

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

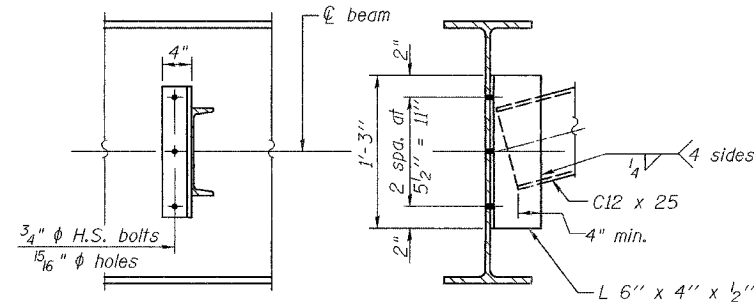
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 1	(8C)B-2	WABASH	36	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract #94783

	0.4 Sp. 1 & 0.6 Sp. 4	Piers 1 or 3	0.5 Sp. 2 & 0.5 Sp. 3	Pier 2
Is	(in <sup>4</sup> ) 4760	4760	4760	4760
Ic (n)	(in <sup>4</sup> ) 12159	4760	12159	4760
Ic (sn)	(in <sup>4</sup> ) 8737	4760	8737	4760
Ss	(in <sup>3</sup> ) 345	345	345	345
Sc (n)	(in <sup>3</sup> ) 500	345	500	345
Sc (sn)	(in <sup>3</sup> ) 447	345	447	345
DC1	(k/ft.) 0.650	0.650	0.650	0.650
M DC1	(k) 240	318	100	193
DC2	(k/ft.) 0.150	0.150	0.150	0.150
M DC2	(k) 60	62	30	43
DW	(k/ft.) 0.260	0.260	0.260	0.260
M DW	(k) 104	108	52	74
M <sub>u</sub> +Imp	(k) 704	419	567	381
Ma (Strength I)	(k) 1763	1370	1233	1073
Mr	(k) 2252		2283	
fs DC1	(k.s.i.) 8.3	11.1	3.5	6.7
fs DC2	(k.s.i.) 1.6	2.2	0.8	1.5
fs DW	(k.s.i.) 2.8	3.8	1.4	2.6
fs 1.3(φ+I)	(k.s.i.) 22.0	18.9	17.7	17.2
fs (Service II)	(k.s.i.) 34.7	35.9	23.4	28.0
fs (Total)(Strength I)	(k.s.i.)	47.7		37.3
Vsr	(k) 22.7		23.1	

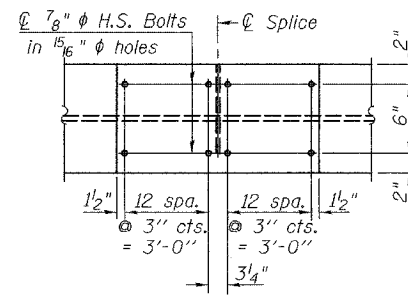
	Abuts.	Piers 1 or 3	Pier 2
R DC1	(k) 17.6	50.2	39.1
R DC2+DW	(k) 11.6	31.0	25.5
R <sub>u</sub>	(k) 49.5	73.1	70.5
R Imp.	(k) 12.3	14.0	13.9
R (Total)	(k) 91.0	168.3	149.0

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs due to non-composite loads.  
Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing fs due to short-term composite loads.  
Ic(sn) and Sc(sn) are the moment of inertia and section modulus of the composite section used in computing fs 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.  
Ma (Strength I)=1.25(MDC1+DC2)+1.5M(DW)+1.75(M<sub>u</sub>+Imp).  
Mr is the full plastic moment capacity computed in accordance with 6.10.3.1.3 and 6.10.4.2.  
fs (Service II) is the sum of the stresses due to DC1+DC2+DW+1.3(φ+Imp).  
fs (Total) (Strength I) (Non-compact section) is the sum of the stresses due to 1.25(DC1+DC2)+1.5DW+1.75(φ+Imp).  
Vsr is the maximum shear range in the span 0.75(φ+Imp).

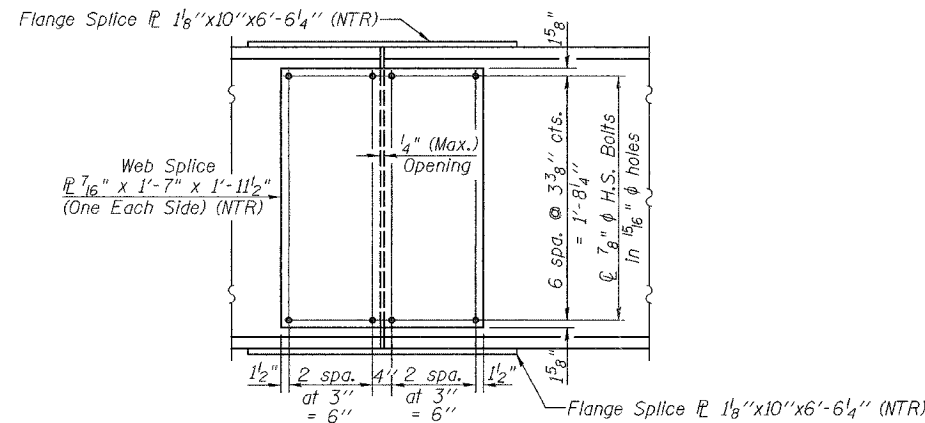


**DIAPHRAGM D**

(55 Required)  
All diaphragm material shall be AASHTO M270 Grade 50W.

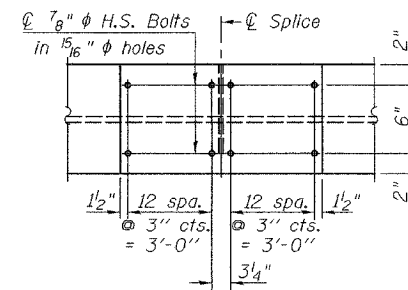


**TOP FLANGE SPLICE**

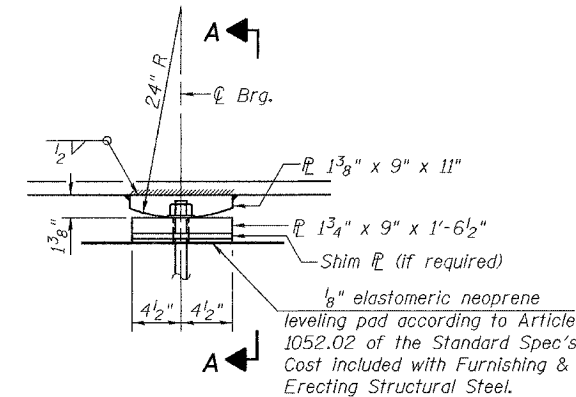


**SPLICE DETAIL**

(24 Required)



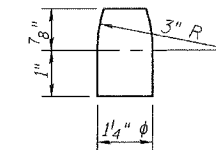
**BOTTOM FLANGE SPLICE**



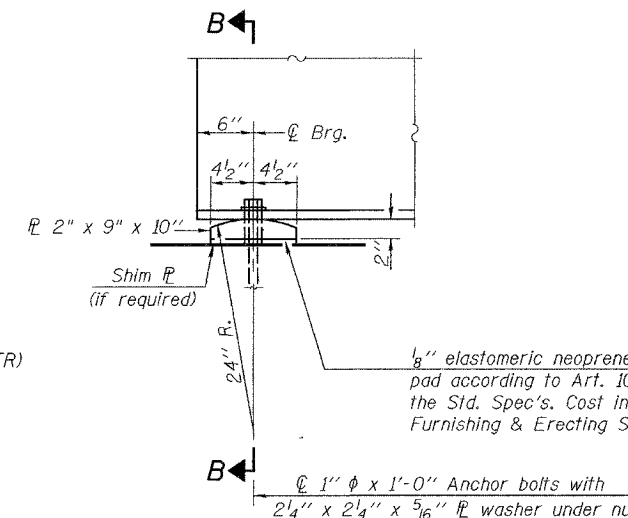
**ELEVATION**

**FIXED BEARINGS AT PIERS**

(18 Required)



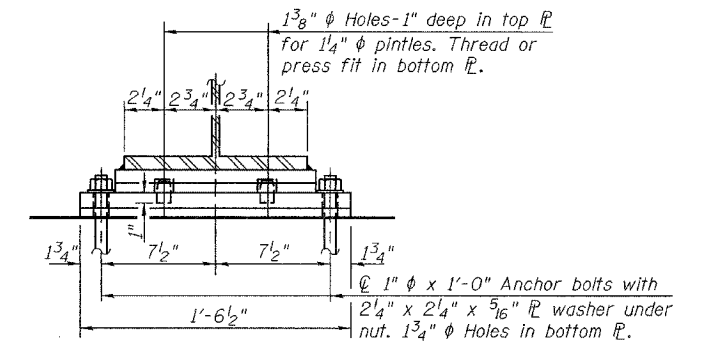
**PINTLE**



**ELEVATION AT ABUTMENTS**

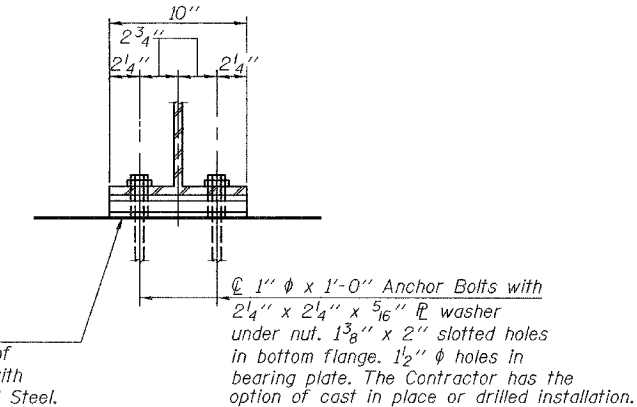
**ABUTMENT BEARING**

(12 Required)



**SECTION A-A**

Note: For Anchor Bolt details, See Sheet 12 of 21.  
All bearing plates and pintles shall be AASHTO M270 Grade 50W.



**SECTION B-B**

DESIGNED	Dewey Coultas
CHECKED	Chi Cheung Chau
DRAWN	R. Sommer
CHECKED	D.H.C./C.C.C.

September 18 2006  
EXAMINED Thomas J. Domagala  
PASSED Ralph E. Anderson

Note: All splice plates shall be AASHTO M 270 Grade 50W.  
"NTR" denotes members to which Notch Toughness Requirements are applicable.  
Two hardened washers shall be required over all oversized holes.

**STRUCTURAL STEEL**  
S.B.I. RT. 1 SEC. (8C)B-2  
WABASH COUNTY  
STATION 204+42.25  
STRUCTURE No. 093-0022