

**INDIAN RIVER COUNTY, FLORIDA
MEMORANDUM**

TO: Board of County Commissioners

THROUGH: John A. Titkanich, Jr., County Administrator
Andrew Sobczak, Planning and Development Services Director, Floodplain Administrator

FROM: Sean Lieske, Utilities Director, Acting Public Works Director

SUBJECT: Quay Dock Landing Subdivision
Partial Waiver Request to Floodplain Cut and Fill Balance Requirements
SD-19-04-01 / 2003010102-83528

DATE: November 21, 2023

SUMMARY OF REQUEST

KMA Engineering on behalf of Conengineers Builders LLC, developer for the proposed Quay Dock Landing Subdivision, a conventional 58 lot subdivision approved by the Planning and Zoning Commission on September 24, 2020 as a Preliminary Plat, is requesting a partial waiver of the cut and fill balance requirements for both the 100-Year flood storage and the 10-Year flood storage in accordance with Indian River County Land Development Regulations (IRC) Section 930.07(2)(i)1.a. Refer to 'Code Citation' below.

DESCRIPTION

The project is located east of US Highway 1, between Quay Dock Road and 63rd Street. Lots are proposed approximately 1000 feet from the banks of the Indian River Lagoon (Exhibits A and AA). The applicant has not yet applied for a County Land Development Permit or any other state and federal permits. Refer to Exhibit B, Preliminary Drainage Plan for the Quay Dock Landing layout.

The site is situated within Special Flood Hazard Area Zone AE with the 100-Year Base Flood Elevation being five (5) feet (North American Vertical Datum 1988 (NAVD 1988) (AE-5) for the western portion of the property and six (6) feet NAVD 1988 (AE-6) for the eastern portion (Exhibit C). The 10-Year Flood Elevation similarly varies from four (4) feet NAVD 1988 to three (3) feet NAVD 1988 (Exhibit D).

The applicant has demonstrated that filling of the site will not increase the flood stage of the river by more than one (1) foot in accordance with IRC 930.07(2)(a)3.b. "For development activities proposed to be located in a riverine flood hazard area for which base flood elevations are included in the flood insurance study or on the Flood Insurance Rate Maps (FIRM) and floodways have not been designated, a floodway encroachment analysis which demonstrates that the cumulative effect of the proposed development, when combined with all other existing and anticipated flood hazard area encroachments, will not increase the base flood elevation more than one (1) foot at any point within the community." The Engineer for the applicant has determined that the elevation will rise 0.5 feet. Refer to Exhibit G, Rise Exhibit.

CODE CITATION – IRC 930.07(2)(i)1.a.

"Cut and fill. An equal volume of storage capacity must be created for any volume of the base flood that would be displaced by fill or structures except for the following instances:

Those development projects within the special flood hazard area along the Indian River Lagoon when granted a waiver from the cut and fill balance requirements by the Board of County Commissioners. In the special flood hazard area of the Indian River Lagoon, an equal volume of storage capacity must be created for any volume of the base flood that would be displaced by fill or structures below elevation two and one-half (2.5) feet NAVD88, or the ten-year flood elevation which has been determined in the flood insurance study, whichever is greater. The board of county commissioners may, in its discretion, grant a waiver from the provisions of this subsection upon the affirmative showing of the applicant, by means of a competent engineering study, that the development project is situated in an estuarine environment and that the development project, as designed, will meet all other requirements of the stormwater management and flood protection chapter and will not create a material adverse impact on flood protection on other lands in the estuarine environment.”

DECISION

IRC 930.07(2)(i)1.a. allows for waivers to be considered for two different flood events. The first is a waiver of the 100-Year flood event while the site maintains the ability to compensate for the 10-Year storm event. If approved, a waiver of the 10-Year storm event which includes a part of the 100-Year storm event may be considered. Required storage for the two storm events are interconnected due to hydraulics. The applicant is requesting partial waivers for portions of each storm event.

REQUEST 1

Applicant requests a partial waiver of the 100-Year flood elevation in the amount of 82 acre-feet (131, 600 cubic yards) of storage; waiving 46% of requirement. In order to meet code requirements, the site would have to provide 179 acre-feet of storage. The site as designed is able to store 97 acre-feet (157,000 cubic yards); meeting 54% of the requirement.

REQUEST 2

Applicant requests a partial waiver of the 10-Year flood elevation in the amount of 24 acre-feet of storage (37,400 cubic yards); waiving 33% of requirement. In order to meet code requirements, the site would have to provide 72 acre-feet (115,400 cubic yards) of storage. The site as designed is able to store 48 acre-feet (78,000 cubic yards); meeting 67% of the requirement.

HARDSHIP

The natural ground elevation poses a problem for this site because much of the existing ground is at or below the seasonal high water table elevation requiring the site to be raised significantly to meet flood protection criteria. Providing additional flood plain storage on the site would cause lots to be lost. Currently the site has preliminary plat approval for 58 lots. If the waiver for a partial 100-Year cut and fill balance is not approved, the site would be limited to approximately 43 lots. Refer to Exhibit E, 10-yr Cut/Fill Balance with 100-Year Waiver exhibit. If the 10-Year waiver and the 100-Year waivers of the cut and fill balances are not approved, the site would be limited to approximately eight (8) lots. Refer to Exhibit F, 100-yr Cut/Fill Balance with no Waivers exhibit.

ENVIRONMENTAL CONSIDERATIONS

During the Preliminary Plat application stage, environmental considerations have been reviewed. The following is an excerpt from Quay Dock Landing Preliminary Plat staff report dated September 15, 2020, which was based on an Environmental Assessment Report that was reviewed and approved by staff.

Wetlands: Approximately 4.80 acres of estuarine wetlands exist on the project site. The applicant proposes to fill all 4.80 acres of estuarine wetlands, and mitigate the impacts to those wetlands through the purchase of mitigation credits from an off-site wetland mitigation bank. Prior to issuance of land clearing and tree removal

permits, the applicant must obtain a County wetlands resource permit and provide documentation that the mitigation credits have been secured for the project.

Uplands: Since the site is over 5 acres, the County's native upland set-aside requirement potentially applies. Because the site was previously cleared for agricultural use, there are no existing native uplands. Therefore, no native upland set-aside requirements apply to the proposed development.

NEIGHBORING IMPACTS

The site is bordered on the west by the Antilles Subdivision, the north by a single-family residence and Quay Dock Road, on the south by 63rd Street and the east by undeveloped impacts.

Antilles Subdivision

Homes within the Antilles Subdivision bordering Quay Dock Landing have finished floor elevations above 7.9 feet NAVD 1988. Approximately 15 feet of the rear Antilles properties drain offsite to the east. Quay Dock Landing proposes a rear lot swale which will collect the rear drainage area along with some of the Quay Dock Landing area and route to the Quay Dock Landing stormwater management system. No impacts are anticipated. Refer to the Preliminary Drainage Plan, Exhibit B.

North Property Line

An existing meandering swale exists along the north side of the property between Quay Dock Landing and a residence. A consistent bypass swale is proposed along the property line to maintain any the conveyance of offsite runoff. Refer to the Preliminary Drainage Plan, Exhibit B.

Consistent with the County Land Development Regulations, the site is limited to discharging stormwater runoff not to exceed predevelopment amounts for a 25-Year storm event. A 25-Year event is 9.2 inches of rainfall in a 24-hour period.

AVOIDANCE AND MINIMIZATION

The Applicant understands that the request includes partial waivers for both the 100-Year and 10-Year flood elevations. As such, the applicant is looking to limit the amount of fill needed for the development.

Florida Building Code requires the finished floor elevation to be one foot above the Base Flood Elevations (100 Year). Garages are allowed to be lower than the requirement when certain rules are met. The applicant proposes to reduce the fill required by using stem wall construction and to place the garage elevations lower than the requirement in accordance with the Florida Building Code and Federal Emergency Management Agency (FEMA) guidelines.

DIRECT FUNDING

No funding is required for this option.

POTENTIAL IMPACTS TO THE COUNTY

The County has adopted FEMA flood plain guidelines as provided in the Comprehensive Plan and Land Development Regulations. As part of the adoption process the County participates in the Community Rating System (CRS). Participating in the CRS allows County residents to purchase flood insurance at rates dependent upon the determined Class. The lower the Class the less the rates. The County is audited every three to five years to establish the CRS rating. The last Report of Audit is dated of April 27, 2022. A recertification of the County's adopted guidelines will occur in 2024.

During the 2022 CRS audit the County received 2,750 points (Class 5). The Class ratings and flood reduction rates are broken down as:

Class Rating	Points Required	Flood Reduction Rate In SFHA	Flood Reduction Rate Outside of the SFHA
4	3000 to 3499	30%	10%
5	2500 to 2999	25%	10%
6	2000 to 2499	20%	10%

SFHA = Special Flood Hazard Area, Zones A, AE, A1-A30, V, V1-V30, AO and AH

Cut and Fill requirements (also known as compensatory storage) as codified in IRC 930.07(2)(i)1.a. allows the County to receive points under FEMA Audit Activity 430, "Higher Regulatory Standards". Specifically, the subpart of 431a, "Development Limitations" and is credited under DL1b. According to the last Report of Audit, the County received 419 points for Activity 430. Staff has had discussions with its FEMA advisors regarding issuance of waivers. It has been indicated to us that waivers will cause the County to lose all allocated points for this subpart. In review of the prior audit, this would be approximately a 200 point reduction.

Therefore if 200 points are lost, and no additional points are gained through additional CRS activities, then the County would remain at a Class 5 Rating based on the prior audit. FEMA will be issuing a new CRS Manual prior to the next County audit. It is unknown as to how much of a point reduction this waiver will cause.

AVAILABLE OPTIONS

Staff has reviewed all provided data by the applicant and is able to present the following alternatives to the Board for its consideration.

Alternative No. 1

Deny both waiver requests.

Alternative No. 2

Approve the 100-Year flood plain waiver for 82 acre-feet (131,600 cubic yards) but require the project to meet the 10-Year flood cut and fill requirements with the expiration of the waiver to coincide with the Preliminary Plat approval expiration date (or any extension thereof).

Alternative No. 3

Approve the 100-Year flood plain waiver for 82 acre-feet (131,600 cubic yards) and then approve the 10-Year flood plain waiver of 24 acre-feet (37,400 cubic yards) with the expiration of the waiver to coincide with the Preliminary Plat approval expiration date (or any extension thereof).

STAFF RECOMENDATION

Staff recommends that the Board of County Commissioners approve the 100-Year flood plain waiver for 82 acre-feet (131,600 cubic yards) and then approve the 10-Year flood plain waiver of 24 acre-feet (37,400 cubic yards) with the expiration of the waiver to coincide with the Preliminary Plat approval expiration date (or any extension thereof).

ATTACHMENTS

1. Exhibit A, Location Map Street
2. Exhibit AA, Location Map Aerial
3. Exhibit B, Preliminary Drainage Plan with 100-Year and 10-Year Partial Cut/Fill Waivers
4. Exhibit C, 100-Year Flood Plain Location
5. Exhibit D, 10-Year Flood Plain Location
6. Exhibit E, 10-yr Cut/Fill Balance with 100 Year Partial Cut/Fill Waiver
7. Exhibit F, 100-yr Cut/Fill Balance with no Waivers
8. Exhibit G, Rise Exhibit

APPROVED AGENDA ITEM FOR DECEMBER 6, 2023