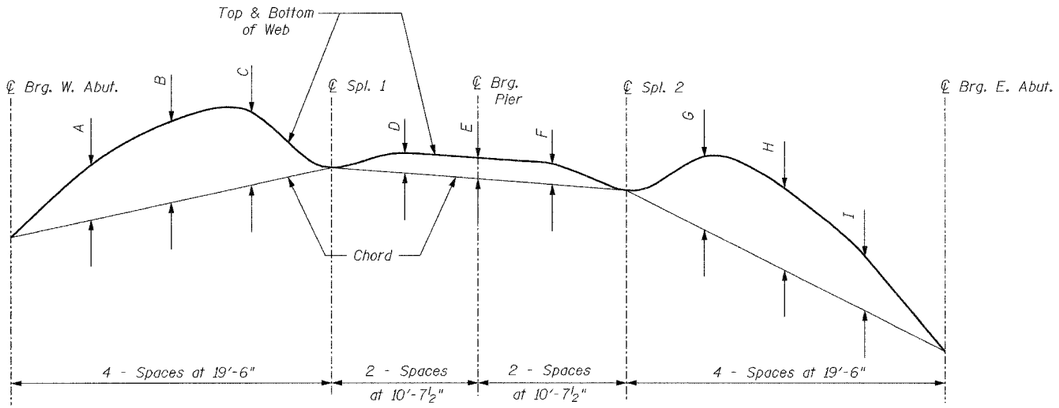
CONTRACT NO. 62952

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 3578	1327 F	COOK	16	11
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 9
14 SHEETS

TOP OF WEB ELEVATIONS
(For Fabrication Only)

GIRDER NO.	℄ BRG. W. ABUT.	℄ SPLICE 1	℄ BRG. PIER	℄ SPLICE 2	℄ BRG. E. ABUT.
1	700.976	701.076	701.059	700.965	700.461
2	701.052	701.188	701.190	701.101	700.647
3	701.124	701.301	701.317	701.238	700.830
4	701.191	701.412	701.440	701.373	701.008
5	701.255	701.520	701.560	701.504	701.183
6	701.316	701.623	701.675	701.632	701.354
7	701.372	701.725	701.787	701.757	701.521



CAMBER DIAGRAM

Girder	A	B	C	D	E	F	G	H	I
1	1 13/16"	2 11/16"	2 1/2"	1/2"	7/16"	1/2"	2 1/2"	2 11/16"	1 13/16"
2-7	1 5/8"	2 3/8"	2 1/4"	9/16"	9/16"	9/16"	2 1/4"	2 3/8"	1 5/8"

CAMBER TABLE

GIRDER MOMENT TABLE					
		GIRDER 1		INTERIOR GIRDER	
		0.4 Sp. 1	Pier	0.4 Sp. 1	Pier
Is	(in⁴)	17,131	30,344	17,131	30,344
Ic(n)	(in⁴)	48,774	-	42,955	-
Ic(3n)	(in⁴)	37,979	-	30,808	-
Ss	(in³)	741	1190	741	1190
Sc(n)	(in³)	1114	-	1050	-
Sc(3n)	(in³)	1003	-	946	-
Z	(in³)	-	-	-	-
w℄	(K/ft.)	0.98	2.18	0.75	1.24
M℄	('K)	594	2666	455	1615
s℄	(K/ft.)	* 1.20	-	0.49	-
Ms℄	('K)	917	-	365	-
M℄	('K)	658	500	653	522
M (Imp)	('K)	145	110	144	115
⅔(M℄ + I)	('K)	1338	1017	1328	1062
Ma	('K)	3704	4788	2792	3480
Mu	('K)	4122	-	4079	-
fs℄ non-comp	(k.s.i.)	9.6	26.9	7.4	16.3
fs℄ (comp)	(k.s.i.)	11.0	-	4.6	-
fs⅔(℄ + I)	(k.s.i.)	14.4	10.3	15.2	10.7
fs (Overload)	(k.s.i.)	35.0	37.2	27.2	27.0
fs (Total)	(k.s.i.)	-	48.4	-	35.1
VR	(K)	95.7		95.9	

*Bridge designed for an additional s℄ of 1.27 K/Ft from a future decorative north facade, applied along the north edge of deck. Girder 1 designed for 0.7 K/Ft of this load.

REACTION TABLE					
		GIRDER 1		INTERIOR GIRDER	
		Abut.	Pier	Abut.	Pier
R℄	(K)	81.3	270.1	45.2	155.6
R℄	(K)	33.2	53.6	33.2	53.9
Imp.	(K)	7.3	11.8	7.3	11.9
R (Total)	(K)	121.8	335.5	85.7	221.4

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic and Sc are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

Ic (3n) and Sc (3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads.

VR is the maximum Live Load + Impact shear range in span.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=1.3[M℄ + Ms℄ + ⅔(M℄ + I)].

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to M℄ + Ms℄ + ⅔(M℄ + I).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[M℄ + Ms℄ + ⅔(M℄ + I)].

DESIGNED	SRT
CHECKED	JJI
DRAWN	GM
CHECKED	JJI

Bollinger, Lach & Associates, Inc.

I-2-G

10-22-04

GIRDER DETAILS

IL 7 (SOUTHWEST HIGHWAY) OVER
US 45 (LA GRANGE ROAD)
F.A.U. ROUTE 3578 SECTION 1327F
COOK COUNTY
STA. 1516+85.79
STRUCTURE NUMBER 016-2847

W:\IL 7\Structural\Bridge\BEAM & BEARING PLANS\GIRDER.dgn

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