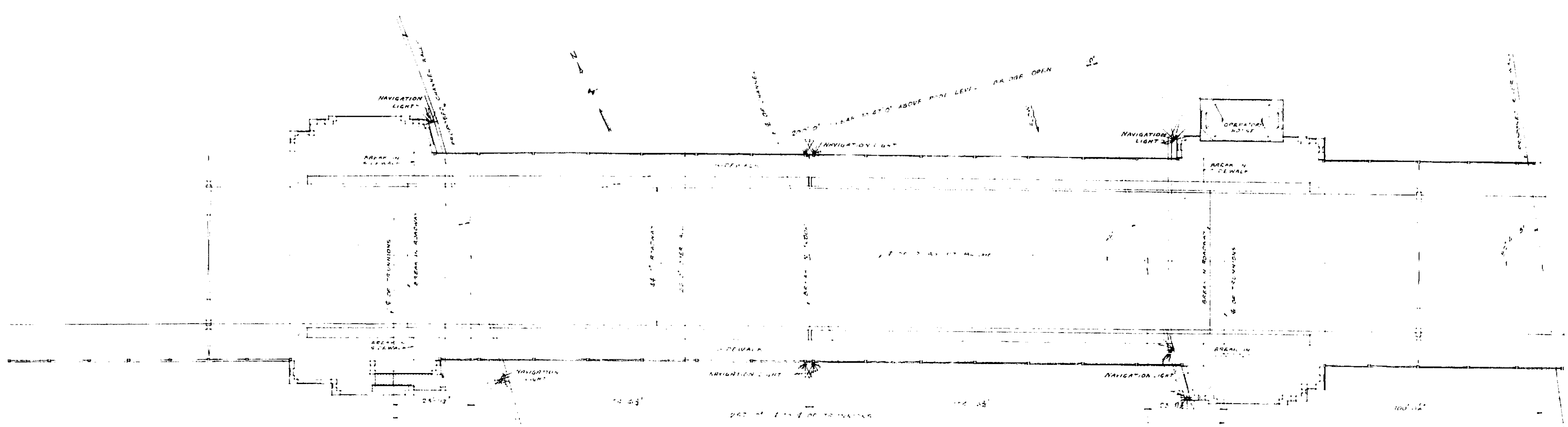
GENERAL PLAN
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

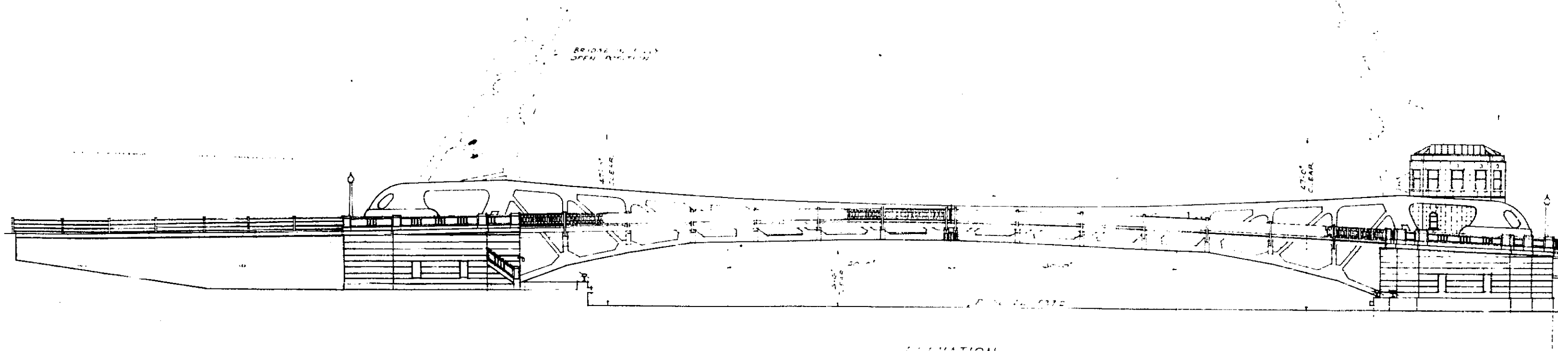
DRAWN BY P.L.D.
TRACED BY F.D.
CHECKED BY P.J.B.
REVISED APRIL 28, 1933 JULY 31, 1933 Aug. 21, 1933

SCALE: 1/16" = 1'-0"
DATE FEB. 23, 1933

SHEET NO. 1343-1



PLAN



ELEVATION

LIST OF DRAWINGS

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9 WEST ABUTMENT
10 WEST ABUTMENT
11 EAST ABUTMENT & DETAILS OF WEST ABUTMENT
12 WEST ABUTMENT
13 WEST ABUTMENT DETAILS
14 STRESS SHEET - BASCULE SPAN
15 STRESS SHEET - FIXED PARTS
16 CLEARANCE DIAGRAM
17 TRUNNION SUPPORTS
18 TRUNNION SUPPORTS
19 CROSS GIRDER F_0
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34 COUNTERWEIGHT SUPPORTS
35 COUNTERWEIGHT SUPPORTS
36 COUNTERWEIGHT SUPPORTS
37 FLOOR DETAILS AND FLOOR CASTINGS
38 FLOOR BEAMS F_3 TO F_8
39 FLOOR BEAMS F_1 AND F_2
40 HORIZONTAL GIRDER AND BRACING [illegible]
41 ORNAMENTAL RAILING
42 CENTER LOCK AND SUPPORTS
43 CENTER LOCK CASTINGS
44 COUNTERWEIGHT - EAST LEAF
45 COUNTERWEIGHT - WEST LEAF
46 OPERATING MACHINERY
47 MACHINERY DETAILS
48 TRUNNIONS AND BEARINGS
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52 MECHANICAL INDICATOR ETC.
53 WATER MAINS AND CONNECTIONS
54 ALTERATIONS TO PUMPING STATION

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved: Sept. 13, 1933

[illegible]

Managing Engineer

Approved: Sept. 13, 1933

[illegible]

Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended:

Bridge Engineer

Approved:

Chief Engineer

GENERAL PLAN

DOUBLE LEAF TRUNNION BASCULE BRIDGE

OVER

THE ILLINOIS WATERWAY

AT

RUBY ST. JOLIET ILL.

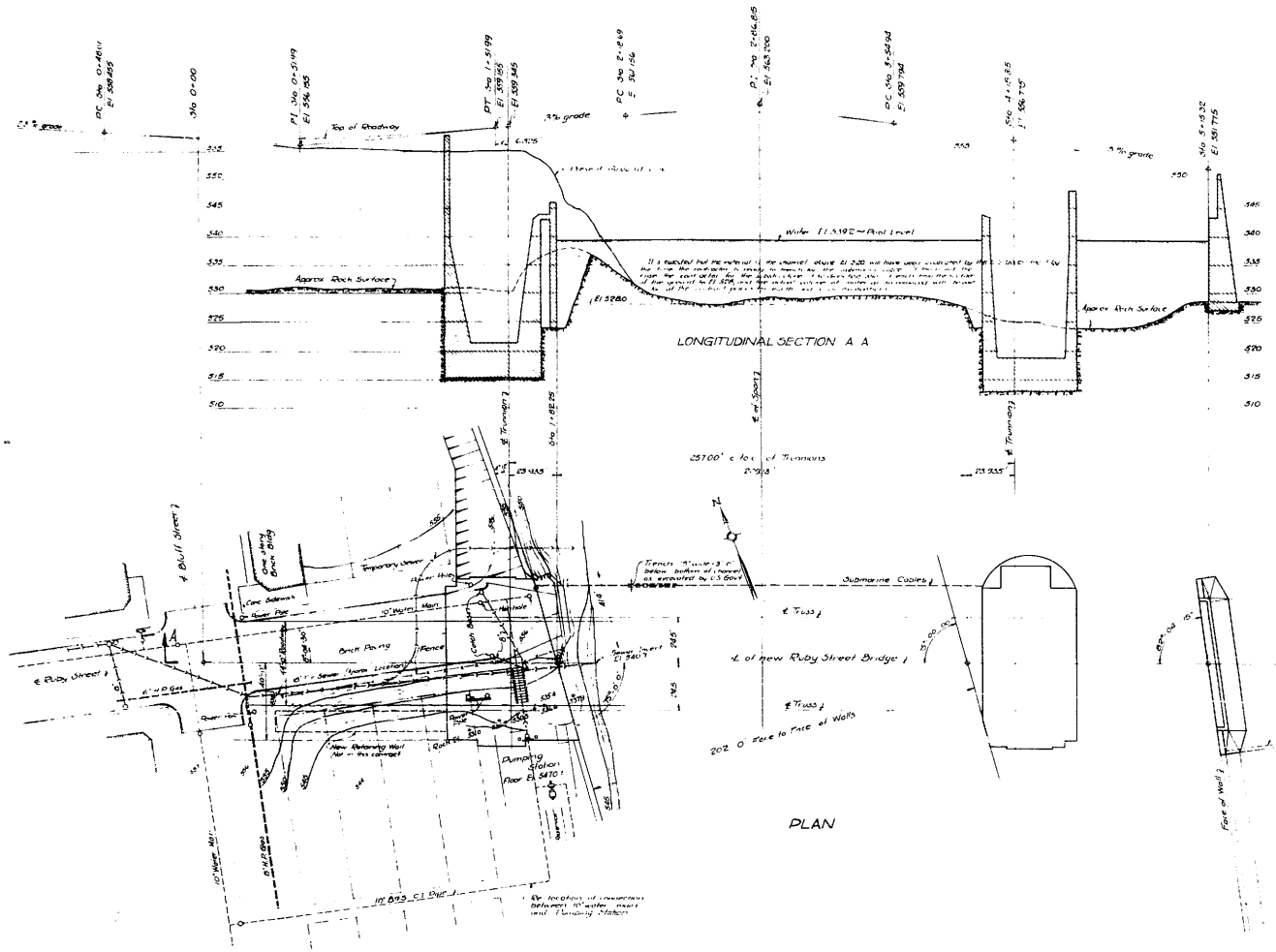
DESIGNED BY

THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

DRAWN BY P.L.D.
TRACED BY F.D.
CHECKED BY P.J.B.
REVISED APRIL 28, 1933
JULY 31, 1933 Aug. 21, 1933

SCALE: 1/16" = 1'-0"
DATE FEB. 23, 1933

SHEET NO. 1343-1



THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved Sept 15 1933
Manager Engineering Dept.
Approved Sept 15 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended.
Bridge Engineer
Approved
Chief Engineer

LOCATION PLAN
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

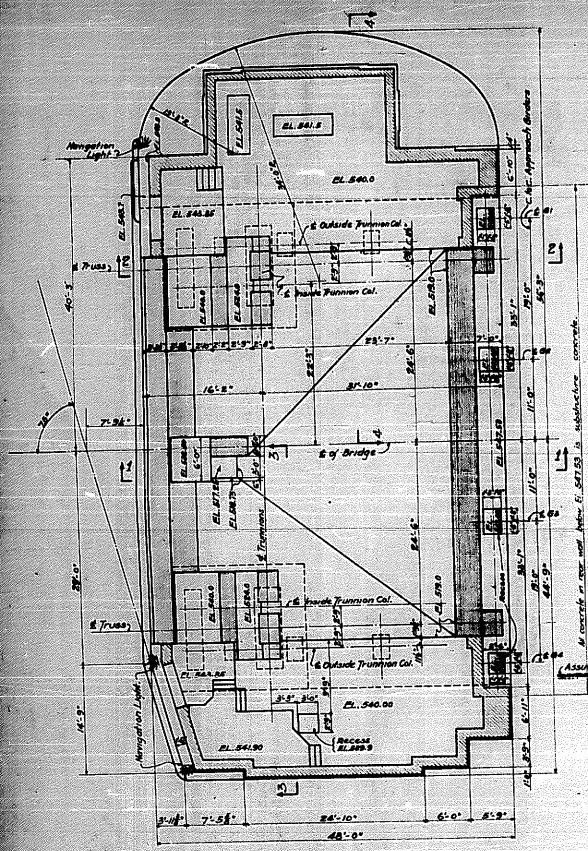
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY I.E.
TRACED BY A.C.
CHECKED BY J.C.B.
REVISED Aug 18 1933

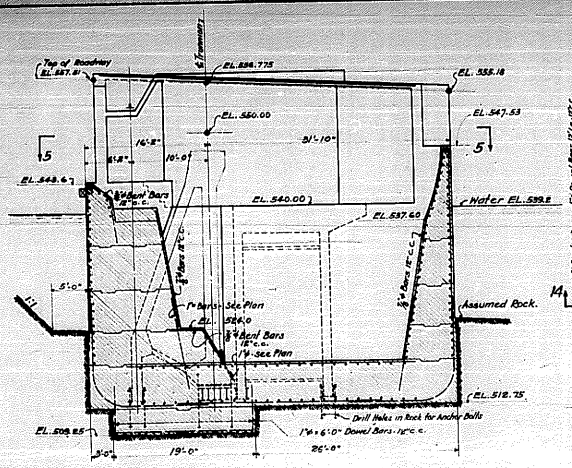
SCALE HORIZ. 1"=20'
VERT. 1"=10'
DATE FEB 22 1933

SHEET NO. 1343-2

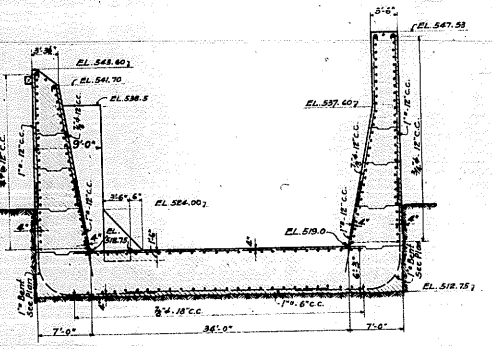
Accession No. 3301



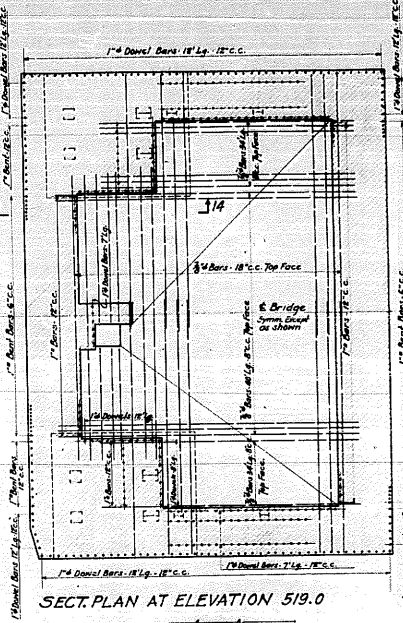
PIER PLAN - SECTION 5-5



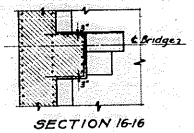
SECTION 2-2



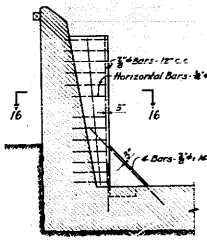
SECTION 1-1



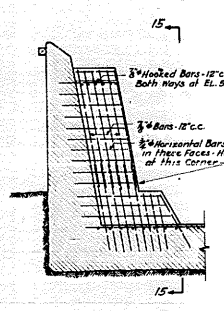
SECT. PLAN AT ELEVATION 519.0



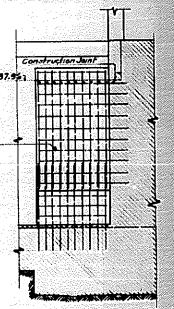
SECTION 16-16



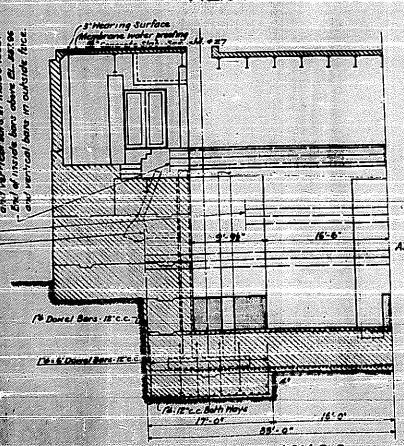
PART SECTION 1-1 SHOWING PILASTER REINFORCING BARS.



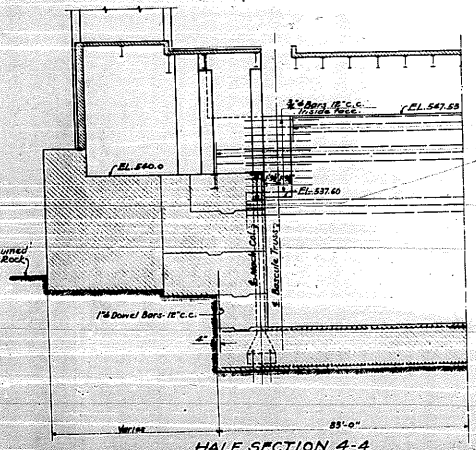
SECTION 14-14



SECTION 15-15



HALF SECTION 3-3



HALF SECTION 4-4

Notes for bars shown in section 1-1:
- End of horizontal bars in inside face above EL. 537.60
- End of horizontal bars in outside face.
- End of horizontal bars in inside face below EL 537.60 and vertical bars in both faces.

Note:

Except as noted on sheet #4, with reference to the concrete around machinery beams, and on this drg. with reference to the concrete in the rear wall of the pier, all concrete below El 549.85 is substructure concrete.

All concrete above the elevations given is superstructure concrete.

Classes of concrete:

Floor and front and rear walls of counterweight pit, live load supports, pump support, machinery room enclosure walls, floors and walls above machinery room and concrete around machinery beams shall be class 'A' concrete.

All other concrete in the pier shall be class 'A' concrete.

General Notes:

Bars where spliced must lap 40 diameters.

The contractor shall furnish complete setting plans and details of all substructure and superstructure reinforcing bars. The plans shall be carefully drawn on standard size sheets to a scale of not less than ¼" to the foot and shall be in ink on tracing cloth.

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved Sept. 13, 1933

Managing Engineer

Approved Sept 12 1933

Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended: _____

Bridge Engineer

Approved: _____

Chief Engineer

EAST PIER
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

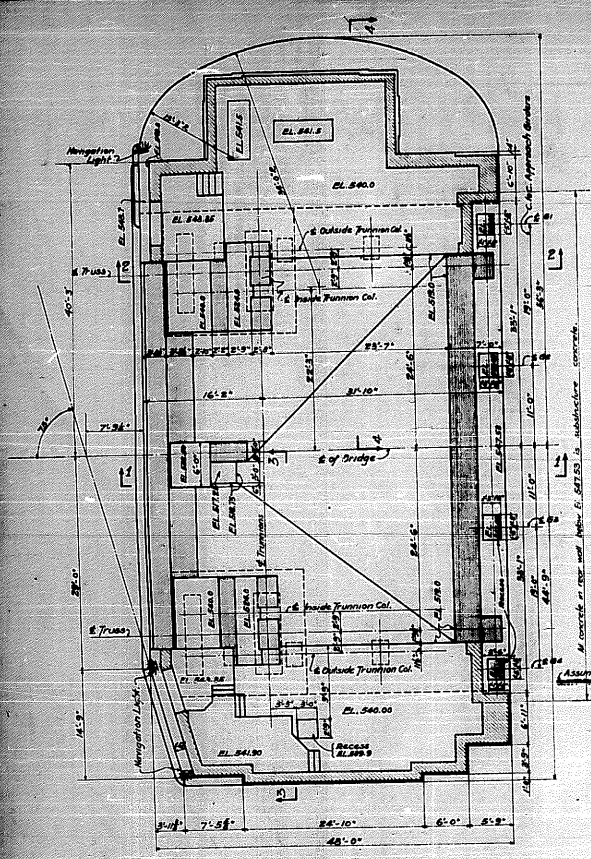
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY AL.R.S.
TRACED BY J.J.R.
CHECKED BY
REVISED Aug. 16-1933.

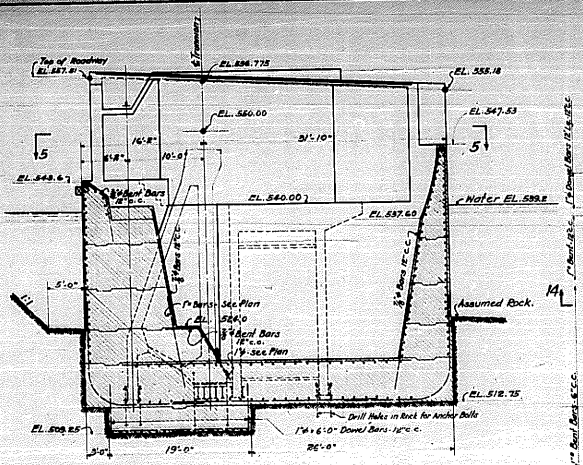
SCALE: ½" = 1'-0"
DATE: Mar. 1, 1933

SHEET NO. 1343-3

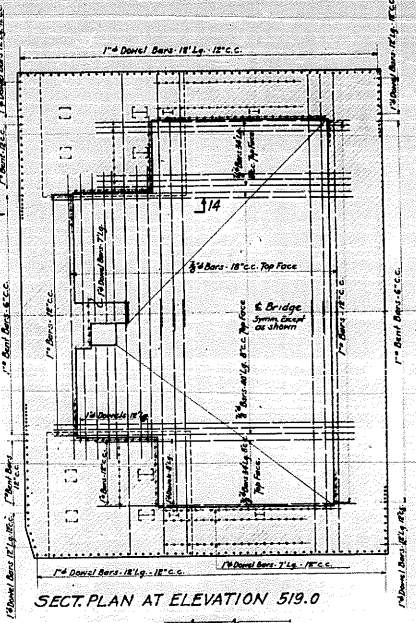
Accession No. 3302



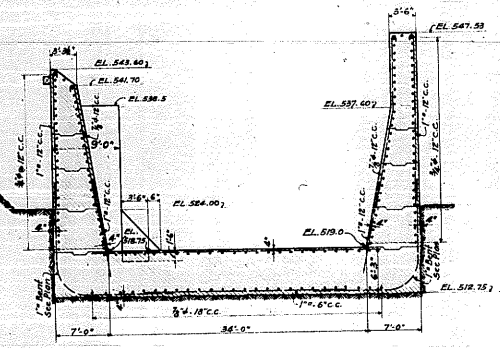
PIER PLAN - SECTION 5-5



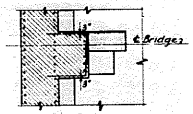
SECTION 2-2



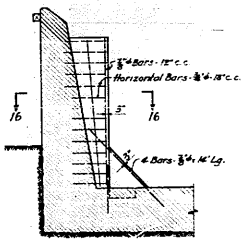
SECT. PLAN AT ELEVATION 519.0



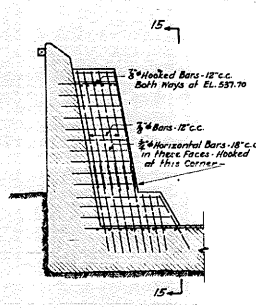
SECTION 1-1



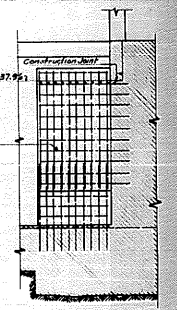
SECTION 16-16



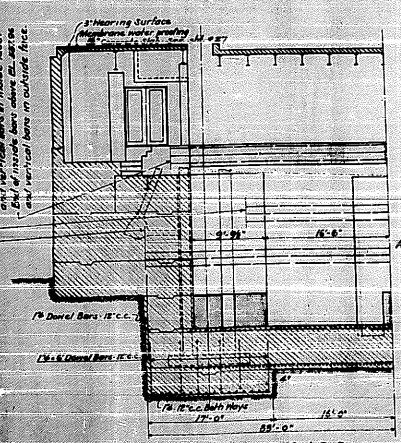
PART SECTION 1-1 SHOWING PILASTER REINFORCING BARS.



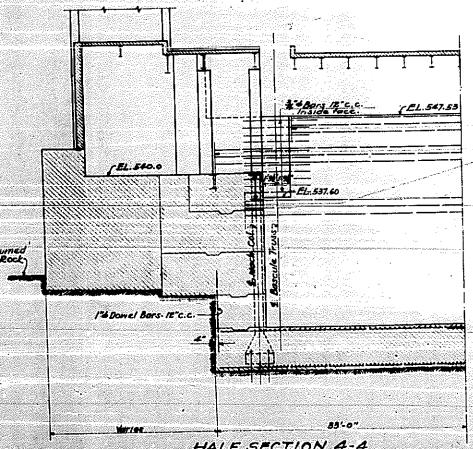
SECTION 14-14



SECTION 15-15



HALF SECTION 3-3



HALF SECTION 4-4

Notes for bars shown in section 1-1:

- End of horizontal bars in inside face above EL. 537.60
- End of horizontal bars in outside face.
- End of horizontal bars in inside face below EL. 537.66 and vertical bars in both faces.

Note:

Except as noted on sheet 4, with reference to the concrete around machinery beams, and on this drg. with reference to the concrete in the rear wall of the pier, all concrete below El. 549.85 is substructure concrete.

All concrete above the elevations given is superstructure concrete.

Classes of concrete:

Floor and front and rear walls of counterweight pit, live load supports, pump support, machinery room enclosure walls, floors and walls above machinery room and concrete around machinery beams shall be class 'A' concrete.

All other concrete in the pier shall be class 'A' concrete.

General Notes:

Bars where spliced must lap 40 diameters.

The contractor shall furnish complete setting plans and details of all substructure and superstructure reinforcing bars. The plans shall be carefully drawn on standard size sheets to a scale of not less than ½" to the foot and shall be in ink on tracing cloth.

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved Sept. 13, 1933

Engineering Engineer

Approved Sept. 13, 1933

Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended: _____

Bridge Engineer

Approved: _____

Chief Engineer

EAST PIER
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY: A.M.S.
TRACED BY: J.H.
CHECKED BY: J.F.B.
REVISED: Aug. 16-1935.

SCALE: ½" = 1'-0"
DATE: Mar. 1, 1933

SHEET NO. 1343-3

Accession No. 3302

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved: Oct. 13, 1933
Managing Engineer

Approved: Oct 13 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended: _____
Bridge Engineer

Approved: _____
Chief Engineer

EAST PIER
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
KUBY ST., JOLIET, ILL.

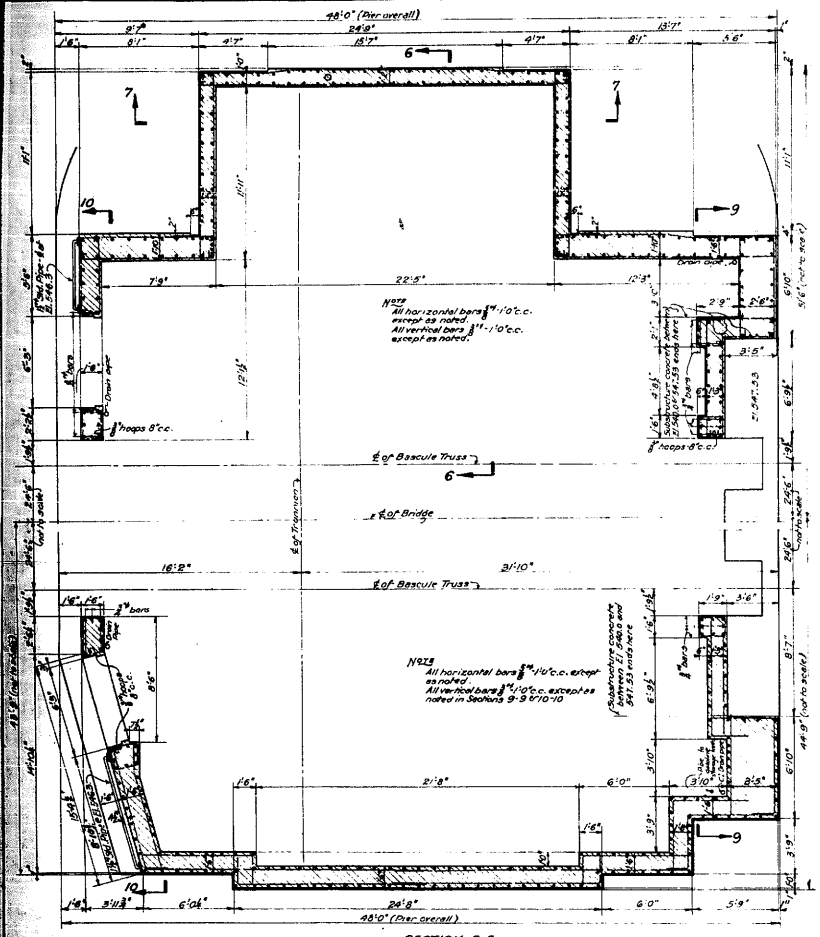
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK CHICAGO, ILL.

DRAWN BY A.L.R.S.
TRACED BY R.K.F.
CHECKED BY F.K.D.
REVISED Aug. 17, 1933

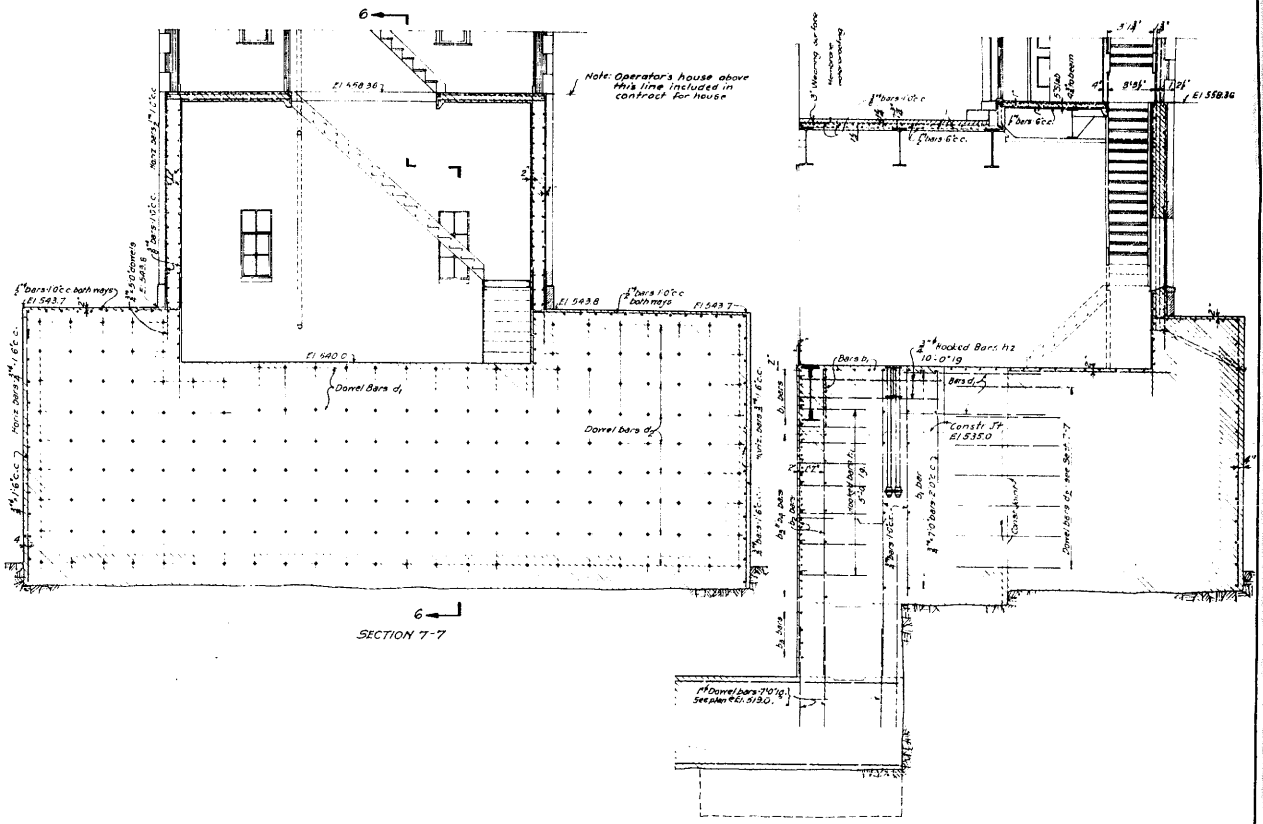
SCALE: ½"=1'0" UNLESS NOTED
DATE: APRIL 26, 1933

SHEET NO. 1343-4

Accession No. 5908

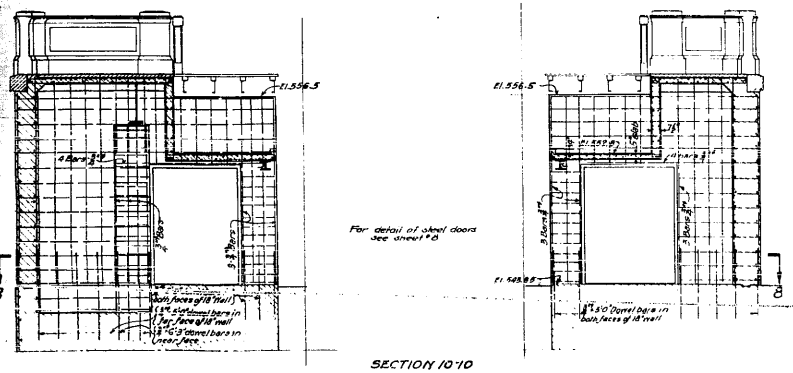


SECTION 8-8



SECTION 7-7

SECTION 6-6



For detail of steel doors See sheet #6

SECTION 10-10

Note - For Section 9-9 see Sheet #6
For general Notes see Sh #3

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: July 12, 1933
Managing Engineer
Approved: July 13 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended:
Bridge Engineer
Approved
Chief Engineer

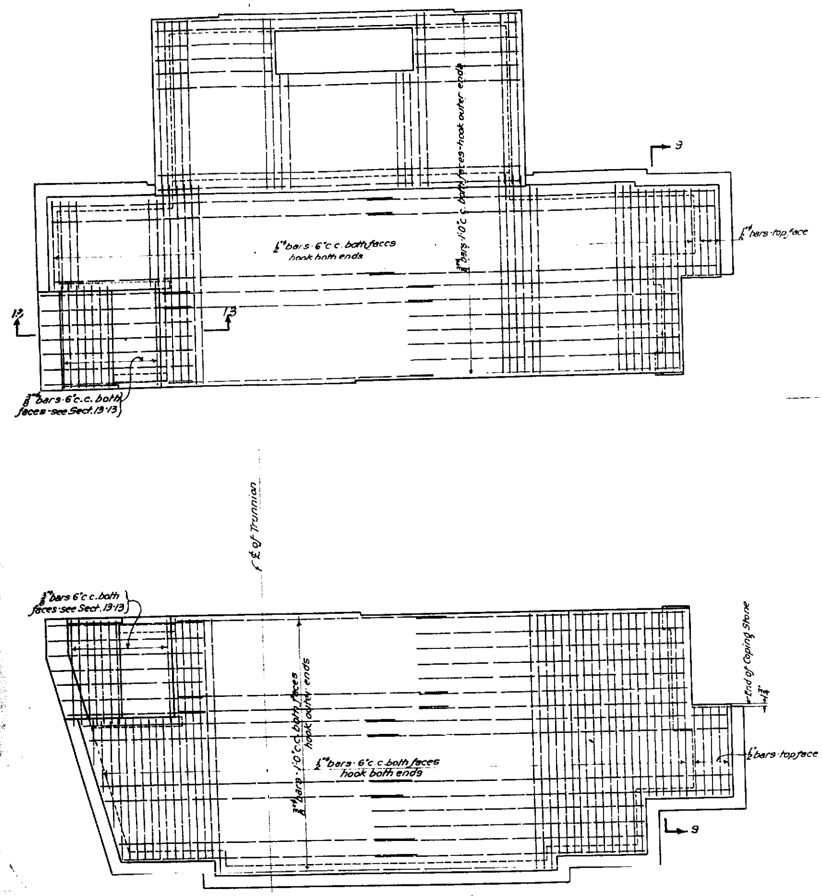
EAST PIER
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

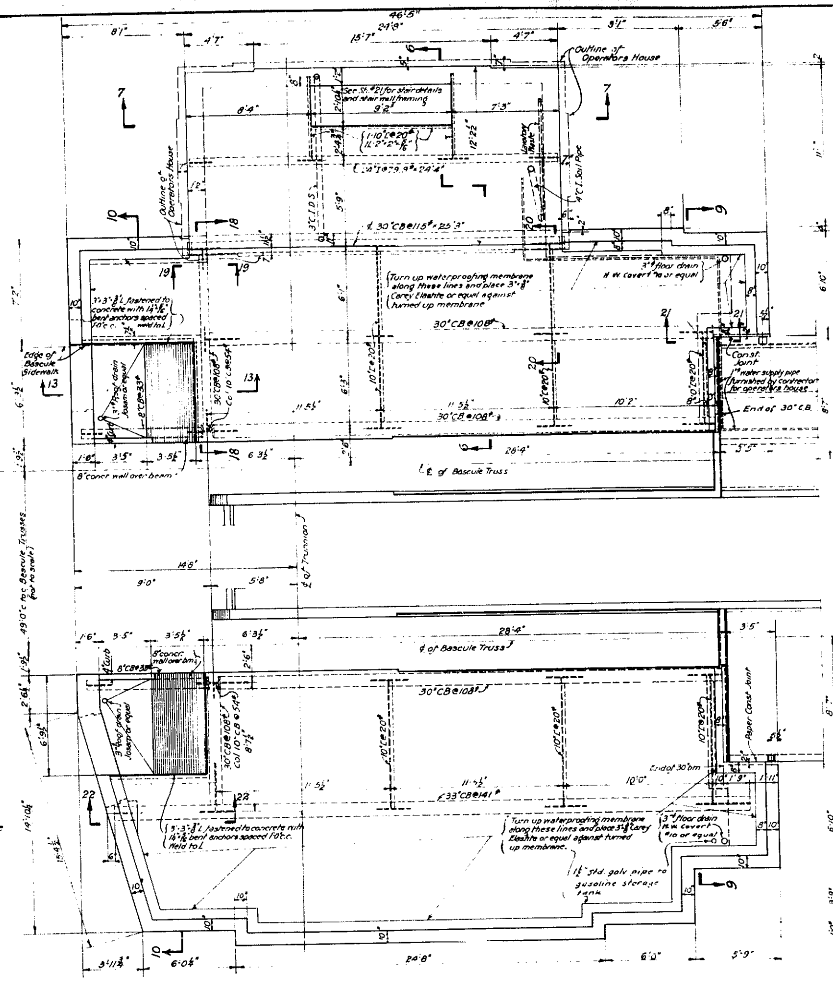
DRAWN BY A. L. H. S.
TRACED BY [illegible]
CHECKED BY [illegible]
REVISED Aug. 18 1933
SCALE 1/4"=1'0"
DATE- APRIL 27, 1933

SHEET NO. 1345-5

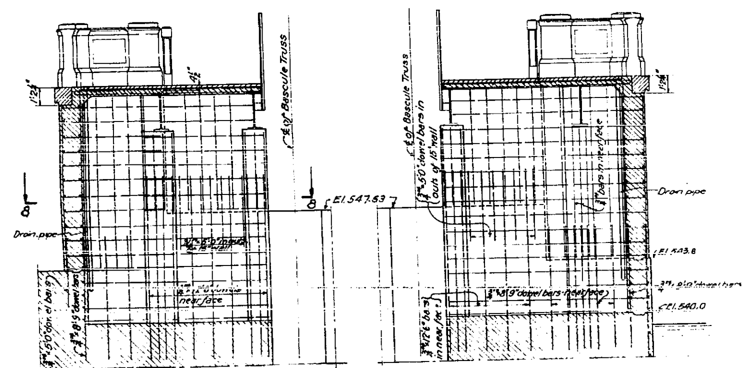
Accession No: 3304



BAR PLAN AT SIDEWALK LEVEL



STEEL FRAMING AND CONCRETE DETAILS AT SIDEWALK LEVEL



SECTION 9-9

NOTE:-
For Sections 6-6, 7-7, 8-8 & 10-10 see Sh. #5
For Sections 18-18, 19-19, 20-20, 21-21 & 22-22 see Sheet #23
For Section 13-13 see Sh. #4
For General Notes see Sh. #3

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved
Managing Engineer
Approved Sept. 15, 1933
Chief Engineer

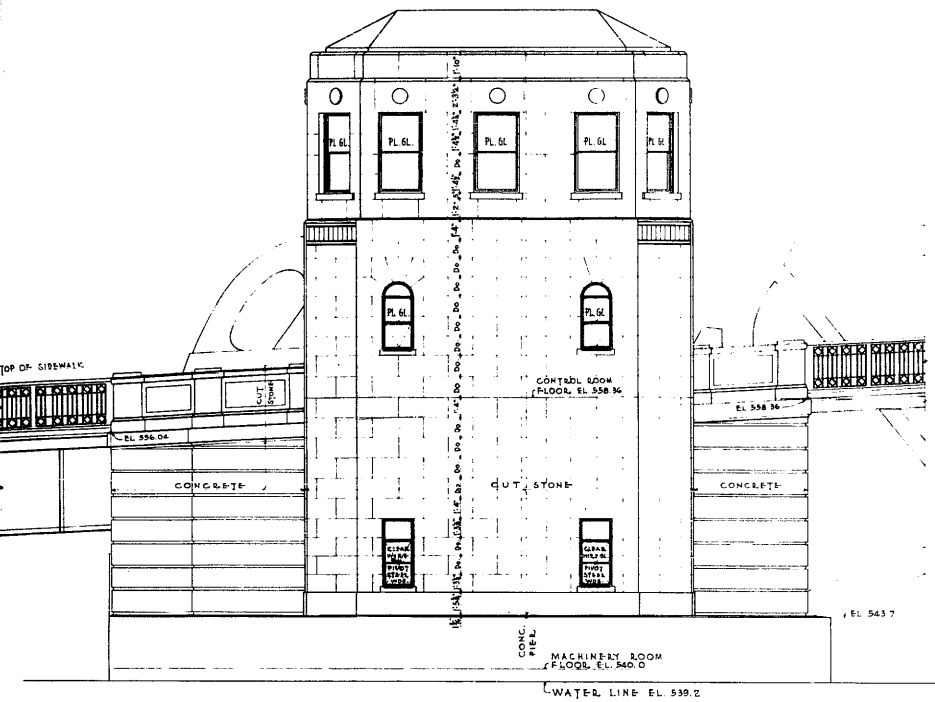
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended
Bridge Engineer
Approved
Chief Engineer

EAST PIER
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.

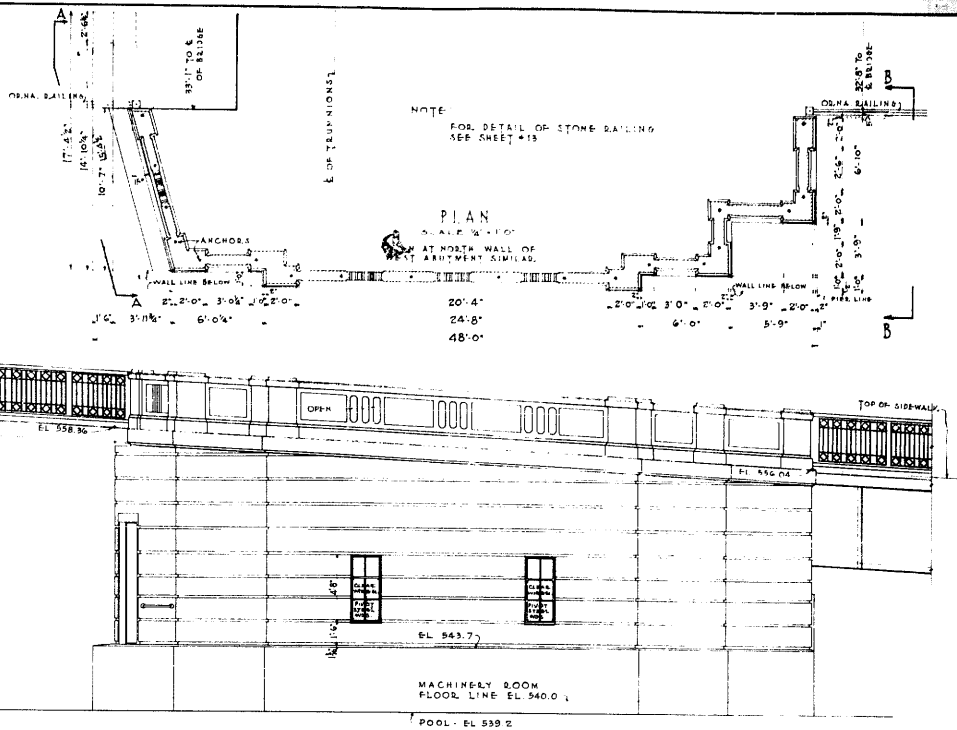
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY A.L.R.S.
TRACED BY
CHECKED BY
REVISED Aug. 21, 1933
SCALE 1/4"=1'0"
SHEET NO. 1343-6

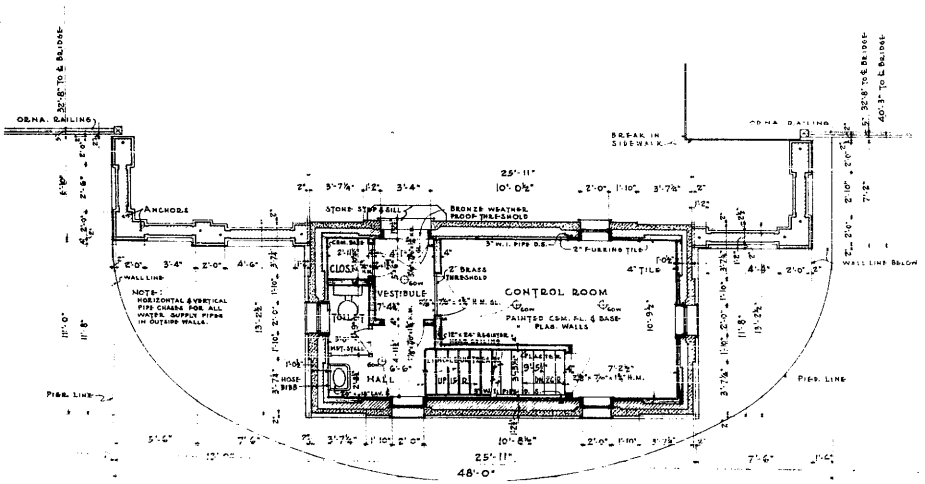
Accession Nº 3305



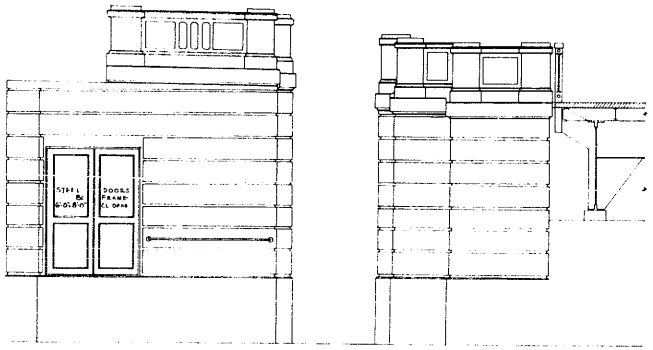
NORTH ELEV. EAST PIER
SCALE: 1/4" = 1'-0"



SOUTH ELEV. EAST PIER
SCALE: 1/4" = 1'-0"



PLAN
SCALE 1/4"=1'-0"



ELEV. A-A
SCALE 1/4" = 1'-0"

ELEV. B-B
SCALE 1/4" = 1'-0"

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved Sept. 13, 1933
Managing Engineer
Approved Sept 13 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended
Bridge Engineer
Approved
Chief Engineer

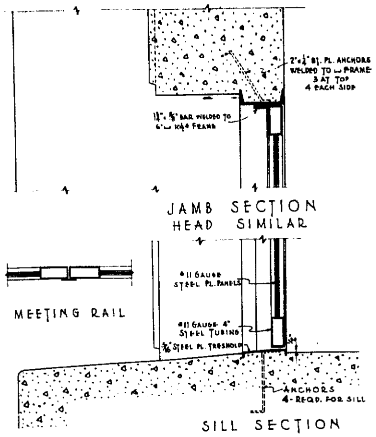
OPERATOR'S HOUSE & EAST PIER DETAILS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY F.B
TRACED BY J.H
CHECKED BY C.W.B
REVISED AUG. 28, 1933
SCALE 1/4" = 1'-0"
DATE: MARCH 1, 1933

SHEET NO. 1343-7

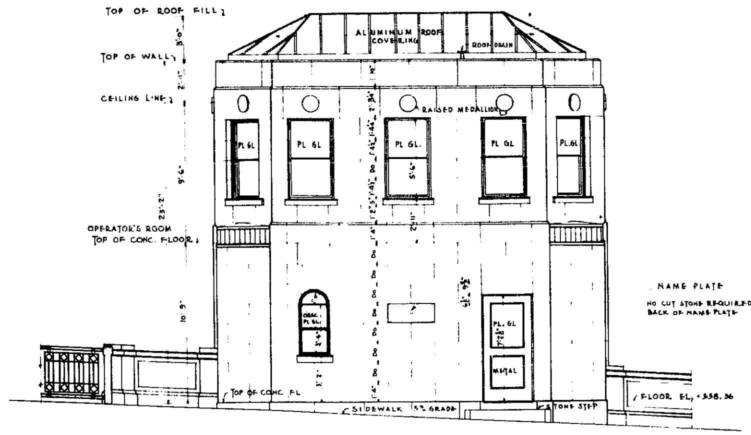
Accession No. 3306



DETAILS OF STEEL DOORS AND FRAMES - MACHINERY ROOMS

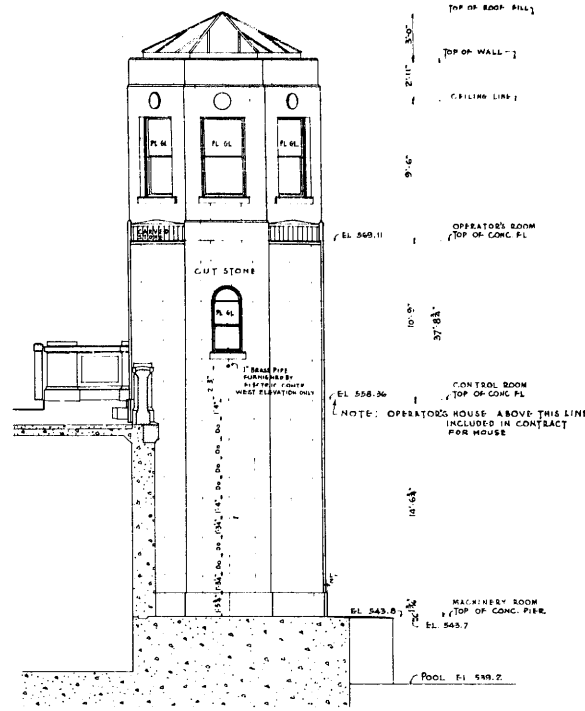
SCALE 1½" = 1'-0"

4 SETS OF DOUBLE DOORS & FRAMES REQD.
2 FOR EAST PIER & 2 FOR WEST ABUTMENT



SOUTH ELEVATION

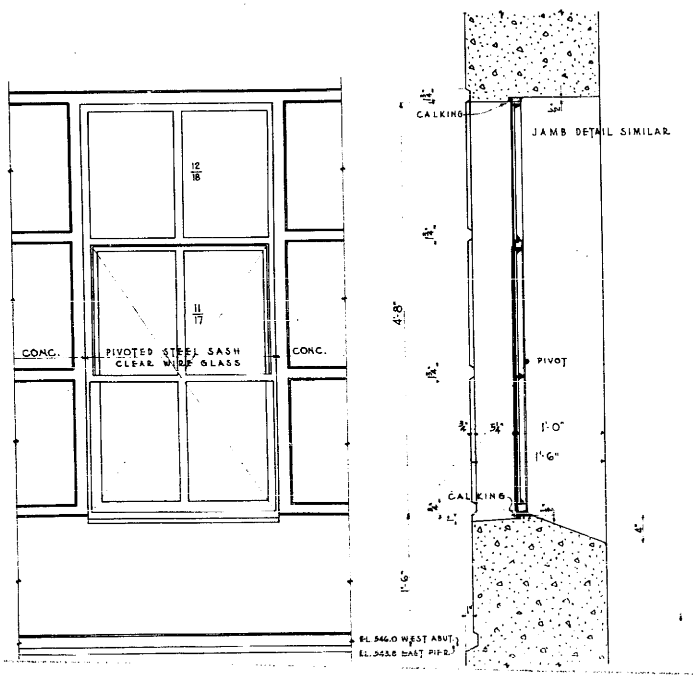
SCALE ¼" = 1'-0"



EAST ELEVATION

WEST ELEVATION SIMILAR REVERSED

SCALE ¼" = 1'-0"

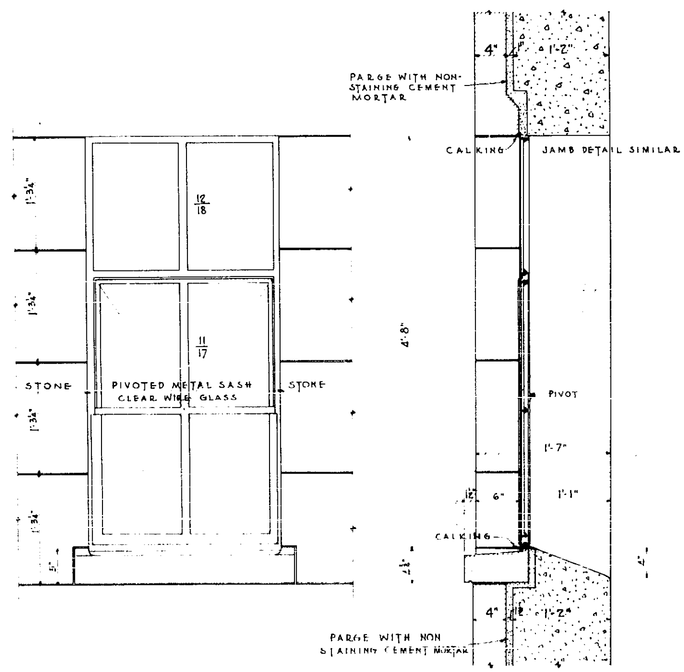


ELEVATION SECTION

DETAILS OF TYP. WDS. MACHINERY ROOMS

SOUTH END OF EAST PIER & SOUTH END OF WEST ABUTMENT

SCALE: 1½" = 1'-0"



ELEVATION SECTION

WINDOW DETAILS - MACHINERY ROOM

NORTH END OF EAST PIER

SCALE 1½" = 1'-0"

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved: Sept. 13, 1933
[signature]
Managing Engineer
Approved: Sept. 13, 1933
[signature]
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended:
Bridge Engineer
Approved:
Chief Engineer

OPERATOR'S HOUSE & DETAILS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

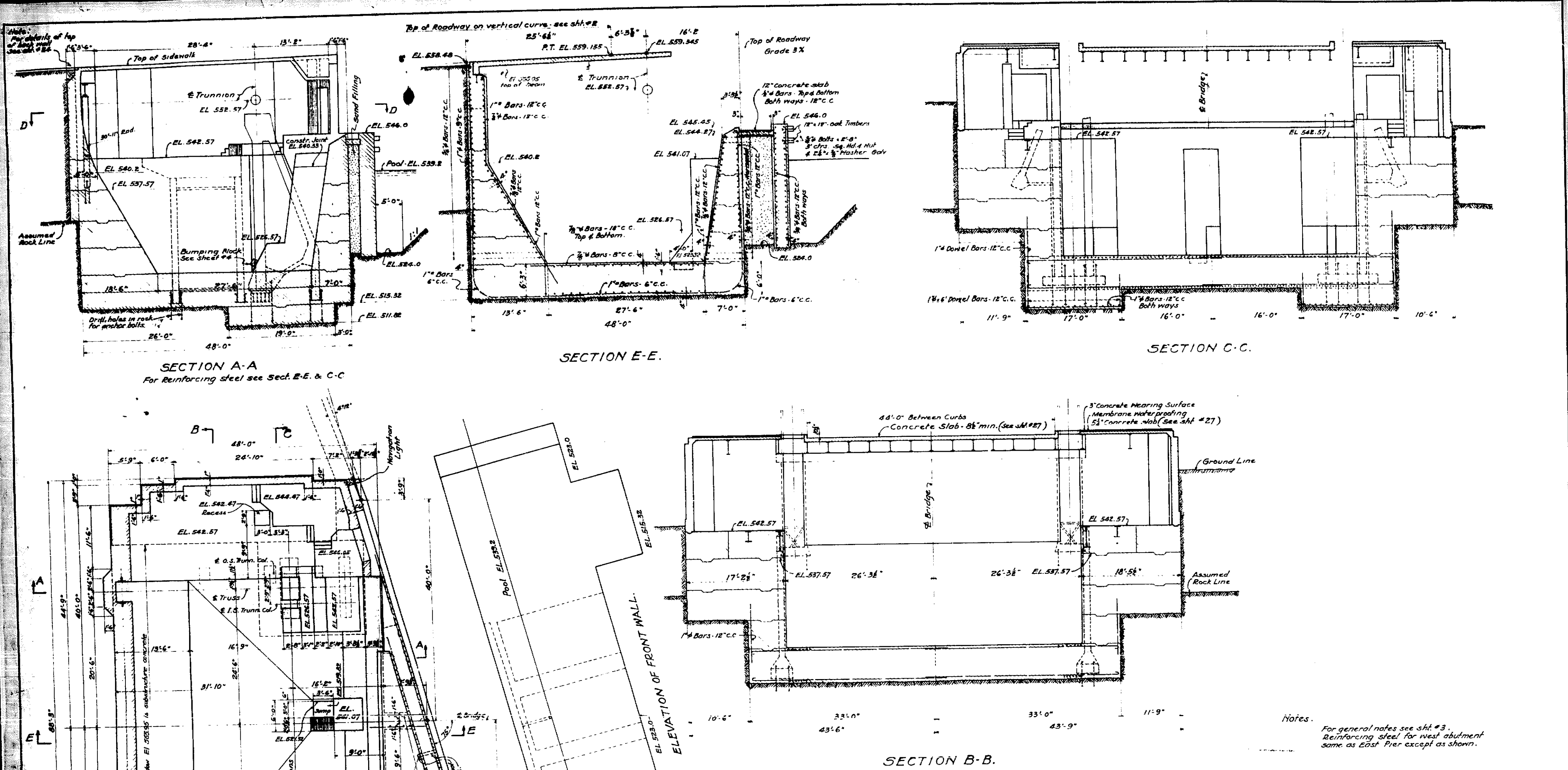
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO
MONADNOCK BLOCK CHICAGO, ILL.

DRAWN BY F. B.
TRACED BY J. R.
CHECKED BY
REVISED AUG. 18, 1933

SCALE ¼" & 1½" = 1'-0"
DATE: MARCH 8, 1933

SHEET NO. 1343-8

Accession No. 3307



Notes.

For general notes see sht. #3.
Reinforcing steel for west abutment same as East Pier except as shown.

Classes of concrete

Floor and front and rear walls of counterweight pit, live load supports, pump support, machinery room enclosure walls and walks above machinery room stairway and concrete around machinery beams shall be class "X" concrete.

All other concrete in the abutment shall be class "A" concrete.

Note:

Except as noted on sheet #10, with reference to concrete around machinery beams, and on this drg with reference to the rear wall of the abutment all concrete below El 546.05 is substructure concrete.

All concrete above the elevations given is superstructure concrete.

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved Sept. 13, 1933

[signature] Managing Engineer

Approved Sept. 13-1933

[signature] Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended: ______

Bridge Engineer

Approved: ______

Chief Engineer

WEST ABUTMENT
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

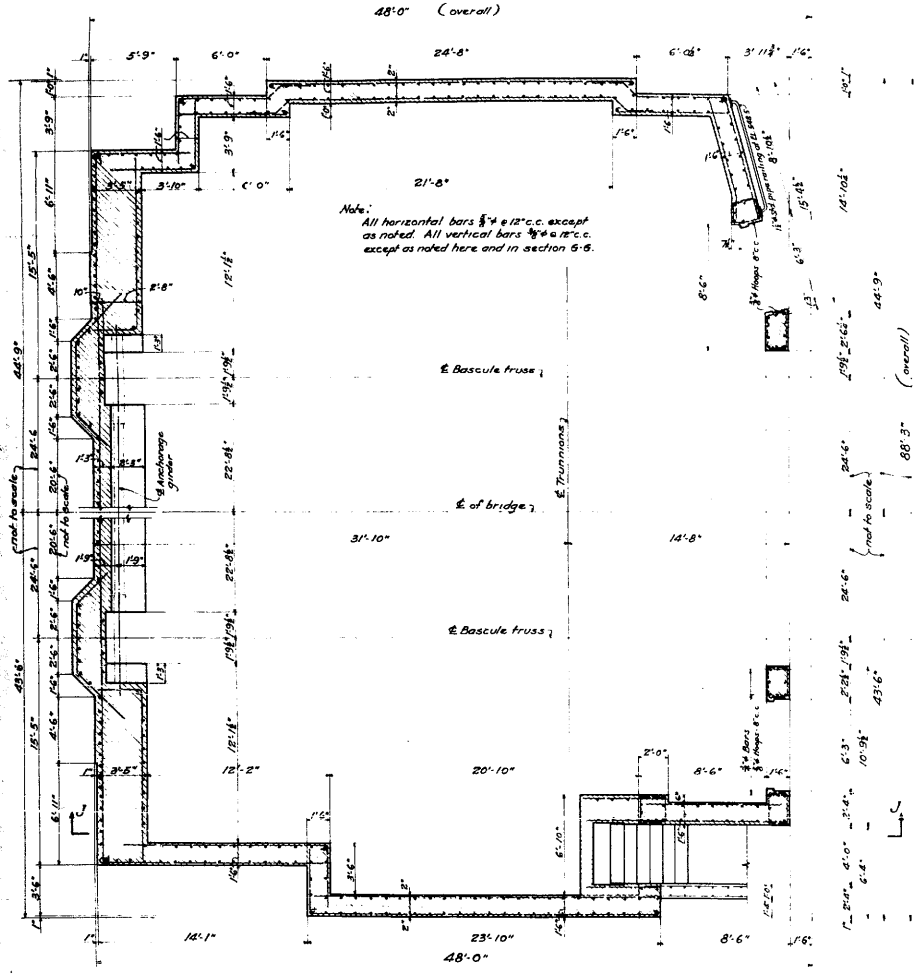
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

DRAWN BY I.E.
TRACED BY J.H.
CHECKED BY [illegible]
REVISED AUG. 18-1933

SCALE $\frac{1}{8}$" = 1'-0"
DATE. FEB. 28-1933

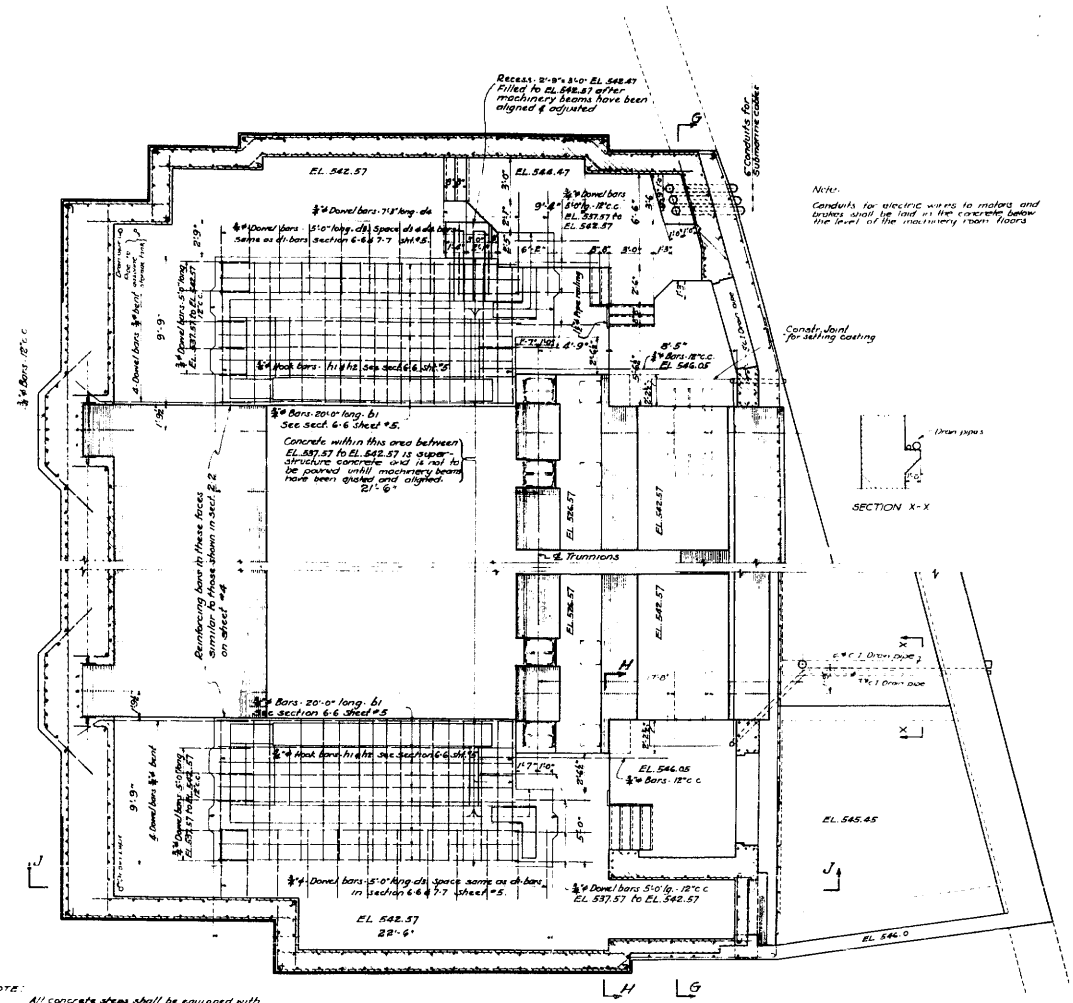
SHEET NO. 1343-9

Accession No. 3308



SECTION F-F.

FOR LOCATION SEE SHT. # 11



PLAN AT EL. 546.0.

NOTE:
All concrete steps shall be equipped with Abrasive safety tread style A 4" wide as manufactured by American Abrasive Metals Co. New York, N.Y. or equal.
For general notes see sht # 9
For sections G-G, H-H & J-J see sht # 11.

THE SCHERZER ROLLING LIFT BRIDGE CO

Approved: April 11 1933

Managing Engineer

Approved: April 13 1933

Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Recommended:

Bridge Engineer

Chief Engineer

WEST ABUTMENT
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

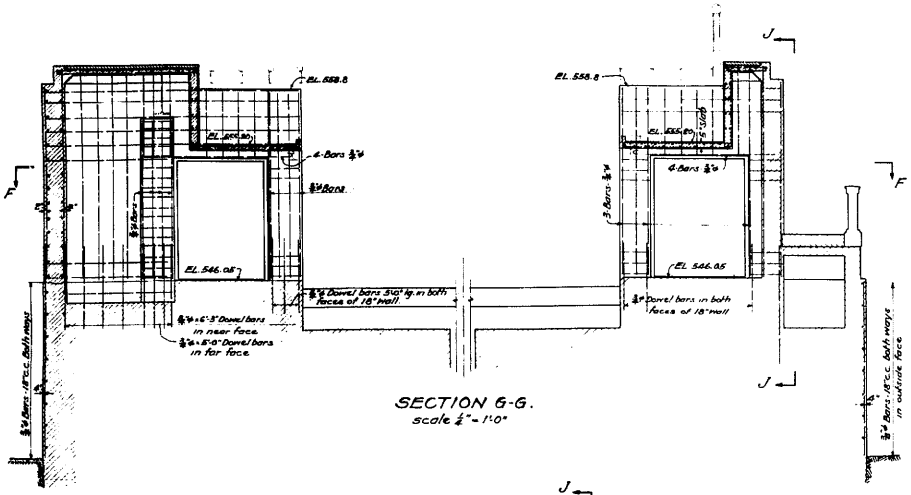
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK CHICAGO, ILL

DRAWN BY A.L.E.S.
TRACED BY J.W.
CHECKED BY C.F.P.
REVISED Nov. 18 1933

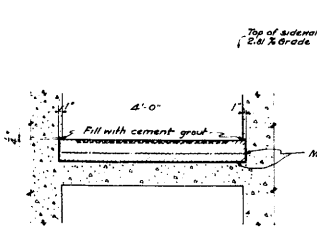
SCALE 1"=10'-0"
DATE APRIL 29-1933

SHEET NO. 1343-10

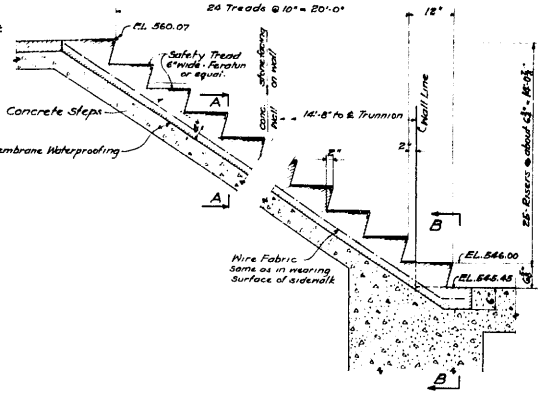
Accession No. 3309



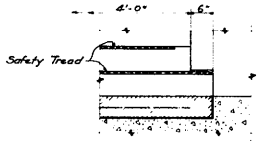
SECTION G-G.
scale ½" = 1'-0"



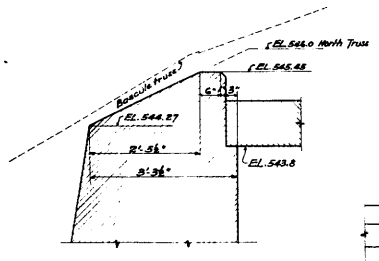
SECTION A-A.



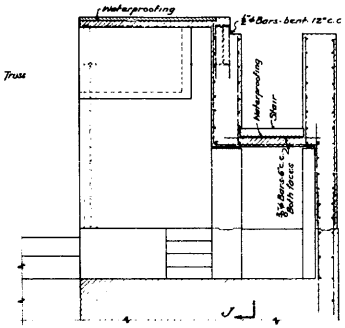
SECTION THRU STAIRWAY.



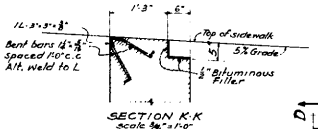
SECTION B-B.



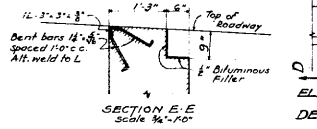
DETAIL AT FRONT WALL.
scale ¾" = 1'-0"



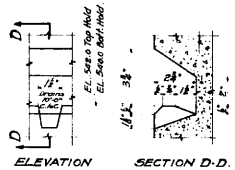
SECTION H-H.
Scale ½" = 1'-0"
24 treads = 20'-0"



SECTION K-K
scale ¾" = 1'-0"

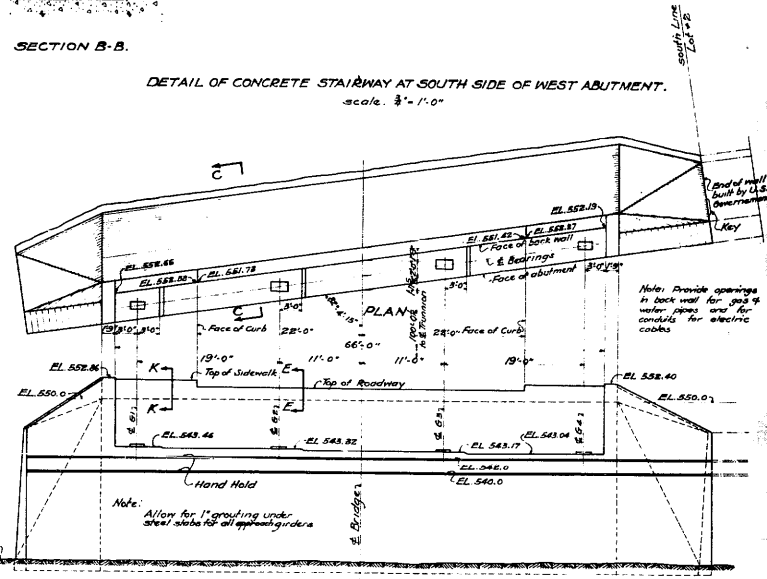


SECTION E-E
Scale ¾" = 1'-0"



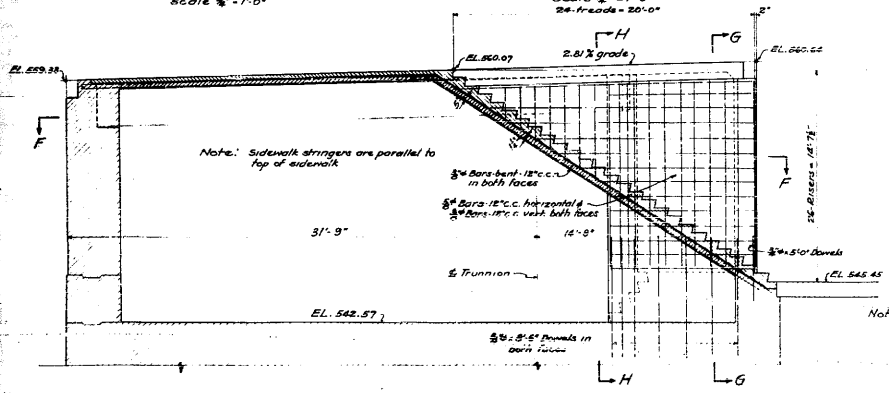
ELEVATION SECTION D-D.

DETAIL OF HAND HOLDS.
scale 3" = 1'-0"

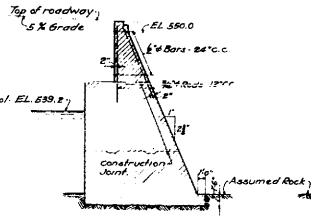


FRONT VIEW

EAST ABUTMENT (including in masonry for substructure)
Scale ⅛" = 1'-0"



SECTION J-J.
scale ½" = 1'-0"



SECTION C-C.

Note: For section E-E see sheet # 10
For general notes see sheet # 3

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept 13 1933
Managing Engineer
Approved: Sept 13 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended: _____
Bridge Engineer
Approved: _____
Chief Engineer

EAST ABUTMENT & DETAILS OF WEST ABUTMENT DOUBLE LEAF TRUNNION BASCULE BRIDGE

OVER

THE ILLINOIS WATERWAY

AT

RUBY ST. JOLIET ILL.

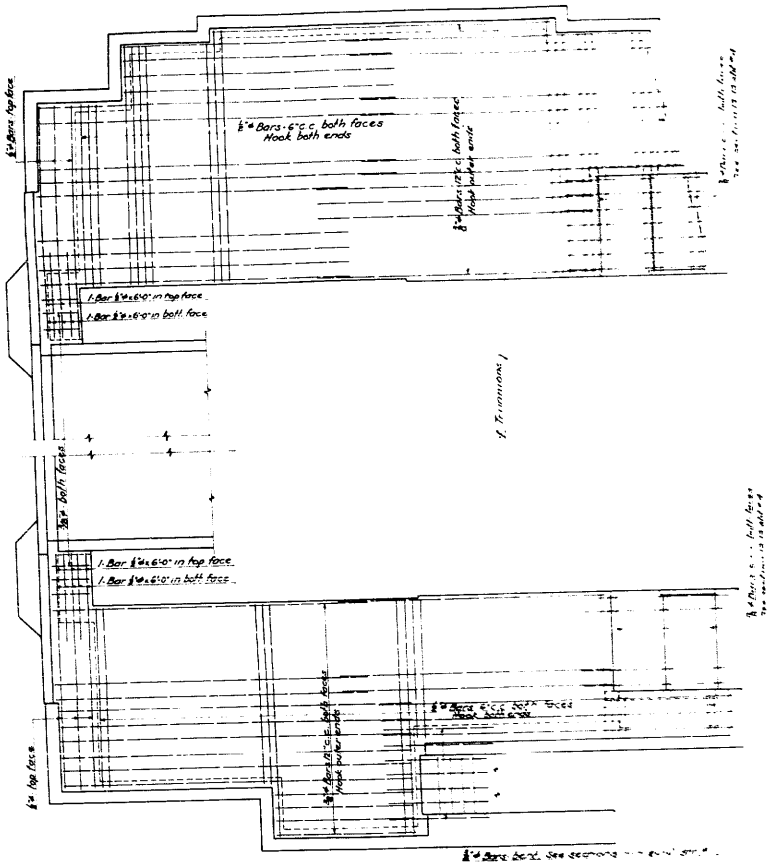
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY A.L. R.S. & A.B.
TRACED BY J.H.
CHECKED BY H.F.B.
REVISED AUG. 18, 1933

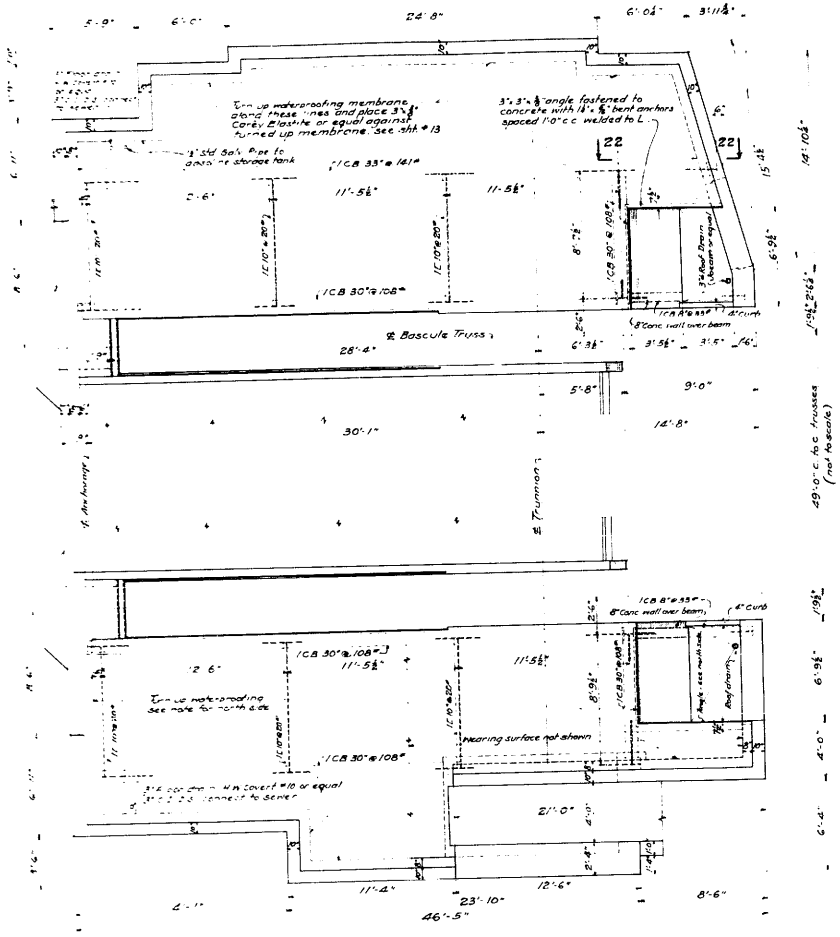
SCALE ¼, ½, 1 & 3" = 1'-0"
DATE APR. 29, 1933

SHEET NO. 1343-11

Accession No. 3310



PLAN AT SIDEWALK LEVEL.



PLAN AT SIDEWALK LEVEL.

THE S. HERZER ROLLING LIFT BRIDGE CO.

Approved
Engineering Engineer

Approved
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended
Bridge Engineer

Approved
Chief Engineer

WEST ABUTMENT
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

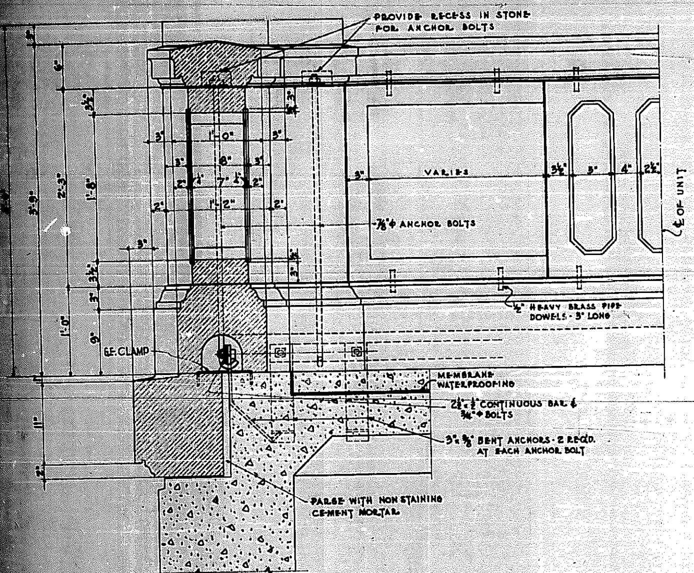
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK CHICAGO, ILL.

DRAWN BY A.L.R.S.
TRACED BY J.R.
CHECKED BY F.F.P.
REVISED AUG 18-1933

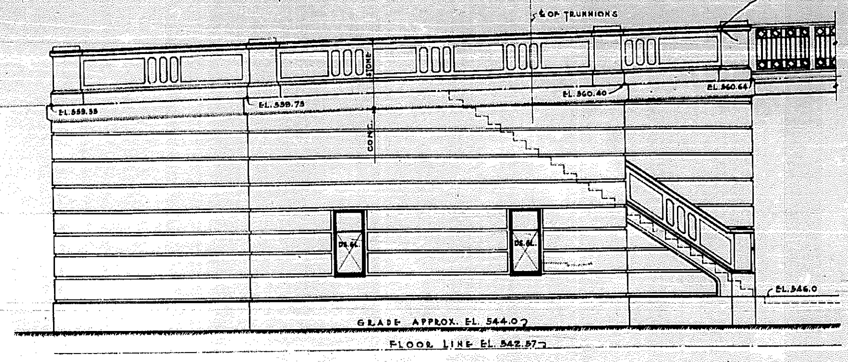
SCALE ½"=1'-0"
DATE APRIL 29-1933

SHEET NO. 1343-12

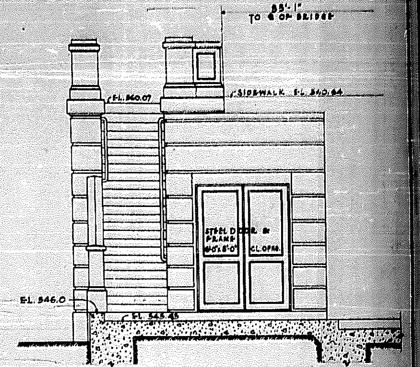
Accession No. 3311



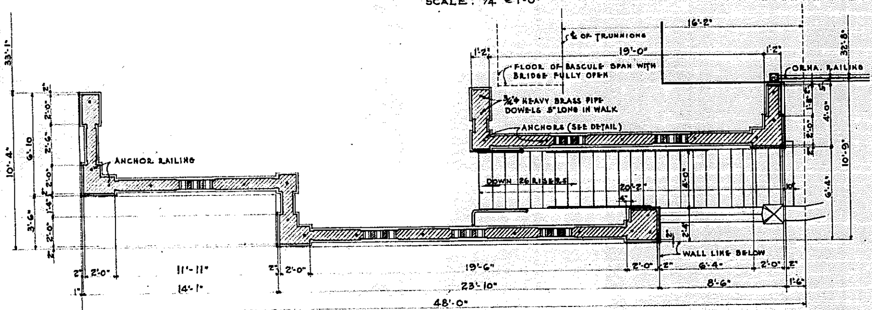
DETAIL OF STONE RAILING
SCALE: 1½" = 1'-0"



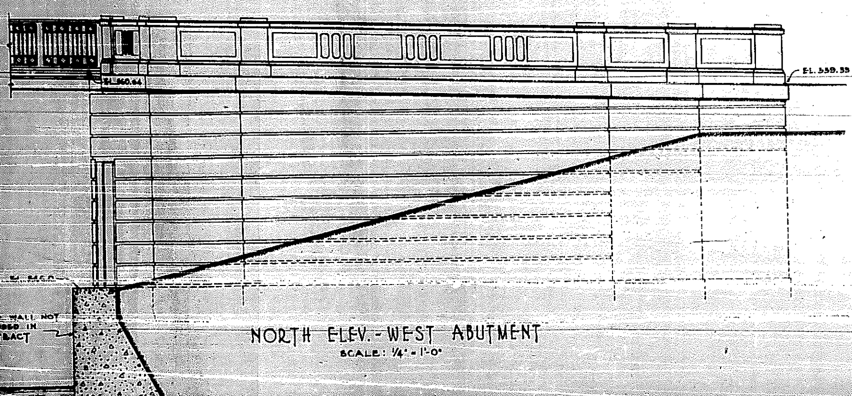
SOUTH ELEV. - WEST ABUTMENT
SCALE: 1/4" = 1'-0"



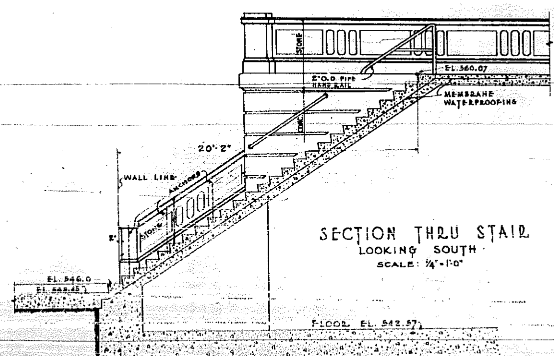
PART EAST ELEV.
SCALE: 1/4" = 1'-0"



PLAN
SCALE: 1/4" = 1'-0"



NORTH ELEV. - WEST ABUTMENT
SCALE: 1/4" = 1'-0"



SECTION THRU STAIR
LOOKING SOUTH
SCALE: 1/4" = 1'-0"

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept. 13, 1933
Managing Engineer
Approved: Sept. 13, 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended: ______
Bridge Engineer
Approved: ______
Chief Engineer

WEST ABUTMENT DETAILS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

DRAWN BY F.B.
TRACED BY J.R.
CHECKED BY
REVISED AUG. 28, 1933
SCALE: 1/4" = 1'-0"
DATE: MAR. 3, 1933

SHEET NO. 1343-13

Accession No. 3312

STRESSES IN FLOOR BEAMS AND STRINGERS

MEMBER	SHEARS IN 1000#				MOMENTS IN 1000 FT. LBS.				SECTION
	D.L.	L.L.	IMP.	TOTAL	D.L.	L.L.	IMP.	TOTAL	
S1	1.0	16.7	5.0	22.7	4.3	54.3	16.3	74.9	16" C.B. @ 45#
S2	1.0	16.0	16.0	33.0	4.4	70.5	70.5	146.0	18" C.B. @ 64#
S3	0.3	1.7	~	2.0	1.2	7.1	~	8.3	10" C.B. @ 20#
[illegible]	[illegible]	~	36.	212.	2170.	~	434.	2604.	See Details
F2	28.0	62.0	18.6	108.6	367.	830.	249.	1446.	4∠s 6"×6"×13/16" 1 Web Pl. 60"×3/8"
F4	25.1	62.0	18.6	105.7	307.	830	249	1386	2∠s 6"×6"×3/4" Top, 2∠s 8"×6"×3/4" Bott., 1 Web Pl. 72"×7/16"
F6 to F7	28.0	62.0	18.6	108.6	367	830.	249	1446	4∠s 6"×6"×3/4", 2 Pls 14"×3/4", 1 Web Pl. 46"×3/8"
F8	20.5	66.3	39.8	126.6	264.	883.	530.	1677	4∠s 6"×6"×3/4", 2 Pls 14"×1/2" Bott., 1 Pl. 14"×1/2" Top, 1 Web Pl. 46"×3/8"

STRESSES IN MAIN TRUSSES - REAR ARM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
MEMBER	BRIDGE CLOSED						BRIDGE OPEN			DESIGN STRESS	ALLOW UNIT STRESS	AREA REQ'D.		AREA USED		SECTION
	DEAD LOAD	LIVE LOAD	IMPACT	TOTAL 2+3+4	REVERSAL INCREMENT	MAX. STRESS	DEAD LOAD	IMPACT	TOTAL 8+9			GROSS	NET	GROSS	NET	
U_1U_8	+1222		+244	+1466			+752	+150	+902	+1466	16.0		91.5	111.4	92.4	4∠s 6"×6"×13/16" - 2 Pls 24"×3/4" - 2 Pls 24"×13/16"
L_1L_8	-252		-50	-302			+510	+102	+612	-302 +612	16.0		38.3	52.6	40.6	4∠s 4"×4"×11/16" - 2 Pls 20"×13/16"
L_8L_b	0						+280	+56	+336	+336	16.0		21.0	35.0	27.0	4∠s 4"×4"×1/2" - 2 Pls 20"×1/2"
M_0U_1	-1000	+990	-200 +81	-1000 +870	± 186	-1200 +555	-1215	-243	-1458	-1458	12.8	114.0		127.2		4∠s 6"×4"×1/2", 4 Pls 24"×7/8", 4∠s 6"×4"×3/4", 1 Pl. 19 1/2"×1/2"
M_0M_1	0						-207	-41	-248	-248	12.3	20.2		26.9		4∠s 6"×4"×1/2" - 1 Pl. 21"×3/8"
M_0L_1	-651	-556	-46	-1253			-1472	-294	-1766	-1766	13.5	131.0		140.8		4∠s 6"×4"×3/4", 4∠s 6"×4"×1/2", 4 Pls 24"×7/8", 1 Pl. 20"×1/2"
M_0U_8	-1552		-310	-1862			-610	-122	-732	-1862	12.8	146.0		148.5		4∠s 6"×6"×3/4" - 4 Pls 12 1/2"×7/8", 2 Pls 24"×7/8" - 4∠s 6"×4"×1/2" - 1 Pl. 20"×1/2"
U_8M_b	+440		+88	+528			+608	+122	+730	+730	16.0		45.6	53.5	46.3	4∠s 8"×6"×3/4" - 1 Pl. 22"×5/8"
L_bM_b	-350		-70	-420			+305	+61	+366	-420 +366	13.5 16.0	31.1	22.9	34.4	25.4	4∠s 6"×4"×5/8" - 1 Pl. 22"×1/2"
U_1L_1	+707	-892	-73	+707 -970	± 236	+942 -705	+1100	+220	+1320	+1320 -703	16.0		82.5	168.5	140.0 ※※	4∠s 6"×6"×7/8" - 4∠s 6"×6"×3/4", 1 Pl. 21 1/2"×1/2", 2 Pls 24"×11/16" - 1 Pl. 24"×7/8"
U_8M_8	+891		+178	+1069			+ 6	+ 1	+ 7	+1069	16.0		66.8			See Details
M_8L_8	+417		+83	+500			-265	-53	-318	+800 -318	16.0		31.2			Do.
M_bL_b	+145		+29	+174			+ 18	+ 4	+ 22	+174	16.0		10.9			Do
M_8M_b	0						-152	-30	-182	-182	13.5	13.5				Do

※※ Section increased to provide for bending due to lateral forces
※ Section increased to reduce deflection from L.L.

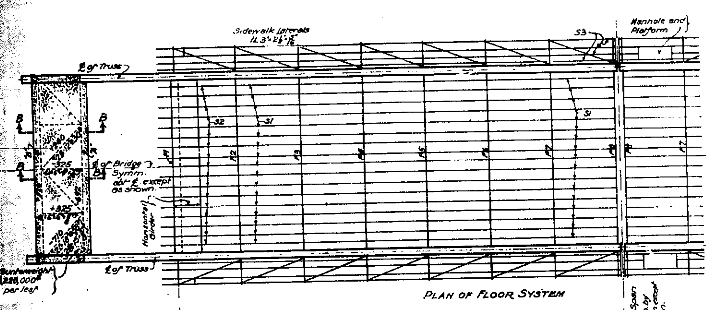
STRESSES IN MAIN TRUSSES - FRONT ARM

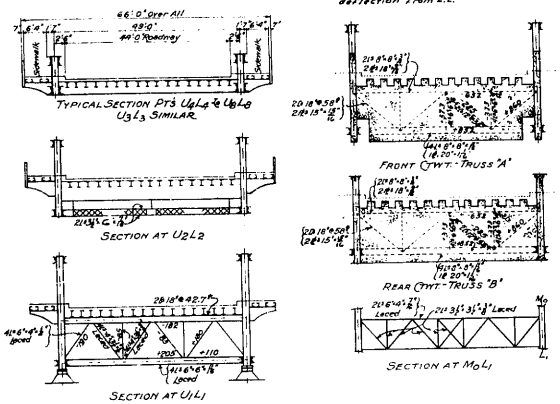
1	2	3	4	5	6	7	8	9
MEMBER	DEAD LOAD	ROADWAY L.L. UNIFORM	ROADWAY L.L. CONCENTRATED	ROADWAY IMP. UNIFORM	ROADWAY IMP. CONCENTRATED	SIDEWALK LIVE LOAD	TOTAL 2 to 7	REVERSAL INCREMENT
U_1U_2	+785	+272	+124	+28	+13	+81	+1303	
U_2U_3	+737	+285	+158	+30	+16	+87	+1308	
U_3U_4	+639	+220	+140	+24	+15	+73	+1111	
U_4U_5	+414	+178	+131	+20	+15	+61	+819	
U_5U_6	+215	+118	+98	+14	+12	+42	+499	
U_6U_7	+67	+58 -41	+54 -42	+7 -5	+7 -6	+21 -15	+214 -63	± 32
U_7U_8	0	0	0					
L_1L_2	-823	-280	-110	-28	-11	-80	-1332	
L_2L_3	-805	-278	-127	-28	-13	-83	-1334	
L_3L_4	-746	-263	-141	-28	-15	-83	-1275	
L_4L_5	-639	-241	-153	-27	-17	-80	-1157	
L_5L_6	-414	-178	-131	-20	-15	-61	-819	
L_6L_7	-215	-118	-98	-14	-12	-42	-499	
L_7L_8	-67	-58 +41	-54 +42	-7 +5	-7 +6	-21 +15	-214 +63	± 32
U_1L_2	-12	-47 +36	-32 +47	-5 +5	-4 +7	-16 +15	-116 +102	± 51
U_2L_3	+64	+43 -27	+54 -22	+6 -3	+8 -3	+17 -10	+192 -20	± 10
U_3L_4	+119	+60	+76	+8	+10	+23	+296	
U_4L_5	+264	+95	+78	+10	+8	+31	+486	
U_5L_6	+227	+90	+77	+10	+9	+30	+443	
U_6L_7	+165	+78	+69	+9	+8	+27	+356	
U_7L_8	+74	+61 -42	+58 -44	+8 -6	+7 -6	+22 -16	+230 -62	± 31
U_2L_2	-81	-27 +23	-36 +18	-4 +3	-5 +2	-11 +8	-164	
U_3L_3	-114	-23	-30	-3	-4	-9	-183	
U_4L_4	-131	-39	-34	-4	-4	-13	-225	
U_5L_5	-105	-38	-34	-4	-4	-13	-198	
U_6L_6	-72	-31	-28	-4	-3	-11	-149	
U_7L_7	-35	-25 +17	-23 +18	-3 +2	-3 +2	-9 +6	-98 +21	± 11
U_8L_8	-2	0	0				-2	

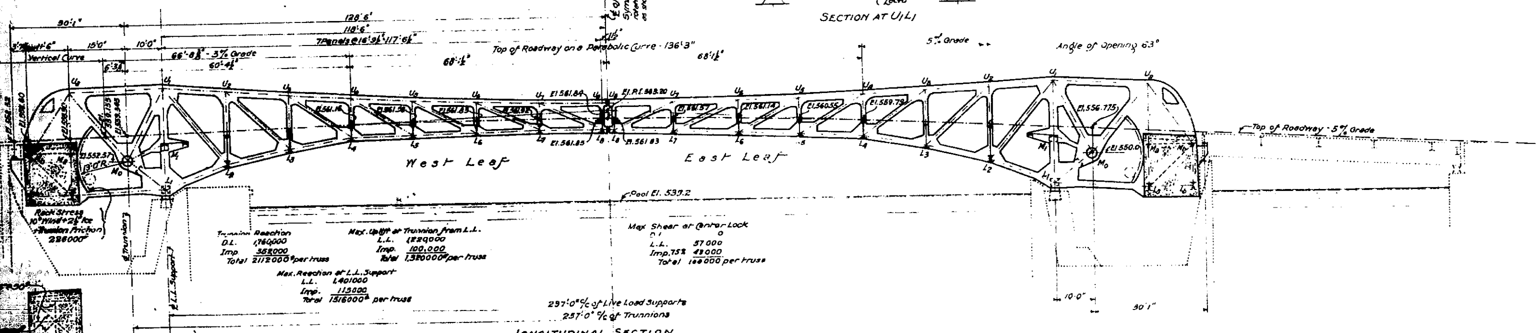
1	10	11	12	13	14	15	16
MEMBER	DESIGN STRESS	ALLOW. UNIT STRESS	AREA REQD. GROSS	AREA REQD. NET	AREA USED GROSS	AREA USED NET	SECTION
U_1U_2	+1303	15.6 #		83.6	105.8	87.8	4∠s 6"×6"×3/4", 4 Pls 24"×3/4"
U_2U_3	+1308	13.7 #		95.4	114.8	95.3	4∠s 6"×6"×3/4" - 4 Pls 24"×3/4" - 2 Pls 10"×3/4"
U_3U_4	+1111	12.6 #		88.2	105.0	87.8	4∠s 6"×6"×3/4" - 4 Pls 24"×3/4"
U_4U_5	+819	14.7 #		55.7	67.1	55.6	4∠s 6"×6"×11/16" - 2 Pls 24"×3/4"
U_5U_6	+499	16.0		31.2	38.4	31.4	4∠s 6"×4"×11/16" - 2 Pls 24"×1/2"
U_6U_7	+246 -95	16.0		15.4	23.4	23.4	4∠s 4"×4"×5/8" - 2 Pls 20"×5/8"
U_7U_8					20.4		Do.
L_1L_2	-1332	13.2	101.0		105.0		4∠s 6"×6"×3/4" - 2 Pls 8 1/2"×7/16", 2 Pls 20"×11/16" - 4∠s 4"×4"×7/16" - 1 Pl. 21 1/2"×1/2"
L_2L_3	-1334	12.5 #	106.8		108.1		4∠s 6"×6"×11/16" - 2 Pls 8 1/2"×7/16", 2 Pls 20"×11/16" - 4∠s 4"×4"×7/16" - 1 Pl. 21 1/2"×9/16"
L_3L_4	-1275	[illegible] #	113.0		114.8		4∠s 6"×6"×3/4" - 4∠s 4"×4"×3/8", 4 Pls 20"×3/4" - 1 Pl. 22"×7/16"
L_4L_5	-1157	10.6 #	109.0		109.6		4∠s 6"×6"×3/4" - 2 Pls 20"×9/16", 2 Pls 20"×11/16" - 4∠s 4"×4"×3/8" - 1 Pl. 21 1/2"×7/16"
L_5L_6	-819	12.2 #	67.1		71.3		4∠s 6"×4"×1/2" - 2 Pls 8 1/2"×1/2", 2 Pls 20"×1/2" - 4∠s 4"×4"×3/8" - 1 Pl. 22"×3/8"
L_6L_7	-499	13.5	37.0		39.0		4∠s 6"×4"×1/2" - 2 Pls 20"×1/2"
L_7L_8	-246 +95	13.5	18.2		29.4		4∠s 6"×4"×3/8" - 2 Pls 20"×3/8"
U_1L_2	-167 +153	9.4 16.0	17.8	9.6	27.0	22.2	4∠s 6"×4"×1/2" - 1 Pl. 21 1/2"×3/8"
U_2L_3	+202 -30	16.0		12.6	22.6	18.6	4∠s 6"×4"×3/8" - 1 Pl. 22"×3/8"
U_3L_4	+296	16.0		18.5	22.6	18.6	4∠s 6"×4"×3/8" - 1 Pl. 22"×3/8"
U_4L_5	+486	16.0		30.4	38.7	31.7	4∠s 6"×4"×3/4" - 1 Pl. 22"×1/2"
U_5L_6	+443	16.0		27.7	34.4	28.4	4∠s 6"×4"×5/8" - 1 Pl. 22"×1/2"
U_6L_7	+356	16.0		22.3	27.2	22.4	4∠s 6"×4"×1/2" - 1 Pl. 22"×3/8"
U_7L_8	+261 -93	16.0		16.3	27.3	18.0	4∠s 5"×3 1/2"×7/16" - 1 Pl. 22"×3/8"
U_2L_2	-164	10.1	16.2		27.2		4∠s 6"×4"×1/2" - 1 Pl. 22"×3/8"
U_3L_3	-183	10.4	17.6		22.3		4∠s 5"×3 1/2"×7/16" - 1 Pl. 22"×3/8"
U_4L_4	-225	11.6	19.4		22.3		Do
U_5L_5	-198	12.0	16.5		22.3		Do.
U_6L_6	-149	12.3	12.1		22.3		Do.
U_7L_7	-109 +33	12.5	8.7		22.3		Do.
U_8L_8					20.4		4∠s 5"×3 1/2"×3/8" - 1 Pl. 22"×3/8"

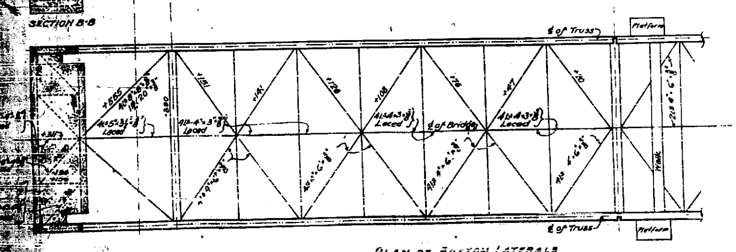
Note:
+ Indicates Tension
− " Compression
Stresses given in 1000# units
Areas given in sq. ins.

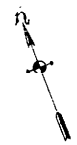
Unit stress decreased to reduce deflection due to deficiency in depth of truss





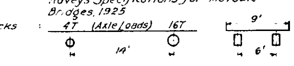






General Notes:
Dead Load: Actual weight.
Live Load: For sidewalk floor system 100#/□'
For roadway floor system 4-20 Ton trucks.
For main trusses and girders Class H20 on roadway and a variable uniform load on sidewalks as per specifications.
Design Specifications: For features common to fixed and movable bridges A.A. of Highway Officials, 1928.
For features special to movable bridges, Waddell's Specifications for Movable Bridges, 1925.

Trucks



All posts, floor beams and sidewalk brackets to be vertical.

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept 13, 1933
[signature]
Managing Engineer
Approved: Sept 13, 1933
[signature]
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended: ______
Bridge Engineer
Approved: ______
Chief Engineer

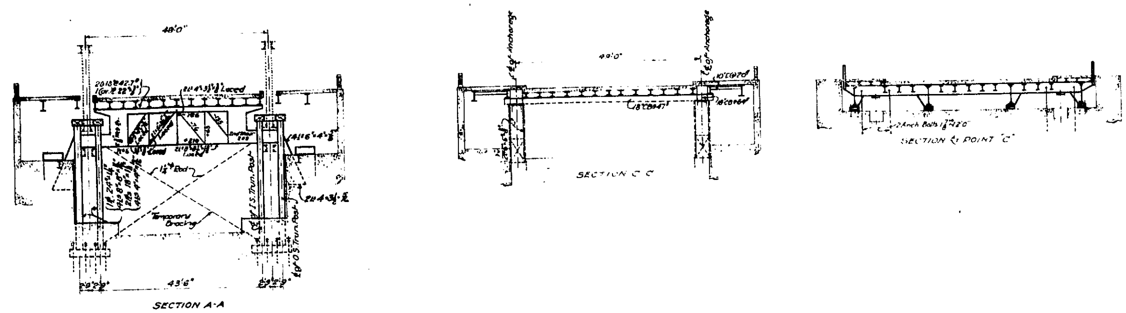
STRESS SHEET - BASCULE SPAN
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

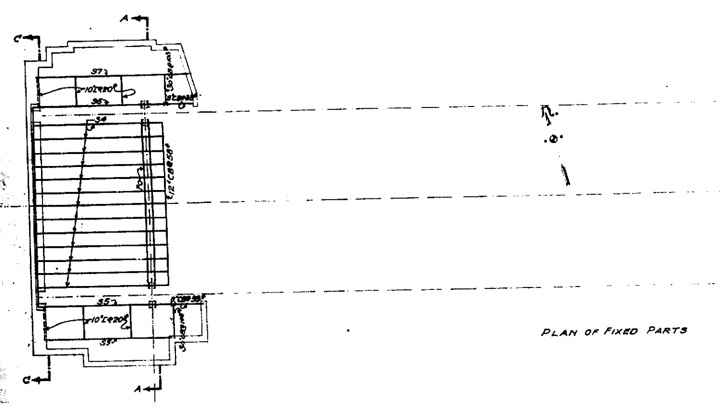
DRAWN BY ______
TRACED BY ______
CHECKED BY ______
REVISED SEPT 12, 1933
SCALE ______
DATE MARCH 22, 1933

SHEET NO. 1343-14

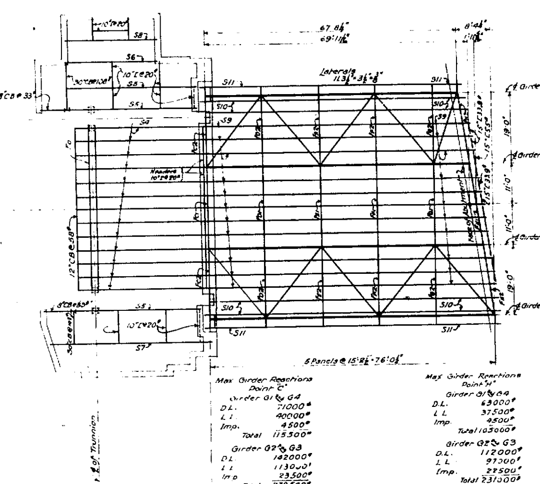
Accession No. 381[illegible]

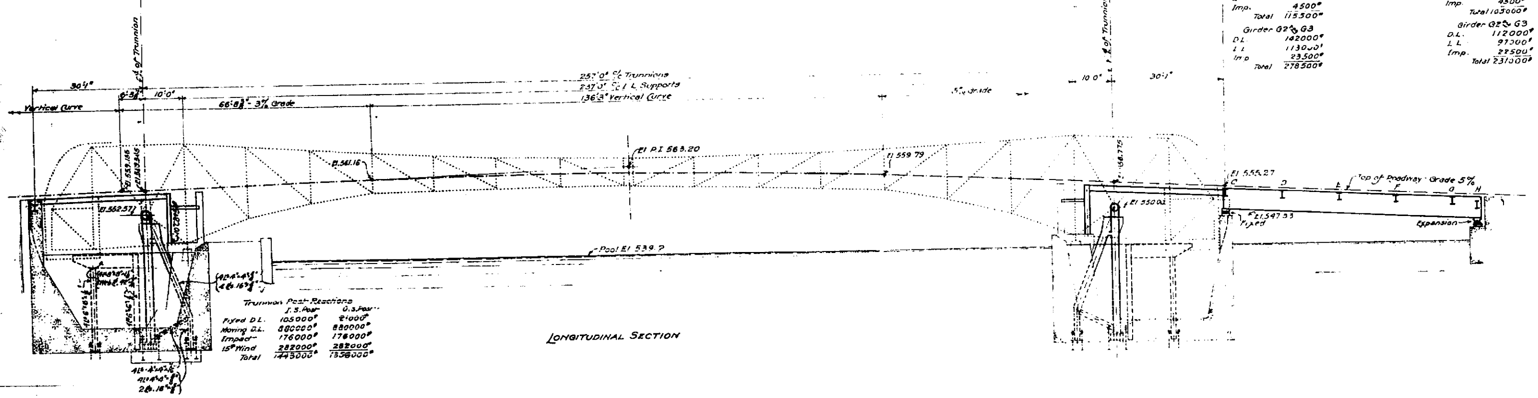


SECTION A-A   SECTION C-C   SECTION ℄ POINT "C"   SECTION ℄ POINTS "D","E","F"&"G"   SECTION ℄ POINT "H"



PLAN OF FIXED PARTS





LONGITUDINAL SECTION

STRESSES IN GIRDERS, FLOOR BEAMS AND STRINGERS

MEMBER	SHEARS IN 1000#				MOMENTS IN 1000 FT. LBS				SECTION
	D.L.	L.L.	IMP.	TOTAL	D.L.	L.L.	IMP.	TOTAL	
S4	7.0	21.4	6.4	34.8	52.	88	26	166	21" CB @ 85# **
S5	12.0	10.0	–	22.0	100.	82	–	182	30" CB @ 108# *
S6	44.4	6.6	–	51.0	266	40	–	306	30" CB @ 115# *
S7	19.4	16.0	–	35.4	194	160	–	354	33 CB @ 141# *
S8	6.1	7.3	–	13.4	36	43	–	79	24" I @ 79.9# *
S9	3.3	19.3	5.8	28.4	13	44	13	70	16" CB @ 46#
S10	1.7	2.5	–	4.2	6.6	9.3	–	15.3	9" I @ 21.8#
S11	1.3	1.3	–	2.6	4.7	4.7	–	9.4	9" [@ 15#
Fc1	27.3	42.9	12.9	83.1	174	235	71	480	30" CB @ 131#
Fc2	20.2	31.5	8.3	60.0	110	159	37	306	30" CB @ 108#
Fo1 & Fs1	17.8	38.6	11.6	68.0	114.	212	64	390	30" CB @ 108#
Fo2 & Fs2	12.8	27.5	7.5	47.8	75.	135	33	243	24" CB @ 81#
FH1	10.7	44.5	26.7	81.9	59.	245	146	450	30" CB @ 122#
FH2	7.0	31.2	8.1	56.3	33	133	80	246	24" CB @ 81#
G2 & G3	87.1	78.4	18.4	83.9	1368.	1685	397	3350	4 Ls 6"×6"×3/4" Web ℞ 72"×7/16" 2 ℞s 18"×7/16" 2 ℞s 18"×[illegible]
G1 & G4	47.2	28.7	3.4	79.3	1073	651	77	1801	4 Ls 6"×6"×5/8" Web ℞ 72"×7/16" 2 ℞s 14"×1/2"

* Additional section provided for handling machinery.

** Section is increased to reduce deflection

For General Notes see Sheet # 14

STRESS SHEET - FIXED PARTS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

DRAWN BY R.L.D.
TRACED BY E.Z.
CHECKED BY A.B.
REVISED SEPT. 12, 1933

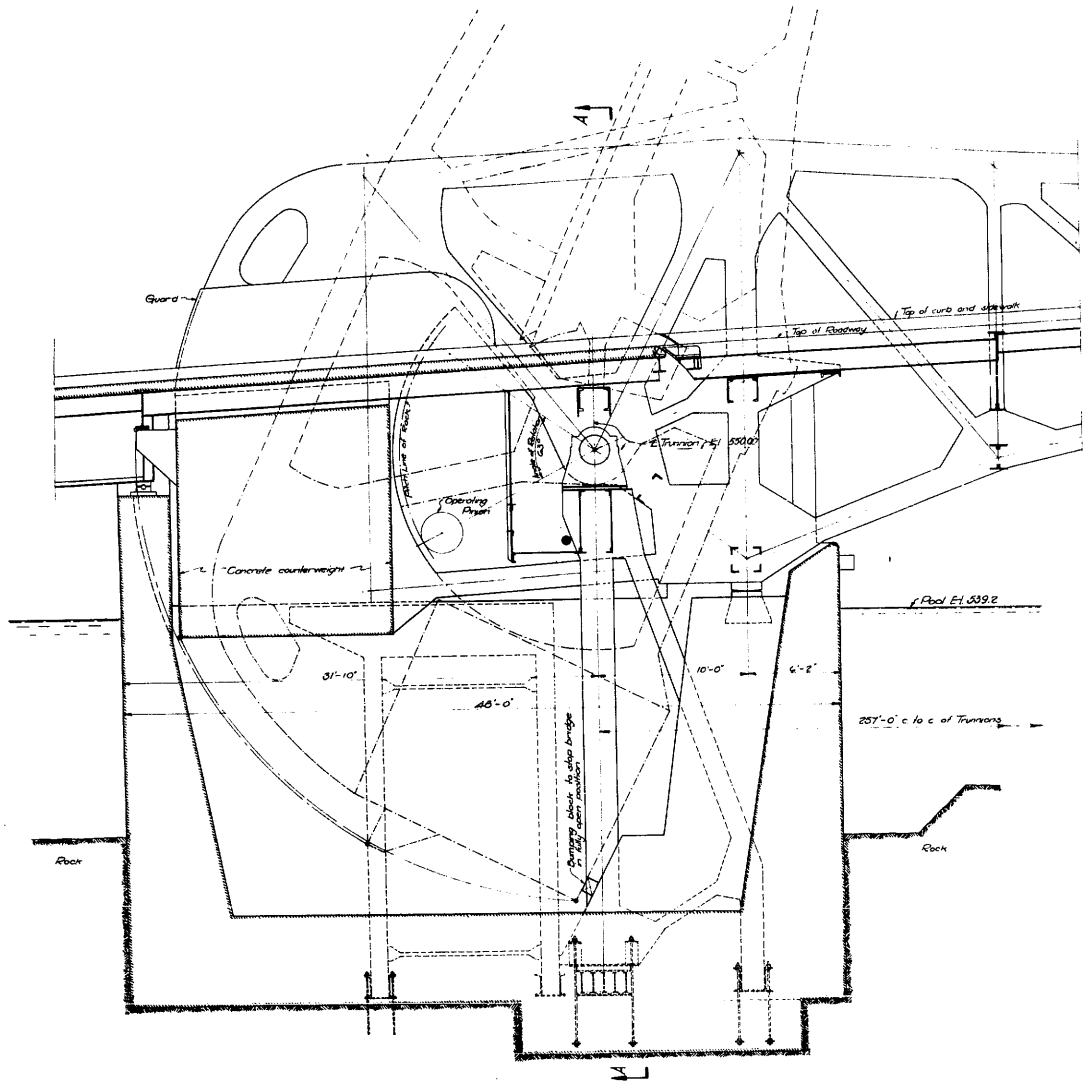
SCALE: 1/4"=1'-0"
DATE: MARCH 24, 1933

SHEET NO. 1343-15

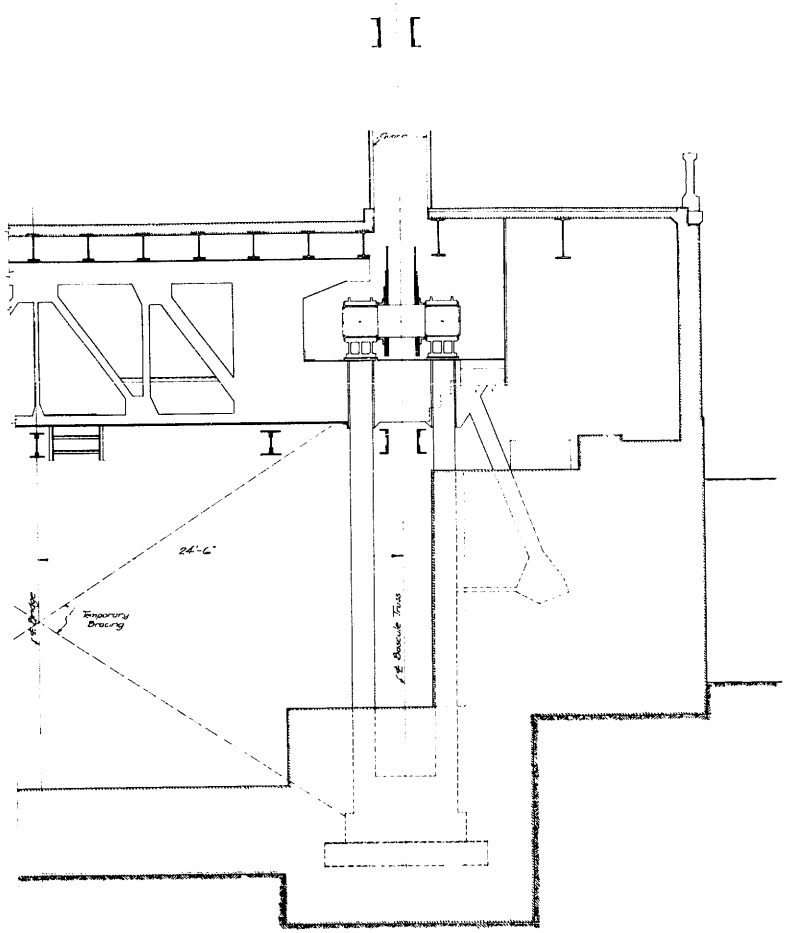
THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept. 13, 1933
[signature]
Managing Engineer
Approved: Sept. 13, 1933
[signature]
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended: ____________
Bridge Engineer
Approved: ____________
Chief Engineer

Accession No 3318



CLEARANCE DIAGRAM FOR EAST LEAF
Diagram for West Leaf similar.



SECTION A-A

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved Sept 3, 1933
Engineer
Approved: Sept 13 1933
Chief Engineer

STATE OF ILLINOIS
DIVISION OF WATERWAYS
Approved and recommended
Bridge Engineer
Approved
Chief Engineer

CLEARANCE DIAGRAM
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

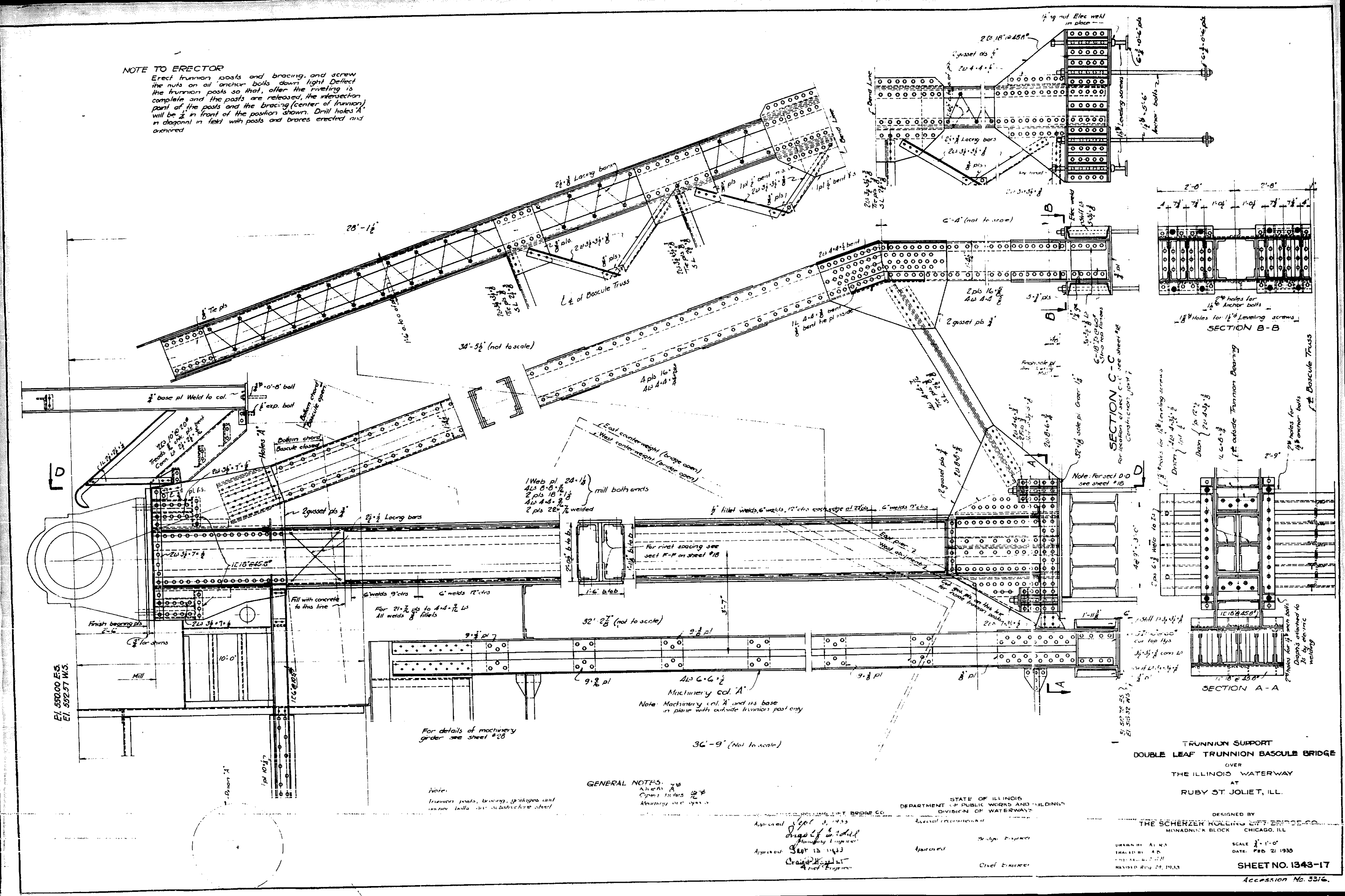
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK CHICAGO, ILL.

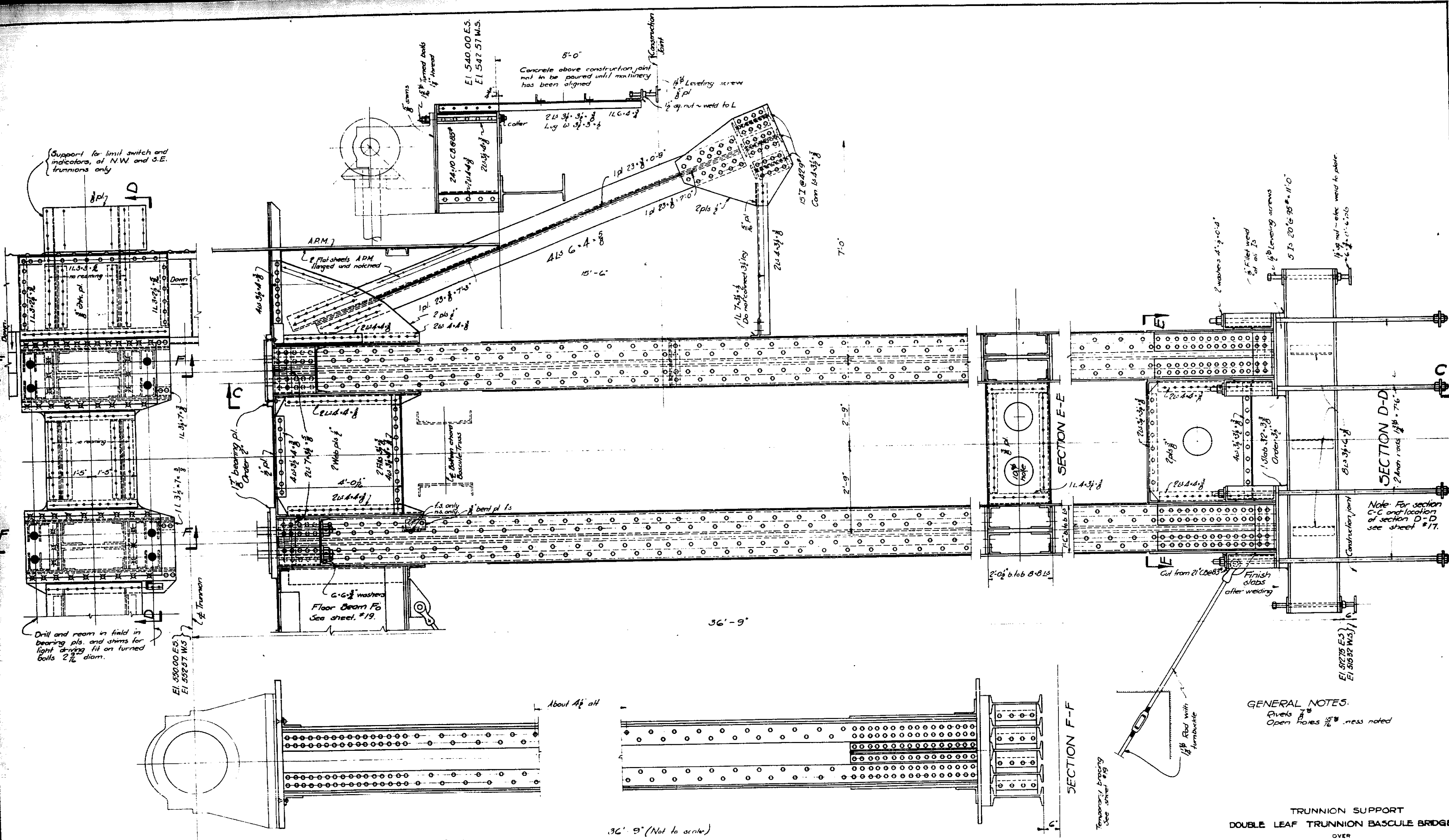
DRAWN BY A.L.R.S.
TRACED BY A.D.
CHECKED BY C.E.J.
REVISED Aug. 30, 1933

SCALE 1/4" = 1'-0"
DATE FEB. 28, 1933

SHEET NO. 1343-16

Accession No. 3515


NOTE TO ERECTOR
Erect trunnion posts and bracing, and screw the nuts on all anchor bolts down tight. Deflect the trunnion posts so that, after the riveting is complete and the posts are released, the intersection point of the posts and the bracing (center of trunnion) will be 1/4" in front of the position shown. Drill holes "A" in diagonal in field with posts and braces erected and anchored
SECTION B-B
SECTION C-C
SECTION A-A
28'-1 1/2"
34'-5 1/2" (not to scale)
32'-2 7/8" (not to scale)
36'-9" (Not to scale)
℄ of Bascule Truss
Machinery col. "A"
Note: Machinery col. "A" and its base in plane with outside trunnion post only
For details of machinery girder see sheet #28
El. 550.00 E.S.
El. 552.57 W.S.
GENERAL NOTES
TRUNNION SUPPORT
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended
Bridge Engineer
Approved
Chief Engineer
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK CHICAGO, ILL
SCALE 3/4" = 1'-0"
DATE FEB 21 1933
REVISED Aug 24, 1933
SHEET NO. 1343-17
Accession No. 3316.



GENERAL NOTES.
Rivets 7/8"
Open holes 15/16", unless noted

TRUNNION SUPPORT
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved Sept. 14, 1933
Engineer
Approved Sept. 16, 1933
Chief Engineer

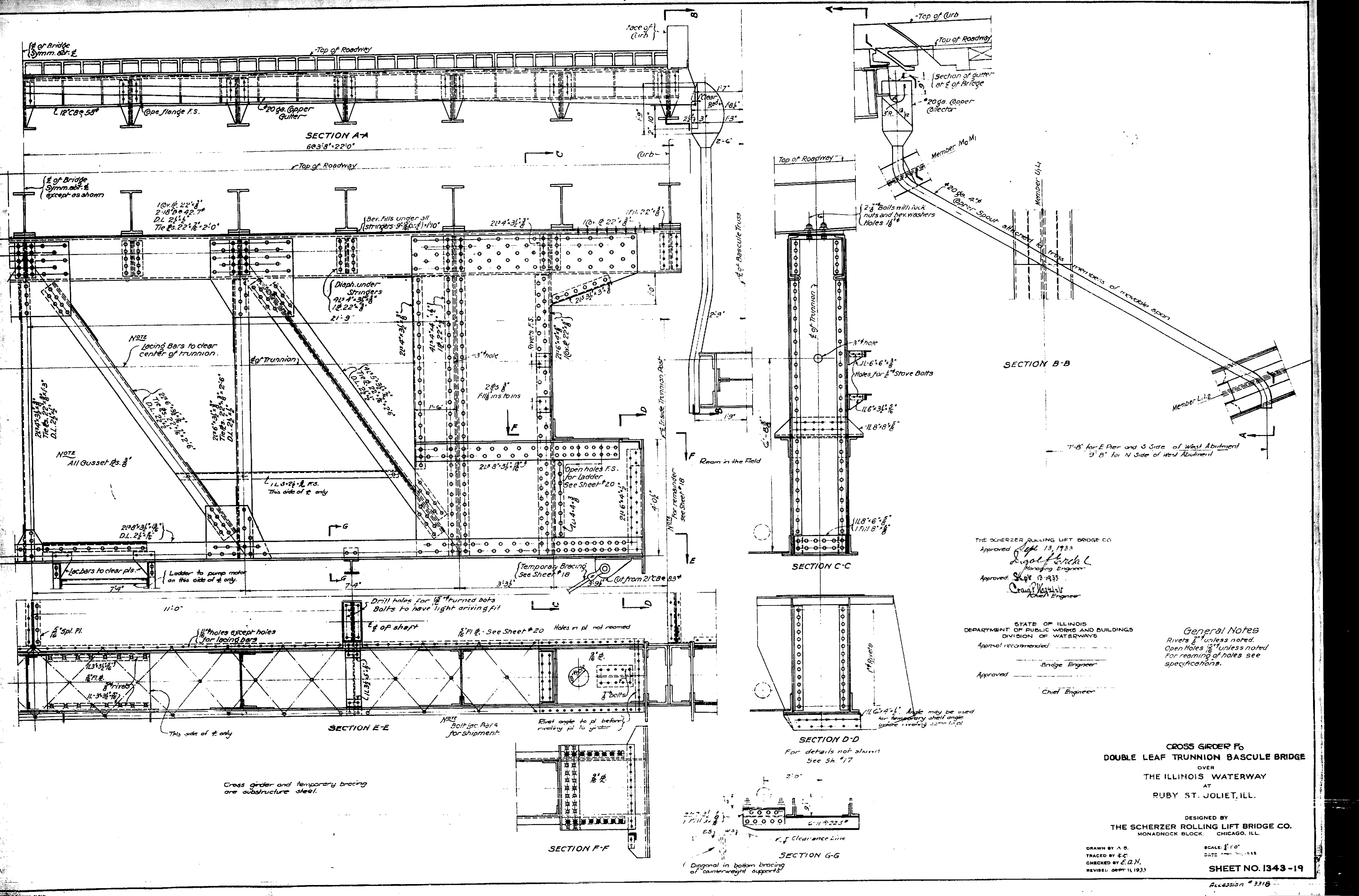
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended
Bridge Engineer
Approved
Chief Engineer

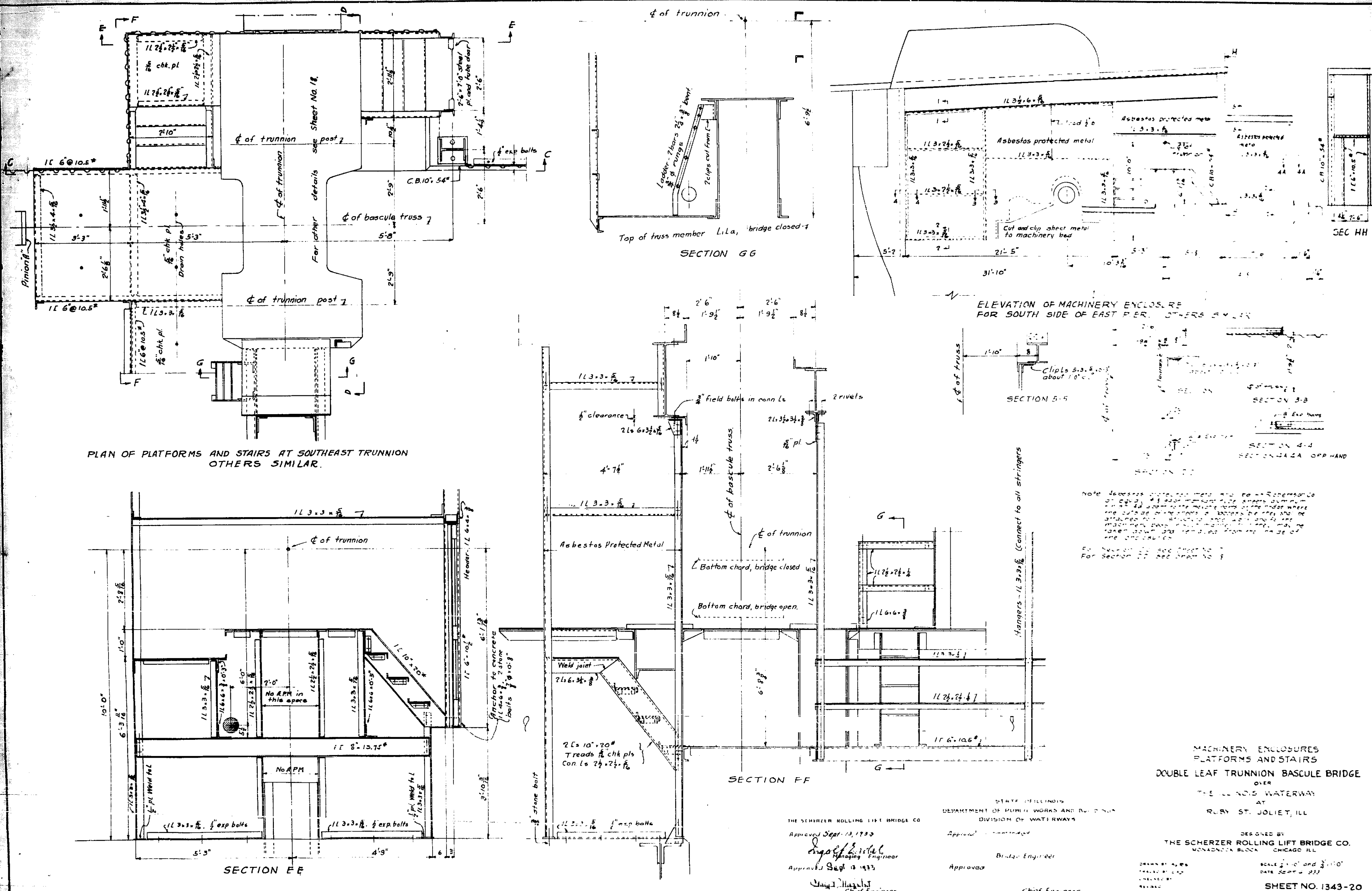
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY A.L.R.S.
TRACED BY A.B.
CHECKED BY E.H.W.
REVISED Aug. 22, 1933
SCALE 3/4" = 1'-0"
DATE FEB. 21, 1933

SHEET NO. 1343-18

Accession No 3317


SECTION A-A
6@3'8" = 22'0"
Top of Roadway
Face of Curb
20 ga. Copper Gutter
Cope flange F.S.
SECTION B-B
Top of Curb
Top of Roadway
Section of gutter at ℄ of Bridge
20 ga. Copper Collector
Member M0M1
20 ga. 4"ø Copper Spout attached to truss members of movable span
Member U1L1
Member L1L2
7'-8" for E Pier and S Side of West Abutment
9'-8" for N Side of West Abutment
℄ of Bridge Symm. abt. ℄ except as shown
Bev. Fills under all stringers
Diaph. under Stringers
Note Lacing Bars to clear center of trunnion.
℄ of Trunnion
Note All Gusset Pls. 3/8"
Open holes F.S. for Ladder See Sheet #20
Ream in the Field
Inside Trunnion Post
Note For remainder see Sheet #18
This side of ℄ only
Lac. bars to clear pls.
Ladder to pump motor on this side of ℄ only.
Temporary Bracing See Sheet #18
Cut from 21 CB @ 93#
℄ of Bascule Truss
SECTION C-C
2-7/8" Bolts with lock nuts and bev. washers Holes 1 1/16"
Holes for 1/2" Stove Bolts
Drill holes for 15/16" turned bolts Bolts to have light driving fit
℄ of shaft
11/16" holes except holes for lacing bars
Holes in pl not reamed
SECTION E-E
This side of ℄ only
Note Bolt Lac. Bars for shipment.
Rivet angle to pl before riveting pl to girder
SECTION D-D
For details not shown See Sh. #17
Angle may be used for temporary shelf angle before riveting comp. to pl.
Cross girder and temporary bracing are substructure steel.
SECTION F-F
SECTION G-G
Clearance Line
Diagonal in bottom bracing of counterweight supports
THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved Sept 13, 1933
Managing Engineer
Approved Sept 13, 1933
Chief Engineer
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended
Bridge Engineer
Approved
Chief Engineer
General Notes
Rivets 7/8"ø unless noted.
Open Holes 15/16"ø unless noted
For reaming of holes see specifications.
CROSS GIRDER F0
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.
DRAWN BY A.B.
CHECKED BY E.Q.N.
REVISED SEPT 11, 1933
SCALE 1" = 1'0"
SHEET NO. 1343-19
Accession # 3318



PLAN OF PLATFORMS AND STAIRS AT SOUTHEAST TRUNNION
OTHERS SIMILAR.
For other details see Sheet No. 18.
℄ of trunnion post
℄ of bascule truss
SECTION GG
Top of truss member L₁L₂ bridge closed
ELEVATION OF MACHINERY ENCLOSURE
FOR SOUTH SIDE OF EAST PIER. OTHERS SIMILAR.
Asbestos protected metal
Cut and clip sheet metal to machinery bed
SEC HH
SECTION 5-5
SECTION 3-3
SECTION 4-4
SECTION EE
No A.P.M. in this space
Anchor to concrete
SECTION FF
Asbestos Protected Metal
Bottom chord, bridge closed
Bottom chord, bridge open.
Hangers - 1L 3×3×5/16 (Connect to all stringers)

MACHINERY ENCLOSURES
PLATFORMS AND STAIRS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

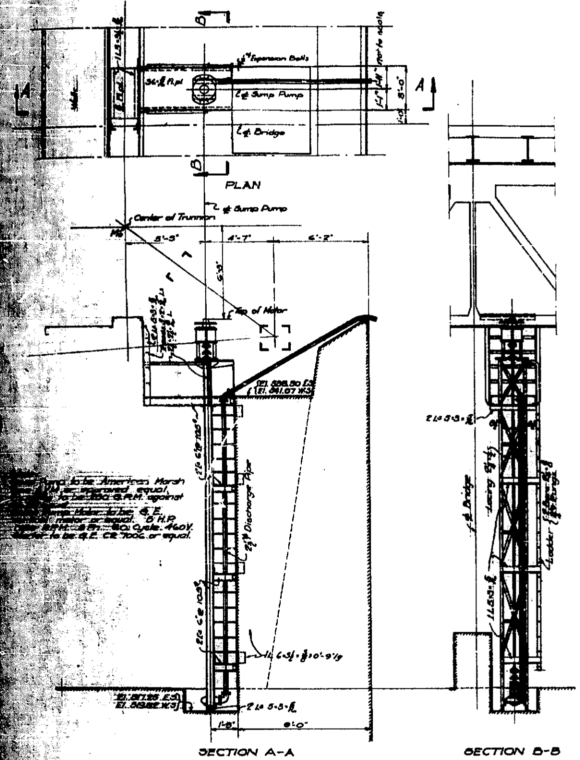
THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved Sept. 13, 1933
Managing Engineer
Approved Sept 13 1933
Chief Engineer

Approved
Bridge Engineer
Approved
Chief Engineer

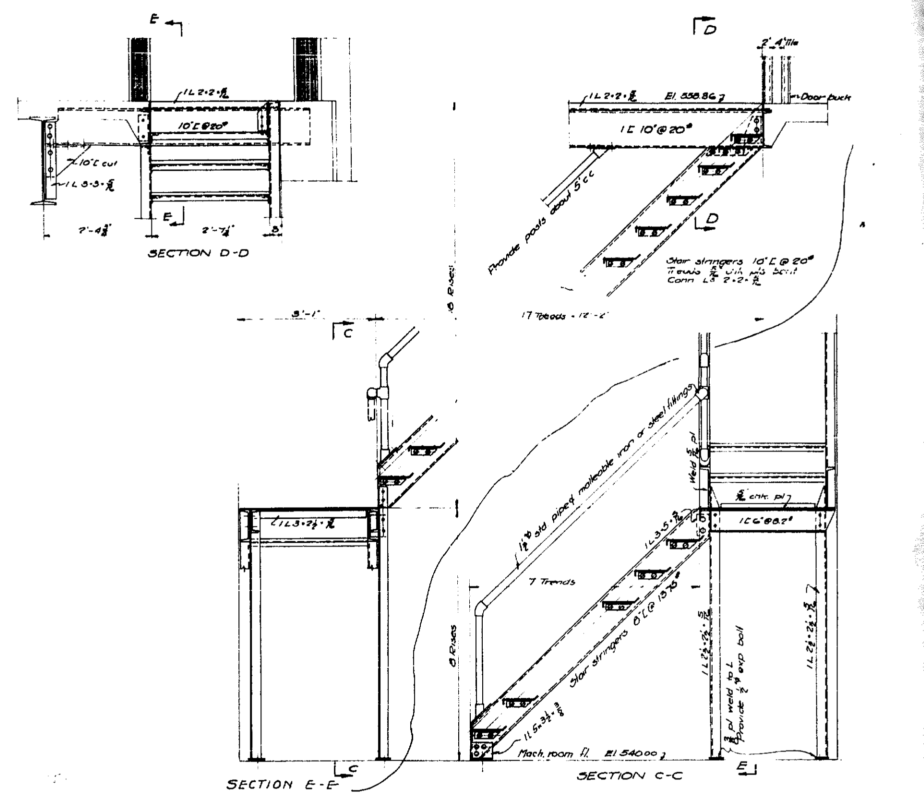
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK CHICAGO ILL.

SHEET NO. 1343-20

Accession No 3319



WALKS AND LADDER AT SUMP PUMP
Details shown for E.S. (looking south)
Details for W.S. similar
Scale ½" = 1'-0



STAIRS FROM CONTROL ROOM TO MACHINERY ROOM

WALKS AND STAIRS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved Sept 13, 1933
Managing Engineer
Approved Sept 13 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended:
Bridge Engineer
Approved
Chief Engineer

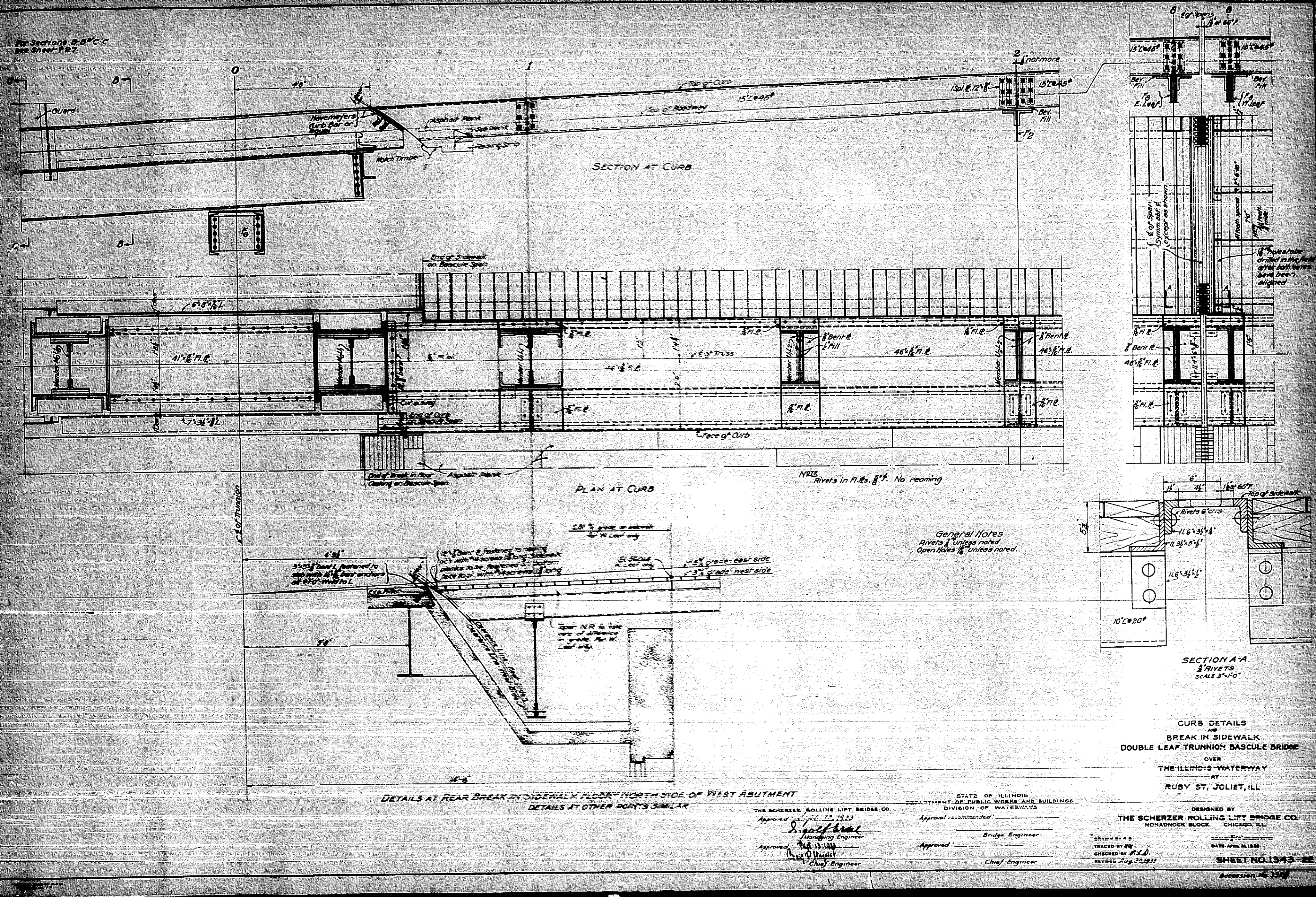
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

DRAWN BY A.L.R. & A.B.
TRACED BY A.B.
CHECKED BY C.R.H.
REVISED Aug. 24, 1933.

SCALE: ¾" = 1'-0" UNLESS NOTED
DATE: APRIL 28, 1933

SHEET NO. 1343-21

Accession No. 3989



CURB DETAILS
AND
BREAK IN SIDEWALK
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST, JOLIET, ILL

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept. 13, 1933
Managing Engineer
Approved: Sept. 13, 1933
Chief Engineer

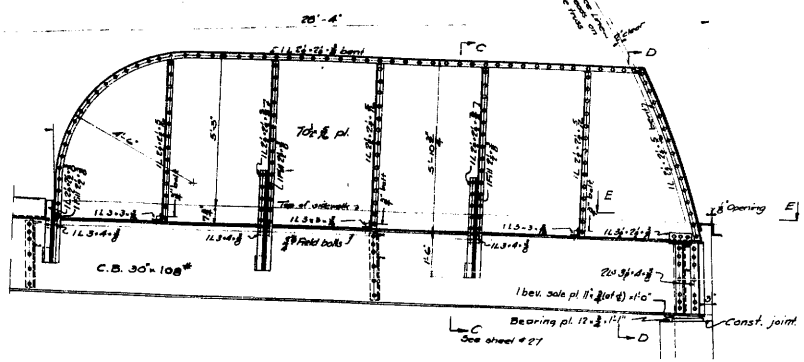
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended: ______
Bridge Engineer
Approved: ______
Chief Engineer

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

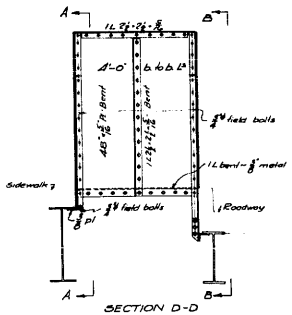
DRAWN BY A.S.
TRACED BY
CHECKED BY
REVISED Aug. 30, 1933
DATE APRIL 21, 1933

SHEET NO. 1343-22

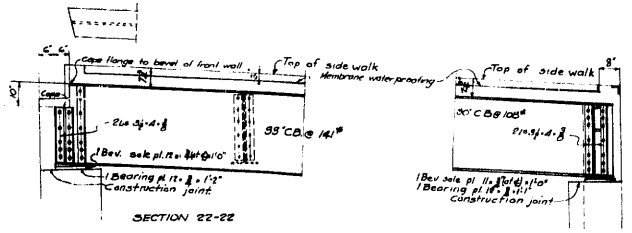
Accession No. 3328



SECTION A-A

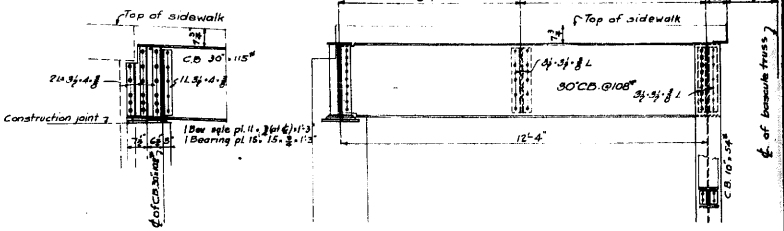


SECTION D-D



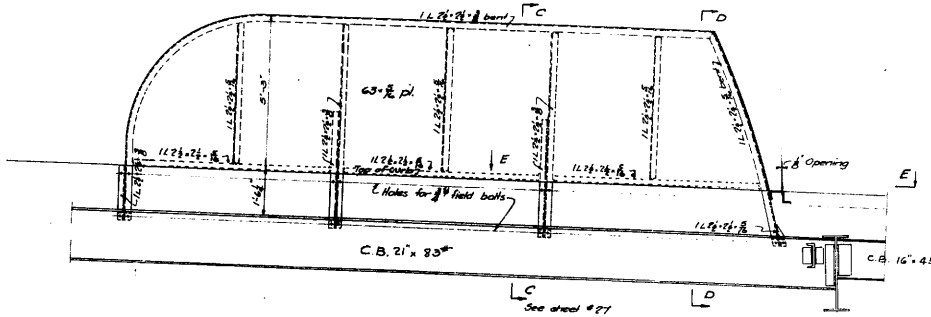
SECTION 22-22

SECTION 21-21

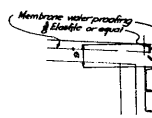


SECTION 19-19
Detail of East end similar

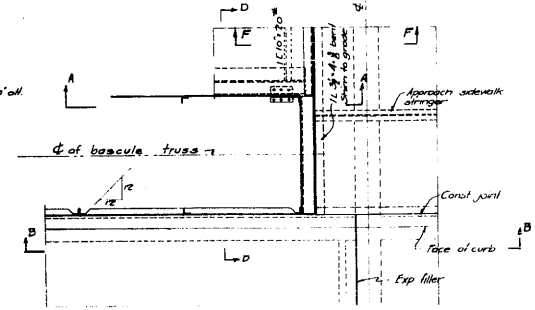
SECTION 18-18



SECTION B-B

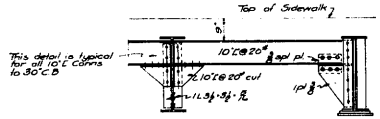


SECTION F-F



SECTION E-E. East Side

GUARD AT REAR END OF EAST BASCULE TRUSSES
Guard at rear end of west bascule trusses similar



SECTION 20-20

SIDEWALK STRINGER DETAILS — For location of sections see Sheets #6 and #12

General Notes
Rivets ¾"ø
Open holes 13/16"

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved Sept. 13, 1933
Managing Engineer
Approved Sept 13-1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended
Bridge Engineer
Approved
Chief Engineer

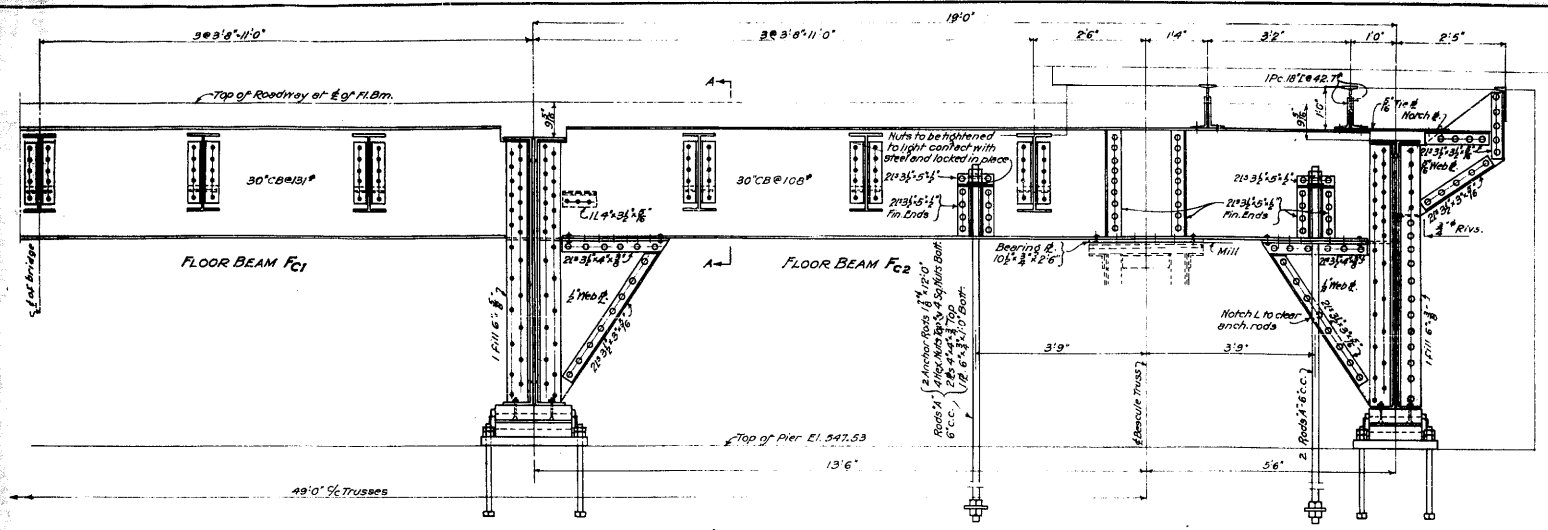
SIDEWALK STRINGERS
GUARD AT REAR END OF TRUSSES
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY A.L.R.S.
TRACED BY A.L.R.S.
CHECKED BY P.F.B.
REVISED Aug. 29, 1933.
SCALE ¾" = 1'-0"
DATE APRIL 20, 1933.

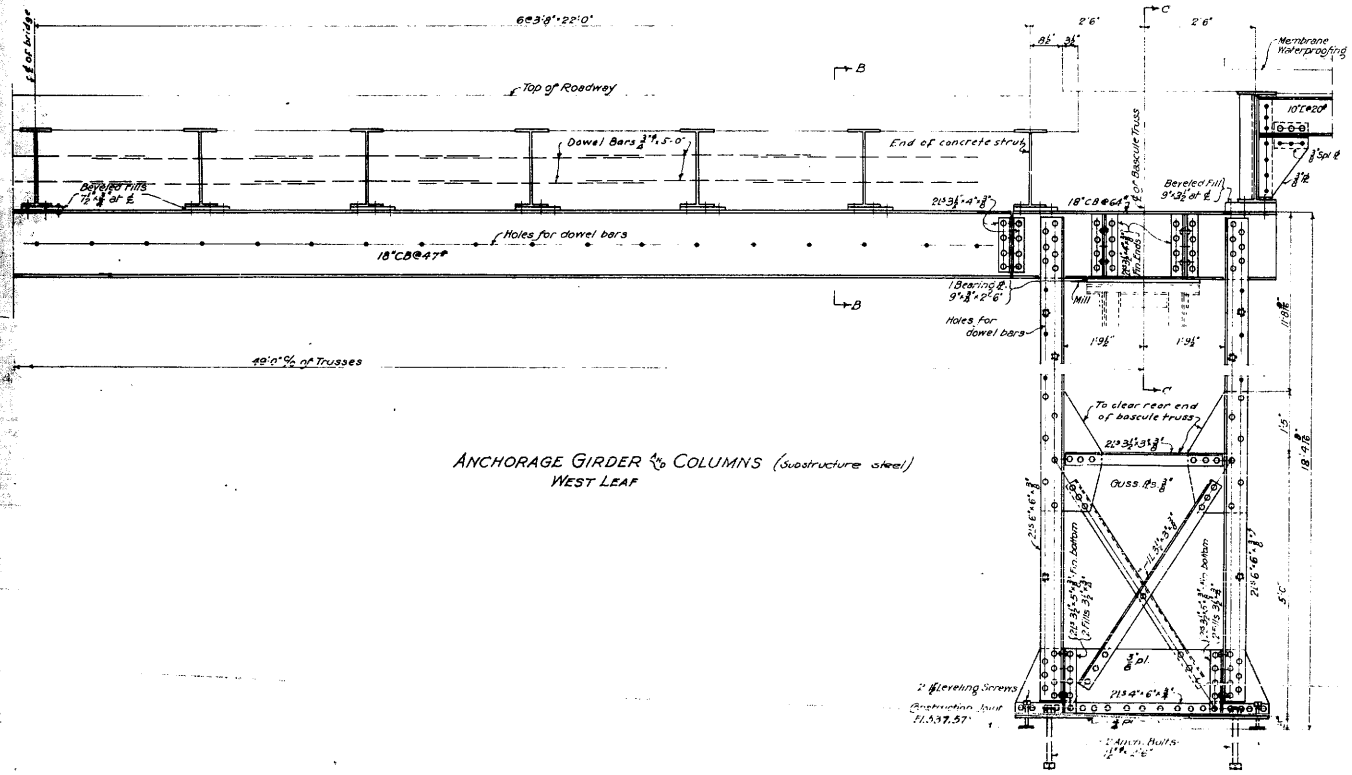
SHEET NO. 1343-25

Accession No. 5528

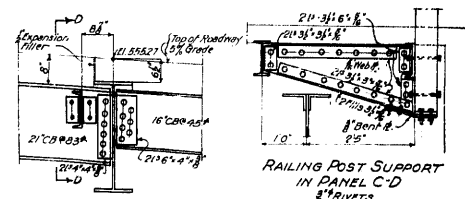


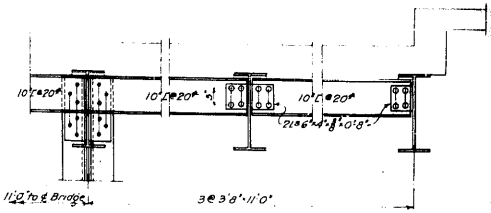
FLOOR BEAMS & ANCHORAGE AT POINT C
EAST LEAF

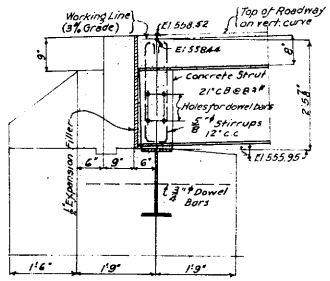
Anchor rods and anchor bolts are substructure steel

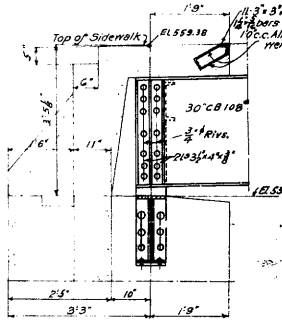


ANCHORAGE GIRDER & COLUMNS (substructure steel)
WEST LEAF









General Notes
Rivets ⅞" ℄ unless noted
Open Holes 1⅛" ℄ unless noted
For reaming of holes see specifications.

THE SCHERZER ROLLING LIFT BRIDGE CO
Approved: Sept. 13, 1933
Managing Engineer
Approved: Sept. 13, 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approved and recommended
Bridge Engineer
Approved
Chief Engineer

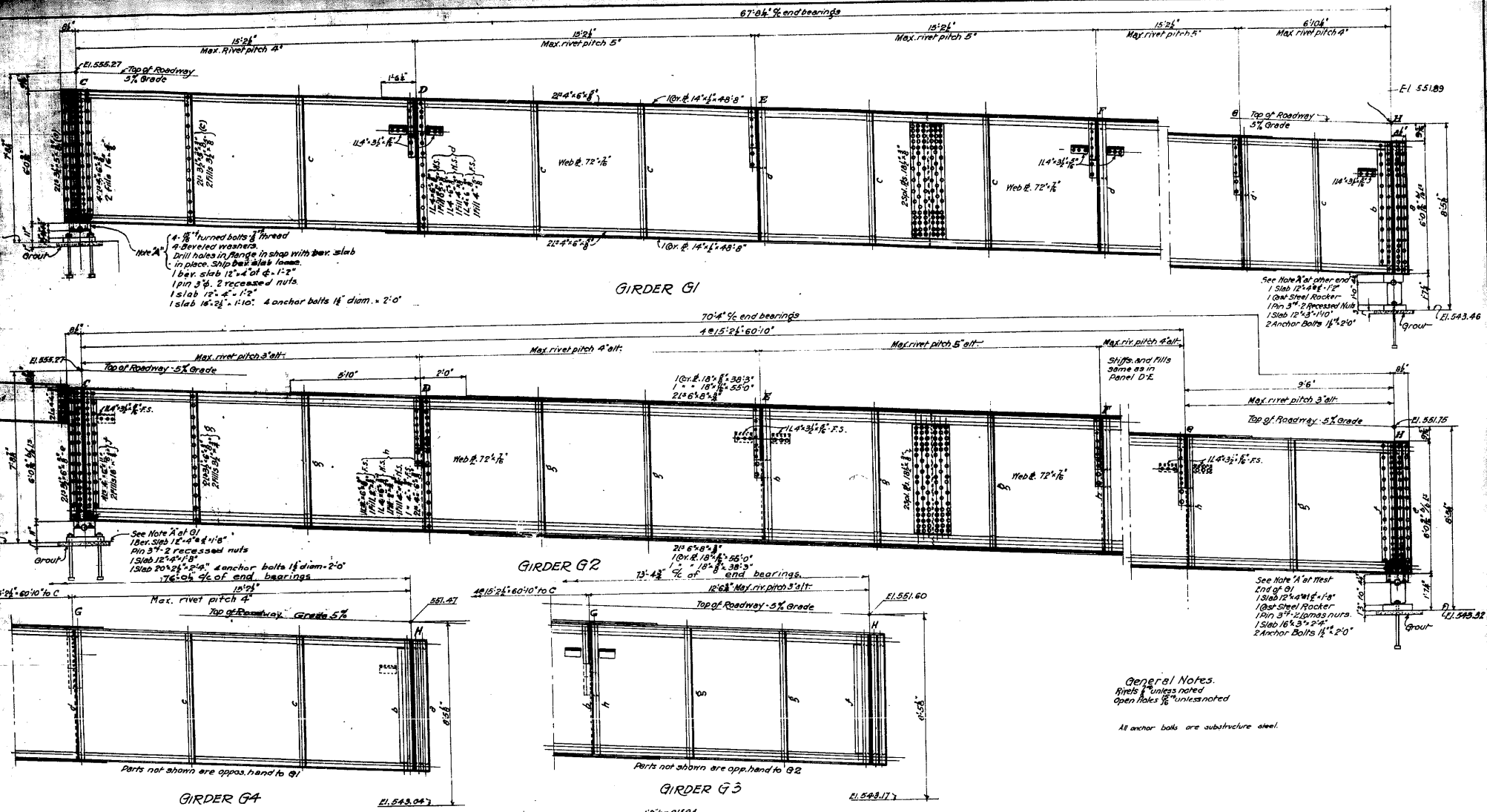
ANCHORAGE GIRDERS & COLUMNS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

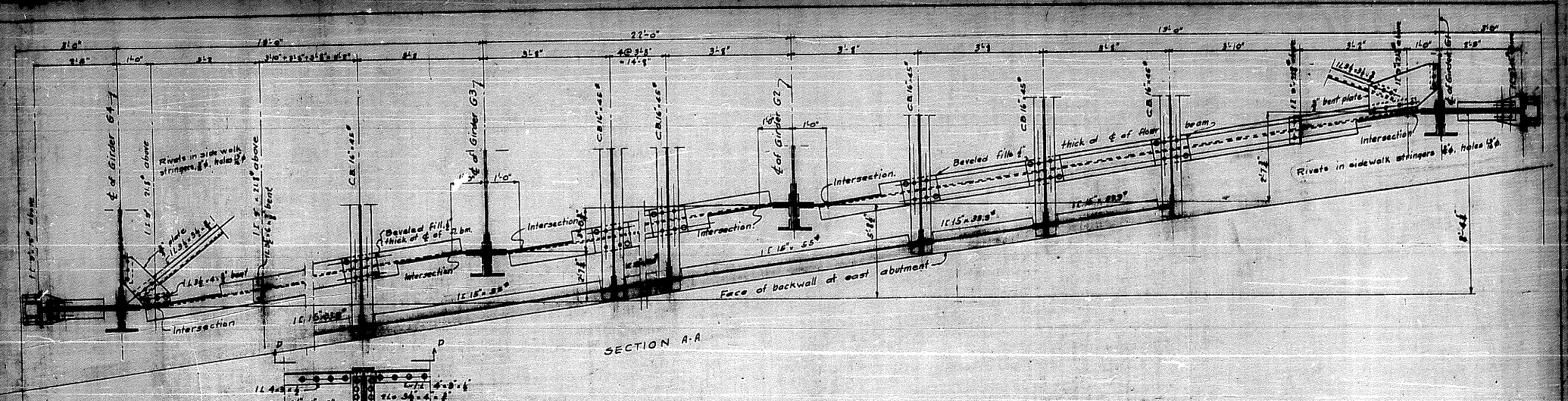
DRAWN BY P.L.D
TRACED BY ℄.℄.
CHECKED BY E.Q.N.
REVISED Aug 22 1933
SCALE: ½"=1'-0"
DATE: APRIL 29, 1933

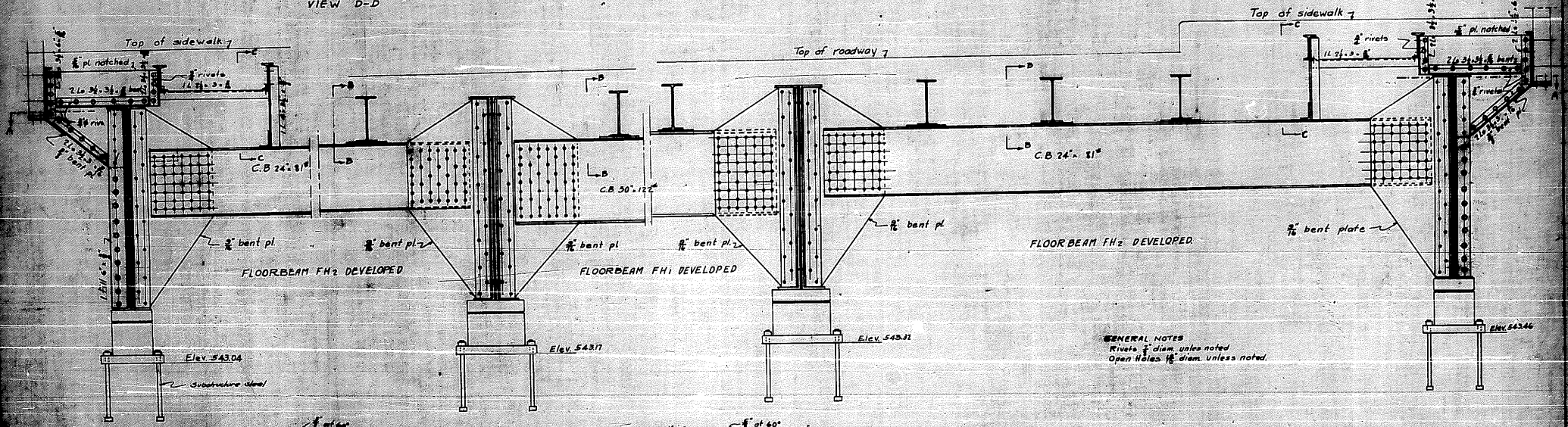
SHEET NO. 1845-24

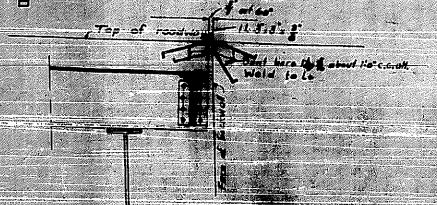
Accession No. 3328

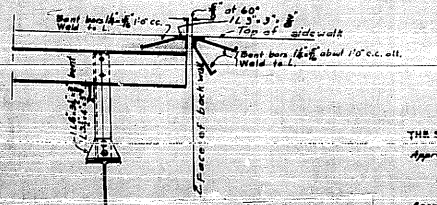


Accession No 3328









GENERAL NOTES
Rivets ⅞" diam. unles noted
Open Holes 1⅛" diam. unless noted.

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: April 13, 1933
Engineering Engineer
Approved: Sept 18, 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended:
Bridge Engineer
Approved:
Chief Engineer

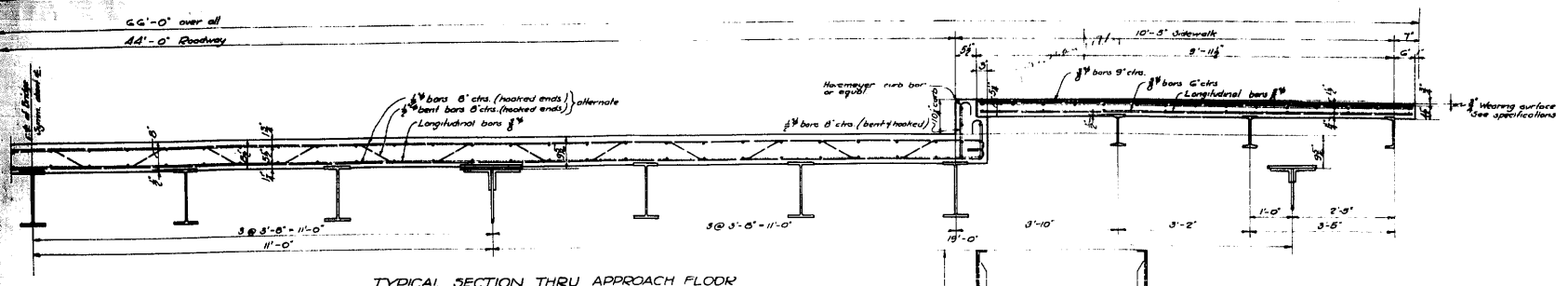
APPROACH FLOORBEAMS FH
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.

THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

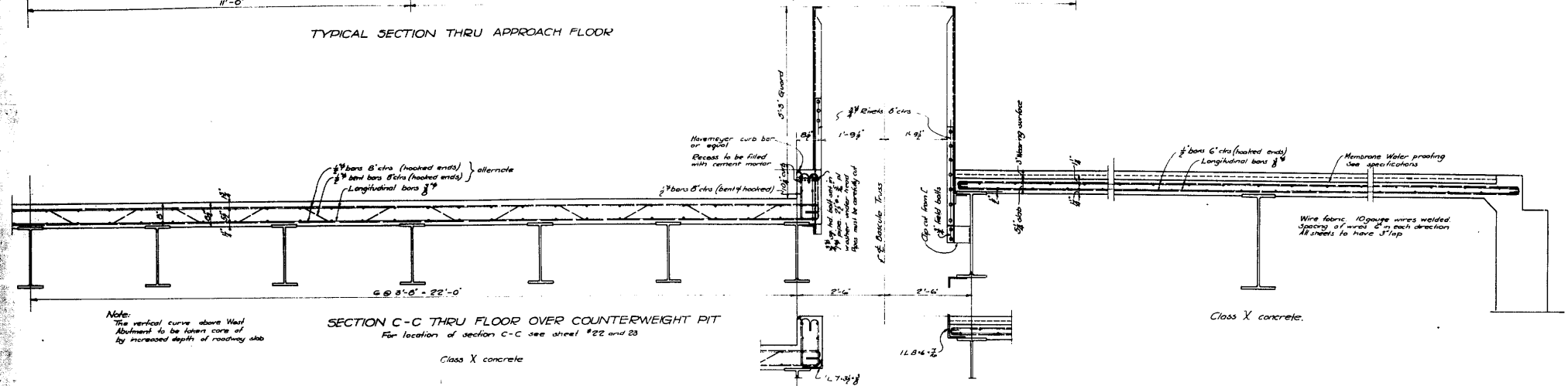
DRAWN BY EEE
TRACED BY ---
CHECKED BY O.F.A.
REVISED Aug 24 1933
SCALE 3/4"=1'-0"
DATE April 26, 1933

SHEET NO. 1345-26

Accession No 3328



TYPICAL SECTION THRU APPROACH FLOOR

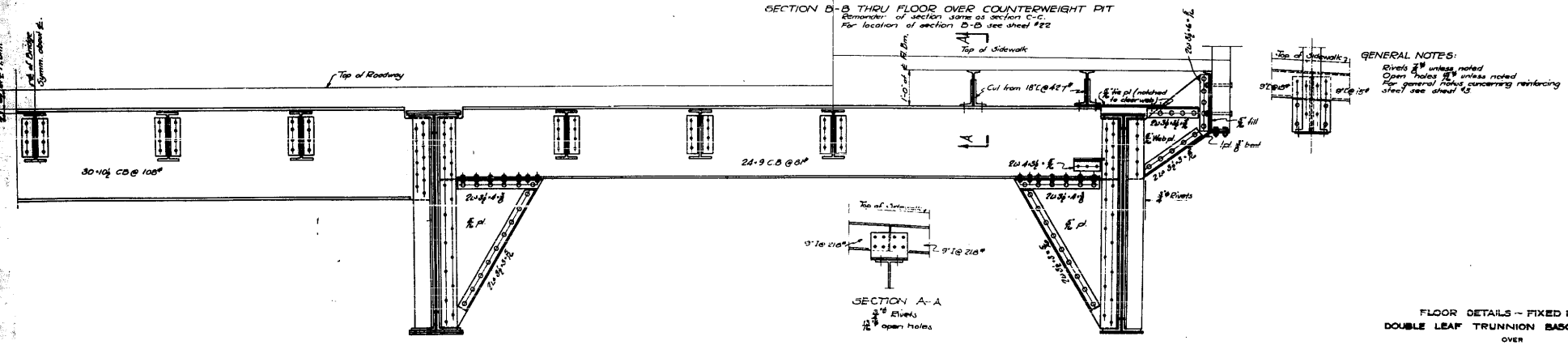


Note:
The vertical curve above West Abutment to be taken care of by increased depth of roadway slab

SECTION C-C THRU FLOOR OVER COUNTERWEIGHT PIT
For location of section C-C see sheet #22 and 23

Class X concrete

SECTION B-B THRU FLOOR OVER COUNTERWEIGHT PIT
Remainder of section same as section C-C.
For location of section B-B see sheet #22



FLOOR BEAM DETAILS AT POINT D
Details at points E, F & G similar

GENERAL NOTES:
Rivets ¾" unless noted
Open holes ⅞" unless noted
For general notes concerning reinforcing steel see sheet #5

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: April 12, 1933
Consulting Engineer
Approved: April 13-1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended:
Bridge Engineer
Approved:
Chief Engineer

FLOOR DETAILS - FIXED PARTS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

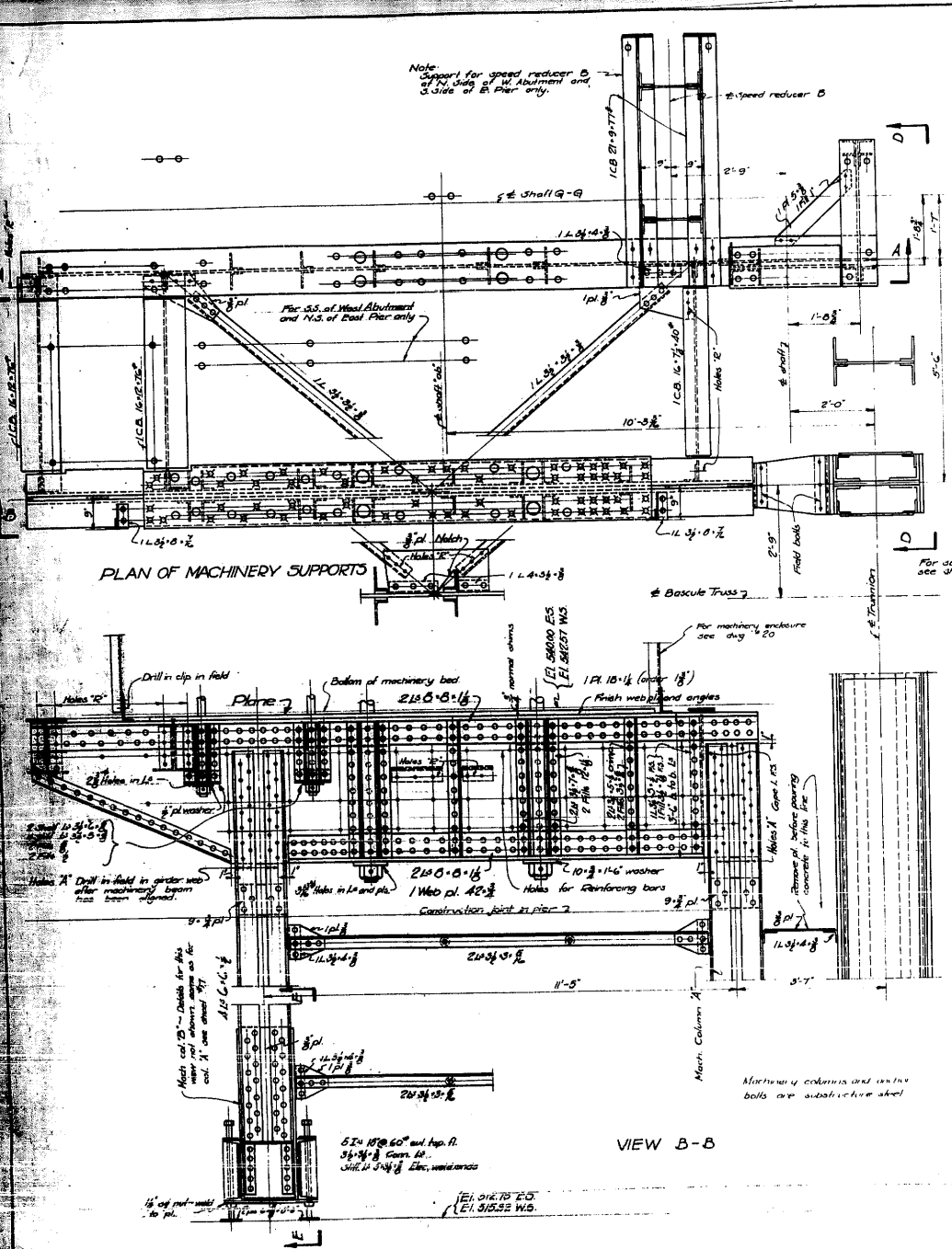
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

DRAWN BY A.D.
TRACED BY A.D.
CHECKED BY F.L.D
REVISED AUG. 18, 1933

SCALE: ¾"-1'-0"
DATE: MAR. 18, 1933.

SHEET NO. 1343-27

Accession No. 3326



GENERAL NOTES:

Rivets ⅞" except as noted
Open holes 1⅛" except as noted

Holes marked "R" are to be reamed for 1⅛" turned bolts with supports assembled in the shop and parts match marked. Bolts to have light driving fit.

All holes for bolts attaching machinery to the supports are to be sub-drilled and reamed with the supports completely bolted up with turned bolts and with machinery beds completely assembled in place in the shop. Machinery and supports must be match marked one with respect to the other.

Painting: Surfaces which are to be embedded in concrete are not to be painted or oiled.

THE SCHERZER ROLLING LIFT BRIDGE CO
Approved: Sept. 12, 1933
Engineering Engineer.
Approved: Sept. 13, 1933
Chief Engineer.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended: _____
Bridge Engineer
Approved: _____
Chief Engineer

MACHINERY SUPPORTS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

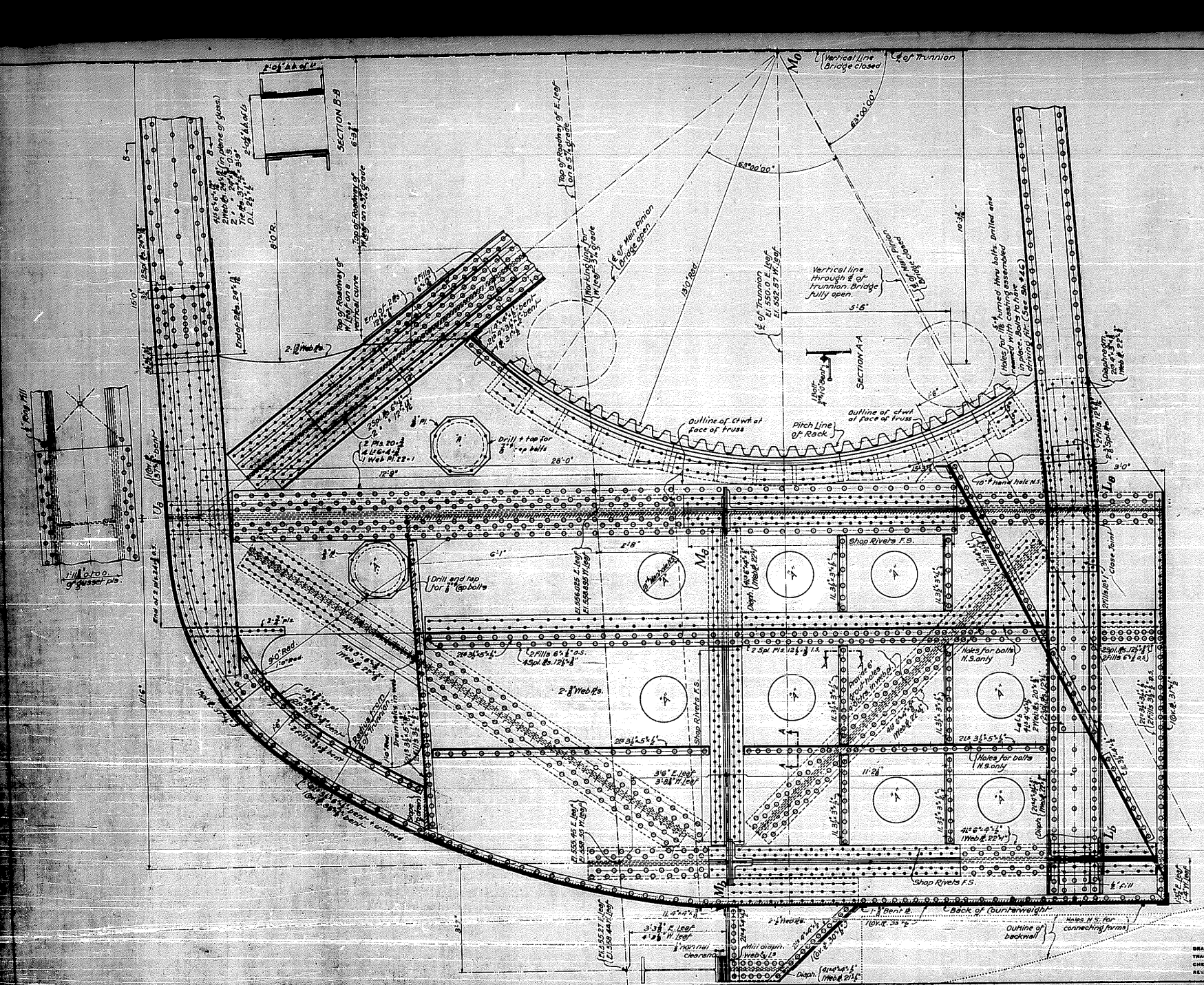
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY A.L.R.D
TRACED BY A.D.
CHECKED BY T.E.
REVISED SEPT 11, 1933

SCALE: ½" = 1'-0"
DATE: MAR 17 1933

SHEET NO. 1343-28

Accession No. 3327.



General Notes.

Rivets ⅞" ø
Open Holes 1⅛" ø unless noted.
Posts are to be vertical.
Details are drawn for E. Leaf
W. Leaf is similar.
Shaded area to be filled between web pls. with counterweight material. See Sh. #44
Surfaces inaccessible after assembly including surfaces in contact with concrete shall have two coats of shop paint.

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved: Sept. 13, 1933
Ingolf Lindal
Managing Engineer.

Approved: Sept. 13, 1933
Craig M. Hazlett
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended: _____
Bridge Engineer

Approved: _____
Chief Engineer

BASCULE TRUSSES - POINTS a & b
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

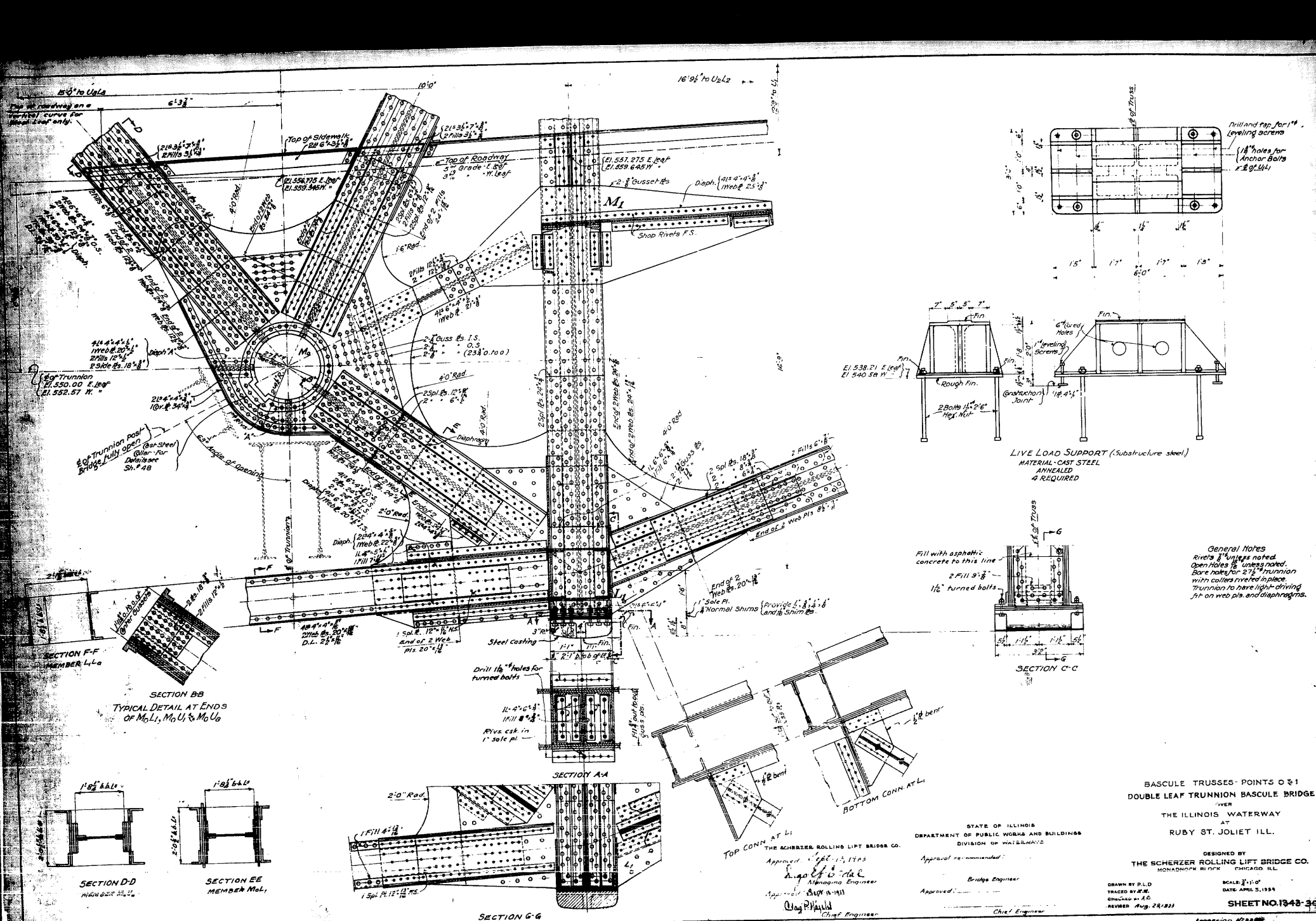
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY P.L.D
TRACED BY A.S.
CHECKED BY A.S.
REVISED Aug. 23, 1933

SCALE: ½" = 1'-0"
DATE: MARCH 28, 1933

SHEET NO. 1343-29

Accession No. 33



General Notes
Rivets ⅞" unless noted.
Open Holes 1⅛" unless noted.
Bore holes for 27½" ø trunnion with collars riveted in place.
Trunnion to have light driving fit on web pls. and diaphragms.

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved Dec. 13, 1933
Managing Engineer
Approved Sept. 15, 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended
Bridge Engineer
Approved
Chief Engineer

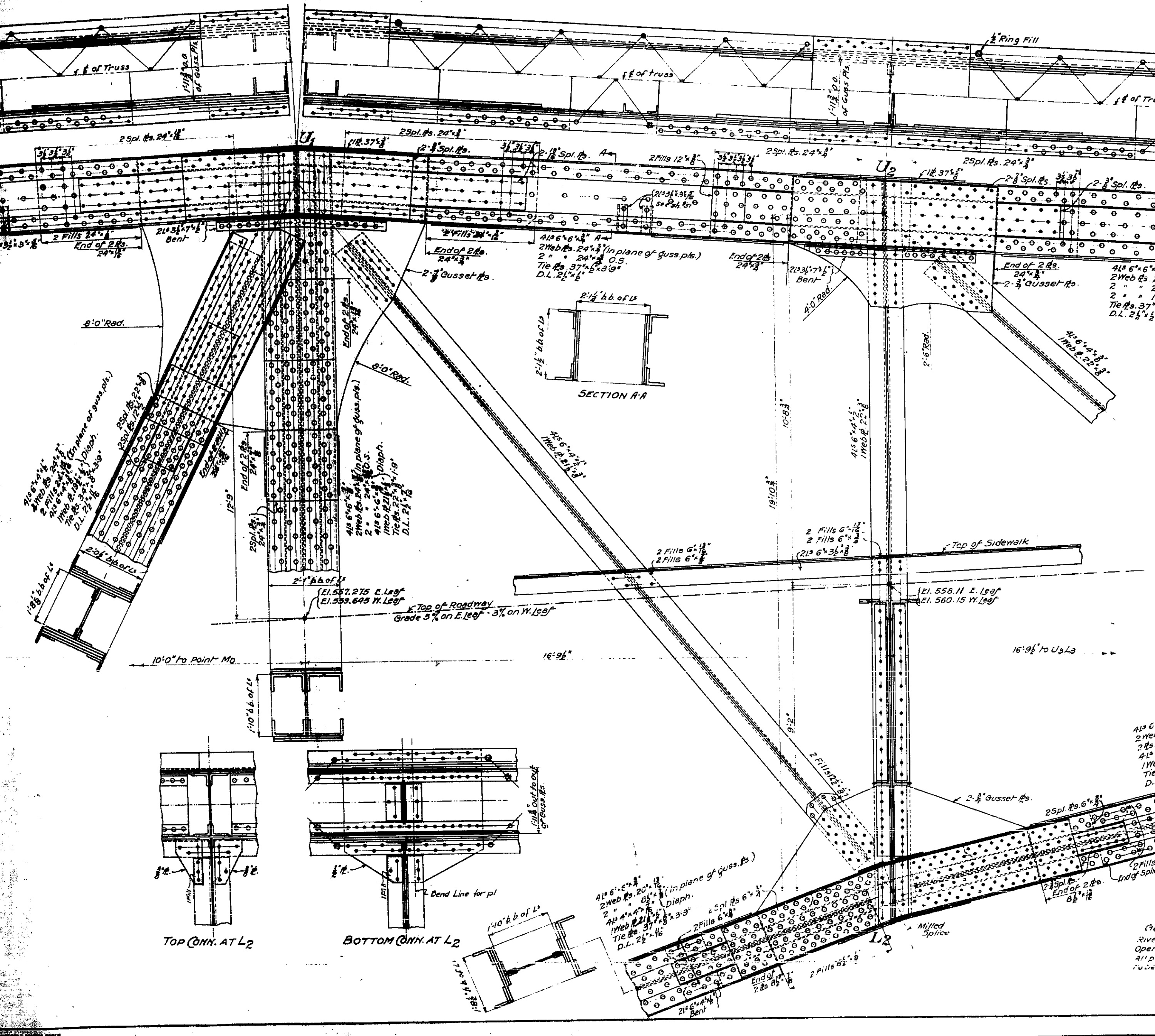
BASCULE TRUSSES - POINTS O to 1
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK CHICAGO ILL.

DRAWN BY P.L.D
TRACED BY W.W.
CHECKED BY A.B.
REVISED Aug. 29, 1933
SCALE: ¾"=1'-0"
DATE: APRIL 5, 1933

SHEET NO. 1348-39

Accession No. 33[illegible]



THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved: Sept. 13, 1933

Managing Engineer

Approved: Sept. 13, 1933

Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended: ____________

Bridge Engineer

Approved: ____________

Chief Engineer

General Notes
Rivets ⅞" ϕ
Open Holes 15/16" ϕ
All posts and floor beams to be vertical.

BASCULE TRUSSES-POINTS 1 & 2
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

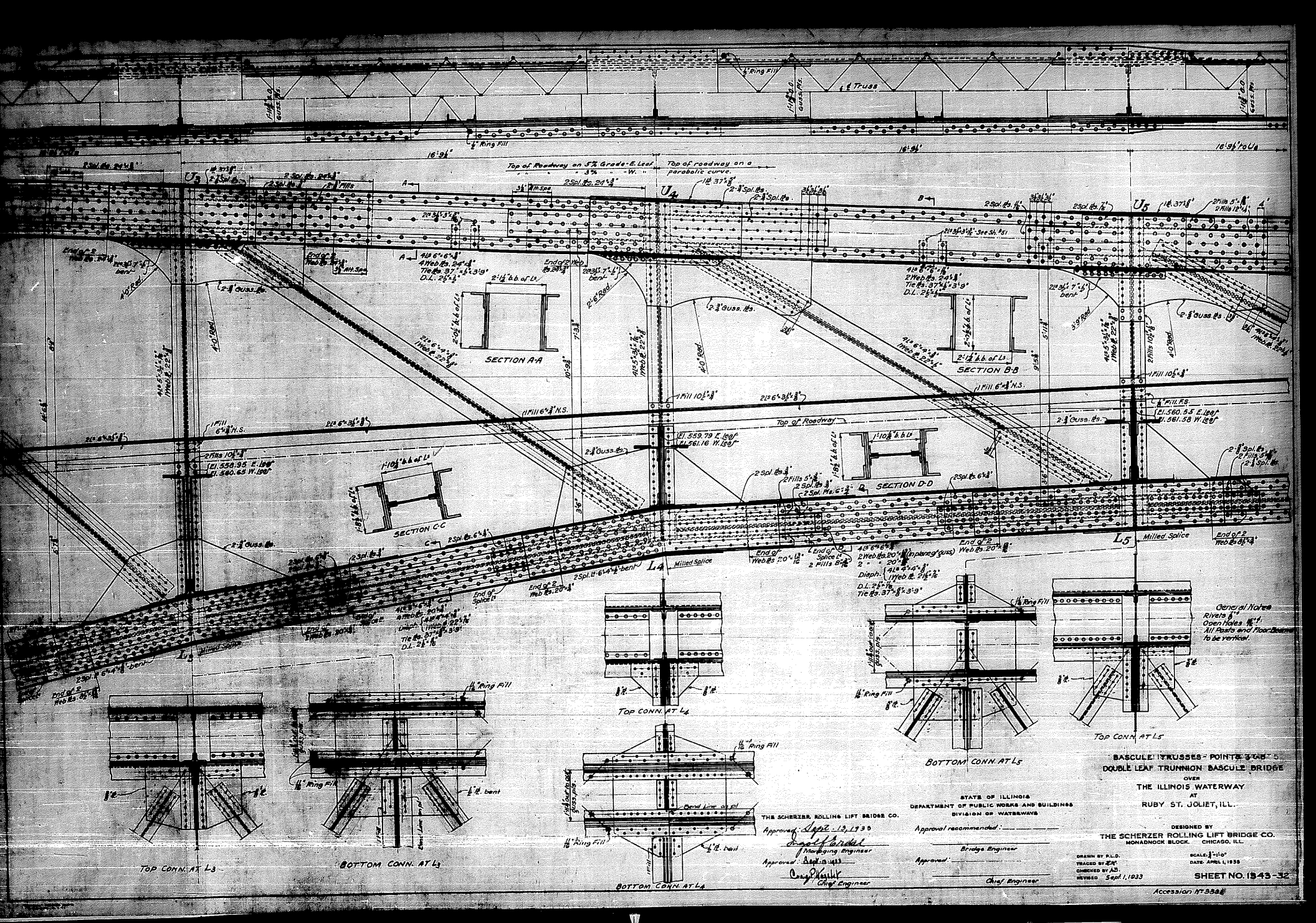
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK CHICAGO, ILL.

DRAWN BY P.L.D.
TRACED BY
CHECKED BY A.D.
REVISED Aug 31, 1933

SCALE: ¾"=1'-0"
DATE: MARCH 30, 1933

SHEET NO. 1343-31

Accession Nº 3330



THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved: Sept. 13, 1933

Adolf Sarrazin
Managing Engineer

Approved: Sept. 13, 1933

Craig P. Hazelet
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended: _____
Bridge Engineer

Approved: _____
Chief Engineer

BASCULE TRUSSES - POINTS 3 AND 5. DOUBLE LEAF TRUNNION BASCULE BRIDGE OVER THE ILLINOIS WATERWAY AT RUBY ST. JOLIET, ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

DRAWN BY R.L.D.
TRACED BY E.M.
CHECKED BY A.S.
REVISED Sept. 1, 1933

SCALE 1/8"=1'-0"
DATE. APRIL 1, 1933

SHEET NO. 1543-32

Accession No. 3384

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved: Sept. 19, 1933

Ingolf Sandal
Managing Engineer

Approved: Sept. 9 1933

Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended: _____
Bridge Engineer

Approved: _____
Chief Engineer

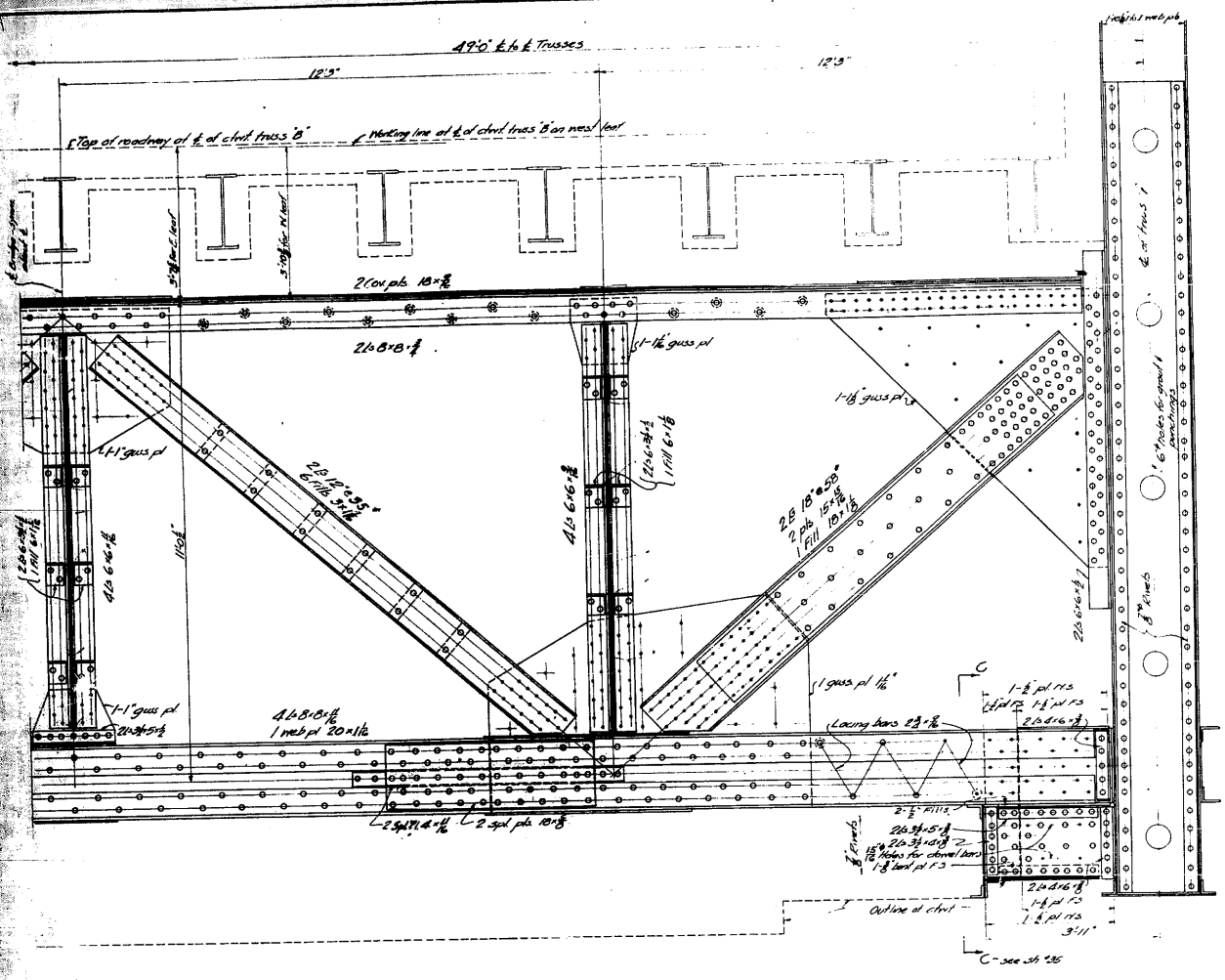
BASCULE TRUSSES-POINT 6 to ℄ SPAN
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

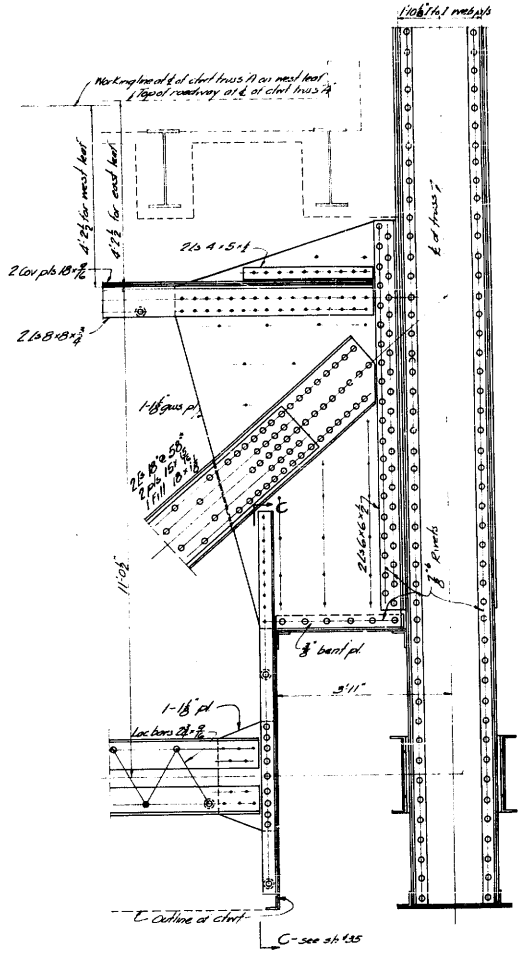
DRAWN BY P.L.D.
TRACED BY [illegible]
CHECKED BY A.B.
REVISED SEPT. 6, 1933

SCALE: 1"=10"
DATE: APRIL 6, 1933

SHEET NO. 1343-33



REAR COUNTERWEIGHT TRUSS 'B'



FRONT COUNTERWEIGHT TRUSS 'A'

Same as Rear Truss except as shown

GENERAL NOTES
Rivets: 1" unless noted.
Open holes: 1⅛" unless noted
Steel encased in concrete not to be painted or oiled.
Open holes in gusset pls. are for lateral bars - see sh 46
For reaming of holes see specifications
Field connections to be reamed assembled

COUNTERWEIGHT SUPPORTS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: [illegible]
Managing Engineer
Approved: Sept 13 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended:
Bridge Engineer
Approved:
Chief Engineer

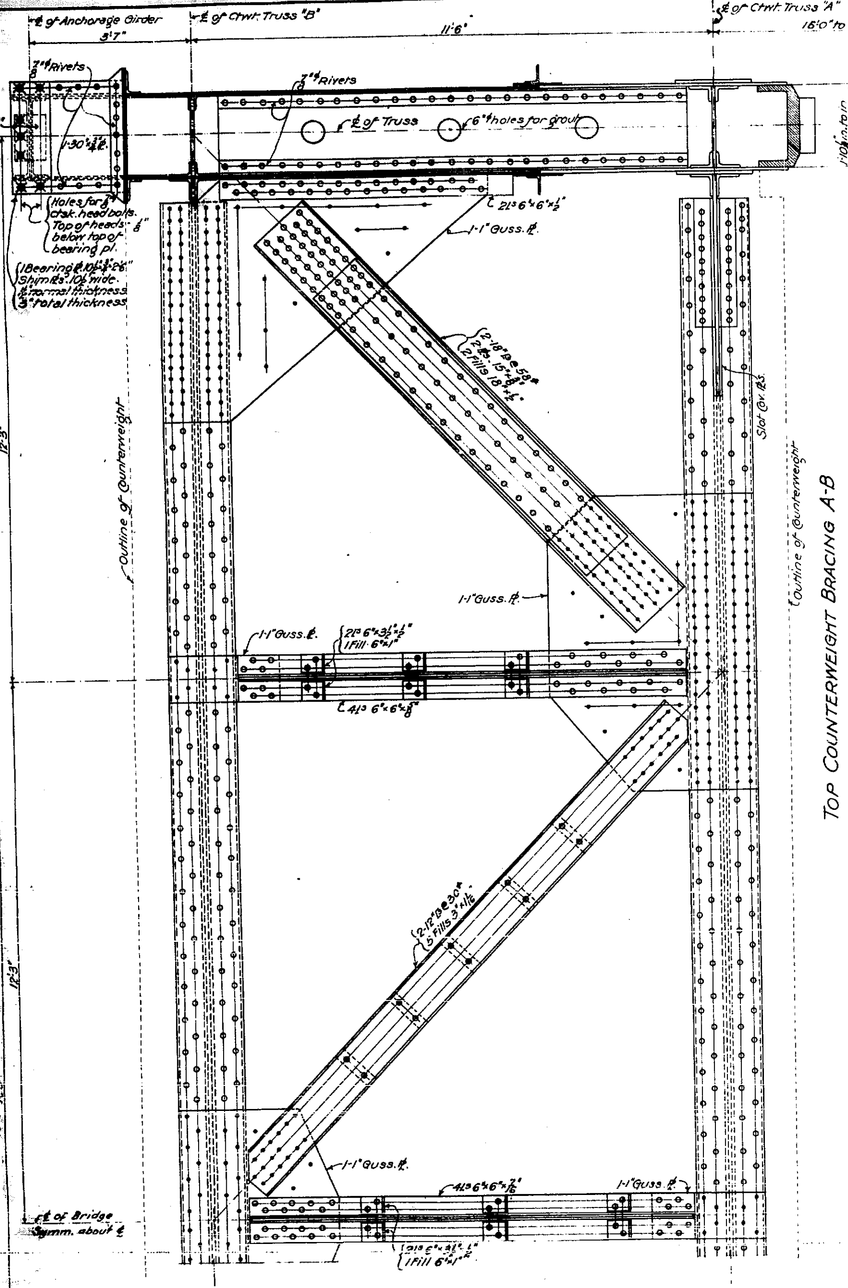
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY F.L.D.
TRACED BY A.L.E.P.
CHECKED BY A.D.
REVISED SEPT. 7, 1933

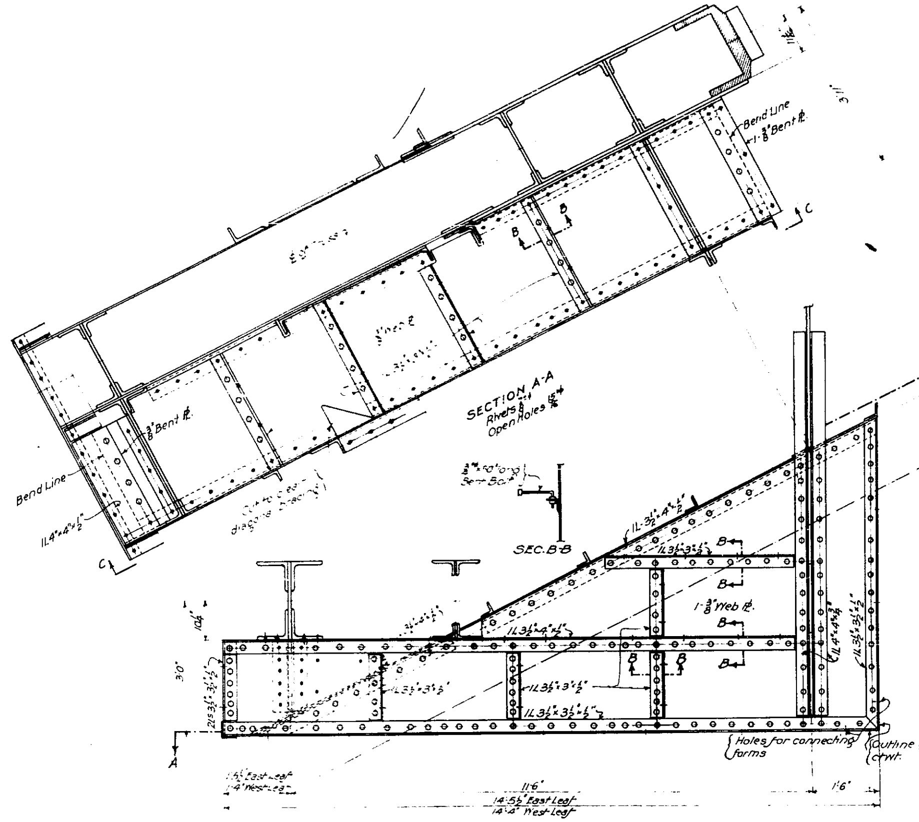
SCALE: ½"=1'0"
DATE: APRIL 27, 1933

SHEET NO. 1343-34

Accession No. 3598



TOP COUNTERWEIGHT BRACING A-B



SECTION C-C

Rivets 7/8"φ
Open Holes 15/16"φ
"C.R. LOCATION SEE SHEET # 36

General Notes.
Rivets 1"φ unless noted.
Open Holes 1 1/16"φ unless noted.
Steel encased in concrete is not to be painted or oiled.
Holes in gusset pls. are for dowel bars. See Sheet # 44
For reaming of holes see specifications.
Field connections to be reamed assembled.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended

Bridge Engineer

Approved:

Chief Engineer

Approved

Approved

Chief Engineer

COUNTERWEIGHT SUPPORTS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.

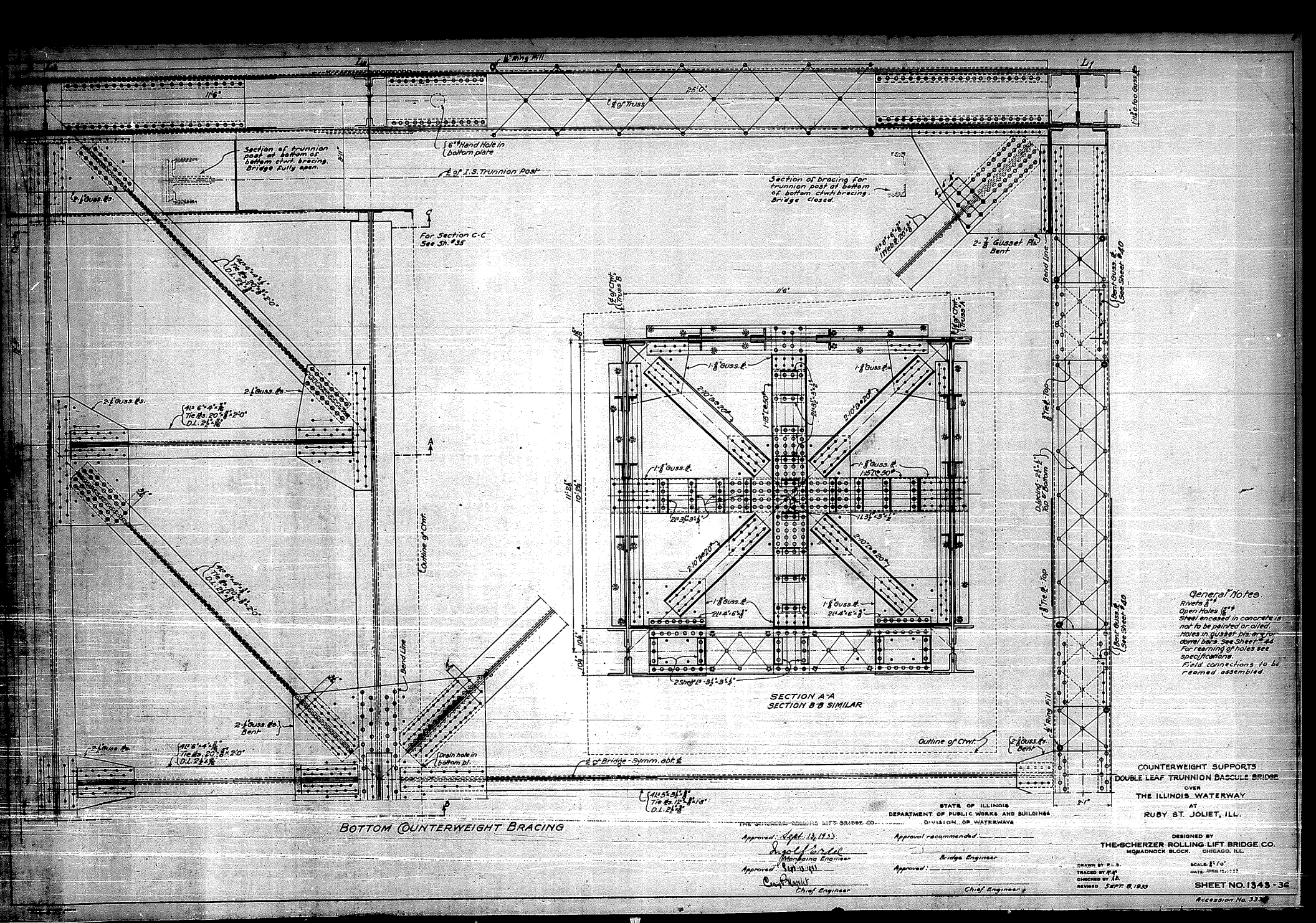
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

DRAWN BY: P.L.D.
TRACED BY
CHECKED BY
REVISED SEPT. 1933

DATE APRIL 24, 1933

SHEET NO. 1343-35

Accession No. 3334



General Notes.

Rivets ⅞" Open holes 15/16" Steel encased in concrete is not to be painted or oiled. Holes in gusset pls. or for barrel bars. See Sheet #44 For reaming of holes see specifications. Field connections to be reamed assembled.

COUNTERWEIGHT SUPPORTS DOUBLE LEAF TRUNNION BASCULE BRIDGE OVER THE ILLINOIS WATERWAY AT RUBY ST. JOLIET, ILL.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved: Sept. 13, 1933
Joseph Carroll
Director

Approved: Sept. 13, 1933
Chief Engineer

Approval recommended:
Bridge Engineer

Approved:
Chief Engineer

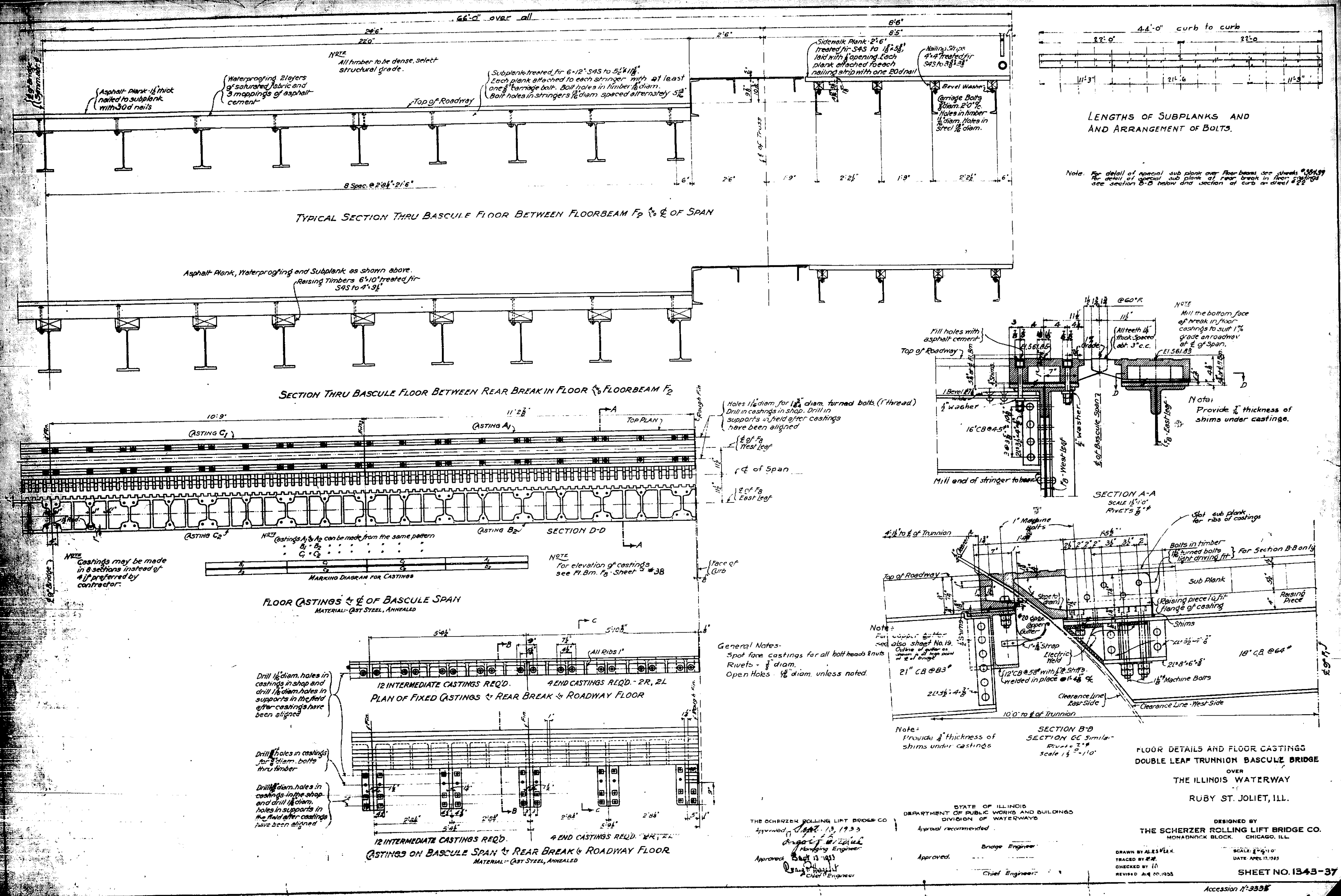
DESIGNED BY THE SCHERZER ROLLING LIFT BRIDGE CO. MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY P.L.D.
TRACED BY P.K.
CHECKED BY J.A.
REVISED SEPT. 8, 1933

SCALE 1"=1'-0"
DATE APRIL 11, 1933

SHEET NO. 1345-36

Accession No. 3330


66'-0" over all
Note
All timber to be dense, select structural grade.
Asphalt Plank · 1½" thick nailed to subplank with 30d nails
Waterproofing 2 layers of saturated fabric and 3 moppings of asphalt cement
Top of Roadway
Sidewalk Plank 2"·6" treated fir S4S to 1⅝"·5⅝", laid with ⅜" opening. Each plank attached to each nailing strip with one 20d nail
Bevel Washer
LENGTHS OF SUBPLANKS AND AND ARRANGEMENT OF BOLTS.
44'-0" curb to curb
TYPICAL SECTION THRU BASCULE FLOOR BETWEEN FLOORBEAM F_p & ℄ OF SPAN
Asphalt Plank, Waterproofing and Subplank as shown above.
SECTION THRU BASCULE FLOOR BETWEEN REAR BREAK IN FLOOR & FLOORBEAM F_2
Casting C_1
Casting A_1
Top Plan
Casting C_2
Casting B_2
SECTION D-D
℄ of Span
Note
Castings may be made in 8 sections instead of 4 if preferred by contractor.
Marking Diagram for Castings
Note
For elevation of castings see Fl. Bm. F_B Sheet #38
FLOOR CASTINGS @ ℄ OF BASCULE SPAN
Material:- Cast Steel, Annealed
General Notes-
Spot face castings for all bolt heads & nuts
Rivets - ⅞" diam.
Open Holes - 15/16" diam. unless noted.
12 INTERMEDIATE CASTINGS REQ'D.
4 END CASTINGS REQD. - 2R, 2L
PLAN OF FIXED CASTINGS @ REAR BREAK in ROADWAY FLOOR
All Ribs 1"
CASTINGS ON BASCULE SPAN @ REAR BREAK in ROADWAY FLOOR
Material:- Cast Steel, Annealed
SECTION A-A
Note:
Provide ¼" thickness of shims under castings.
Sub Plank
Raising Piece
Clearance Line East Side
Clearance Line · West Side
10'0" to ℄ of Trunnion
Note:
Provide ¾" thickness of shims under castings
SECTION B-B
SECTION C-C Similar
FLOOR DETAILS AND FLOOR CASTINGS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
RUBY ST. JOLIET, ILL.
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended
Bridge Engineer
Approved
Chief Engineer
THE SCHERZER ROLLING LIFT BRIDGE CO
Approved Sept. 13, 1933
Managing Engineer
Approved Sept 13 1933
Chief Engineer
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.
SHEET NO. 1343-37
Accession

General Notes.

Rivets ⅞ unless noted
Open Holes ⌀ unless noted
Gusset ⅜ for bottom laterals to be warped in field where required.

Drill holes in lateral L8 of L4 & L9 in the field after leaves have been lowered, except holes marked ⊕

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept. 13, 1933
Managing Engineer
Approved: Sept 13-1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended:
Bridge Engineer
Approved:
Chief Engineer

FLOOR BEAMS F3 & F8 - BASCULE SPAN
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

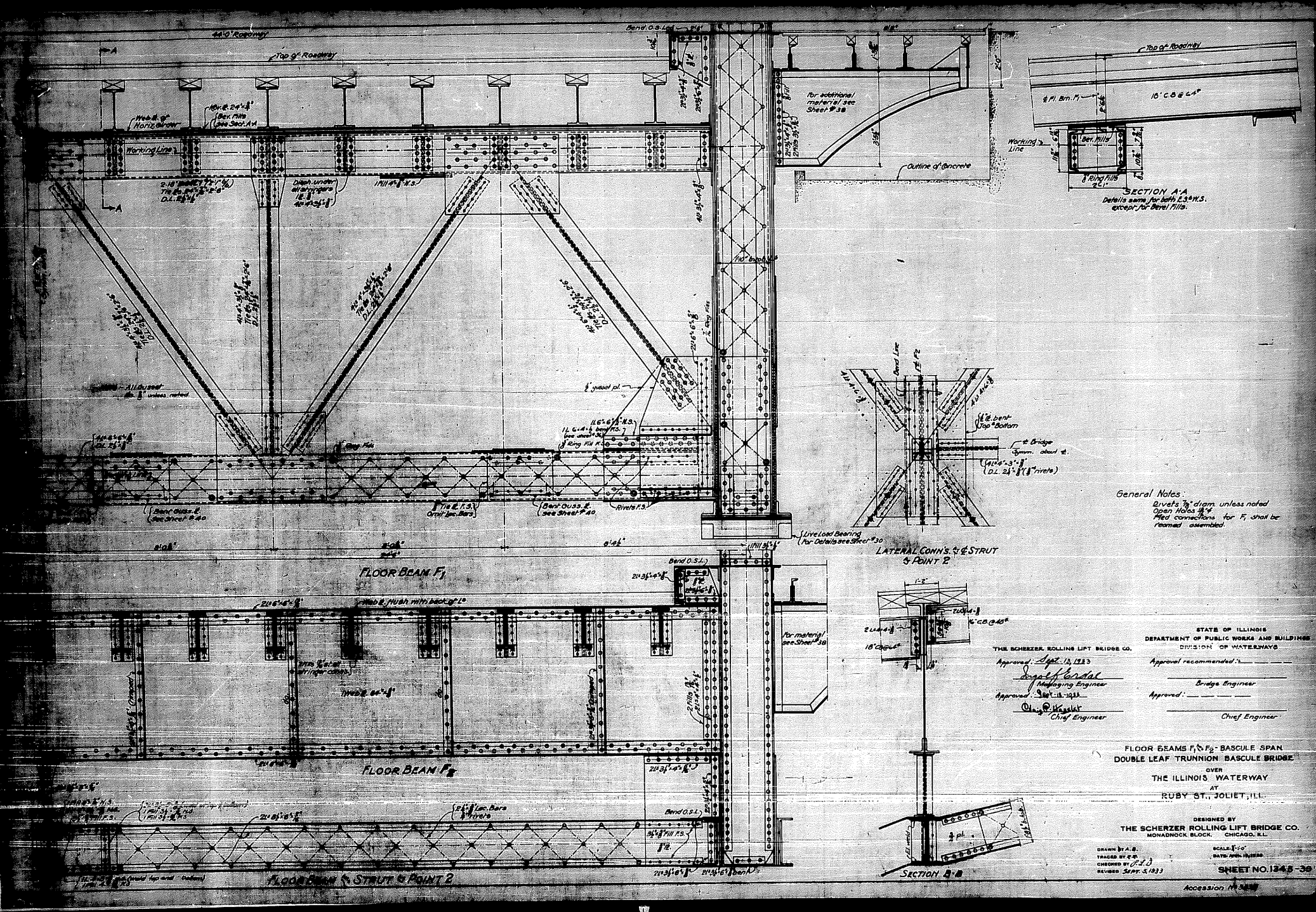
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY A.L.R.S
TRACED BY H.H.
CHECKED BY A.B
REVISED SEPT 12, 1950.

SCALE: ½"=1'-0"
DATE: APRIL 11, 1933

SHEET NO. 1343-38

Accession No. 3338



General Notes:
Rivets ⅞" diam. unless noted
Open Holes ¹⁵/₁₆"
Field connections for F, shall be reamed assembled.

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept. 12, 1933
Ingolf Enstad
Managing Engineer
Approved: Sept. 13, 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended: _____
Bridge Engineer
Approved: _____
Chief Engineer

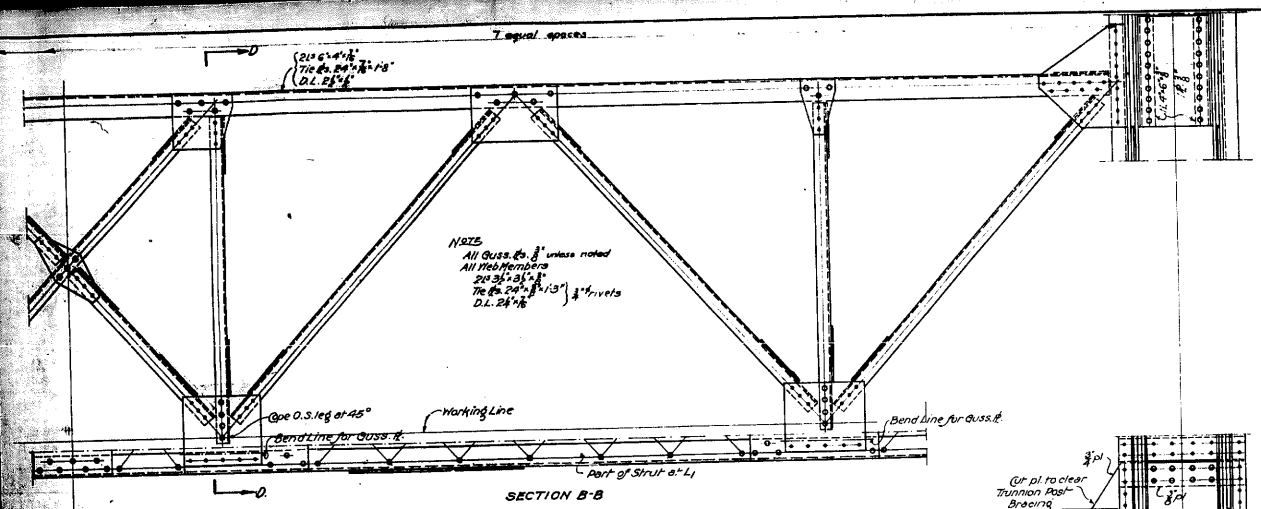
FLOOR BEAMS F_1 & F_2 - BASCULE SPAN
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

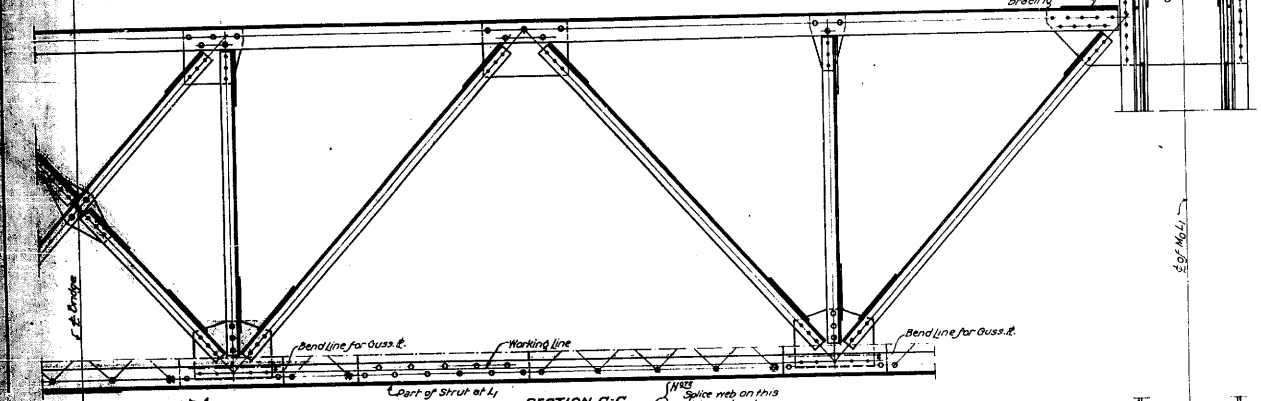
DRAWN BY A.B.
TRACED BY E.P.
CHECKED BY F.E.J.
REVISED Sept. 5, 1933
SCALE: 1"=1'-0"
DATE: April 15, 1933

SHEET NO. 1248-39

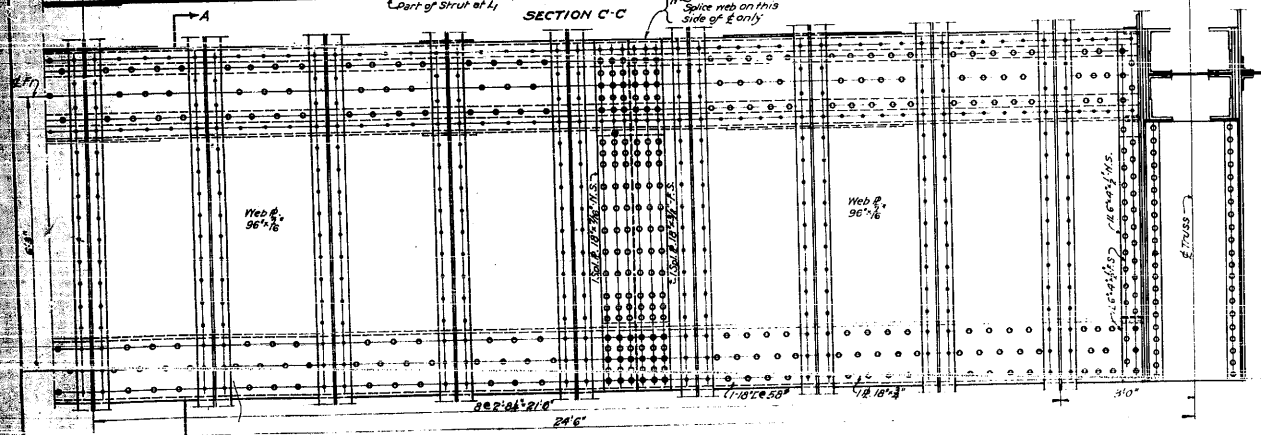
Accession No. 3487



SECTION B-B

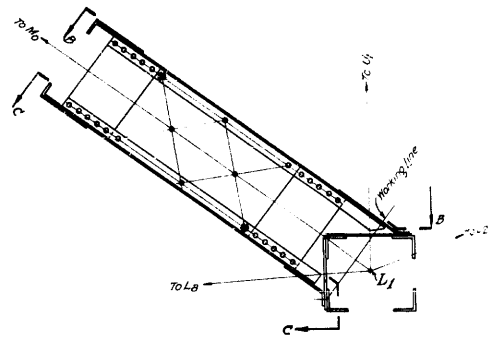


SECTION C-C



HORIZONTAL GIRDER

For Section A-A see Sheet # 38



SECTION D-D

General Notes

Rivets ⅞" unless noted
Open holes ⅞" unless noted
For reaming of holes see specifications

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: April 13, 1933
Designing Engineer
Approved: April 13, 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approved: Recommended
Bridge Engineer
Approved
Chief Engineer

HORIZONTAL GIRDER
AND
BRACING M0 L1
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY A.S.
TRACED BY E.E.
CHECKED BY H.E.B.
REVISED Aug. 30, 1933

SCALE 1"=1'-0"
DATE APRIL 20, 1933

SHEET NO. 1343-40

Accession No. 3350

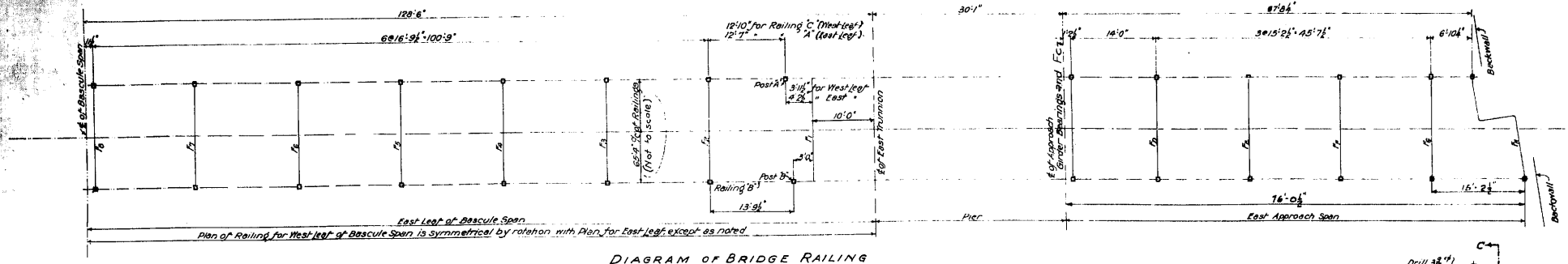
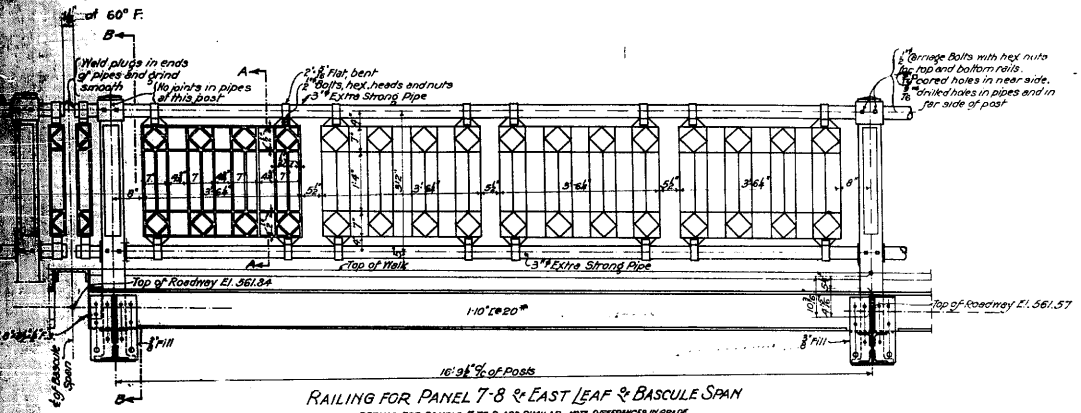
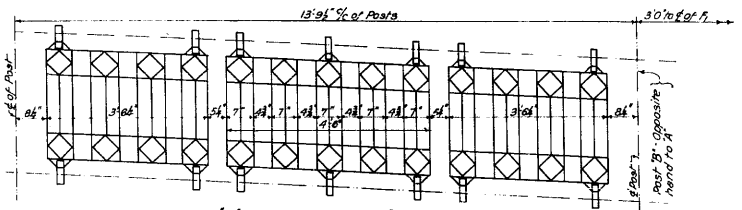


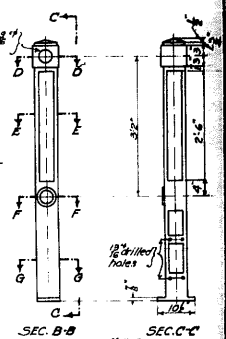
DIAGRAM of BRIDGE RAILING
SCALE 8"=1'-0"

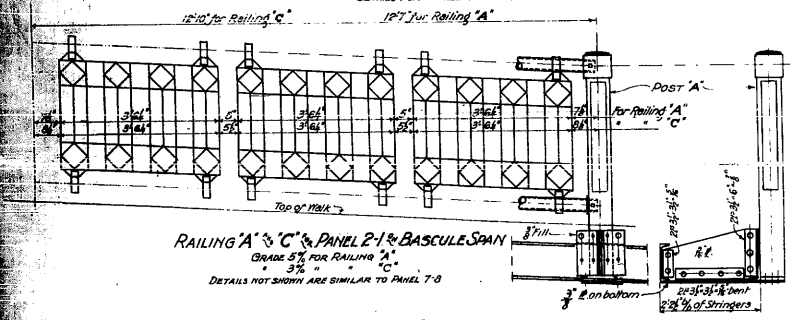


RAILING FOR PANEL 7-8 & EAST LEAF & BASCULE SPAN
DETAILS FOR PANELS 7 TO 2 ARE SIMILAR. NOTE DIFFERENCES IN GRADE

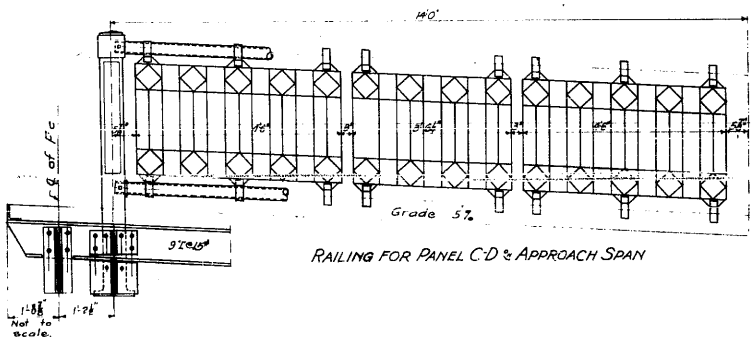


RAILING "B" FOR PANEL 2-1 & BASCULE SPAN
GRADE 5% FOR EAST LEAF
" 3% " WEST "
DETAILS NOT SHOWN SIMILAR TO PANEL 7-8.



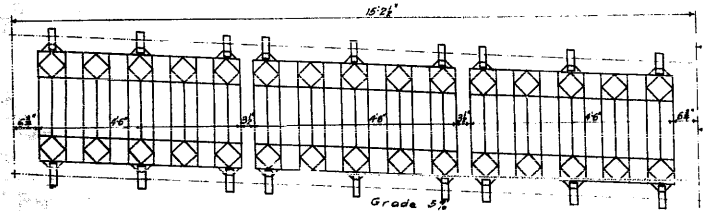


RAILING "A" & "C" & PANEL 2-1 & BASCULE SPAN
GRADE 5% FOR RAILING "A"
" 3% " " "C"
DETAILS NOT SHOWN ARE SIMILAR TO PANEL 7-8

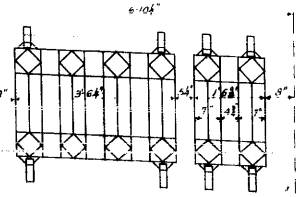


RAILING FOR PANEL C-D & APPROACH SPAN

General Notes
All posts shall be vertical.
All posts shall be made of cast iron.
Grilles shall be made of malleable iron.
Each pattern shall have a distinctive mark that will show on the casting.
All pipe shall be genuine wrought iron.
Cheek ⅞"
Open holes ¹³⁄₁₆" unless noted.



RAILING FOR PANELS D-E, E-F, F-G & G-H & APPROACH SPAN



NORTH RAILING FOR PANEL G-H & APPROACH SPAN

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept 13 1933
Managing Engineer
Approved: Sept 13 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended:
Bridge Engineer
Approved
Chief Engineer

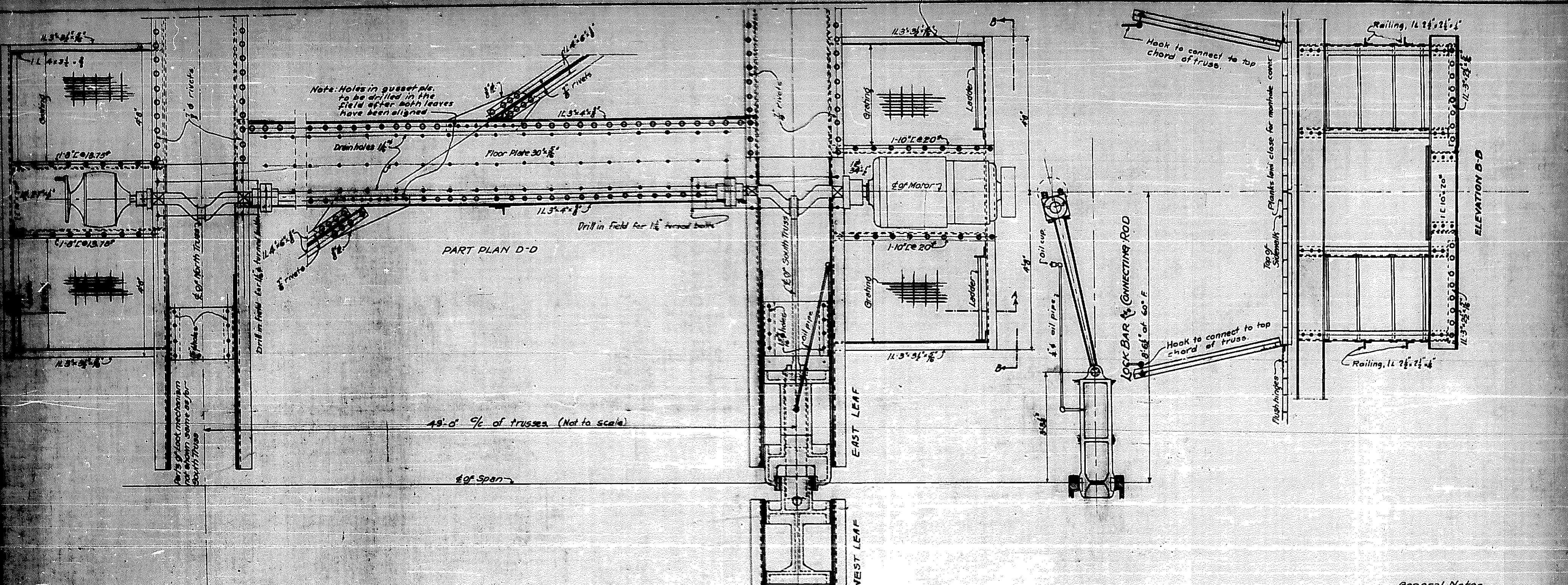
ORNAMENTAL RAILING
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.

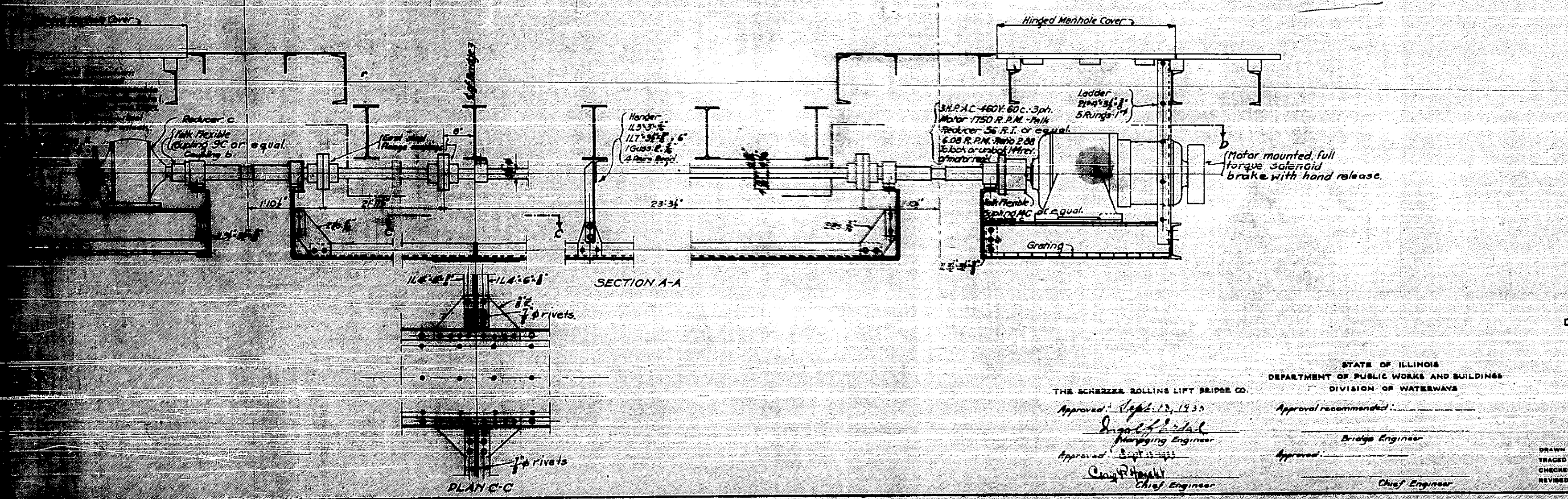
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY E.A.H
TRACED BY E.K.
CHECKED BY E.E.B
REVISED Aug. 24, 1933
SCALE ¾"=1'-0"
DATE APRIL 15, 1933

SHEET NO. 1343-41

Accession No. 3348





General Notes

Rivets $\frac{3}{4}$"φ. unless noted
Open Holes $\frac{13}{16}$"φ. " "
Metal covers, equal to the specified gear covers, shall be provided for the motor, brake, speed reducers, cranks and crank bearings.
Gratings shall be equal to Tri-lock Rectangular Flooring, Class 1-8-4 with bars 1"x$\frac{3}{16}$" and $\frac{1}{2}$"x$\frac{1}{8}$".
For general machinery notes see Sheet No 46.

CENTER LOCK & SUPPORTS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept. 13, 1933
Ingolf Erdal
Managing Engineer
Approved: Sept 13 1933
Craig P. Hazelet
Chief Engineer

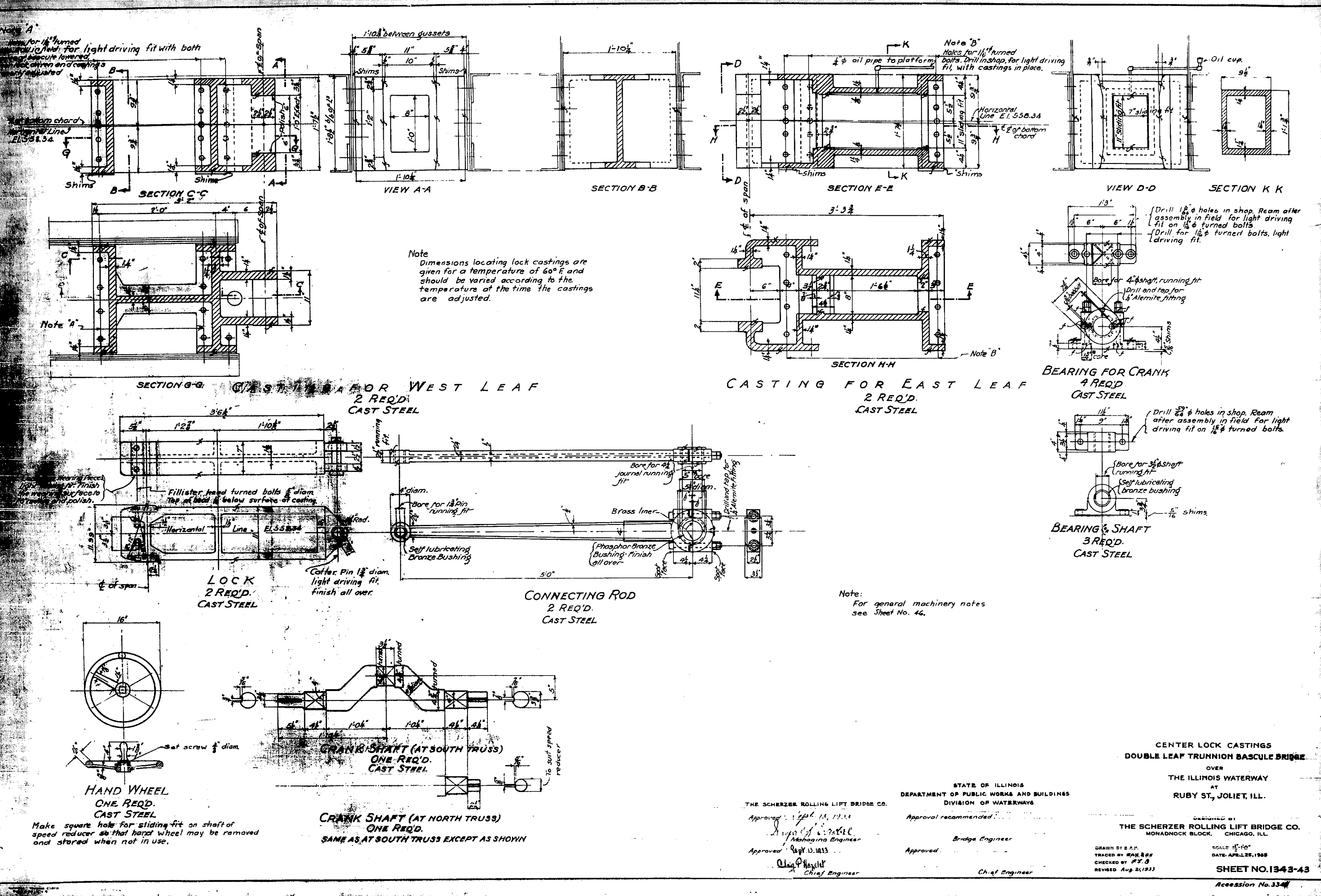
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended: ____________
Bridge Engineer
Approved: ____________
Chief Engineer

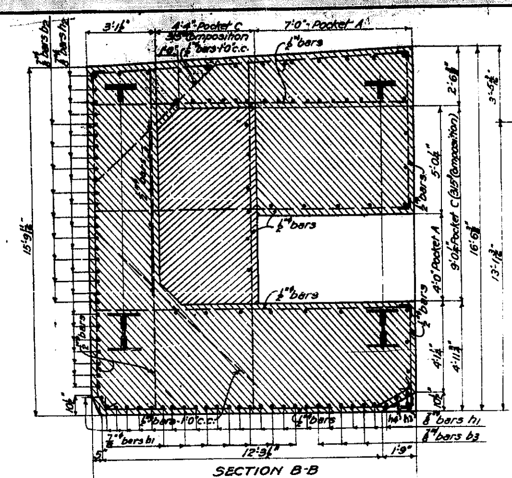
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

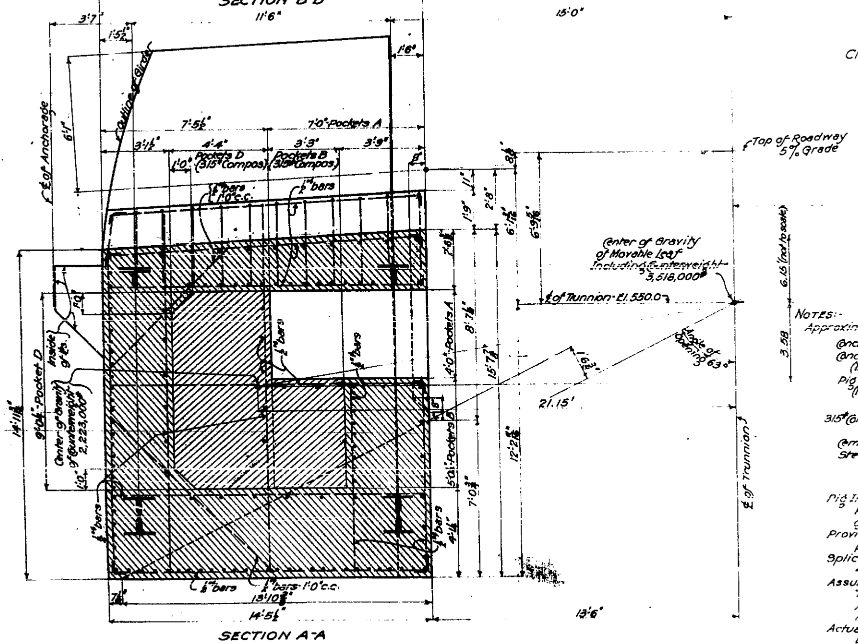
DRAWN BY E.A.H.
TRACED BY E.F. & E.A.H.
CHECKED BY C.L.D.
REVISED Aug. 21, 1933
SCALE $\frac{3}{4}$"=1'-0"
DATE APRIL 21, 1933

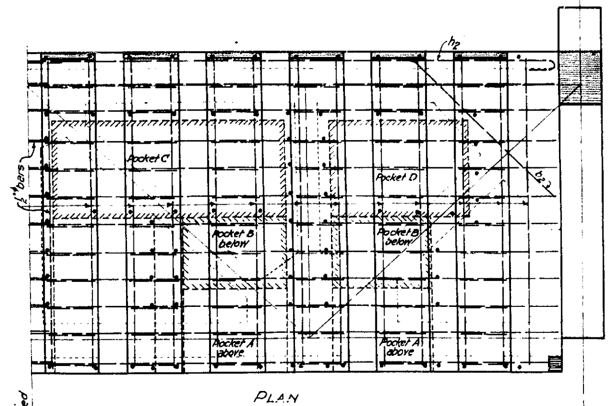
SHEET NO. 1343-42

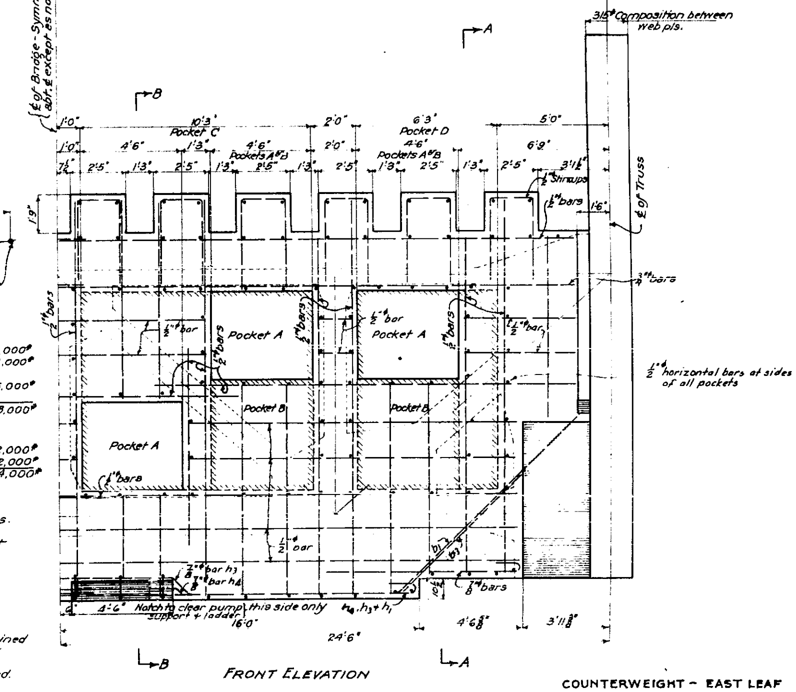
Accession No. 2345


SECTION C-C
VIEW A-A
SECTION B-B
SECTION E-E
VIEW D-D
SECTION K-K
SECTION G-G
SECTION H-H
CASTING FOR WEST LEAF
2 REQ'D.
CAST STEEL
CASTING FOR EAST LEAF
2 REQ'D.
CAST STEEL
Note
Dimensions locating lock castings are given for a temperature of 60° F. and should be varied according to the temperature at the time the castings are adjusted.
BEARING FOR CRANK
4 REQ'D.
CAST STEEL
BEARING ℄ SHAFT
3 REQ'D.
CAST STEEL
LOCK
2 REQ'D.
CAST STEEL
CONNECTING ROD
2 REQ'D.
CAST STEEL
Note:
For general machinery notes see Sheet No. 46.
HAND WHEEL
ONE REQ'D.
CAST STEEL
Make square hole for sliding fit on shaft of speed reducer so that hand wheel may be removed and stored when not in use.
CRANK SHAFT (AT SOUTH TRUSS)
ONE REQ'D.
CAST STEEL
CRANK SHAFT (AT NORTH TRUSS)
ONE REQ'D.
SAME AS AT SOUTH TRUSS EXCEPT AS SHOWN
CENTER LOCK CASTINGS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved Sept. 13, 1933
Managing Engineer
Approved Sept. 13, 1933
Chief Engineer
Approval recommended
Bridge Engineer
Approved
Chief Engineer
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.
REVISED Aug. 21, 1933
SHEET NO. 1343-43
Accession No. 3341









Center of Gravity of Movable Leaf Exclusive of Counterweight 1,295,000#

NOTES:-

Approximate Quantities for Counterweight

Concrete @ 150# per cu. ft.	1,294,000#
Concrete Composition @ 315# per cu. ft. (In Pockets B, C & D & between web pls.)	844,000#
Pig Iron Adjustment Blocks (In Pockets A)	85,000#
Total	2,223,000#

315# Concrete Composition may be made as follows:-

Cement Grout @ 137# per cu. ft.	182,000#
Steel Punchings	662,000#
Total	844,000#

Pig Iron Adjustment Blocks shall be so placed in Pockets 'A' as to balance the leaf in all positions of opening.

Provide dowel bars $\frac{5}{8}$"⌀ × 2'6" through holes in gusset pls. See Sheets # 34, 35 & 36.

Splices in reinforcing bars shall have a lap of 40 diameters of the bars

Assumed Unit Weights:-
Timber 34# per cu. ft.
Asphalt Planking 12.5# per sq. ft. (including nails and waterproofing.)

Actual weight of materials used shall be determined before placing concrete and if found to vary materially from the assumed weights the counterweight shall be modified as required.

For general notes concerning reinforcing steel see sh #3

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved Sept 13, 1933
[signature]
Managing Engineer

Approved Sept 13, 1933
[signature]
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended
Bridge Engineer

Approved
Chief Engineer

COUNTERWEIGHT – EAST LEAF

DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.

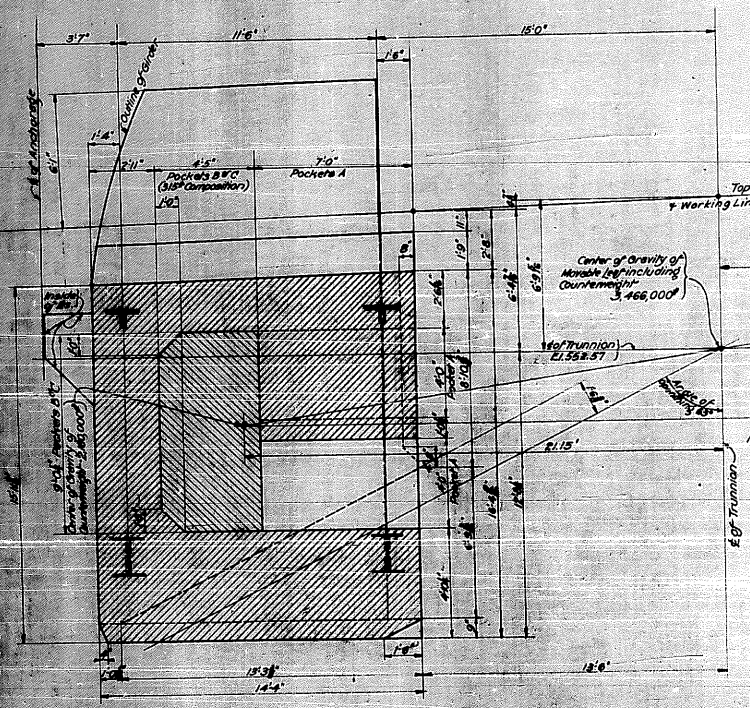
DESIGNED BY
~~THE SCHERZER ROLLING LIFT BRIDGE CO.~~
MONADNOCK BLOCK. CHICAGO, ILL.

DRAWN BY P.L.D.
TRACED BY E.K.
CHECKED BY A.B.
REVISED SEPT 11, 1933

SCALE $\frac{3}{8}$" = 1'-0"
DATE APRIL 28, 1933

SHEET NO. 1343-44

Accession No 3348



NOTES:-

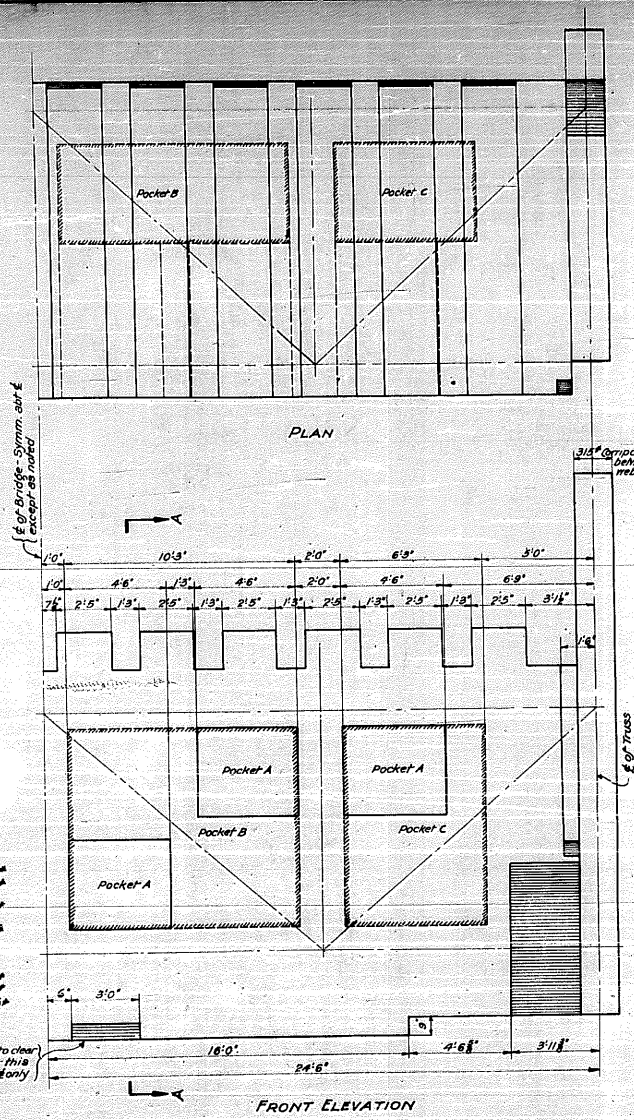
Approximate Quantities for Counterweight -

Concrete @ 150# per cu.ft.	1,333,000#
Concrete Composition @ 315# per cu.ft. (In pockets B, C & between web pls.)	762,000#
Pig Iron Adjustment Blocks (In pockets A)	85,000#
Total	2,180,000#

315# Concrete Composition may be made as follows:-

Cement Grout @ 137# per cu.ft.	162,000#
Steel Punchings	600,000#
Total	762,000#

For other notes see Sheet # 44
Reinforcing Steel Similar to East Leaf, Sheet # 44



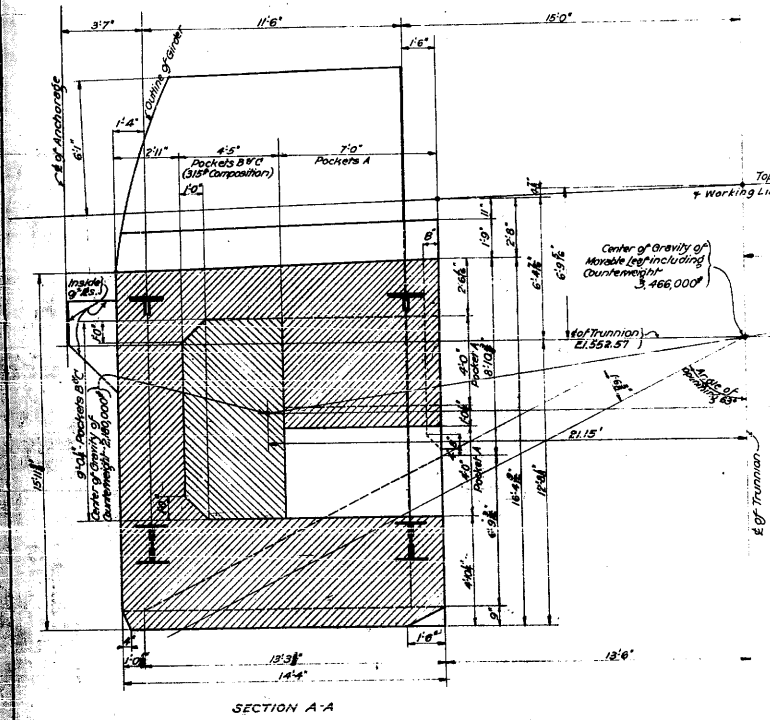
COUNTERWEIGHT - WEST LEAF
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept. 11, 1933
Managing Engineer
Approved: Sept. 11, 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Bridge Engineer
Approved:
Chief Engineer

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.
DRAWN BY P.L.D.
TRACED BY
CHECKED BY
REVISED SEPT 11 1933
SCALE: 1" = 1'-0"
DATE: April 28, 1933
SHEET NO. 1343-43

Accession No. 3844



SECTION A-A

35.8' (Not to scale)

5.35' (Not to scale)

Center of Gravity of Movable Leaf Exclusive of Counterweight 1,286,000#

NOTES:-

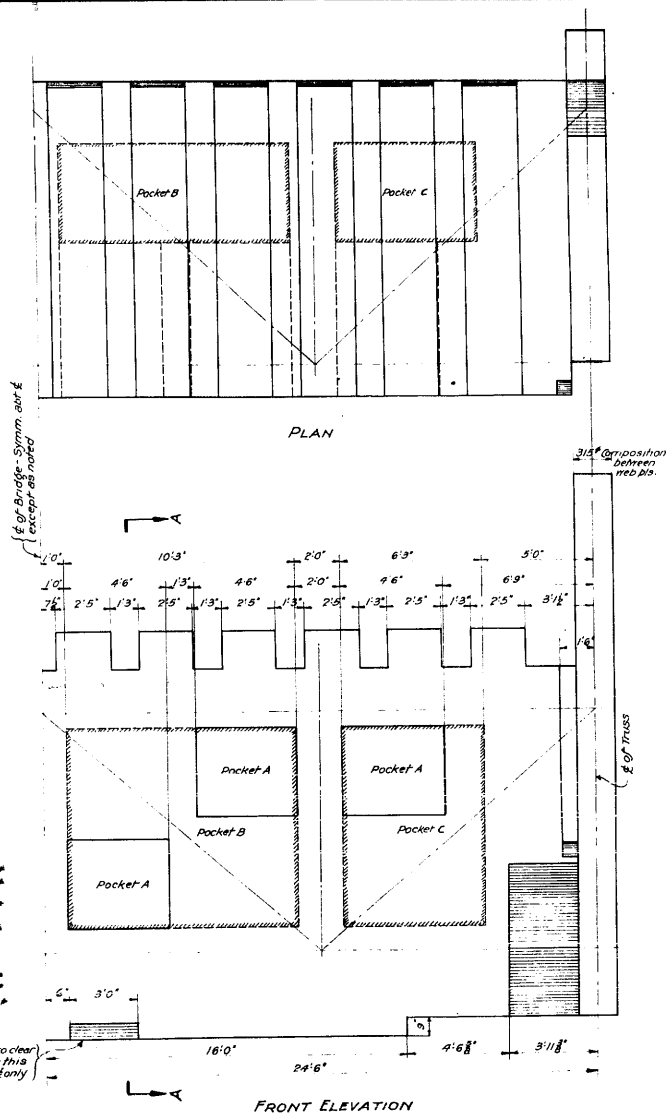
Approximate Quantities for Counterweight -

Concrete @ 150# per cu.ft.	1,333,000#
Concrete Composition @ 315# per cu.ft. (In pockets B, C & between web pls.)	762,000#
Pig Iron Adjustment Blocks (In pockets A)	85,000#
Total	2,180,000#

315# Concrete Composition may be made as follows:-

Cement Grout @ 137# per cu.ft.	162,000#
Steel Punchings	600,000#
Total	762,000#

For other notes see Sheet# 44
Reinforcing Steel Similar to East Leaf, Sheet# 44



FRONT ELEVATION

COUNTERWEIGHT - WEST LEAF
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST., JOLIET, ILL.

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved Sept 15, 1933
Managing Engineer

Approved Sept 15, 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approved
Bridge Engineer

Approved
Chief Engineer

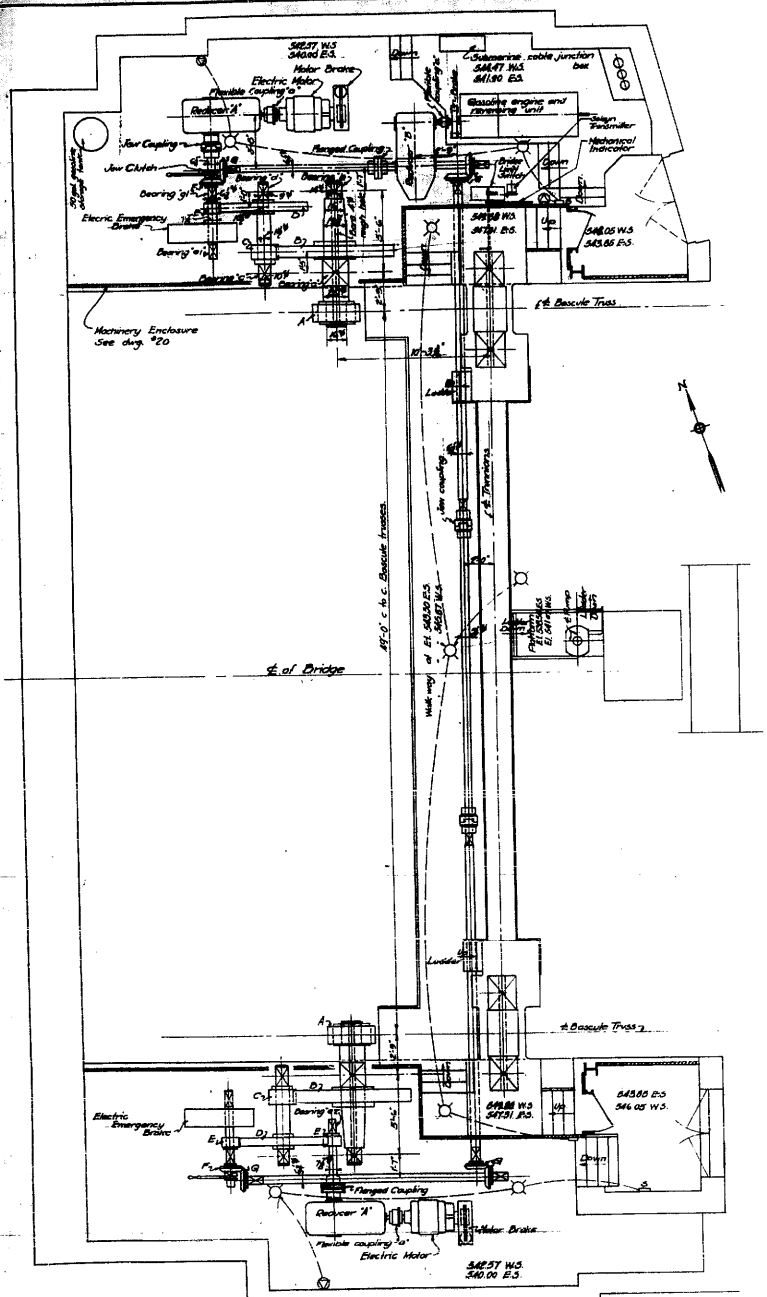
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

DRAWN BY P.L.D.
TRACED BY
CHECKED BY
REVISED SEPT 11 1933

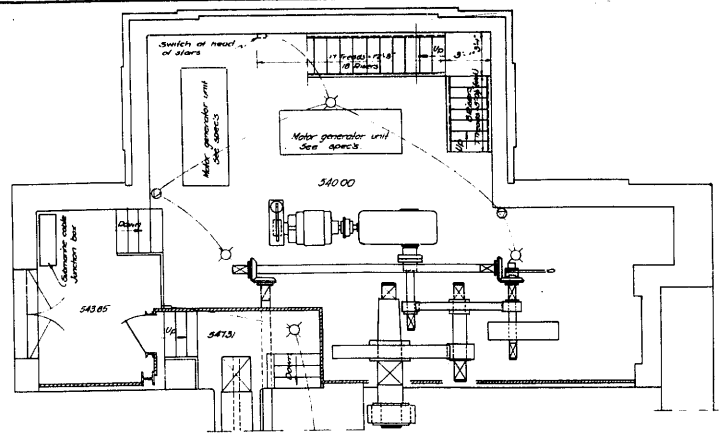
SCALE: 1" = 1'-0"
DATE: APRIL 28, 1933

SHEET NO. 1348-45

Accession No. 334



PLAN OF OPERATING MACHINERY — WEST LEAF
EAST LEAF SAME BY ROTATION Scale $\frac{1}{4}$"-1'-0"



PLAN OF MACHINERY SHOWING LOCATION OF MOTOR GENERATOR UNITS
NORTH SIDE OF EAST LEAF
Scale $\frac{1}{4}$"-1'-0"

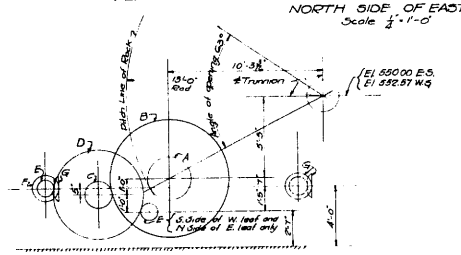


DIAGRAM OF GEARS

TABLE OF GEARS — PER LEAF

GEAR	HAND	NO TEETH	PITCH	PITCH DIA	FACE	TEETH	KEYS PER GEAR
RACK	2	89	7 C.P.	26'-0"	1'-3"	Special 20° Involute (see detail sh #18)	
A	2	15	7 C.P.	3.342"	1'-2"	do do	2 - 7/8" x 2½"
B	2	66	4½ C.P.	14.64"	10½"	do do	2 - 3 x 2½"
C	2	15	4½ C.P.	3.149"	11"	do do	2 - 1½" x 1½"
D	2	75	3 C.P.	7.162"	7"	Standard 20° Involute stub	2 - 1½" x 1½"
E	3	15	3 C.P.	1.432"	7½"	do	1 - 1½" x 1½"
F*	2	22	1 D.P.	22"	4"	14½° Standard	Loose on shaft
G*	6	22	1 D.P.	22"	4"	do	2 - 1½" x ⅜"

* Bevel gears

EQUIPMENT

Motor Generator Units
75 H.P. A.C. Motor 3 Ph. 60 C. 460 V. and generator G.E.Co or equal.

Operating Motors
30 H.P. @ 880 R.P.M. D.C. Motor 230 V. G.E.Co. Frame # CO 1830 or equal.
Torque requirements 650# for 2 min — 1000# momentarily

Motor Brake:
G.E. Floor mounted Thyrator Brake # C.R. 9514-A14 or equal
Retarding torque 375# Provide interlocked hand release

Electric Emergency Brake:
G.E. Floor mounted Thyrator Brake # C.R. 9514-A67 or equal.
Holding torque 6000# Provide interlocked hand release

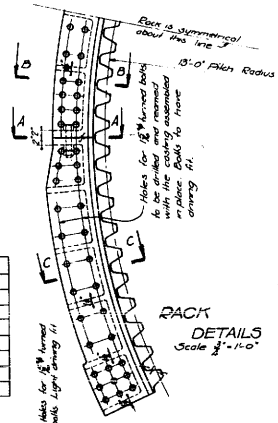
Reducer A.
Falk # 10 DA right angle speed reducer or approved equal.
Reduction ratio 24.4 to 1. Speed reducer to be assembled with motor on C.I. or welded steel bed plates. Price of same to be included in lump sum price for speed reducers. Bed plate to be of minimum width and length.

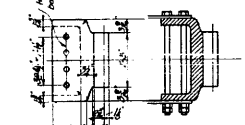
Reducer B.
Falk # 11 DA parallel shaft speed reducer with equalizer, or approved equal
Reduction ratio 70 to 1

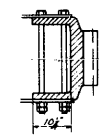
Gasoline engine, reversing unit and brake
38 H.P. at 900 R.P.M. gasoline engine with reversing unit having 7 to 5 reduction ratio and attached Brake of 250# holding torque. Norwood-Noonan Co unit # 5.5-T or approved equal. This unit shall be furnished complete with all accessories.

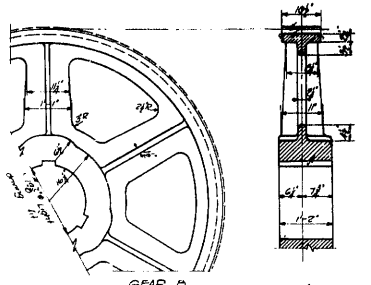
Flexible coupling "a"
Falk #9 or equal

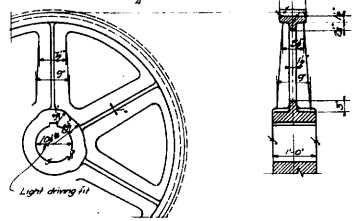
Note: Manufacturers of speed reducers shall furnish complete details of the speed reducers for approval.
Complete details of the gasoline engine reversing units and attached brakes shall be furnished.











GENERAL NOTES:
Pinion A may be made of cast steel all other pinions shall be forged.
All Castings and forgings shall be made of steel and shall be annealed
All gears, pinions and racks shall have machine cut teeth and pitch lines plainly marked on both sides
All shafts over 3½" shall be forged. Others may be cold rolled
Gib head tapered keys shall be used where possible.
Thickness of keys given are for small end.
Shanks of turned bolts shall be 1/16 larger than the threaded ends and shall have lock nuts unless otherwise noted.
All bearings shall be provided with Alemite-Dot Mogul fittings or equal oil grooved for lubrication except where self lubricating bushings are specified.
Babbitted bearings shall have slotted cores
All couplings are to be furnished by machinery contractor.

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept 13 1933
Managing Engineer
Approved: Sept 13 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended:
Bridge Engineer
Approved
Chief Engineer

OPERATING MACHINERY
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILLINOIS

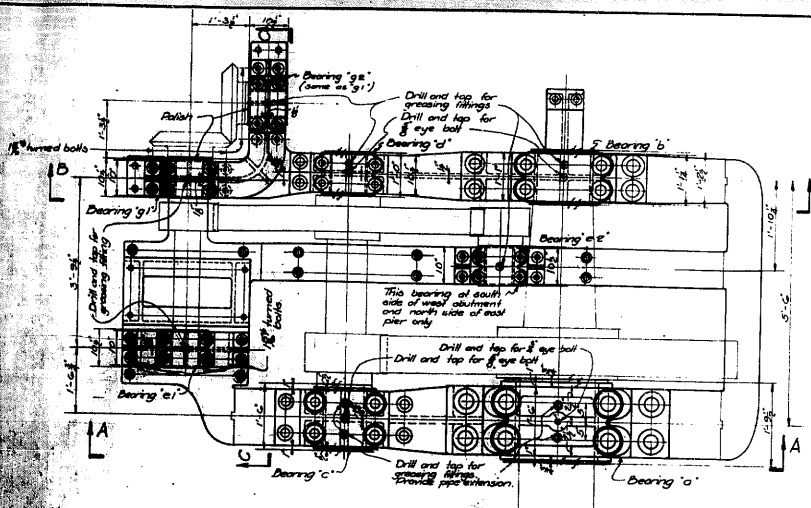
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY ALRS
TRACED BY A.D.
CHECKED BY TE
REVISED SEPT. 11, 1933
Nov 3, 1933

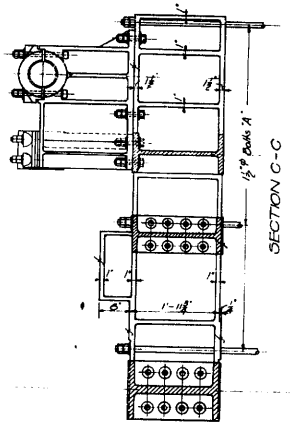
SCALE: AS NOTED
DATE: FEB. 21, 1933

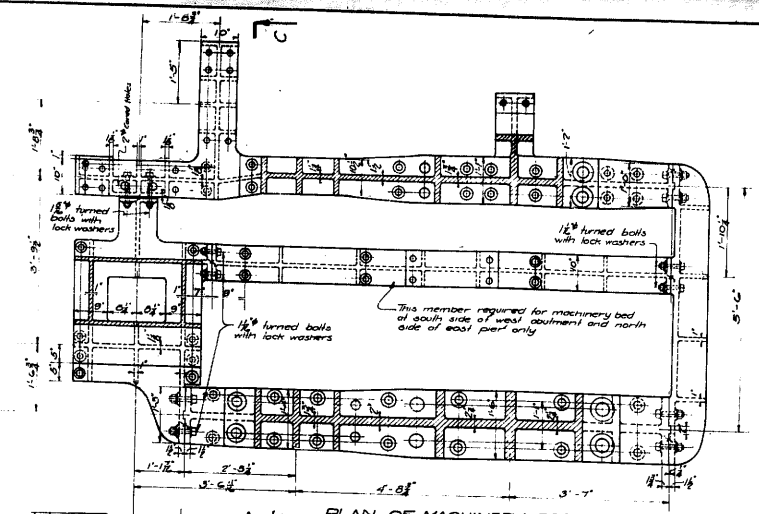
SHEET NO. 1343-46

Accession No. 3345

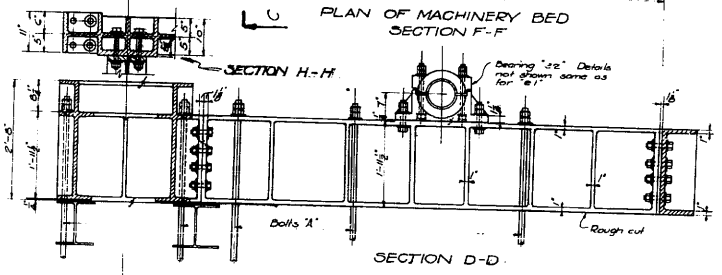


PLAN OF BEARINGS



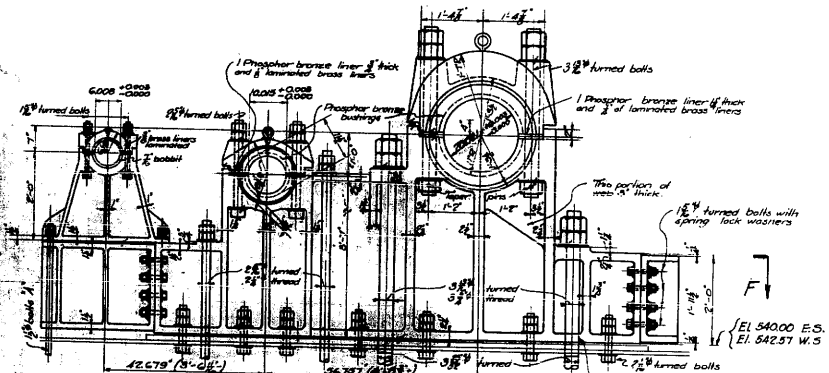


PLAN OF MACHINERY BED

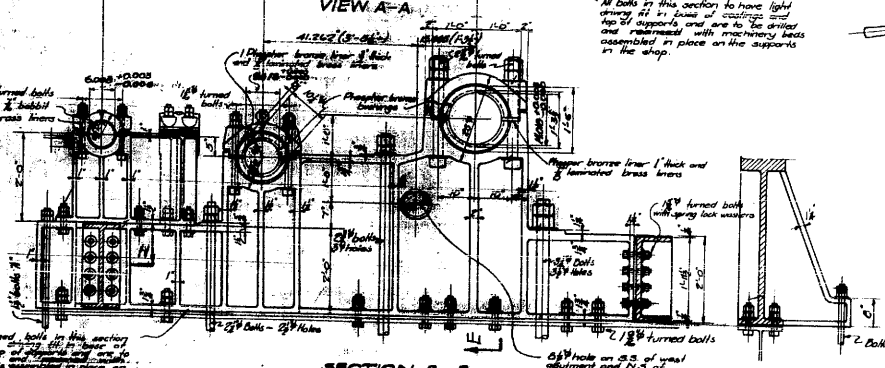


SECTION D-D

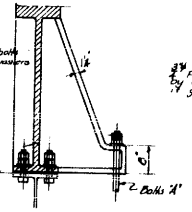
SECTION F-F



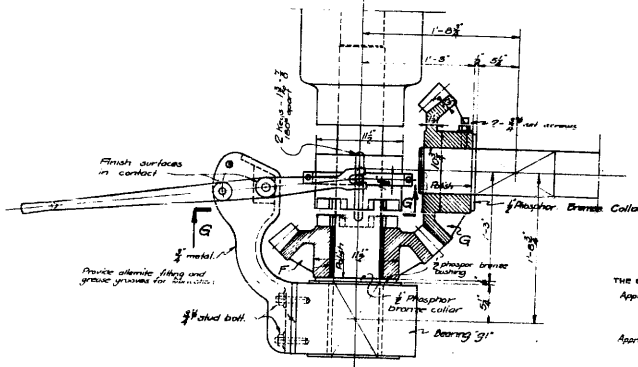
VIEW A-A



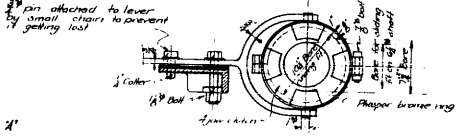
SECTION B-B.



SECTION E-E.



DETAIL OF BEVEL GEARS AND CLUTCH



SECTION G-G
Scale 1½"-1'-0"

GENERAL NOTES:

Bolts marked 'A' are to be 1½" C-C long with 2 hex nuts each at top and 2 3/4" nuts each and ½" washers at bottom. Drill 1 1/8" holes for bolts 'A'.

Bolts attaching bearing caps to bases shall have a push fit in the caps and a light driving fit in the bases.

Bolts not covered by above notes shall have light driving fit unless noted otherwise.

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved Sept 13, 1933
Hoisting Engineer
Approved Sept 13 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended: _____
Bridge Engineer
Approved: _____
Chief Engineer

MACHINERY DETAILS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

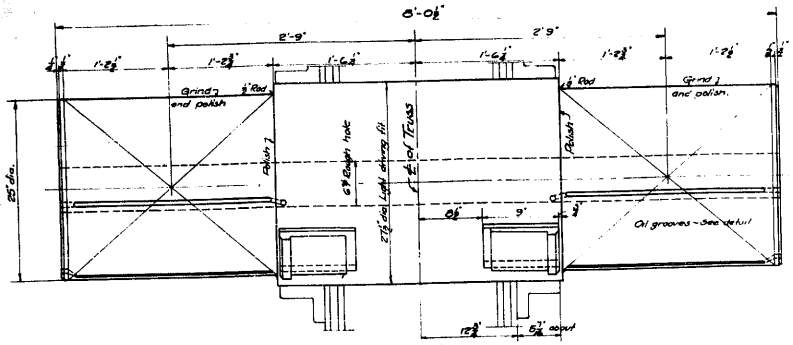
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY ALRS
TRACED BY A.D.
CHECKED BY I.F.
REVISED SEPT 11, 1933.

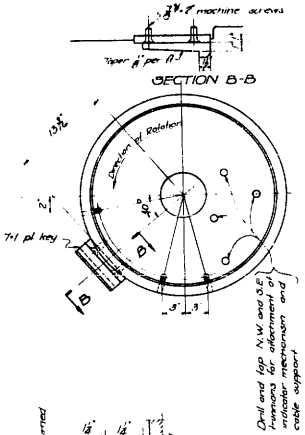
SCALE: 1/2"=1'-0"
DATE: FEB. 20, 1933.

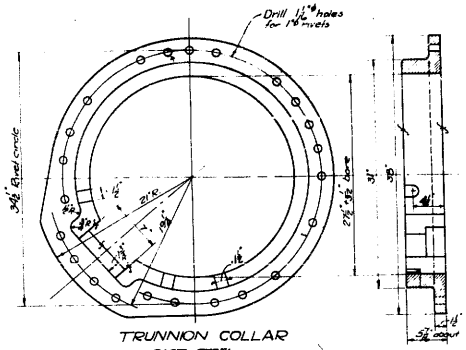
SHEET NO. 1343-47.

Accession No. 364c.

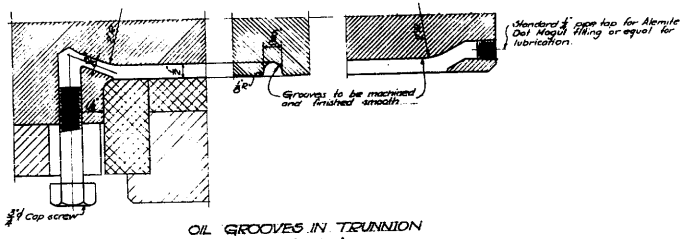


TRUNNION
CARBON STEEL FORGING — FINISH ALL OVER
Scale 1½" = 1'-0"

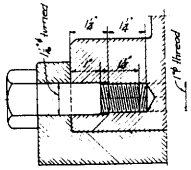




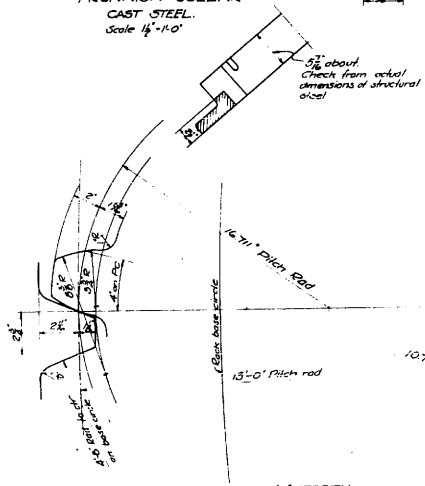
TRUNNION COLLAR
CAST STEEL.
Scale 1½" = 1'-0"



OIL GROOVES IN TRUNNION
Scale 6" = 1'-0"

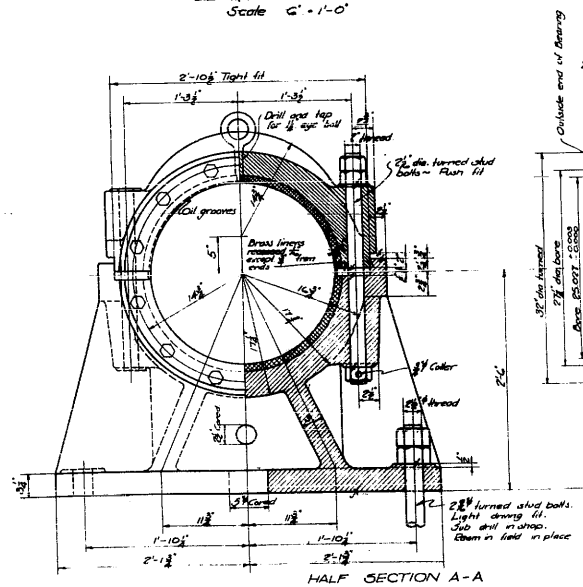


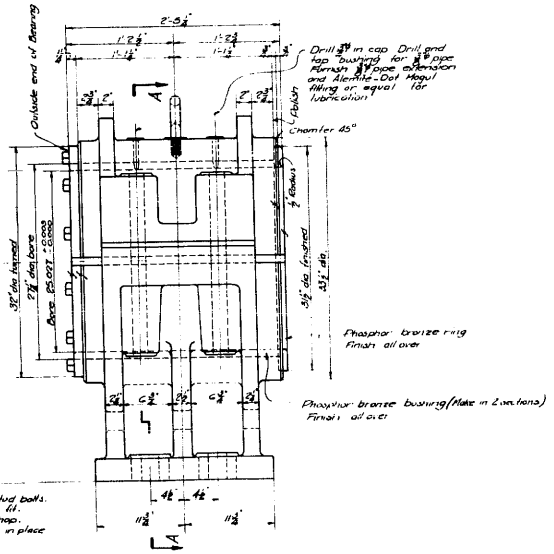
METHOD OF FASTENING BUSHING TO BEARING



PROFILES OF RACK AND PINION 'A' TEETH
20° INVOLUTE TEETH
Scale 3" = 1'-0"

PROFILES OF GEAR 'B' AND PINION 'C' TEETH
20° INVOLUTE TEETH
Scale 6" = 1'-0"





HALF SECTION A-A
TRUNNION BEARINGS
CARBON STEEL CASTINGS
Scale 1½" = 1'-0"

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved 12-12-1933
Approved Sept. 13 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended
Bridge Engineer
Approved
Chief Engineer

TRUNNIONS AND BEARINGS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY I.E.
TRACED BY J.P.
CHECKED BY I.P.
REVISED SEPT. 11, 1933.
SCALE AS NOTED
DATE FEB. 25, 1933
SHEET NO. 1343-46

Accession No. 3347.

BRIDGE FULLY OPEN
NEARLY OPEN
BRIDGE FREE
BRIDGE NEARLY CLOSED
BRIDGE FULLY CLOSED
C27 C28 C31 L12 L23 L26 L29 L26 L49 L51 L50
C48 C49 C83 L12 L28 L29 L30 L51 L52 L54 L53
NOTATIONS FOR N.S.
NOTATIONS FOR F.S.

LAYOUT OF N.S. & F.S. LIMIT SWITCHES
NORWOOD-NOONAN CO'S DRUM TYPE LIMIT SWITCH OR EQUIVALENT 2 REQ'D

LOCK OUT
LOCK IN
C6 C15 C18 L12 L31 L32 C4 C9 C6 C18

LAYOUT OF LOCK LIMIT SWITCH
NORWOOD-NOONAN CO'S DRUM TYPE LIMIT SWITCH OR EQUIVALENT
1 REQ'D

GENERAL NOTES

ALL WIRES TO BE DOUBLE BRAID 30% PARA RUBBER COVERED.
ALL WIRES TO BE #14 B&S GAUGE EXCEPT AS NOTED.
ALL WIRES ON MOVING LEAVES TO BE STRANDED.
ALL WIRES #8 GAUGE AND OVER TO BE STRANDED
ALL WIRES BETWEEN MOVING LEAVES AND FIXED PARTS TO BE SIMPLEX MFG. CO'S TIREX CABLES OR EQUIVALENT, SUITABLE TIED TOGETHER, ENDING & SPLICED IN PROPERLY LOCATED CAST IRON BOXES. WIRES AT TERMINALS AND IN JUNCTION BOXES TO HAVE FIBRE IDENTIFICATION TAGS, STAMPED TO CONFORM WITH THE NOTATIONS ON THIS DIAGRAM.
WIRES SHOWN THUS —|— ARE IN SUBMARINE CABLE.

SUBMARINE CABLES.

1- D.C CABLE CONTAINING 3 #0000, 3 #6 & 11 #12 WIRES OF WHICH 3 #12 ARE SPARES
1- A.C CABLE-440 VOLT CONTAINING 24 #12 & 8 #10 WIRES OF WHICH 5 #12 ARE SPARES (8 #10 WIRES ARE FOR FUTURE CONSTRUCTION)
1- A.C CABLE-110 VOLT CONTAINING 32 #12, 4 #10 & 2 #8 WIRES OF WHICH 7 #12 ARE SPARES (2 #8 WIRES ARE FOR PROPOSED APPROACH LIGHTS)

NOTE:
FOR KEY TO ELECTRICAL EQUIPMENT
SEE LIGHT DIAGRAM DRAWING N° 1343-50

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: August 13, 1933
Ingolf Scherzer
Managing Engineer
Approved: Sept. 13 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended
Bridge Engineer
Approved:
Chief Engineer

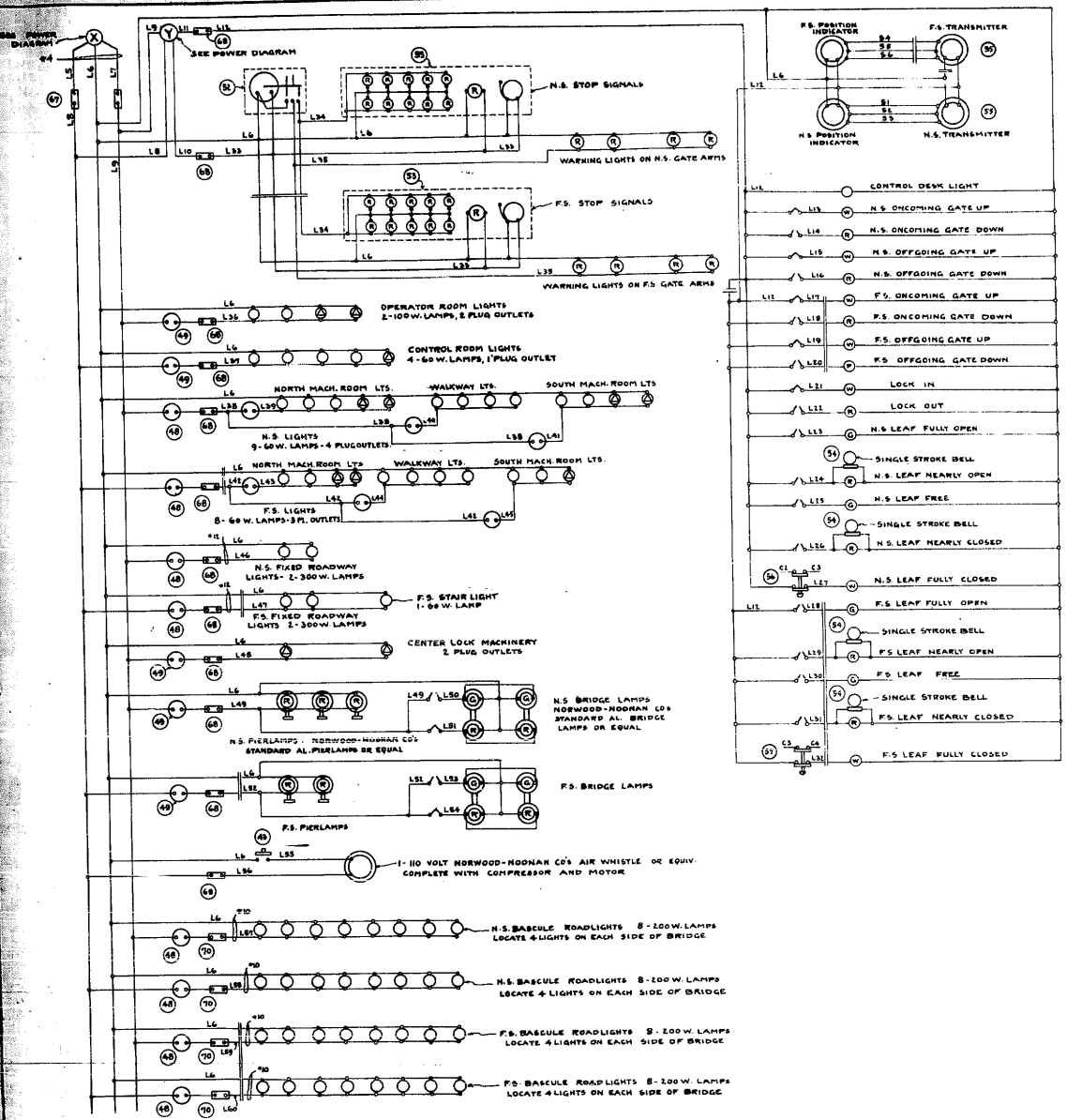
POWER AND CONTROL WIRING DIAGRAM
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET ILL

DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK, CHICAGO, ILL.

DRAWN BY - W.E
TRACED BY
CHECKED BY
REVISED
SCALE:
DATE MARCH 20 1933

SHEET NO. 1343-49

Accession No. 3348



KEY TO ELECTRICAL EQUIPMENT

NO	DESCRIPTION	CONTROLS
1	A.C VOLTMETER 0-600 VOLT SCALE	MAIN LINE
2	A.C AMMETER 0-400 A SCALE	" "
3	CURRENT TRANSFORMER 5/400 A RATIO	" 2
4	D.C. VOLTMETER 0-300 V. SCALE	EXCITERS
5	D.C AMMETER 0-200 A SCALE COMPLETE WITH EXTERNAL SHUNT	N.S & F.S BRIDGE MOTORS
6	400 A. 3 P.S.T MANUALLY OPERATED O.C.B. W/H I.T.L O.L. TRIP COILS & NO VOLTAGE RELAY	MAIN LINE
7	100 A - 440 V. 3 POLE MAGNETIC CONTACTOR	" 1 MOTOR GENERATOR SET
8	SAME AS NO 7	" 2 " " "
9	75 A 440 V 3P. MAGNETIC CONTACTOR	CENTER LOCK MOTOR
10	SAME AS AND MECHANICALLY INTERLOCKED WITH " 9	" " "
11	SAME AS NO 9	GATES
12	40 A - 440 V 3 P MAGNETIC CONTACTOR	EMERGENCY BRAKES
13	SAME AS NO 12	SERVICE BRAKES
14	2 COIL THERMAL O.L RELAY	MOTOR GEN SETS
15	200 A 3 P.S.T. 600 V.A.C KNIFE SWITCH	" " "
16	60 A - 2 P.S.T - 500 V.A.C SAFETY SWITCH	LIGHT SERVICE
17	60 A - 3 P.S.T 500 V.A.C KNIFE SWITCH	GATES
18	SAME AS NO 17	PUMP MOTORS
19	2 COIL THERMAL O.L RELAY	CENTER LOCK
20	200 A. S.P.S.T. 250 V. KNIFE SWITCH	GENERATOR DISCONNECT
21	600 A. 2 P.S.T 250 V KNIFE SWITCH WITH DISCHARGE CLIP	GENERATOR FIELDS
22	200 A. 4 P.D.T 250 V.D.C KNIFE SWITCH	MOTOR DISCONNECT
23	200 A S P. 250 V.D.C MAGNETIC CONTACTOR	LEAF MOTORS
24	40 A S P " "	GENERATOR FIELD
25	40 A D.P " "	EXCITER SELECTORS
26	MAGNETIC TIME DELAY RELAY	MOTOR FIELDS
27	" " " "	N S FULL POWER
28	MAGNETIC RELAY	N S REDUCED POWER - RAISE
29	MAGN. RELAY WITH NORM. OPEN & NORM CLOSED CONTACT	N S REDUCED POWER - LOWER
30	SAME AS NO 27	F.S FULL POWER
31	SAME AS NO 28	F S REDUCED POWER - RAISE
32	SAME AS NO 29	F S REDUCED POWER - LOWER
33	DRUM TYPE VOLTMETER SWITCH	" 1
34	" " CONTROL "	GATES
35	" " " "	EMERGENCY BRAKES
36	" " " "	CONTROL CIRCUIT
37	" " " "	EXCITER FIELD
38	PUSH BUTTON WITH NORM OPEN & NORM CLOSED CONTACT	N S LIMITS RELEASE RAISE
39	SAME AS NO 38	F.S. " " "
40	STOP & START PUSH BUTTON STATION	" 1 MOT GEN SET
41	" " " "	" 2 " " "
42	" " " "	LOCK MOTOR
43	NORMALLY OPEN PUSH BUTTON STATION	AIR WHISTLE
44	NORWOOD-NOONAN CO'S FOOT SWITCH OR EQUIVALENT	N.S & F.S LIMITS RELEASE - CLOSE
45	20 A. 250 V D.C. TUMBLER SWITCH	EMERGENCY RELEASE GATES
46	" " "	" " LOCK
47	" " "	" " BRIDGE
48	20 A. 125 V. S P TUMBLER SWITCH	N S & F S ROADWAY & MACH. LIGHTS
49	10 A " " "	LIGHTING CIRCUITS
50	GEN. ELECTR CO'S CR7006 STARTER OR EQUAL	PUMP MOTORS
51	15 K.V.A OIL COOLED 440/110/220 V SINGLE PHASE TRANSFORMER	LIGHT SERVICE
52	NORWOOD-NOONAN CO'S MODEL F216 - 2 CIRCUIT FLASHER 110 V. BICYCLE OR EQUIVALENT	ROAD TRAFFIC
53	NORWOOD-NOONAN CO'S SIGNAL LIGHT UNIT SL-30-C WITH NO 38 12" MOTOR OPERATED WARNING BELL OR EQUAL	ROAD TRAFFIC
54	110 V.A.C. SINGLE STROKE GONG	NEARLY OPEN & NEARLY CLOSED POSITIONS
55	SELSYN INDICATOR & TRANSMITTER	BRIDGE POSITION
56	NORWOOD-NOONAN CO'S FULLY CLOSED SWITCH OR EQUAL	N.S. INTERLOCK & INDICATION
57	SAME AS NO 56	F.S. INTERLOCK & INDICATION
58	MANUALLY OPERATED DRUM TYPE SELECTOR SWITCH	GENERATOR SELECTION
59	250 A - 600 V. N.E.C CARTRIDGE FUSES	MOTOR GEN SETS
60	20 A - 600 V " " "	CENTER LOCK MOTOR
61	20 A - 600 V " " "	SUMP PUMP MOTORS
62	15 A - 600 V " " "	LIGHT TRANSFORMER
63	10 A - 600 V " " "	BRAKES
64	10 A - 600 V " " "	GATES
65	3 A - 600 V " " "	" 1
66	100 A - 250 V " " "	GENERATOR FIELDS
67	40 A - 250 V " " "	LIGHT SERVICE
68	15 A - 250 V " " "	N.S. LIGHTING & WARNING SIGNALS
69	10 A - 250 V " " "	EXCITER SELECTOR
70	20 A - 250 V " " "	BASCULE ROAD LIGHTS

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved: [illegible]
Managing Engineer

Approved Sept 15 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approved: [illegible]
Bridge Engineer

Approved: [illegible]
Chief Engineer

LIGHTING AND INDICATION WIRING DIAGRAM
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

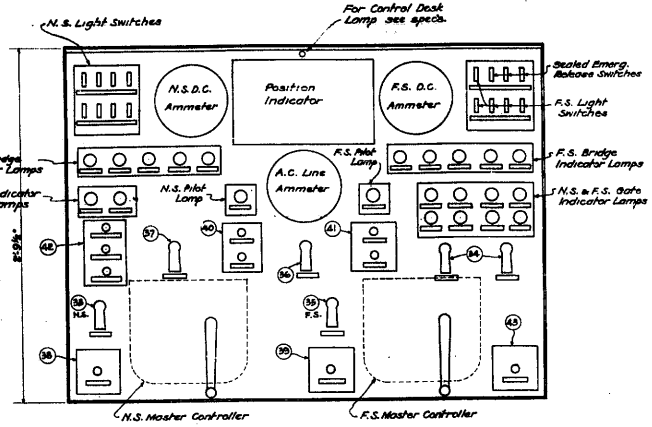
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

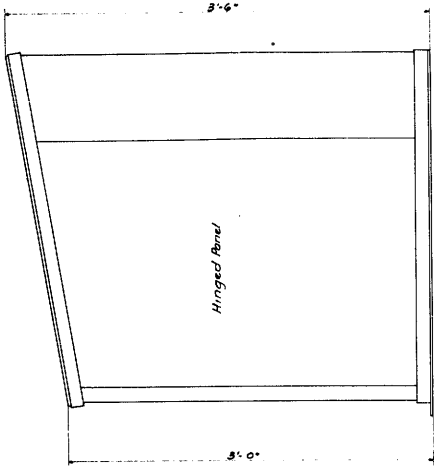
DRAWN BY W.E.
TRACED BY "
CHECKED BY
REVISED SEPT 11, 1933

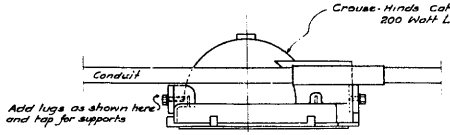
SCALE:
DATE: MARCH 20 1933

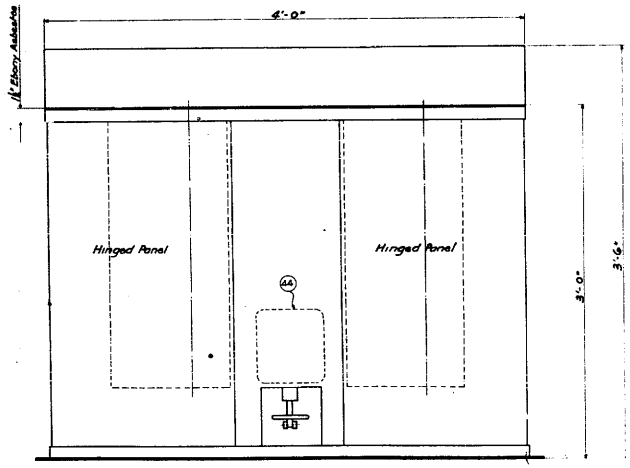
SHEET NO. 1343-50

Accession No 3349









MAIN CONTROL DESK

1- REQ'D.

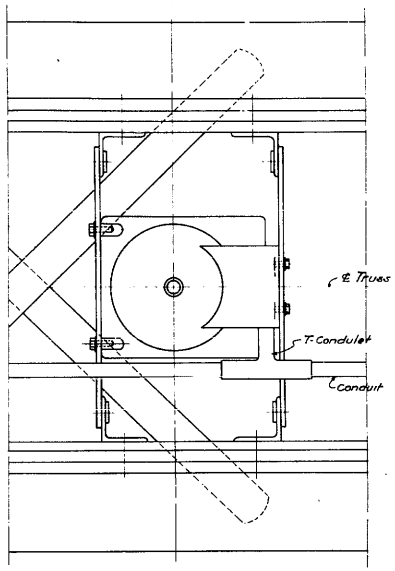
Scale 2"=1'-0"

SPECIFICATIONS:

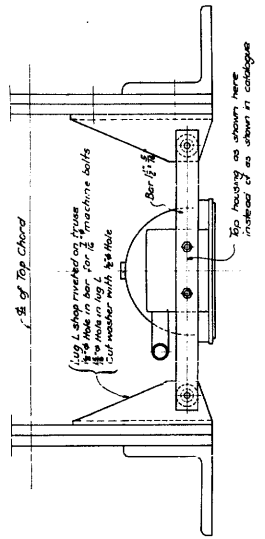
Control stand to be substantially constructed of #14 6in steel plate over light angle iron frame work, the hinged panels to be #10 Ga. steel plate.
The top to be 1½" Ebony Asbestos
Painting outside to have one coat of Underbody Primer and two coats of flat black air drying Enamel Paint.
Front and side panels to be Hinged.
Emergency release switches to be sealed.
All exposed metal fittings to be brushed Nickel Plated.

NOTE:

Two drum type control switches for near side gates to be placed in the operator's room as directed by the engineer.



PLAN



TRANSVERSE SECTION

DETAILS OF ATTACHING ROADWAY LIGHTS TO TOP CHORD

Scale 3"=1'0"

THE SCHERZER ROLLING LIFT BRIDGE CO.

Approved: August 18, 1933

Managing Engineer

Approved: Sept 13 1933

Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS

Approval recommended

Bridge Engineer

Approved

Chief Engineer

ROADWAY LIGHTS &
MAIN CONTROL DESK
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

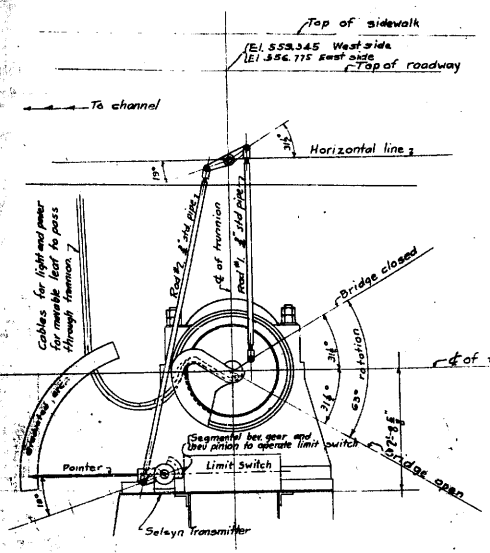
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

DRAWN BY W.B.
TRACED BY J.H.
CHECKED BY O.L.O
REVISED SEPT. 8, 1933

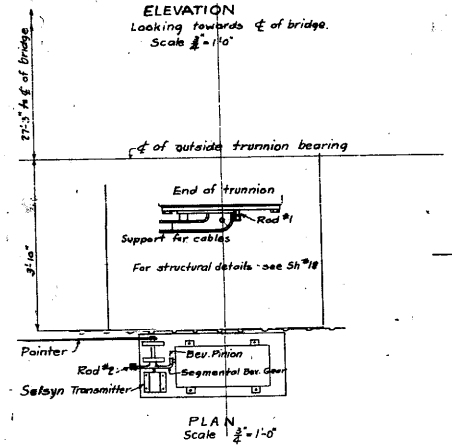
SCALE: 2"+3"=1'-0"
DATE: APR. 25, 1933

SHEET NO. 1343-51

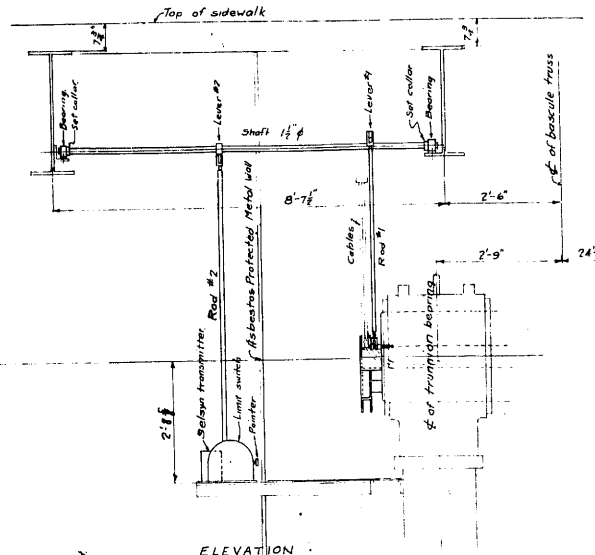
Accession No. 3350



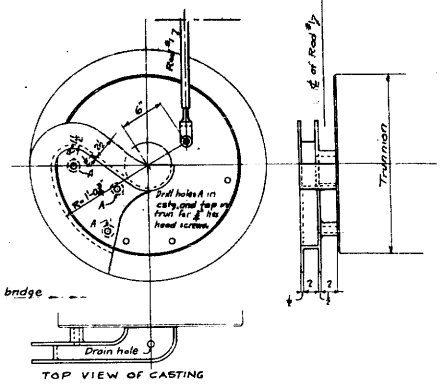
ELEVATION
Looking towards ¢ of bridge.
Scale ¾" = 1'-0"



PLAN
Scale ¾" = 1'-0"

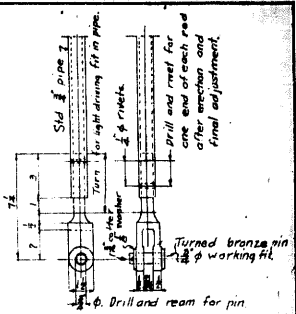


ELEVATION
Looking towards channel
Scale ¾" = 1'-0"

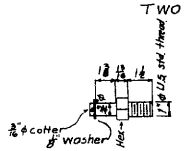


TOP VIEW OF CASTING

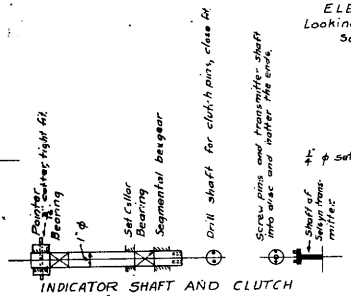
SUPPORT FOR LIGHT AND POWER CABLES.
Scale, 1½" = 1'-0".
Material, cast iron
TWO REQ'D



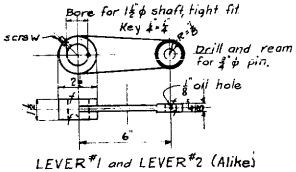
END OF ROD #1 and ROD #2
Scale 3" = 1'-0"
Material, Cast Steel
EIGHT REQ'D.



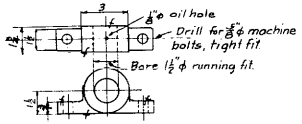
PIN FOR ATTACHING ROD #1 TO TRUNNION
Scale, 3" = 1'-0"
Material. Bronze. Finish all over.
TWO REQ'D.



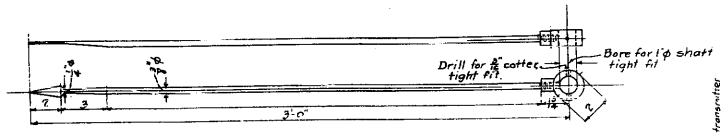
INDICATOR SHAFT AND CLUTCH
Scale 3" = 1'-0"
Material, Cold Rolled Steel
TWO REQ'D



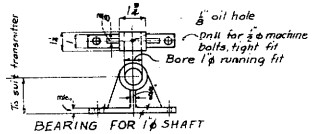
LEVER #1 and LEVER #2 (Alike)
Scale 3" = 1'-0"
Material, Cast Steel
FOUR REQ'D.



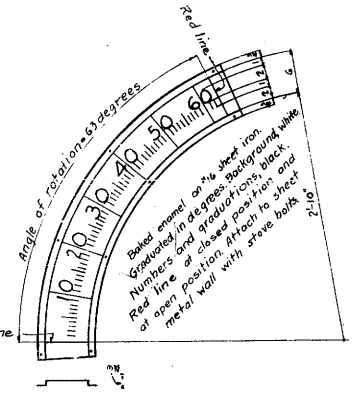
BEARING FOR 1½" ¢ SHAFT
Scale 3" = 1'-0"
Material, Cast Iron
FOUR REQ'D



POINTER
Scale 3" = 1'-0"
TWO REQ'D

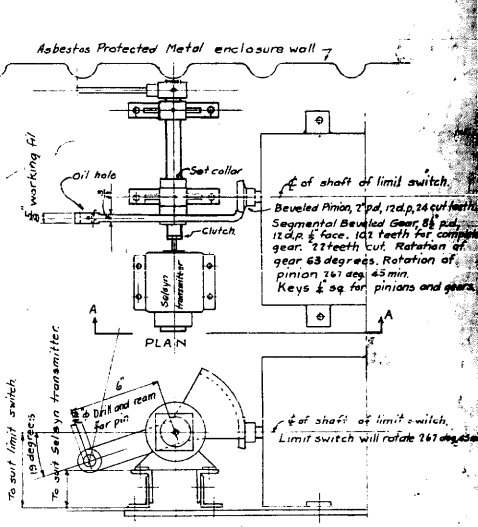


BEARING FOR 1" ¢ SHAFT
Scale 3" = 1'-0"
Material, Cast Iron
FOUR REQ'D.



SECTION

ARC FOR MECHANICAL INDICATOR
Scale 1½" = 1'-0"
TWO REQ'D



ELEVATION A-A

ASSEMBLY OF MECHANICAL INDICATOR, SELSYN TRANSMITTER AND LIMIT SWITCH
Scale 3" = 1'-0"

THE SCHERZER ROLLING LIFT BRIDGE CO.
Approved: Sept. 13, 1933
Ingolf Erdal
Managing Engineer
Approved: Sept 13 1933
Chief Engineer

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
Approval recommended.
Bridge Engineer
Approved
Chief Engineer

MECHANICAL INDICATOR, ETC.

DOUBLE LEAF TRUNNION BASCULE BRIDGE.
OVER
THE ILLINOIS WATERWAY
AT
RUBY ST. JOLIET, ILL.

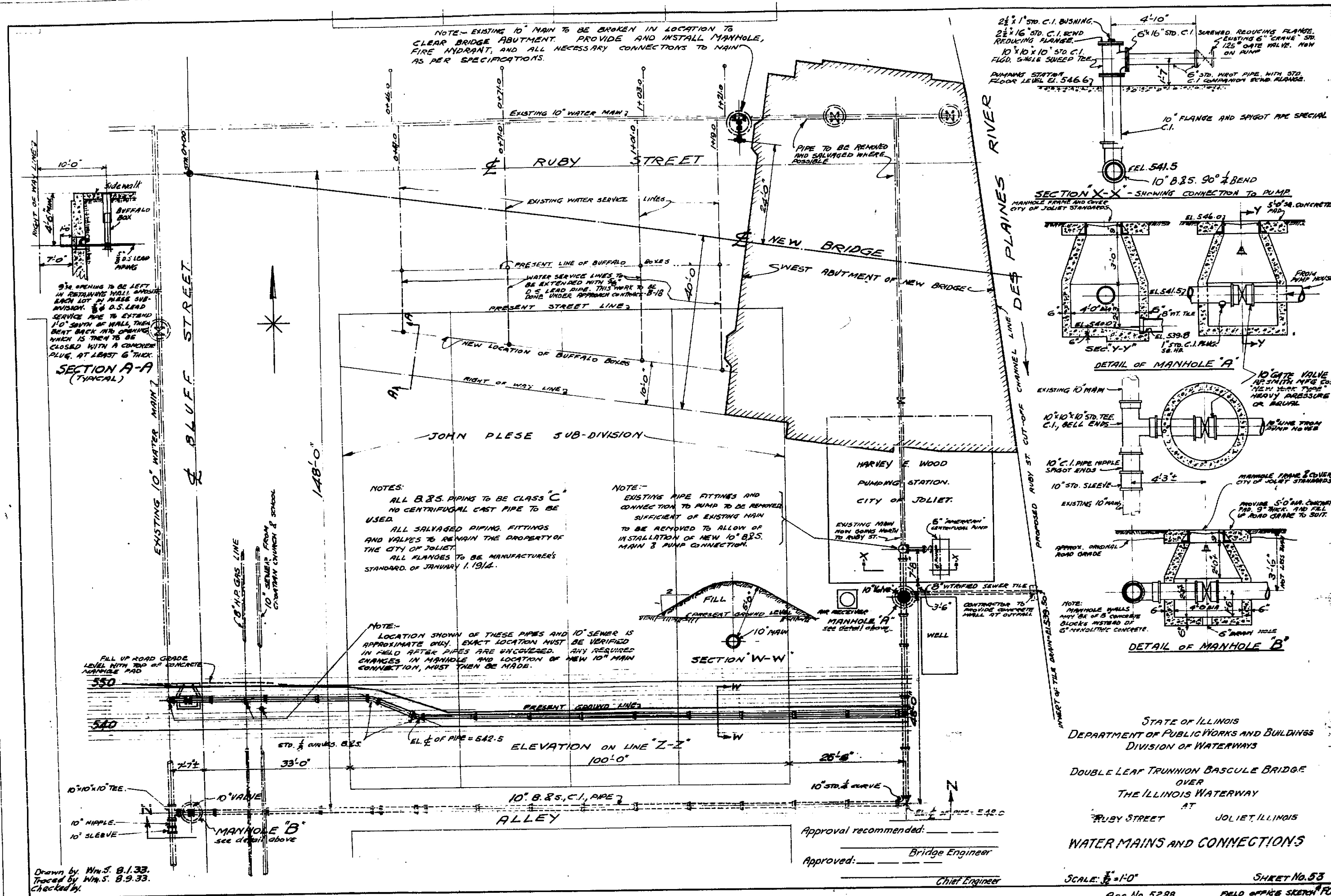
DESIGNED BY
THE SCHERZER ROLLING LIFT BRIDGE CO.
MONADNOCK BLOCK. CHICAGO, ILL.

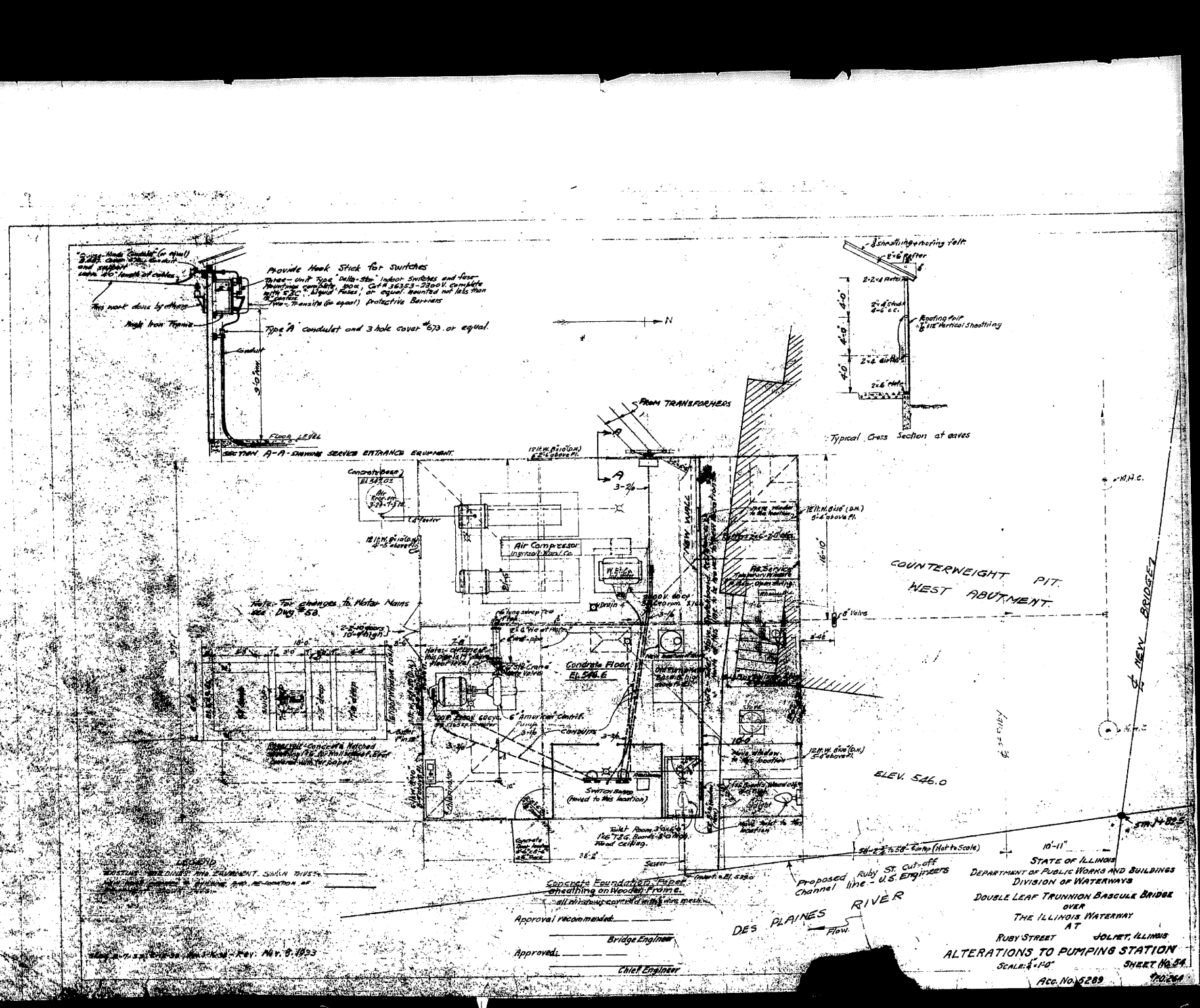
DRAWN BY E.G.K
TRACED BY E.G.K
CHECKED BY I.E.
REVISED

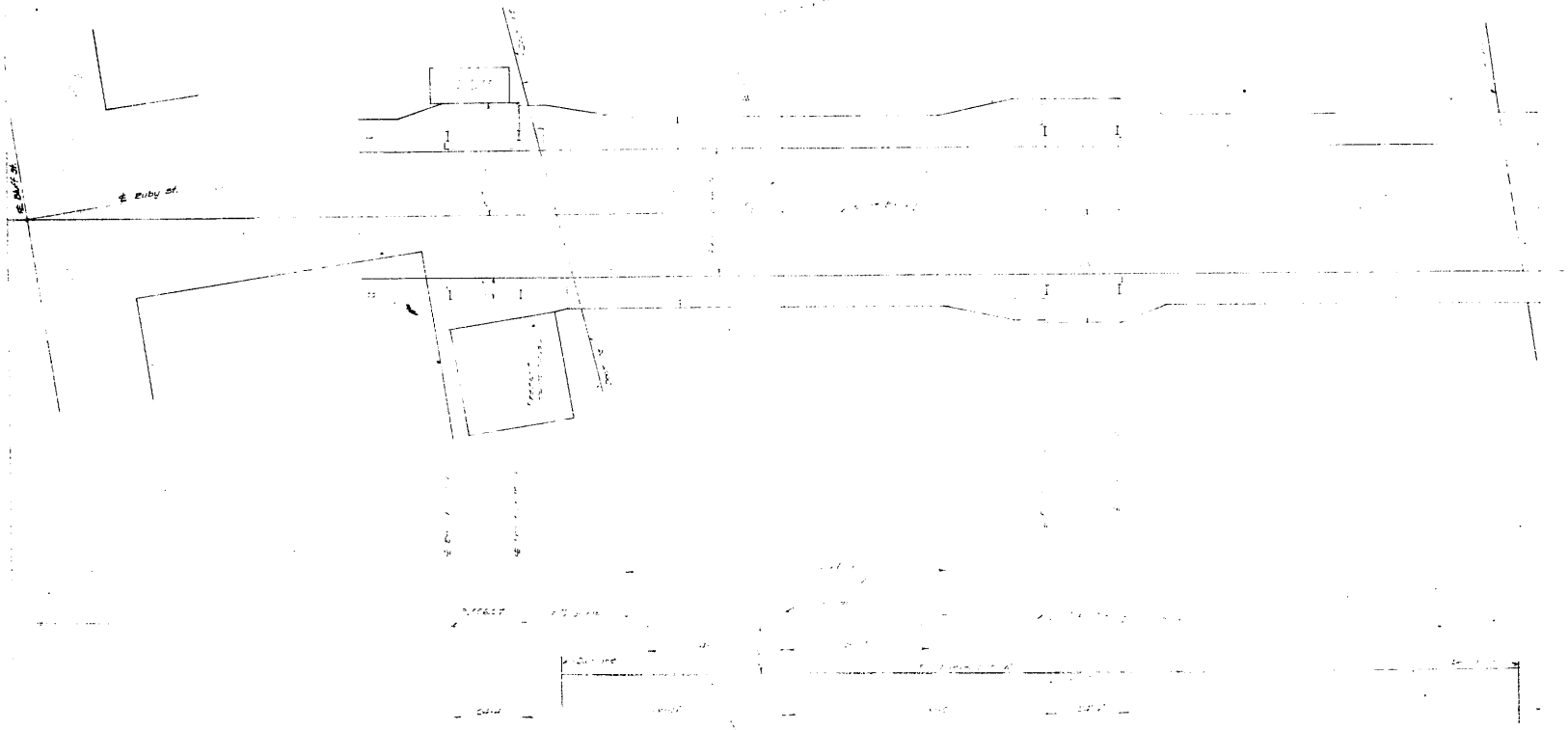
SCALE: As noted
DATE: SEPT 6, 1933

SHEET NO. 1343-52.

Accession No. 3351


NOTE:- EXISTING 10" MAIN TO BE BROKEN IN LOCATION TO CLEAR BRIDGE ABUTMENT. PROVIDE AND INSTALL MANHOLE, FIRE HYDRANT, AND ALL NECESSARY CONNECTIONS TO MAIN AS PER SPECIFICATIONS.
EXISTING 10" WATER MAIN
RUBY STREET
PIPE TO BE REMOVED AND SALVAGED WHERE POSSIBLE
EXISTING WATER SERVICE LINES
NEW BRIDGE
WEST ABUTMENT OF NEW BRIDGE
PRESENT LINE OF BUFFALO BOXES
WATER SERVICE LINES TO BE EXTENDED WITH 5/8" D.S. LEAD PIPE. THIS WORK TO BE DONE UNDER APPROACH CONTRACT B-18
PRESENT STREET LINE
NEW LOCATION OF BUFFALO BOXES
RIGHT OF WAY LINE
JOHN PLESE SUB-DIVISION
DES PLAINES RIVER
BLUFF STREET
EXISTING 10" WATER MAIN
148'-0"
SECTION A-A (TYPICAL)
Sidewalk
BUFFALO BOX
5/8" D.S. LEAD PIPING
9"x9" OPENING TO BE LEFT IN RETAINING WALL OPPOSITE EACH LOT IN PLESE SUB-DIVISION. 5/8" D.S. LEAD SERVICE PIPE TO EXTEND 1'-0" SOUTH OF WALL, THEN BENT BACK INTO OPENING WHICH IS THEN TO BE CLOSED WITH A CONCRETE PLUG, AT LEAST 6" THICK.
NOTES:
ALL B.&S. PIPING TO BE CLASS "C" NO CENTRIFUGAL CAST PIPE TO BE USED.
ALL SALVAGED PIPING, FITTINGS AND VALVES TO REMAIN THE PROPERTY OF THE CITY OF JOLIET.
ALL FLANGES TO BE MANUFACTURER'S STANDARD OF JANUARY 1, 1914.
NOTE:- EXISTING PIPE FITTINGS AND CONNECTION TO PUMP TO BE REMOVED SUFFICIENT OF EXISTING MAIN TO BE REMOVED TO ALLOW OF INSTALLATION OF NEW 10" B.&S. MAIN & PUMP CONNECTION.
HARVEY E. WOOD PUMPING STATION. CITY OF JOLIET.
EXISTING MAIN NOW GOING NORTH TO RUBY ST.
6" "AMERICAN" CENTRIFUGAL PUMP
8" VITRIFIED SEWER TILE
CONTRACTOR TO PROVIDE CONCRETE WALL AT OUTFALL
WELL
AIR RECEIVER
MANHOLE "A" see detail above
FILL
10" MAIN
SECTION "W-W"
PROPOSED RUBY ST. CUT-OFF CHANNEL LINE
INVERT OF TILE DRAIN EL. 539.50
8" H.P. GAS LINE
10" SEWER FROM CROATIAN CHURCH & SCHOOL
NOTE:- LOCATION SHOWN OF THESE PIPES AND 10" SEWER IS APPROXIMATE ONLY. EXACT LOCATION MUST BE VERIFIED IN FIELD AFTER PIPES ARE UNCOVERED. ANY REQUIRED CHANGES IN MANHOLE AND LOCATION OF NEW 10" MAIN CONNECTION, MUST THEN BE MADE.
FILL UP ROAD GRADE LEVEL WITH TOP OF CONCRETE MANHOLE PAD
550
540
PRESENT GROUND LINE
STD. 1/8 CURVES B.&S.
EL. ℄ OF PIPE = 542.5
ELEVATION ON LINE "Z-Z"
100'-0"
33'-0"
26'-6"
10"x10"x10" TEE.
10" VALVE
10" NIPPLE
10" SLEEVE
MANHOLE "B" see detail above
10" B.&S. C.I. PIPE
ALLEY
10" STD. 1/8 CURVE
2 1/2"x 1" STD. C.I. BUSHING
2 1/2"x 16" STD. C.I. BEND REDUCING FLANGE
10"x 10"x 10" STD. C.I. FLGD. SINGLE SWEEP TEE
6"x 16" STD. C.I. SCREWED REDUCING FLANGE
EXISTING 6" "CRANE" STD. 125# GATE VALVE. NOW ON PUMP
PUMPING STATION FLOOR LEVEL EL. 546.67
6" STD. WROT PIPE, WITH STD. C.I. COMPANION SCRD. FLANGE.
10" FLANGE AND SPIGOT PIPE SPECIAL C.I.
EL. 541.5
10" B.&S. 90° 1/4 BEND
SECTION "X-X" - SHOWING CONNECTION TO PUMP
MANHOLE FRAME AND COVER CITY OF JOLIET STANDARDS
5'-0" SQ. CONCRETE PAD
FROM PUMP HOUSE
SEC. Y-Y
DETAIL OF MANHOLE "A"
10" GATE VALVE A.P. SMITH MFG. Co's "NEW YORK TYPE" HEAVY PRESSURE OR EQUAL
EXISTING 10" MAIN
10"x10"x10" STD. TEE. C.I. BELL ENDS
10" C.I. PIPE NIPPLE SPIGOT ENDS
10" STD. SLEEVE
10" LINE FROM PUMP HOUSE
MANHOLE FRAME & COVER CITY OF JOLIET STANDARDS.
PROVIDE 5'-0" SQ. CONCRETE PAD 9" THICK AND FILL UP ROAD GRADE TO SUIT.
APPROX. ORIGINAL ROAD GRADE
NOTE: MANHOLE WALLS MAY BE OF 8" CONCRETE BLOCKS INSTEAD OF 6" MONOLITHIC CONCRETE.
DETAIL OF MANHOLE "B"
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY STREET JOLIET, ILLINOIS
WATER MAINS AND CONNECTIONS
Approval recommended:
Bridge Engineer
Approved:
Chief Engineer
SCALE: 1/8" = 1'-0"
SHEET No. 58
Acc. No. 5288
FIELD OFFICE SKETCH
Drawn by Wm.S. 8.1.33.
Traced by Wm.S. 8.9.33.
Checked by.


Provide Hook Stick for Switches
Type "A" conduit and 3 hole cover #673 or equal.
Conduit
Floor Level
SECTION A-A - SHOWING SERVICE ENTRANCE EQUIPMENT.
FROM TRANSFORMERS
Typical Cross Section at eaves
Air Compressor
Ingersoll Rand Co.
Concrete Floor
El. 546.6
Switch Board
(moved to this location)
COUNTERWEIGHT PIT.
WEST ABUTMENT.
NEW BRIDGE
ELEV. 546.0
DES PLAINES RIVER
Proposed Channel line - U.S. Engineers
Ruby St. cut-off
Concrete Foundation Piers
Approval recommended:
Bridge Engineer
Approved:
Chief Engineer
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF WATERWAYS
DOUBLE LEAF TRUNNION BASCULE BRIDGE
OVER
THE ILLINOIS WATERWAY
AT
RUBY STREET JOLIET, ILLINOIS
ALTERATIONS TO PUMPING STATION
SCALE: 1/4" = 1'-0"
SHEET No. 54
Acc. No. 5289


E Ruby St.