

Dear Client:

We wanted to communicate to you a clear understanding of the design we are providing for your proposed “hardened area” of your building.

As you requested, this area is not to be designed to current industry standards that define a shelter, such as FEMA 361 and ICC 500. Both of these documents provide for structural design criteria (wind speed characteristics and projectile penetration resistance) in shelters designed to resist severe storms such as tornados and hurricanes.

In your building’s location, ICC 500 prescribes a design wind speed of 250 mph. This is roughly based on resistance to an F5 level tornado and its resulting wind forces and projectiles. This wind produces forces approximately 4.7 times that of a typical non-storm wind design.

For your building’s design we have used a wind speed of xxx mph, which equates to roughly X.X times the typical wind force. In addition, we have provided a somewhat “hardened” perimeter around the majority of the walls and lid/roof of the safe area.

However, this area does not provide the adequate projectile penetration resistance that an ICC 500 shelter would. This includes any doors, windows, louvered openings, etc. that would not resist flying debris in a storm. The perimeter walls also do not guarantee complete resistance to projectiles as resistance is only verified by lab testing and the partially grouted masonry walls used here have not been tested.

Because of this, we wanted you to clearly understand the limits of this hardened space. Posting this space as a “tornado shelter” would be inaccurate.

If you have any questions concerning this information, please do contact us at your convenience.

Sincerely,