

February 26, 2018

Mr. Tony Ficano One Ocean Place Homeowners Association 1990 N Waccamaw Drive Garden City, SC

Re: Glass Door & Window Replacement at One Ocean Place Homeowners Association North and South Towers 1990 N Waccamaw Drive Garden City, SC

Dear Tony,

Per the request of the Association, this office has been commissioned to assess the feasibility of replacement sliding door and window units at the above referenced buildings. The following requirements have been established for the two buildings to be considered independent:

- DP rating of door and window units are tested at the following pressures compliant with the 2015 International Building Code Chapter 16 and ASCE 7-10 Chapter 28 Components and Cladding (Envelope Procedure):
 - 85 PSF for doors and windows within 10 feet of perimeter [outside four] corners known as the "End Zones".
 - 65 PSF for doors and windows interior of the designated distance for above guidelined corner or "End Zones".
- Compliant with Design Wind Speed requirement of 148 MPH Ultimate and 116 MPH Nominal.
- Door or window unit glazing is impact resistant for ASTM E 1996 (Below 30 feet] and ASTM E 1996 (Above 30 feet].
- Door or window unit is resistant to Wind Exposure Classification of D

It should be stated that the installation contractor will be responsible for all waterproofing requirements as established by industry standards and the manufacturer.

If you have further questions or concerns, please do not hesitate to contact our office at the above listed phone number.

Respectfully, Saul J. Martinez, P.E.



WIND PRESSURE CALCULATIONS FOR MAIN WIND FORCE RESISTING SYSTEM PER ASCE 7-10

Job Name ONE OCEAN PLACE NORTH AND SOUTH TOWER Job # 18-235

Location GARDEN CITY, SC

Designer Saul J. Martinez, PE

| | DESIGN | DATA |
|---------------------------------------|------------|--|
| MEAN ROOF HEIGHT, h | 120.58 ft. | |
| BUILDING PERIOD & Vy AND Mx, Txy: | 0.728 sec. | $T_a = 0.02(h)^{75}$ |
| BUILDING PERIOD FOR Vx & My, Tyx: | 0.728 sec. | $Ta = 0.02(h)^{75}$ |
| BASIC WIND SPEED, V: | 148 mph | (FIGURE 26.5-1A) |
| EXPOSURE CATEGORY: | D | (PARAGRAPH 26.7.3.) |
| DESIGN BUILDING WIDTH, X: | 160.00 ft. | FOR WIND COEFFICIENTS |
| DESIGN BUILDING LENGTH, Y: | 78.00 ft. | FOR WIND COEFFICIENTS |
| INTERNAL PRESSURE DATA | | |
| POS. COEF. ABOVE 60', Gepi: | 0.18 | (TABLE 26.11-1) |
| NEG. COEF. ABOVE 60', Gcpi: | -0.18 | (TABLE 26.11-1) |
| POS. COEF. BELOW 60', GCpi: | 0.18 | (TABLE 26.11-1) |
| NEG. COEF. BELOW 60', GCpi: | -0.18 | (TABLE 26.11-1) |
| CLASS. OF BLDG TYPE (I, II, III, IV): | II | (TABLE 1.5-1) |
| IMPORTANCE FACTOR, I: | 1.00 | (TABLE 1.5-2) |
| POWER LAW COEFFICIENT, alpha: | 11.5 | (TABLE 26.9-1) |
| GRADIENT HEIGHT, zg: | 700 | (TABLE 26.9-1) |
| WIND DIRECTIONALITY FACTOR, Kd | 0.85 | (TABLE 26.6-1) |
| EXP. COEF., Kz AT MEAN ROOF, z = h: | 1.48 | (TABLE 27.3-1) FOR INDIRECT WIND SUCTION |
| STRUCTURE COEFFICIENTS | | |
| ALPHA(^): | 0.087 | (TABLE 26.9-1) |
| BETA (^): | 1.070 | (TABLE 26.9-1) |
| ALPHA (-): | 0.111 | (TABLE 26.9-1) |
| BETA (-): | 0.800 | (TABLE 26.9-1) |
| C: | 0.150 | (TABLE 26.9-1) |
| L: | 650 ft. | (TABLE 26.9-1) |
| EPSILON: | 0.125 | (TABLE 26.9-1) |
| Z (MIN): | 7 ft. | (TABLE 26.9-1) |
| RIGID STRUCTURE FACTORS | | |
| Zbar: | 72 ft. | (TABLE 26.9-1) |
| I(Zbar): | 0.132 | (EQ. 26.9-7) |
| L(Zbar): | 717 ft. | (EQ. 26.9-9) |

| WIND FORCE Mx, Vy: | | | |
|--|--|------|--|
| h / X | 0.75 | | |
| Y / X | 0.49 | | |
| WINDWARD WALLS, Cp | 0.80 | | (FIGURE 27.4-1) |
| LEEWARD WALLS, Cp | -0.50 | | (FIGURE 27.4-1) |
| TOPO. FACTOR FOR Vy & Mx, Kzt: | 1.000 | | (EQ. 26.8-1) |
| VEL. PRES. FOR Vy & Mx AT z = h, qh: | 70.56 psf | | (EQ. 27.3-1) |
| Q^2 FOR Vy AND Mx: | 0.861 | | (EQ. 26.9-8) |
| G FOR Vy & Mx: | 0.869 | 0.85 | (EQ. 26.9-6) GUST EF. FACT. FOR Vy AND Mx |
| ABOVE 60': | | | |
| POS. INTERNAL PRESSURE, p: | 12.70 psf | | POSITIVE qh(Gcpi) ABOVE 60' |
| NEG. INTERNAL PRESSURE, p: | -12.70 psf | | NEGATIVE qh(Gcpi) ABOVE 60' |
| BELOW 60': | | | |
| POS. INTERNAL PRESSURE, p: | 12.70 psf | | POSITIVE qh(Gcpi) BELOW 60' |
| NEG. INTERNAL PRESSURE, p: | -12.70 psf | | NEGATIVE qh(Gcpi) BELOW 60' |
| WIND FORCE My, Vx: 🛛 | | | |
| h / Y | 1.55 | | |
| X / Y | 2.05 | | |
| WINDWARD WALLS, Cp | 0.80 | | (FIGURE 27.4-1) |
| LEEWARD WALLS, Cp | -0.30 | | (FIGURE 27.4-1) |
| TOPO. FACTOR FOR Vx & My, Kzt: | 1.000 | | (EQ. 26.8-1) |
| VEL. PRES. FOR Vx & My AT z = h, gh: | 70.56.psf | | (EQ 27.3.1) |
| | 70100 por | | (EQ. 27.5-1) |
| Q^2 FOR Vx & My: | 0.884 | | (EQ. 26.9-8) |
| Q^2 FOR Vx & My: G FOR Vx & My: | 0.884 0.879 | 0.85 | (EQ. 26.9-8) (EQ. 26.9-6) GUST EF. FACT. FOR Vy AND Mx |
| Q^2 FOR Vx & My: G FOR Vx & My: ABOVE 60': | 0.884 0.879 | 0.85 | (EQ. 26.9-8) (EQ. 26.9-6) GUST EE FACT. FOR Vy AND Mx |
| Q^2 FOR Vx & My: G FOR Vx & My: ABOVE 60': POS. INTERNAL PRESSURE, p: | 0.884 0.879 12.70 psf | 0.85 | (Eq. 26.9-8) (EQ. 26.9-6) GUST EF. FACT. FOR Vy AND Mx POSITIVE qh(Gcpi) ABOVE 60' |
| Q^2 FOR Vx & My: G FOR Vx & My: ABOVE 60': POS. INTERNAL PRESSURE, p: NEG. INTERNAL PRESSURE, p: | 0.884 0.879 12.70 psf -12.70 psf | 0.85 | (EQ. 26.9-8) (EQ. 26.9-6) GUST EF. FACT: FOR Vy AND Mx POSITIVE qh(Gcpi) ABOVE 60' NEGATIVE qh(Gcpi) ABOVE 60' |
| Q^2 FOR Vx & My: G FOR Vx & My: ABOVE 60': POS. INTERNAL PRESSURE, p: NEG. INTERNAL PRESSURE, p: BELOW 60': | 0.884 0.879 12.70 psf -12.70 psf | 0.85 | (EQ. 26.9-8) (EQ. 26.9-6) GUST EF. FACT. FOR Vy AND Mx POSITIVE qh(Gcpi) ABOVE 60' NEGATIVE qh(Gcpi) ABOVE 60' |
| Q^2 FOR Vx & My: G FOR Vx & My: ABOVE 60': POS. INTERNAL PRESSURE, p: NEG. INTERNAL PRESSURE, p: BELOW 60': POS. INTERNAL PRESSURE, p: | 0.884 0.879 12.70 psf -12.70 psf 12.70 psf | 0.85 | (EQ. 26.9-8) (EQ. 26.9-6) GUST EF. FACT. FOR Vy AND Mx POSITIVE qh(Gcpi) ABOVE 60' NEGATIVE qh(Gcpi) ABOVE 60' POSITIVE qh(Gcpi) BELOW 60' |

| | E | UILDING LEVEL INFOR | MATION | | | WINDWA | RD | LEEWAF | RD |
|------------|-----------|---------------------|--------|-----------|-----------|----------|----------|----------|----------|
| Level | Elevation | Delta | Kz | qz | qh | POSITIVE | NEGATIVE | POSITIVE | NEGATIVE |
| | | | | | | | | | |
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| | | | | | | | | | |
| MR Roof | 138.08 | 8.75 ft. | 1.52 | 72.24 psf | 70.56 psf | 37.55 | 63.25 | -43.37 | -17.97 |
| MR | 129.33 | 8.75 ft. | 1.50 | 71.42 psf | 70.56 psf | 36.98 | 62.53 | -43.37 | -17.97 |
| Roof | 120.58 | 26.29 ft. | 1.48 | 70.56 psf | 70.56 psf | 36.38 | 61.78 | -43.37 | -17.97 |
| 13th | 111.83 | 8.75 ft. | 1.46 | 69.64 psf | 70.56 psf | 35.74 | 60.97 | -43.37 | -17.97 |
| 12th | 103.08 | 8.75 ft. | 1.44 | 68.66 psf | 70.56 psf | 35.06 | 60.12 | -43.37 | -17.97 |
| 11th | 94.29 | 8.75 ft. | 1.42 | 67.60 psf | 70.56 psf | 34.32 | 59.19 | -43.37 | -17.97 |
| 10th | 85.54 | 8.75 ft. | 1.39 | 66.47 psf | 70.56 psf | 33.53 | 58.20 | -43.37 | -17.97 |
| 9th | 76.79 | 8.75 ft. | 1.37 | 65.23 psf | 70.56 psf | 32.67 | 57.11 | -43.37 | -17.97 |
| 8th | 68.04 | 8.75 ft. | 1.34 | 63.87 psf | 70.56 psf | 31.73 | 55.93 | -43.37 | -17.97 |
| 7th | 59.29 | 8.75 ft. | 1.31 | 62.36 psf | 70.56 psf | 30.68 | 54.60 | -43.37 | -17.97 |
| 6th | 50.54 | 8.75 ft. | 1.27 | 60.65 psf | 70.56 psf | 29.49 | 53.11 | -43.37 | -17.97 |
| 5th | 41.79 | 8.75 ft. | 1.23 | 58.68 psf | 70.56 psf | 28.12 | 51.38 | -43.37 | -17.97 |
| 4th | 33.04 | 8.75 ft. | 1.18 | 56.33 psf | 70.56 psf | 26.48 | 49.32 | -43.37 | -17.97 |
| 3rd | 24.29 | 8.75 ft. | 1.12 | 53.40 psf | 70.56 psf | 24.44 | 46.75 | -43.37 | -17.97 |
| 2nd | 15.54 | 8.75 ft. | 1.04 | 49.41 psf | 70.56 psf | 21.67 | 43.26 | -43.37 | -17.97 |
| Ground | 6.79 | 6.79 ft. | 1.03 | 49.10 psf | 70.56 psf | 21.46 | 42.99 | -43.37 | -17.97 |
| Foundation | 0.00 | 0.00 ft. | 1.03 | 49.10 psf | 70.56 psf | 21.46 | 1299 | -43.37 | -17.97 |

| | | | | WI | ND FORCE Mx, Vy | DESIGN VALUES | | | |
|------------|-----------|-------------|-------------|--------------|-----------------|---------------|------------|-------------|-------------|
| Level | qz | Width above | Width below | Net pressure | Area above | Area below | Net force | Story shear | Moment |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| MR Roof | 72.24 psf | | 16.25 ft. | 80.92 psf | - | 71 sft | 5.8 kips | 5.8 kips | - |
| MR | 71.42 psf | 16.25 ft. | 16.25 ft. | 80.35 psf | 71 sft | 71 sft | 11.4 kips | 17.2 kips | 50 k-ft |
| Roof | 70.56 psf | 16.25 ft. | 78.00 ft. | 79.75 psf | 71 sft | 1,025 sft | 87.4 kips | 104.6 kips | 201 k-ft |
| 13th | 69.64 psf | 78.00 ft. | 78.00 ft. | 79.11 psf | 1,024 sft | 341 sft | 108.0 kips | 113.7 kips | 151 k-ft |
| 12th | 68.66 psf | 78.00 ft. | 78.00 ft. | 78.43 psf | 1,024 sft | 343 sft | 107.2 kips | 124.4 kips | 501 k-ft |
| 11th | 67.60 psf | 78.00 ft. | 78.00 ft. | 77.70 psf | 1,025 sft | 341 sft | 106.2 kips | 210.8 kips | 2,951 k-ft |
| 10th | 66.47 psf | 78.00 ft. | 78.00 ft. | 76.91 psf | 341 sft | 341 sft | 52.5 kips | 263.3 kips | 4,795 k-ft |
| 9th | 65.23 psf | 78.00 ft. | 78.00 ft. | 76.05 psf | 341 sft | 341 sft | 51.9 kips | 315.2 kips | 7,099 k-ft |
| 8th | 63.87 psf | 78.00 ft. | 78.00 ft. | 75.10 psf | 341 sft | 341 sft | 51.3 kips | 366.4 kips | 9,857 k-ft |
| 7th | 62.36 psf | 78.00 ft. | 78.00 ft. | 74.05 psf | 341 sft | 341 sft | 50.5 kips | 417.0 kips | 13,063 k-ft |
| 6th | 60.65 psf | 78.00 ft. | 78.00 ft. | 72.86 psf | 341 sft | 341 sft | 49.7 kips | 466.7 kips | 16,712 k-ft |
| 5th | 58.68 psf | 78.00 ft. | 78.00 ft. | 71.49 psf | 341 sft | 341 sft | 48.8 kips | 515.5 kips | 20,796 k-ft |
| 4th | 56.33 psf | 78.00 ft. | 78.00 ft. | 69.86 psf | 341 sft | 341 sft | 47.7 kips | 563.2 kips | 25,306 k-ft |
| 3rd | 53.40 psf | 78.00 ft. | 78.00 ft. | 67.82 psf | 341 sft | 341 sft | 46.3 kips | 609.5 kips | 30,234 k-ft |
| 2nd | 49.41 psf | 78.00 ft. | 78.00 ft. | 65.04 psf | 341 sft | 341 sft | 44.4 kips | 653.9 kips | 35,567 k-ft |
| Ground | 49.10 psf | 78.00 ft. | 78.00 ft. | 64.83 psf | 341 sft | 265 sft | 39.3 kips | 693.1 kips | 41,288 k-ft |
| Foundation | 49.10 psf | 78.00 ft. | | 64.83 psf | 265 sft | - | 17.2 kips | 710.3 kips | 45,995 k-ft |

| | | | | WIN | ID FORCE My, Vx | DESIGN VALUES | \Rightarrow | | |
|------------|-----------|-------------|-------------|--------------|-----------------|---------------|---------------|--------------|-------------|
| Level | qz | Width above | Width below | Net pressure | Area above | Area below | Net force | Story shear | Moment |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| | | | | - | - | - | - | - | - |
| MR Roof | 84.99 psf | | 44.58 ft. | 78.17 psf | - | 195.04 sft | 15.2 kips | 15.2 kips | - |
| MR | 84.03 psf | 44.58 ft. | 44.58 ft. | 77.49 psf | 195.04 sft | 195.04 sft | 30.2 kips | 45.5 kips | 133 k-ft |
| Roof | 83.01 psf | 44.58 ft. | 160.00 ft. | 76.78 psf | 195.04 sft | 2103.20 sft | 176.4 kips | 221.9 kips | 1,329 k-ft |
| 11th | 79.53 psf | 160.00 ft. | 160.00 ft. | 74.33 psf | 2103.20 sft | 700.00 sft | 208.4 kips | 430.3 kips | 3,271 k-ft |
| 10th | 78.20 psf | 160.00 ft. | 160.00 ft. | 73.39 psf | 700.00 sft | 700.00 sft | 102.8 kips | 533.0 kips | 7,036 k-ft |
| 9th | 76.74 psf | 160.00 ft. | 160.00 ft. | 72.37 psf | 700.00 sft | 700.00 sft | 101.3 kips | 634.4 kips | 11,700 k-ft |
| 8th | 75.15 psf | 160.00 ft. | 160.00 ft. | 71.25 psf | 700.00 sft | 700.00 sft | 99.7 kips | 734.1 kips | 17,251 k-ft |
| 7th | 73.37 psf | 160.00 ft. | 160.00 ft. | 70.00 psf | 700.00 sft | 700.00 sft | 98.0 kips | 832.1 kips | 23,674 k-ft |
| 6th | 71.36 psf | 160.00 ft. | 160.00 ft. | 68.59 psf | 700.00 sft | 700.00 sft | 96.0 kips | 928.1 kips | 30,955 k-ft |
| 5th | 69.04 psf | 160.00 ft. | 160.00 ft. | 66.96 psf | 700.00 sft | 700.00 sft | 93.7 kips | 1,021.9 kips | 39,076 k-ft |
| 4th | 66.27 psf | 160.00 ft. | 160.00 ft. | 65.01 psf | 700.00 sft | 700.00 sft | 91.0 kips | 1,112.9 kips | 48,018 k-ft |
| 3rd | 62.82 psf | 160.00 ft. | 160.00 ft. | 62.59 psf | 700.00 sft | 700.00 sft | 87.6 kips | 1,200.5 kips | 57,756 k-ft |
| 2nd | 58.13 psf | 160.00 ft. | 160.00 ft. | 59.29 psf | 700.00 sft | 700.00 sft | 83.0 kips | 1,283.5 kips | 68,260 k-ft |
| Ground | 57.77 psf | 160.00 ft. | 160.00 ft. | 59.04 psf | 700.00 sft | 543.20 sft | 73.4 kips | 1,356.9 kips | 76,975 k-ft |
| Foundation | 57.77 psf | 160.00 ft. | 0.00 ft. | 59.04 psf | 543.20 sft | - | 32.1 kips | 1,389.0 kips | 86,189 k-ft |

| | | Main Wind | FORCE RESISTIN | g system - Vy and | Mx WINDBLOCKS | 公 | |
|-------------|--------------|------------|----------------|-------------------|---------------|------------|------------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | WINDWARD | WINDWARD | LEEWARD | LEEWARK | NET |
| | | | POSITIVE | NEGATIVE | POSITIVE | NEGATIVE | WIND |
| h | Kz | qz | INTERNAL | INTERNAL | INTERNAL | INTERNAL | PRESSURE |
| 400 ft. | 1.82 | 102.26 psf | 58.43 psf | 83.83 psf | -43.37 psf | -17.97 psf | 101.80 psf |
| 350 ft. | 1.78 | 99.91 psf | 56.79 psf | 82.19 psf | -43.37 psf | -17.97 psf | 100.17 psf |
| 300 ft. | 1.73 | 97.27 psf | 54.96 psf | 80.36 psf | -43.37 psf | -17.97 psf | 98.33 psf |
| 250 ft. | 1.68 | 94.23 psf | 52.84 psf | 78.24 psf | -43.37 psf | -17.97 psf | 96.22 psf |
| 200 ft. | 1.62 | 90.64 psf | 50.35 psf | 75.75 psf | -43.37 psf | -17.97 psf | 93.72 psf |
| 180 ft. | 1.59 | 89.00 psf | 49.20 psf | 74.60 psf | -43.37 psf | -17.97 psf | 92.58 psf |
| 160 ft. | 1.55 | 87.19 psf | 47.95 psf | 73.35 psf | -43.37 psf | -17.97 psf | 91.32 psf |
| 140 ft. | 1.52 | 85.19 psf | 46.56 psf | 71.96 psf | -43.37 psf | -17.97 psf | 89.93 psf |
| 120 ft. | 1.48 | 82.94 psf | 44.99 psf | 70.39 psf | -43.37 psf | -17.97 psf | 88.36 psf |
| 100 ft. | 1.43 | 80.35 psf | 43.19 psf | 68.59 psf | -43.37 psf | -17.97 psf | 86.56 psf |
| 90 ft. | 1.41 | 78.89 psf | 42.17 psf | 67.57 psf | -43.37 psf | -17.97 psf | 85.55 psf |
| 80 ft. | 1.38 | 77.29 psf | 41.06 psf | 66.46 psf | -43.37 psf | -17.97 psf | 84.44 psf |
| 70 ft. | 1.35 | 75.52 psf | 39.83 psf | 65.23 psf | -43.37 psf | -17.97 psf | 83.20 psf |
| 60 ft. | 1.31 | 73.52 psf | 38.44 psf | 63.84 psf | -43.37 psf | -17.97 psf | 81.81 psf |
| 50 ft. | 1.27 | 71.23 psf | 36.84 psf | 62.24 psf | -43.37 psf | -17.97 psf | 80.22 psf |
| 40 ft. | 1.22 | 68.51 psf | 34.96 psf | 60.36 psf | -43.37 psf | -17.97 psf | 78.33 psf |
| 30 ft. | 1.16 | 65.17 psf | 32.63 psf | 58.03 psf | -43.37 psf | -17.97 psf | 76.00 psf |
| 25 ft. | 1.13 | 63.14 psf | 31.22 psf | 56.62 psf | -43.37 psf | -17.97 psf | 74.59 psf |
| 20 ft. | 1.08 | 60.73 psf | 29.54 psf | 54.94 psf | -43.37 psf | -17.97 psf | 72.92 psf |
| 15 ft. | 1.03 | 57.77 psf | 27.48 psf | 52.88 psf | -43.37 psf | -17.97 psf | 70.86 psf |
| (1)- HEIGHT | ABOVE GROUND | | | | | | |

(1)- HEIGHT ABOVE GROUND (2)- VELOCITY PRESSURE EXPOSURE COEFFICIENT AT HEIGHT z (3)- VELOCITY PRESSURE AT HEIGHT z ABOVE GROUND, qz = $0.00256(Kz)(Kzt)(V^2)$ [Eq.6-1] (4)- WINDWARD PRESSURE WITH MAXIMUM POSITIVE INTERNAL PRESSURE = qzGCp-qh(+GCpi)

(5)- WINDWARD PRESSURE WITH MAXIMUM NEGATIVE INTERNAL PRESSURE = q_zGCp - $q_h(-GCpi)$ (6)- LEEWARD PRESSURE WITH MAXIMUM NEGATIVE INTERNAL PRESSURE = q_hGCp - $q_h(-GCpi)$ (7)- LEEWARD PRESSURE WITH MAXIMUM NEGATIVE INTERNAL PRESSURE = q_hGCp - $q_h(-GCpi)$

(8)- NET HORIZONTAL WIND FORCE [(4) - (6) OR (5) - (7)]

| | | MAIN WIND | FORCE RESISTIN | G SYSTEM - Vx AND | My WINDBLOCKS | | |
|---------------|--------------|------------|----------------|-------------------|---------------|-----------|-----------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | WINDWARD | WINDWARD | LEEWARD | LEEWARD | NET |
| | | | POSITIVE | NEGATIVE | POSITIVE | NEGATIVE | WIND |
| h | Kz | qz | INTERNAL | INTERNAL | INTERNAL | INTERNAL | PRESSURE |
| 400 | 1.82 | 102.26 psf | 59.17 psf | 84.57 psf | -31.14 psf | -5.74 psf | 90.30 psf |
| 350 | 1.78 | 99.91 psf | 57.52 psf | 82.92 psf | -31.14 psf | -5.74 psf | 88.65 psf |
| 300 | 1.73 | 97.27 psf | 55.66 psf | 81.06 psf | -31.14 psf | -5.74 psf | 86.80 psf |
| 250 | 1.68 | 94.23 psf | 53.53 psf | 78.93 psf | -31.14 psf | -5.74 psf | 84.66 psf |
| 200 | 1.62 | 90.64 psf | 51.01 psf | 76.41 psf | -31.14 psf | -5.74 psf | 82.14 psf |
| 180 | 1.59 | 89.00 psf | 49.85 psf | 75.25 psf | -31.14 psf | -5.74 psf | 80.99 psf |
| 160 | 1.55 | 87.19 psf | 48.58 psf | 73.98 psf | -31.14 psf | -5.74 psf | 79.72 psf |
| 140 | 1.52 | 85.19 psf | 47.17 psf | 72.57 psf | -31.14 psf | -5.74 psf | 78.31 psf |
| 120 | 1.48 | 82.94 psf | 45.59 psf | 70.99 psf | -31.14 psf | -5.74 psf | 76.73 psf |
| 100 | 1.43 | 80.35 psf | 43.77 psf | 69.17 psf | -31.14 psf | -5.74 psf | 74.91 psf |
| 90 | 1.41 | 78.89 psf | 42.75 psf | 68.15 psf | -31.14 psf | -5.74 psf | 73.88 psf |
| 80 | 1.38 | 77.29 psf | 41.62 psf | 67.02 psf | -31.14 psf | -5.74 psf | 72.76 psf |
| 70 | 1.35 | 75.52 psf | 40.37 psf | 65.77 psf | -31.14 psf | -5.74 psf | 71.51 psf |
| 60 | 1.31 | 73.52 psf | 38.97 psf | 64.37 psf | -31.14 psf | -5.74 psf | 70.11 psf |
| 50 | 1.27 | 71.23 psf | 37.36 psf | 62.76 psf | -31.14 psf | -5.74 psf | 68.49 psf |
| 40 | 1.22 | 68.51 psf | 35.45 psf | 60.85 psf | -31.14 psf | -5.74 psf | 66.59 psf |
| 30 | 1.16 | 65.17 psf | 33.10 psf | 58.50 psf | -31.14 psf | -5.74 psf | 64.24 psf |
| 25 | 1.13 | 63.14 psf | 31.67 psf | 57.07 psf | -31.14 psf | -5.74 psf | 62.81 psf |
| 20 | 1.08 | 60.73 psf | 29.98 psf | 55.38 psf | -31.14 psf | -5.74 psf | 61.12 psf |
| 15 | 1.03 | 57.77 psf | 27.90 psf | 53.30 psf | -31.14 psf | -5.74 psf | 59.04 psf |
| (1)- HEIGHT A | ABOVE GROUND | | | | | | |
| (a) | | | | | | | |

(1)- HEIGHT ABOVE GROUND (2)- VELOCITY PRESSURE EXPOSURE COEFFICIENT AT HEIGHT z (3)- VELOCITY PRESSURE AT HEIGHT z ABOVE GROUND, qz = $0.00256(Kz)(Kzt)(V^2)$ [Eq.6-1] (4)- WINDWARD PRESSURE WITH MAXIMUM POSITIVE INTERNAL PRESSURE = qzGCp-qh(+GCpi)

(5)- WINDWARD PRESSURE WITH MAXIMUM NEGATIVE INTERNAL PRESSURE = q_zGCp - $q_h(-GCpi)$ (6)- LEEWARD PRESSURE WITH MAXIMUM NEGATIVE INTERNAL PRESSURE = q_hGCp - $q_h(-GCpi)$ (7)- LEEWARD PRESSURE WITH MAXIMUM NEGATIVE INTERNAL PRESSURE = q_hGCp - $q_h(-GCpi)$

(8)- NET HORIZONTAL WIND FORCE [(4) - (6) OR (5) - (7)]

| | | | WALL COMPON | JENTS AND CL | ADDING, FIGURE 30.6- | 1 | | | | |
|-------------------|-----------------|----------------|------------------------|---------------------|---|---|--------------|-------|--|--|
| WINDWARD PRESSURE | | | | | | LEEWARD PRESSURE | | | | |
| ZONE | MIN AREA | GCp | MAX AREA | GCp | MIN AREA | GCp | MAX AREA | GCp | | |
| 4 | 20 sft | 0.90 | 500 sft | 0.60 | 20 sft | -0.90 | 500 sft | -0.70 | | |
| 5 | 20 sft | 0.90 | 500 sft | 0.60 | 20 sft | -1.80 | 500 sft | -1.00 | | |
| VEL. PRES. F | OR Vy AND Mx A | T z = h, qh: | 70.56 psf | | USE MAXIMUM VAI | LUE FROM EITH | ER DIRECTION | | | |
| TOPOGRAPHI | C FACTOR FOR V | y AND Mx, Kzt: | 1.00 | - | USE MAXIMUM VALUE FROM EITHER DIRECTION | | | | | |
| ZONE 4 IS IN | TERIOR WALL PAI | NEL | p = q [(GCp) - (GCpi) |] | (FIGURE 30.6-1, Con | (FIGURE 30.6-1, Components and cladding, h > 60') | | | | |
| ZONE 5 IS ED | GE WALL PANEL | | | q = qz | (windward face) | | | | | |
| | | | | q = qh | (leeward face and sides | 5) | | | | |

| · | WINDWA | RD PRESSURES | | WINDWARD FACE | | SIDE | WALLS AND LEEWARD |) FACE |
|---|--|---|--|---|--|--|--|--|
| HEIGHT | Kz | qz | MIN AREA | 50 sft | MAX AREA | MIN AREA | 50 sft | MAX AREA |
| 400 | 1.82 | 102.26 psf | 110.44 psf | 108.52 psf | 79.76 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 350 | 1.78 | 99.91 psf | 107.90 psf | 106.03 psf | 77.93 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 300 | 1.73 | 97.27 psf | 105.05 psf | 103.22 psf | 75.87 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 250 | 1.68 | 94.23 psf | 101.77 psf | 100.00 psf | 73.50 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 200 | 1.62 | 90.64 psf | 97.90 psf | 96.20 psf | 70.70 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 180 | 1.59 | 89.00 psf | 96.12 psf | 94.45 psf | 69.42 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 160 | 1.55 | 87.19 psf | 94.17 psf | 92.53 psf | 68.01 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 140 | 1.52 | 85.19 psf | 92.01 psf | 90.41 psf | 66.45 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 120 | 1.48 | 82.94 psf | 89.57 psf | 88.02 psf | 64.69 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 100 | 1.43 | 80.35 psf | 86.78 psf | 85.27 psf | 62.67 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 90 | 1.41 | 78.89 psf | 85.20 psf | 83.72 psf | 61.54 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 80 | 1.38 | 77.29 psf | 83.47 psf | 82.03 psf | 60.29 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 70 | 1.35 | 75.52 psf | 81.56 psf | 80.14 psf | 58.90 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 60 | 1.31 | 73.52 psf | 79.40 psf | 78.02 psf | 57.35 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 50 | 1.27 | 71.23 psf | 76.92 psf | 75.59 psf | 55.56 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 40 | 1.22 | 68.51 psf | 74.00 psf | 72.71 psf | 53.44 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 30 | 1.16 | 65.17 psf | 70.38 psf | 69.16 psf | 50.83 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 25 | 1.13 | 63.14 psf | 68.19 psf | 67.00 psf | 49.25 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 20 | 1.08 | 60.73 psf | 65.59 psf | 64.45 psf | 47.37 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| 15 | 1.03 | 57.77 psf | 62.39 psf | 61.31 psf | 45.06 psf | -76.20 psf | -75.32 psf | -62.09 psf |
| | | | | | | | | |
| | | | | DNENTS FOR NEAR EI | JGE PANELS - ZU | NE 5 | | |
| | WINDWA | RD PRESSURES | | WINDWARD FACE | JGE PANELS - 20 | NE 5 SIDEV | WALLS AND LEEWARD | FACE |
| HEIGHT | WINDWA Kz | RD PRESSURES | MIN AREA | WINDWARD FACE 50 sft | MAX AREA | NE 5 SIDEV MIN AREA | WALLS AND LEEWARD | FACE MAX AREA |
| HEIGHT 400 | WINDWA Kz 1.82 | RD PRESSURES qz 102.26 psf | MIN AREA 110.44 psf | WINDWARD FACE 50 sft 108.52 psf | MAX AREA 79.76 psf | NE 5 SIDEV MIN AREA -139.70 psf | WALLS AND LEEWARD 50 sft -136.17 psf | PFACE MAX AREA -83.26 psf |
| HEIGHT 400 350 | WINDWA Kz 1.82 1.78 | RD PRESSURES qz 102.26 psf 99.91 psf 99.91 psf | MIN AREA 110.44 psf 107.90 psf | State State <th< td=""><td>MAX AREA 79.76 psf 77.93 psf</td><td>NE 5 SIDEV MIN AREA -139.70 psf -139.70 psf</td><td>WALLS AND LEEWARD 50 sft -136.17 psf -136.17 psf</td><td>FACE MAX AREA -83.26 psf -83.26 psf</td></th<> | MAX AREA 79.76 psf 77.93 psf | NE 5 SIDEV MIN AREA -139.70 psf -139.70 psf | WALLS AND LEEWARD 50 sft -136.17 psf -136.17 psf | FACE MAX AREA -83.26 psf -83.26 psf |
| HEIGHT 400 350 300 | WINDWA Kz 1.82 1.78 1.73 | gz 102.26 psf 99.91 psf 97.27 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf | Stent S FOR NEAR EI WINDWARD FACE 50 sft 108.52 psf 106.03 psf 103.22 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf | SIDE MIN AREA -139.70 psf -139.70 psf -139.70 psf | So sft -136.17 psf -136.17 psf -136.17 psf | FACE MAX AREA -83.26 psf -83.26 psf -83.26 psf |
| HEIGHT 400 350 300 250 | WINDWA Kz 1.82 1.78 1.73 1.68 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf | WINDWARD FACE 50 sft 108.52 psf 106.03 psf 103.22 psf 100.00 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 73.50 psf | SIDEV MIN AREA -139.70 psf -139.70 psf -139.70 psf -139.70 psf -139.70 psf | S0 sft -136.17 psf -136.17 psf -136.17 psf -136.17 psf -136.17 psf | FACE MAX AREA -83.26 psf -83.26 psf -83.26 psf -83.26 psf -83.26 psf |
| HEIGHT 400 350 300 250 200 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 | gz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 97.90 psf | WINDWARD FACE 50 sft 108.52 psf 103.22 psf 100.00 psf 96.20 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 73.50 psf 70.70 psf | SIDEV MIN AREA -139.70 psf -139.70 psf -139.70 psf -139.70 psf -139.70 psf | Solution Solution 50 sft -136.17 psf -136.17 psf -136.17 psf -136.17 psf -136.17 psf -136.17 psf -136.17 psf | FACE MAX AREA -83.26 psf -83.26 psf -83.26 psf -83.26 psf -83.26 psf |
| HEIGHT 400 350 300 250 200 180 160 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 97.90 psf 96.12 psf | MIND S FOR NEAR EI WINDWARD FACE 50 sft 108.52 psf 100.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 73.50 psf 70.70 psf 69.42 psf | SIDEV MIN AREA -139.70 psf -139.70 psf -139.70 psf -139.70 psf -139.70 psf -139.70 psf | Solution Solution 50 sft -136.17 psf -136.17 psf -136.17 psf | FACE MAX AREA -83.26 psf -83.26 psf -83.26 psf -83.26 psf -83.26 psf -83.26 psf |
| HEIGHT 400 350 200 180 160 140 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 1.55 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 97.90 psf 96.12 psf 94.17 psf | MINDWARD FACE 50 sft 108.52 psf 100.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 73.50 psf 70.70 psf 69.42 psf 68.01 psf | SIDE MIN AREA -139.70 psf | Solution Solution 50 sft -136.17 psf -136.17 psf -136.17 psf | FACE MAX AREA -83.26 psf |
| HEIGHT 400 350 250 200 180 160 140 120 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 1.55 1.52 1.52 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf 85.19 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 97.90 psf 96.12 psf 94.17 psf 92.01 psf 0.01 | MINDWARD FACE 50 sft 108.52 psf 100.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf 90.41 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 73.50 psf 70.70 psf 69.42 psf 68.01 psf 66.45 psf | SIDE MIN AREA -139.70 psf | Solution Solution 50 sft -136.17 psf -136.17 psf -136.17 psf | FACE MAX AREA -83.26 psf |
| HEIGHT 400 350 250 200 180 160 140 120 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 1.55 1.55 1.52 1.48 1.49 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf 85.19 psf 82.94 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 97.90 psf 96.12 psf 94.17 psf 92.01 psf 89.57 psf 60.57 psf | WINDWARD FACE 50 sft 108.52 psf 106.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf 90.41 psf 88.02 psf 97.57 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 73.50 psf 70.70 psf 69.42 psf 68.01 psf 66.45 psf 64.69 psf | SIDE MIN AREA -139.70 psf | Solution Solution 50 sft -136.17 psf -136.17 psf -136.17 psf | FACE MAX AREA -83.26 psf |
| HEIGHT 400 350 250 200 180 160 140 120 100 00 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 1.55 1.55 1.55 1.52 1.48 1.43 1.43 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf 85.19 psf 82.94 psf 80.35 psf 70.00 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 96.12 psf 96.12 psf 94.17 psf 92.01 psf 89.57 psf 80.57 psf 80.57 psf | View 13 FOR NEAR EI WINDWARD FACE 50 sft 108.52 psf 106.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf 90.41 psf 88.02 psf 85.27 psf 97.041 psf 85.27 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 73.50 psf 69.42 psf 66.45 psf 64.69 psf 64.69 psf 62.67 psf | SIDEV MIN AREA -139.70 psf | WALLS AND LEEWARD 50 sft -136.17 psf | FACE MAX AREA -83.26 psf |
| HEIGHT 400 350 250 200 180 160 140 120 100 90 80 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 1.55 1.55 1.55 1.48 1.43 1.41 1.41 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf 85.19 psf 80.35 psf 78.89 psf 78.89 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 97.90 psf 96.12 psf 94.17 psf 94.17 psf 92.01 psf 89.57 psf 86.78 psf 85.20 psf 65.20 psf | View 13 FOR NEAR EI WINDWARD FACE 50 sft 108.52 psf 100.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf 90.41 psf 88.02 psf 85.27 psf 83.72 psf 90.40 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 70.70 psf 69.42 psf 66.45 psf 64.69 psf 62.67 psf 61.54 psf 61.54 psf | SIDEV MIN AREA -139.70 psf | WALLS AND LEEWARD 50 sft -136.17 psf | FACE MAX AREA -83.26 psf |
| HEIGHT 400 350 250 200 180 160 140 120 100 90 80 70 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 1.55 1.55 1.55 1.52 1.48 1.43 1.41 1.38 1.47 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf 85.19 psf 80.35 psf 78.89 psf 77.29 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 97.90 psf 96.12 psf 94.17 psf 92.01 psf 89.57 psf 86.78 psf 85.20 psf 85.20 psf 83.47 psf | Ment 3 FOR NEAR EI WINDWARD FACE 50 sft 108.52 psf 100.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf 90.41 psf 88.02 psf 85.27 psf 82.03 psf 82.03 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 73.50 psf 70.70 psf 69.42 psf 68.01 psf 66.45 psf 64.69 psf 62.67 psf 61.54 psf 60.29 psf 50.09 psf | SIDEV MIN AREA -139.70 psf | WALLS AND LEEWARD 50 sft -136.17 psf | FACE MAX AREA -83.26 psf |
| HEIGHT 400 350 250 200 180 160 140 120 100 90 80 70 60 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 1.55 1.55 1.52 1.48 1.43 1.41 1.38 1.35 1.35 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf 85.19 psf 80.35 psf 78.89 psf 77.29 psf 75.52 psf 75.52 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 97.90 psf 96.12 psf 94.17 psf 92.01 psf 82.57 psf 86.78 psf 85.20 psf 83.47 psf 81.56 psf 81.56 psf | Ment 3 FOR NEAR EI WINDWARD FACE 50 sft 108.52 psf 100.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf 90.41 psf 88.02 psf 85.27 psf 83.72 psf 82.03 psf 80.14 psf 70.02 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 73.50 psf 70.70 psf 69.42 psf 66.45 psf 64.69 psf 62.67 psf 61.54 psf 60.29 psf 60.29 psf 58.90 psf | SIDEV MIN AREA -139.70 psf | Solution Solution 50 sft -136.17 psf -136.17 psf -136.17 psf | FACE MAX AREA -83.26 psf |
| HEIGHT 400 350 250 200 180 160 140 120 100 90 80 70 60 50 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 1.55 1.52 1.48 1.43 1.41 1.38 1.35 1.31 | PRESSURES 92 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf 85.19 psf 80.35 psf 78.89 psf 77.29 psf 75.52 psf 73.52 psf 71.32 rsf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 97.90 psf 96.12 psf 94.17 psf 92.01 psf 89.57 psf 86.78 psf 85.20 psf 83.47 psf 81.56 psf 79.40 psf 72.02 psf | Ment 3 FOR NEAR EI WINDWARD FACE 50 sft 108.52 psf 100.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf 90.41 psf 88.02 psf 88.02 psf 83.72 psf 82.03 psf 80.14 psf 78.62 psf 75.50 pcf | MAX AREA 77.93 psf 77.93 psf 75.87 psf 73.50 psf 70.70 psf 69.42 psf 68.01 psf 66.45 psf 64.69 psf 62.67 psf 61.54 psf 60.29 psf 58.90 psf 57.35 psf | SIDEV MIN AREA -139.70 psf | Solution Solution 50 sft -136.17 psf -136.17 psf -136.17 psf | FACE MAX AREA -83.26 psf |
| HEIGHT 400 350 250 250 200 180 160 140 120 100 90 80 70 60 50 40 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 1.55 1.52 1.48 1.43 1.41 1.38 1.31 1.27 1.22 | PRESSURES 92 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf 85.19 psf 80.35 psf 78.89 psf 77.29 psf 75.52 psf 73.52 psf 71.23 psf (12.3 psf) | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 97.90 psf 96.12 psf 94.17 psf 92.01 psf 88.57 psf 86.78 psf 85.20 psf 83.47 psf 81.56 psf 79.40 psf 76.92 psf 76.92 psf 70.40 psf | Ment 3 FOR NEAR EI WINDWARD FACE 50 sft 108.52 psf 100.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf 90.41 psf 88.02 psf 85.27 psf 82.03 psf 80.14 psf 78.02 psf 73.71 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 73.50 psf 70.70 psf 69.42 psf 66.45 psf 64.69 psf 62.67 psf 61.54 psf 60.29 psf 58.90 psf 57.35 psf | SIDEV MIN AREA -139.70 psf | Solution Solution 50 sft -136.17 psf -136.17 psf -136.17 psf | FACE MAX AREA -83.26 psf |
| HEIGHT 400 350 250 200 180 160 140 120 100 90 80 70 60 50 40 30 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 1.55 1.52 1.48 1.43 1.38 1.35 1.31 1.27 1.22 1.14 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf 85.19 psf 80.35 psf 77.29 psf 78.89 psf 77.29 psf 75.52 psf 73.52 psf 68.51 psf 68.51 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 97.90 psf 96.12 psf 94.17 psf 92.01 psf 89.57 psf 86.78 psf 85.20 psf 83.47 psf 83.47 psf 81.56 psf 79.40 psf 76.92 psf 74.00 psf 70.32 psf | WINDWARD FACE 50 sft 108.52 psf 106.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf 90.41 psf 88.02 psf 83.72 psf 83.72 psf 80.14 psf 78.02 psf 75.59 psf 72.71 psf 601.4 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 73.50 psf 70.70 psf 69.42 psf 68.01 psf 64.69 psf 61.54 psf 61.54 psf 60.29 psf 57.35 psf 57.35 psf 55.56 psf 53.44 psf 50.92 psf | NE 5 SIDEV MIN AREA -139.70 psf | WALLS AND LEEWARD 50 sft -136.17 psf | FACE MAX AREA -83.26 psf |
| HEIGHT 400 350 250 200 180 160 140 120 100 90 80 70 60 50 40 30 25 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 1.55 1.52 1.48 1.43 1.35 1.31 1.27 1.22 1.16 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf 85.19 psf 82.94 psf 80.35 psf 77.29 psf 75.52 psf 73.52 psf 68.51 psf 68.51 psf 66.51 psf 63.14 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 96.12 psf 96.12 psf 96.12 psf 92.01 psf 89.57 psf 85.20 psf 85.20 psf 85.20 psf 81.56 psf 81.56 psf 76.92 psf 76.92 psf 74.00 psf 92.01 psf 92.01 psf 76.92 psf 74.00 psf 92.01 psf 70.38 psf 92.01 psf 92.01 psf 92.01 psf 94.17 psf 94.17 psf 94.17 psf 94.17 psf 94.17 psf 95.20 ps | View 13 FOR NEAR EI WINDWARD FACE 50 sft 108.52 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf 90.41 psf 88.02 psf 88.02 psf 88.02 psf 88.02 psf 88.02 psf 82.03 psf 80.14 psf 78.02 psf 75.59 psf 72.71 psf 69.16 psf 67.00 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 73.50 psf 70.70 psf 60.42 psf 66.45 psf 64.69 psf 62.67 psf 61.54 psf 60.29 psf 58.90 psf 57.35 psf 53.56 psf 53.44 psf 90.83 psf 90.25 pcf | SIDEV MIN AREA -139.70 psf | WALLS AND LEEWARD 50 sft -136.17 psf | FACE MAX AREA -83.26 psf |
| HEIGHT 400 350 250 200 180 160 140 120 100 90 80 70 60 50 40 30 25 20 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.59 1.55 1.52 1.48 1.43 1.41 1.35 1.31 1.27 1.22 1.16 1.13 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf 88.01 psf 88.02 psf 77.25 psf 99.91 psf 87.19 psf 82.94 psf 77.29 psf 75.52 psf 71.23 psf 68.51 psf 68.51 psf 63.14 psf 60.34 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 96.12 psf 94.17 psf 92.01 psf 89.57 psf 85.20 psf 83.47 psf 81.56 psf 76.92 psf 76.92 psf 76.92 psf 76.92 psf 70.38 psf 68.19 psf 65.50 opf | WINDWARD FACE 50 sft 108.52 psf 100.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf 90.41 psf 88.02 psf 88.02 psf 88.02 psf 88.02 psf 87.72 psf 82.03 psf 80.14 psf 78.02 psf 75.59 psf 72.71 psf 69.16 psf 64.40 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 77.50 psf 70.70 psf 66.45 psf 66.45 psf 62.67 psf 61.54 psf 62.67 psf 63.50 psf 70.70 psf 64.69 psf 62.67 psf 61.54 psf 60.29 psf 58.90 psf 55.56 psf 53.44 psf 50.83 psf 49.25 psf 49.25 psf | SIDEV MIN AREA -139.70 psf | WALLS AND LEEWARD 50 sft -136.17 psf | FACE MAX AREA -83.26 psf |
| HEIGHT 400 350 200 200 180 160 140 120 100 90 80 70 60 50 40 30 25 20 15 | WINDWA Kz 1.82 1.78 1.73 1.68 1.62 1.55 1.55 1.55 1.52 1.48 1.43 1.43 1.31 1.27 1.22 1.16 1.13 1.08 1.02 | qz 102.26 psf 99.91 psf 97.27 psf 94.23 psf 90.64 psf 89.00 psf 87.19 psf 85.19 psf 80.35 psf 77.29 psf 77.29 psf 75.52 psf 71.23 psf 68.51 psf 66.51 psf 63.14 psf 60.73 psf 60.73 psf | MIN AREA 110.44 psf 107.90 psf 105.05 psf 101.77 psf 97.90 psf 96.12 psf 94.17 psf 94.17 psf 92.01 psf 89.57 psf 86.78 psf 85.20 psf 83.47 psf 81.56 psf 79.40 psf 74.00 psf 70.38 psf 65.59 psf 65.59 psf 65.59 psf | New 13 FOR NEAR EI WINDWARD FACE 50 sft 108.52 psf 100.03 psf 103.22 psf 100.00 psf 96.20 psf 94.45 psf 92.53 psf 90.41 psf 88.02 psf 85.27 psf 83.72 psf 80.14 psf 78.02 psf 75.59 psf 72.71 psf 69.16 psf 67.00 psf 64.45 psf 61.1 psf | MAX AREA 79.76 psf 77.93 psf 75.87 psf 75.87 psf 70.70 psf 69.42 psf 66.45 psf 64.69 psf 62.67 psf 61.54 psf 63.01 psf 62.67 psf 61.54 psf 60.29 psf 55.56 psf 53.44 psf 50.83 psf 49.25 psf 47.37 psf 47.67 psf | SIDEV SIDEV MIN AREA -139.70 psf -139.70 psf | WALLS AND LEEWARD 50 sft -136.17 psf -136.17 psf | FACE MAX AREA -83.26 psf -83.26 psf |

CRITICAL PRESSURES



WALL ELEVATION

Notes:

- Vertical scale denotes GC_p to be used with appropriate q_z or q_h . 1.
- 2.
- Horizontal scale denotes effective wind area A, in square feet (square meters). 3.
- Plus and minus signs signify pressures acting toward and away from the surfaces, respectively. Use q_z with positive values of GC_p and q_h with negative values of GC_p . 4.
- 5.
- Each component shall be designed for maximum positive and negative pressures. Coefficients are for roofs with angle $\theta \le 10^\circ$. For other roof angles and geometry, use GC_p values 6.
- from Fig. 30.4-2A, B and C and attendant q_h based on exposure defined in Section 26.7. If a parapet equal to or higher than 3 ft (0.9m) is provided around the perimeter of the roof with $\theta \le 10^{\circ}$ Zone 3 shall be treated as Zone 2 7.
- 8. Notation:
 - a:
 - 10 percent of least horizontal dimension, but not less than 3 ft (0.9 m). *h*:
 - Mean roof height, in feet (meters), except that eave height shall be used for $\theta \le 10^{\circ}$. z: θ:
 - Angle of plane of roof from horizontal, in degrees.



