LACLEDE STEEL COMPANY D105-T2-Sheet 2

WORLD TRADE CENTER
FLOOR GRID TRUSSES
DESIGN DATA

TRUSS UNIT MARKED 2C32T2 Refer to drawings ST 101,246,7

Clearspan "L" = 59.08 ft. Spacing = 6.67 ft.

Applicable Total Moment = 5,630,000 inch pounds.

Based on 157 lbs./sq. ft. Total Load "w".

Applicable End Reaction = 31,300 pounds.

Based on 157 lbs./sq. ft. Total Load "w".

Applicable Total Constr. Moment = 1,860,000 inch pounds.

Based on 52 lbs./sq. ft. Construction Load.

Applicable Constr. End Reaction = 10,360 pounds.

Based on 52 lbs./sq. ft. Construction Load.

"V" Shear at End Panel = 28,150 pounds. ED = 3.0 ft.

WEB MEMBER #1 Distance from End Panel = 0.0 ft.

Applicable Shear V_x = 28,150 lbs. f_y = 50,000 psi

Slope = 2.65 f_s = 30,000 psi

ℓ = — in. f_{sc} = — psi

Reqd. Area = 2.77 sq. in. Use 2-1.17" DIA. + 2-0.75" DIA. Area = 2.92 sq. in.

WEB MEMBER #2 Distance from End Panel = 0.0 ft.

Applicable Shear V_x = 28,150 lbs. f_y = 50,000 psi

Slope = 1.00 f_s = — psi

ℓ = 26.0 in. f_{sc} = 16,530 psi

Reqd. Area = 1.84 sq. in. Use 2-1.14" DIA. Area = 2.04 sq. in.

WEB MEMBER #3 Distance from End Panel = 4.87 ft.

Applicable Shear V_x = 23,050 lbs. f_y = 50,000 psi

Slope = 1.162 f_s = — psi

ℓ = 30.0 in. f_{sc} = 13,490 psi

Reqd. Area = 1.99 sq. in. Use 2-1.14" DIA. Area = 2.04 sq. in.