Resolution 2021-60 Exhibit D

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Environmental and Permitting Services

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October 13, 2021

Harvey Gonzalez
Morgan Group
2750 NW 3rd Avenue, Suite 2
Miami, FL 33127

Proj: Anclote Harbor Site – Pinellas County, Florida
(BTC File #1119-03)
Re: Wetland and Upland Buffer Enhancement Plan

Dear Mr. Gonzalez:

Based on the site plan provided by Kimley Horn, the Anclote Harbor Project Site is proposing to impact two isolated wetland systems (0.78 acres and 0.14 acres) that total 0.92 acres. A Unified Mitigation Assessment Methodology (UMAM) evaluation has been conducted on the proposed wetland impacts that require mitigation, as well as the enhancement of the remaining post-development on-site wetlands (22.08 acres). The UMAM evaluation calculated a 0.39 functional loss with the proposed direct wetland impacts and a 1.77 functional gain with the on-site wetland enhancement. Therefore, the proposed wetland impacts should be more than offset with the on-site wetland enhancement activities. The following provides details to the proposed wetland enhancement plan:

BEST MANAGEMENT PRACTICES
ANCLOTE RIVER WATERSHED MANAGEMENT PLAN

Section 5.2 - Natural System Enhancement East of US Highway 19 North within the Anclote River Watershed Management Plan (ARWMP) provides recommendations for Best Management Practices (BMP's) that will be followed and/or have already been provided. These recommendations include,

- Mapping and ecological assessment of the existing natural systems. (*Please see Environmental Assessment*)
- Confirmation of bald eagle nest location and activity of the nest by Florida Fish and Wildlife Conservation Commission. (*Please see Environmental Assessment*)

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- Identification of area for improved habitat and scenic view, including removal of Brazilian pepper and selective planting of appropriate vegetation.
  (*This document provides information for above recommended BMP*)

WETLAND ENHANCEMENT

In order to enhance and restore the 22.08 acres of on-site wetlands and associated upland buffers in the post-development condition, an initial maintenance event will be implemented with the goal of elimination of existing exotic vegetative species. Once maintenance activities have eliminated the exotic vegetation, the wetlands and upland buffers will then be planted with the following species, See Tables 1 & 2 below:

Table 1. Wetland Enhancement Plantings.

Species	# Planted	Size	Centers
Canopy			
Red Maple (*Acer rubrum*)	1,143	15-gallon	20’
Slash Pine (*Pinus elliottii*)	1,143	15-gallon	20’
Bald Cypress (*Taxodium distichum)*	2,093	15-gallon	15’
Sweet Gum (*Liquidambar styraciflua)*	300	15-gallon	20’
Sea Grape (*Coccoloba uvifera*)	300	15-gallon	20’

Table 2. Buffer Enhancement Plantings.

Species	# Planted	Size	Centers
Canopy			
Southern Magnolia (*Magnolia grandiflora*)	536	15-gallon	10’
Slash pine (*Pinus elliottii*)	536	15-gallon	10’
Sweetgum (*Liquidambar styraciflua)*	200	15-gallon	10’

All trees will be 15-gallon specimens and average caliper size of 2”.

No herbaceous plantings are proposed with this enhancement plan. However, the enhancement areas will be maintained to promote the natural recruitment of native desireable species, including herbaceous groundcover.

ENHANCEMENT MAINTENANCE

Maintenance of the enhancement areas will consist of hand-removal and non-restricted use herbicide application. All exotic woody species will be cut at the stump and treated with an

appropriately rated herbicide. The cut material will be removed from the enhancement area. Off-site and brought to an appropriate dump site. This will be conducted by hand specifically to not impact any native species and/or their root systems. No heavy equipment will be used within the drip line of native trees to remain post development. The maintenance will be conducted monthly for the first two (2) years, and quarterly for the last three (3) years to ensure that the level of exotic and/or noxious vegetation (as defined by the Florida Exotic Pest Plant Council) present within the enhancement areas does not exceed 10% aerial coverage between maintenance activities and exotic vegetation is less than 5% total aerial coverage. Once the enhancement area has been released for required monitoring the area will be perpetually maintained to maintain the success levels identified in the success criteria below.

ENHANCEMENT MONITORING

The wetland and upland buffer enhancement areas will be monitored on a semi-annual basis to verify the survivorship of the planted species and ensure the exotic coverage is below the required threshold. Additionally, these areas will be placed under a conservation easement dedicated to the SWFWMD.

The monitoring will consist of quantitative and general qualitative observations in the wetland and upland buffer enhancement areas. A Baseline monitoring event will be conducted after the proposed plantings are installed and will include photographs of the enhancement areas. The Baseline Monitoring Report will be submitted to the City of Tarpon Springs and SWFWMD. A summary of the bi-annual data collected will be included in an annual report submitted to SWFWMD and the City of Tarpon Springs each year. The recorded data obtained from the vegetative monitoring will be provided in report form and will be submitted on an annual basis. Reports will include the following:

A. The dates and time of the monitoring event.
B. The person responsible for performing the measurements.
C. The analytical techniques or methods utilized.
D. The results of such analyses including:
    1. Status of invader species
    2. Coverage by wetland and FACW vegetation.
    3. Survivorship of the planted species.
    4. Groundcover photographs from established photo stations.

In addition to the vegetative portion of the monitoring to be conducted, wildlife information will also be gathered and described in the report.

SUCCESS CRITERIA

The success criteria for the wetland and upland buffer enhancement areas will consist of greater than 85 percent survivorship of planted species, 90 percent coverage by desirable species, and less than 5 percent areal coverage by exotic species in the enhancement areas after five (5) years.

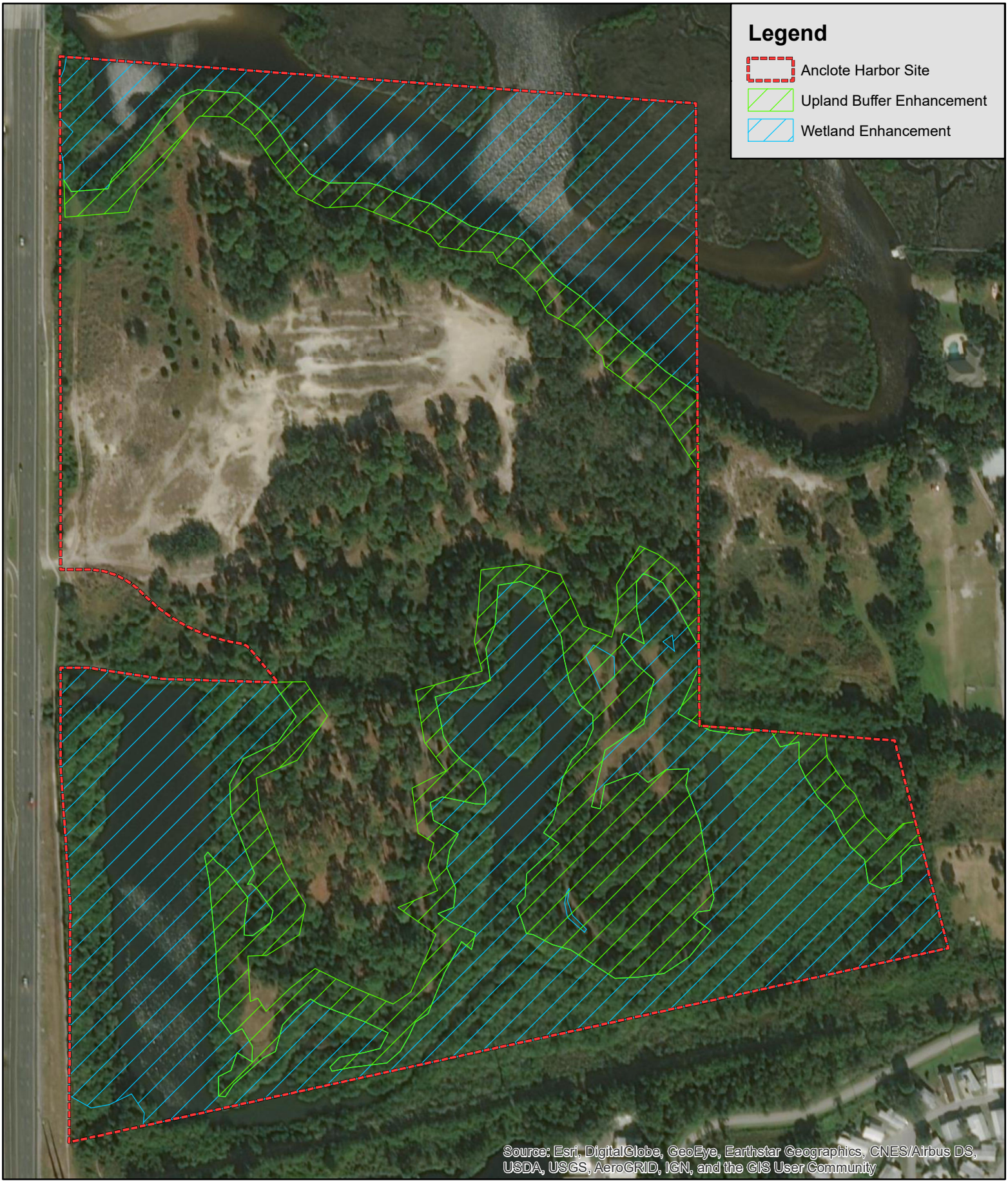
Should you have any questions or require any additional information, please do not hesitate to contact our office at (407) 894-5969. Thank you.

Regards,

Daniel Gough
Project Manager

John Miklos
President

Attachments:
Enhancement Areas Map
Tree Replanting Areas Map
Analysis of Potential Topographic Alteration



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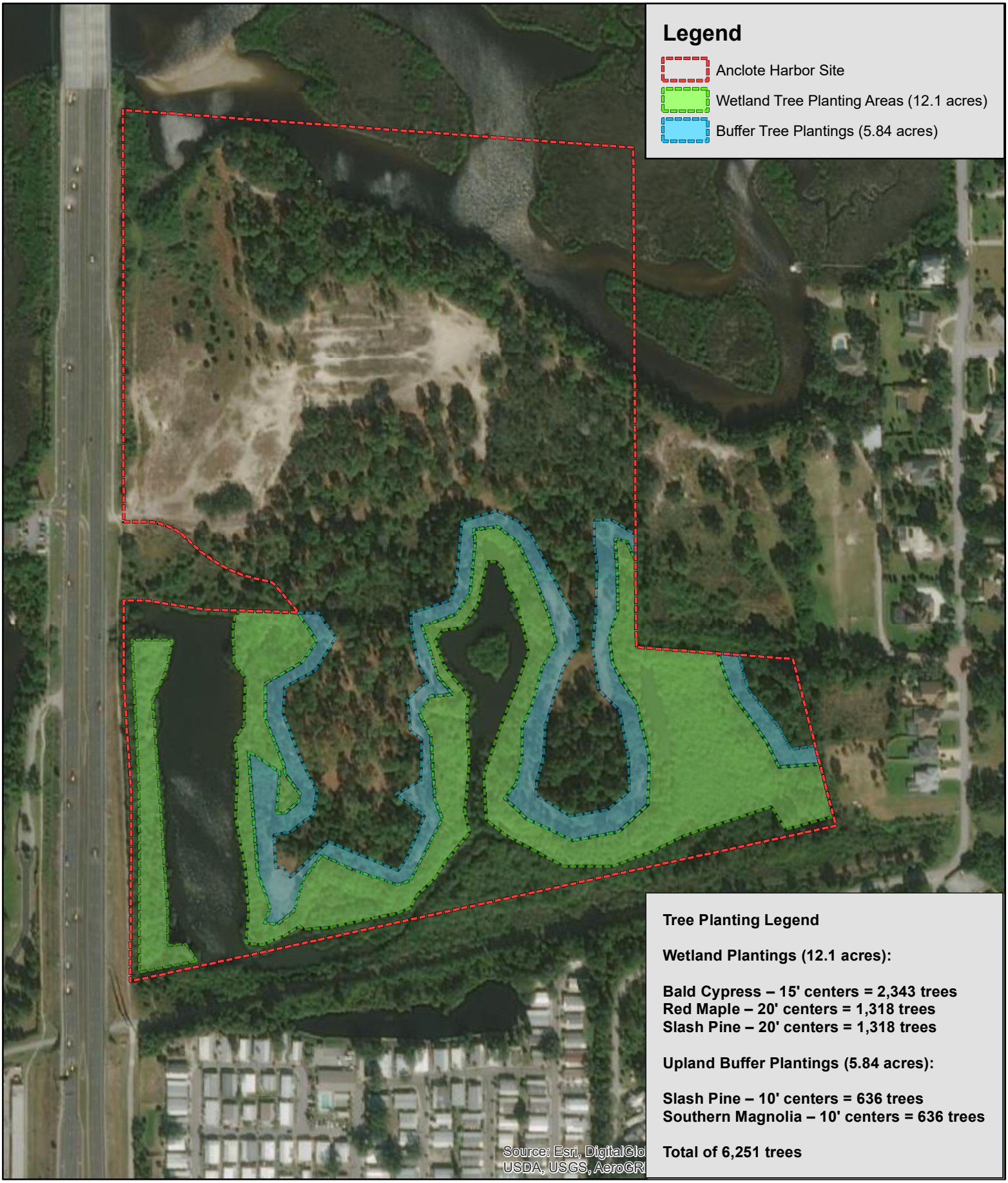
Anclote Harbor Site
Pinellas County, Florida
Enhancement Areas

N
W E
S

290
Feet

Project #: 1119-03
Produced By: JDH
Date: 7/21/2021



Tree Planting Legend

Wetland Plantings (12.1 acres):

Bald Cypress – 15' centers = 2,343 trees
Red Maple – 20' centers = 1,318 trees
Slash Pine – 20' centers = 1,318 trees

Upland Buffer Plantings (5.84 acres):

Slash Pine – 10' centers = 636 trees
Southern Magnolia – 10' centers = 636 trees

Total of 6,251 trees

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Anclote Harbor Site
Pinellas County, Florida
Tree Replanting Areas

N
W E
S

370
Feet

Project #: 1119-03
Produced By: JDH
Date: 7/7/2021

Anclote Harbor

Analysis of Potential for Topographic Alteration of Enhancement Areas

This document had been created to address the potential for restoration of the Mitigation/Enhancement areas to what historically appears to have been a shallow marine salt water marsh system. Specifically, the City of Tarpon Springs asked the applicant to provide the below analysis.

An analysis of whether specific enhancement areas may be candidates for topographic alteration closer to the original wetland elevation with the goal of achieving long-term functional condition that discourage or prevent invasive exotic plant recruitment.

History of the Wetland Enhancement Area

The southern portion of the subject site appears to have historically been a Saltwater Marsh (642 – FLUCFCS). The area of salt marsh was legally excavated sometime between 1962 and 1976. Once excavation was complete the excavated area appears to have been maintained through 1986. After 1986 some of the open water has filled in with vegetative species.

Analysis for Potential Topographic Alteration within the Enhancement Areas

To return the enhancement area to a native salt marsh system several factors must be analyzed including the potential for success, the permitting required, and the cost incurred.

Potential for success – Returning the area to a salt marsh system has a high level of environmental risk associated with exotic species. Fill placed within the excavated areas will be ideal for exotic species to get a foot hold, out compete native species, and become a monoculture of exotic species. This scenario has played out many times throughout the state of Florida. Any time a project has exposed dirt with a continual supply of water and an ample exotic seed source the area provides an easy target for exotic species to get a foothold and thrive. The area would be planted with herbaceous salt tolerant species but since this area is tidally influenced the seed source for exotic species float into the area on a daily basis. Even if all exotic species can be eradicated within the subject site, exotic seeds will be carried into the subject area with every high tide. Returning the area back to a native state is ideal in concept but has been proven many times that the risk of this area becoming an exotic vegetative monoculture is much higher that the potential reward.

This area currently provides valuable habitat to Florida vegetative and marine species. The root systems for mangroves (located in the area currently and will not be removed) provide beneficial habitat to juvenile fish, crustaceans, and mollusks. Additionally, the open water component provides foraging opportunities to native avian species. If this area were to be converted to a salt marsh system, many of these will no longer be available to native flora and fauna.

Permitting required – Although it is obvious this area was excavated through legal means between 1962 and 1976, any effort to recontour to match historic elevations and return to historic habitat would need to be permitted through all local, state, and federal agencies. Approvals for

this work may occur but the level of detail, engineering and environmental permitting would be immense. This is not a simple case of "we have an environmental idea, let us do it.". It also must be considered that since many agencies would require permitting to conduct these actions there are very real implications that not all agencies would be able to permit these actions. Even without considering the potential harm of turning what is currently a functioning open water tidally influenced system into a historic salt marsh system, the effort to permit this will take years and has a high level of potential permitting risk.

Cost incurred – The area that was excavated is vast, not only in surface area but also depth. To return this area to a native salt marsh, a massive amount of fill would be required. One of the most expensive items to purchase when it comes to site development is dirt. Many times, when a project requires dirt, it will be sourced within the subject site. This is why compensating storage and stormwater ponds are over excavated during construction. This helps alleviate the need to purchase dirt for the project. The cost to purchase dirt to return this area to saltwater marsh system is not financially viable to develop this project.

Conclusion

To return the mitigation/enhancement areas to a Florida native salt marsh system carries a high level of risk of creating a habitat that is not a viable Florida native system. The action would also carry a high level of risk with associated permitting agencies and their ability to permit this action. Additionally, the cost incurred would be exorbitant and would create a situation in which this project would not be financially viable.

Should you have any questions, comments or concerns please contact Dillon Reeves at dillon@bio-techconsutling.com or via phone at (877) 894-5969.

Regards

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