revised 3-3-67

LACLEDE STEEL COMPANY D105- T 5 -Sheet 3

WEB MEMBER #4 Distance from End Panel = 3.21 ft. (GP = 2.00')

Applicable Shear V_x = 12,570 lbs. f_y = 50,000 psi

Slope = 1.162 f_s = — psi

ℓ = 30.0 in. f_{sc} = 9,970 psi

Reqd. Area = 1.47 sq. in. Use 2-0.98" DIA Area = 1.51 sq. in.

WEB MEMBER #5 Distance from End Panel = 0.0 ft. (GP = 2.00')

Applicable Shear V_x = 15,865 lbs. f_y = 50,000 psi

Slope = 1.90 f_s = 30,000 psi

ℓ = — in. f_{sc} = — psi

Reqd. Area = 1.01 sq. in. Use 2-0.92" DIA Area = 1.33 sq.in.

CHORD MEMBER #6 Consists of 4 - 2" x 1½" x 0.25" Angles

Construction Load Design Area = 3.60 sq. in.

Applicable Moment = 585,000 in. lbs. f_y = 50,000 psi

ℓ = 35.375 in. f_s = — psi

r_x = 0.44 in. f_{sc} = 12,930 psi

r_z = 0.31 in. ~~(with fillers in middle 60% of span)~~

$\frac{\ell}{r_x}$ = 75.8

$\frac{\ell}{r_z}$ = 107.5 $\frac{f_a}{F_a} + \frac{f_b C_m}{F_b(1 - \frac{f_a}{F'_e})}$ = 0.477 less than 1

f_a = 5,800 psi

F_a = 12,930 psi

f_b = 748 psi

F_b = 30,000 psi

F'_e = 25,950 psi

Use 4 - 2" x 1½" x 0.25" X's Area = 3.60 sq. in.

CHORD MEMBER #7 Consists of 4 - 2" x 1½" x 0.25" Angles

Total Load Design Area = 3.60 sq. in.