ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. Rte. 6120	*	LaSALLE	492	282
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

*50-3HBK

SHEET NO. 14
22 SHEETS
CONTRACT NO. 66542

INTERIOR GIRDER MOMENT TABLE			
		0.4 Sp. 1 or 0.6 Sp. 2	Pier
Is	(in^4)	14054	21798
Ic (n)	(in^4)	32693	——
Ic (3n)	(in^4)	24621	——
Ss	(in^3)	646	980
Sc (n)	(in^3)	868	——
Sc (3n)	(in^3)	798	——
Z	(in^3)	——	1086
DL	(k/ft.)	0.98	1.57
MDL	('k)	571	1862
sDL	(k/ft.)	0.52	——
MsDL	('k)	338	——
MLL	('k)	903	708
M (Imp)	('k)	208	163
$\frac{5}{3}$[MLL+M(Imp)]	('k)	1852	1451
Ma	('k)	3762	3877
**** Mu	('k)	4456.4	4522.9
fs DL non-comp	(k.s.i.)	10.61	22.81
fs DL (comp)	(k.s.i.)	5.09	——
fs $\frac{5}{3}$(LL+Imp)	(k.s.i.)	25.62	17.78
fs (Overload)	(k.s.i.)	41.32	40.59
VR	(k)	70	——

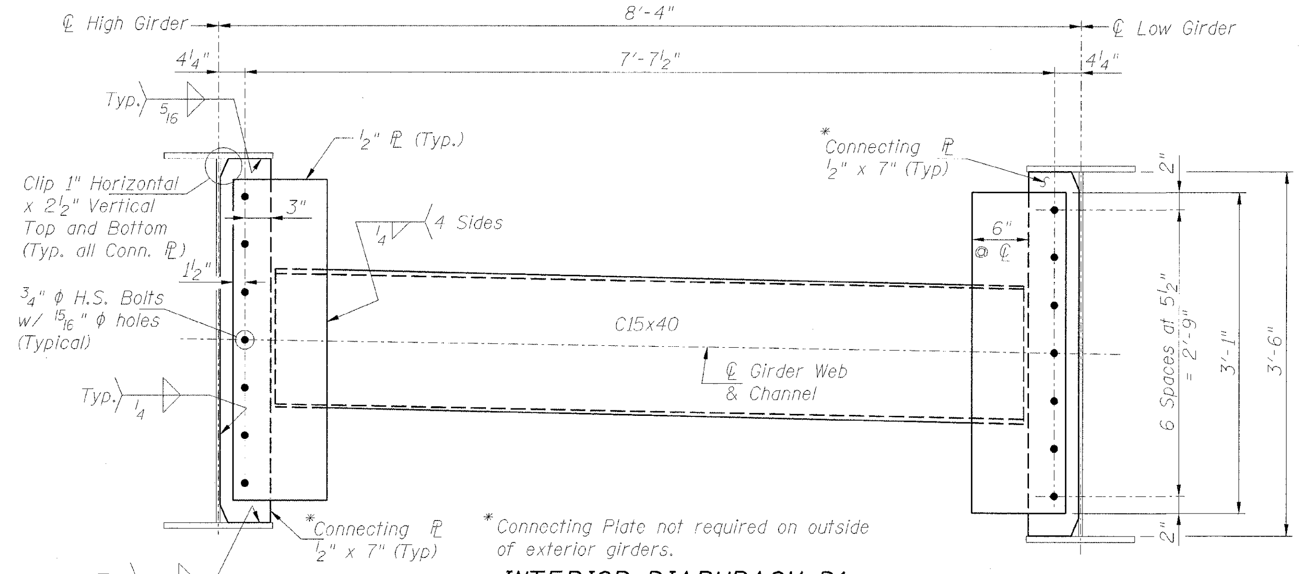
****Compact Section

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
RDL	(k)	52.8	183.8
RLL	(k)	52.6	75.9
Imp.	(k)	12.1	17.5
R (Total)	(k)	117.5	277.2

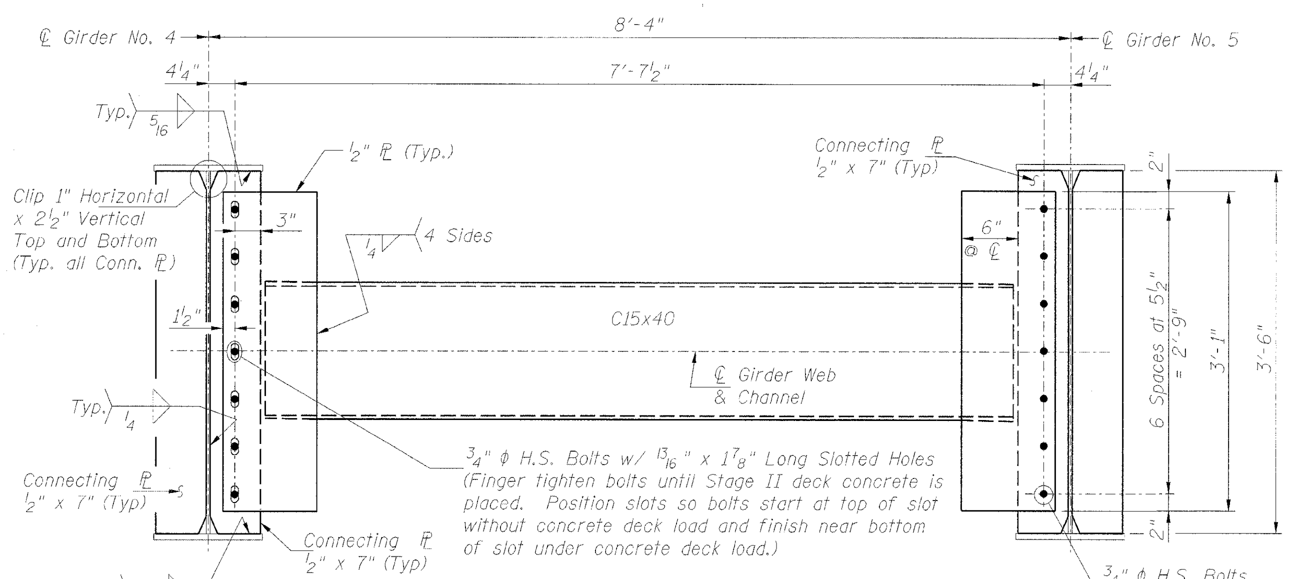
I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Overload) due to non-composite dead loads (in.^{4} and in.^{3}).
$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Overload) due to short-term composite live loads (in.^{4} and in.^{3}).
$I_c(3n)$, $S_c(3n)$: 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 (Overload) due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).
Z: Plastic Section Modulus of the steel section in non-composite areas (in.^{3}).
DL: Un-factored non-composite dead load (kips/ft.).
MDL: Un-factored moment due to non-composite dead load (kip-ft.).
sDL: Un-factored long-term composite (superimposed) dead load (kips/ft.)
MsDL: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
MLL: Un-factored live load moment (kip-ft.).
MImp: Un-factored moment due to impact (kip-ft.).
Ma: Factored design moment (kip-ft.).
1.3 [MDL + MsDL + $\frac{5}{3}$ (MLL + MImp)]
Mu: 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).
MDL + MsDL + $\frac{5}{3}$ (MLL + MImp)
VR: Maximum LL + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).

The applied moment at the pier was 4307 Kft but has been reduced 430.0 Kft (10%) for moment redistribution.

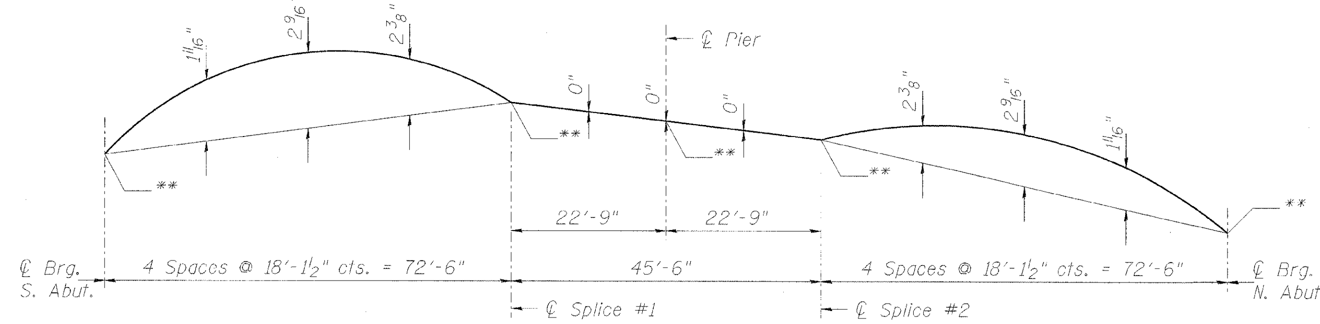
The applied moment at 0.4 span 1 or 0.6 span 2 was 3590 Kft but has been increased 172.0 Kft (4.8%) for moment redistribution.



INTERIOR DIAPHRAGM D1
(66 Required)



INTERIOR DIAPHRAGM D2
(11 Required)

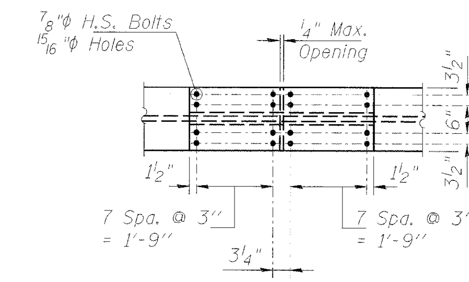


CAMBER DIAGRAM
** See Table for Top of Web Elevations

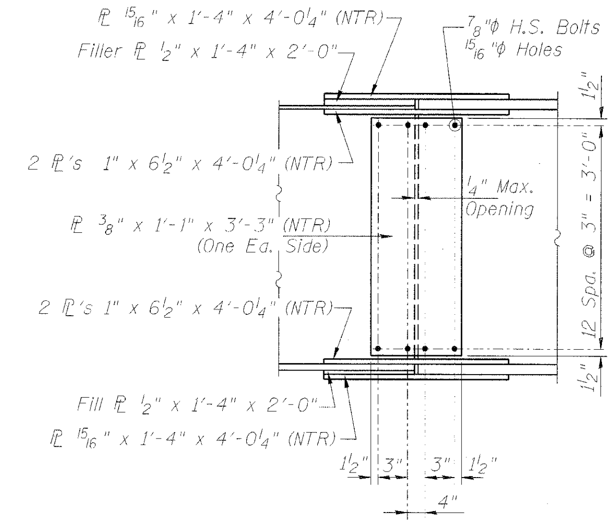
*** TOP OF WEB ELEVATIONS

	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7	Girder 8
℄ Brg. S. Abut.	645.892	646.048	646.173	646.298	646.298	646.173	646.048	645.892
℄ Splice No. 1	646.094	646.244	646.367	646.495	646.495	646.367	646.244	646.094
℄ Brg. Pier	646.094	646.244	646.367	646.495	646.495	646.367	646.244	646.094
℄ Splice No. 2	646.094	646.244	646.367	646.495	646.495	646.367	646.244	646.094
℄ Brg. N. Abut.	645.892	646.048	646.173	646.298	646.298	646.173	646.048	645.892

*** For Fabrication Only



TOP & BOTTOM FLANGE SPLICES



WEB SPLICE

FIELD SPLICE DETAIL
(16 Required)

Notes:
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

Two hardened washers shall be required over all oversized and slotted holes.

All flanges, webs, bearing stiffeners, splice plates, and structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270, Grade 50.

Fill plates, Diaphragms, and diaphragm connecting plates shall conform to the requirements of AASHTO M270, Grade 36.

STRUCTURAL STEEL DETAILS
UTICA ROAD (IL. RTE. 178) over F.A.I. ROUTE 80
SECTION 50-3HBK
LaSALLE COUNTY
STATION 115+00.00
STRUCTURE NO. 050-0248

HANSON

JOB NO. 05S2015
DATE 10/12/09

LAYOUT	MMM	11/16/05
DRAWN	Red	1/15/07
REVIEWED	JJT	1/15/07