

**CENTRAL AVENUE  
IMPROVEMENTS FROM  
135TH ST. W. TO 119TH ST. W.**

**CENTRAL AVE  
BRIDGE  
BILL OF  
REINFORCING**  
SHEET TITLE  
472-84017  
PROJECT NUMBER

DESIGN BY: JAG  
DRAWN BY: DMU  
CHECKED BY: KJS

ISSUED  
November 9, 2012

REVISED

SHEET NO.  
100 of 220

**BILL OF REINFORCING STEEL  
Epoxy Coated - Grade 60**

Straight Bars				Bent Bars			
Mark	Size	Number	Length	Mark	Size	Number	Length
PW4	#10	14	⊗	P5	#9	136	16'-4"
PB2	#5	48	17'-5"	PB1	#5	144	7'-10"
PW1	#5	144	20'-6"	PW7	#5	144	7'-4"
PW2	#5	128	6'-7" Δ <sub>2</sub>	PW8	#5	112	3'-6"
PW3	#5	96	22'-1" Δ <sub>2</sub>				
PW5	#5	8	49'-0"				
PW6	#5	16	25'-7"				

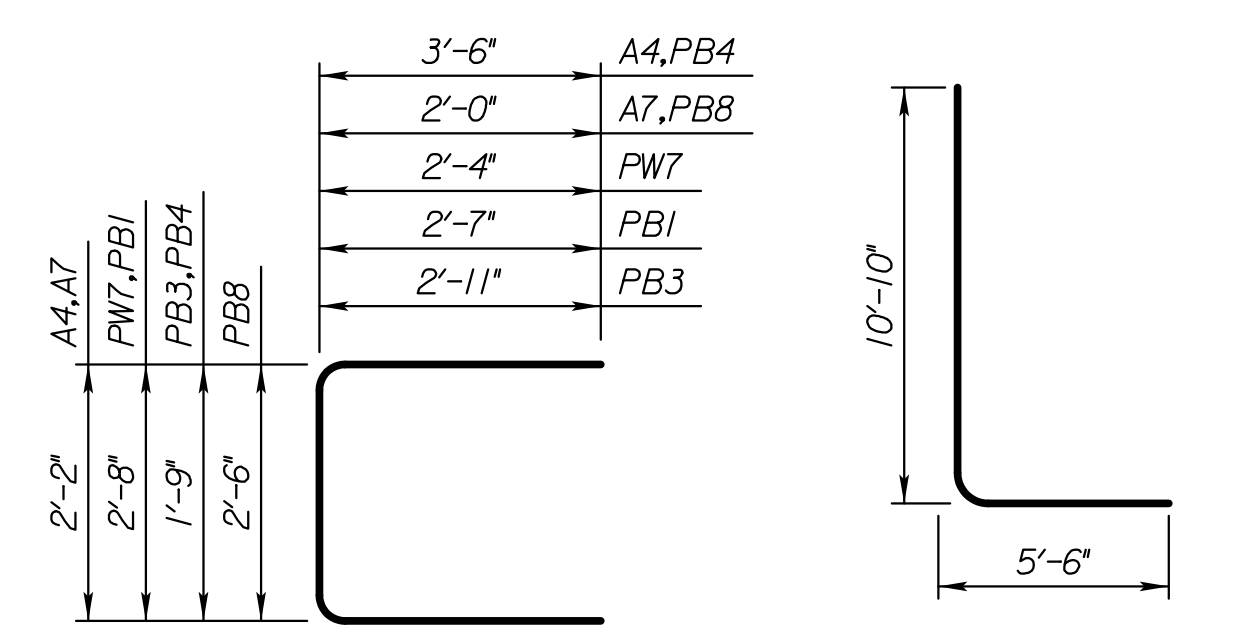
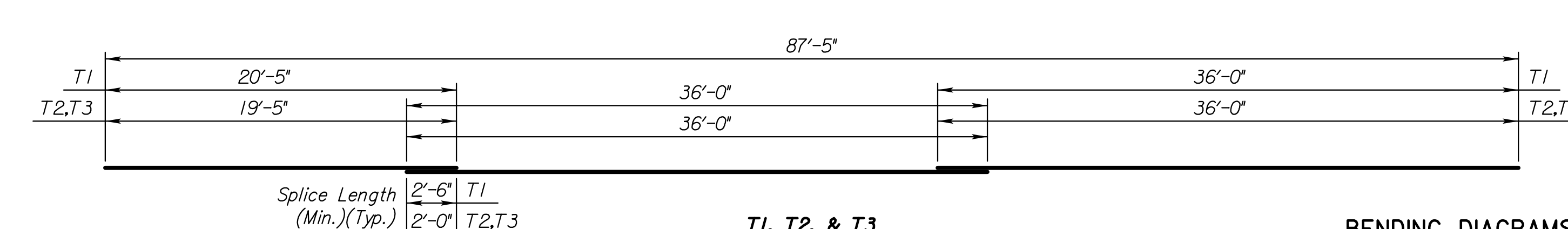
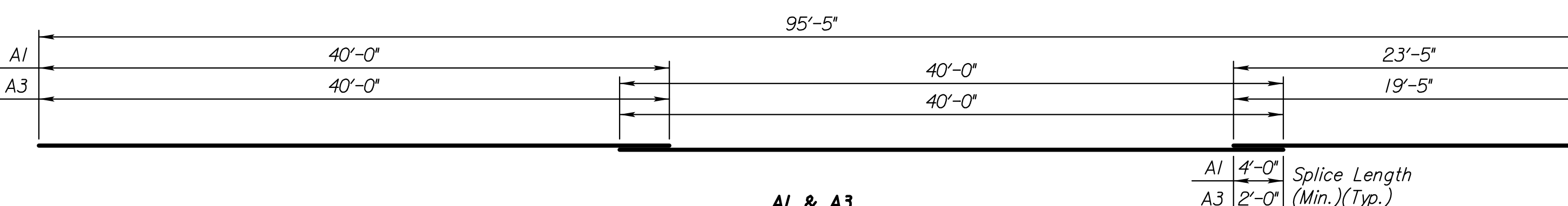
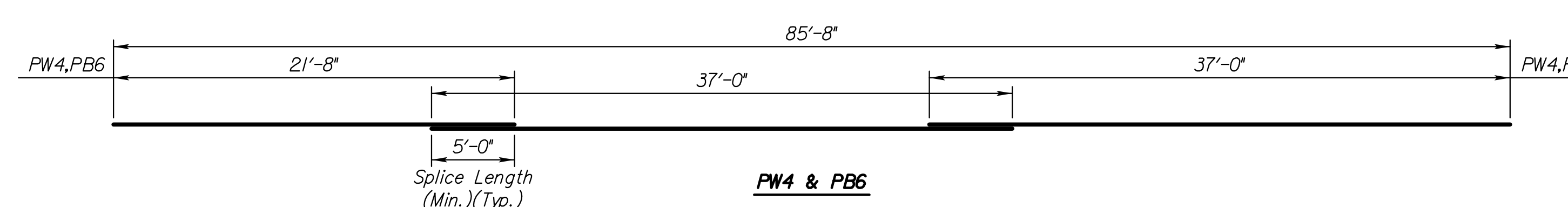
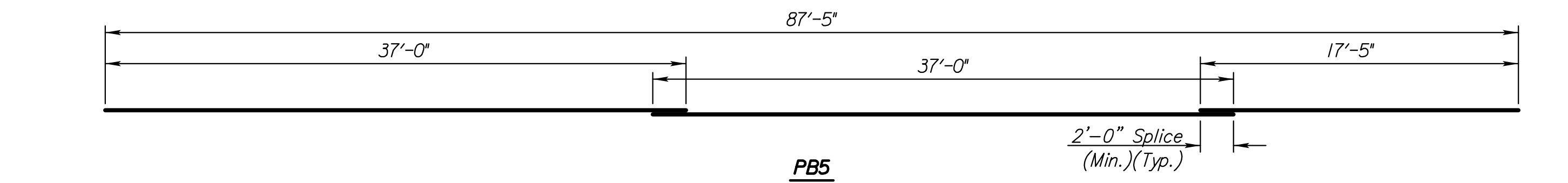
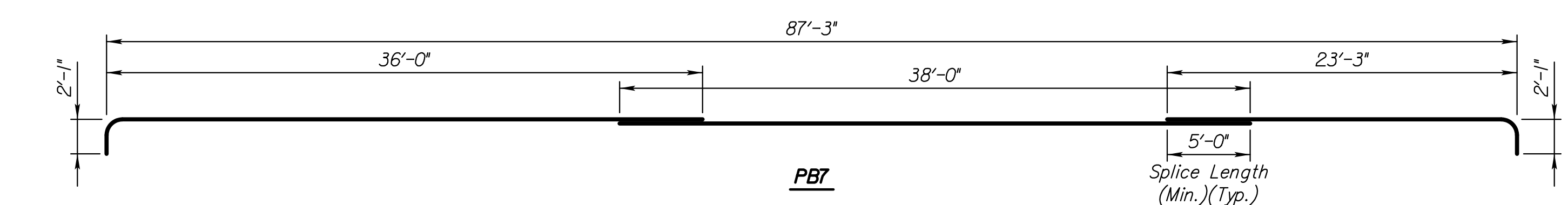
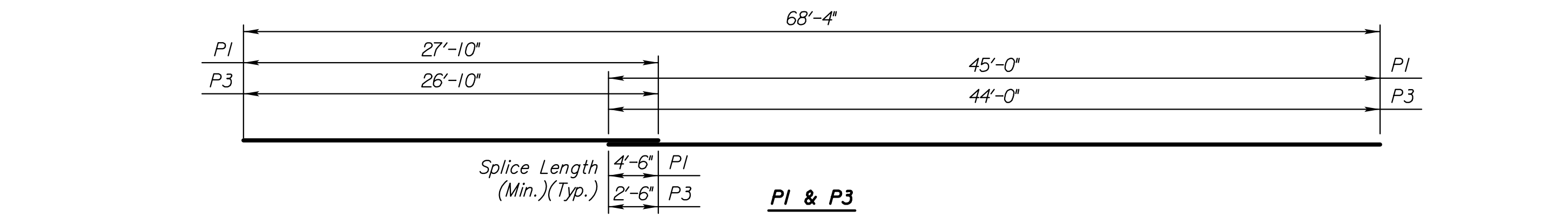
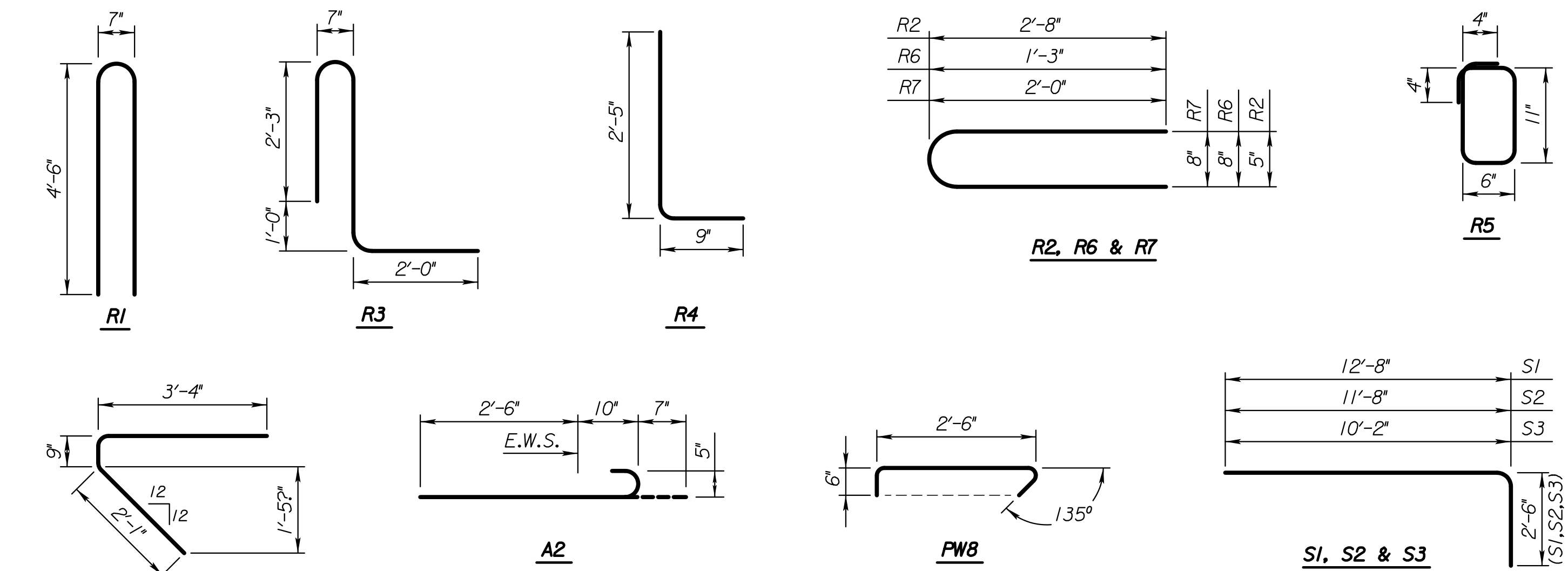
**BILL OF REINFORCING STEEL  
Non-Epoxy Coated - Grade 60**

Straight Bars				Bent Bars			
Mark	Size	Number	Length	Mark	Size	Number	Length
P1	#9	34	⊗				
P2	#9	274	8'-6"				
P3	#6	34	⊗				
P4	#6	274	8'-6"				

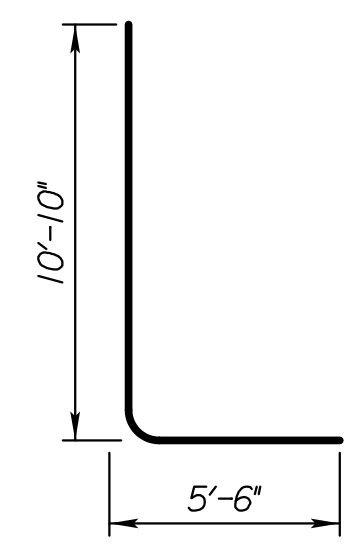
**BILL OF REINFORCING STEEL  
Epoxy Coated - Grade 60**

Straight Bars				Bent Bars			
Mark	Size	Number	Length	Mark	Size	Number	Length
S7	#11	116	51'-0"	S1	#8	128	15'-2"
S4	#10	6	55'-6"	R1	#7	24	9'-3"
S6	#10	128	54'-9"	R3	#7	252	7'-9"
S8	#10	120	55'-6"	S2	#7	116	14'-2"
S9	#10	96	50'-2"	S3	#7	120	12'-8"
S10	#10	88	39'-8"				
S15	#10	48	60'-0"	R2	#6	4	5'-8"
S11	#9	92	37'-2"	A2	#5	176	3'-11"
S12	#9	88	26'-2"				
S14	#9	96	6'-0"	A4	#4	384	9'-2"
S16	#9	44	42'-6"	A5	#4	176	6'-2"
S17	#9	46	37'-0"	A7	#4	28	6'-2"
S18	#9	44	25'-6"	R4	#4	252	3'-2"
A1	#8	16	⊗	R5	#3	436	3'-3"
				R6	#3	60	2'-11"
R8	#6	24	11'-0"	R7	#3	272	4'-5"
R9	#6	168	9'-8"				
S13	#6	88	12'-0"	T4-T21			⊗
S19	#6	88	13'-3"				
T1	#6	90	⊗				
A3	#5	20	⊗				
T2	#5	61	⊗				
A6	#4	2	90'-8"				
T3	#4	154	⊗				
SCI	#4	84	6'-6"				
PB6	#10	14	⊗	PB7	#10	14	⊗
PB5	#5	20	⊗	PB3	#5	528	7'-7"
				PB4	#5	168	8'-9"
				PB8	#5	24	6'-6"

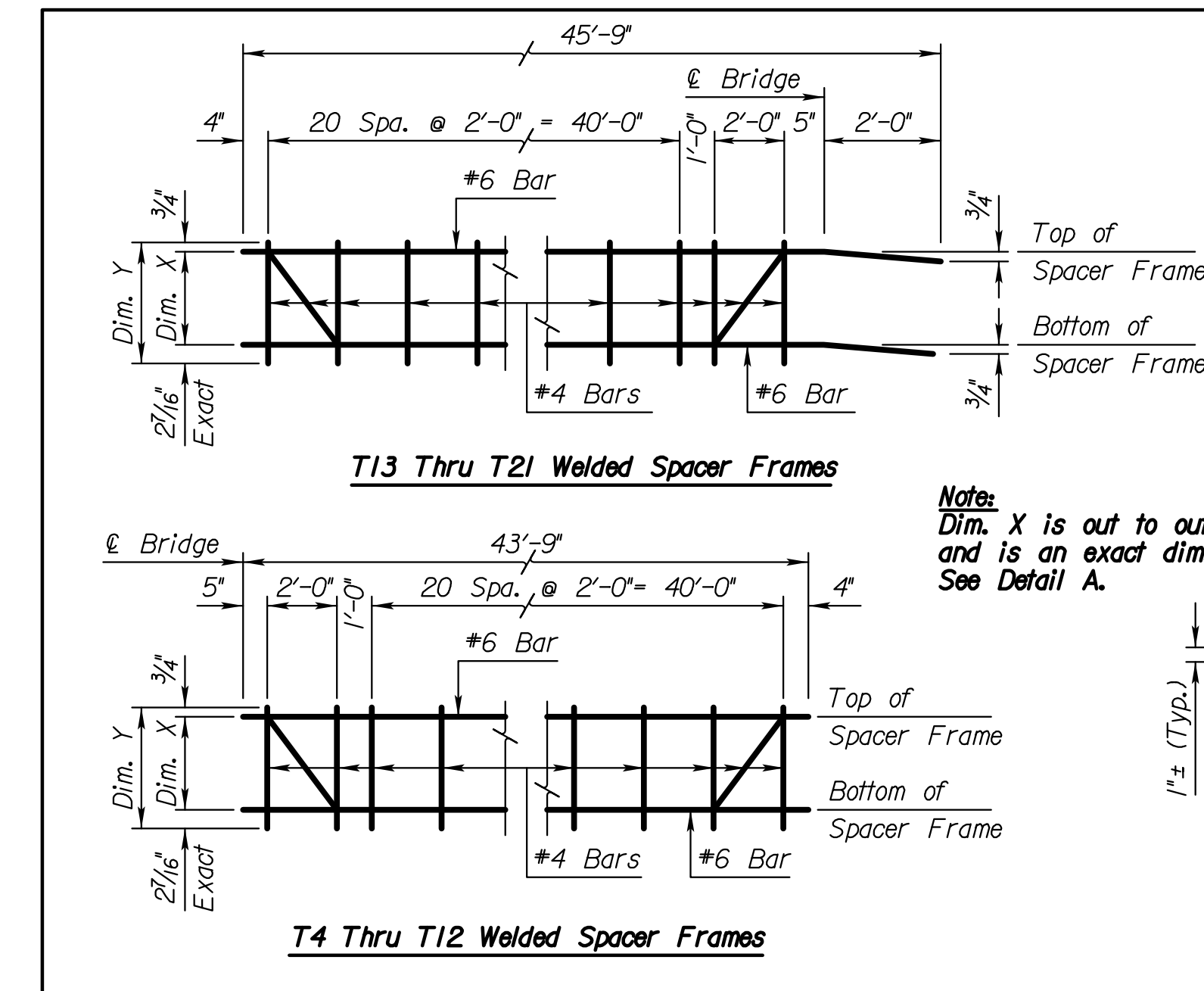
Δ<sub>1</sub> Average Length: Varies 3'-11" to 10'-11", cut 4 each length  
 Δ<sub>2</sub> Average Length: Varies 18'-3" to 36'-9", cut 4 each length  
 ⊗ See Bending Diagram



A4, A7, PBI, PB3  
PB4, PB8, & PW7



P5

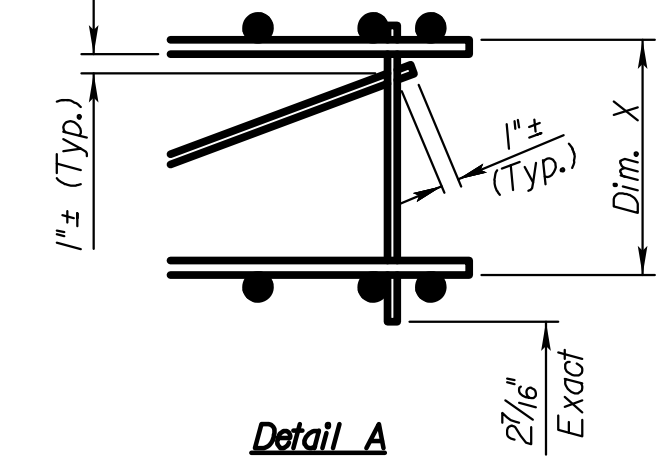


**SPACER FRAMES  
(Epoxy Coated)**

Mark	No.	Ea.	Dim. X	Dim. Y
T4, T13	8		11 <sup>3</sup> / <sub>8</sub> "	1'-2 <sup>3</sup> / <sub>16</sub> "
T5, T14	4		11 <sup>1</sup> / <sub>2</sub> "	1'-2 <sup>1</sup> / <sub>16</sub> "
T6, T15	4		11 <sup>15</sup> / <sub>16</sub> "	1'-3 <sup>3</sup> / <sub>8</sub> "
T7, T16	4		1'-0 <sup>3</sup> / <sub>16</sub> "	1'-4"
T8, T17	4		1'-2 <sup>1</sup> / <sub>16</sub> "	1'-5 <sup>5</sup> / <sub>16</sub> "
T9, T18	4		1'-3 <sup>1</sup> / <sub>8</sub> "	1'-7 <sup>1</sup> / <sub>16</sub> "
T10, T19	4		1'-6 <sup>1</sup> / <sub>16</sub> "	1'-9 <sup>1</sup> / <sub>4</sub> "
T11, T20	4		1'-8 <sup>1</sup> / <sub>16</sub> "	1'-11 <sup>7</sup> / <sub>16</sub> "
T12, T21	4		1'-11 <sup>15</sup> / <sub>16</sub> "	2'-3 <sup>3</sup> / <sub>8</sub> "

Weight of spacer frames included in the weight of reinforcing steel.

**Note:**  
Dim. X is out to out and is an exact dim. See Detail A.



**BENDING DIAGRAMS**  
(All dimensions are out to out of bars)