GIRDER MOMENT TABLE - RAMP 1 FLARE

		0.4 Sp. R1-1	Pier	0.6 Sp. R1-2
		Girder 1.12		
I_s	(in^4)	126,687	126,687	126,687
$I_c(n)$	(in^4)	185,044	185,044	185,044
$I_c(3n)$	(in^4)	150,261	150,261	150,261
S_s	(in^3)	3913	3913	3913
$S_c(n)$	(in^3)	4410	4410	4410
$S_c(3n)$	(in^3)	4145	4145	4145
S_l	(in^3)	228	228	228
ℓ	$(k/')$	1.11	1.54	2.43
$M\ell$	$('k)$	646.6	2783.5	1418
$s\ell$	$(k/')$	0.34	0.53	0.91
$M_s\ell$	$('k)$	197.9	956.7	533.7
$M\mathup{\large\&}$	$('k)$	722.9	828.5	803.4
M_I	$('k)$	157.6	170.7	156.7
$^5\!/\!_3[M\mathup{\large\&} + M_I]$	$('k)$	1467.5	1665.3	1600.2
M_a	$('k)$	3005.6	7027.2	4617.4
M_{bl}	$('k)$	24.1	49.8	44.8
$f_s\ell$ (non-comp)	(ksi)	2.0	8.5	4.3
$f_s\ell$ (comp)	(ksi)	0.6	2.8	1.5
f_s $^5\!/\!_3[M\mathup{\large\&} + M_I]$	(ksi)	4.0	4.5	4.4
f_l	(ksi)	1.3	2.6	2.4
f_s (Overload)	(ksi)	6.5	15.8	10.2
f_s (Total)	(ksi)	8.6	20.6	13.4
F_{cr} (Overload)	(ksi)	47.5	47.5	47.5
VR	(k)	69.1		70.4
F_{cr}	(ksi)	49.8	48.4	49.7

GIRDER REACTION TABLE - RAMP 1 FLARE

		R1 Abut.	Pier	Carrier Girder
		Girder 1.12		
$R\ell$	(k)	50.2	371.7	66.4
$R\mathup{\large\&}$	(k)	42.9	83.3	41.0
R_I	(k)	9.4	17.1	8.0
R_{Total}	(k)	102.5	472.1	115.4

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).

S_l: Section modulus of one flange plate for lateral flange bending (in^3).

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

$M\ell$: Un-factored moment due to non-composite dead load (kip-ft).

$s\ell$: Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s\ell$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

$M\mathup{\large\&}$: Un-factored live load moment (kip-ft.).

M_I: Un-factored moment due to impact (kip-ft.).

M_a: Factored design moment (kip-ft.). $1.3 [M\ell + M_s\ell + \frac{5}{3} (M\mathup{\large\&} + M_I)]$

M_{bl}: Factored lateral bending moment for flange plate (kip-ft.).

f_l: Factored calculated normal stress at the edge of flange due to lateral bending (ksi).

f_s (Overload): Sum of stresses as computed from the moments below (ksi). $M\ell + M_s\ell + \frac{5}{3} (M\mathup{\large\&} + M_I)$

f_s (Total): Sum of stresses as computed from the moments below (ksi). $1.3 [M\ell + M_s\ell + \frac{5}{3} (M\mathup{\large\&} + M_I)]$

F_{cr} (Overload): Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5 (ksi.).

F_{cr}: Critical average flange stress (smaller of F_{cr1} or F_{cr2} for partially braced flanges and F_y for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4) (ksi).

VR: Maximum$\mathup{\large\&}$+ impact shear range within span for stud shear connector design (kips).

Note:
  $M\mathup{\large\&}$ and $R\mathup{\large\&}$ include the effects of centrifugal force and superelevation.

MOMENT TABLE 2
RAMP 1 FLARE
STRUCTURE NO. 016-0724

TY-LIN INTERNATIONAL

DESIGNED	-	EKH, JMA
CHECKED	-	AMD,
DRAWN	-	EKH, JMA
CHECKED	-	AMD,
DATE	-	08/02/10

REVISIONS		
NAME		DATE

SHEET NO. 56

137 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	0711.2R & 1011.1BR	COOK	200	86

CONTRACT NO. 60L39

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