

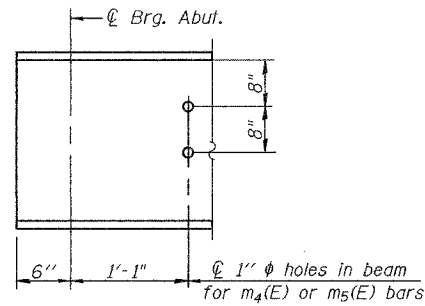
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. 10 18 SHEETS
F.A.U. 9251	28-3 BR-1	ST. CLAIR	101	33	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			
Contract #76394					

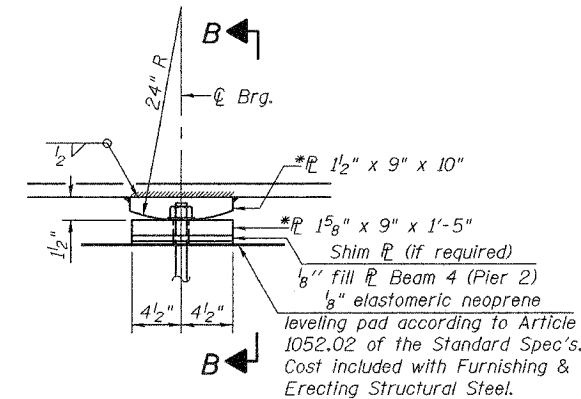
		0.4 Sp. 1 & 0.6 Sp. 3	Piers	0.5 Sp. 2
$I_s$	(in <sup>4</sup> )	2100	2100	2100
$I_{c(m)}$	(in <sup>4</sup> )	6777	—	6777
$I_{c(3n)}$	(in <sup>4</sup> )	5092	—	5092
$S_s$	(in <sup>3</sup> )	176	176	176
$S_{c(m)}$	(in <sup>3</sup> )	282	—	282
$S_{c(3n)}$	(in <sup>3</sup> )	256	—	256
DC1	(K/ft.)	0.705	0.705	0.705
M DC1	(K)	93	152	69
DC2	(K/ft.)	0.150	0.150	0.150
M DC2	(K)	23	24	23
DW	(K/ft.)	0.325	0.325	0.325
M DW	(K)	50	52	50
M <sub>4</sub> +Imp	(K)	393	209	396
M <sub>a</sub> (Strength I)	(K)	908	664	883
M <sub>r</sub>	(K)	1423	—	1423
f <sub>sDC1</sub>	(k.s.i.)	6.3	10.4	4.7
f <sub>sDC2</sub>	(k.s.i.)	1.1	1.6	1.1
f <sub>sDW</sub>	(k.s.i.)	2.3	3.5	2.3
f <sub>s(L+I)</sub>	(k.s.i.)	21.7	18.5	21.9
f <sub>s(SER II)</sub>	(k.s.i.)	31.4	34.0	30.0
f <sub>s</sub> (Total)(Strength I)(k.s.i.)		—	45.2	—
V <sub>sr</sub>	(K)	21.3	—	16.0

	Abuts.	Piers
R DC1 (K)	11.5	36.2
R DC2+DW (K)	8.3	23.8
R <sub>4</sub> (K)	53.4	70.1
R Imp. (K)	14.2	15.3
R (Total) (K)	87.4	145.4

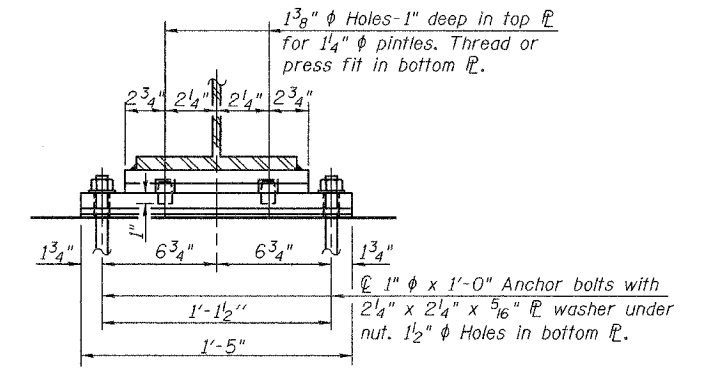
$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $f_s$  due to non-composite loads.  
 $I_{c(m)}$  and  $S_{c(m)}$  are the moment of inertia and section modulus of the composite section used in computing  $f_s$  due to short-term composite loads.  
 $I_{c(3n)}$  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.  
DC1 is the dead load acting on the non-composite section.  
DC2 is the dead load acting on the long-term composite section.  
DW is the dead load acting on the long-term composite section due to wearing surface.  
 $M_a$  (Strength I) = 1.25 M(DC1+DC2) + 1.5M (DW) + 1.75 M(L+Imp).  
 $M_r$  is the full plastic moment capacity computed in accordance with 6.10.3.1.3 and 6.10.4.2.  
 $f_s$  (Service II) is the sum of the stresses due to DC1+DC2+DW+1.3(L+Imp).  
 $f_s$  (Total) (Strength I) (Non-compact section) is the sum of the stresses due to 1.25(DC1+DC2)+1.5DW+1.75(L+Imp).  
 $V_{sr}$  is the maximum shear range in the span 0.75 (L+Imp).



TYP. END OF BEAM ELEVATION



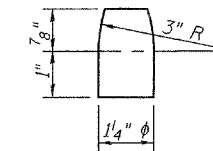
ELEVATION AT PIERS



SECTION B-B

FIXED BEARING

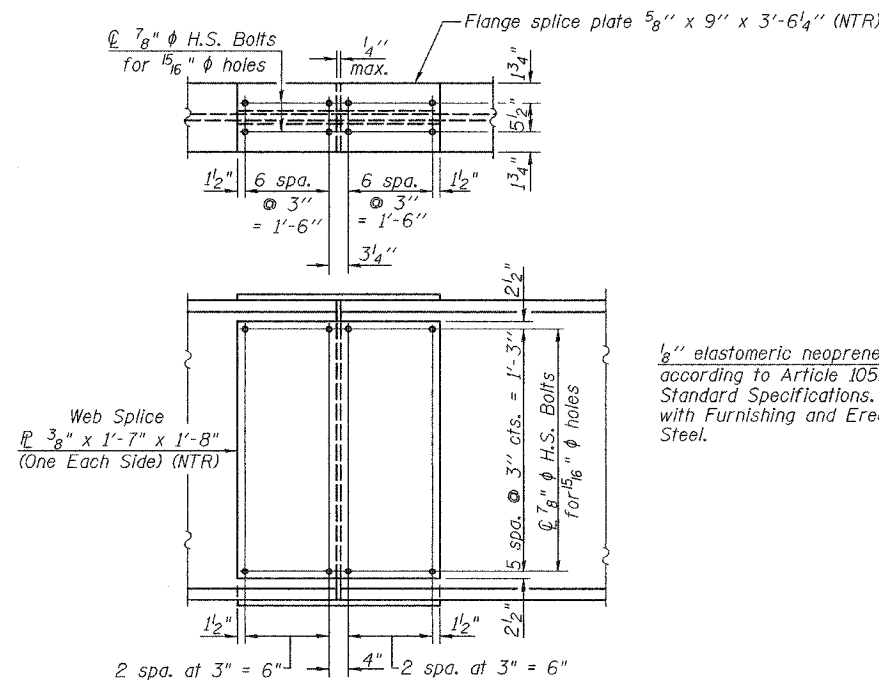
(8 Required Pier 1)  
(8 Required Pier 2)



\*PINTLE

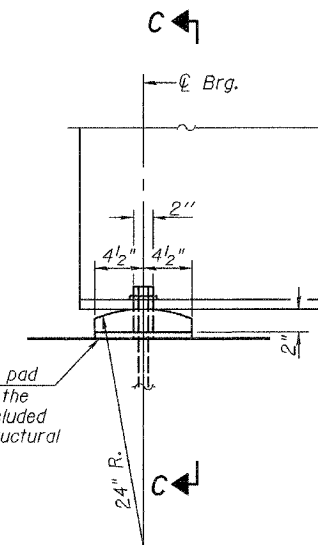
Notes: All splice plates shall be AASHTO M 270 Grade 50.  
"NTR" denotes members to which Notch Toughness Requirements are applicable.  
Anchor Bolts at all bearings may be built into the masonry.

\*All bearing plates and pintles shall be AASHTO M270 Grade 50.

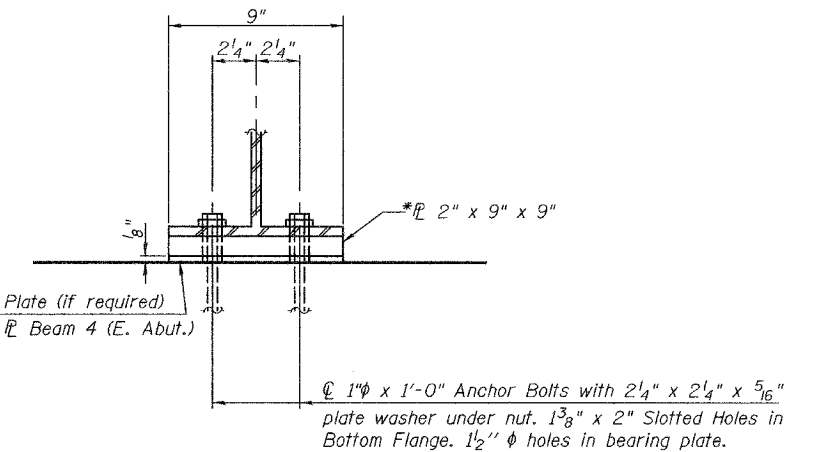


SPlice DETAIL

(16 Required)



ELEVATION AT ABUTMENTS



SECTION C-C

ABUTMENT BEARING

(16 Req'd.)

DESIGNED	Rebecca Tharp
CHECKED	Curt Evoy
DRAWN	R. Sommer
CHECKED	RLT/CME

EXAMINED	March 16, 2006
PASSED	Thomas J. Demagallaki ENGINEER OF BRIDGE DESIGN
	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURAL STEEL DETAILS  
F.A.U. ROUTE 9251 - SECTION 28-3BR-1  
ST. CLAIR COUNTY  
STATION 246+33.80  
STRUCTURE NO. 082-0398