ANDREW CONKLIN ENVIRONMENTAL SERVICES, LLC
INTEGRATING SUCCESSFUL DEVELOPMENT AND ENVIRONMENTAL INTEGRITY

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April 17, 2021

Re: 3660 Lionel Road, Parcel No. 20-35-31-00-519
ACES File No. 2156

Andrew Conklin Environmental Services, LLC (ACES) has completed a review of environmental issues associated with the above-referenced ±3.33-acre project site, located in Section 31, Township 20 South, Range 35 East, Mims, Florida. Figure 1 depicts the location of the subject site, and Figure 2 is a recent aerial photograph of the site depicting current conditions thereon. On April 12, 2021, ACES inspected the property for the presence of wetlands, surface waters, protected species, and indications of protected species habitat. To assess the presence and extent of wetlands, we implemented the jurisdictional wetland identification methodologies of the Florida Department of Environmental Protection (DEP) and the U.S. Army Corps of Engineers (ACOE), which incorporate an analysis of on-site vegetation, soils, and hydrology to determine the presence or absence of jurisdictional wetlands. The likelihood of protected species habitation was determined by identifying the various vegetative communities, habitat types, and species indicators currently present on the site, and referencing these against standards and indicators used by the Florida Fish and Wildlife Conservation Commission (FWC) and the U.S. Fish and Wildlife Service (USFWS). Following is a presentation of our findings.

Soil Types

The USDA Natural Resource Conservation Service (NRCS) identifies two soil types on the property (see Figure 3). Soil maps are used by the environmental regulatory agencies as a general guideline to determine the likelihood of wetland and upland conditions on reviewed properties; soils more commonly associated with wetland conditions potentially indicate areas of lower elevation and greater surface hydrology, whereas soil types that are more commonly associated with uplands are expected to exhibit fewer or no wetland characteristics. Potentially hydric (i.e., wetland) soil types are listed in the *Hydric Soils of Florida Handbook* (Victor W. Carlisle, et al., 2000). It should be noted that the soil types listed by NRCS are based on a 1984 soil survey of Indian River County by the USDA Soil Conservation Service, and no comprehensive soil survey of the county has been completed since then. As such, it is not uncommon for there to be some inconsistencies between historically-mapped soil types and current on-site soil

conditions. ACES sampled soil types throughout the subject property by excavating 6-inch diameter, 12-inch deep cylindrical plugs from the surface, and assessing the soil profiles and characteristics of each plug. Following are brief descriptions of the soil types that are mapped on the subject site, compared to our observations of current soil conditions.

Candler Fine Sand – NRCS Code No. 4: This is an excessively drained fine sand formed from knolls and ridges on ancient marine terraces. The typical habitat is xeric upland pine scrub. The depth to the water table is typically more than 80 inches below the surface. This soil type is not listed in the *Hydric Soils of Florida Handbook*.

This elevated upland soil type is mapped over all but the southwest corner of the site. Soils in this area of the property all are composed of well-drained non-hydric fine sand.

Pomello Sand, 0 to 5 Percent Slopes – NRCS Code No. 49: This is a nearly level, moderately well drained sandy soil on broad low ridges and low knolls. The water table is 30 to 40 inches below the surface for 2 to 4 months in most years and between 40 and 60 inches for more than 6 months. During dry periods, it is below 60 inches for short periods. This soil type is not listed in the *Hydric Soils of Florida Handbook*.

This elevated upland soil type is mapped within the southwest corner of the site. Soils in this area are consistent with the mapped soil type, with soils consisting of well-drained non-hydric fine sand.

We find there is a strong correlation between the NRCS map and actual site conditions. All soils examined across the site are composed of non-hydric fine sand.

Community Types

Using the Florida Land Use, Cover and Forms Classification System (FLUCFCS) as a guideline, ACES categorized the different natural communities and land uses on the subject site according to FLUCFCS designations and code numbers. Figure 4 depicts the different FLUCFCS communities on the property. The major FLUCFCS categories on the site are:

Herbaceous – FLUCFCS Code No. 310: This non-forested upland community is found in meandering lobes and swaths in the southern portion of the site, occupying a total of approximately 0.49 acres. It contains an herbaceous cover including Bahia grass, prickly pear, Spanish needles, silk grass, southern fox grape, catbriar, and passion vine. Underlying soils are composed of non-hydric sand. No wetland hydrologic indicators were observed.

Upland Scrub, Pine and Hardwood – FLUCFCS Code No. 436: This remaining +/-2.84 acres of the site are covered by this forested upland community. It is vegetated with a mixture of slash pine, sand pine, scrub hickory, myrtle oak, and sand live oak in the canopy, saw palmetto, lantana, winged sumac, hog plum, pawpaw, deerberry, and coral bean in the midstory, and shiny blueberry, silk grass, southern fox grape, and

catbriar in the ground cover. Underlying soils are composed of well-drained non-hydric sand with no indicators of wetland hydrology.

Thus, the entire 3.33-acrer property consists of uplands. No wetlands are present on the site. As such, it is our conclusion that the National Wetland Inventory (NWI) map (see Figure 5) is erroneous. It appears that an untrained eye at NWI mistook on-site scrub vegetation for deciduous hardwood wetland vegetation on the aerial photograph. No wetland vegetation and no deciduous hardwood trees exist on or adjacent to the site. Following is an examination of environmental permitting issues that may need to be addressed prior to site development.

Wetland Considerations

No wetlands were found on the site. As such, wetland permitting and mitigation costs will not apply to the development of this project.

Protected Species

On the dates of our site assessment, ACES examined the property for any indications of habitation by protected wildlife species. This included inspecting the property for direct visual and auditory evidence of protected species themselves, as well as assessing the site for the presence of secondary indicators, such as burrows, nests, nesting cavities, scat, tracks, trails, rookeries, etc. We also used on-line mapping resources from Brevard County, USFWS, and FWC to identify the known location of certain protected species populations. Following is a discussion identifying the extent to which protected species are thought to be using the site.

Bald Eagle (*Haliaeetus leucocephalus*): No recorded bald eagle nests exist within at least 0.9 miles of the subject site, and no eagle nests or eagle activity were observed on the site. Therefore, it is not expected that potential impacts to this species will need to be addressed prior to site development.

Eastern Indigo Snake (*Drymarchon corais couperi*): Indigo snakes exist in a very wide variety of Florida native habitats, from flatwoods to marshes to xeric scrub, and range over a wide area, typically utilizing gopher tortoise burrows for shelter. No indigo snakes or their signs were observed during our site inspection. Barring direct sighting of this species, no special permits for potential impacts to it are expected to be required.

Gopher Tortoise (*Gopherus* polyphemus): Gopher tortoises are protected as a Threatened species by the Florida Fish and Wildlife Conservation Commission (FWC). Gopher tortoises require habitat that includes well-drained sandy soils for burrowing, open sunlit areas for nesting, and adequate herbaceous forage. On this property, the Herbaceous community provides optimal tortoise habitat and the Upland Scrub, Pine and Hardwood community provides suitable tortoise habitat.

Although we did not conduct a formal gopher tortoise survey, ACES observed some evidence of gopher tortoise occupation during our site inspection. The locations of five

Potentially-Occupied tortoise burrows that we happened to observe on our survey dates are shown on Figure 4. Based on the habitat conditions we observed on the property, our preliminary estimate is that the current overall on-site tortoise density is between 3 and 5 gopher tortoises per acre, or a total of between 10 and 17 gopher tortoises on the property, using between 20 and 34 burrows.

FWC requires that all tortoises that are likely to be displaced by proposed development be identified through a formal survey, and safely relocated under an off-site gopher tortoise conservation permit from FWC prior to site clearing. Any tortoises that utilize burrows within 25 feet from proposed clearing/construction will need to be permitted for relocation. In order to determine the number of tortoises that will be affected by site development, it will be necessary to complete a formal tortoise survey over all potentially suitable habitat that is proposed for development on this site. Costs associated with tortoise permitting include the 100% survey and mapping of all on-site tortoise habitat (approx. $1,400), developing and submitting the tortoise relocation application to FWC ($600.00), and excavating all potentially-occupied burrows on the site with a backhoe (assuming 20 burrows, the projected cost is $6,500). In addition, FWC will charge an application fee of $217 for the first group of 10 burrows (up to five tortoises), plus an additional $326 for each tortoise captured thereafter. Also, the property receiving the relocated tortoises charges $1,500 per tortoise to cover long-term management costs (assuming 10 tortoises, that cost would be $15,000). So, under a hypothetical 20 burrows excavated and 10 tortoises relocated, the total cost would be approximately $25,347. Please note that the actual cost could be more or less, depending on the results of the tortoise survey and relocation. If all tortoise burrows identified on the comprehensive tortoise survey can be avoided by at least 25 feet, then no tortoise permitting or relocation costs will apply. In addition, if fewer than 10 burrows will be affected, an on-site relocation permit can be obtained, which eliminates the $1,500/tortoise recipient site fee.

Timing of the tortoise permitting process is linked to the expected project start date. FWC requires that the survey data be no more than 90 days old prior to excavating tortoises under the authority of a permit. Furthermore, FWC requires that an applicant provide documentation from local government confirming that the proposed project that will necessitate tortoise relocation is imminent; without this documentation, the relocation is not allowed to take place. Therefore, the tortoise survey is recommended to occur no more than two months prior to the anticipated project start date. Once the application is submitted, most tortoise permits can be acquired within two weeks (assuming all required documentation is provided). After the permit is issued, relocation can occur as long as predicted weather temperatures do not drop below 50 degrees Fahrenheit for 72 hours after the relocation is completed.

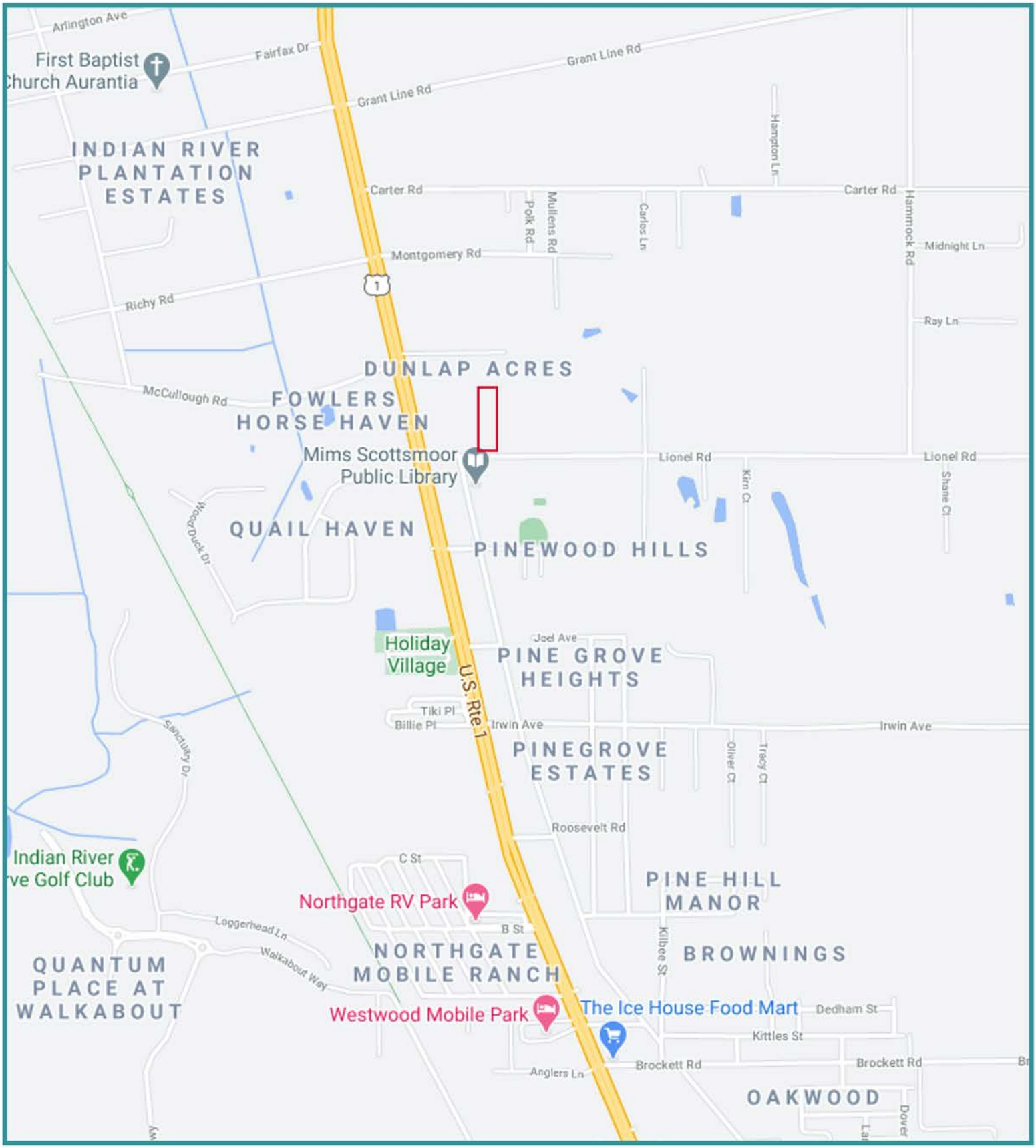
ACES found no indication of any other listed species or listed species habitats on the property. Other than potential impacts to gopher tortoises, no protected species are expected to be affected by the development of the property.

Summary and Conclusion

ACES has completed an environmental assessment of 3660 Lionel Road in Mims, Florida. It is our determination that the entire +/-3.33-acre site consists of elevated uplands, with no wetlands present on or adjacent to the property. We have confirmed that the NWI map for this property (Figure 5) is completely erroneous. No wetland permitting or mitigation will be required for the development of this site. Protected gopher tortoises are present on the site; any tortoises affected by site development can be permitted for relocation through FWC. A formal gopher tortoise survey will need to be completed no sooner than 90 days in advance of the anticipated start date of the project, so that all tortoise burrows can be accounted for and an accurate estimate of tortoise relocation costs can be made. Upon your review of this report, should you have any questions or need any additional information, please do not hesitate to contact us.

Sincerely,

Andrew Conklin – President, ACES, LLC



Source - Google Maps

Fig. 1 - Location Map

ACES File No. 2156 - 3660 Lionel Road

- Property Boundary

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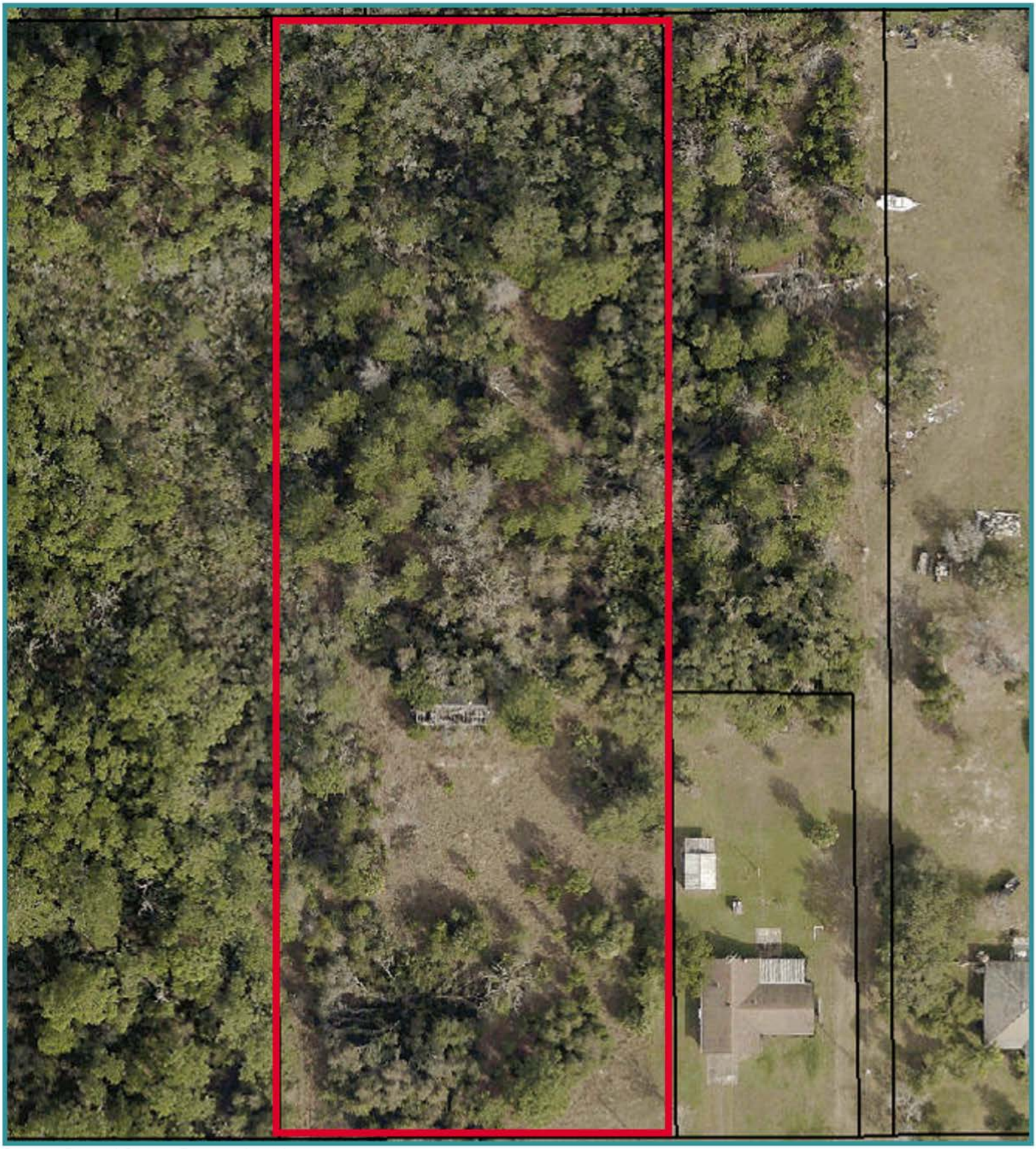

Source - Brevard Cou nty Property Appraiser

Fig. 2 - Aerial Site Photograph

ACES File No. 2156 - 3660 Lionel Road

- Property Boundary

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Source - USDA Natural Resources Conservation Service (NRCS)

Fig. 3 - NRCS Soils Map

ACES File No. 2156 - 3660 Lionel Road

- Property Boundary
- NRCS Soil Type Boundaries

4 - Candler Fine Sand
49 - Pomello Sand, 0 to 5 Percent Slopes

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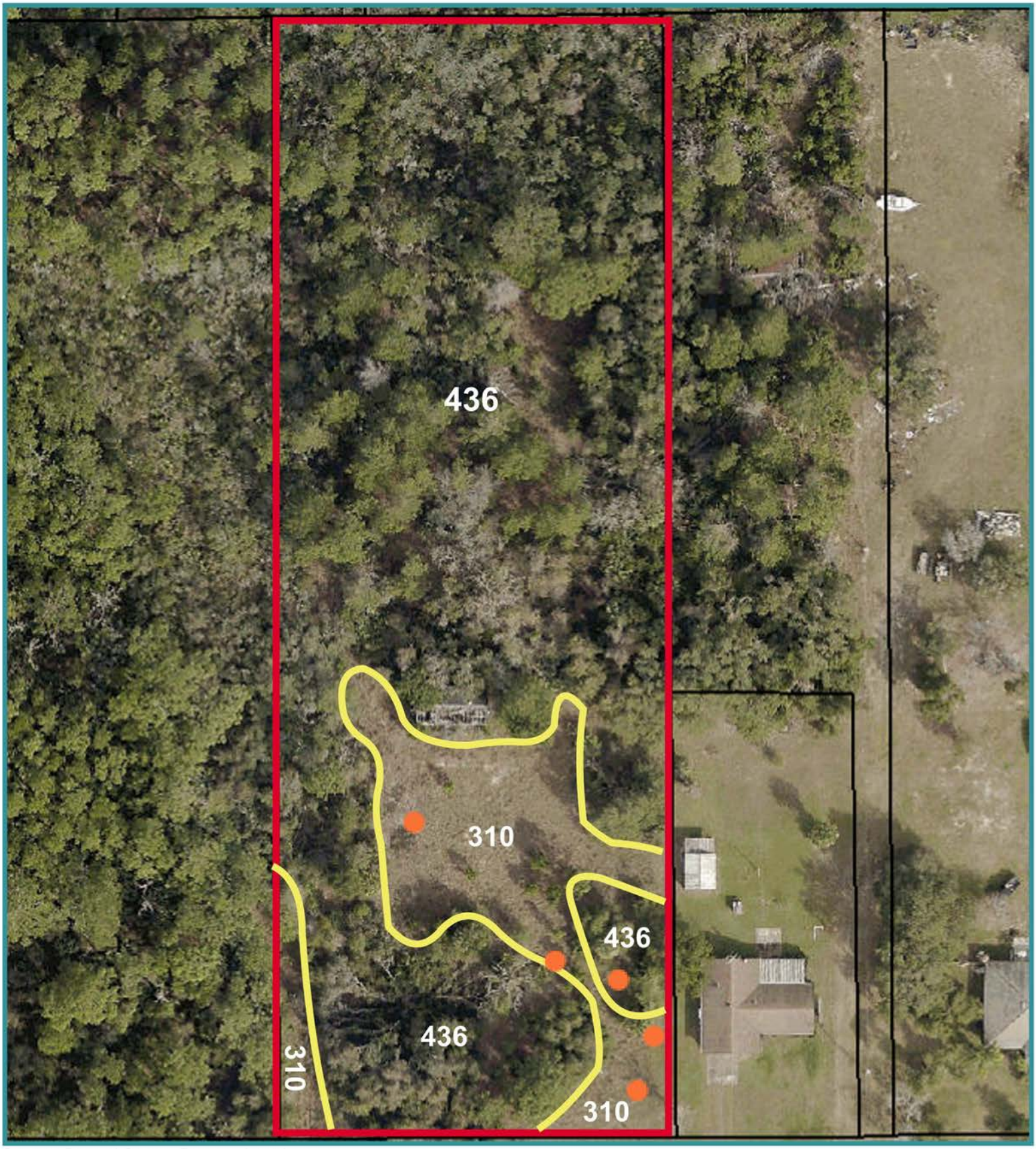

Source - Brevard Cou nty Property Appraiser
Codes referenced to the Florida Land Use Cover and Forms Classification System (FLUCFCS)

Fig. 4 - Environmental Survey Map

ACES File No. 2156 - 3660 Lionel Road

- Property Boundary
- FLUCFCS Community Boundaries
- Potentially-Occupied Gopher Tortoise Burrow; (not comprehensive; additional burrows expected elsewhere on-site)

310 - Herbaceous
436 - Upland Scrub, Pine and Hardwoods

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Source - National Wetland Inventory (NWI)
PSS1/3A: Palustrine (P: Freshwater) Scrub-Shrub(SS) Broad-Leaved Deciduous/Evergreen (1/3) Temporary Flooded (A) wetland

Fig. 5 - NWI Map

ACES File No. 2156 - 3660 Lionel Road

- Property Boundary

- Incorrectly Mapped Wetlands

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