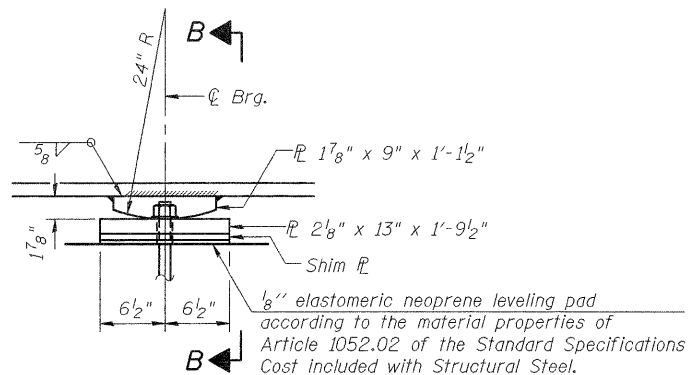
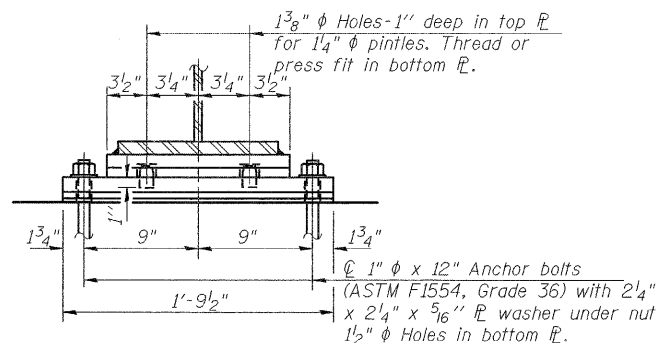


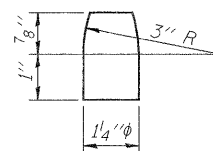
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION AT PIER



SECTION B-B



PINTLE

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). 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.

Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

FIXED BEARING

14 Required

INTERIOR GIRDER MOMENT TABLE			
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or 2 / 0.5 Span 2
I_s	(in ⁴)	12100	7800
$I_c(n)$	(in ⁴)	28752	20768
$I_c(3n)$	(in ⁴)	20629	15079
S_s	(in ³)	664	439
$S_c(n)$	(in ³)	935	648
$S_c(3n)$	(in ³)	834	581
DC1	(k/ft)	0.871	0.830
M _{DC1}	(k)	213.8	378.5
DC2	(k/ft)	0.128	0.128
M _{DC2}	(k)	36.6	76.6
DW	(k/ft)	0.285	0.285
M _{DW}	(k)	81.5	170.4
M _{ℓ + IM}	(k)	791.2	922.0
M _u (Strength I)	(k)	1820.0	2439.0
φ _r M _n , φ _r M _{nc}	(k)	4578	3149
f _s DC1	(ksi)	3.86	10.35
f _s DC2	(ksi)	0.47	1.42
f _s DW	(ksi)	1.17	3.52
f _s 1.3(ℓ + IM)	(ksi)	13.2	22.2
f _s (Service II)	(ksi)	18.7	37.5
V _r	(k)	25.7	21.5

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 (in⁴ and in³).

$I_c(n), S_c(n)$: 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) due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: 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) due to long-term composite (superimposed) dead loads (in⁴ and in³).

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}

φ_rM_n: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

φ_rM_{nc}: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).

f_s (Service II): Sum of stresses as computed from the moments below (ksi).

M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{ℓ + IM}

V_r: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

INTERIOR GIRDER REACTION TABLE HL93 LOADING		
	Abut.	Pier
R _{DC1}	(k) 19.7	82.4
R _{DC2}	(k) 3.1	12.2
R _{DW}	(k) 6.9	27.3
R _{ℓ + IM}	(k) 69.6	134.9
R _{Total}	(k) 99.3	256.8

DESIGNED	DB
CHECKED	RS
DRAWN	ER
CHECKED	WWH

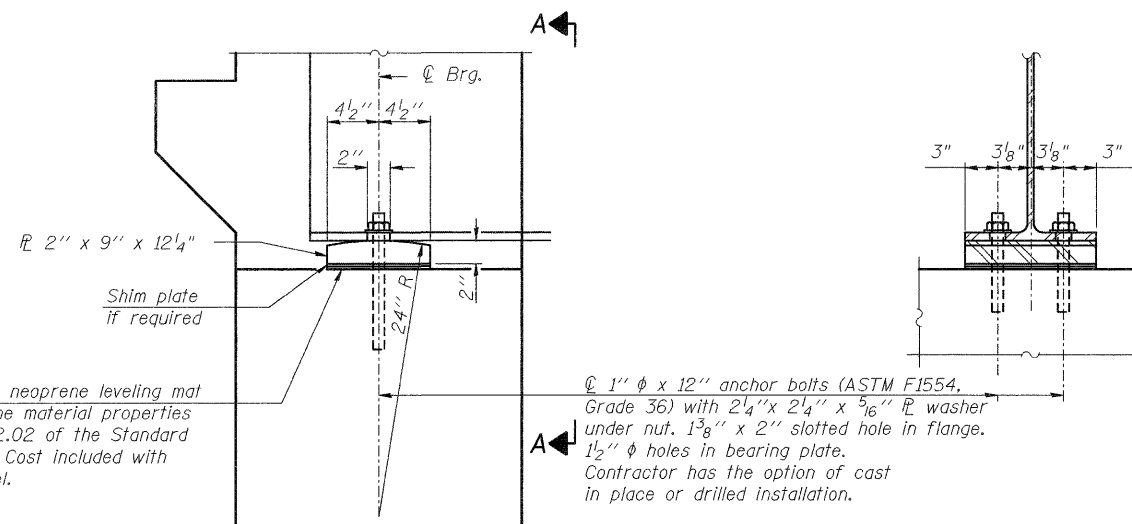


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SECTION A-A

BEARING AT INTEGRAL ABUTMENTS

14 Required

BEARING DETAILS
ILLINOIS ROUTE 3 OVER
PIASA CREEK
F.A.U. ROUTE 8956 SEC 59BR-1
MADISON COUNTY
STATION 638+11.00
STRUCTURE NO. 060-0343

SHEET NO. 15 28 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	8956	59BR-1	MADISON		44
STRUCTURE NO. 060-0343		CONTRACT NO. 76B18			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			