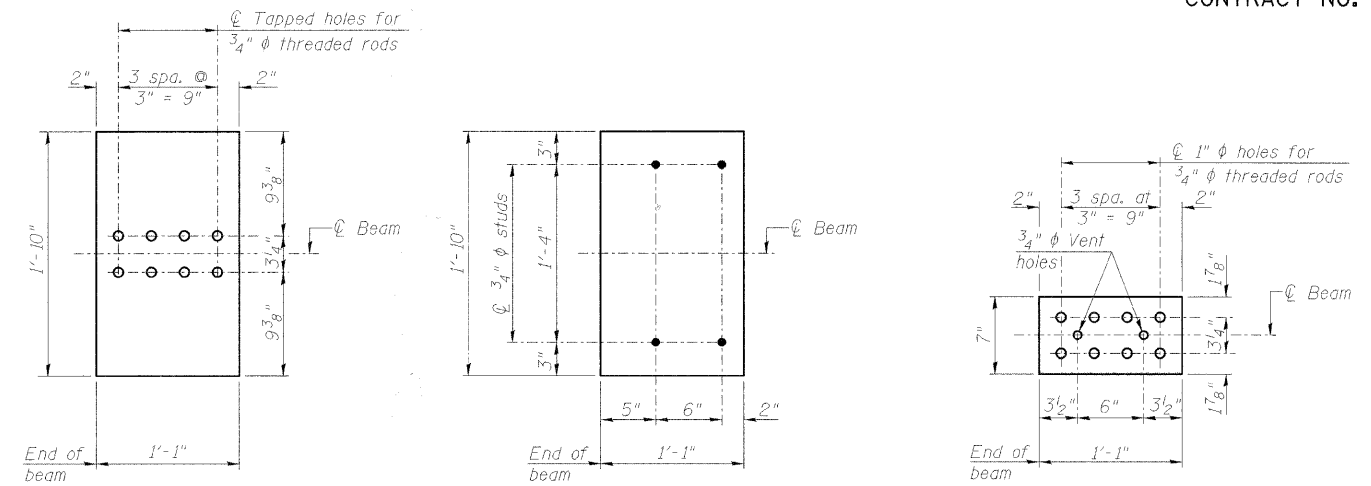


INTERIOR BEAM MOMENT TABLE		
		Span
I	(in ⁴)	213,715
I'	(in ⁴)	478,025
S_b	(in ³)	8,559
S_b'	(in ³)	12,507
S_t	(in ³)	7,362
S_t'	(in ³)	30,293
$DC1$	(k/ft)	1.205
M_{DC1}	(k)	1,395
$DC2$	(k/ft)	0.129
M_{DC2}	(k)	149
DW	(k/ft)	0.275
M_{DW}	(k)	318
$M_L + IM$	(k)	1,398

INTERIOR BEAM REACTION TABLE		
		Abut.
R_{DC1}	(k)	58.0
R_{DC2}	(k)	6.2
R_{DW}	(k)	13.2
$R_L + IM$	(k)	81.3
R_{Total}	(k)	158.7

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.).
 $M_L + IM$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

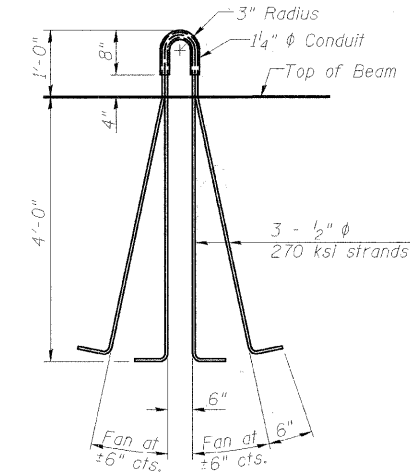
Estimated Weight of 54" P.P.C. I-Beams = 60,700 lbs., Each.



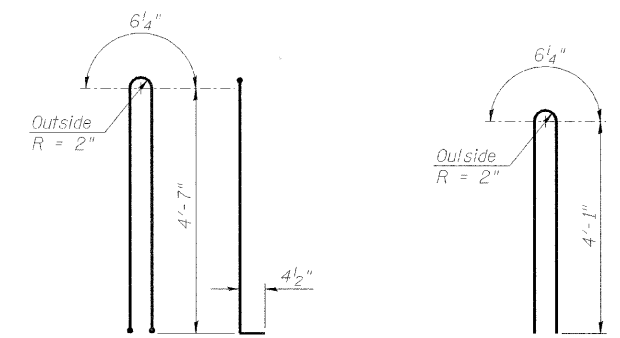
BOTTOM PLATE
(Showing threaded rods)

BOTTOM PLATE
(Showing studs)

TOP PLATE

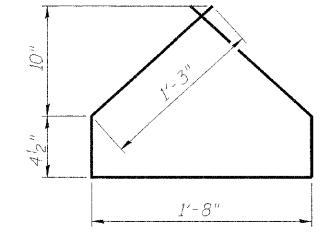


LIFTING LOOP DETAIL
(2 Required each end of beam)

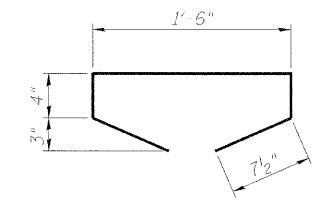


BAR G1

BAR G2



BAR G4



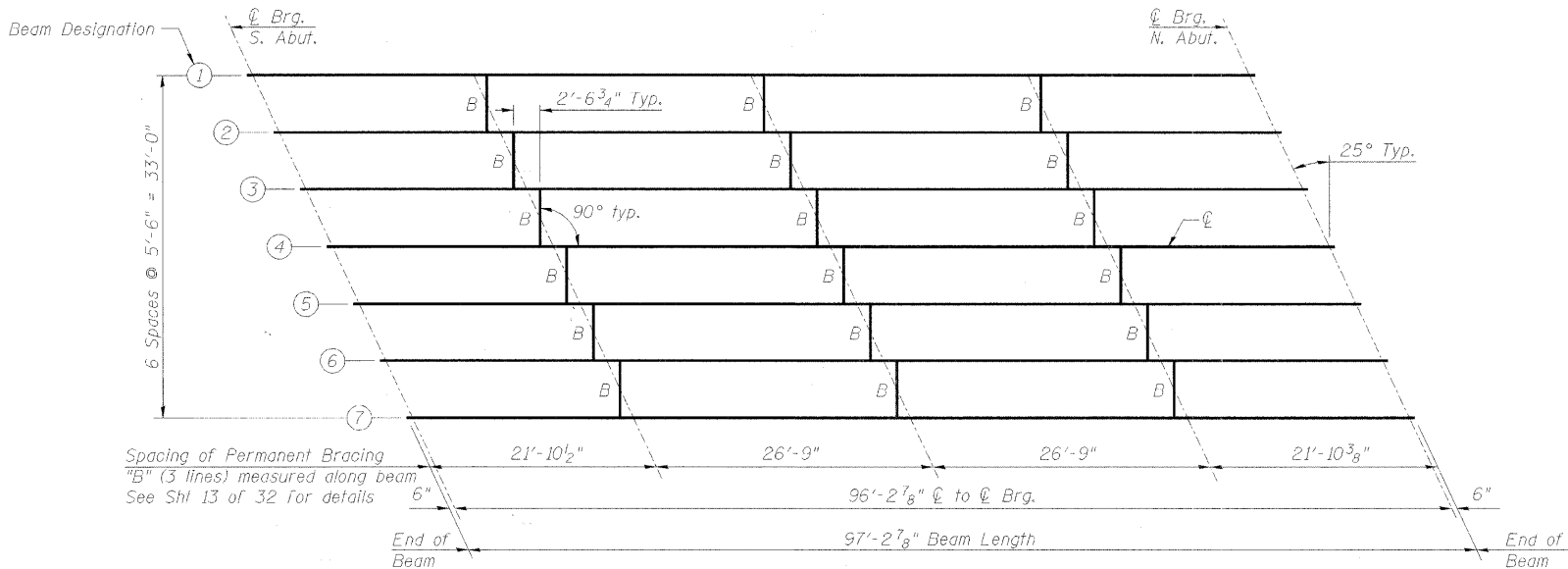
BAR G5

NOTES

- Inserts for 3/4" diameter threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- The top and bottom plates shall be AASHTO M270 Grade 50.
- The bottom plates and studs shall be galvanized according to AASHTO M111.
- Threaded rods shall be ASTM F 1554 Grade 55.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54"	Ft.	681



FRAMING PLAN



DESIGNED	P.J.L.
CHECKED	LLV
DRAWN	MGM
CHECKED	P.J.L.

AECOM 111 NE Jefferson Ave. Peoria, Illinois 61602 Ph: 309.676.8464 Fax: 309.676.5445 IL Design Firm Reg. No. 184-001518 www.aecom.com	HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	R-15	08-00092-00-BR	PEORIA	32	18
	STRUCTURE NO. 072-3147		STATION 7+27		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT BROS-0143(049)

**54" PPC I-BEAM DETAILS
ELMORE ROAD BRIDGE
OVER FRENCH CREEK**