INTERIOR GIRDER MOMENT TABLE - UNIT VI						
		0.4 Sp. 11	Pier 11	0.5 Sp. 12	Pier 12	0.6 Sp. 13
I_s	(in^4)	19,444	40,045	19,444	40,045	19,444
$I_c(n)$	(in^4)	47,586	-	47,586	-	47,586
$I_c(3n)$	(in^4)	35,969	-	35,969	-	35,969
$I_c(cr)$	(in^4)	-	46,885	-	46,885	-
S_s	(in^3)	786	1,627	786	1,627	786
$S_c(n)$	(in^3)	1,092	-	1,092	-	1,092
$S_c(3n)$	(in^3)	1,002	-	1,002	-	1,002
$S_c(cr)$	(in^3)	-	1,720	-	1,720	-
DC1	(k/')	1.06	1.17	1.06	1.17	1.06
M_{DC1}	('k)	567	1,539	540	1,622	634
DC2	(k/')	0.20	0.20	0.20	0.20	0.20
M_{DC2}	('k)	110	277	107	291	123
DW	(k/')	0.41	0.41	0.41	0.41	0.41
M_{DW}	('k)	226	567	218	597	253
M_{L+IM}	('k)	1,321	1,820	1,274	1,846	1,369
M_U (Strength I)	('k)	3,497	6,306	3,365	6,517	3,722
$\phi_f M_n$	('k)	5,499	7,934	5,517	7,931	5,450
f_s DC1	(ksi)	8.66	11.35	8.25	11.96	9.68
f_s DC2	(ksi)	1.32	1.93	1.28	2.03	1.47
f_s DW	(ksi)	2.71	3.95	2.61	4.16	3.03
f_s (L+IM)	(ksi)	14.52	12.69	14.00	12.88	15.05
f_s (Service II)	(ksi)	31.56	33.74	30.35	34.90	33.75
$0.95R_hF_{yf}$	(ksi)	47.50	47.50	47.50	47.50	47.50
f_s (Total)(Strength I)	(ksi)	-	-	-	-	-
$\phi_f F_n$	(ksi)	-	-	-	-	-
V_f	(k)	59.30	62.00	46.00	68.20	62.50

INTERIOR GIRDER REACTION TABLE - UNIT VI					
		Pier 10-W	Pier 11	Pier 12	W. Abut.
R_{DC1}	(k)	36.0	138.1	141.9	38.0
R_{DC2}	(k)	6.7	24.9	25.5	7.1
R_{DW}	(k)	13.8	51.0	52.3	14.5
R_{L+IM}	(k)	92.3	181.0	182.4	93.3
R_{Total}	(k)	148.9	395.0	402.1	152.9

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total-Strength I, and Service II) 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-Strength I, and Service II) in uncracked sections due to short-term composite live loads ($in.^4$ and $in.^3$).

I (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-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

I (cr), $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_U (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_s

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

$0.95R_hF_{yf}$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_s(L+IM)$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

V_f: Maximum factored shear range in span computed according to Article 6.10.10.

0161705-60W28-S098-SuperStruct.dgn

AECOM

USER NAME = floresg	DESIGNED - DD	REVISED	
	CHECKED - ATB	REVISED	
PLOT SCALE = N.T.S.	DRAWN - MRK	REVISED	
PLOT DATE = 5/7/2014	CHECKED - DD	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER MOMENT AND REACTION TABLES – UNIT VI
STRUCTURE NO. 016–1705
SHEET NO. S-98 OF S-165 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	414
		CONTRACT NO. 60W28		
	ILLINOIS FED. AID PROJECT			