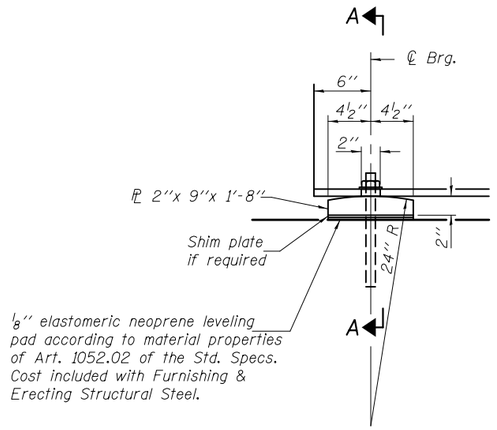
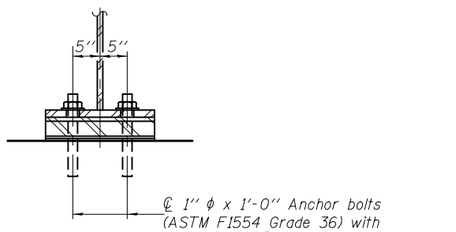
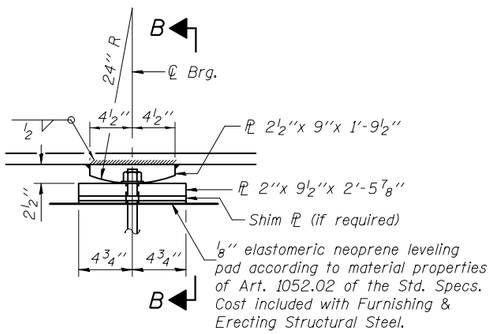


ELEVATION AT ABUTMENT

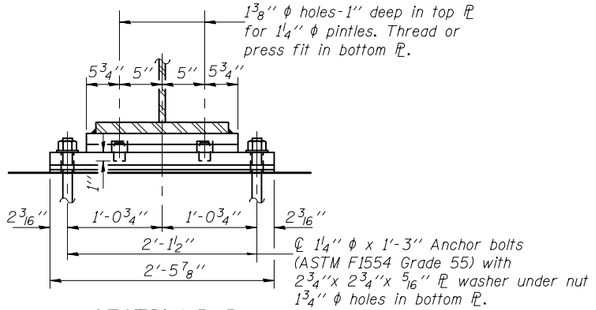


SECTION A-A

FIXED BEARING
(12 Required)

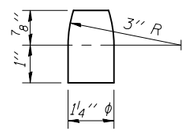


ELEVATION AT PIER



SECTION B-B

FIXED BEARING
(6 Required)



PINTLE

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in^4)	85807	114486	66491
$I_c(n)$	(in^4)	154636	189778	124272
$I_c(3n)$	(in^4)	116882	146924	93597
$I_c(cr)$	(in^4)	———	124743	———
S_s	(in^3)	2482	3230	1847
$S_c(n)$	(in^3)	3004		2312
$S_c(3n)$	(in^3)	2769		2111
$S_c(cr)$	(in^3)	———	3327	———
DC1	(k/′)	0.975	1.09	0.931
M_{DC1}	(′k)	2923	4162	691
DC2	(k/′)	0.15	0.15	0.15
M_{DC2}	(′k)	442	624	124
DW	(k/′)	0.288	0.288	0.288
M_{DW}	(′k)	849	1198	238
M_{L+IM}	(′k)	2562	2629	1802
M_u (Strength I)	(′k)	9963	12380	4529
$\phi_f M_n$	(′k)	13644	———	11565
f_s DC1	(ksi)	14.13	15.46	4.49
f_s DC2	(ksi)	1.92	2.25	0.70
f_s DW	(ksi)	3.68	4.32	1.35
f_s (L+IM)	(ksi)	10.23	9.48	9.35
f_s (Service II)	(ksi)	33.03	34.36	18.71
$0.95R_hF_{yf}$	(ksi)	47.50	47.50	47.50
f_s (Total)(Strength I)	(ksi)	43.49	45.22	24.89
$\phi_f F_n$	(ksi)	———	50.00	———
V_f	(k)	29.58	27.22	28.72

INTERIOR GIRDER REACTION TABLE				
		W. Abut.	Pier	E. Abut.
R_{DC1}	(k)	76.4	223.8	39.1
R_{DC2}	(k)	11.5	33.0	6.5
R_{DW}	(k)	22.1	63.4	12.4
R_{L+IM}	(k)	102.3	188.0	83.7
R_{Total}	(k)	212.3	508.2	141.7

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 (superimposed) 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 load 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).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_s(L+IM)$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

V_f: Maximum factored shear range in span computed according to Article 6.10.10.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

All bearing plates and pintles shall conform to the requirements of AASHTO M270 Grade 50.

Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

*TOP OF WEB ELEVATIONS

Location	℄ Brg. W. Abut.	℄ Splice 1	℄ Brg. Pier	℄ Splice 2	℄ Brg. E. Abut.
Girder 1	628.57	627.55	626.65	626.09	625.33
Girder 2	628.64	627.62	626.72	626.16	625.40
Girder 3	628.69	627.68	626.77	626.21	625.46
Girder 4	628.67	627.65	626.74	626.18	625.42
Girder 5	628.55	627.53	626.62	626.06	625.30
Girder 6	628.41	627.39	626.49	625.93	625.17

*For fabrication use only.

SHIM PLATE TABLE

Location	W. Abut.	Pier	E. Abut.
Girder 3	5/8″	5/8″	3/4″
Girder 4	3/8″	1/4″	1/4″

DESIGNED -	Justin T. Belue	EXAMINED	
CHECKED -	David H. Richter	PASSED	
DRAWN -	h.t. duong	DATE -	OCTOBER 16, 2014
CHECKED -	JTB/DHR	REVISED	___
		REVISED	___

ACTING ENGINEER OF BRIDGE DESIGN

ACTING ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
STUCTURE NO. 015-0076
SHEET NO. 19 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	36
		CONTRACT NO. 74350		
	ILLINOIS FED. AID PROJECT			