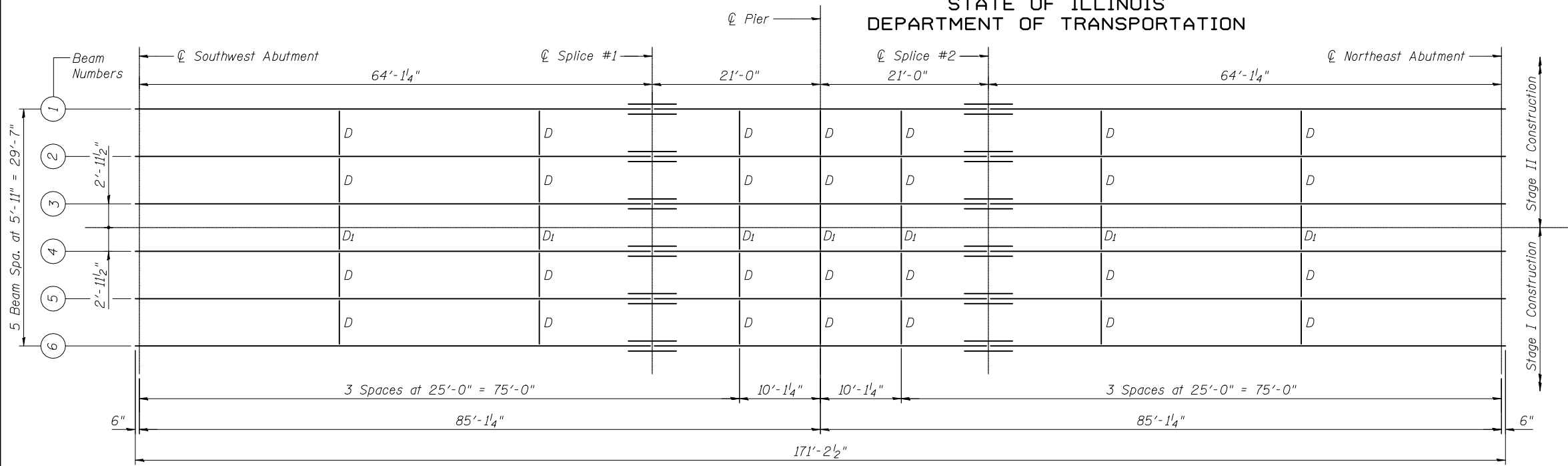


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

☉ F.A.P. Rte. 71 &
Stage Constr. Line



TOP OF BEAM ELEVATIONS
(For Fabrication only)

LOCATION	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5	BEAM 6
☉ SW. Abutment	722.26	722.36	722.45	722.45	722.36	722.26
* Splice #1	722.23	722.34	722.43	722.43	722.34	722.23
☉ Pier	722.23	722.34	722.43	722.43	722.34	722.23
* Splice #2	722.23	722.34	722.43	722.43	722.34	722.23
☉ NE. Abutment	722.26	722.36	722.45	722.45	722.36	722.26

*Elevations are given at top of W36x210.

FRAMING PLAN

INTERIOR BEAM MOMENT TABLE		
	0.4 Sp. 1 or 0.6 Sp. 2	Pier
I_s	7800	13200
$I_c(n)$	19897	
$I_c(3n)$	14524	
S_s	439	719
$S_c(n)$	637	
$S_c(3n)$	573	
Z		833
$DC1$	0.789	0.871
M_{DC1}	360	855
$DC2$	0.150	0.150
M_{DC2}	77	133
DW	0.267	0.267
M_{DW}	138	236
$M_{\ell + IM}$	963	859
M_u (Strength I)	2439	3092
* $\phi_f M_n, \phi_f M_{nc}$	3143	3472
f_s DC1	9.9	14.3
f_s DC2	1.6	2.2
f_s DW	2.9	3.9
f_s 1.3($\ell + IM$)	23.6	18.6
f_s (Service II)	38.0	39.0
V_f	25	

* Compact sections

INTERIOR GIRDER REACTION TABLE		
	Abut.	Pier
R_{DC1}	24.3	88.8
R_{DC2}	4.8	15.8
R_{DW}	8.6	28.2
$R_{\ell + IM}$	71.4	126.4
R_{Total}	109.1	259.2

DESIGNED	KMS
CHECKED	SMM
DRAWN	KMS
CHECKED	SMM

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) 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 (Total-Strength I, and Service II) 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 (Total-Strength I, and Service II) 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).

$DC1$: Un-factored non-composite dead load (kips/ft.).

M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).

$DC2$: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW : Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

$M_{\ell + IM}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\ell + IM}$

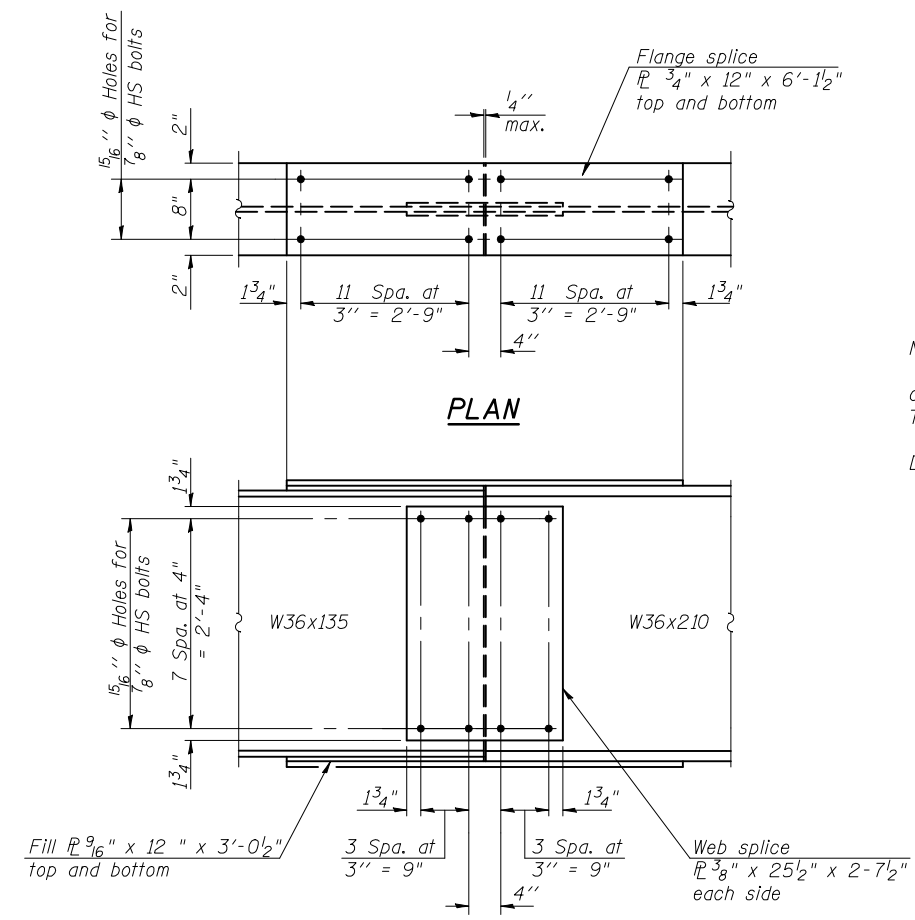
$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

$\phi_f M_{nc}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).

f_s (Service II): Sum of stresses as computed from the moments below (ksi).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{\ell + IM}$

f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\ell + IM}$

V_f : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



ELEVATION

SPLICE DETAIL

(12 Required,
Splice #1 Shown)

CLARK DIETZ, INC.

Notes:
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
See sheet 15 of 22 for Beam Elevation, Diaphragm Details and Stud Shear Connector Details.
All splice plates shall be "NTR" except fill plates.

STEEL FRAMING PLAN & DETAILS
STRUCTURE NO. 020-0064

SHEET NO. 14 22 SHEETS	F.A.P. RTE. 71	SECTION (121BR)BR	COUNTY DEWITT	TOTAL SHEETS 75	SHEET NO. 43
	CONTRACT NO. 70429				
FED. ROAD DIST. NO. 5 ILLINOIS FED. AID PROJECT					