DS 2025-028 – Architect T.A. Krebs, LLC

Issue: Petitioner is seeking a declaratory statement to clarify whether a detached accessory structure that complies with the requirements of section R322.2.2 without the floor below grade on all sides is limited to 600 square feet.

Petitioner presents the following question:

Is a detached accessory structure that complies with the requirements of Section R322.2.2 without the floor below grade on all sides limited to 600 square feet?

Background:

According to the petitioner, the project in question will be a 30' x 30' detached garage to be used solely for parking and storage on a residential single-family property. The property is in the AE9 flood zone. To comply with the flood zone requirements of 9' + 1' freeboard, the grade under the structure would need to be built up approximately 3 ½ to 4 feet and would make the garage unusable. The petitioner believes that the proposed structure with the floor above grade on all sides and in compliance with section R322.2.2 meets the requirements of section R322.2.1 (Exception) and can exceed 600 square feet.

8th Edition (2023) Florida Building Code, Residential

R322.1.1 Alternative provisions. As an alternative to the requirements in Section R322, ASCE 24 is permitted subject to the limitations of this code and the limitations therein.

R322.2.1 Elevation requirements.

1. Buildings and structures in flood hazard areas not including flood hazard areas designated as Coastal A Zones, shall have the lowest floors elevated to or above the base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.

2. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated to a height above the highest adjacent grade of not less than the depth number specified in feet (mm) on the FIRM plus 1 foot (305 mm), or not less than 3 feet (915 mm) if a depth number is not specified.

3. Basement floors that are below grade on all sides shall be elevated to or above base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.

4. Attached garages and carports shall comply with one of the following:

    4.1. The floors shall be elevated to or above the elevations required in Item 1 or Item 2, as applicable.

    4.2. The floors shall be at or above grade on not less than one side. Where an attached garage or carport is enclosed by walls, the walls shall have flood openings

that comply with Section R322.2.2 and the attached garage or carport shall be used solely for parking, building access or storage.

5. Detached accessory structures and detached garages shall comply with either of the following:

5.1. The floors shall be elevated to or above the elevations required in Item 1 or Item 2, as applicable.

5.2. The floors are permitted below the elevations required in Item 1 or Item 2, as applicable, provided such detached structures comply with all of the following:

5.2.1. Are used solely for parking or storage.

5.2.2. Are one story and not larger than 600 square feet (56 m2).

5.2.3. Are anchored to resist flotation, collapse or lateral movement resulting from design flood loads.

5.2.4. Have flood openings that comply with Section R322.2.2.

5.2.5. Are constructed of flood damage resistant materials that comply with Section R322.1.8. 5.2.6. Have mechanical, plumbing and electrical systems, if applicable, that comply with Section R322.1.6.

Exception: Enclosed areas below the elevation required in this section, including basements with floors that are not below grade on all sides, shall meet the requirements of Section R322.2.2.

R322.2.2 Enclosed area below required elevation. Enclosed areas, including crawl spaces, that are below the elevation required in Section R322.2.1 shall:

1. Be used solely for parking of vehicles, building access or storage.

2. Be provided with flood openings that meet the following criteria and are installed in accordance with Section R322.2.2.1:

2.1. The total net area of nonengineered openings shall be not less than 1 square inch (645 mm2) for each square foot (0.093 m2) of enclosed area where the enclosed area is measured on the exterior of the enclosure walls, or the openings shall be designed as engineered openings and the construction documents shall include a statement by a registered design professional that the design of the openings will provide for equalization of hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwaters as specified in Section 2.7.2.2 of ASCE 24.

2.2. Openings shall be not less than 3 inches (76 mm) in any direction in the plane of the wall.

2.3. The presence of louvers, blades, screens and faceplates or other covers and devices shall allow the automatic flow of floodwater into and out of the enclosed

areas and shall be accounted for in the determination of the net open area.

Exception: The following are not required to comply with this section:

1. Elevator shafts.
2. Utility chases that protect utility lines from freezing, provided the utility chases are the minimum size necessary to protect the utility lines and do not provide access for a person to enter the space.

ASCE 24 – 14 Flood Resistant Design and Construction

Table 2-1 Minimum Elevation of the Top of Lowest Floor – Flood Hazard Areas Other than Coastal A Zones, and High Risk Flood Hazard Areas

Footnote c – Flood Design Class 1 structures shall be allowed below the minimum elevation if the structure meets the wet floodproofing requirements of Section 6.3.

Table 1-1 Flood Design Class of Buildings and Structures

Flood Design Class 1 – Buildings and structures that normally are unoccupied and pose minimal risk the public or minimal disruption to the community should they be damaged of fail due to flooding. Flood Design Class 1 includes (1) temporary structures that are in place for less than 180 days, (2) accessory storage buildings and minor storage facilities (does not include commercial storage facilities), (3) small structures used for parking of vehicles, and (4) certain agricultural structures.

Chapter 6 Dry Floodproofing and Wet Floodproofing

6.2 Dry Floodproofing

Dry floodproofing shall be accomplished through the use of flood damage-resistant material and techniques that render the dry-floodproofed portions of a structure substantially impermeable to the passage of floodwater below the elevations specified in Table 6-1. Sump pumps shall be provided to remove water accumulated due to any passage of vapor and seepage of water during the flooding event. Sump pumps shall not be relied on as a means of dry floodproofing. All materials that are below the elevations specified in Table 6-1 shall conform to the requirements of Chapter 5, except materials on the interior of dray floodproofed portions of building.

6.3 Wet Floodproofing

Wet floodproofing shall be accomplished through the use of flood damage-resistant materials and techniques that minimize damage to a structure during periods where the lower portion of the structure is inundated by floodwater. All materials in contact with floodwaters shall conform with the requirements of Chapter 5.

6.3.1 Wet Floodproofing Limitations on Use. Wet floodproofing of enclosed areas below the elevations listed in Table 6-1 shall be limited to:

1. Flood Design Class 1 structures.
2. Enclosures used solely for parking of vehicles, building access, or storage,

3. Structures that are functionally dependent on close proximity to water, and
4. Agricultural structures not included in Flood Design Calls 1 that cannot be located elsewhere and that are used solely for agricultural purposes.

6.3.2 Wet Floodproofing Requirements. Wet floodproofing for flood events up to and including the design flood shall be accomplished by:

1. Use of techniques that minimize damage to the structure associated with flood loads.
2. Meeting the requirements of Section 2.7 or Section 4.6, depending on the flood hazard area, and
3. Installation of utilities, including plumbing fixtures, in conformance with the requirements of Chapter 7.

Staff Analysis:

Question:

Is a detached accessory structure that complies with the requirements of Section R322.2.2 without the floor below grade on all sides limited to 600 square feet?

Answer:

Section R322.2.2 of the Florida Building Code (FBC), Residential, 8th Edition (2023) does not apply to the project in question. This section governs enclosed areas below buildings that are elevated in accordance with section R322.2.1 of the FBC, Residential, 8th Edition (2023). Pursuant to section R322.2.1, the project in question is required to be elevated to or above the base flood elevation plus 1 foot. However, pursuant to section R322.1.1 of the FBC, Residential and, Table 2-1 and Chapter 6 of ASCE 24-14, as an alternative to compliance with elevations specified in section R322.2.1, the project in question is permitted to be constructed below the required minimum elevation if the said project meets the dry floodproofing requirements of section 6.2 of ASCE 24-14 or the wet floodproofing requirements of section 6.3 of ASCE 24-14.