

Main Wind Force Resisting System – Method 1

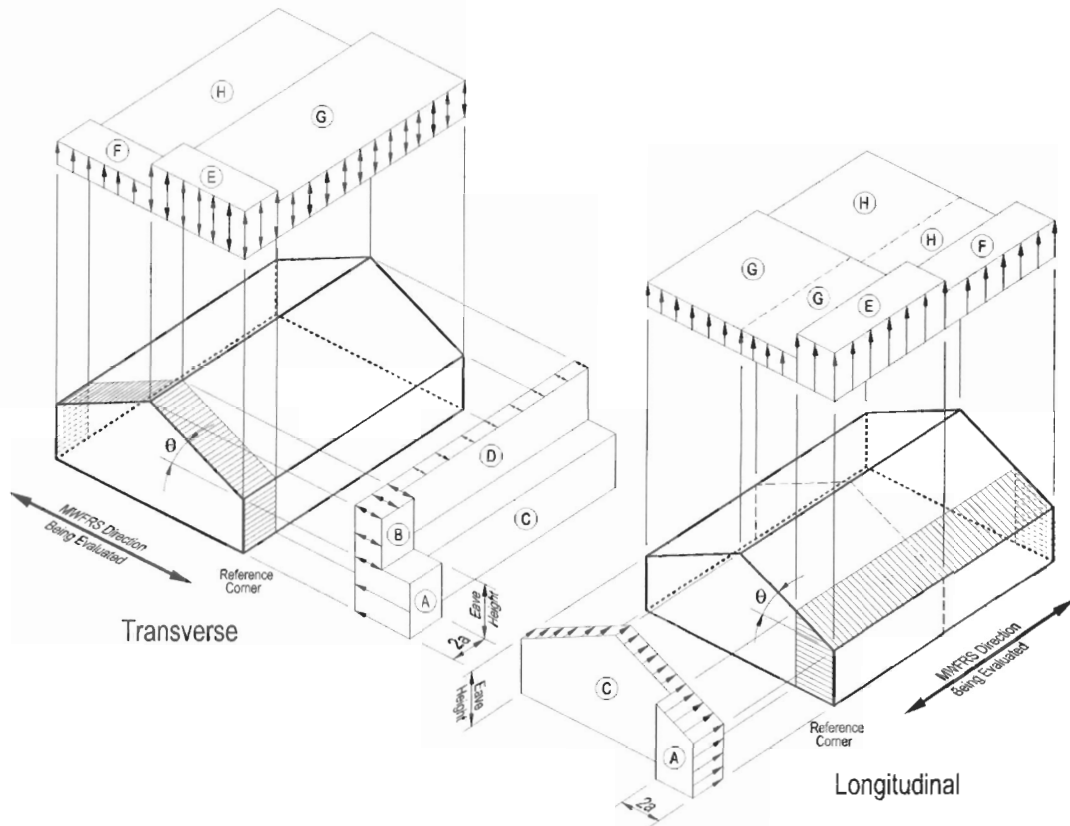
 $h \leq 60 \text{ ft.}$

Figure 6-2

Design Wind Pressures

Walls & Roofs

Enclosed Buildings



Notes:

1. Pressures shown are applied to the horizontal and vertical projections, for exposure B, at $h=30 \text{ ft} (9.1\text{m})$, $I=1.0$, and $K_{zt} = 1.0$. Adjust to other conditions using Equation 6-1.
2. The load patterns shown shall be applied to each corner of the building in turn as the reference corner. (See Figure 6-10)
3. For the design of the longitudinal MWFRS use $\theta = 0^\circ$, and locate the zone E/F, G/H boundary at the mid-length of the building.
4. Load cases 1 and 2 must be checked for $25^\circ < \theta \leq 45^\circ$. Load case 2 at 25° is provided only for interpolation between 25° to 30° .
5. Plus and minus signs signify pressures acting toward and away from the projected surfaces, respectively.
6. For roof slopes other than those shown, linear interpolation is permitted.
7. The total horizontal load shall not be less than that determined by assuming $p_s = 0$ in zones B & D.
8. The zone pressures represent the following:
Horizontal pressure zones – Sum of the windward and leeward net (sum of internal and external) pressures on vertical projection of:
A - End zone of wall
B - End zone of roof
C - Interior zone of wall
D - Interior zone of roof
Vertical pressure zones – Net (sum of internal and external) pressures on horizontal projection of:
E - End zone of windward roof
F - End zone of leeward roof
G - Interior zone of windward roof
H - Interior zone of leeward roof
9. Where zone E or G falls on a roof overhang on the windward side of the building, use E_{OH} and G_{OH} for the pressure on the horizontal projection of the overhang. Overhangs on the leeward and side edges shall have the basic zone pressure applied.
10. Notation:
 a : 10 percent of least horizontal dimension or $0.4h$, whichever is smaller, but not less than either 4% of least horizontal dimension or 3 ft (0.9 m).
 h : Mean roof height, in feet (meters), except that eave height shall be used for roof angles $< 10^\circ$.
 θ : Angle of plane of roof from horizontal, in degrees.