



State of Delaware V Zone Certificate

Purpose of the V Zone Design Certificate

The V Zone Design Certificate is an important administrative tool for documenting compliance with National Flood Insurance Program (NFIP) and community floodplain management requirements for buildings and structures located in V Zones. It can be used to provide design and construction information necessary to ensure compliance with requirements for buildings in coastal high-hazard areas, including requirements for foundations, anchoring, flood and wave loads, and enclosures below elevated buildings.

The V Zone Design Certificate is used to document floodplain management compliance for new and substantially improved buildings located in V Zones. As part of the agreement for making flood insurance available in a community, the NFIP requires the community to adopt floodplain management regulations that specify minimum requirements for reducing flood losses. One such requirement is for the community to ensure that buildings and structures in V Zones are designed and constructed to withstand the effects of floodwater, waves, and other coastal hazards.

The V Zone Design Certificate provides a way for a community to document compliance with these V Zone design and construction requirements and to maintain a record of the required professional certification. A registered professional engineer or architect, as authorized by State law, must certify the applicable design and planned methods of construction.

This certificate is used only to document V Zone design and construction compliance. A separate Elevation Certificate may be required to document the as-built elevations of the structure. The V Zone Design Certificate does not replace the Elevation Certificate or any other required permit, certification, or inspection.

Additional guidance can be found in [FEMA P-762: Local Officials Guide for Coastal Construction](#) and [FEMA P-499: Home Builder's Guide to Coastal Construction](#), available on FEMA's Building Science Resource Library website at <https://www.fema.gov/emergency-managers/risk-management/building-science/publications>.

V Zone Certificate Instructions:

The V Zone Design Certificate is to be completed by a registered professional engineer or architect who is authorized by State law to certify the design and planned methods of construction for buildings and structures located in V Zones. The certificate is used for new and substantially improved buildings where V Zone design certification is required by the community's floodplain management requirements.



State of Delaware V Zone Certificate

The property owner, owner's authorized representative, or local floodplain management official may complete the project and property information on the certificate. The partially completed form can then be provided to the registered professional engineer or architect to complete the applicable design certification sections.

The registered professional engineer or architect should review and verify the information provided by the property owner, owner's representative, or local floodplain management official to ensure that the certificate is complete and accurately reflects the proposed design and planned methods of construction. The professional engineer or architect must certify the applicable design elements, including, as appropriate, foundations, anchoring, flood and wave loads, and breakaway walls or other enclosures below elevated buildings.

Where breakaway walls or other enclosures are proposed, the registered professional engineer or architect must provide the applicable certification required by the NFIP and the community's floodplain management requirements. Supporting plans, calculations, or other documentation may be required by the local floodplain management official.

The completed V Zone Design Certificate must be maintained in the community's permit file for the applicable structure. The certificate should be completed as part of the permit review process and retained with other required floodplain management documentation.

The V Zone Design Certificate is used to document design compliance and does not establish the elevation of the structure. A completed construction Elevation Certificate is required separately to document as-built elevations.

Property Information

Complete property information including a phone and email for the property owner. Note that the 'Building Use' field would include a description such as non-residential, mixed use, addition, accessory structure, etc. The 'Property Description' field would describe the lot and block numbers, legal description and/or tax parcel number.

Section 1: Flood Insurance Rate Map (FIRM) Information

Complete FIRM information for the panel that includes the property.

Section 2: Elevation Information Used for Design

Complete elevations based on property measurements. All elevations must be in North American Vertical Datum of 1988 (NAVD88) to match the FIRM panels available in Delaware which are all in NAVD88.



State of Delaware V Zone Certificate

Section 3: V Zone Design Certification Statement

The Signatory is Certifying that for ALL certified structures, the design professional has either developed or reviewed the designs, plans, and specifications for the structure and found that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the following provisions:

- The lowest horizontal structural member is above the Design Flood Elevation (DFE).
- The pile and column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of the wind and water loads acting simultaneously on all building components.
- Water loading values used are those associated with the base flood event.
- Wind loading values used are those required by the applicable State or local building code.
- The potential for scour and erosion at the foundation has been anticipated for conditions associated with the base flood, including wave action.
- Any concrete slab below the structure meets frangible requirements.
- Decks and deck foundations are properly secured and not a hazard.

Section 4: Breakaway Wall Design Certification Statement

This section begins by identifying whether breakaway walls are present. If present, the Signatory is Certifying that certified structures with breakaway walls exceed a design safe loading resistance of 20 psf (pounds per square foot), based on Allowable Stress Design. The design professional has either developed or reviewed the structural design, plans, and specifications for construction, and the design and methods of construction to be used for the breakaway walls are in accordance with accepted standards of practice for meeting the following provisions:

- All areas below the lowest floor are free of obstruction (including open lattice work, insect screening, bracing and grade beams as allowed in accordance with FEMA Technical Bulletin 5 and ASCE 24); or
- Breakaway walls are constructed in accordance with prescriptive design in FEMA Technical Bulletin 9: Breakaway Walls; or
- Breakaway walls shall collapse from water loads less than that which would occur during the base flood without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system.
- Enclosures below DFE are constructed with flood-damage-resistant materials.

Section 5: Utilities

The Signatory is Certifying that the design professional has either developed or reviewed the structural design, plans, and specifications for the location of the electrical Main Panel or Sub-Panel, HVAC equipment, mechanical equipment, plumbing, and the anchoring of any present storage tanks, and the location and anchoring are in accordance with accepted standards of practice for V zones.



State of Delaware V Zone Certificate

Section 6: Certification Stage

Complete section to note if the certificate represents a Pre-Construction / Design Certification or Final / As-Built Certification. If Pre-Construction is selected, a Final/As-Built certification is required prior to Certificate of Occupancy.

Section 7: Certification and Seal

Complete with certifier's information and professional seal.

Section 8: Required Attachments

Attach photographs, design drawings, and owner acknowledgement as described.