INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in^4)	53,510	107,872	99,955
$I_c(n)$	(in^4)	122,831	192,465	186,801
$I_c(3n)$	(in^4)	90,599	147,908	141,840
$I_c(cr)$	(in^4)	-----	121,655	-----
S_s	(in^3)	1610	2955	2859
$S_c(n)$	(in^3)	2162	3529	3434
$S_c(3n)$	(in^3)	1974	3283	3198
$S_c(cr)$	(in^3)	-----	3083	-----
DC1	(k/')	1.167	1.335	1.302
M_{DC1}	('k)	1278	4081	2793
DC2	(k/')	0.157	0.157	0.157
M_{DC2}	('k)	184	504	330
DW	(k/')	0.404	0.404	0.404
M_{DW}	('k)	473	1298	850
M_{L+IM}	('k)	2255	2779	2877
M_u (Strength I)	('k)	6483	12,542	10214
$\phi_f M_n$	('k)	10,883	13,302	17,186
f_s DC1	(ksi)	9.5	16.6	11.7
f_s DC2	(ksi)	1.1	1.8	1.2
f_s DW	(ksi)	2.9	4.7	3.2
f_s (L+IM)	(ksi)	12.5	9.4	10.1
f_s (Service II)	(ksi)	29.8	35.4	29.2
$0.95R_hF_yf$	(ksi)	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	-----	-----	-----
$\phi_f F_n$	(ksi)	-----	-----	-----
V_f	(k)	72.8	66.9	75.7

INTERIOR GIRDER REACTION TABLE				
		W. Abut.	Pier	E. Abut.
R_{DC1}	(k)	87.6	251.7	117.2
R_{DC2}	(k)	7.7	31.0	10.2
R_{DW}	(k)	19.8	79.6	26.2
R_{L+IM}	(k)	121.9	233.2	131.0
R_{Total}	(k)	237.0	595.5	284.6

All reactions are unfactored.
Reactions at abutments include weight of diaphragm

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) in uncracked sections, 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) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite 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.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

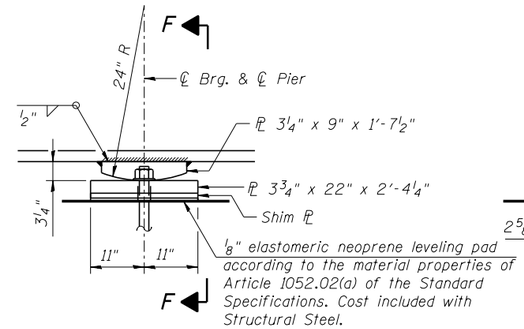
f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

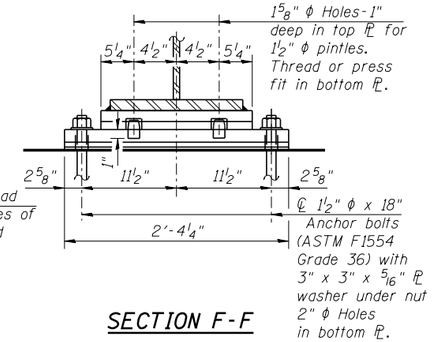
f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_{sL+IM}$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7.2 (ksi).

V_f: Maximum factored shear range in composite portion of span computed according to Article 6.10.10 (at Abutments & Pier).

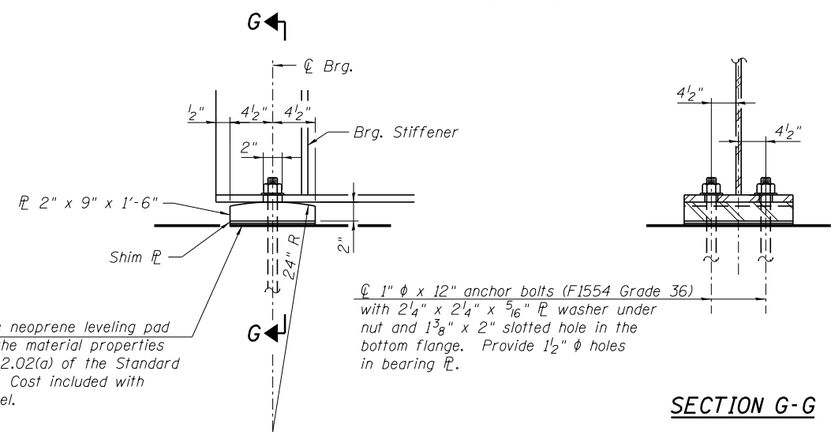


ELEVATION AT PIER



SECTION F-F

FIXED BEARING AT PIER
(Girders 3 thru 12)



SECTION G-G

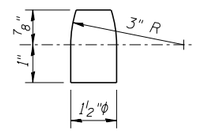
ELEVATION

FIXED BEARING AT ABUTMENT

FILLER PLATE SCHEDULE
(In addition to adjustment shims, see General Notes)
Cost Included with Structural Steel

Abutment	Girder	Plate Thickness t
West	7	5/8"
East	7	3/8"

Fill plates to be the same horizontal dimensions as the bottom bearing plates.



PINTLE

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Anchor Bolts, 1"	Each	56
Anchor Bolts, 1 1/2"	Each	20

NOTES:

1. Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified.
2. Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
3. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
4. Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
5. Steel members required for bearing assembly shall be included in the cost of structural steel.

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engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10056

FILE NAME = 0900169_68620_32_stdt3.dgn	USER NAME = mbecker	DESIGNED - MFB/DTS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GIRDER DETAILS 3 OF 4 STRUCTURE NO. 090-0169	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - MRB/SLD/AAY	REVISED -			74	90-[14R;(14HB-4,14,14HVB)BR]	TAZEWELL	2433	2008
	PLOT SCALE =	DRAWN - PRT	REVISED -					CONTRACT NO. 68620		
	PLOT DATE = 7/16/2012	CHECKED - MRB/SLD	REVISED -		SHEET NO. SC32 OF SC63 SHEETS			ILLINOIS FED. AID PROJECT		

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