

CMU WALL DESIGN

| | | | | | | | |
|------------------------------|------------|--|--|--|--|--|--|
| CMU WALL: | MW1 | | | | | | |
| Design Length = | 12 in. | | | | | | |
| Wall Thickness = | 8 in. | | | | | | |
| Wall Clear Height, h' = | 14.0 ft. | | | | | | |
| CMU Assembly f'm = | 1900 psi | | | | | | |
| Spec. Insp. ? | 1 | | | | | | |
| # Bars in Cell = | 1 | | | | | | |
| Rebar size = | # 6 | | | | | | |
| Spacing = | 16 in. | | | | | | |
| (Override) As = | | | | | | | |
| @ Ctr or Edge ? | Ctr | | | | | | |
| (Override) d = | | | | | | | |
| Addnl Axial Load = | 4610 lbs. | | | | | | |
| Addnl Moment = | | | | | | | |
| Lateral Load ASI = | 1.33 | | | | | | |
| Wall Height = | 14.0 ft. | | | | | | |
| Parapet Height = | | | | | | | |
| Wall Grout Spacing = | 8 in. | | | | | | |
| Parapet Grout Spacing = | 8 in. | | | | | | |
| Wt. Classification (L,M,H) = | M | | | | | | |
| Wt. of Wall Finish/misc. = | | | | | | | |
| Seismic Z = | | | | | | | |
| Soil Profile Type = | 1.4 | | | | | | |
| Basic Wind Cq = | 90 mph | | | | | | |
| Wind Speed = | C | | | | | | |
| Wind Exp. = | | | | | | | |
| Bot. of Wall at = | 0. ft. | | | | | | |
| Width of Adj. Door/Window = | | | | | | | |
| Head of Door/Window at = | | | | | | | |
| Sill of Door/Window at = | | | | | | | |

| | | | | | | | |
|------------------------------|-----------------------|--------------|--|--|--|--|--|
| ASI = 1.00 | Axial Load R = | 0.170 | | | | | |
| Lat Load ASI | Combined R = | 0.474 | | | | | |
| Reduced Wind Cq = | 1.39 | | | | | | |
| Avg. Wind Pressure = | 30.6 psf | | | | | | |
| Avg. Seismic Load = | | | | | | | |
| Lateral Reaction at Top = | 214 lbs. | | | | | | |
| Lateral Reaction at Bottom = | 214 lbs. | | | | | | |
| Lateral Moment = | 749 ft-lbs | | | | | | |
| Moment Capacity = | 2165 ft-lbs | | | | | | |
| Axial Load Capacity = | 30313 lbs. | | | | | | |
| Rho Gross Area = | 0.0036 | | | | | | |
| Wall Weight at Mid-Ht = | 546 lbs. | | | | | | |

| | | Grout Spacing | | Volume F.S.T. | | Cmu Nominal Width | |
|-------------|----|---------------|-----|---------------|------|-------------------|--|
| | | 6 | 8 | 10 | 12 | | |
| Solid Grout | 8 | 5.6 | 7.6 | 9.6 | 11.6 | | |
| | 16 | 4.5 | 5.8 | 7.2 | 8.5 | | |
| | 24 | 4.1 | 5.2 | 6.3 | 7.5 | | |
| | 32 | 4.0 | 4.9 | 5.9 | 7.0 | | |
| | 40 | 3.8 | 4.7 | 5.7 | 6.7 | | |
| UngROUTED | 48 | 3.7 | 4.6 | 5.5 | 6.5 | | |
| | 56 | 3.4 | 4.0 | 4.7 | 5.5 | | |

| | | Grout Spacing | | Radius of Gyration | | Cmu Nominal Width | |
|-------------|----|---------------|------|--------------------|------|-------------------|--|
| | | 6 | 8 | 10 | 12 | | |
| Solid Grout | 8 | 1.62 | 2.19 | 2.77 | 3.34 | | |
| | 16 | 1.79 | 2.43 | 3.04 | 3.67 | | |
| | 24 | 1.87 | 2.53 | 3.17 | 3.82 | | |
| | 32 | 1.91 | 2.59 | 3.25 | 3.91 | | |
| | 40 | 1.94 | 2.63 | 3.30 | 3.97 | | |
| UngROUTED | 48 | 1.96 | 2.66 | 3.33 | 4.02 | | |
| | 56 | 1.98 | 2.68 | 3.36 | 4.05 | | |

| # of Rebars = | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|---------------|---------|---------|---------|---------|---------|---------|---------|
| As per L.F. = | 0.44 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| As per L.F. = | 0.33 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7.625 | -0.375 | -0.375 | -0.375 | -0.375 | -0.375 | -0.375 | -0.375 |
| 20.35 | 28.64 | 28.64 | 28.64 | 28.64 | 28.64 | 28.64 | 28.64 |
| 24000 | 20000 | 20000 | 20000 | 20000 | 20000 | 20000 | 20000 |
| 1900 | 675 | 675 | 675 | 675 | 675 | 675 | 675 |
| 0.00721 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| 0.147 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| 0.415 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| 3.813 | -0.188 | -0.188 | -0.188 | -0.188 | -0.188 | -0.188 | -0.188 |
| 0.862 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| 1.58 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| 1.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 2.19 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 7.6 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 91.2 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 30313 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 36071 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 0.00453 | 0.00135 | 0.00135 | 0.00135 | 0.00135 | 0.00135 | 0.00135 | 0.00135 |
| 0.00361 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| 30313 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 0.33 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| 21.0 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| 627 | 223 | 223 | 223 | 223 | 223 | 223 | 223 |
| 77 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 2.38 | 2.38 | 2.38 | 2.38 | 2.38 | 2.38 | 2.38 | 2.38 |
| 2169 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| 1628 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |

| | | | | | | | |
|-----------------------|------|---|---|---|---|---|---|
| Default rebar @ Ctr : | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Default LDF : | 1.33 | 1 | 1 | 1 | 1 | 1 | 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|-----------------------------|-----|------|------|------|------|------|------|
| Wall light | 75 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Wall medium | 78 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Wall heavy | 84 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Wall pfl | 78 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Wall + Finish at Mid-Ht pfl | 546 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | |
|----------------------|----|------|------|------|------|------|------|
| Parapet light | 75 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Parapet medium | 78 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Parapet heavy | 84 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Parapet pfl | 78 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parapet + Finish pfl | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|-----------------------------|-----|------|------|------|------|------|------|
| Wall + Parapet + Finish lbs | 546 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
|-----------------------------|-----|------|------|------|------|------|------|

| | | Grout Spacing | | Cmu Nominal Width | |
|-------------|----|---------------|----|-------------------|-----|
| | | 6 | 8 | 10 | 12 |
| Solid Grout | 8 | 52 | 75 | 93 | 118 |
| | 16 | 41 | 60 | 69 | 88 |
| | 24 | 37 | 55 | 61 | 79 |
| | 32 | 36 | 52 | 57 | 74 |
| | 40 | 35 | 50 | 55 | 71 |
| UngROUTED | 48 | 34 | 48 | 53 | 69 |
| | 56 | 26 | 33 | 36 | 47 |