

INTERIOR GIRDER MOMENT TABLE		
		0.5 Span
I_s	(in ⁴)	52,529
$I_c(n)$	(in ⁴)	125,389
$I_c(3n)$	(in ⁴)	89,961
S_s	(in ³)	1,770
$S_c(n)$	(in ³)	2,405
$S_c(3n)$	(in ³)	2,181
DC1	(k/')	1.126
M _{DC1}	(k)	2,471
DC2	(k/')	0.143
M _{DC2}	(k)	314
DW	(k/')	0.360
M _{DW}	(k)	790
$M_{\xi} + IM$	(k)	2,523
M_u (Strength I)	(k)	9,081
$\phi_f M_n$	(k)	12,853
f_s DC1	(ksi)	16.76
f_s DC2	(ksi)	1.73
f_s DW	(ksi)	4.35
f_s 1.3($\xi + IM$)	(ksi)	16.36
f_s (Service II)	(ksi)	39.19
f_s (Total)(Strength I)	(ksi)	51.65
V_f	(k)	30.8

INTERIOR GIRDER REACTION TABLE		
		Abutment
R _{DC1}	(k)	74.61
R _{DC2}	(k)	9.47
R _{DW}	(k)	23.85
R $\xi + IM$	(k)	109.2
R _{Total}	(k)	217.1

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 long-term composite (superimposed) dead 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.).

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

M_u (Strength I): Factored design moment (kip-ft.).

$1.25(M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\xi} + IM$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

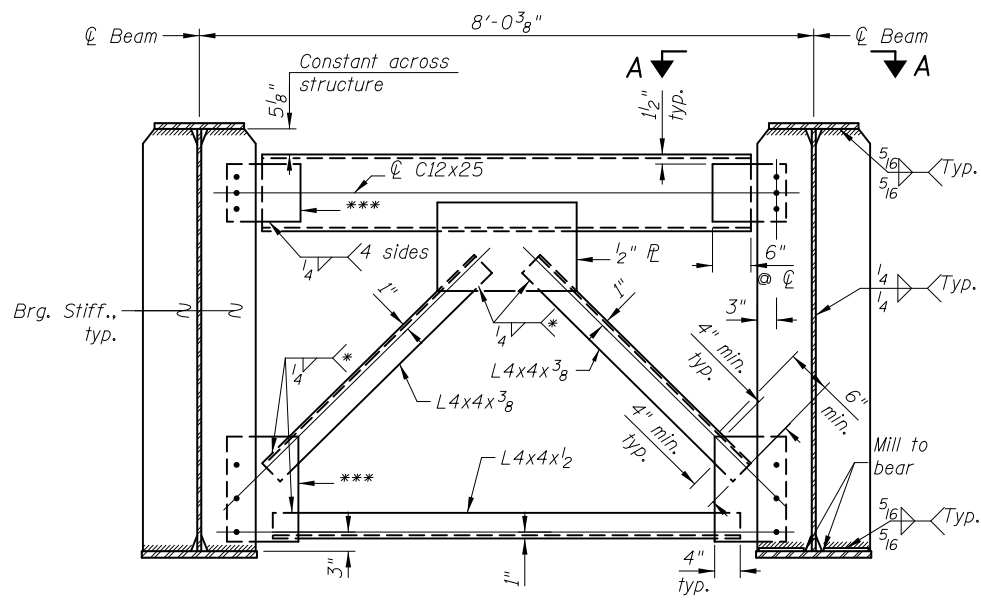
f_s (Service II): Sum of stresses as computed from the moments below (ksi).

$M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{\xi} + IM$

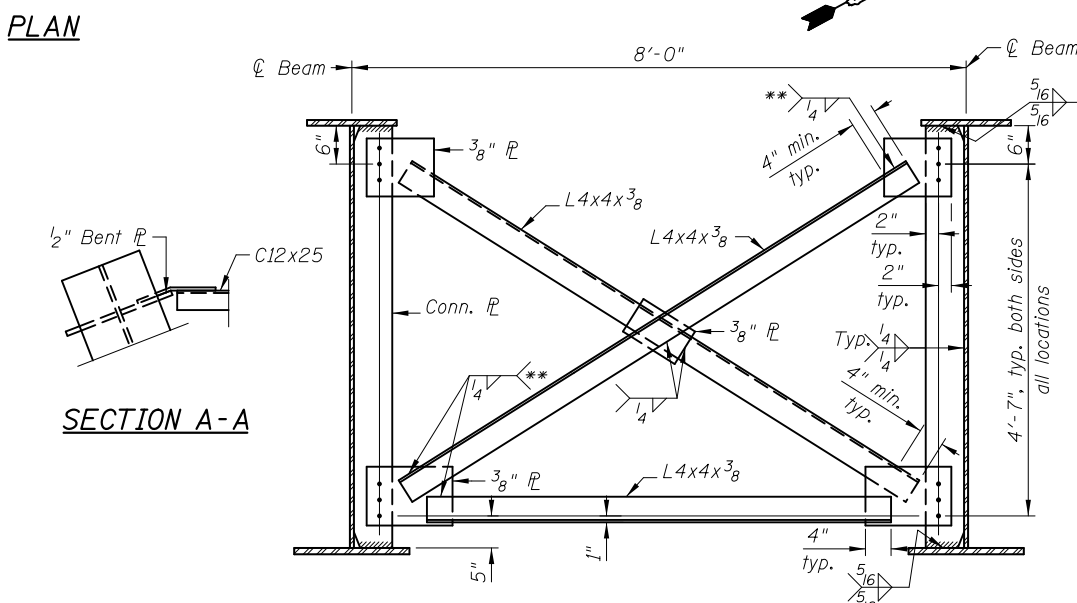
f (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).

$1.25(M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\xi} + IM$

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



END CROSS FRAME D
(18 Required)



INTERIOR CROSS FRAME D1
(45 Required)

* Weld on near side of 1/2" plate.
 ** Fillet weld angles along 3 sides on one face of gusset plate.
 *** 1/2" Plates to be bent for skew.

Notes:
 Detail 15/16" ϕ holes for all 3/4" ϕ bolts.
 Two hardened washers required for each set of oversized holes.
 Place diaphragm with channel flanges and outstanding angle legs outward from abutment backwall.

5/2/2012 4:16:41 PM I:\2154\cad\sheet\Roadway\20-STR\Structures & Walls\01_SN_056-007T\056007T-60F72-1B-FRP.dgn