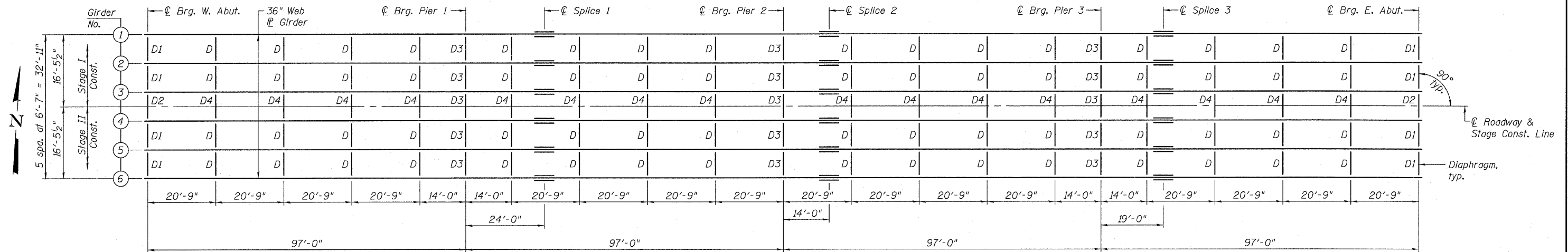


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



		0.4 Sp. 1 or 0.6 Sp. 4	Pier 1 or 3	0.5 Sp. 2 or 3	Pier 2
I_s	(in ⁴)	11,062	17,560	11,062	14,268
$I_c(n)$	(in ⁴)	25,631	-	25,631	-
$I_c(3n)$	(in ⁴)	19,157	-	19,157	-
S_s	(in ³)	590	912	590	751
$S_c(n)$	(in ³)	786	-	786	-
$S_c(3n)$	(in ³)	722	-	722	-
Z	(in ³)	-	-	-	-
DC1	(k/')	0.862	0.932	0.862	0.898
M _{DC1}	(k)	574.8	1,008.8	238.6	565.2
DC2	(k/')	0.150	0.150	0.150	0.150
M _{DC2}	(k)	109.9	148.6	54.9	94.4
DW	(k/')	0.300	0.300	0.300	0.300
M _{DW}	(k)	219.8	297.2	109.8	188.8
M _{ℓ + IM}	(k)	1,228.9	1,032.3	1,029.0	897.7
M _u (Strength I)	(k)	3,336.2	3,699.1	2,332.3	2,678.7
* $\phi_r M_n$, $\phi_r M_{nc}$	(k)	3,893.4	3,975.9	3,906.4	3,442.1
f_s DC1	(ksi)	11.69	13.27	4.85	9.03
f_s DC2	(ksi)	1.83	1.96	0.91	1.51
f_s DW	(ksi)	3.65	3.91	1.82	3.02
f_s 1.3(ℓ + IM)	(ksi)	24.39	17.66	20.42	18.65
f_s (Service II)	(ksi)	41.56	36.80	28.01	32.21
** f_s (Total)(Strength I)	(ksi)	-	-	-	-
V _r	(k)	27.0	-	23.0	-

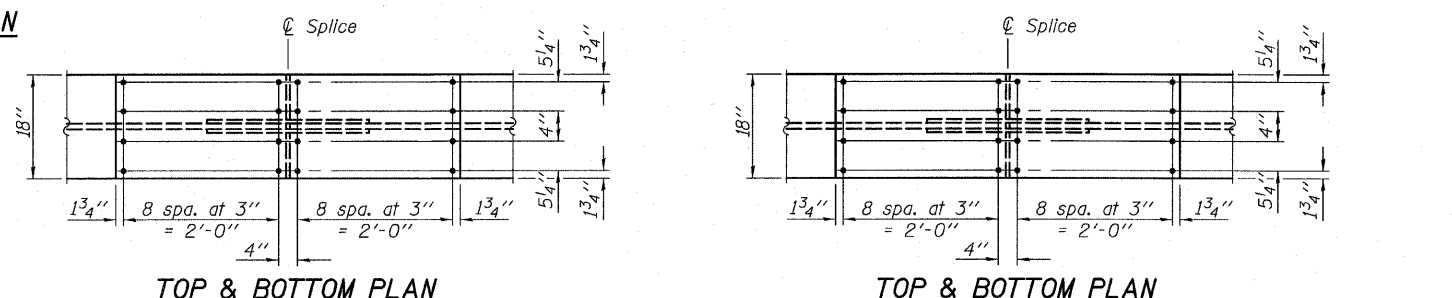
* Compact sections
** Non-Compact and slender sections

		Abut.	Pier 1 or 3	Pier 2
R _{DC1}	(k)	31.5	101.3	75.8
R _{DC2}	(k)	5.7	16.6	13.4
R _{DW}	(k)	11.5	33.3	26.9
R _{ℓ + IM}	(k)	80.4	143.5	138.0
R (Total)(Strength I)	(k)	204.5	448.5	393.4

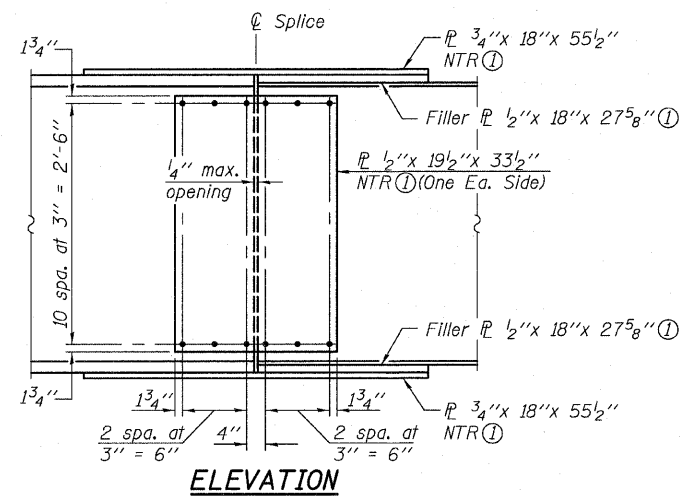
I_s , S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).
 $I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead 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).
 Z: Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations (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_{ℓ + IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
 M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{ℓ + IM}$
 $\phi_r M_n$: 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).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{ℓ + IM}$
 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.

PLAN

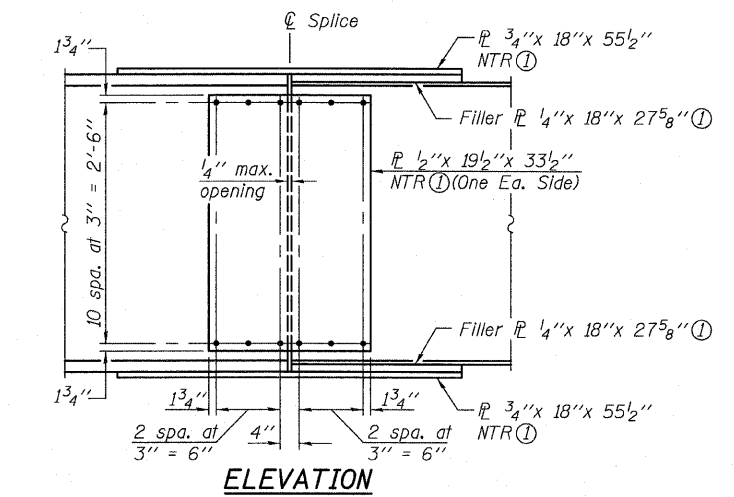


TOP & BOTTOM PLAN



SPLICE 1 & 3 DETAIL

(12 Required)



SPLICE 2 DETAIL

(6 Required)

- Notes:
 ① AASHTO M 270 Grade 50 steel.
 ② Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 ③ For girder elevation and details, see sheet 19 of 38.
 ④ For diaphragm details, see sheet 20 of 38.
 ⑤ All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

FRAMING PLAN
STRUCTURE NO. 026-0105

SHEET NO. 18	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	752	(U-2BR)B-1	FAYETTE	71	40
38 SHEETS	FED. ROAD DIST. NO. 7 ILLINOIS		CONTRACT NO. 74235		
FED. AID PROJECT					
OATES ASSOCIATES Consulting Engineers			Eastport Business Center 1 100 Lanter Court, Suite 1 Collinsville, Illinois 62234 618-345-2200 Design Firm License No. 184.001115		
			DESIGNED JAD		
			CHECKED DGL		
			DRAWN JAD		
			CHECKED DGL		