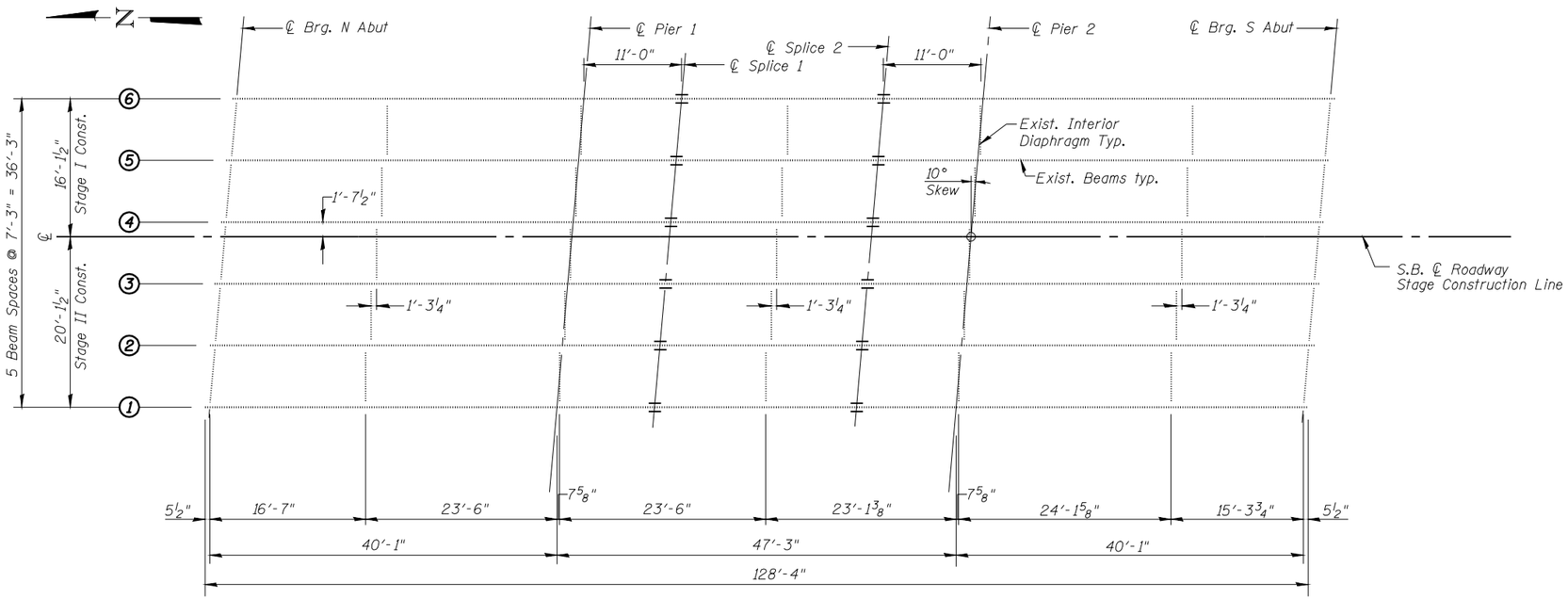
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



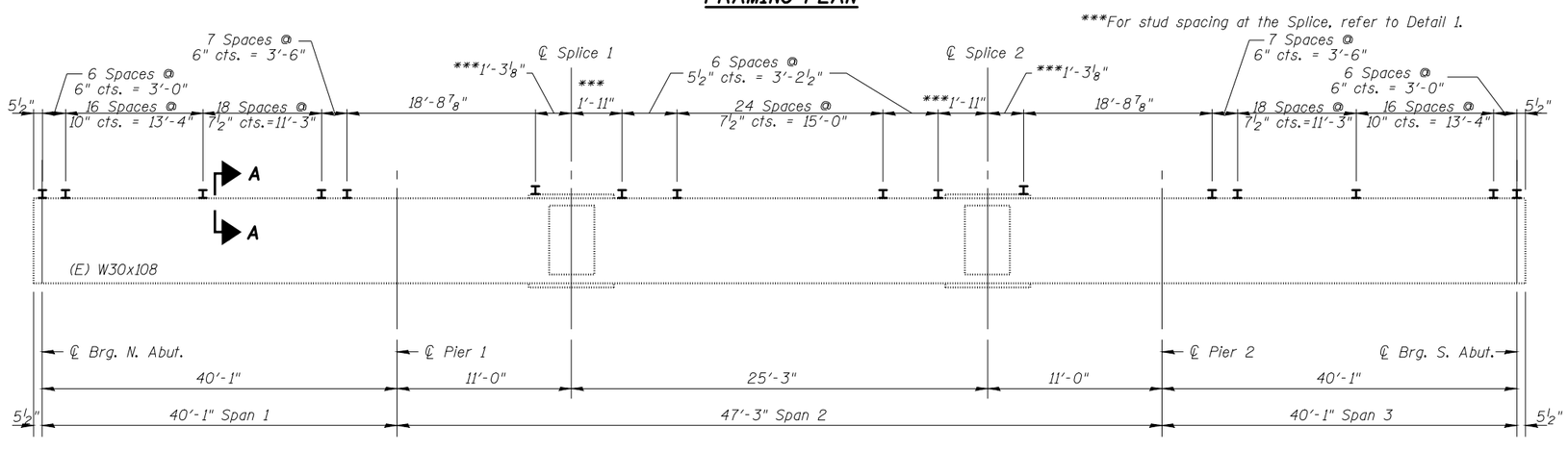
INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 0.6 Sp. 3	Pier 1 Pier 2	0.5 Sp. 2
I_s	(in^4)	4,470	4,470	4,470
$I_c(n)$	(in^4)	12,914	-	12,914
$I_c(3n)$	(in^4)	9,686	-	9,686
S_s	(in^3)	299	299	299
$S_c(n)$	(in^3)	456	-	456
$S_c(3n)$	(in^3)	414	-	414
$\wp$	(k/')	0.875	1.158	0.875
$M\wp$	('k)	105	212	80
$s\wp$	(k/')	0.283	-	0.283
$M_s\wp$	('k)	38	-	37
$M\ell$	('k)	256	138	260
M_I	('k)	77	41	75
$\frac{5}{3}[M\ell + I]$	('k)	555	299	559
M_a	('k)	907	664	899
* M_u	('k)	1,292	-	1,309
f_s $\wp$ non-comp	(ksi)	4.3	8.6	3.3
f_s $\wp$ (comp)	(ksi)	1.1	-	1.1
f_s $\frac{5}{3}[M\ell + M_I]$	(ksi)	14.6	12.0	14.8
f_s (Overload)	(ksi)	20.1	20.6	19.2
** f_s (Total)	(ksi)	-	26.5	-
VR	(k)	48.3	-	39.6

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
$R\wp$	(k)	18.2	56.5
$R\ell$	(k)	34.9	42.4
R_I	(k)	10.5	10.0
R_{Total}	(k)	63.6	108.9

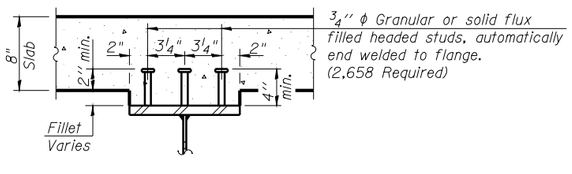
* Compact section
** Braced non-compact and partially braced section

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total and Overload) 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 and Overload) 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 and Overload) due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).
$\wp$: Un-factored non-composite dead load (kips/ft.).
$M\wp$: Un-factored moment due to non-composite dead load (kip-ft.).
$s\wp$: Un-factored long-term composite (superimposed) dead load (kips/ft.)
$M_s\wp$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
$M\ell$: Un-factored live load moment (kip-ft.).
M_I: Un-factored moment due to impact (kip-ft.).
M_a: Factored design moment (kip-ft.).
$1.3\ [M\wp + M_s\wp + \frac{5}{3}(M\ell + M_I)]$
M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
f_s (Overload): Sum of stresses as computed from the moments below (ksi).
$M\wp + M_s\wp + \frac{5}{3}(M\ell + M_I)$
f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.3\ [M\wp + M_s\wp + \frac{5}{3}(M\ell + M_I)]$
VR: Maximum ℓ + impact shear range within the composite portion of the span for stud shear connector design (kips).

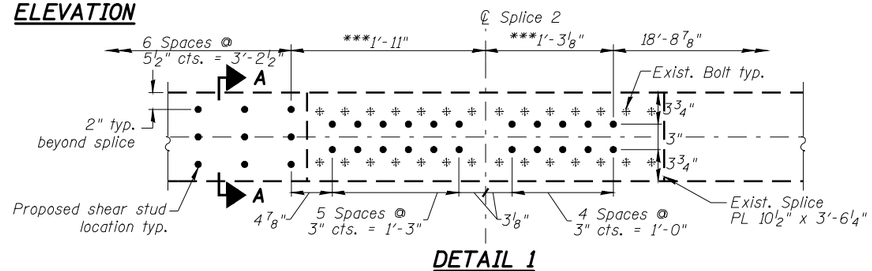
FRAMING PLAN



ELEVATION



SECTION A-A



DETAIL 1

FRAMING PLAN AND BEAM DETAILS
STRUCTURE NO. 059-0040 (S.B.)

SHEET NO. 20	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
31 SHEETS	55	(59, 68)RS-3, BR	Macoupin	137	118
			CONTRACT NO. 72921		
	FED. ROAD DIST. NO. 6	ILLINOIS	FED. AID PROJECT		