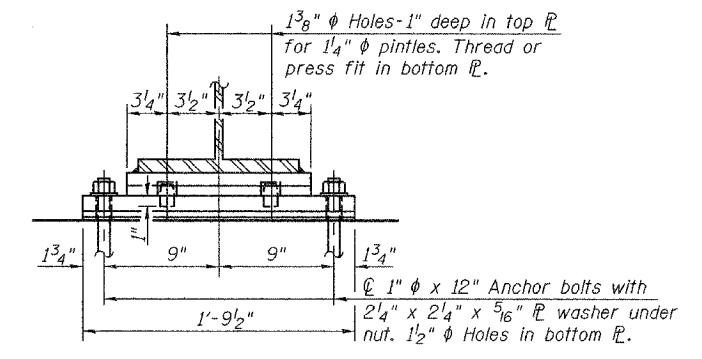
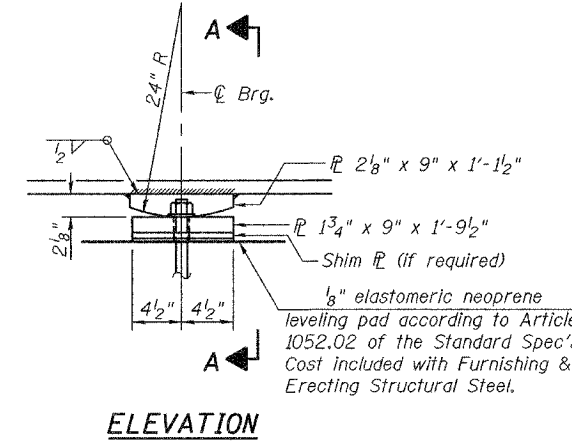


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. 10
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	27	18 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #72760

		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.6 Sp. 4
Is	(in <sup>4</sup> )	5900	5900	5900	5900	5900	5900	5900
Ic (n)	(in <sup>4</sup> )	16062	---	16062	---	16062	---	---
Ic (3n)	(in <sup>4</sup> )	11696	---	11696	---	11696	---	---
Ss	(in <sup>3</sup> )	359	359	359	359	359	359	359
Sc (n)	(in <sup>3</sup> )	538	---	538	---	538	---	---
Sc (3n)	(in <sup>3</sup> )	483	---	483	---	483	---	---
Z	(in <sup>3</sup> )	415	415	415	415	415	415	415
DC1	(k/ft.)	0.711	0.711	0.711	0.711	0.711	0.711	0.711
M DC1	(k)	69.0	181.8	112.4	344.5	222.1	292.7	24.6
DC2	(k/ft.)	0.150	0.150	0.150	0.150	0.150	0.150	0.150
M DC2	(k)	17.5	31.0	35.2	57.0	61.4	48.2	10.6
DW	(k/ft.)	0.300	0.300	0.300	0.300	0.300	0.300	0.300
M DW	(k)	34.9	62.1	70.4	114.1	122.9	96.5	21.2
Mk+Im	(k)	387.8	307.8	562.6	436.7	704.9	392.3	361.2
Ma (Strength I)	(k)	839.0	897.9	1274.5	1437.3	1772.4	1257.4	707.9
Mr	(k)	2599	---	2599	---	2599	---	---
fs DC1	(k.s.i.)	2.31	6.08	3.76	11.52	7.42	9.78	0.82
fs DC2	(k.s.i.)	0.43	1.04	0.87	1.91	1.53	1.61	0.35
fs DW	(k.s.i.)	0.87	2.08	1.74	3.81	3.05	3.23	0.71
fs L3(LL+Im)	(k.s.i.)	11.24	13.38	16.31	18.98	20.44	17.05	15.05
fs (Service II)	(k.s.i.)	14.85	22.58	22.69	36.22	32.44	31.67	17.53
fs (Total)(Strength I)	(k.s.i.)	---	30.03	---	48.05	---	42.03	23.66
Vsr	(k)	19.5	---	25.1	---	25.3	---	19.4



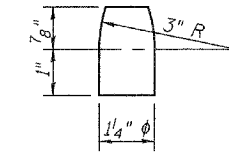
ELEVATION

SECTION A-A

**FIXED BEARINGS AT PIERS**  
(18 Required)

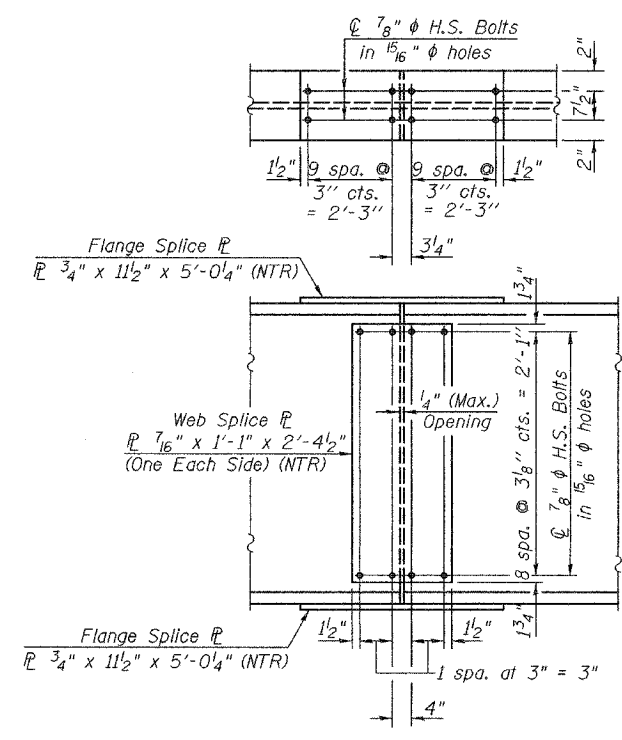
	N. Abut.	Pier 1	Pier 2	Pier 3	S. Abut.
R DC1 (K)	10.0	39.6	54.0	48.7	7.3
R DC2+DW (K)	6.9	24.9	33.7	30.0	5.6
R L (K)	44.4	71.9	80.0	76.4	43.2
R IM (K)	11.9	15.0	15.3	15.4	11.6
R (Total) (K)	73.2	151.4	183.0	170.5	67.7

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(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing fs due to long-term composite loads.  
Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.  
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 + 1.5 M DW + 1.75 M(LL + 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(LL + Imp).  
fs (Total) (Strength I) (Non-Compact Section) is the sum of the stresses due to 1.25(DC1 + DC2) + 1.5DW + 1.75(LL + Imp).  
Vsr is the maximum shear range in the span (0.75 LL + Imp).

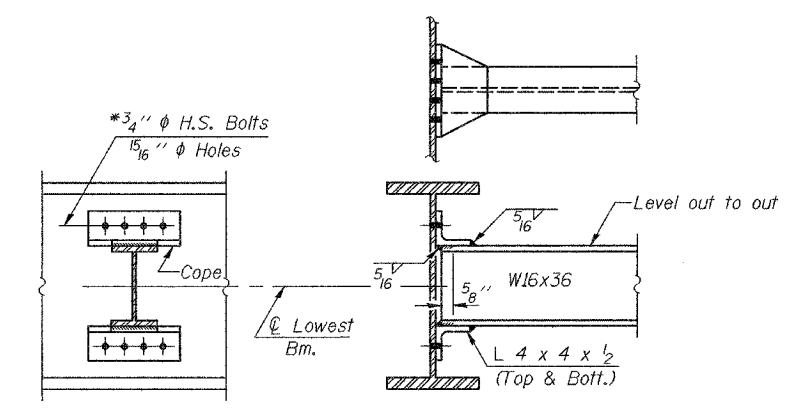


PINTLE

Note: All splice plates shall be AASHTO M 270 Grade 50W.  
"NTR" denotes members to which Notch Toughness Requirements are applicable.  
All bearing plates shall be AASHTO M270 Grade 50W.  
Two hardened washers shall be required over all oversize holes for diaphragms.



SPLICE DETAIL  
(18 Required)



DIAPHRAGM D  
(70 Required)

\*Use 13/16\"/>

DESIGNED Stephen M. Ryan  
CHECKED Chi-Cheung Chau  
DRAWN R. Sommer  
CHECKED SMR/CCC

October 14, 2005  
EXAMINED Thomas J. Domagala  
PASSED Ralph E. Anderson

**STRUCTURAL STEEL DETAILS**  
F.A.S. RTE. 1774-SEC. 113(B-5, B-6)  
LOGAN COUNTY  
STATION 1723+50.00  
STRUCTURE NO. 054-0505