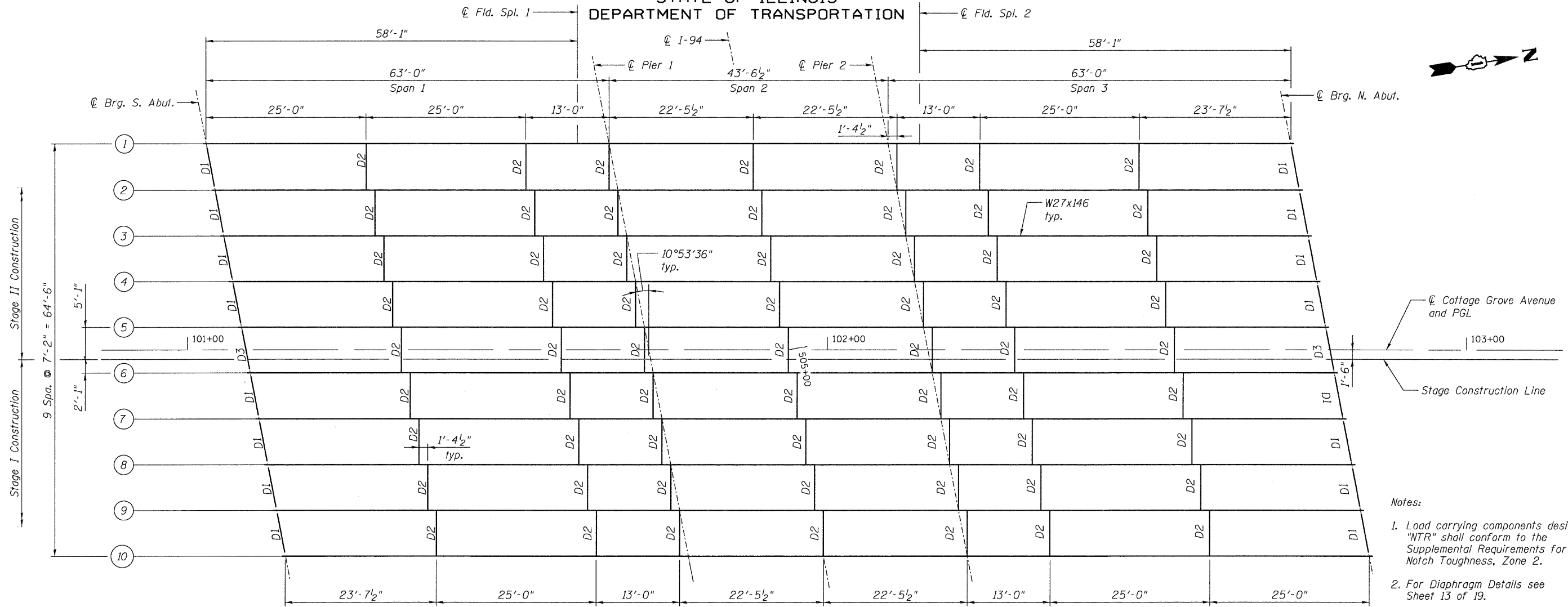


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



- Notes:
1. Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 2. For Diaphragm Details see Sheet 13 of 19.
 3. For Beam and Splice Details see Sheet 14 of 19.

FRAMING PLAN

	Abut.	Pier
R_{DC1} (k)	24.4	53.9
R_{DC2} (k)	14.4	29.3
R_{DW} (k)	7.5	15.2
$R_{\frac{1}{2} + IM}$ (k)	79.3	126.7
R_{Total} (k)	125.6	225.1

	0.4 Span 1 or 0.6 Span 3	Pier 1 or Pier 2	0.5 Span 2
I_s (in^4)	5630	5630	5630
$I_c(n)$ (in^4)	15,544	15,544	15,544
$I_c(3n)$ (in^4)	11,284	-	11,284.2
S_s (in^3)	411	411	411
$S_c(n)$ (in^3)	9,197.7	-	-
$S_c(3n)$ (in^3)	1,685.1	-	-
Z (in^3)	457.33	457.33	457.33
$DC1$ (k/ft)	0.926	0.926	0.926
M_{DC1} (k)	322.2	297	77.6
$DC2$ (k/ft)	0.516	0.516	0.516
M_{DC2} (k)	199	117.6	5.1
DW (k/ft)	0.27	0.27	0.27
M_{DW} (k)	104	61.4	2.6
$M_{\frac{1}{2} + IM}$ (k)	792.4	341.8	346.2
M_u (Strength I) (k)	2,194.4	1,208.7	519.2
$\phi_r M_n, \phi_r M_{nc}$ (k)	2,919.1	-	-
f_s DC1 (ksi)	9.41	8.67	2.27
f_s DC2 (ksi)	1.42	3.43	0.15
f_s DW (ksi)	0.74	1.79	0.08
f_s 1.3($\frac{1}{2} + IM$) (ksi)	20.76	13.08	13.25
f_s (Service II) (ksi)	36.58	27.11	11.19
f_s (Total)(Strength I) (ksi)	-	-	-
V_r (k)	23.8	-	12.4

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 long-term composite (superimposed) dead 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. Omit line in Moment Table if not used in design calculations (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.).

$M_{\frac{1}{2} + IM}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
 $1.25(M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\frac{1}{2} + IM}$

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

$\phi_r M_{nc}$: 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).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{\frac{1}{2} + IM}$

f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.25(M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\frac{1}{2} + IM}$

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

DESIGNED	EV
CHECKED	PC
DRAWN	JCP
CHECKED	JPO

* Compact sections
** Non-Compact and slender sections

**FRAMING PLAN
STRUCTURE NO. 016-2119**

 600 W FULTON ST CHICAGO, ILLINOIS 60661 1259	SHEET NO. 10 S17 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		94	1314B-1-F	COOK	19	12
				CONTRACT NO. 60K91		
ILLINOIS FED. AID PROJECT						

6/10/2010 5:20:48 PM F:\Projects\20090825-1001_PTB_152CAD\ADD_Sheets\Beam Fabrication\0161243-01-FramingPlan.dgn