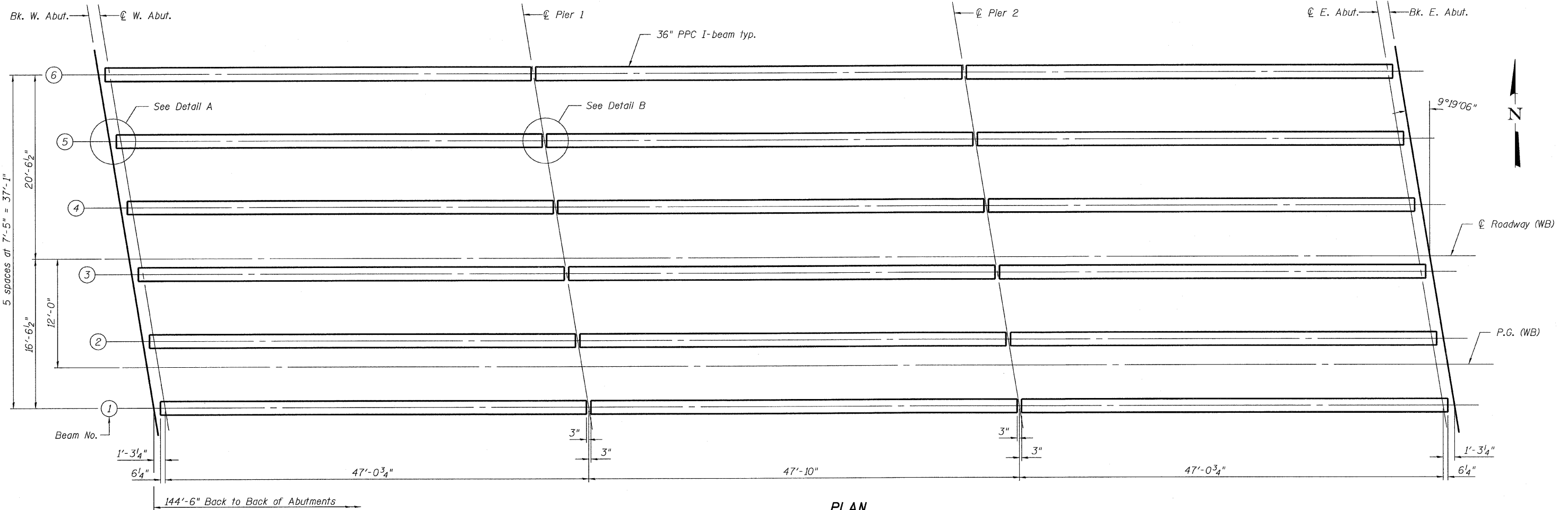


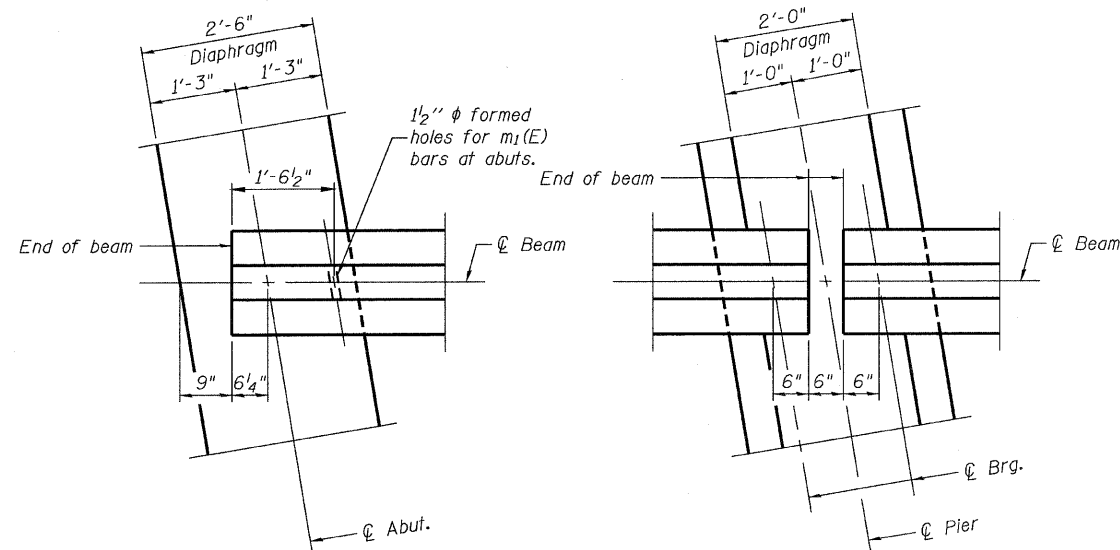
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12
FAP 301	177-2	STEPHENSON	386	199	24 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract No. 64799



PLAN



DETAIL A

DETAIL B

DESIGNED	M.SHAIKH
CHECKED	J. ZUO
DRAWN	D.C.PATEL
CHECKED	J.GRAINAWI

	0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
I	(in ⁴) 48647.6	-	48647.6
I'	(in ⁴) 175858	-	175858
S_b	(in ³) 3165.1	-	3165.1
S_b'	(in ³) 5919	-	5919
S_t	(in ³) 2358.1	-	2358.1
S_t'	(in ³) 27958	-	27958
Q	(k/ft) 1.088	-	1.088
M_Q	(k) 292	-	292
s_Q	(k/ft) 0.521	0.521	0.521
$M_s Q$	(k) 92	117	32
M_t	(k) 304	218	250
M_{Imp}	(k) 88	63	73

	Abut.	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2
R_Q	(k) 25.9	25.9	26.0
$R_s Q$	(k) 9.8	13.6	13.6
R_t	(k) 44.8	28.1	28.1
$Imp.$	(k) 13.0	8.1	8.1
R_{Total}	(k) 93.5	75.7	75.8

* The total $R_s Q$, R_t , and impact reactions are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios.

- I : Non-composite moment of inertia of beam section (in⁴).
- I' : Composite moment of inertia of beam section (in⁴).
- S_b : Non-composite section modulus for the bottom fiber of the prestressed beam (in³).
- S_b' : Composite section modulus for the bottom fiber of the prestressed beam (in³).
- S_t : Non-composite section modulus for the top fiber of the prestressed beam (in³).
- S_t' : Composite section modulus for the top fiber of the prestressed beam (in³).
- Q : Un-factored non-composite dead load (kips/ft.).
- M_Q : Un-factored moment due to non-composite dead load conservatively taken at 0.5 of the span (kip-ft.).
- s_Q : Un-factored long-term composite (superimposed) dead load (kips/ft.).
- $M_s Q$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
- M_t : Un-factored live load moment on the composite section (kip-ft.).
- M_{Imp} : Un-factored moment due to impact on the composite section (kip-ft.).

FRAMING PLAN

F.A.P. ROUTE 301 SECTION 177-2VB-1
STEPHENSON COUNTY
STATION 569+87.29
STRUCTURE NO. 089-0083

