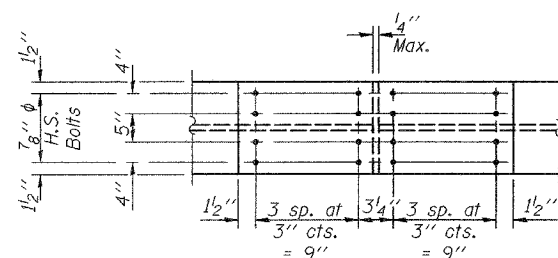


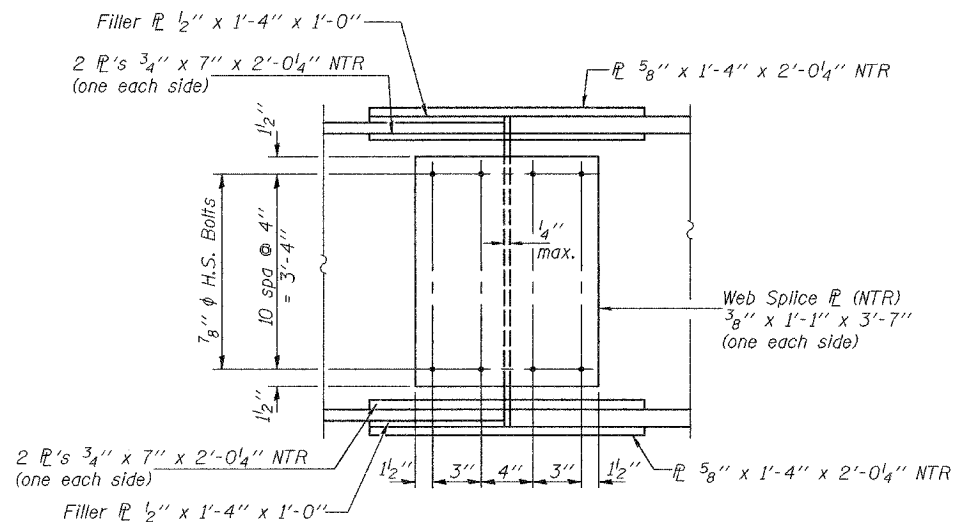
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.	SHEET NO. 20
FAP 623	X-IBR	LaSalle	126	75	41 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

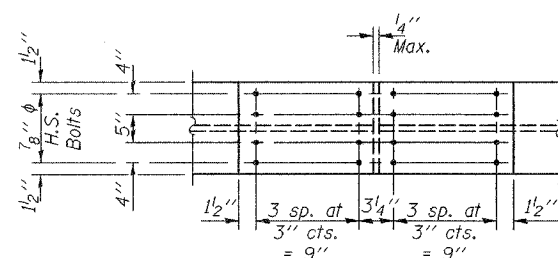
Contract #66617



PLAN - TOP FLANGE



ELEVATION



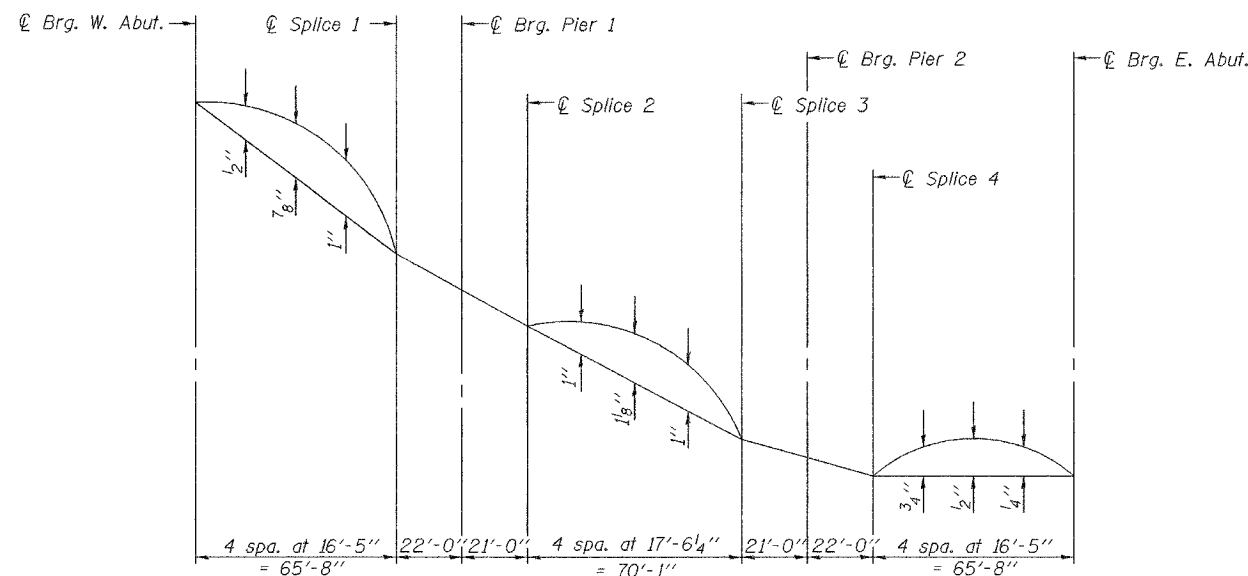
PLAN - BOTTOM FLANGE

SPLICES 1 THRU 4 FOR GIRDER 1A
(4 required)

Notes:
All splice plates shall be AASHTO M270, Grade 36.
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

	0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
I_s	(in ⁴) 25,755	36,058	25,755
$I_c(n)$	(in ⁴) 54,530	-	54,530
$I_c(3n)$	(in ⁴) 41,124	-	41,124
S_s	(in ³) 1025	1407	1025
$S_c(n)$	(in ³) 1300	-	1300
$S_c(3n)$	(in ³) 1204	-	1204
Z	(in ³) -	-	-
P	(k/')	0.95	0.95
M_D	(k)	469	1535
s_D	(k/')	0.56	0.56
M_{sD}	(k)	314	373
M_L	(k)	797	666
M_{Imp}	(k)	187	148
$^{5/8} [M_L + M_{Imp}]$	(k)	1640	1357
M_a	(k)	3150	3379
M_u	(k)	3704	3696
$f_s \text{ non-comp}$	(ksi)	5.5	13.1
$f_s \text{ (comp)}$	(ksi)	3.1	3.7
$f_s \text{ }^{5/8} [M_L + M_{Imp}]$	(ksi)	15.1	11.6
$f_s \text{ (Overload)}$	(ksi)	23.7	24.7
$f_s \text{ (Total)}$	(ksi)	-	32.1
VR	(k)	61.2	63.9

	Abut.	Pier
R_D	(k) 48.9	170.0
R_L	(k) 45.8	72.7
$Imp.$	(k) 10.8	16.1
R_{Total}	(k) 105.5	258.8

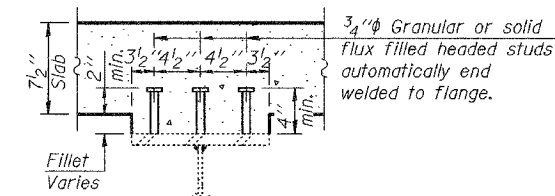


CAMBER DIAGRAM FOR GIRDER 1A

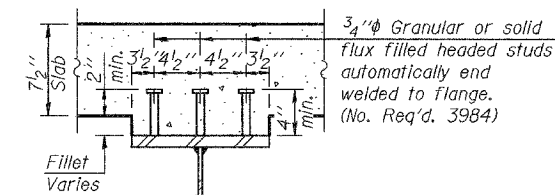
Girder	℄ Brg. W. Abut.	℄ Splice 1	℄ Brg. Pier 1	℄ Splice 2	℄ Splice 3	℄ Brg. Pier 2	℄ Splice 4	℄ Brg. E. Abut.
Girder 1A	496.76	495.63	495.34	495.07	494.43	494.32	494.21	494.20

*For Fabrication Only.

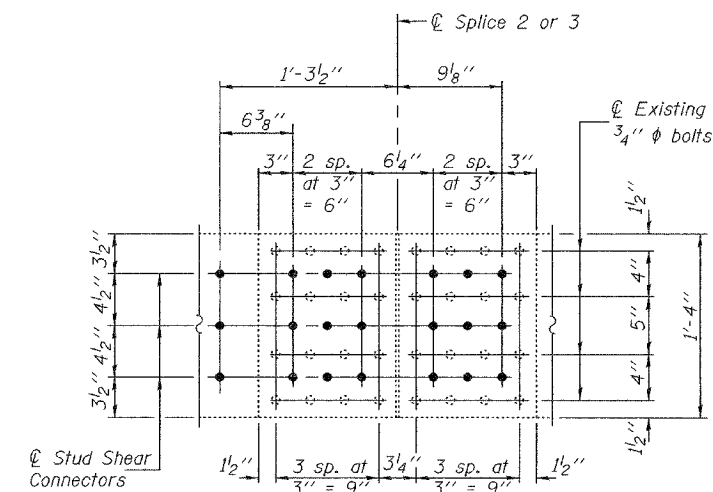
I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in⁴ and in³).
 $I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in⁴ and in³).
 $I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in⁴ and in³).
 Z : Plastic Section Modulus of the steel section in non-composite areas (in³).
 P : Un-factored non-composite dead load (kips/ft.).
 M_D : Un-factored moment due to non-composite dead load (kip-ft.).
 s_D : Un-factored long-term composite (superimposed) dead load (kips/ft.).
 M_{sD} : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
 M_L : Un-factored live load moment (kip-ft.).
 M_{Imp} : Un-factored moment due to impact (kip-ft.).
 M_a : Factored design moment (kip-ft.).
 M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
 f_s (Overload): Sum of stresses as computed from the moments below (ksi).
 f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 VR : Maximum $L +$ impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).



SECTION A-A



SECTION B-B



VIEW C-C

Shown over Existing Splice 3.
Existing Splice 2 similar
(For Existing Girders 1-5)

STRUCTURAL STEEL DETAILS
F.A.P. ROUTE 623 - SECTION X-IBR
LaSALLE COUNTY
STATION 1036+60.72
STRUCTURE NO. 050-0094

DESIGNED	F.T.
CHECKED	S.M.R.
DRAWN	BECKY M. LEACH
CHECKED	F.T./S.M.R.

EXAMINED	February 1, 2007
THOMAS J. DOMAGALSKI	ENGINEER OF BRIDGE DESIGN
PASSED	Ralph E. Anderson
	ENGINEER OF BRIDGES AND STRUCTURES