

INTERIOR BEAM MOMENT TABLE		
0.5 Span		
I_s	(in ⁴)	11,174
$I_c(n)$	(in ⁴)	28,812
$I_c(3n)$	(in ⁴)	20,915
S_s	(in ³)	615
$S_c(n)$	(in ³)	896
$S_c(3n)$	(in ³)	806
DC1	(k/')	0.98
M_{DC1}	(k)	558
DC2	(k/')	0.45
M_{DC2}	(k)	256
DW	(k/')	0.38
M_{DW}	(k)	216
$M_L + IM$	(k)	1,050
M_u (Strength I)	(k)	3,179
$\phi_r M_n$	(k)	4,438
f_s DC1	(ksi)	10.89
f_s DC2	(ksi)	3.82
f_s DW	(ksi)	3.22
f_s 1.3(4+IM)	(ksi)	18.27
f_s (Service II)	(ksi)	35.49
f_s (Total)(Strength I)	(ksi)	46.75
V_f	(k)	25.1

INTERIOR BEAM REACTION TABLE		
Abut.		
R_{DC1}	(k)	33
R_{DC2}	(k)	15
R_{DW}	(k)	10
$R_L + IM$	(k)	92
R_{Total}	(k)	150

**TOP OF BEAM ELEVATIONS
(FOR FABRICATION ONLY)**

Beam No.	℄ Brg. N. Abut.	℄ Brg. S. Abut.
Girder 1	670.97	671.29
Girder 2	671.21	671.53
Girder 3	671.45	671.78
Girder 4	671.69	672.02
Girder 5	671.93	672.26
Girder 6	672.17	672.51
Girder 7	672.41	672.75
Girder 8	672.65	672.99
Girder 9	672.89	673.24
Girder 10	673.13	673.48
Girder 11	673.37	673.72

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 (in⁴ and in³).

$I_c(n), S_c(n)$: 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) due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: 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) due to long-term composite (superimposed) dead loads (in⁴ and in³).

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.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$
 $\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
 f_s (Service II): Sum of stresses as computed from the moments below (ksi).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_L + IM$
 f_s (Total)(Strength I): Sum of stresses as computed from the moments below (ksi).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$
 V_f : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

NOTE:

This sheet is for information only.
Structural steel was furnished in
Contract 60P54.



FILE NAME = 0490199-60P53-020-Moment.dgn	USER NAME =	DESIGNED - JY	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEAM MOMENT AND REACTION TABLE STRUCTURE NO. 049-0199	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE =	CHECKED - WPM	REVISED -	330			128R-3	LAKE	518	270	
PLOT DATE = 12/20/2010	DRAWN - JY	REVISED -	CONTRACT NO. 60953							
CHECKED - WPM	REVISED -	SHEET NO. 28 OF 43 SHEETS								
						ILLINOIS FED. AID PROJECT				