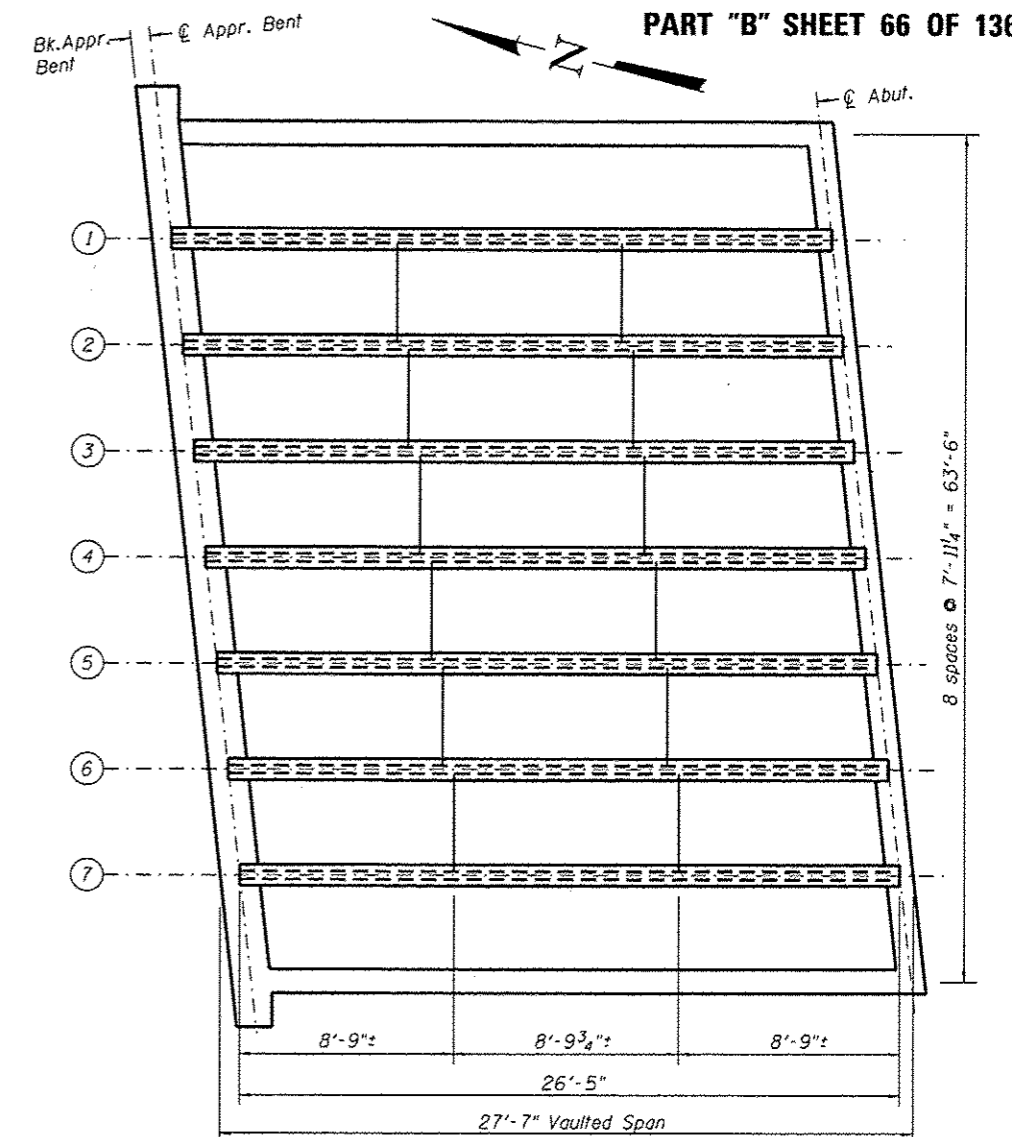


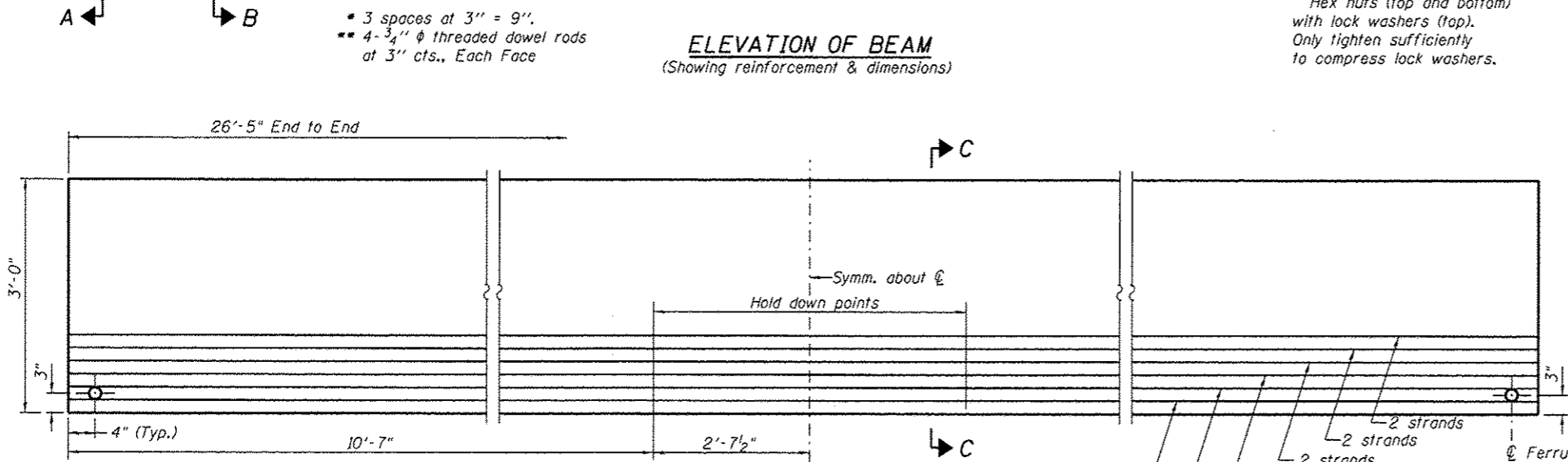
**ELEVATION OF BEAM**  
(Showing reinforcement & dimensions)

Note A:  
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



**FRAMING PLAN**

(N. Approach Span shown, S. Approach Span similar)



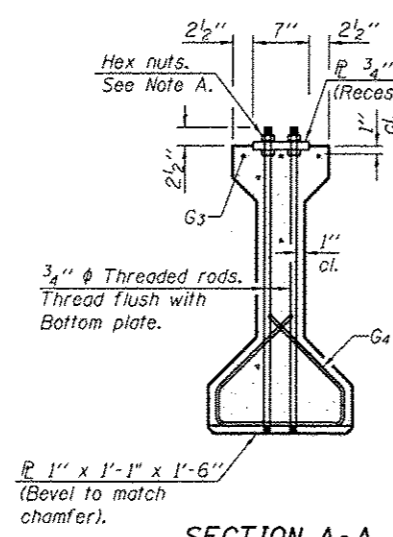
**ELEVATION OF BEAM**  
(Showing prestressing steel)

**\*\*\*BAR LIST**  
**ONE BEAM ONLY**

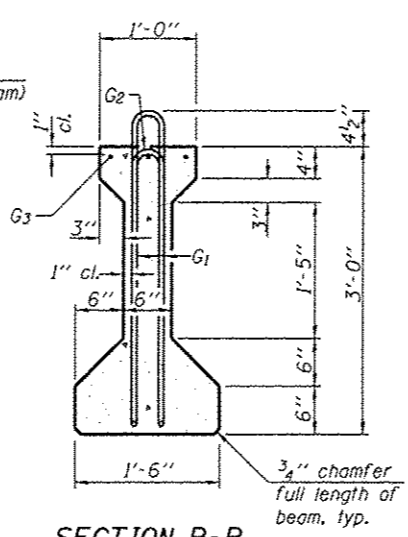
Bar	No.	Size	Length	Shape
G <sub>1</sub>	33	#4	7'-5"	fl
G <sub>2</sub>	33	#4	5'-8"	fl
G <sub>3</sub>	3	#5	26'-1"	—
G <sub>4</sub>	38	#3	4'-1"	CS

\*\*\*For information only

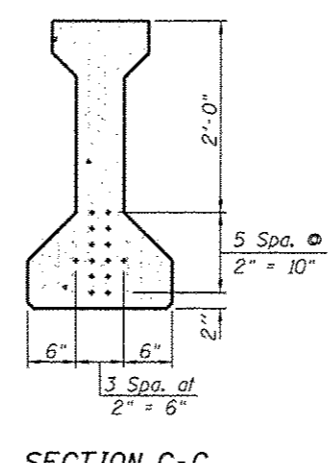
Notes:  
See sheet 13 of 27 for additional details and Bill of Material.  
Required release strength, f'ci, shall be 5,000 psi.



**SECTION A-A**



**SECTION B-B**



**SECTION C-C**

I: Non-composite moment of inertia of beam section (in.<sup>4</sup>).  
I': Composite moment of inertia of beam section (in.<sup>4</sup>).  
S<sub>b</sub>: Non-composite section modulus for the bottom fiber of the prestressed beam (in.<sup>3</sup>).  
S<sub>b</sub>': Composite section modulus for the bottom fiber of the prestressed beam (in.<sup>3</sup>).  
S<sub>t</sub>: Non-composite section modulus for the top fiber of the prestressed beam (in.<sup>3</sup>).  
S<sub>t</sub>': Composite section modulus for the top fiber of the prestressed beam (in.<sup>3</sup>).  
Q: Un-factored non-composite dead load (kips/ft.).  
M<sub>s</sub>Q: Un-factored moment due to non-composite dead load conservatively taken at 0.5 of the span (kip-ft.).  
sQ: Un-factored long-term composite (superimposed) dead load (kips/ft.).  
M<sub>s</sub>sQ: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).  
M<sub>L</sub>: Un-factored live load moment on the composite section (kip-ft.).  
M<sub>I</sub>: Un-factored moment due to impact on the composite section (kip-ft.).

INTERIOR BEAM MOMENT TABLE		
		0.5 Sp. 2
I	(in. <sup>4</sup> )	48,648
I'	(in. <sup>4</sup> )	173,929
S <sub>b</sub>	(in. <sup>3</sup> )	3,165
S <sub>b</sub> '	(in. <sup>3</sup> )	5,929
S <sub>t</sub>	(in. <sup>3</sup> )	2,358
S <sub>t</sub> '	(in. <sup>3</sup> )	26,094
Q	(k/ft.)	1,256
M <sub>s</sub> Q	(k-ft.)	102
sQ	(k/ft.)	0,689
M <sub>s</sub> sQ	(k-ft.)	56
M <sub>L</sub>	(k-ft.)	155
M <sub>I</sub>	(k-ft.)	47

INTERIOR BEAM REACTION TABLE		
		Abut.
R <sub>Q</sub>	(k)	16.0
R <sub>s</sub> Q	(k)	8.8
R <sub>L</sub>	(k)	34.2
R <sub>I</sub>	(k)	10.3
R <sub>Total</sub>	(k)	69.3

PI-4-36

7-1-10

FILE NAME : CH2 over FAI-72.dgn	USER NAME :	DESIGNED - SAL	REVISION -
		CHECKED - MTH	REVISION -
		DRAWN - TJW	REVISION -
		CHECKED - MTH	REVISION -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

36" PPC I-BEAMS & FRAMING PLAN  
MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150

SHEET NO. 12 OF 27 SHEETS

P.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		SANGAMON	194	124
• 184-10-1RS-3, 84-10-2RS-RIBR.1 CONTRACT NO. 72C90				
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				