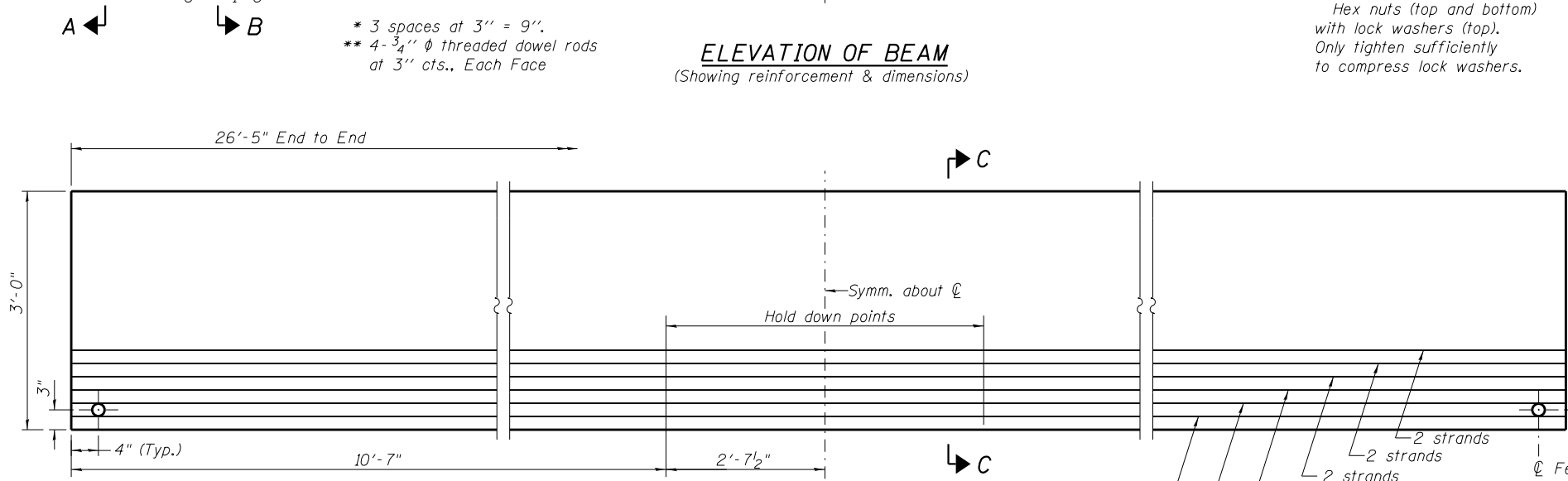


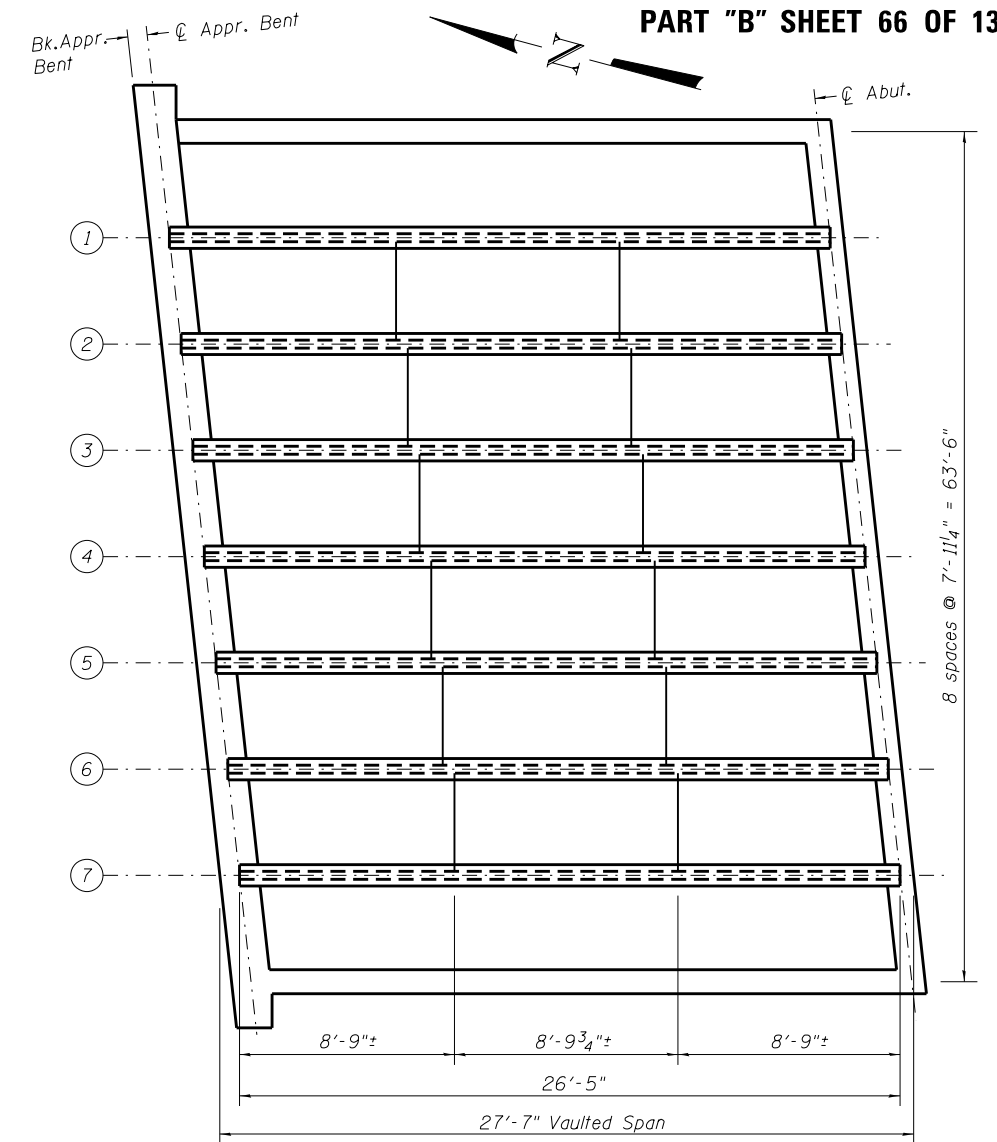
* 3 spaces at 3" = 9".
 ** 4- 3/4" ϕ threaded dowel rods at 3" cts., Each Face

ELEVATION OF BEAM
 (Showing reinforcement & dimensions)

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



ELEVATION OF BEAM
 (Showing prestressing steel)



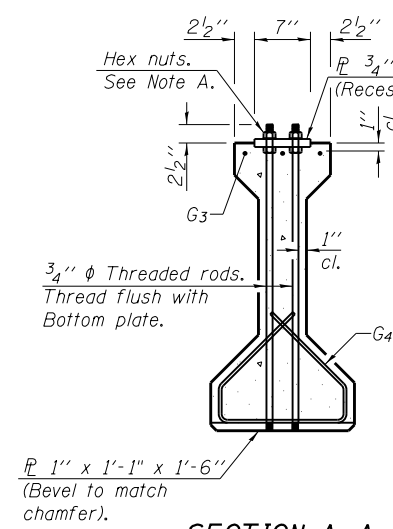
FRAMING PLAN
 (N. Approach Span shown, S. Approach Span similar)

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

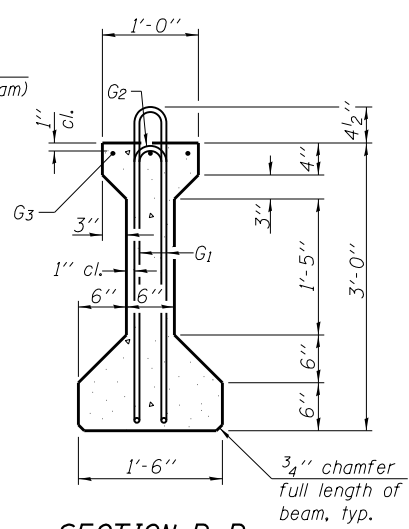
Bar	No.	Size	Length	Shape
G ₁	33	#4	7'-5"	nl
G ₂	33	#4	5'-8"	n
G ₃	3	#5	26'-1"	—
G ₄	38	#3	4'-1"	⊔

***For information only

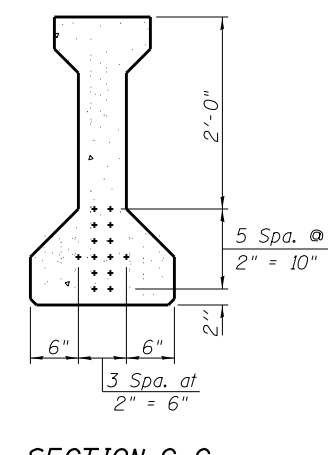
Notes:
 See sheet 13 of 27 for additional details and Bill of Material.
 Required release strength, f'ci, shall be 5,000 psi.



SECTION A-A



SECTION B-B



SECTION C-C

I: Non-composite moment of inertia of beam section (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_{sQ}: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
 M_L: Un-factored live load moment on the composite section (kip-ft.).
 M_I: Un-factored moment due to impact on the composite section (kip-ft.).

INTERIOR BEAM MOMENT TABLE

0.5 Sp. 2		
I	(in ⁴)	48,648
I'	(in ⁴)	173,929
S _b	(in ³)	3,165
S _b '	(in ³)	5,929
S _t	(in ³)	2,358
S _t '	(in ³)	26,094
Q	(k/ft.)	1.256
M _Q	(k)	102
s _Q	(k/ft.)	0.689
M _{sQ}	(k)	56
M _L	(k)	155
M _I	(k)	47

INTERIOR BEAM REACTION TABLE

Abut.		
R _Q	(k)	16.0
R _{sQ}	(k)	8.8
R _L	(k)	34.2
R _I	(k)	10.3
R _{Total}	(k)	69.3

PI-4-36

7-1-10

FILE NAME = CH12 over FAI-72.dgn	DESIGNED - SAL	REVISD -
USER NAME =	CHECKED - MTH	REVISD -
PLOT SCALE =	DRAWN - TJW	REVISD -
PLOT DATE =	CHECKED - MTH	REVISD -

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

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	.	SANGAMON	194	124
• (84-10-IRS-3, 84-10-2RS-RIBR,I			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				