

**National Flood Insurance Program
V-Zone Certification**

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|--|----------------------------------|----------|
| Property Information | For Insurance Company Use | |
| Name | Policy Number | |
| Structure Address or Other Description | | |
| City | State | Zip Code |

SECTION I: FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

Note: To be obtained from FIRMs in effect at the time of the certification

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|---------------------|-----------------|-----------|-----------------------|--------------|
| 1. Community Number | 2. Panel Number | 3. Suffix | 4. Date of FIRM Index | 5. FIRM Zone |
|---------------------|-----------------|-----------|-----------------------|--------------|

SECTION II: ELEVATION INFORMATION

Note: This form is not a substitute for an Elevation Certificate. Elevations should be rounded to nearest tenth of a foot.

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|---|----------------------|
| 1. Elevation of the Bottom of Lowest Horizontal Structure Member | _____ feet (NAVD 88) |
| 2. Regulatory Flood Protection Elevation (BFE + Freeboard)..... | _____ feet (NAVD 88) |
| 3. Elevation of Lowest Adjacent Grade | _____ feet (NAVD 88) |
| 4. Approximate Depth of Anticipated Scour/Erosion Used for Foundation Design..... | _____ feet (NAVD 88) |
| 5. Embedment Depth of Pilings or Foundation Below Lowest Adjacent Grade..... | _____ feet (NAVD 88) |

SECTION III: V-ZONE CERTIFICATION STATEMENT

Note: This section must be certified by a registered professional engineer or architect.

_____ I certify that I have developed or reviewed the structural design, plans and specifications for construction and that the methods of construction to be used are in accordance with accepted standards of practice for meeting the following provisions:

- a) The bottom of the lowest horizontal structure member of the lowest floor (excluding the pilings or columns) is elevated to or above the Regulatory Flood Protection Elevation; and,
- b) The pile or 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, including grade beams and bracing, if applicable. Water loading values used are those associated with the base flood including wave action. 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 flood, including wave action.

SECTION IV: AREAS BELOW THE LOWEST FLOOR

Note: This section must be certified by a registered professional engineer or architect. Initial all that apply.

I certify that I have developed or reviewed the structural design, plans and specifications for construction and that the design and methods of construction to be used for the breakaway walls are in accordance with accepted standards of practice for meeting one of the following provisions:

- _____ a) 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
- _____ b) Breakaway walls are constructed in accordance with prescriptive design in FEMA Technical Bulletin 9: Breakaway Walls; or
- _____ c) Breakaway walls shall collapse from water load 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.

SECTION V: SAND DUNES AND MANGROVE STANDS

Note: This section must be certified by a registered professional engineer or architect. Initial all that apply.

In accordance with 44 CFR 60.3(e)(7) and Paragraph G103.7 of the North Carolina Building Code, the construction:

- _____ a) Does not alter sand dunes or mangrove stands; or
- _____ b) Alters sand dunes or mangrove stands but does not increase potential flood damage.

SECTION VI: SEPTIC TANKS

Note: This section must be certified by a registered professional engineer or architect. Initial all that apply.

- _____ a) There is not a septic tank serving the building; or

In accordance with 44 CFR 60.3(a)(3) and (6), Section G701.1 of the North Carolina Building Code, and ASCE 24-14 7.3 and 9.7, the sanitary sewer system:

- _____ b) Is designed and adequately anchored to prevent flotation, collapse, or lateral movement resulting from hydrostatic and hydrodynamic loads, including 150% of the effect of buoyancy and is designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters; or
- _____ c) Is located to avoid impairment to them or contamination from them during flooding.

SECTION VII: UNDERGROUND FUEL TANKS

Note: This section must be certified by a registered professional engineer or architect. Initial all that apply.

_____ a) There is not an underground fuel tank serving the building; or

In accordance with 44 CFR 60.3(a)(3)(iv) and ASCE 24-14 Section 9.7, the fuel tank(s) servicing the structure:

_____ b) Is designed and adequately anchored to prevent flotation, collapse, or lateral movement resulting from hydrostatic and hydrodynamic loads, including 150% of the effect of buoyancy, is designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters, and calculated flood-related loads take into account the eroded ground elevation.

SECTION VIII: ABOVE GROUND FUEL TANKS

Note: This section must be certified by a registered professional engineer or architect. Initial all that apply.

_____ a) There is not an above ground fuel tank serving the building; or

In accordance with 44 CFR 60.3(a)(3)(iv) and ASCE 24-14 Section 9.7, the fuel tank(s) servicing the structure:

_____ b) Is elevated to or above the Regulatory Flood Protection Elevation on a detached platform with a foundation that meets the requirements of Section III, or

_____ c) is attached to a building and is elevated in accordance with ASCE 24-14 Table 4-1.

SECTION IX: SWIMMING POOLS

Note: This section must be certified by a registered professional engineer or architect. Initial all that apply.

_____ a) There is not a swimming pool or hot tub located on the subject property; or

In accordance with the North Carolina State Building Code Section G801.5, the North Carolina Residential Building Code Section AV103.3, and ASCE 24 9.6.2, the swimming pool / hot tub is either:

_____ b) Elevated so that the lowest horizontal structural member is at or above the Regulatory Flood Protection Elevation and is either (check one):

___ i) Located in or on elevated floors or roofs that are at or above the Regulatory Flood Protection Elevation; or

___ ii) Located and designed to be structurally independent of buildings and structures.

- OR -

_____ c) Located and installed in-ground either (check one):

___ i) Designed and constructed to break away during design flood conditions without producing debris capable of causing significant damage to any structure; or

___ ii) Designed and constructed to remain in the ground during design flood conditions without obstructing flow that results in damage to any structure.

SECTION X: FILL

Note: This section must be certified by a registered professional engineer or architect. Initial all that apply.

_____ a) No fill has been placed on the site; or

_____ b) Site compatible, nonstructural fill is either (check one):

___ i) Placed on the site is at less than a 5:1 (20%) slope; or

___ ii) Is at a greater than 5:1 (20%) slope but will not cause or worsen wave runup or wave reflection capable of damaging adjacent buildings.

SECTION XI: OTHER DEVELOPMENT

Note: This section must be certified by a registered professional engineer or architect. Initial all that apply.

Bulkheads, seawalls, retaining walls, revetments, solid fences, privacy walls, docks, piers, and other similar structures are considered other development activities.

_____ a) No other development activity has taken place on the site; or

_____ b) Any other development activity as designed and constructed will not cause the diversion of floodwaters, wave runup, and wave reflection that would increase damage to adjacent buildings and structures.

SECTION XII: CERTIFICATION

| | | | | |
|-------------------|-------|-----------------------------------|--|------|
| Name of Certifier | | Title | | Seal |
| Firm Name | | License Number | | |
| Street Address | | Phone Number and Email () | | |
| City | State | Zip Code | | |
| Signature | | Date | | |
| | | | | |