

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 827	12Z-3, 12BR	WABASH, IL GIBSON, IN	158	81
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

BRIDGE SHEET S65 OF S114

CONTRACT
94450

INTERIOR GIRDER MOMENT TABLE

Properties		0.4 Span 5	Pier 5	0.5 Span 6	Pier 6	0.5 Span 7	Pier 7	0.5 Span 8	Pier 8	0.6 Span 9
I_s	(in ⁴)	67794	136435	65355	124577	74513	124577	65355	136435	67794
$I_c(n)$	(in ⁴)	151123		144423		170410		144423		151123
$I_c(3n)$	(in ⁴)	109506		105187		121661		105187		109506
S_s	(in ³)	1963	3533	1851	3246	2297	3246	1851	3533	1963
$Sc(n)$	(in ³)	2625		2482		3052		2482		2625
$Sc(3n)$	(in ³)	2376		2245		2768		2245		2376
D	(k/ft)	1.190	1.940	1.180	1.910	1.210	1.910	1.180	1.940	1.190
$M D$	(k-ft)	3016	-8490	2022	-7448	2529	-7448	2022	-8490	3016
$S D$	(k-ft)	0.580		0.580		0.580		0.580		0.580
$Ms D$	(k-ft)	1611		1254		1398		1254		1611
$M L$	(k-ft)	2645	-2947	2668	-2891	2914	-2891	2668	-2947	2645
$M (Imp)$	(k-ft)	413	-438	379	-411	414	-411	379	-438	413
$^{5}_3(M L + M (Imp))$	(k-ft)	5107	-5653	5089	-5514	5557	-5514	5089	-5653	5107
* Mu	(k-ft)	15309		14823		16631		14823		15309
Ma	(k-ft)	12654	-18386	10874	-16851	12329	-16851	10874	-18386	12654
$fs D$ (non-composite)	(ksi)	18.4	-28.8	13.1	-27.5	13.2	-27.5	13.1	-28.8	18.4
$fs D$ (composite)	(ksi)	8.1		6.7		6.1		6.7		8.1
$fs ^{5}_3(M L + M (Imp))$	(ksi)	23.3	-19.2	24.6	-20.4	21.9	-20.4	24.6	-19.2	23.3
fs (Overload)	(ksi)	49.9	-48.0	44.4	-47.9	41.1	-47.9	44.4	-48.0	49.9
** fs (Total)	(ksi)		-62.5		-62.3		-62.3		-62.5	
VR	(k)	73.9		79.6		81.3		79.6		73.9

INTERIOR GIRDER REACTION TABLE

Properties		Pier 4	Pier 5	Pier 6	Pier 7	Pier 8	Pier 9
$R D$	(k)	127.3	423.8	397.1	397.1	423.8	127.3
$R L$	(k)	66.8	148.4	150.0	150.0	148.4	66.8
Imp.	(k)	10.4	13.6	13.0	13.0	13.6	10.4
R (Total)	(k)	204.5	585.8	560.1	560.1	585.8	204.5

NOTES:

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).

$I_c(n)$ and $Sc(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to live load.

$I_c(3n)$ and $Sc(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. See AASHTO 10.38.

VR is the maximum live load + impact shear range within the composite portion of the span.

Ma (Applied Moment) = $1.3[M D + Ms D + ^{5}_3(M L + M (Imp))]$.

The plastic moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to $M D + Ms D + ^{5}_3(M L + M (Imp))$.

fs (Total) is the sum of the stresses due to $1.3[M D + Ms D + ^{5}_3(M L + M (Imp))]$.

$M D$ - Moment due to dead loads on non-composite section.

$Ms D$ - Moment due to dead loads on composite section.

$M L$ - Moment due to live load on non-composite or composite section.

$M (Imp)$ - Moment due to live load impact on non-composite or composite section.

* Compact, Braced section.

** Non-Compact section.

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ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 15/IN ROUTE 64
OVER WABASH RIVER PUBLIC WATERS
FAP 827 SECT 12Z-3, 12BR
STEEL PLATE GIRDER
MOMENT TABLES

SN: 093-0021 (IL)/9502700 (IN)
WABASH CO., IL.

STA. 1036+27
DATE: JUNE 15, 2007

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DESIGNED	MRB
CHECKED	KWS
DRAWN	MRB/VH
CHECKED	MRB