

$$44.5 + 18.5 + 12 + 12 = 96 - 9 = 87$$

$$18.5 + 18.5 + 10 = 96 - 44 = 57$$

96

$$k_2 = \frac{1}{2}$$

$$G = 44.5 \quad J = 18.5 \times 3$$

$$H = 10$$

$$I = 12 \times 2$$

$$\text{if } k_2 = 1$$

$$G = 44.5 \quad J = 18.5$$

$$H = 20.5 - 1 = 9.5$$

$$I = 21.5 - H = 12$$

$$H + I = 21.5$$

$$k_1 = 0.75$$

$$G = B - 2k_1 = 46 - 1.5 = 44.5$$

$$H = A - k_2 - I = 22.5 - k_2 - I = 10.5 - k_2$$

$$2. I = A - k_2 - H = 22.5 - k_2 - H = 12$$

$$3. J = 20 - 2k_1 = 20 - 1.5 = 18.5 \cdot 3 = 55.5$$

Group I:

$$J \times 3 = 18.5 \cdot 3 = 55.5 = \sim 56$$

Group II:

$$G \times 1 = 44.5$$

Group III:

$$I \times 2, H \times 1 = 12 \cdot 2 + 9.5 = 24 + 9.5 = 33.5 = \sim 34$$

$$+ 10 = 24 + 9.5 = 34$$

Screws:

Philips #8 ~2"

flat-head

Semi-threaded

Wood options:

A). 4x8

- Cut down to  $1\frac{3}{4} \times 3$ , 288 inches in length

- Uses 134.5 inches

B). 4x4

- Cut down to  $1\frac{3}{4} \times 3$ , 144 inches in length

- Uses 134.5 inches

~~Doesn't work for~~ - Breakdown: 1). G-44.5, 2). Jx2, H, 3). J, Ix2

$$- 1 - 44.5, 2 - 37 + 9.5 + 10 = 47, 3 - 18.5 + 24 = 42.5$$

C). 4x2

- Cut to  $1\frac{3}{4} \times 3$ , 72 in length (24x3)

- Only works for J

- Cut into  $1\frac{3}{4} \times 1$ ,  $7\frac{7}{8} \times 1$ , 48 in length (48x1x16, 48x1,8)

d) Double 1x8 for beams/everything

Just beams:  $34 \times 2 = 68$  in

Everything = ~270

$$G + I = \sim 100 \text{ ft} \cdot 2 = 200 \text{ ft}$$

6-8 ft of 1" for I & H

8ft + 10ft of  $\frac{1}{2}$ " or  $\frac{3}{4}$ " for G & I