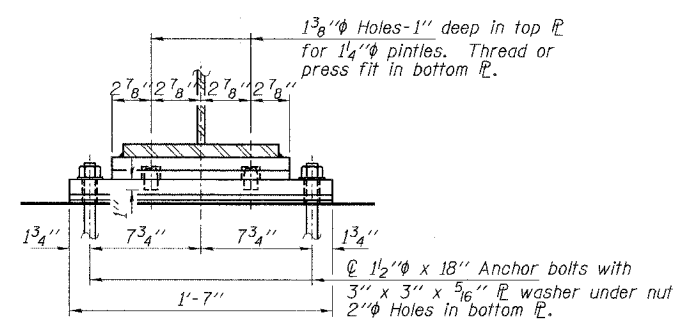
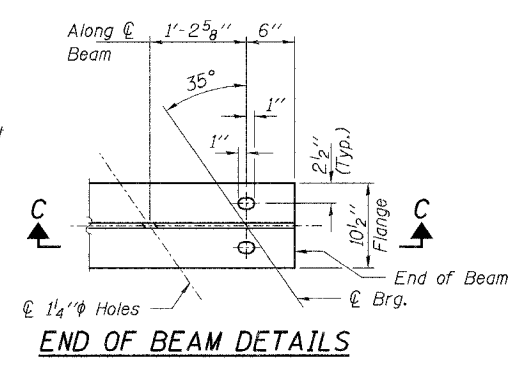


**ELEVATION AT PIER**



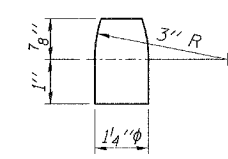
**SECTION C-C**



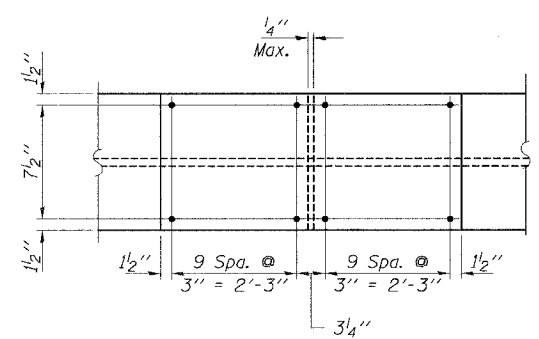
**END OF BEAM DETAILS**

		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
$I_s$	(in <sup>4</sup> )	4,470	4,470	4,470	4,470	4,470
$I_c$ (n)	(in <sup>4</sup> )	12,987		12,987		12,987
$I_c$ (3n)	(in <sup>4</sup> )	9,739		9,739		9,739
$S_s$	(in <sup>3</sup> )	299	299	299	299	299
$S_c$ (n)	(in <sup>3</sup> )	457		457		457
$S_c$ (3n)	(in <sup>3</sup> )	417		417		417
$Z$	(in <sup>3</sup> )					
$\phi$	(k/ft.)	0.88	1.23	0.88	1.23	0.88
$M\phi$	(k/ft.)	124	296	113.8	439.3	244.2
$s\phi$	(k/ft.)	0.35		0.35		0.35
$M_s\phi$	(k)	55.5		70.3		109.7
$M\phi$	(k)	255.0	198.0	292	236.8	338.2
$M$ (Imp)	(k)	68.5	55.5	78.8	64.0	91.6
$S_3[M\phi + M(\text{Imp})]$	(k)	538.3	422.5	631.0	501.33	716.33
$M_a$	(k)	933	934	1,060	1,222.8	1,391.3
$M_u$	(k)	2,170	1,246	2,170	1,246	2,170
$f_s\phi$ non-comp (k.s.i.)		5.0	11.9	4.57	17.6	9.8
$f_s\phi$ (comp) (k.s.i.)		1.6		1.85		2.9
$f_s\phi_3$ (k + Imp) (k.s.i.)		14.2	17.0	17.8	14.4	18.8
$f_s$ (Overload) (k.s.i.)		20.8	28.9	24.2	32.0	31.5
$f_s$ (Total) (k.s.i.)		27	37.6	39.8	41.6	41.0
$VR$	(k)	40.4		42.6		43.8

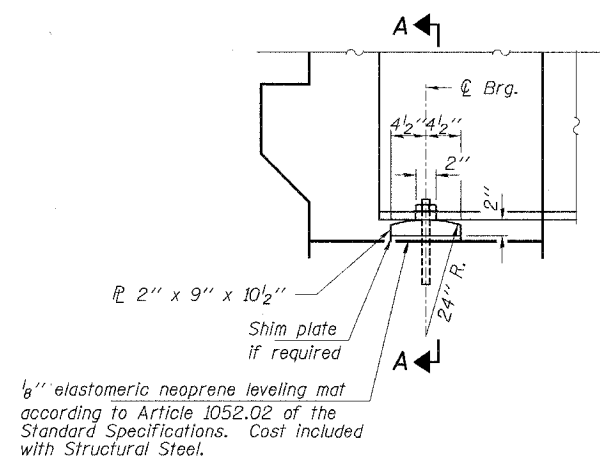
**FIXED BEARING**



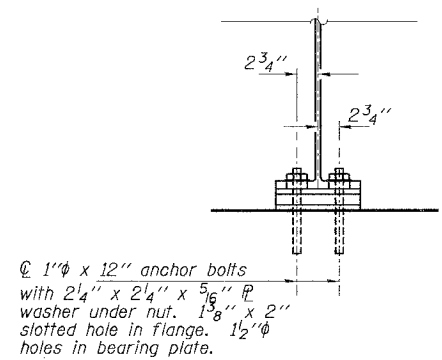
**PINTLE**



**SECTION B-B**



**ELEVATION AT ABUTMENT**



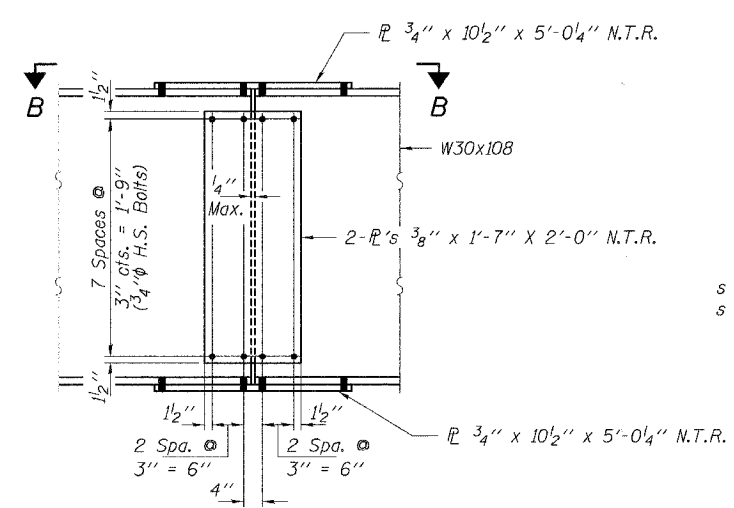
**SECTION A-A**

		N. Abutment	Pier 1	Pier 1	N. Abutment
$R\phi$	(K)	21.0	68.6	83.3	29.5
$R\phi$	(K)	28.3	45.8	49.5	31.0
$R$ Imp.	(K)	8.2	12.8	13.4	8.4
$R$ (Total)	(K)	57.6	127.2	146.2	68.9

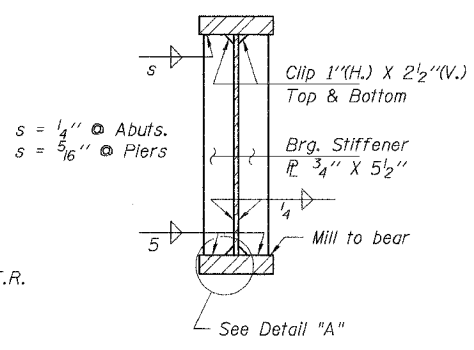
$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $f_s$  (Total & Overload).  
 $I_c(n)$  and  $S_c(3n)$  are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.  
 $I_c(3n)$  and  $S_c(3n)$  are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (See ASSHTO 10.38).  
 $VR$  is the maximum Live Load + Impact shear range within the composite portion of the span.  
 $Z$  is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite area.  
The Plastic Moment capacity ( $M_u$ ) is computed according to AASHTO 10.48.1 & 10.50.1.1.  
 $f_s$  (Total) is the sum of the stresses due to  $1.3[M\phi + M_s\phi + 5_3(M\phi + M(\text{Imp}))]$ .  
 $f_s$  (Overload) is the sum of the stresses due to  $M\phi + M_s\phi + 5_3(M\phi + M(\text{Imp}))$ .  
 $M\phi$  - Moment due to dead loads on non-composite section.  
 $M\phi$  - Moment due to dead loads on composite section.  
 $M\phi$  - Moment due to live load on non-composite or composite section.  
 $M(\text{Imp})$  - Moment due to live load impact on non-composite or composite section.  
 $M_a$  (Applied Moment) =  $1.3[M\phi + M_s\phi + 5_3(M\phi + M(\text{Imp}))]$ .

**BEARING AT ABUTMENT**  
(12 Required)

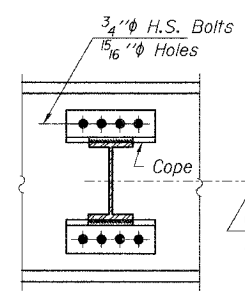
Notes:  
Anchor bolts at bearings may be built into the masonry.  
See sheet 26 for Anchor Bolt installation.



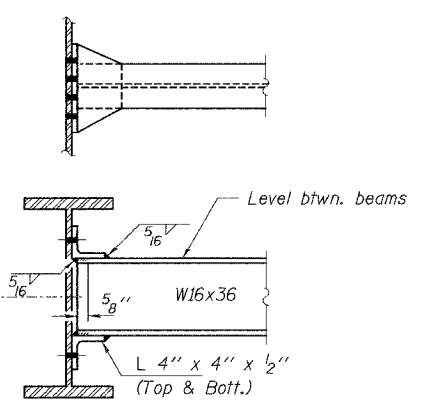
**SPLICE**



**SECTION AT ABUTS. & PIERS**



**DIAPHRAGM D**  
54 Required



**DETAIL \"A\"**

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618-790-4637  
Date: 11/15/05  
DESIGNED: P.S.L. CHECKED: S.W.M. DRAWN: D.B.

**STRUCTURAL STEEL**  
F.A.U. 6385 / C.H. 70 OVER SUGAR CREEK  
SECTION 00-00182-01-BR  
McLEAN COUNTY  
STRUCTURE 057-5306 / STATION 820+21