



Location	\varnothing Brg. N. Abut.	\varnothing Brg. S. Abut.
BEAM 1	380.45	380.82
BEAM 2	380.58	380.95
BEAM 3	380.68	381.05
BEAM 4	380.68	381.05
BEAM 5	380.58	380.95
BEAM 6	380.45	380.82

TOP OF BEAM ELEVATIONS
(For fabrication only)
(Does not include Dead Load Deflections)

INTERIOR GIRDER MOMENT TABLE		
		0.5 Sp. 1
I_s	(in ⁴)	4,470
$I_c(n)$	(in ⁴)	13,261
$I_c(3n)$	(in ⁴)	9,869
S_s	(in ³)	300
$S_c(n)$	(in ³)	464
$S_c(3n)$	(in ³)	420
DC1	(k/')	0.810
MDC1	(k)	336
DC2	(k/')	0.150
MDC2	(k)	62
DW	(k/')	0.330
MDW	(k)	138
$M_{\psi} + IM$	(k)	776
M_u (Strength I)	(k)	2,063
$\phi_r M_n$	(k)	2,429
f_s DC1	(ksi)	13.4
f_s DC2	(ksi)	1.8
f_s DW	(ksi)	3.9
f_s ($\psi + IM$)	(ksi)	20.1
f_s (Service II)	(ksi)	45.2
$0.95R_h F_{yf}$	(ksi)	47.5
f_s (Total)(Strength I)	(ksi)	-
$\phi_r F_n$	(ksi)	-
V_r	(k)	44.3

* Compact sections

INTERIOR GIRDER REACTION TABLE		
		Abut.
R_{DC1}	(k)	23.4
R_{DC2}	(k)	4.3
R_{DW}	(k)	9.6
$R_{\psi} + IM$	(k)	70.9
R_{Total}	(k)	108.2

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 (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) in uncracked sections 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) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).

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.).

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

M_u (Strength I): Factored design moment (kip-ft.).
1.25 (MDC1 + MDC2) + 1.5 MDW + 1.75 $M_{\psi} + IM$

$\phi_r M_n$: 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).
MDC1 / 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).
MDC2 / $S_c(3n)$ or MDC2 / $S_c(cr)$ 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).
MDW / $S_c(3n)$ or MDW / $S_c(cr)$ as applicable.

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

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

$0.95R_h F_{yf}$: 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 $f_{sDW} + 1.75 f_s(\psi + IM)$

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

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

Notes:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
All steel beams shall be M270 Grade 50W.
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
For Structural Steel details see sheet 15 of 19.