

**100-year flood.** See “base flood.”

## A

**Alluvial Fan.** A fan-shaped deposit of alluvium formed by a stream where its velocity is abruptly decreased, as at the mouth of a ravine or at the foot of a mountain.

**Astragal.** The center member of a double door, which is attached to the fixed or inactive door panel.

## B

**Base flood.** The flood having a 1-percent chance of being equaled or exceeded in any given year, commonly referred to as the “100-year flood.” The base flood is the national standard used by the NFIP and all Federal agencies for the purposes of requiring the purchase of flood insurance and regulating new development.

**Base flood elevation (BFE).** The height of the base (1 percent or 100-year) flood in relation to a specified datum, usually the National Geodetic Vertical Datum of 1929, or the North American Vertical Datum of 1988.

**Basic wind speed.** A 3-second gust speed at 33 feet above the ground in Exposure C. (Exposure C is flat open terrain with scattered obstructions having heights generally less than 30 feet.) Note: Since 1995, ASCE 7 has used a 3-second peak gust measuring time. A 3-second peak gust is the maximum instantaneous speed with a duration of approximately 3 seconds. A 3-second peak gust speed could be associated with a given windstorm (e.g., a particular storm could have a 40-mph peak gust speed), or a 3-second peak gust speed could be associated with a design-level event (e.g., the basic wind speed prescribed in ASCE 7).

**Building, enclosed.** A building that does not comply with the requirements for open or partially enclosed buildings.

**Building, open.** A building having each wall at least 80 percent open. This condition is expressed by an equation in ASCE 7.

**Building, partially enclosed.** A building that complies with both of the following conditions:

1. The total area of openings in a wall that receives positive external pressure exceeds the sum of the areas of openings in the balance of the building envelope (walls and roof) by more than 10 percent.
2. The total area of openings in a wall that receives positive external pressure exceeds 4 square feet, or 1 percent of the area of that wall, whichever is smaller, and the percentage of openings in the balance of the building envelope does not exceed 20 percent.

These conditions are expressed by equations in ASCE 7.

**Building, regularly shaped.** A building having no unusual geometrical irregularity in spatial form.

**Building, simple diaphragm.** An enclosed or partially enclosed building in which wind loads are transmitted through floor and roof diaphragms to the vertical main wind-force resisting system.

## C

**Components and cladding (C&C).** Elements of the building envelope that do not qualify as part of the main wind-force resisting system.

**Coping.** The cover piece on top of a wall exposed to the weather, usually made of metal, masonry, or stone, and sloped to carry off water.

## D

**Design flood.** The greater of the following two flood events: (1) the base flood, affecting those areas identified as special flood hazard areas on a community's Flood Insurance Rate Map (FIRM); or (2) the flood corresponding to the area designated as a flood hazard area on a community's flood hazard map or otherwise legally designated.

**Design flood elevation (DFE).** The elevation of the design flood, including wave height, relative to the datum specified on a community's flood hazard map.

**Dry floodproofing.** An adjustment, modification, or addition of a feature, or any combination thereof, that eliminates or reduces the potential for flood damage by sealing walls and closing openings to keep water from entering a building.

## E

**Erodible soil.** Soil subject to wearing away due to the effects of wind, water, or other geological processes during a flood or storm or long-term exposure.

**Escarpment.** Also known as a scarp. With respect to topographic effects, a cliff or steep slope generally separating two levels or gently sloping areas.

**Exposure.** The characteristics of the ground roughness and surface irregularities in the vicinity of a building. ASCE 7 defines three exposure categories—Exposures B, C, and D.

**Extratropical storm.** A cyclonic storm that forms outside of the tropical zone. Extratropical storms may be large, often 1,500 miles (2,400 kilometers) in diameter, and usually contain a cold front that extends toward the equator for hundreds of miles.

## F

**Federal Emergency Management Agency (FEMA).** The Federal Emergency Management Agency is the Federal agency which administers the National Flood Insurance Program (NFIP).

**Fetch.** Distance over which wind acts on the water surface to generate waves.

**Flashing.** Any piece of material, usually metal or plastic, installed to prevent water from penetrating a structure.

**Flood Insurance Rate Map (FIRM).** The official map of a community on which FEMA has delineated both the special hazard areas, and the risk premium zones applicable to the community.

**Flood Insurance Study (FIS).** An engineering study performed by FEMA to identify flood hazard areas, flood insurance risk zones, and other flood data in a community; used in the development of the FIRM.

**Floodplain.** Any land area, including the watercourse, that is susceptible to partial or complete inundation by water, from any source.

**Floodplain management regulations.** Zoning ordinances, subdivision regulations, building codes, or special-purpose ordinances that set flood-resistant standards for new construction, land use, and development.

**Flood profile.** A graph of computed flood elevations at points located along a riverine waterway. A flood profile typically is available for a waterway that has Base Flood Elevations (BFEs) shown on the Flood Insurance Rate Map (FIRM). Flood profiles are usually found in the Flood Insurance Study (FIS) report.

**Floodway.** The channel and that portion of the floodplain that is to be reserved to convey the base flood, without cumulatively increasing the water surface elevation more than a designated height.

**Floodway fringe.** The area of the floodplain outside of the floodway, where floodwaters may be shallower and slower.

**Freeboard.** A factor of safety, usually expressed in feet above a flood level, for purposes of floodplain management. Freeboard also compensates for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, constricting bridge openings, and the hydrological effect of urbanization of the watershed. A freeboard of 1 to 3 feet is often applied to critical facilities.

**Frontal dune.** Ridge or mound of unconsolidated sandy soil, extending continuously alongshore landward of the sand beach and defined by relatively steep slopes abutting markedly flatter and lower regions on each side.

## G

**Glazing.** Glass or a transparent or translucent plastic sheet used in windows, doors, and skylights.

**Glazing, impact-resistant.** Glazing that has been shown, by an approved test method, to withstand the impact of wind-borne missiles likely to be generated in wind-borne debris regions during design winds.

## H

**Hurricane-prone regions.** Areas vulnerable to hurricanes; in the United States and its territories defined as:

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

**Human intervention.** The presence and active involvement of people necessary to enact or implement floodproofing measures prior to the onset of flooding.

**Hydrodynamic load.** Loads imposed by water flowing against and around an object or structure, including the impacts of debris and waves.

**Hydrostatic load.** Load (pressure) imposed on an object or structure by a standing mass of water; the deeper the water, the greater the load or pressure against the object or structure.



**Impact-resistant covering.** A covering designed to protect glazing, which has been shown by an approved test method to withstand the impact of wind-borne missiles likely to be generated in wind-borne debris regions during design winds.

**Importance factor, I.** A factor that accounts for the degree of hazard to human life and damage to property. Importance factors are given in ASCE 7.



**Lowest floor.** The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that the enclosure is compliant with flood-resistant requirements.



**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, (h).** The average of the roof eave height and the height to the highest point on the roof surface, except that, for roof angles of less than or equal to 10 degrees, the mean roof height shall be the roof eave height.

**Missiles.** Debris that could become propelled into the wind stream.



**National Flood Insurance Program (NFIP).** A Federal program to identify flood-prone areas nationwide, and make flood insurance available for properties in communities that participate in the program.

**Nor'easter.** Nor'easters are non-tropical storms that typically occur in the eastern United States, any time between October and April, when moisture and cold air are plentiful. They are known for dumping heavy amounts of rain and snow, producing hurricane-force winds, and creating high surfs that cause severe beach erosion and coastal flooding. A nor'easter is named for the winds that blow in from the northeast and drive the storm up the east coast along the Gulf Stream, a band of warm water that lies off the Atlantic Coast.

## O

**Openings.** Apertures or holes in the building envelope that allow air to flow through the building envelope. A door that is intended to be in the closed position during a windstorm would not be considered an opening. Glazed openings are also not typically considered openings. However, if the building is located in a wind-borne debris region and the glazing is not impact-resistant or protected with an impact-resistant covering, the glazing is considered an opening.

## R

**Racking.** Lateral deflection of a structure resulting from external forces, such as wind or lateral ground movement in an earthquake.

**Ridge.** With respect to topographic effects, an elongated crest of a hill characterized by strong relief in two directions.

## S

**Scour.** Removal of soil or fill material by the flow of floodwaters. The term is frequently used to describe storm-induced, localized erosion around pilings at building corners and other foundation supports where the obstruction of flow increases turbulence.

**Seiche.** A wave that oscillates in lakes, bays, or gulfs from a few minutes to a few hours as a result of seismic or atmospheric disturbances.

**Sheetflow.** Rainfall runoff that flows over relatively flat land without concentrating into streams or channels.

**Stillwater elevation.** The elevation that the surface of coastal flood waters would assume in the absence of waves, referenced to a datum.

**Storm surge.** Rise in the water surface above normal water level on the open coast due to the long-term action of wind and atmospheric pressure on the water surface.

**Substantial damage.** Damage of any origin sustained by a structure, whereby the cost of restoring the structure to its pre-damage condition equals or exceeds 50 percent of the market value of the structure before the damage occurred (or smaller percentage if established by the authority having jurisdiction). Structures that are determined to be substantially damaged are considered to be substantial improvements, regardless of the actual repair work performed.

**Substantial improvement.** Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure (or smaller percentage if established by the authority having jurisdiction) before the start of the improvement.

## T

**Tsunami.** An unusually large sea wave produced by submarine earth movement or a volcanic eruption.

## W

**Wave runup.** Rush of wave water up a slope or structure. The additional height reached by waves above the stillwater elevation.

**Wet floodproofing.** Permanent or contingent measures and construction techniques, applied to a structure or its contents, that prevent or provide resistance to damage from flooding while allowing floodwaters to enter the structure. Generally, this includes properly anchoring the structure, using flood-resistant materials below the BFE, protection of mechanical and utility equipment, and the use of openings or breakaway walls.

**Wind-borne debris regions.** Areas within hurricane-prone regions located:

1. Within 1 mile of the coastal mean high water line where the basic wind speed is equal to or greater than 110 mph and in Hawaii.
2. In areas where the basic wind speed is equal to or greater than 120 mph.

