

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier #1 or Pier #2	0.5 Sp. 2
I_s	(in ⁴)	2100	2100	2100
$I_c(n)$	(in ⁴)	6584	-	6584
$I_c(3n)$	(in ⁴)	4909	-	4909
S_s	(in ³)	176	176	176
$S_c(n)$	(in ³)	279	-	279
$S_c(3n)$	(in ³)	252	-	252
DC1	(k/')	0.671	0.671	0.671
M _{DC1}	(k)	62.6	142.8	84.8
DC2	(k/')	0.175	0.175	0.175
M _{DC2}	(k)	19.2	30.0	29.3
DW	(k/')	0.23	0.23	0.23
M _{DW}	(k)	25.3	39.4	38.6
M _{ℓ + IM}	(k)	354.4	233.3	456.7
M _u (Strength I)	(k)	760.6	683.6	999.8
* $\phi_r M_{n_c}$, $\phi_r M_{n_o}$	(k)	1442.1	733.3	1416.3
f_s DC1	(ksi)	4.3	14.5	5.8
f_s DC2	(ksi)	0.9	-	1.4
f_s DW	(ksi)	1.2	-	1.8
f_s 1.3(ℓ+IM)	(ksi)	19.8	20.7	25.5
f_s (Service II)	(ksi)	26.2	35.2	34.5
f_s (Total)(Strength I)	(ksi)	-	-	-
V _r	(k)	37.6	-	31.8

* Compact sections

INTERIOR GIRDER REACTION TABLE			
	Abuts.	Pier 1 or 2	
R _{DC1}	(k)	9.2	34.1
R _{DC2}	(k)	2.6	8.7
R _{DW}	(k)	3.4	11.5
R _{ℓ + IM}	(k)	58.8	77.0
R _{Total}	(k)	74	131.1

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 (in.⁴ and in.³).

$I_c(n), S_c(n)$: 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 (in.⁴ and in.³).

$I_c(3n), S_c(3n)$: 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 (in.⁴ and in.³).

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}

$\phi_r M_{n_c}$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

$\phi_r M_{n_o}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).

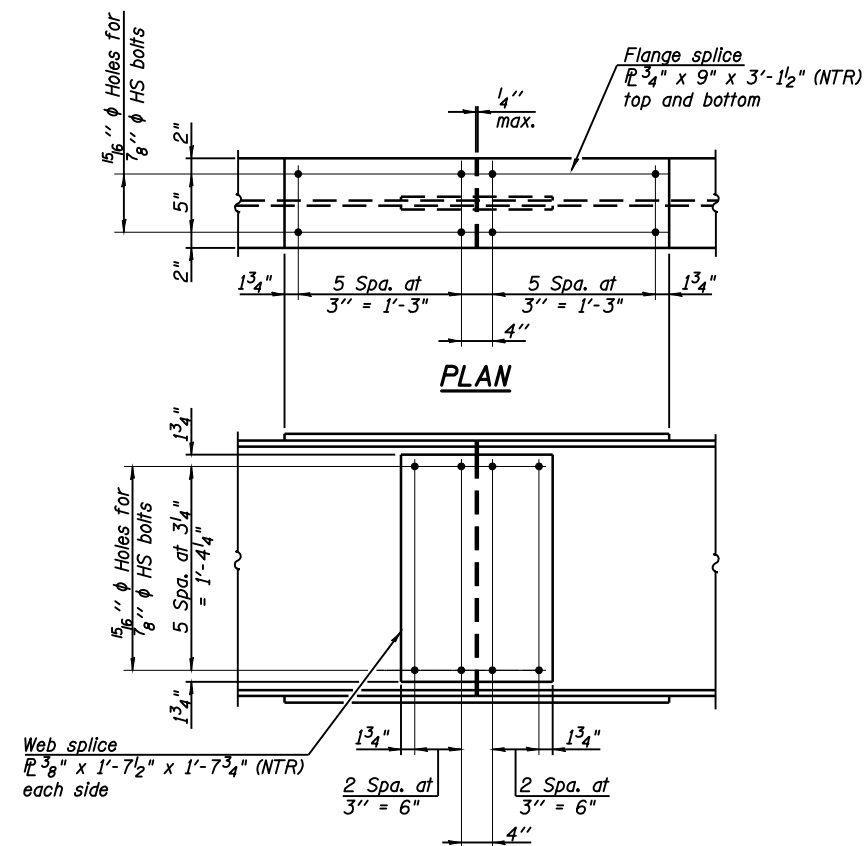
f_s (Service II): Sum of stresses as computed from the moments below (ksi).

M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{ℓ + 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_{ℓ + IM}

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



ELEVATION
SPLICE DETAIL
 (28 Required)

Note: All splice plate material shall be AASHTO M 270, Grade 50, NTR.
 Load carrying components designated "NTR" shall conform to the supplemental requirements for Notch Toughness, Zone 2.

STRUCTURAL STEEL DETAILS
S.N. 084-0521



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 No. 184-001907

SHEET NO. 19
 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
662	H(RS-10,B-2)	SANGAMON	84	63
CONTRACT NO. 72A73				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		