

		0.4 Sp. 1 0.6 Sp. 3	0.5 Sp. 2	Piers
I_s	(in ⁴)	27430	27430	71268
$I_c(n)$	(in ⁴)	62379	62379	-
$I_c(3n)$	(in ⁴)	45778	45778	-
S_s	(in ³)	1056	1056	2416
$S_c(n)$	(in ³)	1399	1399	-
$S_c(3n)$	(in ³)	1279	1279	-
Z	(in ³)	-	-	-
ρ	(k/')	0.865	0.865	1.516
$M\rho$	(k)	1018	780	4086
$s\rho$	(k/')	0.434	0.434	-
$M_s\rho$	(k)	542	444	-
M_L	(k)	1304	1335	1753
M_{IM}	(k)	246	223	311
$\rho_3 [M_L + I]$	(k)	2584	2597	3440
M_o	(k)	5387	4968	9783
M_u	(k)	5942	6111	-
$f_s \rho$ non-comp	(ksi)	11.57	8.86	20.30
$f_s \rho$ (comp)	(ksi)	5.08	4.17	-
$f_s \rho_3 [M_L + M_I]$	(ksi)	22.17	22.28	17.09
f_s (Overload)	(ksi)	38.82	35.31	37.38
f_s (Total)	(ksi)	-	-	48.60
VR	(k)	70	56	-

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.).

$M\rho$: Un-factored moment due to non-composite dead load (kip-ft.).

$s\rho$: Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s\rho$: 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_o : Factored design moment (kip-ft.).
 $1.3 [M\rho + M_s\rho + \frac{5}{3} (M_L + M_I)]$

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.).

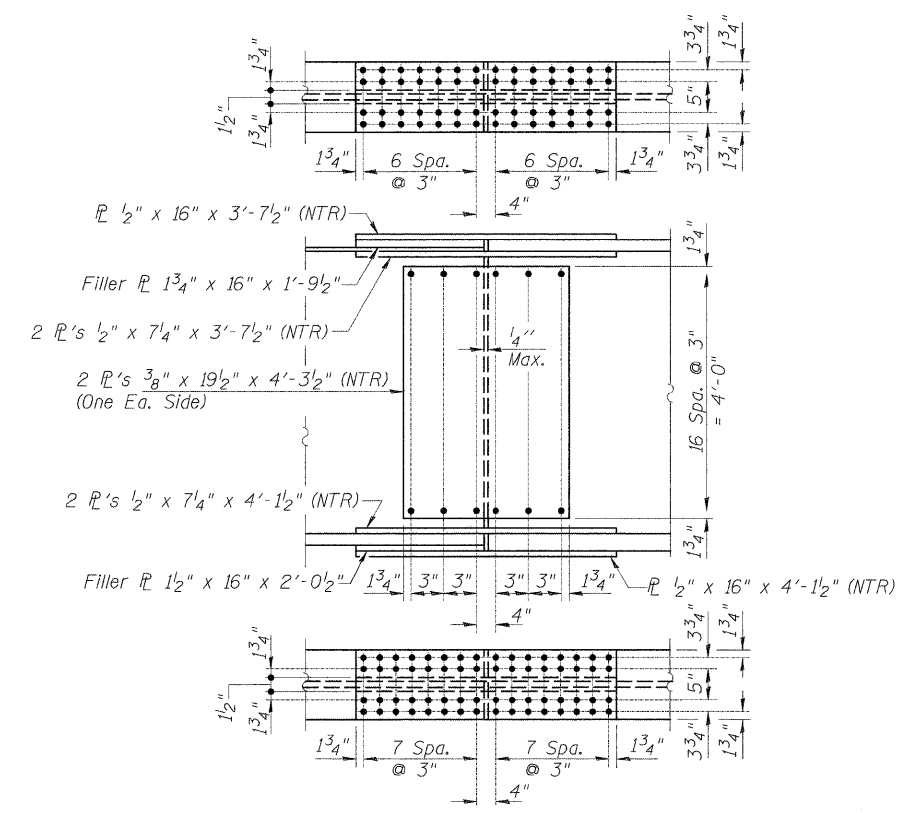
f_s (Overload): Sum of stresses as computed from the moments below (ksi).
 $M\rho + M_s\rho + \frac{5}{3} (M_L + M_I)$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M\rho + M_s\rho + \frac{5}{3} (M_L + M_I)]$

VR : Maximum τ + impact shear range within the composite portion of the span for stud shear connector design (kips).

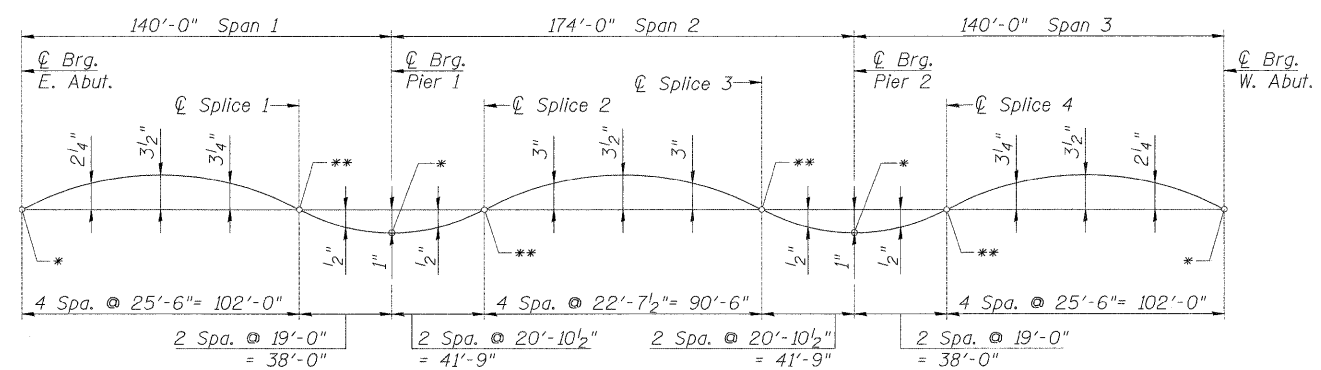
		E. & W. Abut.	Pier 1 & 2
$R\rho$	(k)	65.9	246.3
R_L	(k)	52.9	105.2
R_I	(k)	10.0	18.6
R_{Total}	(k)	128.8	370.1

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



DETAIL - FIELD SPLICE

Note:
 Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 Use 7/8" ϕ H.S. Bolts with 15/16" ϕ holes for all splice connections.
 Splice plates shall be AASHTO M270, Grade 50.



CAMBER DIAGRAM

* See Table for Final Top of Web Elevations at abutments and piers.
 ** Theoretical Top of Web Elevations before dead load deflections.

TOP OF WEB ELEVATIONS TABLE
 For Fabrication Only

Girder Number	Brg. E. Abut.	Splice No. 1	Brg. Pier 1	Splice No. 2	Splice No. 3	Brg. Pier 2	Splice No. 4	Brg. W. Abut.
Girder 1	701.55	703.62	704.32	705.28	707.18	707.98	708.87	711.09
Girder 2	701.68	703.75	704.45	705.40	707.30	708.11	709.00	711.21
Girder 3	701.80	703.87	704.58	705.53	707.43	708.23	709.12	711.34
Girder 4	701.93	704.00	704.70	705.66	707.56	708.36	709.25	711.47
Girder 5	702.02	704.08	704.79	705.74	707.64	708.44	709.33	711.55
Girder 6	701.89	703.96	704.66	705.61	707.51	708.32	709.21	711.42
Girder 7	701.76	703.83	704.54	705.49	707.39	708.19	709.08	711.30

SPLICE AND CAMBER DETAILS
 STRUCTURE NUMBER 101-3100

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JOB NO. 03R1807
 DATE 10/26/10

SHEET NO. 22
 47 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5103	03-00337-00-BR	Winnebago	66	37

CONTRACT NO. 85523
 ILLINOIS FED. AID PROJECT

LAYOUT JKR/SMK 08/23/10
 DRAWN NOM 10/25/10
 REVIEWED JKR/SMK 10/26/10

10/26/2010
 10370303R1807