

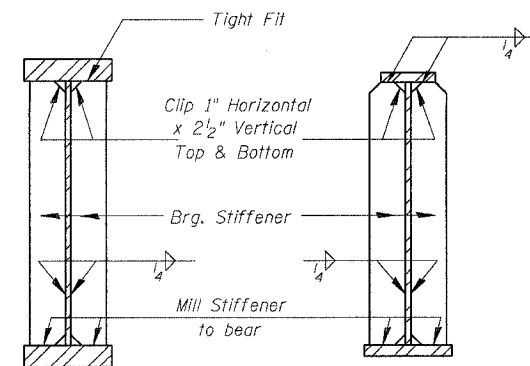
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 13 29 SHEETS
F.A.P. RTE. 774	107BY	EFFINGHAM	344	305	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-					

CONTRACT NO. 94827

**TOP OF WEB ELEVATIONS**

	Girder 1A	Girder 2A	Girder 3A	Girder 4A
⊕ Brg. W. Abut.	541.674	541.541	540.643	540.506
⊕ Splice 1	541.598	541.467	540.570	540.434
⊕ Pier 1	541.590	541.459	540.564	540.428
⊕ Splice 2	541.582	541.450	540.557	540.421
⊕ Pier 2	541.591	541.459	540.569	540.433
⊕ Splice 3	541.593	541.462	540.573	540.437
⊕ Brg. E. Abut.	541.666	541.535	540.649	540.513

For Fabrication Only



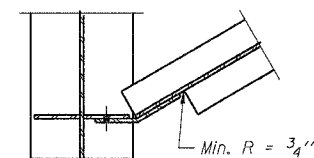
**SECTION AT PIER**

**SECTION AT ABUTMENT**

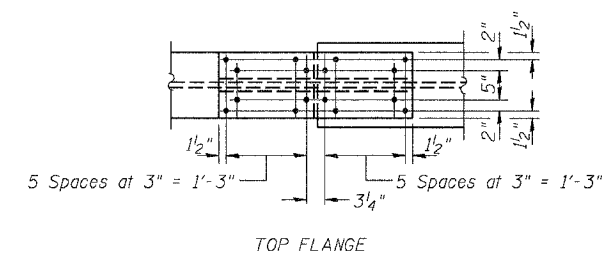
INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 & 0.6 Sp. 3	Piers 1 & 2	0.5 Sp. 2
$I_s$	(in <sup>4</sup> )	20,438	28,079	20,438
$I_c$ (n)	(in <sup>4</sup> )	55,138		55,138
$I_c$ (3n)	(in <sup>4</sup> )	39,415		39,415
$S_s$	(in <sup>3</sup> )	998	1107	998
$S_c$ (n)	(in <sup>3</sup> )	1373		1373
$S_c$ (3n)	(in <sup>3</sup> )	1260		1260
$Z$	(in <sup>3</sup> )		1238	
$\bar{D}$	(k/ft.)	1.073	1.62	1.084
$M\bar{D}$	(k)	494	1242	333
$s\bar{D}$	(k/ft.)	0.520		0.520
$M_s\bar{D}$	(k)	276		247
$M\bar{k}$	(k)	804	557	795
$M$ (Imp)	(k)	194	131	180
$S_2[M\bar{k} + M(\text{Imp})]$	(k)	1663	1147	1625
$M_a$	(k)	3163	3106	2867
$M_u$	(k)	5230	3715	5230
$f_s\bar{D}$ non-comp (k.s.i.)		5.9	13.5	4.0
$f_s\bar{D}$ (comp) (k.s.i.)		2.6		2.4
$f_s\bar{D}_3$ (k.s.i.)		14.5	12.4	14.2
$f_s$ (Overload) (k.s.i.)		23.0	25.9	20.6
$VR$	(k)	53.4		54.6

INTERIOR GIRDER REACTION TABLE			
	Abuts.	Piers 1 & 2	
$R\bar{D}$	(k)	86.8	156.6
$R\bar{k}$	(k)	49.6	72.3
Imp.	(k)	12.0	17.0
$R$ (Total)	(k)	148.4	245.9

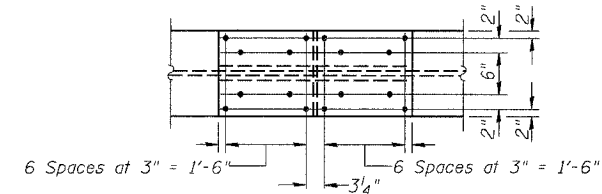
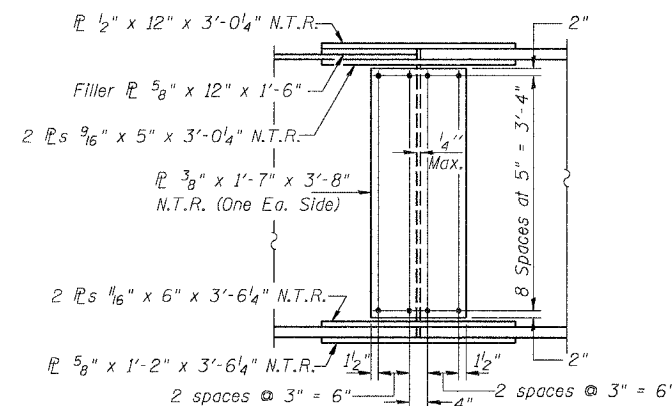
$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $f_s$  (overload)  
 $I_c(n)$  and  $S_c(n)$  are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.  
 $I_c(3n)$  and  $S_c(3n)$  are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)  
 $VR$  is the maximum Live Load + Impact shear range in span.  
 $Z$  is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.  
 $M_a$  (Applied Moment) =  $1.3[M\bar{D} + M_s\bar{D} + S_2(M\bar{k} + M(\text{Imp}))]$ .  
The Plastic Moment capacity ( $M_u$ ) is computed according to AASHTO 10.48.1 and 10.50.1.1.  
 $f_s$  (Overload) is the sum of the stresses due to  $M\bar{D} + M_s\bar{D} + S_2(M\bar{k} + M(\text{Imp}))$ .  
 $R\bar{D}$  includes the weight of the Concrete diaphragm and the dead load reaction from the approach pavement.



**SECTION A-A**

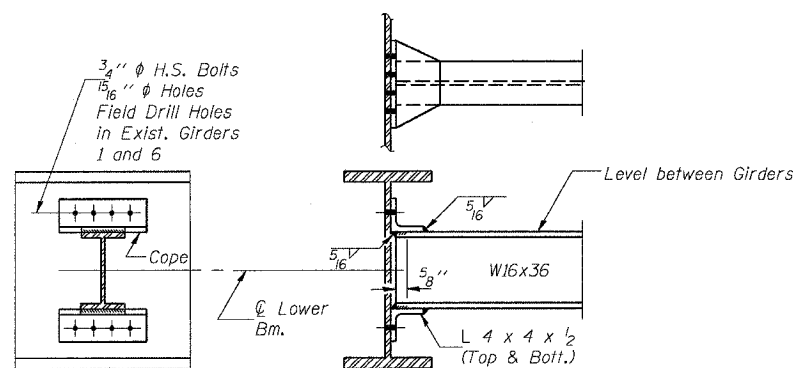


**TOP FLANGE**

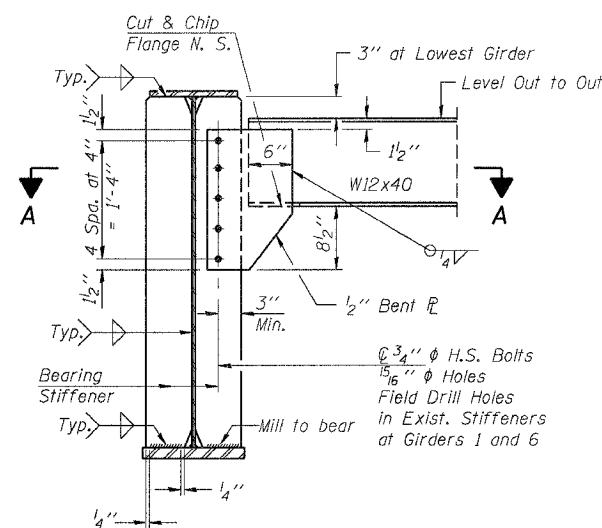


**BOTTOM FLANGE**

**SPLICES**  
(12 Required)



**DIAPHRAGM D & D1**  
Required 24 D & 24 D1



**DIAPHRAGM D2 & D3**  
Required 4 D2 & 4 D3

Note:  
Two hardened washers shall be required over all oversize holes for diaphragms.

SHEET TITLE		STRUCTURAL STEEL	
PROJECT	IL RTE. 32/33 OVER LITTLE WABASH RIVER F.A.P. RTE. 774 SECTION 107BY EFFINGHAM COUNTY STATION 1011+50.17 STRUCTURE NO. 025-0078	PROJECT NO.	02017
DRAWN BY	TFG	CHECKED BY	GJB/MCB
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703		13 OF 29 SHTS	