

GIRDER MOMENT TABLE (GIRDER 6W)										
	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.6 Sp. 5	
$I_s$	(in <sup>4</sup> )	18,869	28,869	20,051	34,020	20,051	34,020	20,051	28,869	18,869
$I_c(n)$	(in <sup>4</sup> )	45,477	-	49,247	-	49,247	-	43,247	-	45,477
$I_c(3n)$	(in <sup>4</sup> )	34,543	-	37,078	-	37,078	-	37,078	-	35,543
$I_c(cr)$	(in <sup>4</sup> )	-	-	-	-	-	-	-	-	-
$S_s$	(in <sup>3</sup> )	762	1,143	840	1,334	840	1,334	840	1,143	762
$S_c(n)$	(in <sup>3</sup> )	1,041	-	1,140	-	1,140	-	1,140	-	1,041
$S_c(3n)$	(in <sup>3</sup> )	960	-	1,053	-	1,053	-	1,053	-	960
$S_c(cr)$	(in <sup>3</sup> )	-	-	-	-	-	-	-	-	-
$S_{xc}$	(in <sup>3</sup> )	995	1,143	1,107	1,334	1,082	1,334	1,105	1,143	988
DC1	(k/ft)	1.096	1.160	1.105	1.191	1.105	1.191	1.105	1.160	1.096
MDC1	(k)	347.9	681.9	247.9	964.9	446.3	986.1	267.4	772.1	407.4
DC2	(k/ft)	0.450	0.450	0.450	0.450	0.450	0.450	0.450	0.450	0.450
MDC2	(k)	150.5	314.6	129.7	409.6	164.9	423.3	135.3	349.9	163.8
DW	(k/ft)	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385
MDW	(k)	127.0	193.1	103.7	291.4	190.9	298.0	114.9	217.7	145.5
$M_L + IM$	(k)	1,062.0	1,040.6	1,167.7	1,416.2	1,388.6	1,395.3	1,220.2	1,166.3	1,136.9
$f_t$ (Strength I)	(ksi)	4.47	1.53	3.87	3.85	4.91	4.25	4.43	1.84	5.33
$M_u + 1/3 f_t S_{xc}$	(k)	2,795.5	3,404.8	2,790.0	4,776.3	3,627.9	4,807.9	2,946.9	3,828.5	3,068.1
$\phi_r M_n$	(k)	-	-	-	-	-	-	-	-	-
$f_s$ DC1	(ksi)	5.48	7.16	3.54	8.68	6.38	8.87	3.82	8.11	6.42
$f_s$ DC2	(ksi)	1.88	3.30	1.48	3.68	1.88	3.81	1.54	3.67	2.05
$f_s$ DW	(ksi)	1.59	2.03	1.18	2.62	2.18	2.68	1.31	2.29	1.82
$f_s$ (L+IM)	(ksi)	12.24	10.92	12.29	12.74	14.62	12.55	12.84	12.25	13.11
$f_t$ (Service II)	(ksi)	3.35	1.07	2.90	2.04	3.68	2.16	3.32	1.23	4.00
$f_s + 1/2$ (Service II)	(ksi)	26.54	27.23	23.63	32.56	31.29	32.76	25.02	30.62	29.33
$0.95R_h F_{yf}$	(ksi)	47.50	-	47.50	-	47.50	-	47.50	-	47.50
$0.80R_h F_{yf}$	(ksi)	-	40.00	-	40.00	-	40.00	-	40.00	-
$f_s + 1/3$ (Total)(Strength I)	(ksi)	34.50	35.74	30.84	42.96	40.82	43.25	32.62	40.21	38.04
$\phi_r F_n$	(ksi)	50.00	46.02	50.00	43.51	50.00	43.19	50.00	45.91	50.00
$V_f$	(k)	57.3	-	48.2	-	56.1	-	50.7	-	62.2

$I_s, S_s$ : 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<sup>4</sup> and in<sup>3</sup>).

$I_c(n), S_c(n)$ : 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<sup>4</sup> and in<sup>3</sup>).

$I_c(3n), S_c(3n)$ : 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-Strength I, and Service II) in uncracked sections due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(cr), S_c(cr)$ : 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 dead loads (in<sup>4</sup> and in<sup>3</sup>).

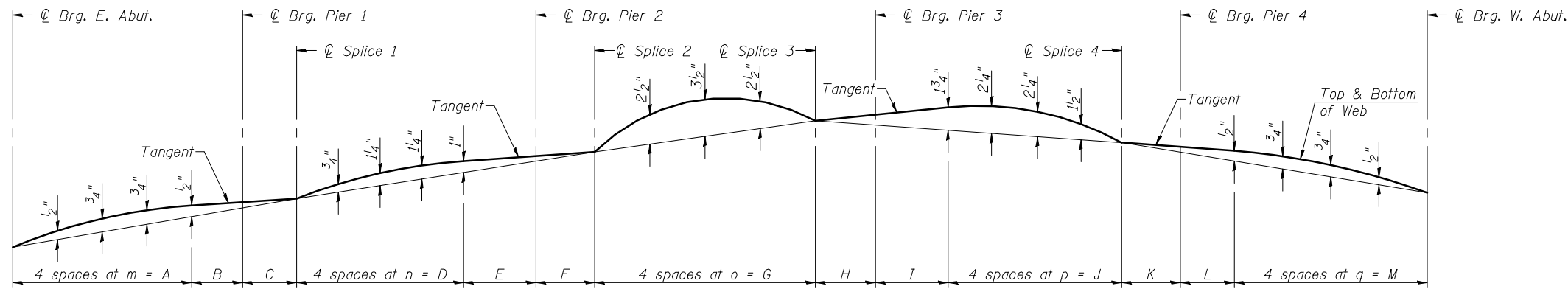
$S_{xc}$ : Section modulus about the major axis of section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange (in<sup>3</sup>).

DC1: Un-factored non-composite dead load (kips/ft.).  
MDC1: 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.).  
MDC2: 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.).  
MDW: 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.).  
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$   
 $f_t$ : Factored calculated normal stress at edge of flange for controlling steel flange plate due to lateral bending, Strength I or Service II as applicable (ksi).  
 $\phi_r M_n$ : Factored resistance available according to A6.1.1 (k).  
 $f_s$  DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).  
 $M_{DC1} / S_{nc}$   
 $f_s$  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 plus impact loads as calculated below (ksi).  
 $M_L + IM / S_c(3n)$  or  $M_L + IM / S_c(cr)$  as applicable.  
 $f_s + 1/2$  (Service II): Sum of stresses as computed below (ksi).  
 $f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s L + IM + 1/2$   
 $0.95R_h F_{yf}$ : Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).  
 $f_s + 1/3$  (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).  
 $1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s L + IM + 1/3$   
 $\phi_r F_n$ : Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7.2 (ksi).  
 $V_f$ : Maximum factored shear range computed according to Article 6.10.10.

Note:  
 $M_L$  and  $R_L$  include the effects of centrifugal force and superelevation.

GIRDER REACTION TABLE (GIRDER 6W)							
	E. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	W. Abut.	
$R_{DC1}$	(k)	26.0	86.7	100.9	102.0	91.9	27.6
$R_{DC2}$	(k)	13.3	44.5	48.5	49.9	46.8	14.7
$R_{DW}$	(k)	8.2	25.9	30.0	31.4	26.9	10.0
$R_L + IM$	(k)	69.4	121.5	137.5	142.8	133.1	92.7
$R_{Total}$	(k)	116.9	278.6	316.9	326.1	298.7	145.0



CAMBER DIAGRAM

DIMENSION TABLE ①

Girder	A	B	C	D	E	F	G	H	I	J	K	L	M	m	n	o	p	q
1W	58'-1 <sup>3</sup> / <sub>16</sub> "	16'-6"	17'-6"	54'-4 <sup>3</sup> / <sub>16</sub> "	23'-6"	19'-0"	71'-7 <sup>1</sup> / <sub>4</sub> "	19'-6"	23'-6"	56'-6 <sup>13</sup> / <sub>16</sub> "	19'-0"	17'-6"	62'-7 <sup>7</sup> / <sub>16</sub> "	14'-6 <sup>7</sup> / <sub>16</sub> "	13'-7 <sup>1</sup> / <sub>16</sub> "	17'-10 <sup>13</sup> / <sub>16</sub> "	14'-1 <sup>11</sup> / <sub>16</sub> "	15'-7 <sup>7</sup> / <sub>8</sub> "
2W	58'-1 <sup>5</sup> / <sub>16</sub> "	16'-6"	17'-6"	54'-3 <sup>3</sup> / <sub>8</sub> "	23'-6"	19'-0"	71'-6"	19'-6"	23'-6"	56'-5 <sup>5</sup> / <sub>8</sub> "	19'-0"	17'-6"	62'-6 <sup>3</sup> / <sub>8</sub> "	14'-6 <sup>5</sup> / <sub>16</sub> "	13'-6 <sup>5</sup> / <sub>8</sub> "	17'-10 <sup>9</sup> / <sub>16</sub> "	14'-1 <sup>9</sup> / <sub>16</sub> "	15'-7 <sup>9</sup> / <sub>16</sub> "
3W	58'-0 <sup>13</sup> / <sub>16</sub> "	16'-6"	17'-6"	54'-2 <sup>3</sup> / <sub>8</sub> "	23'-6"	19'-0"	71'-5 <sup>1</sup> / <sub>8</sub> "	19'-6"	23'-6"	56'-4 <sup>1</sup> / <sub>8</sub> "	19'-0"	17'-6"	62'-5 <sup>1</sup> / <sub>8</sub> "	14'-6 <sup>3</sup> / <sub>8</sub> "	13'-6 <sup>1</sup> / <sub>8</sub> "	17'-10 <sup>4</sup> / <sub>16</sub> "	14'-1 <sup>3</sup> / <sub>8</sub> "	15'-7 <sup>5</sup> / <sub>16</sub> "
4W	58'-0 <sup>1</sup> / <sub>4</sub> "	16'-6"	17'-6"	54'-1 <sup>13</sup> / <sub>16</sub> "	23'-6"	19'-0"	71'-4"	19'-6"	23'-6"	56'-3 <sup>5</sup> / <sub>16</sub> "	19'-0"	17'-6"	62'-4 <sup>3</sup> / <sub>16</sub> "	14'-6 <sup>3</sup> / <sub>16</sub> "	13'-6 <sup>1</sup> / <sub>16</sub> "	17'-10"	14'-0 <sup>13</sup> / <sub>16</sub> "	15'-7 <sup>1</sup> / <sub>16</sub> "
5W	57'-11 <sup>3</sup> / <sub>4</sub> "	16'-6"	17'-6"	54'-1 <sup>1</sup> / <sub>16</sub> "	23'-6"	19'-0"	71'-2 <sup>15</sup> / <sub>16</sub> "	19'-6"	23'-6"	56'-2 <sup>1</sup> / <sub>16</sub> "	19'-0"	17'-6"	62'-3 <sup>8</sup> / <sub>16</sub> "	14'-5 <sup>15</sup> / <sub>16</sub> "	13'-6 <sup>4</sup> / <sub>16</sub> "	17'-9 <sup>3</sup> / <sub>4</sub> "	14'-0 <sup>9</sup> / <sub>16</sub> "	15'-6 <sup>3</sup> / <sub>4</sub> "
6W	57'-11 <sup>1</sup> / <sub>4</sub> "	16'-6"	17'-6"	54'-0 <sup>5</sup> / <sub>16</sub> "	23'-6"	19'-0"	71'-1 <sup>8</sup> / <sub>16</sub> "	19'-6"	23'-6"	56'-1 <sup>1</sup> / <sub>16</sub> "	19'-0"	17'-6"	62'-2 <sup>8</sup> / <sub>16</sub> "	14'-5 <sup>1</sup> / <sub>16</sub> "	13'-6 <sup>1</sup> / <sub>16</sub> "	17'-9 <sup>2</sup> / <sub>2</sub> "	14'-0 <sup>1</sup> / <sub>4</sub> "	15'-6 <sup>9</sup> / <sub>16</sub> "

Notes:  
① Horizontal dimensions are taken along centerline of each individual girder.  
② Analyzed in model as a 0.450k/ft line load applied at the edge of deck.  
③ Analyzed in model as a 0.050 ksf area load applied from face to face of parapets.