

**Florida
Environmental
Consulting, Inc.**



Environmental Impact Report

For:

495 W Merritt Ave Merritt Island



Prepared for:

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4/28/2022

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Certification #77283

FEC Job #22-164



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1.0 Executive Summary

The 495 W Merritt Ave property development:

- is approximately 2.12 acres in Brevard County, Florida.
- is one undeveloped parcels along W Merritt Ave proposed for land development improvements.
- contains mostly moderately well drained sandy soils.
- is at approximately elevation 10.
- is mostly in Flood Zone X and is partially in flood zone AE-5.
- was mostly cleared of vegetation
- contains some pines, palms, and oaks.
- does not support scrub jays.
- does not support the gopher tortoise.
- does not contain jurisdictional wetlands above the shoreline of the Indian River Lagoon.
- may impact native trees.
- may require additional environmental permitting for dock or pier construction.
- if not properly planned and permitted may cause adverse environmental impacts to native trees and submerged resources of the Indian River Lagoon.

2.0 Environmental Impact Report

2.1 Objective

In April of 2022 Environmental Specialists from *Florida Environmental Consulting Inc.* performed an environmental impact study of the 495 W Merritt Ave. property. The objective of this study was to assess and report on the baseline environmental condition of the subject site as well as to discuss how developing this site may impact the environment.

2.2 Introduction

The subject property is parcel ID 24-36-35-26-*-10 and is in section 35 of township 24, range 36 of Brevard County, Florida. More specifically, on the west side of N. Tropical Trail, south of W Merritt Ave. It is comprised of approximately 2.12 acres of undeveloped lands, at 28°21'38.4"N 80°42'28.1"W and is currently proposed for land development. Please see the maps and other reference materials in the appendix of this report.

2.3 Materials and Methods

The site assessment included preliminary research of the site and surrounding area to determine what type of ecological community to expect as well as what types of individual flora and fauna may be found on site. This preliminary research included; Geographic Information Systems (GIS) Mapping, aerial interpretation, Florida Department of Environmental Protection (FDEP) Environmental Resource Analysis, and assessing the potential for species and habitats listed by the City, County, St. Johns River Water Management District (SJRWMD), Florida Natural Areas Inventory (FNAI), Florida Fish and Wildlife Conservation Commission (FWC), and the U.S. Fish and Wildlife Service (FWS).

The site assessment also included traversing and observing communities adjacent to and within the site. During the site assessment community types, vegetation, wildlife, and other pertinent observations were noted.

2.4 Soils

According to the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) the property contains 2 major soil types more specifically described as:

Soil 52, *Quartzipsammments, smoothed*, characterized as moderately well drained sand with a water table typically about 24-60 inches below the surface with no typical frequency of ponding or flooding.

Soil 36, *Myakka sand*, 0 to 2 percent slopes, characterized as poorly drained sand with a water table typically about 6-18 inches below the surface with no typical frequency of ponding or flooding.

2.5 Hydrology

This project is in hydrologic basin 21, the *Northern Indian River Lagoon* basin, and the United States Geological Survey (USGS) Topographic Map in the Appendix shows the area as generally flat with stormwater runoff sheet flowing towards the Indian River. Using the North American Vertical Datum of 1983 (NAD83) the natural ground grade is approximately elevation 10 and according to the Flood Hazard Map in the Appendix, this area is largely not in a flood plain and as such is considered Flood Zone X, however the waterfront portion is partially in flood zone AE-5.

2.6 Flora

As noted in the introduction the property is one parcel totaling approximately 2.12 acres of vacant partially cleared land. The flora of the property has already been impacted by historic clearing, however the site exhibits remnant Hardwood/Conifer mixed habitat characteristics (FLUCCS 4340). Please see the Aerial LULC Map and Site Photos in the Appendix.

The notable flora included a slash pine (*Pinus elliottii*), live oak (*Quercus virginiana*), and cabbage palms (*Sabal palmetto*) with railroad vine (*Ipomoea pes-caprae*), exotic Brazilian Pepper (*Schinus terebinthifolia*), Boston fern (*Nephrolepis exaltata*), sand-spurs (*Cenchrus spinifex*), and muscadine grape (*Vitis rotundifolia*), and miscellaneous grasses and forbes.

No species of flora was observed on site listed by the County, Florida Natural Areas Inventory, Florida Fish and Wildlife Conservation Commission, or U.S. Fish and Wildlife Service, as Endangered, Threatened, or a Species of Special Concern.

2.7 Fauna

Possibly due to the clearing activity and other surrounding development, the fauna was found to be somewhat limited. The species directly observed and evidenced on site were squirrels (*Sciurus carolinensis*), spiders (*Arachnida spp.*), eastern lubber grasshopper (*Romalea microptera*), ants (*Formicidae spp.*), and anoles (*Anolis spp.*). Additionally, ospreys (*Pandion haliaetus*), were seen flying overhead as well as at an offsite nesting site.

Additionally, there were no gopher tortoise (*Gopherus polyphemus*) burrows nor individuals observed, and the site does not contain scrub jay habitat (*Aphelocoma coerulescens*) and was specifically outside the quarter-mile survey threshold from the nearest occupied scrub jay territory or suitable habitat.

2.8 Wetlands

Based on topography and aerial interpolation in conjunction with the soils survey publication and given the proximity to the Indian River, wetlands were not suspected, and this was confirmed in the field. However, the area below the high-water line of the Indian River would be considered protected waters of the State.

Please see the National Wetland Inventory Map in the Appendix of this report.

2.9 Summary and Discussion

In summary, the 495 W Merritt Ave property is approximately 2.12 acres of partially cleared, vacant unimproved land in Brevard County, Florida. The property is in Flood Zone X and partially in flood zone AE-5, contains poorly drained sandy soils at elevation 10, directly adjacent to the Indian River.

Further, as stated above the property does contain some native oaks and palms, and though these trees may be cleared with a permit, it is recommended that micro-site-planning be looked into in an effort to save trees as best practical. Specifically cabbage palms over 10 feet in trunk height, as well as oaks require individual tree protection or possible mitigation if proposed for removal.

Finally, based on the property having frontage on the Indian River Lagoon, if a dock or pier is proposed additional Environmental Resource Permitting including water depths, potential seagrass coverage, and manatee protection may be required.

2.10 Conclusion and Recommendations

In conclusion, without proper planning and permitting, improvements to the 495 W Merritt Ave. property could cause adverse environmental impacts to native trees and submerged resources of the Indian River Lagoon.

It is recommended to preserve or mitigate applicable native palms and oaks as best practical, as well as utilize micro-site planning to avoid and minimize such impacts. Additional environmental planning and permitting is also recommended if a future dock or pier is proposed.

Please contact Florida Environmental Consulting, Inc. with any questions or comments regarding this report or for any additional specific consulting.

2.11 Qualifications of Individual Preparing Report

Florida Environmental Consulting is a Florida registered environmental consulting firm, the person who prepared this report is the president of the company, and his signature and seal on the cover of this document demonstrate that he is in responsible charge of the information provided. He is a Certified Environmental Consultant and Environmental Specialist. Additionally, he has a Bachelor of Science in Environmental Science from the University of

Florida with a minor in Natural Resource Management, along with 22 years of experience. Finally he is a member of the National Association of Environmental Professionals, and the Environmental Assessment Association where a code of ethics and personal commitment to quality work is upheld.

3.0 Appendix

- 3.1 Location Map**
- 3.2 Soils Map**
- 3.3 Topographic Map**
- 3.4 Flood Map**
- 3.5 Land Use Land Cover Map**
- 3.6 National Wetland Inventory Map**
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LOCATION

MERRITT ISLAND EIR

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Legend

Subject Parcel

Florida Soils

- Myakka sand
- Myakka-Urban land complex
- Paola-Urban land complex, 0 to 8 percent slopes
- Quartzipsamments, smoothed
- Waters of the Atlantic Ocean

SOILS

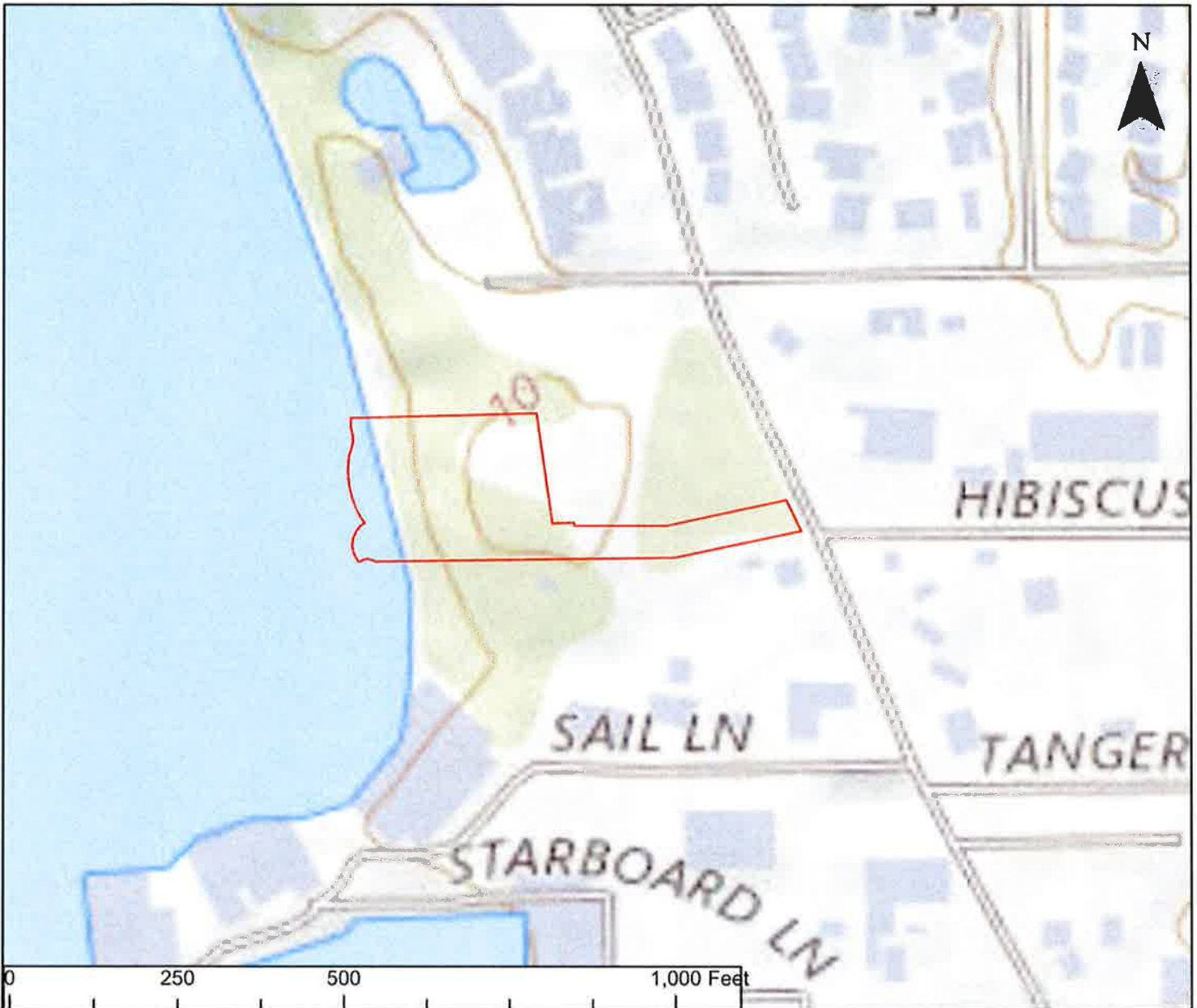
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TOPO

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Subject Parcel

USA Flood Hazard



0.2% Annual Chance Flood Hazard



1% Annual Chance Flood Hazard

FLOOD HAZARD

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LANDUSE

1200: Medium Density, 2>5 dwelling units/acre, 1200: Medium Density, 2>5 dwelling units/acre

1300: High Density, 6 or more dwelling units/acre, 1300: High Density, 6 or more dwelling units/acre

1400: Commercial and Services, 1400: Commercial and Services

4340: Upland Mixed - Coniferous / Hardwood, 4340: Upland Mixed - Coniferous / Hardwood

5400: Bays and Estuaries

LULC

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FL Wetlands

Estuarine and Marine Deepwater

NWI

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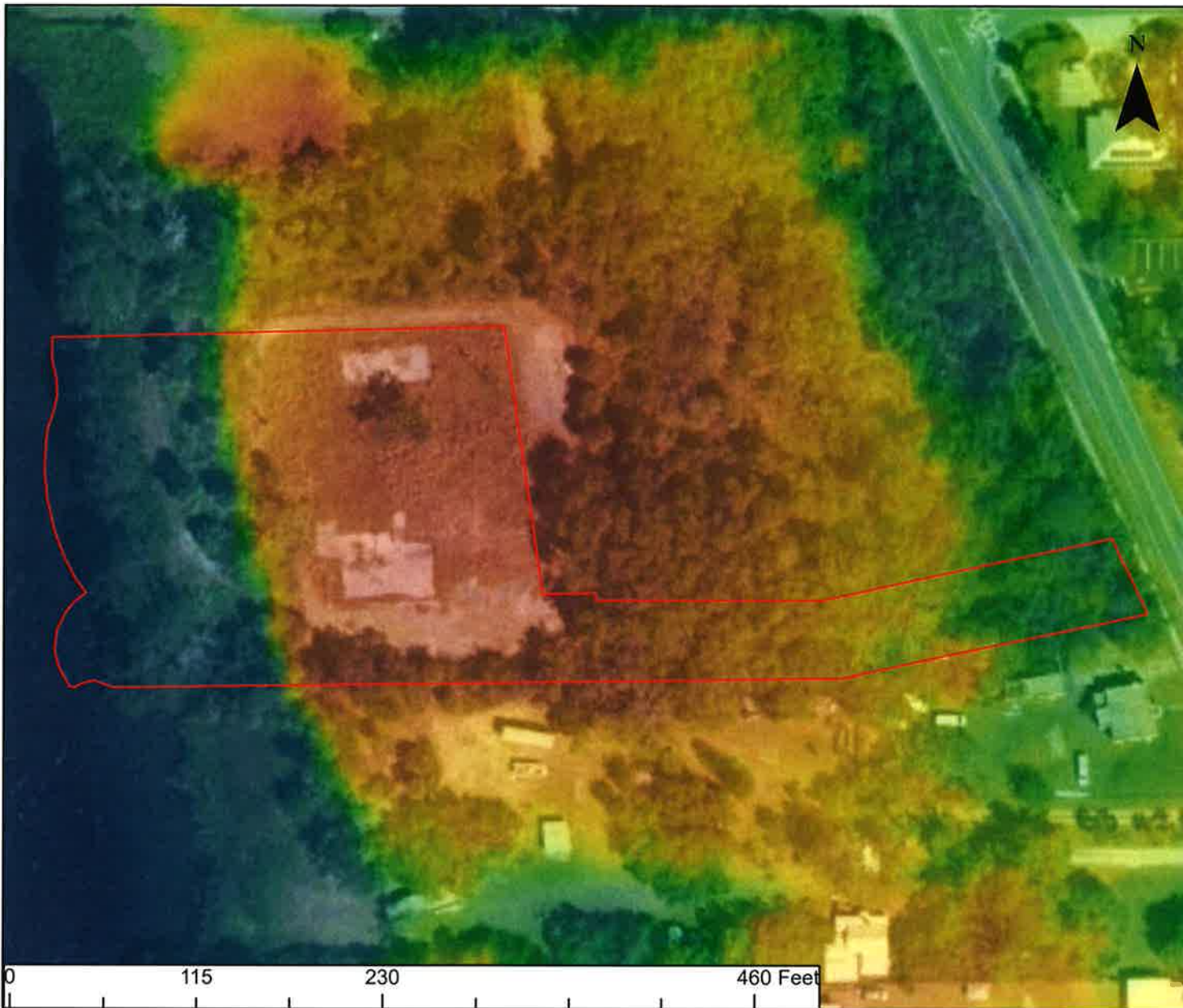
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Subject Parcel





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