



MEMORANDUM

Date: May 12, 2025

Re: **Magic Beach Hotel: 50 Vilano Road, St. Augustine Beach, FL**
Building and Property Evaluation – Coastal Construction Regulations and Criteria

To: Rick Johnston

From: Elizabeth Fountain, P.E., CFM, JR Evans Engineering

The purpose of this memorandum is to provide a description of the critical site-specific design/construction criteria applicable to the project site per FEMA, Florida Department of Environmental Protection (FDEP), and Local (County) regulations. The information provided is critical to the feasibility of considering substantial improvements to the existing building and/or redevelopment of the property.

Site Information and Jurisdictions:

- The site is located at 50 Vilano Road, St. Augustine, FL 32084.
- Per current FEMA FIRM Panel 12109C0316J, dated December 7, 2018; the 50 Vilano Rd property is located partially Zone X Shaded (500-yr) and Zone X. The property is also adjacent to the FEMA Zone VE (EL 10), which is considered a Coastal High Hazard Area.
- Based on the current 1988 FDEP Coastal Construction Control Line (CCCL) boundary and recent Boundary Survey (2021), most of the 50 Vilano Rd property is located seaward of the 1988 CCCL boundary. Therefore, any substantial improvements to the existing buildings or redevelopment of the property are subject to FDEP's regulations for activities seaward of the CCCL.
- Based on recent available topographic data from U.S. Army Corps of Engineers (Dated 2024 Post Hurricane Milton, NAVD-88), the average existing ground elevations around the existing Magic Beach Hotel building are 9.0-9.5 FT-NAVD.
- Based on the 2024 topographic data, the existing elevations of Vilano Rd fronting the Magic Beach Hotel property range from 7.5 FT-NAVD to 9.5 FT-NAVD.
- Based on recent building inspections by Fisher/Koppenhafer, it is noted that the existing finished floor elevations of the Magic Hotel building are below the current grade of the adjacent areas/properties.
- It should be noted that Vilano Road also serves as vehicle access to the open beach along the Atlantic Ocean.

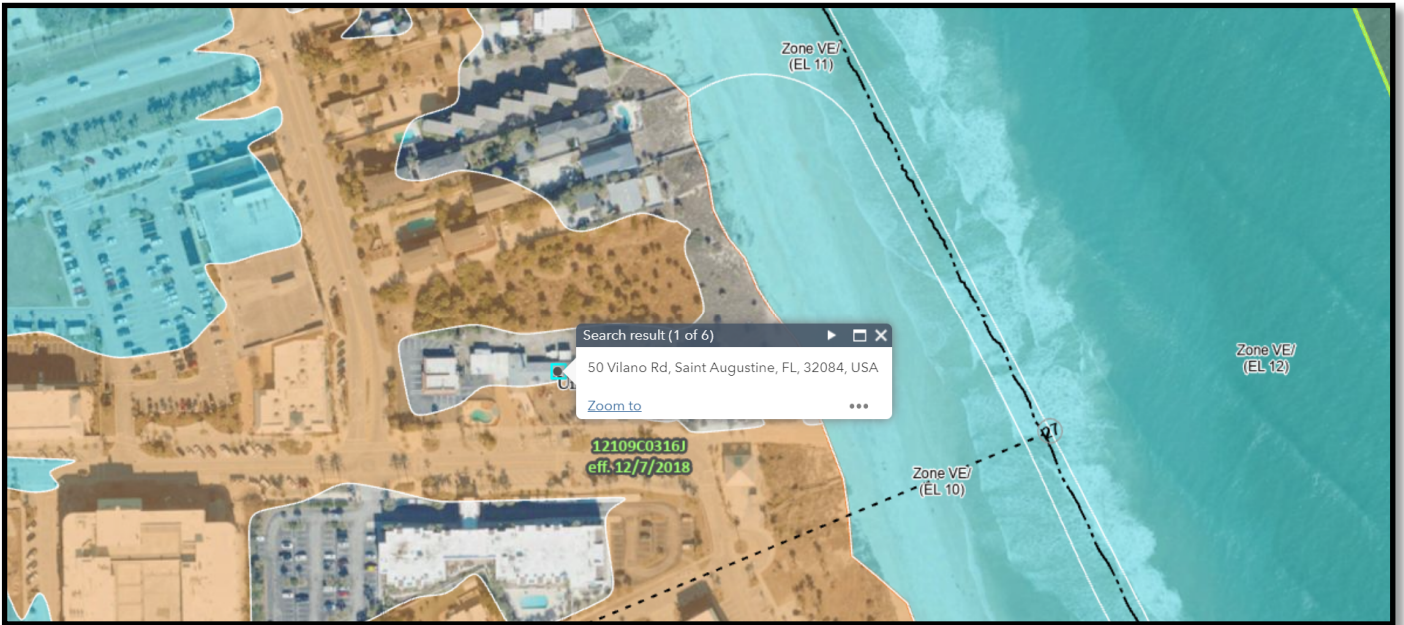
Provided on the following pages are the following maps:

- FEMA National Flood Hazard Layer Map of Property;
- FDEP CCCL Boundary Map of Property
- Recent Boundary Survey, prepared by Nicholas H. Franklin (2021)- *Partial View provided and Full View provided in Separate Attachment*
- Topographic Work Map, prepared by JR Evans Engineering – *Partial View provided, and Full View provided in Separate Attachment*

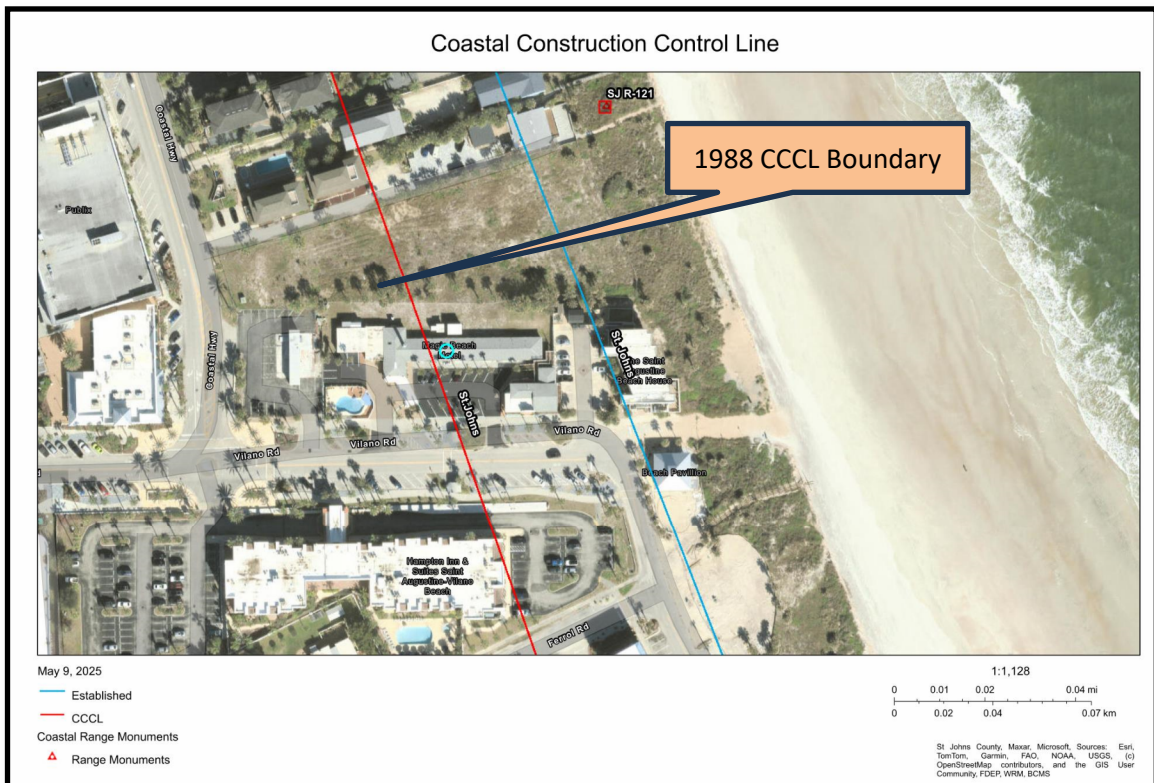
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FEMA National Flood Hazard Layer Map – 50 Vilano Road

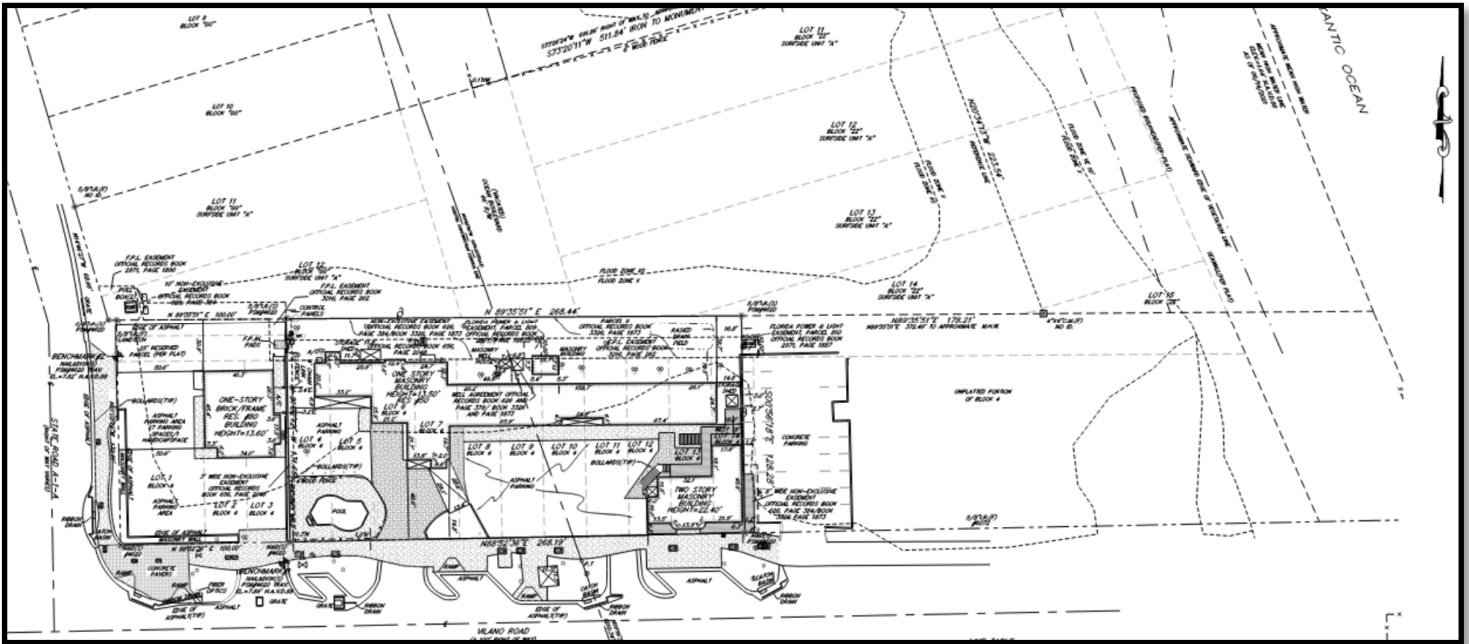


FDEP CCCL Boundary Map

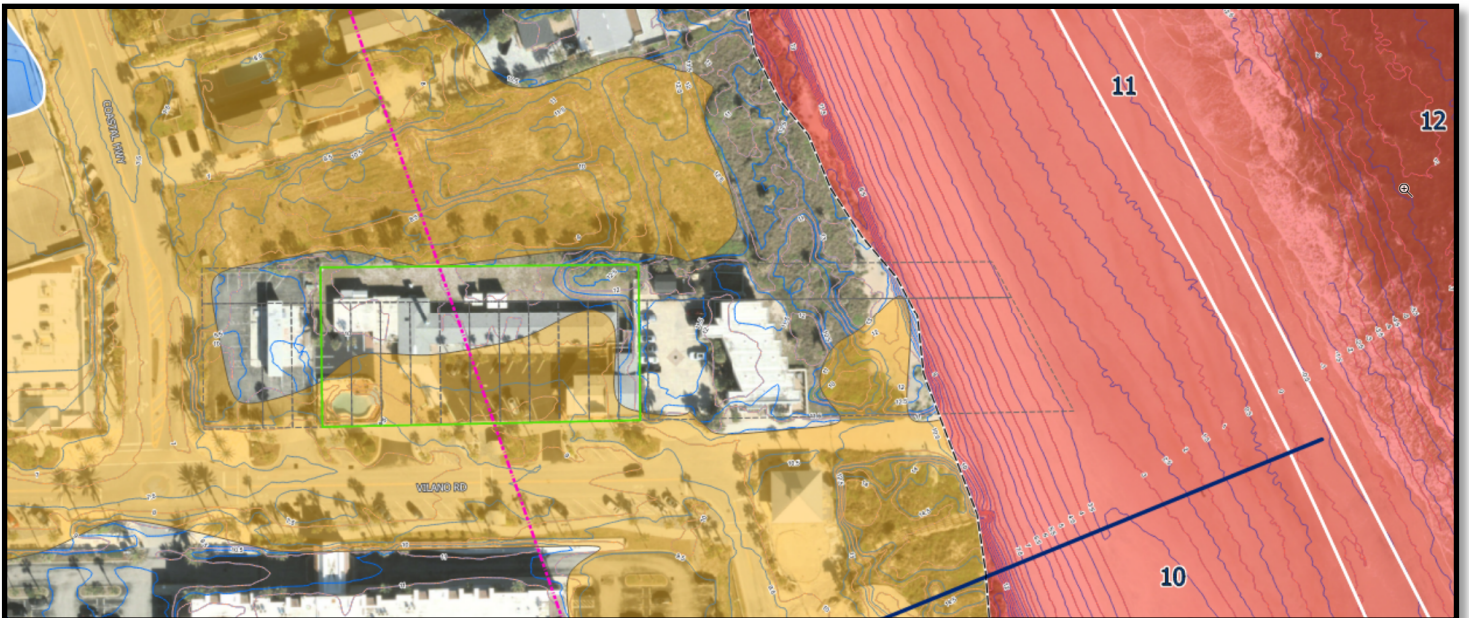
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2021 Boundary Survey



Topographic Work Map



FDEP Coastal Construction, Florida Building Code (FBC) and FEMA/Local Floodplain Regulations

For the evaluation of the feasibility of making substantial improvements to the existing Magic Beach hotel structure such that it can remain, careful consideration should be given to the criteria and regulations associated with FDEP's Coastal Construction Control Line boundary, State of Florida Building Code, FEMA's regulations and the local (County) Floodplain Damage Control criteria. Outlined below are the specific criteria and regulations and a description of how they impact the feasibility of maintaining the existing Magic Beach Hotel building.

Per the 2023 Florida Building Code, 8th edition, the term *Substantial Improvement* is defined as follows:

Any repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either:

- 1. Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that is the minimum necessary to assure safe living conditions.*
- 2. Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.*

I. FDEP Coastal Construction Control Line Boundary Regulations

- The Florida Department of Environmental Protection's (FDEP) Coastal Construction Control Line (CCCL) program regulates construction and activities seaward of the CCCL to protect the coastal environment.
- Per the current 2023 Florida Building Code, 8th Edition, Chapter 3109 Structures Seaward of a Coastal Construction Control Line; the provisions of this section shall apply to the design and construction of habitable structures, and substantial improvement or repair of substantial damage of such structures, that are entirely seaward of, and portions of such structures that extend seaward of, the coastal construction control line or seaward of the 50-foot setback line, whichever is applicable. In reference to Existing Structures, the provisions of this chapter do not apply to the modification, maintenance, or repair of existing habitable structures, provided all of the following apply to the modification, maintenance, or repair:
 - *It is within the limits of the existing foundation.*
 - *Does not require, involve, or include any additions to, or repair or modification of, the existing foundation.*
 - *Does not include any additions or enclosures added, constructed, or installed below the lowest floor or deck.*

Therefore, should the improvements, repairs or modifications to the existing structure involve changes to the existing foundation, then the structure will be required to comply with Chapter 3109 and all the provisions.

- Chapter 3109 outlines the specific design and construction criteria for habitable structures located seaward of the CCCL boundary. These provisions include the requirement of a pile supported foundation, elevation requirements for the lowest horizontal structural member, limitations on shear walls and specifications for walls located below the lowest habitable floor.
- Per the published *FDEP 100-Year Storm Elevation Requirements for Habitable Structures Located Seaward of the CCCL* document, FDEP has established specific 100-year storm design elevations and design grade



(scour elevations) for all coastal counties with established CCCL boundaries. The 100-year storm elevations are published per FDEP Range Monuments along the coastline.

- For the 50 Vilano Road property, the closest FDEP Range Monument is SJR-R-121. Based on this location, the published FDEP **100-Year Storm Elevation is 18.3 FT-NGVD/17.24 FT-NAVD**. Please see table below for further information. Therefore 17.24 FT-NAVD is the required minimum elevation for the **underside of the lowest horizontal structural member** for any proposed habitable structures on the property. In addition, the foundation system supporting the habitable structures needs to be designed based on a **scour/design grade of 4.14 FT-NAVD**. This will set the minimum elevations for pile caps or grade beams located below ground.
- Based on the potential upgrades, repairs or improvements to the existing Magic Beach Hotel building necessitating modifications to the existing foundation, the improvements would require compliance with FBC Chapter 3109, including a pile supported foundation.

NGVD
Conversion = 1.056 FT

County	From/To	Range Monument ID	Northing	Easting	100 - Year Storm Elevation (ft.)	100 - Year Storm Design Grade Elevation (ft.)
Duval	---	R065	2166477.950	376962.230	17.8	5.5
Duval	---	R066	2165503.710	377128.900	17.8	5.5
Duval	---	R067	2164537.930	377282.630	17.9	5.5
Duval	---	R068	2163568.490	377370.490	17.9	5.5
Duval	---	R069	2162545.010	377609.890	17.9	5.5
Duval	---	R070	2161538.130	377806.140	17.9	5.5
Duval	---	R071	2160628.050	377970.770	18.0	5.5
Duval	---	R072	2159634.440	377925.080	18.0	5.5
Duval	---	R073	2158689.490	378368.780	18.0	5.5
Duval	---	R074	2157807.880	378527.330	18.0	5.5
Duval	---	R075	2156845.480	378751.490	18.0	5.5
Duval	---	R076	2155824.500	378949.770	18.1	5.5
Duval	---	R077	2154887.990	379129.990	18.1	5.5
Duval	---	R078	2154052.170	379268.560	18.1	5.5
Duval	---	R079	2153053.480	379439.700	18.1	5.5
Duval	---	R080	2151939.290	379681.720	18.1	5.5
St. Johns	From	R001	2151940.349	379681.864	17.3	5.2
St. Johns	To	R045	2107393.562	389799.320	17.3	5.2
St. Johns	From	R067	2084801.704	394430.910	16.5	5.2
St. Johns	To	R117	2034104.349	406102.112	16.5	5.2
St. Johns	---	R118	2033084.256	406485.121	17.6	5.2
St. Johns	---	R119	2032061.729	406921.041	18.2	5.2
St. Johns	---	R120	2031034.982	407363.865	17.9	5.2
St. Johns	---	R121	2030032.197	407769.343	18.3	5.2
St. Johns	---	R122	2027528.141	406881.407	17.3	5.2
St. Johns	---	R142	2007878.972	415752.124	18.6	5.2
St. Johns	---	R143	2006063.238	415707.466	18.4	5.2
St. Johns	---	R144	2005831.246	415575.231	18.6	5.2
St. Johns	---	R145	2004803.947	415597.979	18.0	5.2
St. Johns	---	R146	2003809.066	415674.148	17.5	5.2
St. Johns	---	R147	2002764.080	415575.260	17.0	5.2
St. Johns	---	R148	2001825.744	415872.102	17.0	5.2
St. Johns	---	R149	2000819.459	415927.813	16.4	5.2
St. Johns	---	R150	1999839.248	416062.115	15.8	5.2
St. Johns	---	R151	1998834.381	416040.556	15.5	5.2
St. Johns	---	R152	1997849.499	416108.848	16.1	5.2
St. Johns	---	R199	1950313.292	428953.791	16.1	5.2
St. Johns	---	R200	1949336.572	429186.976	18.0	5.2
St. Johns	---	R209	1940544.778	431959.225	18.0	5.2

17.24 FT- NAVD 4.14 FT-NAVD

Revised Feb 2002 18

FDEP Published 100-yr Storm Elevations

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II. FEMA and County Flood Damage Control Regulations

- Per the current FEMA Map, the closest adjacent base flood elevation (BFE) associated with the property is 10.0 FT-NAVD. The existing Magic Beach Hotel building is located within areas mapped as Zone X (Shaded) and Zone X (Unshaded). Zone X (Shaded) represents areas identified by FEMA as being within the 0.2% annual chance floodplain (500-year flood), but outside the 1% annual chance floodplain (100-year flood), as determined by the 2018 Flood Insurance Study (FIS) for St. Johns County.
- Based on St. Johns County Land Development Code, Article III., Section 3.03.00 Flood Damage Control Regulations, and specifically Section 3.03.02 Applicability, C.: The County's Floodplain Administrator will utilize the following criteria to establish a Flood Hazard Area:

- C. Basis for Establishing Flood Hazard Areas

The FIS for St. Johns County, Florida and Incorporate Areas dated December 7, 2018, and all subsequent amendments and revisions, and the accompanying FIRM, and all subsequent amendments and revisions to such maps, are adopted by reference as a part of these regulations and shall serve as the minimum basis for establishing Flood Hazard Areas. Studies and maps that establish Flood Hazard Areas are on file at the Building Department, 4040 Lewis Speedway, St. Augustine, Florida 32084.

1. Submission of Additional data to Establish Flood Hazard Areas

To establish Flood Hazard Areas and base flood elevations, pursuant to Section 3.03.05, below, the Floodplain Administrator may require submission of additional data. Where field surveyed topography prepared by a Florida licensed professional surveyor or digital topography accepted by the community indicates that ground elevations:

a. Are below the closest applicable base flood elevation, even in areas not delineated as a special Flood Hazard Area on a FIRM, the area shall be considered as Flood Hazard Area and subject to the requirements of these regulations and, as applicable, the requirements of the Florida Building Code.

b. Are above the closest applicable base flood elevation; the area shall be regulated as special Flood Hazard Area unless the applicant obtains a Letter of Map Change that removes the area from the special Flood Hazard Area.

2. The Floodplain Administrator may accept the use of best available data providing it is more stringent than that provided on the FIRM.

- Understanding that the existing 2024 topographic data for the subject property indicates elevations which are lower than the closest applicable base flood elevation of 10.0 FT-NAVD, the County would designate the property as a Special Flood Hazard Area (SFHA-Flood Zone) with respect to construction activities within SFHAs. This designation affects any evaluation under the Substantial Improvement/Substantial Damage (SI/SD) rules governed by the National Flood Insurance Program (NFIP) and enforced via the FBC 50% Rule.
- If any proposed upgrades, repairs, or improvements to the Magic Beach Hotel are deemed to meet the threshold for Substantial Improvement, then full compliance with Chapter 3109 of the Florida Building Code, ASCE 24-24, and local Flood Damage Control Regulations would be required. Due to these regulatory



constraints, compliance would necessitate demolition of the existing structure and reconstruction in accordance with current code requirements for buildings seaward of the Coastal Construction Control Line (CCCL).

III. **Additional Considerations**

- It is important to note that the beach and dune system located immediately seaward of the Magic Beach Hotel has been subject to ongoing erosion and storm-related impacts, as documented through aerial imagery and topographic data since 2016. According to the most recent 2024 topographic data and aerial photography, the dune width in this area has decreased by approximately 60 feet. This reduction demonstrates the dune's vulnerability to erosion, thereby diminishing its effectiveness as a natural barrier against storm surge and wave impacts.
- Additionally, given that the existing elevations along Vilano Road are at or below the applicable Base Flood Elevation (BFE) of 10.0 FT-NAVD, there is significant potential for coastal floodwaters to breach this corridor and directly impact the Magic Beach Hotel property.

It is my professional opinion that any substantial repairs or upgrades to the Magic Beach Hotel building would trigger the Florida Building Code's Substantial Improvement/Substantial Damage (50% Rule), as outlined in Section 1612 of the Florida Building Code (FBC) and FEMA regulations. This would require the existing hotel structure to be demolished, and a new structure constructed in full compliance with the current Florida Building Code Chapter 3109 provisions for buildings located seaward of the Coastal Construction Control Line (CCCL), as well as with Florida Department of Environmental Protection (FDEP) Chapter 62B-33, F.A.C., which governs coastal construction.

I trust this report has provided a detailed and thorough review of the applicable Federal, State and Local regulations applicable to the evaluation of the feasibility of modifications or upgrades to the existing Magic Beach hotel building. Should there be any additional questions concerning these matters, please contact our office.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Elizabeth Fountain', is positioned above the printed name.

Elizabeth Fountain, P.E., CFM
Senior Vice President
FL License No. 60077



Attachments:
Boundary Survey

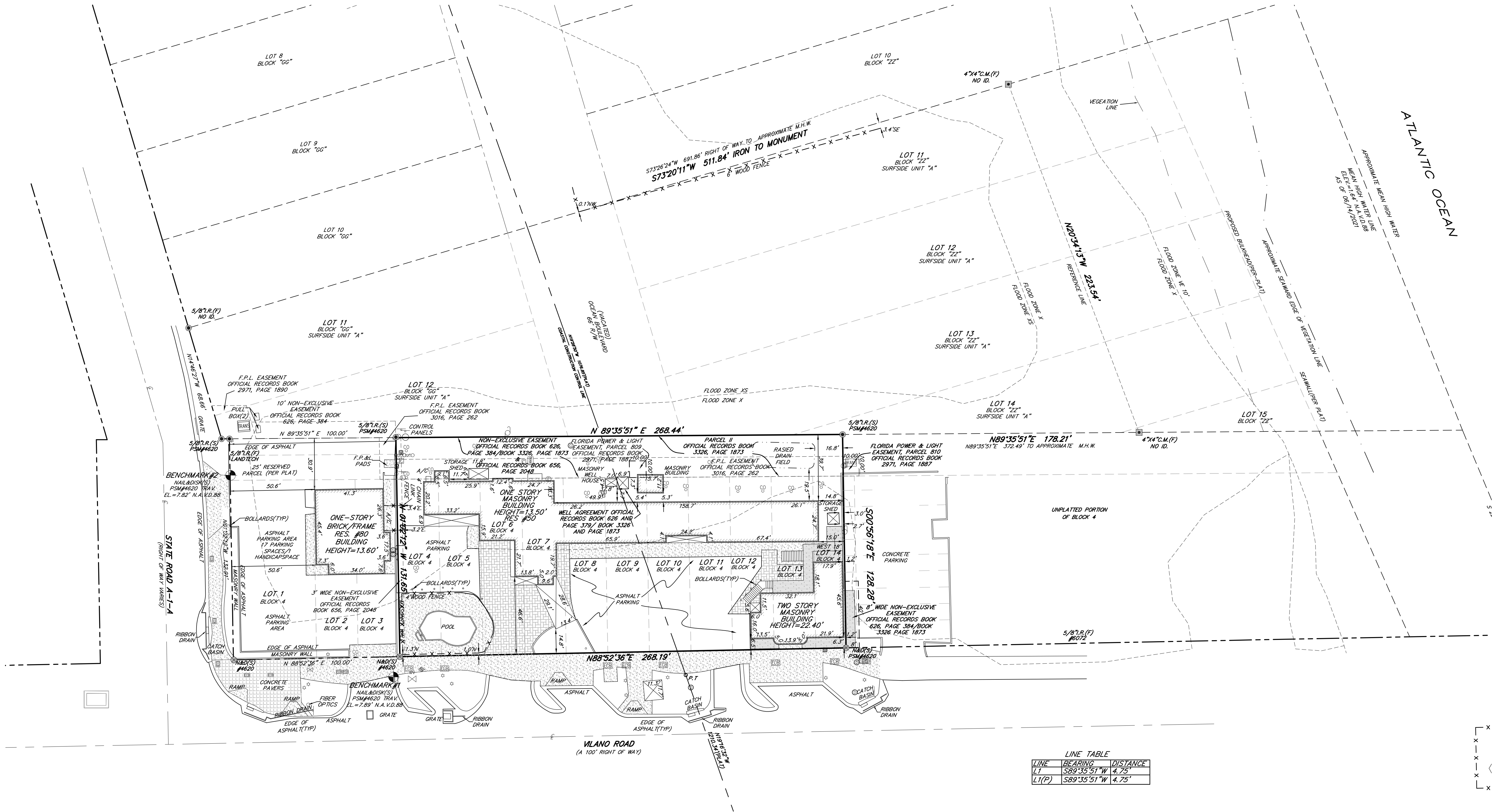
MAP SHOWING SURVEY OF

PARCEL 1
LOTS 4, 5, 6, 7, 8, 9, 10, 11, 12 AND 13 AND THE WEST 18 FEET OF LOT 14, BLOCK 4, VILANO BEACH, UNIT A, ACCORDING TO THE MAP OR PLAT THEREOF, AS RECORDED IN MAP BOOK 4, PAGE 48, OF THE PUBLIC RECORDS OF ST. JOHNS COUNTY, FLORIDA.

PARCEL 2
A PARCEL OF LAND 25 FEET IN WIDTH IN VILANO BEACH, UNIT A, ACCORDING TO THE MAP OR PLAT THEREOF, AS RECORDED IN MAP BOOK 4, PAGE 48, OF THE PUBLIC RECORDS OF ST. JOHNS COUNTY, FLORIDA, SAID PARCEL OF LAND BEING THAT PART OF THE 25 FOOT WIDTH STRIP OF LAND DESIGNATED AS "RESERVED" AND LYING BETWEEN THE NORTHERLY EXTENSION OF THE WEST LINE OF LOT 4, BLOCK 4 AND THE EAST LINE OF THE WEST 18 FEET OF LOT 14, BLOCK 4, OF SAID SUBDIVISION.

PARCELS 3
TOGETHER WITH THE NON-EXCLUSIVE EASEMENT FOR UTILITIES AND INGRESS AND EGRESS AS SET FORTH AND MORE PARTICULARLY DESCRIBED IN THAT GRANT OF NON-EXCLUSIVE REEASEMENT RECORDED IN OFFICIAL RECORDS BOOK 626, PAGE 384, CORRECTED IN OFFICIAL RECORDS BOOK 970, PAGE 576, AS AFFECTED BY AGREEMENT GRANTING EASEMENT RECORDED IN OFFICIAL RECORDS BOOK 3326, PAGE 1873, PUBLIC RECORDS OF ST. JOHNS COUNTY, FLORIDA.

CERTIFIED TO:
SHIVAM PROPERTY MANAGEMENT, LLC, A FLORIDA LIMITED LIABILITY COMPANY
COMMUNITY FIRST CREDIT UNION
OLD CITY LAW, PLLC
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY



LINE	BEARING	DISTANCE
L1	S89°35'51"W	4.75'
L1(P)	S89°35'51"W	4.75'

GRAPHIC SCALE
30 0 15 30
1"=30'

AREA = ±0.80 ACRES
OR ±34,871 sq. ft.

LEGEND

A/C - AIR CONDITIONER PAD
ID. - IDENTIFICATION
N.A.V.D. - NORTH AMERICAN VERTICAL DATUM
sq. ft. - SQUARE FEET
I.P.(F) - IRON PIPE FOUND
I.R.(F) - IRON ROD FOUND
I.R.(S) - 5/8" IRON ROD SET (PSM #4620)
W.P. - WOOD POWER POLE
OHC - OVERHEAD UTILITIES
CONC. - CONCRETE
W.D. - WOOD DECK
U.G. - UNDERGROUND GAS
LIFT STATION
CLEANOUT
ELECTRIC TRANSFORMER
ELECTRIC CONTROL BOX
TOW - TOP OF WALL

RES. - RESIDENCE
CEN. - CENTERLINE
D.N.T. - DENOTES NOT TO SCALE
W.M. - WATER METER
EXPOSED CONCRETE
COVERED AREA
TYP. - TYPICAL
BRICK PAVERS
WOOD DECK
LAMP POST
DRAINAGE MANHOLE
SEWER VALVE
ELECTRIC METER
SIGN POST
BACK FLOW PREVENTOR

SURVEYOR'S NOTES:

1. REFERENCE MONUMENTS FOR THE SUBJECT PROJECT LOCATED BY SPECTRA PRECISION EPOCH 50 GNSS RECEIVER (NETWORK ROVER) UTILIZING THE FDOT FFRN (FLORIDA PERMANENT REFERENCE NETWORK).

STATEPLANE COORDINATE SYSTEM:
ZONE: FLORIDA EAST
DATUM: NAD83/90
UNITS: U.S. SURVEY FOOT

2. THE PROCEDURES AND OR NETWORK DESIGN MEET THE GEODETIC ACCURACY STANDARDS AND SPECIFICATIONS FOR USING GPS RELATED POSITIONING AS SET FORTH BY THE FEDERAL CONTROL SUB-COMMITTEE IN THEIR MOST CURRENT PUBLICATION FOR 3RD ORDER CLASS 1 HORIZONTAL CONTROL SURVEY.

3. THE RECORD STATEPLANE COORDINATES SHOWN HEREIN WERE CONVERTED FROM NAD27 TO NAD83 USING CORPSSOFT V6.0.1

4. ACCURACY IS WITHIN 1"± WITH REFERENCE TO US ARMY CORPS OF ENGINEERS' INTRACASTAL WATERWAY CHANNEL DATA.

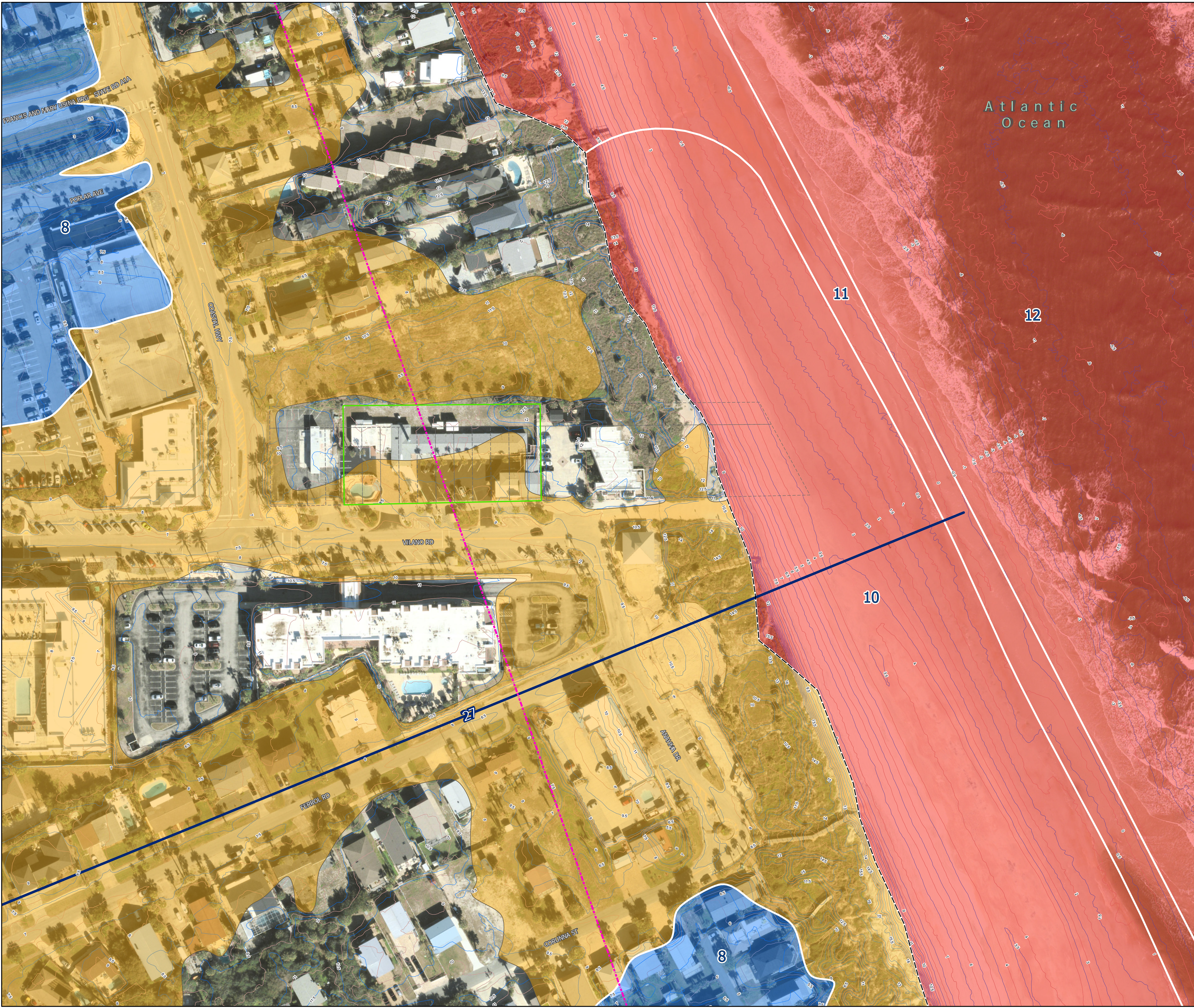
5. TREES - THERE ARE NO HARDWOODS OR OTHER SPECIMAN TREES REQUIRED TO BE LOCATE. ONLY SCATTERED PALM TREES THROUGHOUT THE SITE.

GENERAL NOTES:
- The accuracy of this survey is based on the accuracy of the data provided to the surveyor.
- The surveyor is not responsible for the accuracy of the data provided to the surveyor.
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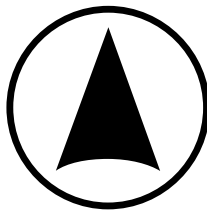
According to the Federal Emergency Management Agency (FEMA) Flood Map No. 18194-D-106A, the property described herein appears to lie in Zone ASX1E 19 effective date 12/01/2018. BEING 6055 ASSUMED.
- Basis of bearing structure: BEING 6055 ASSUMED.
- Basis of elevation: N.A.V.D. 89.
- Date of survey: 04/14/2021.
- Date of map: 04/14/2021.
- Scale: 1" = 30'.
- Surveyor: MICHAEL H. PRINCE, P.E., S.U.C. 14516.
- Station: 61170 A.A.
- Address: 1300 N. W. 10th Ave., Suite 100, Fort Lauderdale, FL 33304.
- Phone: (954) 471-6877.
- Fax: (954) 471-6876.
- Email: info@landtech.com.
- Website: www.landtech.com.
- Copyright 2021. All rights reserved.



Attachments:
Topographic Map



Scale: 1" = 60 FT

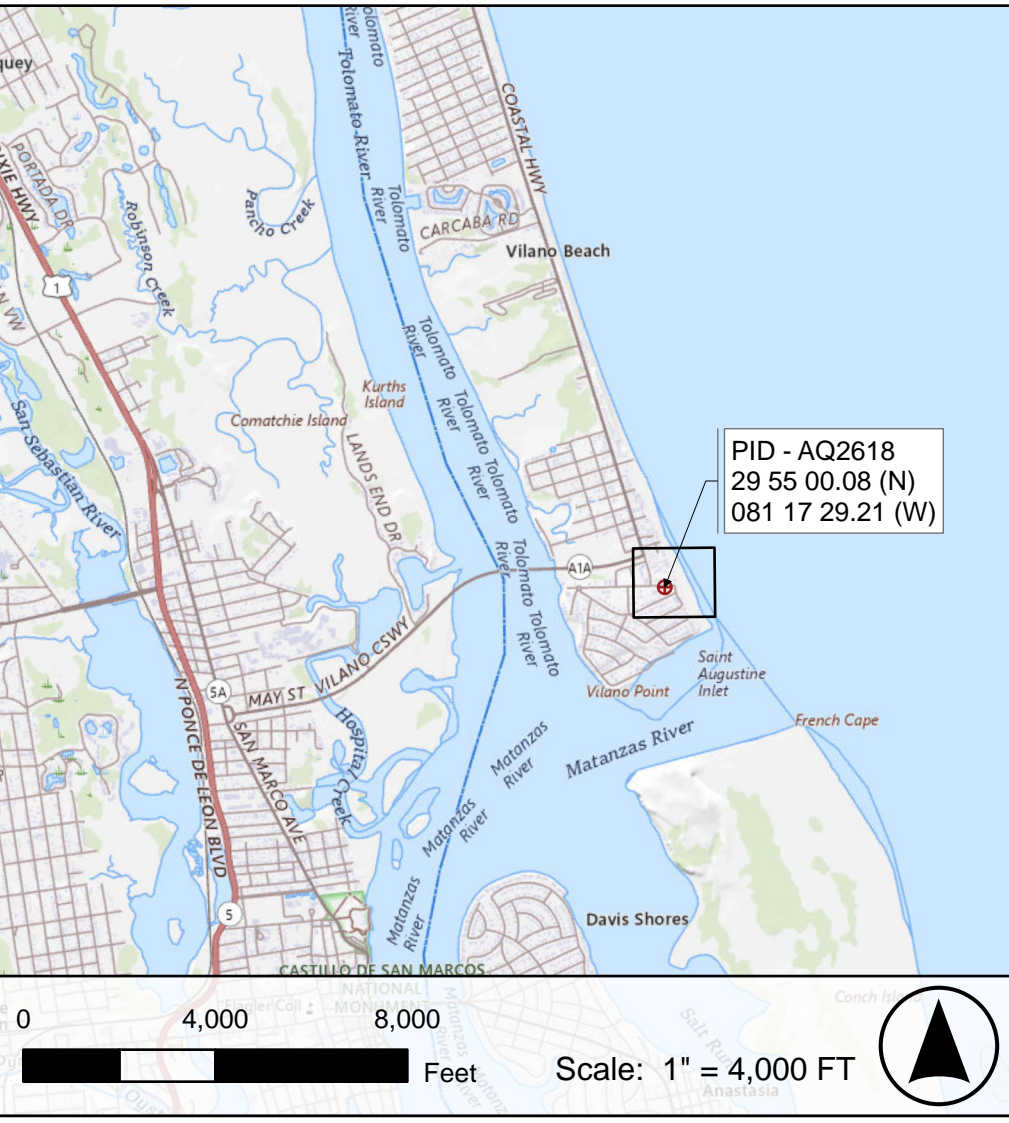


Legend

- BFE** Effective BFE (FT-NAVD)
- PFD
- FDEP CCCL (1988)
- FEMA Coastal Transect
- Existing 1ft Contour
- Existing 0.5ft Contour
- Property Boundary
- - - Lot Lines
- Effective Zone AE
- Effective Zone VE
- Effective Zone X (Shaded)
- Effective Zone X (Unshaded)

Map Notes

- COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE FLORIDA EAST FIPS 0901 FT US PROJECTION: TRANSVERSE MERCATOR
- 2024 AERIAL IMAGERY OBTAINED FROM ESRI.
- CONTOURS AND ELEVATIONS WERE OBTAINED BY J.R. EVANS ENGINEERING FROM THE 2024 USACE FEMA TOPOBATHY LIDAR DEM: POST HURRICANE MILTON, FL (NAVD 88).



<div><div></div><div>J.R. EVANS ENGINEERING</div></div>	J.R. EVANS ENGINEERING, P.A. 9961 INTERSTATE COMMERCE DRIVE, SUITE 230 FORT MYERS, FLORIDA 33913 PHONE: (239) 405-9148 FAX: (239) 288-2537 WWW.JREVAENGINEERING.COM		50 Vilano Rd St Augustine St. Johns County, FL		PROJECT #: 01309-00
					FILE DATE: 5/9/2025
					DESIGN BY: EAF
					DRAWN BY: MH
					SCALE: AS SHOWN
TOPOGRAPHIC WORK MAP			ELIZABETH A. FOUNTAIN, P.E. FL. LICENSE NO. 60077 FL. COA #29226		
REVISIONS			SHEET: 1 of 1		
1.)					
2.)					
3.)					
4.)					
5.)					