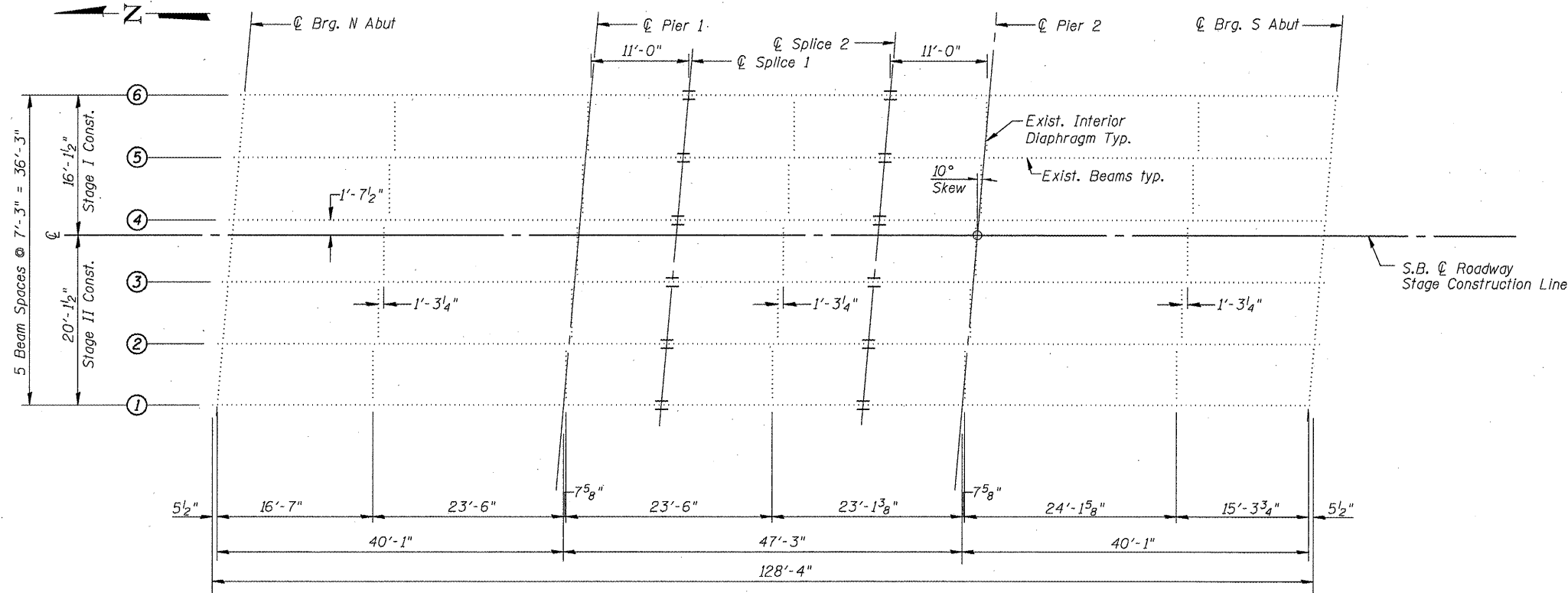


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



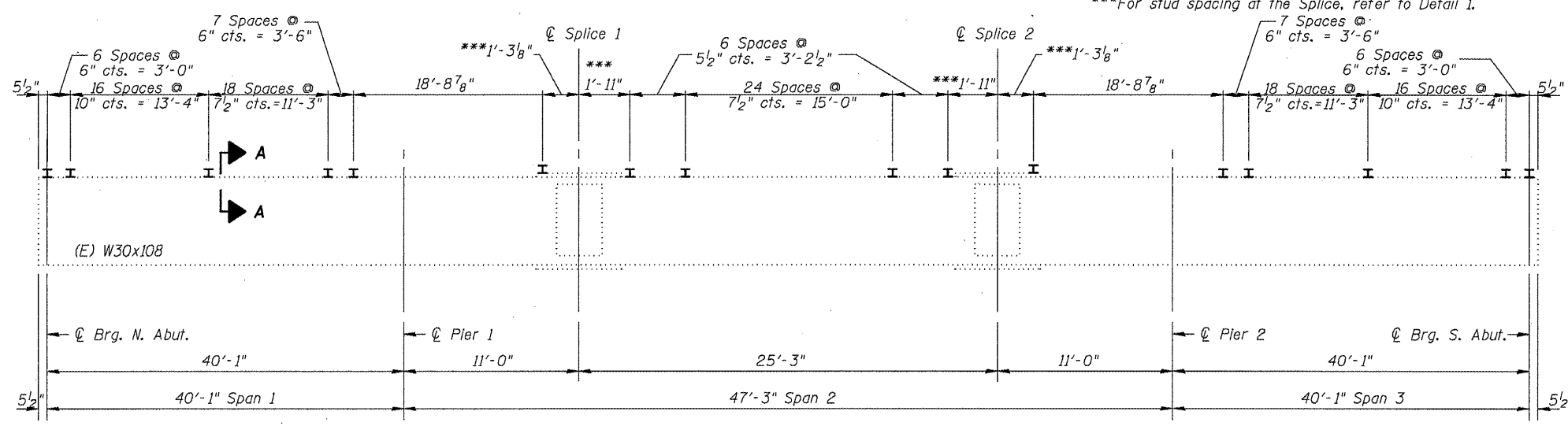
FRAMING PLAN

	0.4 Sp. 1 0.6 Sp. 3	Pier 1 Pier 2	0.5 Sp. 2
I_s	4,470	4,470	4,470
$I_c(n)$	12,914	-	12,914
$I_c(3n)$	9,686	-	9,686
S_s	299	299	299
$S_c(n)$	456	-	456
$S_c(3n)$	414	-	414
ρ	0.875	1.158	0.875
M_D	105	212	80
s_D	0.283	-	0.283
M_{sD}	38	-	37
M_L	256	138	260
M_{IM}	77	41	75
$S_D [M_L + I]$	555	299	559
M_o	907	664	899
M_u	1,292	-	1,309
$f_s \rho$ non-comp	4.3	8.6	3.3
$f_s \rho$ (comp)	1.1	-	1.1
$f_s S_D [M_L + M_I]$	14.6	12.0	14.8
f_s (Overload)	20.1	20.6	19.2
f_s (Total)	-	26.5	-
VR	48.3	-	39.6

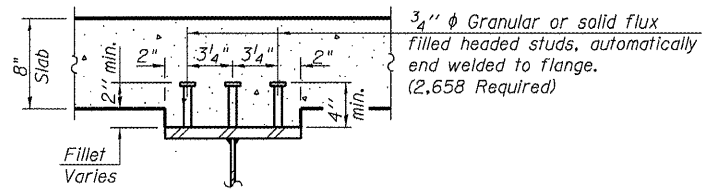
	Abut.	Pier
R_D	18.2	56.5
R_L	34.9	42.4
R_I	10.5	10.0
R_{Total}	63.6	108.9

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

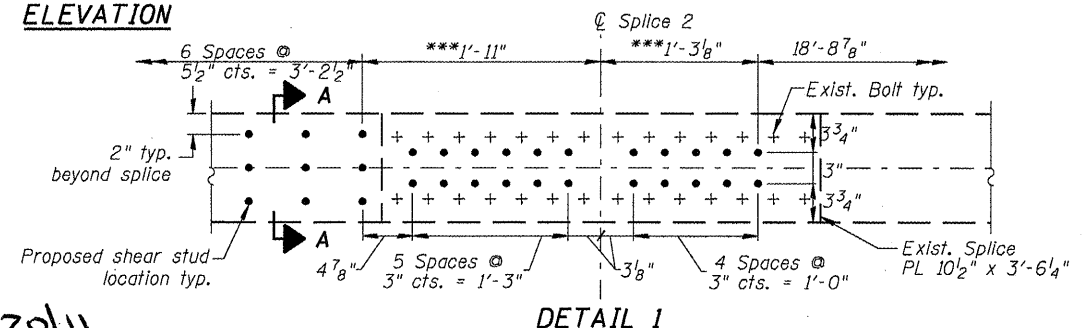
I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in.⁴ and in.³).
 $I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", 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).
 ρ : Un-factored non-composite dead load (kips/ft.).
 M_D : Un-factored moment due to non-composite dead load (kip-ft.).
 s_D : Un-factored long-term composite (superimposed) dead load (kips/ft.).
 M_{sD} : 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_o : Factored design moment (kip-ft.).
 $1.3 [M_D + M_{sD} + \frac{2}{3} (M_L + M_I)]$
 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).
 $M_D + M_{sD} + \frac{2}{3} (M_L + M_I)$
 f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M_D + M_{sD} + \frac{2}{3} (M_L + M_I)]$
 VR: Maximum $\ell +$ impact shear range within the composite portion of the span for stud shear connector design (kips).



ELEVATION



SECTION A-A



DETAIL 1

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

SHEET NO. 28 31 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	(59, 68)RS-3, BR	Macoupin	137	126
			CONTRACT NO. 72921		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					

REVISOR SHEET 4/20/11