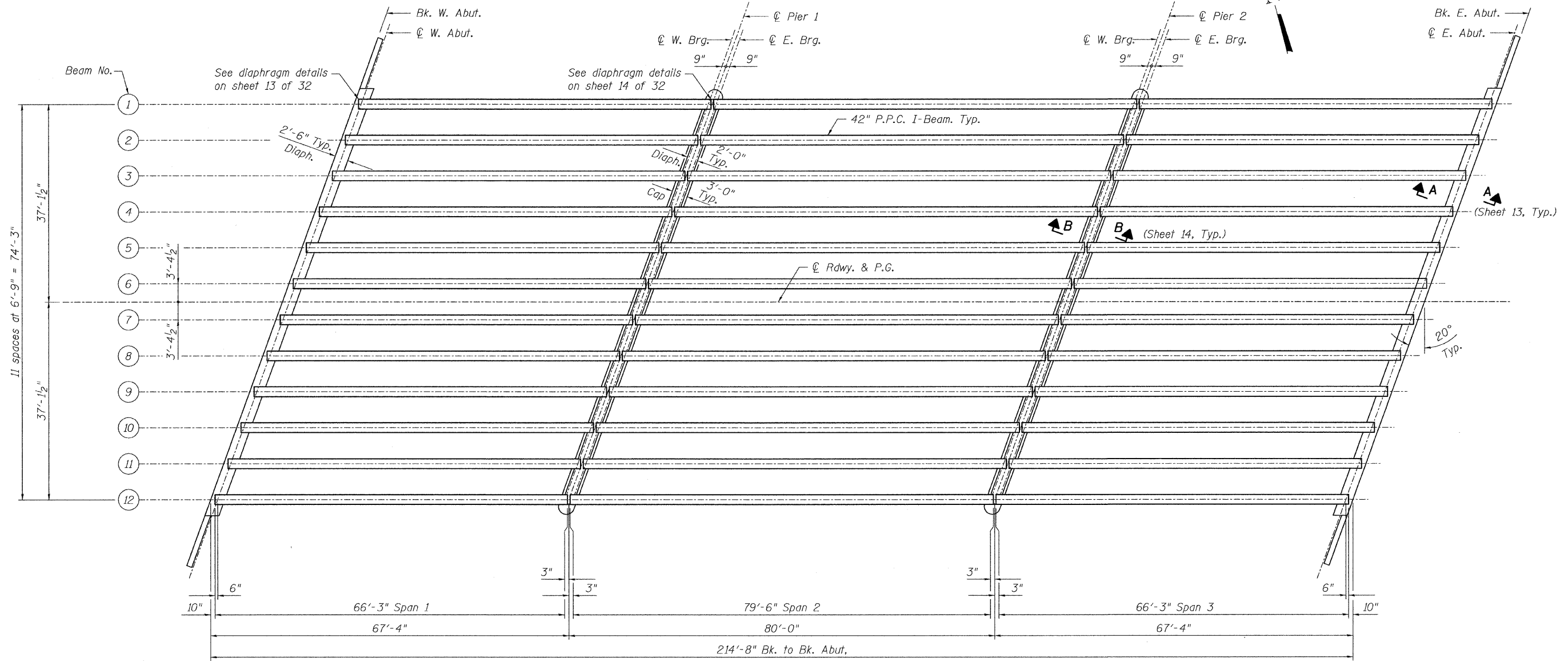


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 17 32 SHEETS
FAU 1312	0707-B	Cook	80	51	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-			

Contract # 60B98



FRAMING PLAN

	Abut.	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2
R_{DC1} (k)	38.7	38.7	47.0
* R_{DC2} (k)	4.8	7.9	7.9
* R_{DW} (k)	6.9	11.4	11.1
* $R_{\frac{1}{2} + Imp}$ (k)	70.9	81.5	82.5
R_{Total} (k)	121.3	139.5	148.5

* The total R_{DC2} , R_{DW} and $R_{\frac{1}{2} + Imp}$ are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios.

	0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
I (in ⁴)	90956		90956
I' (in ⁴)	299979		299979
S_b (in ³)	5153		5153
S_b' (in ³)	9148		9148
S_t (in ³)	3736		3736
S_t' (in ³)	32575		32575
$DC1$ (k/ft)	1.18		1.18
M_{DC1} (k-ft)	614.4		940.4
$DC2$ (k/ft)	0.19	0.19	0.19
M_{DC2} (k-ft)	60.1	103.1	51.9
DW (k/ft)	0.28	0.28	0.28
M_{DW} (k-ft)	86.5	148.1	74.8
$M_{\frac{1}{2} + Imp}$ (k-ft)	827.0	830.3	824.3

- 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).
- $DC1$: Un-factored non-composite dead load (kips/ft.).
- M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).
- $DC2$: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW : Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_{\frac{1}{2} + Imp}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

BL Bollinger, Lach & Associates, Inc.

FRAMING PLAN
EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858