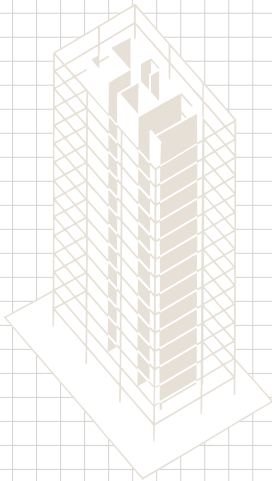
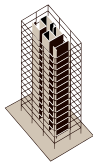


STRUCTURAL AFFILIATES INTERNATIONAL
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		COLUMNS			
		W8	W10	W12	W14
6.5"	24				
	28				
	31				
	35				
	40				
8"	48	33	40	43	
	58	39	45	48	
	67	45	50	53	
		49	53	61	
		54	58	68	
10"		60		74	
		68		82	
		77			
		88			
		100			
		112			
			65		
			72		
			79		
			87		
12"		96			
		106			
		120			
		136			
		152			
		170			
		190			
		210			
		230			
		252			
13"		279			
		305			
		336			
			90		
			99		
			109		
			120		
			132		
			145		
	15"		159		
		176			
		193			
		211			
		233			
		257			
		283			
		311			
		342			
16"			370		
			90		



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BEAMS
W 8x10
W 10x22
W 12x14
W 12x16
W 12x19
W 12x22
W 12x26
W 12x30
W 14x22
W 14x26
W 14x30
W 14x34
W 16x26
W 16x31
W 16x40
W 18x35
W 18x40
W 18x50
W 18x55
W 21x44
W 21x50
W 21x68
W 21x62
W 24x55
W 24x62
W 24x68
W 24x76
W 24x84
W 27x84
W 30x90
W 30x99
W 30x108
W 30x116
W 33x118
W 33x130
W 33x141
W 33x201
W 33x221
W 36x135
W 36x150
W 36x160
W 36x170
W 36x182
W 36x194
W 36x210
W 36x230
W 36x245
W 36x260
W 36x280
W 36x300

SECTION PROPERTIES

$$A = \frac{Wt}{3.4}$$

$$I_x \approx \frac{d^2 Wt}{20}$$

$$r_x \approx 45\% d$$

$$r_y \approx 26\% b$$

BEAMS

$$\text{Beam Wt} \approx \frac{5M}{d}$$

$$\text{Beam Wt} \approx \frac{3.5M}{d}$$

$$\text{Truss Wt} \approx \frac{6M}{d}$$

$$\text{Truss Wt} \approx \frac{4.5M}{d}$$

Wt \approx 70% for Composite

100% Studs \approx 1.1 Wt

100% Studs \approx 1.25 Wt

COLUMNS

$$P_a \approx A (22 - 0.10 \frac{KL}{r})$$

$$P_a \approx A (30 - 0.15 \frac{KL}{r})$$

TONNAGE

$$\text{psf} \approx \frac{\text{Stories}}{3} + 7$$

SERVICEABILITY

Roof Bm $d \approx 0.5L$

Floor Bm $d \approx 0.6L$

Composite Bm $d \approx 0.55L$

NOTE: Typical $F_y = 36$ ksi

■ Indicates $F_y = 50$ ksi

STRUCTURAL STEEL