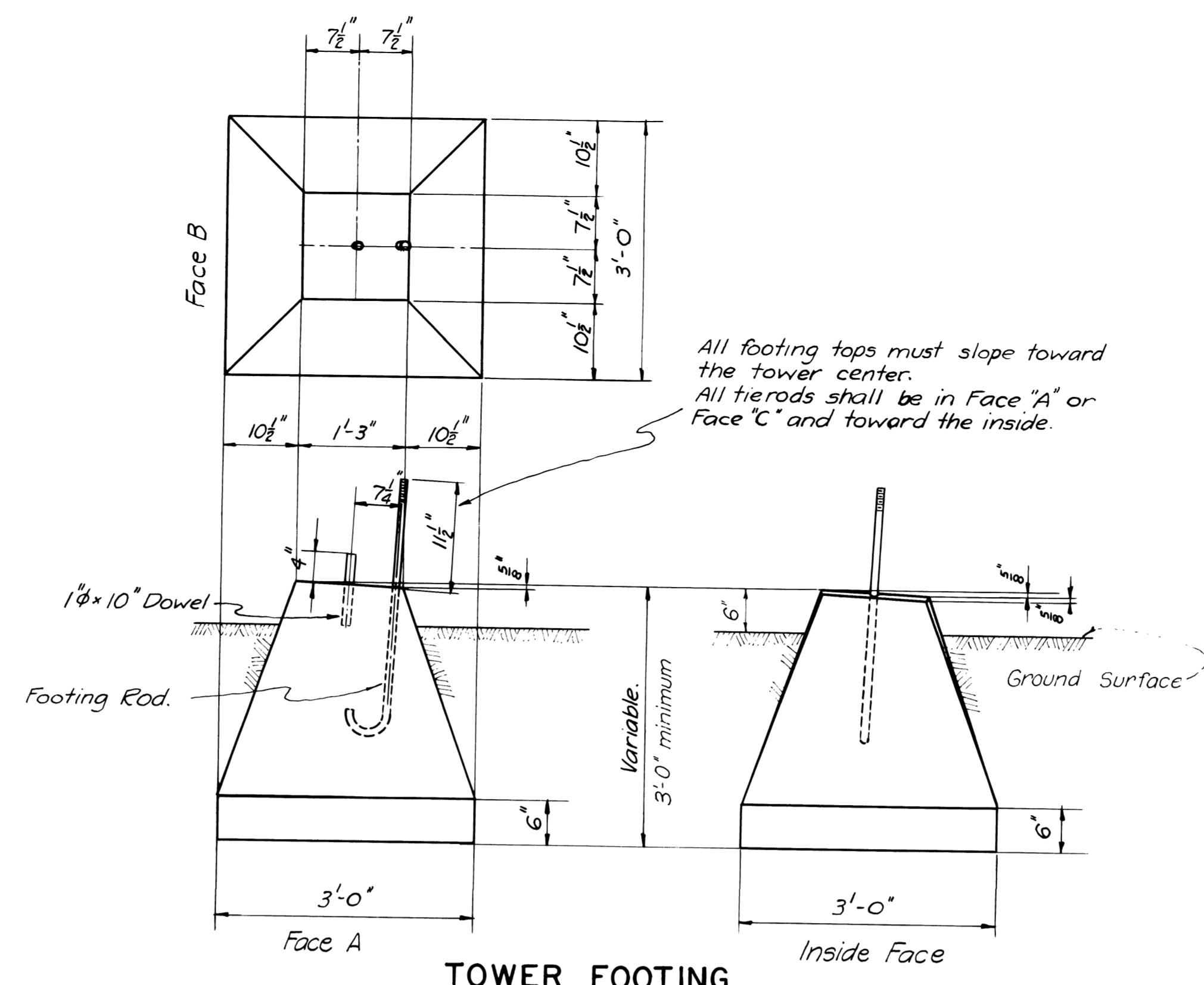


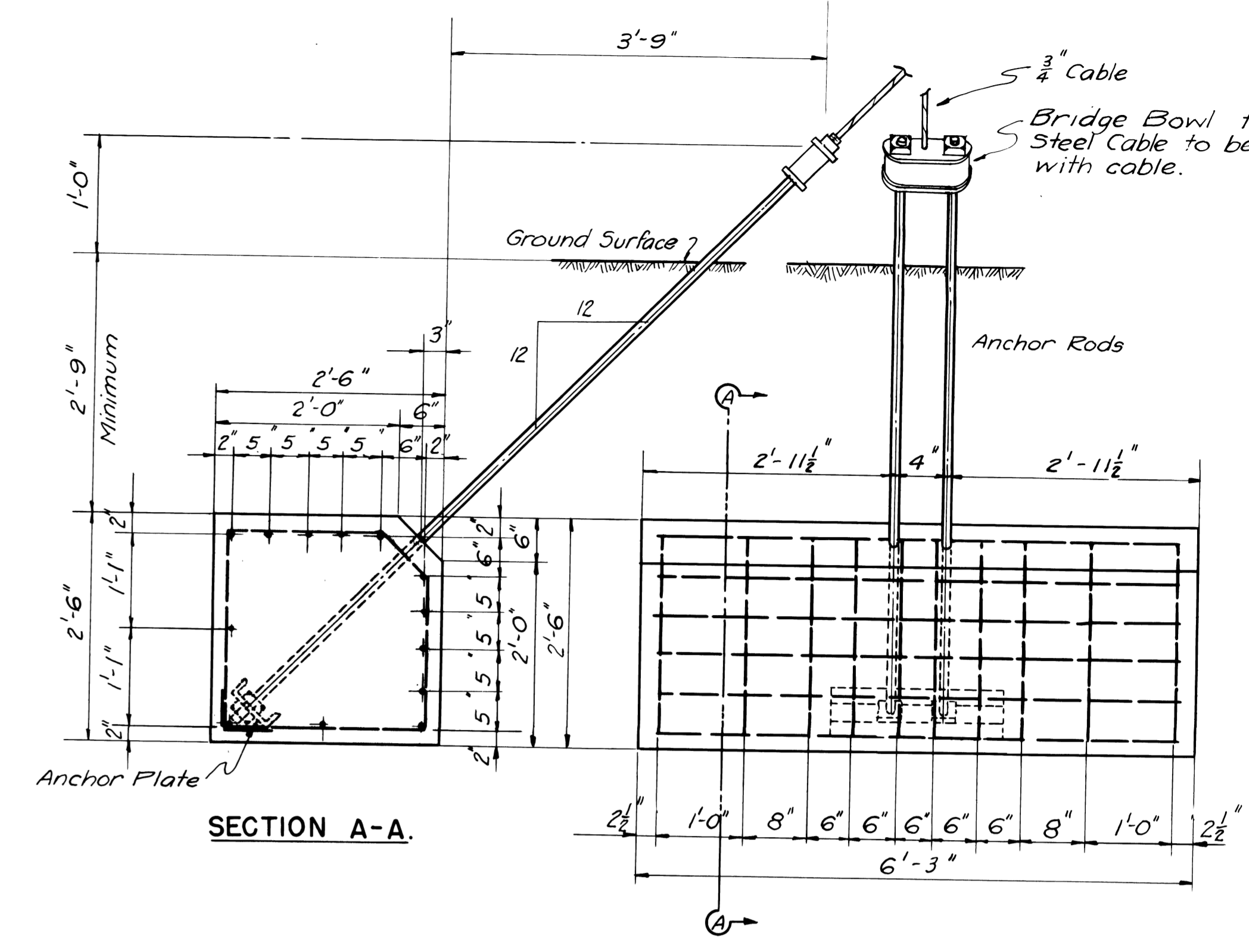
**FOOTING & ANCHOR PLAN**

This layout is NOT SQUARE.  
Cables shall slope at 45° and location of anchors shall be computed accordingly.

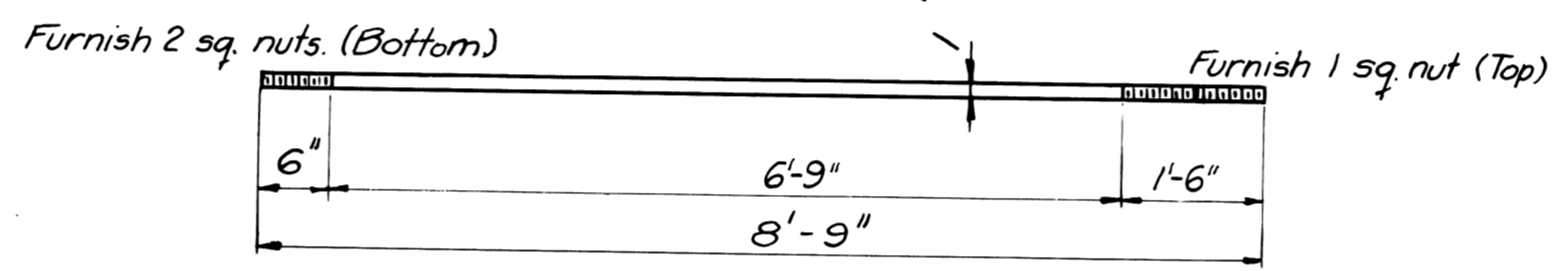


**TOWER FOOTING**

3'-0" x 3'-0" Concrete block, of variable height. Top bevelled two ways at 1/2" to 12."

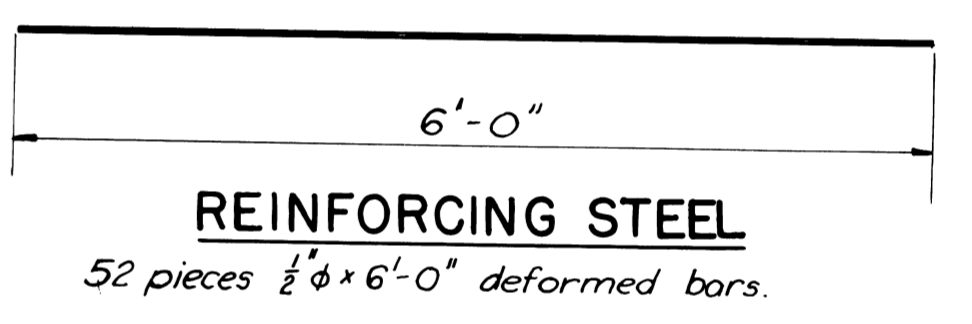


**GUY ANCHOR DETAIL**



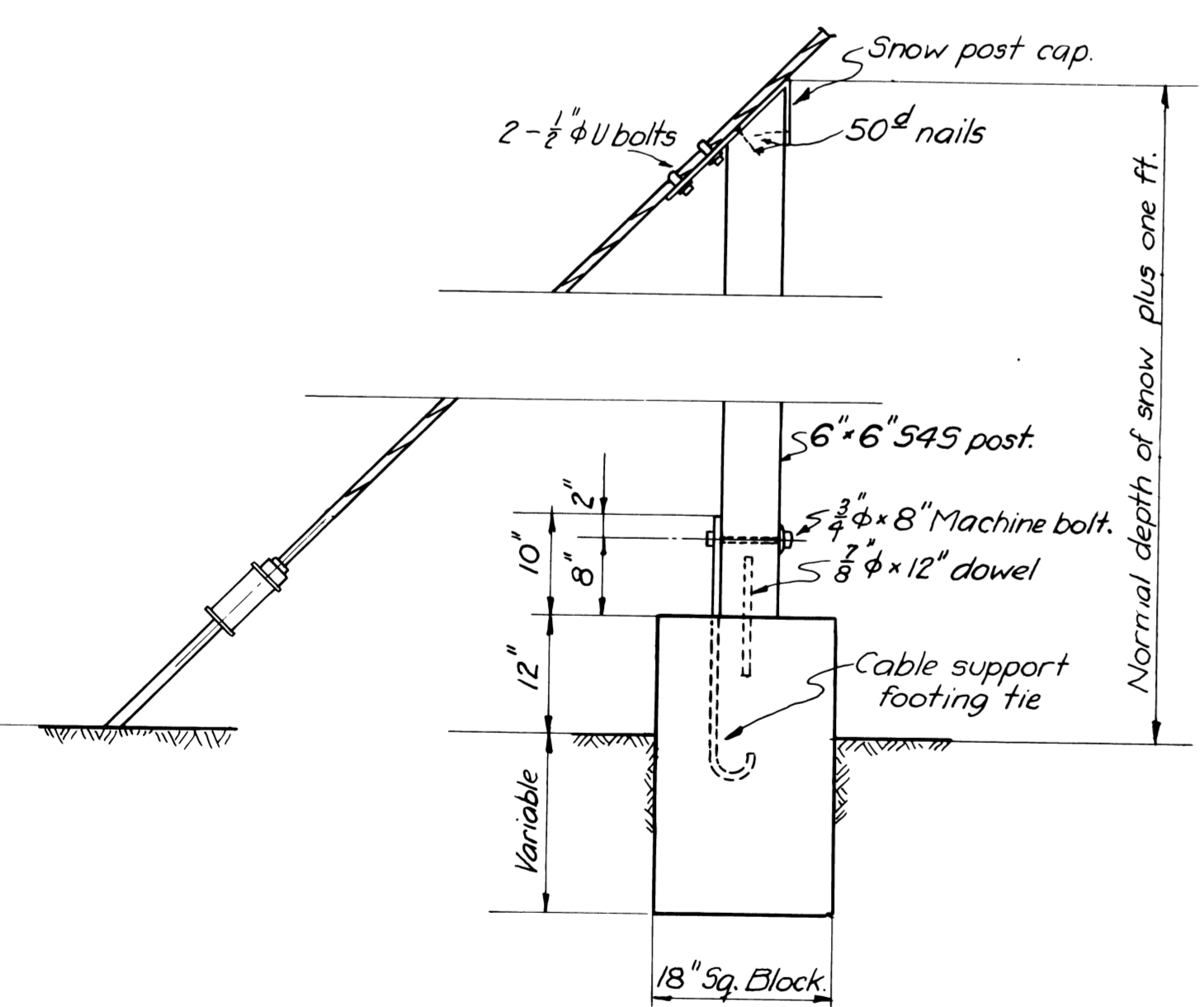
**ANCHOR ROD**

1 1/2" x 8'-9" Rod. Thread ends as indicated. Furnish 3 sq. nuts for each rod. Make B, galvanized.

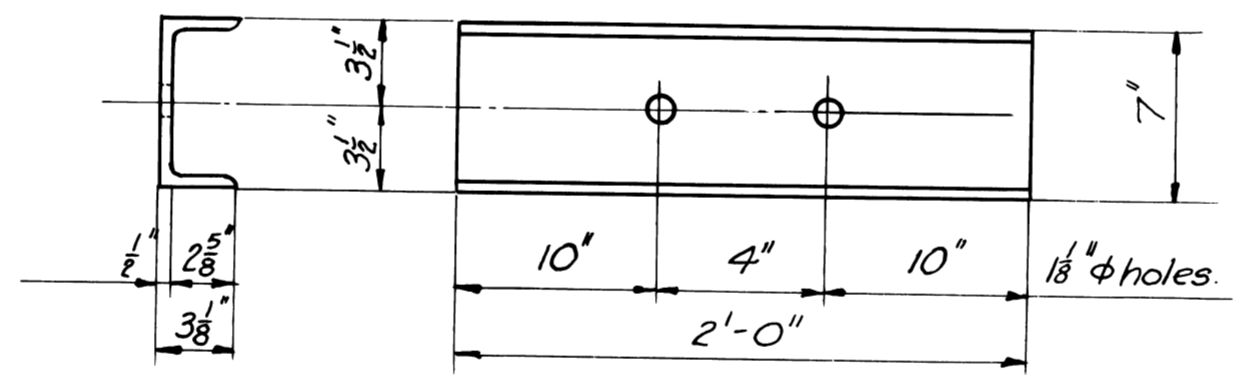


**REINFORCING STEEL**

52 pieces 1/2" x 6'-0" deformed bars.

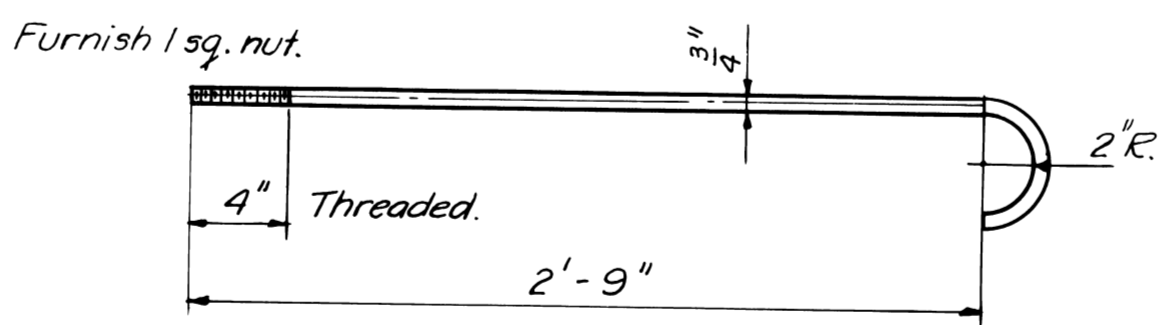


**GUY CABLE SUPPORT**



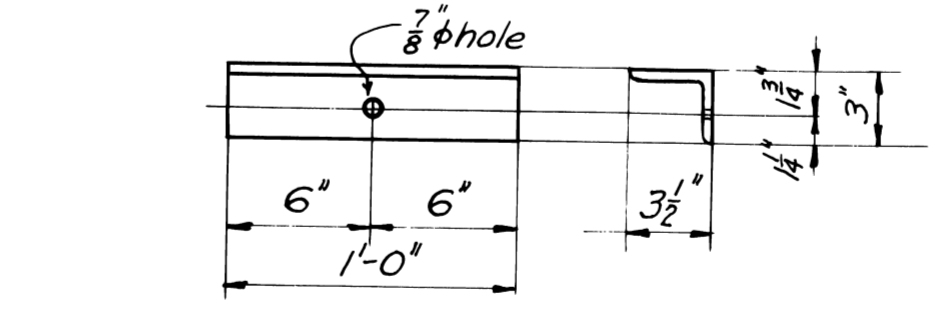
**ANCHOR PLATE**

7" x 3 1/2" x 1/2" Channel C42 (BSC9) Galvanized. Make 4.



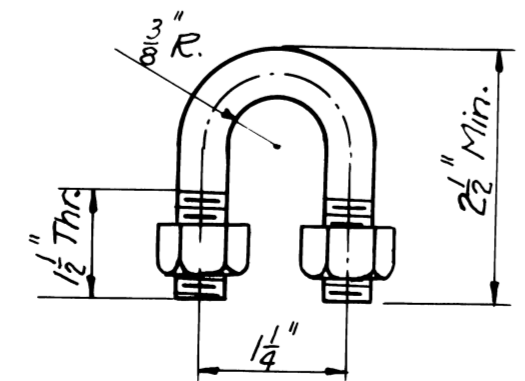
**FOOTING ROD**

3/8" x 3'-4" Rod, galvanized. Furnish 1 square nut each. Make 4.



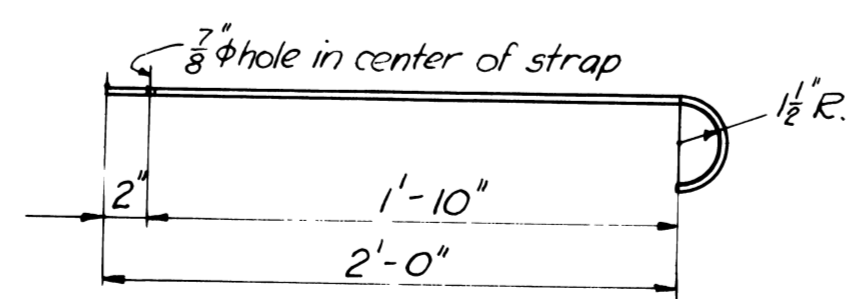
**FOOTING ANGLE**

3/8" x 3" x 3" x 1'-0" angle, galvanized. Make 4. See Tower Detail, Sheet Two, showing attachment.



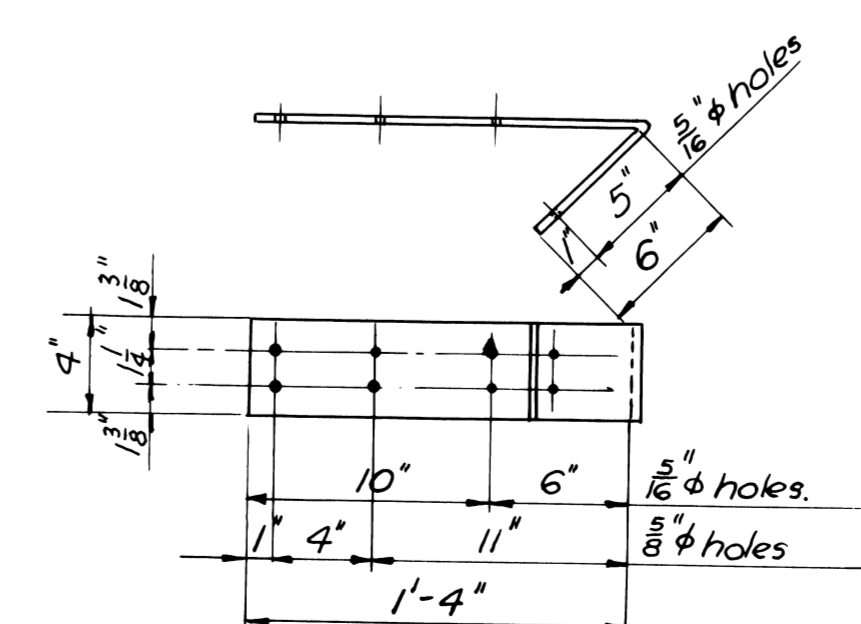
**U-BOLT**

1/2" galvanized U-bolt. Furnish 2 hex nuts, each bolt. Make 8.



**CABLE SUPPORT FOOTING TIE**

3/8" x 3" x 2'-6" strap, galvanized. Make 4.



**SNOW POST CAP**

4" x 1/4" x 1'-10" Galvanized strap. Make 4.

Furnish all detailed material, and in addition furnish:  
4 - 2 1/2" x 12" dowels, plain.  
4 - 1 1/2" x 10" dowels, plain.  
4 - 3/4" x 8" machine bolts.  
4 - 3/8" malleable washers. All galvanized.

**CONCRETE**

Mix: 1:3:5  
Approximate Volume: 895 cu. yds.  
Cement: 10.0 bbls.  
Sand: 4.5 cu. yds.  
Gravel: 7.6 cu. yds.

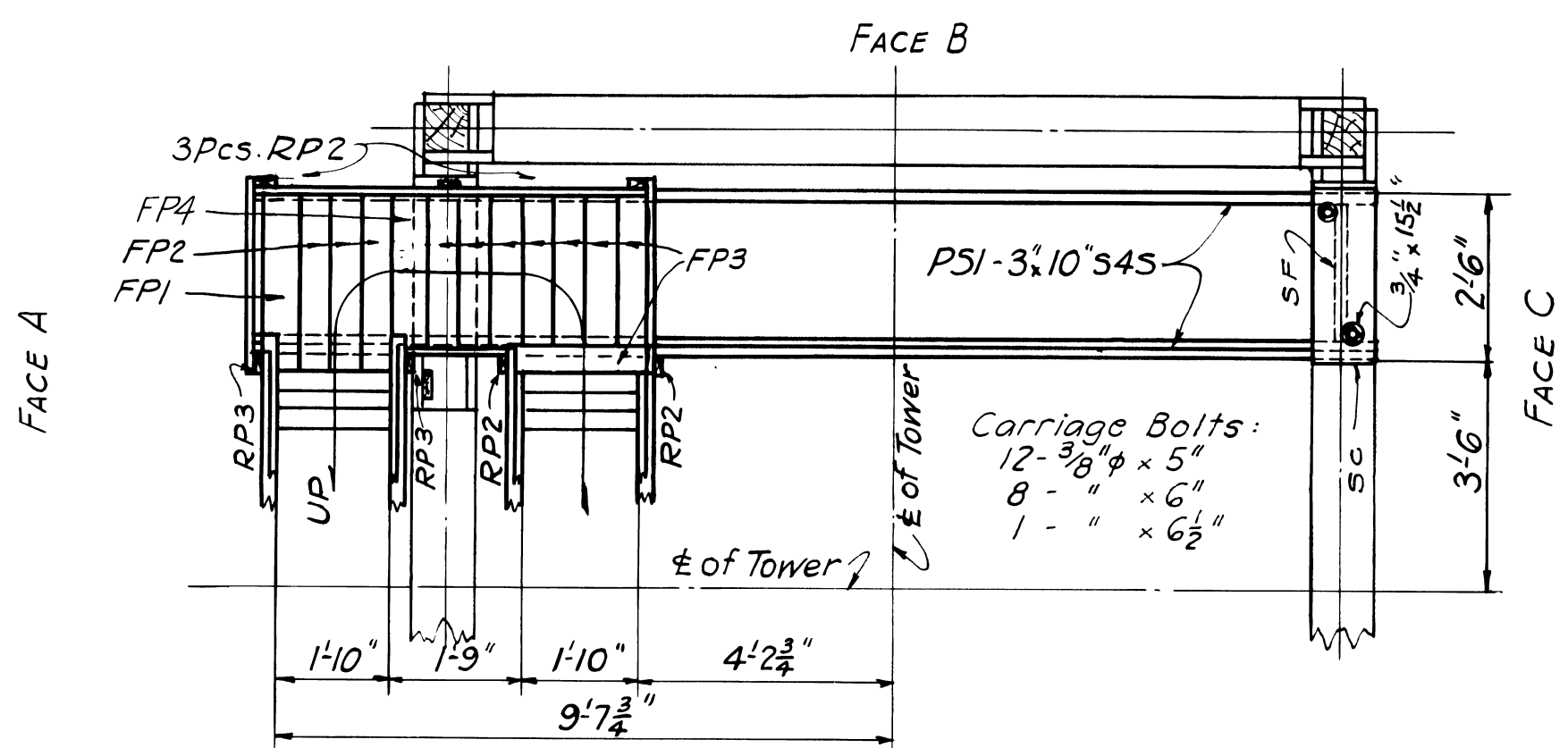
Revised 12-5-39 by A.S.

U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
REGION SIX JAMES FRANKLAND REGIONAL ENGINEER

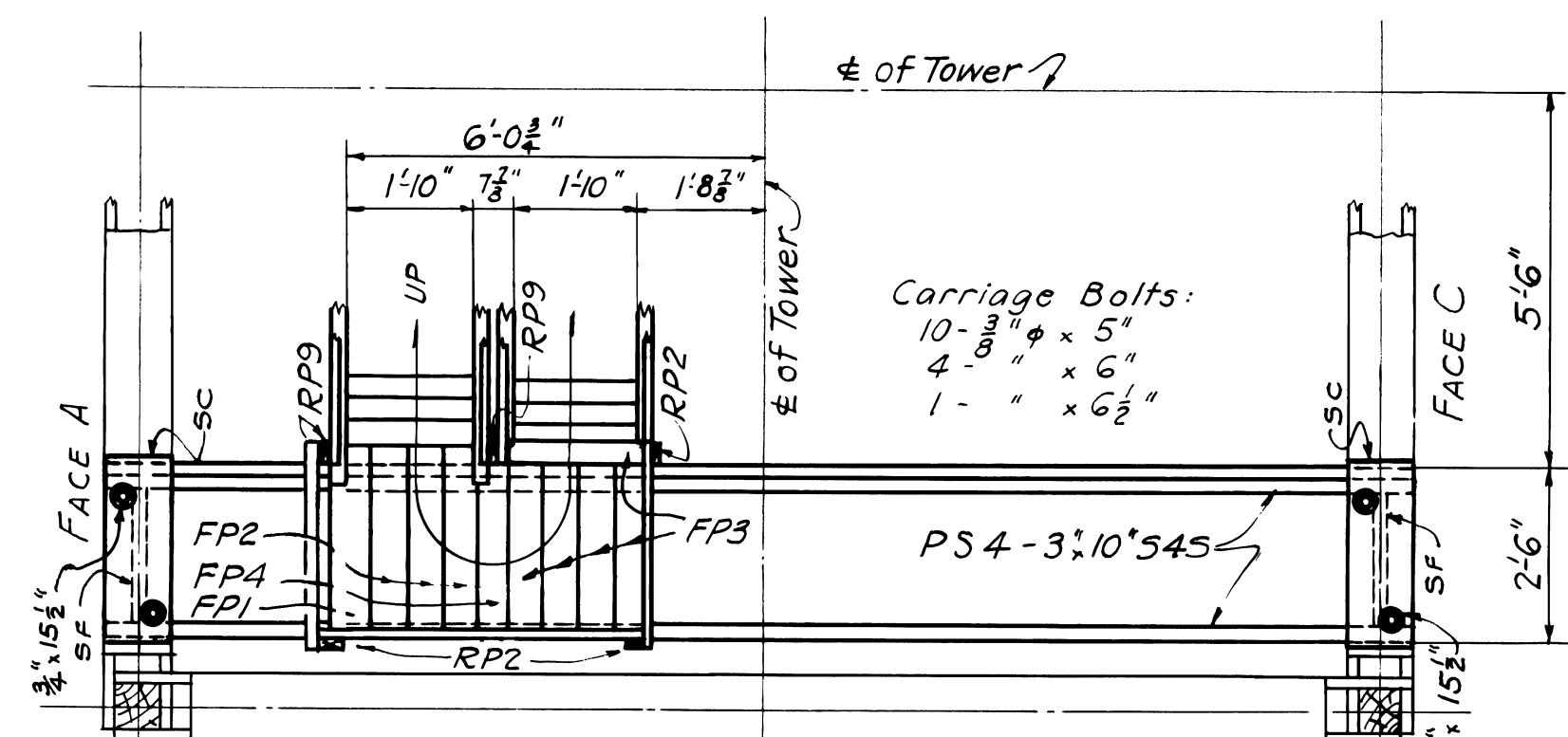
**STANDARD LOOKOUT TOWER  
83-FOOT TYPE CT-4  
FOUNDATION PLAN**

DESIGNED: B.C.O. DRAWN: B.C.O. TRACED: B.C.O.  
SCALE: NONE CHECKED: W.D.S.  
APPROVED: DATE: DEC. 15, 1937  
ASSISTANT REGIONAL FORESTER

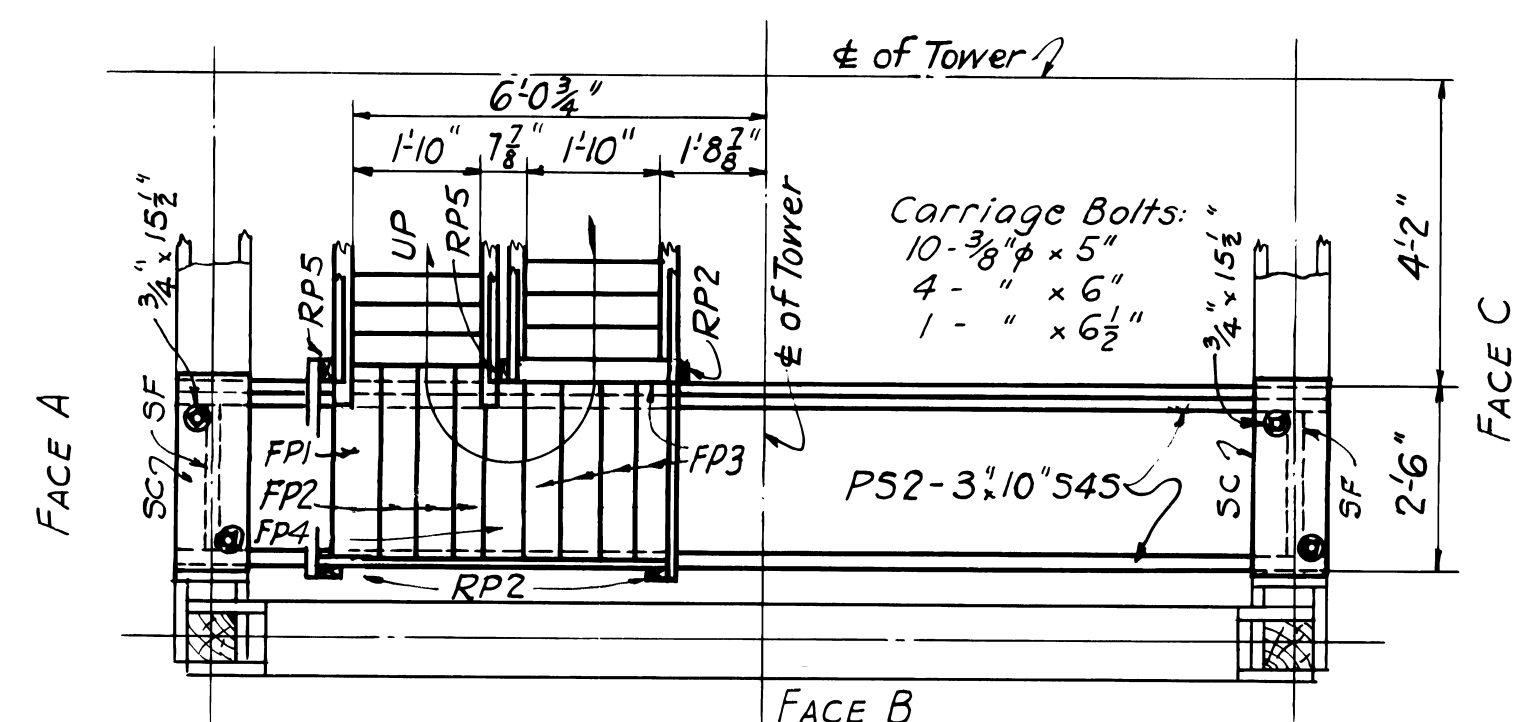




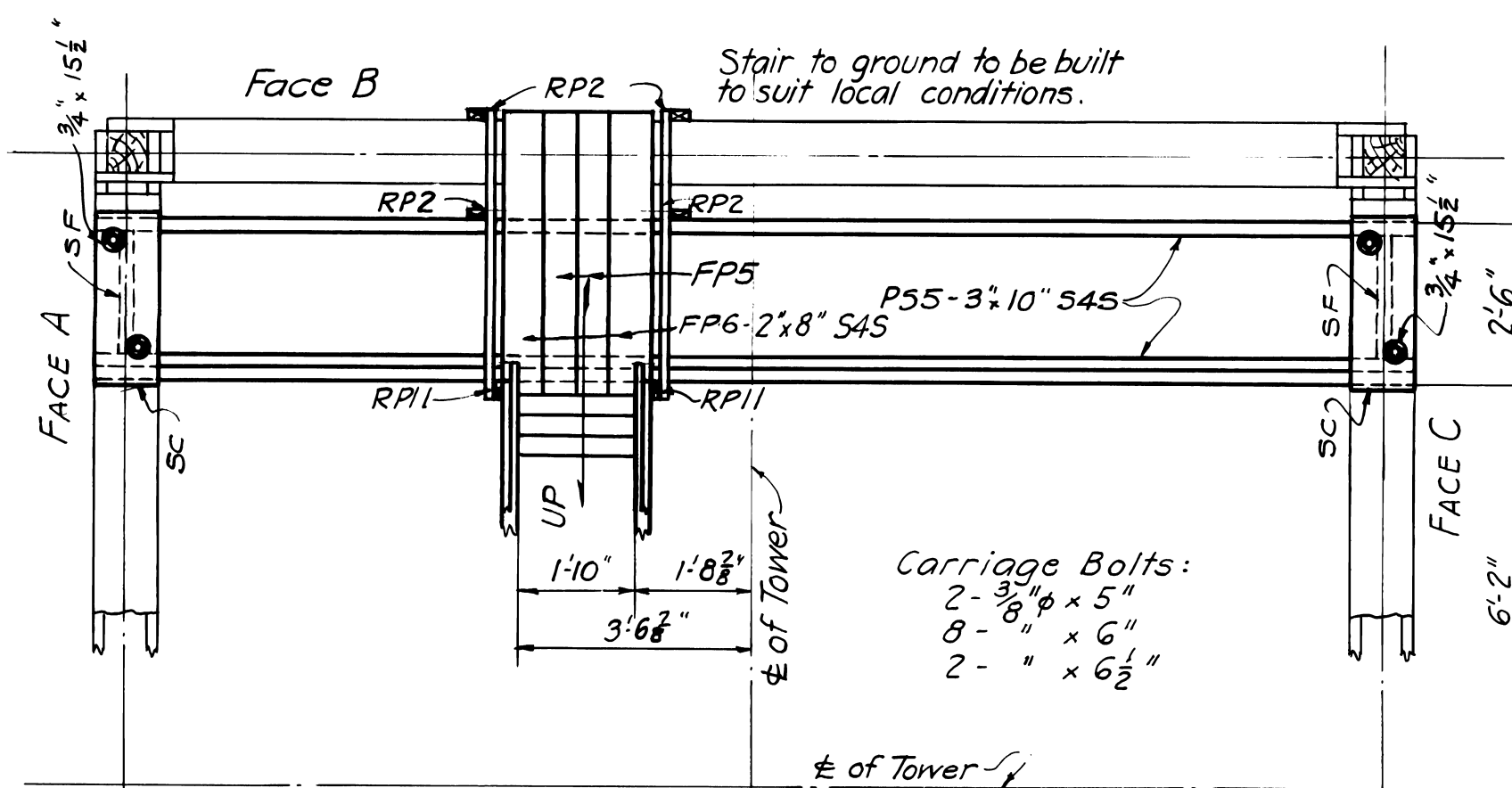
PLATFORM ONE



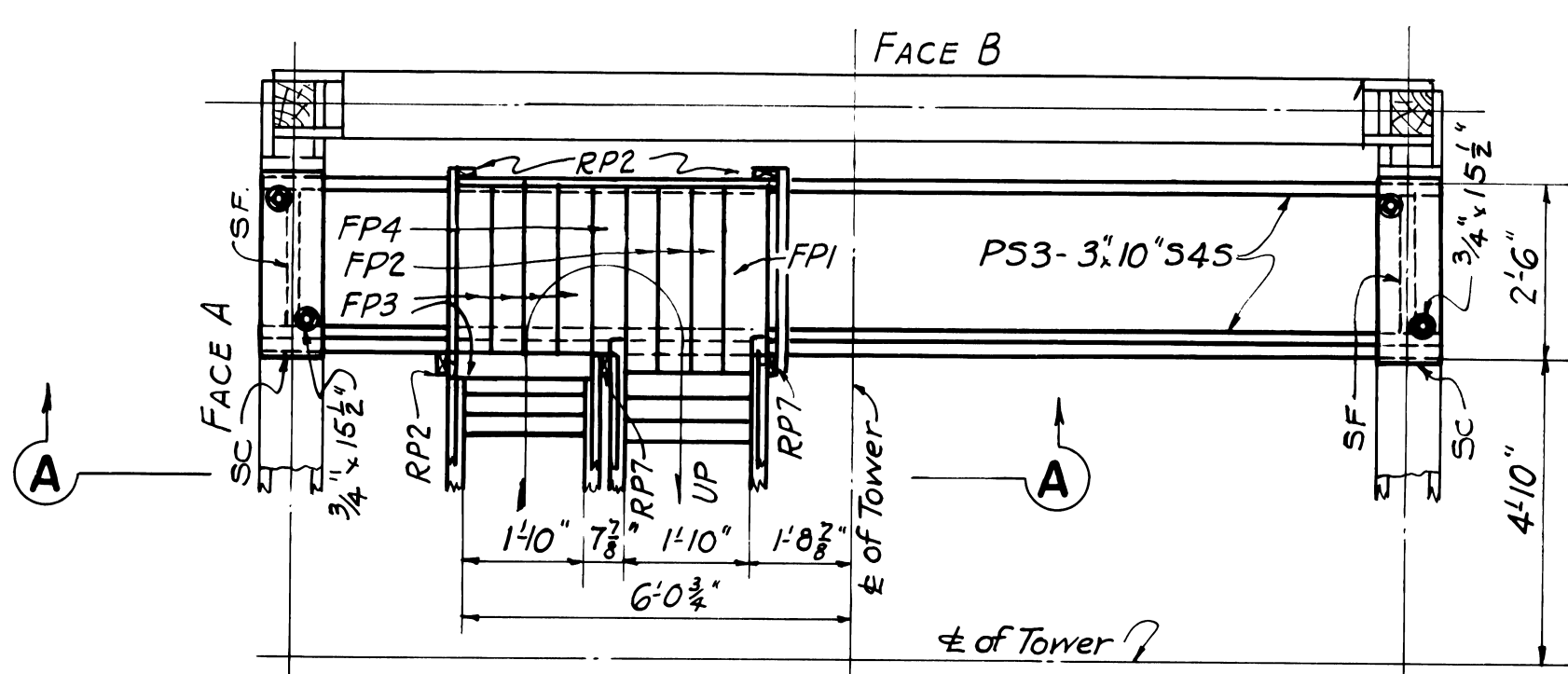
PLATFORM FOUR



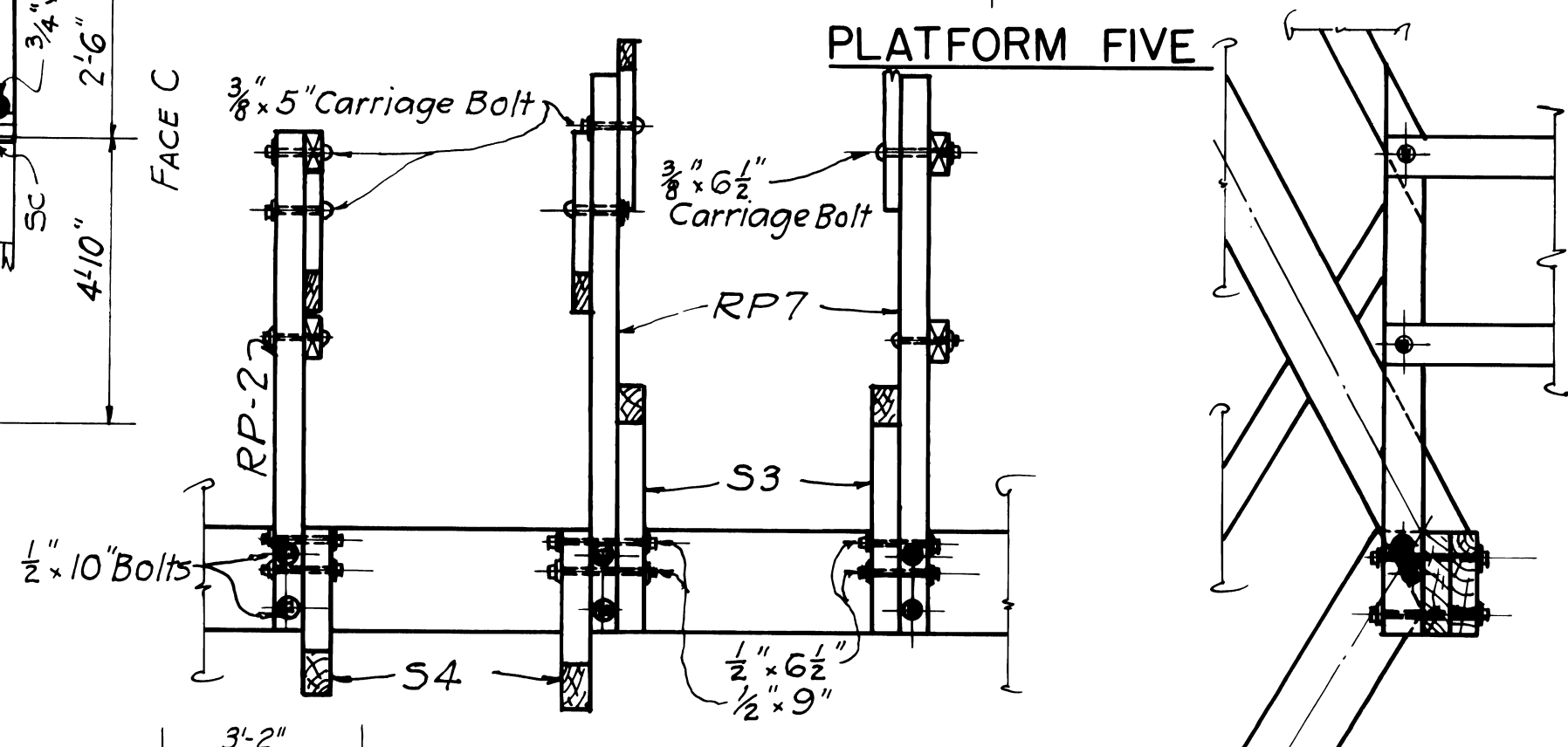
PLATFORM TWO



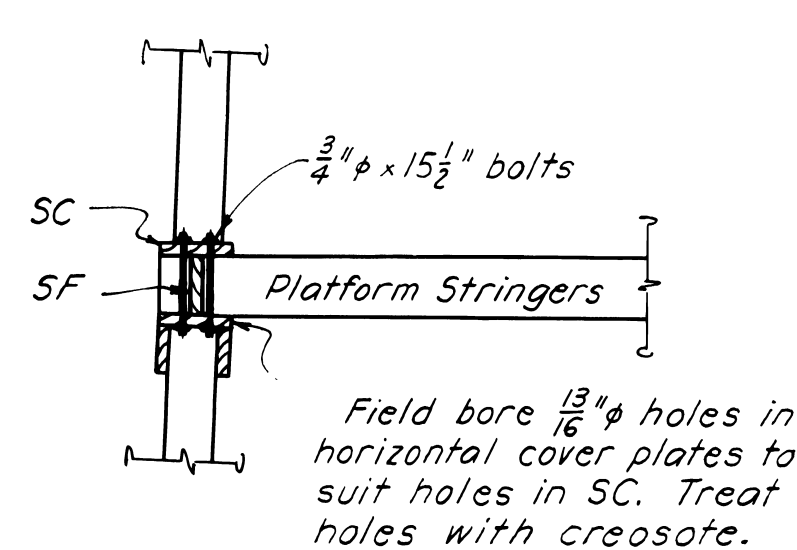
PLATFORM FIVE



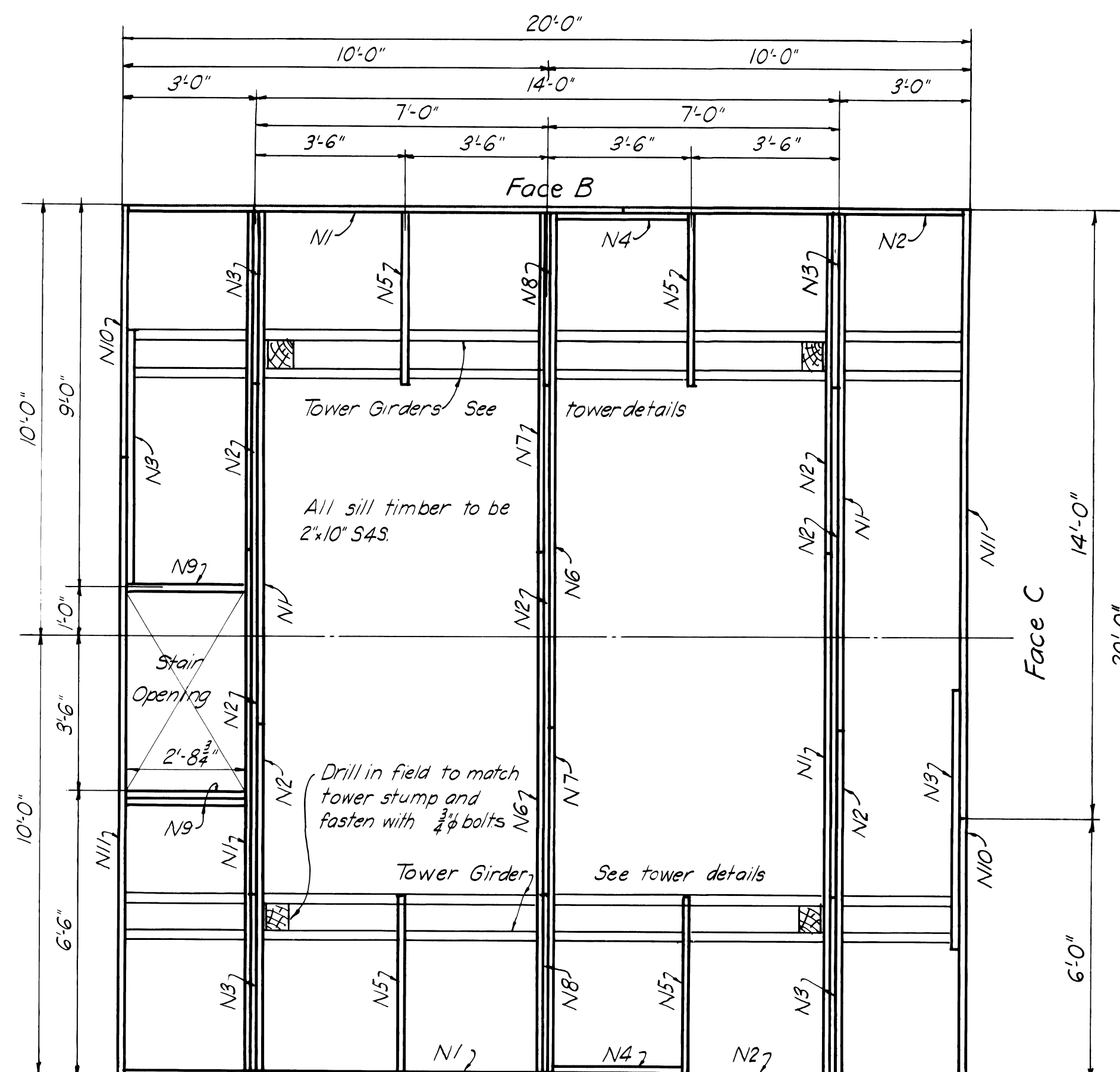
PLATFORM THREE



SECTION AA  
Bore holes in field



SECTION THROUGH  
PLATFORM STRINGER  
FASTENINGS

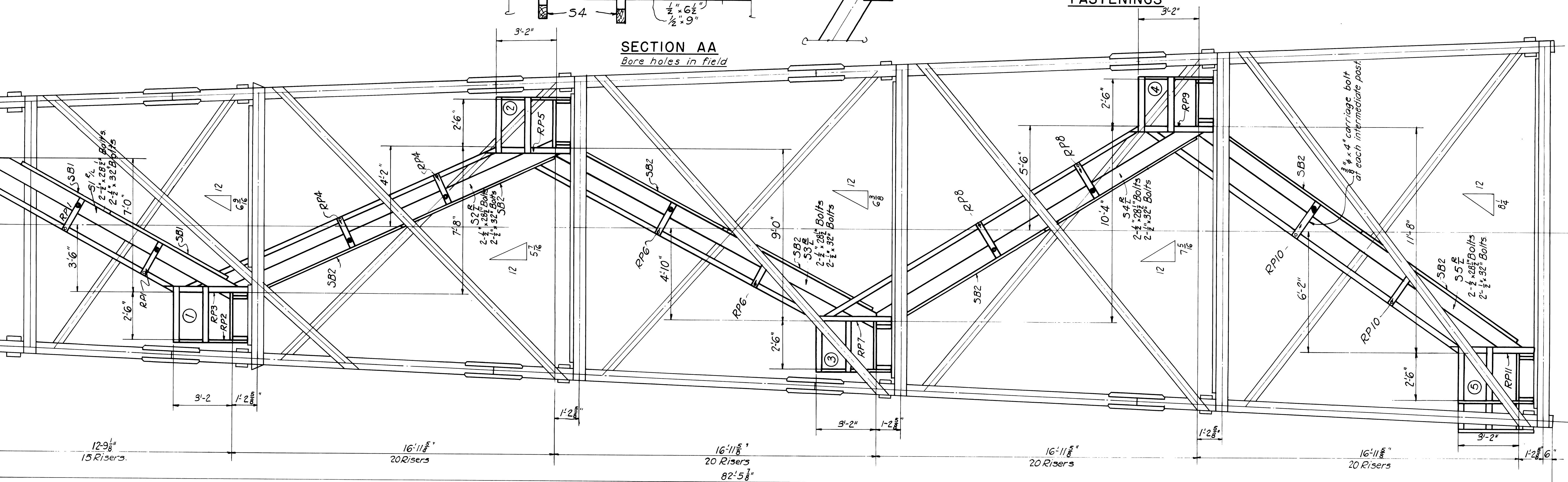


HOUSE & CATWALK SILLS

MATERIAL SIZES

House & Catwalk Sills	2x10 S4S	Treated
Stair Stringers	3x8	"
Stair Treads	2x8	"
Platform Stringers	3x10	"
Platform Floor Plank	2x6	"
Rail Posts	3x4x2x4	Except As Noted
Stair Stringer Snags	2x4	"
Hand Rail	2x4	Untreated

NOTE-  
Stair Stringers to rest directly on joists and not on Platform Plank.



FACE "A"

Revised 3-15-44 by W.G.  
Revised 5-9-40 by W.D.S.  
Revised 12-5-39 by A.S.

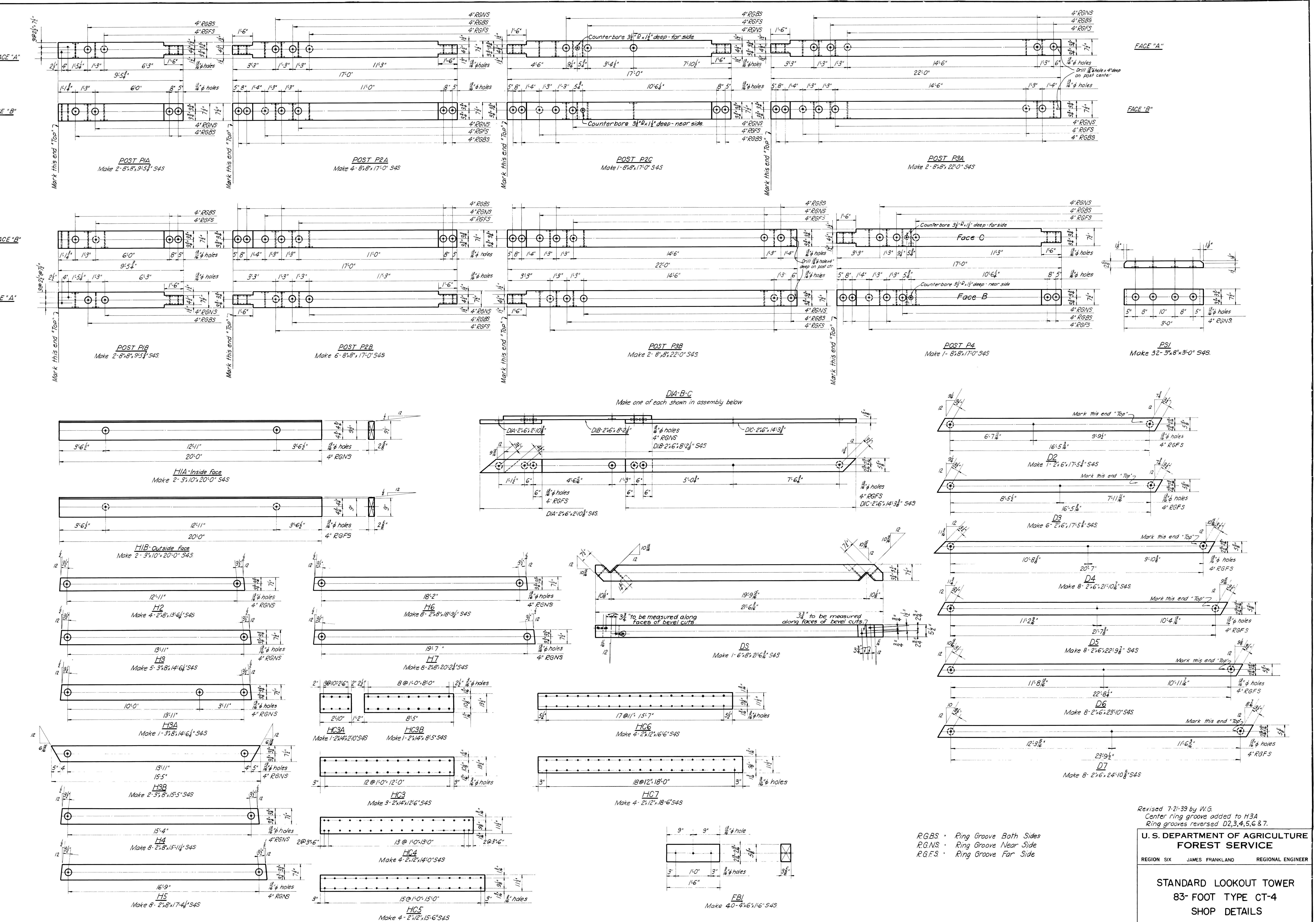
U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

REGION SIX J. FRANKLAND REGIONAL ENGINEER

STANDARD LOOKOUT TOWER  
83-FOOT TYPE CT-4  
STAIR LAYOUT

DESIGNED W.D.S. DRAWN W.D.S. TRACED W.D.S.  
SCALE 3/8"=1'-0" CHECKED W.D.S.  
APPROVED W.D.S. DATE DECEMBER 1937  
ACT. ASSISTANT REGIONAL FORESTER

LT 2703194403



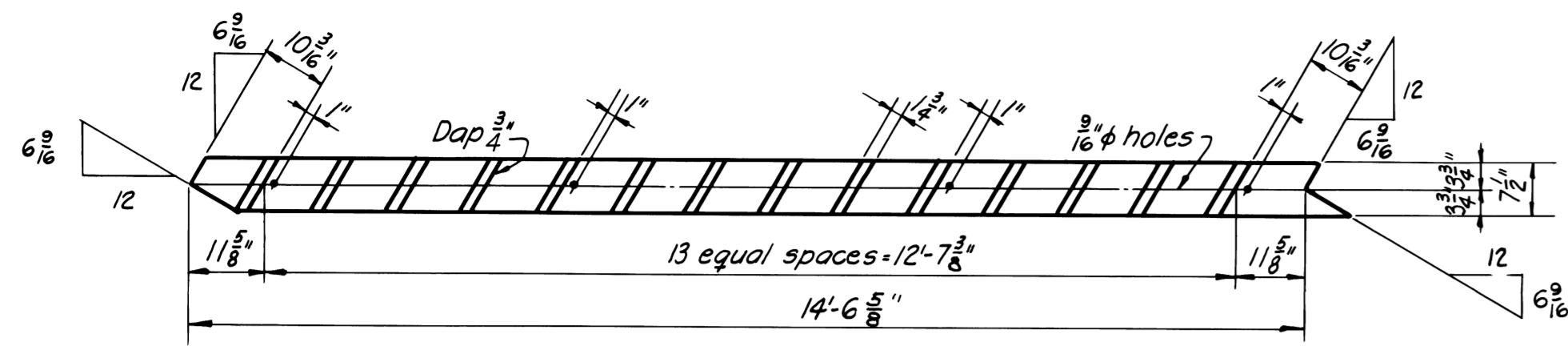
Revised 7-21-39 by W.G.  
 Center ring groove added to H3A  
 Ring grooves reversed D2,3,4,5,6 & 7.

U. S. DEPARTMENT OF AGRICULTURE  
 FOREST SERVICE

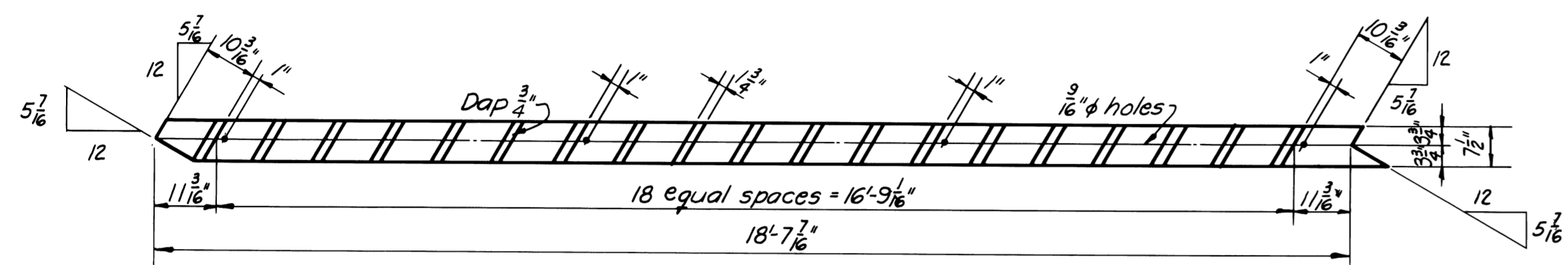
REGION SIX JAMES FRANKLAND REGIONAL ENGINEER

STANDARD LOOKOUT TOWER  
 83- FOOT TYPE CT-4  
 SHOP DETAILS

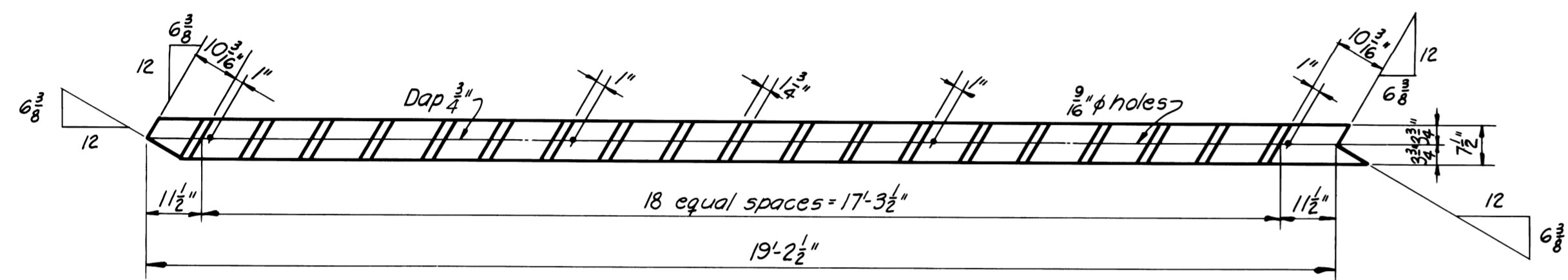
DESIGNED W.D.S. DRAWN H.R.S. TRACED H.R.S.  
 SCALE NONE APPROVED H.R.S. CHECKED H.R.S.  
 ACT. ASSISTANT REGIONAL FORESTER DATE DECEMBER 1937



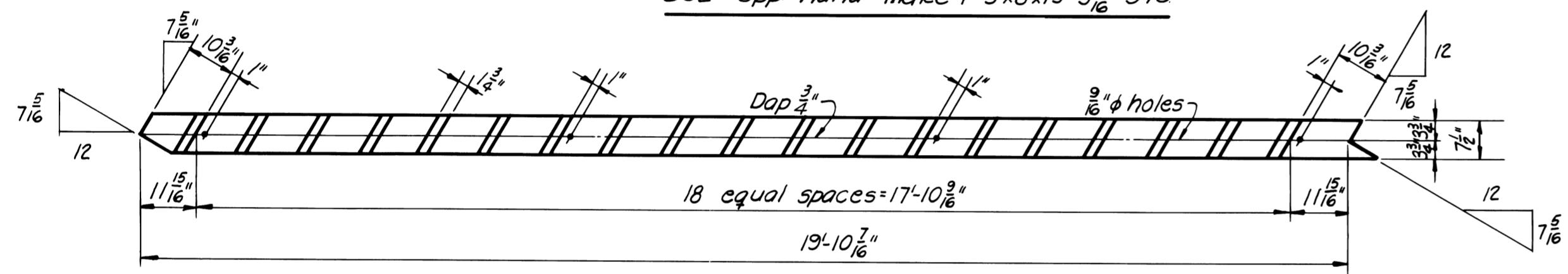
91R - As shown - Make 1 - 3" x 8" x 15' 1 1/2" S4S  
 91L - Opp hand - Make 1 - 3" x 8" x 15' 1 1/2" S4S



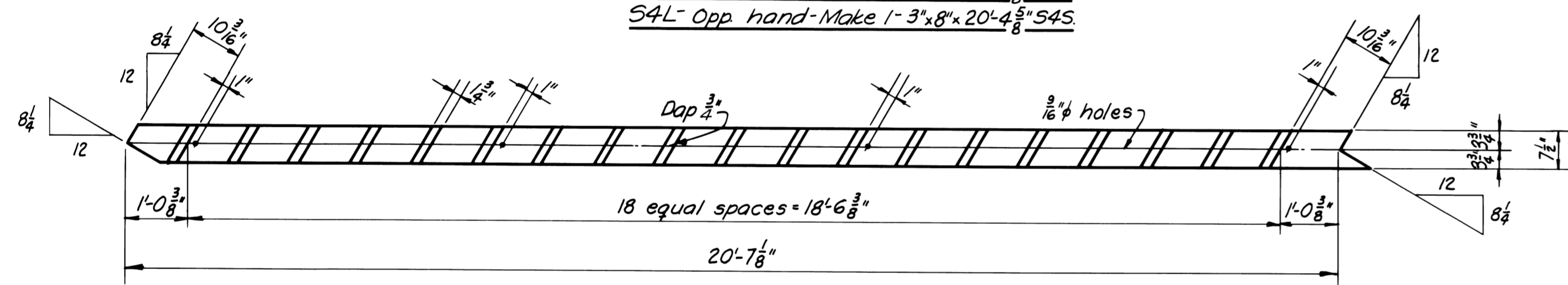
92R - As shown - Make 1 - 3" x 8" x 19' 3 3/8" S4S  
 92L - Opp hand - Make 1 - 3" x 8" x 19' 3 3/8" S4S



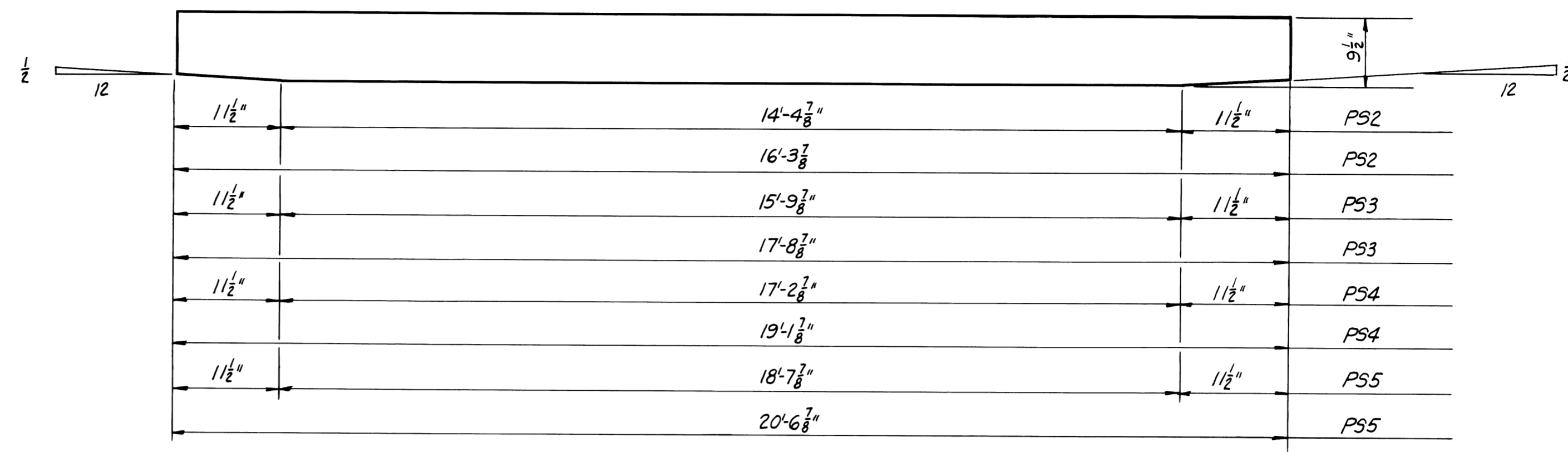
93R - As shown - Make 1 - 3" x 8" x 19' 9 3/8" S4S  
 93L - Opp hand - Make 1 - 3" x 8" x 19' 9 3/8" S4S



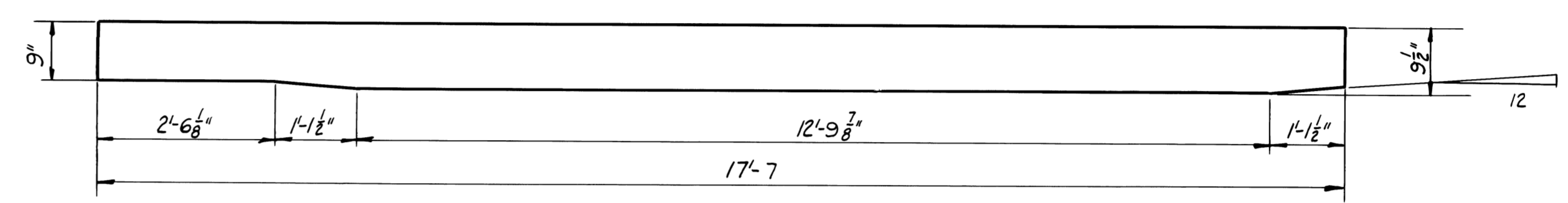
94R - As shown - Make 1 - 3" x 8" x 20' 4 3/8" S4S  
 94L - Opp hand - Make 1 - 3" x 8" x 20' 4 3/8" S4S



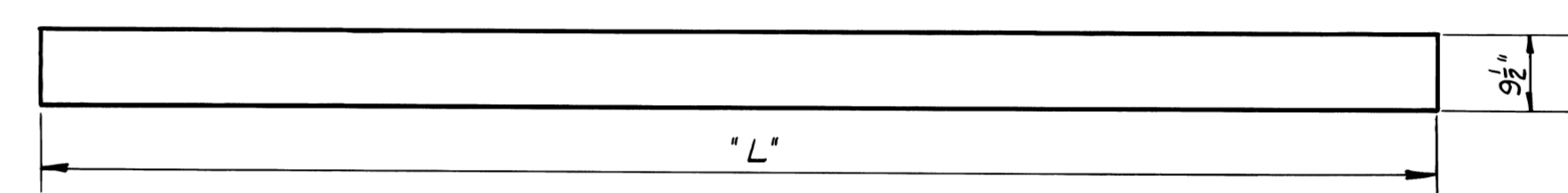
95R - As shown - Make 1 - 3" x 8" x 21' 0 3/8" S4S  
 95L - Opp hand - Make 1 - 3" x 8" x 21' 0 3/8" S4S



Stringers PS2-3-4-5  
 Make 3 of each of 3" x 10" S4S

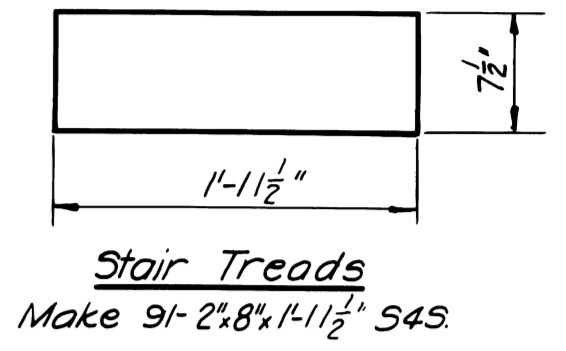


Stringer PS1  
 Make 3 - 3" x 10" x 17' 7" S4S

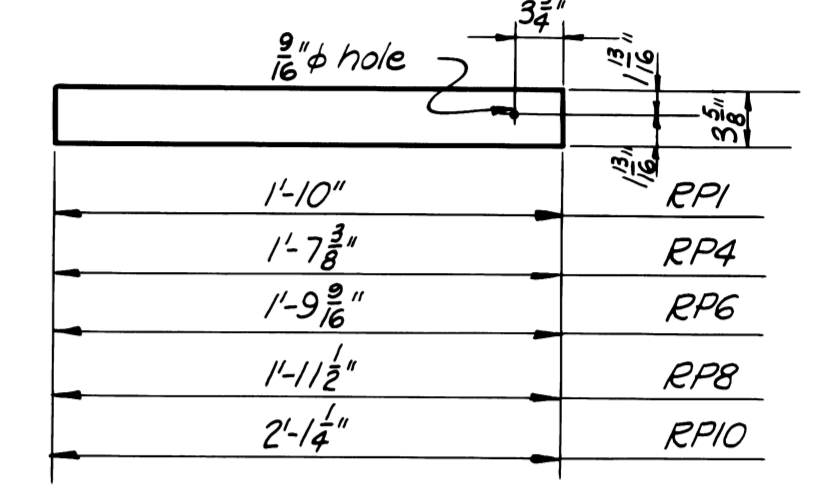


Cab Joist Layout  
 2" x 10" S4S

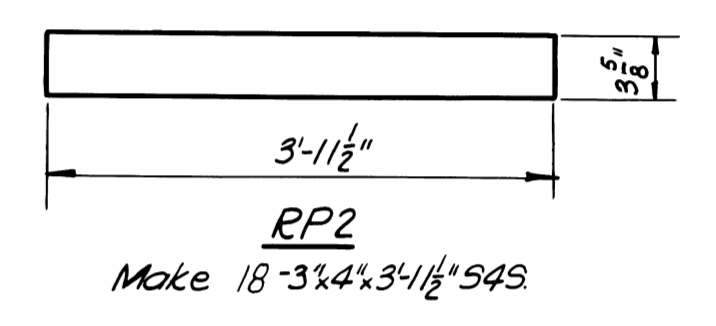
Mark	No. Req'd	Length "L"
N1	6	12'-0"
N2	9	7'-8 3/8"
N3	6	6'-0"
N4	2	3'-2 3/8"
N5	4	4'-0"
N8	2	5'-8 3/8"
N9	3	2'-8 3/8"



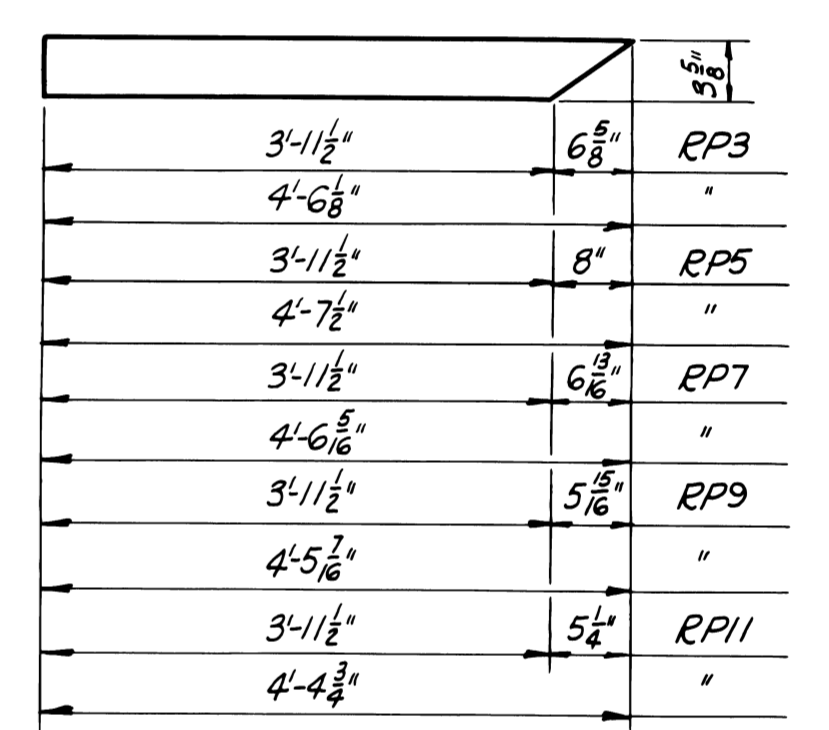
Stair Treads  
 Make 91 - 2" x 8" x 11 1/2" S4S



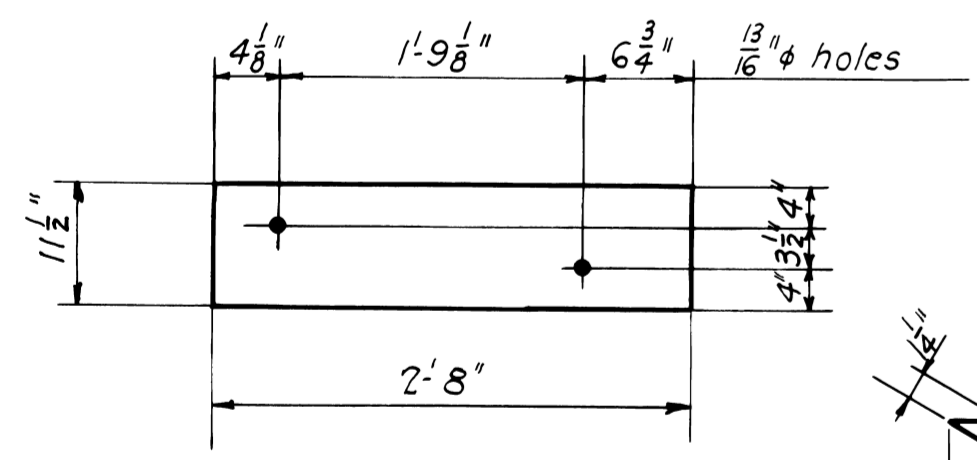
RPI-4-6-8-10  
 Make 4 each of 2" x 4" S4S



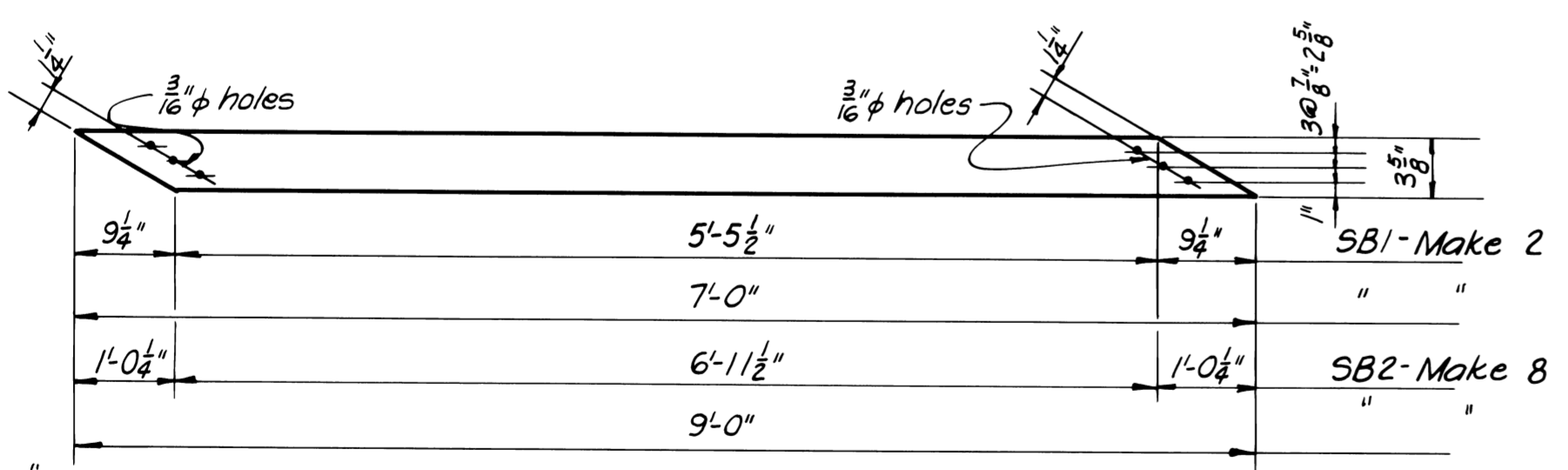
RP2  
 Make 18 - 3" x 4" x 3'-11 1/2" S4S



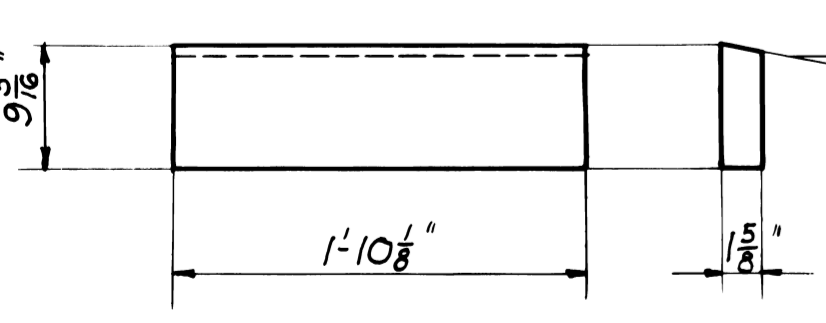
RPI3-5-7-9-11  
 Make 2 each of 3" x 4" S4S



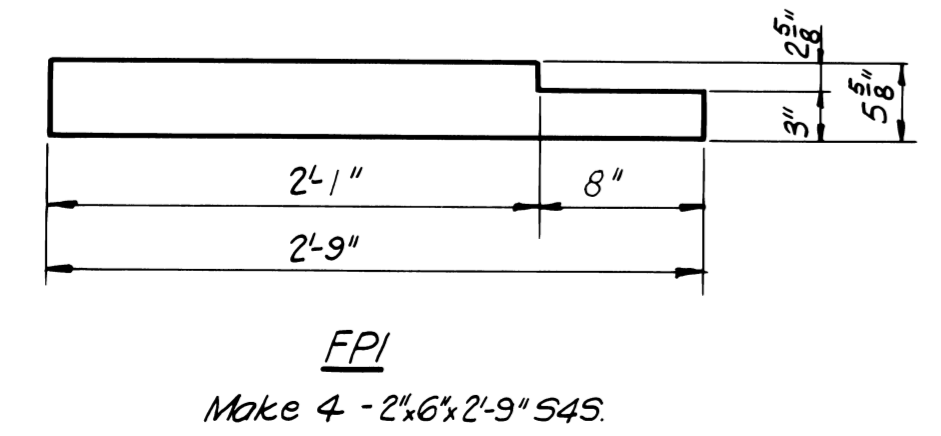
SC  
 Make 9 - 2" x 12" x 2'-8"



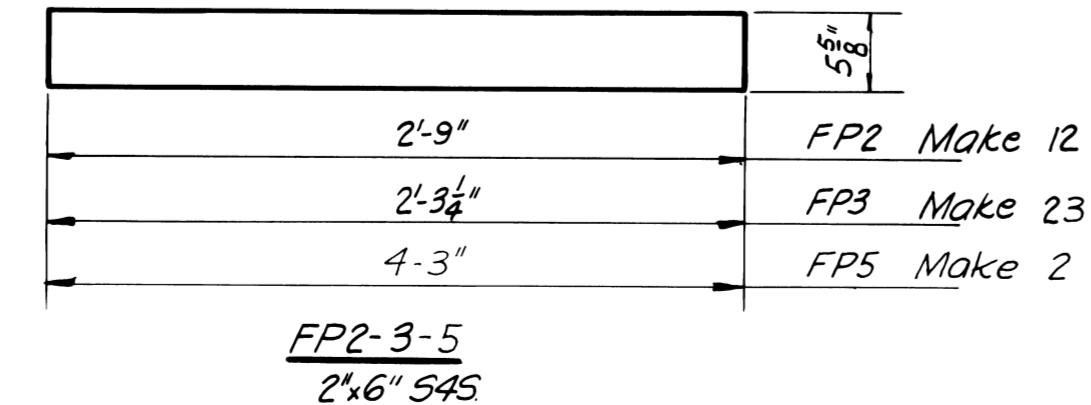
SBI-1 - Make 2  
 SBI-2 - Make 8



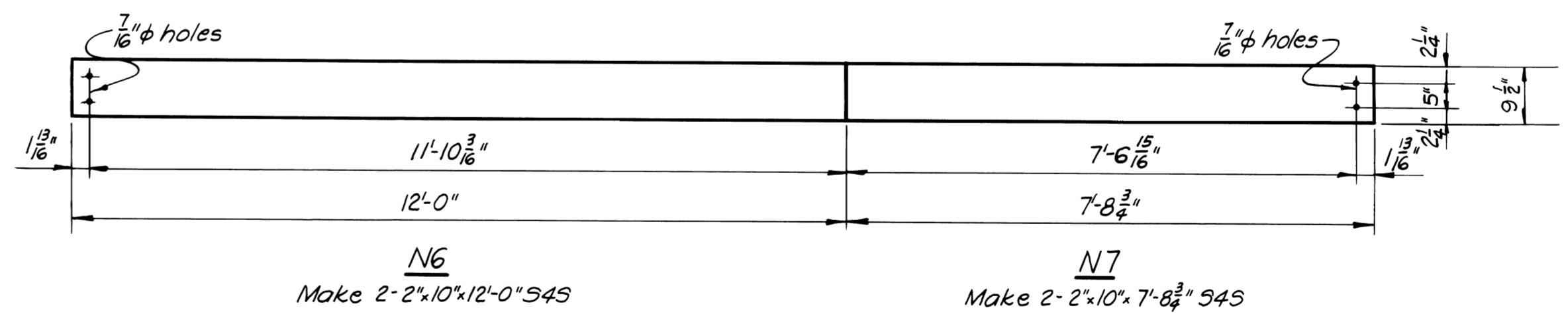
SF  
 Make 9 - 2" x 10" x 1'-10 3/8"



FP1  
 Make 4 - 2" x 6" x 2'-9" S4S

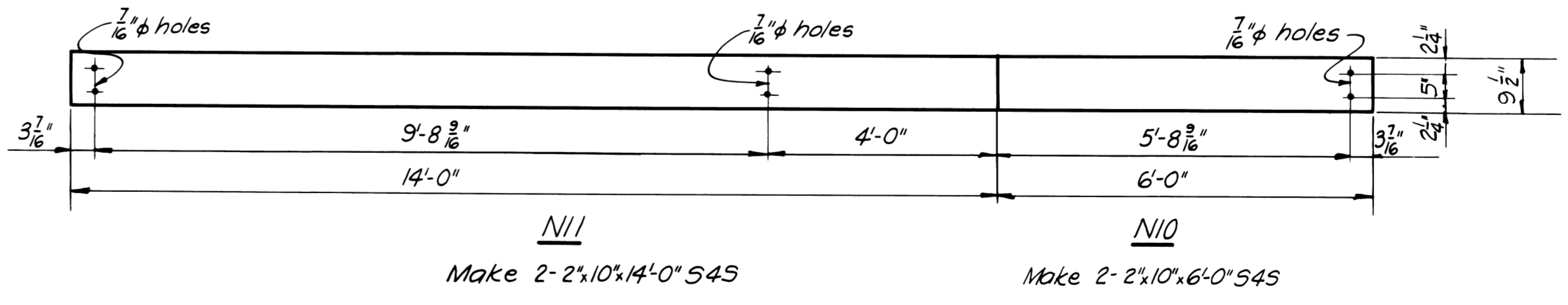


FP2 Make 12  
 FP3 Make 23  
 FP5 Make 2



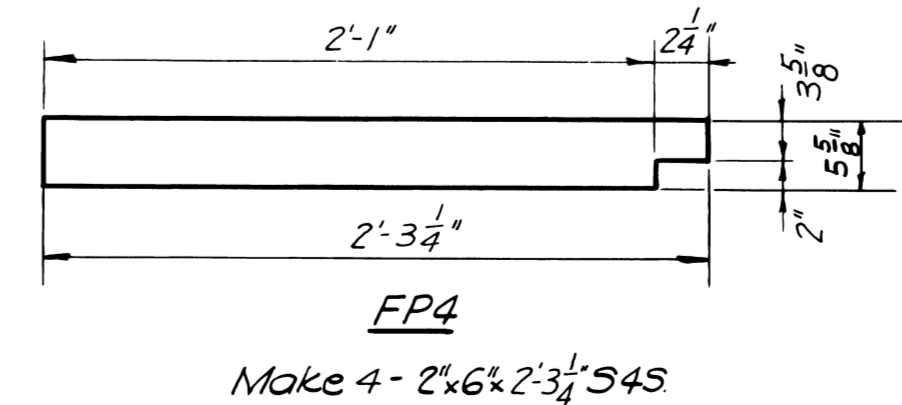
N6  
 Make 2 - 2" x 10" x 12'-0" S4S

N7  
 Make 2 - 2" x 10" x 7'-8 3/8" S4S

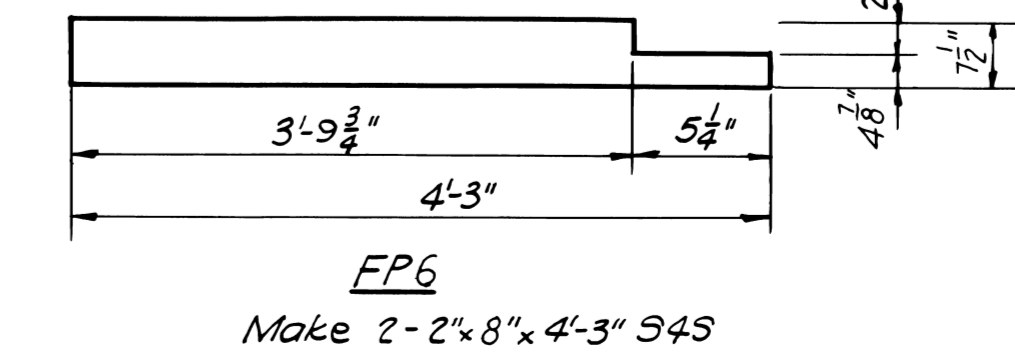


N11  
 Make 2 - 2" x 10" x 14'-0" S4S

N10  
 Make 2 - 2" x 10" x 6'-0" S4S



FP4  
 Make 4 - 2" x 6" x 2'-3 1/4" S4S



FP6  
 Make 2 - 2" x 8" x 4'-3" S4S

Revised - 5-13-40 by W.D.S.  
 Revised 12-5-39 by A.S.

U. S. DEPARTMENT OF AGRICULTURE  
 FOREST SERVICE  
 REGION SIX J. FRANKLAND REGIONAL ENGINEER

STANDARD LOOKOUT TOWER  
 83-FOOT TYPE CT-4  
 SHOP DETAILS

DESIGNED W.D.S. DRAWN H.R.S. TRACED H.R.S.  
 SCALE NONE CHECKED G.H.S.  
 APPROVED DATE FEB. 1939  
 ACT. ASSISTANT REGIONAL FORESTER

TREATED TOWER LUMBER

No.	MARK	SIZE	LENGTH	DESCRIPTION	F.B.M.
2	PIA	8" x 8"	11' - 5 <sup>3</sup> / <sub>4</sub> "	Posts	128
2	PIB	"	11' - 5 <sup>3</sup> / <sub>4</sub> "	"	128
4	P2A	"	19' - 0"	"	427
6	P2B	"	19' - 0"	"	640
1	P2C	"	19' - 0"	"	107
2	P3A	"	24' - 0"	"	256
2	P3B	"	24' - 0"	"	256
1	P4	8" x 8"	19' - 0"	"	107
32	PS1	3" x 8"	3' - 0"	Post Splice	192
2	H1A	3" x 10"	20' - 0"	Horizontals	100
2	H1B	3" x 10"	20' - 0"	"	100
4	H2	2" x 8"	13' - 6 <sup>1</sup> / <sub>4</sub> "	"	75
5	H3	3" x 8"	14' - 6 <sup>1</sup> / <sub>4</sub> "	"	160
1	H3A	"	14' - 6 <sup>1</sup> / <sub>4</sub> "	"	32
2	H3B	3" x 8"	15' - 5"	"	64
8	H4	2" x 8"	15' - 11 <sup>1</sup> / <sub>4</sub> "	"	171
8	H5	"	17' - 4 <sup>1</sup> / <sub>4</sub> "	"	192
8	H6	"	18' - 9 <sup>1</sup> / <sub>4</sub> "	"	214
8	H7	2" x 8"	20' - 2 <sup>1</sup> / <sub>4</sub> "	"	235
1	HC3A	2" x 14"	2' - 10"	Horizontal Covers	7
1	HC3B	"	8' - 5"	"	21
3	HC3	2" x 14"	12' - 6"	"	99
4	HC4	2" x 12"	14' - 0"	"	112
4	HC5	"	15' - 6"	"	128
4	HC6	"	16' - 6"	"	144
4	HC7	2" x 12"	18' - 6"	"	160
40	FBI	4" x 6"	1' - 6"	Fill Blocks	120
1	DIA	2" x 6"	2' - 10 <sup>3</sup> / <sub>8</sub> "	Diagonals	3
1	DIB	"	8' - 2 <sup>1</sup> / <sub>8</sub> "	"	9
1	DIC	"	14' - 3 <sup>3</sup> / <sub>8</sub> "	"	16
1	D2	"	17' - 5 <sup>3</sup> / <sub>4</sub> "	"	18
6	D3	"	17' - 5 <sup>3</sup> / <sub>4</sub> "	"	108
8	D4	"	21' - 10 <sup>7</sup> / <sub>16</sub> "	"	176
8	D5	"	22' - 9 <sup>7</sup> / <sub>8</sub> "	"	192
8	D6	"	23' - 10"	"	192
8	D7	2" x 6"	24' - 10 <sup>5</sup> / <sub>8</sub> "	"	208
1	DS	6" x 8"	21' - 6 <sup>3</sup> / <sub>16</sub> "	Diagonal Strut	88
TOTAL					5385

TREATED STAIR LUMBER

No.	MARK	SIZE	LENGTH	DESCRIPTION	F.B.M.
1	S1R	3" x 8"	15' - 1 <sup>1</sup> / <sub>2</sub> "	Stair Stringers	32
1	S1L	"	15' - 1 <sup>1</sup> / <sub>2</sub> "	"	32
1	S2R	"	19' - 3 <sup>1</sup> / <sub>16</sub> "	"	40
1	S2L	"	19' - 3 <sup>1</sup> / <sub>16</sub> "	"	40
1	S3R	"	19' - 9 <sup>9</sup> / <sub>16</sub> "	"	40
1	S3L	"	19' - 9 <sup>9</sup> / <sub>16</sub> "	"	40
1	S4R	"	20' - 4 <sup>5</sup> / <sub>8</sub> "	"	44
1	S4L	"	20' - 4 <sup>5</sup> / <sub>8</sub> "	"	44
1	S5R	"	21' - 0 <sup>9</sup> / <sub>16</sub> "	"	44
1	S5L	3" x 8"	21' - 0 <sup>9</sup> / <sub>16</sub> "	"	44
2	SB1	2" x 4"	7' - 0"	Stair Braces	10
8	SB2	2" x 4"	9' - 0"	"	48
3	PS1	3" x 10"	17' - 7"	Platform Stringers	135
3	PS2	"	16' - 3 <sup>7</sup> / <sub>8</sub> "	"	135
3	PS3	"	17' - 8 <sup>7</sup> / <sub>8</sub> "	"	135
3	PS4	"	19' - 1 <sup>1</sup> / <sub>8</sub> "	"	150
3	PS5	3" x 10"	20' - 6 <sup>7</sup> / <sub>8</sub> "	"	165
6	N1	2" x 10"	12' - 0"	Cab Joists	120
9	N2	"	7' - 8 <sup>3</sup> / <sub>4</sub> "	"	120
6	N3	"	6' - 0"	"	60
2	N4	"	3' - 2 <sup>3</sup> / <sub>4</sub> "	"	12
4	N5	"	4' - 0"	"	27
2	N6	"	12' - 0"	"	40
2	N7	"	7' - 8 <sup>3</sup> / <sub>4</sub> "	"	27
2	N8	"	5' - 8 <sup>3</sup> / <sub>8</sub> "	"	20
3	N9	"	2' - 8 <sup>3</sup> / <sub>4</sub> "	"	15
2	N10	"	6' - 0"	"	20
2	N11	2" x 10"	14' - 0"	"	47
91	—	2" x 8"	1' - 11 <sup>1</sup> / <sub>2</sub> "	Stair Treads	243
4	FP1	2" x 6"	2' - 9"	Floor Plank	12
12	FP2	"	2' - 9"	"	36
23	FP3	"	2' - 3 <sup>1</sup> / <sub>4</sub> "	"	54
4	FP4	"	2' - 3 <sup>1</sup> / <sub>4</sub> "	"	9
2	FP5	2" x 6"	4' - 3"	"	9
4	RPI	2" x 4"	1' - 10"	Rail Posts	6
18	RP2	3" x 4"	3' - 11 <sup>1</sup> / <sub>2</sub> "	"	72
2	RP3	3" x 4"	4' - 6 <sup>1</sup> / <sub>8</sub> "	"	10
4	RP4	2" x 4"	1' - 7 <sup>3</sup> / <sub>8</sub> "	"	6
2	RP5	3" x 4"	4' - 7 <sup>1</sup> / <sub>2</sub> "	"	10
4	RP6	2" x 4"	1' - 9 <sup>9</sup> / <sub>16</sub> "	"	6
2	RP7	3" x 4"	4' - 6 <sup>5</sup> / <sub>16</sub> "	"	10
4	RP8	2" x 4"	1' - 11 <sup>1</sup> / <sub>2</sub> "	"	6
2	RP9	3" x 4"	4' - 5 <sup>7</sup> / <sub>16</sub> "	"	10
4	RPI0	2" x 4"	2' - 1 <sup>1</sup> / <sub>4</sub> "	"	7
2	RPI1	3" x 4"	4' - 4 <sup>3</sup> / <sub>4</sub> "	"	9
2	FP6	2" x 8"	4' - 3"	Floor Plank	12
9	SC	2" x 12"	2' - 8"	Stair Stringer Caps	48
9	SF	2" x 10"	1' - 10 <sup>1</sup> / <sub>8</sub> "	"	30
TOTAL					2291

UNTREATED LUMBER

No.	MARK	SIZE	LENGTH	DESCRIPTION	F.B.M.
4	—	2" x 4"	22' - 0"	Hand Rails	59
6	—	"	20' - 0"	"	80
4	—	"	18' - 0"	"	48
2	—	2" x 4"	16' - 0"	"	22
TOTAL					209

NOTE:

All lumber to be S4S.

As required by specifications, material for posts is listed 2'-0" greater than shop detail length to eliminate seasoning end checks.

Revised - 5-14-30 by W.D.S.  
Revised 12-5-39 by A.S.

U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

REGION SIX JAMES FRANKLAND REGIONAL ENGINEER

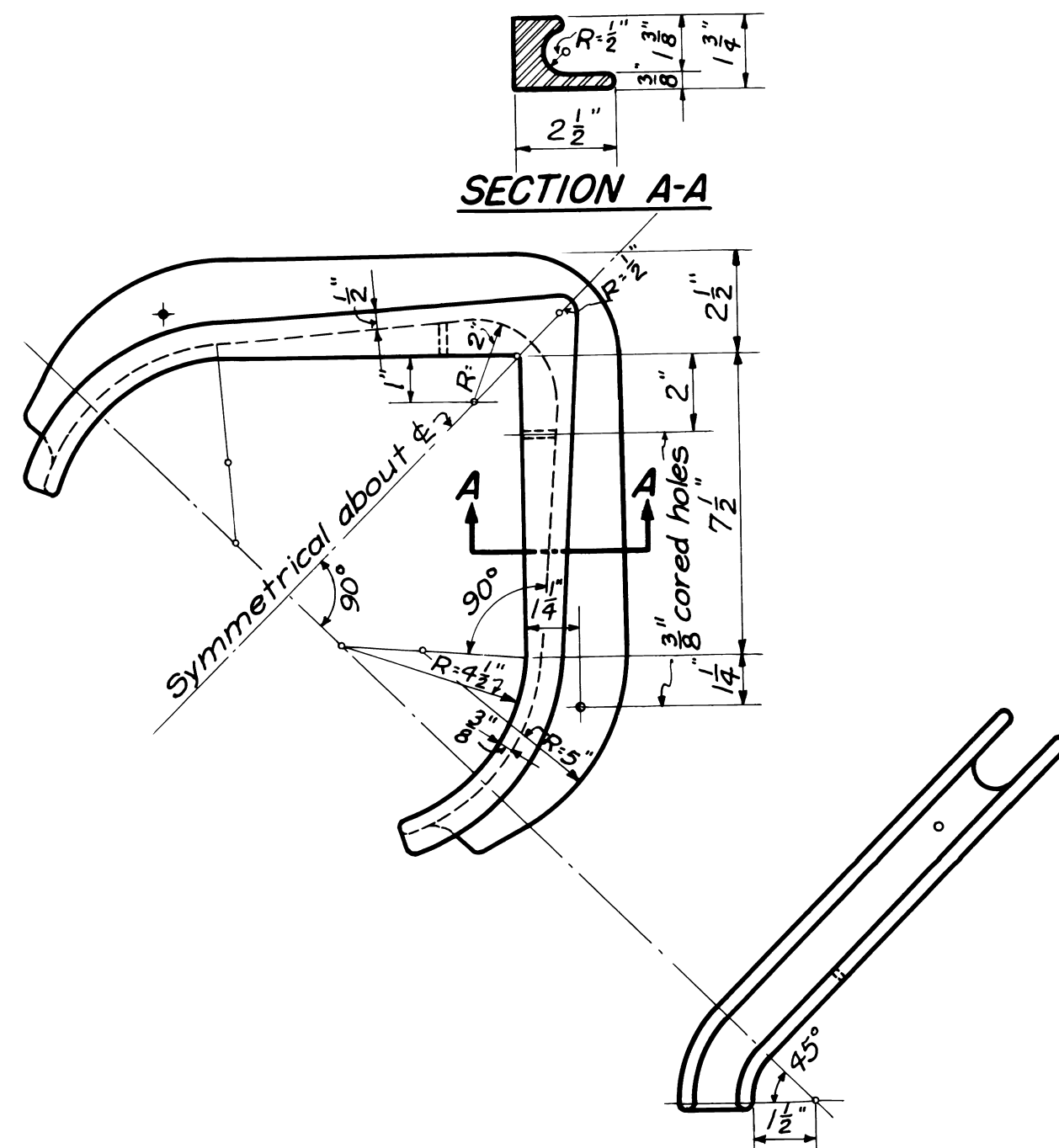
STANDARD LOOKOUT TOWER  
83-FOOT, TYPE CT-4  
BILL OF LUMBER

DESIGNED W.D.S. DRAWN L.L.L. TRACED L.L.L.  
SCALE NONE CHECKED 4/7 6-1-32.  
APPROVED G. J. [Signature] DATE MAY 8, 1938  
ACT. ASSISTANT REGIONAL FORESTER

## BILL OF HARDWARE

NO.	SIZE	LENGTH	DESCRIPTION	WEIGHT
5	$\frac{3}{4}$ " $\phi$	0'-5"	Machine Bolts	5
2	$\frac{3}{4}$ " $\phi$	0'-6"	" "	2
85	$\frac{3}{4}$ " $\phi$	0'-11"	" "	150
70	$\frac{3}{4}$ " $\phi$	0'-11 $\frac{1}{2}$ "	" "	127
62	$\frac{3}{4}$ " $\phi$	0'-12 $\frac{1}{2}$ "	" "	120
13	$\frac{3}{4}$ " $\phi$	0'-14 $\frac{1}{2}$ "	" "	28
5	$\frac{3}{4}$ " $\phi$	0'-17"	" "	12
340	4"		"TECO" split rings or equal	226
520	$\frac{3}{4}$ "		Malleable C.I. Washers	182
4			Guy Collar (See Detail)	80
4			Bridge Bowls for $\frac{3}{4}$ " wire rope	40
16	$\frac{3}{4}$ "		Wire Rope Clips	15
			$\frac{9}{16}$ " Plow Steel Cable (Galv.) Length to suit topography	
		10 $\text{d}$	Nails (Common)	17
		40 $\text{d}$	" "	60
		50 $\text{d}$	" "	50
11	$\frac{1}{2}$ " $\phi$	2'-4 $\frac{1}{2}$ "	Machine Bolts	18
11	$\frac{1}{2}$ " $\phi$	2'-8"	" "	20
222	$\frac{1}{2}$ "		Malleable C.I. Washers	27
20	$\frac{3}{4}$ "	15 $\frac{1}{2}$ "	Machine Bolts (Stairs)	46
44	$\frac{1}{2}$ "	6 $\frac{1}{2}$ "	" " "	19
5	"	7 $\frac{1}{2}$ "	" " "	3
7	"	9"	" " "	4
33	"	10"	" " "	22
22	$\frac{3}{8}$ "	4"	Carriage Bolts	4
46	"	5"	" " "	9
31	"	6"	" " "	7
7	"	6 $\frac{1}{2}$ "	" " "	2

All above to be galvanized except C.S. guy collar.



### GUY COLLAR

SCALE 3" = 1'-0"

MATERIAL - CAST STEEL

Revised 3-15-44 by W.G.  
Revised 5-15-40 by W.D.S.  
Revised 12-5-39 by A.S.

U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

REGION SIX      JAMES FRANKLAND      REGIONAL ENGINEER

STANDARD LOOKOUT TOWER  
83-FOOT , TYPE CT-4  
BILL OF HARDWARE

DESIGNED W.D.S.      DRAWN L.L.L.      TRACED L.L.L.  
SCALE 3" = 1'-0"      CHECKED W.G.      DATE 6-1-39  
APPROVED A.S.      ACT. ASSISTANT REGIONAL FORESTER

NOTE:  
This list includes an approximate  
10% overage of bolts, washers,  
split rings and nails.