

STRINGER LINE	DIMENSIONS **				SHEAR CONNECTOR SPACING					COVER PL. SIZE
	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	
18	74'-11"	74'-0"	49'-0"	12'-6"	17SPR11'	6SPR1-3'	3SPR1-6'	2SPR1-6"	6SPR1-0"	11x3/8"
49 THRU 53	75'-0"	74'-4"	52'-6"	10'-9"	16SPR9'	10SPR1-0'	4SPR1-3'	4SPR1-6'	3SPR1-6"	11x1/8"
54	75'-3"	74'-4"	52'-6"	10'-11"	16SPR9'	10SPR1-0'	4SPR1-3'	4SPR1-6'	3SPR1-10"	11x1/8"

** DIMENSIONS GIVEN ALONG \perp BEAM.

TYPICAL BEAM ELEVATION
UNIT "D" - SPAN 29-30
FOR DIMENSIONS NOT SHOWN, SEE 'TABLE I'
NOT TO SCALE

STRINGER LINE LOCATION	18 & 22	19 & 21	20
PIER 26 - \perp W. BRG.	623.996	624.096	624.176
\perp FIELD SPlice #1	624.721	624.821	624.901
\perp PIER 27	624.913	625.013	625.093
\perp FIELD SPlice #2	625.168	625.268	625.348
\perp FIELD SPlice #3	625.660	625.760	625.840
\perp PIER 28	625.969	626.069	626.149
\perp FIELD SPlice #4	626.201	626.301	626.381
PIER 29 - \perp E. BRG.	627.127	627.227	627.307

TOP/UF ELEVATIONS - UNIT 'D'											
LOCATION				LOCATION				LOCATION			
STRINGER LINE	SPAN	EL. @ T/GIRDER FLG. PL.	EL. @ E. BRG.	STRINGER LINE	PIER 59	PIER 60	PIER 29	STRINGER LINE	PIER 29	PIER 30	EL. @ E. BRG.
23		622.335	623.844	23	623.884	623.743	623.783	43 & 46	623.517	623.297	623.347
24		621.881	623.376	44 & 47	623.117	624.783	624.847	24	622.224	624.273	624.351
25		621.412	622.771	45 & 48	622.724	624.273	624.351	25	622.303	623.413	623.537
26		621.035	622.332	26	622.363	623.863	623.893	52	622.241	623.351	623.475

PROPERTIES - UNIT 'D'		
3 SPAN CONTINUOUS INTERIOR BEAMS		
STRINGER LINE	SPAN	PROPERTIES
26-27 & 28-29	27-28	IC 9713
19 THRU 21	19 THRU 21	STC 475
STEEL SECTION		SC 617
I _s	10627	7796
S _{TS}	533	437
S _{BS}	648	437
COMPOSITE SECTION		IC 22887
I _c	24333	17837
S _{TC}	16344	14333
S _{BC}	864	602

TABLE OF MOMENTS AND REACTIONS UNIT 'C' - INTERIOR COMPOSITE BEAMS			PROPERTIES			
LOCATION	STRINGER LINE	SPAN	MAX. MOMENTS	MAX. REACTIONS	STEEL SECTION	
27 THRU 29	7-B	D.L.	452	23.6	IC 9713	
		S.D.L.	36	4.6	STC 475	
		COMPOSITE SECTION			SC 617	
		L.L.	322	30.7	IC 22887	
		IMP.	131	7.7	STC 14452	
TOTAL		739	43.0	SC 837		

TABLE OF MOMENTS AND REACTIONS UNIT 'C' - INTERIOR COMPOSITE BEAMS			PROPERTIES			
LOCATION	STRINGER LINE	SPAN	MAX. MOMENTS	MAX. REACTIONS	STEEL SECTION	
30	7-B	D.L.	458	24.1	IC 10440	
		S.D.L.	102	3.6	STC 330	
		COMPOSITE SECTION			SC 630	
		L.L.	330	31.5	IC 23310	
		IMP.	133	7.9	STC 14963	
TOTAL		763	45.0	SC 842		

TABLE OF MOMENTS AND REACTIONS UNIT 'D' - 3 SPAN CONTINUOUS INTERIOR BEAMS			PROPERTIES			
LOCATION	STRINGER LINE	SPAN	MAX. MOMENTS	MAX. REACTIONS	STEEL SECTION	
33 THRU 37	7-B	D.L.	530	28.0	IC 11751	
		S.D.L.	112	6.0	STC 578	
		COMPOSITE SECTION			SC 721	
		L.L.	604	36.0	IC 26961	
		IMP.	132	9.0	STC 17156	
TOTAL		863	51.0	SC 966		

TABLE OF MOMENTS AND REACTIONS UNIT 'D' - 3 SPAN CONTINUOUS INTERIOR BEAMS			PROPERTIES			
LOCATION	STRINGER LINE	SPAN	MAX. MOMENTS	MAX. REACTIONS	STEEL SECTION	
33 THRU 37	8-9	D.L.	112	6.0	IC 11751	
		S.D.L.	604	36.0	STC 26961	
		COMPOSITE SECTION			SC 721	
		L.L.	132	9.0	STC 17156	
		IMP.	144	8.6	STC 16287	
TOTAL		818	48.0	SC 915		

TABLE OF MOMENTS AND REACTIONS UNIT 'D' - 3 SPAN CONTINUOUS INTERIOR BEAMS			PROPERTIES			
LOCATION	STRINGER LINE	SPAN	MAX. MOMENTS	MAX. REACTIONS	STEEL SECTION	
30 & 39	8-9	D.L.	496	26.0	IC 11380	
		S.D.L.	99	5.4	STC 578	
		COMPOSITE SECTION			SC 683	
		L.L.	575	34.0	IC 23490	
		IMP.	144	8.6	STC 16287	
TOTAL		818	48.0	SC 915		

TABLE OF MOMENTS AND REACTIONS UNIT 'D' - 3 SPAN CONTINUOUS INTERIOR BEAMS			PROPERTIES			
LOCATION	STRINGER LINE	SPAN	MAX. MOMENTS	MAX. REACTIONS	STEEL SECTION	
33 & 42	10-11	D.L.	534	28.2	IC 11933	
		S.D.L.	117	6.3	STC 578	
		COMPOSITE SECTION			SC 737	
		L.L.	632	37.6	IC 27762	
		IMP.	139	9.4	STC 17682	
TOTAL		908	53.3	SC 992		

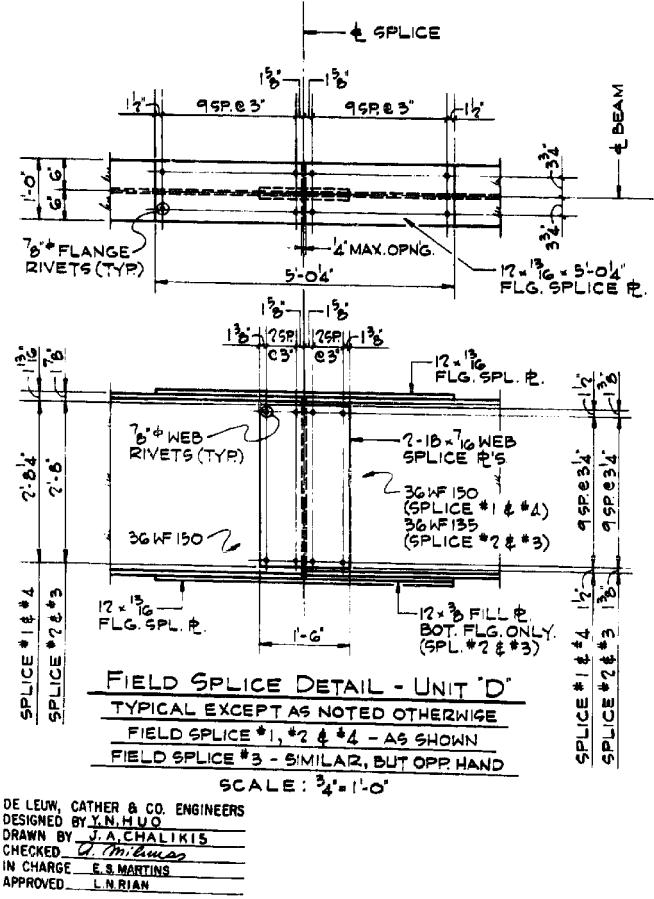


TABLE OF MOMENTS AND REACTIONS - SIMPLE SPANS						
UNIT 'D' - INTERIOR COMPOSITE BEAMS					PROPERTIES	
LOCATION	STRINGER LINE	SPAN	MAX. MOMENTS	MAX. REACTIONS	STEEL SECTION	STEEL SECTION
24	HINGE 59	D.L.	440	28.0	IC 11940	STC 475
		COMPOSITE SECTION			SC 706	
		S.D.L.	103	6.7	IC 26030	STC 17243
		L.L.	612	44.6	IC 26030	
		IMP.	164	11.9	STC 17243	SC 930
TOTAL		879	63.2	SC 930		
25	HINGE 59	D.L.	481	29.3	IC 12133	STC 610
		COMPOSITE SECTION			SC 724	
		S.D.L.	113	7.0	IC 26367	STC 17391
		L.L.	648	49.0	IC 26367	
		IMP.	171	11.9	STC 17391	SC 953
TOTAL		932	63.9	SC 953		
43 THRU 46	60-60 & 60-71	D.L.	344	27.4	IC 11930	STC 581
		COMPOSITE SECTION			SC 739	
		S.D.L.	120	6.7	IC 26321	STC 16375
		L.L.	602	34.1	IC 26321	
		IMP.	149	8.4	STC 16375	SC 971
TOTAL		871	48.7	SC 971		
49 THRU 52	29-30	D.L.	519	27.3	IC 11751	STC 578
		COMPOSITE SECTION			SC 721	
		S.D.L.	127	6.9	IC 26167	STC 16753
		L.L.	596	33.5	IC 26167	
		IMP.	150	8.9	STC 16753	SC 951
TOTAL		873	51.3	SC 951		
55 & 56	29-30	D.L.	690	36.0	IC 15699	STC 727
		COMPOSITE SECTION			SC 980	
		S.D.L.	161	8.6	IC 34044	STC 19404
		L.L.	803	47.5	IC 34044	
		IMP.	201	11.9	STC 19404	SC 1282
TOTAL		1163	66.2	SC 1282		

TABLE OF MOMENTS AND REACTIONS UNIT 'D' - 3 SPAN CONTINUOUS INTERIOR BEAMS									
	MOMENTS *					REACTIONS *			
	SPAN 26-27	PIER 27	SPAN 27-28	PIER 28	SPAN 28-29	PIER 26	PIER 27	PIER 28	PIER 29
D.L.	387	-517	114	-517	387	26.2	73.4	73.4	26.2
S.D.L.	95	-96	46	-96	95	6.2	16.2	16.2	6.2
L.L.	636	-403	532	-403	636	44.7	39.4	39.4	44.7
IMP.	164	-101	133	-101	164	11.3	14.9	14.9	11.3
TOTAL COMPOSITE	915	-	711	-	915	-	-	-	-
TOTAL STEEL	387	-1117	114	-1117	387	88.4	163.9	163.9	88.4

* MOMENTS ARE IN FT. - KIPS.
REACTIONS ARE IN KIPS.

LEGEND:
FOR SYMBOLS USED IN TABLES OF MOMENTS, REACTIONS AND PROPERTIES.
D.L. — DEAD LOAD.
S.D.L. — SUPERIMPOSED DEAD LOAD ACTING ON COMPOSITE SECTION.
L.L. — LIVE LOAD.
IMP. — IMPACT.
I_s — MOMENT OF INERTIA STEEL SECTION.
S_{TS} — SECTION MODULUS - TOP STEEL SECTION.
S_{BS} — SECTION MODULUS - BOT. STEEL SECTION.
I_c — MOMENT OF INERTIA COMPOSITE SECTION.
S_{TC} — SECTION MODULUS - TOP COMPOSITE SECTION.
S_{BC} — SECTION MODULUS - BOT. COMPOSITE SECTION.

NOTE:
FOR BILL OF MATERIAL, SEE SH. G9.

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
LAWDALE AVE. VIADUCT
STEEL DETAILS - UNIT 'D' & TABLE OF MOMENTS & SHEARS - UN. 'C'
SCALE: AS NOTED DATE: 11-25-1965

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		RMM	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (20 OF 26)
STRUCTURE NO. 016-2457

FOR INFORMATION ONLY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	478
			CONTRACT NO. 60J16	

ILLINOIS FED. AID PROJECT

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