ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	DOUGLAS	279	64
FED.ROAD DIST.NO.		ILLINOIS	PROJECT	

*99-00080-00-RP

FRAMING PLAN

4 sp at 17'-4½" = 69'-6"

N

Interior diaphragm typ
See detail this sheet

90°

℄ Brg
Abut No. 1

162

Back
Abut No. 1

℄ Structure
Sta 162+38.00

Back
Abut No. 2

℄ Brg
Abut No. 2

℄ CH 11

4 beam sp at 9'-0" = 36'-0"

W27x178 steel beams

1'-3"   69'-6" c to c bearings   1'-3"

72'-0" Back to Back Abutments

INTERIOR GIRDER MOMENT TABLE
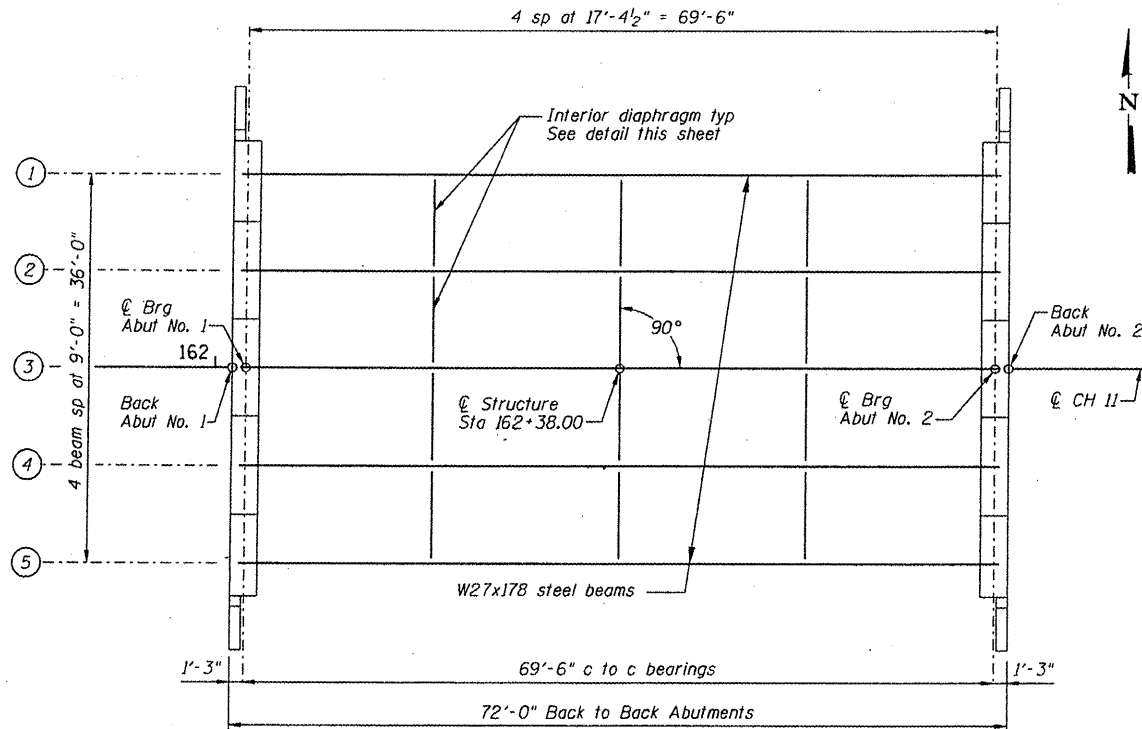
		0.5	
I_s	(in^4)	6990	
$I_c(n)$	(in^4)	18429	
$I_c(3n)$	(in^4)	13383	
S_s	(in^3)	503	
$S_c(n)$	(in^3)	728	
$S_c(3n)$	(in^3)	656	
Z	(in^3)		
ρ	(k/')	1.131	
$M\rho$	('k)	683	
$s\rho$	(k/')	0.570	
$M_s\rho$	('k)	344	
M_L	('k)	690	
M_{Imp}	('k)	177	
$\frac{5}{3}[M_L + Imp]$	('k)	1446	
M_a	('k)	3215	
M_u	('k)	3357	
$f_s \rho$ non-comp	(ksi)	16.3	
$f_s \rho$ (comp)	(ksi)	6.3	
$f_s \frac{5}{3}[M_L + M_{Imp}]$	(ksi)	23.8	
f_s (Overload)	(ksi)	46.4	
** f_s (Total)	(ksi)		
VR	(k)	70.2	

INTERIOR GIRDER REACTION TABLE

		Abut.	
$R\rho$	(k)	59.2	
R_L	(k)	51.2	
Imp.	(k)	13.2	
R_{Total}	(k)	123.7	

* 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}).

Z: Plastic Section Modulus of the steel section in non-composite areas (in.^{3}).

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

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

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

$M_s\rho$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_L: Un-factored live load moment (kip-ft.).

M_{Imp}: Un-factored moment due to impact (kip-ft.).

M_a: Factored design moment (kip-ft.).
1.3 $[M\rho + M_s\rho + \frac{5}{3}(M_L + M_{Imp})]$

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).
$M\rho + M_s\rho + \frac{5}{3}(M_L + M_{Imp})$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
1.3 $[M\rho + M_s\rho + \frac{5}{3}(M_L + M_{Imp})]$

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

CH 11 (FA 666) OVER BIG SLOUGH

FRAMING PLAN AND DETAILS