



ENVIRONMENTAL ASSESSMENT

On

**3865 W New Haven Avenue
Brevard County, Florida**

**±8.87-acre
Parcel ID. 28-36-02-00-750
Section 2, Township 28 South, Range 36 East**

Conducted for:

**Mr. Scott Glaubitz, PE
BSE Consultants, Inc.
312 S. Harbor City Blvd.
Melbourne, FL 32901**

Conducted by:

**Atlantic Environmental of Florida, LLC
657 Montreal Avenue
Melbourne, Florida 32935**

January 6, 2023



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January 6, 2023

Mr. Scott Glaubitz, PE
BSE Consultants, Inc.
312 S. Harbor City Blvd.
Melbourne, FL 32901

Re: Environmental Assessment
3865 W New Haven Avenue Project Site
Brevard County, Florida
Atlantic Environmental File No. 2308

Dear Mr. Glaubitz:

Atlantic Environmental of Florida, LLC (Atlantic Environmental) has completed an environmental assessment and feasibility study of the above-referenced ± 8.87 -acre project site located at 3865 W New Haven Avenue, Brevard County, Florida (Figures 1 and 2). The field assessment of this parcel, hereinafter referred to as "the Property", occurred on January 6, 2023. This study is intended to assess any reasonably ascertainable environmental issues that might influence the developability of the subject property. Following are the results of our study.

Topography and Soils

Figure 3 shows the USGS Topographical Map for the Property and surrounding areas. According to this map, the Property is relatively flat. The U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) map for Indian River County (Figure 4) depicts three soil types underlying the Property. Following is a description of the mapped soil types as they occur in a natural environment.

Basinger sand (7)

The Basinger component makes up 90 percent of the map unit. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy marine deposits. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during June, July, August, September, October, and November. This soil meets hydric criteria.
Riviera fine sand, 0 to 2% slopes (10)

Myakka sand (36)

The Myakka component makes up 85 percent of the map unit. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy marine deposits. The natural drainage class is poorly drained. This soil is not flooded or ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, and September. This soil does not meet hydric criteria.

Pompano Sand (51)

The Pompano component makes up 90 percent of the map unit. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is very high. This soil is not flooded or ponded. A seasonal zone of water saturation is at 6 inches during June, July, August, September, and October. This soil meets hydric criteria.

Past development and more recent human activity surrounding the Property appears to have altered some of the characteristics possessed by the underlying soils. However, the soils underlying the Property appear fairly consistent with the above descriptions.

Vegetation and Community Types

Different combinations of natural and human-influenced factors, such as surface elevation, hydrology, vegetative species and structure, soil characteristics, and degree and type of historical disturbance, will give rise to a variety of distinct ecological systems and functions, known as communities and land uses. The Florida Land Use, Cover, and Forms Classification System (FLUCFCS) organizes most of the major categories of communities and land uses into descriptions, each corresponding to a different code number. Using our field observations and the FLUCFCS system as a guideline, Atlantic Environmental has identified the on-site communities as it currently exists on the Property. Figure 5 depicts the code number of the on-site FLUCFCS categories, specifically, Hardwood-Conifer Mixed (FLUCFCS Code Number 434) and Wetlands (600).

Following is a description of this classification, as it exists on the Property, along with an assessment of the jurisdictional wetland status based on the rules and regulations of the St. Johns River Water Management District (SJRWMD) and the U.S. Army Corps of Engineers (USACE).

Hardwood – Coniferous Mixed (434)

Approximately ± 7.88 -acres of the Property can be classified as a Hardwood – Coniferous Mixed community (see Figure 5). The canopy was dominated by slash pine (*Pinus elliottii*), laurel oak (*Quercus laurifolia*), cabbage palm (*Sabal palmetto*), Brazilian pepper (*Schinus terebinthifolia*), wild coffee (*Psychotria nervosa*), and American beautyberry (*Callicarpa americana*). The ground cover in these areas was dominated by St. Augustine grass (*Stenotaphrum secundatum*), creeping oxeye (*Sphagneticola trilobata*), guineagrass (*Urochloa maxima*), and earleaf greenbrier (*Smilax auriculata*). This community is an upland and should therefore require no wetland permitting for direct wetland impacts.

Wetlands (600)

An isolated (± 0.99 -acres) wetland was located within the interior of the Property (see Figure 5). It appears that the hydrology of this area is being artificially maintained by a free-flowing well. The dominant vegetation within these wetland areas included Brazilian pepper (*Schinus terebinthifolia*), cabbage palm (*Sabal palmetto*), strawberry guava (*Psidium cattleianum*), Virginia chain fern (*Woodwardia virginica*), and swamp fern (*Telmatoblechnum serrulatum*).

As the wetland is currently greater than 0.50 acres, this on-site wetland system will be claimed as jurisdictional by SJRWMD and will require mitigation for proposed impacts. Brevard County Natural Resources Department (BCNRMD) will also claim this area as a wetland and will require mitigation for impacts. With this having been said, Atlantic Environmental believes that if the well is shut off, the hydroperiod within this area would be greatly reduced and this wetland would decrease in size and potentially disappear over time.

Habitat Potential for Protected Wildlife Species

A preliminary survey for listed species and suitable listed species habitats was completed on the Property. This survey resulted in the determination that the Property provides adequate habitat to support gopher tortoises.

Gopher Tortoise

Gopher tortoises are state listed as a threatened species. These species require three environmental conditions: well drained loose soil in which to burrow, adequate low-growing herbs for food, and open sunlit sites for nesting. It appears that a small portion of the Property in its southwest corner meets these conditions. Therefore, Atlantic Environmental recommends having a formal gopher tortoise survey completed prior to clearing/development over 100% of the suitable on-site habitat. Should tortoises be present, the acquisition of a permit will be required from the FWC prior to any site work. The cost of relocating can be discussed after a 100% tortoise survey is completed and the number of potential tortoises is found. With this having been said, Atlantic Environmental believes the tortoise population will be very low, if any are present.

Wetlands

Wetlands, including those located on the Property, are protected by state, federal, and/or local government rules against impacts from development. Should development be proposed which would affect these natural resources, permits authorizing these impacts would be needed, and mitigation for alterations to these wetlands can be required. Following is a general discussion of mitigation alternatives that may be applicable to the wetlands proposed to be impacted by development of the Property.

Prior to impacting a wetland on a particular piece of property it is required that all efforts have been made to eliminate wetland impacts. If elimination of wetland impacts is not practicable, it is then required that site development alternatives are considered that reduce wetland impacts. This elimination and reduction exercise will be required should impacts to wetlands be proposed on the Property.

Once it has been determined that all reasonable efforts have been made to reduce wetland impacts, the wetland regulatory agencies will consider compensation for wetland impacts through compensatory mitigation. Although mitigation can take on many forms, mitigation usually consists of restoration, enhancement, creation, or preservation of wetlands, other surface waters, or uplands. The amount of compensatory mitigation required is determined by the amount of biological lift needed to offset the proposed impacts. The quantity of biological lift required is dependent on the acreage of proposed wetland impact, the location and landscape support of the proposed impact site, the habitat value of the proposed impact site, the functionality of the proposed impact site, as

well as the vegetative and hydrologic quality of wetlands proposed for impact.

To determine the amount of biological lift provided by a mitigation site, an applicant must take into account all of the above criteria, as the mitigation site exists prior to mitigation action, and determine how the proposed mitigation action will biologically improve the mitigation site. If the biological lift provided by completing the mitigation action outweighs the biological loss incurred by the proposed impact, the regulatory agencies are expected to permit the proposed project.

As for this particular site, SJRWMD and Brevard County Natural Resources Management Department (BCNRMD) will require that efforts be made to reduce wetland impacts to the greatest extent possible. Once such efforts have been made and proven to the regulatory agencies, an applicant can then propose impacts to wetlands in conjunction with providing compensatory mitigation for such impacts. With this having been said, if an applicant were to employ one of the SJRWMD out-provisions in which mitigation were offered that has a greater long-term ecological value than that of the wetlands proposed for impact and mitigation that implements all or part of a plan that provides regional ecological value, one could potentially bypass SJRWMD's elimination and reduction criteria. One method to employ this out-provision is to provide mitigation from a permitted mitigation bank. Atlantic Environmental estimates mitigation costs to range from approximately \$6,250.00 to \$7,500.00 for every 0.10 acres of wetland impacts. Thus, to impact the entire wetland, one could expect to pay approximately \$62,500.00 to \$75,000.00.

With regards to BCNRMD, if commercial development is proposed, per Section 62-3694(b), BCNRMD allows for wetland impacts on properties with frontage on mitigation qualified roadways (MQR). Commercial land development activities may be permitted within wetlands if the property is designated for commercial or industrial land uses on the future land use map. Should this designation be available for the Property, and considering that the Property is located on an MQR, BCNRMD should allow for wetland impacts on the Property.

Conclusions

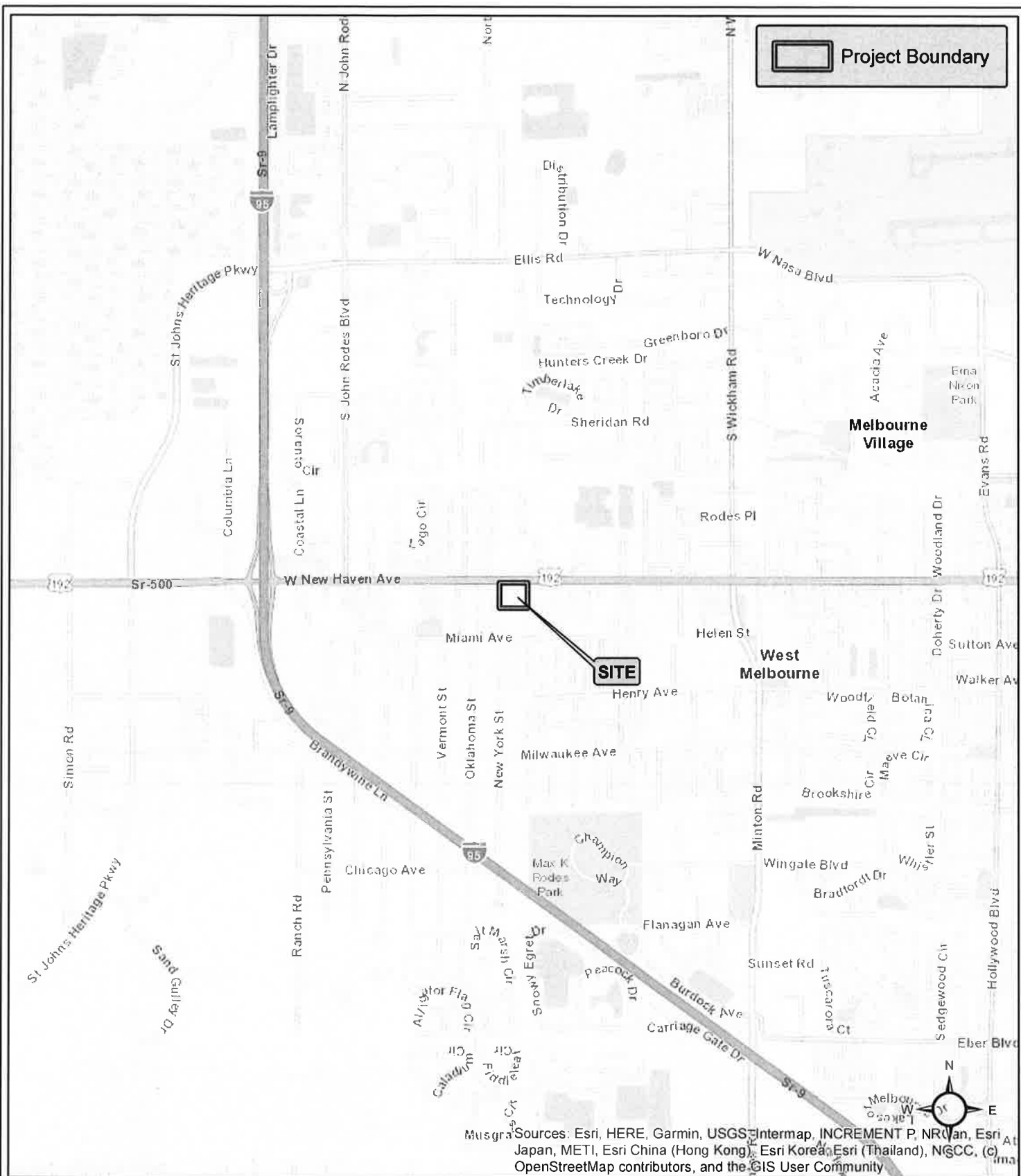
Atlantic Environmental determined that the Property supports approximately ± 7.88 -acres of uplands and ± 0.99 -acres of wetlands. Wetlands must be addressed in the development process, through permitting, avoidance, mitigation, or some combination thereof. As the next step in the development process as it relates to environmental issues, Atlantic Environmental recommends delineating the on-site wetlands and gaining approval of our wetland lines through SJRWMD. Should time allow, Atlantic Environmental recommends capping the free-flowing well on the Property and re-evaluating the wetland status of this area at a later date. If needed, Atlantic Environmental can assist in the wetland permitting process and coordinate with the respective regulatory agencies to secure approved permits and mitigation. Lastly, a 100 percent gopher tortoise survey should be completed within the suitable on-site habitat to determine if any tortoises are present and, if they are, initiate the relocation permitting process.

Should you have any questions or need additional information, please do not hesitate to contact our office.

Sincerely,

A handwritten signature in black ink, appearing to read "Jon Shepherd". The signature is fluid and cursive, with the first name "Jon" and last name "Shepherd" clearly distinguishable.

Jon H. Shepherd, MS, PWS
President/Ecologist



Project: 3865 W New Haven Avenue

Figure 1: Location Map

0 0.25 0.5 1 Miles

Brevard County, Florida



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Project: 3865 W New Haven Avenue

Figure 2: Aerial Map

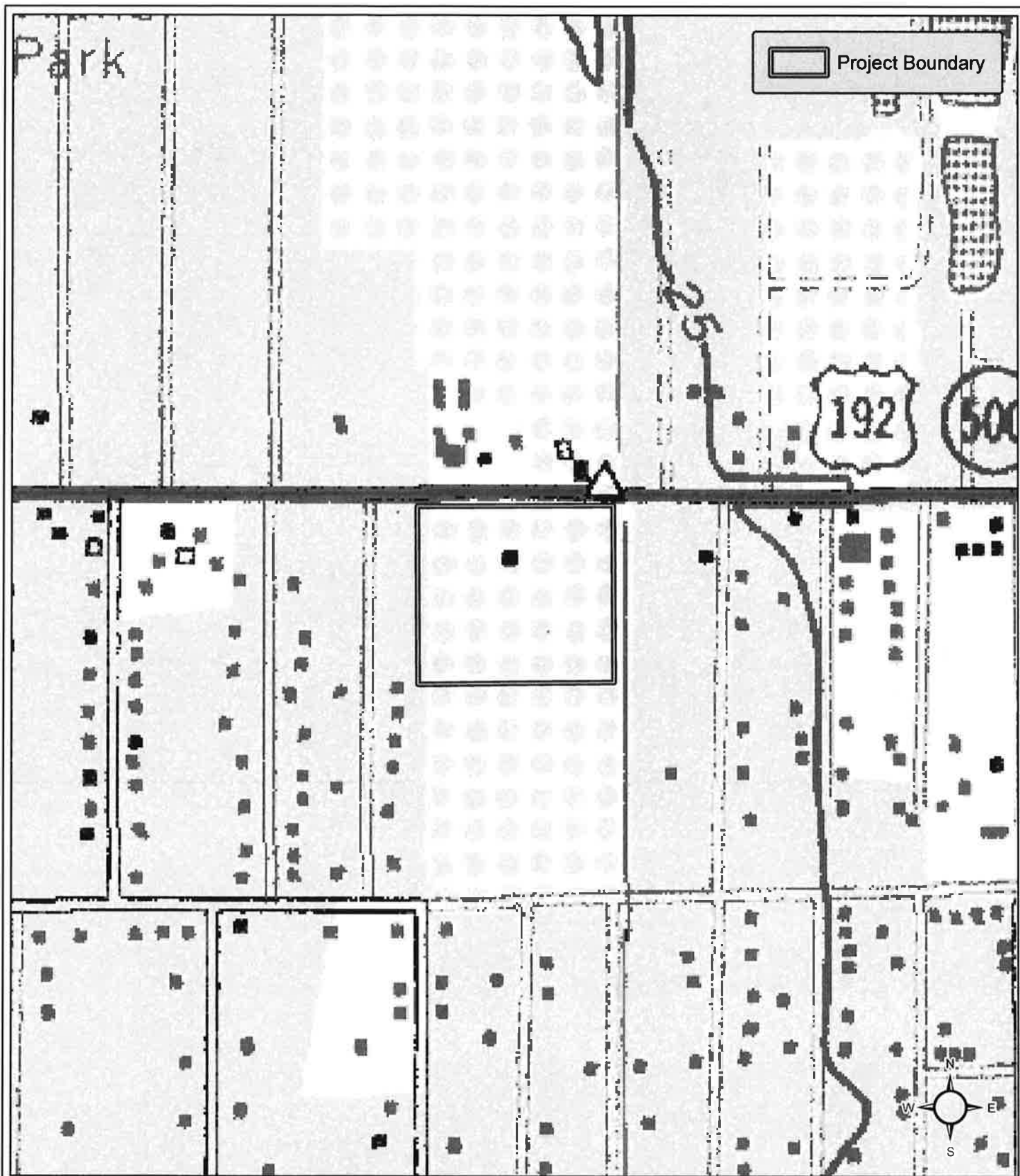
0 100 200 400
Feet

2022 Aerial, Brevard County, Florida

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Project: 3865 W New Haven Avenue

Figure 3: USGS Topo Map

0 300 600 1,200 Feet

Melbourne West, Brevard County, Florida

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Project: 3865 W New Haven Avenue

Figure 5: Land Use (FLUCFCS) Map

0 100 200 400 Feet

2022 Aerial, Brevard County, Florida

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