INTERIOR GIRDER MOMENT TABLE						
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
I_s	(in^4)	9040	9040	9040	9040	9040
$I_c(n)$	(in^4)	24641	-	-	-	24641
$I_c(3n)$	(in^4)	17641	-	-	-	17641
S_s	(in^3)	504	504	504	504	504
$S_c(n)$	(in^3)	762	-	-	-	762
$S_c(3n)$	(in^3)	679	-	-	-	679
Z	(in^3)	-	581	581	581	
w_D	(k/')	0.830	1.32	1.32	1.32	0.830
M_{D}	('k)	494	-672	-517	-715	512
s_D	(k/')	0.490	-	-	-	0.490
M_{SD}	('k)	325	-	-	-	337
M_L	('k)	654	-328	-212	-338	672
M_{Imp}	('k)	157	-89	-63	-92	160
$\frac{5}{3}[M_L + M_{Imp}]$	('k)	1352	-695	-458	-717	1386
M_a	('k)	2822	-1777	-1268	-1862	2906
* M_u	('k)	3279	-	-	-	3279
f_s D non-comp	(ksi)	11.8	-16.0	-12.3	-17.0	12.2
f_s D (comp)	(ksi)	5.7	-	-	-	6.0
$f_s \frac{5}{3}[M_L + M_{Imp}]$	(ksi)	21.3	-16.5	-10.9	-17.1	21.8
f_s (Overload)	(ksi)	38.8	-32.5	-23.2	-34.1	40.0
** f_s (Total)	(ksi)	-	-42.3	-30.2	-44.3	-
VR	(k)	50.5	-	-	-	50.5

INTERIOR GIRDER REACTION TABLE					
		Abut. A	Pier 1	Pier 2	Abut. B
R_D	(k)	47.1	82.6	86.7	47.9
R_L	(k)	43.8	53.4	53.6	44.0
Imp.	(k)	10.5	14.6	14.6	10.5
R_{Total}	(k)	101.4	150.5	154.8	102.4

* Compact section
** Braced non-compact and partially braced section

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in.^{4} and in.^{3}).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in.^{4} and in.^{3}).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).

Z: Plastic Section Modulus of the steel section in non-composite areas (in.^{3}).

w_D: Un-factored non-composite dead load (kips/ft.).

M_D: Un-factored moment due to non-composite dead load (kip-ft.).

s_D: Un-factored long-term composite (superimposed) dead load (kips/ft.)

M_{SD}: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_L: Un-factored live load moment (kip-ft.).

M_{Imp}: Un-factored moment due to impact (kip-ft.).

M_a: Factored design moment (kip-ft.).
$1.3\,[\,M_D + M_{SD} + \frac{5}{3}(M_L + M_{Imp})\,]$

M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi).
$M_D + M_{SD} + \frac{5}{3}(M_L + M_{Imp})$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.3\,[M_D + M_{SD} + \frac{5}{3}(M_L + M_{Imp})]$

VR: Maximum M_L + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).

TOP OF BEAM ELEVATIONS (FOR FABRICATION ONLY)						
BEAM	ABUT A	SPLICE 1	PIER 1	PIER 2	SPLICE 2	ABUT. B
1	592.13	593.51	593.58	593.76	593.83	593.13
2	591.97	593.35	593.41	593.60	593.66	592.99
3	592.08	593.45	593.51	593.70	593.76	593.10
4	592.21	593.57	593.63	593.82	593.89	593.24
5	592.33	593.70	593.76	593.95	594.01	593.38
6	592.46	593.82	593.88	594.07	594.13	593.53
7	592.34	593.69	593.76	593.95	594.01	593.42
8	592.22	593.57	593.63	593.82	593.88	593.31
9	592.10	593.44	593.50	593.69	593.76	593.19
10	592.01	593.34	593.40	593.60	593.66	593.11
11	592.17	593.50	593.56	593.76	593.82	593.29

FILE NAME = 01161064-SA17-STL1.dgn

JE JACOBS

PLOT DATE = 1/12/2009

DESIGNED - JRW	REVISED -	
DRAWN - JRW	REVISED -	
CHECKED - MBC	REVISED -	
DATE - 1/13/09	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS I
F.A.P. 392 FRANKLIN CONNECTOR (AT 26th STREET)
STRUCTURE NO. 016-1064

SCALE: NTS | SHEET NO. SA17 OF SA31 SHEETS | STA. 11+81.01

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
392	1717-2-3B-R	COOK	114	64
		CONTRACT NO. 62197		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		