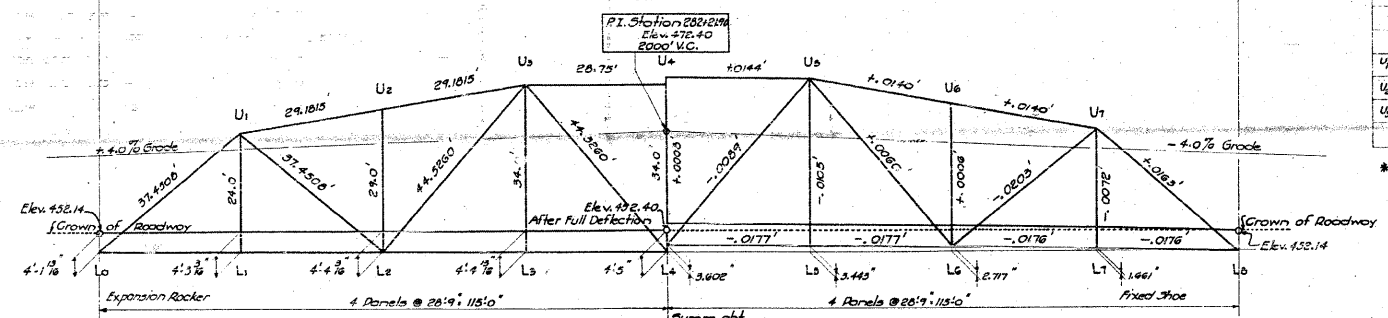
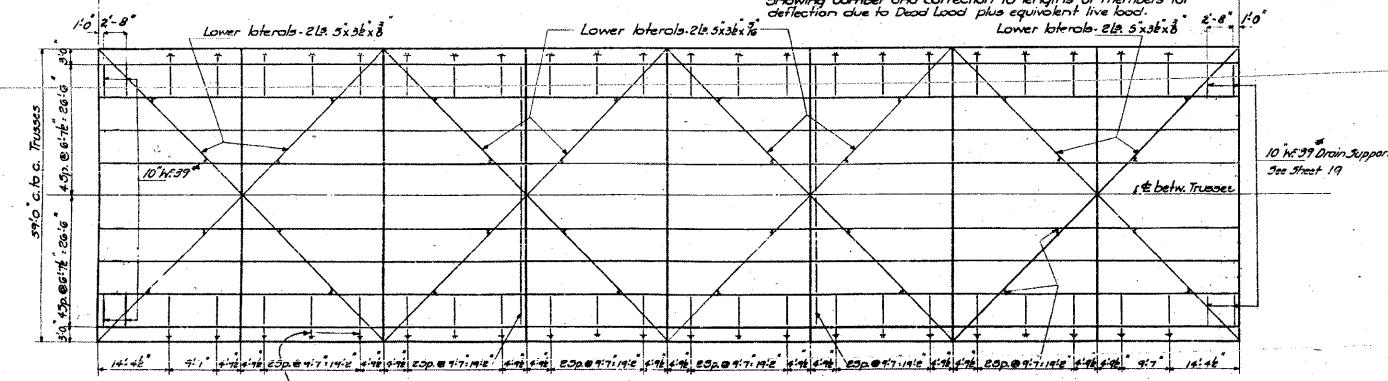


PLAN TOP LATERAL SYSTEM-SPAN 7  
Scale: 1" = 15'0"



TRUSS DIMENSIONS-SPAN 7

CAMBER DIAGRAM-SPAN 7  
Showing Camber and correction to lengths of members for deflection due to Dead Load plus equivalent live load.



PLAN OF FLOOR SYSTEM-SPAN 7  
Scale: 1" = 15'0"

COMPUTED	<i>W. J. Mackay</i>	EXAMINED	8-10-1954
CHECKED	<i>W. E. Hanson</i>	ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES	
DRAWN	<i>W. J. Mackay</i>	PASSED	<i>W. E. Hanson</i>
CHECKED	<i>W. J. Mackay</i>	APPROVED	<i>W. E. Hanson</i>
SPECIAL	ASSEMBLED		
	CHECKED		

**STRESSES AND SECTIONS IN MAIN TRUSSES-SPAN 7**

Member	Stresses				Length c. f. c. ft.	Radius of curvature ft.	L ft.	Allowable Unit Stresses		Area sq. in.	Net sq. in.	Section	Material
	D.L.	L.L.	Impact	Wind				Compression	Tension				
L <sub>1</sub> -L <sub>2</sub>	1312	1186	128	1724	57.5000	-	-	24.00	36.90	35.75	20.26	14 WF 136	H
L <sub>2</sub> -L <sub>3</sub>	1775	1671	110	1997	57.5000	-	-	24.00	58.73	51.98	21.10	14 WF 136	H
L <sub>3</sub> -L <sub>4</sub>	1775	1682	140	1997	57.5000	-	-	24.00	58.73	51.98	21.10	14 WF 136	H
L <sub>4</sub> -L <sub>5</sub>	1512	1416	128	1724	57.5000	-	-	24.00	39.88	35.75	20.26	14 WF 136	H
L <sub>1</sub> -U <sub>1</sub>	-647	-264	-37	-948	57.5000	8.61	32.20	-	15.75	61.19	-	15-82 Top Cov. R. 25x8 2 Web R. 20x6 2 Top R. 14x8 2 Bottom R. 14x8	H
U <sub>1</sub> -U <sub>2</sub>	-737	-263	-36	-1043	58.3630	8.61	40.61	-	19.24	61.19	-	17.05 Top Cov. R. 25x8 2 Web R. 20x6 2 Top R. 14x8 2 Bottom R. 14x8	H
U <sub>2</sub> -U <sub>3</sub>	-827	-300	-42	-1169	57.5000	8.61	40.60	-	19.23	66.19	-	17.66 Top Cov. R. 25x8 2 Web R. 20x6 2 Top R. 14x8 2 Bottom R. 14x8	H
U <sub>3</sub> -U <sub>4</sub>	-737	-263	-36	-1043	58.3630	8.61	40.61	-	19.24	61.19	-	17.05 Top Cov. R. 25x8 2 Web R. 20x6 2 Top R. 14x8 2 Bottom R. 14x8	H
U <sub>4</sub> -U <sub>5</sub>	-647	-264	-37	-948	57.5000	8.61	32.20	-	15.75	61.19	-	15-82 Top Cov. R. 25x8 2 Web R. 20x6 2 Top R. 14x8 2 Bottom R. 14x8	H
U <sub>1</sub> -L <sub>1</sub>	1278	1134	123	1435	57.5000	-	-	24.00	35.94	30.07	21.67	14 WF 70	H
L <sub>2</sub> -U <sub>2</sub>	-78	-84	-16	-176	44.5260	4.90	10.90	-	12.03	19.14	-	9.20 2-12 LB 25 2-12 14x8	H
U <sub>2</sub> -L <sub>2</sub>	110	119	119	1190	44.5260	-	-	10.00	17.94	15.37	12.36	14 WF 61	H
L <sub>3</sub> -U <sub>3</sub>	110	119	119	1190	44.5260	-	-	10.00	17.94	15.37	12.36	14 WF 61	H
U <sub>3</sub> -L <sub>3</sub>	-78	-84	-16	-176	44.5260	4.90	10.90	-	12.03	19.14	-	9.20 2-12 LB 25 2-12 14x8	H
L <sub>4</sub> -U <sub>4</sub>	1278	1134	123	1435	57.5000	-	-	24.00	35.94	30.07	21.67	14 WF 70	H
U <sub>4</sub> -L <sub>4</sub>	110	119	119	1190	44.5260	-	-	10.00	17.94	15.37	12.36	14 WF 53	H
U <sub>5</sub> -L <sub>5</sub>	-14	0	0	-14	29.0000	3.00	116.00	-	11.64	22.94	-	0.61 14 WF 70	H
L <sub>5</sub> -U <sub>5</sub>	103	166	124	1213	56.0000	-	-	10.00	15.59	12.96	16.59	14 WF 53	H
U <sub>5</sub> -L <sub>5</sub>	-15	0	0	-15	36.0000	3.00	136.00	-	13.36	22.94	-	0.63 14 WF 70	H

\* Partial effect caused by 30' Wind to be combined with D.L. only

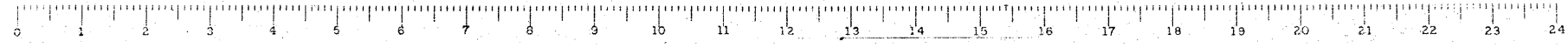
**STRESSES AND SECTIONS IN FLOOR SYSTEM**

Member	Shear				Moment				Section	Material
	D.L.	L.L.	Impact	Total	D.L.	L.L.	Impact	Total		
Curb Stringer	11.88	11.24	3.66	26.78	85.48	72.92	23.71	182.11	21 WF 60	H
Interior stringer	8.71	26.91	8.79	44.41	62.61	135.16	50.46	248.23	21 WF 60	H
Ex Stringer	10.72	18.16	3.71	32.59	77.00	117.64	38.32	232.94	21 WF 60	H
Floorbeam @ L <sub>1</sub> or L <sub>5</sub>	33.10	63.81	17.48	114.39	775.72	1021.19	303.37	2066.28	4 Lx 6x10x3/8 Web R. 40x8	H
Jacking Fl. Bm. @ L <sub>1</sub> or L <sub>5</sub>	434.17	-	-	434.17	-	-	-	1318.41	Web R. 40x8	H
Fl. Bm. @ L <sub>2</sub> -L <sub>4</sub> or U <sub>2</sub> -U <sub>4</sub>	74.78	63.81	17.48	156.07	1383.51	1021.19	303.37	2708.07	4 Cov. R. 14x8	H
Floorbeam @ L <sub>3</sub> or L <sub>4</sub>	47.47	63.81	17.48	128.76	1468.89	1021.19	303.37	2855.55	4 Cov. R. 14x8	H

BILL OF MATERIAL - SPAN 7

Bar	No.	Size	Length
a	504	3/4"	32'-0"
a1	502	3/4"	29'-9"
a2	502	3/4"	30'-0"
a3	118	1/2"	14'-0"
b	768	5/8"	30'-6"
b1	328	5/8"	30'-3"
b2	80	1/2"	30'-3"
b3	420	3/8"	14'-0"
c1e	52	3/4"	3'-0"
u4	230	6"	4'-5"
x2	132	3/8"	3'-6"
Class X Concrete - Cu. Yds.			311.4
Reinforcement Bars - Lbs.			76,000
Structural Steel - Carbon - Lbs.			323,670
Structural Steel - A-242 - Lbs.			509,800

**SPAN 7  
GRADE SEPARATION  
MISSOURI PACIFIC R.R.  
NORTH OF DUPO  
FA. ROUTE 4 - SEC 64-1VBR.D.E.F.  
ST. CLAIR COUNTY**



FOR INFORMATION ONLY

**CB** Coombe-Bloxdorf P.C.  
- CIVIL ENGINEERS -  
- STRUCTURAL ENGINEERS -  
- LAND SURVEYORS -  
Design Firm License No. 184-002703