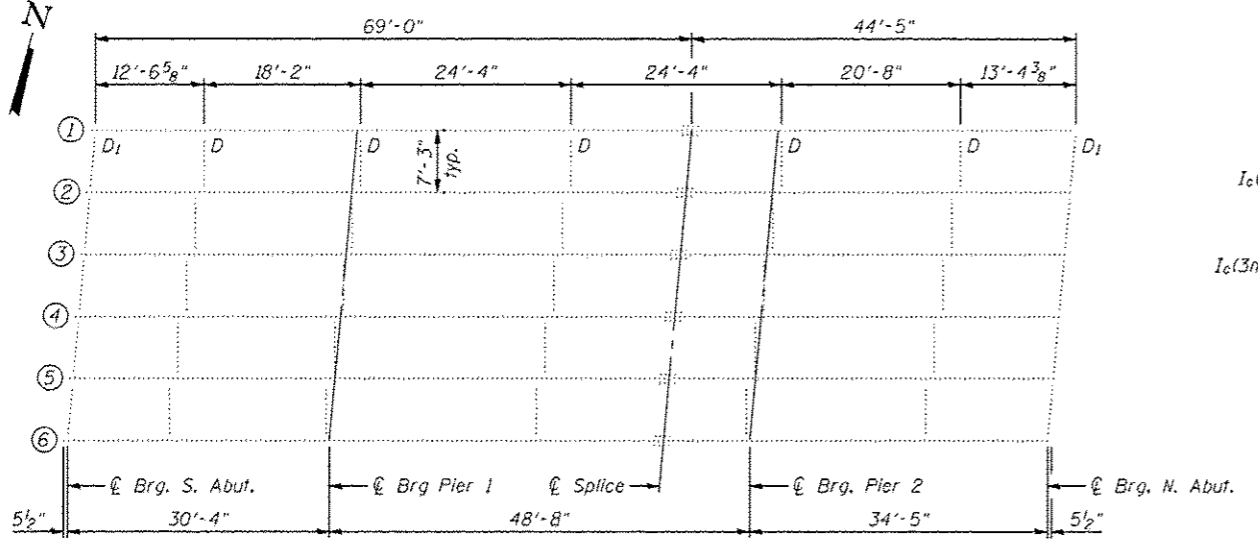
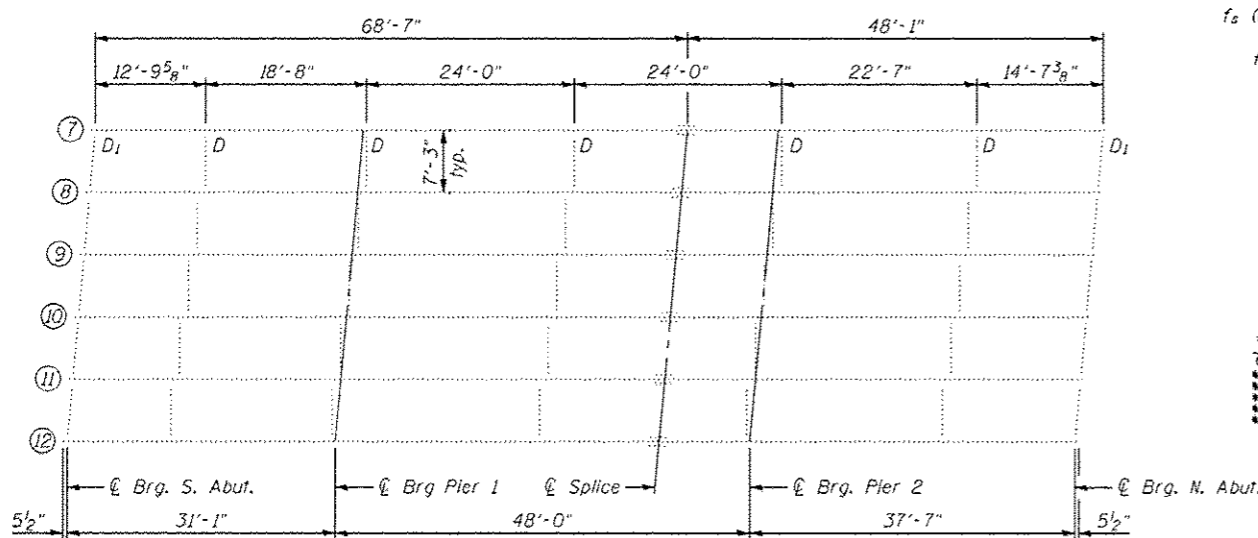


**GIRDER ELEVATION**

• N.B. Structure  
•• S.B. Structure



**DIAPHRAGM LAYOUT S.B. STRUCTURE**



**DIAPHRAGM LAYOUT N.B. STRUCTURE**

$I_s, S_s$ : 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.<sup>4</sup> and in.<sup>3</sup>).

$I_c(n), S_c(n)$ : 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.<sup>4</sup> and in.<sup>3</sup>).

$I_c(3n), S_c(3n)$ : 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.<sup>4</sup> and in.<sup>3</sup>).

$Q$ : Un-factored non-composite dead load (kips/ft.).

$M_Q$ : Un-factored moment due to non-composite dead load (kip-ft.).

$s_Q$ : Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_{sQ}$ : 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.).

$1.3 [M_Q + M_{sQ} + \frac{2}{3} (M_L + M_I)]$

$M_u$ : 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.).

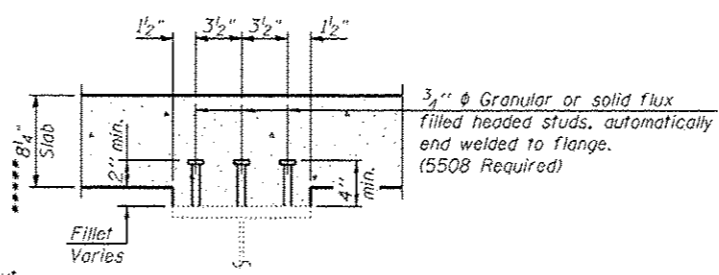
$f_s$  (Overload): Sum of stresses as computed from the moments below (ksi).

$M_Q + M_{sQ} + \frac{2}{3} (M_L + M_I)$

$f_s$  (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).

$1.3 [M_Q + M_{sQ} + \frac{2}{3} (M_L + M_I)]$

VR: Maximum  $\frac{1}{4}$  impact shear range within the composite portion of the span for stud shear connector design (kips).



**SECTION A-A**

•••• Prior to grinding

**INTERIOR GIRDER MOMENT TABLE - SOUTH BOUND STRUCTURE**

	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
$I_s$	3226	4483	3226	4483	3226
$I_c(n)$	11,284	-	11,284	-	11,284
$I_c(3n)$	8384	-	8384	-	8384
$S_s$	240	324	240	324	240
$S_c(n)$	405	-	405	-	405
$S_c(3n)$	366	-	366	-	366
$Q$	0.896	1.43	0.896	1.43	0.896
$M_Q$	37	224	103	246	60
$s_Q$	0.534	-	0.534	-	0.534
$M_{sQ}$	31	-	85	-	45
$M_L$	160	127	283	134	189
$M_I$	48	39	82	40	57
$^{5/8} [M_L + M_I]$	347	277	608	290	410
$M_o$	539	652	1036	697	669
$M_u$	1111	-	1111	-	1111
$f_s Q$ (non-comp)	1.8	8.3	5.2	9.1	3.0
$f_s Q$ (comp)	1.0	-	2.8	-	1.5
$f_s ^{5/8} [M_L + M_I]$	10.3	10.1	18	10.7	12.1
$f_s$ (Overload)	13.1	18.5	26	19.8	16.6
$f_s$ (Total)	-	24.1	-	25.7	-
VR	45.7	-	41.4	-	46.6

**INTERIOR GIRDER MOMENT TABLE - NORTH BOUND STRUCTURE**

	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
$I_s$	3226	4483	3226	4483	3226
$I_c(n)$	11,284	-	11,284	-	11,284
$I_c(3n)$	8384	-	8384	-	8384
$S_s$	240	324	240	324	240
$S_c(n)$	405	-	405	-	405
$S_c(3n)$	340	-	340	-	340
$Q$	0.896	1.43	0.896	1.43	0.896
$M_Q$	44	218	95	259	81
$s_Q$	0.534	-	0.534	-	0.534
$M_{sQ}$	34	-	78	-	58
$M_L$	165	127	267	139	233
$M_I$	50	39	77	41	70
$^{5/8} [M_L + M_I]$	358	277	573	300	505
$M_o$	568	645	971	726	837
$M_u$	1111	-	1111	-	1111
$f_s Q$ (non-comp)	2.2	8.1	4.7	9.6	4.1
$f_s Q$ (comp)	1.2	-	2.8	-	2.0
$f_s ^{5/8} [M_L + M_I]$	10.6	10.3	17.0	11.1	15.0
$f_s$ (Overload)	14.0	18.4	24.5	20.7	21.0
$f_s$ (Total)	-	23.9	-	26.9	-
VR	45.7	-	41.2	-	49.4

••• Compact sections  
•••• Braced non-compact and partially braced section

**INTERIOR GIRDER REACTION TABLE**

	SOUTH BOUND STRUCTURE				NORTH BOUND STRUCTURE			
	S. Abut.	N. Abut.	Pier 1	Pier 2	S. Abut.	N. Abut.	Pier 1	Pier 2
$R_Q$	14.3	17.5	63.4	67.0	15.2	20.0	62.8	68.9
$R_L$	31.0	33.0	42.8	42.1	31.0	34.9	42.0	42.8
$R_I$	9.3	9.9	12.8	12.6	9.3	10.5	12.6	12.8
$R_{Total}$	54.6	60.4	119.0	121.7	55.5	65.4	117.4	124.5

$R_Q$  does not include weight of Diaphragm & Appr. slab

REV. SHEET 6-3-13

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