EXISTING INTERIOR GIRDER MOMENT TABLE					
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 & 3	0.5 Sp. 2	Pier 2
I_s	(in^4)	44,271	95,488	53,509	95,488
$I_c(n)$	(in^4)	89,553	95,488	113,862	95,488
$I_c(3n)$	(in^4)	68,712	----	86,255	----
S_s	(in^3)	1417	2521	1449	2521
$S_c(n)$	(in^3)	1736	----	1875	----
$S_c(3n)$	(in^3)	1625	----	1729	----
Z	(in^3)	----	----	----	----
ϱ	(k/')	1.114	1.382	1.109	1.382
$M\varrho$	('k)	930.4	2417.5	855.2	2375.4
$s\varrho$	(k/')	0.150	----	0.150	----
$M_s\varrho$	('k)	136.6	----	134.7	----
M_L	('k)	1059.2	1179.0	1198.8	1294.1
M_{IM}	('k)	219.5	230.2	221.2	238.8
$\frac{5}{3}[M_L + I]$	('k)	2136	2353	2371	2560
M_a	('k)	4163.3	6202.1	4369.5	6415.8
* M_u	('k)	6417.0	----	8221.6	----
f_s ϱ non-comp	(ksi)	7.9	11.5	7.1	11.3
f_s ϱ (comp)	(ksi)	1.0	----	0.9	----
f_s $\frac{5}{3}[M_L + M_I]$	(ksi)	14.8	11.2	15.2	12.2
f_s (Overload)	(ksi)	23.7	22.7	23.2	23.5
** f_s (Total)	(ksi)	----	29.5	----	30.5
VR	(k)	68.8	----	59.7	----

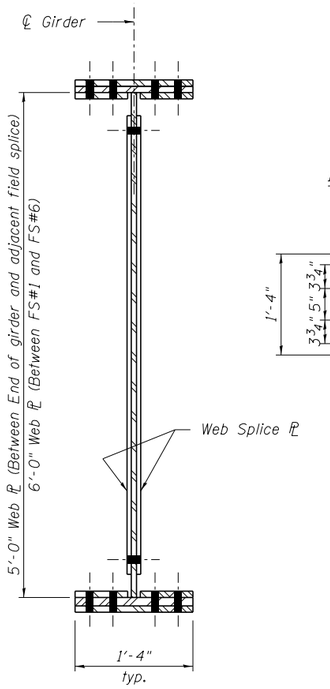
PROPOSED INTERIOR GIRDER 2 MOMENT TABLE								
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Pier 3	Pier 3	.6 Span 4
I_s	(in^4)	34,942	71,157	52,729	71,157	52,729	71,157	34,942
$I_c(n)$	(in^4)	67,978	71,157	107,204	71,157	112,945	71,157	77,395
$I_c(3n)$	(in^4)	50,854	----	80,076	----	84,642	----	58,306
S_s	(in^3)	1132	1910	1430	1910	1430	1910	1132
$S_c(n)$	(in^3)	1444	----	1862	----	1891	----	1499
$S_c(3n)$	(in^3)	1314	----	1694	----	1727	----	1377
Z	(in^3)	----	----	----	----	----	----	----
ϱ	(k/')	0.747	0.901	0.913	1.047	1.059	1.160	1.075
$M\varrho$	('k)	607.3	1824.4	758.5	2085.8	880.9	2342.7	916.7
$s\varrho$	(k/')	0.150	----	0.150	----	0.150	----	0.150
$M_s\varrho$	('k)	137.1	----	140.4	----	144.000	----	139.930
M_L	('k)	601.0	786.5	917.0	1046.4	1120.4	1091.6	941.0
M_{IM}	('k)	124.6	153.5	169.2	193.1	206.7	213.1	195.1
$\frac{5}{3}[M_L + I]$	('k)	1212	1570	1814	2070	2216	2179	1897
M_a	('k)	2542.9	4412.7	3526.7	5402.5	4213.5	5877.8	3840.0
* M_u	('k)	----	----	----	----	----	----	----
f_s ϱ non-comp	(ksi)	6.4	11.5	6.4	13.1	7.4	14.7	9.7
f_s ϱ (comp)	(ksi)	1.3	----	1.0	----	1.0	----	1.2
f_s $\frac{5}{3}[M_L + M_I]$	(ksi)	10.1	9.9	11.7	13.0	14.1	13.7	15.2
f_s (Overload)	(ksi)	17.8	21.3	19.0	26.1	22.5	28.4	26.1
** f_s (Total)	(ksi)	23.1	27.7	24.8	33.9	29.2	36.9	34.0
VR	(k)	41.5	----	47.5	----	57.3	----	67.8

INTERIOR EXISTING GIRDER REACTION TABLE				
		S. Abut. & Pier 4	Pier 1 & 3	Pier 2
R ϱ	(k)	51.9	189.9	188.7
R L	(k)	51.9	95.6	100.0
R I	(k)	10.8	12.3	12.0
R Total	(k)	114.5	297.8	300.6

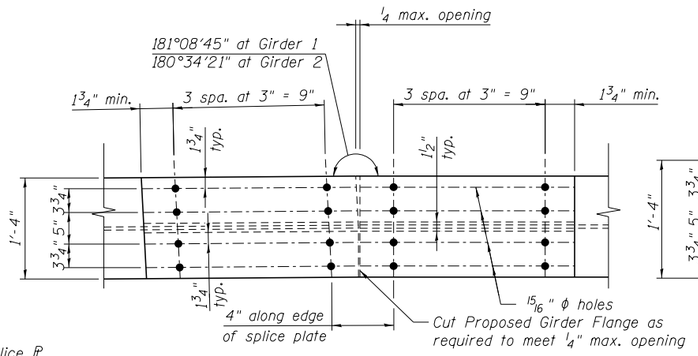
INTERIOR GIRDER 2 REACTION TABLE						
		S. Abut.	Pier 1	Pier 2	Pier 3	Pier 4
R ϱ	(k)	36.5	146.7	169.0	185.6	45.2
R L	(k)	30.5	66.2	85.2	93.5	51.5
R I	(k)	6.3	8.5	10.2	12.1	10.7
R Total	(k)	73.3	221.4	264.4	291.2	107.4

* Compact section
** Braced non-compact and partially braced section

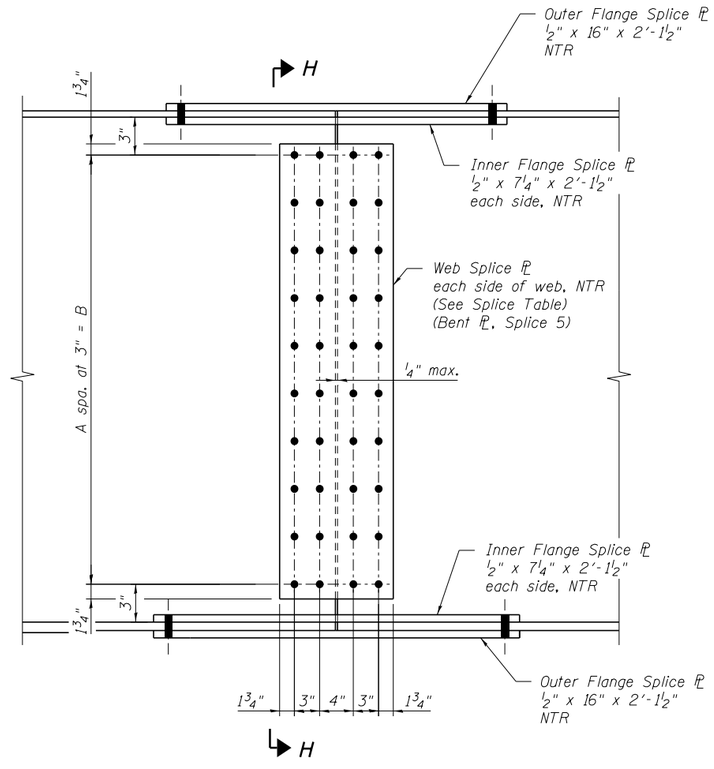
I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads ($in.^4$ and $in.^3$).
$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) 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 and Overload) due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).
Z: Plastic Section Modulus of the steel section in non-composite areas ($in.^3$).
ϱ: Un-factored non-composite dead load (kips/ft.).
$M\varrho$: Un-factored moment due to non-composite dead load (kip-ft.).
$s\varrho$: Un-factored long-term composite (superimposed) dead load (kips/ft.)
$M_s\varrho$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
M_L: Un-factored live load moment (kip-ft.).
M_I: Un-factored moment due to impact (kip-ft.).
M_a: Factored design moment (kip-ft.).
$1.3\ [\ M\varrho + M_s\varrho + \frac{5}{3}\ (M_L + M_I)]$
M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
f_s (Overload): Sum of stresses as computed from the moments below (ksi).
$M\varrho + M_s\varrho + \frac{5}{3}\ (M_L + M_I)$
f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.3\ [M\varrho + M_s\varrho + \frac{5}{3}\ (M_L + M_I)]$
VR: Maximum L + impact shear range within the composite portion of the span for stud shear connector design (kips).



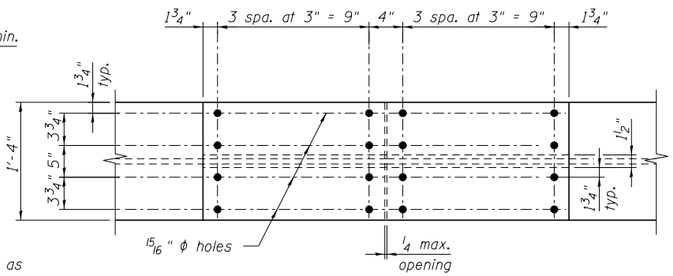
SECTION H-H



FLANGE SPLICE - #5
(Top & Bottom Flanges)



ELEVATION - FIELD SPLICE - GIRDER 1 & 2



FLANGE SPLICE 1, 2, 3, 4 & 6
(Top & Bottom Flanges)
(32 Bolts per Flange Splice)

SPLICE TABLE

Splice Location	Web Splice ℄	A	B	No. Bolts
Splice 1 & 6	⅜"x13½"x4'-9½"	18	4'-6"	76
Splice 2 & 5	⅜"x13½"x5'-9½"	22	5'-6"	92
Splice 3 & 4	⅜"x13½"x5'-9½"	22	5'-6"	92

NOTES:
1. All Splice Plates shall be AASHTO M270 Grade 50 steel.
2. All Splice Bolts shall be ⅞" ϕ ASTM A325 High Strength with 15/16" ϕ holes.
3. Load carrying components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2.

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312-565-0450 Job No. 10093

FILE NAME = 0160483_60J16_024_Camber_Mom_Table.dgn	USER NAME = jsurber	DESIGNED - DTS	REVISED -
		CHECKED - KMP/AAY	REVISED -
	PLOT SCALE =	DRAWN - DTS	REVISED -
	PLOT DATE = 12/20/2013	CHECKED - KMP/AAY	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPLICE DETAILS AND MOMENT & REACTION TABLE
STRUCTURE NO. 016-0483
SHEET NO. SE24 OF SE46 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	508
		CONTRACT NO. 60J16		
	ILLINOIS FED. AID PROJECT			

8/11/2014 5:24:00 PM Y:\chicago\10000S\10093\Eng_Docs_Phase_II\SN_016_0483_0985_1st_Ave_over_Des_Plaines_River\Final\0160483_60J16_024_Camber_Mom_Table.dgn