

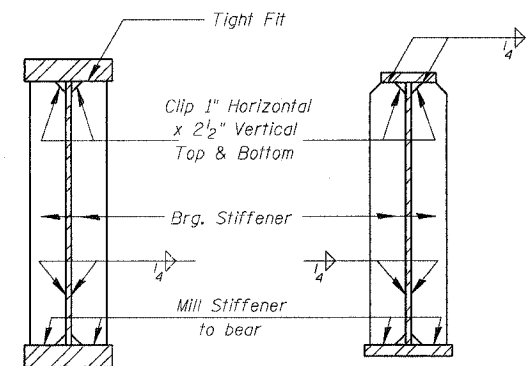
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 13 29 SHEETS
F.A.P. RTE. 774	107BY	EFFINGHAM	344	305	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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

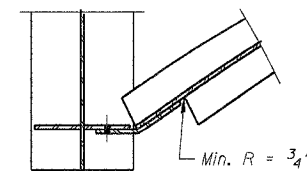
SECTION AT ABUTMENT

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 & 0.6 Sp. 3	Piers 1 & 2	0.5 Sp. 2
I_s	(in ⁴)	20,438	28,079	20,438
I_c (n)	(in ⁴)	55,138		55,138
I_c (3n)	(in ⁴)	39,415		39,415
S_s	(in ³)	998	1107	998
S_c (n)	(in ³)	1373		1373
S_c (3n)	(in ³)	1260		1260
Z	(in ³)		1238	
D	(k/ft.)	1.073	1.62	1.084
M_D	(k)	494	1242	333
s_D	(k/ft.)	0.520		0.520
M_{sD}	(k)	276		247
M_t	(k)	804	557	795
M (Imp)	(k)	194	131	180
$M_3[M_t + M(\text{Imp})]$	(k)	1663	1147	1625
M_a	(k)	3163	3106	2867
M_u	(k)	5230	3715	5230
f_{sD} non-comp (k.s.i.)		5.9	13.5	4.0
f_{sD} (comp) (k.s.i.)		2.6		2.4
f_{s3} (k + Imp) (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

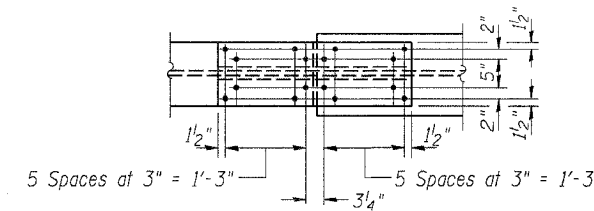
INTERIOR GIRDER REACTION TABLE

	Abut.	Piers 1 & 2
R_D	(k)	86.8
R_t	(k)	49.6
Imp.	(k)	12.0
R (Total)	(k)	148.4

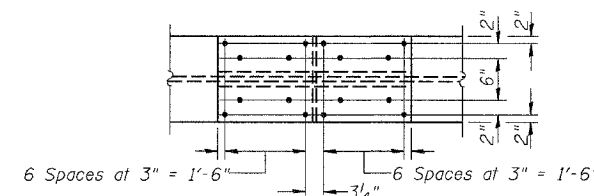
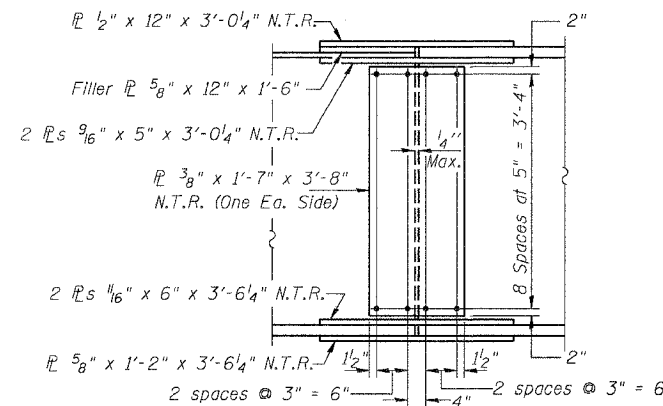
I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (overload).
 $I_c(n)$ and $S_c(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 $I_c(3n)$ and $S_c(3n)$ are the moment of inertia 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) = $1.3[M_D + M_{sD} + M_t + M(\text{Imp})]$.
 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 $M_D + M_{sD} + M_t + M(\text{Imp})$.
 R_D includes the weight of the Concrete diaphragm and the dead load reaction from the approach pavement.



SECTION A-A

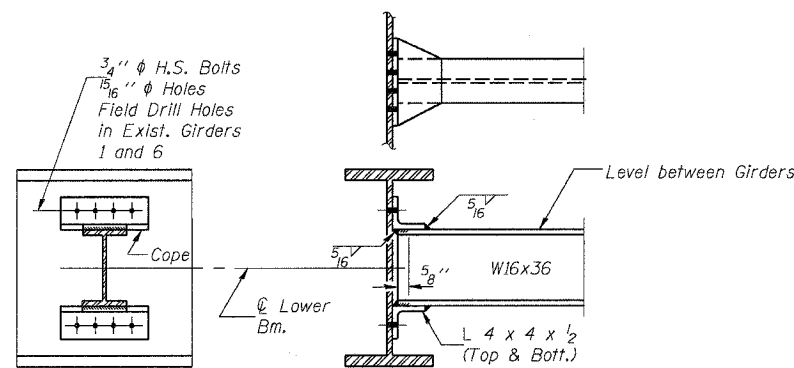


TOP FLANGE

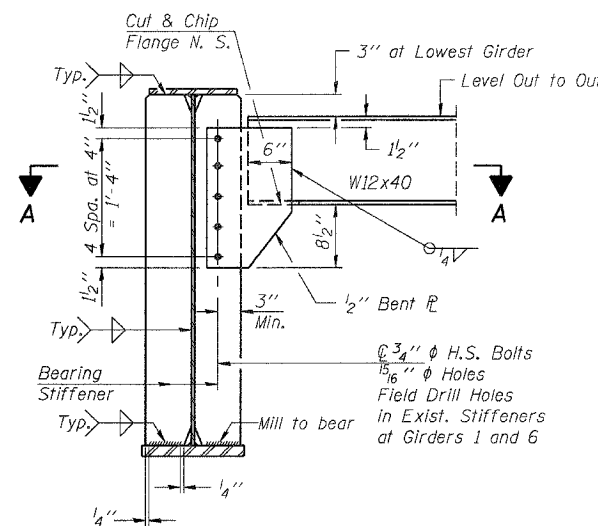


BOTTOM FLANGE

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
SCALE		DATE	
DRAWN BY	TFG	CHECKED BY	GJB/MCB
DRAWING NO.			
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703		13 OF 29 SHTS	