

INTERIOR BEAM MOMENT TABLE			
	0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
I_s	(in ⁴)	3,620	3,620
$I_o(n)$	(in ⁴)	11,065	11,065
$I_o(3n)$	(in ⁴)	8,264	8,264
S_s	(in ³)	267	267
$S_o(n)$	(in ³)	417	417
$S_o(3n)$	(in ³)	378	378
Z	(in ³)	305	305
DC1	(k/')	0.789	0.789
M _{DC1}	(k)	48	138
DC2	(k/')	0.033	0.033
M _{DC2}	(k)	1.3	3.8
DW	(k/')	0.300	0.300
M _{DW}	(k)	24	67
M _{Σ + IM}	(k)	343	597
M _u (Strength I)	(k)	698	1,323
*** $\phi_r M_n, \phi_r M_{nc}$	(k)	1,904	1,904
f_s DC1	(ksi)	2.2	6.2
f_s DC2	(ksi)	0.1	0.2
f_s DW	(ksi)	0.8	2.1
f_s 1.3(Σ + IM)	(ksi)	12.8	22.3
f_s (Service II)	(ksi)	15.9	30.8
f_s (Total)(Strength I)	(ksi)	21.4	41.3
**** V _r	(k)	22	23

*** Compact sections
**** Non-Compact and slender sections

INTERIOR BEAM REACTION TABLE		
	Abuts.	Pier 1 & 2
R _{DC1}	(k)	8.9
R _{DC2}	(k)	0.2
R _{DW}	(k)	3.9
R _{Σ + IM}	(k)	55.4
R _{Total}	(k)	68.4

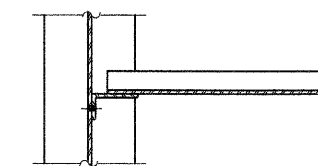
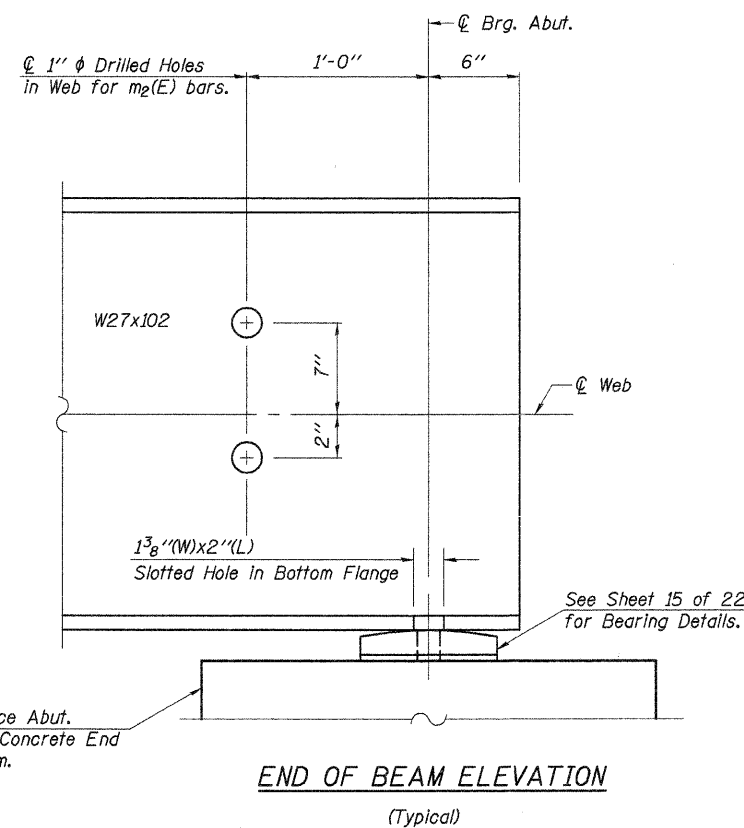
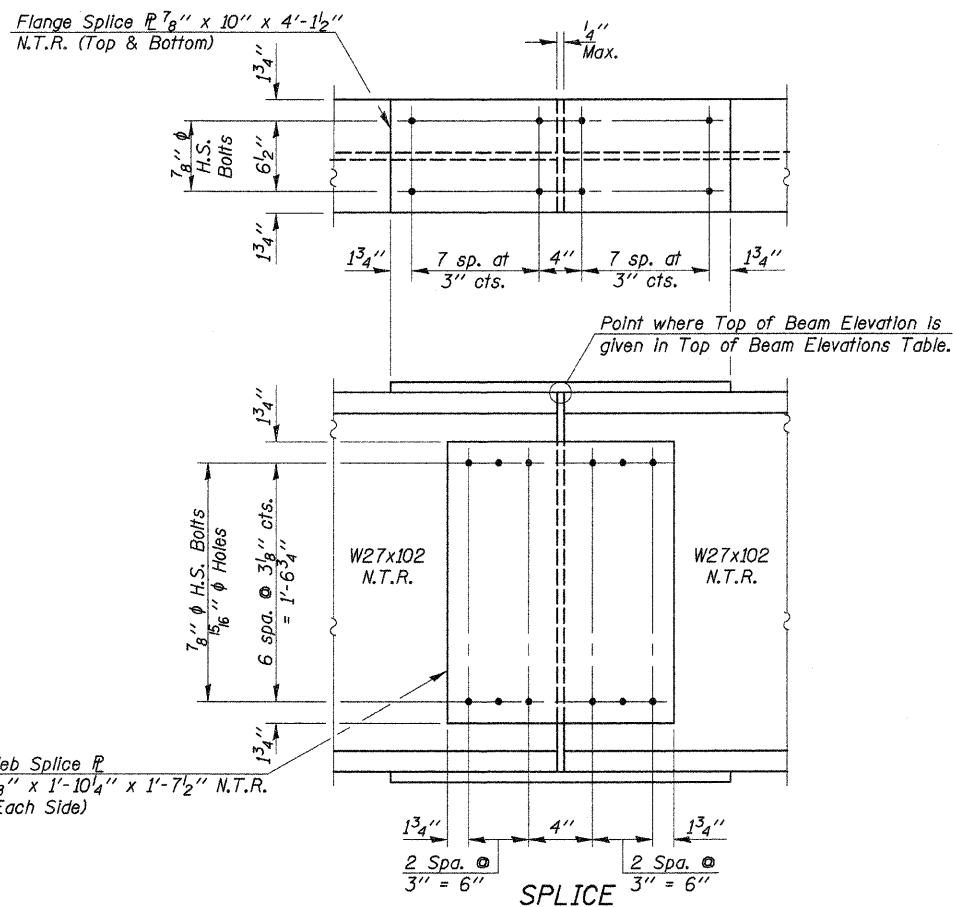
I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).

$I_o(n), S_o(n)$: 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).

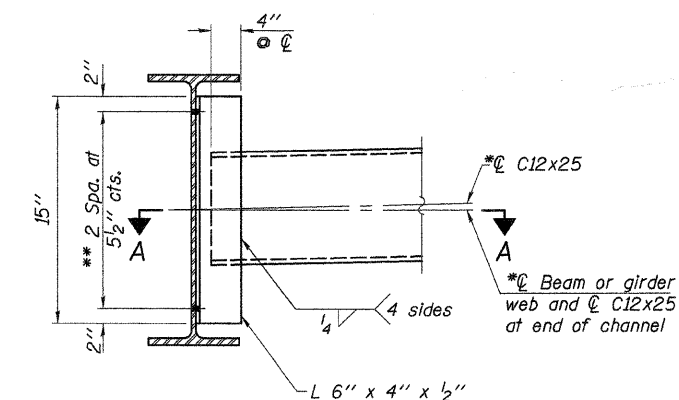
$I_o(3n), S_o(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in⁴ and in³).

Z: Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations (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_{Σ + IM}: Un-factored live load moment plus dynamic load allowance (Impact) (kip-ft.).
M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\Sigma + IM}$
 $\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
 $\phi_r M_{nc}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).
 f_s (Service II): Sum of stresses as computed from the moments below (ksi).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{\Sigma + IM}$
 f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\Sigma + IM}$
V_r: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



SECTION A-A



INTERIOR DIAPHRAGM

Note:
Two hardened washers required for each set of oversized holes.
* Alternate channels C12x30 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
*** 3/4" ϕ HS bolts, 1 5/8" ϕ holes

Work this Sheet with Sheets 13 & 15 of 22.

DESIGNED -	A.L.S.
CHECKED -	A.R.K. & J.A.M.
DRAWN -	S.A.P.
CHECKED -	A.R.K.

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