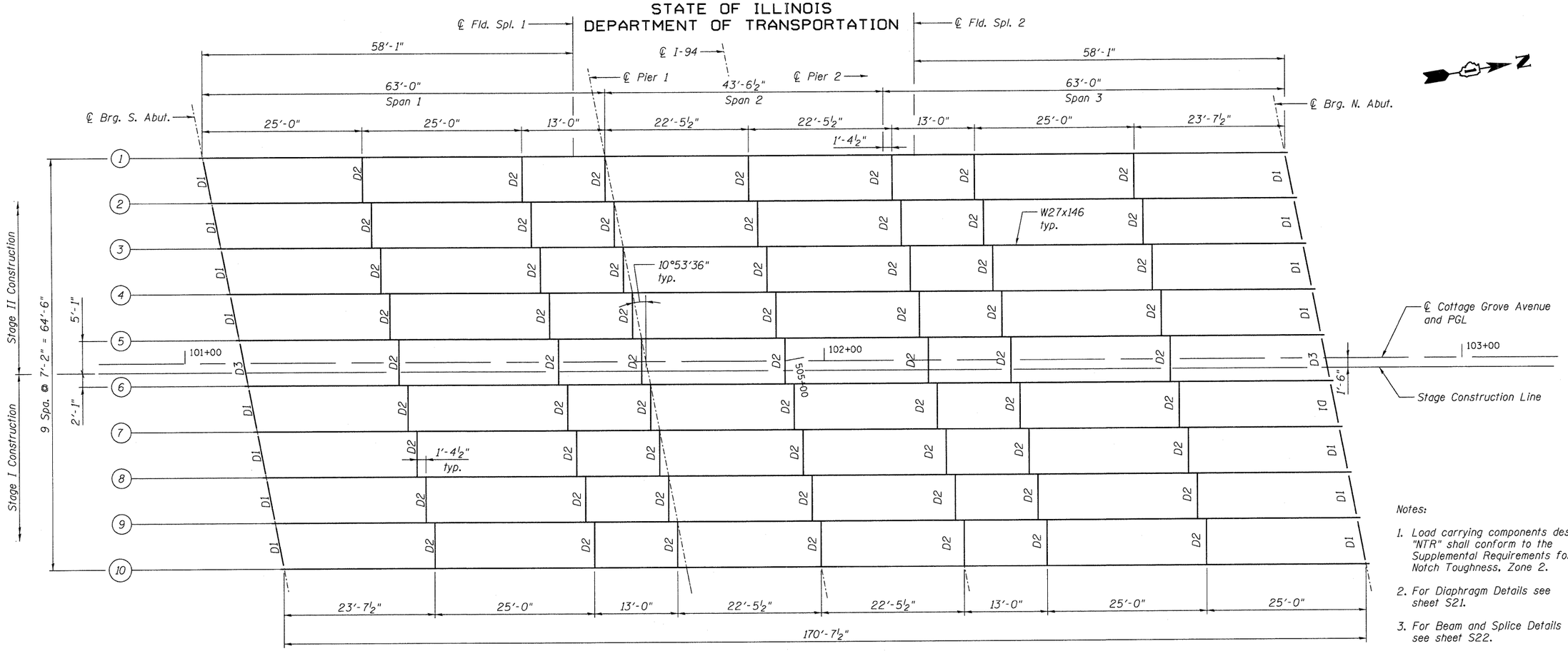
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Notes:

1. Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
2. For Diaphragm Details see sheet S21.
3. For Beam and Splice Details see sheet S22.

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
R_{DC1}	(k)	24.4	53.9
R_{DC2}	(k)	14.4	29.3
R_{DW}	(k)	7.5	15.2
R_{L+IM}	(k)	79.3	126.7
R_{Total}	(k)	125.6	225.1

INTERIOR GIRDER MOMENT TABLE				
		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	15544
$I_c(3n)$	(in^4)	11,284	-	11284.2
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/')	0.926	0.926	0.926
M_{DC1}	('k)	322.2	297	77.6
DC2	(k/')	0.516	0.516	0.516
M_{DC2}	('k)	199	117.6	5.1
DW	(k/')	0.27	0.27	0.27
M_{DW}	('k)	104	61.4	2.6
M_{L+IM}	('k)	792.4	341.8	346.2
M_u (Strength I)	('k)	2,194.4	1,208.7	519.2
* $\phi_f M_n$, $\phi_f M_{nc}$	('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(L+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

* Compact sections
** Non-Compact and slender sections

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 (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. 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_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
M_u (Strength I): Factored design moment (kip-ft.).
$1.25\,(M_{DC1} + M_{DC2}) + 1.5\,M_{DW} + 1.75\,M_{L+IM}$
$\phi_f M_n$: 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).
$M_{DC1} + M_{DC2} + M_{DW} + 1.3\,M_{L+IM}$
f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.25\,(M_{DC1} + M_{DC2}) + 1.5\,M_{DW} + 1.75\,M_{L+IM}$
V_r: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

FRAMING PLAN
STRUCTURE NO. 016-2119

DESIGNED	EV
CHECKED	PC
DRAWN	JCP
CHECKED	JPO

EPSTEIN
800 WEST FULTON STREET
CHICAGO, ILLINOIS
60661-1259
TEL 312 454 9100
FAX 312 559 1217
WEB www.epsteinglobal.com

SHEET NO. S20
S52 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	1314B-1	COOK	110	56
		CONTRACT NO. 60F65		
	ILLINOIS	FED. AID PROJECT		