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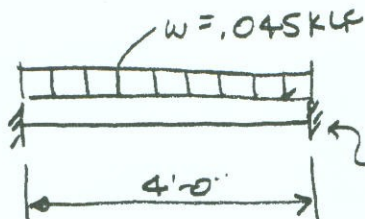
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PROJECT #: D1454-002 SHEET INDEX #: 1
PROJECT NAME: ROMAN KEMP WINDOW UNIT
SUBJECT: COVER CAPACITY SHEET #: 1 of 1
DESIGNED BY: _____ DATE: _____
REVISED BY: _____ DATE: _____
CHECKED BY: RKD DATE: 9-23-05

CALCULATIONS:

LOADING
40 PSF LIVE
5 DEAD
45 PSF



$$M = WL^2/12 = .045 \times 4^2 / 12 = 0.001 \text{ k/ft.}$$

CHECK # OF BARS EFFECTIVE

$$\text{BAR SPACING} = (36.5 - 2 - 2) / 15 \text{ spaces} = 2.17"$$

$$\text{WITHIN 12" WIDTH \# OF BARS} = 12 / 2.17 = 5.53$$

$$S_x \text{ per } 3/8" \phi \text{ ROD } (0.375" \phi) \rightarrow 6 \text{ BARS}$$

$$= .0982 d^3 = .0982 (.375)^3 = .00518 \text{ in}^3$$

$$f_b = M/S = \frac{0.001 \times 12}{0.00518 \times 6} = 23.2 \text{ ksi}$$

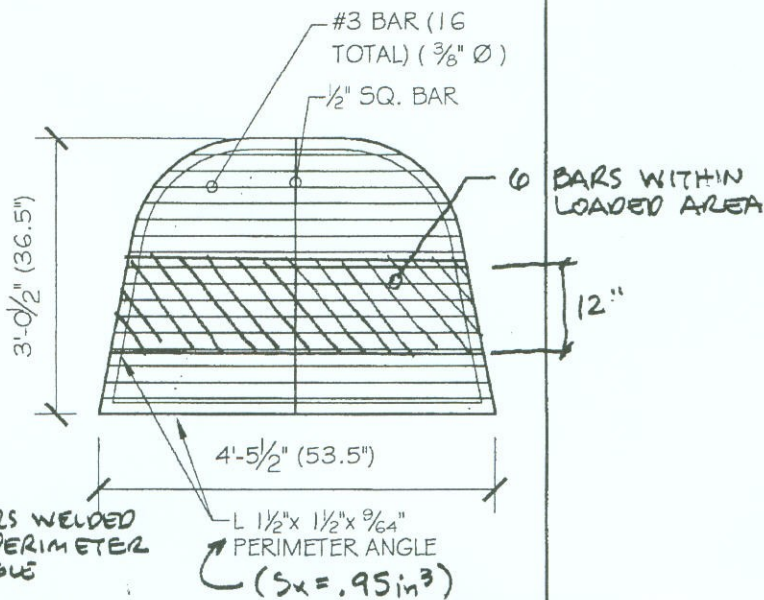
$F_y = 71,900 \text{ ksi}$ PER MIL CERT.

USING $F_y = 60 \text{ ksi}$ (i.e. for A615-60 REBAR)

$$F_b = .6 \times 60 = 36 \text{ ksi} > 23.2 \text{ ksi}$$

NOTE: AT SIMPLE SPAN ($WL^2/8$) $f_b = 34.8 < 36 \text{ ksi}$ STILL OK

RESULTS:



6 BARS WITHIN LOADED AREA

12"

L 1 1/2" x 1 1/2" x 9/64" PERIMETER ANGLE
($S_x = .95 \text{ in}^3$)
 $\gg 3/8" \text{ ROD} = .0052 \text{ in}^3$

END