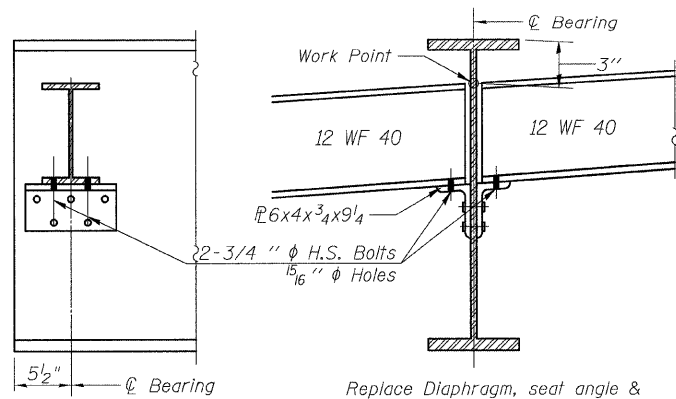


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

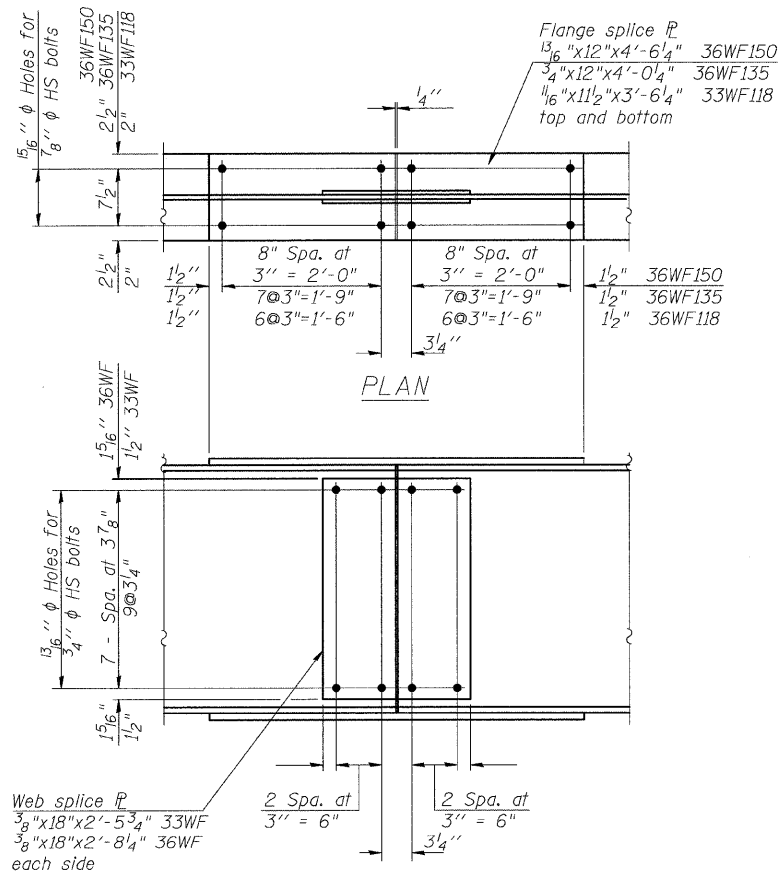
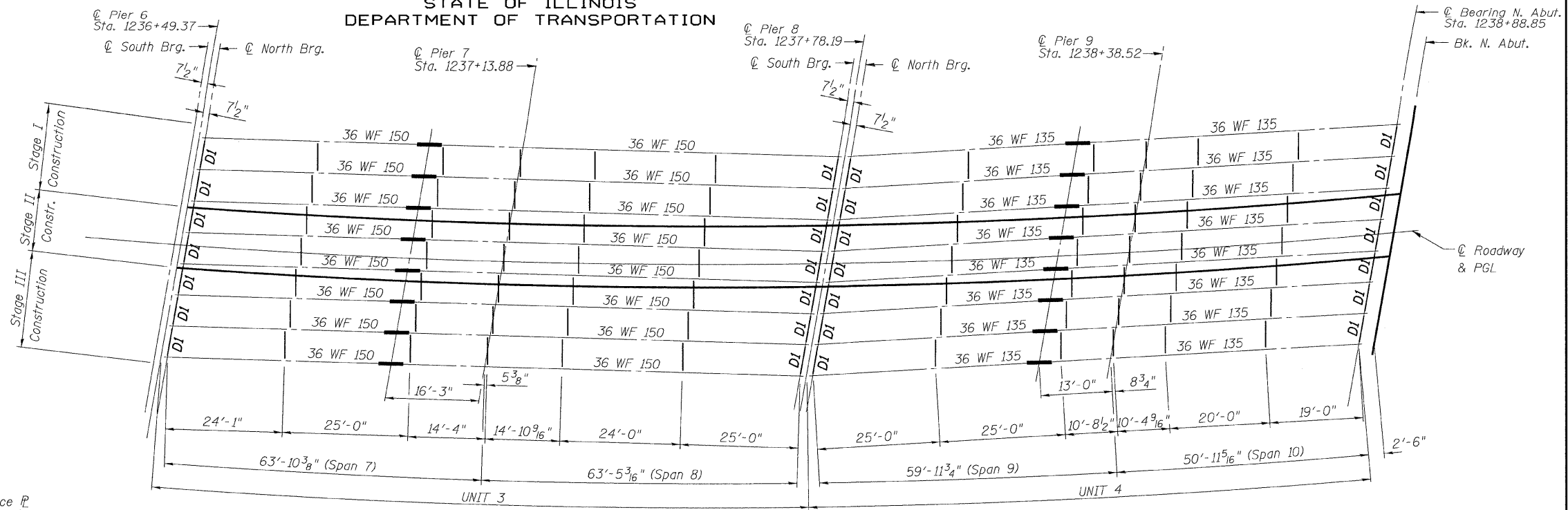


EXISTING END DIAPHRAGM "DI"

Replace with W12x40

Notes:

- Loosen or remove bottom flange bolts of all existing interior diaphragms between beams 3 & 4 prior to Stage I deck removal and between beams 5 & 6 prior to Stage II deck removal.
- Replace all bolts that are loosened or removed to facilitate staging.
- Cost included in Concrete Superstructure.



ELEVATION

SPLICE DETAIL
(For Information Only)

DESIGNED - MJB/MAJ
CHECKED - JFS
DRAWN - MSJ/MLB
CHECKED - MJB

UNIT 3 (SPANS 7-8)

	0.4 Span 7 or 0.6 Span 8	Pier 7
I_s (in ⁴)	9040	9040
$I_c(n)$ (in ⁴)	23392	
$I_c(3n)$ (in ⁴)	16951	
S_s (in ³)	504	504
$S_c(n)$ (in ³)	737	
$S_c(3n)$ (in ³)	661	
Z (in ³)		581
R (k/')	0.79	1.043
M_p (k)	235.9	-517.8
s_p (k/')	0.253	
$M_s p$ (k)	86.9	
M_t (k)	424.2	-228.3
M_{IM} (k)	110.3	-59.4
$p_3 [M_t + j]$ (k)	890.8	-479.5
M_o (k)	1578	-1296
M_u (k)	2695	-1743
$f_s \phi$ non-comp (ksi)	5.6	12.3
$f_s \phi$ (comp) (ksi)	1.6	
$f_s \phi_3 [M_t + M_I]$ (ksi)	14.5	11.4
f_s (Overload) (ksi)	21.7	23.7
f_s (Total) (ksi)		
VR (k)	41.7	

	Pier 6	Pier 7	Pier 8
R_p (k)	26.2	84.8	26.2
R_t (k)	33.7	42.0	33.7
R_i (k)	8.8	10.9	8.8
R_{Total} (k)	68.7	137.7	68.7

* Compact section
** Braced non-compact and partially braced section

UNIT 4 (SPANS 9-10)

	0.4 Span 9	Pier 9	0.6 Span 10
I_s (in ⁴)	7800	7800	7800
$I_c(n)$ (in ⁴)	21088		21088
$I_c(3n)$ (in ⁴)	15329		15329
S_s (in ³)	439	439	439
$S_c(n)$ (in ³)	657		657
$S_c(3n)$ (in ³)	590		590
Z (in ³)		509	
R (k/')	0.775	1.028	0.775
M_p (k)	224	-385.7	115.0
s_p (k/')	0.253		0.253
$M_s p$ (k)	81.6		48.0
M_t (k)	385.3	-194.6	307.6
M_{IM} (k)	111.7	-56.4	92.3
$p_3 [M_t + j]$ (k)	828.3	-418.3	666.6
M_o (k)	1474	-1045	1078
M_u (k)	2707	-1527	2707
$f_s \phi$ non-comp (ksi)	6.1	10.5	3.1
$f_s \phi$ (comp) (ksi)	1.7		1.0
$f_s \phi_3 [M_t + M_I]$ (ksi)	15.1	11.4	12.2
f_s (Overload) (ksi)	22.9	21.9	16.3
f_s (Total) (ksi)			
VR (k)	40.6		40.6

	Pier 8	Pier 9	N Abut
R_p (k)	25.4	72.3	18.9
R_t (k)	33.2	38.5	32.0
R_i (k)	9.0	10.8	9.3
R_{Total} (k)	67.6	121.6	60.2

* Compact section
** Braced non-compact and partially braced section

Dead Load Reaction of Steel Only (k)	Required Jack Capacity (k)	
S. Abut.	2	4
Pier 5 (S)	2	4
Pier 5 (N)	9	18
Pier 6 (S)	9	18
Pier 6 (N)	4	8
Pier 8 (S)	4	8
Pier 8 (N)	4	8
N. Abut.	3	6

BILL OF MATERIAL

Item	Units	Total
Furnishing and Erecting Structural Steel	Pound	17668

FRAMING PLAN & STRUCTURAL STEEL DETAILS
STRUCTURE NO. 058-0014

Foth
Foth Infrastructure & Environment, LLC
1610 Broadmoor Drive
Champaign, IL 61821
Phone: 217-352-4109 Fax: 217-352-0885
Illinois Registration Number 184.004913

SHEET NO. 25	F.A. RTE. 710	SECTION (50Z-VB)BR	COUNTY MACON	TOTAL SHEETS 79	SHEET NO. 51
49 SHEETS	CONTRACT NO. 74215			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	