STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERIOR GIRDER MOMENT TABLE				
		0.4 Span 1 0.6 Span 3 0.4 Span 4 0.6 Span 6	Pier 1 Pier 2 Pier 4 Pier 5	0.5 Span 2 0.5 Span 5
I_s	(in^4)	20,872	44,404	20,872
$I_c(n)$	(in^4)	72,612		72,612
$I_c(3n)$	(in^4)	49,826		49,826
S_s	(in^3)	954	1692	954
$S_c(n)$	(in^3)	1568		1568
$S_c(3n)$	(in^3)	1396		1396
Z	(in^3)		1871	
$\mathcal{D}$	(k/')	0.998	1.133	1.014
$M\mathcal{D}$	('k)	572.6	2072.6	548.1
$s\mathcal{D}$	(k/')	0.480		0.480
$M_s\mathcal{D}$	('k)	324.1		366.5
$M\mathcal{L}$	('k)	745.5	673.6	837.9
M_I	('k)	166.4	141.5	166.2
$\frac{5}{3}[M\mathcal{L} + M_I]$	('k)	1523	1361	1677
M_a	('k)	3145.4	4464.1	3369.0
* M_u	('k)	5727.3	5612.6	5727.3
f_s $\mathcal{D}$ non-comp	(ksi)	7.2	14.7	6.9
f_s $\mathcal{D}$ (comp)	(ksi)	2.8		3.2
f_s $\frac{5}{3}[M\mathcal{L} + M_I]$	(ksi)	11.7	9.7	12.8
f_s (Overload)	(ksi)	21.6	24.4	22.9
** f_s (Total)	(ksi)			
VR	(k)	57.1		45.2

INTERIOR GIRDER REACTION TABLE				
		N. Abut. S. Abut.	Piers 1, 2, 4 or 5	N. Brg. Pier 3 S. Brg. Pier 3
$R\mathcal{D}$	(k)	53.1	190.8	55.5
$R\mathcal{L}$	(k)	42.3	64.9	42.3
R_I	(k)	9.4	9.3	9.4
R_{Total}	(k)	104.8	265.0	107.2

* 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 ($in.^3$).

$\mathcal{D}$: Un-factored non-composite dead load (kips/ft.).

$M\mathcal{D}$: Un-factored moment due to non-composite dead load (kip-ft.).

$s\mathcal{D}$: Un-factored long-term composite (superimposed) dead load (kips/ft.)

$M_s\mathcal{D}$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

$M\mathcal{L}$: Un-factored live load moment (kip-ft.).

M_I: Un-factored moment due to impact (kip-ft.).

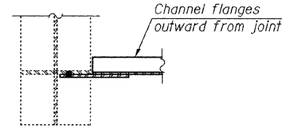
M_a: Factored design moment (kip-ft.).
$1.3\ [\ M\mathcal{D} + M_s\mathcal{D} + \frac{5}{3}\ (M\mathcal{L} + M_I)]$

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.).

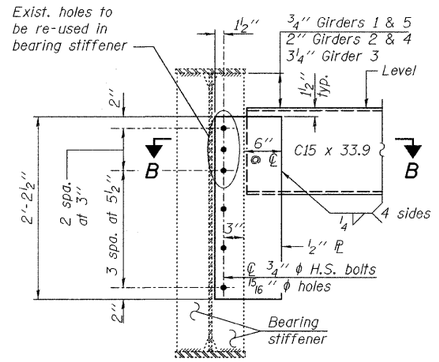
f_s (Overload): Sum of stresses as computed from the moments below (ksi).
$M\mathcal{D} + M_s\mathcal{D} + \frac{5}{3}\ (M\mathcal{L} + M_I)$

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

VR: Maximum $\mathcal{L}$ + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).



SECTION B-B



END DIAPHRAGM
(16 required)

***ELEVATION - TOP OF WEB PLATE					
Location	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5
℄ Brg. N. Abut.	520.44	520.54	520.63	520.55	520.44
℄ Brg. Pier 1	519.86	519.95	520.04	519.95	519.84
℄ Brg. Pier 2	519.87	519.95	520.05	519.98	519.87
℄ Pier 3	519.86	519.96	520.09	519.99	519.88
℄ Brg. Pier 4	519.89	520.00	520.11	520.00	519.93
℄ Brg. Pier 5	519.88	519.98	520.08	519.98	519.88
℄ Brg. S. Abut.	519.89	519.99	520.09	519.99	519.89

*** For information only. Elevations are based on survey results and represent the proposed elevation after bearings have been replaced.

NOTES:

1. Two hardened washers required for each set of oversized holes.
2. Existing and Proposed bolt holes in the existing bearing stiffeners shall be subpunched or subdrilled 13/16" diameter and reamed in the field to 15/16" diameter. Cost included with Furnishing and Erecting Structural Steel.
3. All structural steel shall conform to the requirements of AASHTO M 270 Grade 50.

DESIGNED -	JLS
CHECKED -	MRB/KWS
DRAWN -	VH
CHECKED -	MRB/KWS

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STRUCTURAL STEEL REPAIRS 1 OF 2
STRUCTURE NO. 099-3298

SHEET NO. S23	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S47 SHEETS	341	04-00090-07-BR	WILL	57	31
			CONTRACT NO. 63442		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		