

Wind Load Terminology

ASCE 7: “Minimum Design Loads for Buildings and Other Structures” developed by American Society of Civil Engineers. Section 6 is the standard covering wind loads on buildings and other structures. Most building codes in the U.S. use this standard as the base code for wind provisions.

ACTIVE SYSTEM: Any type of reinforcing system used on a garage door that requires action by the homeowner or end user to resist high wind events.

BASIC WIND SPEED: Wind speed measured at 33 ft above the ground in Exposure C (flat open country). This is typically determined by the National Weather Service at airports. Historically based on annual probability of 0.02 (50-year storm). Most current codes use 3-second gust wind speeds while older codes used fastest mile wind speeds.

3-SECOND GUST WIND SPEED: The highest sustained gust over a three second period of time. Most commonly used wind speed reporting method in U.S. today.

FASTEST MILE WIND SPEED: Average wind speed associated with the passing of one mile of wind past a given point.

COMPONENTS AND CLADDING: Elements of the building envelope that do not qualify as part of the main wind force-resisting system.

EFFECTIVE WIND AREA: The effective wind area for garage door is the size of the door (e.g. a 16x7 door has an effective wind area of 112 square feet).

HURRICANE-PRONE REGIONS: Areas vulnerable to hurricanes defined as:

1. The U.S. Atlantic Ocean and Gulf of Mexico coasts where the basic wind speed is greater than 90 mph and
2. Hawaii, Puerto Rico, Guam, Virgin Islands and American Samoa.

IMPORTANCE FACTOR: A factor that accounts for the degree of hazard to human life and damage to property.

MAIN WIND FORCE-RESISTING SYSTEM: An assemblage of structural elements assigned to provide support and stability for the overall structure. The system generally receives wind loading from more than one surface.

MEAN ROOF HEIGHT: The average of the roof eave height and the height to the highest point on the roof surface, except that eave height shall be used for roof angle of less than or equal to 10 degrees.

PASSIVE SYSTEM: A reinforcing system used on a garage door that is permanently attached to the door and is capable of withstanding high wind events without any action by the homeowner or end user.

WIND-BORNE DEBRIS REGION: Areas within hurricane-prone regions within 1 mile of the coastal mean high water line where the basic wind speed is 110 mph or greater; or where the

basic wind speed is 120 mph or greater (except in Florida from the eastern border of Franklin County to the Florida-Alabama line where the region includes areas only within 1 mile of the coast); or Hawaii.