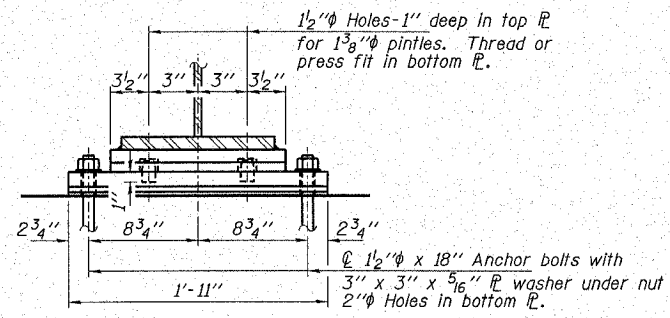
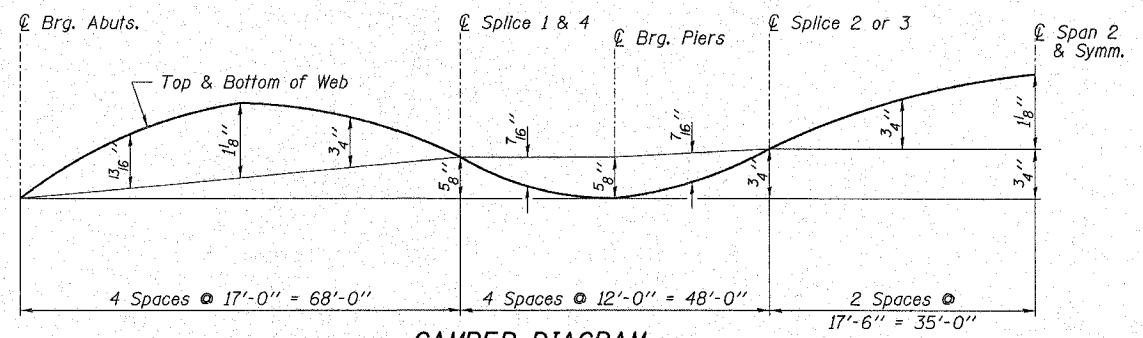


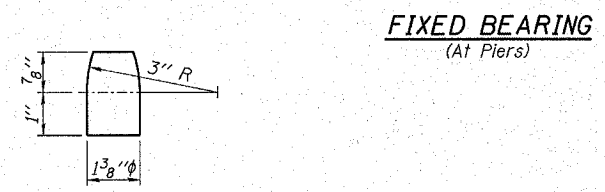
**ELEVATION AT PIER**



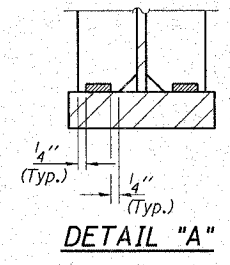
**SECTION C-C**



**CAMBER DIAGRAM**



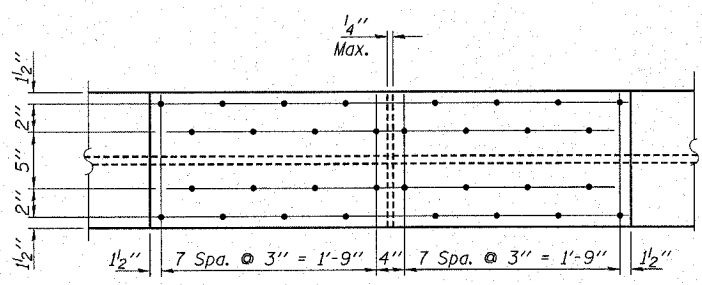
**PINTLE**  
(50 ksi)



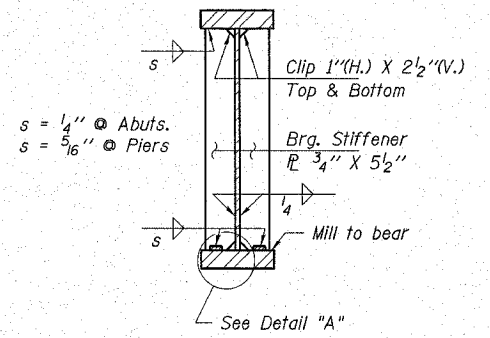
**DETAIL "A"**

	0.4 Sp. 1 & 3	Pier 1 & 2	0.5 Sp. 2
$I_s$	(in <sup>4</sup> ) 11,312	18,613	11,312
$I_c$ (n)	(in <sup>4</sup> ) 28,740		28,740
$I_c$ (3n)	(in <sup>4</sup> ) 21,333		21,333
$S_s$	(in <sup>3</sup> ) 520	832	520
$S_c$ (n)	(in <sup>3</sup> ) 747		747
$S_c$ (3n)	(in <sup>3</sup> ) 679		679
$Z$	(in <sup>3</sup> )		
$\bar{y}$	(k/ft.) 0.844	1.014	0.844
$M_D$	(k/ft.) 442	1,220	432
$s_D$	(k/ft.) 0.170		0.170
$M_s D$	(k) 100		113
$M_L$	(k) 725	619	783
$M$ (Imp)	(k) 167	136	164
$3[M_L + M(\text{Imp})]$	(k) 1,486	1,259	1,579
$M_a$	(k) 2,637	3,222	2,761
$M_u$	(k) 3,956		3,956
$f_s D$ non-comp (k.s.i.)	10.2	17.6	10.0
$f_s D$ (comp) (k.s.i.)	1.8		2.0
$f_s 5_3$ (k+Imp) (k.s.i.)	23.9	18.2	25.4
$f_s$ (Overload) (k.s.i.)	35.9	35.8	37.4
$f_s$ (Total) (k.s.i.)		46.5	
VR	(k) 51.2		50.7

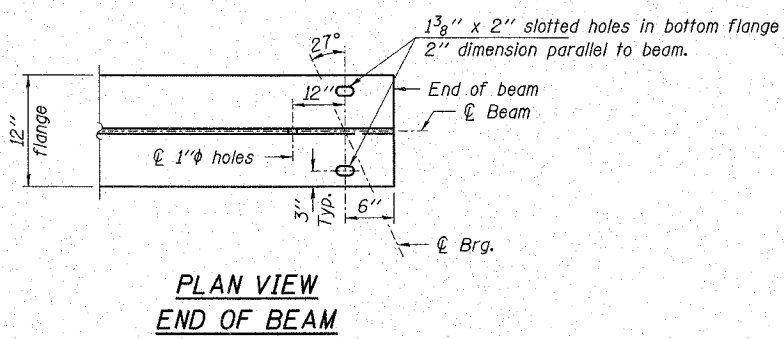
	N. Abutment	Pier 1
$R_D$	(K) 33.3	119.7
$R_L$	(K) 39.4	64.4
$R$ Imp.	(K) 9.1	14.0
$R$ (Total)	(K) 81.8	198.1



**SECTION B-B**

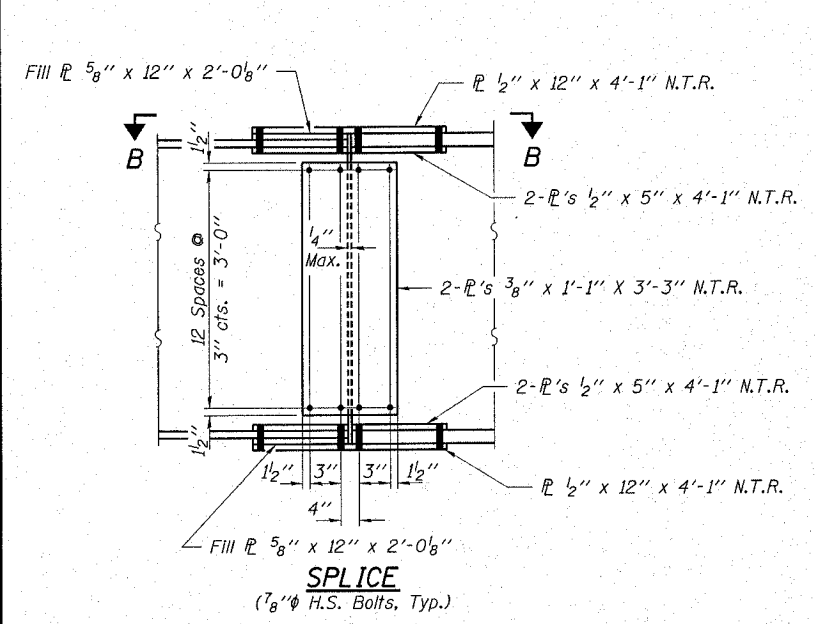


**SECTION AT PIERS**

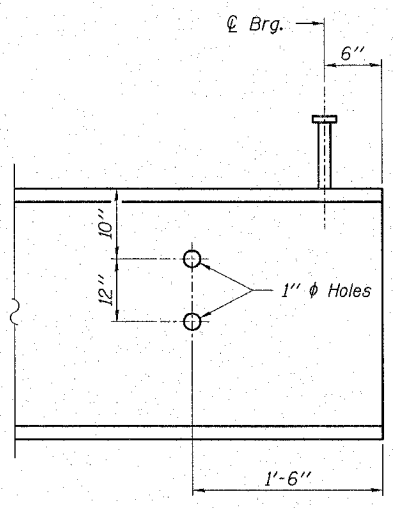


**PLAN VIEW  
END OF BEAM**

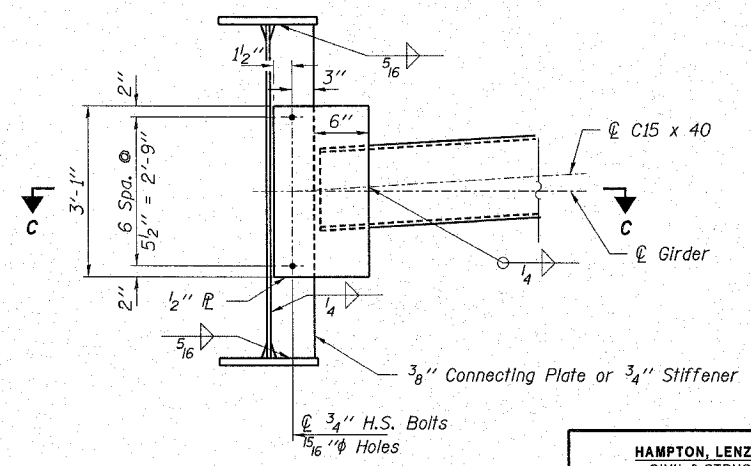
Note:  
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



**SPLICE**  
(7/8 inch H.S. Bolts, Typ.)



**ELEVATION VIEW  
END OF BEAM**



**DIAPHRAGM D**  
54 Required

$I_s$  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  $1.3[M_D + M_s D + 5_3(M_L + M(\text{Imp}))]$ .  
 $f_s$  (Overload) is the sum of the stresses due to  $M_D + M_s D + 5_3(M_L + M(\text{Imp}))$ .  
 $M_D$  - Moment due to dead loads on non-composite section.  
 $M_s D$  - Moment due to dead loads on composite section.  
 $M_L$  - 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) =  $1.3[M_D + M_s D + 5_3(M_L + M(\text{Imp}))]$ .

**HAMPTON, LENZINI & RENWICK, INC.**  
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(217) 548-3400

**ELGIN • SPRINGFIELD**

PROJECT NUMBER: 12-98-0013-1 DATE: 01/18/07  
DESIGNED: M.G.B. CHECKED: S.W.M. DRAWN: D.B.

**STRUCTURAL STEEL**

F.A.S. ROUTE 882  
SECTION 84-00059-00-BR  
WHITE COUNTY

STRUCTURE NO. 097-3186 / STATION 9+40