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REF: DS 2021-005 (ID # 24227125)

Mr. Madani:

After reviewing the response dated March 8, 2021 from Mr. Doug Harvey, St Lucie County Building Official, I noticed that the survey provided failed to identify and demonstrate the location of the Coastal Construction Control Line (CCCL). The location of the CCCL line in reference is the major defining factor in the evaluation of the applicable codes since the homes are seaward of the CCCL. I have enclosed a survey demonstrating the CCCL line on the subject property. Inconceivably, the flood zone identification map provided in the March 8th email does not illustrate the subject properties.

While it is accurate that certain sections of FBC R322 do not apply to the issue at hand since the subject properties are not situated in the "V" zone or in the Coastal High Hazard zone. It is neglectfully not to acknowledge section R332 applying in the flood hazard zone.

Section R322.1.4 establishes the design flood elevation at a minimum as **the higher of the following**:

1. The base flood elevation at the depth of peak elevation of flooding, including wave height, that has a percent (100-year flood) or greater chance of being equaled or exceeded in any given year; or,
2. The elevation of the design flood associated with the area designated on a flood hazard map adopted by the community, or otherwise legally designated.

Section R322.2 Flood Hazard Areas (including A Zones) specifies building and structures constructed in whole or in part in flood hazard areas shall be designed and constructed in accordance with Sections R322.2.1 through R322.2.3.

R322.2.1 Elevation requirements.

1. **Buildings and structures in flood hazard areas**, 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**.

Exception: Enclosed areas below the design flood elevation, 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 design flood elevation.

Enclosed areas, including crawl spaces, that are below the design flood elevation **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

More importantly, Section R322.1.11 – Structures Seaward of a Coastal Control Construction Line

Is more specific and states:

In addition to the requirements of this section, structures located in flood hazard areas and seaward of the coastal construction line shall be designed in accordance with Section 3109 of the Florida Building Code, **and the more restrictive provisions shall govern**. Clearly section R332 refers to homes built seaward of the CCCL must comply with the **most restrictive** provisions of both FBC R322 and FBC 3109.

In Chapter 31 of the FBC, **the definition of the Lowest Floor is:**

For the purpose of Section 3109, the lowest floor of the lowest enclosed area, excluding any enclosure that complies with the requirements and limitations of Section 3109.3.4 applicable to enclosures below the flood elevation.

To establish the elevation standard of the lowest floor, Section 3109.3.3 Elevation standards states: The bottom of the lowest horizontal structural member of the lowest floor **shall be at or above the higher** of the following:

1. The elevation specified in ASCE 24 Chapter 4 if the structure is in a coastal high hazard area or Coastal A Zone;
2. The elevation specified by the jurisdiction; or
3. The 100-year storm elevation determined by the Florida Department of Environmental Protection in the report titled "One-Hundred-Year Storm Elevation Requirements for Habitable Structures Located Seaward of a Coastal Construction Control Line" (1999).

Furthermore, Section 3109.3.4 defines walls and enclosures below the flood elevation required by 3109.3.3 as such:

Walls and enclosures below the elevation required by Section 3109.3.3 and above the design grade elevation shall comply with **all** of the following, as applicable:

1. **Walls seaward of the CCCL shall comply with the breakaway wall requirements** of ASCE 24 Section 4.6 using the lesser of the flood loads specified by Section 3109.3.1.
2. Elevator shafts and stairways shall comply with ASCE 24.
4. **In special flood hazard areas** (Zone V and Zone A), all breakaway walls below the elevation specified in ASCE 24 or the elevation specified by the jurisdiction shall have flood openings in accordance with ASCE 24 Section 4.6.2. Flood openings are not required in:
 - a. Shear walls designed in accordance with Section 3109.3.2.2.
 - b. Walls of enclosures below buildings not located in special flood hazard areas (Zone X).
 - c. Walls that are designed and constructed in conformance with the dry floodproofing requirements of ASCE 24 in areas other than coastal high hazard areas.
5. **In special flood hazard areas** (Zone V and Zone A):
 - a. Enclosures below the elevation specified in ASCE 24 or the elevation specified by the jurisdiction shall be used solely for parking of vehicles, building access, or storage unless enclosures are designed and constructed in accordance with the dry floodproofing requirements of ASCE 24.
 - b. Enclosures above the elevation specified in ASCE 24 or by the jurisdiction and below the 100-year storm elevation, or enclosures with dry floodproofing to the elevation specified in ASCE 24 or by the jurisdiction, shall be limited to allowed use as defined in this section.

6. In habitable structures not located in special flood hazard areas (Zone X), uses of enclosures below the 100-year storm elevation shall be limited to allowed use as defined in this section.

The St. Lucie County Land Development Code Chapter VI – Resource Protection Standards Section 6.05.09 – Flood Resistant Development also requires the Floodplain Administrator to comply with FBC 3109 for building and structures seaward of the CCCL.

6.05.09 A. 2. - Buildings and Structures Seaward of the Coastal Construction Control Line. If extending, in whole or in part, seaward of the coastal construction control line and also located, in whole or in part, in a flood hazard area:

(a) Buildings and structures shall be designed and constructed to **comply with the more restrictive** applicable requirements of the Florida Building Code, Building Section 3109 and Section 1612 or Florida Building Code, Residential.

Furthermore, regarding the aforementioned March 8th correspondence, it states that the lower floors in question are considered non-habitable per the rule. Yet, there is direct evidence that contradicts this notion. Enclosed I have attached photographs of the residence located in the Watersong community in St. Lucie County exhibiting first floors being inhabited. Moreover, enclosed you will find a real estate listing of the residence in St. Lucie County that further establishes our point.

Ironically, an analogous circumstance was recently brought to light in Monroe County. Litigation is underway concerning certain non-compliant flood building permits in Monroe County. The homes built and approved by the St. Lucie Building department contain a breakaway wall on the ground floor without a door at the top of staircase leading to the second floor providing no protection and exposing the habitable second floor to the wind loads and wind pressures when the breakaway wall fails, under hydrostatic pressure, as it is designed to do so. In a nutshell, these homes are ticking time bombs and a safety nightmare that is patiently waiting for the next big storm in St. Lucie County.