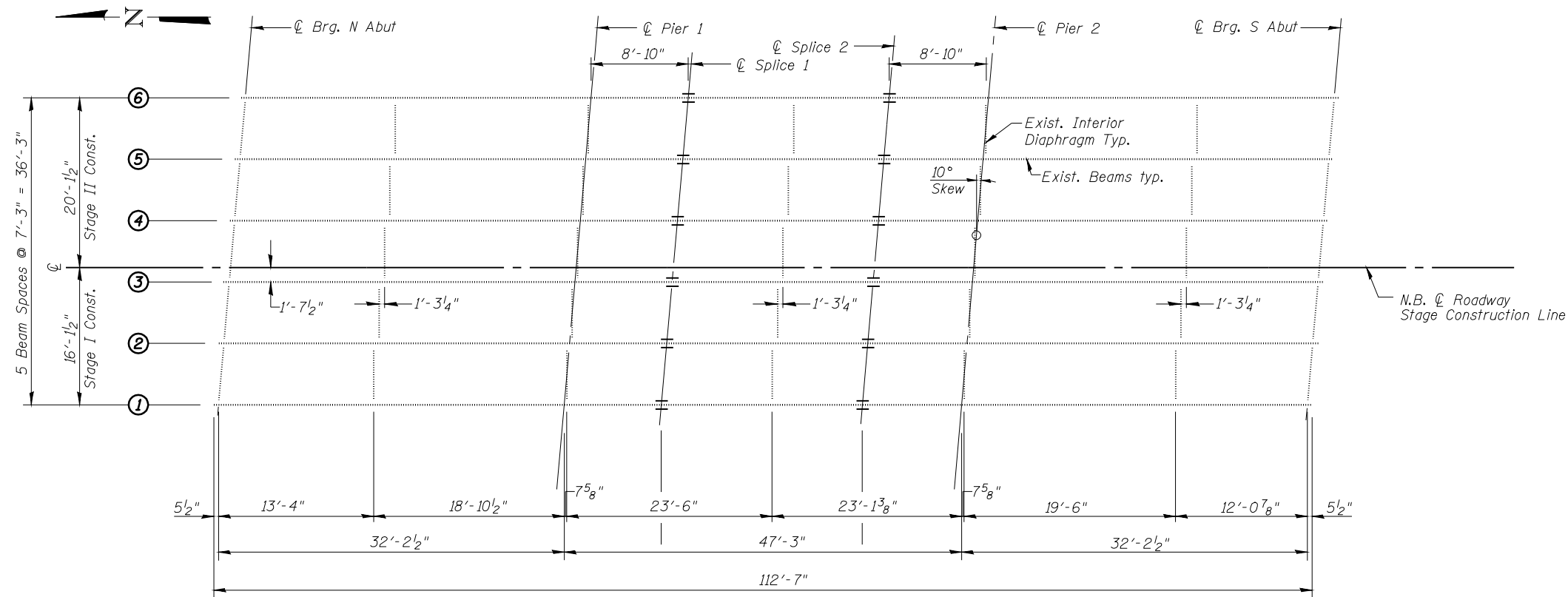


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

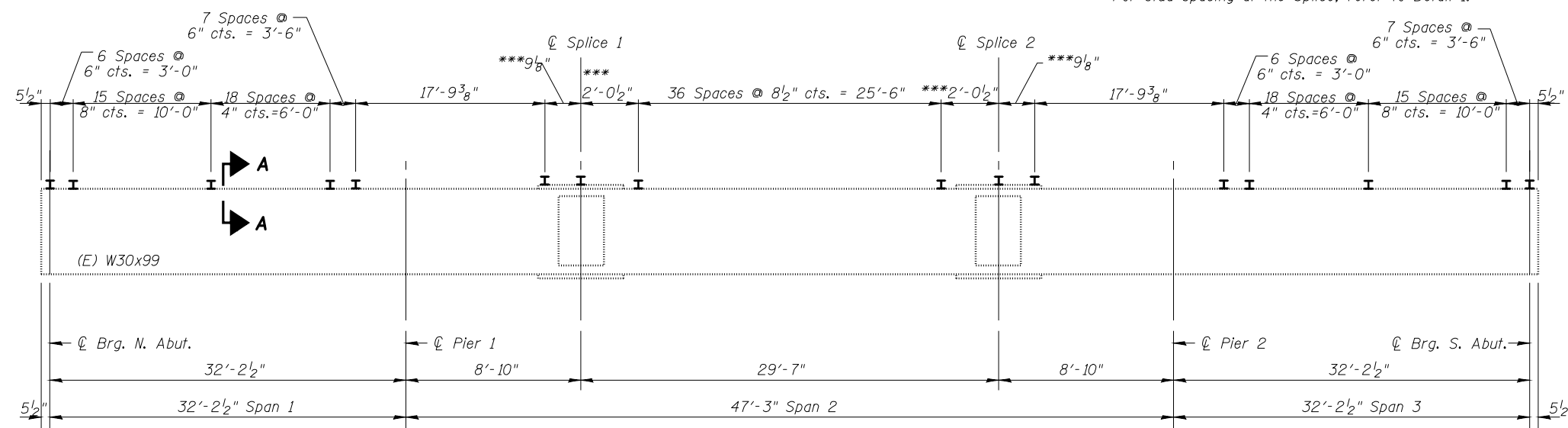
INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp. 1	Pier 1	0.5 Sp. 2
I_s	(in ⁴) 3,990	3,990	3,990
$I_c(n)$	(in ⁴) 11,915	-	11,915
$I_c(3n)$	(in ⁴) 8,984	-	8,984
S_s	(in ³) 269	269	269
$S_c(n)$	(in ³) 417	-	417
$S_c(3n)$	(in ³) 379	-	379
\bar{Q}	(k/')	0.866	1.148
$M\bar{Q}$	(k)	53	183
$s\bar{Q}$	(k/')	0.283	-
$M_s\bar{Q}$	(k)	21	-
M_L	(k)	175	122
M_{IM}	(k)	53	36
$\bar{S}_3 [M_L + I]$	(k)	380	264
M_a	(k)	390	581
M_u	(k)	1,213	-
$f_s \bar{Q}$ non-comp	(ksi)	2.4	8.2
$f_s \bar{Q}$ (comp)	(ksi)	0.7	-
$f_s \bar{S}_3 [M_L + M_I]$	(ksi)	11.0	11.8
f_s (Overload)	(ksi)	14.1	20.0
f_s (Total)	(ksi)	-	26.0
VR	(k)	45.6	-

INTERIOR GIRDER REACTION TABLE		
	Abut.	Pier
$R\bar{Q}$	(k) 13.0	51.9
R_L	(k) 32.2	41.8
R_I	(k) 9.7	10.2
R_{Total}	(k) 54.9	103.9

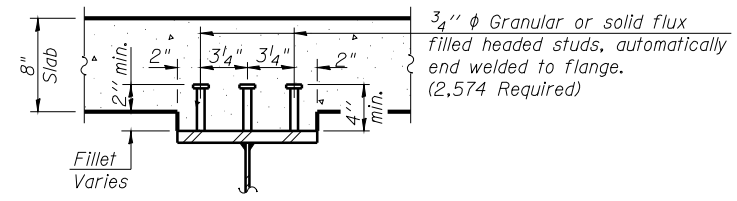
* Compact section
** Braced non-compact and partially braced section

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).
 \bar{Q} : Un-factored non-composite dead load (kips/ft.).
 $M\bar{Q}$: Un-factored moment due to non-composite dead load (kip-ft.).
 $s\bar{Q}$: Un-factored long-term composite (superimposed) dead load (kips/ft.).
 $M_s\bar{Q}$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
 M_L : Un-factored live load moment (kip-ft.).
 M_I : Un-factored moment due to impact (kip-ft.).
 M_a : Factored design moment (kip-ft.).
 $1.3 [M\bar{Q} + M_s\bar{Q} + \frac{5}{3} (M_L + M_I)]$
 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).
 $M\bar{Q} + M_s\bar{Q} + \frac{5}{3} (M_L + M_I)$
 f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M\bar{Q} + M_s\bar{Q} + \frac{5}{3} (M_L + M_I)]$
 VR: Maximum shear range within the composite portion of the span for stud shear connector design (kips).

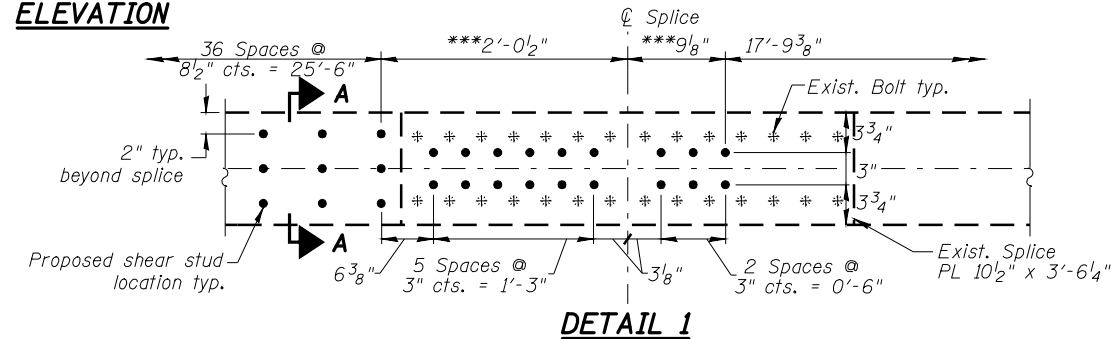
***For stud spacing at the Splice, refer to Detail 1.



ELEVATION



SECTION A-A



DETAIL 1

**FRAMING PLAN AND BEAM DETAILS
STRUCTURE NO. 059-0041 (N.B.)**

SHEET NO. 21 31 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	(59, 68)RS-3, BR	Macoupin	137	132
			CONTRACT NO. 72921		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					