Mr. Maik Agaard, District Manager
DPFG, Inc.
1060 Maitland Center Commons
Suite 340
Maitland, FL 32751

## RE: Avalon Groves Community Development District Engineer's Report

To Whom It Concerns:

Pursuant to the Board of Supervisor's authorization, Heidt Design, Inc. is pleased to submit this Engineer's Report for the proposed improvements for the Avalon Groves Community Development District related to its Capital Improvement Revenue Bonds. This report has been prepared on behalf of the District in connection with the financing for these proposed improvements. A detailed description of the improvements and their corresponding estimates of costs are outlined in the following report.

Thank you for this opportunity to be of professional service.

Sincerely,

HEIDT DESIGN, LLC


Gary D. Miller, P.E.
District Engineer
cc: Jim Harvey, Kolter Land Partners
Roy Van Wyk, Hopping, Green \& Sams, P.A.
Alyssa Willson, Hopping, Green \& Sams, P.A.
File

# AVALON GROVES COMMUNITY DEVELOPMENT DISTRICT PRELIMINARY ENGINEER'S REPORT 

Prepared for:<br>Board of Supervisors<br>Avalon Groves Community Development District

Prepared by:

Heidt Design, LLC<br>5806-B Breckenridge Parkway<br>Tampa, Florida 33610<br>813-253-5311

October 11, 2016

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## INTRODUCTION

Avalon Groves is a residential development project located on property totaling approximately 985 acres in size, located East of U.S. 27 in eastern Lake County. The Vicinity Map is contained in Appendix B. The Avalon Groves community will consist of multiple residential neighborhoods and recreational amenities.

The Avalon Groves Community Development District ("District") is located in Sections 13, 14, 23, \& 24, Township 24 South, Range 26 East, Lake County, Florida. The District consists of approximately 972 acres situated in the South Lake County area to the West of the western limits of Orange County. The legal description of the property is attached in Appendix A. The portion of Avalon Groves, which is located in the District, is referred to as the "development".

The District is being created to provide an efficient funding and long-term maintenance mechanism for the public infrastructure associated with the portion of the Avalon Groves community planned within the boundaries of the District. A series of exhibits are included in Appendix C of this report, including a Zoning Map, a Future Land Use Map, and an Aerial Map of the overall Avalon Groves project.

The current plan of development for the Avalon Groves community within the District contains approximately 1,352 housing units, various recreational facilities and an amenity site. The current Planned Unit Development (PUD) approval allows for these uses, with more detailed permit information being found in the "Permit Status" section of this report.

The purpose of this report is to provide a description of the improvements and land acquisition that may be financed by the District ("the Total Project"). Refer to Table 1 for a costs summary of the Total Project. Public infrastructure and land improvements needed to service the development within the District include the construction of the extension of Sawgrass Bay Boulevard to the northwest project boundary and through the planned development. Also included are wetland mitigation creation, listed species habitat mitigation creation and costs, stormwater management facilities and associated infrastructure grading, entry monumentation, common area landscaping and irrigation, dry utilities, and recreational facilities. Construction of the Total Project is scheduled to commence in Q4 of 2016, and is anticipated to be complete by December 2021.

The Engineer's Report reflects the District's present intentions. The implementation and completion of any land purchase and any improvement outlined in this report requires final approval by the District's Board of Supervisors, including the award of contracts for the construction of the improvements. Cost estimates contained in this report have been prepared based on the best available information. Actual costs will vary based upon final plans, design, planning, approvals from regulatory authorities, inflation, etc. Nevertheless, all costs contained herein may be reasonably expected to adequately fund the improvements described, and contingency costs as included are reasonable.

## INFRASTRUCTURE IMPROVEMENTS

The District presently intends to undertake certain public infrastructure improvements necessary for the development of the Avalon Groves community within the boundaries of the District. As mentioned, a portion of these improvements will be funded by District bond issuances and a portion will be funded by the Developer. There is a Planned Unit Development (PUD) zoning approval in place that mandates a portion of these improvements. The construction and maintenance of the proposed improvements are necessary and will benefit the property within the District. A more specific description of each of these items follows and the related costs are provided in Table 1.

## LAND ACQUISITION

The District intends to acquire wetland and upland areas that are necessary for the lands that will comprise the proposed District. Each assessment area will realize a benefit from the land acquisition needed to meet regulatory requirements related to wetland systems, stormwater management systems, wetland setbacks, open space, and other infrastructure improvements. All assessment areas benefit from the land and will be allocated by the District as needed.

## MASTER ROADS AND STREETS

The District presently intends to provide the master transportation facilities within and adjacent to the District boundaries. A description of each facility follows:

Sawgrass Bay Boulevard: Sawgrass Bay Boulevard is the central collector roadway through the development and will serve as the primary project entrance roadway. The proposed cross-section consists of 106 -foot wide right-of-way with four lanes of pavement divided by a central median; however, only two lanes will be constructed. The District intends to construct the roadway, including utility transmission mains, landscape, irrigation, and lighting within this collector roadway. No improvements have been made at this time, but all plans and permitting are nearly complete and funded by the Developer. The improvements are planned to commence construction in the $4^{\text {th }}$ quarter of 2016, pending receipt of all required regulatory approvals.

## MASTER WATER AND WASTEWATER

Utilities, Inc., the private utility owner for the subject project area, has indicated that water, and wastewater capacity for this project is available. Utilities, Inc. has indicated that, until such time that residential development increases to support greater wastewater flows, reclaimed water supply will not be reliable to meet demands on a continuous basis. As development occurs in the surrounding areas, reclaimed water supply will grow proportionally, and their ability to meet the common area irrigation needs of the community will increase.

Water Distribution System: The Developer will fund and construct the water distribution system for the Avalon Groves project located within the District. The water distribution main lines will have multiple points of connection to the Utilities, Inc. system within the Sawgrass Bay Blvd. right-of-way. The water mains will loop through the Avalon groves project to provide water to all portions of the development.

Sanitary Sewer Collection System: The Developer will fund and construct the master sanitary sewer collection system. The Avalon Groves project will consist of a system of gravity sewer mains, several pump stations and the associated force main to provide sanitary sewer service to the project. The forcemain will run the length of Sawgrass Bay Blvd. through the project.

Reuse Water Distribution System: The Developer will fund and construct the master reuse water distribution system. The reuse water mains will loop through the Avalon Groves project to provide reuse water service to the project. At such time that Utilities, Inc. has sufficient capacity to serve the community, meters will be set and reclaimed water may be made available to the residents.

## MASTER SURFACE WATER MANAGEMENT

The District will provide the master surface water management infrastructure for the Avalon Groves project within the District in accordance with St. Johns River Water Management District (SJRWMD) and U.S. Army Corps of Engineers (ACOE) permit approvals. Any surplus of excavated material is anticipated to be used within the development for road sub base, perimeter landscape berms, and/or site grading. Components of the surface water management infrastructure are described below:

Wetland Mitigation: A comprehensive wetland compensation plan is being proposed to mitigate for unavoidable wetland impacts within the Avalon Groves project. Components of the mitigation plan are summarized below:

Environmental Impact Compensation Plan: The proposed wetland impacts are being compensated for by creating wetlands in mitigation areas located within the District and mitigation credits from mitigation bank purchases.

Wetland Enhancement and Preservation: Numerous isolated wetlands are being preserved on the site. Enhancement for a portion of these wetland systems is to be achieved by removing nuisance species and restoring the historic hydroperiods.

Threatened and Endangered Species Mitigation: The District will also provide for the cost of relocation and/or mitigation credit purchases for the adversely affected gopher tortoise and sand skink population or other protected species within the District.

## SUBDIVISION INFRASTRUCTURE

Residential: The District presently intends to provide supporting infrastructure for the residential
portion of the Avalon Groves project. Subdivision infrastructure improvements include roadway, utilities and stormwater management facilities and associated grading necessary for the stormwater system to function. The current land plan shows approximately 28,000 lineal feet ( 5.3 miles) of local roadway construction within the residential neighborhoods.

The CDD will ultimately consist of three assessment areas geographically positioned as depicted in the Site Map. Assessment Area 1 will be established as a residential active adult community with approximately 556 lots. The proposed product may be a mix of attached 45 -foot and detached 50 foot and 60 -foot wide single family residential lots. Assessment Area 1 is approximately 303 acres and lies in the northernmost portion of the District property.

Assessment Area 2 contains approximately 328 acres and is located in the central portion of the District property. The two residential tracts (Villages 1 and 2) are separated by the Sawgrass Bay Boulevard Right-of-Way. The two Villages contain 479 single family detached (SFD) residential units. The proposed product mix in Assessment Area 2 is: 83 SFD 40 -foot lots, 294 SFD 50-foot lots, and 102 SFD 60 -foot lots.

Assessment Area 3 is located in the southern portion of the District property. It is approximately 354 acres in total land area. The approximate lot yield in Assessment Area 3 if 317 SFD 50-foot wide lots but could increase based on current entitlements.

Each of the three assessment areas will contain retention ponds and floodplain compensation ponds as part of the overall stormwater management system for the project. Impacts to isolated wetlands are proposed in order to allow for the efficient implementation of the development footprint.

## LANDSCAPING AND MONUMENT SIGNS

The District presently intends to provide certain landscape improvements and facilities within the Avalon Groves project. These improvements may include landscaping and irrigation, retaining walls, common signage, stormwater management and treatment areas with landscape enhancements. The collector roadway network (rights-of-way and medians) and stormwater management facilities will also be landscaped consistent with the theme of the Avalon Groves project.

Entrance Landscaping and Signage: The District collector roadway will be landscaped with special attention given to the primary entrance, which may include monument walls and signage.

Monument Walls: The individual neighborhoods will be identified with specific signage and monuments in combination with landscape tracts will be used to buffer the neighborhoods from the adjacent collector roadway.

Common Area Irrigation System: The extensive landscaping areas and the collector road right-ofway will be irrigated with a common system of irrigation distribution lines.

## PARKS AND RECREATION FACILITIES

The District presently intends to provide numerous parks and recreation facilities within the project.
Neighborhood Park Facilities: The park facilities include the construction of neighborhood parks to be accessed by the public, some with play equipment. The District intends to provide hard surface pedestrian and bicycle trails throughout the project.

Recreation Facilities: The recreation facilities include an Amenity Center to be centrally located within the project. This may be funded by the Developer and if so, it would remain a private facility.

## DRY UTILITIES FACILITIES

The dry utilities improvements include undergrounding of facilities needed to serve the residential development within the project.

## PROFESSIONAL FEES

Professional Fees include civil engineering costs for site design, permitting, inspection, and master planning, survey costs for construction staking and as-builts as well as preparation of preliminary and final plats, geotechnical costs for pre-design soil borings, underdrain analysis and construction staking, and architectural costs for landscape and recreation design. Also included in this category are fees associated with environmental consultation and permitting. The professional fees are a proportionate amount of the overall costs to design, permit, and construct the project relating to the public infrastructure to be financed by the District. Design fees associated with the private utilities funded by the Developer are not included in these estimate fee projections.

The infrastructure, as outlined above, is necessary for the functional development of the District as required by the applicable independent unit of local government. The planning and design of the infrastructure is in accordance with current governmental regulatory requirements. The infrastructure will provide their intended function so long as the construction is in substantial compliance with the design and permits.

The Engineer recommends that in addition to the annual non-ad valorem assessments to be levied and collected by the District to pay debt service on its bonds, the District should levy and collect an annual "Maintenance Assessment" to be determined, assessed, and levied by the District's Board of Supervisors upon the assessable real property within the District for the purpose of defraying the cost and expenses of maintaining District-owned improvements.

## OWNERSHIP AND MAINTENANCE

Ownership and maintenance of the improvements* is anticipated as set forth below:

| IMPROVEMENT | OWNERSHIP/MAINTENANCE |
| :---: | :---: |
| Stormwater Management System | Community Development District (with Drainage Easements to Lake County) |
| Public Roadway Systems (Collector Roads) | Lake County/Community Development District |
| Public Roadway Systems (Local Roads) | Lake County / HOA (Private Roads) |
| Master Sewer Facilities | Utilities, Inc. (Private) |
| Master Water Facilities | Utilities, Inc. (Private) |
| Master Reuse Water System | Utilities, Inc. (Private) |
| Master Dry Utilities | Community Development District / Utility Companies (with Utility Easements) |
| Parks and Recreational Facilities | Community Development District / HOA |
| Landscaping and Signs | Lake County / Community Development District |

## PERMIT STATUS

The permit status for the Avalon Groves development plans is as follows:

## PERMIT

1. Lake County Preliminary Plat - Villages 1 and 2
2. Lake County - Villages 1 and 2 Phase 1A Construction Plans
3. SJRWMD Environmental Resource Permit

Villages 1 and 2 Phase 1 A
4. Lake County - Sawgrass Bay Blvd. Construction Plans Pending
5. SJRWMD Environmental Resource Permit

Sawgrass Bay Blvd. - Permit \#135777-3
5. USACOE Individual Permit \#SAJ-2015-01634
5. Lake County Zoning (PUD) Amendment Ord. 2016-20
6. Florida Fish and Wildlife Commission Conservation Permit

STATUS
Pending
Pending
Pending

Approved

Pending

Approved
Pending

The remainder of the construction plans for the required infrastructure within the Avalon Groves Community Development District is in the planning process and will be submitted for final permits in Phases as development progresses.

## Pending Permit Issuance

We are of the opinion that all permits that are not heretofore issued, and which are necessary to effect the improvements described herein, will be obtained during the ordinary course of development.

| Avalon Groves Community Development District |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Table 1 |  |  |  |  |
| Item | Assessment Area 1 | Assessment Area 2 | Assessment Area 3 | Totals |
| Master Infrastructure |  |  |  |  |
| Land Acquisition (1) | \$3,715,320 | \$5,217,120 | \$4,479,960 | \$13,412,400 |
| Clearing / Earthwork (2) | \$2,464,414 | \$2,123,120 | \$1,405,071 | \$5,992,605 |
| Master Stormwater Management | \$1,719,152 | \$1,481,068 | \$980,164 | \$4,180,384 |
| Master Collector Road (2 lanes, excl. utilities) | \$1,807,890 | \$1,807,890 | \$1,807,890 | \$5,423,671 |
| Parks and Recreational Facilities / Amenities | \$100,000 | \$1,862,500 | \$1,862,500 | \$3,825,000 |
| Professional Fees (3) | \$1,072,500 | \$936,000 | \$624,000 | \$2,632,500 |
| Master Utilities (Water, Wastewater, Reuse) | \$0 | \$0 | \$0 | \$0 |
| Sub-total | \$10,879,277 | \$13,427,698 | \$11,159,585 | \$35,466,560 |
| Residential Tract Costs |  |  |  |  |
| Roadway (Local Streets) | \$1,993,260 | \$881,910 | \$1,136,445 | \$4,011,615 |
| Landscaping, Entry Features and Signs | \$834,000 | \$720,000 | \$480,000 | \$2,034,000 |
| Sub-total | \$2,827,260 | \$1,601,910 | \$1,616,445 | \$6,045,615 |
| Contingency | \$1,370,654 | \$1,502,961 | \$1,277,603 | \$4,151,217 |
| Project Total | \$15,077,190 | \$16,532,569 | \$14,053,633 | \$45,663,392 |
| Anticipated Buildout Assessment Area 1 | December, 2019 |  |  |  |
| Anticipated Buildout Assessment Area 2 | December, 2018 |  |  |  |
| Anticipated Buildout Assessment Area 3 | December, 2021 |  |  |  |
| (1) Land Acquisition values are subject to appraisal ordered by District |  |  |  |  |
| (2) Earthwork excludes filling and compaction to final grade on developable lots |  |  |  |  |
| (3) Professional fees for design of public infrastructure only |  |  |  |  |
| (4) All Costs are in 2016 Dollars |  |  |  |  |
|  |  |  |  |  |

## ENGINEER'S OPINION

It is our professional opinion that the summary of costs listed above is sufficient to complete the construction of the items intended.

It is my professional opinion that the infrastructure costs associated herein for the district improvements are reasonable to complete the construction of the infrastructure described herein and that these infrastructure improvements will benefit and add value to the assessable lands within the District. The assessable property within the District will receive a special benefit from the herein described improvements, which benefit is at least equal to the cost of such improvements. Infrastructure costs are for public improvements or community facilities as set forth in section 190012(1) and (2) of the Florida Statutes.

The estimate of infrastructure construction costs is only an estimate and not a guarantee maximum price. The estimated cost is based on unit prices currently being experienced for ongoing and similar items of work in Lake County and quantities as represented on construction plans.

The labor market future costs of equipment and materials, increased regulatory actions and the actual construction process are all beyond control. Due to this inherent opportunity for fluctuation of cost, the total final cost may be more or less than this estimate.

Assuming project construction continues in a timely manner, it is our opinion that the proposed improvements, if constructed and built in substantial accordance with the approved plans and specifications, can be completed and meets their intended functions. Where necessary, historical costs, information from other professional or utility consultants and contractors have been used in preparation of this report. Consultants and contractors who have contributed in providing the cost data included in this report are reputable entities in the Lake County area. It is therefore our opinion that the construction of the proposed project can be completed at the cost stated.


Gary D. Miller, P.E.
Florida Registered Engineer No. 52717

## Appendix A







## Appendix B



## Appendix C





