



Floravista, Inc.

Sustainable Ecological Solutions

. Conservation Biology
. Land Management
. Wetland Delineation
. Arboriculture
. Research & Consultation
. Native Plant & Wildlife Ecology

March 15, 2018

Cooltural Lands LLC
Attn: Ezequiel F. Peña
Arlen House East Condominiums
100 Bay View Drive, Apt. 1903
Sunny Isles, Miami FL, 33160

RE: Letter Report – Natural Resources / Ecological Assessment and Constraints and Report for Parcel ID 23-36-27-00-5, Tax Account 2317004, Merritt Island, Brevard County, Florida

Dear Mr. Peña:

Floravista, Inc. is pleased to provide this **Letter Report** describing field work, research, results, and findings as described in the **Scope of Consulting Services**, which was executed on **March 1, 2018**. Cooltural Lands LLC ("**Client**") subcontracted Floravista, Inc. to provide to the Client, the Consulting Services ("**Consulting Services**") described in the **Letter Agreement – Natural Resources / Ecological Assessment and Constraints and Report by Floravista**.

The study area is east of and adjacent to N. Courtenay Parkway, comprises approximately 1.02 +/- acre of undeveloped land, parcel: **Parcel ID: 23-36-27-00-5**, north and adjacent to a developed site, with the address: 5800 N Courtenay Pkwy Merritt Island FL 32953. The Client intends to use the vacant parcel, which is zoned BU-1 for development of an office and associated stormwater management.

Specifically, the **Scope of Consulting Services** of this assessment is:

- 1 Generate soil map from the United States Department of Agriculture, Natural Resources Conservation Service.
- 2 Communicate with the local, and jurisdictional Brevard County Natural Resource Management Office regarding buffers, tree preservation/replacement, aquifer recharge areas, wetland and upland maps, parking waivers, and other requirements to be submitted by the Client's for Client's proposed Site Plan Application.
- 3 Conduct a native tree inventory, measure the Diameter at Breast Height (DBH) of native trees, and list and field-label native trees defined as protected or specimen by the Brevard County Code of Ordinances, CH. 62, ART. XIII, DIV. 2 - LANDSCAPING, LAND CLEARING & TREE PROTECTION. Map the approximate locations of native trees relative to the parcel boundary
- 4 Following Florida Administrative Code (F.A.C.) 62-340 wetland definitions and field methodology, determine wetlands absence or presence.

- 5 Conduct a Threatened and Endangered Species Assessment to evaluate the occurrence or potential use of the subject property by species listed by the Florida Fish and Wildlife Conservation Commission (FFWCC) or U.S. Fish and Wildlife Service (USFWS), which will include a database search and subject property field review. Flag and provide map of any listed species findings.
- 6 Provide a concise Letter Report to the Client, comprising brief findings, including summary of native trees, wetland determination, and listed species assessments, and applicable Brevard County Natural Resource and Florida Fish and Wildlife Conservation Commission regulatory requirements, if applicable.

RESULTS AND DISCUSSION

Floravista, Inc. senior environmental scientist, Suzanne Kennedy, visited the site with Field Assistants and performed the above-mentioned site-assessments and field-flagging on March 11, 2018, on the study area, **Parcel ID: 23-36-27-00-5**.

This assessment did not conduct subsurface soil, water quality, archaeological, or hazardous materials investigations as part of. The findings in this assessment reflect conditions on-site at the time of the field investigation (March 11, 2018) and do not preclude the possibility that on-site conditions may change or that protected wildlife species may occur on the site in the future.

General Site Description

The subject area, **Parcel ID: 23-36-27-00-5**, is an upland, vacant, undeveloped, mostly cleared parcel, in un-incorporated Brevard County, and zoned BU-1, a commercial zoning. Assessments revealed no wetlands, no aquifer recharge mapped soils, no hydric mapped soils, no current presence of threatened or endangered wildlife or plant species. The main ecological and natural resource finding on the site is the presence of ten (10) native protected trees and one (1) specimen tree, as defined by Section 62-4332, by the Brevard County Code of Ordinances, CH. 62, ART. XIII, DIV. 2 - LANDSCAPING, LAND CLEARING & TREE PROTECTION.

Native Tree Inventory

Floravista, Inc.'s native tree assessment found the presence of ten (10) native protected trees and one (1) specimen tree, as defined by Section 62-4332, by the Brevard County Code of Ordinances, CH. 62, ART. XIII, DIV. 2 - LANDSCAPING, LAND CLEARING & TREE PROTECTION. Floravista, Inc. marked these trees with blue flagging near the measurement, Diameter at Breast Height (DBH). DBH is defined by Brevard County Code or Ordinances, Section 62-4332 as the diameter of the trunk of a tree, or the sum of the stems of a multi-stemmed tree, measured 4.5 feet above natural or development grade. Floravista wrapped blue flagging around each of the 11 trees described in Table 1 (below) and with permanent marker, gave each tree a unique identification code (FV) for Floravista, hyphen Tree, hyphen numbers 1 through 11, with the common name and the DBH on the flag.

**Table 1. Native Trees that Brevard County defines as Protected and Specimen Sizes
(Parcel ID: 23-36-27-00-5)**

Scientific Name	Common Name	DBH	Field Flag ID (blue flag labels)	Brevard County Natural Resource Definition	Condition (assessed by Floravista, Inc.)
<i>Pinus elliottii</i>	Slash pine	23.9"	FV-Tree-1	Protected	Fair to Good
<i>Quercus virginiana</i>	Live Oak	41.1"	FV-Tree-2	Specimen	Poor
<i>Quercus virginiana</i>	Live Oak	16.3"	FV-Tree-3	Protected	Fair
<i>Pinus elliottii</i>	Slash Pine	16.4"	FV-Tree-4	Protected	Poor
<i>Pinus elliottii</i>	Slash pine	16.7"	FV-Tree-5	Protected	Good
<i>Pinus elliottii</i>	Slash pine	15.9"	FV-Tree-6	Protected	Fair
<i>Quercus virginiana</i>	Live Oak	14.5"	FV-Tree-7	Protected	Fair to Good
<i>Pinus elliottii</i>	Slash pine	19.7"	FV-Tree-8	Protected	Fair to Good
<i>Quercus virginiana</i>	Live Oak	21.3"	FV-Tree-9	Protected	Fair
<i>Quercus virginiana</i>	Live Oak	74.2"	FV-Tree-10	Specimen	Good
<i>Quercus virginiana</i>	Live Oak	16.7"	FV-Tree-11	Protected	Good

Soils, Wetland Determination, Aquifer Recharge Assessment

The soil data were obtained from the Natural Resources Conservation Services (NRCS) Web Soil Survey (<https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/>). The NRCS mapped one soils types in the study area: Immokalee sand, 0 to 2 percent slopes sand. The Immokalee series consists of very deep, very poorly and poorly drained soils that formed in sandy marine sediments. Immokalee soils are on flatwoods and low broad flats on marine terraces. Slopes range from 0 to 2 percent. Mean annual precipitation is about 1397 millimeters (55 inches) and the mean annual temperature is about 22 degrees C (72 degrees F) (Source: https://soilseries.sc.egov.usda.gov/OSD_Docs/I/IMMOKALEE.html). Immokalee sand, 0 to 2 percent slopes, is not a hydric (wetland) soil, and not an aquifer recharge soil.

The potential jurisdictional wetlands and surface waters in the study area were investigated in the field based on the methodologies detailed in Chapter 62-340.200(19) Florida Administrative Code (F.A.C) for the Florida Department of Environmental Protections (FDEP), State of Florida Water Management Districts, and the federal definition and methodology in the U.S. Army Corps of Engineers (ACOE) Wetlands Delineation Manual.

Floravista, Inc., determined the absence of jurisdictional wetlands and surface waters on the subject property. No soil, hydrology, or sufficient hydrophytic plants were present to indicate wetland presence. The upper stratum of vegetation were upland species, as defined by. Lower strata of vegetation supported non-hydrophytic plants from our Floravista, Inc. expert field botanist and wetland biologist, Suzanne Kennedy.

Vegetation Assessment

The subject area **Parcel ID: 23-36-27-00-5** has been disturbed and maintained with periodic mowing in the front. The parcel (note, from non-survey-flagged boundary visual interpretation) is all upland. Many of the plant species colonizing the parcel are very invasive, non-native plants, as described by the Florida

Exotic Pest Plants Council (www.fleppc.org, FLEPPC 2017). Over ¾ of the site has been cleared and has a ground cover of ruderal native and non-native plants, such as blackberry (*Rubus* sp.), Cogon grass (*Imperata cylindrical*; FLEPPC Category I), shiny blueberry (*Vaccinium myrsinites*; native upland plant), Caesar weed (*Urena lobata*), wedelia (*Sphagneticola trilobata*), shrubby false buttonwood (*Spermacoce verticillata*; FLEPPC Category II)

The rear, and part of the north and southeast perimeter within the side setbacks or slightly outside the setbacks (locations will be known with survey of the blue flags Floravista wrapped around the native protected and one specimen trees) support the following trees: slash pine (*Pinus elliottii*), scattered live oak (*Quercus virginiana*), schlefera, Queensland umbrella tree (*Schefflera actinophylla*; FLEPPC Category I), and Brazilian pepper (*Schinus terebinthifolia*; FLEPPC Category I). The understory supports wax myrtle (*Myrica cerifera*), saw palmetto (*Serenoa repens*), herbaceous ruderal, weedy groundcover plant species, vines, and slash pine and live oak seedlings.

The following vines range from occasional to moderate throughout the parcel: Muscadine grape (*Vitis rotundifolia*), poison ivy (*Toxicodendron radicans*), briar (*Smilax* sp.), Virginia creeper (*Parthenocissus quinquefolia*). Vines are growing along the trunks of native trees to their lower canopy branches, especially Briar vines.

Threatened and Endangered Wildlife and Plant Species Assessment

The potential use or presence of the study area by protected species regulated by the Florida Fish and Wildlife Conservation Commission (FWC), Florida Department of Agriculture and Consumer Services (DACS), and the U.S. Fish and Wildlife Service (FWS) was evaluated based on database records and actual observation, signs of scat, prints, or other indications of their presence or utilization of the study area during the field review.

The natural communities in the study area have been altered and rendered largely unsuitable for most listed plant species. Additionally, dumped trash in some areas, and heavy leaf litter and duff under the trees, which are present in the back (east) and northeast small fraction of the property, are not conducive for listed wildlife or plants documented in Brevard County.

No animal tracks, burrows, scat, or other indications of the presence of listed animals were found during the field reconnaissance. Specifically, gopher tortoise (*Gopherus polyphemus*), which are common in Brevard County upland habitats, were not observed during this site review. The FWC Eagle Nest Locator (updated 2014) database identified BE080 as the nearest bald eagle (*Haliaeetus leucocephalus*) nest, inactive, and within the Pine Island Sanctuary, approximately 1.5 miles northwest of the study area, beyond the regulatory 660-foot buffer.

No listed plant species were observed during the field reconnaissance of the project site (March 11, 2018). The onsite habitats are degraded and in poor quality, with non-native, invasive plants, such as

Conclusions and Recommendations:

1. The study area contains ten protected trees and one specimen tree, regulated by Brevard County Natural Resources Management Office (BC NRMO). They should be accurately mapped by a Professional, Licensed Surveyor, before the Client has a site plan review with BC

NRMO, to determine the landscape buffer zone, and tree replacement, as necessary for the protect trees.

- a. During site plan design, Brevard County Natural Resources Management Department will want to see preservation of the specimen live oak tree, and its root zone, and preservation of protected trees, where feasible. The condition (in Table 1) will help determine which trees would be hazardous if preserved. Verbatim, Brevard County Code or Ordinances Section, 62-4341 (18) states:

"Replacement criteria. Specimen and Protected Trees shall be preserved or relocated on site to the Greatest Extent Feasible. Where the site, parcel or lot has met canopy coverage requirements as outlined in Section 62-4339, without the use of an Alternative Landscape Enhancement Plan, site, parcel or lot shall not be subject to replacement criteria with the exception of Specimen Trees. Where the removal of a protected or specimen tree is necessary below the minimum canopy preservation percentage required per Section 62-4339, an Alternative Landscape Enhancement Plan shall be required that meets the criteria in Section 62-4344."

- b. Replacement native trees can be proposed in the buffers or the front of the parcel, for some of the protected trees, with BC NRMD coordination and approval. Below are the percent DBH replacement requirements:

Verbatim, Brevard County Code of Ordinances, Section 62-4341,

"18 (d) Replaces Protected Trees with new plantings of canopy species trees at a rate of twenty-five percent (25%) of the cumulative Diameter at Breast Height (dbh) of the trees removed, using a minimum fifty (50) percent four (4) inch caliper plantings. The remaining fifty (50) percent replacement plantings shall be a minimum two and one-half (2.5) inch caliper plantings. Of the two and one-half (2.5) inch caliper plantings, up to twenty (20) percent may be non-native. In no event shall undesirable or non-native invasive plantings be used for replacement."

2. No Threatened and Endangered plants or animals were found during this assessment.

- a. No consultation with the FWC or the FWS is anticipated based on this assessment.
- b. Wildlife move and wildlife assessments cannot guarantee that wildlife will not occur on the site at another time.

I look forward to working with you, by providing environmental/ecological services for the next phases of your project. Floravista, Inc., gladly will provide additional services as mutually agreed upon between Floravista, Inc. and the Client.

If you have any questions about the content or scope of this report, please call or email me.

Sincerely,



President and Ecological Scientist

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