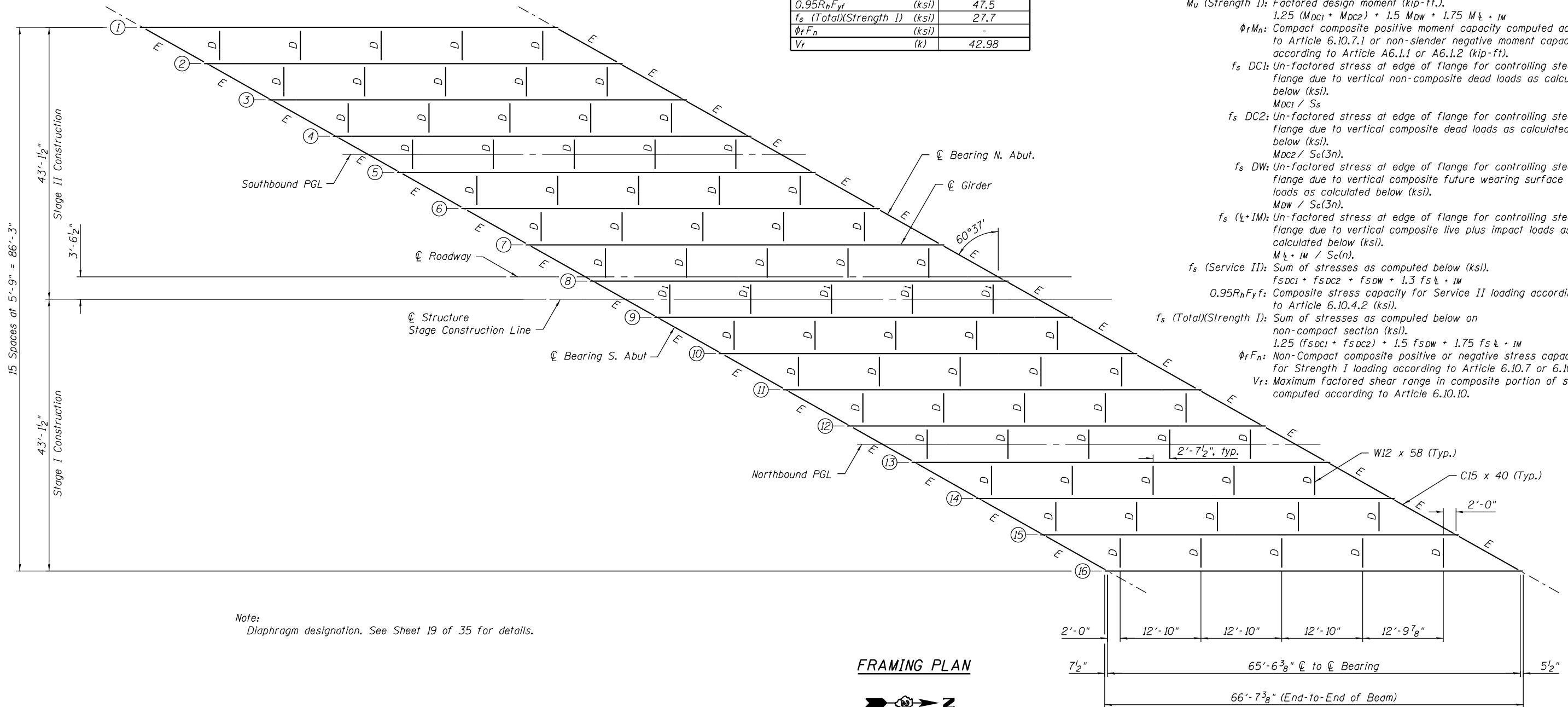


* TOP OF WEB ELEVATIONS		
Beam Number	☐ Brg. S. Abut.	☐ Brg. N. Abut.
1	645.83	646.07
2	646.00	646.20
3	646.16	646.32
4	646.32	646.43
5	646.47	646.54
6	646.62	646.64
7	646.75	646.73
8	646.88	646.81
9	646.88	646.81
10	646.78	646.62
11	646.65	646.46
12	646.53	646.29
13	646.39	646.11
14	646.25	645.92
15	646.10	645.73
16	645.95	645.53

* For Fabrication Only

INTERIOR GIRDER REACTION TABLE	
	Abutment
R_{DC1}	(k) 26.08
R_{DC2}	(k) 10.10
R_{DW}	(k) 8.60
$R_{\ell + IM}$	(k) 103.15
R_{Total}	(k) 147.92

INTERIOR GIRDER MOMENT TABLE	
	0.5 Sp.
I_s	(in ⁴) 7,246
$I_c(n)$	(in ⁴) 25,684
$I_c(3n)$	(in ⁴) 16,956
S_s	(in ³) 714
$S_c(n)$	(in ³) 1,064
$S_c(3n)$	(in ³) 965
$DC1$	(k/ft.) 0.775
M_{DC1}	(k) 404
$DC2$	(k/ft.) 0.338
M_{DC2}	(k) 158
DW	(k/ft.) 0.288
M_{DW}	(k) 134
$M_{\ell + IM}$	(k) 721
M_u (Strength I)	(k) 2,165
$\phi_r M_n$	(k) 4,293
$f_s DC1$	(ksi) 6.78
$f_s DC2$	(ksi) 1.96
$f_s DW$	(ksi) 1.67
$f_s (\ell + IM)$	(ksi) 8.13
f_s (Service II)	(ksi) 20.98
$0.95R_n F_y f$	(ksi) 47.5
f_s (Total)(Strength I)	(ksi) 27.7
$\phi_r F_n$	(ksi) -
V_r	(k) 42.98



Note:
Diaphragm designation. See Sheet 19 of 35 for details.

FRAMING PLAN



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 (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-Strength I, and Service II) 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-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in⁴ and in³).

$DC1$: 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.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\ell + IM}$

$\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).

$f_s DC1$: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
 M_{DC1} / S_s

$f_s DC2$: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
 $M_{DC2} / S_c(3n)$.

$f_s DW$: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
 $M_{DW} / S_c(3n)$.

$f_s (\ell + IM)$: Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
 $M_{\ell + IM} / S_c(n)$.

f_s (Service II): Sum of stresses as computed below (ksi).
 $f_{SDC1} + f_{SDC2} + f_{SDW} + 1.3 f_{s \ell + IM}$

$0.95R_n F_y f$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
 $1.25 (f_{SDC1} + f_{SDC2}) + 1.5 f_{SDW} + 1.75 f_{s \ell + IM}$

$\phi_r F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

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

FILE NAME = s:\p1\6380--6395\6346\025\microsa\Sh1\Structural\Plans\0980015-64C17-01B-FRAM.dgn

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 CHECKED - AJS
 DRAWN - BJF
 CHECKED - RRD
 PLOT SCALE =
 PLOT DATE = 8/14/2014

DESIGNED - MJD
 CHECKED - AJS
 DRAWN - BJF
 CHECKED - RRD
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 REVISED

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STEEL FRAMING PLAN
 STRUCTURE NO. 098-0015**

SHEET NO. 18 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
646	101 BR-3	WHITESIDE	130	77
CONTRACT NO. 64C17				

ILLINOIS FED. AID PROJECT