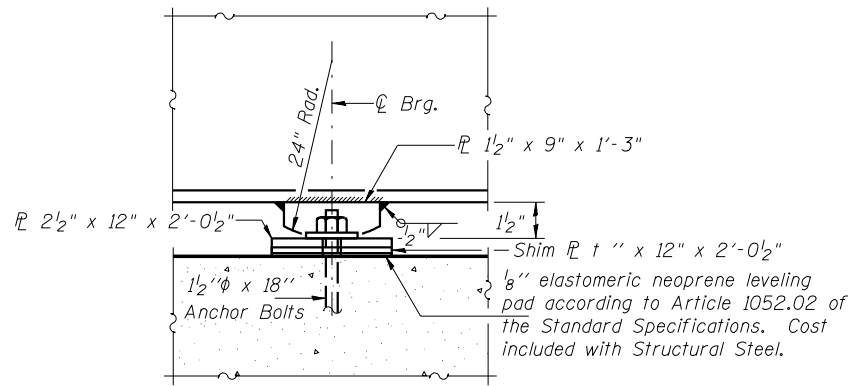
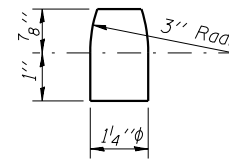


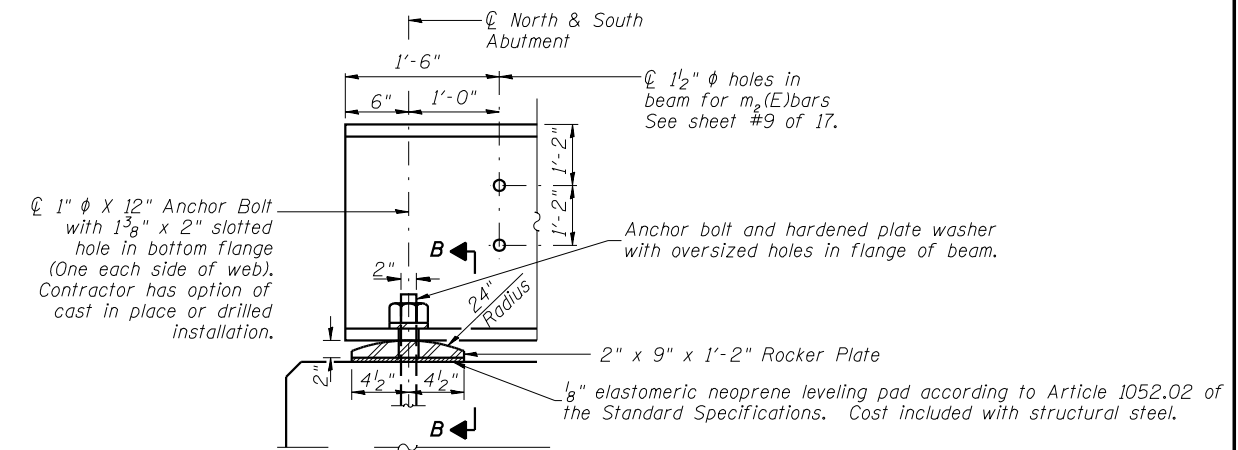
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	★	CHAMPAIGN	122	59
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
★ (10-92-8HB-1)BR				



**ELEVATION**

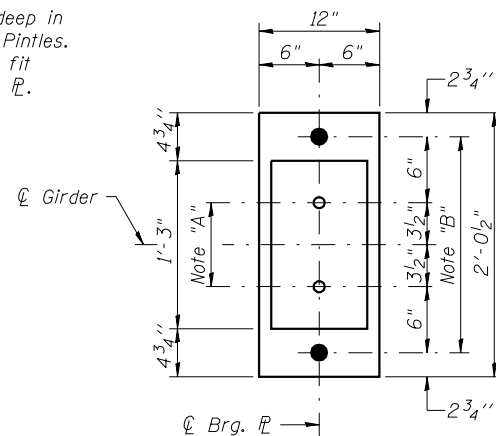


**PINTLE**



**ELEVATION**

Note "A"  
1 3/8" φ Holes-1" deep in top flange for 1 1/4" φ Pintles. Thread or press fit pintles in bottom flange.



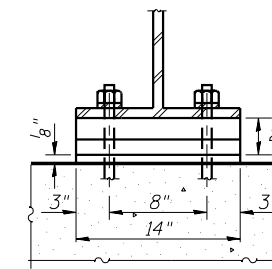
**PLAN AT PIER**

Note "B"  
2" φ Holes for 1 1/2" φ Anchor Bolts-3" x 3" x 5/16" flange washer under nut.

	0.4 Sp. 1 & 0.6 Sp. 2	Pier
$I_s$	(in <sup>4</sup> ) 15587	37778
$I_{c(n)}$	(in <sup>4</sup> ) 40850	
$I_{c(3n)}$	(in <sup>4</sup> ) 29241	
$S_s$	(in <sup>3</sup> ) 816	1608
$S_{c(n)}$	(in <sup>3</sup> ) 1126	
$S_{c(3n)}$	(in <sup>3</sup> ) 1028	
$Z$	(in <sup>3</sup> )	
DC1	(k/ft) 0.915	1.087
M DC1	(k-ft) 629	1786
DC2	(k/ft) 0.137	0.137
M DC2	(k-ft) 106	217
DW	(k/ft) 0.333	0.333
M DW	(k-ft) 258	526
M LL	(k-ft) 1194	1097
M Imp	(k-ft) 394	395
M LL+Imp	(k-ft) 1588	1592
Ma (Strength I)	(k-ft) 4085	6079
Mr	(k-ft) 5785	
fs DC1	(ksi) 9.3	13.3
fs DC2	(ksi) 1.2	1.6
fs DW	(ksi) 3.0	3.9
fs 1.3(LL+I)	(ksi) 22.0	15.4
fs (Ser II)	(ksi) 35.5	34.2
fs (Total) (Strength I)	(ksi) 45.2	
Vsr	(k) 22.8	

	Abutment	Pier
$R_{DC1}$	(k) 34.4	143.3
$R_{DC2+DW}$	(k) 18.6	64.6
$R_{LL}$	(k) 59.6	114.5
$R_{Imp}$	(k) 19.7	37.8
$R$ (Total)	(k) 132.3	360.2

	Abutment	Pier
$R_{DL}$	(k) 53.1	207.7
$R_{LL}$	(k) 43.4	75.6
$R_{Imp}$	(k) 9.3	11.1
$R$ (Total)	(k) 105.8	294.4



**SECTION B-B**

**END OF GIRDER AT ABUTMENTS**

$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $f_s$  due to non-composite loads.

$I_{c(n)}$  and  $S_{c(n)}$  are the moment of inertia and section modulus of the composite section used in computing  $f_s$  due to short-term composite loads.

$I_{c(3n)}$  and  $S_{c(3n)}$  are the moment of inertia and section modulus of the composite section used in computing  $f_s$  due to long-term composite loads.

$V_{sr}$  is the maximum of 0.75 (LL+IM) shear range in span.  $Z$  is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

$Ma$  (Strength I) = 1.25 M(DC1+DC2) + 1.5 DW + 1.75 M(LL+Imp)

$Mr$  is the Full Plastic Moment Capacity computed in accordance with AASHTO 6.10.3.1.3 and 6.10.4.2.2

$f_s$  (Service II) is the sum of the stresses due to DC1 + DC2 + DW + 1.3 (LL+Imp).

$f_s$  (Total) (Non-compact section) is the sum of the stresses due to 1.25 (DC1 + DC2) + 1.5 DW + 1.75 (LL+Imp).

DC1 is the dead load acting on non-composite section.

DC2 is the dead load acting on the long-term composite section.

DW is the dead load acting on long-term composite section due to wearing surface.

Note: All Steel plates shown on this sheet shall be AASHTO M270 Grade 50.

REVISIONS	
NAME	DATE

**LIN ENGINEERING, LTD.**  
20 N. Chestnut  
Chatham, Illinois 62629  
(217) 483-4668  
FAX (217) 483-4706  
Designed By: MTH  
Checked By: STD  
Drawn By: JMD  
Date: 11/02  
File: 0100277.DGN

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**BEARING DETAILS**  
FAS RTE 518 (IL 49S) & FAP RTE 836 (C.H.22)  
OVER FAI RTE 74 (I-74)  
SECTION (10-92-8HB-1) BR  
CHAMPAIGN COUNTY  
STA. 1000+88.67 (I-74)  
STA. 50+00.00 (IL 49S & C.H. 22)  
STRUCTURE NO. 010-0277