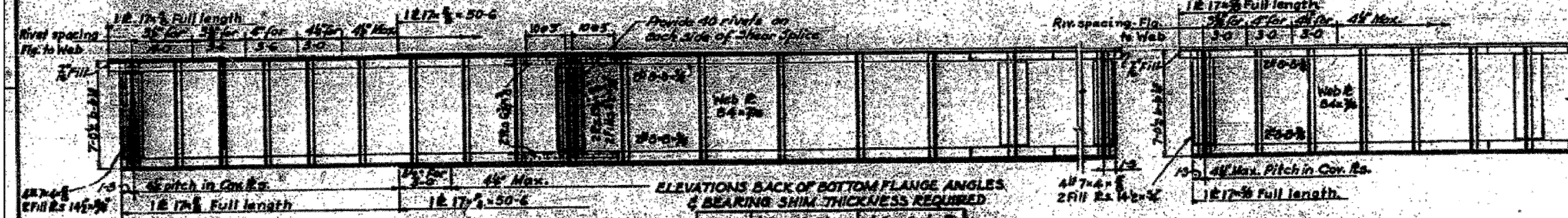
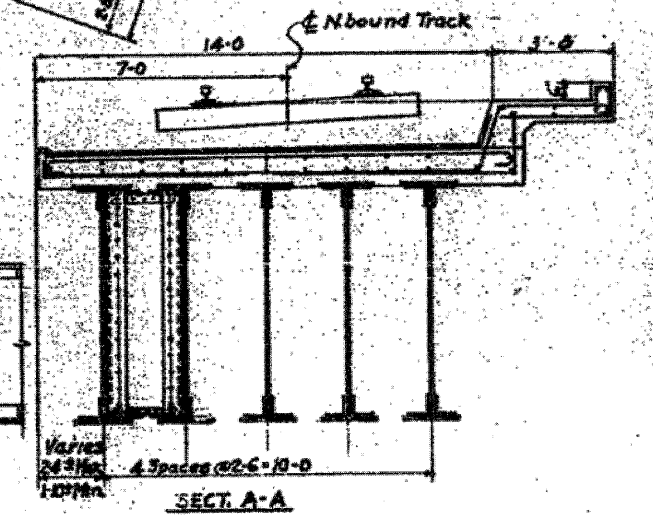
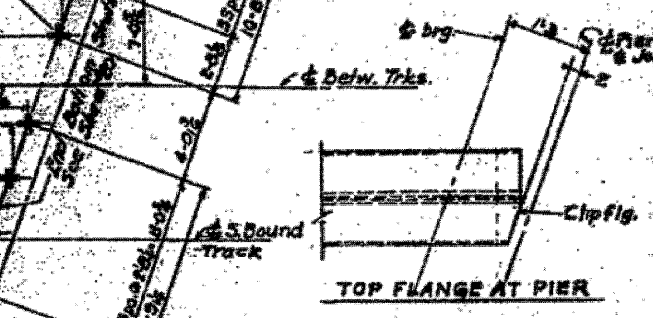
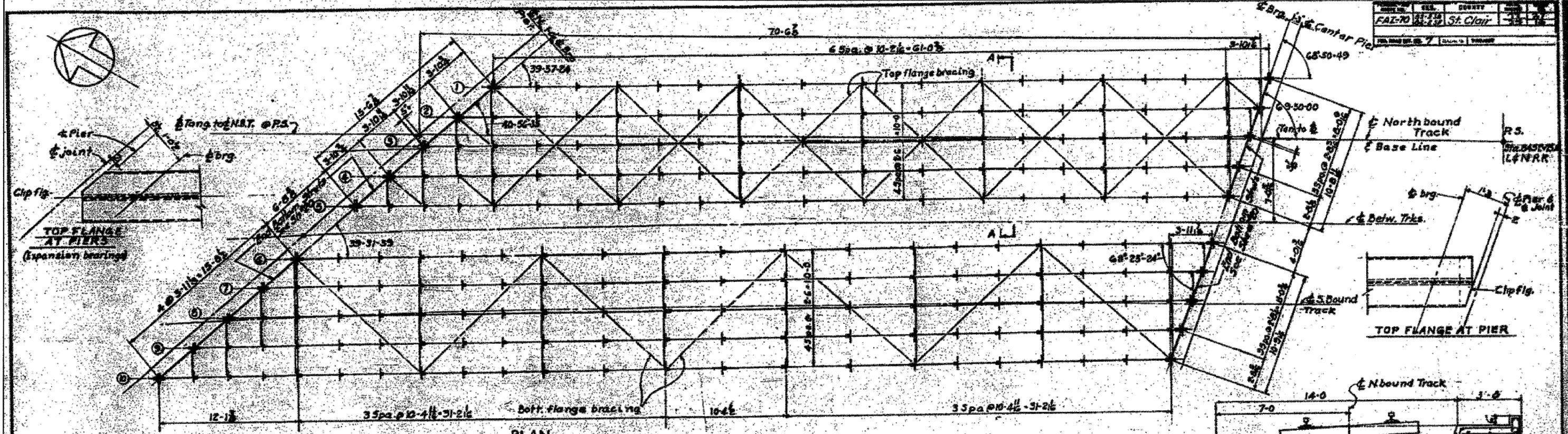


FILE NO.	70-65	SHEET NO.	19
PROJECT NO.	64-998-70	COUNTY	ST. CLAIR
DATE	7/13/60	SCALE	AS SHOWN



Order	4 Brg. N. Pier	4 Brg. Center Pier		
Elev.	Shim	Elev.	Shim	
1	406.06	1/2"	407.01	1/2"
2	406.06	1/2"	407.01	1/2"
3	406.07	1/2"	407.06	1/2"
4	406.06	1/2"	407.06	1/2"
5	406.06	1/2"	407.06	1/2"
6	406.11	1/2"	407.06	1/2"
7	406.12	1"	407.09	1/2"
8	406.12	1 1/2"	407.08	1/2"
9	406.14	1 1/2"	407.08	1/2"
10	406.15	1 1/2"	407.50	1/2"

ELEVATION (Girders 1-5)

Span lengths (C-C bearings)

1 62-10 1/2	2 76-0
3 66-11	4 70-0 1/2
5 68-11 1/2	6 80-9
7 70-11 1/2	8 82-9 1/2
9 72-11 1/2	10 84-10

GIRDER SHEARS (Kips)

Girder No.	No. 8	No. 6	No. 5	No. 3	No. 1
D.L.	95.2	67.6	62.5	58.3	54.5
L.L.	94.6	90.9	66.7	63.2	79.1
Imp.	61.8	60.4	59.1	57.6	53.7
C.F.	0.0	0.0	33.5	0.0	55.0
Total	251.6	218.9	211.8	179.1	232.3

DEAD LOAD PER TRACK

Ballast, Ties & Rail 2.75
 Steel Waterproof Walk 3.00
 Total 5.75

IMPACT

Vertical	31.4%	45.4%
Rolling	30.0%	20.0%
Total	71.4%	65.4%

SECTION BOTH FLANGES

Girders 1-5	Girders 6-10		
Gross	Net	Gross	Net
4.60"	4.00"	4.60"	4.50"
22.00"	19.00"	22.00"	20.00"
10.63"	9.63"	10.63"	9.63"
Total 37.23"	32.63"	37.23"	32.63"

GIRDER MOMENTS (K-ft)

Girder No.	No. 8	No. 6	No. 5	No. 3	No. 1
D.L.	2003.0	1587.0	1806.0	1079.0	5400
L.L.	1152	1608	1454	1337	1213
L.L. Acc.	0	0	102	0	37
Imp.	1145	1025	956	326	632
C.F.	0	0	550	0	406
Total	4300.0	4220.0	4748.0	3342.0	6278.0

CENTRIFUGAL
 1.75(1/2+3) = 7.9%

ADDITIONAL MATERIAL

Web 84x7/8 = 36.75"
 End Ch. Inter Diaphragms
 End Shift 4x4 = 16"
 Lateral R. & Ch. on top of girders
 2 End Fills 14x (see elev.)
 Inter Shift 2x 2x 1/2 on fills
 at Diaphragms, 2x 2x 1/2 on fills
 elsewhere.
 End Bottom Shifts 2x 4x 1/2 on S. 20'

GIRDERS 1-5

Gross S.M. 3118	Net S.M. 2609
Allow. Stress 1807	Unit Stress 1627

GIRDERS 6-10

Gross S.M. 3300	Net S.M. 2800
Allow. Stress 1807	Unit Stress 1536

Notes:

1) For details of diaphragms, lateral bracing & connections, see Sh. 20.
 2) For details of bearings see Sh. 21
 3) For Notes see Sh. 1
 Max. distance c.c. rivets on outside gage line of cover plates shall be 47".
 In bottom cover plate near 4' span on account of net section 1/4", pitch 3/16".

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS
 CITY OF EAST ST. LOUIS
EAST ST. LOUIS EXPRESSWAY
 L. & N. R. R. OVER WEST BOUND EXPWAY.
 RAMP "L", EAST BOUND EXPWAY AND RAMP "M"
 FRAMING PLAN SPAN 2
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 DATE JULY 1960
 SHEET NO. 19