Chair Sandy Burgess
Vice Chair Virginia Johns
Member Danielle J. Judd
Member William "Bill" Menadier
Member Susan Sloan
School Board Member Tina Certain

City Manager Mike DaRoza
City Attorney Marian Rush

The Planning and Zoning Board will conduct a

Regular Planning and Zoning Board Meeting
At 6:00 PM

to address the item(s) below.

Meeting Date: April 15, 2025

Meeting Location: James A. Lewis City Commission Chambers
15100 NW 142 Terrace
Alachua, FL 32615

Planning and Zoning Board Meeting

Notice given pursuant to Section 286.0105, Florida Statutes. In order to appeal any decision made at this meeting, you will need a verbatim record of the proceedings. It will be your responsibility to ensure such a record is made.

CALL TO ORDER

INVOCATION

PLEDGE TO THE FLAG

APPROVAL OF THE AGENDA

I. OLD BUSINESS

II. NEW BUSINESS

A) APPROVE MEETING MINUTES- MARCH 11, 2025

B) PSP24-0014 - TOMOKA HILLS GOLF COURSE SITE PLAN - A REQUEST BY CHW, LLC, ON BEHALF OF TOMOKA HILLS FARMS, INC. FOR THE TOMOKA HILLS GOLF COURSE SITE PLAN APPLICATION, WHICH PROPOSES AN 18-HOLE PRIVATE GOLF COURSE, ASSOCIATED MAINTENANCE FACILITIES, AND ASSOCIATED SITE IMPROVEMENTS ON A ± 197.03-ACRE SUBJECT PROPERTY LOCATED AT 156012 NW 167TH BOULEVARD. TAX PARCELS

03873-000-000; 03873-001-001. FLU: AGRICULTURE; ZONING: AGRICULTURAL (A); OVERLAY DISTRICT: GATEWAY OVERLAY DISTRICT; (QUASI-JUDICIAL HEARING)

C) ADMIN - MIXED-USE STAFF-INITIATED TEXT AMENDMENT TO THE CITY OF ALACHUA LAND DEVELOPMENT REGULATIONS - A REQUEST BY THE CITY OF ALACHUA, APPLICANT, FOR CONSIDERATION OF A TEXT AMENDMENT TO THE CITY OF ALACHUA LAND DEVELOPMENT REGULATIONS: AMENDING ARTICLE 2, ADMINISTRATION, RELATING TO THE POWERS AND DUTIES OF THE PLANNING AND ZONNING BOARD; AMENDING ARTICLE 3, ZONE DISTRICTS, RELATING TO THE PERMITTED DENSITY AND INTENSITY AND PURPOSES OF THE BUSINESS DISTRICTS; AMENDING ARTICLE 4, USE REGULATIONS, RELATING TO USE SPECIFIC STANDARDS AND THE CREATION OF MIXED-USE SPECIFIC STANDARDS; AMENDING ARTICLE 5, DENSITY, INTENSITY, AND DIMENSIONAL STANDARDS, RELATING TO THE PERMITTED DENSITY AND INTENSITY OF THE BUSINESS DISTRICTS AND ESTABLISHING DIMENSIONAL STANDARDS FOR MIXED-USE DEVELOPMENT; AMENDING ARTICLE 6, DEVELOPMENT STANDARDS, RELATING TO OFF-STREET PARKING AND LOADING STANDARDS AND TREE PROTECTION AND LANDSCAPING STANDARDS FOR MIXED-USE DEVELOPMENT; AND AMENDING ARTICLE 10, DEFINITIONS, RELATING TO THE DEFINITIONS OF "DEVELOPMENT AREA" AND "MIXED-USE"; (LEGISLATIVE HEARING).

III. BOARD COMMENTS/DISCUSSION

IV. CITIZENS COMMENTS

ADJOURN

City of Alachua
THE GOOD LIFE COMMUNITY

Commission Agenda Item

MEETING DATE: April 15, 2025
SUBJECT: Approve Meeting Minutes- March 11, 2025
PREPARED BY: Brenda Flieger
RECOMMENDED ACTION:
Approve Meeting Minutes for the March 11, 2025

Summary

FINANCIAL IMPACT

ADDITIONAL FINANCIAL INFORMATION

ATTACHMENTS

1. 25.03.11.M.PZB

Regular Planning and Zoning Board Meeting Minutes
March 11, 2025 at 6:00 PM

Chair Sandy Burgess
Vice Chair Virginia Johns
Member Danielle J. Judd
Member William "Bill" Menadier
Member Susan Sloan
School Board Member Tina Certain

City Manager Mike DaRoza
City Attorney Marian Rush

Meeting Location: James A. Lewis City Commission Chambers
15100 NW 142 Terrace
Alachua, FL 32615

Planning and Zoning Board Meeting

Notice given pursuant to Section 286.0105, Florida Statutes. In order to appeal any decision made at this meeting, you will need a verbatim record of the proceedings. It will be your responsibility to ensure such a record is made.

CALL TO ORDER

Sandy Burgess – Chair 6:00 p.m.

Susan Sloan - Member - Absent

INVOCATION

Led by Chair Burgess

PLEDGE TO THE FLAG

Led by Chair Burgess

APPROVAL OF THE AGENDA

Member William Menadier moved to approve the agenda; seconded by Vice Chair Virginia Johns.

Motion passed by 4-0 vote.

I. OLD BUSINESS

II. NEW BUSINESS

A) APPROVE MEETING MINUTES- FEBRUARY 11, 2025

Vice Chair Johns moved to approve the minutes from the February 11, 2025 meeting; seconded by Member Menadier.

Motion passed by unanimous consent.

B) PSSC24-0001 - WESTSIDE COMMONS SMALL SCALE COMPREHENSIVE PLAN AMENDMENT - A REQUEST BY ALAKAI ACQUISITIONS LLC, APPLICANT AND AGENT FOR BROWNING FAMILY REVOCABLE TRUST AND SANTA FE HILLS CHURCH OF CHRIST, INC., PROPERTY OWNERS, FOR CONSIDERATION OF AN AMENDMENT TO THE CITY OF ALACHUA FUTURE LAND USE MAP (FLUM). THE PROPOSED AMENDMENT WOULD CHANGE THE FUTURE LAND USE DESIGNATION OF A ± 5.07-ACRE SUBJECT PROPERTY FROM AGRICULTURE AND AGRICULTURE (COUNTY) TO COMMERCIAL. THE SUBJECT PROPERTY IS LOCATED AT 16313 NW US HIGHWAY 441; ALACHUA COUNTY TAX PARCELS 03044-001-002 AND 03044-002-000. EXISTING FLU: AGRICULTURE AND AGRICULTURE (COUNTY); PROPOSED FLU: COMMERCIAL; EXISTING ZONING: AGRICULTURAL (A) AND ADMINISTRATIVE AND PROFESSIONAL (AP)(COUNTY); (LEGISLATIVE HEARING).

Carson Crockett, Planner, presented the staff report.

Chair Burgess wanted clarification of the information in his staff report regarding any traffic deficiencies that may occur at a future time.
Mr. Crockett confirmed that it is for information only for both city staff and any developer that may submit plans in the future. A preliminary development order does not impact anything requested at this meeting.

Attorney Marian Rush confirmed that this information is for future use, but everyone needs to be mindful of it.

Chris Blurton, Interplan, LLC, stated he is present for any questions. He confirmed that they will be submitting a full traffic study with plans once they are finalized. He stated that they are trying to harmonize this property with the surrounding properties pertinent to zoning and future land use.

Vice Chair Johns moved that based upon the competent substantial evidence, the presentation before this Board, and Staff's recommendation, this Board finds the application for a Small-Scale Comprehensive Plan Amendment for Browning Family Revocable Trust and Santa Fe Hills Church of Christ, Inc., to be consistent with the City of Alachua Comprehensive Plan and transmits the application to the City Commission with a recommendation to approve; seconded by Member Danielle Judd.

Citizens comments:
Soorya Lindberg questioned the total acreage listed on the request because it does not match the county tax map totals. She also inquired about the buffer between the existing homes and the acreage listed.

Mr. Crockett confirmed that the applicant would not be able to do anything off of their property. The small section she is referring to is not in the application.

Mr. Blurton confirmed that they did obtain a survey and that is the information being utilized.

Chair Burgess also reiterated that the property appraiser's data is approximate, and it is up to the property owner to verify.

Brian Bisher commented that the Future Land Use map on line is not the most current. He believes that this rezoning would only add to the traffic problem.

Member Judd wanted verification that the sliver of land in question is not being used to get to the 5+/- acres listed on the application.

Mr. Crockett and Mr. Blurton confirmed that the land in question is not included in the property survey.

Member Judd also questioned the concurrency report that was released. She asked about the removal of ghost strips from the report, so numbers would be more accurate.

Mr. Crockett confirmed that staff does review and update the report annually. He also stated that the report Member Judd is referring to is the quarterly to monthly report. The annual report comes out in April.

Motion passed by 4-0 roll call vote. Member Sloan is not present.

C) PR24-0005 - WESTSIDE COMMONS SITE-SPECIFIC AMENDMENT TO THE OFFICIAL ZONING ATLAS (REZONING) - A REQUEST BY ALAKAI ACQUISITIONS LLC, APPLICANT AND AGENT FOR BROWNING FAMILY REVOCABLE TRUST AND SANTA FE HILLS CHURCH OF CHRIST, INC., PROPERTY OWNERS, FOR CONSIDERATION OF A SITE-SPECIFIC

AMENDMENT TO THE OFFICIAL ZONING ATLAS (REZONING). THE PROPOSED AMENDMENT WOULD CHANGE THE ZONING DISTRICT OF A ± 5.07-ACRE SUBJECT PROPERTY FROM AGRICULTURAL (A) AND ADMINISTRATIVE PROFESSIONAL (AP)(COUNTY) TO COMMUNITY COMMERCIAL (CC). THE SUBJECT PROPERTY IS LOCATED AT 16313 NW US HIGHWAY 441; ALACHUA COUNTY TAX PARCELS 03044-001-002 AND 03044-002-000. EXISTING FLU: AGRICULTURE AND AGRICULTURE (COUNTY); PROPOSED FLU: COMMERCIAL; EXISTING ZONING: AGRICULTURAL (A) AND ADMINISTRATIVE AND PROFESSIONAL (AP)(COUNTY); PROPOSED ZONING: COMMUNITY COMMERCIAL (CC); (QUASI-JUDICIAL HEARING).

Chair Burgess stated that this item is quasi-judicial. All who intend to speak need to be sworn in.

City Attorney Marian Rush explained the meaning of quasi-judicial and voir-dired the board.

Carson Crockett, Planner, presented his staff report.

Vice Chair Johns commended Mr. Crockett for his outstanding presentation.

Chris Blurton, Interplan, LLC, reiterated that he is present for any questions. He also explained that the zoning request is intentional to provide a step-down between the residential section and the intensity of the commercial section along the 441 corridor.

Member Judd moved that based upon the competent substantial evidence, the presentation before this Board, and Staff's recommendation, this Board finds the application for a site-specific amendment to the Official Zoning Atlas for Browning Family Revocable Trust and Santa Fe Hills Church of Christ, Inc., to be consistent with the City of Alachua Comprehensive Plan and in compliance with the City's Land Development Regulations and transmits the application to the City Commission with a recommendation to approve; seconded by Vice Chair Johns.

Motion passed by 4-0 roll call vote. Member Sloan is not present.

III. BOARD COMMENTS/DISCUSSION

Chair Burgess inquired about next month.

Rodolfo Valladares, Assistant City Manager, City of Alachua verified that there will be items for the meeting in April and confirmed that it will occur on the third Tuesday of the month instead of the second Tuesday for the month of April.

IV. CITIZENS COMMENTS

ADJOURN

Vice Chair Johns moved to adjourn; seconded by Member Menadier. Motion passed by unanimous consent.

Chair Burgess adjourned the meeting. 6:52 pm.

ATTEST:

CITY COMMISSION OF THE CITY OF ALACHUA, FLORDIA:

_____
Presiding Officer

_____
Staff Liaison

Commission Agenda
Item

MEETING DATE: April 15, 2025

SUBJECT: PSP24-0014 - Tomoka Hills Golf Course Site Plan - A request by CHW, LLC, on behalf of Tomoka Hills Farms, Inc. for the Tomoka Hills Golf Course site plan application, which proposes an 18-hole private golf course, associated maintenance facilities, and associated site improvements on a ± 197.03-acre subject property located at 156012 NW 167th Boulevard. Tax parcels 03873-000-000; 03873-001-001. FLU: Agriculture; Zoning: Agricultural (A); Overlay District: Gateway Overlay District; (Quasi-Judicial Hearing)

PREPARED BY: Carson Crockett

RECOMMENDED ACTION:

Staff recommends that the Planning & Zoning Board find the site plan application for Tomoka Hills Farms, Inc. to be consistent with the City of Alachua Comprehensive Plan and in compliance with the City of Alachua Land Development Regulations and approve the site plan, subject to the 13 conditions recommended by Staff found in Exhibit "A" and located on page 35 of the April 15, 2025, staff report.

Recommended Motion: *I move that, based upon the competent substantial evidence, the presentation before this Board, and Staff's recommendation, this Board finds the site plan application for Tomoka Hills Farms, Inc. to be consistent with the City of Alachua Comprehensive Plan and in compliance with the City of Alachua Land Development Regulations and approves the site plan, subject to the 13 conditions found in Exhibit "A" and located on page 35 of the April 15, 2025, staff report.*

Summary

This application is a request for a site plan submitted by CHW, LLC on behalf of the property owner, Tomoka Hills Farms, Inc., for the Tomoka Hills Golf Facility project. The application proposes an 18-hole private golf course and maintenance facility with associated site improvements on a ± 197.03-acre subject property. The subject property is located at 15601 NW 167th Boulevard (tax parcels 03873-000-000; 03873-001-001).

Access to the maintenance facility is proposed to be provided from NW 162nd Lane and access to the golf course itself is to be provided from the Tower Hill HQ property (tax parcel 03873-001-000). A shared parking plan is proposed between the office use on tax parcel 03873-001-00 and the private golf course.

Stormwater runoff will be directed to both onsite management facilities and offsite management facilities under common ownership.

Staff have recommended 13 conditions upon approval to ensure the application is consistent with the City of Alachua Comprehensive Plan and in compliance with the City of Alachua Land Development Regulations.

The Applicant has proposed 12 conditions. Some conditions are comparable to Staff's and others are significantly different. Both sets of conditions have been provided to the Planning & Zoning Board.

FINANCIAL IMPACT

ADDITIONAL FINANCIAL INFORMATION

ATTACHMENTS

1. Staff Report, Recommended Conditions by Staff, and Supporting Materials
2. Site Plan
3. Application Materials
4. Recommended Conditions by Applicant
5. Applicant's Statement of Revised Comprehensive Plan Consistency (Not Reviewed by Staff)
6. Public Notice Materials
7. Carson J. Crockett, AICP Candidate - Resume on File
8. Letter.Liederman.DeRoza.

City of Alachua
Planning & Community Development Department
Staff Report

Planning & Zoning Board Hearing Date: April 15, 2025
Quasi-Judicial Hearing **Application #: PSP24-0014**

SUBJECT:	A request for site plan approval of an 18-hole private golf course, associated maintenance facilities, and associated site improvements.
APPLICANT/AGENT:	CHW, LLC
PROPERTY OWNER:	Tomoka Hills Farms, Inc.
LOCATION:	15601 NW 167th Boulevard
PARCEL ID NUMBER:	03873-000-000; 03873-001-001
FLUM DESIGNATION:	Agriculture
ZONING:	Agricultural (A)
OVERLAY:	Gateway Overlay District
ACREAGE:	± 197.03-acres
PROJECT PLANNER:	Justin Tabor, AICP Carson J. Crockett, AICP Candidate
RECOMMENDATION:	Staff recommends that the Planning & Zoning Board find the site plan application for Tomoka Hills Farms, Inc. to be consistent with the City of Alachua Comprehensive Plan and in compliance with the City of Alachua Land Development Regulations and approve the site plan, subject to the 13 conditions recommended by Staff found in Exhibit "A" and located on page 35 of the April 15, 2025, staff report.
RECOMMENDED MOTION:	*I move that, based upon the competent substantial evidence, the presentation before this Board, and Staff's recommendation, this Board finds the site plan application for Tomoka Hills Farms, Inc. to be consistent with the City of Alachua Comprehensive Plan and in compliance with the City of Alachua Land Development Regulations and approves the site plan, subject to the 13 conditions found in Exhibit "A" and located on page 35 of the April 15, 2025, staff report.*

SUMMARY

This application is a request for a site plan submitted by CHW, LLC on behalf of the property owner, Tomoka Hills Farms, Inc., for the Tomoka Hills Golf Facility project. The application proposes an 18-hole private golf course and maintenance facility with associated site improvements on a ± 197.03-acre subject property. The subject property is located at 15601 NW 167th Boulevard (tax parcels 03873-000-000; 03873-001-001).

Access to the maintenance facility is proposed to be provided from NW 162nd Lane and access to the golf course itself is to be provided from the Tower Hill HQ property (tax parcel 03873-001-000). A shared parking plan is proposed between the office use on tax parcel 03873-001-00 and the private golf course.

Stormwater runoff will be directed to both onsite management facilities and offsite management facilities under common ownership.

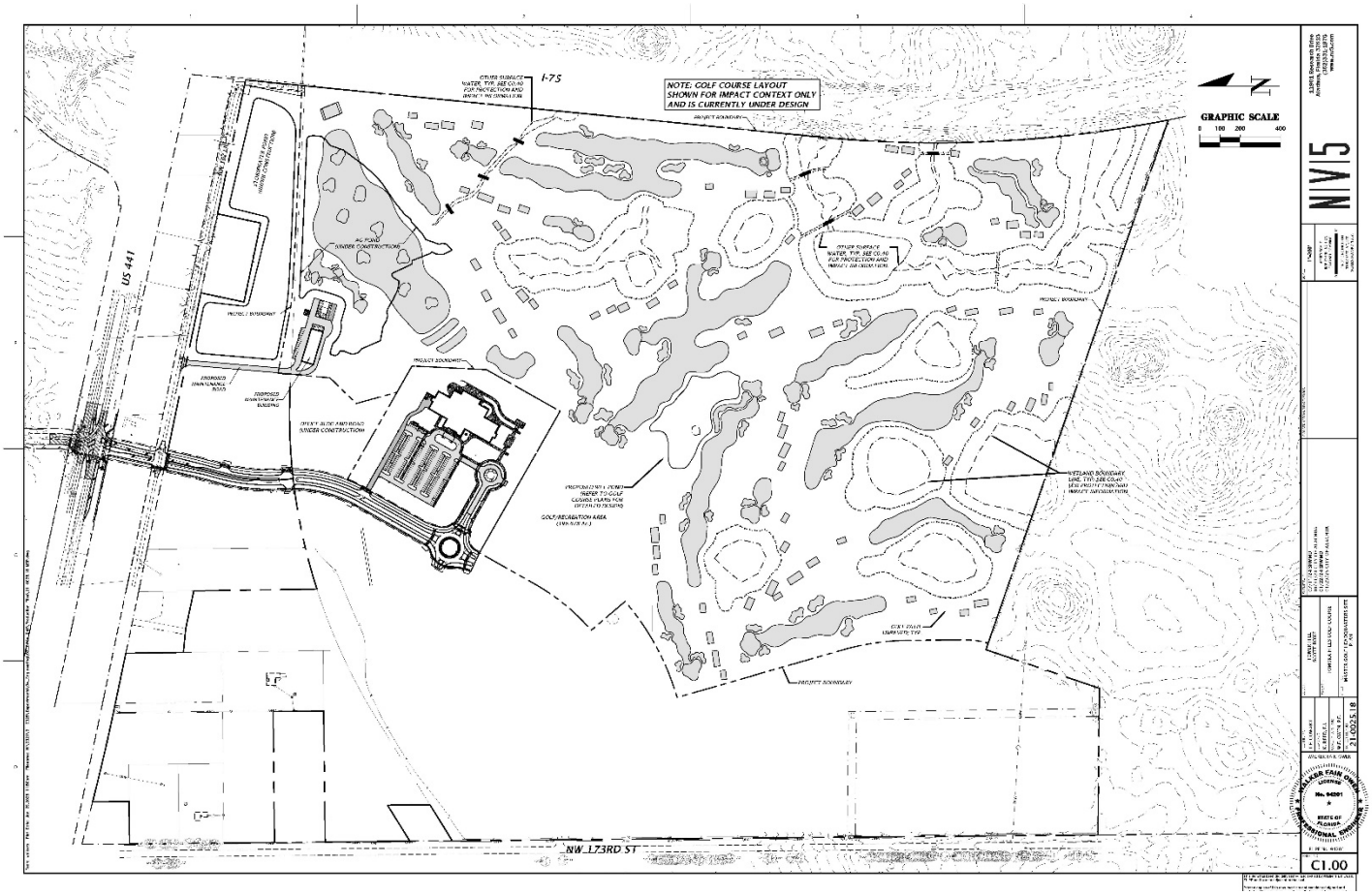


Figure 1. Proposed Site Plan

EXISTING USES

The subject property is primarily comprised of a mix of undeveloped agricultural lands and naturally wooden areas, including some wetland areas.

SURROUNDING USES

The existing uses, Future Land Use Map (FLUM) designations, and zoning districts of the surrounding area are identified in Table 1. Figure 2 provides an overview of the vicinity of the subject property. (NOTE: The information below is intended to provide a general overview of the area surrounding the subject property and to generally orient the reader. The information below is not intended to be all-inclusive, and may not identify all existing uses, FLUM designations, and/or zoning districts surrounding the subject property.)

Table 1. Surrounding Land Uses

Direction	Existing Use(s)	FLUM Designation(s)	Zoning District(s)
North	Restaurant with Drive-Thru; Hotel; Gasoline Sales	Commercial	Commercial Intensive (CI)
South	Agriculture; Single-family Residential	Rural/Agriculture	Agricultural (A)(County)
East	Vacant Commercial	Commercial	Commercial Intensive (CI)
West	Agriculture; Professional Services	Agriculture; Community Commercial	Agricultural (A); Community Commercial (CC)

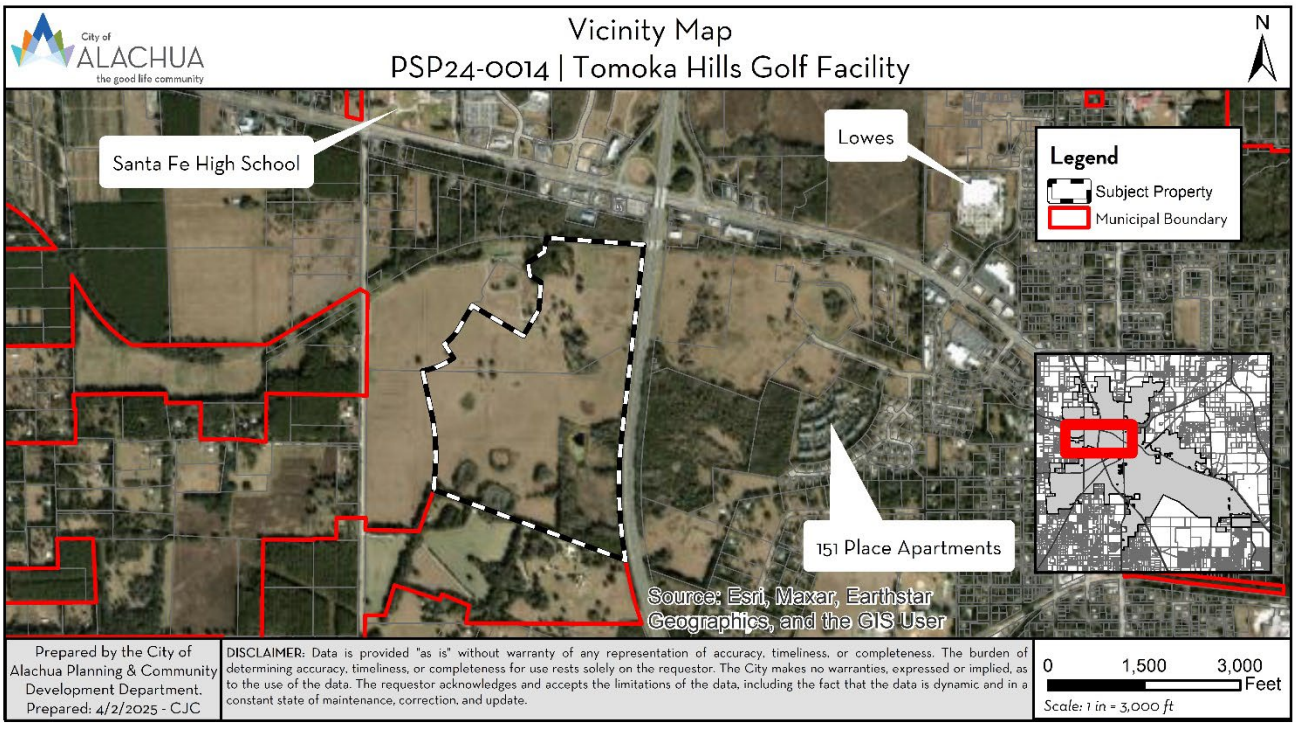


Figure 2. Vicinity Map

NEIGHBORHOOD MEETING

The purpose of a neighborhood meeting is to educate the owners of nearby land and any other interested members of the public about the project and to receive comments regarding the project. Neighborhood meetings are required for site plan applications.

A neighborhood meeting was held on September 12, 2024, at 11801 Research Drive, Alachua, Fl (CHW Offices). As required by Section 2.4.4 of the City's Land Development Regulations, all property owners within 400 feet of the subject property were notified and notice of the meeting was published in a newspaper of general circulation. The applicant was available to answer questions. Materials submitted by the applicant indicate that the meeting was attended by six members of the public. A neighborhood meeting summary submitted by the applicant is available for review in the application materials. Comments and questions from attendees included concerns regarding traffic, on-site wetlands, and fertilizer runoff.

COMPREHENSIVE PLAN CONSISTENCY ANALYSIS

The goals, objectives, and policies (GOPs) identified below are provided to establish a basis of the application's consistency with the Comprehensive Plan. There may be additional GOPs which the application is consistent with that are not identified within this report. An evaluation and findings of consistency with the identified GOPs is also provided below.

Future Land Use Element

Goal 1: *Future Land Use Map 2035*

The City shall maintain a Future Land Use Map in order to effectively guide development in a sustainable manner and to ensure economic prosperity and stability while maintaining a high quality of life for all of its present and future citizens, businesses, and visitors.

Objective 1.1: *Agriculture*

The City shall establish an Agriculture land use category in order to maintain agriculture operations within the city limits as well as preserve the rural character and small-town charm of Alachua.

Evaluation & Findings: The Agriculture future land use category permits for agritourism, recreation, and other related activities. The future land use category is consistent with the zone district of the subject property (Agricultural (A)) which also permits the use of private golf course.

Policy 1.3.g: The City shall pursue the establishment of activity centers and similar criteria to guide the placement and design of commercial and business areas.

1. The City shall establish and maintain a Gateway Activity Center at the interchange of US 441 and Interstate 75. The boundaries of the Gateway Activity Center shall be based on the Generalized US 441/I-75 Activity Center Map provided in the Future Land Use Map Series. The intent of this activity center is to welcome existing and future residents and visitors to the City, and to promote Alachua as an attractive, vibrant, and economically prosperous community.

Evaluation & Findings: The subject property is located within the Gateway Activity Center (also referred to as the Gateway Overlay District). An evaluation with the application's compliance with the standards of the Gateway Overlay District has been included within this report.

Objective 2.4: *Landscaping and Tree Protection Standards*

The City shall adopt landscaping and tree protection standards in order to achieve the aesthetic design values of the community and preserve tree canopies, as well as to protect exceptional specimens and champion trees.

Evaluation & Findings: The applicant has provided documentation in the form of a landscape plan demonstrating compliance with the applicable landscaping and tree protection standards implemented by Section 6.2 of the City's Land Development Regulations. Heritage and regulated trees will be preserved to the greatest extent practicable. No champion trees are known to exist on the site.

Policy 5.1.a: *Topography*: The City shall protect the natural topography of the City, including steep and seepage slopes, by requiring new development to include techniques to minimize negative impacts on the natural terrain. An emphasis will be placed on retaining the natural function of seepage slopes during development. Additionally, retention of existing native vegetation will be encouraged as one method of protecting slopes.

Policy 5.1.b: *Soils*: The City shall ensure soil protection and intervention measures are included in the development review process.

Policy 5.1.c: *Flood prone areas*: The City shall require as part of the development review process the identification of FEMA flood zone areas. Where necessary, base flood elevations and minimum finished floor elevations shall be established. The City shall also require finished floor elevations on subdivision plats, site plans and building permit plans when necessary to determine compliance with flood prone area regulations. The City shall establish standards for a limitation on filling in flood prone areas.

Policy 5.1.d: *Wetlands*: The City shall utilize statewide wetland delineation methodology in accordance with Florida Administrative Code (FAC) and regulations adopted by the FDEP and the Suwannee River Water Management District.

Policy 5.1.e: *Habitat*: The City shall require as part of the development review process, an inventory of listed species for all new developments in areas identified as known habitat for listed species if listed species are known to exist in close proximity to the development. The survey shall include detailed information regarding type, quantity, location, and habitat requirements for any listed species identified. A de minimus threshold for properties required to complete the inventory may be established in the City's Land Development Regulations.

Evaluation & Findings: Minimal alterations to topography of the subject property are proposed, as the applicant contends that the topography of the site will aid in the enhancement of the project design. Steep and seepage slopes will be protected. Delineated wetlands are known to exist on the subject property.

The applicant has identified 0.05-acres of wetland to be impacted and is providing for a 1-acre enhancement area to offset the impacts. The enhancement area (EA) consists of approximately 0.59-acres of wetland enhancement and 0.40-acres of upland buffer enhancement. The non-impacted wetlands have been buffered appropriately as required by Policy 1.10.g of the Conservation and Open Space Element. A full environmental conditions analysis has been included within this report.

Transportation Element

Objective 1.1: *Level of Service*

The City shall establish a safe, convenient, and efficient level of service standard for all motorized and non-motorized transportation systems.

Evaluation & Findings: The proposed site plan is not expected to negatively impact the level of service of any transportation facility. A public facilities impact analysis, including transportation facilities, has been included within this report.

Community Facilities Element

Policy 1.2.a: The City shall establish a Community Wastewater Service Area, which shall include all areas where wastewater service is available. Wastewater service shall be deemed available if:

1. A gravity water main exists within 100 feet of the property line of any lot with a residential land use category or an existing single family residence and wastewater service is accessible through public utility easements or right of ways. The distance shall be measured as required for construction of the infrastructure along public utility easements and right of ways.
2. Gravity wastewater main exists with 500 feet of the property line of any proposed residential subdivision consisting of 5 units or less and the gravity wastewater system is accessible through public utility easements or right of ways. The distance shall be measured as required for construction of the infrastructure along public utility easements and right of ways.
3. A gravity wastewater main, wastewater pumping station, or force main exists within 2,640 feet of the property line of any proposed residential subdivision comprised of more than 5 units, or any multi-family residential development, or any commercial development, or any industrial development and the gravity wastewater system, wastewater pumping station, or force main is accessible through public utility easements or right of ways. The distance shall be measured as required for construction of the infrastructure along public utility easements and right of ways.

Evaluation & Findings: The subject property is located within the Community Wastewater Service Area and the proposed site improvements will connect.

Policy 2.1.a: The City hereby establishes the following level of service standards for solid waste disposal facilities for residential uses:

Facility Type	Level of Service Standard
Solid Waste Landfill	0.73 tons per capita per year

Evaluation & Findings: An analysis of the impacts to solid waste facilities has been provided within this report. The proposed site plan would not negatively impact the level of service of solid waste facilities.

Policy 4.1.b: The City shall establish a Community Potable Water Service Area, which includes all areas where potable water service is available. Water service shall be deemed available if:

1. A water main exists within 100 feet of any lot within a residential land use category or an existing single family residence water service is accessible through public utility easements or right of ways. The distance shall be measured as required for construction of the infrastructure along public utility easements and right of ways.
2. A water main exists within 500 feet of any proposed residential subdivision consisting of 5 units or less and water service is accessible through public utility easements or right of ways. The distance shall be measured as required for construction of the infrastructure along public utility easements and right of ways.
3. A water main exists within 2,640 feet of any residential subdivision with more than 5 units, or any multi-family residential development, or any commercial development, or any industrial development and water service is accessible through public utility easements or right of ways. The distance shall be measured as required for construction of the infrastructure along public utility easements and right of ways.

Evaluation & Findings: The subject property is located within the Community Potable Water Service Area and the proposed site improvements will connect. The applicant is proposing the use of a well for irrigation purposes. The applicant will be required to obtain a consumptive use permit (CUP) for said irrigation from the Suwannee River Water Management District. Irrigation systems are permitted and regulated by Alachua County and all appropriate permits for such systems will need obtained through Alachua County prior to the installation of the proposed irrigation system. Staff has recommended a condition included in Exhibit "A" of this report to reflect such requirement. Should a CUP or irrigation system not be approved, the applicant may need to modify the site plan through the process provided for in the Land Development Regulations.

Objective 5.1: *Protection of High Aquifer Recharge Areas and Water Bodies*

The City recognizes the importance of the protection of high aquifer recharge areas, wellfield protection areas, lakes, streams, drainage basins, wetlands and stream-to-sink features as vital to the protection of groundwater resources. The City shall, through partnerships and using the best available data, provide protection for groundwater resources.

Evaluation & Findings: Delineated wetlands are known to exist on the subject property. The applicant has identified 0.05-acres of wetland to be impacted and is providing for a 1-acre enhancement area to offset the impacts. The enhancement area (EA) consists of approximately 0.59-acres of wetland enhancement and 0.40-acres of upland buffer enhancement. The non-impacted wetlands have been buffered appropriately as required by Policy 1.10.g of the Conservation and Open Space Element. A full environmental conditions analysis has been included within this report.

Staff is recommending a condition to address the potential use, overuse, and associated runoff of fertilizers on the subject property. The condition is located in Exhibit "A" of this report and would require compliance with the submitted Tomoka Hills Golf Course Best Management Practices (BMP) Planning Guide and the Wetland Mitigation/Monitoring/ Maintenance (3M) Plan, adopting the guide and plan as part of the approved site plan.

Policy 5.2.a: In an effort to protect groundwater quality, the City shall:

1. Adopt design criteria for stormwater management practices that minimize the leaching or discharge of nutrients;
2. Promote the Florida Yards and Neighborhood program and Florida-Friendly landscaping practices to educate the public about proper lawn and landscaped area fertilization and irrigation;
3. Incorporate the principles of the Florida Yards and Neighborhoods and Florida-Friendly landscaping practices program into local landscaping ordinances;
4. Adopt water conservation programs;
5. Educate the public about the proper orientation and maintenance of onsite sewage treatment and disposal systems;
6. Implement a local onsite sewage treatment and disposal systems management program to assure that these systems are regularly inspected, pumped out, or brought up to current standards when required by Florida Administrative Code; and,
7. Participate in intergovernmental efforts which encourage the protection of groundwater quality.

Policy 5.2.c: Applicants for new development, expansions, or redevelopment shall employ one or more of the following techniques to address potential groundwater quality and quantity impacts:

1. Construction and maintenance of shallow, landscaped retention basins;
2. Decreasing the amount of stormwater runoff through the use of pervious surfaces or increased open space;
3. Development of a stormwater pollution prevention plan;
4. Development of a sinkhole remediation plan; and,
5. Development of a groundwater monitoring plan.

Evaluation & Findings: The stormwater facilities provided are shallow, landscaped retention basins. Although the applicant did submit a BMP Planning Guide that addresses water quality, a specific stormwater pollution plan and groundwater monitoring plan were not provided. The Wetland 3M Plan does address the maintenance and monitoring of the wetland areas. Staff is recommending a condition that a specific groundwater monitoring plan for post-construction activities is developed and submitted to City staff for administrative approval, with approval needing obtained prior to the completion of construction. The monitoring plan must be consistent with the Santa Fe River Basin Management Action Plan (BMAP).

Policy 5.2.d: Best management practices and performance standards shall be utilized to maximize open space, limit impervious surfaces, minimize the use of fertilizers on turf grass areas, promote protection of natural vegetation, promote the use of pervious parking areas, and treat stormwater to protect water quality.

Evaluation & Findings: A BMP Planning Guide was submitted by the applicant to address best management practices, including the use of fertilizers, protection of natural vegetation, the use of pesticides, watershed runoff, and irrigation practices.

Conservation and Open Space Element

Objective 1.2: *Native Communities and Ecosystems*

The City shall preserve and protect native communities and ecosystems, particularly those considered endangered or threatened.

Evaluation & Findings: No endangered or threatened plant or animal species are known to exist on the site. A three-tier buffer system is proposed to maintain he protection of local native communities and ecosystems surrounding the delineated wetlands on the site. A full environmental conditions analysis has been included within this report.

Objective 1.3: *Listed Species*

The City shall protect species listed by State and Federal agencies as endangered, threatened or of special concern, and their habitats.

Evaluation & Findings: No listed plant or animal species are known to exist on the site. Should a listed species be discovered, all applicable local, state, and federal regulations must by complied with. A full environmental conditions analysis has been included within this report.

Policy 1.5.a: The City shall ensure soil protection and intervention measures are included in the development review process.

Policy 1.5.b: The City shall require land clearing for development to be phased with construction activity, and to adhere to techniques which minimize soil erosion, minimize removal of native and non-invasive trees and vegetation, and protect champion and designated heritage trees. After clearing, soils shall be stabilized i9n accordance with best management practices (BMPs) identified in "The Florida Stormwater, Erosion, and Sedimentation Control Inspector's Manual".

Policy 1.5.c: The City shall protect the natural topography of the City, including steep and seepage slopes, by requiring new development to include techniques to minimize negative impacts on the natural terrain. An emphasis will be placed on retaining the natural function of seepage slopes during development. Additionally, retention of existing native vegetation will be encouraged as one method of protecting slopes.

Policy 1.5.d: The City shall coordinate with appropriate Alachua County agencies, the Suwannee River Water Management District (SRWMD), the Florida Geological Survey (FGS), the Florida Department of Agriculture and Consumer Services (FDACS), the U.S. Geological Survey (USGS), U.S. Department of Agriculture Natural Resources Conservation Service (NRCS), and the Army Corps of Engineers to identify the best available soil erosion potentials, best management practices and technically sound erosion reduction techniques.

Evaluation & Findings: A full soil analysis is included in the environmental conditions analysis within this report. There are a total of 15 soil types present on the subject property. Staff is recommending a condition regarding soil and dust stabilization during the construction phase of the project. That condition is included in Exhibit "A" of this report. A seepage slope has been documented on the subject property; however, it is to remain undisturbed during the construction phase and post-construction activities on the subject property. All applicable erosion and sedimentation control measures as required by the City and SRWMD are to be provided.

Objective 1.7: *Geological Resources*

The City shall identify, protect and conserve significant geological resources and their natural functions.

Evaluation & Findings: Although no significant geological resources are known to exist on the subject property, significant geological resources do exist in relative proximity to the subject property. The karst features near the site have potential to contribute to the area's network of natural resources; however, the BMP Planning Guide submitted by the applicant does address pollutants and stormwater runoff.

Staff is recommending two conditions in Exhibit "A" regarding these nearby features. One condition would require compliance with the submitted BMP Planning Guide and the Wetland 3M Plan, adopting the guide and plan as part of the approved site plan. The second condition would require that a specific groundwater monitoring plan for post-construction activities is developed and submitted to City staff for administrative approval, with approval needing obtained prior to the completion of construction. The monitoring plan must be consistent with the Santa Fe River Basin Management Action Plan (BMAP).

Policy 1.7.e: The City shall utilize regulatory and stewardship techniques to ensure that stormwater, wastewater and landscaping practices do not negatively impact the structural integrity, hydrology, biodiversity and other natural functions of significant geological resources.

Evaluation & Findings: The applicant has designed the stormwater management facilities to meet the standards of the Suwannee River Water Management District, City of Alachua, and Alachua County.

Policy 1.10.b: The City shall conserve wetlands by prohibiting, where the alternative of clustering all structures in the non-wetland portion of the site exists, any development or dredging and filling which would alter their natural functions. If no other alternative for development exists, the City shall allow only minimal development activity in those areas designated as wetlands within this Comprehensive Plan and that such development activity comply with the following performance standards:

III. Limited development activity with impacts to isolated wetlands (and/or associated buffers) that meet all of the following conditions:

a. Less than .25 acres in size; and,
b. Determined to be of poor quality by a certified environmental specialist; and,
c. The applicant has demonstrated that every reasonable step has been taken to minimize impact to wetland; and,
d. The applicant has provided for appropriate on-site or off-site mitigation for impact to wetland.

Limited development activity includes, but is not limited to, park amenities such as trails or boardwalks, minimum necessary roadways and/or sidewalks for access or internal site connectivity, and underground utility line crossings.

Evaluation & Findings: The applicant has proposed an impact of 0.05-acres of wetlands, and an additional 0.49-acres that would be managed with tree trimming in accordance with best landscape practices. The applicant has provided for on-site mitigation for the proposed impacts. Refer to the submitted Wetland 3M Plan.

Policy 1.10.g: The City shall require natural vegetative buffers around wetlands to protect the fragile ecosystem they sustain. Buffers, measured from the outer edge of the wetland, shall be created as established in the following table:

Resource Addressed	Required Buffer (feet)
Wetlands less than or equal to 0.5 acre that do not support federally and/or state regulated vertebrate wetland/aquatic dependent animal species.	50' average 35' minimum
Wetlands greater than 0.5 acre that do not support the animal species described above.	75' average 50' minimum
Areas where the animal species described above have been documented within 300 feet of a wetland.	100' average 75' minimum

Evaluation & Findings: All required wetland buffers have been provided, except for those impacts described in Policy 1.10.b, which are being mitigated for on-site.

Objective 1.12: *Water Resources*

The City shall protect and conserve the quantity and quality of water resources, not only for the benefit of residents of the City, but for all in North Florida who depend on the Floridan Aquifer for drinking water, and for the benefit of all connected springs, streams, and rivers which may be impacted by the City's land use and development practices.

Evaluation & Findings: The applicant has been in coordination with the Suwannee River Water Management District and Alachua County to ensure no impacts will occur to wetlands or water systems outside of the City limits.

Policy 1.12.d: The City shall require the following buffers for development along surface water bodies. Buffers shall be measured from the outer edge of the water body, and created as established in the following table.

Resource Addressed	Required Buffer (feet)
Surface waters less than or equal to 0.5 acre that do not support federally and/or state regulated vertebrate wetland/aquatic dependent animal species.	50' average 35' minimum
Surface waters greater than 0.5 acre that do not support the animal species described above.	75' average 50' minimum
Areas where the animal species described above have been documented within 300 feet of a wetland.	100' average 75' minimum

Evaluation & Findings: All required surface water buffers have been provided.

Policy 1.12.i: The City shall restrict the use of chemical, biological and mechanical agents to control aquatic pests, animals, insects and fish to those that are consistent with state and federal regulations and are known to minimize impacts on water quality and surroundings.

Evaluation & Findings: The applicant has stated that herbicides are planned to be used using low volume backpack and handheld sprayers, only to be performed by State Certified Pesticide Applicators with Aquatic Pest Control for wetland treatment. Staff recommends that this statement be included as a condition of site plan approval and has included it in Exhibit "A" of this report.

ENVIRONMENTAL CONDITIONS ANALYSIS

Wetlands

Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Evaluation & Findings: The applicant has proposed an impact of 0.05-acres of wetlands, and an additional 0.49-acres that would be managed with tree trimming in accordance with best landscape practices. The applicant has provided for on-site mitigation for the proposed impacts. Refer to the submitted Wetland 3M Plan. All other wetlands on the site have been buffered in accordance with the City of Alachua Comprehensive Plan. Staff has recommended a condition to adopt the Wetland 3M Plan as part of the site plan approval in Exhibit "A" of this staff report.

Strategic Ecosystems

Strategic Ecosystems were identified by an ecological inventory project in a report prepared for Alachua County Department of Growth Management in 1987 and updated in 1996. The purpose of the inventory was to identify, inventory, map, describe, and evaluate the most significant natural biological communities in private ownership in Alachua County.

Evaluation & Findings: The subject property is not located within or adjacent to a strategic ecosystem, therefore, the development will have no impact upon any strategic ecosystem(s) identified within the ecological inventory report.

Regulated Plant & Animal Species

The Florida Natural Areas Inventory (FNAI) has identified areas throughout the State of Florida which may contain good quality natural communities. This data layer is known as the Potential Natural Areas (PNA) data layer, and identifies privately owned lands that are not managed or listed for conservation purposes. These areas were delineated by FNAI scientific staff through interpretation of natural vegetation from 1988-1993 FDOT aerial photographs and from input received during Regional Ecological Workshops held for each regional planning council. These workshops were attended by experts familiar with natural areas in the region.

Potential Natural Areas were assigned ranks of Priority 1 through Priority 5 based on size, perceived quality, and type of natural community present. The areas included in Priority 5 are exceptions to the above criteria. These areas were identified through the same process of aerial photographic interpretation and regional workshops as the PNA 1 through 4 ranked sites, but do not meet the standard criteria.

Evaluation & Findings: No species identified as endangered, threatened, or of special concern are known to exist on the subject property. No areas of the subject property have been prioritized as part of the Florida Natural Areas Inventory. The soils on the site are conducive to gopher tortoise burrowing and Staff has recommended a condition for a gopher tortoise survey in Exhibit "A" of this report. If a regulated plant or animal species is discovered, any future development will be required to conform with the applicable policies and regulations established in the City of Alachua Comprehensive Plan and Land Development Regulations.

Soil Survey

The hydrologic soil group is an indicator of potential soil limitations. The hydrologic soil group, as defined for each specific soil, refers to a group of soils which have been categorized according to their runoff-producing characteristics. These hydrologic groups are defined by the Soil Survey of Alachua County, Florida, dated August 1985. The chief consideration with respect to runoff potential is the capacity of each soil to permit infiltration (the slope and kind of plant cover are not considered, but are separate factors in predicting runoff.) There are four hydrologic groups: A, B, C, and D. "Group A" soils have a higher infiltration rate when thoroughly wet and therefore have a lower runoff potential. "Group D" soils have a lower infiltration rate and therefore a higher runoff potential. There are 15 soil types found within the subject property according to the August 1985 Soil Survey of Alachua County, shown in Table 2.

Table 2. Soil Types

Soil Type	Hydrologic Group	Drainage Class	Limitations		% of Subject Property (may not total to 100% due to rounding)
			Dwellings Without Basements	Small Commercial Buildings	
Blichton Sand; 5% to 8% Slopes	D	Poorly Drained	Severe	Severe	20.12%
Gainesville Sand; 0% to 5% Slopes	A	Well Drained	Slight	Slight	18.21%
Lochloosa Fine Sand; 2% to 5% Slopes	C	Somewhat Poorly Drained	Slight	Slight	16.83%
Millhopper Sand; 5% to 8% Slopes	A	Moderately Well Drained	Slight	Slight	11.23%
Bivans Sand; 5% to 8% Slopes	D	Poorly Drained	Severe	Severe	5.72%
Millhopper Sand; 0% to 5% Slopes	A	Moderately Well Drained	Slight	Slight	5.47%
Fort Meade Fine Sand; 0% to 5% Slopes	A	Well Drained	Slight	Slight	5.04%

Table 2. Soil Types (Continued)

Soil Type	Hydrologic Group	Drainage Class	Limitations		% of Subject Property (may not total to 100% due to rounding)
			Dwellings Without Basements	Small Commercial Buildings	
Kendrick Sand; 5% to 8% Slopes	A	Well Drained	Slight	Slight	4.75%
Arredondo Fine Sand; 0% to 5% Slopes	A	Well Drained	Slight	Slight	3.82%
Norfolk Loamy Fine Sand; 5% to 8% Slopes	B	Well Drained	Slight	Moderate	2.65%
Kendrick Sand; 2% to 5% Slopes	A	Well Drained	Slight	Slight	2.50%
Pits and Dumps; 0% to 4% Slopes	Unranked	Unranked	Severe	Severe	1.73%
Bivans Sand; 2% to 5% Slopes	D	Poorly Drained	Severe	Severe	1.56%
Blichton Sand; 0% to 2% Slopes	D	Poorly Drained	Severe	Severe	0.35%
Lochloosa Fine Sand; 5% to 8% Slopes	C	Somewhat Poorly Drained	Severe	Severe	>0.01%

Evaluation & Findings: The soil types on the subject property range from well drained to poorly drained soils, with a majority being well drained or moderately well drained soils. While several soil types note severe or moderate limitations for urban development, these limitations are generally related to the slope of the soil. Slope presents limitations primarily for commercial, larger residential structures, and other urban development; however, no structures are proposed in these areas. The proposed site plan locates the maintenance facility in an area comprised primarily of Gainesville Sand; 0% to 5% Slopes, located in the north of the subject property.

Many of the soils with severe limitations related to poor drainage are located in or near the delineated wetland areas and would not be significantly impacted by the proposed site plan. The proposed site plan does demonstrate that the golf course will cross soils with severe limitations for structures and urban development; however, since no structures, on-site sewage treatment systems, roadways, parking areas, etc. are being proposed in these areas, there are no concerns related to the suitability of these soils. The applicant has demonstrated that the topography of the subject property is to be minimally altered – particularly in the southern portion of the subject property – with steep and seepage slopes unaltered. The pits and soils area was not a noted area of concern in submitted ecological reports for both this application and the Tower Hill Headquarters Site Plan approve on May 17, 2023.

Flood Potential

Panel 12001C0120D of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Series, dated June 16, 2006 indicates that the development area is in Flood Zone X (areas determined to be outside of the 500-year floodplain).

Evaluation & Findings: Since the subject property is located in Flood Zone X, there are no issues related to flood potential.

Karst-Sensitive Features

Karst sensitive areas include geologic features, such as fissures, sinkholes, underground streams, and caverns, and are generally the result of irregular limestone formations.

Evaluation & Findings: The subject property is not located in area of high aquifer recharge; however, there are several potential sink holes and potential karst features located on the subject property. There are three potential sinkholes located in the northern portion of the subject property (see Figure 3.) and those potential sinkholes were evaluated as part of the Tower Hill Headquarters Site Plan, which was approved on May 17, 2023. No concerns related to the northern potential sinkholes exist. There are three potential sinkholes located in the southern portion of the subject property and those potential sinkholes were not evaluated; however, the potential sinkholes exist in delineated wetland and proposed buffer areas with no major development activities occurring in relative proximity. As such, no concerns exist related to potential sinkholes.

Although no significant geological resources are known to exist on the subject property, significant geological resources do exist in relative proximity to the subject property. The karst features near the site have potential to contribute to the area's network of natural resources; however, the BMP Planning Guide submitted by the applicant does address pollutants and stormwater runoff.

Staff is recommending two conditions in Exhibit "A" regarding these nearby features. One condition would require compliance with the submitted BMP Planning Guide and the Wetland 3M Plan, adopting the guide and plan as part of the approved site plan. The second condition would require that a specific groundwater monitoring plan for post-construction activities is developed and submitted to City staff for administrative approval, with approval needing obtained prior to the completion of construction. The monitoring plan must be consistent with the Santa Fe River Basin Management Action Plan (BMAP).

Wellfield Protection Zones

Policy 7.2.1 of the Future Land Use Element of the City's Comprehensive Plan establishes a 500-foot radius area around each city-owned potable water well.

Evaluation & Findings: The subject property is not located within a City of Alachua wellfield protection zone as identified on the City of Alachua Wellfield Primary Protection Zones Map of the City's Comprehensive Plan, therefore, there are no issues related to wellfield protection.

Historic Structures/Markers and Historic Features

The State of Florida and the Alachua County Historic Resources Inventory identify historic structures in addition to the City's Historic Overlay District, as established by Section 3.7 of the City's Land Development Regulations.

Evaluation & Findings: The subject property is not within the City's Historic Overlay Districts and the State of Florida and Alachua County Historic Resources Inventory note no historic structures or markers on the subject property.

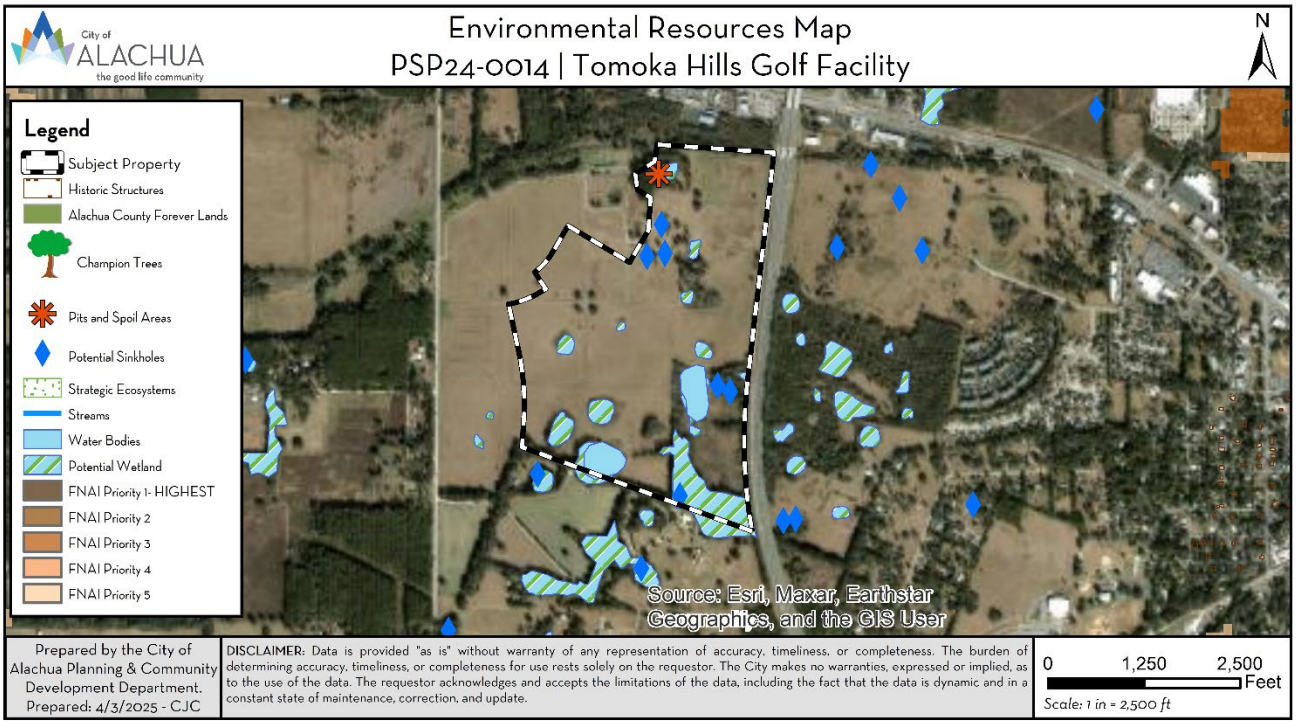


Figure 3. Environmental Resources Map

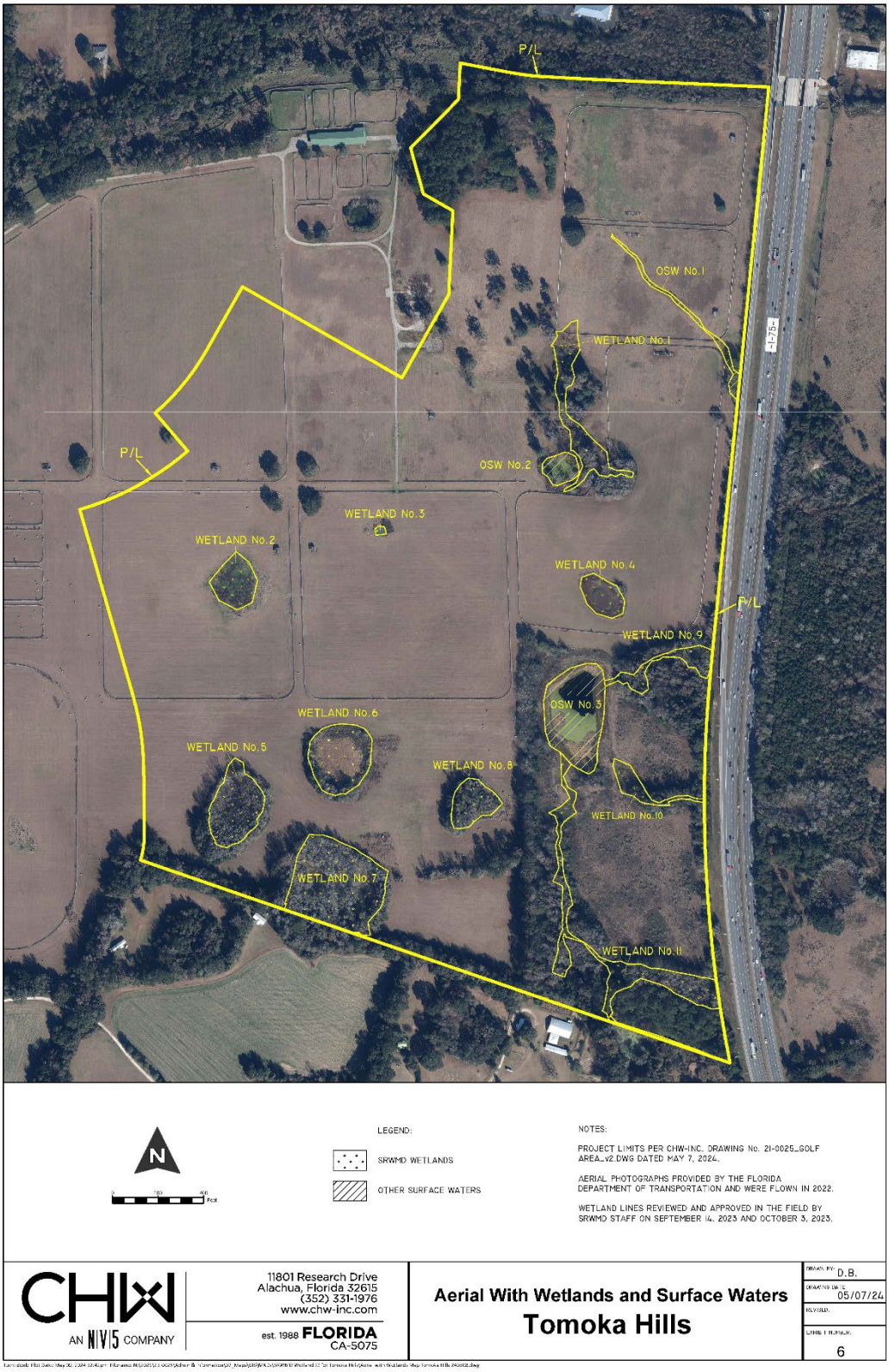


Figure 4. Wetland and Surface Waters Delineation Map

FINDINGS OF FACT: COMPLIANCE WITH LAND DEVELOPMENT REGULATIONS

Site Plan Standards

Section 2.4.9(E)(1) of the City's Land Development Regulations (LDRs) establishes the standards with which all site plans must be found compliant. The application has been reviewed for compliance with the standards of Section 2.4.9(E)(1). An evaluation of the findings of the applicant's compliance with the standards of Section 2.4.9(E)(1) is provided below.

(1) *Minor site plan and site plan standards*. A minor site plan or site plan shall be approved only upon a finding the applicant demonstrates all the following requirements are met:

(a) *Consistency with the Comprehensive Plan*. The development and uses proposed by the minor site plan or site plan comply with the goals, objectives and policies of the Comprehensive Plan.

Evaluation & Findings: An evaluation of the application's consistency with the comprehensive plan has been included within this report. Staff has recommended several conditions to ensure consistency with the Comprehensive Plan is achieved and maintained long-term.

(b) *Use allowed in zone district*. The use is allowed in the zone district in accordance with Article 4, Use Regulations.

Evaluation & Findings: The use type of golf course, private, is a permitted use in the Agricultural (A) zone district.

(c) *Zone district use specific standards*. The development and uses proposed by the minor site plan or site plan comply with Section 4.3, Use specific standards.

Evaluation & Findings: There are no specific use standards for the use type of golf course, private; therefore, this standard is not applicable.

(d) *Development and design standards*. The development proposed by the minor site plan or site plan and its general layout and design comply with all applicable standards in Article 6, Development Standards.

Evaluation & Findings: The application has been reviewed for compliance with all relevant standards of Article 6, including Section 6.1, *Off-street parking and loading standards*, Section 6.2, *Tree protection and landscaping standards*, Section 6.3, *Fencing standards*, Section 6.4, *Exterior lighting standards*, Section 6..6, *Infill standards*, Section 6.7, *Open space standards*, Section 6.8, *Design standards for business uses*, and Section 6.9, *Environmental protection standards*. A more in-depth analysis of compliance with Section 6.6.3, *Residential protection standards*, and Section 6.8.2, *Design standards for business use*, has been included within this report.

(e) *Subdivision standards*. In cases where a subdivision has been approved or is pending, the development proposed by the minor site plan or site plan and its general layout and design comply with all applicable standards in Article 7, Subdivision Standards.

Evaluation & Findings: No subdivision of land is proposed as part of this application; therefore, this standard is not applicable.

(f) *Complies with all other relevant City laws, ordinances, regulations, requirements, and State and Federal laws and regulations*. The proposed development and use complies with all other relevant City laws, ordinances, regulations, requirements, and with all State and Federal laws and regulations.

Evaluation & Findings: The application has been evaluated against Section 3.7.2(C)(5), *Development Standards*, for the Gateway Overlay District with the findings included within this report. The application complies with all other relevant City laws, ordinances, regulations, requirements, and State and Federal laws and regulations.

Gateway Overlay District Standards

Section 3.7.2(C)(5) of the City's Land Development Regulations (LDRs) establishes the standards with which all development within the U.S. Highway 441/Interstate 75 Gateway Overlay District must be found compliant. The application has been reviewed for compliance with the standards of Section 3.7.2(C)(5). An evaluation of the findings of the applicant's compliance with the standards of Section 3.7.2(C)(5) is provided below.

(5) *Development standards*.

(a) *Building design and orientation*.

(i) Architectural elevation plans, drawn to scale, shall be required for all projects involving exterior renovation or new construction.

Evaluation & Findings: Architectural elevation plans were submitted by the applicant as part of the site plan application.

(ii) Except for roofs, metal shall not be used as a finish building material.

Evaluation & Findings: The architectural elevation plans demonstrate that metal will not be used as a finish building material, except for roofs.

(iii) When two or more buildings are proposed on a single lot of record, the primary building shall be oriented to face the public right-of-way.

Evaluation & Findings: Two principal structures are proposed as part of the application, and as such, no one structure is the primary building and this standard is not applicable.

(iv) All accessory structures shall be of comparable design and building materials to the principal structure.

Evaluation & Findings: No accessory structures are proposed as part of the application, and as such, this standard is not applicable. The two principal structures are of comparable design and building materials.

(v) Glazing shall constitute a minimum of 35 percent of the ground floor area when a building faces and is substantially visible from U.S. 441 or I-75.

Evaluation & Findings: No structure faces or is substantially visible from U.S. 441 or I-75, and as such, this standard is not applicable.

(vi) Exterior building walls facing a public right-of-way shall incorporate no fewer than three architectural elements comparable to those listed below. Architectural elements contributing to this requirement shall have sufficient visual impact to be noticeable from the public right-of-way, and may include, but not be limited to:

a. Accent materials.
b. Public art.
c. Architectural details, such as tile work and molding integrated into the building facade.
d. Recesses and/or projections.
e. Roof overhang, which shall vary according to building width, as follows: one-foot overhang for buildings less than 50 feet in width, two-foot overhang for buildings 50 to 100 feet in width, and three-foot overhang for buildings greater than 100 feet in width.
f. Varied roof lines.
g. Articulated cornice lines.
h. Canopies, awnings, and/or porticos.
i. Use of brick in at least 30 percent of the facade.
j. Window shutters.
k. Change in building materials.
l. Prominent public entrances defined by substantive architectural features.
m. Fountain or other water feature.

Evaluation & Findings: No exterior building wall faces, nor is substantially visible from, a public right-of-way, and as such, this standard is not applicable.

(b) *Fencing*.

(i) With the exception of ornamental fencing, fences erected after the effective date of these regulations for property with frontage along U.S. 441 shall be installed in the side or rear yard only. Ornamental fencing may be erected inside the front yard.

Evaluation & Findings: The subject property does not front U.S. 441, and as such, this standard is not applicable.

(c) *Outside storage areas*.

(i) All accessory outdoor storage areas shall be screened in accordance with Section 4.4.4(E). Such screening requirements shall apply to the parking of all vehicles used for commercial purposes.

Evaluation & Findings: Submitted site plan sheet C5.11 notes no proposed outdoor storage areas, and as such, this standard is not applicable. The fuel tanks have been properly landscaped to be screened from view.

(ii) Areas for outdoor storage and loading shall be incorporated into the primary building design. Construction materials for such areas shall be of comparable quality and appearance as the primary building.

Evaluation & Findings: Submitted site plan sheet C5.11 notes no proposed outdoor storage areas nor loading docks, and as such, this standard is not applicable

(iii) Areas for trash collection shall:

a. Be enclosed with a wall that is:
   i. A minimum of 8' in height;
   ii. Constructed with masonry, stone, or other similar materials;
   iii. Of comparable architectural design to principal structure;
   iv. Gated in accordance with Section 6.2.3(B)
b. Be located to the rear of the principal structure
c. Not project beyond the front building line of the principal structure; and,
d. Have a three-foot landscaped buffer around the perimeter of the trash collection area. Such buffer must be landscaped with a mixture of shrubs, flowers, and/or other planting native to the area.

Evaluation & Findings: The dumpster enclosure has been incorporated into the principal structure depict on sheet A3.2 with a wall 10' in height, made of masonry or other similar materials, of comparable design to the principal structures, and gated. As the area for trash collection is incorporated into the main structure, it does not project past the front building line of the principal structure. A landscaped buffer is infeasible to provide directly adjacent due to the incorporation into the principal structure; however, a landscaped buffer is provided directly adjacent to the parking area.

(d) *Street buffer*.

(i) Buffering for properties with frontage along I-75 and U.S. 441 shall meet the requirements of Section 6.2.3(E).

Evaluation & Findings: The subject property does not front U.S. 441, but does have frontage along I-75. The landscape plans demonstrate compliance with the standards of Section 6.2.3, including using preserved trees to meet the requirement.

(ii) The minimum landscaped buffer width shall be 15 feet. No existing, dedicated, or reserved public or private right-of-way shall be included in the calculation of the buffer width.

Evaluation & Findings: The minimum buffer of 15 feet has been provided along the subject property's frontage of I-75.

(iii) Live Oak shall be used as the required canopy tree. Applicants shall use the following plant materials, in order to create a consistent and uniform planting program for the Gateway Overlay District:

a. American Holly.
b. Crape Myrtle.
c. Drake Elm.
d. Ligustrum.
e. Red Maple.
f. Southern Magnolia.
g. Southern Red Cedar.
h. Oak.
i. Bradford Pear.

Evaluation & Findings: The canopy trees provided in the required buffer are primarily species of live oak trees. The above plant materials have been substantially provided, with additional species variety provided to ensure species diversity and protect against the spread of disease tree to tree.

(e) *Parking areas*.

(i) All parking areas shall be designed to avoid the appearance of a large expanse of pavement, and shall be conducive to safe pedestrian access and circulation.

Evaluation & Findings: One parking area is proposed as part of this application, as the application proposes to share parking with the approved Tower Hill Headquarters Site Plan. The one parking area consists of 16 and has been arranged to avoid the appearance of a large expanse of pavement.

(ii) No more than 25 percent of required parking shall be located in the front of the principal structure, for properties with frontage along U.S. 441. The percentage may be adjusted by the LDR Administrator if the applicant provides written information demonstrating that the property's characteristics, such as size and/or site topography, prevent the applicant from meeting this requirement. Under no circumstances shall be percentage of required parking located in front of the principal structure exceed 50 percent, and shall be the minimum necessary.

Evaluation & Findings: The subject property does not front U.S. 441, and as such, this standard is not applicable.

(iii) Parking spaces shall not be located within a public right-of-way.

Evaluation & Findings: No parking spaces are proposed to be located within a public right-of-way.

(f) *Loading areas*.

(i) Loading areas shall not face a public right-of-way and shall be located at the rear of the principal structure when feasible.

Evaluation & Findings: No loading areas are proposed to face or be located in a public right-of-way.

(g) *Access*.

(i) Any parcel or assembly of parcels having frontage along U.S. 441 shall be permitted only one direct access. New development shall be designed for cross access to adjacent parcels.

Evaluation & Findings: The subject property does not front U.S. 441, and as such, this standard is not applicable.

(h) *Signage*.

Evaluation & Findings: Signage is reviewed for and approved as part of a separate sign permit application process. No signage is to be approved as part of the site plan, and as such, all signage standards are not applicable.

Residential Protection Standards

Section 6.6.3 of the City's Land Development Regulations (LDRs) establishes residential protection standards as a condition of the approval of any nonresidential development located within 500 feet of any residential district or adjacent to an existing single-family or two-family development. The subject property is adjacent to a single-family residential use to the south. The application has been reviewed for compliance with the standards of Section 6.6.3. An evaluation of the findings of the applicant's compliance with the standards of Section 6.6.3 is provided below.

(A) ***General conditions***. As a condition of the approval of any nonresidential development located within 500 feet of any residential district or adjacent to an existing residential single-family or two-family development, conditions may be imposed to reduce or minimize any potential adverse impacts on the residential land or development. Such conditions may include but are not limited to the following:

(1) *Hours of operation and deliveries*. Hours of operation and deliveries.
(2) *Activities that generate potential adverse impacts*. Location on a site of activities that generate potential adverse impacts on adjacent uses such as noise and glare.
(3) *Placement of trash receptacles*. Placement of trash receptacles.
(4) *Loading and delivery area*. Location of loading and delivery areas.
(5) *Lighting*. Lighting location, intensity, and hours of illumination.
(6) *Placement of outdoor machines and activities*. Placement and illumination of outdoor vending machines, telephones, or similar outdoor services and activities.
(7) *Additional landscaping and buffering to mitigate adverse impacts*. Additional landscaping and buffering to mitigate adverse impacts.
(8) *Height restrictions*. Height restrictions to preserve light and privacy and views of significant features from public property and rights-of-way.
(9) *Preservation of natural lighting and solar access*. Preservation of natural lighting and solar access.
(10) *Ventilation and control of odors and fumes*. Ventilation and control of odors and fumes.
(11) *Paving and parking areas*. Paving to control dust.
(12) *Placement or configuration of site design*. Placement or configuration of site design.

Evaluation & Findings: The applicant has proposed to remain intact a large portion of naturally vegetated area to the south of the subject property, adjacent to the single-family residence, which would provide for a large landscape area as a buffer.

(B) *Height and setbacks*. Any nonresidential structure located in any nonresidential district and within 100 feet of a property boundary of a residential district or adjacent to a single-family or two-family dwelling shall be set back from the boundary of the residential district property boundary or residential development a minimum distance equal to the height of the nonresidential structure.

Evaluation & Findings: No structures are proposed within 100 feet of a property boundary adjacent to single-family or two-family dwelling or a residential district.

Design Standards for Business Uses

Section 6.8.2 of the City's Land Development Regulations (LDRs) establishes the standards with which all business uses, unless exempted by Section 6.8.1, must be found compliant. The application has been reviewed for compliance with the standards of Section 6.8.2. An evaluation of the findings of the applicant's compliance with the standards of Section 6.8.2 is provided below.

(A) *Façade and material design*.

(1) *Generally*. All façades facing a street, lands containing existing residential uses, or vacant land classified as CSV, A, RSF-1, RSF-3, RSF-4, RSF-6, RMH-5, RMH-P, RMF-8, or RMF-15, shall be subject to the standards set forth in Subsection 6.8.2(A)(2).

(2) *Standards*.

(a) *Glazing*.

(i) Glazing of the front facade in the following amounts:

a. Twenty percent of the ground floor façade area when it faces a street or a publicly-accessible parking area which is a part of the development and consists of 15 percent or more of the development's minimum off-street parking requirement pursuant to Section 6.1.4(B);

b. Fifteen percent of the ground floor façade area when it faces any vacant land classified as CSV, A, RSF-1, RSF-3, RSF-4, RSF-6, RMH-5, RMH-P, RMF-8 or RMF-15, or lands containing existing residential uses.

(ii) For the purposes of this section, the ground floor façade area of single-story buildings shall be calculated by measuring the applicable building wall between the finished grade and the underside of the roof of the facade. When a building wall includes a parapet, the ground floor façade area shall be calculated by measuring to the top of the parapet. For buildings with more than one story, the ground floor façade area shall be calculated by measuring the applicable building wall between the finished grade and the underside of the floor above the ground level floor.

(iii) Windows shall not use reflective or heavily tinted glass that obstructs views into the building.

(iv) Spandrel glass may be used only when an architectural floorplan demonstrates that windows cannot be provided due to a limitation presented by the interior layout or functional purpose of such interior space.

Evaluation & Findings: No façade substantially faces a street, publicly accessible parking area which consists of 15 percent or more of the development's minimum off-street parking requirement, or vacant lands classified as CSV, A <RSF-1, RSF-3, RSF-4, RSF-6, RMH-5, RMH-P, RMF-8, or RMF-15 or lands containing existing residential uses. As such, this standard is not applicable.

(b) *Façade massing*.

(i) *Offset required*. Front facades and street-facing facades shall incorporate wall offsets of at least two feet in depth (projections or recesses) a minimum of every 30 feet. Each required offset shall have a minimum width of ten feet.

(ii) *Offset alternatives*. The following alternatives can be used in place of the required front façade offsets:

a. Façade color changes following the same dimensional standards as the offset requirements;

b. Pilasters having a minimum depth of one foot, a minimum width of one foot, and a minimum height of 80 percent of the façade's height; and/or

c. Roofline changes when coupled with correspondingly aligned façade material changes.

Evaluation & Findings: The front façade of the maintenance building is 60 feet in width and no offset is provided; however, an overhang with pillars and material changes have been provided. No façade substantially faces a street. The golf cart storage and wash building contains the required off-sets on the front façade in addition to an overhand with pillars and material changes. No façade substantially faces a street.

(c) *Material design*.

(i) A minimum of 25 percent of the materials utilized for each side facade and the rear façade shall be the same as the materials utilized for the front or street-facing façade(s).

Evaluation & Findings: The side and rear facades of both structures utilize a minimum of 25 percent of the materials utilized for the front facades.

(d) *Prohibited materials*. The following materials shall be prohibited:

(i) Metal siding in more than 50 percent of any façade when visible from a street, lands classified as CSV, A, RSF-1, RSF-3, RSF-4, RSF-6, RMH-5, RMH-P, RMF-8 or RMF-15, or lands containing existing residential uses;

(ii) Exposed smooth finished concrete block when visible from a street, lands classified as CSV, A, RSF-1, RSF-3, RSF-4, RSF-6, RMH-5, RMH-P, RMF-8 or RMF-15, or lands containing existing residential uses; and,

(iii) Exposed split face concrete block in more than 60 percent of any façade.

Evaluation & Findings: The facades of both structures provide for two materials each, ensuring no façade contains metal siding nor more than 60 percent of split face concrete block. No façade is substantially visible from a street.

(3) *Screening of mechanical equipment*. Mechanical equipment shall be fully concealed from visibility from a street, lands classified as CSV, A, RSF-1, RSF-3, RSF-4, RSF-6, RMH-5, RMH-P, RMF-8 or RMF-15, or lands containing existing residential uses.

Evaluation & Findings: No mechanical equipment is proposed to be visible from land classified as CSV, A, RSF-1, RSF-3, RSF-4, RSF-6, RMH-5, RMH-P, RMF-8, or RMF-15 or lands containing existing residential uses.

(B) *Connections to sidewalk system.*

(1) When a sidewalk system exists within a right-of-way which is contiguous to the development, a minimum of one pedestrian connection to the sidewalk system shall be provided. On-site pedestrian circulation patterns shall be configured to provide safe and convenient access from the off-site sidewalk system to the main entrance(s) of the building(s). Sidewalks shall be constructed in accordance with Subsection 7.3.2(B), Configuration.

Evaluation & Findings: No sidewalk system exists within a right-of-way which is contiguous to the development, and as such, this standard is not applicable.

(C) *Interconnectivity with adjacent business uses.*

(1) All uses subject to this section shall provide interconnection with adjacent existing compatible developments through one or more of the following methods:

(a) Through extension of a public or private street from the new development to the adjacent existing development or adjacent lands; and/or

(b) Through joint use of driveways and cross access agreements among adjoining properties to allow circulation between sites. Cross access between new development and existing development shall be configured to provide safe and convenient interconnectivity between the new development and all other existing development located along the cross-access corridor.

Evaluation & Findings: The golf course is proposed to be for the private use of the employees of the Tower Hill Headquarters building and the applicant has proposed shared parking with the approved Tower Hill Headquarters Site Plan. As such, cross access is not applicable since access will be via the approved Tower Hill Headquarters Site Plan, which has already been found to comply with this standard.

PUBLIC FACILITIES IMPACT ANALYSIS

Section 2.4.14 of the City's Land Development Regulations (LDRs) establishes the standards for a Certificate of Concurrency Compliance which applies to all development orders unless exempted by Section 2.4.14(C). The application has been reviewed for impacts to roads, sanitary sewer, solid waste, stormwater management, potable water, and recreation facilities to ensure the application's potential impacts do not negatively impact the level of service (LOS) for those public facilities.

Traffic Impact

Evaluation & Findings: The applicant has submitted a shared parking plan and narrative regarding the potential users of the private golf course. The users are to be employees and staff of the Tower Hill Insurance Headquarters building, and as such, the applicant contends that only de minimis impacts are to be expected. The applicant is relying on the assumption that the Tower Hill Insurance Headquarters Site Plan has already accounted for all trips by potential users of the private golf course. As such, the proposed site plan would not negatively impact the level of service of any road segments.

The shared parking narrative has been attached in Exhibit "B" of this report.

Staff is recommending two conditions in Exhibit "A" of this report regarding limited users, limited hours of operations, and the filing of a local business tax receipt to ensure that a de minimis threshold of trips is not exceeded or that any additional trips generated by those who are not employees of the adjacent property are avoided.

Potable Water Impacts

Table 3. Potable Water Impacts

System Category	Gallons Per Day
Current Permitted Capacity[1]	2,300,000
Less Actual Potable Water Flows[1]	1,548,250
Reserved Capacity[2]	469,250
Available Capacity	282,209
Increase/Decrease in Potable Water Demand from Application[3]	400
Residual Capacity	281,809
Residual Percentage of Permitted Design Capacity Utilized	87.75%

1 City of Alachua Public Services Department, April 2024
2 City of Alachua February 2025 Development Monitoring Report
3 Formula: Per Submitted Application Materials

Evaluation & Findings: The expected impacts of the application will not adversely affect the level of service of the potable water system. Note that the projected demand does not include irrigation. The impacts that will be generated by the application are acceptable. This application is a final development order and concurrency will be reserved.

Sanitary Sewer Impacts

Table 4. Sanitary Sewer Impacts

System Category	Gallons Per Day
Treatment Plant Permitted Capacity[1]	1,500,000
Less Actual Treatment Plant Flows[1]	764,000
Reserved Capacity[2]	437,084
Available Capacity	298,916
Increase/Decrease in Sanitary Sewer Demand from Application[3]	400
Residual Capacity	298,516
Residual Percentage of Permitted Design Capacity Utilized	80.07%

1 City of Alachua Public Services Department, April 2024
2 City of Alachua February 2025 Development Monitoring Report
3 Formula: Per Submitted Application Materials

Evaluation & Findings: The expected impacts of the application will not adversely affect the level of service of the sanitary sewer system. The impacts that will be generated by the application are acceptable. This application is a final development order and concurrency will be reserved.

Solid Waste Impacts

Table 5. Solid Waste Impacts

System Category	Pounds Per Day	Tons Per Year
Existing Demand[1]	44,060.00	8,040.95
Reserved Capacity[2]	50,407.82	9,199.43
Increase/Decrease in Demand Generated by Application[3]	0	0
New River Solid Waste Facility Anticipated Capacity[4]	50+ Years	

1 Bureau of Economic & Business Research, University of Florida, Estimates of Population by County and City in Florida (2023); Policy 2.1.a, Community Facilities Element. Formula: 11,015 Persons x 0.73 tons per year.
2 City of Alachua February 2025 Development Monitoring Report
3 Formula: Per Submitted Application Materials.
4 New River Solid Waste Association, April 2024

Evaluation & Findings: The expected impacts on solid waste facilities are expected to be de minimis. Similarly to expected traffic impacts, the applicant is relying on the expected impacts of the associated Tower Hill Headquarters Site Plan to account for all generated waste from this project. The impacts that will be generated by the application are acceptable. This application is a final development order and concurrency will be reserved.

Recreation Facilities

The proposed development is a nonresidential development; therefore, there are no impacts to recreation facilities. The development will have no impact to the Level of Service (LOS) of recreation facilities.

Public School Facilities

The proposed development is a nonresidential development; therefore, there are no impacts to public school facilities. The development will have no impact to the Level of Service (LOS) of public school facilities.

EXHIBIT "A"
TO
PSP24-0014
TOMOKA HILLS GOLF COURSE SITE PLAN
STAFF REPORT

CONDITIONS

1. The applicant acknowledges and agrees that the golf course is for the private use of the employees of Tower Hill Insurance Group, Inc., its affiliates and subsidiaries and their guests. General admittance may not be granted for play on the course, whether for a fee or complimentary, unless admittance is otherwise granted through a special exception permit or future approval is obtained through a site plan that provides facilities to accommodate play by the general public. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
2. The applicant acknowledges and agrees that the property owner, successor, or their agent must obtain an approved local business tax receipt before play on the course may begin. An updated approved local business tax receipt must be obtained, demonstrating compliance with the Land Development Regulations, including parking requirements, should the property owner, successor, or their agent allow anyone other than those described in condition 1 to play on the course. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
3. The applicant acknowledges and agrees that play may only take place on the golf course during daylight hours unless otherwise granted by a special exception permit. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
4. The applicant acknowledges and agrees that the Tomoka Hills Golf Facility Best Management Practices Planning Guide and the Wetlands Mitigation/Maintenance/Monitoring Plan are incorporated into this site plan approval as governing documents and shall be maintained and followed. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.

5. The applicant acknowledges and agrees that it shall develop a groundwater monitoring plan that will monitor for pollutants from fertilizer and stormwater runoff in coordination with, and as determined to be applicable by, the Suwannee River Water Management District and in compliance with all applicable local, state, and federal regulations. A copy of such plan shall be submitted to the City of Alachua Planning & Community Development Department prior to the commencement of play on the golf course. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
6. The applicant acknowledges and agrees that herbicide applications shall only be performed by State Certified Pesticide Applicators and shall only be applied with low volume backpack or handheld sprayers, except during the establishment period of new turf grass or during pre-emergent herbicide applications limited to twice annually. Herbicide and fertilizer use shall not occur in the wetland buffer areas as shown on the approved site plan. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
7. The applicant acknowledges and agrees that a 100% gopher tortoise survey of the project area and 25 feet around the project area shall be performed consistent with the State of Florida Fish and Wildlife Commission guidelines. The applicant further agrees that it shall provide the City with a copy of the findings of said survey prior to the commencement of construction. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
8. The applicant acknowledges and agrees that it shall implement the United States Fish & Wildlife Service Standard Protection Measures for the Eastern Indigo Snake on the subject property while construction activity is occurring on-site. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
9. The applicant acknowledges and agrees it shall monitor the subject property for evidence of any sinkhole activity while construction activity is occurring on-site. The Applicant further agrees that if any sinkhole activity is observed during construction, immediate remedial action shall be taken with guidance from the Suwannee River Water Management District and other applicable agencies. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
10. The applicant acknowledges and agrees that construction activities associated with any approval or permit issued as part of the site plan shall occur subject to the following:
    a. Construction activities shall only occur between the hours of 7:00 AM and 7:00 PM, Monday through Friday and between the hours of 9:00 AM and 7:00 PM, Saturday and Sunday; and,
    b. Dust and debris from construction activities shall be minimized as to not spread dust and debris off-site. This may include, but is not limited to, dust control achieved through water trucks, removal of mud/soil from vehicle tires before exiting the site, and street cleaning.

11. The applicant acknowledges and agrees that it shall obtain all other applicable local, state, and federal permits before the commencement of site plan work. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
12. The applicant acknowledges and agrees that to ensure the continued compliance with the City of Alachua Comprehensive Plan and Land Development Regulations, the development order authorizing this site plan shall be recorded in the public records of Alachua County, Florida, and shall run with the land. The applicant shall be responsible for all costs associated with recording the development order in the public records of Alachua County, Florida. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
13. The applicant acknowledges and agrees that Conditions 1 – 12 as stated above do not inordinately burden the land and shall be binding upon the property owner, including any subsequent property owners, successors, or assigns, and that the site plan shall comply with Conditions 1 –13 as stated herein.

EXHIBIT "B"
TO
PSP24-0014
TOMOKA HILLS GOLF COURSE SITE PLAN
STAFF REPORT

SUPPORTING MATERIALS
SUBMITTED BY CITY STAFF TO THE
PLANNING AND ZONING BOARD

MEMORANDUM

To:	Justin Tabor, AICP City of Alachua Planning & Development	**Date:**	01/29/2025
From:	Walker Fain Owen, PE NV5	**Project:**	Tomoka Hills Golf Course
CC:			
Subject:	Shared Parking Plan - Tomoka Hills Golf		

On January 8th, 2025, the following comment was issued by the City of Alachua Planning and Zoning Department regarding the proposed Tower Hill Golf Course project:

i. Table 6.1-1 establishes a parking standard of 4 spaces per hole per course. The parking standard utilized is 1 space per 1,000 square feet of floor area. Staff cannot identify the source of this parking standard.

The Tomoka Hills Private Golf Course is only for employees of the Tower Hill office building, which is currently under construction. While some additional parking is proposed at the maintenance facility for golf course staff, it is proposed that all users of the golf course are Tower Hill employees that will park at the Tower hill Office building and walk to the golf course.

Response:

- Building 1, Office Building Under Construction**:** (Refer to C0.00) will consist of a business services office, which requires 1 parking space per 330 sf of floor area per Sec. 6.1 in the City of Alachua Land Development Code.

- Building 2, Golf Course Maintenance Building & Private Golf Course**:** (Refer to C0.00) will consist of a private golf course and maintenance building. The closest use directly related to maintaining the golf course and machinery is “farm machinery repair”, which requires 1 parking space per 1,000 sf of floor area or outdoor repair area. The closest applicable standard is “Public Golf Course” which requires 4 spaces per hole per course.

In total, the two proposed buildings require 265 total parking spaces based on the City of Alachua LDR parking requirements, 9 of which are required to be accessible spaces. The project proposes 209 total parking spaces, 7 of which are accessible spaces. The intent is to demonstrate sufficient parking through shared parking with the Tower Hill Headquarters development to the west. NV5 is currently in the process of submitting a revised Tower Hill Golf Course plan set. The revised Tomoka Hills Golf Course maintenance building parking lot will include 16 spaces, 1 of which is accessible space.

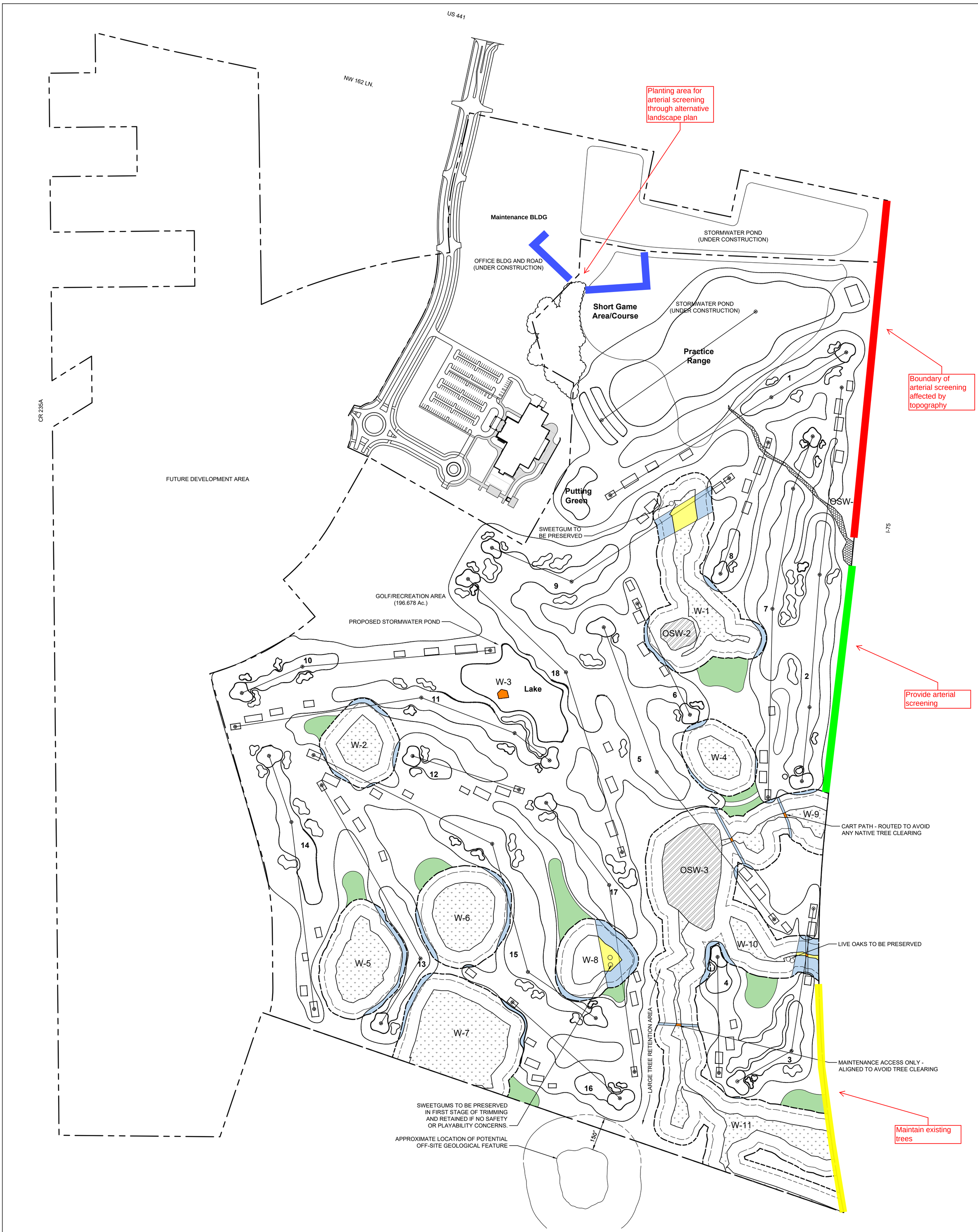
Conclusion:

The unique characteristics of the site and proposed uses include the golf course exclusively being used by the office employees and colleagues that would otherwise be conducting business services at the Tower Hill office building. Due to these circumstances, we believe that the amount of parking provided will be adequate to serve the developments.

Should you have any questions or require additional information, please contact walker.owen@nv5.com or (352) 331-1976.

Sincerely,
NV5

Walker Fain Owen, PE
Project Manager



LEGEND:

- WETLANDS - PRESERVED (12.79 Ac.±)
- OTHER SURFACE WATERS (ARTIFICAL) - PRESERVED (3.06 Ac.±)
- WETLAND IMPACTS (0.05 Ac.±)
- WETLAND TREE TRIMMING IMPACTS (0.49 Ac.±)
- OTHER SURFACE WATERS (ARTIFICIAL) IMPACTS (0.39 AC.±) (REGRADE/REPLANT)
- BUFFER IMPACTS (2.81 Ac.±)
- BUFFER MITIGATION AREAS (2.81 Ac.±) (MIN. AREA IN FOREST: 1.32 Ac.±)
- 50' UPLAND BUFFER
- 75' UPLAND BUFFER

NOTES:

AERIAL PHOTOGRAPHS PROVIDED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AND WERE FLOWN IN 2022.

FLUCFCS PER FLORIDA LAND USE, COVER, AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

WETLAND LINES REVIEWED AND APPROVED IN THE FIELD BY SRWMD STAFF ON SEPTEMBER 14, 2023 AND OCTOBER 3, 2023.

N

GRAPHIC SCALE
0 100 200 400

CHW
AN NV5 COMPANY
11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA
CA-5075

Wetlands Impact Map
Tomoka Hills

DRAWN BY: JMS
DRAWING DATE: 08/15/24
REVISED:
EXHIBIT NUMBER:

Tech: john-michaels Plot Date: Aug 15, 2024 6:22pm Filename: N:\2021\21-0025\Departments\02_Planning\Dwg\Golf Files\21-0025 Golf Concept (County)_R.dwg

City of Alachua

MIKE DAROZA
CITY MANAGER

PLANNING & COMMUNITY DEVELOPMENT

March 26, 2025

Submitted electronically to Walker.Owen@nv5.com

Walker Owen, P.E.
CHW, LLC
11801 Research Drive
Alachua, Fl 32615

Application #: PSP24-0014

RE: Notice of Hearing to be Scheduled for Tomoka Hills Golf Course Site Plan

Dear Walker Owen,

The Tomoka Hills Golf Course site plan application submitted on behalf of Tomoka Hills Farms, Inc. proposes an 18-hole golf course and maintenance facility with associated site improvements on a ± 00-acre subject property (tax parcels 03873-000-000; 03873-001-001). Based on review of the materials submitted, the City has determined that this application can now be scheduled for a hearing before the Planning & Zoning Board.

The application has been scheduled for the **April 15, 2025** Planning & Zoning Board meeting.

You must provide two *double sided, three-hole punched, color sets* of each **complete** application package, four full size sets of site plans, and a digital copy of all materials in PDF format on a CD or by emailing a Cloud/FTP link to download the materials to planning@cityofalachua.org *no later than 10 business days prior to the Planning & Zoning Board meeting at which you application is scheduled to be heard*; therefore, the above referenced materials must be submitted to the City no later than ***Monday, March 31, 2025***. Materials may be submitted earlier than this date.

Additionally, Section 2.2.9(D) of the Land Development Regulations requires the applicant to place posted notice signs on the subject property at least 14 days prior to the public hearing; therefore, posted notice signs must be placed on the property no later than ***Monday, March 31, 2025***. These signs will be ready for pickup after 12:00 PM on Thursday, March 27, 2025.

If you plan to utilize a PowerPoint presentation or would like other materials to be available for reference during the public hearing, please submit the presentation or materials no later than 12:00 PM on the last business day prior to the Planning & Zoning Board meeting; therefore, the presentation or materials must be submitted no later than 12:00 PM on ***Monday, April 14, 2025***. Any presentation or materials may be submitted electronically by emailing them to planning@cityofalachua.org.

If you have any questions regarding the information above, please contact me at (386) 418-6137 or via email at ccrockett@cityofalachua.org.

Sincerely,

Carson J. Crockett, AICP Candidate
Planner

CC: Mike DaRoza, City Manager *(by electronic mail)*
Rodolfo Valladares, Assistant City Manager *(by electronic mail)*
Marian Rush, City Attorney *(by electronic mail)*
Brenda Flieger, Planning Assistant *(by electronic mail)*
Project File

City of Alachua

MIKE DAROZA
CITY MANAGER

PLANNING & COMMUNITY DEVELOPMENT
DIRECTOR KATHY WINBURN

February 19, 2025

Sent by electronic mail to walkero@chw-inc.com

Walker Owen, P.E.
Causseaux, Hewett, & Walpole, Inc.
11801 Research Drive
Alachua, FL 32615

RE: Second Project Assistance Team (PAT) Review: Tomoka Hills Golf Facility Site Plan Application

Dear Mr. Owen:

On January 30, 2025, the City of Alachua received your revised application for a Site Plan submitted on behalf of Tomoka Hill Farms, Inc. for the Tomoka Hills Golf Facility project. The application proposes an 18-hole golf course and maintenance facility with associated site improvements on Tax Parcel Numbers 03873-000-000 and 03873-001-001.

The application has been reviewed by the City's Project Assistance Team (PAT). Upon review of the application and materials, the following insufficiencies must be addressed. A meeting to review these comments may be scheduled upon request.

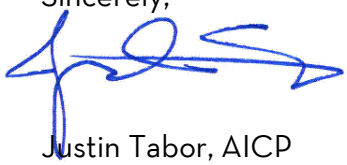
Please address all insufficiencies in writing and provide an indication as to how they have been addressed by **5:00 PM** on **Thursday, March 6, 2025**. A total of four (4) copies of the application package and a digital copy of all materials in PDF format on a CD or sent by emailing a Cloud / FTP link must be provided by this date.

Please address the following:

1. *Public Services / Fire Rescue / Engineering Review Comments*
   a. The applicant must address all comments provided by the Public Services Department in a memorandum dated February 19, 2025. Note the electrical plans submitted on 2/13/25 have been provided to Public Services for review, and comments regarding these plans are not included with the 2/19/25 memo.

If you have any questions regarding the information above, please contact me at 386-418-6100 x 1602 or via e-mail at jtabor@cityofalachua.com. We look forward to receiving your revised application.

Sincerely,



Justin Tabor, AICP
Principal Planner

Attachments

c: Kathy Winburn, Planning & Community Development Director *(by electronic mail)*
Carson Crockett, Planner *(by electronic mail)*
Project File

City of
ALACHUA
the good life community

City of Alachua

MIKE DAROZA
CITY MANAGER

RODOLFO VALLADARES, P.E.
ASS'T CITY MANAGER

INTER-OFFICE COMMUNICATION

DATE: **Feb 19, 2025**

TO: **Kathy Winburn, AICP**
Planning & Community Development Director

FROM: **Michael Carrillo, P.E.**
Public Services Director
Tom Ridgik, P.E.
Engineering Supervisor

TR 2/19/2025

RE: **Tower Hills Golf Facility Site Plan**

Public Services has reviewed the subject project (Feb 2025 Documents) and offer the following comments. Review was specific to Public Services utilities.

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NO.	COMMENTS
1	**Comment of Dec Submittal** No electrical design drawings have been submitted. Please **submit** electrical design drawings. **Comment on Feb Submittal** This comment remains un-addresed Please **submit** electrical design drawings.
2	**Comment of Dec Submittal** No COA Standard Details have been submitted. Because NV5 does the CAD work for COA, NV5 should already have the most up-to-date details.

NO.	COMMENTS
	Please **submit** COA Standard Details. As a minimum, include the following: 100 112 115 118 121 127 139 145 151 211 303 307 309 318 321A 321B **Comment on Feb Submittal** **Approved**
3	**Comment of Dec Submittal** **Sheet C0.10** **General Notes** Please add the following note: "30. THE CITY OF ALACHUA SHALL BE COMPENSATED FOR ALL WORK REQUIRED OF THE CITY TO MODIFY ITS INFRASTRUCTURE. SUCH WORK INCLUDES, BUT IS NOT LIMITED TO, WATER, WASTEWATER AND ELECTRIC INFRASTRUCTURE IMPROVEMENTS, RELOCATION OR DEMOLITION. FOR PROJECTS NOT WITHIN THE CITY'S ELECTRIC SERVICE AREA, MODIFICATIONS TO THE CITY'S ELECTRIC INFRASTRUCTURE EITHER WITHIN OR ADJACENT TO THE PROJECT AREA MAY BE REQUIRED.THE CITY SHALL BE COMPENSATED FOR SUCH MODIFICATIONS." **Water & Wastewater General Notes** Please -

NO.	COMMENTS
	Modify Note 12 by adding "2-inches and less" so it now reads: "12. ALL PVC SERVICE LINES 2-INCHES AND LESS SHALL BE SCH 40 PVC." Delete Note 16 (starts with "During construction,…"); Delete Note 17 (starts with "Use Rieber gaskets…"); Delete "AND WASTEWATER " from Note 18 so it now reads: "PROVIDE TRACER WIRE SYSTEM FOR WATER PIPING AS SHOWN ON THE DETAILS AND AS PER THE COA DCM." Modify Note 24 by adding "either" and "or ductile iron cement lined" to second sentence so it now reads "WATER MAIN PIPING NOT UNDER ROADS AND PAVEMENT SHALL **EITHER** BE AWWA C900 DR 18 PVC **OR DUCTILE IRON CEMENT LINED.**" **Comment on Feb Submittal** **Approved**
4	**Comment of Dec Submittal** **Sheet C1.00** See attached markup. The proposed maintenance road connects with a section of 162nd Lane that is now closed, and may remain closed in the future. If so, the proposed maintenance road and appurtenances will need to be relocated. Suggest discussing this issue with COA, including Office of the City Manager. As of this writing, the proposed location of the maintenance road is **NOT APPROVED**. See attached markup. Please **submit** response. **Comment on Feb Submittal** **Sheet C1.00** The Engineer is in the process of addressing this comment, and has requested a meeting with the office of the city manager to address this issue.

NO.	COMMENTS
	This comment remains open.
6	**Comment of Dec Submittal** **Sheet C5.20** See attached markup. Please: At cleanout CO#1, call-out "COA END OF MAINTENANCE". Call-out the horizontal separation between the 8- and 4-inch P-W lines. Right end of sheet: Call out the matchlines or at least reference the matching sheet. Inset AA Provide a 4-inch gate valve where the 4-inch P-W service line connects to the 8-inch P-W. Calcs size meter as 2-inch, yet a 4-inch meter is called out. Resolve. The water service line is called out as 4-inch, which seems large. Are there any future additional uses for this line? Please resolve. Review 4-inch size of the RPZ Backflow Preventer. The sole purpose of the 8-inch P-W appears to be to supply water to the bldg fire hydrant. If so, both the fire hydrant and its supply line are private. This requires installation of an above ground Backflow preventer assembly. Show in Inset A-A. Please **submit** response & **resubmit** this sheet. **Comment on Feb Submittal** **Sheet C5.20** The 4-inch P-W has been downsized to 2-inch. Water meter sizing is not resolved. See Comment 14. **Approved as Noted.**
7	**Comment of Dec Submittal** **Sheet C5.21** See attached markup. Review size of 6-inch bend. Should it be 8-inch to match P-W size? Review size of 4-inch service line and its fittings. Seems large. Suggest reviewing hydrant location with fire marshall. It is common for hydrant to be closer to the bldg.

NO.	COMMENTS
	Please **resubmit** this sheet. **Comment on Feb Submittal** **Sheet C5.21** **Approved**
8	**Comment of Dec Submittal** **Sheet C5.30** See attached markup. Review size of 4-inch service line and its fittings. Seems large. Please **resubmit** this sheet. **Comment on Feb Submittal** **Sheet C5.30** **Approved**
9	**Comment of Dec Submittal** **Sheet C5.31** See attached markup. Review size of 4-inch service line and its fittings. Seems large. Please **resubmit** this sheet. **Comment on Feb Submittal** **Sheet C5.31** **Approved**
10	**Comment of Dec Submittal** **Sheet LS-2** See attached markup. Please identify each sheet, similar to as shown on IR-2. Please **resubmit** this sheet. **Comment on Feb Submittal** **Sheet LS-2**

NO.	COMMENTS
	Approved
11	**Comment of Dec Submittal** **Sheet LS-3** See attached markup. A live oak appears to be about 7-8 ft from the P-W supplying the hydrant. Even though this P-W will likely be private, suggest moving the live oak farther away from the P-W. Please **resubmit** this sheet. **Comment on Feb Submittal** **Sheet LS-3** **Approved**
12	**Comment of Dec Submittal** **Sheet IR-11** See attached markup. Please identify the source of the irrigation water supply. Please **submit** response and **resubmit** this sheet. **Comment on Feb Submittal** **Sheet IR-11** **Approved**
13	**Fire Flow** Under a separate document, Engineer has submitted a Fire Flow memo. As per memo, required flow is 2750 gpm. Fire flow testing on 9/1/2022 showed a fire flow of 5860 gpm at 20 psi residual. Subsequent COA modeling of the simulated fire flow revealed a value substantially less than 5860 gpm, but still greater than the required fire flow of 2750 gpm. Thus the City takes No Exception to the implied "PASS" results of the fire flow evaluation. **FYI**
14	**Water Meter Sizing** Water sizing calculations are based on AWWA Manual M22 method, with a 2-inch meter selected.

NO.	COMMENTS
	Yet Sheet C5.20 calls out a 4-inch meter with a 4-inch backflow preventer assembly and a 4-inch service line supplying the building. Please resolve the following: The 4-inch water service line appears large. Is future expansion expected, is there a hydraulic issue, etc.? Please explain. The demand calculation is based on a total of 5 fixtures, yet the plumbing design internal to this building does not appear to have been started. How confident is the Engineer of the fixture count? Please confirm that only one hose connection will be provided to wash down the golf carts. Anecdotally, there are often multiple hose bibs for golf cart wash-downs. The COA reviewer could not follow how the meter was selected as per Table 6-1. If anything, a smaller meter may be appropriate. It is suggested that these issues be discussed with COA. Please **submit** response, **resubmit** calculations and **resubmit** sheets as needed. **Comment on Feb Submittal** **Water Meter Sizing** Please confirm that no additional water fixtures are anticipated. Please confirm that the number of golf cart washdown hose connections is the best estimate of the Engineer/Architect. The City reviewer still does not fully understand how the Engineer interprets the M22 methodology. Note that the City has sized the water meter using a different method; that based on the Florida Bldg code, and has obtained a different result. Note that the City's analysis suggests that the proposed 2-inch meter be DECREASED in size. The City suggests that this issue be discussed with the ENGINEER either by phone or face-to-face. Please address this comment, which remains unresolved.

NO.	COMMENTS
END OF COMMENTS	

Please advise if you have any questions or require additional information.
cc: Justin Tabor – AICP Principal Planner

City of Alachua

MIKE DAROZA
CITY MANAGER

PLANNING & COMMUNITY DEVELOPMENT
DIRECTOR KATHY WINBURN

January 8, 2025

Sent by electronic mail to walkero@chw-inc.com

Walker Owen, P.E.
Causseaux, Hewett, & Walpole, Inc.
11801 Research Drive
Alachua, FL 32615

RE: Project Assistance Team (PAT) Summary: Tomoka Hills Golf Facility Site Plan Application

Dear Mr. Owen:

On December 18, 2024, the City of Alachua received your revised application for a Site Plan submitted on behalf of Tomoka Hill Farms, Inc. for the Tomoka Hills Golf Facility project. The application proposes an 18-hole golf course and maintenance facility with associated site improvements on Tax Parcel Numbers 03873-000-000 and 03873-001-001.

The application has been reviewed by the City's Project Assistance Team (PAT). Upon review of the application and materials, the following insufficiencies must be addressed. A meeting to review these comments may be scheduled upon request.

Please address all insufficiencies in writing and provide an indication as to how they have been addressed by **5:00 PM** on **Monday, January 27, 2025**. A total of four (4) copies of the application package and a digital copy of all materials in PDF format on a CD or sent by emailing a Cloud / FTP link must be provided by this date.

Please address the following:

1. *Consistency with Comprehensive Plan*
   a. Grading plans were only provided for the area around the proposed maintenance building and have not been provided for the proposed golf course greens. There are several comprehensive plan policies which require natural topography to be maintained. Without grading plans of areas outside of the maintenance building Staff cannot make a determination that the proposed development will comply with all applicable policies of the Comprehensive Plan pertaining to such matters.

2. *Compliance with Zoning*
   a. Portions of the proposed golf facility are located in areas presently zoned Community Commercial (CC). A private golf course is not an allowable use in this zoning district.

3. *Article 6, Development Standards*
   a. Section 6.1., Off-Street Parking and Loading Standards
      i. Table 6.1-1 establishes a parking standard of 4 spaces per hole per course. The parking standard utilized is 1 space per 1,000 square feet of floor area. Staff cannot identify the source of this parking standard.
         1. Provide parking in accordance with the standard established in Table 6.1-1.
         2. Provide clarification regarding selected parking standard.
   b. Section 6.2, Landscaping Standards
      i. Several regulated and heritage trees are proposed for removal in the area of the proposed maintenance building. Mitigation calculations are not provided within the landscape plan. Please address required mitigation.
      ii. Tree credits have been applied to fulfill portions of the required tree plantings of Section 6.2.2. Section 6.2.1(D)(6) requires a table displaying a list of all trees claimed for credits to be included in the landscape plan. The table must include common name, botanical name, caliper at DBH, health, number of tree credits being used, and reference number to location on tree survey provided as a part of the landscape plan. Provide required data for preserved trees being credited for tree requirements.
      iii. Sheet LS-2 is labeled as a plan key but sheet numbers are not provided on the plan key.
      iv. Section 6.2.3(E) requires screening along arterial frontages. This is applicable to the east property line, which is adjacent to the Interstate 75. Provide arterial screening and calculations in accordance with Section 6.2.3(E).
      v. A Tree Protection Detail meeting the requirements of Section 6.2.1(D)(2) has not been included within the plans.
      vi. Tree protection barriers not shown on the plans. Must be shown for all affected areas, including the golf course greens.
      vii. Demolition Plan Series (C0.3X): Only heritage trees are shown. Show all regulated trees.
   c. Section 6.3, Fencing Standards
      i. Please note any proposed fencing and provide detail of any proposed fencing.
   d. Section 6.4, Exterior Lighting Standards
      i. Photometric plans were not included with the plan set. Please note if any exterior lighting is proposed and if so provide photometric plans.

4. *Public Services / Fire Rescue / Engineering Review Comments*
   a. The applicant must address all comments provided by the Public Services Department in a memorandum dated December 31, 2024.
   b. The applicant must address the comments provided by Sergio Reyes, PE, of EDA Consultants, Inc., in a letter dated January 6, 2025.

5. *Environmental Resources Assessment Report*
   a. The report notes that a gopher tortoise survey should be conducted at a later date. Staff will propose a condition requiring a 100% gopher tortoise survey to be completed prior to the commencement of construction and in accordance with the Florida Fish & Wildlife Conservation Commission guidelines.

b. The report notes that further field review and habitat assessment is needed to confirm the likelihood of the presence of listed faunal species. Please submit documentation addressing this recommendation.

6. *Miscellaneous*
   a. Proposed connection to NW 162nd Lane is subject to review and approval/denial by the Public Services Department.
   b. The project name is generally referenced as "Tomoka Hills Golf Facility" however the plans refer to the project as "Tower Hill Golf Facility". Please ensure the project name is consistent throughout application materials.
   c. Sheet C0.00, General Note #2: Correct zoning district is Agricultural.
   d. Sheet C0.10, General Note #14: Revise reference from "Alachua County Environmental Protection Department" to "City of Alachua Public Services Department".
   e. Sheet C0.10, General Note #25: Revise reference from "Alachua County Public Works Department" to "City of Alachua Public Services Department".
   f. Sheet C0.10, Paving, Grading, and Drainage General Note #8: Revise reference from "Alachua County Public Works Department" to "City of Alachua Public Services Department".
   g. Sheet C0.20, Contractor/Subcontractor certification Statement: Correct the project name.

If you have any questions regarding the information above, please contact me at 386-418-6100 x 1602 or via e-mail at jtabor@cityofalachua.com. We look forward to receiving your revised application.

Sincerely,

Justin Tabor, AICP
Principal Planner

Attachments

c: Kathy Winburn, Planning & Community Development Director *(by electronic mail)*
Adam Hall, AICP, Principal Planner *(by electronic mail)*
Carson Crockett, Planner *(by electronic mail)*
Project File

City of
ALACHUA
the good life community

City of Alachua

MIKE DAROZA
CITY MANAGER

RODOLFO VALLADARES, P.E.
ASS'T CITY MANAGER

INTER-OFFICE COMMUNICATION

DATE: **Dec 31, 2024**

TO: **Kathy Winburn, AICP**
Planning & Community Development Director

FROM: **Michael Carrillo, P.E.**
Public Services Director
Tom Ridgik, P.E.
Engineering Supervisor

TR 12/27/2024

RE: **Tower Hills Golf Facility Site Plan**

Public Services has reviewed the subject project (Dec 2024 Documents) and offer the following comments. Review was specific to Public Services utilities.

NO.	COMMENTS
1	**Comment of Dec Submittal** No electrical design drawings have been submitted. Please **submit** electrical design drawings.
2	**Comment of Dec Submittal** No COA Standard Details have been submitted. Because NV5 does the CAD work for COA, NV5 should already have the most up-to-date details. Please **submit** COA Standard Details. As a minimum, include the following: 100 112

NO.	COMMENTS
	115 118 121 127 139 145 151 211 303 307 309 318 321A 321B
3	**Comment of Dec Submittal** **Sheet C0.10** **General Notes** Please add the following note: "30. THE CITY OF ALACHUA SHALL BE COMPENSATED FOR ALL WORK REQUIRED OF THE CITY TO MODIFY ITS INFRASTRUCTURE. SUCH WORK INCLUDES, BUT IS NOT LIMITED TO, WATER, WASTEWATER AND ELECTRIC INFRASTRUCTURE IMPROVEMENTS, RELOCATION OR DEMOLITION. FOR PROJECTS NOT WITHIN THE CITY'S ELECTRIC SERVICE AREA, MODIFICATIONS TO THE CITY'S ELECTRIC INFRASTRUCTURE EITHER WITHIN OR ADJACENT TO THE PROJECT AREA MAY BE REQUIRED.THE CITY SHALL BE COMPENSATED FOR SUCH MODIFICATIONS." **Water & Wastewater General Notes** Please - Modify Note 12 by adding "2-inches and less" so it now reads: "12. ALL PVC SERVICE LINES 2-INCHES AND LESS SHALL BE SCH 40 PVC." Delete Note 16 (starts with "During construction…."). Delete Note 17 (starts with "Use Rieber gaskets….").

NO.	COMMENTS
	Delete "AND WASTEWATER " from Note 18 so it now reads: "PROVIDE TRACER WIRE SYSTEM FOR WATER PIPING AS SHOWN ON THE DETAILS AND AS PER THE COA DCM." Modify Note 24 by adding "either" and "or ductile iron cement lined" to second sentence so it now reads "WATER MAIN PIPING NOT UNDER ROADS AND PAVEMENT SHALL **EITHER** BE AWWA C900 DR-18 PVC **OR DUCTILE IRON CEMENT LINED."**
4	**Comment of Dec Submittal** **Sheet C1.00** See attached markup. The proposed maintenance road connects with a section of 162nd Lane that is now closed, and may remain closed in the future. If so, the proposed maintenance road and appurtenances will need to be relocated. Suggest discussing this issue with COA, including Office of the City Manager. As of this writing, the proposed location of the maintenance road is **NOT APPROVED**. See attached markup. Please **submit** response.
6	**Comment of Dec Submittal** **Sheet C5.20** See attached markup. Please: At cleanout CO#1, call-out "COA END OF MAINTENANCE". Call-out the horizontal separation between the 8- and 4-inch P-W lines. Right end of sheet: Call out the matchlines or at least reference the matching sheet. Inset AA Provide a 4-inch gate valve where the 4-inch P-W service line connects to the 8-inch P-W. Calcs size meter as 2-inch, yet a 4-inch meter is called out. Resolve. The water service line is called out as 4-inch, which seems large. Are there any future additional uses for this line? Please resolve. Review 4-inch size of the RPZ Backflow Preventer. The sole purpose of the 8-inch P-W appears to be to supply water to the bldg fire hydrant. If so, both the fire hydrant and its supply line are private. This requires installation of an

NO.	COMMENTS
	above ground Backflow preventer assembly. Show in Inset A-A. Please **submit** response & **resubmit** this sheet.
7	**Comment of Dec Submittal** **Sheet C5.21** See attached markup. Review size of 6-inch bend. Should it be 8-inch to match P-W size? Review size of 4-inch service line and its fittings. Seems large. Suggest reviewing hydrant location with fire marshall. It is common for hydrant to be closer to the bldg. Please **resubmit** this sheet.
8	**Comment of Dec Submittal** **Sheet C5.30** See attached markup. Review size of 4-inch service line and its fittings. Seems large. Please **resubmit** this sheet.
9	**Comment of Dec Submittal** **Sheet C5.31** See attached markup. Review size of 4-inch service line and its fittings. Seems large. Please **resubmit** this sheet.
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NO.	COMMENTS
	A live oak appears to be about 7-8 ft from the P-W supplying the hydrant. Even though this P-W will likely be private, suggest moving the live oak farther away from the P-W. Please **resubmit** this sheet.
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14	**Water Meter Sizing** Water sizing calculations are based on AWWA Manual M22 method, with a 2-inch meter selected. Yet Sheet C5.20 calls out a 4-inch meter with a 4-inch backflow preventer assembly and a 4-inch service line supplying the building. Please resolve the following: The 4-inch water service line appears large. Is future expansion expected, is there a hydraulic issue, etc.? Please explain. The demand calculation is based on a total of 5 fixtures, yet the plumbing design internal to this building does not appear to have been started. How confident is the Engineer of the fixture count? Please confirm that only one hose connection will be provided to wash down the golf carts. Anecdotally, there are often multiple hose bibs for golf cart wash-downs. The COA reviewer could not follow how the meter was selected as per Table 6-1. If anything, a smaller meter may be appropriate. It is suggested that these issues be discussed with COA.

NO.	COMMENTS
	Please **submit** response, **resubmit** calculations and **resubmit** sheets as needed.
END OF COMMENTS	

Please advise if you have any questions or require additional information.
cc: Justin Tabor – AICP Principal Planner
Adam Hall – AICP Principal Planner

NOTE: GOLF COURSE LAYOUT SHOWN FOR IMPACT CONTEXT ONLY AND IS CURRENTLY UNDER DESIGN

I-75

OTHER SURFACE WATER, TYP. SEE C0.40 FOR PROTECTION AND IMPACT INFORMATION.

STORMWATER POND (UNDER CONSTRUCTION)

AG POND (UNDER CONSTRUCTION)

US 441

PROPOSED MAINTENANCE ROAD

PROPOSED MAINTENANCE BUILDING

OFFICE BLDG AND ROAD (UNDER CONSTRUCTION)

PROPOSED WET POND (REFER TO GOLF COURSE PLANS FOR DETAILED DESIGN)

GOLF/RECREATION AREA (196.678 Ac.)

WETLAND BOUNDARY LINE, TYP. SEE C0.40 FOR PROTECTION AND IMPACT INFORMATION

GOLF PATH, UNPAVED; TYP.

PROJECT BOUNDARY

NW 173RD ST

GRAPHIC SCALE
0 100 200 400

1 THIS SECTION OF 162ND LANE IS NOW CLOSED, AND MAY REMAIN CLOSED IN THE FUTURE. IF SO, THE PROPOSED MAINTENANCE ROAD AND APPURTENANCES MAY NEED TO BE RELOCATED.
SUGGEST DISCUSSING THIS ISSUE WITH COA, INCLUDING OFFICE OF THE CITY MANAGER.

11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA CA-5075
CHW AN HWS COMPANY

SCALE: 1"=200'
VERIFY SCALE BAR IS CORRECT FOR ORIGINAL DRAWING
IF NOT ONE INCH (1") THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/REVISION

SUBMITTALS: 05/15/24 SRWMD
10/31/24 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT HOME

PROJECT: TOWER HILLS GOLF

SHEET TITLE: MASTER GOLF HEADQUARTERS SITE PLAN

TECHNICIAN: T.F. COWART
DESIGNER: K. REED, E.I.
QA/QC DESIGNER: SCOTT OWEN, P.E.
PROJECT MANAGER: K. REED, E.I.
21-0025.18

WALKER FAIN OWEN

Walker Fain Owen
State of Florida, Professional Engineer, License No. 84201
This item has been electronically signed and sealed by Walker Fain Owen, PE on 10/31/2024 using a Digital Signature.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

FL PE No. 84201

SHEET NO.
C1.00

SANITARY SEWER STRUCTURE TABLE

STRUCTURE NAME:	STRUCTURE TYPE	TOP	INVERT ELEV	NORTHING & EASTING
SS C/O-1	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER (END CITY OF ALACHUA MAINTENANCE)	85.23'	75.67' S 75.67' N	N: 297001.65 E: 2596804.57
SS C/O-2	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	82.67'	76.27' N 76.27' S	N: 296902.01 E: 2596796.18
SS C/O-3	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	82.66'	76.87' N 76.87' S	N: 296802.34 E: 2596787.77
SS C/O-4	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	82.36'	77.47' N 77.47' S	N: 296702.64 E: 2596779.37
SS C/O-5	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	82.93'	78.07' N 78.07' S	N: 296603.04 E: 2596770.97
SS C/O-6	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	85.14'	81.21' N 81.21' S	N: 296553.19 E: 2596766.77
SS C/O-7	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	90.06'	85.00' N 85.00' SE	N: 296467.02 E: 2596759.51
SS C/O-8	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	92.91'	87.70' NW 87.70' S	N: 296433.42 E: 2596838.17

STORMWATER STRUCTURE TABLE

STRUCTURE:	STRUCTURE TYPE	TOP	INVERT ELEV	NORTHING & EASTING
S-1	TYPE C INLET PER FDOT INDEX 425-052 AND 425-010	92.30'	86.75' E	N: 296341.09 E: 2596828.86
S-2	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	91.97'	86.36' W 86.36' SE	N: 296297.72 E: 2596979.85
S-3	CROSS DRAIN MES PER FDOT INDEX 430-021	75.71'	74.00' NW	N: 296186.11 E: 2597051.20
S-4	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	92.20'	86.75' W	N: 296361.56 E: 2597097.93
S-5	TYPE 'F' INLET FDOT INDEX 425-053	92.12'	86.56' NW 86.56' E	N: 296383.13 E: 2597026.20
S-6	TYPE 'C' INLET FDOT INDEX 425-052	92.14'	86.31' W 86.31' SE	N: 296443.24 E: 2596946.72
S-7	TYPE 'C' INLET FDOT INDEX 425-052	92.14'	86.11' E 86.11' N	N: 296466.21 E: 2596870.35
S-8	24" MITERED END SECTION PER FDOT INDEX 430-021	75.25'	73.00' S	N: 296554.22 E: 2596888.40
S-9	18" MES PER FDOT INDEX 430-021	76.71'	75.00' SE	N: 296732.35 E: 2596739.79
S-10	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	82.00'	71.25' NW 71.25' E	N: 296682.96 E: 2596783.73
S-11	24" MITERED END SECTION PER FDOT INDEX 430-021	N/A	71.00' W	N: 296674.92 E: 2596854.23
S-12	TYPE C INLET PER FDOT INDEX 425-052 AND 425-010	75.75'	73.39' E	N: 296839.56 E: 2596752.83
S-13	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	82.00'	73.16' W 73.16' E	N: 296847.00 E: 2596797.56
S-14	24" MITERED END SECTION PER FDOT INDEX 430-021	N/A	73.00' W	N: 296840.74 E: 2596860.20
S-15	18" MITERED END SECTION PER FDOT INDEX 430-021	N/A	83.00' E	N: 297013.05 E: 2596767.08
S-16	18" MITERED END SECTION PER FDOT INDEX 430-021	N/A	82.50' W	N: 296597.87 E: 2596838.98

AT COR#1, PLEASE CALL-OUT "COA END OF MAINTENANCE"

UNDER CONSTUCTION STORMWATER MAINTENANCE FACILITY (PART OF HEADQUARTERS APPROVED PLANS)

EXISTING STORM SYSTEM PART OF HEADQUARTERS APPROVED PLANS

EXISTING STORM SYSTEM PART OF HEADQUARTERS APPROVED PLANS

PLEASE CALL-OUT HORIZONTAL SEPARATION BETWEEN THE 8" & 4" T-W LINES.

16"X8" WET TAP AND VALVE

OPEN CUT AND REPAIR FOR UTILITY INSTALLATION (REFER TO C5.20 FOR DETAIL)

8" DIP WATER MAIN

8"X6" WYE CONNECTION

OPEN CUT AND REPAIR FOR UTILITY INSTALLATION (REFER TO C5.20 FOR DETAIL)

18"-6" FVC @ 0.60%

DEFLECT ELECTRIC AS NECESSARY FOR CULVERT INSTALLATION

73'-14" RCP @ 0.68%

NW 162ND AVENUE
ROAD CLOSED TO THROUGH TRAFFIC WITH VARIES
85' RAW

NORTH RAW LINE

REFER TO INSET A-A FOR DETAILS

4" CLDI 11.25° BEND

8" CLDI 11.25° BEND

100'-6" FVC @ 0.60%

63'-24" RCP @ 0.25%

4" PVC WATER SERVICE LINE

8" DIP WATER MAIN

45'-18" RCP @ 0.50%

66'-15" RCP @ 5.67%

71'-24" RCP @ 0.35%

100'-6" FVC @ 0.60%

4" CLDI 45° BEND

8" CLDI 45° BEND

50'-6" FVC @ 6.22%

80'-6" FVC @ 4.31%

8"X6" REDUCER

RIP RAP

S-8

S-9

S-10

S-11

S-12

S-13

S-14

C/O#1

C/O#2

C/O#3

C/O#4

C/O#5

C/O#6

12+00

13+00

14+00

15+00

31'-26

31'-00

10'

TR 0306401-000
KENNETH J & REBECCA H FICKETT

GAS/TIME RISER

LIME ROCK SUBGRADE

BENCHMARK
ARMED CONCRETE MONUMENT
ELEV=85.23 (NAVD 88)
PER GPS SURVEY

PROVIDE "GATE VALVE IN THIS WATER SERVICE LINE

CALLS INDICATE A 2" WATER METER. RESOLVE.

PROFOSED FUE

4" WATER METER (BY COA MAINT.)

4" RPZ BACKFLOW PREVENTER

4" FV WATER SERVICE

8" DIP WATER MAIN

REVIEW SIZE

REVIEW SIZE IS 4" TOO CATCH?

THE PURPOSE OF THE 8" WATER MAIN IS TO SUPPLY WATER TO BLDG HYDRANT. THUS, 8" T-W (FIRE) AND HYDRANT ARE PRIVATE. ~~PROVIDE~~ INSTALL A 8" BFP ASSEMBLY HERE.

4" 90° CLDI BEND

8" DIP WATER MAIN

8"X8"X4" TEE

8" GATE VALVE AND BOX AND SAMPLE POINT (END COA MAINTENANCE)

INSET A-A
SCALE: 1"=10'

CALL OUT MATCH-LINE OR AT LEAST ~~CALL OUT~~ CROSS-REFERENCE CONNECTING SHEET.

ADJUST TO STORM TOP TO PROV. GRADE

CONSTRUCTION NOTES

SCALE:	1"=20'
VERIFY SCALE BAR IS CORRECT FOR PLOTTED SIZE	IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

CHW
AN MWH COMPANY

1801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.cdhw-inc.com
est. 1980 FLORIDA CA-30175

SUBMITTALS
05/15/24 SRWMD
10/31/24 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT HOWE

PROJECT: TOWER HILLS GOLF

SHEET TITLE: DETAILED GOLF MAINTENANCE FACILITY GRADING AND UTILITY PLAN

TECHNICIAN: T.R. COWART
DESIGNER: K. REED, E.I.
QUALITY CONTROL: M.F. OWEN, P.E.
PROJECT MANAGER: M.F. OWEN, P.E.

21-0025.18

WALKER FAIN OWEN

Mark Fain Owen
State of Florida, Professional Engineer, License No. 94201
This item has been electronically signed and sealed by Walker Fain Owen, PE on 10/31/2024 using a Digital Signature.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

FL PE No. 94201

SHEET NO.
C5.20

REVIEW. BECAUSE THE 8" SHOULD BEND ALSO BE 8"?

REVIEW THE FITTING SIZES. (SEEMS LARGE)

SUGGEST REVIEWING HYDRANT LOCATION WITH FIRE MARSHALL. IT IS COMMON FOR HYDRANT TO BE CLOSE TO BLDG.

GOOD!

STORMWATER STRUCTURE TABLE

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S-4	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	92.20'	86.75' W	N: 296361.56 E: 2597097.93
S-5	TYPE 'P' INLET FDOT INDEX 425-053	92.12'	86.56' NW 86.56' E	N: 296383.13 E: 2597026.20
S-6	TYPE 'C' INLET FDOT INDEX 425-052	92.14'	86.31' W 86.31' SE	N: 296443.24 E: 2596946.72
S-7	TYPE 'C' INLET FDOT INDEX 425-052	92.14'	86.11' E 86.11' N	N: 296466.21 E: 2596870.35
S-8	24" MITERED END SECTION PER FDOT INDEX 430-021	75.25'	73.00' S	N: 296554.22 E: 2596888.40
S-9	18" MES PER FDOT INDEX 430-021	76.71'	75.00' SE	N: 296732.35 E: 2596739.79
S-10	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	82.00'	71.25' NW 71.25' E	N: 296682.96 E: 2596783.73
S-11	24" MITERED END SECTION PER FDOT INDEX 430-021	N/A	71.00' W	N: 296674.92 E: 2596854.25
S-12	TYPE C INLET PER FDOT INDEX 425-052 AND 425-010	75.75'	73.39' E	N: 296839.56 E: 2596752.83
S-13	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	82.00'	73.16' W 73.16' E	N: 296847.00 E: 2596797.56
S-14	24" MITERED END SECTION PER FDOT INDEX 430-021	N/A	73.00' W	N: 296340.74 E: 2596860.20
S-15	18" MITERED END SECTION PER FDOT INDEX 430-021	N/A	83.00' E	N: 297013.05 E: 2596767.08
S-16	18" MITERED END SECTION PER FDOT INDEX 430-021	N/A	82.50' W	N: 296997.87 E: 2596838.96

SANITARY SEWER STRUCTURE TABLE

STRUCTURE NAME:	STRUCTURE TYPE	TOP	INVERT ELEV	NORTHING & EASTING
SS C/O-1	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER (END, CITY OF ALACHUA MAINTENANCE)	85.23'	75.67' S 75.67' N	N: 297001.65 E: 2596804.57
SS C/O-2	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	82.67'	76.27' N 76.27' S	N: 296902.01 E: 2596796.18
SS C/O-3	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	82.66'	76.87' N 76.87' S	N: 296802.34 E: 2596787.77
SS C/O-4	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	82.36'	77.47' N 77.47' S	N: 296702.64 E: 2596779.37
SS C/O-5	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	82.93'	78.07' N 78.07' S	N: 296603.04 E: 2596770.97
SS C/O-6	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	85.14'	81.21' N 81.21' S	N: 296553.19 E: 2596766.77
SS C/O-7	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	90.06'	85.00' N 85.00' SE	N: 296467.02 E: 2596759.51
SS C/O-8	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	92.91'	87.70' NW 87.70' S	N: 296433.42 E: 2596838.17

UNDER CONSTUCTION STORMWATER MAINTENANCE FACILITY (PART OF HEADQUARTERS APPROVED PLANS)

UNDER CONSTUCTION STORMWATER MAINTENANCE FACILITY (PART OF HEADQUARTERS APPROVED PLANS)

CHW
AN MIVES COMPANY
1801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA
CA-5075

SCALE: 1"=20'

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONTRACTOR/CHW REVISIONS:

SUBMITTALS:
05/15/24 SRWMD
10/31/24 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT PONTE

PROJECT: TOWER HILLS GOLF

SHEET TITLE: DETAILED GOLF MAINT. FACILITY GRADING, DRAINAGE AND UTILITY PLAN

TECHNICIAN: T.P. COWART
DESIGNER: K. REED, E.I.
QUALITY CONTROL: J. WALKER, P.E.
PROJECT MANAGER: T. COWART

21-0025.18

WALKER FAIN OWEN

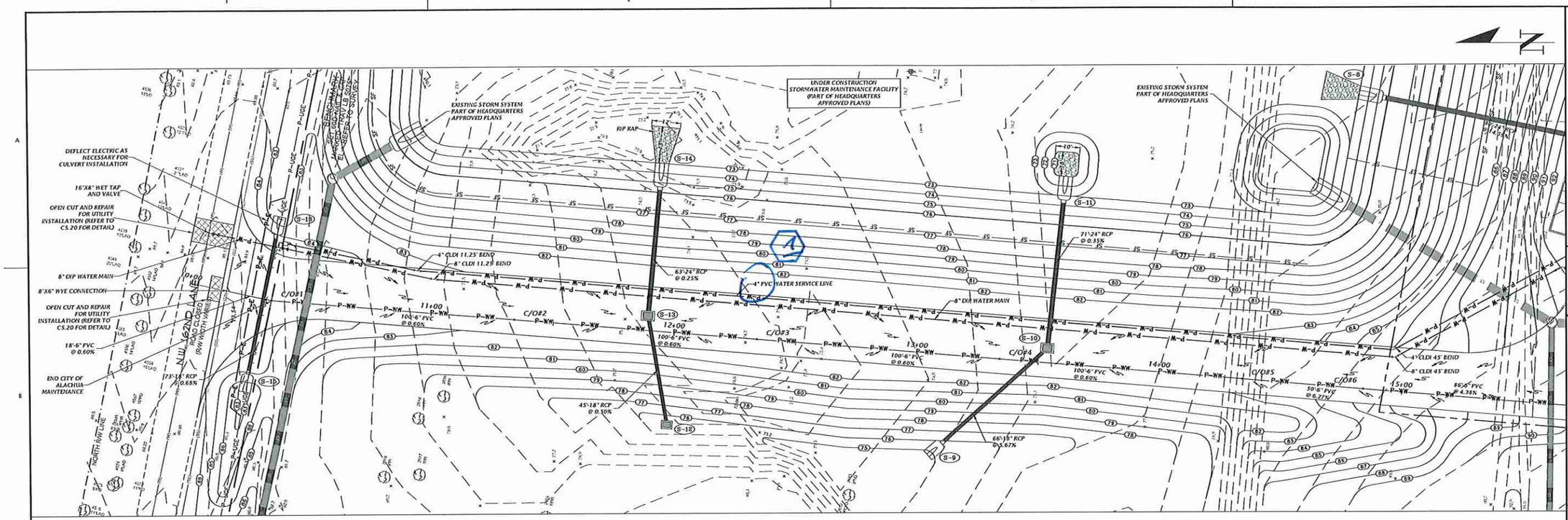
Walker Fain Owen
State of Florida, Professional Engineer, License No. 84205

This item has been electronically signed and sealed by Walker Fain Owen, PE on 10/31/2024 using a Digital Signature.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

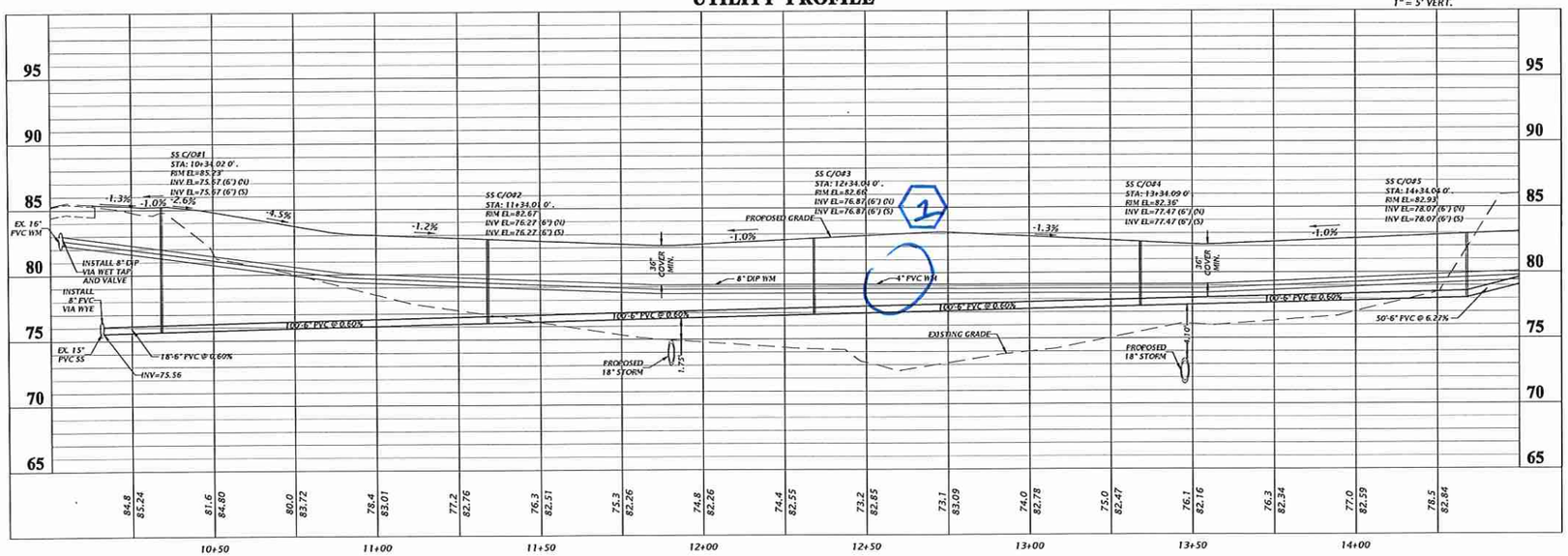
FL PE No. 84205

SHEET NO.
C5.21



UTILITY PROFILE

SCALE: 1" = 20' HORIZ.
1" = 5' VERT.



1 REVIEW SIZE OF 4" PVC WM SERVICE LINE.

CHW AN NIV15 COMPANY
11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA CA-5075

SCALE: 1"=20'
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/BID REVISIONS

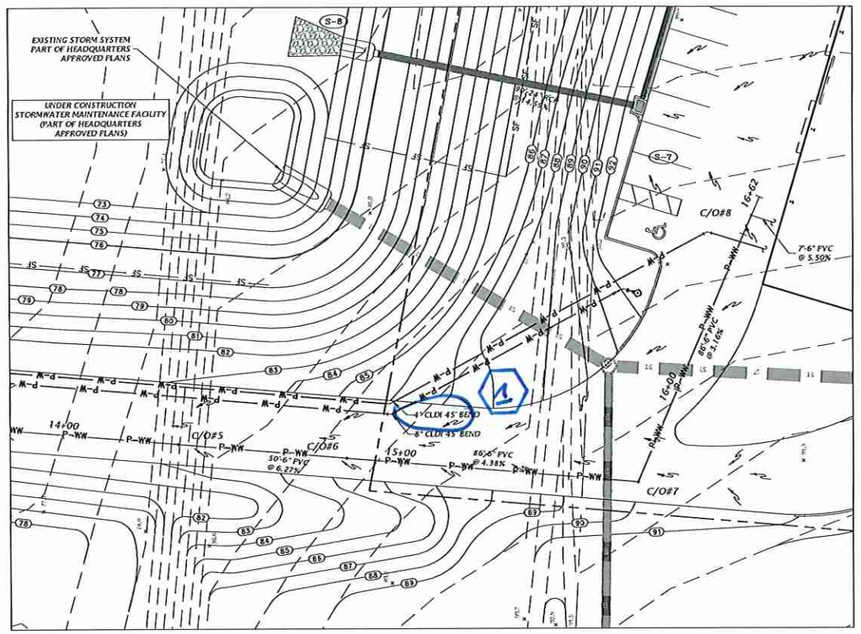
SUBMITTALS:
05/15/24 SRWMD
10/31/24 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE
PROJECT: TOWER HILLS GOLF
SHEET TITLE: GOLF MAINTENANCE FACILITY UTILITY PLAN AND PROFILE

TECHNICIAN: T.F. COWART
DESIGNER: K. REED, E.I.
QUALITY CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN
Walker Fain Owen
State of Florida, Professional Engineer, License No. 94201
This item has been electronically signed and sealed by Walker Fain Owen, P.E. on 10/31/2024 using a Digital Signature.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

FL PE No. 94201
SHEET NO.: C5.30



1 REVIEW SIZE OF 4" PVC WM SERVICE LINE.

CHW AN NIV15 COMPANY

11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA
CA-5075

SCALE: 1"=20'

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/RID REVISIONS

SUBMITTALS
05/15/24 SRWMD
10/31/24 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE
PROJECT: TOWER HILLS GOLF
SHEET TITLE: GOLF MAINTENANCE FACILITY UTILITY PLAN AND PROFILE

TECHNICIAN: T.F. COWART
DESIGNER: K. REED, E.I.
QUALITY CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

Walker Fain Owen
State of Florida, Professional Engineer, License No. 94201

This item has been electronically signed and sealed by Walker Fain Owen, P.E. on 10/31/2024 using a Digital Signature.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

FL PE No. 94201

SHEET NO.: C5.31

PLEASE IDENTIFY EACH SHEET, SIMILAR TO LS-2.

GRAPHIC SCALE
0 100 200 400

KNOW WHAT'S BELOW
ALWAYS CALL 811 BEFORE YOU DIG
It's fast, it's free, it's the law.
Call 811 two business days before digging

11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA LA0001683
CHW Professional Consultants

SCALE: 1"=200'

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING
IF NOT ONE INCH ON
THIS SHEET ADJUST
SCALES ACCORDINGLY.
0 1"

CONSTRUCTION AND REVISIONS

SUBMITTALS
10/31/2024 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE NOTES & PLAN KEY

DESIGNED
DRAWN BY: JMS
CHECKED BY: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOSEPH MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-2

THIS LIVE OAK ONLY 7-8 FT FROM P-W (PIPE LINE). EVEN THOUGH THIS LINE IS LIKELY PRIVATE, SUGGEST MOVING IT FARTHER AWAY.

EXISTING TREES TO REMAIN

MATCHLINE LS-3
MATCHLINE LS-5

MATCHLINE LS-3
MATCHLINE LS-4

KNOW WHAT'S BELOW ALWAYS CALL 811 BEFORE YOU DIG
It's fast, it's free, it's the law.
Call 811 two business days before digging

GRAPHIC SCALE
0 15 30 60

11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA LA0001665

CHW Professional Consultants

SCALE: 1"=30'
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET ADJUST SCALE ACCORDINGLY.

CONSTRUCTION/REVISIONS

SUBMITTALS
10/31/2024 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TOPOGRAPH:
DESIGNER: JMS
QUALITY CONTROL: MJS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT JOHN MICHAEL SIMPSON LA5667436 STATE OF FLORIDA

Digitally signed by John Michael Simpson
Date: 2024.10.31 13:53:14 -04'00'

SHEET NO.: LS-3

MATCHLINE IR-7
MATCHLINE IR-11

MATCHLINE IR-10
MATCHLINE IR-11

MATCHLINE IR-11
MATCHLINE IR-12

MATCHLINE IR-11
MATCHLINE IR-15

PS

10 10 10

January 6, 2025

Justin Tabor, AICP
City of Alachua
15100 NW 142nd Terrace | PO Box 9
Alachua, Florida 32616

Ref: Tower Hill Golf Facility – Construction Plans
Construction Plans Comments

Dear Mr. Tabor:

The comments below correspond to the Construction Plans for Tower Hill Golf Facility submitted on 12/12/2024.

Plans

C0.00:

1. Digital signatures could not be verified.
2. General – provide project boundaries and clearly demarcate the boundary of the golf facility and the future golf course.

C0.21:

1. Silt fence needs to protect the existing (under construction) stormwater system to prevent any silt or other construction material being carried off into an existing stormwater system.

C0.30:

1. Show project boundaries. It is difficult to tell where the site improvements are proposed.

C0.31:

1. Show project boundaries. It is difficult to tell where the site improvements are proposed

C0.40:

1. Show project boundaries. It is difficult to tell where the site improvements are proposed.

C0.40:

Show project boundaries. It is difficult to tell where the site improvements are proposed

C5.11:

1. Show the top of the stormwater being built with the previous approved plans to demonstrate the stormwater will not be impacted with the construction of the facility.
2. Add dimensions to the loading space.

C5.20:

1. Pipe between S15 and S16 only have 10” of cover. Recommends to lower pipe or raise the roadway at the entrance.

2. It seems the 6” sanitary service may have a conflict with the existing 36” RCP pipe crossing at the entrance (invert +/- 74.50)

C5.21:

1. Recommend to provide additional clearance between the proposed building and the existing 42” RCP stormpipe, which is about 12 ft deep.

C5.30:

1. Profile should include the stormpipes (existing 36” and proposed 18”) crossing the roadway.

Feel free to contact us if you have any questions.

Sincerely,

Claudia S. Vega, P.E.
Director of Engineering
cvega@edafl.com
edafl.com

City of Alachua

MIKE DAROZA
CITY MANAGER

PLANNING & COMMUNITY DEVELOPMENT
DIRECTOR KATHY WINBURN

December 18, 2024

Sent by electronic mail to walkero@chw-inc.com

Walker Owen, P.E.
Causseaux, Hewett, & Walpole, LLC
11801 Research Drive
Alachua, FL 32615

RE: Second Completeness Review: Tomoka Hills Golf Facility Site Plan Application

Dear Mr. Owen:

On December 5, 2024, the City of Alachua received your revised application for a Site Plan submitted on behalf of Tomoka Hill Farms, Inc. for the Tomoka Hills Golf Facility project. The application proposes an 18-hole golf course and maintenance facility with associated site improvements on Tax Parcel Numbers 03873-000-000 and 03873-001-001. The revised application received on December 5, 2024 was submitted in response to the completeness review comments issued to you in a letter dated November 7, 2024.

According to Section 2.2.6 of the Land Development Regulations (LDRs), upon receipt of an application, a completeness review shall be conducted to determine that the application contains all the necessary information and materials, is in proper form and of sufficient detail, and is accompanied by the appropriate fee. The Planning Department has reviewed the aforementioned application for completeness and finds that **the application is complete**.

An in-depth review of the content of the application will be performed, and the findings of the in-depth review will be discussed at a Project Assistance Team (PAT) Meeting, which will be sent under separate cover.

If you have any questions regarding the information above, please contact me at 386-418-6100 x 1602 or via e-mail at jtabor@cityofalachua.com.

Sincerely,

Justin Tabor, AICP
Principal Planner

c: Kathy Winburn, Planning & Community Development Director *(by electronic mail)*
Adam Hall, AICP, Principal Planner *(by electronic mail)*
Carson Crockett, AICP Candidate, Planner *(by electronic mail)*
Project File

City of Alachua

MIKE DAROZA
CITY MANAGER

PLANNING & COMMUNITY DEVELOPMENT
DIRECTOR KATHY WINBURN

November 7, 2024

Sent by electronic mail to walkero@chw-inc.com

Walker Owen, P.E.
Causseaux, Hewett, & Walpole, LLC
11801 Research Drive
Alachua, FL 32615

RE: Completeness Review: Tomoka Hills Golf Facility Site Plan Application

Dear Mr. Owen:

On October 31, 2024, the City of Alachua received your application for a Site Plan submitted on behalf of Tomoka Hill Farms, Inc. for the Tomoka Hills Golf Facility project. The application proposes an 18-hole golf course and maintenance facility with associated site improvements on Tax Parcel Numbers 03873-000-000 and 03873-001-001.

According to Section 2.2.6 of the Land Development Regulations (LDRs), upon receipt of an application, a completeness review shall be conducted to determine that the application contains all the necessary information and materials, is in proper form and of sufficient detail, and is accompanied by the appropriate fee. The Planning Department has reviewed the aforementioned application for completeness and finds that the application is incomplete and the following information is needed to begin the review of the application. Please address the following deficiencies no later than **5:00 PM on Thursday, November 14, 2024**.

In accordance with Section 2.2.6(B) of the LDRs, the applicant must correct the deficiencies and resubmit the application for completeness determination. *Plans and application materials may be made available for return in order to revise and resubmit as needed.*

The time frame and cycle for review shall be based upon the date the application is determined to be complete. If the applicant fails to respond to the identified deficiencies within forty-five (45) calendar days, the application shall be considered withdrawn.

Please note that if an additional completeness review is required, a resubmittal fee equal to 10% of the application fee will be assessed for each additional completeness review and must be paid prior to further review of the application.

The comments below are based solely on a preliminary review of your application for completeness. An in-depth review of the content of the application will be performed, and the findings of the in-depth review will be discussed at a Project Assistance Team (PAT) Meeting, which will be sent under separate cover and subsequent to a determination of completeness.

In order to provide a complete application, please address the following:

1. Authorized Agent Affidavit does not include all parcels subject to the application. Please submit a corrected Authorized Agent Affidavit identifying the correct parcels subject to the application.
2. General Comment: Mailing labels did not include a recent addition to the notification list. Please ensure future submittals use the most recent list as posted on the City's web site.
3. The Comprehensive Plan Consistency Analysis does not provide a reasonable analysis of the application's consistency with the City's Comprehensive Plan. At a minimum, the analysis should respond to the following GOPs (note – there may be additional GOPs the applicant wishes to include within its analysis):
    a. Future Land Use Element
        i. Objective 2.4 and associated policies;
        ii. Objective 5.1 and associated policies.
    b. Community Facilities Element
        i. Goal 5 and associated objectives and policies.
    c. Conservation & Open Space Element
        i. Objective 1.2 and associated policies;
        ii. Objective 1.3 and associated policies;
        iii. Objective 1.5 and associated policies;
        iv. Objective 1.7 and associated policies;
        v. Objective 1.10 and associated policies;
        vi. Objective 1.12 and associated policies.
4. The Comprehensive Plan Consistency Analysis considers proposed FLUM Designations. The analysis must be based upon the land use presently in place.
5. Provide an Environmental Assessment/Study considering any potential impacts to natural features and protected flora/fauna.
6. Fee: Payment must be remitted for review to commence.

If you have any questions regarding the information above, please contact me at 386-418-6100 x 1602 or via e-mail at jtabor@cityofalachua.com.

Sincerely,

Justin Tabor, AICP
Principal Planner

c: Kathy Winburn, Planning & Community Development Director *(by electronic mail)*
Adam Hall, AICP, Principal Planner *(by electronic mail)*
Carson Crockett, AICP Candidate, Planner *(by electronic mail)*
Project File

SITE PLANS
FOR:

TOMOKA HILLS GOLF COURSE

ALACHUA COUNTY, FLORIDA

SECTION 9/16/37, TOWNSHIP 8 SOUTH, RANGE 18 EAST

SUBMITTED TO:

ALACHUA COUNTY
CITY OF ALACHUA
SUWANNEE RIVER WATER MANAGEMENT DISTRICT
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

GENERAL NOTES

1. *DEVELOPMENT DATA:*

OVERALL SITE AREA=	*8,582,527 S.F.*	*100.0%*	*197.03 ACRES*
BUILDING FOOTPRINT AREA= (MAINTENANCE FACILITY)	*10,180 S.F.*	*0.1%*	
CONC./PAVE AREA=	*35,352 S.F.*	*0.4%*	
TOTAL IMPERVIOUS AREA=	*45,532 S.F.*	*0.5%*	
OPEN AREA=	*8,536,995 S.F.*	*99.5%*	

PROPOSED DEVELOPMENT

DESCRIPTION: THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A PRIVATE GOLF COURSE, ±10,180 SF MAINTENANCE BUILDING, WITH A PARKING AREA, DRIVEWAY INFRASTRUCTURE, STORMWATER MANAGEMENT FACILITY REVISIONS, AND ASSOCIATED UTILITY INFRASTRUCTURE.

2. *MINIMUM BUILDING / YARD SETBACKS PER AGRICULTURAL ZONING ARE AS FOLLOWS:*
   PRIMARY BUILDING (AG)
   FRONT: 30'
   SIDE: 25' FOR EACH
   REAR: 25'

MINIMUM LOT AREA	*NONE*
MINIMUM LOT WIDTH	*NONE*
MAX BUILDING HEIGHT	*65'*
MAX LOT COVERAGE	*20%*
PROPOSED FAR	*0.04*

3. *PARKING CALCULATIONS:*
   TOTAL REQUIRED PARKING: 265
   **TOTAL PROVIDED PARKING: 209*

   TOTAL REQUIRED BIKE PARKING: 27
   **TOTAL PROVIDED BIKE PARKING: 20*

   BREAKDOWN SUMMARY PER BUILDING:

   BUILDING 1 (EXISTING HQ BUILDING):

   BUISNESS SERVICES
   CAR: 1 SPACE PER 330 SQ. FT. FLOOR AREA
   63,595 SQ. FT. / 330 SQ. FT. = MINIMUM 193 SPACES
   193 X 125% = MAXIMUM 242 SPACES

   ACCESSIBLE SPACES REQUIRED: 6

   BICYCLE: 1 SPACE/10 CAR SPACES = 193/ 10=19.3 SPACES REQUIRED

   PROVIDED SPACES: 193
   PROVIDED ACCESSIBLE SPACES: 6
   PROVIDED BICYCLE SPACES: 20

   BUILDING 2 (PROPOSED PRIVATE GOLF COURSE MAINTENANCE BUILDING):

   PUBLIC GOLF COURSE PARKING
   CAR: 4 SPACES PER HOLE PER COURSE
   4 X 18 HOLES = MINIMUM 72 SPACES
   72 SPACES X 125% = MAXIMUM 90 SPACES

   ACCESSIBLE SPACES REQUIRED: 3

   BICYCLE: 1SPACE/10 CAR SPACES = 72/ 10 = 8 SPACES REQUIRED

   **PROVIDED: 16 SPACES*
   **PROVIDED ACCESSIBLE SPACES: 1*
   **PROVIDED BIKE SPACES: 0*

**PER CITY OF ALACHUA LAND DEVELOPMENT REGULATIONS, SECTION 6.1.11 (C)(a), A SHARED PARKING PLAN MAY BE PERMITTED AS A FORM OF ALTERNATIVE COMPLIANCE WITH THE OFF-STREET PARKING AND LOADING STANDARDS IF IT IS DETERMINED THAT THE SHARED PARKING PLAN PROVIDES ADEQUATE OFF-STREET PARKING FOR THE PROPOSED USES, AND WOULD NOT SIGNIFICANTLY INCREASE ON-STREET PARKING IN THE AREA. THE SHARED PARKING PLAN IS SUBJECT TO REVIEW AND APPROVAL BY THE LDR ADMINISTRATOR.*

REFER TO THE NARRATIVE SUBMITTED UNDER A SEPARATE COVER FOR MORE INFORMATION DESCRIBING THE 'UNIQUE CHARACTERISTICS' QUALIFYING THE PROPOSED DEVELOPMENT FOR A SHARED PARKING PLAN.

4. *DATE OF BOUNDARY SURVEY:*
   A BOUNDARY SURVEY WAS COMPLETED BY CHW AND DATED MAY 10, 2022.

5. *UTILITIES:*
   -POTABLE WATER AND FIRE SERVICE WILL BE PROVIDED BY CITY OF ALACHUA.

   -SANITARY SEWER SERVICE WILL BE PROVIDED BY CITY OF ALACHUA.

   -ELECTRIC SERVICE WILL BE PROVIDED BY CITY OF ALACHUA.

6. *DRAINAGE:*
   AN ON-SITE STORMWATER COLLECTION SYSTEM WILL BE CONSTRUCTED AND CONNECT TO A PROPOSED STORMWATER MANAGEMENT FACILITY. THE FACILITY MEETS CITY OF ALACHUA AND SRWMD DESIGN CRITERIA. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR OPERATION AND MAINTENANCE OF ALL COMPONENTS OF THE STORMWATER SYSTEM.

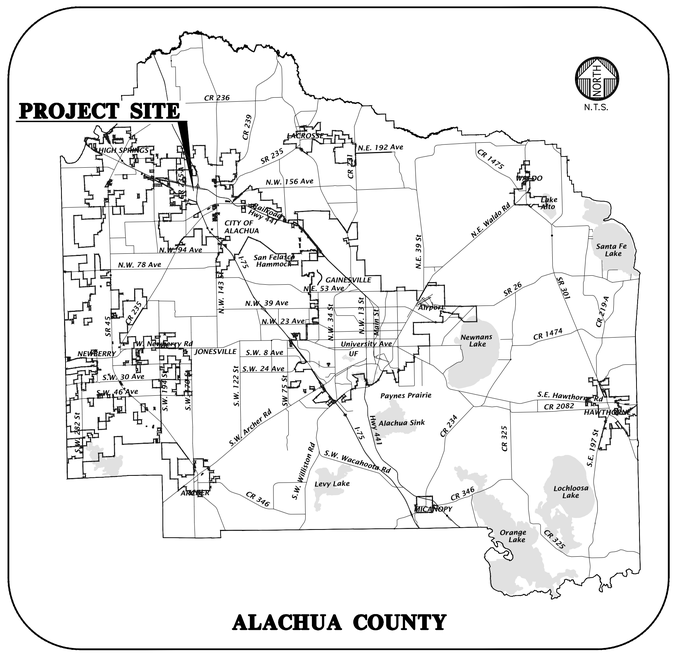
7. *NATURAL FEATURES:*
   TOPOGRAPHY SLOPES FROM SOUTH TO NORTH WITH MODERATE SLOPES. THERE ARE SEVERAL ON-SITE WETLANDS.

8. *ZONING/LAND USE INFORMATION AND COMPLIANCE:*
   ZONING DISTRICT = AGRICULTURAL (A)

   PER ARTICLE 6 OF THE LDRS, THE PROPOSED SITE IS CONSIST WITH ALL APPLICABLE DEVELOPMENT STANDARDS. COMPLIANCE WITH THE REQUIRED PARKING CAN BE FOUND IN NOTE 3 ON THIS SHEET. THE SITE IS CURRENTLY CLEARED AND GRASSED FOR AGRICULTURAL PURPOSES AND THE PROPOSED LANDSCAPING FULFILLS GENERAL, MITIGATION, AND BUFFER REQUIREMENTS. A STORMWATER MANAGEMENT SYSTEM WILL BE BUILT WITH THE PROPOSED PROJECT.

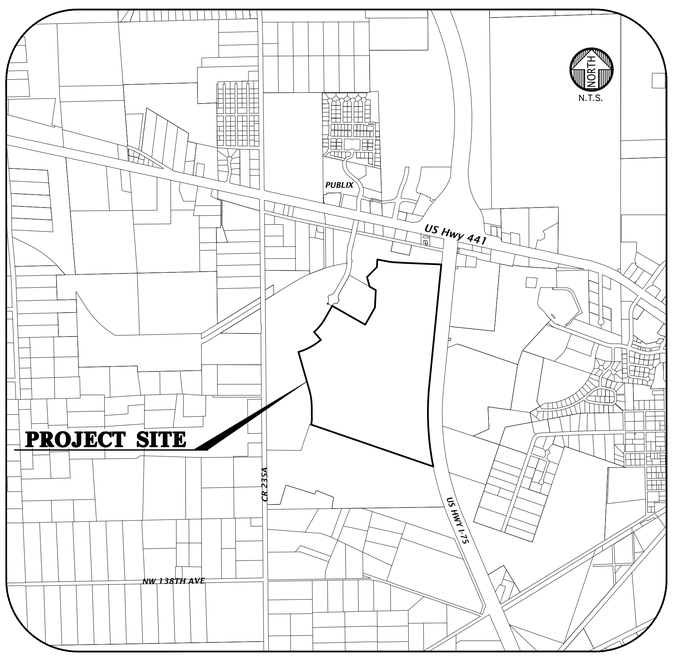
9. *CONCURRENCY IMPACT ANALYSIS:*
   SUBMITTED UNDER SEPARATE COVER

10. *LEGAL DESCRIPTION:*
    REFER TO SURVEY



ALACHUA COUNTY

VICINITY MAP



LOCATION MAP

SHEET INDEX

SHEET NUMBER	
C0.00	COVER SHEET AND INDEX
1-47 OF 47	BOUNDARY AND TOPOGRAPHIC SURVEY
C0.10	GENERAL NOTES
C0.11	LEGEND
C0.20	STORMWATER POLLUTION PREVENTION NOTES
C0.21	STORMWATER POLLUTION PREVENTION PLAN AND DETAILS
C0.22	OVERALL STORMWATER AND WETLAND BUFFER PROTECTION PLAN
C0.23	STORMWATER CROSS SECTIONS
C0.30 - C0.31	DEMOLITION AND TREE PROTECTION PLAN
C0.40	WETLAND IMPACTS MAP
C1.00	MASTER GOLF HEADQUARTERS SITE PLAN
C2.00	MASTER STORMWATER MANAGEMENT PLAN
C2.01	AG POND STORMWATER MANAGEMENT PLAN
C5.00	MASTER GOLF MAINTENANCE FACILITY PLAN
C5.10 - C5.11	DETAILED GOLF MAINTENANCE FACILITY SITE PLAN
C5.20 - C5.21	DETAILED GOLF MAINTENANCE FACILITY GRADING, DRAINAGE AND UTILITY PLAN
C5.30 - C5.31	GOLF MAINTENANCE FACILITY UTILITY PLAN AND PROFILE
C5.40 - C5.43	CONSTRUCTION DETAILS
A2.1	ARCHITECTURAL FLOOR PLAN
A4.2-A4.3	ARCHITECTURAL ELEVATIONS
LS-1	LANDSCAPES NOTES AND DETAILS
LS-2	KEY SHEET
LS-3 - LS-32	LANDSCAPE PLANS
LS-33- LS-35	TREE MITIGATION CALCULATIONS
LS-36	LANDSCAPE BUFFER EXHIBIT
GR-1 - GR-3	GOLF COURSE GRADING

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LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON, L.A.
NV5, INC.
11801 RESEARCH DRIVE
ALACHUA, FL 32615
(352) 331-1976

SURVEYOR OF RECORD
CHAD A. COLSON, P.L.S.
NV5, INC.
11801 RESEARCH DRIVE
ALACHUA, FL 32615
(352) 331-1976

OWNER/DEVELOPER
TOMOKA HILLS FARMS, INC.
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GAINESVILLE, FL 32605

ENGINEER OF RECORD
WALKER FAIN OWEN, P.E.
NV5, INC.
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(352) 331-1976

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Alachua, Florida 32615
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SCALE: N/A
VERIFY SCALE BAR IS CORRECT ON ORIGINAL DRAWING
0 1" IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/15/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE
PROJECT: TOMOKA HILLS GOLF COURSE
SHEET TITLE: COVER SHEET AND INDEX

TECHNICIAN: T.F. COWART
DESIGNED: K. KEEGEL, E.I.
QUALITY CONTROL: W.E. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C0.00

Tech: keefer Plot Date: Mar 12,2025 12:47pm Filename: N:\2021\21-0025\Departments\04_eng\eng\03_dwgs_ppt\Production Files\21-0025.10 C0.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

LEGEND:

- = BENCHMARK
- = SET NAIL AND DISK STAMPED "TRAVERSE LB 5075"
- = FOUND 4"X4" CONCRETE MONUMENT (MARKED AS NOTED)
- = FOUND IRON PIPE (SIZE AS NOTED)
- = FOUND 5/8" IRON ROD (NO ID.)
- = FOUND NAIL AND DISK (MARKED AS NOTED)
- = FOUND STEEL REBAR & CAP (MARKED AS NOTED)(SIZE AS NOTED)
- = SET 1/2" STEEL REBAR AND CAP MARKED "TRAVERSE LB 5075"
- = CLEANOUT
- = CONCRETE POWER POLE
- = GAS VALVE
- = GUY ANCHOR
- = METAL LIGHT POLE
- = TELEPHONE PEDESTAL
- = TRAFFIC SIGNAL BOX
- = GUY POLE
- = WOODEN POWER POLE
- = ELECTRIC METER
- = FIRE HYDRANT
- = FIBER OPTIC BOX
- = FIBER OPTIC LINE MARKER
- = MAILBOX
- = SIGN
- = TREE (SIZE AND TYPE AS NOTED)
- = SPIGOT
- = SANITARY SEWER MANHOLE
- = STORM SEWER MANHOLE
- = UTILITY POLE
- = WOODEN POWER POLE
- = WATER VALVE
- = STORM INLET
- = SIGN WITH TWO POLES
- = BOLLARD
- = MONITORING WELL
- = CROSSWALK INDICATOR
- = HORSE WATERER
- = WATER TANK
- = ELECTRIC BOX
- = AIR CONDITIONER
- = TELEPHONE MANHOLE
- = CABLE TELEVISION BOX

TYP = TYPICAL
ELEV = ELEVATION
ID = IDENTIFICATION
NRE = NORTH RIM ELEVATION
FEMA = FEDERAL EMERGENCY MANAGEMENT AGENCY
NAVD = NORTH AMERICAN VERTICAL DATUM
X 95.5 = SPOT ELEVATION (PERVIOUS SURFACE)
X 95.75 = SPOT ELEVATION (IMPERVIOUS SURFACE)
SCO = SWAMP CHESTNUT OAK
LO = LIVE OAK
LAO = LAUREL OAK
HB = HACKBERRY
PER = PERSIMMON
PI = PINE
PM = PALM
TREE = UNKNOWN SPECIES
MAP = MAPLE
FG = FOXGLOVE
SYC = SYCAMORE
WTO = WHITE OAK
SCO = SWAMP CHESTNUT OAK
MAG = MAGNOLIA
CAM = CAMPHOR
SG = SWEETGUM
CB = CHINABERRY
CL = CHERRY LAUREL
HIC = HICKORY
CED = CEDAR
MIM = MIMOSA
BE = BOX ELDER
PCN = PECAN
RO = RED OAK
WO = WATER OAK
CT = CHINESE TALLOW
INV = INVERT
RCP = REINFORCED CONCRETE PIPE
PVC = POLYVINYL CHLORIDE
CMP = CORRUGATED METAL PIPE
(M) = DATA BASED ON FIELD MEASUREMENTS
(C) = CALCULATED DATA
P.U.E. = PUBLIC UTILITIES EASEMENT
P.O.B. = POINT OF BEGINNING
P.O.C. = POINT OF COMMENCEMENT
O.R.B. = OFFICIAL RECORDS BOOK
R/W = RIGHT OF WAY
CONC. = CONCRETE
TP = TAX PARCEL
N = NORTH
E = EAST
S = SOUTH
W = WEST
NE = NORTHEAST
SE = SOUTHEAST
SW = SOUTH WEST
NW = NORTHWEST
NO. = NUMBER
(M) = DATA BASED ON FIELD MEASUREMENTS
(C) = DATA BASED ON CALCULATIONS
(P) = DATA BASED ON PLAT BOOK "I", PAGE 53
(D1) = DATA BASED ON PARCEL 1 DESCRIPTION (O.R.B. 3299, PAGE 210)
(D2) = DATA BASED ON PARCEL 2 DESCRIPTION (O.R.B. 2213, PAGE 1501)
(D3) = DATA BASED ON PARCEL 3 DESCRIPTION (O.R.B. 2219, PAGE 1139)
(D4) = DATA BASED ON PARCEL 4 DESCRIPTION (O.R.B. 4921, PAGE 21)
(D5) = DATA BASED ON PARCEL 5 DESCRIPTION (O.R.B. 2645, PAGE 97)
(D7) = DATA BASED ON PARCEL 7 DESCRIPTION (O.R.B. 2971, PAGE 987)
(D8) = DATA BASED ON PARCEL 8 DESCRIPTION (O.R.B. 4540, PAGE 598)

- = OVERALL BOUNDARY LINE
- = INTERNAL BOUNDARY AND ADJOINER BOUNDARY LINES
- = MATCHLINE
- = EASEMENT LINE
- = R/W LINE
- = WETLAND DELINEATION LINE TO BOUNDARY TIE LINE
- = WETLAND DELINEATION LINE
- OHW = OVERHEAD WIRE
- X = FENCE (SIZE AND TYPE AS NOTED)
- SS = SANITARY SEWER LINE
- W = UNDERGROUND WATER LINE
- ST = STORM SEWER LINE
- (W) = WATER LINE (PER MAPS)
- (G) = GAS LINE (PER MAPS)
- (FM) = SANITARY SEWER FORCE MAIN LINE (PER MAPS)
- (FO) = FIBER OPTIC LINE (PER MAPS)
- 95 = CONTOUR LINE
- = ROADWAY PAVEMENT MARKINGS
- = ASPHALT SURFACE
- = CONCRETE SURFACE
- = DIRT SURFACE

DESCRIPTIONS:

PARCEL 1 (PER O.R.B. 3299, PAGE 210)

A TRACT OF LAND SITUATED IN FRACTIONAL SECTION 16 AND THE WILLIAM GARVIN GRANT, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, SAID TRACT OF LANE BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A CONCRETE MONUMENT AT THE NORTHEAST CORNER OF THE AFOREMENTIONED FRACTIONAL SECTION 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST FOR A POINT OF REFERENCE AND RUN SOUTH 00 DEGS., 27 MINS., 55 SECS. WEST, A DISTANCE OF 3.76 FEET TO THE SOUTH RIGHT OF WAY LINE OF THE SEABOARD COASTLINE RAILROAD (200 FOOT RIGHT OF WAY ABANDONED); THENCE RUN NORTH 88 DEGS., 37 MINS., 15 SECS. WEST, ALONG SAID RIGHT OF WAY LINE , A DISTANCE OF 1090.69 FEET TO THE WEST RIGHT OF WAY LINE OF INTERSTATE NO. 75 (300 FOOT RIGHT OF WAY); THENCE RUN SOUTH 04 DEGS., 11 MINS., 43 SECS. WEST, ALONG SAID RIGHT OF WAY LINE OF INTERSTATE HIGHWAY NO. 75, A DISTANCE OF 1290.36 FEET TO A CONCRETE MONUMENT AT THE INTERSECTION OF THE SOUTH LINE OF THAT CERTAIN PARCEL OF LAND DESCRIBED IN OFFICIAL RECORDS BOOK 1195, AT PAGE 66 OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA WITH SAID WEST RIGHT OF WAY LINE, OF INTERSTATE HIGHWAY NO.75 AND THE TRUE POINT OF BEGINNING; THENCE CONTINUE SOUTH 04 DEGS., 11 MINS., 43 SECS. WEST, ALONG SAID RIGHT OF WAY LINE, A DISTANCE OF 1257.04 FEET TO A CONCRETE MONUMENT AT THE POINT OF CURVATURE OF A 00 DEGS., 58 MINS., 28 SEC. CURVE, HAVING A RADIUS OF 5879.58 FEET, A TOTAL INTERNAL ANGLE OF 28 DEGS., 38 MINS., 28 SECS. AND BEING CONCAVE TO AN EASTERLY DIRECTION; THENCE RUN SOUTHEASTERLY, ALONG THE ARC OF THE SAID RIGHT OF WAY CURVE, AN ARC DISTANCE OF 1734.82 FEET TO A CONCRETE MONUMENT, SAID CONCRETE MONUMENT BEING THE SOUTHEAST CORNER OF THE CERTAIN PARCEL OF LAND DESCRIBED IN OFFICIAL RECORDS BOOK 742, AT PAGE 153 OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA; THENCE RUN NORTH 72 DEGS., 29 MINS., 54 SECS. WEST, ALONG THE SOUTH LINE OF SAID PARCEL OF LAND RECORDED IN OFFICIAL RECORDS BOOK 742, AT PAGE 153, A DISTANCE OF 2775.69 FEET TO A CONCRETE MONUMENT; THENCE RUN SOUTH 17 DEGS., 05 MINS., 50 SECS. WEST, ALONG SAID SOUTH LINE, A DISTANCE OF 592.04 FEET TO A CONCRETE MONUMENT; THENCE RUN SOUTH 89 DEGS., 04 MINS., 44 SECS. WEST, ALONG SAID SOUTH LINE, A DISTANCE OF 725.63 FEET TO THE EAST RIGHT OF WAY LINE OF STATE ROAD NO. S-235-A (100 FOOT RIGHT OF WAY); THENCE RUN NORTH 01 DEGS., 59 MINS., 55 SECS. WEST, ALONG SAID RIGHT OF WAY LINE, A DISTANCE OF 2164.71 FEET TO A CONCRETE MONUMENT AT THE SOUTHWEST CORNER OF SAID PARCEL OF LAND DESCRIBED IN OFFICIAL RECORDS BOOK 1195, AT PAGE 66; THENCE RUIN NORTH 88 DEGS., 29 MINS., 13 SECS. EAST, ALONG THE SOUTH LINE OF SAID PARCEL OF LAND, A DISTANCE OF 2807.17 FEET TO A CONCRETE MONUMENT; THENCE RUN NORTH 58 DEGS., 14 MINS., 10 SECS. EAST, ALONG SAID SOUTH LINE, A DISTANCE OF 917.09 FEET TO THE TRUE POINT OF BEGINNING.

PARCEL 2 (PER O.R.B. 2213, PAGE 1501)

A TRACT OF LAND SITUATED IN FRACTIONAL SECTIONS 9 & 16 AND SECTION 37 (WILLIAM GARVIN GRANT), TOWNSHIP 8 SOUTH , RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A CONCRETE MONUMENT AT THE SOUTHEAST CORNER OF THE AFOREMENTIONED FRACTIONAL SECTION 9, TOWNSHIP 8 SOUTH, RANGE 18 EAST FOR A POINT OF REFERENCE AND RUN S. 01°54'57" W., A DISTANCE OF 3.76 FEET TO A CONCRETE MONUMENT ON THE SOUTHERLY RIGHT OF WAY LINE OF THE ABANDONED SEABOARD COASTLINE RAILROAD (200 FOOT RIGHT OF WAY); THENCE RUN N. 87°08'33" W., ALONG SAID SOUTHERLY RIGHT OF WAY LINE, A DISTANCE OF 1090.74 FEET TO A CONCRETE MONUMENT ON THE WESTERLY RIGHT OF WAY LINE OF STATE ROAD NO. 93, ALSO KNOWN AS INTERSTATE HIGHWAY NO. 75 (300 FOOT RIGHT OF WAY); THENCE RUN N. 05°41'41" E., ALONG SAID WESTERLY RIGHT OF WAY LINE; A DISTANCE OF 100.12 FEET TO AN IRON PIPE ON THE CENTERLINE OF SAID RAILROAD RIGHT OF WAY AND THE TRUE POINT OF BEGINNING; THENCE RUN N. 87°08'33"W., ALONG SAID CENTERLINE, A DISTANCE OF 1480.63 FEET TO AN IRON PIPE AT THE POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY, SAID CURVE HAVING A RADIUS OF 2864.79 FEET, A CENTRAL ANGLE OF 34°35'30", AND A CHORD BEARING AND DISTANCE OF S. 75°33'43"W., 1703.44 FEET RESPECTIVELY; THENCE RUN SOUTHWESTERLY, WITH SAID CURVE AND ALONG SAID CENTERLINE, AN ARC DISTANCE OF 1729.58 FEET TO AN IRON PIPE AT THE POINT OF TANGENCY OF SAID CURVE; THENCE RUN S. 58°15'57" W., ALONG SAID CENTERLINE, A DISTANCE OF 716.12 FEET TO A CONCRETE MONUMENT ON THE EASTERLY RIGHT OF WAY LINE OF COUNTY ROAD NO. 235A (100 FOOT RIGHT OF WAY); THENCE RUN S. 00°30'42" E., ALONG SAID RIGHT OF WAY LINE, A DISTANCE OF 1030.00 FEET TO A CONCRETE MONUMENT; THENCE RUN N. 89°58'49" E. A DISTANCE OF 2807.17 FEET TO A CONCRETE MONUMENT; THENCE RUN N. 59°41'41" E., A DISTANCE OF 917.50 FEET TO A CONCRETE MONUMENT ON SAID WESTERLY RIGHT OF WAY LINE OF STATE ROAD NO. 93; THENCE RUN N. 05°41'41" E., ALONG SAID RIGHT OF WAY LINE, A DISTANCE OF 1300.00 FEET TO THE TRUE POINT OF BEGINNING.

PARCEL 3 (PER O.R.B. 2219, PAGE 1139)

A TRACT OF LAND SITUATED IN SECTION 9, TOWNSHIP 8 SOUTH, RANGE 18 EAST AND FRACTIONAL SECTION 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTH-WEST CORNER OF THE AFOREMENTIONED SECTION 9, TOWNSHIP 8 SOUTH, RANGE 18 EAST FOR THE POINT OF REFERENCE AND RUN N.86°54'12"E., ALONG THE SOUTH LINE OF SAID SECTION 9, A DISTANCE OF 50.00 FEET TO THE EAST RIGHT OF WAY LINE OF COUNTY ROAD NO. 235-A (100 FOOT RIGHT OF WAY) AND THE TRUE POINT OF BEGINNING; THENCE RUN N.03°06'59"W., ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 500.44 FEET; THENCE RUN N.86°53'01"E., A DISTANCE OF 647.68 FEET; THENCE RUN S.03°06'59"E., A DISTANCE OF 500.66 FEET TO THE AFOREMENTIONED SOUTH LINE OF SECTION 9; THENCE RUN N.86°54'12"E., ALONG SAID SOUTH LINE, A DISTANCE OF 299.30 FEET TO THE EAST LINE OF THAT CERTAIN PARCEL OF LAND AS DESCRIBED IN OFFICIAL RECORD BOOK 175, PAGE 1000 OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA, SAID PARCEL OF LAND BEING HEREINAFTER REFERRED TO AS THE "ORIGINAL PARCEL"; THENCE RUN S.03°19'15"E., ALONG THE EAST LINE OF SAID "ORIGINAL PARCEL", A DISTANCE OF 84.71 FEET TO THE CENTERLINE OF THE ABANDONED SEABOARD COASTLINE RAILROAD (200 FOOT RIGHT OF WAY); THENCE RUN SOUTHWESTERLY, ALONG SAID CENTERLINE AND WITH A CURVE CONCAVE SOUTHERLY, SAID CURVE HAVING A RADIUS OF 2864.79 FEET, THROUGH AN ARC ANGLE OF 07°33'14", AN ARC DISTANCE OF 377.68 FEET (CHORD BEARING AND DISTANCE OF S.59°28'16"W., 377.42 FEET RESPECTIVELY) TO THE END OF SAID CURVE; THENCE RUN S.55°41'39"W., ALONG SAID CENTERLINE, A DISTANCE OF 506.12 FEET TO A BOUNDARY CORNER OF SAID "ORIGINAL PARCEL"; THENCE RUN N.03°05'00"W., ALONG A BOUNDARY LINE OF SAID "ORIGINAL PARCEL", A DISTANCE OF 210.00 FEET; THENCE RUN S.55°41'39"W., ALONG A BOUNDARY LINE OF SAID "ORIGINAL PARCEL", A DISTANCE OF 210.00 FEET TO THE INTERSECTION OF SAID BOUNDARY LINE WITH THE AFOREMENTIONED EAST RIGHT OF WAY LINE OF COUNTY ROAD NO. 235-A; THENCE RUN N.03°05'00"W., ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 419.65 FEET TO THE TRUE POINT OF BEGINNING, CONTAINING 14.105 ACRES MORE OR LESS.

LESS AND EXCEPT; A TRACT OF LAND SITUATED IN SECTION 9, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THE SOUTH 1/2 OF THE FOLLOWING DESCRIBED PROPERTY:

COMMENCE AT THE SW CORNER OF THE AFOREMENTIONED SECTION 9, TOWNSHIP 8 SOUTH, RANGE 18 EAST FOR THE POINT OF REFERENCE AND RUN N.86°54'12"E., ALONG THE SOUTH LINE OF SAID SECTION 9, A DISTANCE OF 50.00 FEET TO THE EAST RIGHT OF WAY LINE OF COUNTY ROAD NO. 235-A (100 FOOT RIGHT OF WAY) AND THE TRUE POINT OF BEGINNING; THENCE RUN N.03°06'59"W., ALONG SAID EAST RIGHT OF WAY LINE A DISTANCE OF 500.44 FEET; THENCE RUN N.86°53'01"E. A DISTANCE OF 647.68 FEET; THENCE RUN S.03°06'59"E. A DISTANCE OF 500.66 FEET TO THE AFOREMENTIONED SOUTH LINE OF SECTION 9; THENCE RUN S.86°54'12"W. ALONG THE SOUTH LINE OF SAID SECTION 9 TO THE POINT OF BEGINNING.

PARCEL 4 (PER O.R.B. 2229, PAGE 1239)

LOTS TWO (2) AND THREE (3), ALACHUA OAKS SUBDIVISION, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK "I", PAGE 53, OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA.

PARCEL 5 (PER O.R.B. 2645, PAGE 97)

A TRACT OF LAND SITUATED IN SECTION 9, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF THE AFOREMENTIONED SECTION 9, TOWNSHIP 8 SOUTH, RANGE 18 EAST, FOR THE POINT OF REFERENCE AND RUN NORTH 86°54'12" EAST, ALONG THE SOUTH LINE OF SAID SECTION 9, A DISTANCE OF 50.00 FEET TO THE EAST RIGHT OF WAY LINE OF COUNTY ROAD NO. 235-A (100 FOOT RIGHT OF WAY); THENCE RUN NORTH 03°06'59" WEST, ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 967.41 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUE NORTH 03°06'59" WEST, ALONG SAID RIGHT OF WAY LINE, A DISTANCE OF 235.36 FEET TO THE INTERSECTION OF SAID EAST RIGHT OF WAY LINE WITH THE SOUTH RIGHT OF WAY LINE OF OLD STATE HIGHWAY NO. 2 (66 FOOT RIGHT OF WAY); THENCE RUN SOUTH 78°37'24" EAST, ALONG SAID SOUTH RIGHT OF WAY LINE, A DISTANCE OF 321.65 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHERLY, SAID CURVE HAVING A RADIUS OF 10209.13 FEET; THENCE RUN SOUTHEASTERLY, ALONG SAID SOUTH RIGHT OF WAY LINE AND WITH SAID CURVE, THROUGH AN ARC ANGLE OF 01°56'28", AN ARC DISTANCE OF 345.87 FEET (CHORD BEARING AND DISTANCE OF SOUTH 79°35'38" EAST, 345.86 FEET RESPECTIVELY); THENCE RUN SOUTH 03°06'59" EAST, A DISTANCE OF 540.96 FEET; THENCE RUN SOUTH 86°53'01" WEST, A DISTANCE OF 254.68 FEET; THENCE RUN NORTH 03°06'59" WEST, A DISTANCE OF 466.97 FEET; THENCE RUN SOUTH 86°53'01" WEST, A DISTANCE OF 393.00 FEET TO THE TRUE POINT OF BEGINNING.

LESS THE WESTERLY 210 FEET THEREOF.

PARCEL 6 (PER O.R.B. 3090, PAGE 1391)

LOT 1, ALACHUA OAKS SUBDIVISION, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK "I", PAGE 53, OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA.

PARCEL 7 (PER O.R.B. 2971, PAGE 987)

A TRACT OF LAND SITUATED IN SECTION 9, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHWEST CORNER OF THE AFOREMENTIONED SECTION 9 FOR A POINT OF REFERENCE AND RUN NORTH ALONG THE WEST LINE OF SAID SECTION 9, A DISTANCE OF 500.44 FEET; THENCE RUN EAST PERPENDICULAR TO THE SAID WEST LINE OF SECTION 9, A DISTANCE OF 50.00 FEET TO THE EASTERLY RIGHT OF WAY LINE OF STATE ROAD NO. 235-A (100' R/W) AND THE POINT OF BEGINNING; THENCE CONTINUE EAST PERPENDICULAR TO THE SAID WEST LINE OF SECTION 9 A DISTANCE OF 393.00 FEET; THENCE RUN NORTH PARALLEL TO THE SAID WEST LINE OF SECTION 9, A DISTANCE OF 221.68 FEET; THENCE RUN WEST, PERPENDICULAR TO THE SAID WEST LINE OF SECTION 9 A DISTANCE OF 393.00 FEET TO THE SAID EASTERLY RIGHT OF WAY OF STATE ROAD NO. 235-A; THENCE SOUTH PARALLEL TO THE SAID WEST LINE OF SECTION 9, AND ALONG THE SAID EASTERLY RIGHT OF WAY LINE OF STATE ROAD NO. 235-A, A DISTANCE OF 221.68 FEET TO THE POINT OF BEGINNING.

PARCEL 8 (PER O.R.B. 4540, PAGE 598)

EAST PARCEL: A PARCEL OF LAND SITUATED IN FRACTIONAL SECTION 9 AND THE WILLIAM GARVIN GRANT, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT A CONCRETE MONUMENT AT THE SOUTHEAST CORNER OF SAID FRACTIONAL SECTION 9, TOWNSHIP 8 SOUTH, RANGE 18 EAST, FOR A POINT OF REFERENCE AND RUN SOUTH 01 DEG. 54'57" WEST, A DISTANCE OF 3.76 FEET TO A CONCRETE MONUMENT ON THE SOUTHERLY RIGHT OF WAY LINE OF THE ABANDONED SEABOARD COASTLINE RAILROAD (200 FOOT RIGHT OF WAY); THENCE RUN NORTH 87 DEG. 08'33" WEST, ALONG SAID SOUTHERLY RIGHT OF WAY LINE A DISTANCE OF 1090.74 FEET TO A CONCRETE MONUMENT AT THE INTERSECTION OF SAID SOUTHERLY RIGHT OF WAY LINE WITH THE WESTERLY RIGHT OF WAY LINE OF STATE ROAD NO. 93, ALSO KNOWN AS INTERSTATE HIGHWAY NO. 75 (300 FOOT RIGHT OF WAY); THENCE RUN NORTH 05 DEG. 41'41" EAST ALONG SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 100.12 FEET TO A 5/8" STEEL ROD AND CAP STAMPED CHW INC. (LB 5075) AT THE CENTERLINE OF AFOREMENTIONED ABANDONED SEABOARD COASTLINE RAILROAD AND THE POINT OF BEGINNING; THENCE RUN NORTH 87 DEG. 10'32" WEST, ALONG SAID CENTERLINE OF ABANDONED RAILROAD, A DISTANCE OF 1480.76 FEET TO A 1/2" STEEL ROD AND CAP STAMPED ACLS (LB2903) AT THE POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY AND HAVING A RADIUS OF 2864.79 FEET; THENCE RUN 416.82 FEET ALONG THE ARC OF SAID CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 8 DEG. 20'11" AND SUBTENDED BY A CHORD BEARING AND DISTANCE OF SOUTH 88 DEG. 41'02" WEST, 416.45 FEET TO IT'S INTERSECTION WITH THE EAST LINE OF A PROPOSED 100 FOOT WIDE ROADWAY SAID INTERSECTION BEING ON THE ARC OF A CURVE CONCAVE EASTERLY AND HAVING A RADIUS OF 900.00 FEET; THENCE RUN ALONG SAID EAST LINE, 364.58 FEET ALONG THE ARC OF SAID NON-TANGENT CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE 23 DEG. 12'35" AND SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 04 DEG. 14'21" EAST, 362.09 FEET TO A NON-TANGENT POINT OF REVERSE CURVATURE ON THE ARC OF A CURVE CONCAVE WESTERLY AND HAVING A RADIUS OF 3309.14 FEET; THENCE CONTINUE ALONG SAID EAST LINE, 211.79 FEET ALONG THE ARC OF SAID CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 03 DEG. 40'01" AND SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 13 DEG. 59'35" EAST, 211.76 FEET TO A POINT OF TANGENCY; THENCE CONTINUE ALONG SAID EAST LINE, NORTH 12 DEG. 09'34" EAST, A DISTANCE OF 49.63 FEET TO IT'S INTERSECTION WITH THE SOUTH RIGHT OF WAY LINE OF NW 162ND LANE, (A 60 FOOT WIDE RIGHT OF WAY); THENCE RUN SOUTH 78 DEG. 09'10" EAST, ALONG SAID SOUTH RIGHT OF WAY LINE, A DISTANCE OF 798.74 FEET TO A 4" SQUARE CONCRETE MONUMENT (NO IDENTIFICATION), MARKING THE NORTHWEST CORNER OF LANDS AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 4281 AT PAGE 128 OF THE PUBLIC RECORDS OF ALACHUA COUNTY FLORIDA; THENCE RUN ALONG THE BOUNDS OF SAID LANDS THE FOLLOWING THREE (3) COURSES; 1) SOUTH 12 DEG. 00'06" WEST, A DISTANCE OF 217.73 FEET TO A 4" SQUARE CONCRETE MONUMENT AND DISK STAMPED (PLS 2228); 2) SOUTH 78 DEG. 08'35" EAST, A DISTANCE OF 399.95 FEET TO A 4" SQUARE CONCRETE MONUMENT AND DISK STAMPED (PLS2228); 3) NORTH 12 DEG. 02'06" EAST, A DISTANCE OF 217.80 TO A 5/8" STEEL ROD AND CAP STAMPED CHW INC (LB 5075) SAID POINT BEING THE NORTHEAST CORNER OF SAID LANDS AND A POINT ON THE AFOREMENTIONED SOUTH RIGHT OF WAY LINE OF NW 162ND LANE; THENCE RUN SOUTH 78 DEG. 09'10" EAST, ALONG SAID SOUTH RIGHT OF WAY LINE, A DISTANCE OF 677.36 FEET TO ITS INTERSECTION WITH THE AFOREMENTIONED WESTERLY RIGHT OF WAY LINE OF STATE ROAD NO. 93; THENCE RUN SOUTH 05 DEG. 41'04" WEST, ALONG SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 294.78 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH EAST ROADWAY PARCEL:.

A PARCEL OF LAND SITUATED IN FRACTIONAL SECTION 9, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A CONCRETE MONUMENT AT THE SOUTHEAST CORNER OF SAID FRACTIONAL SECTION 9, TOWNSHIP 8 SOUTH, RANGE 18 EAST, FOR A POINT OF REFERENCE AND RUN SOUTH 01 DEG. 54'57" WEST, A DISTANCE OF 3.76 FEET TO A CONCRETE MONUMENT ON THE SOUTHERLY RIGHT OF WAY LINE OF THE ABANDONED SEABOARD COASTLINE RAILROAD (200 FOOT RIGHT OF WAY); THENCE RUN NORTH 87 DEG. 08'33" WEST, ALONG SAID SOUTHERLY RIGHT OF WAY LINE A DISTANCE OF 1090.74 FEET TO A CONCRETE MONUMENT AT THE INTERSECTION OF SAID SOUTHERLY RIGHT OF WAY LINE WITH THE WESTERLY RIGHT OF WAY LINE OF STATE ROAD NO. 93, ALSO KNOWN AS INTERSTATE HIGHWAY NO. 75 (300 FOOT RIGHT OF WAY); THENCE RUN NORTH 05 DEG. 41'41" EAST ALONG SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 100.12 FEET TO A 5/8" STEEL ROD AND CAP STAMPED CHW INC (LB5075) AT THE CENTERLINE OF AFOREMENTIONED ABANDONED SEABOARD COASTLINE RAILROAD; THENCE RUN NORTH 87 DEG. 10'32" WEST, ALONG SAID CENTERLINE OF ABANDONED RAILROAD, A DISTANCE OF 1480.76 FEET TO A 1/2" STEEL ROD AND CAP STAMPED ACLS(LB2903) AT THE POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY AND HAVING A RADIUS OF 2864.79 FEET; THENCE RUN 416.82 FEET ALONG THE ARC OF SAID CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 8 DEG. 20'11" AND SUBTENDED BY A CHORD BEARING AND DISTANCE OF SOUTH 88 DEG. 41'02" WEST, 416.45 FEET TO IT'S INTERSECTION WITH THE EAST LINE OF A PROPOSED 100 FOOT WIDE ROADWAY AND THE POINT OF BEGINNING, SAID INTERSECTION BEING ON THE ARC OF A CURVE CONCAVE EASTERLY AND HAVING A RADIUS OF 900.00 FEET; THENCE RUN ALONG SAID EAST LINE, 364.58 FEET ALONG THE ARC OF SAID NON-TANGENT CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE 23 DEG. 12'35" AND SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 04 DEG. 14'21" EAST, 362.09 FEET TO A NON-TANGENT POINT OF REVERSE CURVATURE ON THE ARC OF A CURVE CONCAVE WESTERLY AND HAVING A RADIUS OF 3309.14 FEET; THENCE CONTINUE ALONG SAID EAST LINE, 211.79 FEET ALONG THE ARC OF SAID CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 03 DEG. 40'01" AND SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 13 DEG. 59'35" EAST, 211.76 FEET TO A POINT OF TANGENCY; THENCE CONTINUE ALONG SAID EAST LINE, NORTH 12 DEG. 09'34" EAST, A DISTANCE OF 49.63 FEET TO IT'S INTERSECTION WITH THE SOUTH RIGHT OF WAY LINE OF NW 162ND LANE, TO 60 FOOT WIDE RIGHT OF WAY); THENCE RUN NORTH 78 DEG. 09'10" WEST, ALONG SAID SOUTH RIGHT OF WAY, A DISTANCE OF 50.00 FEET TO IT'S INTERSECTION WITH THE CENTERLINE OF SAID PROPOSED 100 FOOT WIDE ROADWAY; THENCE RUN SOUTH 12 DEG. 09'34" WEST, ALONG SAID CENTERLINE, A DISTANCE OF 49.36 FEET TO A POINT OF CURVATURE OF A CURVE CONCAVE TO WESTERLY, HAVING A RADIUS OF 3259.14 FEET; THENCE RUN ALONG SAID CENTERLINE, 209.02 FEET ALONG THE ARC OF SAID CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 03 DEG. 40'29" AND SUBTENDED BY A CHORD BEARING AND DISTANCE OF SOUTH 13 DEG. 59'49" WEST, 208.99 FEET TO A NON-TANGENT POINT OF REVERSE CURVATURE ON THE ARC OF A CURVE CONCAVE EASTERLY, HAVING A RADIUS OF 950.00 FEET; THENCE CONTINUE ALONG SAID CENTERLINE, 383.18 FEET ALONG THE ARC OF SAID CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 23 DEG. 06'36" AND SUBTENDED BY A CHORD BEARING AND DISTANCE OF SOUTH 04 DEG. 15'43" WEST, 380.59 FEET TO IT'S POINT OF INTERSECTION WITH THE AFOREMENTIONED CENTERLINE OF THE ABANDONED SEABOARD COASTLINE RAILROAD, SAID INTERSECTION BEING ON THE ARC OF A CURVE CONCAVE SOUTHERLY AND HAVING A RADIUS OF 2864.79 FEET; THENCE RUN ALONG SAID CENTERLINE OF ABANDONED RAILROAD, 50.01 FEET ALONG THE ARC OF SAID CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 01 DEG. 00'01" AND SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 84 DEG. 00'56" EAST, 50.01 FEET TO THE POINT OF BEGINNING.

SURVEYOR'S NOTES:

1. BEARINGS SHOWN HEREON ARE BASED ON STATE PLANE FLORIDA NORTH ZONE 83/86 DATUM PROJECTED FROM ALACHUA COUNTY DENSIFICATION SURVEY 1988 - RECOVERED TRAVERSE CONTROL POINTS #4602 & 4603.
2. ELEVATIONS SHOWN HEREON ARE NORTH AMERICAN DATUM OF 1988 (NAD88) PROJECTED FROM RECOVERED BENCHMARK C 51- 6"X6" CONCRETE MONUMENT AND BRASS CAP STAMPED C 51 1934 HAVING A PUBLISHED ELEVATION OF 75.14 FEET.
3. THE SURVEYOR HAS NO KNOWLEDGE OF UNDERGROUND FOUNDATIONS WHICH MAY ENCROACH.
4. THIS SURVEY WAS PRODUCED WITHOUT THE BENEFIT OF FURNISHED TITLE WORK. INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHTS-OF-WAY, AND OR OWNERSHIP WERE NOT FURNISHED TO THE SURVEYOR EXCEPT AS SHOWN. SEARCH OF THE PUBLIC RECORDS HAS NOT BEEN DONE BY THE SURVEYOR.
5. INFORMATION FROM FEDERAL EMERGENCY MANAGEMENT AGENCY, (F.E.M.A.) FLOOD INSURANCE RATE MAP(S), SHOWN ON THIS MAP WAS CURRENT AS OF THE REFERENCED DATE. MAP REVISIONS AND AMENDMENTS ARE PERIODICALLY MADE BY LETTER AND MAY NOT BE REFLECTED ON THE MOST CURRENT MAP.
6. FENCES, SYMBOLS, MONUMENTATION AND UTILITIES SHOWN HEREON MAY BE EXAGGERATED FOR PICTORIAL PURPOSES ONLY AND MAY NOT BE SHOWN TO SCALE.
7. IN THE OPINION OF THIS SURVEYOR, THE PERIMETER LINES AS SHOWN HEREON REPRESENT THE LOCATION OF THE BOUNDARY LINES OF THE SUBJECT PARCEL IN RELATION TO THE DESCRIPTION OF RECORD AND THOSE E

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

GRAPHIC SCALE
0 125 250 500

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L586(M)	S 76°02'39" E	104.62'
L589(M)	S 12°02'31" W	217.85'
L589(D8)	S 12°02'06" W	217.73'
L590(M)	S 78°08'19" E	400.00'
L590(D8)	S 78°08'35" E	399.95'
L591(M)	N 12°02'06" E	217.83'
L591(D8)	N 12°02'06" E	217.80'
L594(M)	S 12°09'36" W	49.36'
L594(D8)	S 12°09'34" W	49.36'
L730(M)	N 78°08'10" W	399.97'
L731(M)	S 0°34'01" E	180.68'
L732(M)	S 89°22'44" W	210.00'
L733(M)	S 0°35'52" E	250.14'
L734(M)	S 0°32'14" E	419.86'
L735(M)	N 58°03'05" E	209.99'
L736(M)	S 0°36'09" E	210.09'
L737(M)	S 58°15'37" W	210.05'
L757(M)	S 78°11'12" E	277.98'

CURVE DATA TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C1(M)	1735.53'	5879.58'	16°54'45"	874.12'	1729.23'	S 2°48'16" E
C1(D1)	1734.82'	5879.58'	28°28'28"	-------	-------	-------
C9(M)	370.81'	10209.13'	2°04'52"	185.43'	370.79'	S 77°08'50" E
C16(M)	209.03'	3259.14'	3°40'29"	104.55'	208.99'	S 13°59'54" W
C16(D8)	209.03'	3259.14'	3°40'29"	104.55'	208.99'	S 13°59'49" W
C17(M)	382.71'	950.00'	23°04'54"	193.99'	380.13'	S 4°16'34" W
C17(D8)	383.18'	950.00'	23°06'37"	194.23'	380.59'	S 4°15'43" W
C25(M)	885.24'	2864.79'	17°42'17"	446.18'	881.73'	S 74°37'31" W

COUNTY ROAD NO. 235-A
FORMALLY STATE ROAD NO. 235-A
(100' R/W)

S 0°32'00" E 3194.89' (M)

(MCGRIFF RLS 509)

S 89°04'44" W 725.63' (D1)
N 89°27'59" W 725.92' (M)

(NO ID)

S 18°40'42" W 592.11' (M)
S 17°05'50" W 592.04' (D1)

PARCEL ID: 03872-000-000
CURRENT OWNER: SHIRES CYNTHIA H

N 72°39'54" W 2776.69' (D1)
N 71°08'52" W 2774.72' (M)

(MCGRIFF RLS 509)

C1

INTERSTATE HIGHWAY NO. 75
STATE ROAD NO. 93
(300' R/W)

N 5°41'18" E 2852.52' (M)

SHEET 3

PARCEL 1
SEE SHEET 3
PARCEL ID: 03873-000-000

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 120.85' (NAVD 88)

SHEET 4

PARCEL 2
SEE SHEET 4
PARCEL ID: 03873-001-000

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 128.80' (NAVD 88)

PARCEL ID: 03871-001-000
CURRENT OWNER:
THOMAS & THOMAS & THOMAS HEIRS

(PRM 1772)

A BOUNDARY CORNER OF THE LANDS DESCRIBED IN O.R.B. 175, PAGE 1000 FOUND 5/8" STEEL ROD & CAP STAMPED "ACLS LB 2903"

L737

L735

L734

(ACLS LB 2903)

L736

PORTION OF PARCEL 3
SEE SHEET 3
PARCEL ID: 03873-000-000

FOUND 6"X6" CONCRETE MONUMENT, WITH BROKEN TOP AND NO IDENTIFICATION

S 0°34'39" E 717.18' (M)

(ACLS LB 2903)

S 89°23'41" W 648.03' (M)

LESS AND EXCEPT PARCEL 3
CURRENT OWNER:
FLORIDA POWER CORP

S 89°25'00" W 647.88' (M)

PORTION OF PARCEL 3
SEE SHEET 5
PARCEL ID: 03055-001-001

PARCEL 7
SEE SHEET 5
PARCEL ID: 03055-001-000

PARCEL 6
SEE SHEET 5
PARCEL ID: 03055-010-001

L732

L731

LESS PARCEL 5
PARCEL ID: 03055-000-000
CURRENT OWNER:
SINGH LAKHVIR

FOUND 4"X4" CONCRETE MONUMENT WITH NO IDENTIFICATION 39°35'58" E 23.11' FROM BOUNDARY CORNER

R/W POINT OF CURVATURE

L589

C9

(5/8")

(5/8")

L733

SHEET 5

PARCEL 5
SEE SHEET 5
PARCEL ID: 03055-001-003

(1/2"CD)

PARCEL 4
SEE SHEET 5
PARCEL ID: 03055-010-003

L757

(ACLS LB 2903)

(3456)

N 0°46'05" W 1061.45' (M)

PARCEL ID: 03056-001-000
CURRENT OWNER:
BRADLEY & WILLIAMS

PARCEL ID: 03056-001-002
CURRENT OWNER:
BLACK NANCY BURGESS

PARCEL ID: 03055-000-000
CURRENT OWNER:
CAMPBELL MENZIE G

PARCEL ID: 03055-001-001
CURRENT OWNER:
CAMPBELL MENZIE G

C25

PARCEL ID: 03058-000-000
CURRENT OWNER:
GOOLSBY JEROME S & LYDIA

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 101.90' (NAVD 88)

PARCEL ID: 03054-001-000
CURRENT OWNER:
SARGAV LLC

N.W. 162ND LANE
(F.K.A. OLD STATE ROAD NO. 20 & 25)
(F.K.A. OLD U.S. HIGHWAY 441)
(F.K.A. OLD STATE HIGHWAY 241)
(R/W WIDTH VARIES)

C17

L594

C16

N.W. 167TH BLVD
(100' R/W)

S 78°09'38" E 648.77' (M)

U.S. HIGHWAY NO. 441
(A.K.A. STATE ROAD NO. 25 & 25)
(A.K.A. U.S. HIGHWAY NO. 441)
(A.K.A. OLD STATE HIGHWAY 241)
(R/W WIDTH VARIES)

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 103.10' (NAVD 88)

SHEET 6

PARCEL 8
SEE SHEET 6
PARCEL ID: 03055-010-002

L589

L590

PARCEL ID: 03055-001-001
CURRENT OWNER:
FLORIDA POWER CORP

C20

THE NORTHWEST CORNER OF THE LANDS DESCRIBED IN O.R.B. 4281, PAGE 128 FOUND 4"X4" CONCRETE MONUMENT WITH NO IDENTIFICATION

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 77.02' (NAVD 88)

L591

(PLS 2228)

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 75.23' (NAVD 88)

S 78°09'19" E 617.36' (D)
S 78°10'15" E 617.22' (M)

THE NORTHEAST CORNER OF THE LANDS DESCRIBED IN O.R.B. 4281, PAGE 128 FOUND 5/8" STEEL ROD & CAP STAMPED "CHW INC LB 5075"

INTERSECTION OF SOUTHERLY R/W LINE OF NW 162ND LANE & THE WESTERLY R/W LINE OF STATE ROAD No. 93 (A.K.A. INTERSTATE HIGHWAY NO. 75) FOUND 5/8" STEEL ROD & CAP STAMPED "CHW INC LB 5075"

INTERSTATE NO. 75
(300' R/W)

Tech: sbade Plot Date: Jun 14,2024 - 1:34pm Filename: C:\UserResources\Temp\AcPublish_13920\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

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Alachua, FL 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA CA-5075

CHW
Professional Consultants

SCALE: 1" = 250'

VERIFY SCALE BAR IS CORRECT FOR PLOTTED SIZE
0 250 500 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

TOMOKA HILLS FARMS, INC.

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS, AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/19/2023: UPDATED WETLANDS

CERTIFIED TO:

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF: WKC
ORIGINAL BY: CAC
FIELD BOOK & PAGE: 635 / 69 & 650 / 4

CHAD A. COLSON

SEE SHEET ONE OF FORTY-SEVEN

Professional Surveyor & Mapper Fla. License No. 7142

This map prepared by:

Certificate of Authorization No. L.B. 5075
NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED SEAL OF A DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER

SHEET NO.:
2 OF 47

BOUNDARY & TOPOGRAPHIC SURVEY

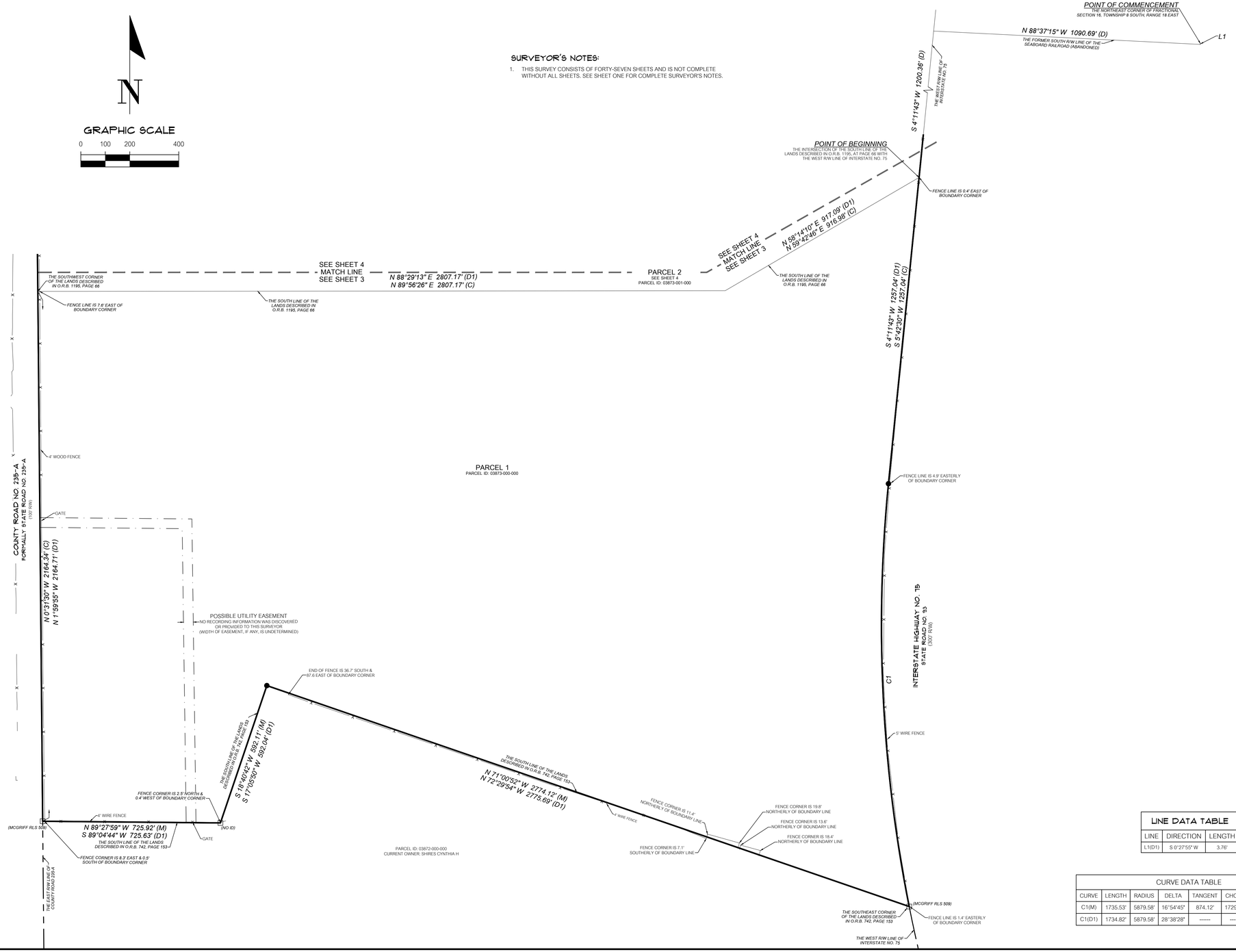
LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

N

GRAPHIC SCALE
0 100 200 400

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.



LINE DATA TABLE

LINE	DIRECTION	LENGTH
L1(D1)	S 0°27'55" W	3.76'

CURVE DATA TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C1(M)	1735.53'	5879.58'	16°54'45"	874.12'	1729.23'	S 2°48'16" E
C1(D1)	1734.82'	5879.58'	28°38'28"	-------	-------	-------

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS, AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/19/2023: UPDATED WETLANDS

CERTIFIED TO:
TOMOKA HILLS FARMS, INC.

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07
TECHNICIAN: WKC
CREW CHIEF: WKC
CHECKED BY: CAC
FIELD BOOK & PAGE: 635 / 69 & 650 / 4
SCALE: 1" = 200'

VERIFY SCALE
BAR ON DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
0 1"

CHAD A. COLSON
SEE SHEET ONE OF FORTY-SEVEN
Professional Surveyor & Mapper Fla. License No. 7142

This map prepared by:
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SHEET NO.:
3 OF 47

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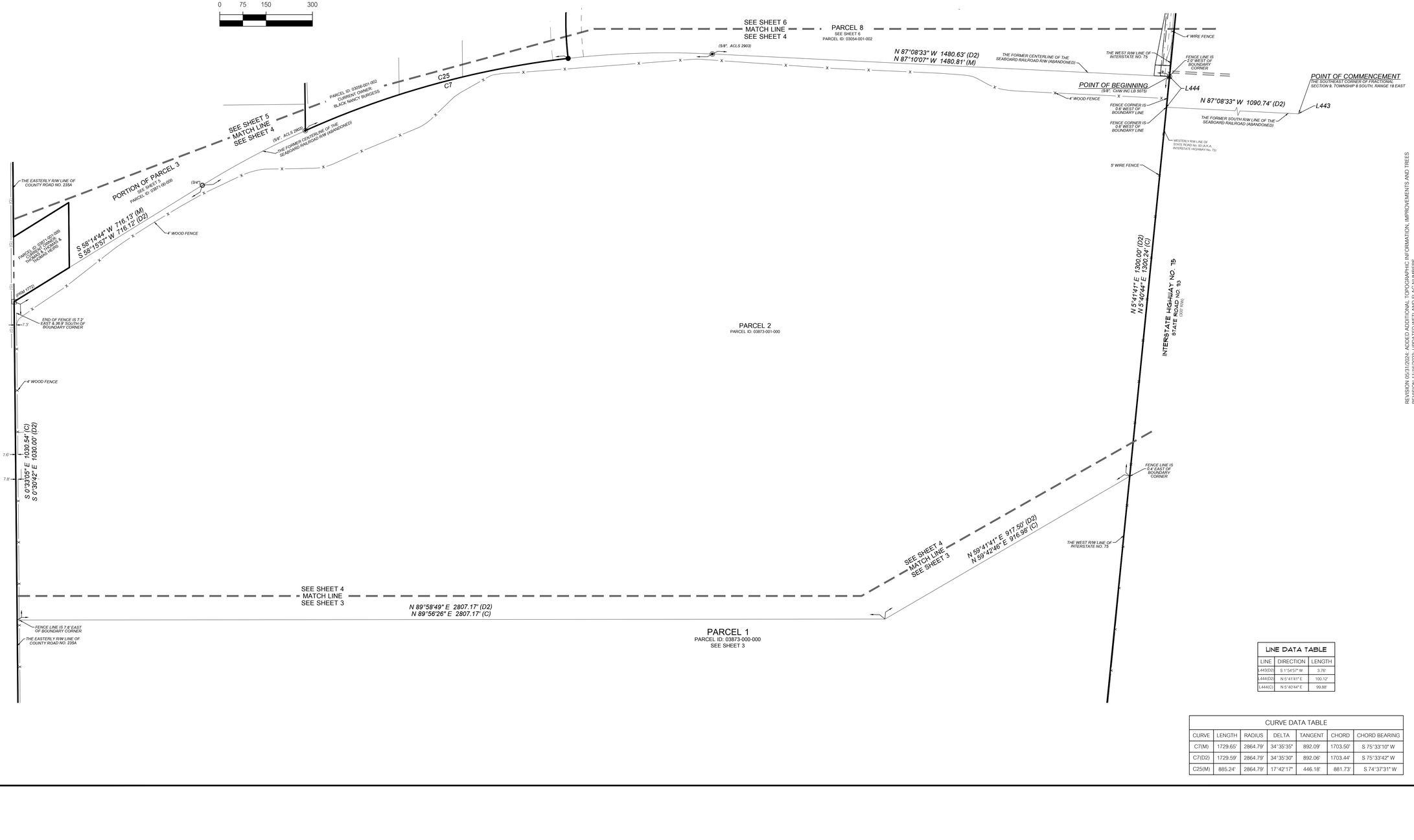
BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

GRAPHIC SCALE
0 75 150 300

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.



LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L443(D2)	S 1°54'57" W	3.76'
L444(D2)	N 5°41'41" E	100.12'
L444(C)	N 5°40'44" E	99.88'

CURVE DATA TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C7(M)	1729.65'	2864.79'	34°35'35"	892.09'	1703.50'	S 75°33'10" W
C7(D2)	1729.59'	2864.79'	34°35'30"	892.06'	1703.44'	S 75°33'42" W
C25(M)	885.24'	2864.79'	17°42'17"	446.18'	881.73'	S 74°37'31" W

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/19/2023: UPDATED WETLANDS

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Alachua, FL 32615
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SCALE: 1" = 150'

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IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.
0 1"

TOMOKA HILLS FARMS, INC.

CERTIFIED TO:

SURVEY DATE:	05/10/2022
REVISION DATE:	05/31/2024
PROJECT NUMBER:	21-0025.07
TECHNICIAN:	WKC
CREW CHIEF:	WM
RECORD BY:	CAC
FIELD BOOK & PAGE:	635 / (69 & 650) / 4

CHAD A. COLSON

SEE SHEET ONE OF FORTY-SEVEN

Professional Surveyor & Mapper Fla. License No. 7142

This map prepared by:

Certificate of Authorization No. LB. 5075
NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND A RAISED OR DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER

SHEET NO.:
4 OF 47

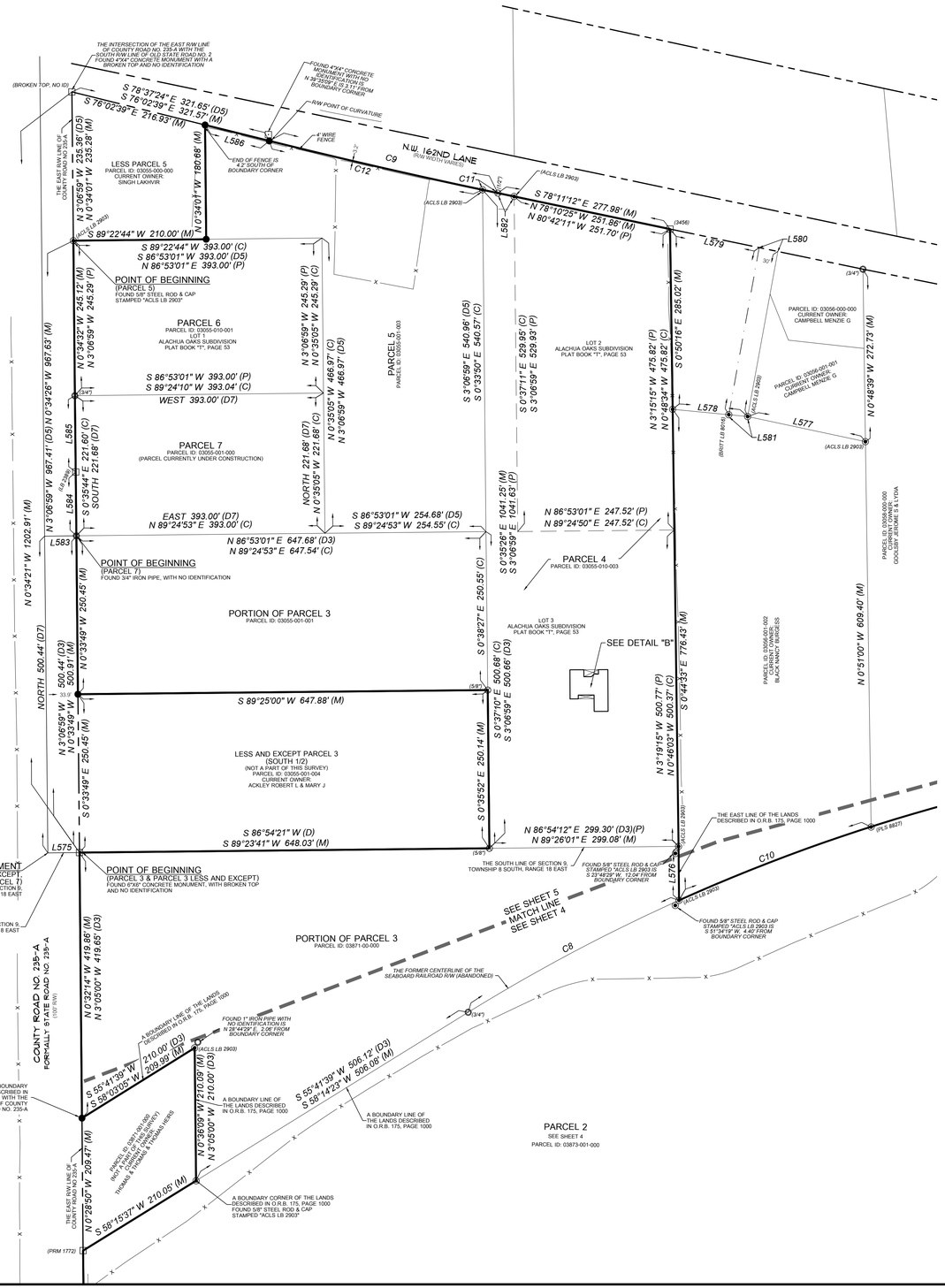
Tech: sbade Plot Date: Jun 14,2024 1:34pm Filename: C:\UserResources\Temp\AcPublish_13920\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

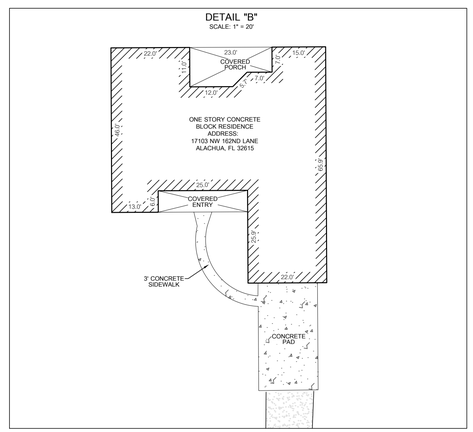
SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.



GRAPHIC SCALE

0 50 100 200



LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L575(D3)(D5)	N 86°54'12" E	50.00'
L576(M)	S 3°19'15" E	84.71'
L576(D3)	S 0°32'24" E	85.25'
L577(M)	N 77°57'58" W	190.34'
L578(M)	N 84°30'07" W	119.08'
L581(M)	N 84°22'200" W	29.96'
L582(M)	N 78°18'40" W	26.12'
L582(P)	N 80°42'11" W	26.51'
L583(D7)	S 89°24'53" W	50.00'
L584(M)	N 0°33'30" W	100.95'
L585(M)	N 0°37'36" W	120.65'
L586(M)	S 76°02'39" E	104.77'

CURVE DATA TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C8(M)	377.58'	2864.79'	7°33'06"	189.07'	377.31'	S 62°01'39" W
C8(D3)	377.68'	2864.79'	7°33'14"	189.12'	377.42'	S 59°28'16" W
C9(M)	370.81'	10209.13'	2°04'52"	185.43'	370.79'	S 77°08'50" E
C10(M)	325.22'	2864.79'	6°30'16"	162.78'	325.04'	S 69°06'13" W
C11(M)	24.84'	10209.13'	0°08'22"	12.42'	24.84'	S 77°50'27" E
C11(P)	24.70'	10209.13'	0°08'19"	12.35'	24.70'	S 80°38'01" E
C12(M)	345.97'	10209.13'	1°56'30"	173.00'	345.95'	S 76°05'51" E
C12(D5)	345.88'	10209.13'	1°56'28"	172.95'	345.86'	S 79°35'38" E

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est. 1988 FLORIDA CA-3075

CHW
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SCALE: 1" = 100'

VERIFY SCALE BAR IS CORRECT FOR PLOTTED SIZE
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CERTIFIED TO:

TOMOKA HILLS FARMS, INC.

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS, AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/19/2023: UPDATED WETLANDS

SURVEY DATE:	05/10/2022
REVISION DATE:	05/31/2024
PROJECT NUMBER:	21-0025.07
TECHNICIAN:	WKC
CREW CHIEF:	
DRAWN BY:	CMC
FIELD BOOK & PAGE:	635 / 69 & 650 / 4

CHAD A. COLSON

Professional Surveyor & Mapper Fla. License No. 7142

SEE SHEET ONE OF FORTY-SEVEN

This map prepared by:

Certificate of Authorization No. L.B. 5075
NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED ELECTRONIC DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER

SHEET NO.:
5 OF 47

Tech: chade Plot Date: Jun 14,2024 1:34pm Filename: C:\Users\Resources\Temp\AcPublish_13520\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

GRAPHIC SCALE

0 50 100 200

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L443(D8)	S 1°54'57" W	3.76'
L587(C)	N 5°40'44" E	99.88'
L587(D8)	N 5°41'41" E	100.12'
L588(C)	N 12°09'34" E	49.63'
L588(D8)	N 12°09'34" E	49.63'
L589(M)	S 12°02'31" W	217.85'
L589(D8)	S 12°02'06" W	217.73'
L590(M)	S 78°08'19" E	400.00'
L590(D8)	S 78°08'35" E	399.95'
L591(M)	N 12°02'06" E	217.83'
L591(D8)	N 12°02'06" E	217.80'
L592(M)	S 5°38'39" W	295.24'
L592(D8)	S 5°41'04" W	294.78'
L593(M)	N 78°09'08" W	50.00'
L593(D8)	N 78°09'10" W	50.00'
L594(M)	S 12°09'36" W	49.36'
L594(D8)	S 12°09'34" W	49.36'
L730(M)	N 78°08'10" W	399.97'

CURVE DATA TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C13(C)	416.95'	2864.79'	8°20'20"	208.84'	416.58'	S 88°44'58" W
C13(D8)	416.82'	2864.79'	8°20'11"	208.78'	416.45'	S 88°41'02" W
C14(C)	364.16'	900.00'	23°11'00"	184.61'	361.68'	N 4°15'08" E
C14(D8)	364.58'	900.00'	23°12'35"	184.82'	362.09'	N 4°14'21" E
C15(C)	211.80'	3309.14'	3°40'01"	105.93'	211.58'	N 13°59'35" E
C15(D8)	211.79'	3309.14'	3°40'01"	105.93'	211.76'	N 13°59'35" E
C16(M)	209.03'	3259.14'	3°40'29"	104.55'	208.99'	S 13°59'54" W
C16(D8)	209.03'	3259.14'	3°40'29"	104.55'	208.99'	S 13°59'49" W
C17(M)	382.71'	950.00'	23°04'54"	193.99'	380.13'	S 4°16'34" W
C17(D8)	383.18'	950.00'	23°06'37"	194.23'	380.59'	S 4°15'43" W
C18(M)	50.02'	2864.79'	1°00'01"	25.01'	50.01'	N 84°04'47" E
C18(D8)	50.01'	2864.79'	1°00'01"	25.01'	50.01'	N 84°00'56" E
C19(M)	466.96'	2864.79'	9°20'21"	234.00'	466.45'	S 88°14'57" W

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

TOMOKA HILLS FARMS, INC.

CHW
Professional Consultants

11801 Research Drive
Alachua, (352) 331-1976
Fax (352) 331-2476
www.chw-inc.com
est. 1988 FLORIDA CA-5075

SCALE: 1" = 100'

VERIFY SCALE BAR IS CORRECT ON PLOTTED DRAWING
0 100 200
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CERTIFIED TO:

SURVEY DATE:	05/10/2022
CREW CHIEF:	WHC
DRAWN BY:	CAC
REVISION DATE:	05/31/2024
PROJECT NUMBER:	21-0025.07
FIELD BOOK & PAGE:	635 / 69 & 650 / 4

TECHNICIAN: WHC

CHAD A. COLSON

SEE SHEET ONE OF FORTY-SEVEN

Professional Surveyor & Mapper Fla. License No. 7142

This map prepared by:

Certificate of Authorization No. LB. 5075
NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED EMBOSSING DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER

SHEET NO.:
6 OF 47

Tech: dbde Plot Date: Jun 14,2024 | 1:34pm Filename: C:\Acad\Resurvey\Temp\XrefDatbs_15420\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

GRAPHIC SCALE
0 125 250 500

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L577(M)	N 77°57'58" W	190.34'
L578(M)	N 84°30'07" W	119.08'
L586(M)	S 76°02'39" E	104.62'
L589(M)	S 12°02'31" W	217.85'
L589(D8)	S 12°02'06" W	217.73'
L590(M)	S 78°08'19" E	400.00'
L590(D8)	S 78°08'35" E	399.95'
L591(M)	N 12°02'06" E	217.83'
L591(D8)	N 12°02'06" E	217.80'
L594(M)	S 12°09'36" W	49.36'
L594(D8)	S 12°09'34" W	49.36'
L730(M)	N 78°08'10" W	399.97'
L731(M)	S 0°34'44" E	181.68'
L732(M)	S 89°22'44" W	210.00'
L733(M)	S 0°35'52" E	250.14'
L734(M)	S 0°32'14" E	419.86'
L735(M)	N 58°03'05" E	209.99'
L736(M)	S 0°36'09" E	210.09'
L737(M)	S 58°15'37" W	210.05'

CURVE DATA TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C1(M)	1735.53'	5879.58'	16°54'45"	874.12'	1729.23'	S 2°48'16" E
C1(D1)	1734.82'	5879.58'	16°54'21"	-------	-------	-------
C9(M)	370.81'	10209.13'	2°04'52"	185.43'	370.79'	S 77°08'50" E
C16(M)	209.03'	3259.14'	3°40'29"	104.55'	208.99'	S 13°59'54" W
C16(D8)	209.03'	3259.14'	3°40'29"	104.55'	208.99'	S 13°59'49" W
C17(M)	382.71'	950.00'	23°04'54"	193.99'	380.13'	S 4°16'34" W
C17(D8)	383.18'	950.00'	23°06'37"	194.23'	380.59'	S 4°15'43" W
C24(M)	559.96'	2864.79'	11°11'57"	280.87'	559.06'	S 77°49'57" W

COUNTY ROAD NO. 235-A
FORMALLY STATE ROAD NO. 235-A
(100' R/W)

S 0°32'00" E 3194.89' (M)

S 89°04'44" W 725.63' (D1)
N 89°27'59" W 725.92' (M)

S 18°40'42" W 592.11' (M)
S 17°05'50" W 592.04' (D1)

N 72°29'54" W 2775.69' (D1)
N 71°50'32" W 2774.12' (M)

PARCEL ID: 03872-000-000
CURRENT OWNER: SHIRES CYNTHIA H

PARCEL 1
PARCEL ID: 03873-000-000
SEE SHEET 3

PARCEL 1
SEE SHEET 3
PARCEL ID: 03873-000-000

PARCEL 2
SEE SHEET 4
PARCEL ID: 03873-001-000

PARCEL ID: 03871-001-000
CURRENT OWNER:
THOMAS & THOMAS & THOMAS HEIRS

PORTION OF PARCEL 3
SEE SHEET 5
PARCEL ID: 03055-001-000

S 89°23'41" W 648.03' (M)

LESS AND EXCEPT PARCEL 3
SEE SHEET 5
CURRENT OWNER:
PARCEL ID: 03055-001-000

S 89°25'00" W 647.88' (M)

PORTION OF PARCEL 3
SEE SHEET 5
PARCEL ID: 03055-001-000

PARCEL 7
SEE SHEET 5
PARCEL ID: 03055-001-000

PARCEL 6
SEE SHEET 5
PARCEL ID: 03055-010-001

S 0°34'39" E 717.18' (M)

LESS PARCEL 5
PARCEL ID: 03055-000-000
CURRENT OWNER:
SINGH LAKHVIR

PARCEL 5
SEE SHEET 5
PARCEL ID: 03055-001-003

PARCEL 4
SEE SHEET 5
PARCEL ID: 03055-010-003

N 0°46'05" W 1061.45' (M)

PARCEL ID: 03056-001-000
CURRENT OWNER:
BRADLEY & WILLIAMS

PARCEL ID: 03056-001-002
CURRENT OWNER:
BLACK NANCY BURGESS

PARCEL ID: 03055-000-000
CURRENT OWNER:
CAMPBELL MENZIE G

PARCEL ID: 03058-000-000
CURRENT OWNER:
GOOLSBY JEROME S & LYDIA

PARCEL ID: 03055-001-001
CURRENT OWNER:
CAMPBELL MENZIE G

PARCEL ID: 03054-001-000
CURRENT OWNER:
SARCAV LLC

L734 L735 L737 L736 L732 L731 L589 L733 L737 L594 L590 L591

C9 C25 C17 C16 C1

R/W POINT OF CURVATURE

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 128.80' (NAVD 88)

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 120.80' (NAVD 88)

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 103.10' (NAVD 88)

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 101.90' (NAVD 88)

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 77.02' (NAVD 88)

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 75.23' (NAVD 88)

PARCEL ID: 03057-000-000
CURRENT OWNER:
DAVIS TIMOTHY L
CURRENT OWNER:
WHITE DAVIS INC

S 78°09'38" E 648.77' (M)

S 78°09'10" E 677.36' (D)
S 78°10'15" E 677.22' (M)

N 5°41'18" E 2852.52' (M)

SHEET 8
SHEET 9
SHEET 10
SHEET 11
SHEET 12
SHEET 13
SHEET 33

BOUNDARY / WETLAND DELINEATION TIE LINE (TYPICAL)
WETLAND DELINEATION LINE (TYPICAL)
WETLAND DELINEATION LINE FLAGGED BY OTHERS (TYPICAL)
TOP OF BANK OF DEPRESSION

N.W. 162ND LANE
(F.K.A. OLD STATE ROAD NO. 20 & 25)
(F.K.A. OLD U.S. HIGHWAY 441)
(F.K.A. OLD STATE ROAD #2)
(R/W WIDTH VARIES)

N.W. 167TH BLVD
(100' R/W)

U.S. HIGHWAY NO. 441
(A.K.A. S.R. 25 / U.S. HIGHWAY 441)
(A.K.A. S.R. 20 / U.S. HIGHWAY 441)
(A.K.A. N.W. 13TH STREET)
(R/W WIDTH VARIES)

INTERSTATE HIGHWAY NO. 75
STATE ROAD NO. 93
(300' R/W)

INTERSTATE NO. 75
(300' R/W)

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS, AND TREES
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11801 Research Drive
Alachua, FL 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA CA-5075
CHW Professional Consultants

SCALE: 1" = 250'

VERIFY SCALE
BAR ON ORIGINAL DRAWING
0" 1" 2"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.

TOMOKA HILLS FARMS, INC.

CERTIFIED TO:

SURVEY DATE:	05/10/2022
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CREW CHIEF:	WKC
CHECKED BY:	CAC
FIELD BOOK & PAGE:	635 / 69 & 650 / 4

CHAD A. COLSON

SEE SHEET ONE OF FORTY-SEVEN

Professional Surveyor & Mapper Fla. License No. 7142

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Certificate of Authorization No. LB 5075
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SHEET NO.:
7 OF 47

Tech: chase Plot Date: Jun 14,2024 1:35pm Filename: C:\Acad\Resources\temp\AcPublish_15620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L3(M)	N 37°45'19" E	22.35'
L4(M)	N 14°55'48" W	31.01'
L5(M)	N 4°11'40" W	25.07'
L6(M)	N 34°38'07" E	44.37'
L7(M)	N 66°33'22" E	41.64'
L8(M)	N 71°02'59" E	28.98'
L9(M)	N 43°42'17" E	25.62'
L10(M)	N 57°06'09" E	30.86'
L11(M)	S 73°52'26" E	29.30'
L12(M)	S 70°56'06" E	46.19'
L13(M)	S 73°27'49" E	25.09'
L14(M)	S 61°59'52" E	33.85'
L15(M)	S 49°52'15" E	31.57'
L16(M)	S 66°39'44" E	40.47'
L17(M)	S 62°49'55" E	32.64'
L18(M)	S 58°12'03" E	35.35'
L19(M)	S 83°04'44" E	30.18'
L20(M)	S 64°25'34" E	23.66'
L21(M)	S 72°03'54" E	17.79'
L22(M)	N 82°26'17" E	38.56'
L23(M)	N 27°22'51" W	31.72'
L24(M)	N 75°24'09" W	28.18'
L25(M)	N 84°42'04" W	30.66'
L26(M)	N 73°55'14" W	39.16'
L27(M)	S 2°34'03" E	0.45'
L28(M)	N 80°28'59" W	79.88'
L29(M)	N 76°19'30" W	32.73'
L30(M)	N 78°50'59" W	38.26'
L31(M)	N 87°36'55" W	36.05'
L32(M)	N 67°35'12" W	50.66'
L33(M)	S 43°27'43" W	1.71'
L34(M)	N 89°50'09" W	56.21'
L35(M)	N 64°22'43" W	28.87'
L36(M)	S 84°48'41" W	35.75'
L37(M)	N 72°29'30" W	27.14'
L38(M)	N 67°43'49" W	34.61'
L39(M)	N 42°43'49" W	49.05'
L40(M)	N 51°26'00" W	40.15'
L41(M)	N 59°05'25" W	31.64'
L42(M)	N 57°51'02" W	36.58'
L43(M)	N 45°13'32" W	25.34'
L44(M)	N 9°52'08" W	40.33'
L45(M)	N 4°52'15" E	14.12'
L46(M)	N 23°47'05" W	2.91'
L47(M)	N 12°41'12" E	46.23'
L48(M)	N 52°40'28" E	21.75'
L49(M)	N 12°17'32" W	39.83'
L50(M)	N 13°16'54" W	41.06'
L51(M)	N 28°22'13" W	21.02'
L60(M)	S 83°08'03" E	20.32'
L61(M)	S 81°38'37" E	36.97'
L62(M)	N 89°33'55" E	47.32'
L63(M)	N 23°31'37" W	15.83'
L64(M)	N 72°36'32" E	27.77'
L65(M)	N 77°44'13" E	33.13'
L66(M)	S 31°57'34" W	2.64'
L87(M)	S 88°40'04" E	38.67'
L88(M)	S 66°54'18" E	22.20'
L89(M)	S 83°15'12" E	28.93'
L90(M)	S 53°56'14" E	22.99'
L91(M)	N 13°20'01" E	63.10'
L130(M)	S 18°07'30" E	67.03'
L131(M)	S 58°39'48" E	53.47'
L132(M)	S 2°25'04" E	82.66'
L133(M)	S 2°21'48" E	60.14'
L134(M)	S 40°29'51" E	29.82'
L135(M)	S 25°07'40" E	38.86'
L136(M)	S 47°31'04" W	54.12'
L137(M)	S 62°31'55" W	61.12'
L138(M)	S 64°44'50" E	31.20'
L139(M)	S 20°39'48" E	37.30'
L140(M)	S 19°16'42" W	25.84'
L141(M)	S 20°36'23" E	32.39'
L142(M)	S 18°53'21" W	42.66'
L143(M)	S 8°41'25" E	69.55'
L144(M)	S 7°21'29" E	31.19'
L145(M)	S 24°39'36" W	61.86'
L146(M)	S 63°00'24" E	47.73'
L147(M)	S 0°58'13" W	45.94'
L148(M)	S 4°05'50" W	44.00'
L149(M)	S 8°15'07" E	43.30'
L150(M)	S 7°53'54" W	32.26'
L151(M)	S 4°25'00" E	27.98'
L152(M)	S 30°16'17" W	17.62'
L153(M)	S 15°14'23" W	47.24'
L154(M)	S 4°08'06" E	29.25'
L155(M)	S 15°50'37" W	37.79'
L156(M)	S 19°32'26" W	33.09'
L157(M)	S 7°55'08" W	30.09'
L158(M)	S 68°00'11" E	28.72'
L159(M)	S 73°03'04" E	28.74'

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L160(M)	N 17°45'54" E	27.98'
L161(M)	N 37°56'11" E	33.54'
L162(M)	N 9°06'12" W	33.97'
L163(M)	N 6°17'16" W	22.64'
L164(M)	N 32°08'45" W	38.49'
L165(M)	N 15°26'36" W	31.68'
L166(M)	N 18°49'28" E	18.85'
L167(M)	S 22°37'42" E	15.91'
L168(M)	S 72°59'35" E	45.06'
L169(M)	S 71°05'39" E	37.18'
L170(M)	S 35°50'44" E	33.65'
L171(M)	S 42°04'57" E	61.24'
L172(M)	S 54°11'17" E	53.03'
L173(M)	S 21°12'26" E	37.03'
L174(M)	S 22°37'44" W	40.94'
L175(M)	S 13°32'34" E	22.10'
L176(M)	S 11°51'47" W	36.56'
L177(M)	S 10°15'39" W	46.45'
L178(M)	S 20°01'30" W	22.46'
L179(M)	S 56°59'41" E	22.40'
L180(M)	S 19°03'03" E	42.43'
L181(M)	S 12°49'06" W	42.60'
L182(M)	N 16°25'39" W	39.24'
L183(M)	N 6°28'32" W	44.41'
L184(M)	N 1°29'53" W	39.09'
L185(M)	N 17°44'11" W	49.17'
L186(M)	N 17°42'52" E	37.10'
L187(M)	N 5°48'26" W	41.02'
L188(M)	N 32°30'54" E	30.70'
L189(M)	N 52°58'41" E	66.09'
L190(M)	N 28°23'52" W	31.06'
L191(M)	N 21°00'27" E	36.79'
L192(M)	N 3°55'32" E	25.75'
L193(M)	N 57°29'09" W	44.97'
L194(M)	N 23°01'54" W	50.38'
L195(M)	N 33°45'53" E	62.79'
L196(M)	S 57°27'40" E	34.47'
L197(M)	S 63°40'00" E	52.33'
L198(M)	N 58°52'29" E	28.51'
L199(M)	N 19°53'45" E	40.99'
L200(M)	N 0°24'42" E	53.60'
L201(M)	N 10°01'33" E	34.89'
L202(M)	N 13°03'54" E	57.79'
L205(M)	N 2°37'30" E	67.45'
L206(M)	N 66°43'54" E	62.76'
L207(M)	S 55°11'45" E	25.62'
L208(M)	N 71°13'04" E	19.74'
L209(M)	S 29°02'28" E	30.02'
L210(M)	N 30°11'59" W	46.89'
L211(M)	N 32°00'14" W	102.60'
L212(M)	N 67°10'09" W	74.96'
L213(M)	S 13°35'58" W	29.46'
L214(M)	S 18°04'26" E	127.23'
L215(M)	S 74°20'24" E	52.72'
L216(M)	S 51°43'54" E	40.90'
L217(M)	S 72°35'57" E	25.09'
L218(M)	N 72°09'27" W	197.84'
L219(M)	N 44°06'20" W	36.99'
L220(M)	S 63°19'12" W	8.30'
L221(M)	N 70°03'07" W	39.07'
L222(M)	S 68°10'03" E	161.14'
L225(M)	S 89°02'30" W	25.23'
L226(M)	N 77°58'00" W	29.94'
L227(M)	N 65°12'43" W	22.44'
L228(M)	S 86°29'04" W	34.92'
L229(M)	S 86°25'26" W	18.52'
L230(M)	S 69°35'06" W	29.73'
L231(M)	S 73°57'32" W	21.04'
L232(M)	S 62°14'21" W	27.82'
L233(M)	N 70°33'04" W	35.12'
L234(M)	N 35°18'41" W	30.64'
L442(M)	S 42°02'52" E	70.91'
L739(M)	N 34°21'01" W	34.42'
L740(M)	N 43°29'33" W	36.53'
L741(M)	N 58°47'40" W	36.10'
L742(M)	N 43°36'16" W	44.83'
L743(M)	N 82°46'01" W	44.91'
L744(M)	S 51°20'05" W	44.70'
L745(M)	S 34°08'55" W	40.38'
L746(M)	S 16°48'59" W	32.16'
L747(M)	S 4°37'20" W	38.83'
L748(M)	S 8°39'34" W	30.78'
L749(M)	S 2°45'26" E	29.66'
L750(M)	S 21°13'19" E	29.94'
L751(M)	S 79°54'34" E	22.67'
L752(M)	N 78°35'52" E	47.06'
L753(M)	N 40°19'48" E	26.91'
L754(M)	N 53°28'42" E	47.74'
L755(M)	N 89°11'09" E	36.45'
L756(M)	N 45°18'15" E	72.18'

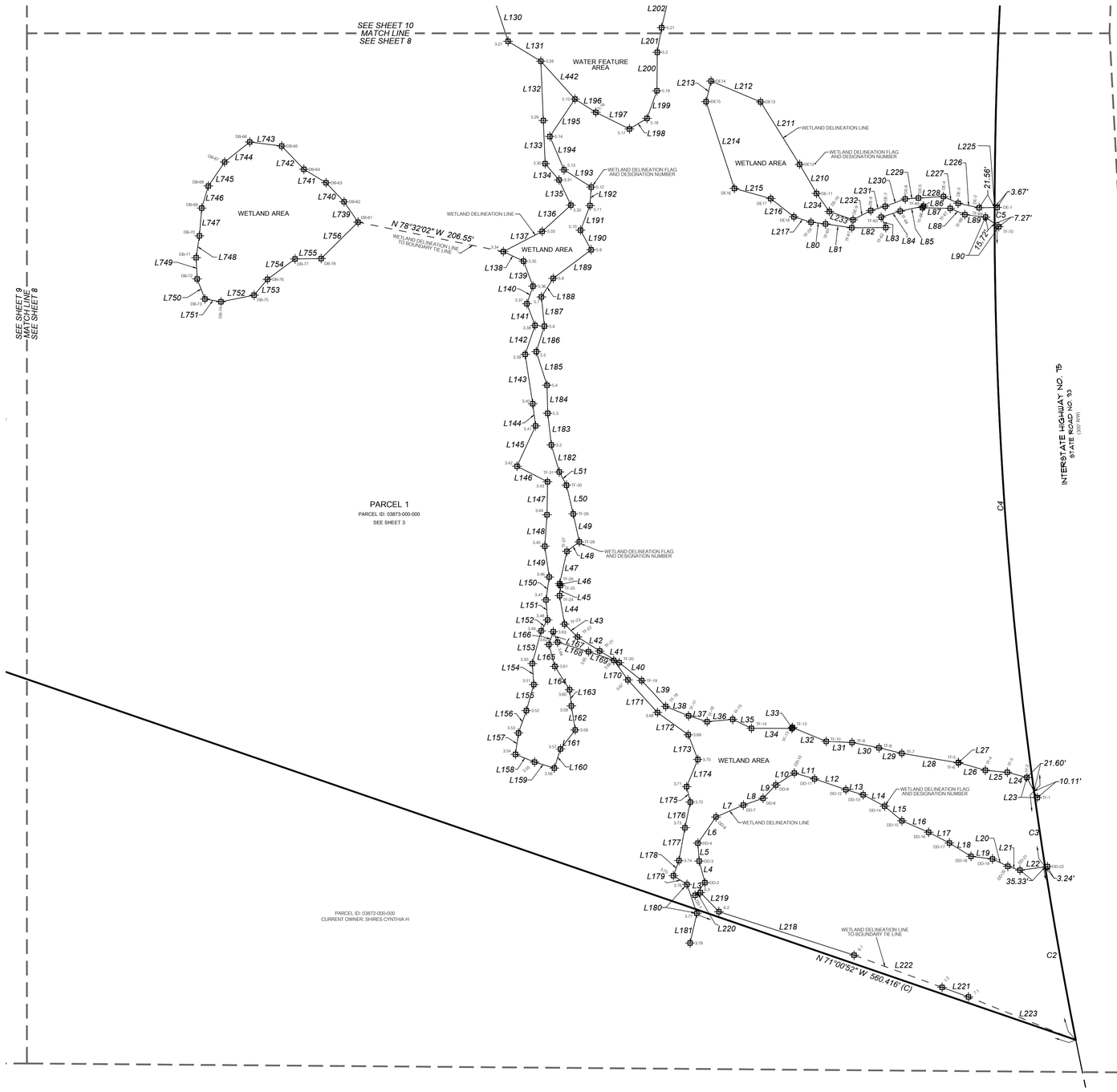
CURVE DATA TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C2(M)	244.97'	5879.58'	2°23'14"	122.50'	244.95'	S 10°04'01" E
C3(M)	106.65'	5879.58'	1°02'22"	53.33'	106.65'	N 8°21'13" W
C4(M)	793.36'	5879.58'	7°43'52"	397.28'	792.75'	S 3°58'06" E
C5(M)	22.57'	5879.58'	0°13'12"	11.28'	22.57'	S 0°00'26" W

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

GRAPHIC SCALE

0 40 80 160



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SCALE: 1" = 80'

VERIFY SCALE BAR IS ACCURATE ON EACH PLOT
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CERTIFIED TO:

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS, AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

SURVEY DATE:	05/10/2022
REVISION DATE:	05/31/2024
PROJECT NUMBER:	21-0025.07
TECHNICIAN:	WKC
CREW CHIEF:	MM
DRAWED BY:	CMC
FIELD BOOK & PAGE:	635 / 69 & 650 / 4

TOMOKA HILLS FARMS, INC.

CHAD A. COLSON

SEE SHEET ONE OF FORTY-SEVEN

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SHEET NO.:
8 OF 47

Tech: chade Plot Date: Jun 14,2024 1:35pm Filename: C:\Users\Resources\Temp\AcPublish_13520\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

GRAPHIC SCALE
0 40 80 160

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L91(M)	N 13°22'01" E	63.00'
L243(M)	N 58°11'16" W	42.31'
L244(M)	N 52°54'59" W	28.01'
L245(M)	N 51°21'55" W	29.99'
L246(M)	N 60°29'30" W	39.98'
L247(M)	N 52°45'01" W	30.77'
L248(M)	N 65°41'10" W	38.18'
L249(M)	N 67°26'48" W	38.85'
L250(M)	N 60°25'28" W	35.21'
L251(M)	N 71°25'41" W	41.75'
L252(M)	N 89°59'27" W	31.06'
L253(M)	N 82°43'54" W	33.11'
L254(M)	S 30°04'29" W	37.93'
L255(M)	S 30°35'18" W	26.83'
L256(M)	S 24°58'34" W	4.05'
L257(M)	S 28°21'33" W	40.54'
L258(M)	S 11°30'48" W	86.88'
L259(M)	S 13°16'31" W	52.32'
L260(M)	S 20°28'48" W	38.10'
L261(M)	S 17°42'14" W	43.14'
L262(M)	N 61°12'22" E	9.08'
L263(M)	N 73°43'46" E	12.34'
L264(M)	S 86°50'28" E	26.19'
L265(M)	S 40°58'52" E	15.05'
L266(M)	S 83°22'38" E	12.10'
L267(M)	N 86°01'40" E	27.38'
L268(M)	N 12°10'03" W	23.62'
L269(M)	N 8°47'08" W	33.02'
L270(M)	N 39°37'46" E	35.55'
L271(M)	N 41°38'32" E	44.77'
L272(M)	N 26°38'04" E	24.04'
L273(M)	N 10°16'5.7" E	26.21'
L274(M)	N 18°03'19" E	24.97'
L275(M)	N 3°26'15" W	32.42'
L276(M)	N 12°40'53" W	16.67'
L277(M)	N 30°22'14" W	31.49'
L278(M)	N 13°16'50" W	29.41'
L279(M)	N 10°35'42" W	33.36'
L280(M)	N 20°50'31" E	19.47'
L281(M)	N 9°38'31" W	27.67'
L282(M)	N 20°20'10" E	31.74'
L283(M)	N 37°30'20" E	21.37'
L284(M)	N 21°05'49" E	33.21'
L285(M)	N 23°37'56" E	29.24'
L286(M)	N 52°31'01" E	22.29'
L287(M)	N 9°19'38" E	15.69'
L288(M)	N 13°48'30" E	22.83'
L289(M)	N 17°20'07" E	42.58'

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L290(M)	N 41°16'25" E	40.08'
L291(M)	S 61°51'44" E	43.29'
L292(M)	S 6°28'48" E	46.70'
L293(M)	S 59°10'32" E	39.30'
L294(M)	S 38°06'18" E	25.30'
L295(M)	S 36°11'36" E	46.84'
L296(M)	S 24°52'03" E	30.68'
L297(M)	S 8°21'46" W	21.53'
L298(M)	S 10°50'22" W	41.32'
L299(M)	S 37°24'23" W	40.44'
L300(M)	S 14°06'34" E	24.07'
L301(M)	S 45°19'40" W	25.10'
L302(M)	S 50°18'33" W	33.54'
L303(M)	S 36°13'50" W	29.75'
L304(M)	S 52°42'21" W	30.74'
L305(M)	S 76°42'41" W	25.60'
L306(M)	S 60°35'28" W	31.38'
L307(M)	N 80°00'39" W	19.77'
L308(M)	N 66°28'25" W	31.35'
L309(M)	N 21°24'07" W	37.20'
L310(M)	N 8°41'48" W	21.25'
L311(M)	N 12°38'56" E	26.27'
L312(M)	N 6°15'04" E	33.62'
L313(M)	N 35°05'30" E	30.52'
L314(M)	N 46°21'25" E	23.98'
L315(M)	N 49°59'30" E	24.23'
L316(M)	N 67°29'36" E	44.80'
L317(M)	N 81°55'24" E	44.31'
L318(M)	S 84°45'09" E	66.31'
L319(M)	S 64°53'52" E	37.89'
L320(M)	S 44°25'58" E	20.71'
L321(M)	S 34°01'38" E	35.41'
L322(M)	S 2°23'27" W	44.35'
L323(M)	S 7°57'53" W	32.68'
L324(M)	S 0°39'03" E	34.16'
L325(M)	S 22°56'30" W	39.73'
L326(M)	S 37°32'40" W	26.25'
L327(M)	S 32°11'23" W	40.45'
L328(M)	S 57°34'27" W	43.32'
L329(M)	S 52°11'21" W	25.39'
L330(M)	N 86°38'41" W	18.74'
L331(M)	S 74°01'44" W	27.85'
L332(M)	N 74°40'03" W	34.41'
L333(M)	N 61°08'10" W	29.95'
L334(M)	N 29°18'20" W	39.85'
L335(M)	N 29°56'58" W	32.03'
L336(M)	N 16°50'54" W	34.37'
L738(M)	S 18°59'08" W	28.81'

N 71°09'32" W 701.89' (C)

N 89°42'12" E 368.98' (C)

N 71°09'32" W 313.03' (C)

N 65°17'35" E 239.94' (C)

PARCEL ID: 03872-000-000
CURRENT OWNER: SHIRES CYNTHIA H

PARCEL 1
PARCEL ID: 03873-000-000
SEE SHEET 3

WETLAND AREA

WETLAND DELINEATION FLAG AND DESIGNATION NUMBER

WETLAND DELINEATION LINE

5.00'
7.35'

SEE SHEET 11
MATCH LINE
SEE SHEET 9

SEE SHEET 9
MATCH LINE
SEE SHEET 8

SEE SHEET 9
MATCH LINE
SEE SHEET 10

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS, AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/19/2023: UPDATED WETLANDS

CERTIFIED TO:

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF:
CHECKED BY: CAC
FIELD BOOK & PAGE: 635 / 69 & 650 / 4

SCALE: 1" = 80'

VERIFY SCALE
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0 80 160 1"

CHAD A. COLSON

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SHEET NO.:
9 OF 47

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BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

N

GRAPHIC SCALE
0 40 80 160

CURVE DATA TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C6(M)	0.11'	5879.58'	0°00'04"	0.05'	0.11'	S 5°39'05" W

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L93(M)	N 59°50'28" W	86.01'
L94(M)	S 70°37'45" W	55.37'
L95(M)	S 9°33'44" W	42.28'
L96(M)	S 22°06'12" E	81.91'
L97(M)	S 43°15'23" E	55.85'
L98(M)	S 73°12'08" E	74.45'
L99(M)	N 66°26'03" E	52.04'
L100(M)	N 8°07'23" E	52.55'
L101(M)	N 18°35'53" W	21.26'
L102(M)	N 31°21'22" W	36.65'
L103(M)	N 24°22'00" W	19.06'
L104(M)	N 64°43'59" W	31.13'
L105(M)	N 43°31'21" E	40.90'
L106(M)	N 64°21'34" W	31.19'
L107(M)	N 70°37'16" W	33.10'
L108(M)	S 76°47'31" W	33.42'
L109(M)	S 80°57'44" W	31.61'
L110(M)	S 82°20'28" W	46.34'
L111(M)	S 62°28'45" W	33.24'
L112(M)	S 80°19'03" W	14.56'
L113(M)	S 70°09'54" W	36.94'
L114(M)	S 66°22'54" W	19.38'
L115(M)	S 55°28'22" W	30.27'
L116(M)	S 62°12'09" W	28.72'
L117(M)	S 33°59'32" W	32.45'
L118(M)	S 50°55'00" W	23.88'
L119(M)	N 71°05'53" W	22.01'
L120(M)	N 82°22'10" W	32.63'
L121(M)	S 46°31'04" W	39.56'
L122(M)	S 76°52'24" W	44.85'
L123(M)	N 10°03'12" W	46.41'
L124(M)	N 42°53'55" W	37.65'
L125(M)	N 86°22'23" W	44.68'
L126(M)	S 74°04'36" W	74.23'
L127(M)	S 55°35'26" W	58.43'
L128(M)	S 53°05'24" W	68.29'
L129(M)	S 11°46'15" W	73.79'
L130(M)	S 3°15'04" E	133.11'
L131(M)	S 18°07'30" E	67.03'
L201(M)	S 18°37'53" E	74.47'
L202(M)	S 13°03'54" E	57.79'

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L203(M)	N 9°14'44" E	64.97'
L204(M)	N 1°33'23" E	55.19'
L205(M)	N 2°37'30" E	67.45'
L206(M)	N 66°43'54" E	62.76'
L207(M)	S 55°11'45" E	25.62'
L208(M)	N 71°13'04" E	19.74'
L209(M)	S 29°02'28" E	30.02'
L343(M)	S 63°23'17" E	32.70'
L344(M)	S 63°41'57" E	22.20'
L345(M)	N 51°48'17" E	35.62'
L346(M)	N 4°28'49" W	39.52'
L347(M)	N 21°34'52" W	33.75'
L348(M)	N 23°42'35" E	28.08'
L349(M)	N 38°00'06" E	35.10'
L350(M)	N 80°27'02" E	31.81'
L351(M)	N 53°26'00" E	22.07'
L352(M)	S 85°31'32" E	28.85'
L353(M)	N 87°45'03" E	22.37'
L354(M)	S 80°50'58" E	25.87'
L355(M)	S 52°06'12" E	29.41'
L356(M)	S 25°17'56" E	25.24'
L357(M)	S 86°16'32" E	31.40'
L358(M)	S 30°08'02" E	42.66'
L359(M)	S 70°29'44" E	31.03'
L360(M)	N 21°03'45" E	32.97'
L361(M)	N 29°03'23" E	19.32'
L362(M)	S.57°14'31" E	87.98'
L363(M)	S.32°20'05" E	20.54'
L364(M)	S.84°30'47" E	26.58'
L365(M)	N 44°18'56" E	21.01'
L366(M)	N 35°26'49" W	34.11'
L367(M)	S 87°50'29" W	12.80'
L368(M)	S.41°04'34" W	29.77'
L437(M)	N 82°49'43" E	45.60'
L438(M)	N 13°54'40" W	31.14'
L439(M)	N 76°08'01" W	27.18'
L442(M)	N 82°21'47" E	61.39'
L415(M)	N 72°46'15" W	49.50'
L416(M)	S 86°36'14" W	42.20'
L417(M)	S 19°49'49" W	36.88'
L418(M)	S 4°37'53" E	47.41'
L419(M)	S 21°06'05" E	51.04'
L757(M)	S 6°29'39" E	25.30'

N 89°58'49" E 2807.17' (D2)
N 89°56'26" E 2807.17' (C)

SEE SHEET 12
MATCH LINE
SEE SHEET 10

PARCEL 2
SEE SHEET 4
PARCEL ID: 03873-001-000

SEE SHEET 11
MATCH LINE
SEE SHEET 10

WETLAND AREA
WETLAND DELINEATION FLAG AND DESIGNATION NUMBER
L439
L440
L438
L441
L437

N 74°44'34" W 882.64' (M)
WETLAND DELINEATION LINE TO BOUNDARY TIE LINE

SEE SHEET 12
MATCH LINE
SEE SHEET 10

L94 L93 L104 L95 L103 L102 L96 L101 L97 L100 L98 L99
WETLAND AREA
WETLAND DELINEATION FLAG AND DESIGNATION NUMBER

N 1°04'02" W 222.58' (M)
WETLAND DELINEATION LINE TO BOUNDARY TIE LINE

PARCEL 1
PARCEL ID: 03873-000-000
SEE SHEET 3

SEE DETAIL "A"

L111 L110 L109 L108 L107 L106 L113 L112 L353 L354 L114 L115 L355 WETLAND AREA L350 L351 L352 L349 L356 L357 L116 L348 L358 L359 L117 L119 L120 L347 L118 L208 L346 L757 L206 L207 L209 L345 L343 L344 L362

WETLAND DELINEATION LINE TO DEPRESSION TOP OF BANK LINE
DEPRESSION
TOP OF BANK OF DEPRESSION

INTERSTATE HIGHWAY NO. 75
STATE ROAD NO. 93
(300' R/W)

SEE SHEET 12
MATCH LINE
SEE SHEET 10

SEE SHEET 9
MATCH LINE
SEE SHEET 10

WETLAND DELINEATION LINE
L318 L319 L320 L321 L322 323
WETLAND DELINEATION LINE

WETLAND DELINEATION LINE
L128 L125 L126 L127 L129 L130 L131
WETLAND DELINEATION FLAG AND DESIGNATION NUMBER
WATER FEATURE AREA

SEE SHEET 10
SEE SHEET 8

L123 L122 L121 L124 L205 L204 L203 L202 L201

DETAIL "A"
SCALE: 1" = 20'
28.67'
L105
2.53'
S 5°42'30" W 84.19'
10.39'
C6
R/W POINT OF CURVATURE TO WETLAND DELINEATION LINE
8.94'
L361
L360

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

CERTIFIED TO:
TOMOKA HILLS FARMS, INC.

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07
TECHNICIAN: WKC
ORDER CHIEF: KRM
DRAWED BY: CAC
FIELD BOOK & PAGE: 633 / 69 & 650 / 4

SCALE: 1" = 80'
VERIFY SCALE BAR ON EACH SHEET
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.
0 1"

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Professional Consultants
1801 Research Drive
Alachua, FL 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA CA-5075

This map prepared by:
CHAD A. COLSON
Professional Surveyor & Mapper Fla. License No. 7142
SEE SHEET ONE OF FORTY-SEVEN
Certificate of Authorization No. L.B. 5075
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SHEET NO.:
10 OF 47

Tech: rbode Plot Date: Jan 14,2024 1:35pm Filename: C:\Jobs\Resurvey\Temp\AcPublish_19928\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

SURVEYOR'S NOTES:

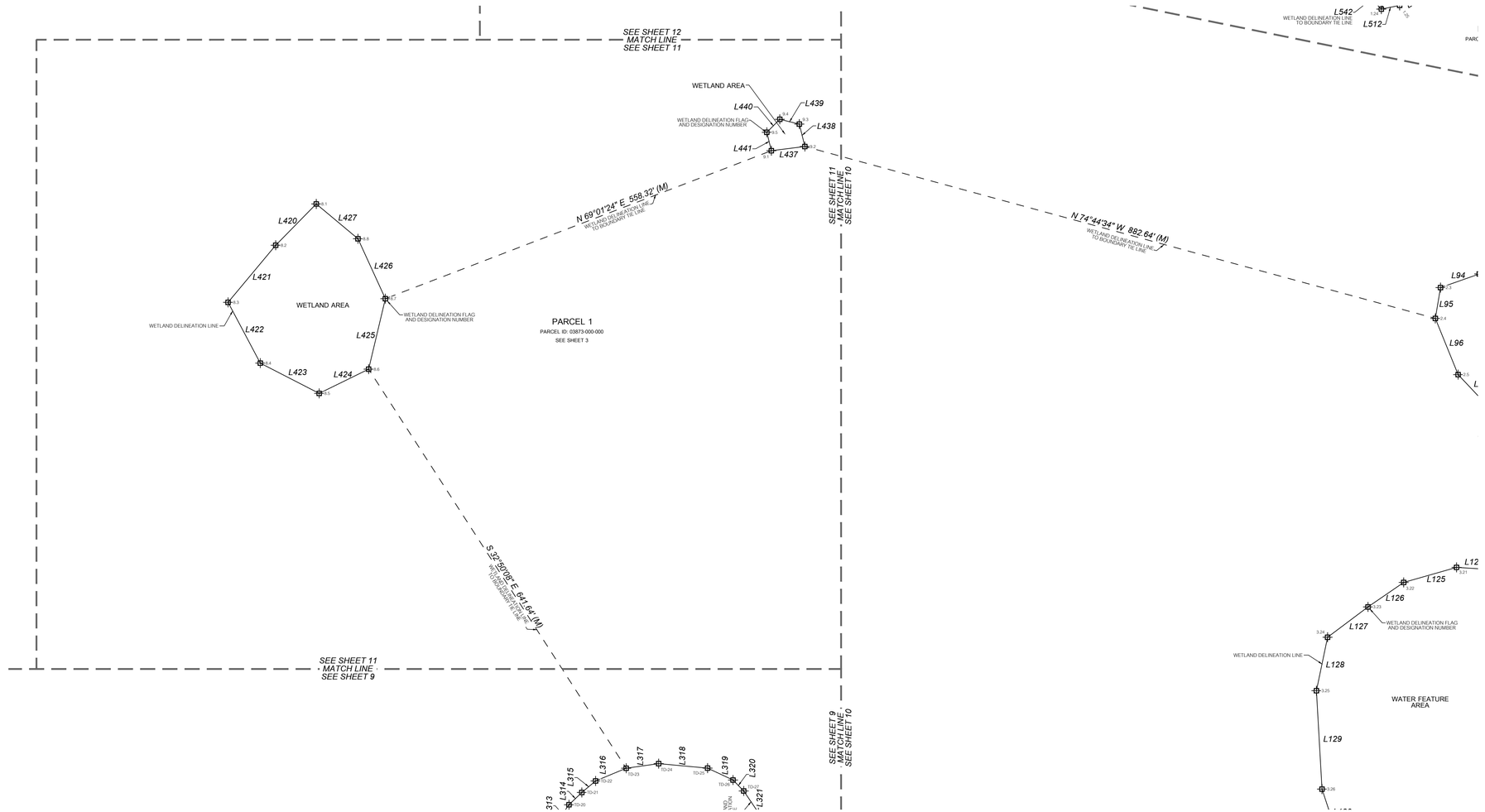
1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

GRAPHIC SCALE

0 40 80 160

N

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L314(M)	N 46°21'25" E	23.98'
L315(M)	N 49°59'30" E	24.23'
L316(M)	N 67°29'36" E	44.80'
L317(M)	N 81°55'24" E	44.31'
L318(M)	S 84°45'09" E	66.31'
L319(M)	S 64°53'52" E	37.89'
L320(M)	S 44°25'58" E	20.71'
L420(M)	S 44°28'57" W	78.20'
L421(M)	S 39°48'25" W	100.45'
L422(M)	S 27°56'19" E	92.93'
L423(M)	S 62°48'29" E	89.40'
L424(M)	N 63°54'25" E	74.35'
L425(M)	N 13°22'47" E	97.88'
L426(M)	N 24°35'25" W	88.96'
L427(M)	N 50°06'46" W	73.44'
L437(M)	N 82°49'43" E	45.60'
L438(M)	N 13°54'40" W	31.14'
L439(M)	N 76°08'01" W	27.18'
L440(M)	S 44°57'40" W	24.80'
L441(M)	S 13°53'39" E	25.64'



REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

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SCALE: 1" = 80'

VERIFY SCALE BAR ON ENCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CERTIFIED TO: TOMOKA HILLS FARMS, INC.

SURVEY DATE: 05/10/2022

REVISION DATE: 05/31/2024

PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC

CREW CHIEF: WM

CHECKED BY: CAC

FIELD BOOK & PAGE: 635 / 69 & 650 / 4

CHAD A. COLSON

SEE SHEET ONE OF FORTY-SEVEN

Professional Surveyor & Mapper Fla. License No. 7142

This map prepared by:

Certificate of Authorization No. L.B. 5075
NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND SEAL OR ELECTRONIC DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER

SHEET NO.: 11 OF 47

Tech: chads Plot Date: Jun 14,2024 1:35pm Filename: C:\AcadResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

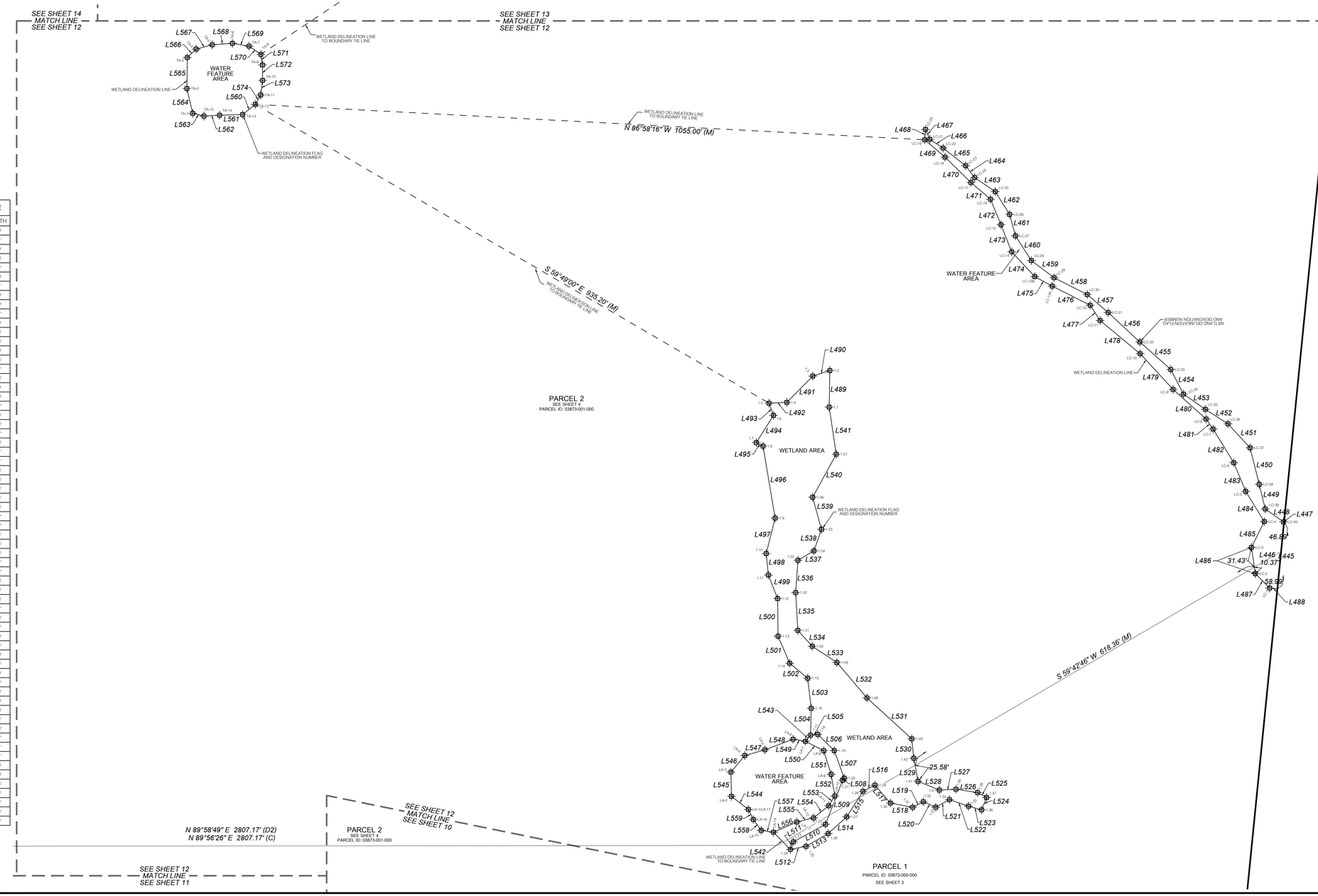
LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

GRAPHIC SCALE
0 40 80 160

N



LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L445(M)	N 5°41'44" E	105.88'
L446(M)	S 59°42'46" W	48.66'
L447(M)	N 84°19'16" W	0.90'
L448(M)	N 54°51'39" W	35.15'
L449(M)	N 13°39'55" W	40.05'
L450(M)	N 14°08'24" W	59.14'
L451(M)	N 42°38'38" W	51.24'
L452(M)	N 57°13'24" W	42.36'
L453(M)	N 55°12'15" W	41.89'
L454(M)	N 27°18'55" W	43.61'
L455(M)	N 48°23'55" W	65.15'
L456(M)	N 46°59'56" W	68.02'
L457(M)	N 49°20'26" W	43.47'
L458(M)	N 63°05'34" W	58.49'
L459(M)	N 52°55'45" W	44.83'
L460(M)	N 32°45'59" W	46.26'
L461(M)	N 15°14'11" W	34.91'
L462(M)	N 32°16'29" W	42.38'
L463(M)	N 55°40'05" W	39.22'
L464(M)	N 37°09'56" W	23.46'
L465(M)	N 51°58'16" W	45.00'
L466(M)	N 56°31'52" W	24.09'
L467(M)	N 23°52'08" W	17.08'
L468(M)	S 3°54'52" W	16.38'
L469(M)	S 49°27'39" E	41.95'
L470(M)	S 45°37'36" E	56.96'
L471(M)	S 49°23'26" E	40.58'
L472(M)	S 22°26'20" E	43.43'
L473(M)	S 21°31'12" E	45.99'
L474(M)	S 42°59'00" E	53.10'
L475(M)	S 61°24'11" E	31.28'
L476(M)	S 63°15'14" E	66.90'
L477(M)	S 33°06'30" E	28.74'
L478(M)	S 50°20'01" E	81.77'
L479(M)	S 42°41'59" E	76.45'
L480(M)	S 48°03'43" E	69.75'
L481(M)	S 34°55'41" E	19.33'
L482(M)	S 31°36'00" E	62.08'
L483(M)	S 22°35'07" E	48.86'
L484(M)	S 31°31'29" E	55.81'
L485(M)	S 26°23'44" W	45.33'
L486(M)	S 8°34'54" E	41.80'
L487(M)	S 44°43'33" E	31.93'
L488(M)	S 84°17'30" E	12.19'
L489(M)	N 1°03'19" E	57.61'
L490(M)	S 71°56'07" W	28.27'
L491(M)	S 44°36'02" W	58.17'
L492(M)	S 87°36'22" W	28.07'
L493(M)	S 20°06'04" E	20.55'
L494(M)	S 32°17'27" W	50.59'
L495(M)	S 62°25'06" E	11.06'
L496(M)	S 9°31'00" E	114.85'
L497(M)	S 14°04'38" W	57.57'
L498(M)	S 5°36'20" E	33.94'
L499(M)	S 21°33'48" E	39.92'
L500(M)	S 0°33'50" E	59.09'
L501(M)	S 23°17'11" E	46.37'
L502(M)	S 50°13'50" E	36.86'
L503(M)	S 6°40'17" E	47.75'
L504(M)	S 1°20'42" W	42.24'
L505(M)	N 84°04'11" E	11.63'
L506(M)	S 45°18'55" E	36.12'
L507(M)	S 19°56'24" E	46.10'
L508(M)	S 35°39'39" W	4.28'
L509(M)	S 21°15'05" W	74.35'

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L510(M)	S 61°22'12" W	57.39'
L511(M)	S 21°51'35" W	13.04'
L512(M)	N 78°30'31" E	25.19'
L513(M)	N 60°00'45" E	40.18'
L514(M)	N 47°58'58" E	39.24'
L515(M)	N 32°31'04" E	47.59'
L516(M)	N 62°33'53" E	21.11'
L517(M)	S 41°01'35" E	37.29'
L518(M)	S 79°14'52" E	35.69'
L519(M)	N 62°39'28" E	18.77'
L520(M)	S 66°25'51" E	21.40'
L521(M)	N 46°39'58" E	24.53'
L522(M)	S 70°51'35" E	31.83'
L523(M)	S 74°37'55" E	21.60'
L524(M)	N 21°18'45" E	21.06'
L525(M)	N 61°41'15" W	16.06'
L526(M)	N 81°15'15" W	34.46'
L527(M)	S 87°05'38" W	26.19'
L528(M)	N 67°37'30" W	36.29'
L529(M)	N 10°20'22" W	36.92'
L530(M)	N 6°03'55" W	30.76'
L531(M)	N 47°36'26" W	95.38'
L532(M)	N 40°20'40" W	73.07'
L533(M)	N 56°32'40" W	46.53'
L534(M)	N 42°14'02" W	33.61'
L535(M)	N 3°21'18" W	59.61'
L536(M)	N 4°01'22" E	51.06'
L537(M)	N 59°40'40" E	29.08'
L538(M)	N 19°29'00" E	35.96'
L539(M)	N 15°22'21" W	52.44'
L540(M)	N 28°41'22" E	77.23'
L541(M)	N 8°30'35" W	74.92'
L542(M)	N 44°22'50" W	38.02'
L543(M)	N 39°54'22" E	12.55'
L544(M)	N 52°23'44" W	33.66'
L545(M)	N 1°12'43" W	38.15'
L546(M)	N 39°52'04" E	33.97'
L547(M)	N 74°03'12" E	33.02'
L548(M)	N 69°26'23" E	47.26'
L549(M)	S 80°40'51" E	19.69'
L550(M)	S 62°41'19" E	32.38'
L551(M)	S 17°24'18" E	38.97'
L552(M)	S 9°46'13" E	34.56'
L553(M)	S 31°49'49" W	18.08'
L554(M)	S 51°27'00" W	30.60'
L555(M)	S 75°59'57" W	27.05'
L556(M)	S 66°27'12" W	40.10'
L557(M)	N 81°14'15" W	19.59'
L558(M)	N 35°59'10" W	21.00'
L559(M)	N 26°05'04" W	17.70'
L560(M)	S 51°01'05" W	25.58'
L561(M)	S 88°27'02" W	36.20'
L562(M)	S 86°41'57" W	24.68'
L563(M)	N 75°57'44" W	18.26'
L564(M)	N 13°14'10" W	40.08'
L565(M)	N 0°47'10" E	48.77'
L566(M)	N 46°31'27" E	19.27'
L567(M)	N 74°58'02" E	26.11'
L568(M)	N 85°53'02" E	31.88'
L569(M)	S 80°36'57" E	26.59'
L570(M)	S 55°05'58" E	22.65'
L571(M)	S 8°27'40" E	16.90'
L572(M)	S 0°35'55" E	24.22'
L573(M)	S 7°18'09" W	23.25'
L574(M)	S 30°22'21" W	17.10'

Text: dbode Plot Date: Jun 14,2024 - 1:35pm Filename: C:\Jobs\Survey\Tony\Ja-Saleh_13620\21-0025 BOUNDARY & TOPO_WETLAND REVISED 06-04-2024.dwg

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS, AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
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VERIFY SCALE
BAR ON ANY SHEET
IF NOT ONE INCH ON
THIS SHEET ADJUST
SCALES ACCORDINGLY.

0 1"

TOMOKA HILLS FARMS, INC.

CERTIFIED TO:

SURVEY DATE:	05/10/2022
REVISION DATE:	05/31/2024
PROJECT NUMBER:	21-0025.07

TECHNICIAN:	WKC
CREW CHIEF:	CAC
DRAWN BY:	CAC
FIELD BOOK & PAGE:	635 / 69 & 650 / 4

CHAD A. COLSON
Professional Surveyor & Mapper Fla. License No. 7142

SEE SHEET ONE OF FORTY-SEVEN

This map prepared by:

Certificate of Authorization No. LB. 5075
NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED EMBOSSED DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER

SHEET NO.:
12 OF 47

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

CURVE DATA TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C16(M)	209.03'	3259.14'	3°40'29"	104.55'	208.99'	S 13°59'54" W
C16(D8)	209.03'	3259.14'	3°40'29"	104.55'	208.99'	S 13°59'49" W
C17(M)	382.71'	950.00'	23°04'54"	193.99'	380.13'	S 4°16'34" W
C17(D8)	383.18'	950.00'	23°06'37"	194.23'	380.59'	S 4°15'43" W
C19(M)	466.96'	2864.79'	9°20'21"	234.00'	466.45'	S 88°14'57" W
C20(M)	122.20'	3259.14'	2°08'24"	61.11'	122.20'	N 13°14'07" E
C21(M)	86.83'	3259.14'	1°31'35"	43.42'	86.82'	N 15°04'21" E

SURVEYOR'S NOTES:

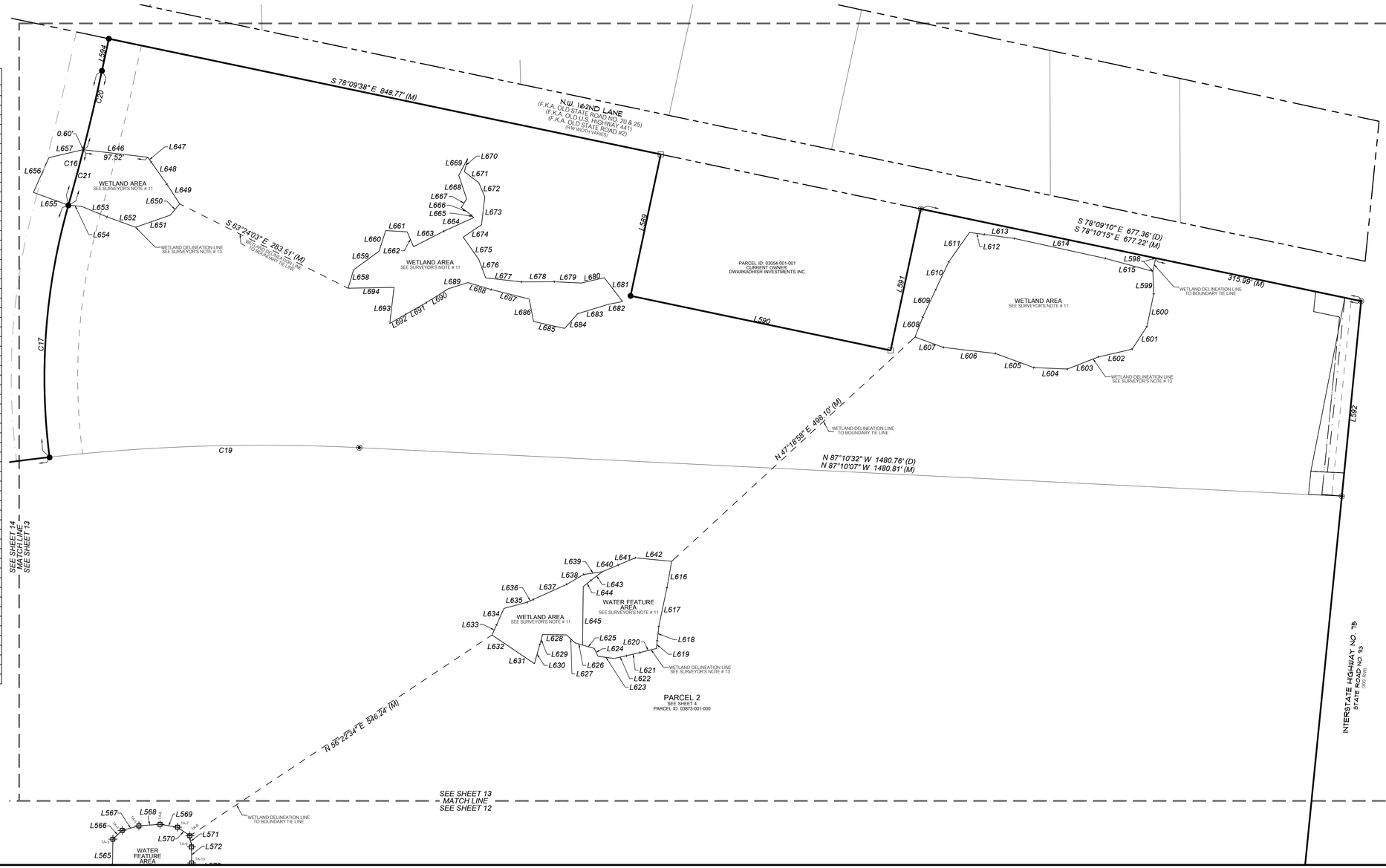
1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

GRAPHIC SCALE
0 40 80 160

N

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L560(M)	S 51°01'05" W	25.58'
L561(M)	S 88°27'02" W	36.20'
L562(M)	S 86°41'57" W	24.68'
L563(M)	N 75°57'44" W	18.26'
L564(M)	N 13°14'10" W	40.08'
L565(M)	N 0°47'10" E	48.77'
L566(M)	N 46°31'27" E	19.27'
L567(M)	N 74°58'02" E	26.11'
L568(M)	N 85°53'02" E	31.88'
L569(M)	S 80°36'57" E	26.59'
L570(M)	S 55°05'58" E	22.65'
L571(M)	S 8°27'40" E	16.90'
L572(M)	S 0°35'57" E	24.22'
L573(M)	S 7°18'05" W	23.25'
L574(M)	S 30°22'21" W	17.10'
L599(M)	S 12°02'31" W	217.85'
L589(D8)	S 12°02'06" W	217.73'
L590(M)	S 78°08'19" E	400.00'
L590(D8)	S 78°08'35" E	399.95'
L591(M)	N 12°02'06" E	217.83'
L591(D8)	N 12°02'06" E	217.80'
L592(M)	S 5°38'39" W	295.24'
L592(D8)	S 5°41'04" W	294.78'
L594(M)	S 12°09'36" W	49.36'
L594(D8)	S 12°09'34" W	49.36'
L598	S 11°49'45" W	20.36'
L599	S 2°12'10" E	33.88'
L600	S 11°53'19" W	50.56'
L601	S 33°10'43" W	40.45'
L602	S 77°00'19" W	52.12'
L603	S 68°44'58" W	50.29'
L604	N 87°28'41" W	50.38'
L605	N 69°49'20" W	61.52'
L606	N 83°20'44" W	78.60'
L607	N 70°01'01" W	45.72'
L608	N 21°22'14" E	32.16'
L609	N 25°06'53" E	46.02'
L610	N 25°06'53" E	46.02'
L611	N 35°13'01" E	54.19'
L612	S 82°20'02" E	22.39'
L613	S 82°19'59" E	45.93'
L614	S 77°38'49" E	139.96'
L615	S 74°44'42" E	74.23'
L616	S 10°18'57" W	40.43'
L617	S 11°53'58" W	59.69'
L618	S 6°06'24" W	21.58'
L619	S 6°06'23" W	11.77'
L620	S 76°21'03" W	25.48'
L621	S 76°21'01" W	21.00'
L622	S 78°00'25" W	19.06'
L623	N 82°25'00" W	24.38'
L624	N 25°11'24" W	13.16'
L625	N 73°59'53" W	18.35'
L626	N 73°59'28" W	11.50'
L627	N 47°26'24" W	17.94'
L628	N 89°15'07" W	35.86'
L629	S 15°35'52" W	15.74'
L630	S 15°35'53" W	29.80'
L631	N 55°53'30" W	41.61'
L632	N 55°53'31" W	35.54'
L633	N 24°16'33" E	16.68'

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L634	N 24°16'34" E	27.16'
L635	N 75°04'52" E	36.27'
L636	N 65°35'27" E	10.20'
L637	N 65°35'28" E	54.78'
L638	N 59°47'10" E	29.80'
L639	N 81°39'45" E	28.46'
L640	N 67°07'16" E	25.65'
L641	N 67°07'12" E	28.02'
L642	S 84°34'03" E	55.22'
L643	S 52°58'54" W	21.59'
L644	S 50°44'13" W	14.94'
L645	S 0°43'16" W	88.01'
L646	S 83°21'44" E	98.12'
L647	S 35°21'48" E	9.11'
L648	S 35°21'43" E	40.39'
L649	S 33°06'42" E	35.75'
L650	S 40°14'12" W	22.17'
L651	S 70°42'36" W	55.18'
L652	N 70°01'01" W	45.72'
L653	N 67°31'14" W	40.87'
L654	N 84°05'34" W	20.95'
L655	N 69°57'54" W	55.63'
L656	N 24°02'02" E	57.37'
L657	N 76°52'13" E	52.60'
L658	N 16°30'23" E	28.93'
L659	N 53°54'05" E	47.52'
L660	N 17°42'39" E	32.64'
L661	S 86°29'47" E	32.45'
L662	S 23°07'58" E	24.34'
L663	N 62°44'48" E	50.96'
L664	N 65°35'36" E	49.42'
L665	N 42°05'21" W	5.31'
L666	N 52°44'53" W	18.76'
L667	N 31°44'17" E	15.28'
L668	N 18°32'45" W	37.32'
L669	N 28°03'25" E	28.65'
L670	S 14°21'27" W	20.36'
L671	S 52°35'55" E	27.52'
L672	S 22°45'15" E	23.10'
L673	S 6°46'40" W	42.21'
L674	S 55°55'17" W	33.31'
L675	S 35°00'11" E	40.88'
L676	S 20°33'21" E	29.67'
L677	S 83°33'30" E	54.16'
L678	N 89°42'42" E	49.47'
L679	S 87°14'06" E	40.66'
L680	N 76°56'40" E	35.55'
L681	S 37°28'59" E	45.39'
L682	S 79°22'51" W	21.20'
L683	S 73°00'33" W	49.01'
L684	S 41°25'24" W	29.52'
L685	N 77°28'16" W	48.02'
L686	N 10°53'06" W	34.47'
L687	N 75°57'56" W	59.06'
L688	N 73°29'44" W	36.67'
L689	S 72°23'41" W	30.96'
L690	S 57°43'28" W	39.01'
L691	S 60°16'51" W	35.69'
L692	S 60°16'52" W	27.56'
L693	N 6°47'33" E	54.68'
L694	S 89°00'17" W	69.14'



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CHW
Professional Consultants

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0 1"

TOMOKA HILLS FARMS, INC.

CERTIFIED TO:

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

SURVEY DATE:	05/10/2022
REVISION DATE:	05/31/2024
PROJECT NUMBER:	21-0025.07
TECHNICIAN:	WKC
CREW CHIEF:	WKC
DRAWN BY:	CAC
CHECKED BY:	CAC
FIELD BOOK & PAGE:	635 / 69 & 650 / 4

CHAD A. COLSON

SEE SHEET ONE OF FORTY-SEVEN

Professional Surveyor & Mapper Fla. License No. 7142

This map prepared by:

Certificate of Authorization No. LB. 5075
VALID WITHOUT THE ORIGINAL SIGNATURE AND SEAL OR ELECTRONIC DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER

SHEET NO.:
13 OF 47

Path: dbdb Plot Date: Jun 14,2024 1:35pm Filename: C:\Jobs\Resource\Temp\AcPublish_15620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

GRAPHIC SCALE
0 125 250 500

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

LINE DATA TABLE

LINE	DIRECTION	LENGTH
L577(M)	N 77°57'58" W	190.34'
L578(M)	N 84°30'07" W	119.08'
L586(M)	S 76°02'39" E	104.62'
L589(M)	S 12°02'31" W	217.85'
L589(D8)	S 12°02'06" W	217.73'
L590(M)	S 78°08'19" E	400.00'
L590(D8)	S 78°08'35" E	399.95'
L591(M)	N 12°02'06" E	217.83'
L591(D8)	N 12°02'06" E	217.80'
L594(M)	S 12°09'36" W	49.36'
L594(D8)	S 12°09'34" W	49.36'
L730(M)	N 78°08'10" W	399.97'
L731(M)	S 0°34'01" E	181.68'
L732(M)	S 89°22'44" W	210.00'
L733(M)	S 0°35'52" E	250.14'
L734(M)	S 0°32'14" E	419.86'
L735(M)	N 58°03'05" E	209.99'
L736(M)	S 0°36'09" E	210.09'
L737(M)	S 58°15'37" W	210.05'

CURVE DATA TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C1(M)	1735.53'	5879.58'	16°54'45"	874.12'	1729.23'	S 2°48'16" E
C1(D1)	1734.82'	5879.58'	16°54'21"	-------	-------	-------
C9(M)	370.81'	10209.13'	2°04'52"	185.43'	370.79'	S 77°08'50" E
C16(M)	209.03'	3259.14'	3°40'29"	104.55'	208.99'	S 13°59'54" W
C16(D8)	209.03'	3259.14'	3°40'29"	104.55'	208.99'	S 13°59'49" W
C17(M)	382.71'	950.00'	23°04'54"	193.99'	380.13'	S 4°16'34" W
C17(D8)	383.18'	950.00'	23°06'37"	194.23'	380.59'	S 4°15'43" W
C24(M)	559.96'	2864.79'	11°11'57"	280.87'	559.06'	S 77°49'57" W

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REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/19/2023: UPDATED WETLANDS

CERTIFIED TO:

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF: WM
CHECKED BY: CAC
FIELD BOOK & PAGE: 635 / (69 & 650) / 4

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SHEET NO.:
14 OF 47

Tech: sbade Plot Date: Jun 14,2024 - 1:56pm Filename: C:\UserResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

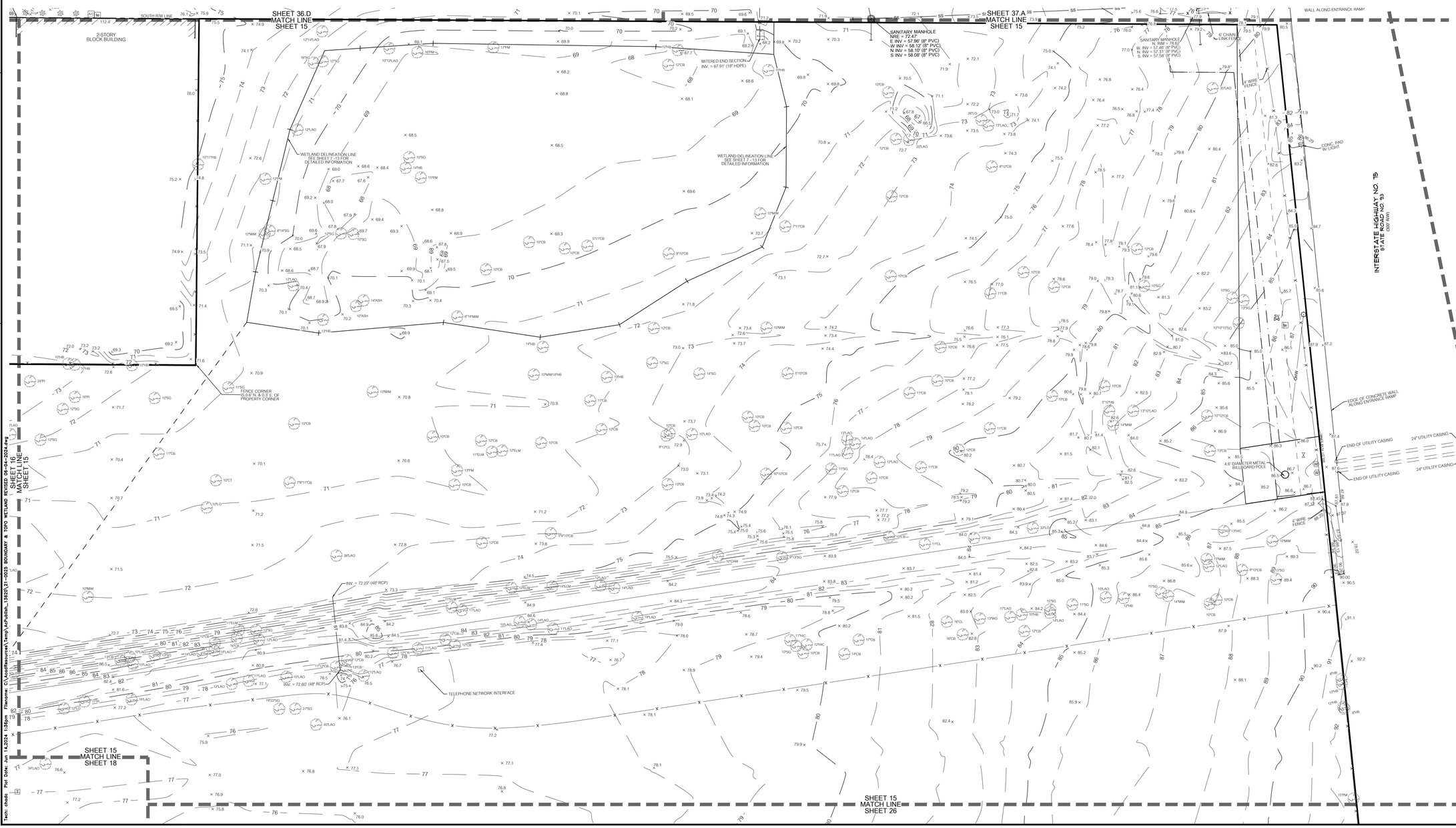
BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

GRAPHIC SCALE
0 15 30 60

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.



SURVEY DATE: 05/10/2022
FIELD BOOK & PAGE: 635 / 69 & 650 / 4
TECHNICIAN: WKC
DRW CHK'D: LM
CHECKED BY: CAC
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

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REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/19/2023: UPDATED WETLANDS

SCALE: 1" = 30'
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SHEET NO.:
15 OF 47

Tech: bbode Plot Date: Jan 11,2024 - 1:35pm Filename: C:\AutoDesk\revit Temp\LAP-bbode_18929_21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

GRAPHIC SCALE
0 15 30 60

SURVEYOR'S NOTES:

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SHEET 36.C MATCH LINE SHEET 16

SHEET 36.D MATCH LINE SHEET 16

BENCHMARK
SET 60D NAIL & CAP
MARKED "TRAV LB 5075"
ELEV = 82.94'

SITE BENCHMARK
SET NAIL & DISK
STAMPED "TRAV PT LB 5075"
ELEVATION = 77.02' (NAVD 88)

SHEET 17 MATCH LINE SHEET 16

SHEET 16 MATCH LINE SHEET 15

SHEET 16 MATCH LINE SHEET 19

SHEET 16 MATCH LINE SHEET 18

SOUTH R/W LINE

8' CHAIN LINK FENCE

1.5' CURB & GUTTER

ELECTRICAL OUTLET

TP: 03054-001-000
KENNETH J & REBECCA H FICKETT

WETLAND DELINEATION LINE
SEE SHEET 7 -13 FOR
DETAILED INFORMATION

PORTIONS OF THE SITE AS SHOWN HEREON HAS BEEN DISTURBED BY EARTH MOVING AND CLEARING. THERE ARE AREAS OF DEBRIS EXPOSED AND POSSIBLY COVERED WITH DIRT.

FENCE CORNER IS 0.7' N & 1.0' E OF PROPERTY CORNER

TOP = 76.01' (6" PVC)

TOP = 76.08' (8" PVC)

INV. = 75.38' (8" PVC)

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0 1"

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REVISION 10/18/2023: UPDATED WETLANDS
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 1/8/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WHC
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SHEET NO.:
16 OF 47

Task: dtob Plot Date: Jan 14,2024 1:37pm Filename: C:\ecdReasurse\Temp\AcPubish_15620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

SURVEYOR'S NOTES:

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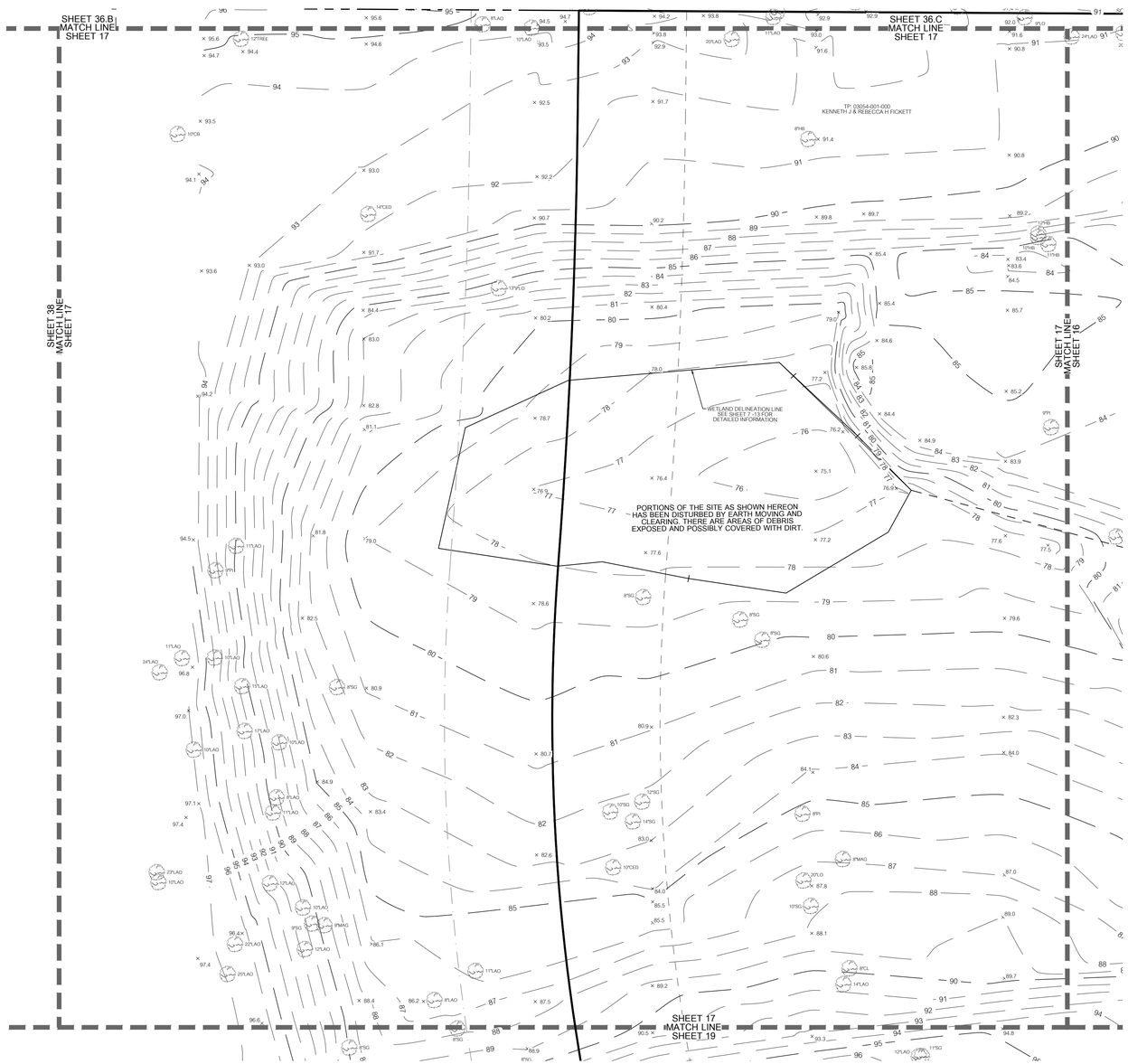
BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST,
ALACHUA COUNTY, FLORIDA

GRAPHIC SCALE
0 15 30 60



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TOMOKA HILLS FARMS, INC.

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF: WM
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SHEET NO.:
17 OF 47

Tech: chadc Plot Date: Jun 14,2024 1:37pm Filename: C:\AcadResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

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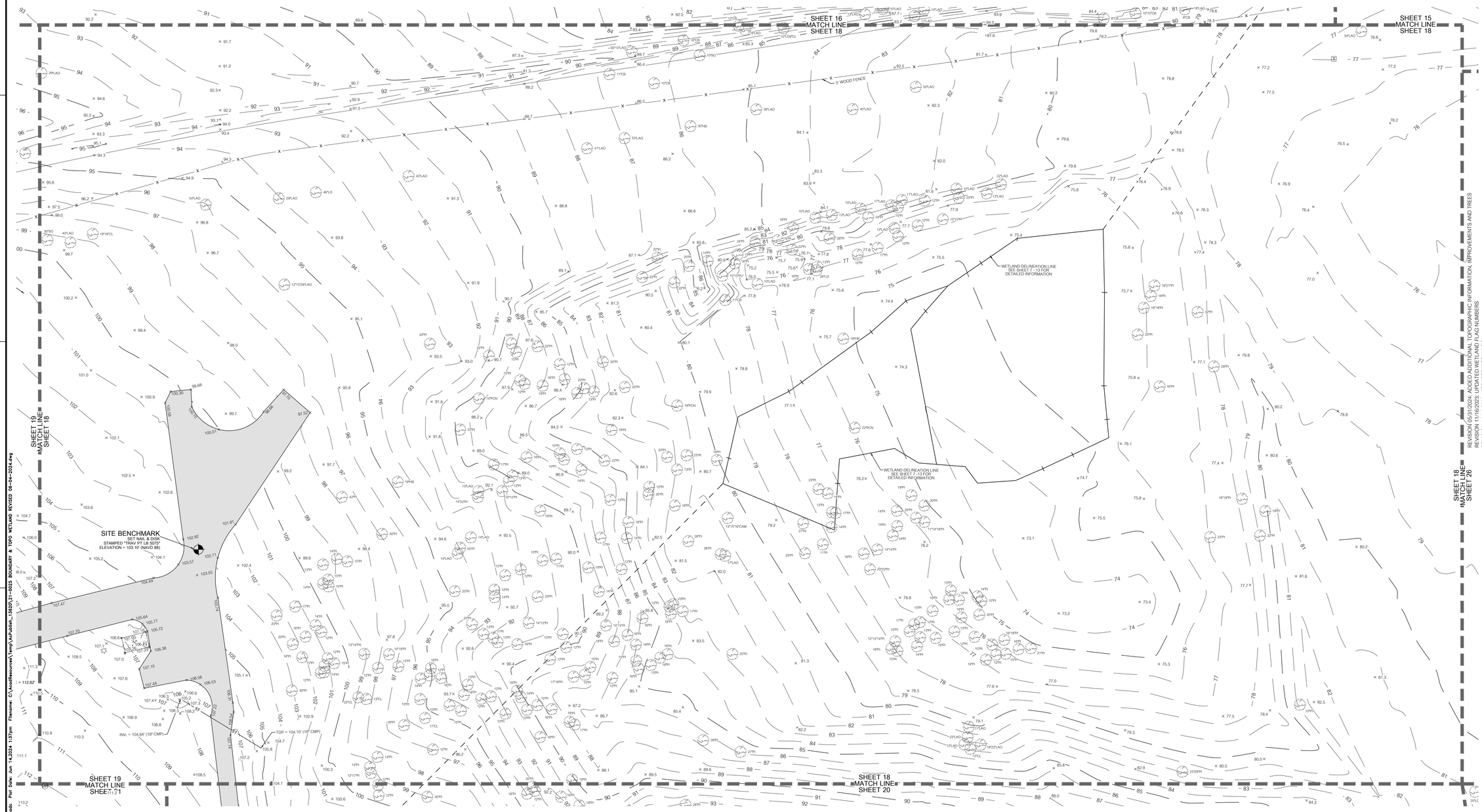
BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST,
ALACHUA COUNTY, FLORIDA

GRAPHIC SCALE
0 15 30 60



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PROJECT NUMBER: 21-0025.07

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CREW CHIEF: WM
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SHEET NO.:
18 OF 47

Tech: chads Plot Date: Jun 14,2024 1:37pm Filename: C:\AcadResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST,
ALACHUA COUNTY, FLORIDA

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GRAPHIC SCALE
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SHEET NO.:
19 OF 47

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST,
ALACHUA COUNTY, FLORIDA

GRAPHIC SCALE
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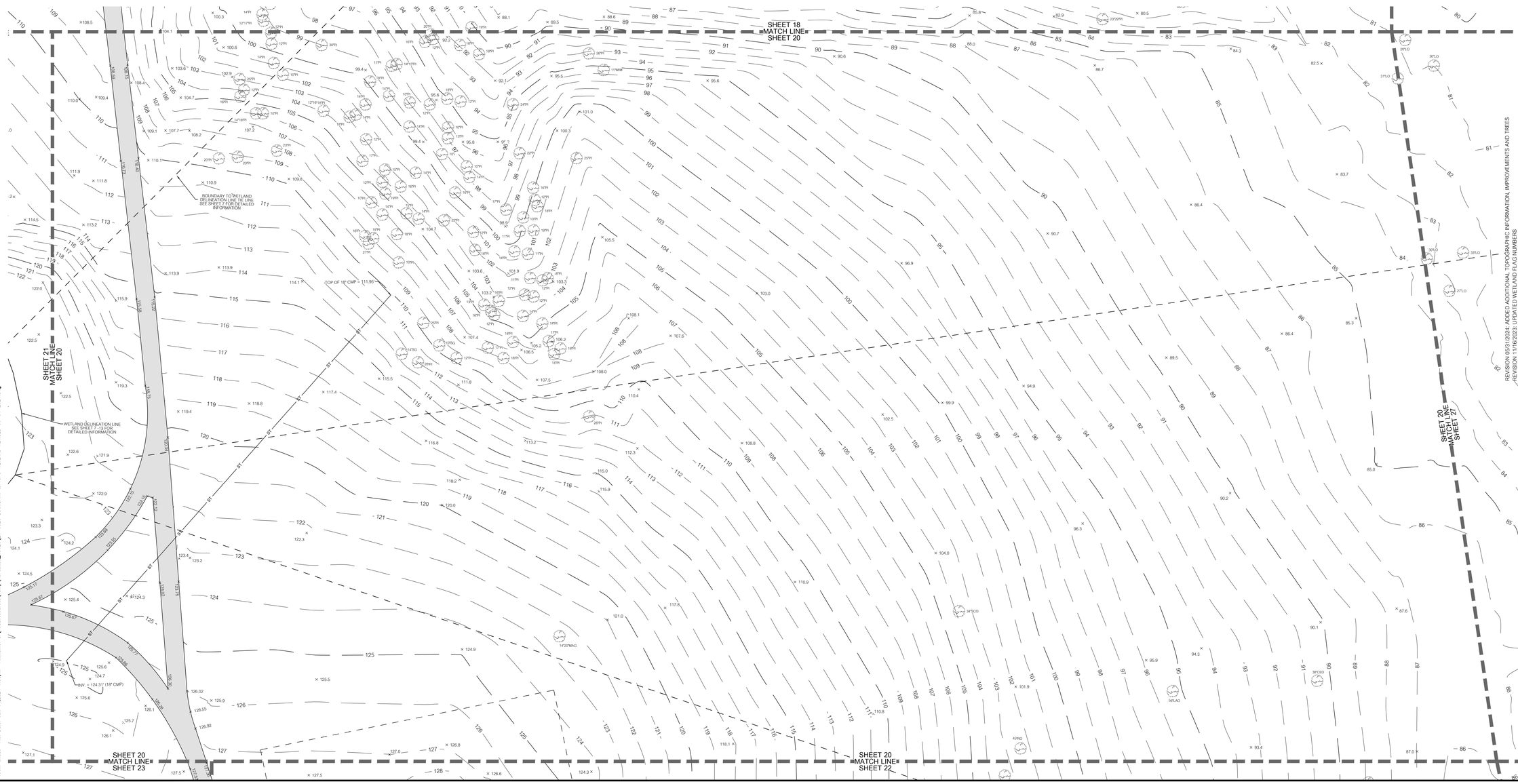

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20 OF 47

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BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

GRAPHIC SCALE

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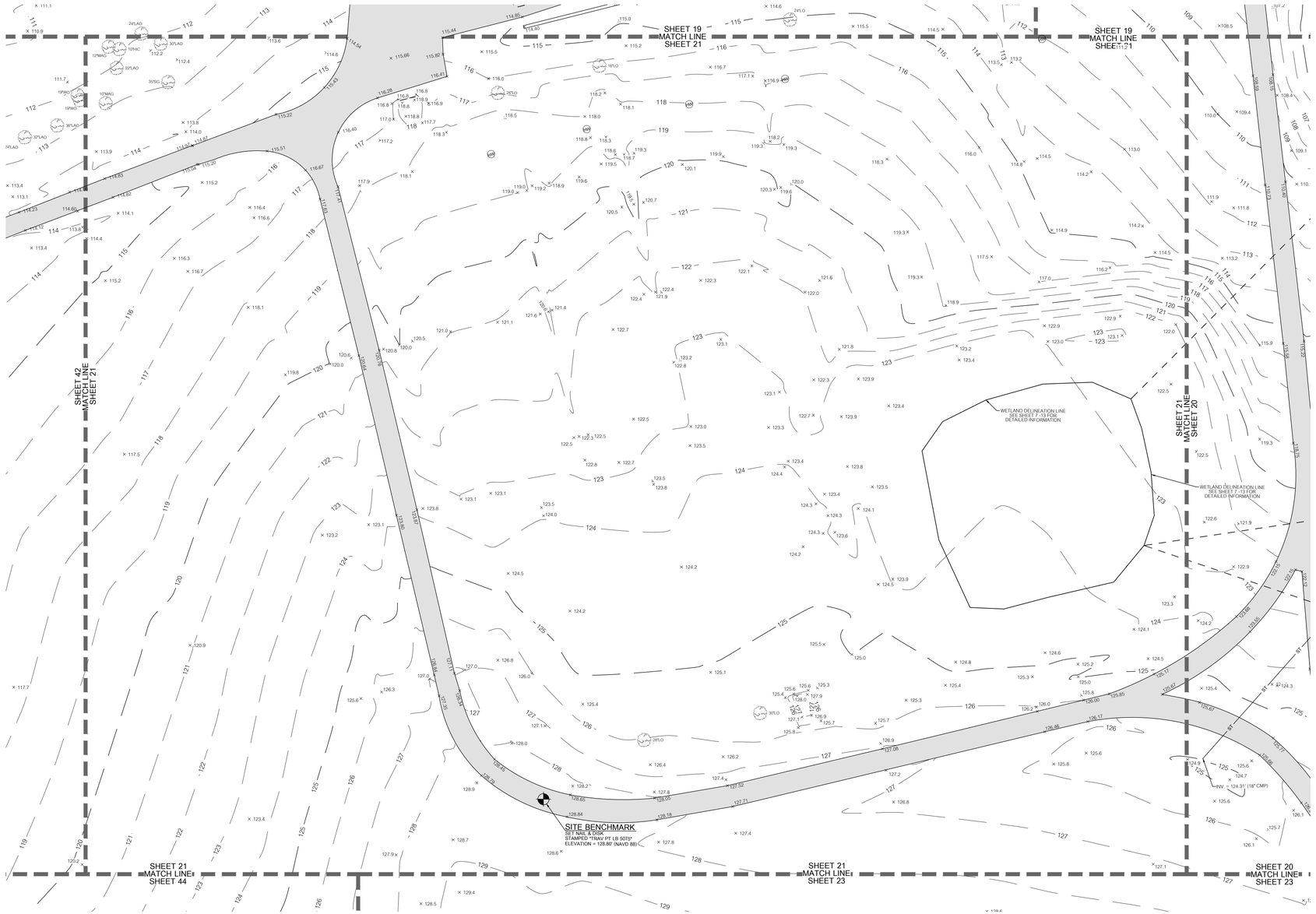

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SHEET NO.:
21 OF 47

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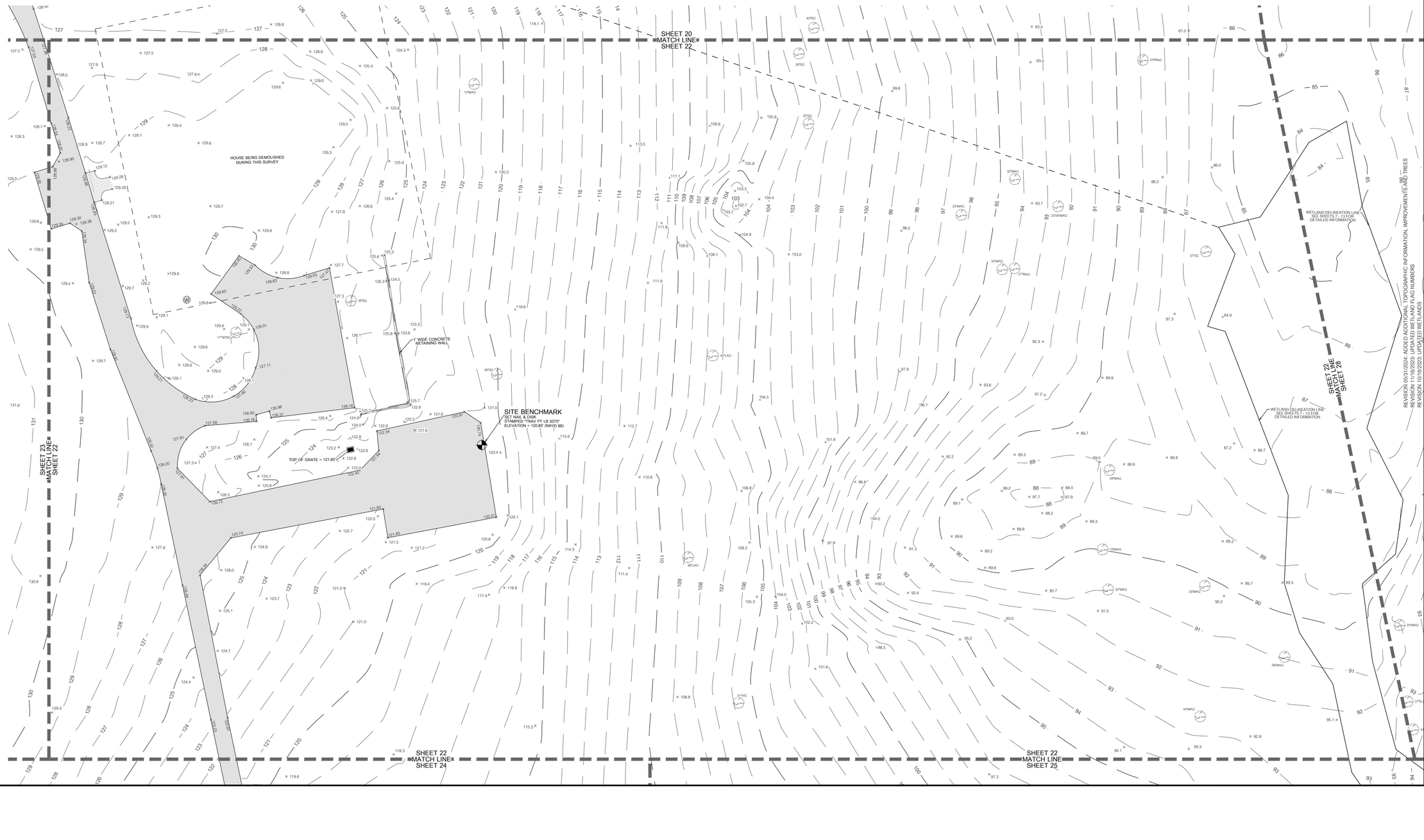
GRAPHIC SCALE
0 15 30 60



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SHEET NO.:
22 OF 47

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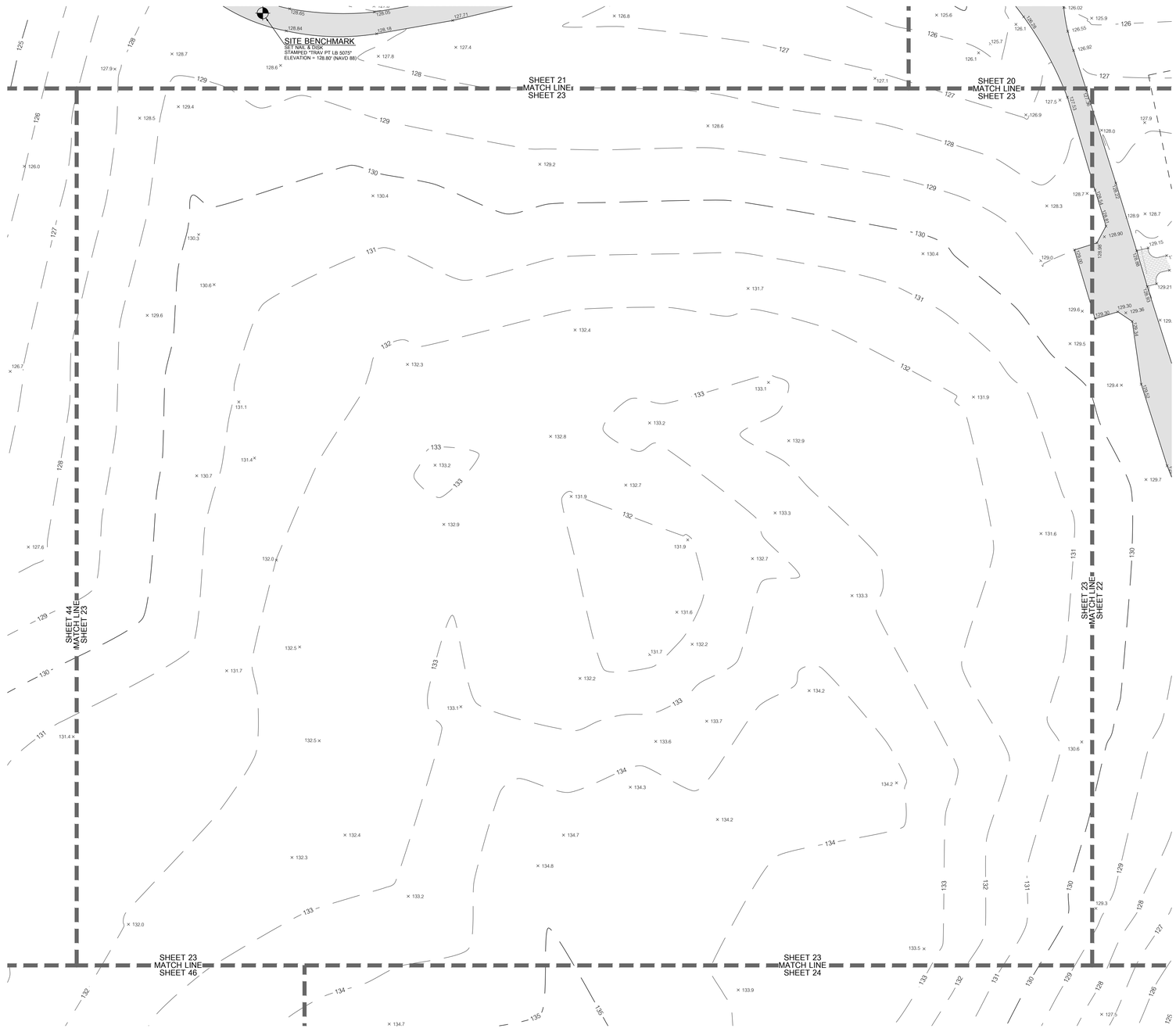

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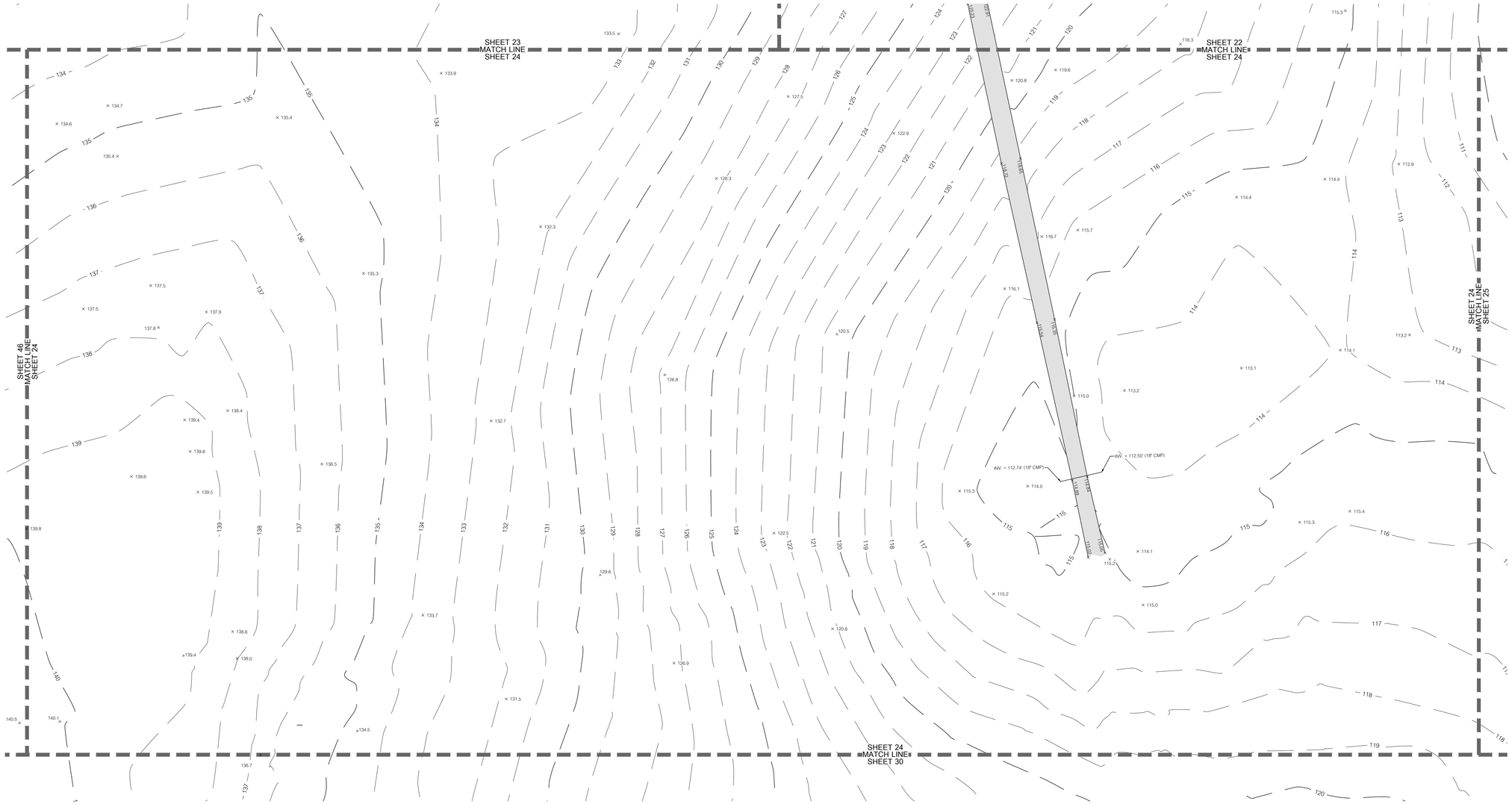

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SHEET NO.:
24 OF 47

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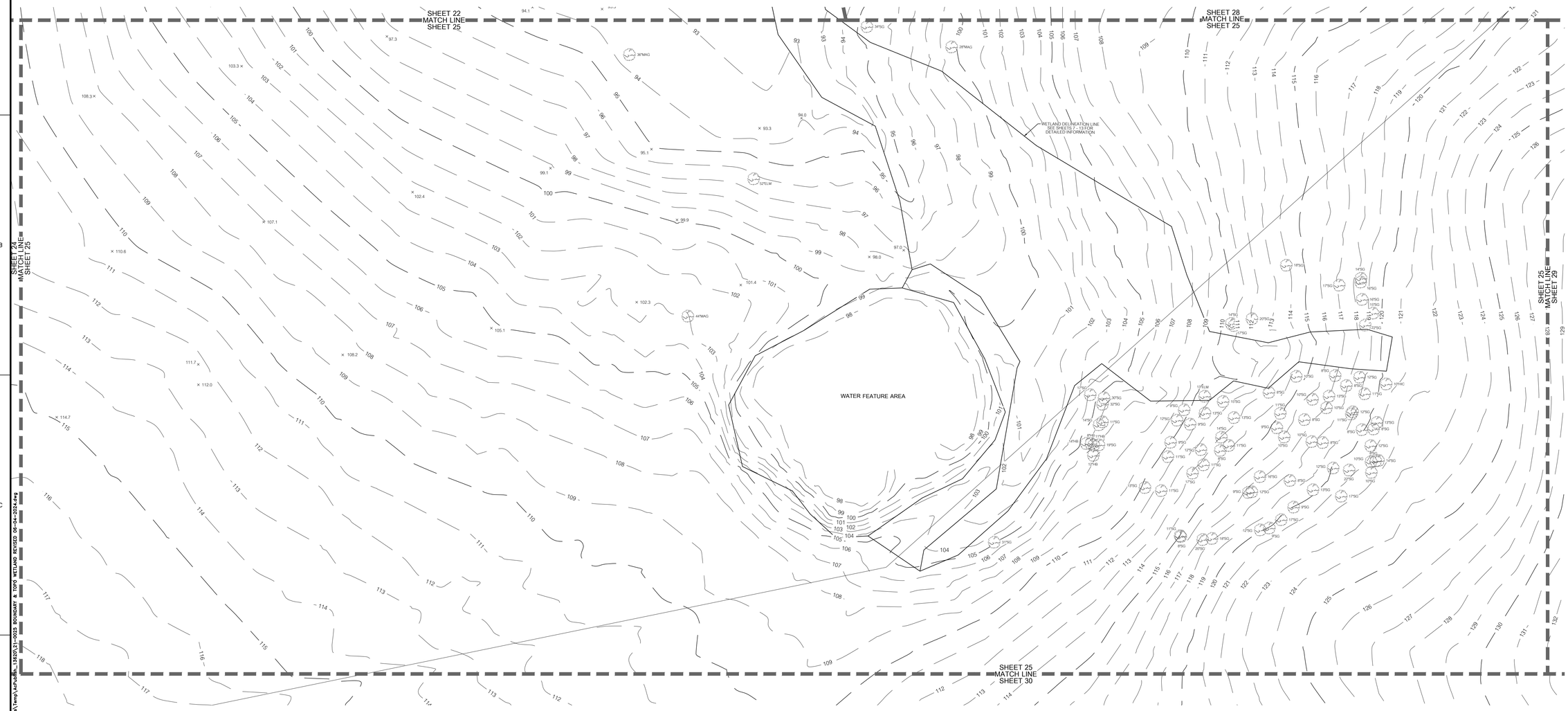
BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

GRAPHIC SCALE
0 15 30 60

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS



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SCALE: 1" = 30'

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IF NOT ONE INCH ON
THIS SHEET ADJUST
SCALES ACCORDINGLY.
0 1" 2"

CERTIFIED TO:

TOMOKA HILLS FARMS, INC.

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF: WKC
CHECKED BY: CAC
FIELD BOOK & PAGE: 635 / 69 & 650 / 4

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LICENSED SURVEYOR AND MAPPER

SHEET NO.:
25 OF 47

Tech: chde Plot Date: Jan 14,2024 1:39pm Filename: C:\Jobs\Resources\Temp\Autodesk\3620\21-0025 BOUNDARY & TOPO WETLAND REVISED 05-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

SURVEYOR'S NOTES:

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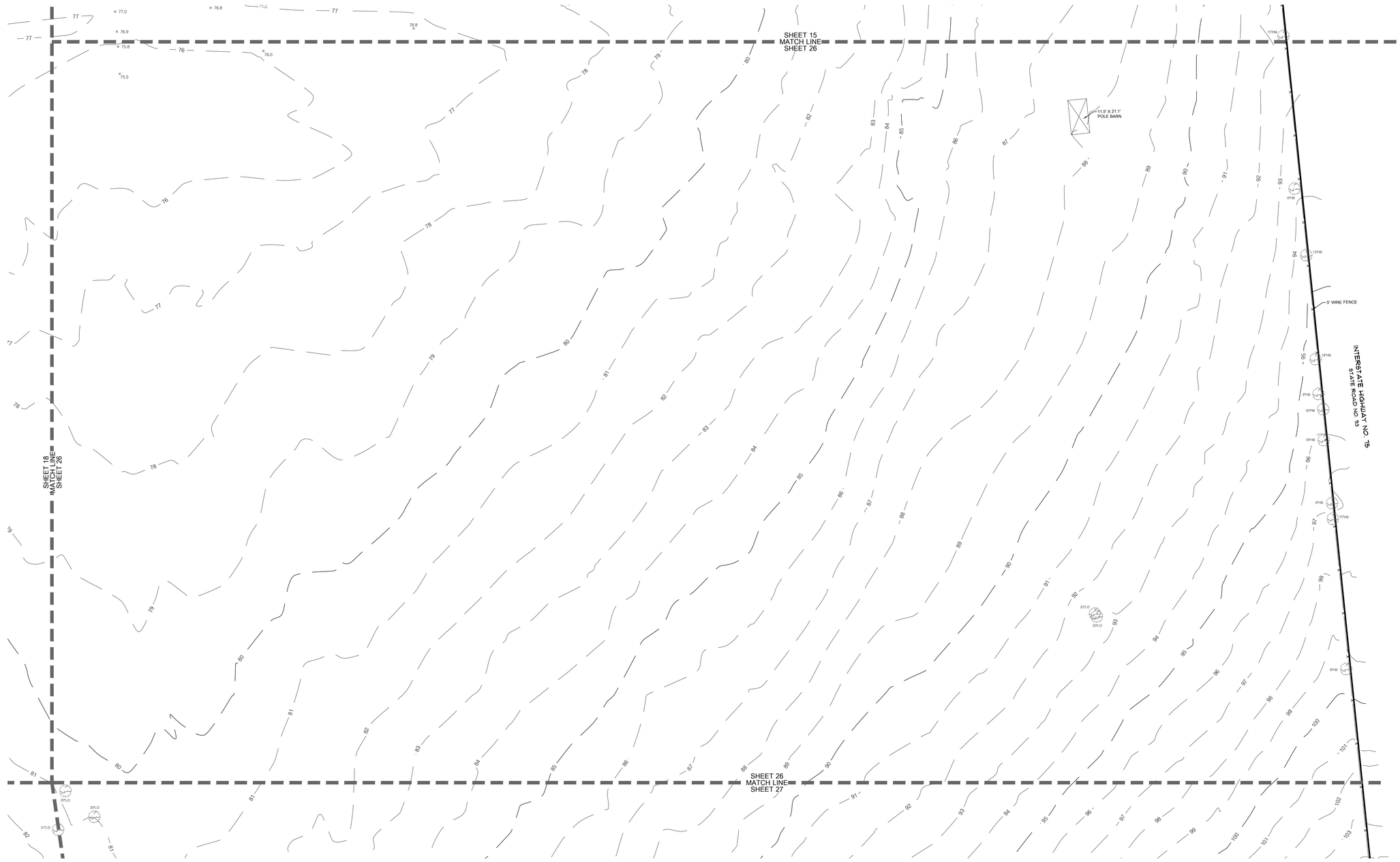
GRAPHIC SCALE
0 15 30 60



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REVISION 10/19/2023: UPDATED WETLANDS

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0 1"

TOMOKA HILLS FARMS, INC.

SURVEY DATE: 05/10/2022
CERTIFIED TO:

TECHNICIAN: WKC
CREW CHIEF: WKC
CHECKED BY: CAC
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07
FIELD BOOK & PAGE: 635 / 69 & 650 / 4

This map prepared by:

CHAD A. COLSON

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Certificate of Authorization No. L.B. 5075
IT IS A VIOLATION OF FLORIDA LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED SURVEYOR AND MAPPER, TO ALTER IN ANY WAY, ANY SURVEY MAP OR REPORT BEARING THE SEAL OF A LICENSED SURVEYOR AND MAPPER UNLESS THE SIGNATURE OF THE SURVEYOR AND MAPPER IS PRESENT AND THE DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER

SHEET NO.:
26 OF 47

Tech: bhale Plot Date: Jun 14,2024 1:39pm Filename: C:\LeadResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST,
ALACHUA COUNTY, FLORIDA

SURVEYOR'S NOTES:

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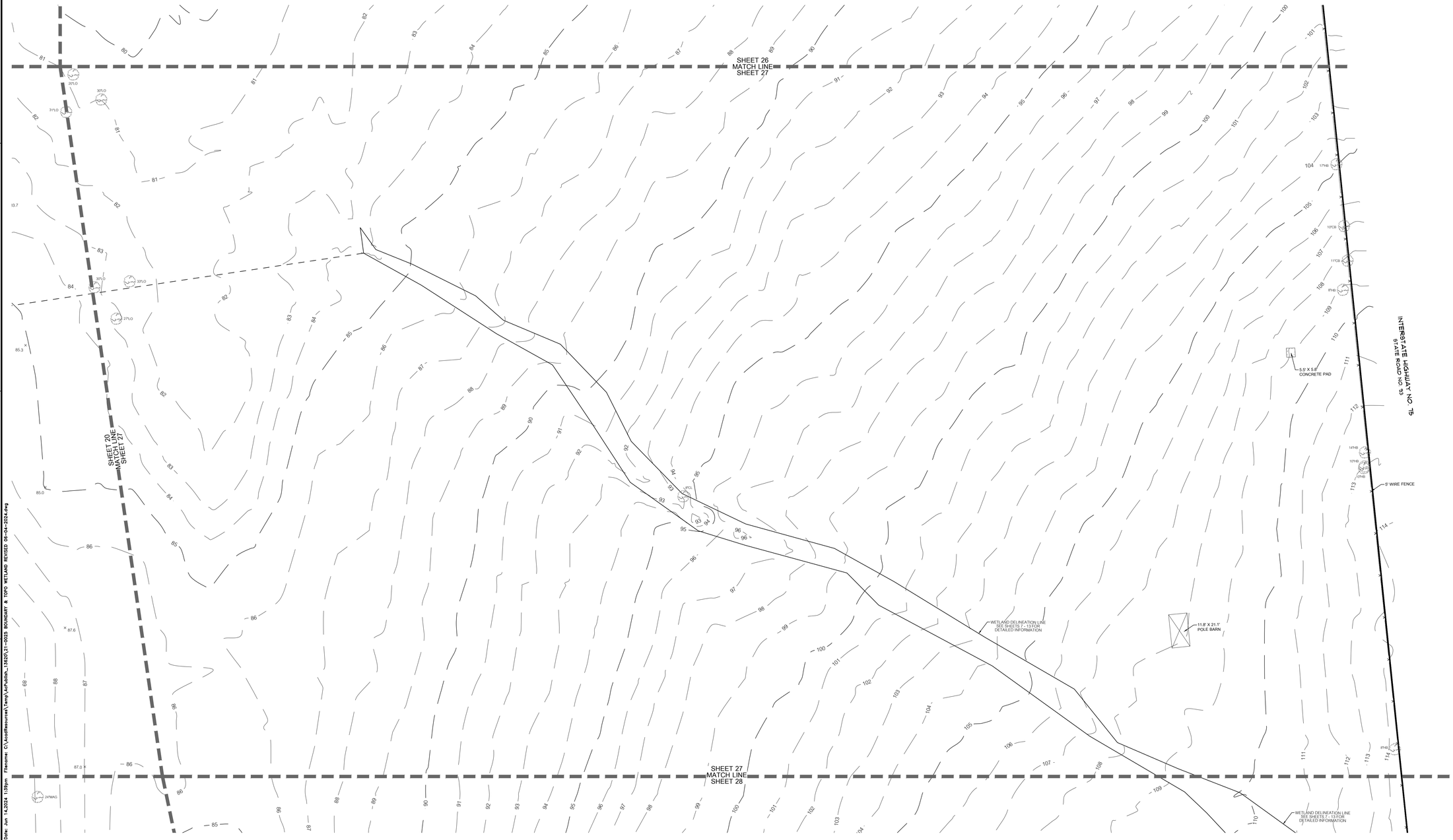
GRAPHIC SCALE
0 15 30 60



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CERTIFIED TO: TOMOKA HILLS FARMS, INC.

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
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SHEET NO.: 27 OF 47

Tech: chada Plot Date: Jun 14,2024 1:39pm Filename: C:\AcadResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

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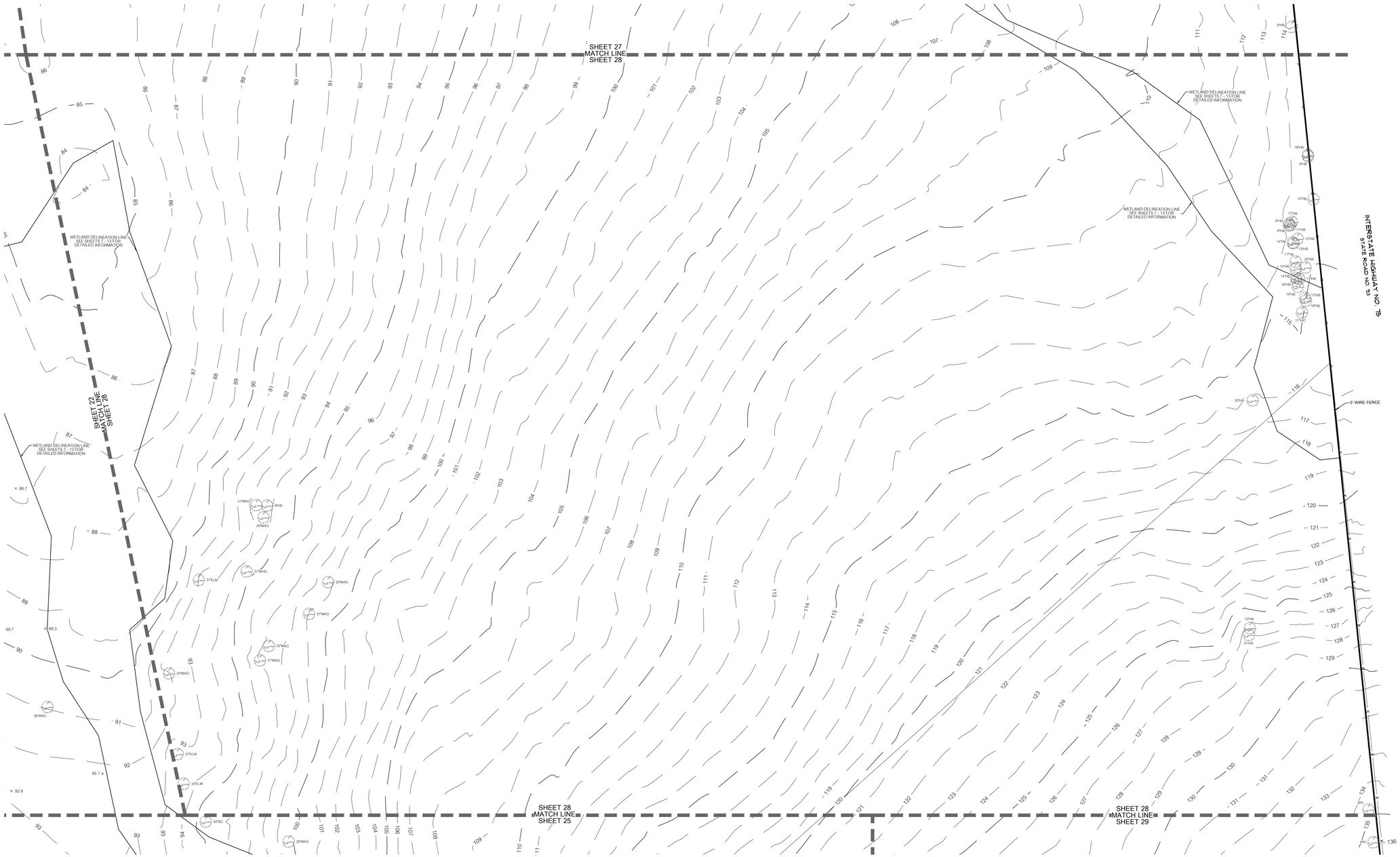
GRAPHIC SCALE
0 15 30 60



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0 1"

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REVISION 10/19/2023: UPDATED WETLANDS

CERTIFIED TO:

TOMOKA HILLS FARMS, INC.

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

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SHEET NO.:
28 OF 47

Tech: chadc Plot Date: Jun 14,2024 1:39pm Filename: C:\UserResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST,
ALACHUA COUNTY, FLORIDA

N

GRAPHIC SCALE

0 15 30 60

SURVEYOR'S NOTES:

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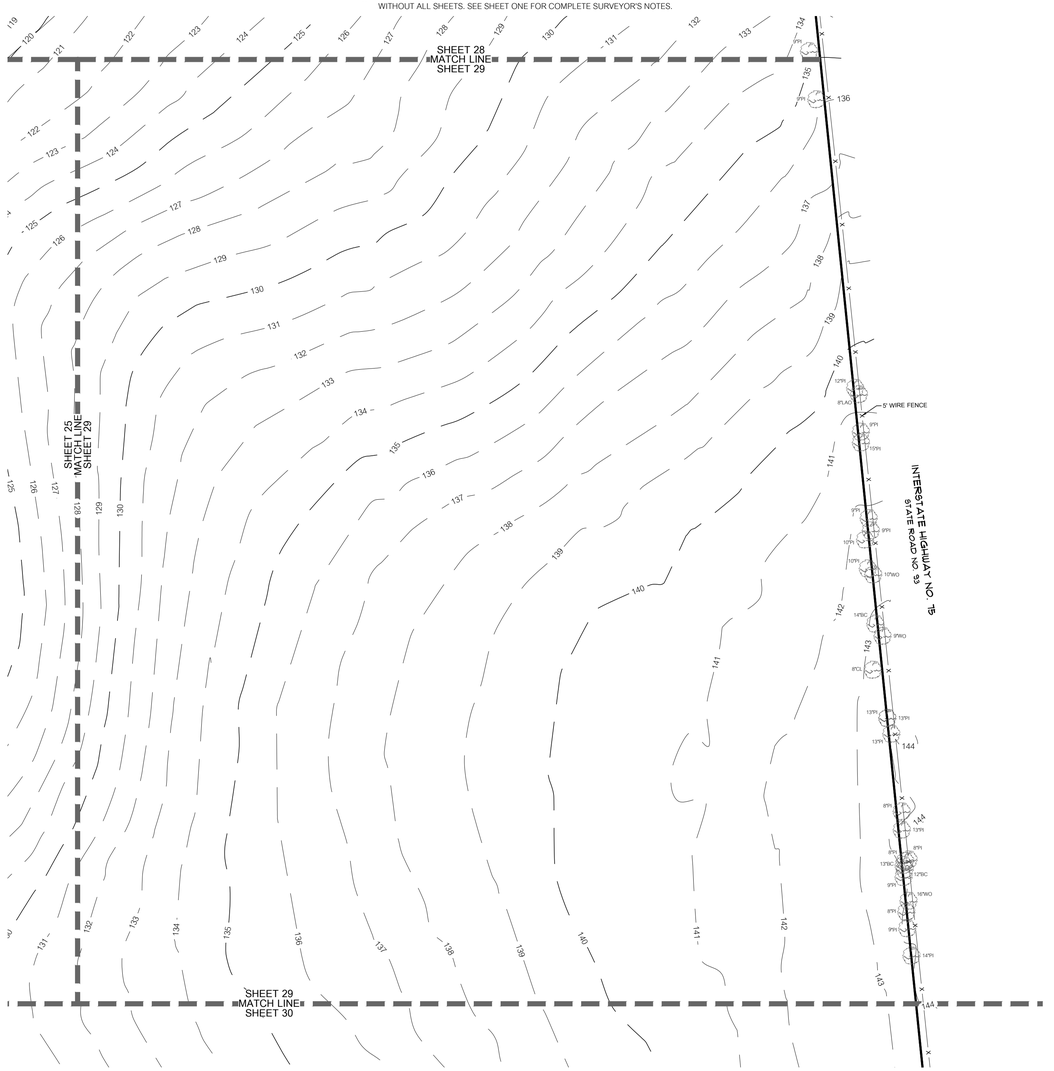

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SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
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SHEET NO.:
29 OF 47

Tech: chadc Plot Date: Jun 14,2024 1:40pm Filename: C:\AcadResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

SURVEYOR'S NOTES:

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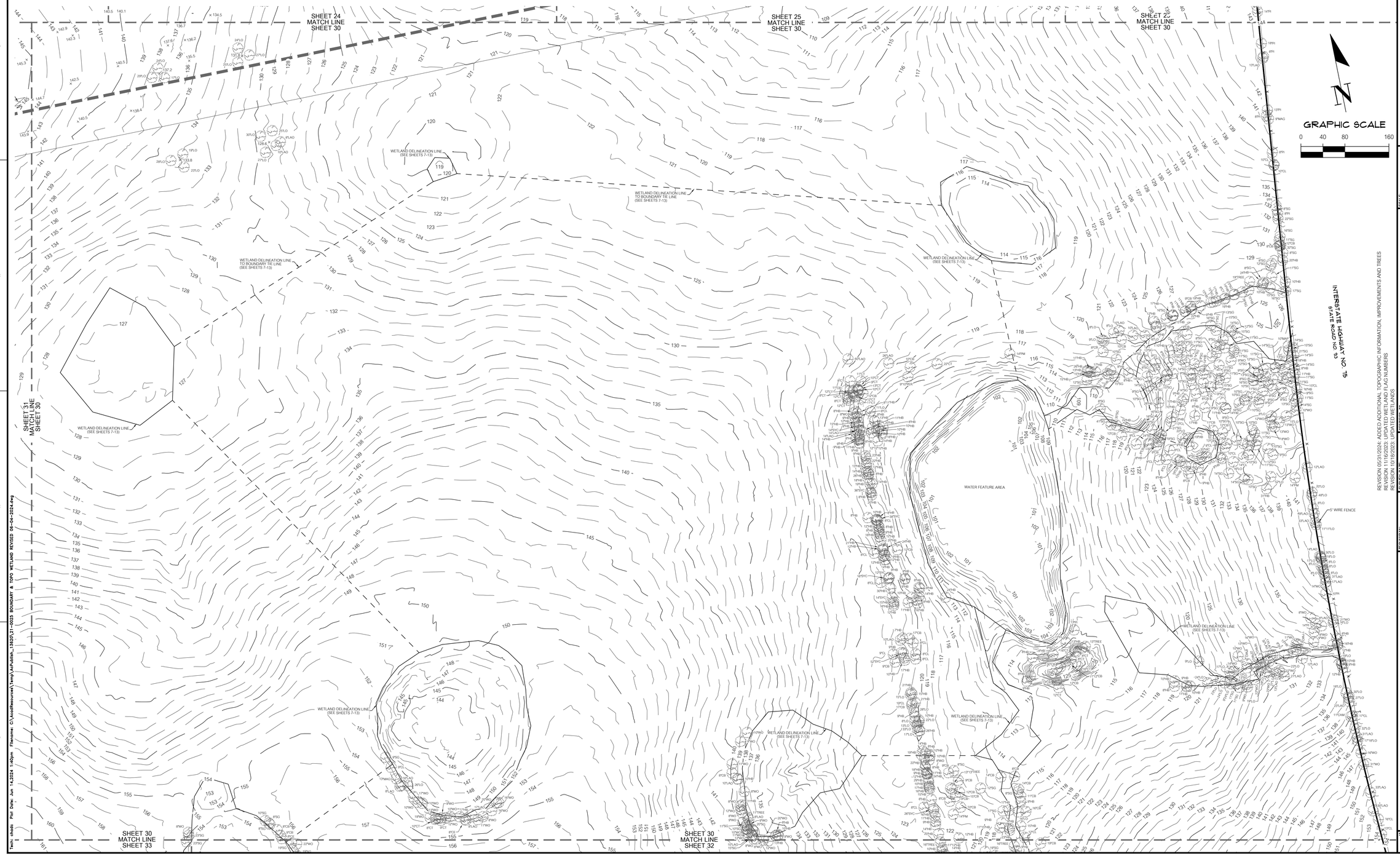

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SCALE: 1" = 80'

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CERTIFIED TO:

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SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF: WM
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FIELD BOOK & PAGE: 635 / 69 & 650 / 4

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SHEET NO.: 30 OF 47

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

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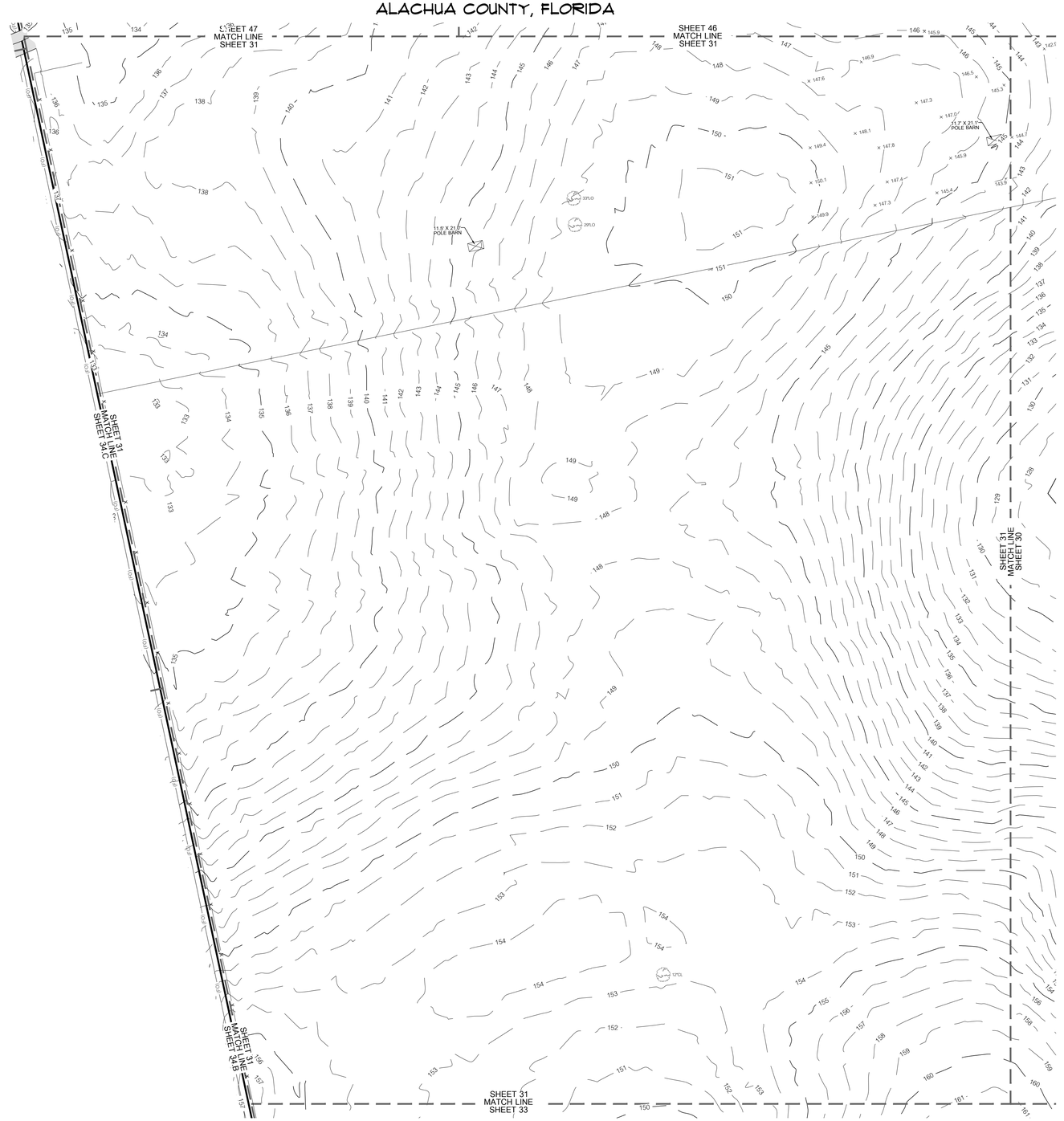

GRAPHIC SCALE
0 40 80 160

N

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS, AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
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SCALE: 1" = 80'

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0" 1"

CERTIFIED TO:

TECHNICIAN: WHC	SURVEY DATE: 05/10/2022
CREW CHIEF: DMC	REVISION DATE: 05/31/2024
APPROVED BY: CAC	PROJECT NUMBER: 21-0025.07
	FIELD BOOK & PAGE: 635 / 69 & 650 / 4

This map prepared by:

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SHEET NO.:
31 OF 47

Tech: dbode Plot Date: Jun 14,2024 1:40pm Filename: C:\Acad\Resurvey\Temp\AcPubSubTa_15620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

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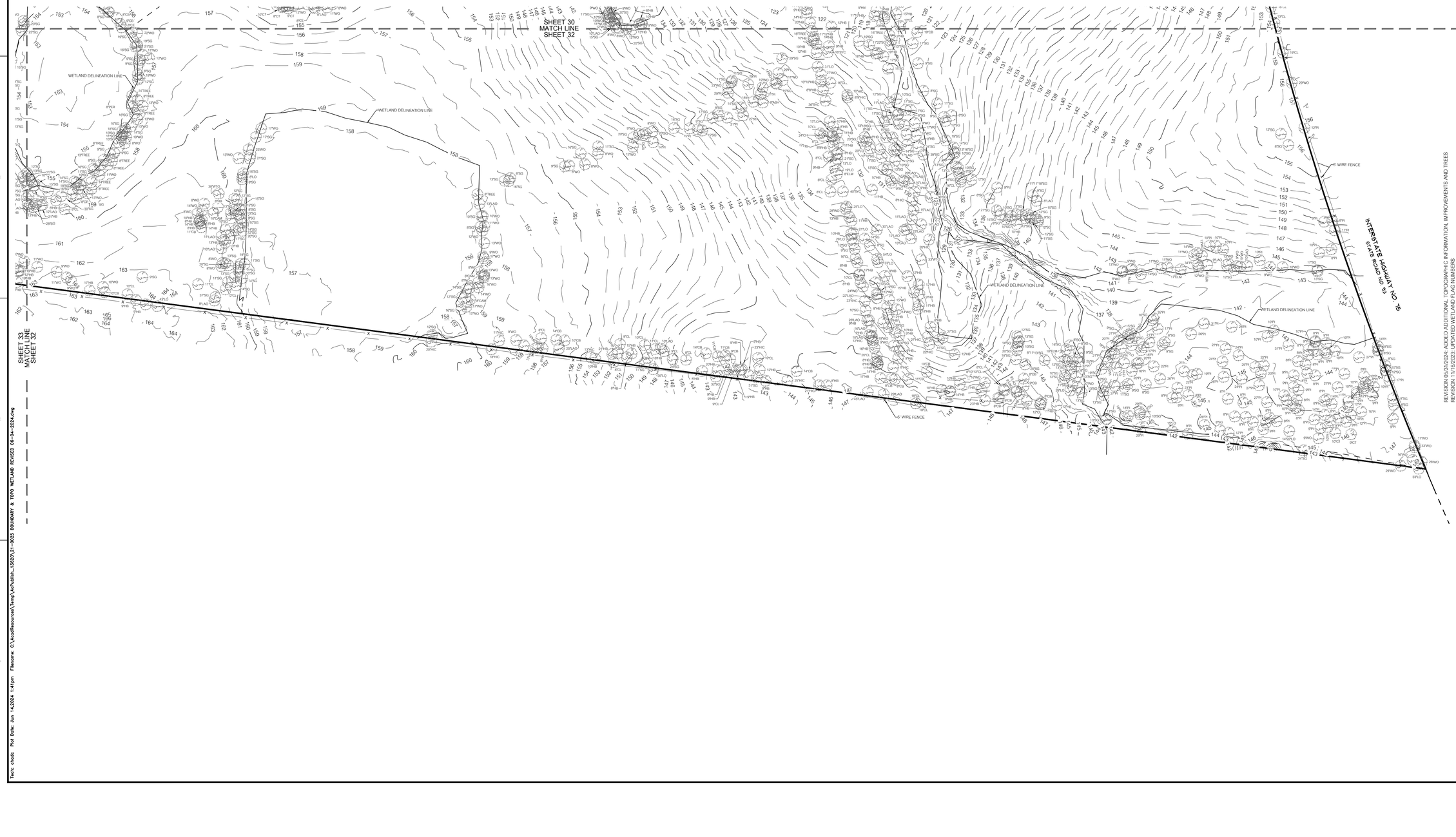
GRAPHIC SCALE
0 40 80 160



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SURVEY DATE: 05/10/2022
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PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF: WM
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SHEET NO.:
32 OF 47

Tech: chade Plot Date: Jun 14,2024 1:41pm Filename: C:\Users\Resources\Temp\AcPublish_13820\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

GRAPHIC SCALE
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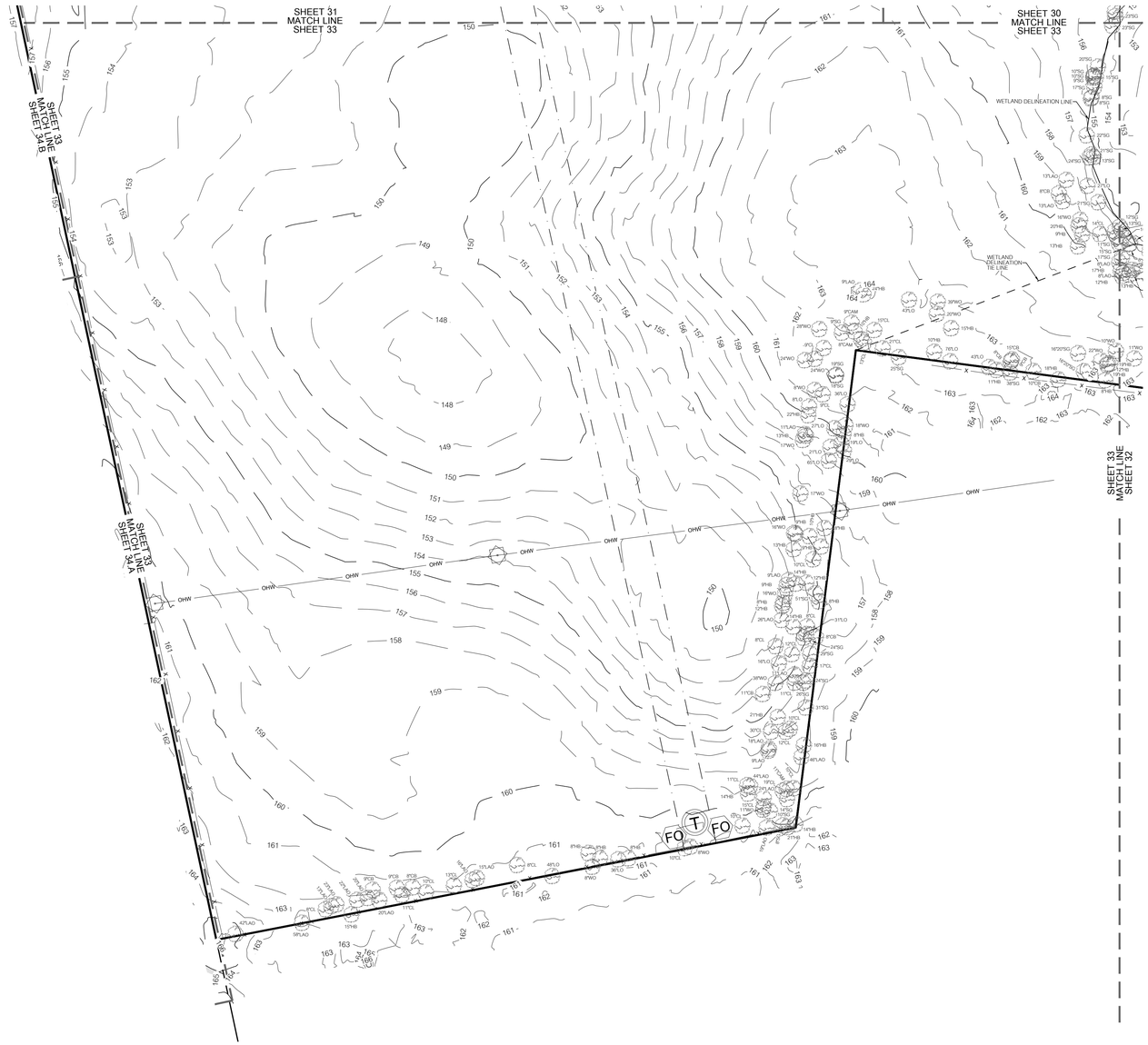

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PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF: WK
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SHEET NO.:
33 OF 47

Tech: chase Plot Date: Jan 14,2024 1:41pm Filename: C:\Acad\Resources\temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

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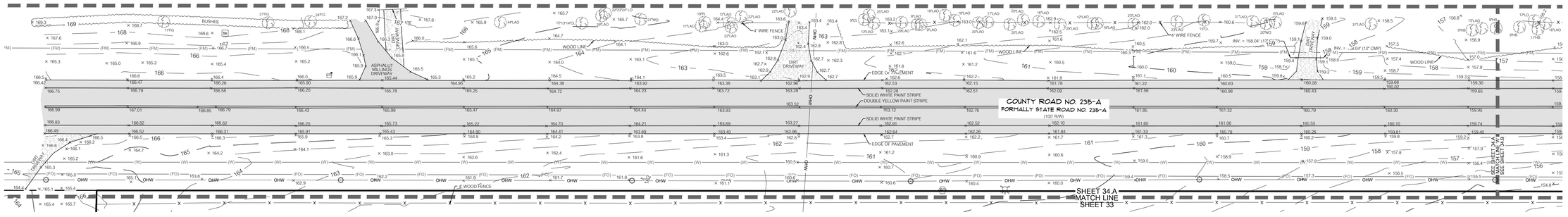
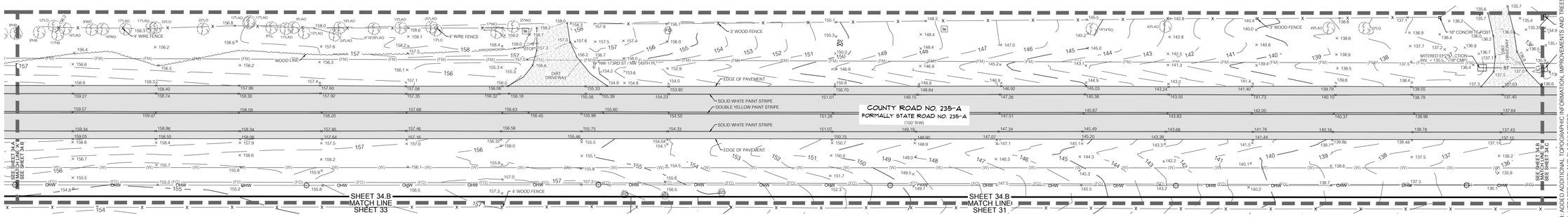
GRAPHIC SCALE
0 15 30 60

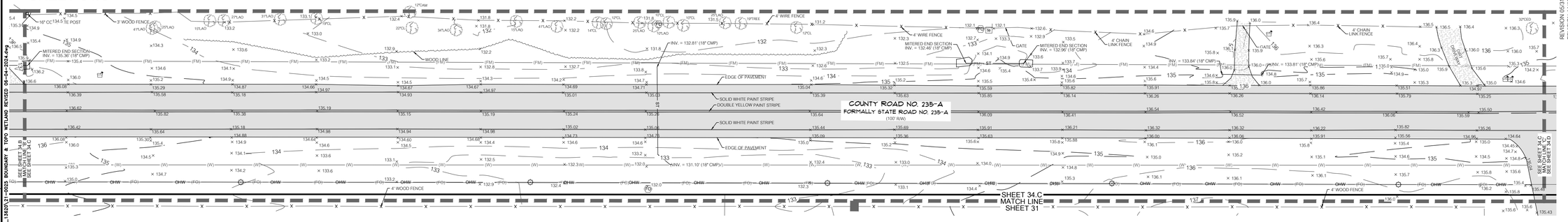
SHEET 34.A



SHEET 34.B



SHEET 34.C



SHEET 34.D

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/16/2023: UPDATED WETLANDS

CERTIFIED TO:

TOMOKA HILLS FARMS, INC.

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SEE SHEET ONE OF FORTY-SEVEN

SHEET NO.: 34 OF 47

SCALE: 1" = 30'
VERIFY SCALE BAR ON EACH SHEET
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.
0 1" 2"

TECHNICIAN: WKC
CREW CHIEF: CAC
DRAWN BY: CAC
FIELD BOOK & PAGES: 635 / 69 & 650 / 4
SURVEY DATE: 05/10/2022
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BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

GRAPHIC SCALE

0 15 30 60

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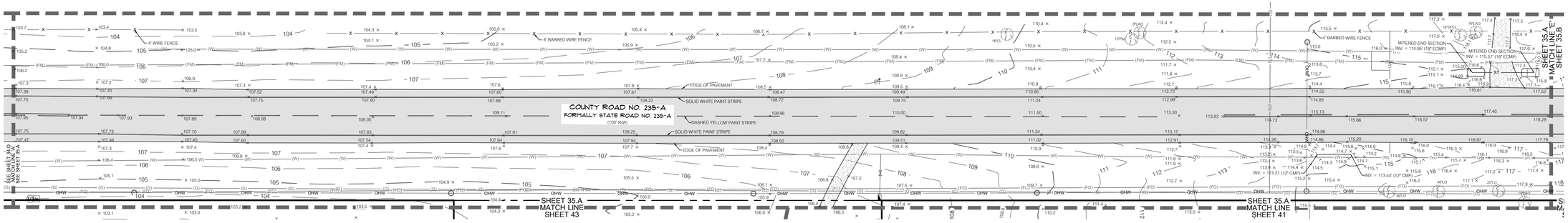
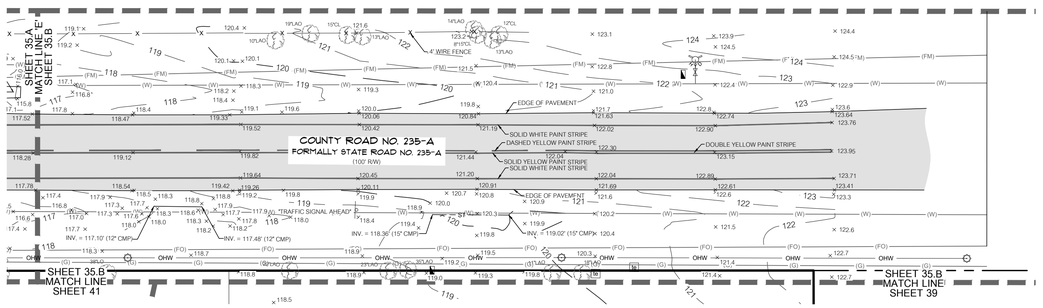
SHEET 35.A



SHEET 35.B



ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
UPDATED WETLAND FLAG NUMBERS
UPDATED WETLANDS

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CREW CHIEF: MW
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SCALES ACCORDINGLY.
0 1"

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SHEET NO.:
35 OF 47

Tech: chade Plot Date: Jun 14,2024 1:42pm Filename: C:\AcadResources\Temp\AcPublish_13520\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

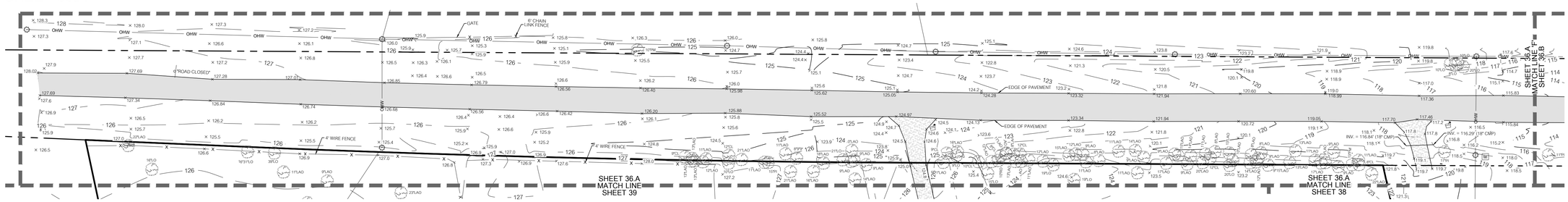
SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

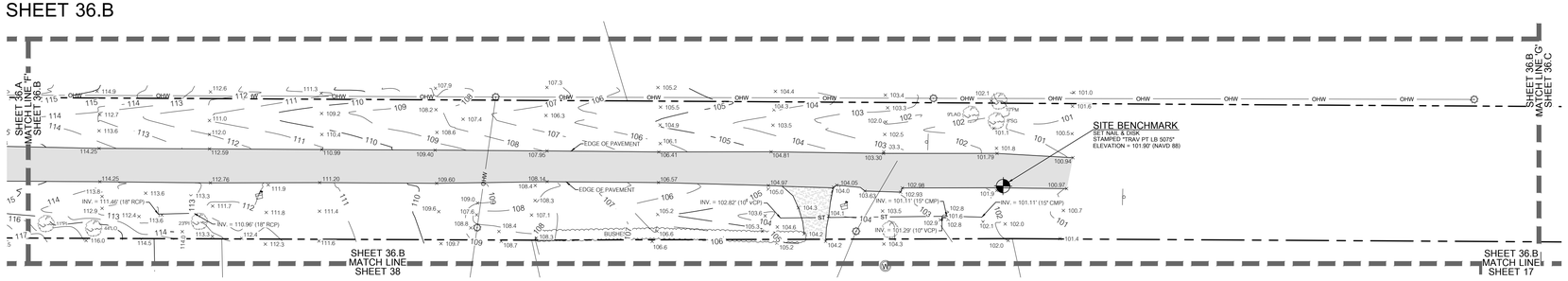
GRAPHIC SCALE
0 15 30 60

N

SHEET 36.A



SHEET 36.B



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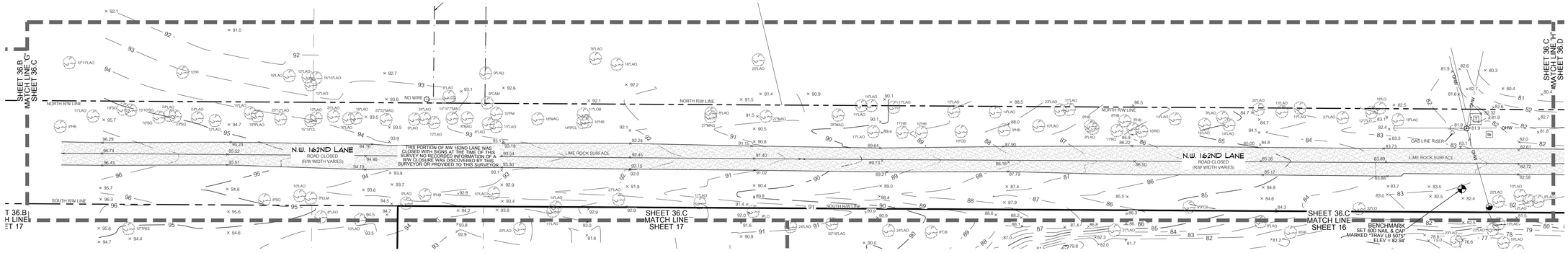

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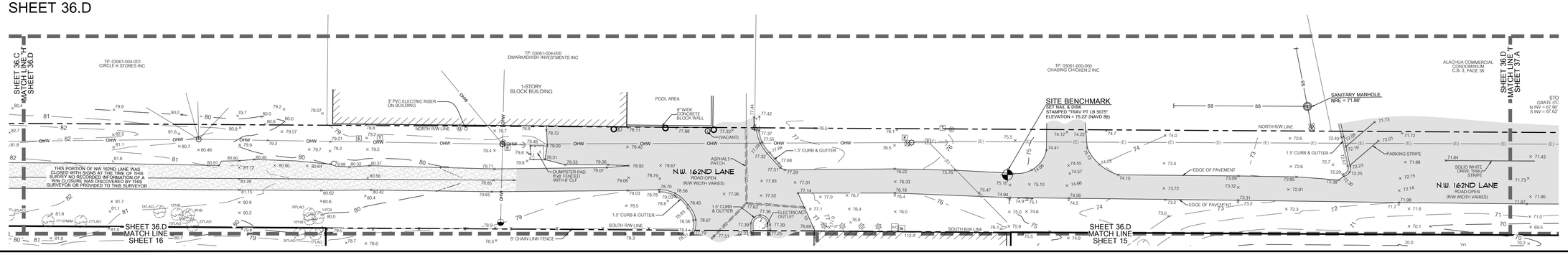

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SCALE: 1" = 30'

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0 1"

TOMOKA HILLS FARMS, INC.

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

CERTIFIED TO:

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF: WKC
CHECKED BY: CAC
FIELD BOOK & PAGE: 635 / 69 & 650 / 4

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SHEET NO.: 36 OF 47

Path: dbide Plot Date: Jan 14,2024 1:43pm Filename: C:\Acad\Resources\Temp\AcPublish_15620\21-0025 BOUNDARY & TOPO WETLAND REVISED 05-24-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

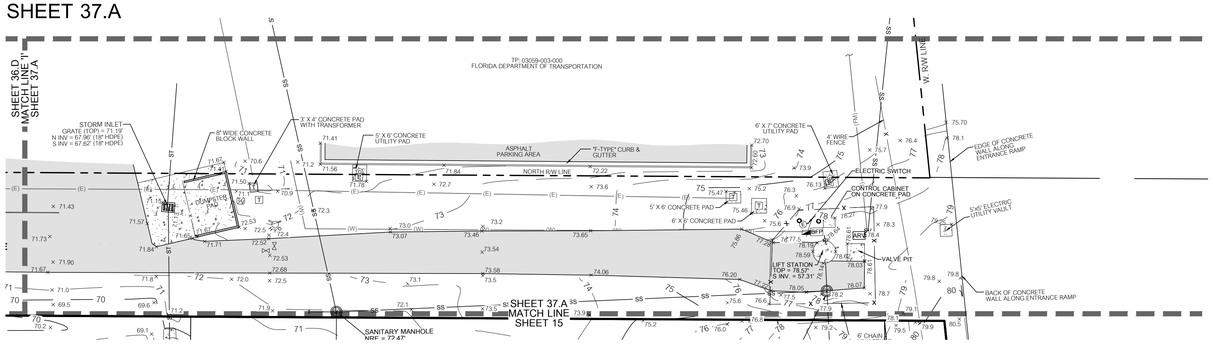
GRAPHIC SCALE

0 15 30 60

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

SHEET 37.A



REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

CERTIFIED TO:

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SCALE: 1" = 30'

VERIFY SCALE BAR ON EACH SHEET IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY. 0 1"

SURVEY DATE: 05/10/2022

REVISION DATE: 05/31/2024

PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC

CREW CHIEF: WK

CHECKED BY: CAC

FIELD BOOK & PAGE: 635 / 69 & 650 / 4

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SHEET NO.:
37 OF 47

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Tech: chde Plot Date: Jun 14,2024 1:43pm Filename: C:\Acad\Resources\temp\AcPublish_15620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST,
ALACHUA COUNTY, FLORIDA

SURVEYOR'S NOTES:

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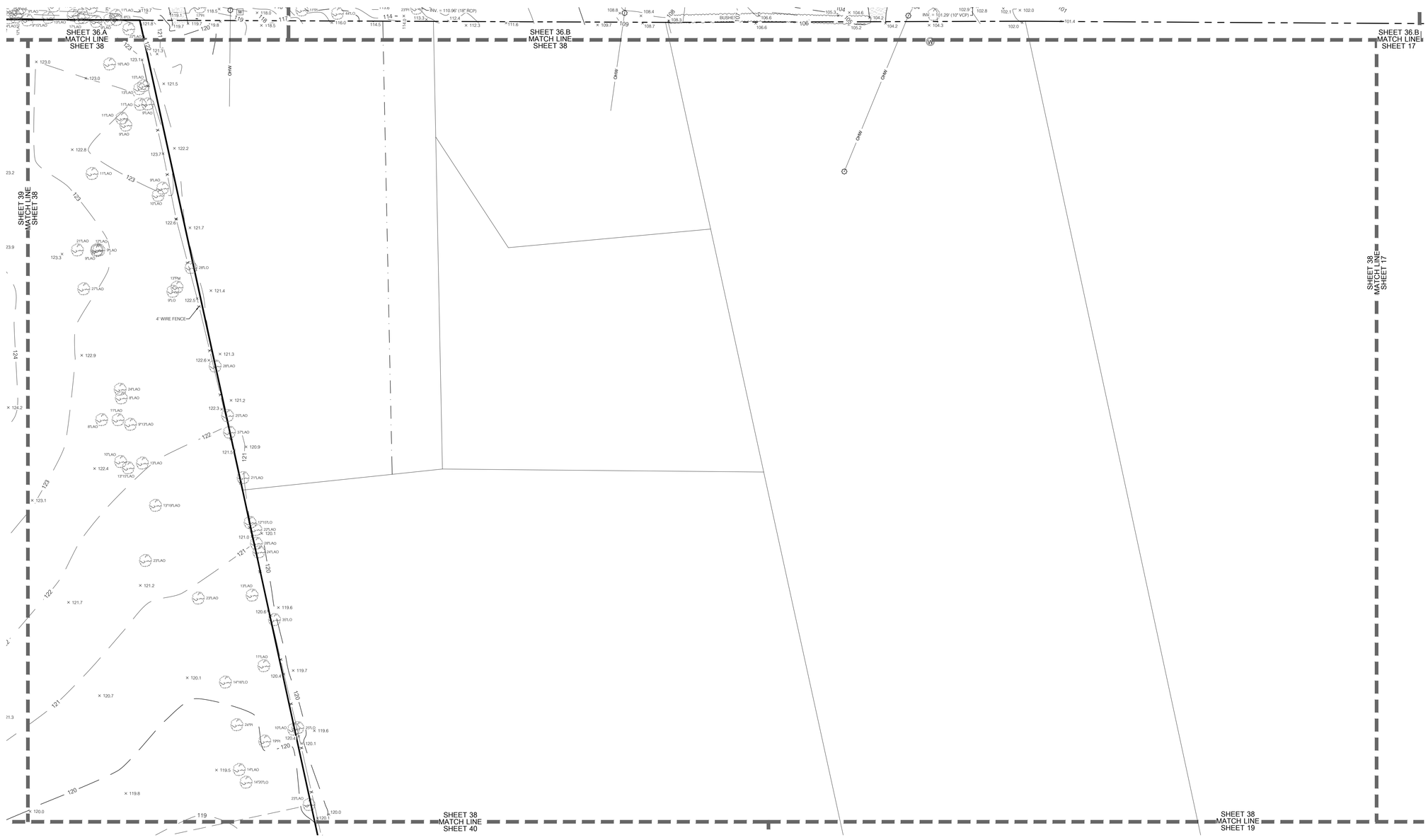
GRAPHIC SCALE
0 15 30 60



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REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF: WM
CHECKED BY: CAC
FIELD BOOK & PAGE: 635 / 69 & 650 / 4

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SHEET NO.:
38 OF 47

Tech: chads Plot Date: Jun 14,2024 1:43pm Filename: C:\AcadResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

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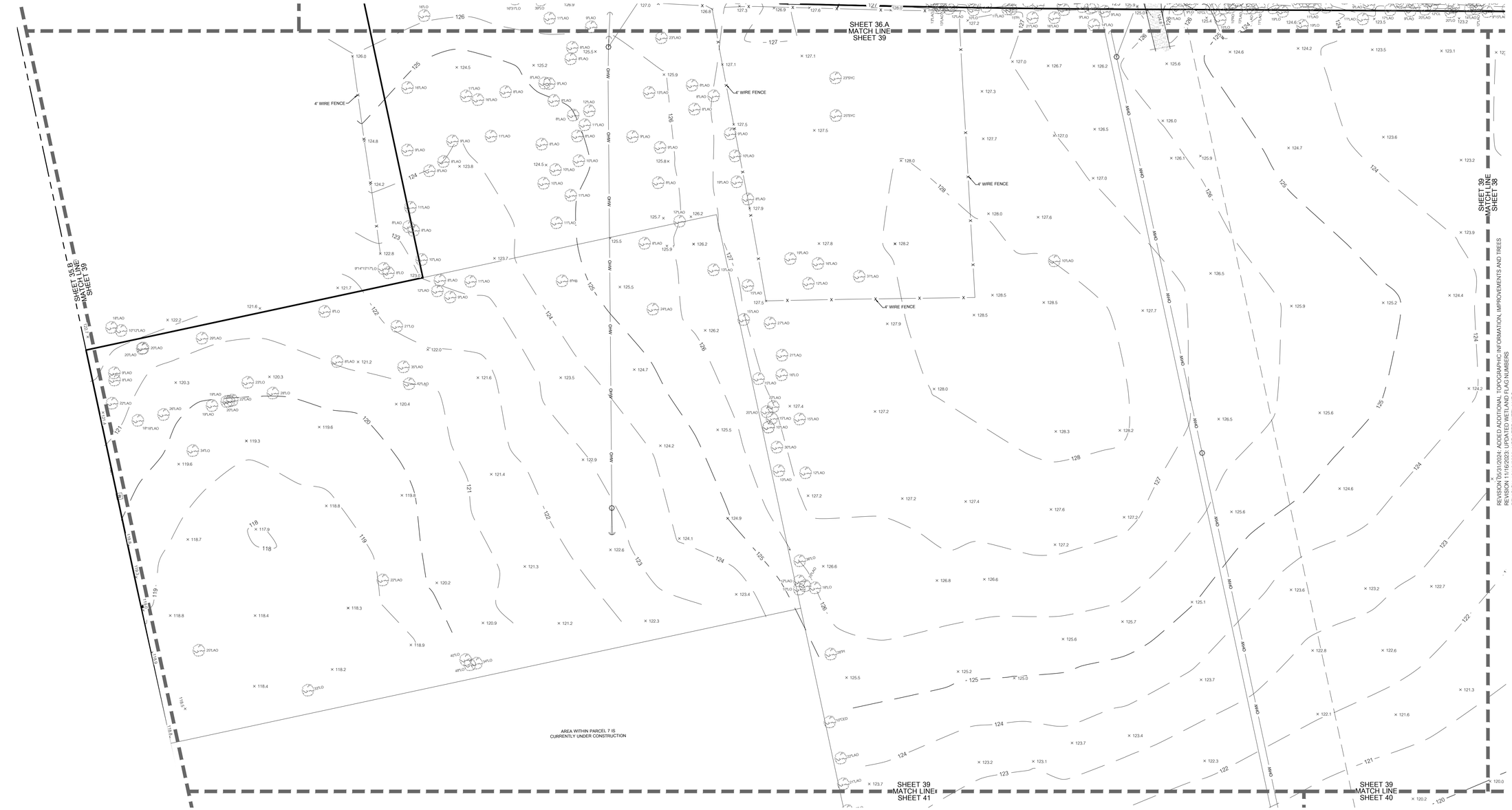
GRAPHIC SCALE
0 15 30 60



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SURVEY DATE: 05/10/2022

REVISION DATE: 05/31/2024

PROJECT NUMBER: 21-0025.07

TECHNICIAN: WHC

CREW CHIEF: WHC

DRAWN BY: CAC

FIELD BOOK & PAGE: 635 / 69 & 650 / 4

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS, AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

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SHEET NO.:
39 OF 47

Tech: dbde Plot Date: Jun 14,2024 1:44pm Filename: C:\AcadResource\Temp\AcPublish_15620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

SURVEYOR'S NOTES:

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GRAPHIC SCALE
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REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

CERTIFIED TO:

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
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TECHNICIAN: WKC
CREW CHIEF: WK
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SHEET NO.:
40 OF 47

Tech: chase Plot Date: Jan 14,2024 1:14pm Filename: C:\AcadResources\temp\AcPublish_15620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

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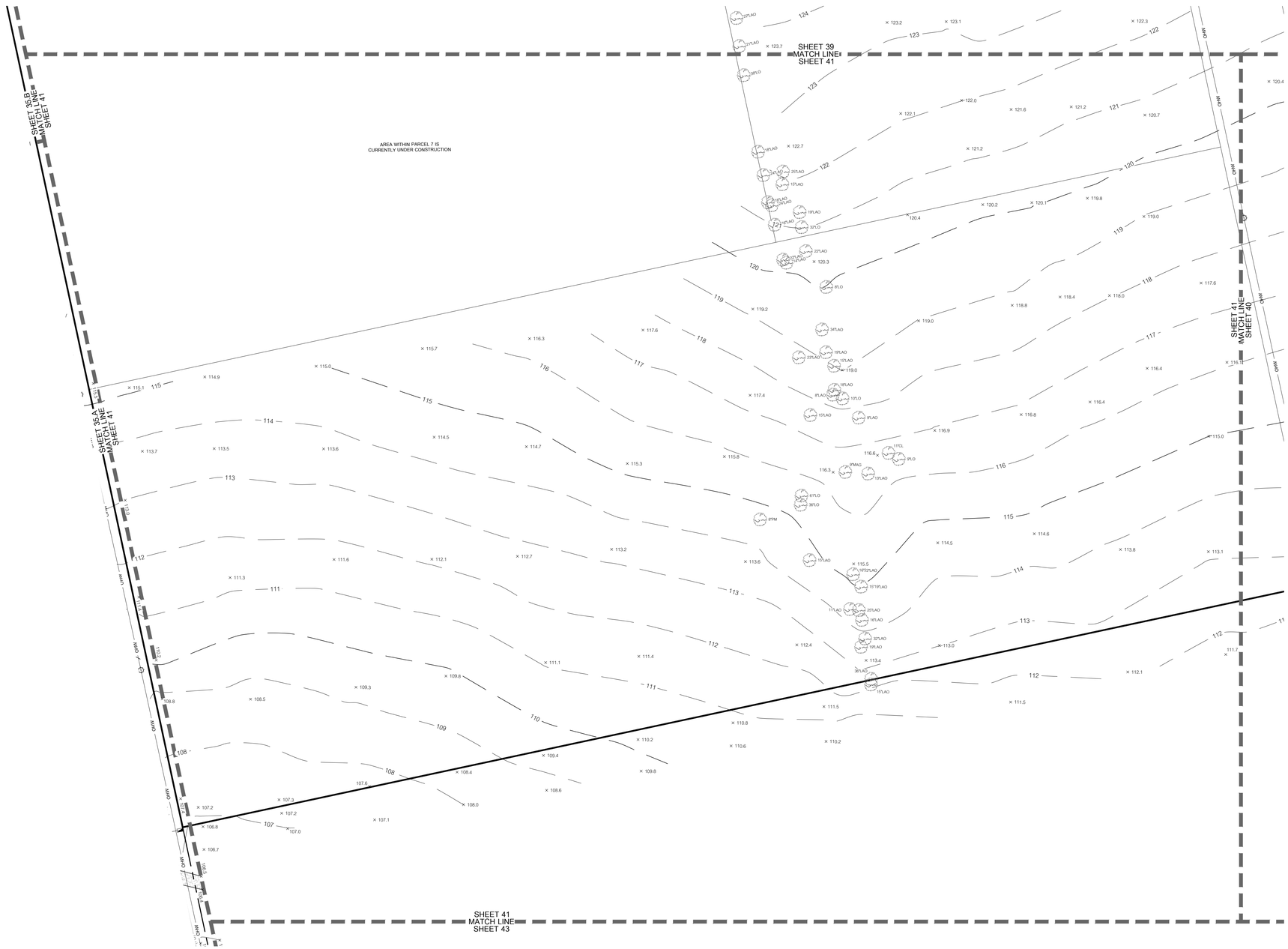

GRAPHIC SCALE
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TOMOKA HILLS FARMS, INC.

CERTIFIED TO:

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/19/2023: UPDATED WETLANDS

SURVEY DATE:	05/10/2022
REVISION DATE:	05/31/2024
PROJECT NUMBER:	21-0025.07
TECHNICIAN:	WKC
CREW CHIEF:	WKM
ORDERED BY:	CAC
FIELD BOOK & PAGE:	635 / 69 & 650 / 4

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SHEET NO.:
41 OF 47

Tech: sbade Plot Date: Jun 14,2024 1:44pm Filename: C:\UserResources\Temp\AcPublish_13920\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

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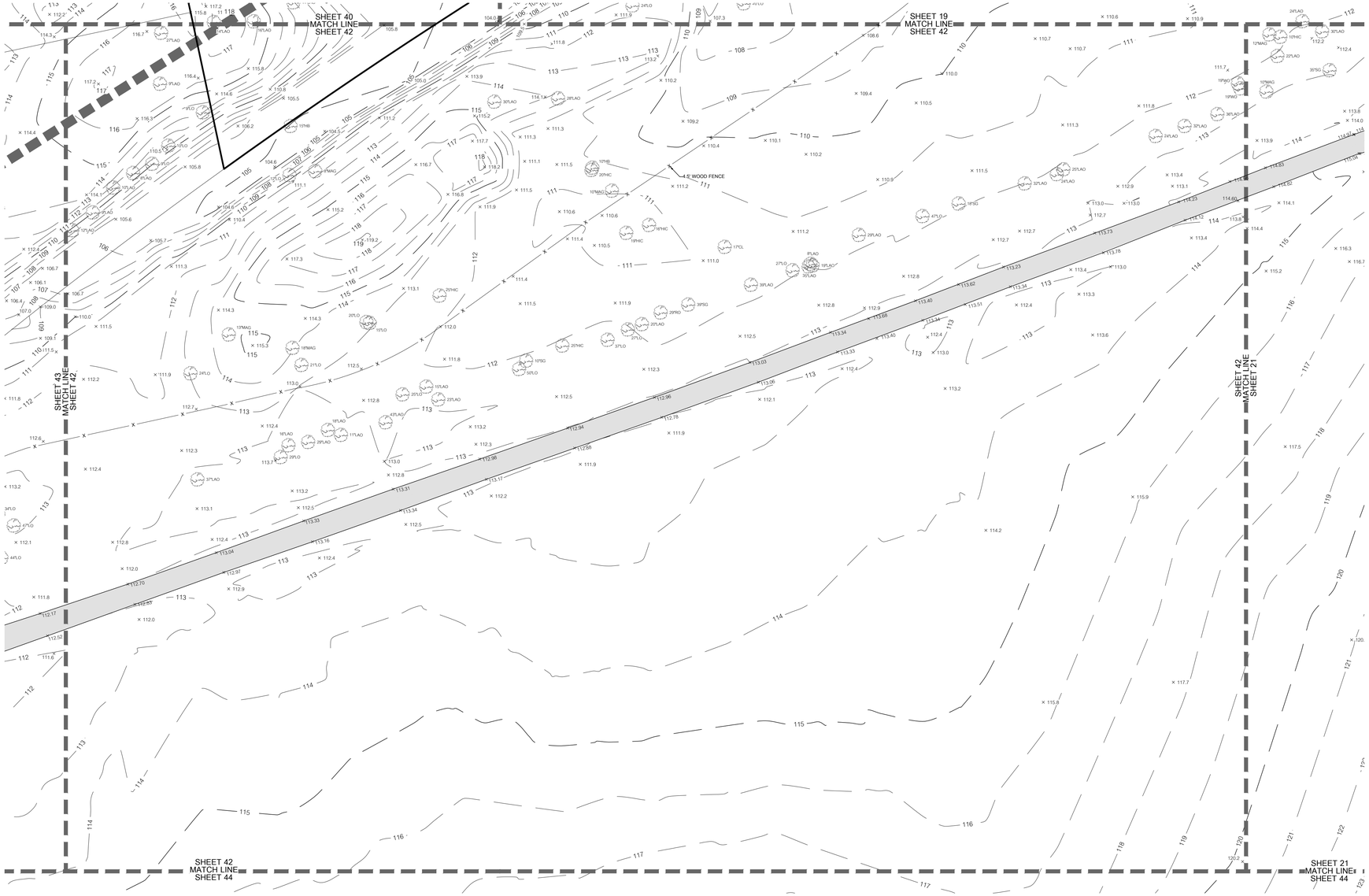

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/19/2023: UPDATED WETLANDS

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SURVEY DATE:	05/10/2022
REVISION DATE:	05/31/2024
PROJECT NUMBER:	21-0025.07
TECHNICIAN:	WKC
CREW CHIEF:	WKC
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FIELD BOOK & PAGE:	635 / 69 & 650 / 4

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SHEET NO.:
42 OF 47

Tech: shade Plot Date: Jun 14,2024 1:44pm Filename: C:\AssetResources\Temp\AcPublish_13920\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST,
ALACHUA COUNTY, FLORIDA

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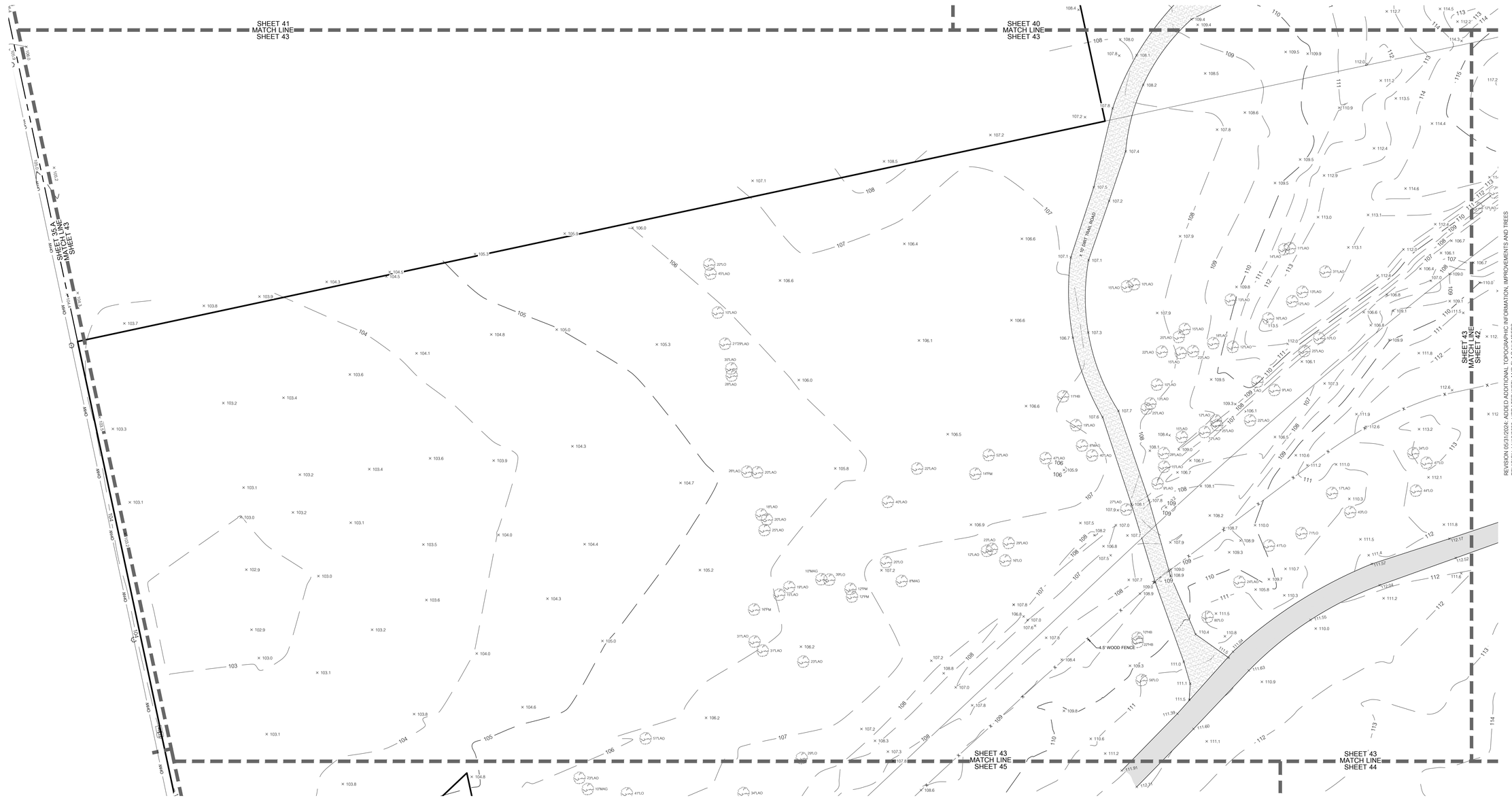
GRAPHIC SCALE
0 15 30 60



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CERTIFIED TO:
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SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF: WM
CHECKED BY: CAC
FIELD BOOK & PAGE: 635 / 69 & 650 / 4

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SHEET NO.:
43 OF 47

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

Tech: chads Plot Date: Jun 14,2024 1:45pm Filename: C:\AcadResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

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ALACHUA COUNTY, FLORIDA

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GRAPHIC SCALE
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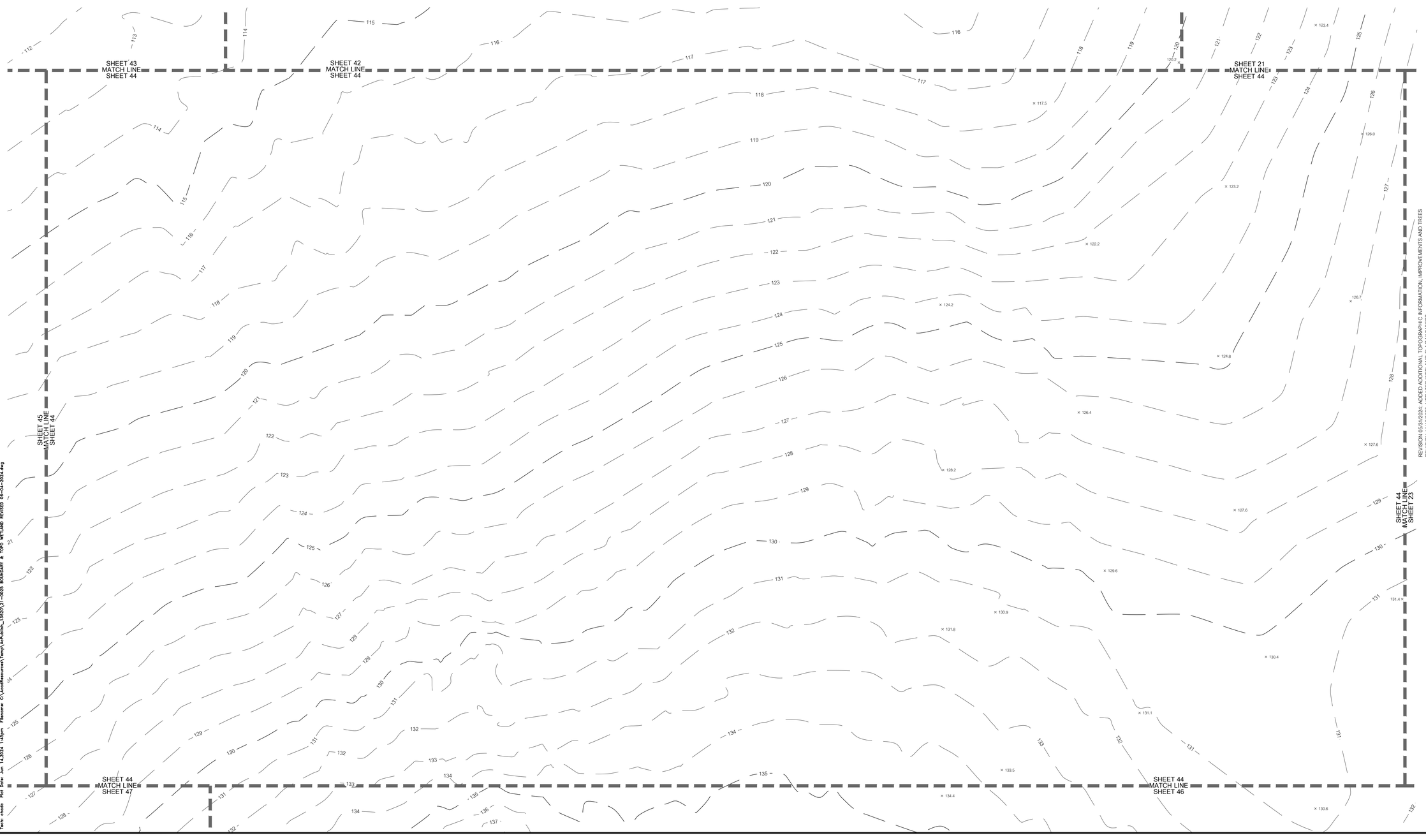

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TECHNICIAN: WKC
CREW CHIEF: WM
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SHEET NO.:
44 OF 47

Tech: chadc Plot Date: Jun 14,2024 1:45pm Filename: C:\AcadResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

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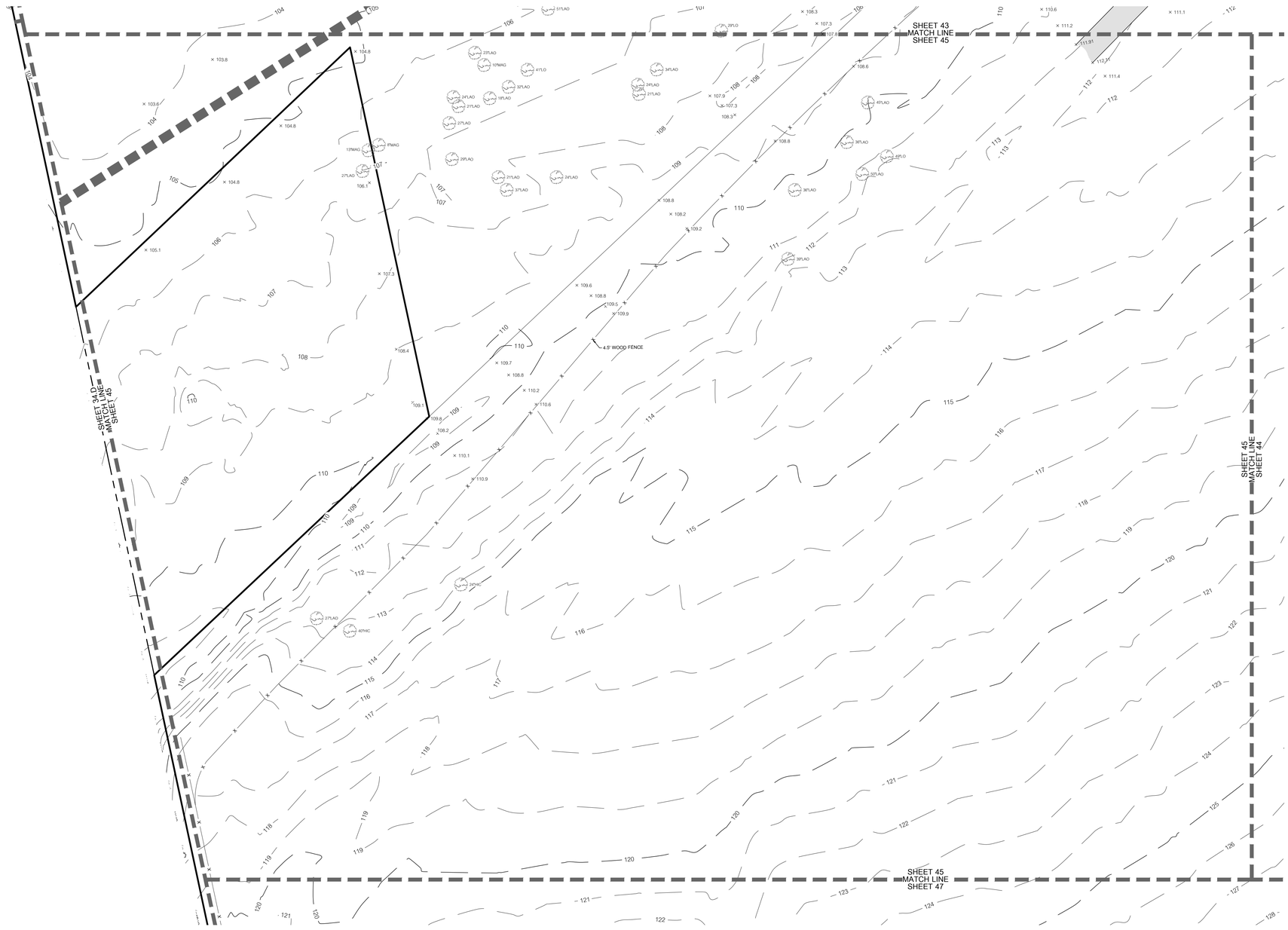

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PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF: WM
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FIELD BOOK & PAGE: 635 / 69 & 650 / 4

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SHEET NO.:
45 OF 47

Tech: chads Plot Date: Jun 14,2024 1:45pm Filename: C:\AcadResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA

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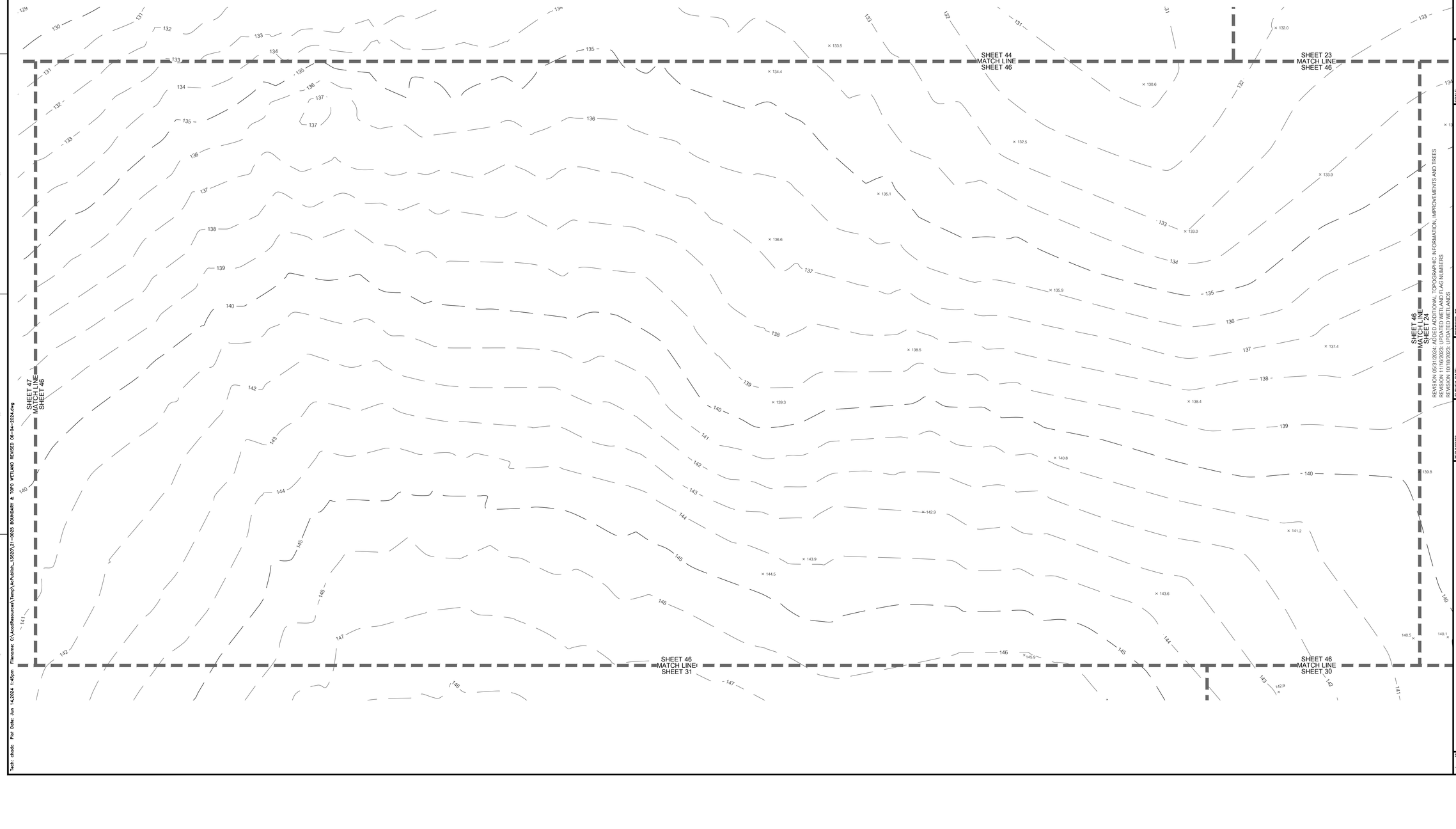

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SCALES ACCORDINGLY.
0 1"

TOMOKA HILLS FARMS, INC.

CERTIFIED TO:

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS, AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/19/2023: UPDATED WETLANDS

SURVEY DATE:	05/10/2022
REVISION DATE:	05/31/2024
PROJECT NUMBER:	21-0025.07
TECHNICIAN:	WKC
CREW CHIEF:	
DRAWN BY:	MM
CHECKED BY:	CAC
FIELD BOOK & PAGE:	635 / 69 & 650 / 4

CHAD A. COLSON

SEE SHEET ONE OF FORTY-SEVEN

Professional Surveyor & Mapper Fla. License No. 7142

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SHEET NO.:
46 OF 47

Tech: chade Plot Date: Jan 14,2024 1:45pm Filename: C:\AcadResources\Temp\Act-Publish_13520\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

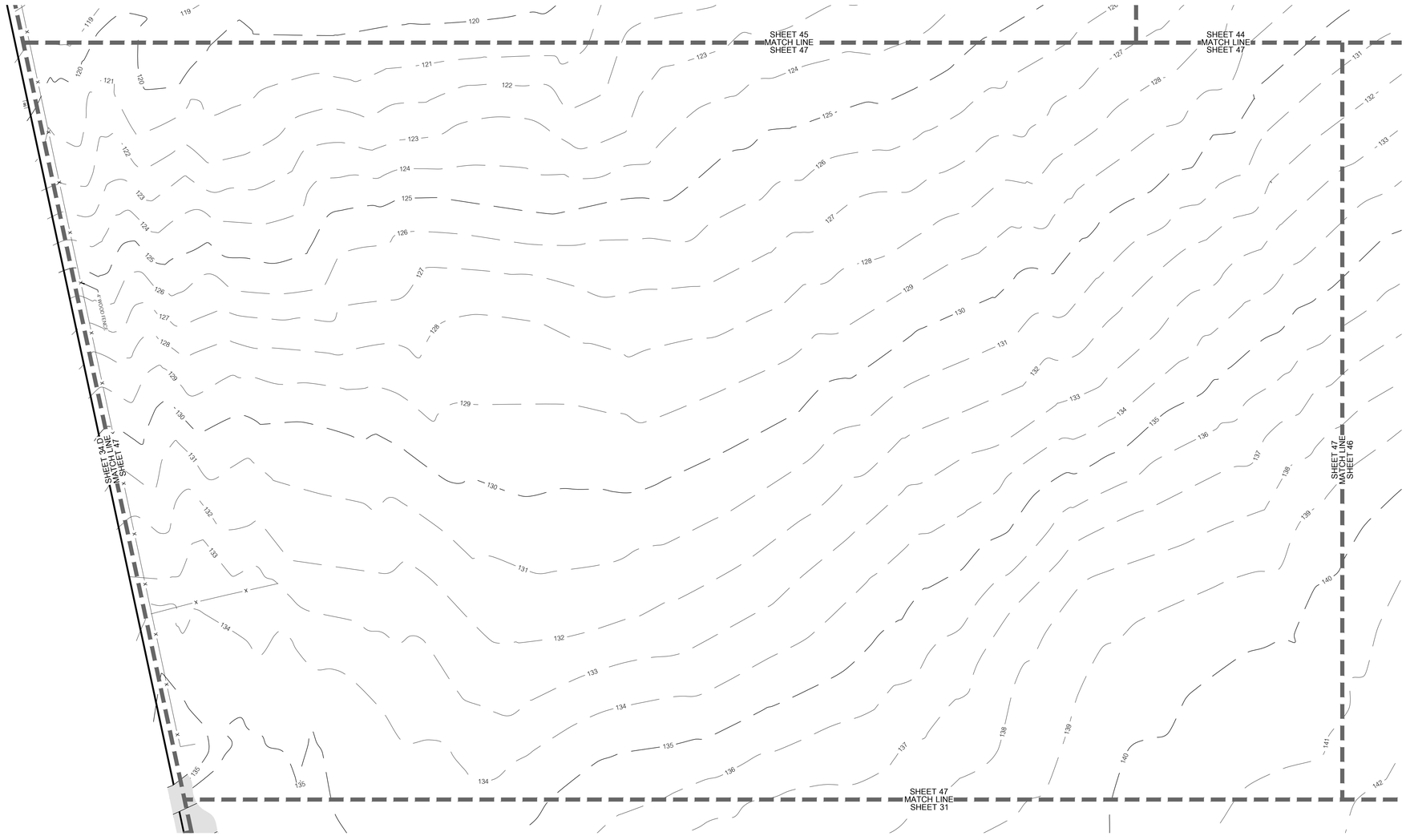
BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN SECTIONS 9 & 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST,
ALACHUA COUNTY, FLORIDA

SURVEYOR'S NOTES:

1. THIS SURVEY CONSISTS OF FORTY-SEVEN SHEETS AND IS NOT COMPLETE WITHOUT ALL SHEETS. SEE SHEET ONE FOR COMPLETE SURVEYOR'S NOTES.

GRAPHIC SCALE
0 15 30 60



11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA CA-5075
CHW Professional Consultants

SCALE: 1" = 30'

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISION 05/31/2024: ADDED ADDITIONAL TOPOGRAPHIC INFORMATION, IMPROVEMENTS AND TREES
REVISION 11/16/2023: UPDATED WETLAND FLAG NUMBERS
REVISION 10/18/2023: UPDATED WETLANDS

CERTIFIED TO:
TOMOKA HILLS FARMS, INC.

SURVEY DATE: 05/10/2022
REVISION DATE: 05/31/2024
PROJECT NUMBER: 21-0025.07

TECHNICIAN: WKC
CREW CHIEF: WM
CHECKED BY: CAC
FIELD BOOK & PAGE: 635 / 69 & 650 / 4

CHAD A. COLSON

SEE SHEET ONE OF FORTY-SEVEN

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SHEET NO.:
47 OF 47

Tech: chads Plot Date: Jun 14,2024 1:45pm Filename: C:\AcadResources\Temp\AcPublish_13620\21-0025 BOUNDARY & TOPO WETLAND REVISED 06-04-2024.dwg

GENERAL NOTES

1. THE TOPOGRAPHIC AND EXISTING INFORMATION SHOWN HEREON WERE TAKEN FROM A BOUNDARY AND TOPOGRAPHIC SURVEY PREPARED BY CHW, AND DATED MAY 10, 2022.
2. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAS BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ACCURACY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE NECESSARY ARRANGEMENTS FOR ANY RELOCATION OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING ANY UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. THE RESPECTIVE UTILITY COMPANIES SHALL RELOCATE ALL UTILITIES THAT INTERFERE WITH THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THE UTILITY COMPANIES DURING THE RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE APPROPRIATE UTILITY COMPANIES IN ORDER TO ALLOW MARKING OF THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES IN ADVANCE OF CONSTRUCTION BY CALLING THE FLORIDA SUNSHINE STATE ONE-CALL CENTER, INC. AT 1-800-432-4770 OR 811. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY "SUNSHINE" 48 HOURS PRIOR TO ANY CLEARING OF CONSTRUCTION TO IDENTIFY ALL UTILITY LOCATIONS. NO CONSTRUCTION ACTIVITY MAY OCCUR UNTIL THE UTILITIES HAVE BEEN PROPERLY MARKED.
4. THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL LOCATION AND VERTICAL LOCATION OF ALL EXISTING UTILITIES WITHIN THE LIMITS OF THE PROJECT ENVELOPE SHOWN PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL CALL ALL UTILITY COMPANIES TO HAVE THE LOCATIONS OF ALL UTILITIES FIELD MARKED PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONTINUING CONSTRUCTION.
5. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED BY THE CONTRACTOR.
6. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITIONS BEFORE COMMENCING CONSTRUCTION WORK, UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. ADDITIONAL COSTS ARE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
7. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK INCLUDING LANDSCAPING.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS OF THE VARIOUS GOVERNMENTAL AGENCIES. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION AND SCHEDULE INSPECTIONS ACCORDING TO AGENCY AND/OR MUNICIPALITY INSTRUCTIONS.
9. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND SHALL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. TRENCHES SHALL BE KEPT DRY WHILE PIPES ARE BEING PLACED. DEWATERING SHALL BE USED AS REQUIRED, AND PERMITTED THROUGH LOCAL GOVERNMENTAL AGENCIES AND WATER MANAGEMENT DISTRICT PER CURRENT REGULATIONS AT THE SOLE COST OF THE CONTRACTOR.
11. CONTRACTOR TO REVIEW GEOTECHNICAL REPORT AND BORINGS PRIOR TO BIDDING THE PROJECT AND FOLLOW OUTLINED CONSTRUCTION TECHNIQUES.
12. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE TESTING WITH THE SERVICES OF AN APPROVED TESTING LABORATORY AND/OR SOILS ENGINEER, APPLICABLE REGULATORY AGENCIES, AND AS MAY BE FOUND IN THE ENGINEERING CONSTRUCTION DRAWINGS OR SPECIFICATIONS. CONTRACTOR TO VERIFY ALL TESTING WITH THE OWNER PRIOR TO COMMENCING CONSTRUCTION. UPON COMPLETION OF THE WORK, THE TESTING LABORATORY AND/OR SOILS ENGINEER MUST SUBMIT TO THE OWNER'S ENGINEER CERTIFICATIONS STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
13. INSTALL SILT FENCE PRIOR TO SITE DEMOLITION OR NEW SITE CONSTRUCTION. INSTALL SILT FENCE PER FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL AND PROVIDE TOE-IN. THE CONTRACTOR SHALL MAINTAIN THE SILT FENCE IN WORKING ORDER THROUGHOUT THE CONSTRUCTION PHASE. THE PROJECT SILT FENCE SHALL BE INSPECTED DAILY AND ANY CORRECTIVE MEASURES SHALL BE COMPLETED WITHIN 24 HOURS.
14. ALL TREE BARRICADES AND SILT FENCING SHALL BE INSTALLED AND INSPECTED BY CITY OF ALACHUA PUBLIC SERVICES DEPARTMENT PRIOR TO COMMENCEMENT OF ANY DEMOLITION OR CONSTRUCTION ACTIVITIES.
15. THE CONTRACTOR IS TO PREPARE THE SITE PRIOR TO BEGINNING ACTUAL CONSTRUCTION IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
16. ALL DELETERIOUS MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED IN ACCORDANCE WITH THESE PLANS OR AS DIRECTED BY THE OWNER'S ENGINEER OR OWNER'S SOIL TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED AND REMOVED FROM THE SITE. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE AREAS.
17. CONTRACTOR SHALL CLEAR AND GRUB ONLY THOSE PORTIONS OF THE SITE NECESSARY FOR CONSTRUCTION. DISTURBED AREAS SHALL BE SODDED, SEEDED, MULCHED, OR PLANTED WITH OTHER APPROVED LANDSCAPE MATERIAL, AS DIRECTED BY THESE PLANS, IMMEDIATELY FOLLOWING CONSTRUCTION PER LOCAL INSPECTOR.
18. WORK BEING PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED ON THE SITE BY OTHER CONTRACTORS AND/OR UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE CONTRACTOR TO COORDINATE AND SCHEDULE HIS ACTIVITIES, WHERE NECESSARY, WITH OTHER CONTRACTORS AND UTILITY COMPANIES.
19. ALL PAVEMENT DIMENSIONS SHOWN ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
20. THE GOVERNING STANDARDS AND SPECIFICATIONS, UNLESS STATED OTHERWISE SHALL BE PER FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS (FY 2024-25 ROAD CONSTRUCTION), AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED JUYY 2024-25, AS AMENDED BY CONTRACT DOCUMENTS. ALL MATERIALS AND METHODS SHALL MEET FDOT SPECIFICATIONS AND SHALL BE PRODUCED OR OBTAINED FROM AN FDOT APPROVED SOURCE.
21. ALL NEW TRAFFIC CONTROL DEVICES (SIGNS AND PAVEMENT MARKINGS) SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND FDOT STANDARDS.
22. ALL STRIPING WITHIN THE FDOT RIGHT OF WAY SHALL BE PLACED FIRST AS TEMPORARY STRIPING FOLLOWED BY APPLICATION OF THERMOPLASTIC STRIPING 30 DAYS LATER.
23. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PROPER BENCHMARKS ON-SITE. EXISTING BENCH MARKS SCHEDULED FOR REMOVAL SHALL BE RELOCATED AT CONTRACTORS EXPENSE AND RE-ESTABLISHED BY A LICENSED SURVEYOR.
24. ALL HANDICAP RAMPS SHALL COMPLY WITH THE FLORIDA ACCESSIBILITY CODE AND AMERICANS WITH DISABILITIES ACT.
25. A PRE-CONSTRUCTION CONFERENCE SHALL BE REQUIRED. THE CONTRACTOR, ENGINEER OF RECORD, AND THE OWNER SHALL MEET WITH THE CITY OF ALACHUA PUBLIC SERVICES DEPARTMENT PRIOR TO INITIATION OF SITE CONSTRUCTION.
26. ANY CHANGE ORDER REQUESTS, SITE REVISIONS, AND PAY REQUESTS MUST BE SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD.
27. CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING AS NEEDED THROUGHOUT ALL CONSTRUCTION ACTIVITIES COVERED BY THESE PLANS. DEWATERING SHALL BE DONE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS, 2024-25 EDITION, SECTION 120.
28. THE CONTRACTOR IS RESPONSIBLE FOR THE PERFORMANCE AND COST OF ALL CLEARING AND GRUBBING AND ALL WORK OF REMOVAL, DISPOSAL, AND REPAIR OR REPLACEMENT OF EXISTING IMPROVEMENTS WHERE SHOWN IN THE PLANS, OR ORDERED BY THE ENGINEER TO BE REMOVED, OR WHERE REQUIRED BECAUSE OF THE CONSTRUCTION OPERATIONS, IN ORDER TO CONSTRUCT THE PROPOSED IMPROVEMENTS (THIS INCLUDES BUT IS NOT LIMITED TO PROPOSED PIPING, STRUCTURES, UTILITIES, PAVING, CURBING, ETC.).
29. AN AS-BUILT SURVEY MAY BE REQUIRED BY REGULATORY AGENCIES. CONTRACTOR TO COORDINATE WITH PROJECT OWNER FOR COMPLETION OF AS-BUILT SURVEYS PRIOR TO PROJECT / PERMIT CLOSE-OUT.
30. THE CITY OF ALACHUA SHALL BE COMPENSATED FOR ALL WORK REQUIRED OF THE CITY TO MODIFY ITS INFRASTRUCTURE. SUCH WORK INCLUDES, BUT IS NOT LIMITED TO, WATER, WASTEWATER AND ELECTRIC INFRASTRUCTURE IMPROVEMENTS, RELOCATION OR DEMOLITION. FOR PROJECTS NOT WITHIN THE CITY'S ELECTRIC SERVICE AREA, MODIFICATIONS TO THE CITY'S ELECTRIC INFRASTRUCTURE EITHER WITHIN OR ADJACENT TO THE PROJECT AREA MAY BE REQUIRED. THE CITY SHALL BE COMPENSATED FOR SUCH MODIFICATIONS.

MAINTENANCE OF TRAFFIC (MOT) NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR CREATING A MAINTENANCE OF TRAFFIC (MOT) PLAN FOR CONSTRUCTION ACTIVITY THAT OCCURS WITHIN THE PUBLIC RIGHT-OF-WAY, INCLUDING BUT NOT LIMITED TO SIDEWALK WORK AND ACTIVITIES THAT REQUIRE A LANE (OR ROAD) CLOSURE, SUCH AS CONNECTION TO SEWER MANHOLES AND WATER MAINS. THE MOT PLAN MUST BE CREATED BY A REGISTERED PROFESSIONAL ENGINEER WHO IS CERTIFIED TO DO SO BY THE FDOT MOT CERTIFICATION TRAINING. THE MOT PLAN MUST ALSO BE IN ACCORDANCE WITH FDOT STANDARDS PLANS AND FDOT STANDARD SPECIFICATIONS REQUIREMENTS AND MUST BE REVIEWED AND APPROVED BY THE FDOT AND CITY OF ALACHUA.
2. THE CONTRACTOR SHALL SUBMIT THE MOT TO THE APPROPRIATE REGULATORY AUTHORITY PRIOR TO WORK REQUIRING THE MOT FOR APPROVAL. NO WORK IN THE ROW SHALL OCCUR UNTIL THE MOT IS APPROVED.

DEMOLITION GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO DISPOSE OF ALL DEMOLITION MATERIALS IN A SAFE AND LAWFUL MANNER. THE CONTRACTOR SHALL SALVAGE TO THE OWNER ANY ITEM AS DETERMINED BY THE OWNER. ONCE DEMOLISHED, MATERIAL SHALL BE DISPOSED OF PROPERLY AND IMMEDIATELY.
2. REMOVE ALL IMPROVEMENTS DEFINED ON THE DEMOLITION PLAN. SALVAGE ITEMS TO OWNER AS DEFINED BY THE OWNER'S REPRESENTATIVE AND CONSTRUCTION DOCUMENT SPECIFICATIONS.
3. EXISTING PAVEMENT AND SIDEWALK EDGES THAT BORDER NEW CONSTRUCTION OR DEMOLITION ARE TO BE SAW-CUT TO PROVIDE A SMOOTH TRANSITION.
4. ALL EXISTING TREES ARE TO REMAIN UNLESS OTHERWISE NOTED.
5. ROOTS LARGER THAN 1 INCH IN DIAMETER ON TREES TO BE PRESERVED THAT ARE ENCOUNTERED DURING CONSTRUCTION MUST BE CUT CLEANLY AND COVERED OVER WITH SOIL BY THE END OF THE WORKING DAY.
6. ALL ASPHALT AND LIMEROCK WILL BE COMPLETELY REMOVED FROM AREAS THAT WILL BE LANDSCAPED. IN PARTICULAR, AREAS WHERE ASPHALT WILL BE REMOVED MUST HAVE THE TOP HARD SURFACE, LIMEROCK, AND COMPACTED SOIL REMOVED. REPLACEMENT SOIL SHALL BE CLEAN DEEP FILL OF PH 5.5 - 6.5. THE DEPTH OF UNCOMPACTED SOIL PRIOR TO PLANTING MUST BE AT LEAST 3 FEET TO ACCOMMODATE FUTURE TREE ROOT GROWTH. NO LIMEROCK, LARGE STONES, OR OTHER CONSTRUCTION DEBRIS CAN REMAIN IN AREAS TO BE LANDSCAPED.

PAVING, GRADING, AND DRAINAGE GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL PRACTICES DURING CONSTRUCTION TO MINIMIZE ON-SITE EROSION/SEDIMENTATION AND TO PROTECT AGAINST DAMAGE TO OFF SITE PROPERTY. THE FOLLOWING PRACTICES SHALL BE EMPLOYED:
   A. A. EROSION AND SEDIMENTATION CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. AREAS OF OFF-SITE DISCHARGE DURING CONSTRUCTION SHALL BE PROTECTED WITH A SEDIMENT BARRIER PER FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL TO PREVENT OFF-SITE DISCHARGE OF SEDIMENTS. A SILT BARRIER SHALL SPECIFICALLY BE REQUIRED, CONSTRUCTED, AND MAINTAINED AS INDICATED ON THIS SHEET. TEMPORARY SEED AND MULCH SHOULD BE USED TO CONTROL ON-SITE EROSION WHEN IT IS NOT PRACTICAL TO ESTABLISH PERMANENT VEGETATION. SOD SHALL BE PLACED AS EARLY AS POSSIBLE ON ALL SLOPES STEEPER THAN 5 (FT) HORIZONTAL TO 1 (FT) VERTICAL. SOD SHALL BE PINNED AS REQUIRED. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED IN WORKING ORDER THROUGHOUT THE CONSTRUCTION PHASE. THE CONTRACTOR SHALL INSPECT AND REPAIR AS NECESSARY THE EROSION/SEDIMENTATION PROTECTION AT THE END OF EACH WORKING DAY.
   B. NOTE: EROSION/SEDIMENTATION CONTROL SHALL BE PLACED PRIOR TO SITE EXCAVATION AND SHALL REMAIN IN PLACE UNTIL SITE VEGETATION AND LANDSCAPING IS COMPLETE.
   C. B. ALL INLET STRUCTURES AND PIPE SHALL BE PROTECTED FROM SILTATION BY CONSTRUCTING INLET PROTECTION AS DEFINED BY THESE PLANS OR IN THE FDOT STANDARDS. IF SILTATION OCCURS, THE CONTRACTOR IS RESPONSIBLE TO REMOVE SILTATION AS PART OF THE BASE CONTRACT AT NO ADDITIONAL COST TO THE OWNER.
   D. C. EXCAVATED STORMWATER FACILITIES SHALL BE CONSTRUCTED AS PART OF THE INITIAL CONSTRUCTION. THE FACILITIES SHALL BE ROUGH GRADED TO THE DESIGN ELEVATIONS. AFTER THE CONTRIBUTING DRAINAGE AREA IS STABILIZED. THE FACILITIES BOTTOM SHALL BE OVER-EXCAVATED BY SIX INCHES, SCARIFIED, BACKFILLED WITH ARCHER FILL (HAVING NO MORE THAN 5% PASSING NO. 200 SIEVE), AND GRADED TO FINAL DESIGN GRADES. EXCESS AND UNSUITABLE SOILS SHALL BE REMOVED FROM THE BASIN (REMOVE ALL ACCUMULATED SILTS, CLAYS, ORGANIC, AND DEBRIS). FINALLY, SCARIFY AND RAKE BOTTOM AND VEGETATE.
   E. D. PERMANENT VEGETATIVE STABILIZATION SHALL BE APPLIED ON FINE GRADED SITES AS SOON AS PRACTICAL. TEMPORARY SEEDING SHOULD BE EMPLOYED TO PREVENT EXPOSURE OF BARREN SOILS UNTIL PERMANENT VEGETATION CAN BE APPLIED.
   F. E. ALL SLOPES 1:3 OR STEEPER REQUIRE LAPPED OR PEGGED SOD.
   G. F. EROSION, SEDIMENT AND TURBIDITY CONTROL ARE THE RESPONSIBILITY OF THE CONTRACTOR. THESE DELINEATED MEASURES ARE THE MINIMUM REQUIRED, WITH ADDITIONAL CONTROLS TO BE UTILIZED AS NEEDED, DEPENDENT UPON ACTUAL SITE CONDITIONS AND CONSTRUCTION OPERATION.
   H. G. ALL SYNTHETIC BALES, SILT FENCE, AND OTHER EROSION CONTROL MEASURES SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT.
2. THE CONTRACTOR SHALL MAINTAIN IN HIS POSSESSION A COPY OF THE WATER MANAGEMENT DISTRICT CONSTRUCTION PERMIT. HE SHALL BE RESPONSIBLE FOR ADHERENCE TO ALL CONDITIONS CONTAINED IN THE PERMIT.
3. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON DRAWINGS.
4. CONTRACTOR SHALL SUBMIT FOR REVIEW TO THE OWNER AND OWNER'S ENGINEER SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO BE USED ON THIS SITE. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE. ENGINEER'S APPROVAL OF A SHOP DRAWING DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR THE PERFORMANCE OF THE ITEM.
5. THE COST OF ALL TESTING OF COMPACTION AND OTHER REQUIRED TESTS SHALL BE PAID BY THE CONTRACTOR AND MADE AVAILABLE TO THE ENGINEER OF RECORD DURING SITE INSPECTIONS.
6. GENERAL CONTRACTOR TO CONTACT ENGINEER OF RECORD AND THE OWNER REPRESENTATIVE 48 HOURS IN ADVANCE PRIOR TO BACKFILLING TRENCHES FOR FIELD INSPECTION AND PRIOR TO LAYING ASPHALT FOR FIELD INSPECTION.
7. CONTRACTOR IS TO SUBMIT FDOT APPROVED ASPHALT DESIGN MIXES TO THE OWNER'S REPRESENTATIVE AND ENGINEER OF RECORD BEFORE ANY WORK IS TO COMMENCE ON PROJECT. THE MIXTURE AT THE PLANT OR ON THE ROAD SHALL NOT EXCEED 335 DEGREES. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND PROVIDE TEMPERATURE READINGS PRIOR TO LAYING ASPHALT.
8. AS DETERMINED NECESSARY AND DIRECTED BY CITY OF ALACHUA PUBLIC SERVICES DEPARTMENT OR ENGINEER OF RECORD, THE CONTRACTOR SHALL UNDERCUT ALL UNSUITABLE MATERIAL 24 INCHES BELOW THE BOTTOM OF ANY PROPOSED LIMEROCK BASE, AND SHALL BACKFILL WITH FILL MATERIAL MEETING FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. SEE FDOT INDEX 120-001 AND 120-002.
9. PROVIDE LEVEL PLATFORM IN FRONT OF ALL EGRESS DOORS. THE FLOOR SURFACE ON BOTH SIDES OF A DOOR SHALL BE AT THE SAME ELEVATION. THE FLOOR SURFACE OR LANDING ON EACH SIDE OF THE DOOR SHALL EXTEND FROM THE DOOR IN THE CLOSED POSITION A DISTANCE EQUAL TO THE DOOR WIDTH AND SHALL COMPLY WITH SECTION 4.13.6 MANEUVERING CLEARANCES AT DOORS OF THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION.
10. RAMPS SHALL HAVE LEVEL LANDINGS AT THE BOTTOM AND TOP OF EACH RAMP RUN. CURB RAMPS ARE NOT REQUIRED TO HAVE LANDINGS. LANDINGS SHALL HAVE THE FOLLOWING FEATURES:
    A. THE LANDING SHALL BE AT LEAST AS WIDE AS THE RAMP RUN LEADING TO IT.
    B. ALL LANDINGS ON RAMPS SHALL BE NOT LESS THAN 60" CLEAR, AND THE BOTTOM OF EACH RAMP SHALL HAVE NOT LESS THAN 72" OF STRAIGHT AND LEVEL CLEARANCE.
    C. IF RAMPS CHANGE DIRECTION AT LANDINGS, THE MINIMUM LANDING SIZE SHALL BE 60"X60". IF A RAMP RUN HAS A RISE GREATER THAN 6" OR A HORIZONTAL PROJECTION GREATER THAN 72" THEN IT SHALL HAVE HANDRAILS ON BOTH SIDES. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. HANDRAILS SHALL BE SHOWN ON THE SITE PLAN.
11. THE CONTRACTOR SHALL STOCKPILE TOPSOIL AND CONSTRUCTION MATERIALS IN AREAS DESIGNATED BY THE OWNER.
12. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING RECORD DRAWINGS AS NOTED IN NOTE #29 UNDER SITE GENERAL NOTES.
13. ALL CONCRETE USED SHALL BE 2,500 PSI MINIMUM.
14. ALL WELLS, CLEANOUTS, MANHOLE TOPS, PULL BOX COVERS AND OTHER UTILITY APPURTENANCES IN THE AREA OF REDEVELOPMENT SHALL BE PROTECTED AND TOPS ADJUSTED TO MATCH PROPOSED GRADES.
15. CONTRACTOR SHALL SAW CUT, TACK, AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS ANY EXISTING PAVEMENT.
16. SOD SHALL BE PLACED AROUND ALL STRUCTURES AS DIRECTED BY THE FDOT INDEX 524-001 AND FDOT INDEX 425- AND 430- SERIES AS APPROPRIATE. ALL OTHER DISTURBED AREAS SHALL BE SEEDED AND MULCHED.
17. ALL STORM SEWER CURB AND DITCH BOTTOM INLETS SHALL CONFORM TO THE APPLICABLE FDOT INDEX. ALL DRAINAGE STRUCTURES WITH GRATES THAT ARE LOCATED IN GRASSED AREAS SHALL HAVE THE GRATE CHAINED TO THE STRUCTURE USING AN EYE BOLT AND CHAIN.
18. ALL CONCRETE STRUCTURES SHALL HAVE ALL EXPOSED EDGES CHAMFERED 3/4" AND CLASS I SURFACE FINISH.
19. ALL HDPE FITTINGS AND CONNECTORS SHALL BE WATER TIGHT. SEE SPECIFICATIONS FOR MORE INFORMATION.
20. COMPACTION OF ALL MATERIALS SHALL BE LIMITED TO STATIC MODE ONLY, UNLESS DIRECTED OTHERWISE BY THE ENGINEER OF RECORD.
21. ALL RCP PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC IN ACCORDANCE WITH FDOT STANDARD SPECIFICATION SECTION 430.
22. GROUT BOTTOM OF ALL STORMWATER DRAINAGE STRUCTURE INVERTS PER FDOT INDEX 425-001.

WATER AND WASTEWATER GENERAL NOTES

1. MATERIALS AND CONSTRUCTION METHODS FOR WATER AND WASTEWATER SYSTEMS SHALL BE IN ACCORDANCE WITH THE LOCAL REGULATORY AGENCY CODES, PLANS, AND SPECIFICATIONS FOR CONSTRUCTION, LATEST REVISION THEREOF AND SUPPLEMENTAL SPECIFICATIONS THERETO. APPROVAL AND CONSTRUCTION OF ALL UTILITY EXTENSIONS AND CONNECTIONS MUST BE COORDINATED THROUGH THE REGULATORY AGENCY DEPARTMENT FOR PUBLIC UTILITIES. WATER AND WASTEWATER SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALACHUA, PUBLIC SERVICES, DESIGN AND CONSTRUCTION MANUAL, LATEST ADDITION.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES TO DISCONNECT OR REMOVE THEIR FACILITIES PRIOR TO REMOVING OR DEMOLISHING ANY EXISTING STRUCTURES FROM THE SITE.
3. THE CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY UTILITY FIELD LOCATION AND RELOCATION AS REQUIRED.
4. THE COST OF ALL TESTING OF COMPACTION AND OTHER REQUIRED TESTS SHALL BE PAID BY THE CONTRACTOR AND MADE AVAILABLE TO THE ENGINEER OF RECORD DURING SITE INSPECTIONS.
5. THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATION TEST ON GRAVITY SEWERS IN ACCORDANCE WITH THE REGULATORY JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. COORDINATION AND NOTIFICATION OF PARTIES US THE CONTRACTOR'S RESPONSIBILITY.
6. ALL FORCE MAINS SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE TEST IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. COORDINATION AND NOTIFICATION OF PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
7. CONTRACTOR SHALL SUBMIT FOR REVIEW TO THE OWNER AND OWNER'S ENGINEER SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO BE USED ON THIS SITE. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE. ENGINEER'S APPROVAL OF A SHOP DRAWING DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR THE PERFORMANCE OF THE ITEM.
8. A HORIZONTAL SEPARATION OF TEN FEET PREFERRED, BUT NO LESS THAN SIX FEET, SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND GRAVITY OR PRESSURE WASTEWATER MAINS, WASTEWATER FORCE MAINS, AND RECLAIMED WATER MAINS NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. A HORIZONTAL SEPARATION OF TEN FEET PREFERRED, BUT NO LESS THAN THREE FEET, SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND VACUUM WASTEWATER MAINS. A HORIZONTAL SEPARATION OF THREE FEET SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND STORM SEWERS, STORMWATER FORCE MAINS, AND RECLAIMED WATER MAINS REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
9. WHEN POTABLE WATER MAINS CROSS OTHER PIPES, THE TWO PIPES SHALL HAVE JOINTS A MINIMUM OF SIX FEET FROM THE CROSSING. WHEN POTABLE WATER MAINS CROSS UNDERNEATH OTHER PIPES, THE MINIMUM VERTICAL SEPARATION IS TWELVE INCHES. WHEN POTABLE WATER MAINS CROSS ABOVE PRESSURE WASTEWATER MAINS, WASTEWATER FORCE MAINS, AND RECLAIMED WATER MAINS, THE MINIMUM VERTICAL SEPARATION IS TWELVE INCHES. WHEN POTABLE WATER MAINS CROSS ABOVE GRAVITY AND VACUUM WASTEWATER MAINS, STORM SEWERS, AND STORMWATER FORCE MAINS, THE PREFERRED VERTICAL SEPARATION IS TWELVE INCHES AND THE THE MINIMUM VERTICAL SEPARATION IS SIX INCHES.
10. ALL WATER MAINS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER.
11. RESTRAINED JOINTS SHALL BE PROVIDED AT ALL FITTINGS AND HYDRANTS IN ACCORDANCE WITH AWWA STANDARDS.
12. ALL PVC WATER SERVICE LINES 2 INCHES AND LESS SHALL BE SCH 40 PVC.
13. THE SITE WORK CONTRACTOR SHALL ENGAGE THE SERVICES OF A LICENSED UNDERGROUND UTILITY AND EXCAVATION CONSTRACTOR TO INSTALL THE NEW WATER SERVICE LINE.
14. ALL SANITARY SEWER SERVICE LATERALS SHALL BE 4" PVC SDR 35 OR 6" PVC SDR 35 WITH A CLEAN-OUT LOCATED PER THE PLANS. MINIMUM SLOPE FOR 4" LATERALS SHALL BE 1.0% AND A MINIMUM CLEANOUT SPACING OF 75 FEET ON-CENTER AND MINIMUM SLOPE FOR 6" LATERALS SHALL BE 0.6% AND A MINIMUM CLEANOUT SPACING OF 100 FEET ON-CENTER.
15. PUBLIC UTILITY EASEMENTS WILL BE PROVIDED AS REQUIRED FOR ALL UTILITIES SHOWN HEREON BY METES AND BOUND DESCRIPTION AND IN ACCORDANCE WITH THE REGULATORY AGENCY DEPARTMENT FOR PUBLIC UTILITIES.
16. PROVIDE TRACER SYSTEM WIRE FOR WATER PIPING AS SHOWN ON THE DETAILS AND AS PER THE COA DCM.
17. ALL WATER AND WASTEWATER DESIGN DETAILS ARE TYPICAL AND MUST BE USED EVEN IF THE DESIGN DETAIL IS NOT CALLED OUT ON A SPECIFIC SHEET. ALL ASSOCIATED WORK SHALL BE IN ACCORDANCE WITH THE DESIGN DETAILS WHETHER THE DETAILS ARE SPECIFICALLY REFERENCED OR NOT.
18. WATER METER APPURTENANCES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE WATER METER ITSELF SHALL BE FURNISHED AND INSTALLED BY THE CITY.
19. WET TAP(S) SHALL BE DONE BY A SUB-CONTRACTOR PRE-APPROVED BY THE CITY OF ALACHUA.
20. ALL POTABLE WATER PIPING SHALL BE NSF-61 RATED.
21. ALL GRAVITY WASTEWATER MAINS SHALL BE 8" PVC SDR 26.
22. WATER MAIN PIPING UNDER ROADS AND PAVEMENT SHALL BE CLDI. WATER MAIN PIPING NOT UNDER ROADS AND PAVEMENT SHALL EITHER BE AWWA C900 DR-18 PVC OR DUCTILE IRON CEMENT LINED.

ELECTRIC SERVICE GENERAL NOTES

1. ALL ELECTRICAL UTILITIES AND INFORMATION SHOWN ON THE CIVIL PLANS ARE FOR LOCATION AND COORDINATION PURPOSES ONLY. REFER TO ELECTRICAL PLANS BY OTHERS FOR THE ELECTRICAL DESIGN AND DETAILS.
2. SCOPE OF COA ELECTRICAL WORK: AT NO COST TO THE CITY, THE COA WILL PERFORM CERTAIN WORK ELEMENTS TO ASSIST THE CONTRACTOR IN PROVIDING COMPLETE AND OPERATING ELECTRICAL SYSTEMS AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
3. THE WORK REQUIRED TO MODIFY EXISTING PRIMARY SERVICE AND TO PROVIDE THE TRANSFORMER SHALL BE A JOINT EFFORT BETWEEN THE CONTRACTOR AND COA.
4. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL ELECTRICAL WORK REQUIRED TO PROVIDE SECONDARY (LOAD-SIDE) SERVICE FROM THE TRANSFORMER.
5. COA WILL ORDER THE FOLLOWING PRODUCTS, WHICH SHALL BE PAID FOR BY THE CONTRACTOR: ALL PRIMARY CABLES, ALL TRANSFORMERS AND ALL MAKE-UP MATERIALS. ONCE ON SITE, THESE PRODUCTS WILL BE INSTALLED BY THE CITY OF ALACHUA. ALL PRIMARY MAKEUP, CONNECTIONS AND TESTING WILL BE COMPLETED BY THE CITY OF ALACHUA. ALL WORK DONE BY COA WILL BE BACKCHARGED TO THE CONTRACTOR.
6.

ABBREVIATIONS

	SYMBOLS
'	FEET (WHEN USED WITH LENGTHS)
°	DEGREES
'	MINUTES (WHEN USED WITH ANGLES)
"	SECONDS
%	PERCENT
@	AT
	A
AASHTO	ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC	ACRES
ADA	AMERICAN WITH DISABILITIES ACT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ARCH	ARCHITECT
ARV	AIR RELEASE VALVE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
	B
BC	BACK OF CURB
BFP	BACKFLOW PREVENTER
BLDG	BUILDING
BM	BENCHMARK
BMP	BEST MANAGEMENT PRACTICE
BOC	BACK OF CURB
BVCS	BEGIN VERTICAL CURVE STATION
BVCE	BEGIN VERTICAL CURVE ELEVATION
BW	BOTTOM OF WALL
BSL	BUILDING SETBACK LINE
	C
CATV	CABLE TELEVISION
CI	CURB INLET
CIP	CAST IRON PIPE
CLDIP	CEMENT LINE DUCTILE IRON PIPE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
COA	CITY OF ALACHUA
CONC	CONCRETE
COORD	COORDINATE
CR	COUNTY ROAD
C/O	CLEANOUT
	D
DBH	DIAMETER AT BREAST HEIGHT
DE	DRAINAGE EASEMENT
DEG	DEGREE
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWG	DRAWING
	E
e	RATE OF ELEVATION
E	EAST
EA	EACH
EL	ELEVATION
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EOR	ENGINEER OF RECORD
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
ESMT	EASEMENT
EVCS	END VERTICAL CURVE STATION
EVCE	END VERTICAL CURVE ELEVATION
EX	EXISTING
	F
FAC	FLORIDA ADMINISTRATIVE CODE
FBR	FLORIDA BEARING RATIO
FC	FRICTION COURSE
FDEP	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FHWA	FLORIDA HIGHWAY ADMINISTRATION
FIG	FIGURE
FM	FORCE MAIN
FOC	FACE OF CURB
FS	FLORIDA STATUTES
FT	FEET
	G
GALV	GALVANIZED
GM	GAS MAIN
GV	GATE VALVE
	H
HDPE	HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
	I
ID	IDENTIFICATION
INV	INVERT
INV EL	INVERT ELEVATION
IP	IRON PIPE
	K
K	VERTICAL CURVE RATE OF CHANGE
	L
L	LENGTH
LA	LANDSCAPE ARCHITECT
LBR	LIMEROCK BEARING RATIO
LDR	LAND DEVELOPMENT REGULATION
LF	LINEAR FEET
LP	LOW POINT
LT	LEFT
	M
MAX	MAXIMUM
ME	MATCH EXISTING
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MUP	MULTI-USE PATH
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
	N
N	NORTH
N-E	NORTHING - EASTING
N/A	NOT APPLICABLE
NAVD	NORTH AMERICAN VERTICAL DATUM OF 1988
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NO	NUMBER
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NTS	NOT TO SCALE
	O
OC	ON CENTER
OHW	OVERHEAD WIRE
ORB	OFFICIAL RECORDS BOOK
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
	P
PAVT	PAVEMENT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PE	POLYETHYLENE
PERF	PERFORATED
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PUE	PUBLIC UTILITY EASEMENT
PVI	POINT OF VERTICAL INTERSECTION
	R
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RPM	RAISED REFLECTIVE PAVEMENT MARKER
RPZ	REDUCED PRESSURE ZONE
RT	RIGHT
RWM	RECLAIMED WATER MAIN
R/W	RIGHT-OF-WAY
	S
S	SOUTH
SAN	SANITARY
SHWE	SEASONAL HIGH WATER ELEVATION
SF	SILT FENCE
SL	SLOPE
SP	SUPERPAVE
SR	STATE ROAD
SS	SANITARY SEWER
ST	STORM
STA	STATION
STD	STANDARD
	T
TB	TREE BARRICADE
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEMP	TEMPORARY
TOB	TOP OF BANK
TV	TELEVISION
TW	TOP OF WALL
TYP	TYPICAL
	U
USF	UNITED STATES FOUNDRY
USGS	UNITED STATES GEOLOGICAL SURVEY
UTIL	UTILITY
	V
V	VERTICAL
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
	W
W	WEST
W	WATER
W/	WITH
WM	WATER MAIN
WW	WASTEWATER
WWF	WELDED WIRE FABRIC

SIGNAGE

SIGNS ARE PER FDOT SPECIFICATIONS OR PER MUTCD. SIGN POSTS AND INSTALLATION SHALL BE PER FDOT INDEX NO. 700-010. SIGN PLACEMENT SHALL BE PER FDOT INDEX NO. 700-101.

PARKING BY DISABLED PERMIT ONLY

FTP-20-06 (12" X 18") PER FDOT INDEX NO. 700-102

STOP

R1-1 "STOP" - SEE PLANS FOR SIZE

SITE INFORMATION

- *EX. PROPERTY LINE*
- *LANDSCAPE BUFFER LINE*
- *BUILDING SETBACK LINE*
- *WETLAND LIMITS LINE*
- *WETLAND SETBACK LINE*
- *CENTER LINE*
- *EASEMENT LINE*
- *RIGHT-OF-WAY LINE*
- SF — SF — *SILT FENCE LINE*
- TB — TB — *TREE BARRICADE LINE*
- *EX. STRUCTURE OR BUILDING*
- *PROPOSED BUILDING*
- *PROPOSED ASPHALTIC PAVEMENT*
- *PROPOSED CONCRETE PAVEMENT*
- *PROPOSED DETECTABLE WARNING SURFACE*
- *DIRECTIONAL TRAFFIC ARROW PER FDOT INDEX NO. 17346*
- *WATERSHED DIVIDE*
- 99 *EX. ELEVATION CONTOUR*
- 99 *PROPOSED CONTOUR*
- 93.23 *EX. SPOT ELEVATION*
- 93.23 *PROPOSED SPOT ELEVATION*
- *DIRECTION OF SURFACE DRAINAGE FLOW*
- *PROPOSED SWALE LINE*
- x — x *EX. FENCE*
- *PROPOSED FENCE*
- 12" PINE *EX. TREE (SIZE & TYPE)*
- 1234 *EX. TREE (TREE ID)*
- 12" PINE *EX. TREE TO BE REMOVED (SIZE & TYPE)*
- 1234 *EX. TREE TO BE REMOVED (TREE ID)*
- *PROJECT BENCHMARK*

STORMWATER

THE PROPOSED STORMWATER STRUCTURES DEPICTED BELOW ARE DRAWN PER FDOT SPECIFICATIONS AND TO SCALE WHEN SHOWN ON THE PLAN SHEETS.

- ST — ST — *EX. GRAVITY STORMWATER MAIN*
- P-ST — *PROPOSED GRAVITY STORMWATER MAIN (PIPE LENGTHS ARE FROM N-E LOCATION OF A STRUCTURE TO N-E LOCATION OF A STRUCTURE)*
- *EX. STORMWATER MANHOLE*
- N-E LOCATION / TOP/RIM ELEV. LOCATION — *PROPOSED 48" DIA. STORMWATER MANHOLE PER FDOT INDEX. NO. 425-001 AND 425-010*
- N-E LOCATION / TOP/GRATE ELEV. LOCATION — *PROPOSED CIRCULAR AREA DRAIN*
- N-E LOCATION / TOP/GRATE ELEV. LOCATION — *PROPOSED SQUARE AREA DRAIN*
- N-E LOCATION / TOP ELEV. LOCATION — *PROPOSED TYPE 1 CURB INLET TOP PER FDOT INDEX NO. 425-020 (SEE PLANS FOR BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP ELEV. LOCATION — *PROPOSED TYPE 2 CURB INLET TOP PER FDOT INDEX NO. 425-020 (SEE PLANS FOR BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP ELEV. LOCATION — *PROPOSED TYPE 3 CURB INLET TOP PER FDOT INDEX NO. 425-020 (SEE PLANS FOR BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP ELEV. LOCATION — *PROPOSED TYPE 4 CURB INLET TOP PER FDOT INDEX NO. 425-020 (SEE PLANS FOR BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP ELEV. LOCATION — *PROPOSED TYPE 5 CURB INLET TOP PER FDOT INDEX NO. 425-021 (SEE PLANS FOR BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP ELEV. LOCATION — *PROPOSED TYPE 6 CURB INLET TOP PER FDOT INDEX NO. 425-021 (SEE PLANS FOR BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP/GRATE ELEV. LOCATION — *PROPOSED TYPE 9 CURB INLET TOP PER FDOT INDEX NO. 425-024 (SEE PLANS FOR BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP/GRATE ELEV. LOCATION — *PROPOSED TYPE 'C' DITCH BOTTOM INLET TOP PER FDOT INDEX NO. 425-052 (SEE PLANS FOR GRATE MATERIAL AND BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP/GRATE ELEV. LOCATION — *PROPOSED TYPE 'D' DITCH BOTTOM INLET TOP PER FDOT INDEX NO. 425-052 (SEE PLANS FOR GRATE MATERIAL AND BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP/GRATE ELEV. LOCATION — *PROPOSED TYPE 'E' DITCH BOTTOM INLET TOP PER FDOT INDEX NO. 425-052 (SEE PLANS FOR GRATE MATERIAL AND BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP/GRATE ELEV. LOCATION — *PROPOSED TYPE 'F' DITCH BOTTOM INLET TOP WITH STEEL GRATE PER FDOT INDEX NO. 425-053 (SEE PLANS FOR BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP/GRATE ELEV. LOCATION — *PROPOSED TYPE 'G' DITCH BOTTOM INLET TOP WITH STEEL GRATE PER FDOT INDEX NO. 425-053 (SEE PLANS FOR BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP/GRATE ELEV. LOCATION — *PROPOSED TYPE 'H' DITCH BOTTOM INLET TOP PER FDOT INDEX NO. 425-052 (SEE PLANS FOR GRATE MATERIAL AND BOTTOM SPECIFICATION)*
- N-E LOCATION / TOP/GRATE ELEV. LOCATION — *PROPOSED TYPE 'J' DITCH BOTTOM INLET TOP WITH STEEL GRATE PER FDOT INDEX NO. 425-054 (SEE PLANS FOR BOTTOM SPECIFICATION)*
- PIPE INV. LOCATION / N-E LOCATION — *PROPOSED U-TYPE CONCRETE ENDWALLS WITH GRATES PER FDOT INDEX NO. 430-010 (SEE PLANS FOR SIZE)*
- N-E LOCATION / INV. ELEV. LOCATION — *PROPOSED FLARED END SECTION PER FDOT INDEX NO. 430-020 (SEE PLANS FOR SIZE)*
- N-E LOCATION / PIPE INV. ELEV. LOCATION — *PROPOSED CROSS DRAIN MITERED END SECTION PER FDOT INDEX NO. 430-021 (SEE PLANS FOR SIZE)*
- N-E LOCATION / PIPE INV. ELEV. LOCATION — *PROPOSED SIDE DRAIN MITERED END SECTION PER FDOT INDEX NO. 430-022 (SEE PLANS FOR SIZE)*
- S-10 *PROPOSED STORMWATER STRUCTURE ID TAG*

POTABLE AND RECLAIMED WATER

- W — W — *EX. POTABLE WATER MAIN*
- P-W — *PROPOSED POTABLE WATER MAIN*
- RCW — RCW — *EX. RECLAIMED WATER MAIN*
- P-RCW — *PROPOSED RECLAIMED WATER MAIN*
- *11.25° BEND W/ MECHANICALLY RESTRAINED JOINTS (POTABLE AND RCW)*
- *22.5° BEND W/ MECHANICALLY RESTRAINED JOINTS (POTABLE AND RCW)*
- *45° BEND W/ MECHANICALLY RESTRAINED JOINTS (POTABLE AND RCW)*
- *90° BEND W/ MECHANICALLY RESTRAINED JOINTS (POTABLE AND RCW)*
- *TEE (POTABLE AND RCW)*
- *CROSS (POTABLE AND RCW)*
- *BLOWOFF ASSEMBLY (POTABLE AND RCW)*
- *REDUCER (POTABLE AND RCW)*
- *EX. GATE VALVE AND BOX (POTABLE AND RCW)*
- *PROPOSED GATE VALVE AND BOX (POTABLE AND RCW)*
- *EX. AIR RELEASE VALVE (POTABLE AND RCW)*
- *PROPOSED AIR RELEASE VALVE (POTABLE AND RCW)*
- *EX. FIRE HYDRANT ASSEMBLY*
- *PROPOSED FIRE HYDRANT ASSEMBLY*
- *PROPOSED SAMPLE POINT*
- *EX. WATER METER (POTABLE AND RCW)*
- *PROPOSED POTABLE WATER METER*
- *PROPOSED POTABLE WATER BACK FLOW PREVENTER*
- *PROPOSED RECLAIMED WATER METER*
- W *EX. WATER WELL*
- *EX, HOSE BIB (POTABLE AND RECLAIMED)*
- *PROPOSED HOSE BIB (POTABLE AND RECLAIMED)*
- 11 *PROPOSED FITTING ID TAG (POTABLE AND RECLAIMED)*

WASTEWATER

- WW — WW — *EX. GRAVITY WASTEWATER MAIN*
- P-WW — *PROPOSED GRAVITY WASTEWATER MAIN (PIPE LENGTHS ARE FROM N-E LOCATION OF A STRUCTURE TO N-E LOCATION OF A STRUCTURE)*
- FM — FM *EX. WASTEWATER FORCE MAIN*
- P-FM — *PROPOSED WASTEWATER FORCE MAIN*
- *EX. WASTEWATER MANHOLE*
- N-E LOCATION / RIM ELEV. LOCATION — *PROPOSED WASTEWATER MANHOLE*
- *EX. WASTEWATER CLEANOUT*
- *PROPOSED WASTEWATER CLEANOUT*
- *PROPOSED WASTEWATER GREASE TRAP*
- MH# *PROPOSED WASTEWATER MANHOLE ID*
- *11.25° BEND W/ MECHANICALLY RESTRAINED JOINTS (WW FORCE MAIN)*
- *22.5° BEND W/ MECHANICALLY RESTRAINED JOINTS (WW FORCE MAIN)*
- *45° BEND W/ MECHANICALLY RESTRAINED JOINTS (WW FORCE MAIN)*
- *90° BEND W/ MECHANICALLY RESTRAINED JOINTS (WW FORCE MAIN)*
- *WYE W/ MECHANICALLY RESTRAINED JOINTS (WW FORCE MAIN)*
- *EX. PLUG VALVE AND BOX (WW FORCE MAIN)*
- *PROPOSED PLUG VALVE AND BOX (WW FORCE MAIN)*
- *EX. AIR RELEASE VALVE (WW FORCE MAIN)*
- *PROPOSED AIR RELEASE VALVE (WW FORCE MAIN)*

MISCELLANEOUS UTILITIES

THE PROPOSED UTILITIES BELOW ARE DESIGN BY OTHERS AND ARE DEPICTED FOR COORDINATION PURPOSES ONLY. REFER TO PLANS BY OTHERS FOR EXACT LOCATIONS, DIMENSION, AND DETAILS.

- P-ATT — *PROPOSED AT&T LINE*
- BC — BC *EX. BURIED CABLE LINE*
- P-BC — *PROPOSED BURIED CABLE LINE*
- BTEL — *EX. BURIED TELEPHONE LINE*
- P-TEL — *PROPOSED TELEPHONE LINE*
- CATV — *EX. CABLE TELEVISION LINE*
- P-TV — *PROPOSED CABLE/TELEVISION LINE*
- FO — FO *EX. FIBER OPTIC LINE*
- UGTEL — *EX. UNDERGROUND TELEPHONE LINE*
- TP *EX. TELEPHONE PEDESTAL*
- *EX. TELEVISION/CABLE PEDESTAL*
- CHW — CHW *EX. CHILLED WATER MAIN*
- P-CHW — *PROPOSED CHILLED WATER MAIN*
- FIRE — *EX. FIRE MAIN*
- P-FIRE — *PROPOSED FIRE MAIN*
- IRR — IRR *EX. IRRIGATION LINE*
- P-IRR — *PROPOSED IRRIGATION LINE*
- STEAM — *EX. STEAM LINE*
- P-STEAM — *PROPOSED STEAM LINE*
- P-CLAY — *PROPOSED CLAY ELECTRIC LINE*
- E — E *EX. ELECTRIC LINE*
- P-E — *PROPOSED ELECTRIC LINE*
- EN — EN *EX. ENERGY LINE*
- P-LIGHT — *PROPOSED PRIVATE LIGHTING LINE*
- OHW — OHW *EX. OVERHEAD WIRE LINE*
- UGE — UGE *EX. UNDERGROUND ELECTRIC LINE*
- *EX. LIGHT*
- *EX. UTILITY POLE*
- *EX. UTILITY POLE*
- *EX. WOOD POWER POLE*
- *EX. GUY ANCHOR*
- T *PROPOSED TRANSFORMER*
- GAS — GAS *EX. GAS LINE*
- P-GAS — *PROPOSED GAS LINE*
- *EX. GAS MARKER*
- G *EX. GAS MARKER*

NOTES:
1. THIS LEGEND IS ALL INCLUSIVE AND MAY INCLUDE ITEMS NOT A PART OF THIS PLAN SET.

2. SYMBOLS SHOWN ON THIS SHEET ARE FOR ILLUSTRATIVE PURPOSES ONLY. UNLESS NOTED OTHERWISE, SYMBOLS IN THESE PLANS MAY NOT BE REPRESENTATIVE OF SIZE.

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Alachua, Florida 32615
(352)331-1976
www.mtn5.com

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SCALE: N/A

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.
0" 1"

CONSTRUCTION/RED REVISIONS:

SUBMITTAL:
07/11/24 SRWMD
10/04/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: LEGEND

TECHNICIAN: T.F. COWART
DESIGNER: K. KEITH, E.I.
PLANS CONTROL:
QUALITY CONTROL: W.F. OWEN, P.E.

PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C0.11

Tech: keeler Plot Date: Mar 12,2025 12:47pm Filename: W:\2021\21-0025\departments\04_engineering\02_dwgs_pdf\Production Files\21-0025.18 CV.dwg

I. INTRODUCTION

THIS DOCUMENT WAS PREPARED IN ORDER TO ILLUSTRATE COMPLIANCE WITH CHAPTER 62-621.300 (4) OF THE FLORIDA ADMINISTRATIVE CODE, WHICH PERTAINS TO THE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES. THE ADMINISTRATIVE CODE GRANTS THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) THE AUTHORITY TO REGULATE POINT SOURCE DISCHARGE OF STORMWATER FROM CONSTRUCTION SITES. THIS DOCUMENT ESTABLISHES A STORMWATER POLLUTION PREVENTION PLAN FOR THE SITE USING STANDARD PRACTICE AND BEST MANAGEMENT PRACTICES (BMPs) AND IS ORGANIZED TO CORRESPOND TO 62-621.300(4)(a) GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES FDEP FORM 62-621.300(4)(b) IS TO BE SUBMITTED IN CONJUNCTION WITH THIS DOCUMENT. CONTRACTOR(S) MUST FILL IN THE ACTIVITIES SEQUENCE (SECTION II. B. BELOW) AND SIGN THIS SHEET (REFER TO SIGNATURE TABLE THIS SHEET) AND RETAIN THIS SHEET AND ALL FOLLOWING SWPPP SHEETS ON SITE. ALTERNATIVELY, CONTRACTOR(S) MAY PREPARE AND SIGN THEIR OWN SWPP PLAN MEETING THE REQUIREMENTS. IF THE SITE OR CONTRACTOR ACTIVITIES REQUIRE ANY BMPs THAT ARE NOT DESCRIBED ON THIS SHEET, THE CONTRACTOR MUST PREPARE AN ALTERNATIVE OR ADDITIONAL SWPPP DOCUMENT CONTAINING THE NECESSARY BMPs.

II. SITE DESCRIPTION

COUNTY: ALACHUA COUNTY, FLORIDA
SECTION, TOWNSHIP, RANGE: SECTION 16, TOWNSHIP 8 SOUTH, RANGE 18 EAST
COUNTY PARCEL NO.: 03054-001-002, 03873-001-000, & 03873-000-000
STREET ADDRESS: TBD; ADJACENT TO 16305 NW 162ND LN, ALACHUA, FL 32615
PROJECT AREA: 37.07 ACRES
SITE LOCATION MAP: SEE COVER SHEET OF CONSTRUCTION DRAWINGS

A. NATURE OF CONSTRUCTION ACTIVITY

THE PROPOSED DEVELOPMENT IS THE CONSTRUCTION OF A ±10,180 SF MAINTENANCE BUILDING, WITH A PARKING AREA, DRIVEWAY INFRASTRUCTURE, STORMWATER MANAGEMENT FACILITY REVISIONS, AND ASSOCIATED UTILITY INFRASTRUCTURE.. THE PROJECT SITE IS LOCATED NEAR 16305 NW 162ND LN, ALACHUA FLORIDA. THE PROJECT SITE TOTAL AREA IS APPROXIMATELY 37.07 ACRES.

B. SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES - CONTRACTOR MUST FILL IN DAYS

DAYS	
FROM_____TO_____	PRIOR TO CONSTRUCTION, SILT FENCING AND TREE PROTECTION FENCING SHALL BE INSTALLED AND ALL EXISTING STORM DRAINAGE SWALE AND INLETS SHALL BE PROTECTED IN ACCORDANCE WITH THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, DATED JULY 2013, AND THESE PLANS.
FROM_____TO_____	THE CONSTRUCTION SERVICE ENTRANCE SHALL BE STABILIZED TO MINIMIZE THE CREATION OF DUST AND OFF-SITE TRACKING OF SEDIMENTS.
FROM_____TO_____	ONLY THE AREA COMPRISING THE PROPOSED STORMWATER MANAGEMENT FACILITY(S) SHALL BE CLEARED AND GRUBBED OF UNWANTED VEGETATION.
FROM_____TO_____	THE PROPOSED STORMWATER MANAGEMENT FACILITY(S) SHALL BE CONSTRUCTED.
FROM_____TO_____	IF SUITABLE, THE EXCAVATED SOIL FROM THE FACILITY(S) MAY BE USED AS FILL FOR ON-SITE GRADING THAT IS DEPICTED IN THESE CONSTRUCTION PLANS. THE CONTRACTOR SHALL DISPOSE OF ALL UNSUITABLE MATERIAL ON-SITE OR OFF-SITE TO A PERMITTED LOCATION.
FROM_____TO_____	THE REMAINING PORTION OF THE SITE THAT IS TREATED BY THE CONSTRUCTED STORMWATER MANAGEMENT FACILITY(S) SHALL BE CLEARED AND GRUBBED.
FROM_____TO_____	THE PERMANENT ROADWAYS/DRIVEWAYS SHALL BE ROUGHLY GRADED.
FROM_____TO_____	THE UNDERGROUND UTILITIES INFRASTRUCTURE AND STORMWATER PIPING SYSTEM SHALL BE INSTALLED. ANY DE-WATERING (PUMPED) SHALL BE DIVERTED TO THE ASSOCIATED STORMWATER MANAGEMENT FACILITY(S).
FROM_____TO_____	THE PERMANENT ROADWAY/DRIVEWAY SUBGRADE SHALL BE COMPACTED, A LIMEROCK BASE SHALL BE ESTABLISHED, AND THEN FOLLOWED BY AN OVERLAY OF ASPHALT.
FROM_____TO_____	UPON SIGNIFICANT COMPLETION OF CONSTRUCTION, THE STORMWATER PIPING SYSTEM SHALL BE FLUSHED OUT TO REMOVE ACCUMULATED DEBRIS AND SEDIMENT.
FROM_____TO_____	UPON COMPLETION OF THE DEBRIS AND SEDIMENT REMOVAL FROM THE STORMWATER PIPING SYSTEM, THE PROPOSED STORMWATER MANAGEMENT FACILITY(S) SHALL BE FINE GRADED AND SHALL BE EXCAVATED A MINIMUM OF SIX INCHES BELOW THE DESIGN BOTTOM ELEVATION AND REPLACED WITH FILL HAVING A MINIMUM PERMEABILITY RATE OF 20 FEET/DAY WITH A MAXIMUM OF 5% SOIL FINES PASSING THE NO. 200 SIEVE. THE BOTTOM SHALL BE SCARIFIED AND STABILIZED ACCORDING TO THESE PLANS. ONCE COMPLETED, NO HEAVY MACHINERY SHALL BE ALLOWED WITHIN THE STORMWATER MANAGEMENT FACILITY(S).
FROM_____TO_____	ALL REMAINING DISTURBED AREAS WITHIN THE CONSTRUCTION AREA SHALL BE COMPLETELY GRASSED AND/OR LANDSCAPED ACCORDING TO THESE PLANS. TURF ESTABLISHMENT SHALL BE PER FDOT STANDARD SPECIFICATIONS SECTION 570. EVIDENCE OF GROWTH MUST BE PRESENT PRIOR TO REMOVAL OF SILT FENCING AND OTHER EROSION CONTROL APPLICATIONS.

C. SITE DEVELOPMENT DATA:

TOTAL PROJECT SITE AREA:	*37.07 ACRES*
TOTAL SITE AREA TO BE DISTURBED:	*46.75 ACRES*
TOTAL IMPERVIOUS AREA (AS SHOWN IN CONSTRUCTION DRAWINGS):	*13.63 ACRES*
TOTAL DETENTION VOLUME:	*89.97 ACRE-FEET*
TOTAL OPEN AREA:	*123.24 ACRES*

D. SOIL CONDITIONS AND STORMWATER QUALITY

THE NRCS DATA FOR THE SITE REVEALS THAT THE SITE SOILS ARE COMPRISED OF ARREDONDO FINE SAND, FORT MEADE FINE SAND, MILLHOPPER SAND, TAVARES SAND, LOCHLOOSA FINE SAND, KENDRICK SAND, S ELLICHTON SAND, GAINESVILLE SAND, BIVANS SAND AND NORFOLK LOAMY SAND. CSE ENGINEERING & CONSULTING, INC. CONDUCTED A GEOTECHNICAL EXPLORATION OF THE PROPOSED STORMWATER MANAGEMENT FACILITY(S) LOCATION IN AUGUST OF 2022. THE INVESTIGATION REVEALED THAT THE PROJECT SITE'S SURFACE SOILS HAVE THE FOLLOWING CHARACTERISTICS:

DEPTH TO EFFECTIVE OR MOBILIZED AQUIFER:	*13 FEET*
DEPTH OF SEASONAL HIGH WATER TABLE:	*12.5 FEET*
HORIZONTAL HYDRAULIC CONDUCTIVITY:	*4.0 FEET/DAY*
UNSATURATED VERTICAL INFILTRATION:	*2.5 FEET/DAY*

DESIGN PERCOLATION RATES FOR THE STORMWATER MANAGEMENT FACILITY(S) WERE DETERMINED BASED ON LABORATORY PERMEABILITY TEST RESULTS FROM BORING SAMPLES TAKEN WITHIN THE LIMITS OF THE STORMWATER MANAGEMENT FACILITY(S).

THE STORMWATER MANAGEMENT FACILITY(S) WAS DESIGNED TO PROVIDE FULL RETENTION AND WATER QUALITY TREATMENT OF THE STORMWATER RUNOFF RESULTING FROM THE POST-DEVELOPMENT SITE UNDER 100-YEAR CRITICAL STORM EVENT RAINFALL CONDITIONS. THE STORMWATER POLLUTION PREVENTION PLANS (C0.21-C0.25) DEPICTS THE POST-DEVELOPMENT WATERSHED(S) LIMITS AND THE TABLE BELOW SUMMARIZES EACH WATERSHED.

WATERSHED ID	POST DEVELOPMENT AREA (ACRES)	POST DEVELOPMENT IMPERVIOUS AREA (ACRES)	STORMWATER MANAGEMENT FACILITY TYPE	FACILITY DETENTION CAPACITY (ACRE-FEET)	100-YEAR FLOOD ELEVATION (FT)
1	78.45	17.70	RETENTION	20.43	74.62
2	111.55	3.68	RETENTION	33.31	81.35

E. SITE MAP

PLEASE SEE THE STORMWATER POLLUTION PREVENTION PLANS (C0.21-C0.25) FOR DETAILS.

F. STORMWATER OUTFALL LOCATION AND RECEIVING WATER BODY

THE STORMWATER MANAGEMENT FACILITIES ARE DESIGNED FOR FULL RETENTION. THE ASSOCIATED WATER BODY IS MILL CREEK.

III. CONTROLS TO REDUCE POLLUTION

AS OUTLINED IN THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT (SRWMD) PERMIT, ALL CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED IN A MANNER AS TO NOT VIOLATE STATE WATER QUALITY STANDARDS. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES REQUIRED TO RETAIN SEDIMENT ON-SITE. IF SITE CONDITIONS ARE SUCH THAT ADDITIONAL CONTROL MEASURES ARE REQUIRED OTHER THAN WHAT IS SPECIFIED IN THE EROSION AND SEDIMENTATION CONTROL PLAN, THEN THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL BEST MANAGEMENT PRACTICES. THESE MEASURES MUST BE INSPECTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PHASE AND UNTIL AS DIRECTED BY THESE PLANS. THE STORMWATER POLLUTION PREVENTION PLAN (C0.21) AND SECTION IV BELOW PROVIDE DETAILS ON THE SPECIFIC CONTROL MEASURES TO REDUCE STORMWATER POLLUTION.

IV. EROSION AND SEDIMENT CONTROLS

A. STABILIZATION PRACTICES

EXISTING TREES AND NATURAL VEGETATION TO REMAIN ON-SITE SHALL BE PROTECTED BY TREE BARRICADE FENCING AS DEPICTED ON THE STORMWATER POLLUTION PREVENTION PLAN (C0.21). TYPE III SILT FENCING SHALL PROTECT ALL DRAINAGE STRUCTURES AND SHALL BUFFER AREAS WITH POTENTIAL TO CONTRIBUTE OFF-SITE RUNOFF AND AS SPECIFICALLY DEPICTED ON THE STORMWATER POLLUTION PREVENTION PLAN (C0.21). STABILIZATION MEASURES SHALL BE INITIATED FOR EROSION AND SEDIMENT CONTROL ON DISTURBED AREAS AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 7 DAYS, IN PORTIONS OF THE SITE WHERE CONSTRUCTION HAS TEMPORARILY OR PERMANENTLY CEASED. AS SPECIFIED IN SECTION II.B. ABOVE, UPON COMPLETION OF CONSTRUCTION, ALL STORMWATER MANAGEMENT FACILITIES SHALL BE SCRAPED CLEAN OF ACCUMULATED SEDIMENT AFTER THE COMPLETION OF CONSTRUCTION. ALL TURF ESTABLISHMENT SHALL BE PERFORMED MEETING THE REQUIREMENTS OF SECTION 570 OF THE STANDARD SPECIFICATIONS. EVIDENCE OF GROWTH MUST BE PRESENT PRIOR TO FINAL RELEASE.

B. STRUCTURE PRACTICES

AS DEPICTED IN THE STORMWATER POLLUTION PREVENTION PLAN (C0.21), A STORMWATER MANAGEMENT SYSTEM WILL BE CONSTRUCTED AND WILL BE COMPRISED OF A DRY RETENTION FACILITY AND A STORM PIPE CONVEYANCE SYSTEM. TO PREVENT EROSION DURING CONSTRUCTION, TYPE III SILT FENCING WILL BE INSTALLED IN THE LOCATIONS SHOWN ON THE PLANS. ALL EXISTING AND PROPOSED STORM DRAINS AND DRAINAGE SWALES SHALL BE PROTECTED ACCORDING TO THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, DATED JULY 2013 OR PER DETAILS PROVIDED ON SHEET C0.21 UNTIL CONSTRUCTION IS COMPLETE. THE STORM PIPE CONVEYANCE SYSTEM SHALL BE FLUSHED OUT TO REMOVE ALL ACCUMULATED DEBRIS AND SEDIMENT UPON COMPLETION OF CONSTRUCTION.

C. DRAINAGE LOCATIONS THAT SERVE AREAS WITH LESS THAN 10 DISTURBED ACRES

NOT APPLICABLE, SEE SECTION D, BELOW

D. DRAINAGE LOCATIONS THAT SERVE AREAS WITH MORE THAN 10 DISTURBED ACRES

AS SPECIFIED IN THE "SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES," THE SMF(S) WILL BE CONSTRUCTED PRIOR TO CLEARING AND GRUBBING OUTSIDE OF THE SMF(S) AREAS AND CONSTRUCTION OF THE PERMANENT PAVED AREAS. THE TOTAL CONTRIBUTING DRAINAGE AREA TO THE STORMWATER MANAGEMENT SYSTEM IS APPROXIMATELY 138.26 ACRES AND WILL CONSIST OF APPROXIMATELY 44.73 ACRES OF DISTURBED CONSTRUCTION AREA. THEREFORE, NO ADDITIONAL SEDIMENT TRAP BASINS ARE NECESSARY TO PROVIDE SEDIMENT STORAGE ON-SITE DURING CONSTRUCTION. AS SHOWN ON THE STORMWATER POLLUTION PREVENTION PLAN (C0.21), THE PROPOSED STORMWATER MANAGEMENT SYSTEM WILL PREVENT OFF-SITE EROSION DURING CONSTRUCTION. SILT FENCES OR EQUIVALENT SEDIMENT CONTROLS SHALL BE INSTALLED AT SIDE SLOPE AND DOWN SLOPE BOUNDARIES, INLET LOCATION, OUTLET LOCATIONS, AND OTHER LOCATIONS AS SHOWN ON THE STORMWATER POLLUTION PREVENTION PLAN, AS REQUIRED. BY COMPLETION OF CONSTRUCTION, THE SIDE SLOPES, SWALES, AND ALL DISTURBED AREAS SHALL BE STABILIZED WITH GRASS AND LANDSCAPING AS SPECIFIED ON THE CONSTRUCTION DRAWINGS.

V. STORMWATER MANAGEMENT

A. BEST MANAGEMENT PRACTICES

AFTER CONSTRUCTION, THE STORMWATER MANAGEMENT SYSTEM SHALL BE MAINTAINED IN ACCORDANCE WITH THE SPECIFIED STORMWATER MAINTENANCE NOTES IN THE INCLUDED CONSTRUCTION DRAWINGS AND/OR RESPECTIVE MAINTENANCE REPORTS. SPECIFICALLY, THE PROPOSED SMF(S) SHALL BE MOWED REGULARLY IN THE SPECIFIED AREAS, STORM PIPES AND STRUCTURES WILL BE INSPECTED SEMI-ANNUALLY AND CLEANED ANNUALLY, SMF(S) SIDE SLOPES SHALL BE MAINTAINED TO PREVENT EROSION, AND LANDSCAPING AND GRASS THAT PREVENTS EROSION SHALL BE MAINTAINED. ADDITIONALLY, REMEDIAL ACTIONS SHALL BE TAKEN SHOULD THE SMF(S) NOT PERFORM AS DESIGNED.

B. VEGETATED SWALES

WHEN VEGETATED SWALES ARE UTILIZED, SILT FENCING OR EQUIVALENT SEDIMENT CONTROLS SHALL BE INSTALLED AT ADEQUATE INTERVALS TO COLLECT SEDIMENT ALONG THE SWALE. THE SEDIMENT SHALL BE REMOVED WHEN SEDIMENT REACHES ONE-THIRD OF THE HEIGHT OF THE SILT FENCING. SEE THE STORMWATER POLLUTION PREVENTION PLAN (C0.21) FOR DETAILS AND LOCATIONS, AS REQUIRED.

C. VELOCITY DISSIPATION DEVICES AT DISCHARGE POINTS

WHEN DISCHARGE POINTS ARE NOT LOCATED UNDER WATER, RIP RAP PADS HAVE BEEN PROVIDED AT LOCATIONS WHERE NECESSARY DUE TO ANTICIPATED DISCHARGE VELOCITIES. PLEASE SEE THE CONSTRUCTION PLANS FOR DETAILS AND LOCATIONS, AS NEEDED.

VI. CONTROLS FOR OTHER POTENTIAL POLLUTANTS

A. WASTE DISPOSAL

THE CONTRACTOR SHALL PROVIDE LITTER COLLECTION CONTAINERS WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION. CONTRACTOR SHALL DISPOSE OF ALL UNSUITABLE MATERIALS AND CONSTRUCTION DEBRIS IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.

B. DUST CONTROL

TO PREVENT OFF-SITE VEHICULAR TRACKING OF SEDIMENTS AND DUST GENERATION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE ESTABLISHED BY THE SITE CONTRACTOR. PLEASE SEE THE STORMWATER POLLUTION PREVENTION PLAN (C0.21) FOR DETAILS AND LOCATION(S).

C. EXISTING VERSUS PROPOSED POTABLE AND SANITARY SEWER SYSTEMS

THERE ARE EXISTING SANITARY SEWER AND POTABLE WATER SYSTEMS LOCATED NEAR THE PROJECT SITE. EXTENSION AND UPGRADES ARE PROPOSED. IF TEMPORARY SANITARY SYSTEMS ARE UTILIZED DURING CONSTRUCTION, THE CONTRACTOR SHALL PROPERLY CONTROL AND DISCHARGE ANY SANITARY WASTE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

D. FERTILIZER & PESTICIDES

THE USE OF FERTILIZERS, HERBICIDES, AND PESTICIDES ON THE PROJECT SITE, WILL BE DIRECTED BY THE LANDSCAPE PLAN AND THE FDOT STANDARD SPECIFICATIONS SECTION 570, TO SUPPORT THE GROWTH OF THE PROPOSED VEGETATION. ESTABLISHING THIS VEGETATION WILL AID IN THE STABILIZATION OF THE PROJECT SITE AND REDUCE EROSION. APPLICATION RATES FOR THE FERTILIZERS, HERBICIDES, AND PESTICIDES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO GUARD AGAINST OVER-USE, WHICH CAN LEAD TO VIOLATIONS OF STATE WATER QUALITY STANDARDS.

E. TOXIC MATERIAL

THE CONSTRUCTION SITE WILL BE IN FULL COMPLIANCE WITH STATE AND FEDERAL REQUIREMENTS. A PLASTIC MAT, TAR PAPER, OR OTHER IMPERVIOUS MATERIAL SHALL BE PLACED UNDER AREAS WHERE TOXIC LIQUIDS ARE TO BE OPENED AND STORED.

F. HAZARDOUS MATERIALS

ALL HAZARDOUS MATERIALS SHALL BE STORED IN A SECURE LOCATION, UNDER COVER, AND IN APPROPRIATE TIGHTLY, SEALED CONTAINERS WHEN NOT IN USE. ALL PRODUCTS SHALL BE STORED IN AND USED FROM THE ORIGINAL CONTAINER WITH THE ORIGINAL PRODUCT LABEL. CONTAINERS MUST BE STORED IN A MANNER TO PROTECT THEM FROM THE ELEMENTS AND INCIDENTAL DAMAGE. THE MINIMUM PRACTICAL QUANTITY OF ALL SUCH MATERIALS SHALL BE KEPT ON THE JOB SITE AND SCHEDULED FOR DELIVERY AS CLOSE TO TIME OF USE AS PRACTICAL.

ALL PRODUCTS SHALL BE USED IN STRICT COMPLIANCE WITH THE INSTRUCTIONS ON THE PRODUCT LABEL.

SUFFICIENT EQUIPMENT AND/OR MATERIALS SHALL BE KEPT ONSITE TO CONTAIN AND CLEAN UP SPILLS OF HAZARDOUS MATERIALS IN THE AREAS WHERE THESE MATERIALS ARE STORED OR USED. SPILL CONTROL AND CONTAINMENT KIT SUPPLIES SHALL BE OF SUFFICIENT QUANTITIES AND APPROPRIATE CONTENT TO CONTAIN A SPILL FROM THE LARGEST ANTICIPATED PIECE OF EQUIPMENT AND FROM THE LARGEST ANTICIPATED QUANTITIES OF PRODUCTS STORED ON THE SITE AT ANY GIVEN TIME.

CONTRACTOR TO CONTAIN AND CLEAN UP ANY SPILLS IMMEDIATELY AFTER THEY OCCUR. ANY SPILLS OF PETROLEUM PRODUCTS OR HAZARDOUS MATERIALS IN EXCESS OF REPORTABLE QUANTITIES AS DEFINED BY EPA, STATE, OR LOCAL AGENCY REGULATIONS SHALL BE REPORTED TO THE APPROPRIATE AGENCIES IN THE REQUIRED TIME FRAMES. THE CONTRACTOR SHALL PROVIDE A WRITTEN NOTICE TO THE OWNER IMMEDIATELY UPON IDENTIFICATION OF ANY SPILL.

ALL EXCESS, USED, OR SPILLED PRODUCTS, INCLUDING CONTAMINATED SOIL, SHALL BE DISPOSED OF BY THE CONTRACTOR IN STRICT COMPLIANCE WITH INSTRUCTIONS ON THE PRODUCT LABEL AND ALL APPLICABLE REGULATIONS.

VII. APPROVED STATE AND LOCAL PLANS

THE CONSTRUCTION DRAWINGS FOR THE PROJECT WERE APPROVED AND PERMITTED BY THE FOLLOWING AGENCIES:

** CITY OF ALACHUA*
** FLORIDA DEPARTMENT OF TRANSPORTATION*
** SUWANNEE RIVER WATER MANAGEMENT DISTRICT*
** FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION*

VIII. CONSTRUCTION ACTIVITY DISCHARGES

IN ACCORDANCE WITH THIS PLAN, THERE ARE NO ANTICIPATED DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

IX. CHANGES TO THE POLLUTION PREVENTION PLAN

THIS STORMWATER POLLUTION PREVENTION PLAN SHALL BE AMENDED TO REFLECT ANY APPLICABLE CHANGE IN A STATE, REGIONAL, OR LOCAL PERMIT FOR WHICH THE PERMITTEE RECEIVES WRITTEN NOTICE. WHEN WRITTEN NOTICE IS RECEIVED, THE PERMITTEE SHALL PROVIDE A RE-CERTIFICATION OF THIS POLLUTION PREVENTION PLAN, WHICH HAS BEEN REVISED TO ADDRESS SUCH CHANGES. AMENDMENTS TO THE PLAN SHALL BE PREPARED, SIGNED, DATE, AND KEPT AS ATTACHMENTS TO THE ORIGINAL PLAN.

X. ALTERNATIVE PERMIT REQUIREMENTS

NO ALTERNATIVE PERMIT REQUIREMENTS ARE REQUESTED.

XI. MAINTENANCE

THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE, INSPECTION SCHEDULE, AND REPAIRS OUTLINED IN THIS PLAN. MAINTENANCE SHALL CONTINUE THROUGHOUT THE PROJECT UNTIL WORK IS COMPLETE. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER CONSTRUCTION IS COMPLETE. IN ADDITION TO THE TIMES MENTIONED IN THE PREVIOUS SECTIONS, THE CONTRACTOR SHALL INITIATE ANY REPAIRS WITHIN 24 HOURS OF BEING REPORTED. IN THE EVENT THAT THE SMF(S) DO NOT PERFORM PROPERLY OR IF A SINKHOLE DEVELOPS, THE PROJECT ENGINEER SHALL BE NOTIFIED TO ASSIST IN COORDINATING REMEDIAL ACTION. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM SILT FENCING WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE SILT FENCE. UPON FINAL COMPLETION OF CONSTRUCTION AND ACCEPTANCE BY BOTH THE CITY AND OWNER, THE OPERATION AND MAINTENANCE ENTITY WILL BE "TOMOKA HILLS FARMS INC".

XII. INSPECTIONS

THE CONTRACTOR SHALL INSPECT ALL POINTS OF POTENTIAL DISCHARGE FROM THE PROJECT SITE FOR ALL DISTURBED AREAS ON THE CONSTRUCTION SITE AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.50 INCHES OR GREATER. FOR POINTS OF DISCHARGE INTO SURFACE WATERS OF THE STATE OR AN MS4, A QUALIFIED INSPECTOR (PROVIDED BY THE OPERATOR) SHALL PERFORM THE REQUIRED INSPECTIONS. THE CONTRACTOR SHALL INSTALL A RAIN GAUGE AT THE SITE TO MONITOR AND DOCUMENT RAINFALL EVENTS 0.50 INCHES OR GREATER. LOCATIONS WHERE THE SITE IS COMPLETELY CONSTRUCTED AND STABILIZED, SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE A MONTH. ALL INSPECTIONS SHALL BE RECORDED ON THE CONSTRUCTION INSPECTION FORM. THE CONTRACTOR MAY USE THEIR OWN FORM (MEETING FDEP SWPPP REQUIREMENTS) OR A SAMPLE FORM FROM FDEP. A SAMPLE CONSTRUCTION FORM IS AVAILABLE AT: "HTTPS://FLORIDADEP.GOV/WATER/STORMWATER/DOCUMENTS/CONSTRUCTION-SWPPP". MORE SPECIFICALLY, THE INSPECTION SHALL ENSURE THE FOLLOWING CATEGORIES.

A. DISTURBED AREAS

ALL DISTURBED AREAS AND AREAS USED FOR MATERIAL STORAGE SHALL BE INSPECTED FOR POLLUTANTS ENTERING THE STORMWATER SYSTEM. THE STORMWATER MANAGEMENT SYSTEM AND EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE INSPECTED TO ENSURE THEY ARE OPERATING CORRECTLY. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.

B. MAINTENANCE PERFORMANCE

BASED ON THE RESULTS OF THE INSPECTION, ALL MAINTENANCE OPERATIONS NEEDED TO ASSURE PROPER COMPLIANCE WITH THIS PLAN SHALL BE DONE IN A TIMELY MANNER, BUT IN NO CASE LATER THAN 7 DAYS FOLLOWING THE INSPECTION.

C. REPORTING REQUIREMENTS

ALL INSPECTIONS SHALL BE RECORDED ON THE CONSTRUCTION INSPECTION FORM. THIS FORM IS CREATED TO SUMMARIZE THE SCOPE OF THE INSPECTION, THE NAME(S) AND QUALIFICATION OF THE INSPECTOR(S), THE DATE OF INSPECTION, RAINFALL DATA, OBSERVATIONS, THE ACTIONS TAKEN TO CORRECT INCIDENTS OF NON-COMPLIANCE WITH THE PROVISIONS OF THIS PLAN. IF NO INCIDENTS OF NON-COMPLIANTS ARE OBSERVED, THE REPORT SHALL CONTAIN A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND THE ASSOCIATED PERMIT.

XIII. NON-STORMWATER DISCHARGES

IN ADDITION TO STORMWATER RUNOFF, THIS PLAN APPLIES TO RUNOFF FROM IRRIGATION OPERATIONS AND CONSTRUCTION PRACTICES. THIS PLAN DOES NOT PERTAIN TO DISCHARGES FROM FIRE FIGHTING ACTIVITIES.

XIV. CONTRACTORS CERTIFICATION

THE CONTRACTORS OR SUB-CONTRACTORS SHALL PHOTOCOPY AND COMPLETE THE FORM ON THIS PAGE. IT SHALL BE PROVIDED TO THE OWNER AND KEPT ON FILE PURSUANT TO SECTION XV REGARDING PROJECT RECORDS.

XV. RETENTION OF RECORDS

THE PERMITTEE SHALL RETAIN COPIES OF STORMWATER POLLUTION PREVENTION PLANS AND ALL REPORTS REQUIRED BY THIS PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT, FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED.

THE PERMITTEE SHALL RETAIN A COPY OF THE STORMWATER POLLUTION PREVENTION PLAN AND ALL REPORTS, RECORDS, AND DOCUMENTATION REQUIRED BY THIS PERMIT AT THE CONSTRUCTION SITE, OR AN APPROPRIATE ALTERNATIVE LOCATION AS SPECIFIED IN THE NOTICE OF INTENT, FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION.

XVI. NOTICE OF TERMINATION

NOTICE OF TERMINATION:

1. *WHERE A SITE HAS BEEN FINALLY STABILIZED AND ALL STORMWATER DISCHARGES AUTHORIZED BY THIS PERMIT ARE ELIMINATED, THE PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION (DEP FORM 62-621.300(6)), SIGNED IN ACCORDANCE WITH PART VII.C OF DEP DOCUMENT NO. 62-621.300(4)(a), WITHIN 14 DAYS OF FINAL STABILIZATION OF THE SITE TO TERMINATE COVERAGE UNDER THIS PERMIT.*
2. *ELIMINATION OF STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY MEANS THAT ALL DISTURBED SOILS AT THE SITE HAVE BEEN FINALLY STABILIZED AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN REMOVED OR WILL BE REMOVED AT AN APPROPRIATE TIME, OR THAT ALL STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE SITE THAT ARE AUTHORIZED BY THIS GENERIC PERMIT HAVE OTHERWISE BEEN ELIMINATED.*
3. *FOR CONSTRUCTION ACTIVITIES WHERE THE OPERATOR CHANGES, THE EXISTING OPERATOR SHALL FILE AN N.O.T. IN ACCORDANCE WITH THIS PART WITHIN 14 DAYS OF RELINQUISHING CONTROL OF THE PROJECT TO A NEW OPERATOR.*

THE PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE FOLLOWING ADDRESS:

NPDES STORMWATER NOTICES CENTER, MS# 2510
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

PROJECTS THAT DISCHARGED STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY TO A MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) SHALL SUBMIT A COPY OF THE N.O.T. TO THE OPERATOR OF THE MS4.

Contractor/Subcontractor Certification Statement
Stormwater Pollution Prevention Plan

Site Name: Tomoka Hills Golf Course
Site Location: TBD; adjacent to 16305 NW 162nd Ln
Alachua County, Florida

THE CONTRACTOR(S) OR SUB-CONTRACTOR(S) RESPONSIBLE FOR COMPLYING WITH THIS STORMWATER POLLUTION PREVENTION PLAN SHALL SIGN THE CERTIFICATION STATEMENT BELOW. MULTIPLE COPIES OF THIS CERTIFICATION STATEMENT MAY BE NECESSARY DEPENDING ON THE NUMBER OF SUB-CONTRACTORS ASSOCIATED WITH THE PROJECT

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER.

DATE	RESPONSIBLE INDIVIDUAL'S NAME	RESPONSIBLE INDIVIDUAL'S SIGNATURE	TITLE	COMPANY NAME, ADDRESS, AND PHONE NUMBER

11801 Research Drive
Alachua, Florida 32615
(352)331-1976
www.inv5.com

INV5

SCALE: N/A
VERIFY SCALE BAR IS TRUE DISTANCE ON YOUR PLOTS
0 1" IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/11/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL
SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: STORMWATER POLLUTION PREVENTION NOTES

TECHNICIAN: T.F. COWART
DESIGNED: E.G. ELI
ACCEPTED BY: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C0.20

Tools: kenter Plot Date: Mar 12

TYPICAL INSTALLATION SEQUENCE FOR SILT-SAVER FRAME AND FILTER

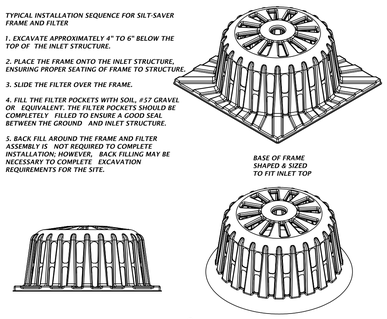
1. EXCAVATE APPROXIMATELY 4" TO 6" BELOW THE TOP OF THE INLET STRUCTURE.

2. PLACE THE FRAME ONTO THE INLET STRUCTURE, ENSURING PROPER SEATING OF FRAME TO STRUCTURE.

3. SLIDE THE FILTER OVER THE FRAME.

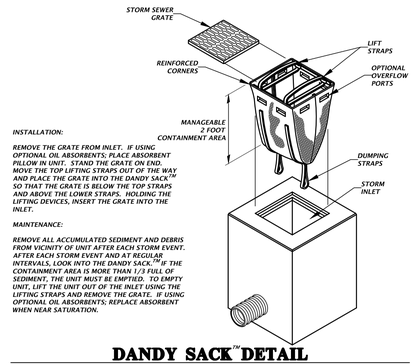
4. FILL THE FILTER POCKETS WITH SOIL, #57 GRAVEL OR EQUIVALENT. THE FILTER POCKETS SHOULD BE COMPLETELY FILLED TO ENSURE A GOOD SEAL BETWEEN THE GROUND AND INLET STRUCTURE.

5. BACK FILL AROUND THE FRAME AND FILTER ASSEMBLY IS NOT REQUIRED TO COMPLETE INSTALLATION; HOWEVER, BACK FILLING MAY BE NECESSARY TO COMPLETE EXCAVATION REQUIREMENTS FOR THE SITE.



SILT-SAVER® DETAIL

NTS



INSTALLATION:

REMOVE THE GRATE FROM INLET. IF USING OPTIONAL OIL ABSORBENTS; PLACE ABSORBENT PILLOW IN UNIT. STAND THE GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO THE DANDY SACK™ SO THAT THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

MAINTENANCE:

REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE DANDY SACK™ IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL OIL ABSORBENTS; REPLACE ABSORBENT WHEN NEAR SATURATION.

DANDY SACK™ DETAIL

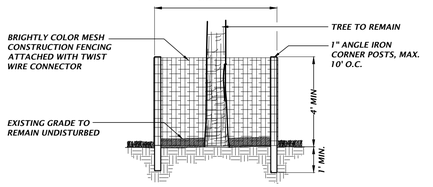
NTS

NOTE:
1. CONSTRUCTION EXIT INSTALLATION SHALL REMOVE MUD/SOILS FROM TIRES TO PREVENT TRACKING ONTO PUBLIC ROADS.
2. TOP DRESSING WITH 2" STONE MAY BE REQ'D AS DETERMINED BY THE USE AND FUNCTION OF THE SYSTEM.
3. THE WASH PIT SHOULD BE INSTALLED IF THE STANDARD CONSTRUCTION EXIT DOES NOT SUFFICIENTLY REMOVE SOILS AND WASHING IS REQ'D.

TEMPORARY CONSTRUCTION EXIT DETAIL

NTS

PLACE BARRICADES AT MINIMUM OF TWO-THIRDS THE AREA OF THE DRIPLINE OR SIX FEET FROM THE TRUNK OF THE TREE, WHICHEVER IS GREATER



TREE PROTECTION DETAIL

NTS

TREE PROTECTION NOTES

1) PROTECTIVE BARRIERS SHALL BE CONSTRUCTED, AS NECESSARY, TO PREVENT THE DESTRUCTION OR DAMAGING OF REGULATED TREES THAT ARE LOCATED WITHIN 50 FEET OF ANY CONSTRUCTION ACTIVITY OR STORAGE OF EQUIPMENT AND MATERIALS.

2) PROTECTIVE BARRIERS SHALL BE PLAINLY VISIBLE AND SHALL CREATE A CONTINUOUS BOUNDARY AROUND TREES OR VEGETATION CLUSTERS IN ORDER TO PREVENT ENCROACHMENT BY MACHINERY, VEHICLES OR STORED MATERIALS.

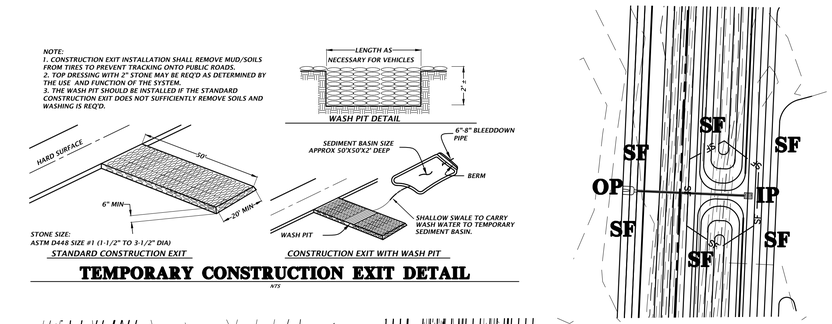
3) NO TRENCHING ALLOWED WITHIN THE PROTECTIVE BARRIER ZONE. HAND DIG TO INSTALL UTILITY IF APPROVED BY CITY MANAGER OR DESIGNEE. WHERE ROOTS GREATER THAN ONE INCH IN DIAMETER ARE DAMAGED OR EXPOSED, THEY SHALL BE CUT CLEANLY AND RE-COVERED WITH SOIL WITHIN ONE HOUR OF DAMAGE OR EXPOSURE.

4) PROTECTIVE BARRIERS SHALL REMAIN IN PLACE AND INTACT UNTIL SUCH TIME AS LANDSCAPE OPERATIONS BEGIN.

5) LANDSCAPE PREPARATION IN THE PROTECTED AREA SHALL BE LIMITED TO SHALLOW DISCING OF THE AREA. DISCING SHALL BE LIMITED TO A DEPTH OF 4 INCHES.

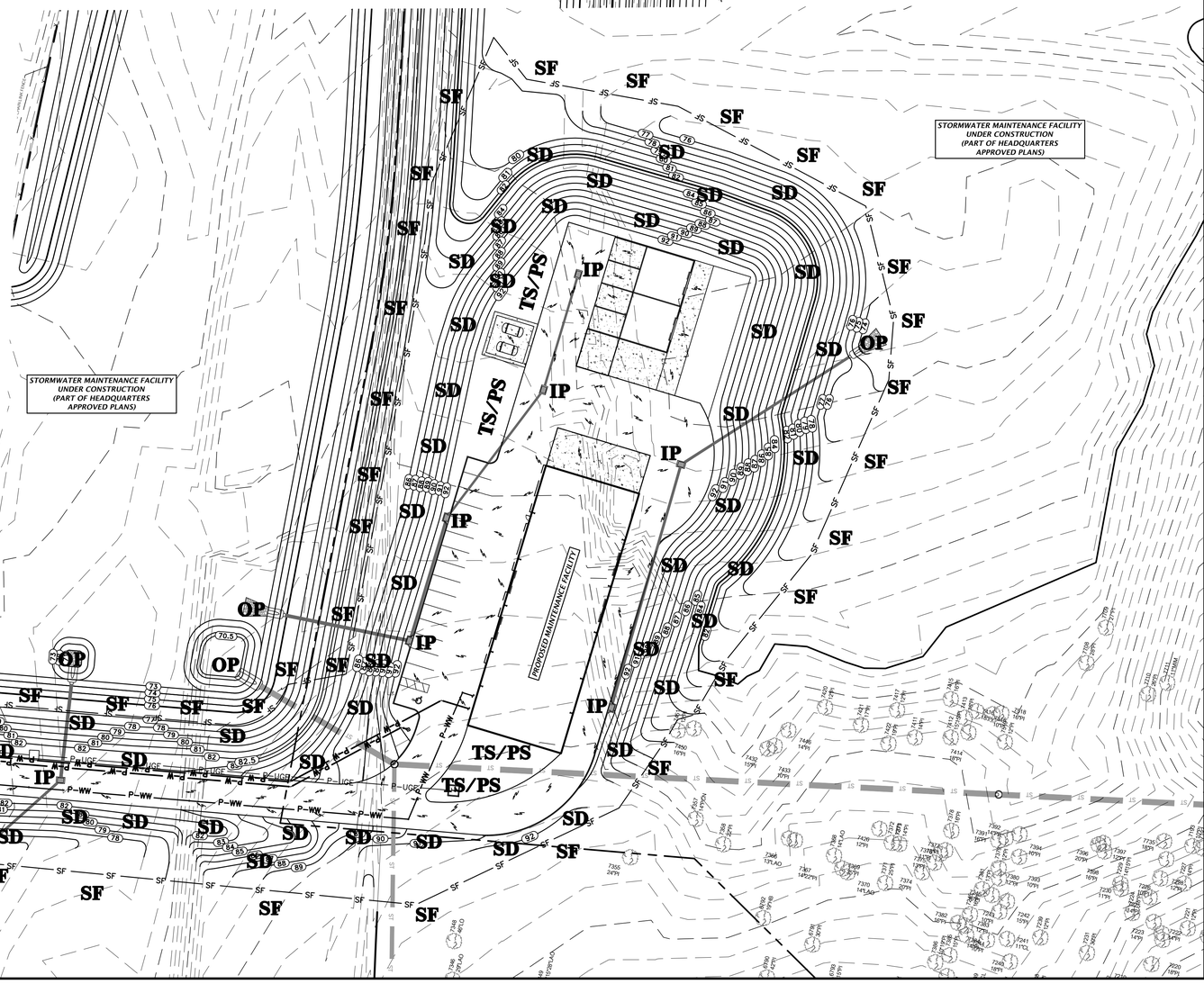
6) NO BUILDING MATERIALS, MACHINERY OR HARMFUL CHEMICALS SHALL BE PLACED WITHIN PROTECTIVE BARRIERS.

7) THE AMERICAN NATIONAL STANDARDS INSTITUTE A-300 PART V: MANAGEMENT OF TREES AND SHRUBS DURING SITE PLANNING, SITE DEVELOPMENT, AND SITE CONSTRUCTION OR OTHER NATIONALLY RECOGNIZED ARBORICULTURAL STANDARDS SHALL BE USED AS GUIDELINES FOR TREE PROTECTION, PLANTING, PRUNING AND CARE DURING DEVELOPMENT AND CONSTRUCTION.



STORMWATER POLLUTION PREVENTION LEGEND

TS	= TEMPORARY SEEDING
PS	= PERMANENT SEEDING
ML	= MULCHING
SD	= SOD STABILIZATION
SF	= SILT BARRIER
TB	= TREE BARRIER
IP	= INLET PROTECTION
OP	= OUTLET PROTECTION
CO	= CONSTRUCTION ENTRANCE/EXIT



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SCALE: 1"=40'

VERIFY SCALE BAR IS CORRECT FOR DRAWING UNITS.
0 1" IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/RED REVISIONS

SUBMITTALS:
07/11/24 SRWMD
10/11/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: STORMWATER POLLUTION PREVENTION PLAN AND DETAILS

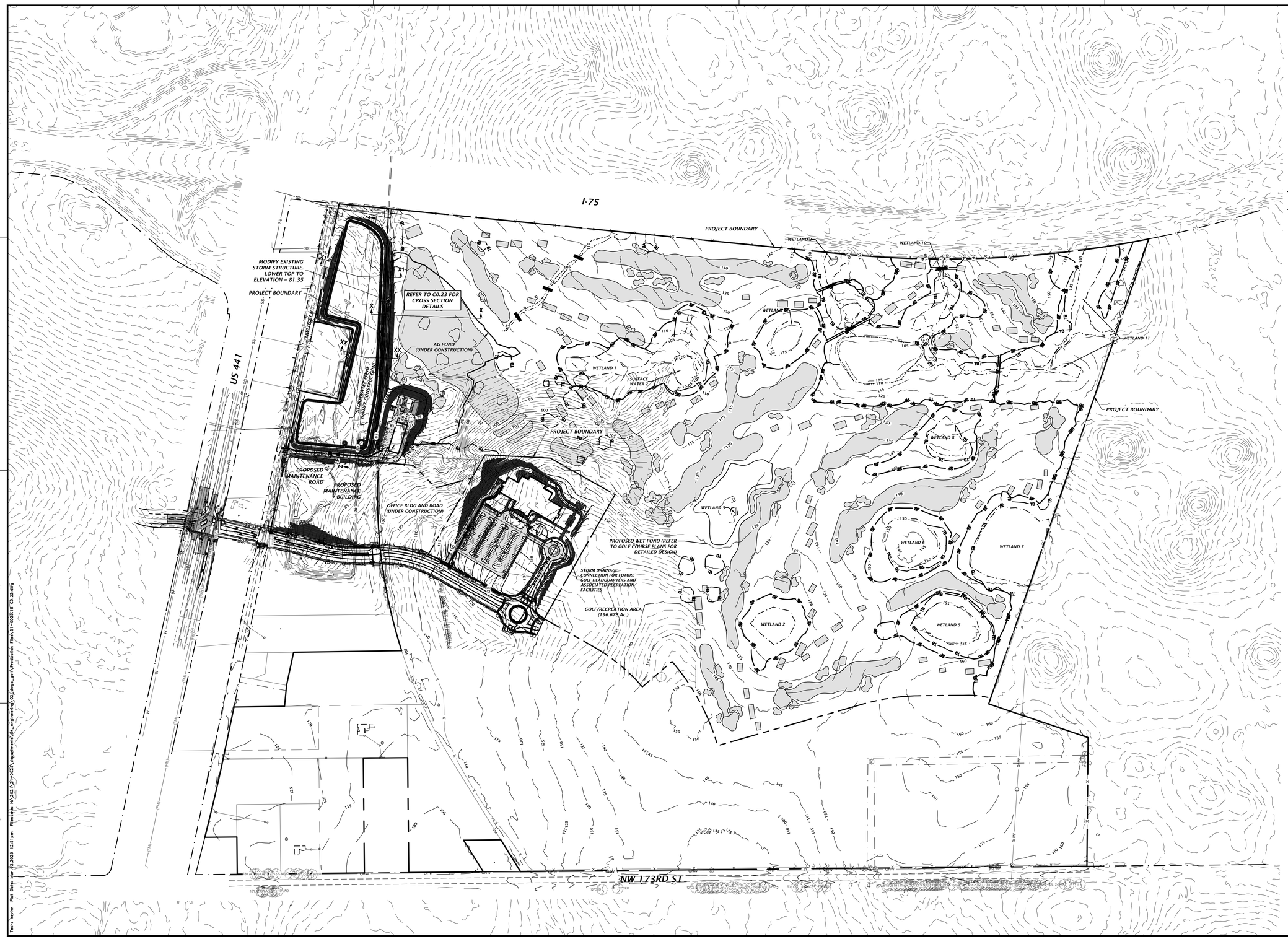
TECHNICIAN: T.F. COWART
DESIGNED: K. KEITH, E.I.
REVIEWED: W.E. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C0.21

Tech: keifer Plot Date: Mar 12,2025 12:49pm Filename: N:\2021\21-0025\departments\04_engineering\03_dwgs_gis\Production Files\21-0025.19 SB SWPP.dwg



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SCALE: 1"=250'

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/31/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: OVERALL STORMWATER AND WETLAND BUFFER PROTECTION PLAN

TECHNICIAN: T.F. COWART

DESIGNER: K. REED, E.I.

QUALITY CONTROL: W.F. OWEN, P.E.

PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C0.22

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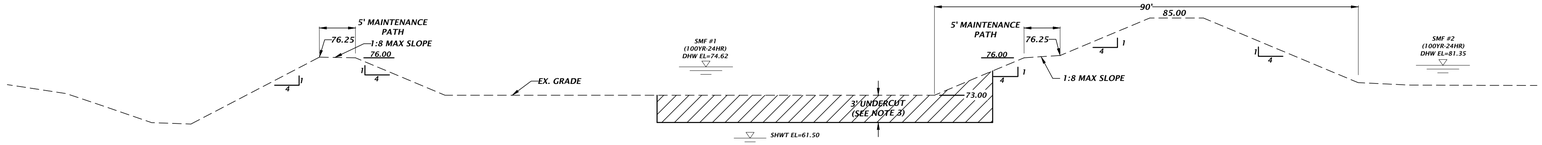
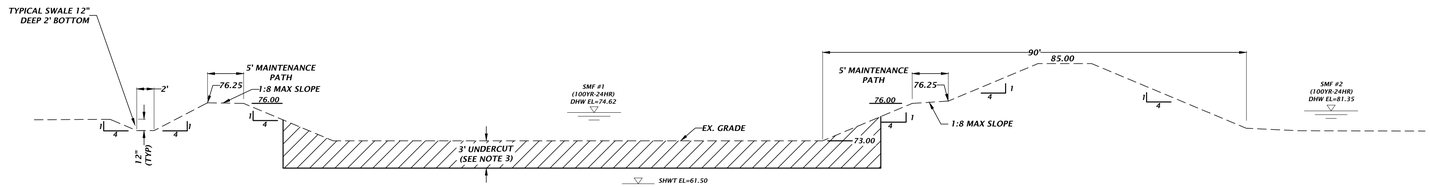


1. *IF A CONTINUOUS LIMEROCK FORMATION IS ENCOUNTERED IN THE BASIN AREA CONTACT THE ENGINEER OF RECORD. THE LIMEROCK SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 3 FEET BEYOND THE BASIN UNDERCUT LIMITS.*
2. *IF A SOLUTION PIPE SINKHOLE DOES FORM IN THE STORMWATER BASIN, THEN THE SINKHOLE SHALL BE REPAIRED BY BACKFILLING WITH MATERIAL OF LOWER-PERMEABILITY MATERIAL, SUCH AS CLAYEY SAND OR CLAY. THE MATERIAL SHALL BE COMPACTED AND THE SINKHOLE REPAIR SHOULD BRING THE SURFACE BACK TO AN ELEVATION WHICH IS SLIGHTLY ABOVE THE ORIGINAL BOTTOM, CREATING A SMALL MOUND.*
3. *UNDERCUT 3' AND BACKFILL WITH ON-SITE OR IMPORTED SANDS WITH SILT (SP, SP-SM) HAVING A MAXIMUM OF 10 PERCENT SOIL FINES PASSING THE NO. 200 SIEVE.*

EX. STORMWATER MANAGEMENT FACILITY 1 CROSS SECTION X1-X1

NTS



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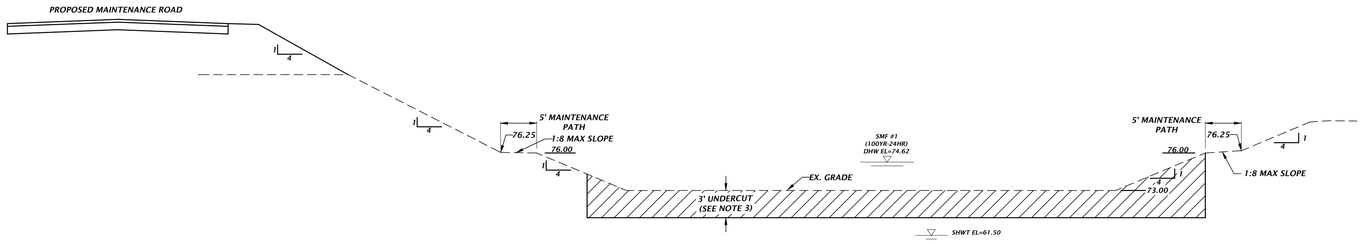
EX. STORMWATER MANAGEMENT FACILITY 1 CROSS SECTION XX-XX

NTS



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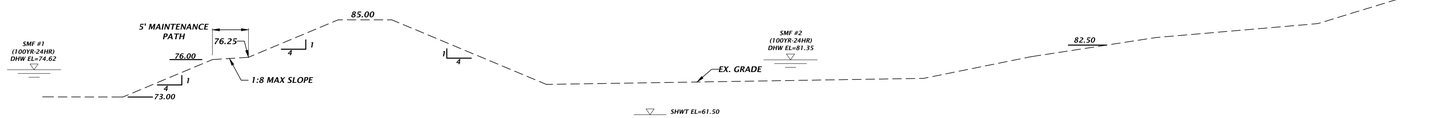
3. *UNDERCUT 3' AND BACKFILL WITH ON-SITE OR IMPORTED SANDS WITH SILT (SP, SP-SM) HAVING A MAXIMUM OF 10 PERCENT SOIL FINES PASSING THE NO. 200 SIEVE.*

EX. STORMWATER MANAGEMENT FACILITY 1 CROSS SECTION Z-Z

NTS



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EX. STORMWATER MANAGEMENT FACILITY 2 CROSS SECTION X-X

NTS

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SCALE: N/A

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0 1"
IF NOT ONE INCH ON
THIS SHEET ADJUST
SCALES ACCORDINGLY

CONSTRUCTION/RED REVISIONS:

SUBMITTALS:
07/11/24 SWMP
10/11/24 CITY OF ALACHUA
01/22/24 SWMD
01/29/25 CITY OF ALACHUA
05/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL
SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: STORMWATER CROSS SECTIONS

TECHNICIAN: T.F.- COWART
DESIGNER: K. KEITH, E.I.
PROJECT CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C0.23

Tech: kwhr Plot Date: Mar 12,2025 12:51pm Filename: H:\2021\21-0025\departments\04_engineering\02_dwg_pdf\Production Files\21-0025.19 02.22.dwg

THIS PORTION OF NW 162ND LANE IS TO BE CLOSED WITH THE SURVEY. SURVEY CLOSURE DISCOVERED WHEN SURVEYOR PROCEED TO THIS

BENCHMARK
SET 8" SQUARE CONC. MONUMENT MARKED TRAVERSE & CPD
SEE SHEET C0.10 FOR SURVEY CONTROL DATA

TP: 09854-001-000
KENNETH J & REBECCA H HICKETT

CAST DYE RISER

LIME ROCK SURFACE

N.W. 162ND LANE
ROAD CLOSED
(R/W WIDTH VARIES)

NORTH R/W LINE

OPEN CUT AND REPAIR FOR UTILITY INSTALLATION

UNDER CONSTRUCTION
STORMWATER MAINTENANCE FACILITY
(PART OF HEADQUARTERS
APPROVED PLANS)

REFER TO LANDSCAPE PLANS LS-2 - LS-32 FOR REMAINDER OF PROJECT SITE TREE DEMOLITION AND PROTECTION

PROJECT BOUNDARY

11801 Research Drive
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MVS

SCALE: 1"=20'

VERIFY SCALE
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0 1"

CONSTRUCTION/BID REVISIONS

SUBMITTALS:
07/11/24 SRWMD
10/14/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: DEMOLITION AND TREE PROTECTION PLAN

TECHNICIAN: T.F. COWART
DESIGNED: K. KEITH, E.I.
QA/QC CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C0.30

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SCALE: 1"=20'
VERIFY SCALE
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THIS SHEET, ADJUST
SCALES ACCORDINGLY.

CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/31/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL
SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: DEMOLITION AND TREE
PROTECTION PLAN

TECHNICIAN: T.F. COWART
DESIGNER: K. REED, E.I.
QUALITY CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C0.31

GRAPHIC SCALE

0 100 200 400

LEGEND:

- WETLANDS (12.79 Ac.±)
- OTHER SURFACE WATERS (3.06 Ac.±)
- WETLAND IMPACTS (0.05 Ac.±)
- WETLAND TREE TRIMMING IMPACTS (0.46 Ac.±)
- OTHER SURFACE WATERS IMPACTS (0.39 Ac.±)
- WETLAND SECONDARY IMPACTS (0.09 Ac.±)
- 25' UPLAND BUFFER

NOTES:

AERIAL PHOTOGRAPHS PROVIDED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AND WERE FLOWN IN 2022.

FLUCFCS PER FLORIDA LAND USE, COVER, AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

WETLAND LINES REVIEWED AND APPROVED IN THE FIELD BY SRWMD STAFF ON SEPTEMBER 14, 2023 AND OCTOBER 3, 2023.

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SCALE: 1"=200'

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0 1"

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/31/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: WETLAND IMPACTS PLAN (SRWMD) (ALACHUA COUNTY)

TECHNICIAN: T.F. COWART

DESIGNER: K. REED, E.I.

QUALITY CONTROL: W.F. OWEN, P.E.

PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C0.40

GRAPHIC SCALE

0 100 200 400

LEGEND:

- WETLANDS (12.79 Ac.±)
- OTHER SURFACE WATERS (3.06 Ac.±)
- WETLAND IMPACTS (0.05 Ac.±)
- WETLAND TREE TRIMMING IMPACTS (0.46 Ac.±)
- OTHER SURFACE WATERS IMPACTS (0.39 Ac.±)
- WETLAND BUFFER
- BUFFER MITIGATION AREAS (3.06 Ac.±) (MIN. AREA IN FOREST 1.17 Ac.±)
- BUFFER ENCROACHMENT - OPEN PASTURE (2.44 Ac.±)
- BUFFER ENCROACHMENT - TREE TRIMMING (0.62 Ac.±) (MAINTAINED ≤ 4 Ft.)

NOTES:

AERIAL PHOTOGRAPHS PROVIDED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AND WERE FLOWN IN 2022.

FLUCFCS PER FLORIDA LAND USE, COVER, AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

WETLAND LINES REVIEWED AND APPROVED IN THE FIELD BY SRWMD STAFF ON SEPTEMBER 14, 2023 AND OCTOBER 3, 2023.

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SCALE: 1"=200'

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/31/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: WETLAND IMPACTS PLAN (ALACHUA COUNTY)

TECHNICIAN: T.F. COWART

DESIGNER: K. REED, E.I.

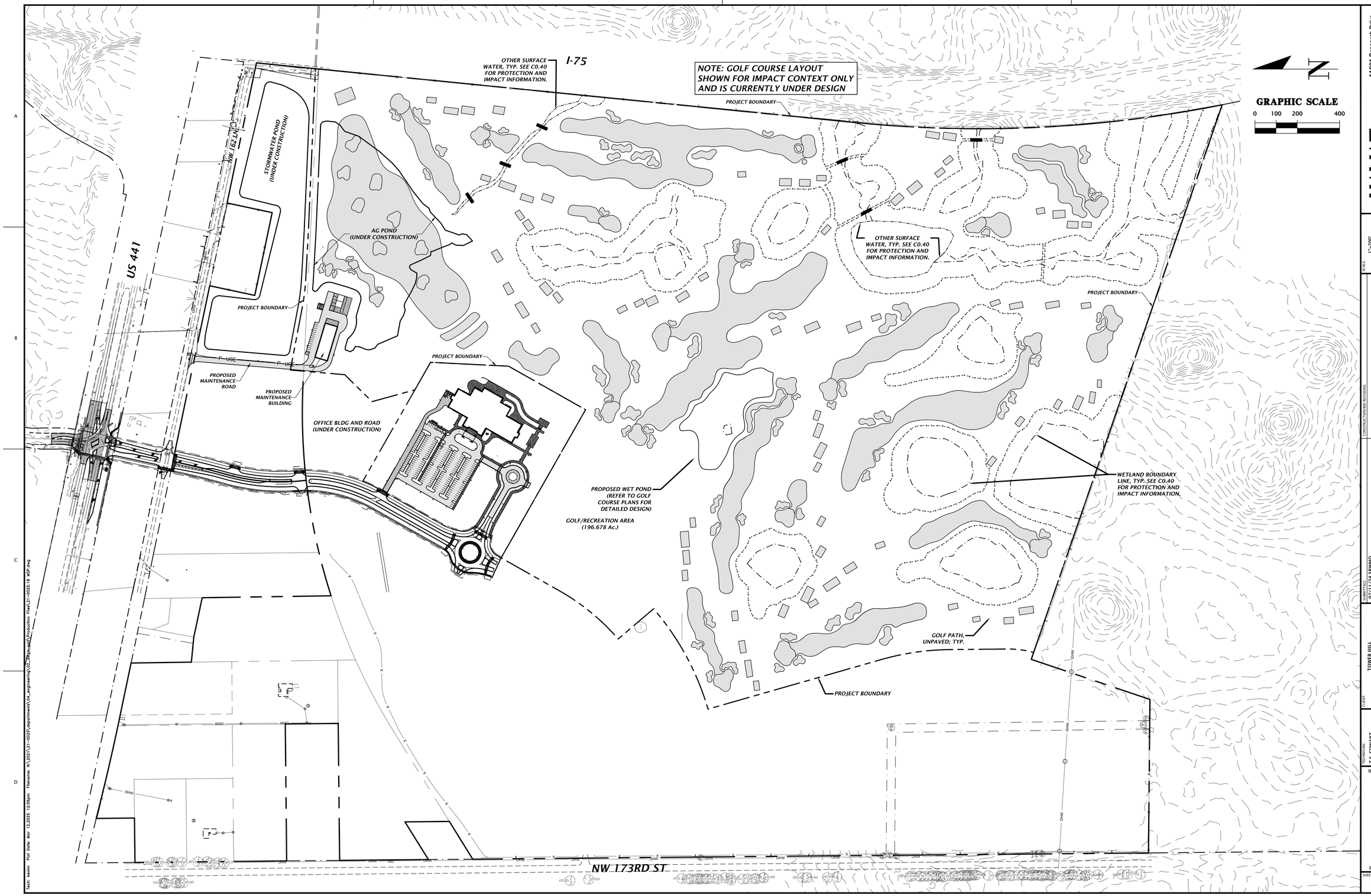
QUALITY CONTROL: W.F. OWEN, P.E.

PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C0.40



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www.nvs.com

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SCALE: 1"=200'

VERIFY SCALE
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CONSTRUCTION/RED REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
07/11/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: MASTER GOLF HEADQUARTERS SITE PLAN

TECHNICIAN: T.F. COWART
DESIGNER: K. KEITH, E.I.
QUALITY CONTROL: W.E. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C1.00

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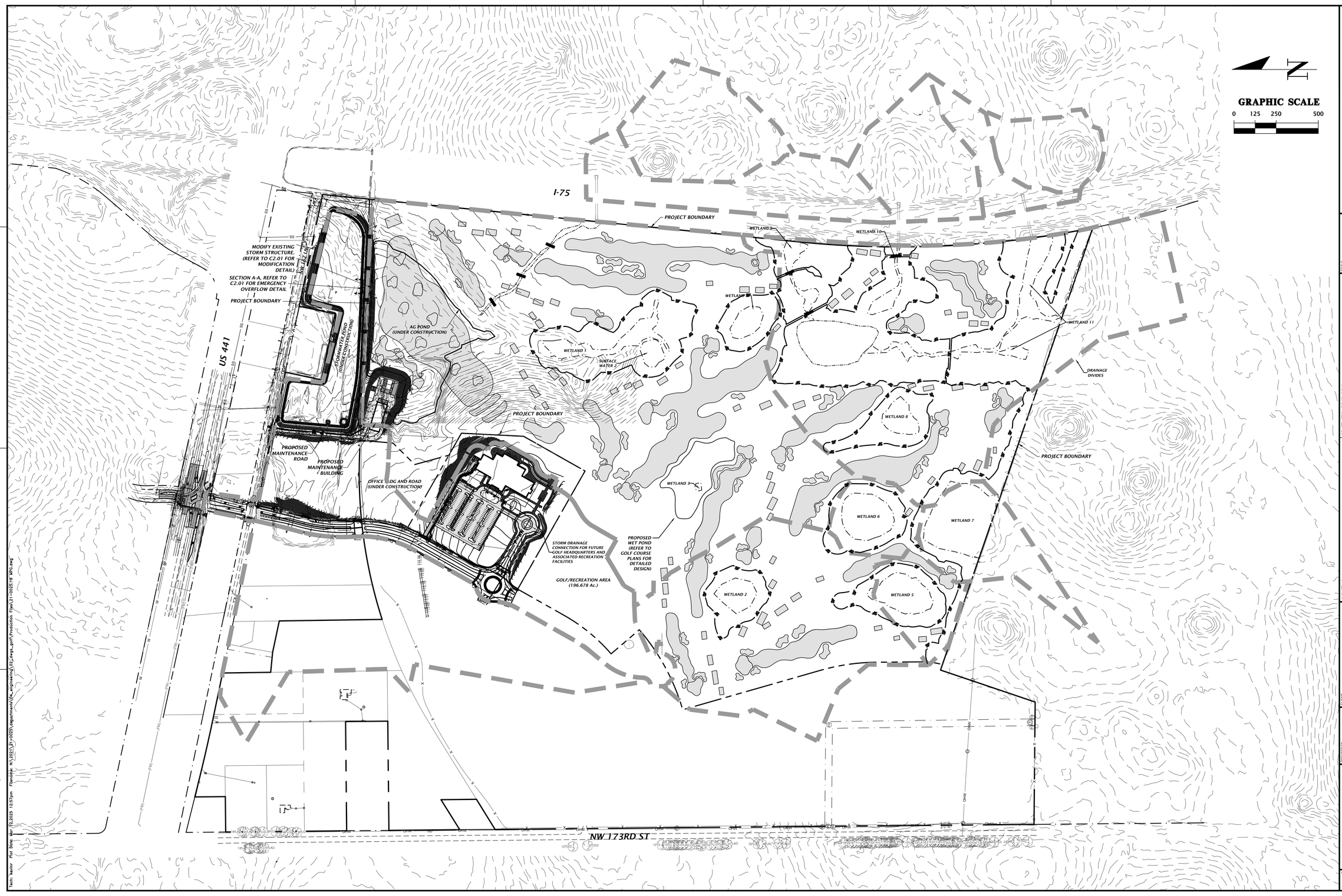

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SCALE: 1"=250'

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CONSTRUCTION/RED REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
07/11/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
05/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: MASTER STORMWATER MANAGEMENT PLAN

TECHNICIAN: T.F.- COWART

DESIGNER: K. KEYES, E.I.

QA/QC CONTROL: W.F. OWEN, P.E.

PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C2.00

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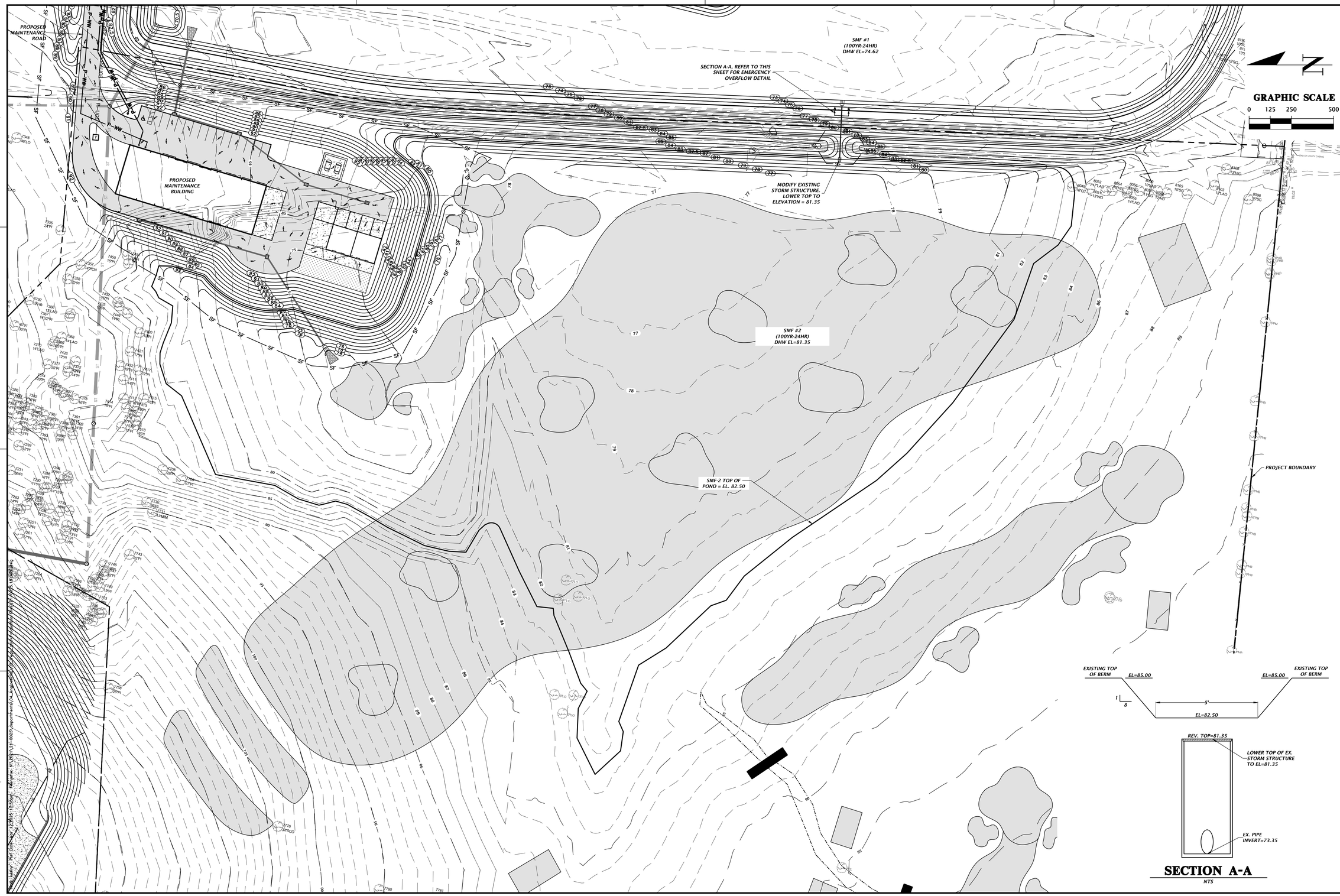

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SCALE: 1"=50'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/31/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE
PROJECT: TOMOKA HILLS GOLF COURSE
SHEET TITLE: AG POND MANAGEMENT PLAN

TECHNICIAN: T.F. COWART
DESIGNER: K. REED, E.I.
QUALITY CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C2.01

PROPOSED MAINTENANCE DRIVE

DETAILED PLAN VIEWPORT

UNDER CONSTRUCTION STORMWATER MAINTENANCE FACILITY (PART OF HEADQUARTERS APPROVED PLANS)

PROPOSED MAINTENANCE BUILDING

UNDER CONSTRUCTION STORMWATER MAINTENANCE FACILITY (PART OF HEADQUARTERS APPROVED PLANS)

C0.30

C5.10

C5.20

C0.31

C5.11

C5.21

N

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MV5

SCALE: 1"=50'

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1" 2"
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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/17/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL
SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

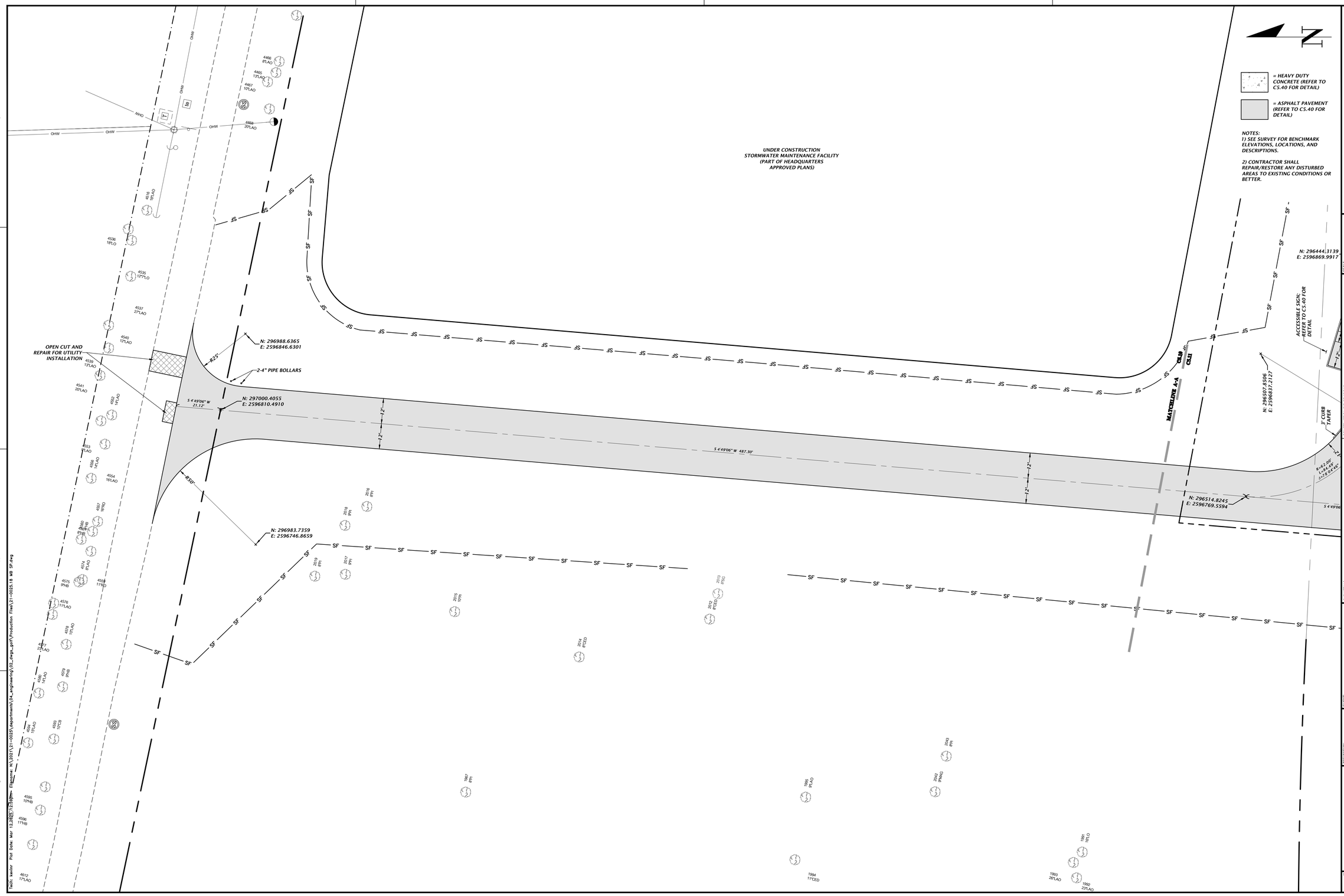
SHEET TITLE: MASTER GOLF MAINTENANCE FACILITY PLAN

TECHNICIAN: T.F. COWART
DESIGNED: K. EISEL, E.I.
QA/QC CONTROL: W.E. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C5.00



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MVS

SCALE: 1"=20'

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/14/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL
SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: DETAILED GOLF MAINTENANCE FACILITY SITE PLAN

TECHNICIAN: T.F. COWART
DESIGNER: K. KEO, E.I.
QUALITY CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C5.10

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MATCHLINE A-A

C5.10

C5.11

N: 2951481825
E: 2596769.5584

UNDER CONSTRUCTION
STORMWATER MAINTENANCE FACILITY
(PART OF HEADQUARTERS
APPROVED PLANS)

= HEAVY DUTY CONCRETE (REFER TO C5.40 FOR DETAIL)

= ASPHALT PAVEMENT (REFER TO C5.40 FOR DETAIL)

NOTES:
1) SEE SURVEY FOR BENCHMARK ELEVATIONS, LOCATIONS, AND DESCRIPTIONS.

2) CONTRACTOR SHALL REPAIR/RESTORE ANY DISTURBED AREAS TO EXISTING CONDITIONS OR BETTER.

N: 296507.8506
E: 2596837.2127

ACCESSIBLE SIGN; REFER TO C5.40 FOR DETAIL

3' CURB TAPER

S 44°00'00" W 91.59'

R=64.00'
L=28.04'
CB=S 56°34'40" W
CH=27.82'

R=80'

R4'

R5'

12'

5'

N: 296444.3139
E: 2596869.9917

6" CURB; TYP. (REFER TO C5.40 FOR DETAIL)

STRIPE ACCESSIBLE SPACE IN ACCORDANCE WITH FDOT INDEX 711-001

15 SPACES @ 9.5'=142.5'

CURB CUT FOR INLET; TYP.

R3'

4" WHITE STRIPE; TYP.

S 73°15'40" E 223.03'

FUEL TANKS; TYP. (REFER TO ARCH PLANS FOR LAYOUT/DESIGN DETAILS

28'

3' CURB TAPER

LOADING SPACE

50'

N: 296386.0082
E: 2597027.0649

N: 296381.6196
E: 2596979.1562

N: 296386.5552
E: 2597066.9109

DUMPSTER PAD AND ENCLOSURE (DESIGNED BY OTHERS)

S 73°15'40" E 104.17'

12'

R100'

168.44'

60.44'

PROPOSED MAINTENANCE BUILDING
10,180 SF

N: 296372.2558
E: 2596800.4492

N: 296363.1477
E: 2596802.9566

6" CURB; TYP. (REFER TO C5.40 FOR DETAIL)

N: 296337.1661
E: 2596986.5598

24.61'

20'

20'

23.83'

14.2'

14.2'

14.2'

14.2'

STORAGE BIN; TYP. (REFER TO ARCH PLANS FOR LAYOUT/DESIGN DETAILS

N: 296323.7431
E: 2596961.7493

S 73°15'39" E 208.03'

8'

12'

R15'

S 16°44'21" E 88.44'

20.59'

21.17'

20.27'

29.05'

29.04'

STORAGE SHED
895 SF

STORAGE SHED
895 SF

N: 296306.3610
E: 2597048.8831

30.6'

12'

24'

3' CURB TAPER

R60'

N: 296303.2324
E: 2597002.1692

12" STABILIZED SURFACE (MIN. LBR.40)

N: 296288.9840
E: 2597106.6598

TOP OF AG POND

UNDER CONSTRUCTION
STORMWATER MAINTENANCE FACILITY
(PART OF HEADQUARTERS
APPROVED PLANS)

7346 28%O
7348 48%O
7349 12"/159%AO
7350 24%
7357 14%PCN
7358 22%
7366 13%AO
7367 14"/22%
7368 14%AO
7369 25%
7370 14%AO
7371 20%
7372 12%
7373 14%
7374 20%
7420 12%
7421 17%
7422 19%
7426 12%
7432 15%
7433 10%
7446 14%
7450 16%
7451 12%
6790 42%
6790 19%B
6791 30%
6793 15%
6794 14%
6796 15%
6797 14%
6798 17%
6801 16%
6804 14%
7335 12%
7336 10%

Tech Update Plot Date: May 12,2025 1:06pm Filename: N:\2021\21-0025\departments\04_engineering\02_dwgs_ppt\Production Files\21-0025.18 SP.dwg

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/14/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL
SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: DETAILED GOLF MAINTENANCE FACILITY SITE PLAN

TECHNICIAN: T.F. COWART
DESIGNER: K. KEITH, E.I.
QUALITY CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C5.11

SANITARY SEWER STRUCTURE TABLE

STRUCTURE NAME:	STRUCTURE TYPE	TOP	INVERT ELEV	NORTHING & EASTING
SS C/O-1	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER (END CITY OF ALACHUA MAINTENANCE)	85.23'	73.65' S 73.65' N	N: 297001.65 E: 2596804.57
SS C/O-2	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	84.58'	73.78' N 73.78' S	N: 296980.61 E: 2596802.80
SS C/O-3	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	82.67'	76.27' N 76.27' S	N: 296902.01 E: 2596796.18
SS C/O-4	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	82.66'	76.87' N 76.87' S	N: 296802.34 E: 2596787.77
SS C/O-5	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	82.36'	77.47' N 77.47' S	N: 296702.64 E: 2596779.37
SS C/O-6	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	82.93'	78.07' N 78.07' S	N: 296603.04 E: 2596770.97
SS C/O-7	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	85.14'	81.21' N 81.21' S	N: 296553.19 E: 2596766.77
SS C/O-8	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	90.06'	83.76' N 83.76' SE	N: 296467.02 E: 2596759.51
SS C/O-9	SS CLEANOUT W/O (H-20) TRAFFIC RATED COVER	92.91'	87.70' NW 87.70' S	N: 296433.42 E: 2596838.17

STORMWATER STRUCTURE TABLE

STRUCTURE:	STRUCTURE TYPE	TOP	INVERT ELEV	NORTHING & EASTING
S-1	TYPE C INLET PER FDOT INDEX 425-052 AND 425-010	92.30'	86.75' E	N: 296341.09 E: 2596828.86
S-2	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	91.97'	86.36' W 86.36' SE	N: 296297.72 E: 2596979.85
S-3	CROSS DRAIN MES PER FDOT INDEX 430-021	75.71'	74.00' NW	N: 296186.11 E: 2597051.20
S-4	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	92.20'	86.75' W	N: 296361.56 E: 2597097.93
S-5	TYPE 'F' INLET FDOT INDEX 425-053	92.12'	86.56' NW 86.56' E	N: 296383.13 E: 2597026.20
S-6	TYPE 'C' INLET FDOT INDEX 425-052	92.14'	86.31' W 86.31' SE	N: 296443.24 E: 2596946.72
S-7	TYPE 'C' INLET FDOT INDEX 425-052	92.14'	86.11' E 86.11' N	N: 296466.21 E: 2596870.35
S-8	24" MITERED END SECTION PER FDOT INDEX 430-021	75.25'	73.00' S	N: 296554.22 E: 2596888.40
S-9	18" MES PER FDOT INDEX 430-021	76.71'	75.00' SE	N: 296732.35 E: 2596739.79
S-10	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	82.00'	71.25' NW 71.25' E	N: 296682.96 E: 2596783.73
S-11	24" MITERED END SECTION PER FDOT INDEX 430-021	N/A	71.00' W	N: 296674.92 E: 2596854.25
S-12	TYPE C INLET PER FDOT INDEX 425-052 AND 425-010	75.75'	73.39' E	N: 296839.56 E: 2596752.83
S-13	TYPE F INLET PER FDOT INDEX 425-053 AND 425-010	82.00'	73.16' W 73.16' E	N: 296847.00 E: 2596797.56
S-14	24" MITERED END SECTION PER FDOT INDEX 430-021	N/A	73.00' W	N: 296840.74 E: 2596860.20
S-15	18" MITERED END SECTION PER FDOT INDEX 430-021	N/A	82.50' E	N: 297013.05 E: 2596767.08
S-16	18" MITERED END SECTION PER FDOT INDEX 430-021	N/A	82.25' W	N: 296997.87 E: 2596838.96

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CONSTRUCTION/RED REVISIONS

SUBMITTALS:
07/11/24 SRWMD
01/21/25 CITY OF ALACHUA
01/22/25 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: DETAILED GOLF MAINT. FACILITY GRADING, DRAINAGE AND UTILITY PLAN

TECHNICIAN: T.F. COWART
DESIGNER: K. REED, E.I.
PROJECT CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C5.20

STORMWATER STRUCTURE TABLE

STRUCTURE:	STRUCTURE TYPE	TOP	INVERT ELEV	NORTHING & EASTING
S-1	TYPE C INLET PER FDOT INDEX 425-052 AND 425-010	92.30'	86.75' E	N: 296341.09 E: 2596828.86
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S-14	24" MITERED END SECTION PER FDOT INDEX 430-021	N/A	73.00' W	N: 296840.74 E: 2596860.20
S-15	18" MITERED END SECTION PER FDOT INDEX 430-021	N/A	82.50' E	N: 297013.05 E: 2596767.08
S-16	18" MITERED END SECTION PER FDOT INDEX 430-021	N/A	82.25' W	N: 296997.87 E: 2596838.96

SANITARY SEWER STRUCTURE TABLE

STRUCTURE NAME:	STRUCTURE TYPE	TOP	INVERT ELEV	NORTHING & EASTING
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CONSTRUCTION/RECORD REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
01/14/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA & SRWMD
05/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL
SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

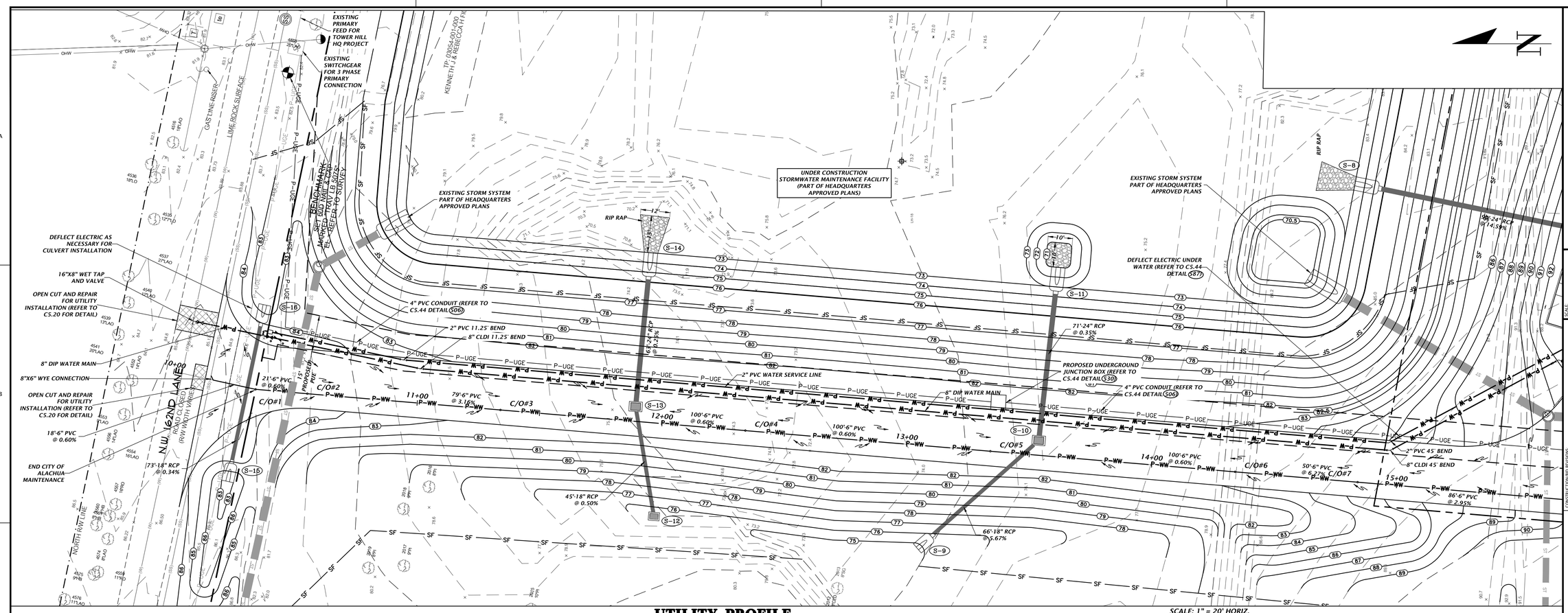
SHEET TITLE: DETAILED GOLF MAINT. FACILITY GRADING, DRAINAGE AND UTILITY PLAN

TECHNICIAN: T.F.- COWART
DESIGNER: K. KEITH, E.I.
PROJECT CONTROL: W.F. OWEN, P.E.
WALKER FAIN OWEN
PROJECT NUMBER: 21-0025.18

FL PE No. 94201

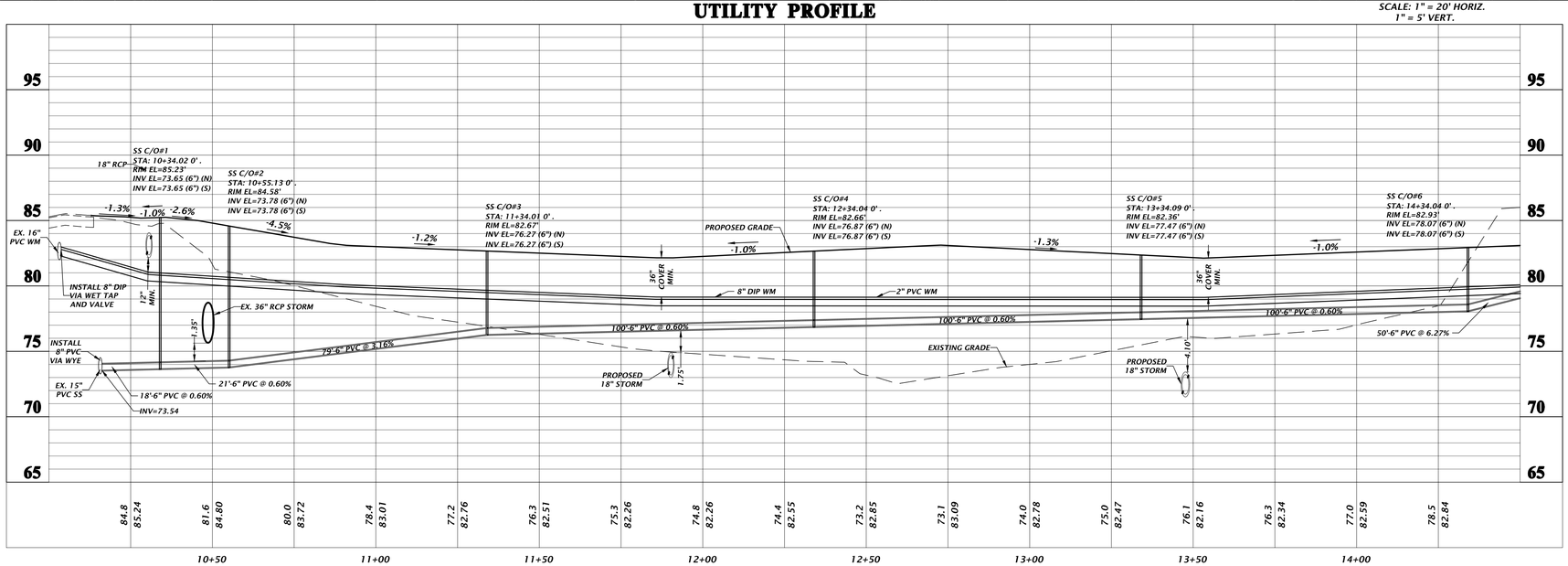
SHEET NO.: C5.21

Tech: kwhite Plot Date: Mar 12,2025 - 1:03pm Filename: N:\2021\21-0025\department\04_engineering\02_dwgs_pdf\Production Files\21-0025.18 HB PGP5.dwg



UTILITY PROFILE

SCALE: 1" = 20' HORIZ.
1" = 5' VERT.



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CONSTRUCTION/RED REVISIONS

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10/17/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: GOLF MAINTENANCE FACILITY UTILITY PLAN AND PROFILE

TECHNICAL: T.F. COWART
DESIGNED: E.L.
DRAWN: K. ALLSTON
CHECKED: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.
C5.30

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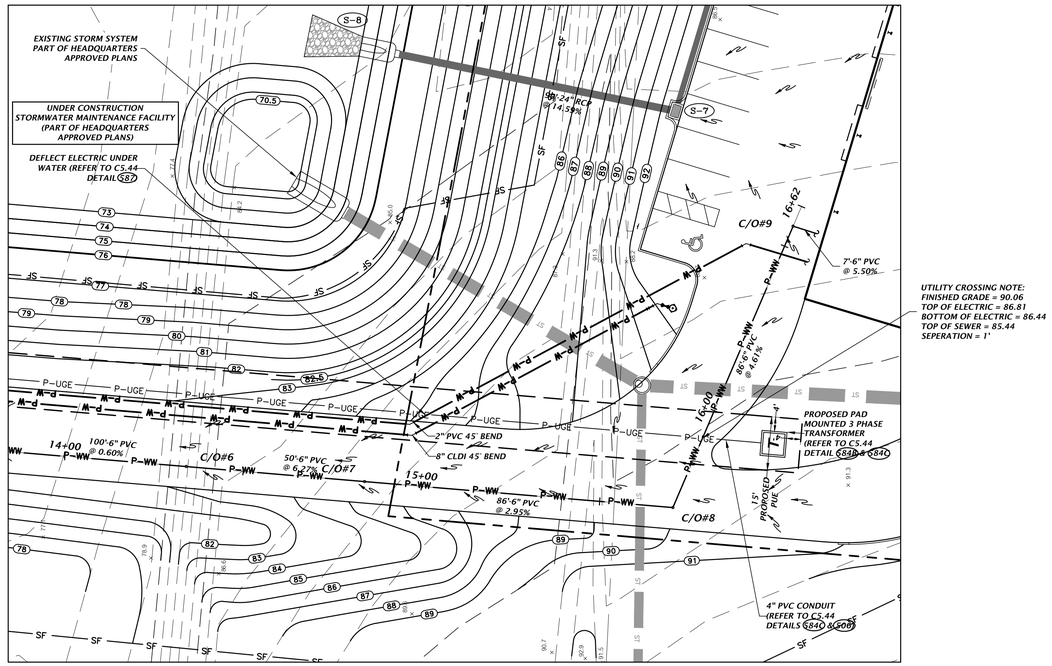
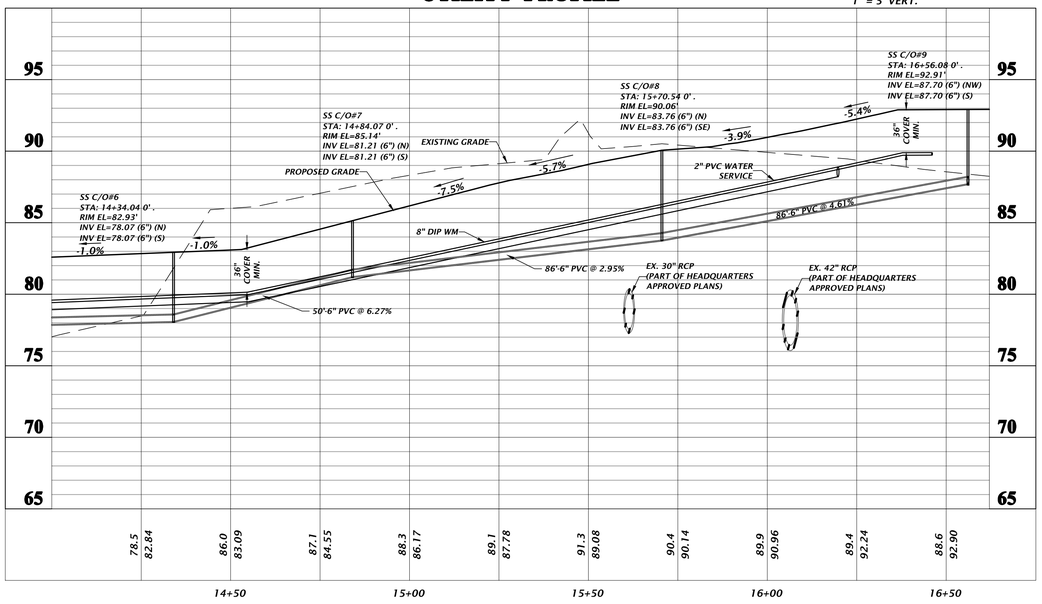


UTILITY PROFILE

SCALE: 1" = 20' HORIZ.
1" = 5' VERT.



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CONSTRUCTION/BID REVISIONS:

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01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: GOLF MAINTENANCE FACILITY UTILITY PLAN AND PROFILE

TECHNICIAN: T.F. COWART
DESIGNER: K. REED, E.I.
QUALITY CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C5.31

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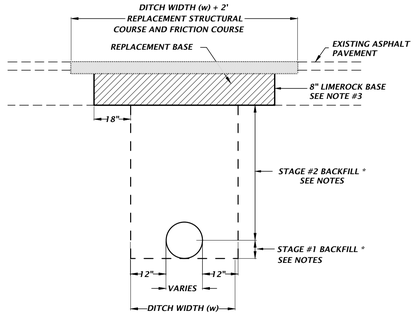


NOTES:

1. IN STAGE #1, CONSTRUCT COMPACTED FILL BENEATH THE HAUNCHES OF THE PIPE, USING MECHANICAL TAMPS SUITABLE FOR THIS PURPOSE. THIS COMPACTION APPLIES TO THE MATERIAL PLACED BENEATH THE HAUNCHES OF THE PIPE AND ABOVE ANY BEDDING.

2. IN STAGE #2, CONSTRUCT COMPACTED FILL ALONG THE SIDES OF THE PIPE AND UP TO THE BOTTOM OF THE BASE, WITH THE UPPER 12" RECEIVING TYPE B STABILIZATION. IN LIEU OF TYPE B STABILIZATION, THE CONTRACTOR MAY CONSTRUCT USING OPTIONAL BASE GROUP 3.

3. NEW 8" LIMEROCK BASE SHALL BE COMPACTED TO NOT LESS THAN 98% OF MAX DENSITY AS SPECIFIED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION 200-7.2. THE WIDTH OF THE LIMEROCK BASE SHALL BE THE WIDTH OF THE PIPE TRENCH PLUS 18" ON BOTH SIDES SEE DETAIL.

4. UNLESS OTHERWISE SPECIFIED, MATERIALS AND METHODS OF OPERATION REQUIRED TO INSTALL NEW AND REPLACEMENT PAVEMENT SHALL BE IN ACCORDANCE WITH THE LATEST APPLICABLE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

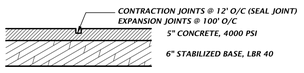
5. PAVEMENT SHALL BE REMOVED TO NEATLY SAWED STRAIGHT EDGES.

6. THE TYPE AND THICKNESS OF THE NEW SURFACE MATERIAL SHALL BE CONSISTENT WITH THAT OF THE EXISTING SURFACE, BUT IN ALL CASES SHALL MEET THE MINIMUM STANDARDS ESTABLISHED BY THE PLANS AND SPECIFICATIONS.

7. THE BACKFILLING AND PAVEMENT REPLACEMENT MUST BE DONE IN ACCORDANCE WITH FDOT INDEX 125-001.

TRENCH WIDTH PAVEMENT AND BACKFILLING REPLACEMENT

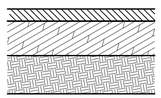
NTS



NOTE: CONCRETE PAVEMENT & JOINTS SHALL BE CONSTRUCTED TO FC & PA STANDARDS.

CONCRETE DETAIL

NTS



ASPHALT DETAIL

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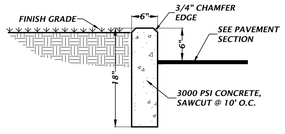
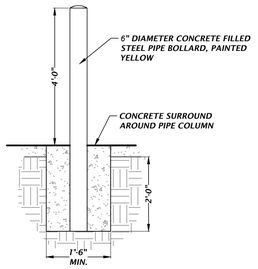


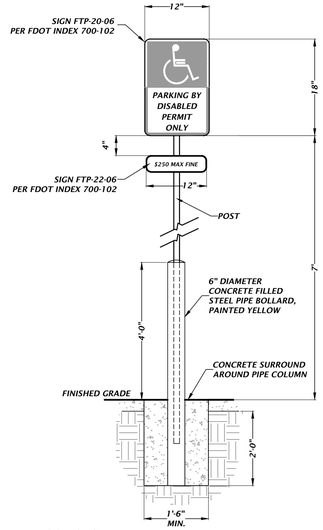
TYPICAL 6" CURB DETAIL

NTS



BOLLARD DETAIL

NTS



SIGN NOTES:

1. SIGN CONSTRUCTION, DESIGN AND PLACEMENT SHALL COMPLY WITH STATE AND LOCAL STATUTES.

ACCESSIBLE PARKING SIGN DETAIL

NTS

BASIN LIMEROCK OUTCROP CONSTRUCTION NOTES

1. IN THE EVENT THAT LIMEROCK IS ENCOUNTERED DURING CONSTRUCTION OF THE RETENTION BASINS, THE FOLLOWING TREATMENT SHALL BE PERFORMED. THE LIMEROCK OUTCROP SHALL BE EXCAVATED TO AN ELEVATION OF THREE (3) FEET BELOW THE DESIGN BASIN BOTTOM. THE EXCAVATED AREA SHALL BE BACKFILLED TO THE DESIGN BASIN BOTTOM ELEVATION WITH CLAYEY-SAND/SANDY-CLAY (AASHTO SOIL GROUP-A2) SOILS. A MIXTURE OF THE BACKFILL/MATERIAL SHALL BE PLACED IN SIX INCH LIFTS AND ROLLED WITH HEAVILY LOADED RUBBER TIRED EQUIPMEWNT. BOTH THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT AND THE ALACHUA COUNTY PUBLIC WORKS DEPARTMENT SHALL BE NOTIFIED WHEN LIMEROCK OUTCROPS ARE ENCOUNTERED AND PRIOR TO COMMENCING REMEDIAL ACTION.

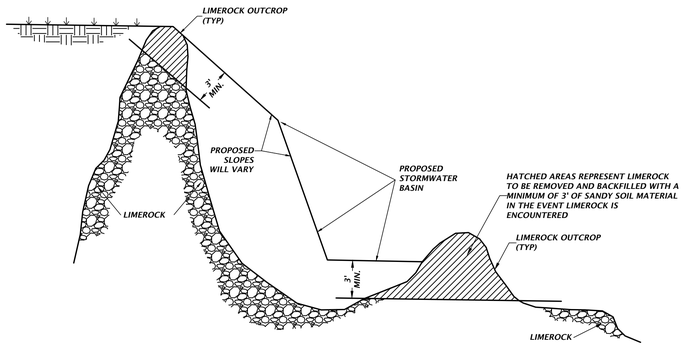
2. IN THE EVENT THAT ANY KARST FEATURES, SUCH AS SOLUTION CAVITIES, CHIMNEYS, OR SINKHOLES APPEAR IN THE RETENTION BASIN, THE FOLLOWING ACTIONS SHALL BE REQUIRED.

A. ONCE THE FEATURE IS IDENTIFIED, IT SHALL BE ISOLATED BY CREATING A BERM AROUND THE FEATURE A MINIMUM OF 2 FEET HIGH TO PREVENT DIRECT DISCHARGE INTO THE KARST FEATURE.

B. THE CIVIL ENGINEER, THE SRWMD MANAGEMENT DISTRICT, AND THE ALACHUA COUNTY PUBLIC WORKS DEPARTMENT SHALL BE NOTIFIED WHEN THE FEATURE IS ENCOUNTERED PRIOR TO REMEDIAL ACTION.

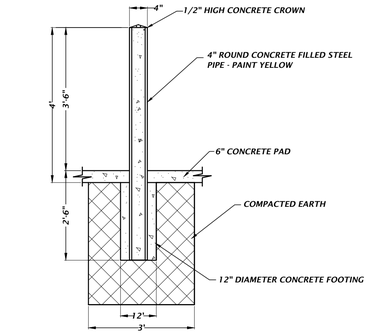
C. A LICENSED GEOTECHNICAL ENGINEERING FIRM SHALL BE RETAINED TO EVALUATE THE SIGNIFICANCE OF THE FEATURE AND TO DETERMINE THE REMEDIAL ACTION NECESSARY. SEE SHALLOW AND DEEP SINKHOLE/CAVITY MAINTENANCE REPAIR DETAIL.

D. THE GEOTECHNICAL ENGINEERING FIRM SHALL BE REQUIRED TO MONITOR THE REMEDIAL WORK AND SEND A SUMMARY REPORT UPON REPAIR COMPLETION TO THE CIVIL ENGINEER, THE SRWMD, AND THE ALACHUA COUNTY PUBLIC WORKS DEPARTMENT.



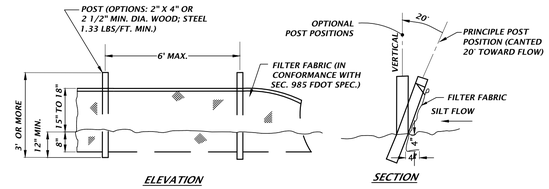
LIMEROCK OUTCROP REMOVAL DETAIL

NTS



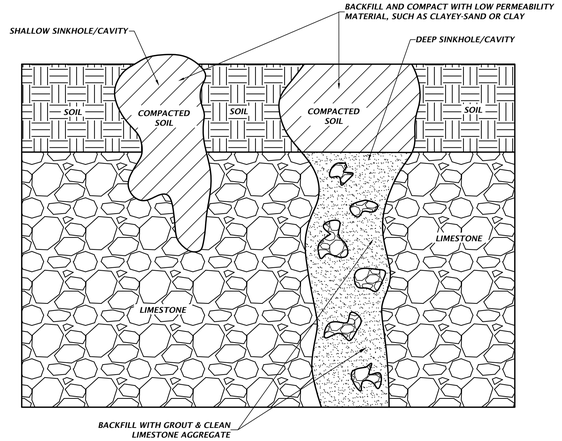
PIPE BOLLARD DETAIL

NTS



TYPE III SILT FENCE DETAIL

NTS



SHALLOW AND DEEP SINKHOLE/CAVITY MAINTENANCE REPAIR DETAIL

NTS

11801 Research Drive
Alachua, Florida 32615
(352)331-1976
www.nv5.com

NV5

SCALE: N/A

VERIFY SCALE BAR IS CORRECT FOR PLOTTED SIZE. IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY. 0 1"

CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
01/17/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: CONSTRUCTION DETAILS

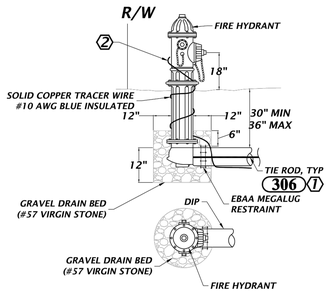
TECHNICIAN: T.F. COWART
DESIGNER: A. REED, E.I.
PROJECT ENGINEER: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C5.40

Tech: kevinr Plot Date: Mar 12,2025 1:05pm Filename: N:\2021\21-0025\departments\04_engineering\02_design_golf\Production Files\21-0025.18 CV.dwg



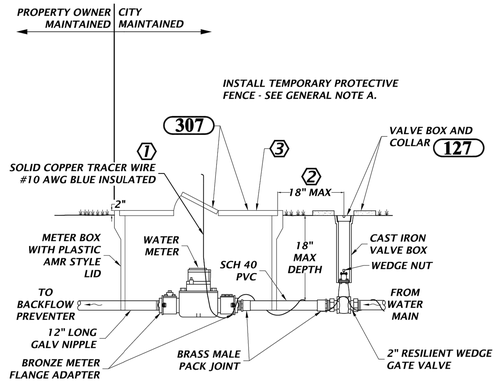
GENERAL NOTE(S):

1. RESTRAIN MINIMUM OF 58' OF PIPE.

KEYED NOTE(S):

1. PROVIDE TIE RODS FOR DUAL RESTRAINT AND AS PER 306.
2. EXTEND TRACER WIRE AT LEAST 8-INCHES ABOVE GRADE.

100 FIRE HYDRANT (DEAD END)
NTS



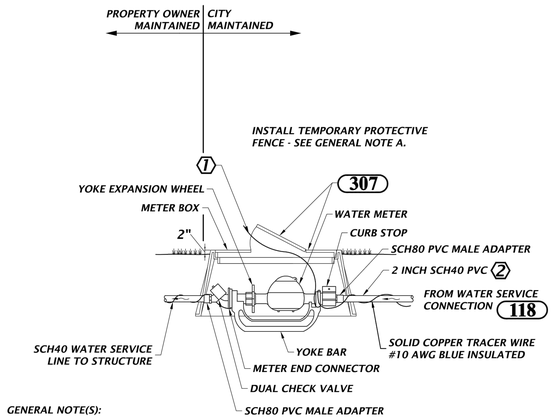
GENERAL NOTE:

A. DURING CONSTRUCTION, PROVIDE TEMPORARY PROTECTIVE FENCE AROUND METER AS PER 324.

KEYED NOTE(S):

1. PROVIDE ENOUGH TRACER WIRE SO IT CAN EXTEND AT LEAST 8-INCHES ABOVE METER BOX.
2. PROVIDE ENOUGH SPACE FOR INSTALLING VALVE BOX COLLAR
3. PROVIDE JUMBO 2-INCH METER BOX

112 1 1/2" AND 2" METER ASSEMBLY
NTS



GENERAL NOTE(S):

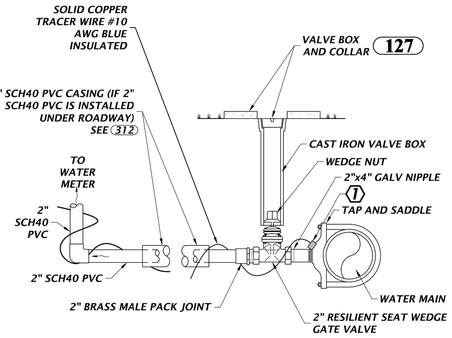
A. DURING CONSTRUCTION, PROVIDE TEMPORARY PROTECTIVE FENCE AROUND METER AS PER 324.

B. CONNECT TRACER WIRES WITH PRO-LINE TRACER-LOCK CONNECTORS. PART # TL-LUG-SS.

KEYED NOTE(S):

1. PROVIDE ENOUGH TRACER WIRE SO IT CAN EXTEND AT LEAST 8-INCHES ABOVE METER BOX.
2. PROVIDE 2x1 (or 3/4) INCH REDUCING BUSHING SCH 80 PVC SPIGOT X SOCKET TO CONNECT TO CURB STOP.

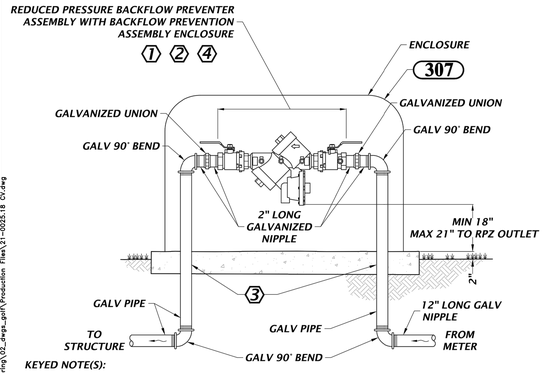
115 3/4" AND 1" WATER METER ASSEMBLY
NTS



KEYED NOTE(S):

1. CONNECT TRACER WIRES FROM MAIN TO SERVICE WITH PRO-LINE TRACER-LOCK CONNECTORS. PART # TL-LUG-SS.

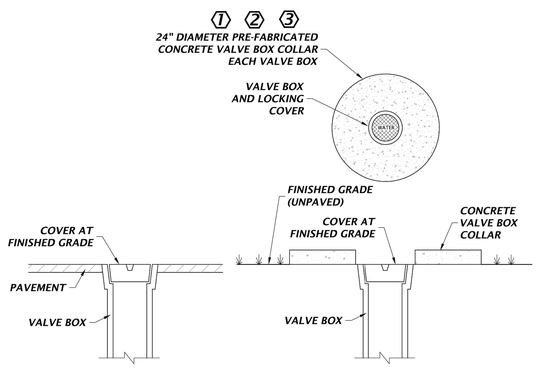
118 2" WATER SERVICE CONNECTION
NTS



KEYED NOTE(S):

1. PROVIDE BACKFLOW PREVENTION ASSEMBLY ENCLOSURE. COORDINATE WITH VENDOR TO SELECT ENCLOSURE SIZE SUITABLE FOR INSTALLED BACKFLOW PREVENTER ASSEMBLY.
2. ENCLOSURE VENDOR AND FEATURES:
   - MARINE GRADE ALUMINUM
   - 1.5 INCH INSULATION, 9.0 R VALUE
   - MEANS TO ACCESS ASSEMBLY
   - LOCKABLE
   - MOUNTING HARDWARE
   - COLOR: TAN, UNLESS OTHERWISE NOTED.
   - VENDORS: SAFE T COVER, NASHVILLE, TN; OR EQUAL
3. POUR CONCRETE PAD WITH DIMENSIONS AS PER VENDOR'S RECOMMENDATIONS. MINIMUM THICKNESS OF 4 INCHES.
   - PROVIDE SLEEVES AROUND PIPING
4. BACKFLOW PREVENTER FURNISHED, INSTALLED AND MAINTAINED BY PROPERTY OWNER, NOT COA.

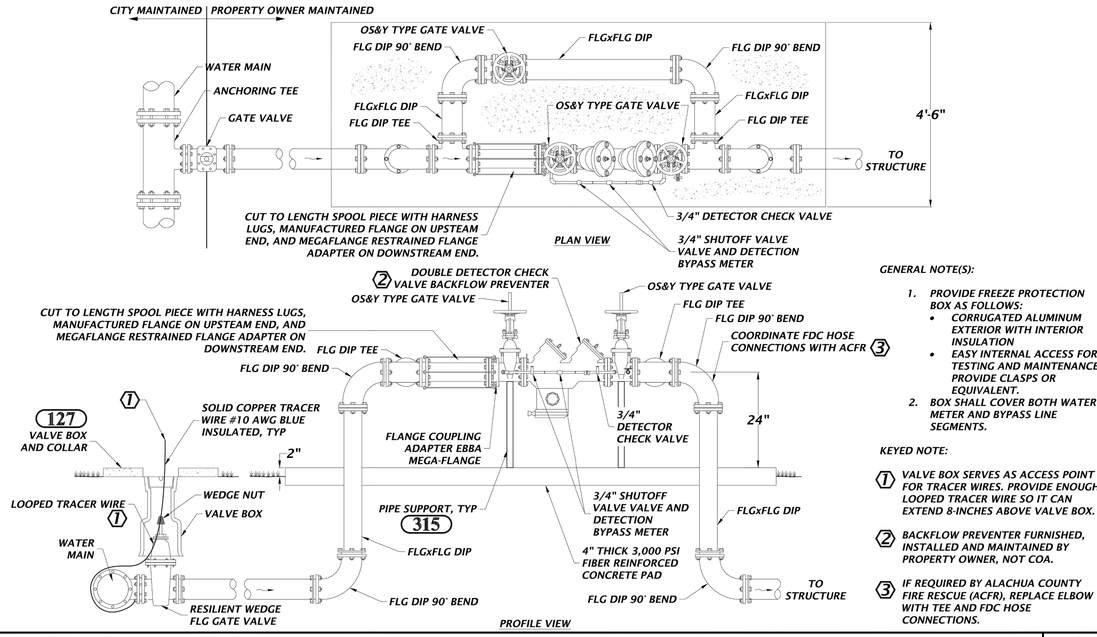
121 3/4" TO 2" BACKFLOW PREVENTER AND ENCLOSURE
NTS



KEYED NOTE(S):

1. VALVE BOX COLLAR FEATURES:
   - 24" DIAMETER, 11" INNER OPENING
   - 4" THICK
   - TWO RINGS OF #3 REBAR
   - 4000 PSI TEST CONCRETE
2. SUPPLIER AND PRODUCT:
   - MASONRY SUPPLY, INC., SELMA, NC OR EQUAL
   - ITEM: 24" CONCRETE VALVE BOX COLLAR OR EQUAL
   - PART: MSVB-24 OR EQUAL
3. PAINT VALVE BOX COVER AND COLLAR AS PER 307

127 VALVE BOX COVER
NTS



GENERAL NOTE(S):

1. PROVIDE FREEZE PROTECTION BOX AS FOLLOWS:
   - CORRUGATED ALUMINUM EXTERIOR WITH INTERIOR INSULATION
   - EASY INTERNAL ACCESS FOR TESTING AND MAINTENANCE. PROVIDE CLASPS OR EQUIVALENT.
2. BOX SHALL COVER BOTH WATER METER AND BYPASS LINE SEGMENTS.

KEYED NOTE:

1. VALVE BOX SERVES AS ACCESS POINT FOR TRACER WIRES. PROVIDE ENOUGH LOOPED TRACER WIRE SO IT CAN EXTEND 8-INCHES ABOVE VALVE BOX.
2. BACKFLOW PREVENTER FURNISHED, INSTALLED AND MAINTAINED BY PROPERTY OWNER, NOT COA.
3. IF REQUIRED BY ALACHUA COUNTY FIRE RESCUE (ACFR), REPLACE ELBOW WITH TEE AND FDC HOSE CONNECTIONS.

139 FIRE LINE 4" AND LARGER DOUBLE DETECTOR CHECK VALVE BACKFLOW PREVENTER (NO DOWNSTREAM DIESEL FIRE PUMP)
NTS

11801 Research Drive
Alachua, Florida 32615
(352)331-1976
www.nv5.com

NV5

SCALE: N/A
VERIFY SCALE BAR IS CORRECT FOR DRAWING UNITS
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/RED REVISIONS

SUBMITTALS:
07/11/24 SRWMD
10/17/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE
PROJECT: TOMOKA HILLS GOLF COURSE
SHEET TITLE: CONSTRUCTION DETAILS

TECHNICIAN: T.F. COWART
DESIGNED: K. KEYES, E.I.
K. KEYES, E.I.
QUALITY CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C5.41

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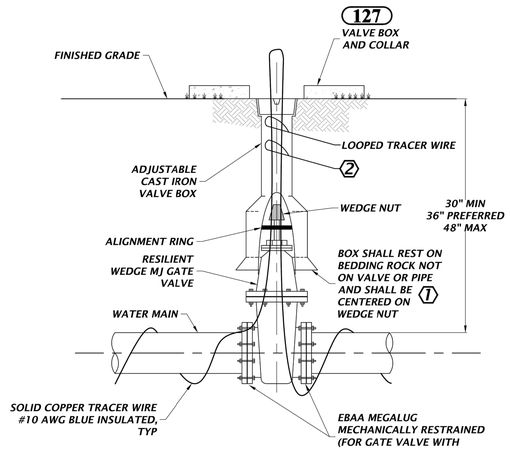


GENERAL NOTE(S):

1. PVC EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
2. VALVE BOX LID TO BE LETTERED WITH THE WORD "WATER" OR "RECLAIMED".

KEYED NOTE(S):

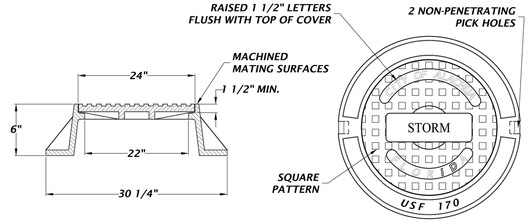
1. WHEN VALVE BOX IS TO BE INSTALLED IN ROADWAY OR OTHER TRAFFIC AREAS SET VALVE BOX ON FIVE (5) SOLID COMMON BRICKS.
2. VALVE BOX MAY SERVE AS ACCESS POINT FOR TRACER WIRES. PROVIDE ENOUGH LOOPED TRACER WIRE SO IT CAN EXTEND 8-INCHES ABOVE GRADE.

145 GATE VALVE FOR WATER AND RECLAIMED WATER MAINS 4" OR LARGER
NTS

ABBREVIATIONS

APP	APPROXIMATE
ARV	AIR RELEASE VALVE
AWG	AMERICAN WIRE GAUGE
DI	DUCTILE IRON
DIP	DUCTILE IRON PIPE
E	ELECTRIC CONDUCTOR
FLG	FLANGED
FT	FOOT
FM	FORCE MAIN
GA	GAUGE
GALV	GALVANIZED
GRN	GREEN
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
ID	INSIDE DIAMETER
LF	LINEAR FEET
MAX	MAXIMUM
MIN	MINIMUM
MJ	MECHANICAL JOINT
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SCREW AND YOKE
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
R/W	RIGHT OF WAY
RPZ	REDUCED PRESSURE ZONE
SCH	SCHEDULE
SF	SQUARE FEET
SIM	SIMILAR
SS	STAINLESS STEEL
TYP	TYPICAL
URD	UNDERGROUND RESIDENTIAL DISTRIBUTION
YEL	YELLOW
WM	WATER MAIN
WW	WASTEWATER

151 DETAIL ABBREVIATIONS
NTS



ELEVATION PLAN

GENERAL NOTE(S):

1. USF 170 RING AND CE COVER
2. LOAD CLASSIFICATION: HEAVY DUTY
3. MATERIAL: GRAY CAST IRON, ASTM A48 CLASS 35B
4. PAINT TOP AS PER 307

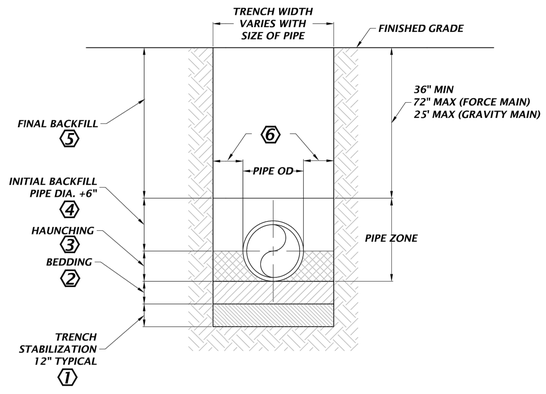
211 CAST IRON STORM MANHOLE FRAME AND COVER
NTS

GENERAL NOTE(S):

1. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
2. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
3. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. FIELD DETERMINE REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION. THE BOTTOM OF THE TRENCH SHALL NOT BE EXCAVATED BELOW THE SPECIFIED GRADE. IF UNDERCUTTING OCCURS, THE BOTTOM OF THE TRENCH SHALL BE BROUGHT UP TO THE ORIGINAL GRADE WITH APPROVED MATERIAL AND THOROUGHLY COMPACTED TO A MINIMUM OF 95% MODIFIED PROCTOR.
4. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES.

KEYED NOTE(S):

1. TRENCH STABILIZATION SHALL BE PROVIDED TO A DEPTH OF 12-INCHES. THE MATERIAL SHALL BE NO. 57 STONE.
2. BEDDING SHALL BE A MINIMUM OF 6-INCHES AND COMPOSED OF IMPORTED GRANULAR FILL. COMPACT TO 95% STANDARD PROCTOR, AASHTO T-99.
3. HAUNCHING PORTION OF THE PIPE ZONE SHALL BE PLACED TO THE SPRINGLINE OF THE PIPE AND COMPOSED OF IMPORTED GRANULAR FILL. COMPACT TO 95% STANDARD PROCTOR ASSHTO T-99.
4. INITIAL BACKFILL: COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180. FROM THE SPRINGLINE OF THE PIPE TO TWO (2) FEET ABOVE THE PIPE, THE SOIL SHALL BE CAREFULLY BACKFILLED IN 6-INCH LIFTS AND THE SOIL CONSOLIDATED WITH THE HAND OPERATED TAMPING MACHINE (OR AS REQUIRED BY CITY, COUNTY, OR STATE INSPECTORS).
5. FINAL BACKFILL: COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180. AFTER PLACEMENT AND COMPACTION OF THE INITIAL BACKFILL, THE BALANCE OF THE BACKFILL MATERIAL MAY BE MACHINE PLACED OR AS REQUIRED BY THE INSPECTOR AND SHALL NOT CONTAIN ANY ROCKS OR DEBRIS.
6. 12" MINIMUM



303 BEDDING AND TRENCHING DETAIL
NTS

PAINT SYSTEM NO. 5

SURFACE PREPARATION -PRESSSURE WASH SURFACE TO BE PAINTED

OPTIMAL APPLICATION CONDITIONS

AMBIENT TEMPERATURE BETWEEN 55 AND 75 DEGREES F.

HUMIDITY BELOW 60 PERCENT

IF OUTSIDE THESE LIMITS, REQUEST PERMISSION TO APPLY PAINT FROM COA INSPECTOR OR SERVICES DURING CONSTRUCTION ENGINEER

APPLY (SPRAY) FIRST COAT

APPLY (SPRAY) SECOND COAT EITHER WITHIN TWO HOURS OR MORE THAN 48 HOURS AFTER APPLYING FIRST COAT.

PRODUCT

KRYLON SPRAY PAINT

FUSION ALL-IN-ONE

PAINT PLUS PRIMER

COLORS

POTABLE WATER - GLOSS PATRIOTIC BLUE

WASTEWATER - GLOSSY SPRING GRASS

RECLAIMED - GLOSSY ICY GRAPE

307 PAINT SYSTEM NO. 5
NTS

11801 Research Drive
Alachua, Florida 32615
(352)334-1376
www.nvs.com

NVS

SCALE: N/A

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY
0 1"

CONSTRUCTION/RED REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/14/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: CONSTRUCTION DETAILS

TECHNICIAN: T.F. COWART
DESIGNED: K. ELI
K. ELI
QUALITY CONTROL:
W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C5.42

Tools: xref Plot Date: Mar 12,2025 1:05pm Filename: N:\2021\21-0025\departments\04_engineering\02_dwg_pgnf\Production Files\21-0025.10 Gv.dwg

GENERAL NOTE(S):

1. THIS TABLE IS BASED ON THE RESTRAINT CALCULATION SOFTWARE PROVIDED FREE OF CHARGE BY EBAA IRON INC. AT http://www.ebaa.com/engineering.htm AND THE FOLLOWING INPUT VARIABLES:

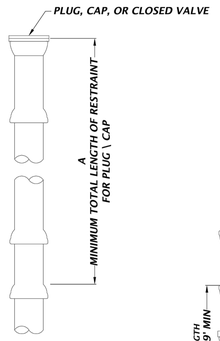
A. MAXIMUM TEST PRESSURE OF 150 PSI
B. LAYING CONDITION TYPE 3
C. POOR SOIL CONDITIONS (SOIL TYPE ML)
D. USING DIP
E. 2 FEET OF COVER
F. HORIZONTAL BENDS ONLY - ENGINEER TO SUBMIT CALCULATIONS FOR VERTICAL RESTRAINTS
G. SAFETY FACTOR = 1.5 TO 1

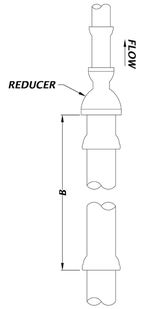
2. FOR POLYWRAPPED DIP, MULTIPLY THE FOOTAGE BY 1.50

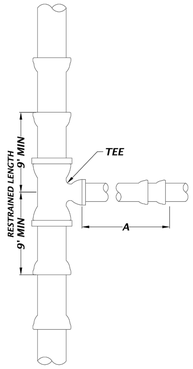
3. FOR PVC PIPE, MULTIPLY FOOTAGE BY 1.34

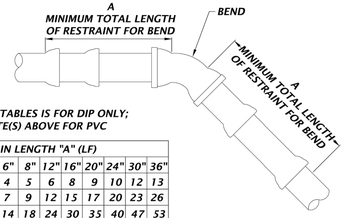
4. RESTRAIN PUSH-ON JOINTS OR MECHANICAL JOINTS WITH EBBA MEGALUG PRODUCTS. PIPE VENDOR'S RESTRAINED JOINT SYSTEM WILL BE SUBJECT TO SUBMITTAL REVIEW AND APPROVAL BY ENGINEER / COA.

5. ANY ADDITIONAL FITTINGS WITHIN THE RESTRAINED SECTION SHALL BE RESTRAINED ACCORDINGLY.









NOTE: THIS TABLES IS FOR DIP ONLY; SEE NOTE(S) ABOVE FOR PVC

RESTRAIN LENGTH "A" (LF)									
FITTING	4"	6"	8"	12"	16"	20"	24"	30"	36"
11¼° BEND	3	4	5	6	8	9	10	12	13
22½° BEND	5	7	9	12	15	17	20	23	26
45°/OFFSET	10	14	18	24	30	35	40	47	53
90° BEND	24	33	42	58	72	85	97	112	126
DEAD END	42	58	75	104	131	157	181	213	243

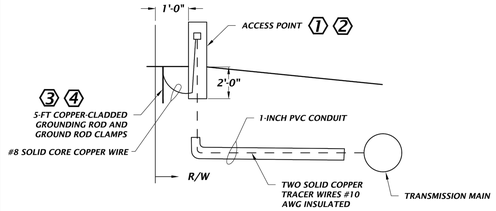
A=MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED.

	RESTRAIN (LF)	
FITTING SIZE	TEE "A"	REDUCER "B"
4x4	21	*
6x4	10	30
6x6	37	*
8x4	A.T.	54
8x6	28	32
8x8	54	*
12x4	A.T.	90
12x6	11	76
12x8	37	55
12x12	82	*
16x6	A.T.	111
16x8	21	96
16x12	66	56
16x16	109	*
20x6	A.T.	141
20x8	8	130
20x12	51	99
20x16	93	55
20x20	134	*
24x6	A.T.	168
24x8	A.T.	159
24x12	37	134
24x16	77	99
24x20	117	54
24x24	157	*
30x6	A.T.	203
30x8	A.T.	196
30x12	20	177
30x16	57	150
30x20	94	116
30x24	132	75
30x30	189	*
36x6	A.T.	235
36x8	A.T.	229
36x12	7	214
36x16	40	193
36x20	74	166
36x24	109	133
36x30	162	74
36x36	218	*

A.T.=RESTRAINT REQUIRED AT TEE ONLY.
*-NOT APPLICABLE

309

JOINT RESTRAINT
NTS



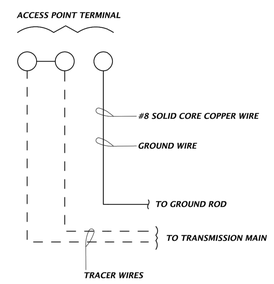
GENERAL NOTE(S):

1. THIS DETAIL APPLIES TO WATER, WASTEWATER, OR RECLAIMED WATER TRANSMISSION MAINS.

KEYED NOTE(S):

1. PRODUCT: PROMARK CATHODIC PROTECTION TEST-STATION, 3-INCH TEST STATION WITH STANDARD 5 STAINLESS STEEL TERMINALS, PART # PM-TS3.
2. COLORS: BLUE FOR POTABLE WATER, GREEN FOR WASTEWATER, PURPLE FOR RECLAIMED WATER.
3. INSTALL ROD SO TOP IS ABOUT 3-INCHES BELOW GRADE.
4. DO NOT LOCATE GROUNDING ROD IN PATH OF TRACER WIRE.

INTERCONNECT DIAGRAM



318

ACCESS POINT FOR TRANSMISSION MAIN
NTS

FLOW STREAMS

- PW — POTABLE WATER
- WW—FM — WASTEWATER FORCE MAIN
- WW—GR — WASTEWATER GRAVITY

LINE LEGENDS

- TRACER WIRE
- SUBDIVISION BOUNDARY OR PROPERTY LOT BOUNDARY
- TRACER WIRE CONNECTOR
- GROUND WIRE

SYMBOLS

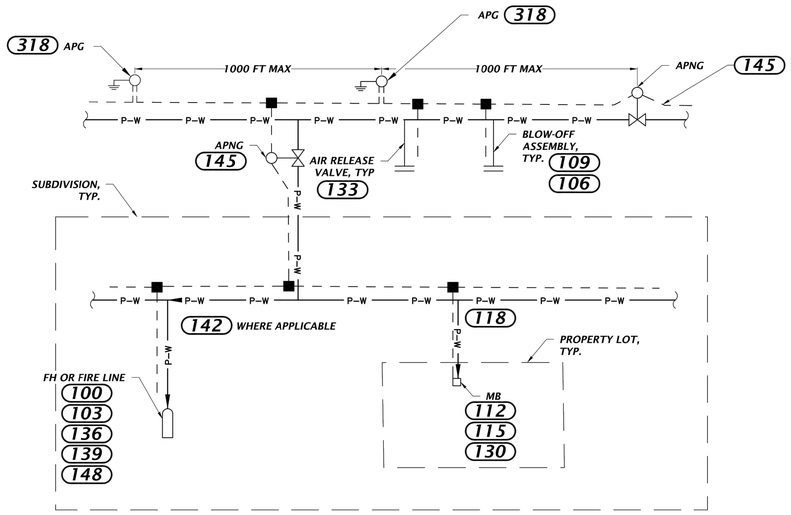
- APG — ACCESS POINT WITH PROVISIONS TO GROUND TRANSMITTER
- MH — MANHOLE
- APNG — GENERAL VALVE WITH VALVE BOX USED AS ACCESS POINT. (NON-GROUNDED)
- LS — LIFT STATION
- MB — METER BOX
- FH — FIRE HYDRANT

GENERAL NOTE(S):

1. RIGHT-OF-WAY AND PUBLIC UTILITY EASEMENTS NOT SHOWN.
2. THESE CONFIGURATION DETAILS DO NOT STAND ALONE. SEE RELATED TRACER WIRE DETAILS.
3. TRACER WIRE CONNECTORS SHALL BE PRO-LINE TRACER-LOCK CONNECTORS, PART #TL-LUG-SS.
4. TRACER WIRE REQUIRED FOR BOTH DUCTILE IRON AND PVC PIPE.

321A

TRACER WIRE CONFIGURATION: LEGENDS AND ABBREVIATIONS
NTS



GENERAL NOTES: SEE 321A

321B

POTABLE (OR RECLAIMED) TRACER WIRE CONFIGURATION
NTS

11801 Research Drive
Alachua, Florida 32615
(352)331-1976
www.nvs.com

NVS

SCALE: N/A

VERIFY SCALE BAR IS TRUE LENGTH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/RED REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/01/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: CONSTRUCTION DETAILS

TECHNICIAN: T.F. COWART
DESIGNER: K. KEITH, E.I.
QUALITY CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

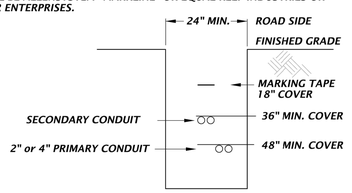
WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C5.43

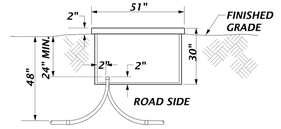
Tech: kwhir Plot Date: Mar 12,2025 1:05pm Filename: N:\2021\21-0025\departments\04_engineering\03_dwg_pgnt\Production Files\21-0025.18 Cf.dwg

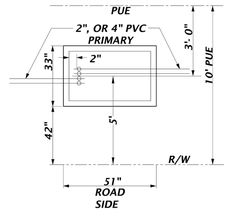
WARNING TAPE SHALL BE RED WITH CONTINUOUS BLACK MARKINGS "CAUTION - CITY OF ALACHUA - ELECTRIC LINE BURIED BELOW SHALL BE ALLENSYSTEM "MARKLINE" OR EQUAL REEF INDUSTRIES OR THOR ENTERPRISES.



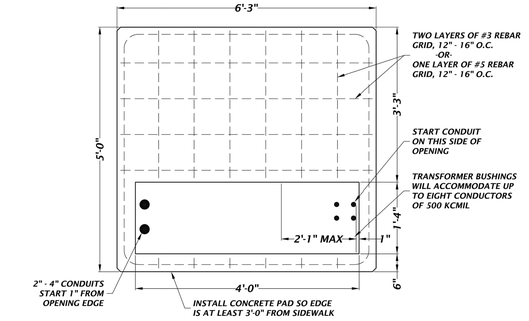
NOTES:
1. CONTRACTOR SHALL CHECK FOR CONFLICTS AND MAKE ADJUSTMENTS AS NECESSARY. REFER TO THE OTHER UTILITY ALLOCATIONS AND LOCATIONS.
2. CONTRACTOR SHALL COORDINATE WITH COA DURING CONSTRUCTION.

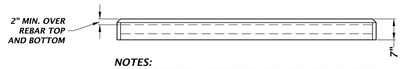
506 **TYPICAL CONDUIT TRENCH**
NTS





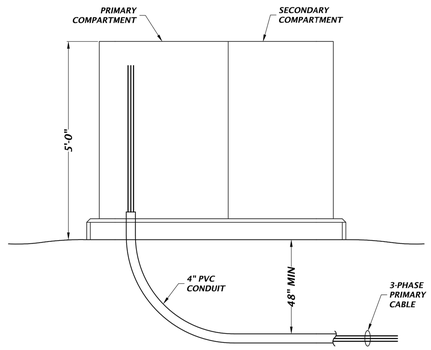
530 **UNDERGROUND JUNCTION BOX**
NTS



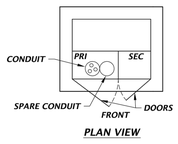


NOTES:
1. LOCATE TRANSFORMER FRONT 8' TO 15' FROM PAVING FOR LINE TRUCK ACCESS.
2. LOCATE TRANSFORMER A MINIMUM OF 4' FROM THE BUILDING DRIP LINE AND 10' FROM ANY WINDOW OR DOOR.
3. MAINTAIN 10' SEPARATION FROM FIRE HYDRANT, TRASH DUMPSTER OR TRASH COMPACTOR.
4. TERMINATE CONDUITS FLUSH WITH TOP OF PAD.
5. CONCRETE SHALL BE 3500 PSI POURED IN PLACE OR COA-APPROVED PRECAST
6. PROVIDE 10 FEET OF LEVEL, STABILIZED EARTH AT FRONT AND BACK OF UNIT, AND 4-FEET AT EACH SIDE.

584B **CONCRETE MOUNTING PAD AND CONDUIT PLACEMENT FOR THREE-PHASE TRANSFORMERS, 75-500 KVA**
NTS



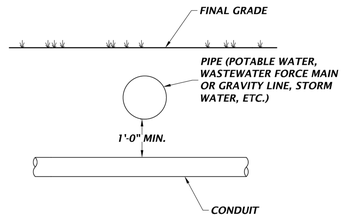
VIEW LOOKING TOWARD THE TRANSFORMER FRONT
ELEVATION 3-PHASE PAD MOUNT TRANSFORMER



PLAN VIEW

NOTES:
1. STUB UP 3-PHASE PRIMARY CABLE 5'-0" ABOVE GROUND AND IN THE CENTER OF THE PRIMARY TRANSFORMER COMPARTMENT.
2. CAP OR TAPE ALL CUT CABLE ENDS.
3. 3-PHASE PRIMARY REQUIRES 4" PVC CONDUIT.
4. CONDUIT AND CONDUCTORS ARE SHOWN FOR THE RADIAL FEED/LOOP TRANSFORMER CONFIGURATION. FOR LOOP FEED AND OPEN LOOP FEED TRANSFORMERS, PROVIDE CONDUIT AND CONDUCTORS AS REQUIRED.

584C **THREE-PHASE PAD MOUNT CONDUIT PLACEMENT**
NTS



GENERAL NOTE(S):

A. WHERE VERTICAL DISTANCES BETWEEN EXISTING CONDUIT AND NEW PIPE ARE LESS THAN MINIMUM, CONTRACTOR SHALL PERFORM WORK TO ACHIEVE THE MINIMUM VERTICAL SEPARATION DISTANCE. CONTRACTOR SHALL COORDINATE REQUIRED WORK WITH CITY.

B. CONTRACTOR SHALL EITHER:
- REPLACE EXISTING CONDUIT AND CONDUCTORS WITH RE-ROUTED NEW CONDUIT AND CONDUCTORS.

--OR--
- KEEP EXISTING CONDUIT AS IS. INSTEAD INSTALL NEW PIPE BELOW EXISTING CONDUIT.

587 **VERTICAL DISTANCE REQUIREMENT BETWEEN CONDUIT AND PIPE**
NTS

11801 Research Drive
Alachua, Florida 32615
(352)331-1976
www.nv5.com

NV5

SCALE: N/A
VERIFY SCALE BAR IS CORRECT FOR DRAWING UNITS.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/RED REVISIONS:

SUBMITTALS:
07/11/24 SRWMD
10/14/24 CITY OF ALACHUA
01/22/24 SRWMD
01/29/25 CITY OF ALACHUA
03/10/25 CITY OF ALACHUA & SRWMD

CLIENT: TOWER HILL
SCOTT ROWE

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: CONSTRUCTION DETAILS

TECHNICIAN: T.P. COWART
DESIGNED: K. KEEL, E.I.
QUALITY CONTROL: W.F. OWEN, P.E.
PROJECT NUMBER: 21-0025.18

WALKER FAIN OWEN

FL PE No. 94201

SHEET NO.: C5.44

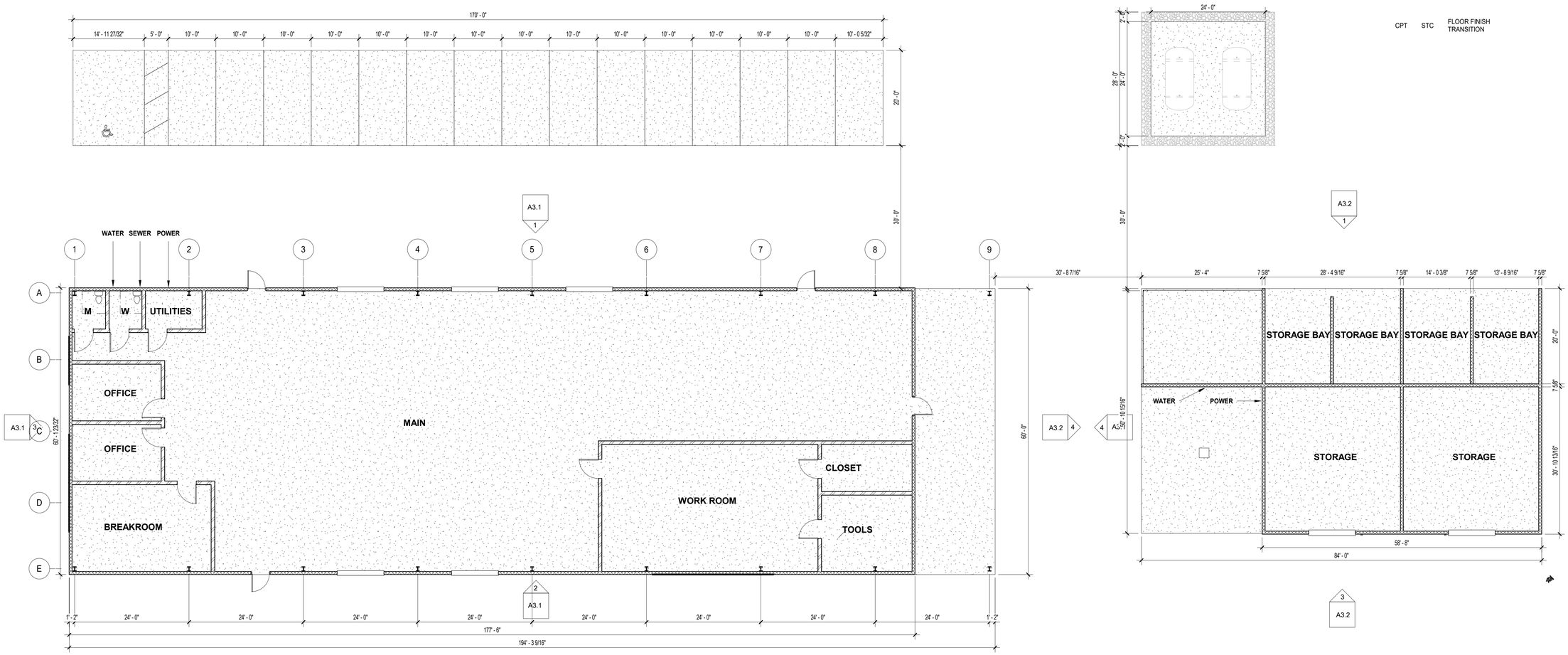
Tools: kenfor Plot Date: Mar 12,2025 1:05pm Filename: N:\2021\21-0025\departments\04_engineering\02_dwg_pdf\Production Files\21-0025.18 Cv1.dwg

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF STUD, FACE OF MASONRY, CENTERLINE OF STRUCTURAL GRID, AND STEEL LINE OR EDGE OF FLOOR SLAB
2. FIELD VERIFY ACTUAL CONDITIONS & DIMENSIONS PRIOR TO INSTALLING ANY NEW WORK - NOTIFY ARCHITECT OF ANY DISCREPANCIES & UNDOCUMENTED CONDITIONS THAT MAY CONFLICT W/ NEW WORK
3. SEE DRAWING A6.1 FOR FINISH SCHEDULE & DOOR SCHEDULE

LEGEND

ROOM 101	ROOM NAME ROOM NUMBER
101	NEW DOOR & FRAME (SEE SCHEDULE)
A	WINDOW TYPE (SEE SCHEDULE)
P-1	PARTITION TYPE (SEE SCHEDULE)
4 A101 2	INTERIOR ELEVATION
A101	BUILDING ELEVATION
1 A3.3	DETAIL OR SECTION (DETAIL # / SHT #)
CPT STC	FLOOR FINISH TRANSITION



1 ARCHITECTURAL FLOOR PLAN
3/32" = 1'-0"

2504 NW 71st Place
Gainesville FL 32653
Tel: (352) 371-1417

2926 Edison Avenue
Jacksonville, FL 32254
Tel: (904) 288-6060

SCHERER CONSTRUCTION

TOWER HILL HEADQUARTERS
GOLF FACILITIES
ALACHUA, FL 32615

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REVISION:
DATE
NO.

ARCHITECT'S SEAL:

STATE OF FLORIDA
ROBERT S. TAYLOR SR.
AR0007526
REGISTERED ARCHITECT

ROBERT S. TAYLOR, SR., ARCHITECT
FLORIDA REGISTRATION AR-0007526

DESCRIPTION:

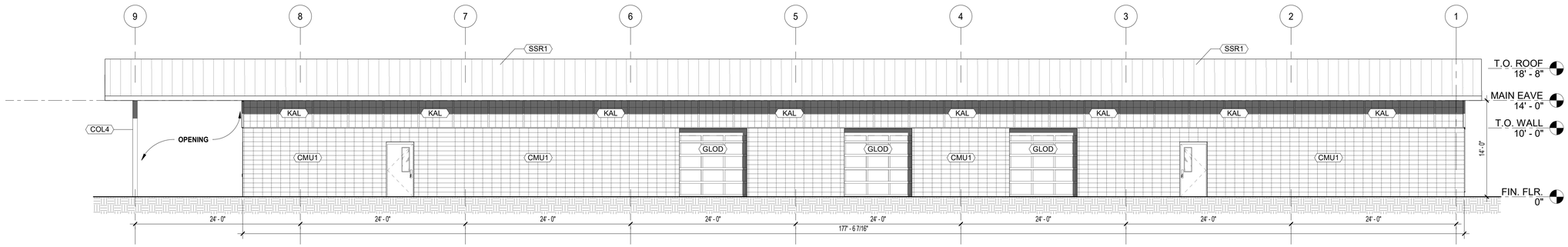
ARCHITECTURAL FLOOR PLAN

JOB NO. XX-XXXA
DRAWN BY: MR
DATE: 08/27/2024

A2.1

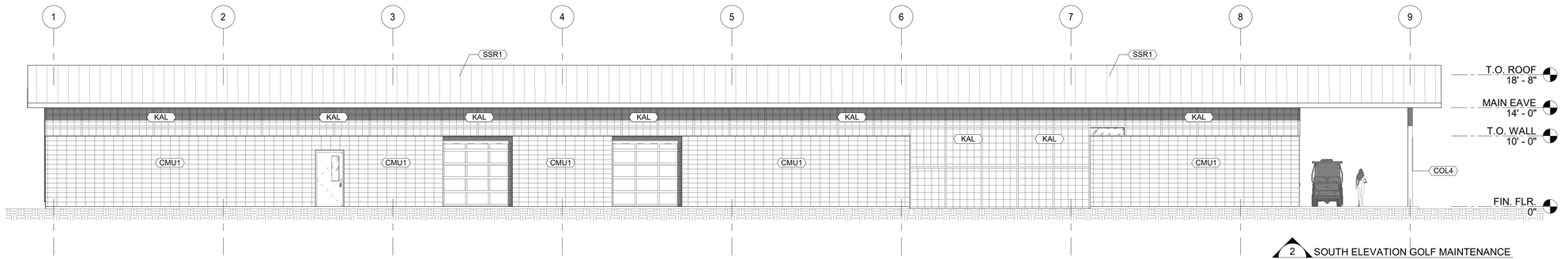
DESIGN PHASE: 30% CONTRACT DOCUMENTS

KEYNOTE LEGEND	
CMU1	CONCRETE MASONRY UNITS - 8" x 8" x 16" Nominal Ordinary Regular Weight Smooth Face Blocks (see structural & partition type)
COL4	COLUMN - Steel Moment Frame Assembly (by PEMB)
DS	DOWNSPOUT - Connect to Underground Storm Piping - see detail: 2/A2.5)
GLOD	Glazed Overhead Door w/ min angle track (vertical)
GTR	GUTTER - Standard PEMB Gutter / Fascia / Painted Steel Sheet Metal
KAL	KALWALL Translucent Glazing System
OPF	Opaque Fencing Secured
SSR1	STANDING SEAM METAL ROOF - 24Ga Double Lock Seam 2" High w/ Floating Clips; Open cell spray foam insulation, R-30, (see specs)

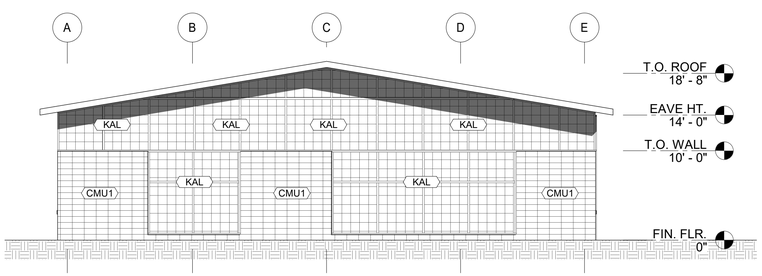


CMU = 56%

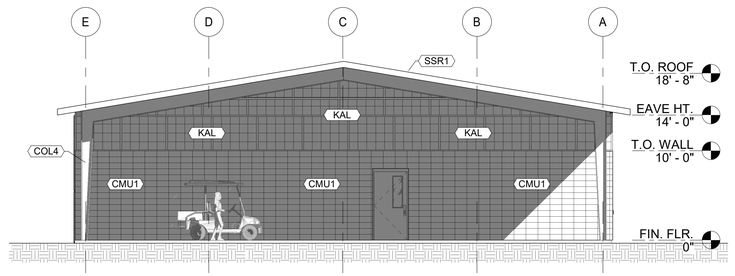
1 A3.1 NORTH ELEVATION GOLF MAINTENANCE
1/8" = 1'-0"



2 A3.1 SOUTH ELEVATION GOLF MAINTENANCE
1/8" = 1'-0"



3 A3.1 WEST ELEVATION GOLF MAINTENANCE
1/8" = 1'-0"



4 EAST ELEVATION GOLF MAINTENANCE
1/8" = 1'-0"

2504 NW 71st Place
Gainesville FL 32653
Tel: (352) 371-1417

2926 Edison Avenue
Jacksonville, FL 32254
Tel: (904) 288-6060

SCHERER CONSTRUCTION

TOWER HILL HEADQUARTERS
GOLF FACILITIES
ALACHUA, FL 32615

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NO.	DATE	REVISION:

ARCHITECT'S SEAL:

STATE OF FLORIDA
ROBERT S. TAYLOR, SR.
AR0007526
REGISTERED ARCHITECT

ROBERT S. TAYLOR, SR., ARCHITECT
FLORIDA REGISTRATION AR-0007526

DESCRIPTION:

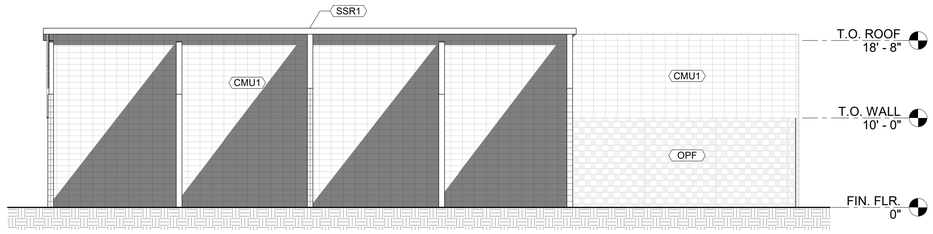
EXTERIOR ELEVATIONS - MAINTANENCE

JOB NO.	XX-XXXA
DRAWN BY:	MR
DATE:	08/27/2024

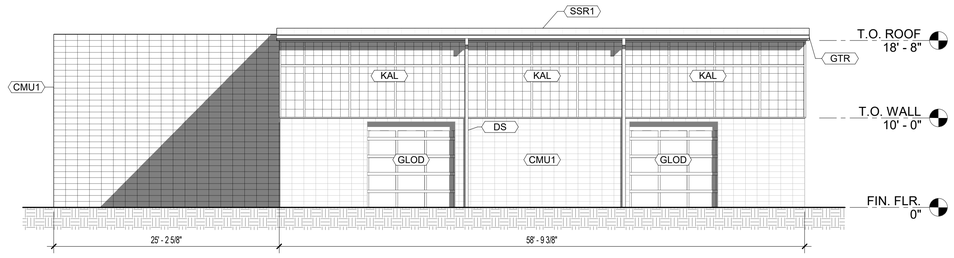
A3.1

DESIGN PHASE: 30% CONTRACT DOCUMENTS

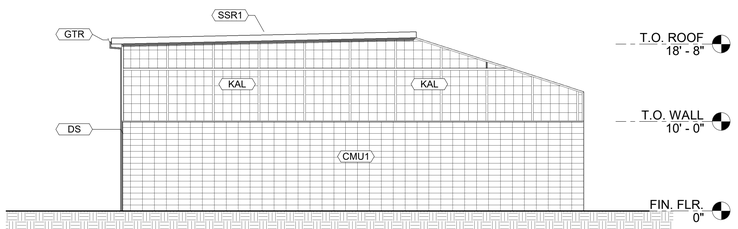
KEYNOTE LEGEND	
CMU1	CONCRETE MASONRY UNITS - 8" x 8" x 16" Nominal Ordinary Regular Weight Smooth Face Blocks (see structural & partition type)
COL4	COLUMN - Steel Moment Frame Assembly (by PEMB)
DS	DOWNSPOUT - Connect to Underground Storm Piping - see detail: 2/A2.5)
GLOD	Glazed Overhead Door w/ min angle track (vertical)
GTR	GUTTER - Standard PEMB Gutter / Fascia / Painted Steel Sheet Metal
KAL	KALWALL Translucent Glazing System
OPF	Opaque Fencing Secured
SSR1	STANDING SEAM METAL ROOF - 24Ga Double Lock Seam 2" High w/ Floating Clips; Open cell spray foam insulation, R-30, (see specs)



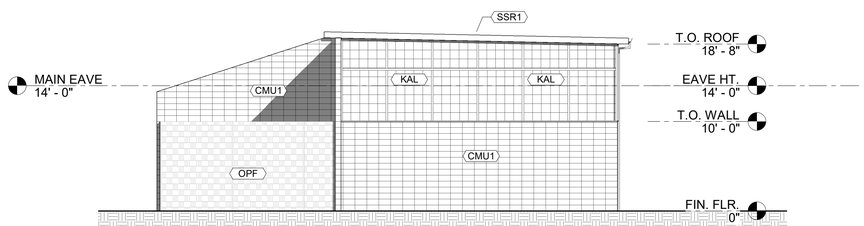
1 NORTH ELEVATION STORAGE + WASH
1/8" = 1'-0"



3 SOUTH ELEVATION STORAGE + WASH
1/8" = 1'-0"



2 EAST ELEVATION STORAGE + WASH
1/8" = 1'-0"



4 WEST ELEVATION STORAGE + WASH
1/8" = 1'-0"

2504 NW 71st Place
Gainesville FL 32653
Tel: (352) 371-1417

2926 Edison Avenue
Jacksonville, FL 32254
Tel: (904) 288-6060

SCHERER CONSTRUCTION

TOWER HILL HEADQUARTERS
GOLF FACILITIES
ALACHUA, FL 32615

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NO.	DATE	REVISION:

ARCHITECT'S SEAL:

STATE OF FLORIDA
ROBERT S. TAYLOR, SR.
AR0007526
REGISTERED ARCHITECT

ROBERT S. TAYLOR, SR., ARCHITECT
FLORIDA REGISTRATION AR-0007526

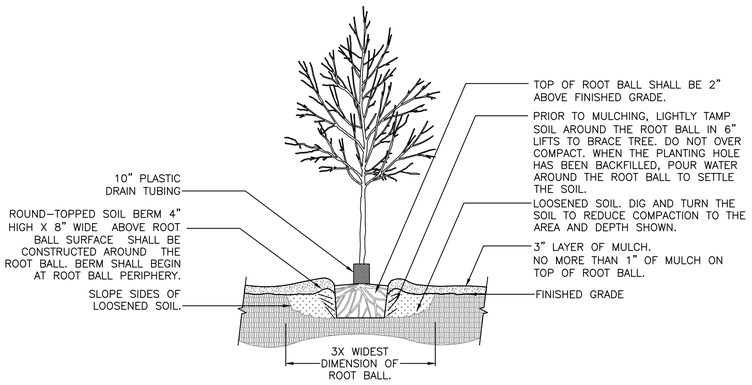
DESCRIPTION:

EXTERIOR ELEVATIONS - STORAGE

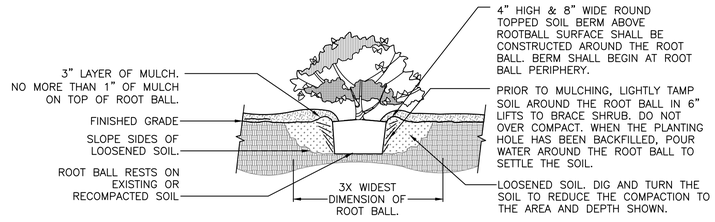
JOB NO. XX-XXXA
DRAWN BY: MR
DATE: 08/27/2024

A3.2

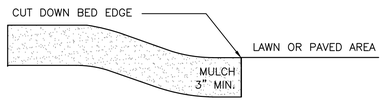
DESIGN PHASE: 30% CONTRACT DOCUMENTS



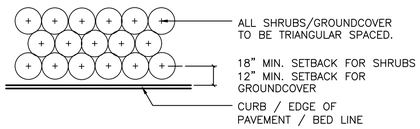
1 TREE PLANTING DETAIL
SCALE: N.T.S.



2 SHRUB PLANTING DETAIL
SCALE: N.T.S.



3 MULCH DETAIL
SCALE: N.T.S.



NOTE: THE PERIMETER OF ALL CURVED PLANTING BEDS SHALL BE PLANTED WITH A ROW OF SHRUBS AS SHOWN IN THE PLANS AND AT THE SPACING SHOWN IN THE PLANT LIST. INTERIOR PORTIONS OF EACH BED SHALL BE PLANTED AT APPROPRIATE SPACING ACCORDING TO THIS PLANT SPACING DETAIL.

4 SHRUB PLANTING DETAIL
SCALE: N.T.S.

811
KNOW WHAT'S BELOW ALWAYS CALL 811 BEFORE YOU DIG
It's fast, it's free, it's the law.
Call 811 two business days before digging

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES				
CV	118	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	30 GAL, 11' HT, 3" SPR, 2" CAL
JS	90	JUNIPERUS SILICICOLA	SOUTHERN RED CEDAR	30 GAL, 12' HT, 42" SPR, 2" CAL
LIM	151	LAGERSTROEMIA INDICA 'MUSKOGEE'	MUSKOGEE CRAPE MYRTLE	30 GAL, 10' HT, 4' SPR, MULTI-TRUNK, 3-5 CANES, 5' CAL MIN (COMBINED, MEASURED 6' ABOVE GRADE)
LJ	129	LIGUSTRUM JAPONICUM	TREE FORM LIGUSTRUM	8' HT., 8" SPR., MULTI-TRUNK TREE FORM SPECIMEN
MGD	86	MAGNOLIA GRANDIFLORA 'DD BLANCHARD'	DD BLANCHARD MAGNOLIA	30 GAL, 12' HT, 42" SPR, 2" CAL
MV	29	MAGNOLIA VIRGINIANA	SWEET BAY	30 GAL, 9' HT, 34" SPR, 2" CAL
PA	59	PRUNUS ANGUSTIFOLIA	CHICKASAW PLUM	30 GAL, 7' HT, 4' SPR, 2" CAL
PE	53	PINUS ELLIOTTII	SLASH PINE	30 GAL, 12' HT, 42" SPR, 2" CAL
PP	158	PINUS PALUSTRIS	LONGLEAF PINE	30 GAL, 12' HT, 42" SPR, 2" CAL
QS	62	QUERCUS SHUMARDII	SHUMARD RED OAK	30 GAL, 12' HT, 42" SPR, 2" CAL
QV	202	QUERCUS VIRGINIANA	SEEDLING SOUTHERN LIVE OAK	30 GAL, 12' HT, 54" SPR, 2" CAL
TD	94	TAXODIUM DISTICHUM	BALD CYPRESS	30 GAL, 12' HT, 42" SPR, 2" CAL
VOW	45	VIBURNUM OBOVATUM	WALTER'S VIBURNUM	30 GAL, 7' HT, 3" SPR, 2" CAL
SHRUBS				
IDB	583	ILEX CORNUTA 'DWARF BURFORDII'	DWARF BURFORD HOLLY	3 GAL, 24" HT, 16" SPR
VOS	1,711	VIBURNUM OBOVATUM 'MRS. SCHILLER'S DELIGHT'	MRS. SCHILLER'S DELIGHT VIBURNUM	3 GAL, 18" HT., 18"SPR.

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
SOD/SEED				
SOD		PASPALUM NOTATUM 'ARGENTINE'	BAHIA GRASS	WEED FREE AND SAND GROWN SOD

LANDSCAPED AREA REQUIREMENT
PER CITY OF ALACHUA COMPREHENSIVE PLAN FUTURE LAND USE ELEMENT, POLICY 2.4.A

TOTAL SITE AREA	196.68 ACRES
TOTAL PROJECT AREA	196.68 ACRES
TOTAL PROPOSED OPEN AREA	196.68 ACRES
OPEN AREA % OF TOTAL SITE AREA (MIN. 10%)	100%
TOTAL PROPOSED LANDSCAPE AREA (EXCLUSIVE OF OPEN AREA)	196.68 ACRES
LANDSCAPED AREA % OF TOTAL SITE AREA (MIN. 10%)	100%

NOTE: SEE SHEETS LS-33 – LS-35 FOR TREE DEMOLITION AND CREDITS CALCULATIONS.

PERIMETER BUFFER LANDSCAPE REQUIREMENTS [Section 6.2.3(E)]

LOCATION	BUFFER LENGTH & TYPE	LANDSCAPE REQUIRED	LANDSCAPE PROVIDED
AGRICULTURE PERIMETER	3,020 L.F. BUFFER TYPE 'D' (25' WIDE)	OPTION 1 1 CANOPY TREE PER 25 LF 1 UNDERSTORY TREE PER 40 LF CONTINUOUS HEDGE	OPTION 1 121 CANOPY TREES 76 UNDERSTORY TREES CONTINUOUS HEDGE
COMMERICAL PERIMETER	3,776 L.F. BUFFER TYPE 'C' (7.5' WIDE)	OPTION 1 1 CANOPY TREE PER 30 LF CONTINUOUS HEDGE	OPTION 1 126 CANOPY TREES CONTINUOUS HEDGE
SINGLE-FAMILY RESIDENTIAL PERIMETER	2,740 L.F. BUFFER TYPE 'D' (25' WIDE)	OPTION 1 1 CANOPY TREE PER 25 LF 1 UNDERSTORY TREE PER 40 LF CONTINUOUS HEDGE	THE EXISTING NATURAL VEGETATION ALONG THIS BOUNDARY PROVIDES AN EQUAL OR BETTER BUFFER THAN REQUIRED. SEE SHEET LS-36 FOR ADDITIONAL INFORMATION.
ARTERIAL BUFFER	4,307 L.F. ARTERIAL BUFFER	4 CANOPY TREES PER 100 LF 3 UNDERSTORY TREES PER 100 LF CONTINUOUS ROW OF SHRUBS	130 CANOPY TREES PROVIDED – 42 CANOPY TREES PROVIDED BY EXISTING VEGETATION 129 UNDERSTORY TREES CONTINUOUS HEDGE

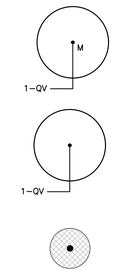
PARKING AREA LANDSCAPE REQUIREMENTS [Sec. 6.2.2(D)(2)(a) & (b)]

DESCRIPTION	LANDSCAPE REQUIRED	LANDSCAPE PROVIDED
PARKING AREA PERIMETER LANDSCAPE	PARKING PERIMETER = 810 L.F. 4 CANOPY TREES PER 100 L.F. 2 UNDERSTORY/ORNAMENTAL PER 100 L.F. CONTINUOUS ROW OF SHRUBS 32 CANOPY TREES REQUIRED 16 UNDERSTORY TREES REQUIRED CONTINUOUS ROW OF SHRUBS	32 CANOPY TREES 16 UNDERSTORY TREES PROVIDED CONTINUOUS ROW OF SHRUBS PROVIDED
INTERIOR PARKING AREA LANDSCAPE	PARKING AREA = 25,700 S.F. 1 CANOPY/UNDERSTORY TREE REQUIRED PER 1,800 S.F. 10 SHRUBS REQUIRED PER LANDSCAPE ISLAND 14 CANOPY/UNDERSTORY TREES REQUIRED 10 SHRUBS REQUIRED	14 UNDERSTORY TREES 10 SHRUBS PROVIDED

SITE LANDSCAPE CALCULATIONS [Sec. 6.2.2(D)(1)(c)]

DESCRIPTION	TREE REQUIREMENTS	TREES PROVIDED (NO MORE THAN 75% REQUIREMENTS FULFILLED VIA TREE PRESERVATION CREDITS)
PRIMARY SIDE CANOPY TREES (EAST SIDE)	3 TREES PER ACRE X 196.68 ACRES = 590 CANOPY TREES REQUIRED	590 CANOPY TREES PROVIDED (442 CREDITED FROM PRESERVATION CREDITS AND 148 PROPOSED)
REAR SIDE CANOPY TREES (WEST SIDE)	2 TREES PER ACRE X 196.68 ACRES = 393 TREES REQUIRED	393 CANOPY TREES PROVIDED (294 CREDITED FROM PRESERVATION CREDITS AND 99 PROPOSED)
NORTH SIDE CANOPY TREES	2 TREES PER ACRE X 196.68 ACRES = 393 TREES REQUIRED	393 CANOPY TREES PROVIDED (294 CREDITED FROM PRESERVATION CREDITS AND 99 PROPOSED)
SOUTH SIDE CANOPY TREES	2 TREES PER ACRE X 196.68 ACRES = 393 TREES REQUIRED	393 CANOPY TREES PROVIDED (294 CREDITED FROM PRESERVATION CREDITS AND 99 PROPOSED)
SITE UNDERSTORY TREES	6 UNDERSTORY TREES PER ACRE X 196.68 ACRES = 1,180 TREES REQUIRED 50% IN FRONT = 590 TREES REQUIRED 25% ON EAST SIDE = 295 TREES REQUIRED 25% ON WEST SIDE = 295 TREES REQUIRED 1,180 UNDERSTORY TREES REQUIRED	FRONT SIDE 590 UNDERSTORY TREES PROVIDED (442 CREDITED FROM PRESERVATION CREDITS AND 148 PROPOSED) EAST SIDE 295 UNDERSTORY TREES PROVIDED (221 CREDITED FROM PRESERVATION CREDITS AND 74 PROPOSED) WEST SIDE 295 UNDERSTORY TREES PROVIDED (221 CREDITED FROM PRESERVATION CREDITS AND 74 PROPOSED) 1,180 UNDERSTORY TREES PROVIDED
BUILDING FACADE	4 CANOPY TREE PER 100 LIN. FT. AND ROW OF SHRUBS REQUIRED ON EACH SIDE 230 LF NORTH FACADE = 9 TREE REQUIRED 230 LF SOUTH FACADE = 9 TREE REQUIRED 60 LF WEST FACADE = 2 TREE REQUIRED 60 LF EAST FACADE = 2 TREE REQUIRED	NORTH FACADE 9 CANOPY TREES PROVIDED (6 CREDITED FROM PRESERVATION CREDITS AND 3 PROPOSED) SOUTH FACADE 9 CANOPY TREES PROVIDED (6 CREDITED FROM PRESERVATION CREDITS AND 3 PROPOSED) WEST FACADE 2 CANOPY TREES PROVIDED (1 CREDITED FROM PRESERVATION CREDITS AND 1 PROPOSED) WEST FACADE 2 CANOPY TREES PROVIDED (1 CREDITED FROM PRESERVATION CREDITS AND 1 PROPOSED) ROW OF SHRUBS PROVIDED ON ALL SIDES

LEGEND



GENERAL NOTES
ALL ASPHALT, LIMEROCK, AND CONSTRUCTION DEBRIS SHALL BE REMOVED FROM PLANTING BEDS AND SOD AREAS PRIOR TO LANDSCAPE INSTALLATION. IF ENCOUNTERED DURING CONSTRUCTION OR INSTALLATION, THESE SHALL BE EXCAVATED AND REMOVED FROM THE SITE. PLANTING DEPTH OF SOIL IN SUCH AREAS SHOULD BE AT LEAST 3'. IF FILL MUST BE ADDED, IT MUST BE FLORIDA CLEAN DEEP FILL (FREE OF WEED SEEDS) WITH pH 6.0 – 7.5.

ALL LANDSCAPED AREAS SHALL BE MULCHED WITH 3" THICKNESS OF MULCH. PINE BARK MULCH SHALL BE USED IN ALL AREAS, EXCEPT RETENTION AREAS. PINE STRAW MULCH SHALL BE USED IN RETENTION AREAS.

NEW TREES OUTSIDE OF MULCHED LANDSCAPED BEDS WILL BE PROTECTED FROM MOWER AND STRING TRIMMER DAMAGE WITH 10" OF PLASTIC DRAIN TUBING.

LEADER SHOOTS AND MAIN STRUCTURAL LIMBS OF TREES SHALL NOT BE TOPPED OR PRUNED. TREES WILL BE STAKED AS NEEDED. GUYLINES WILL BE OF NON-SYNTHETIC BIODEGRADABLE MATERIAL.

REFER TO CIVIL PLANS FOR TREE BARRICADE DETAILS AND INFORMATION.

GRASSING
ALL DISTURBED AND UNPAVED AREAS TO BE GRASSED WITH SOD THAT IS FREE OF NOXIOUS WEEDS INCLUDING TROPICAL SODA APPLE OR SHALL BE SEEDED AND MULCHED. SEE CIVIL SITE PLANS FOR ADDITIONAL RELATED INFORMATION.

PLANT MATERIAL
ALL PLANT MATERIAL TO BE FLORIDA NO.1 OR BETTER, GRADED IN ACCORDANCE WITH THE STATE OF FLORIDA DEPARTMENT OF AGRICULTURE, DIVISION OF PLANT INDUSTRY'S 'GRADES AND STANDARDS FOR NURSERY PLANTS', CURRENT EDITION AT THE TIME PLANS ARE ISSUED. CALL THE LANDSCAPE ARCHITECT PRIOR TO PURCHASING ANY PLANT MATERIAL FOR AN ON SITE INSPECTION AND REVIEW OF LANDSCAPE PLAN.

PLANT QUANTITIES SHOWN ARE FOR PERMITTING PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM ALL QUANTITIES SHOWN ON THE PLAN.

10% OPEN SPACE REQUIREMENT
AS PER CITY OF ALACHUA LDR SECTION 6.7.3 (A), THE MINIMUM OPEN SPACE SET ASIDE SHALL BE 10% OF THE DEVELOPMENT SITE. REFER TO CIVIL PLANS FOR OPEN SPACE CALCULATIONS.

IRRIGATION
LANDSCAPE IRRIGATION TO BE PROVIDED BY AUTOMATIC IRRIGATION SYSTEM IN ACCORDANCE WITH CITY OF ALACHUA LDR SECTION 6.2.2(D)(6)(B)(VI).

ALL NEWLY PLANTED TREES SHALL HAVE INDIVIDUAL LOW FLOW OR MICRO-IRRIGATION SUPPLIES [407.46(A)3]. ALL IRRIGATION SYSTEMS ARE REQUIRED TO HAVE A MOISTURE SENSOR/AUTOMATIC RAINFALL SHUTOFF DEVICE [407.46(A)4].

UTILTIES
TREES SHALL BE PLANTED SO THEIR TRUNKS ARE A MINIMUM OF 10' FROM ALL WATER AND WASTEWATER LINES.

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

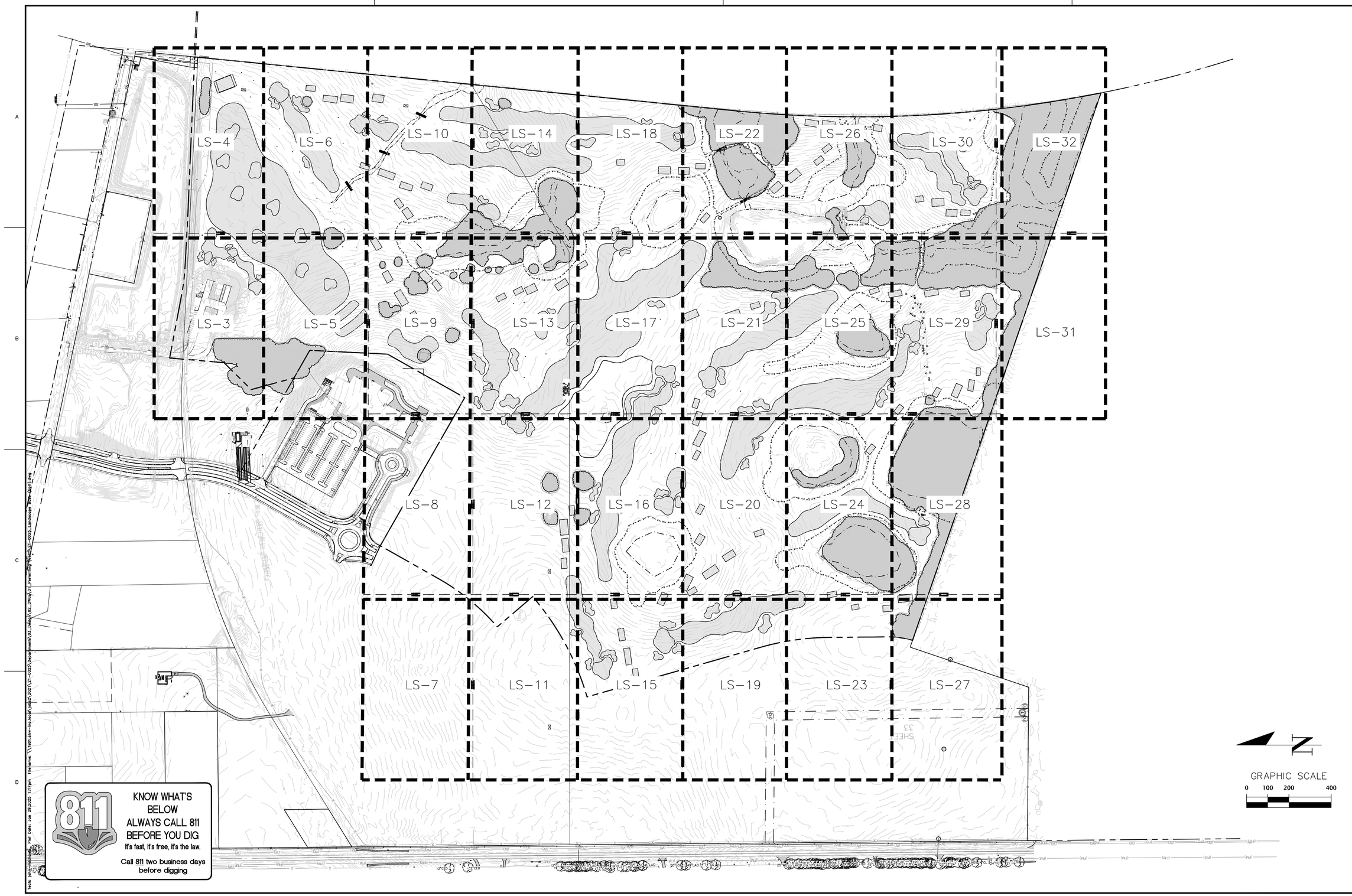
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE NOTES & DETAILS

TECHNICIAN:
DESIGNER: MLS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-1

Tech: John-michaels Plot Date: Jan 29,2025 1:17pm Filename: \\1401.chw-inc.local\Jobs\2021\21-0025\Department\03_Design\03_DWGs\01_Permitting (Civil)\21-0025_Landscape Base (Civil).dwg



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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE KEY SHEET

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-2

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SUBMITTALS:
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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-3

Tech: john-michaels Plot Date: Jan 29,2025 1:18pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg

MATCHLINE LS-5

MATCHLINE LS-4

MATCHLINE LS-4

MATCHLINE LS-6

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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.

PROJECT: TOWER HILL GOLF

SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:

DESIGNER: MS

QUALITY CONTROL: JMS

PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-4

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CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

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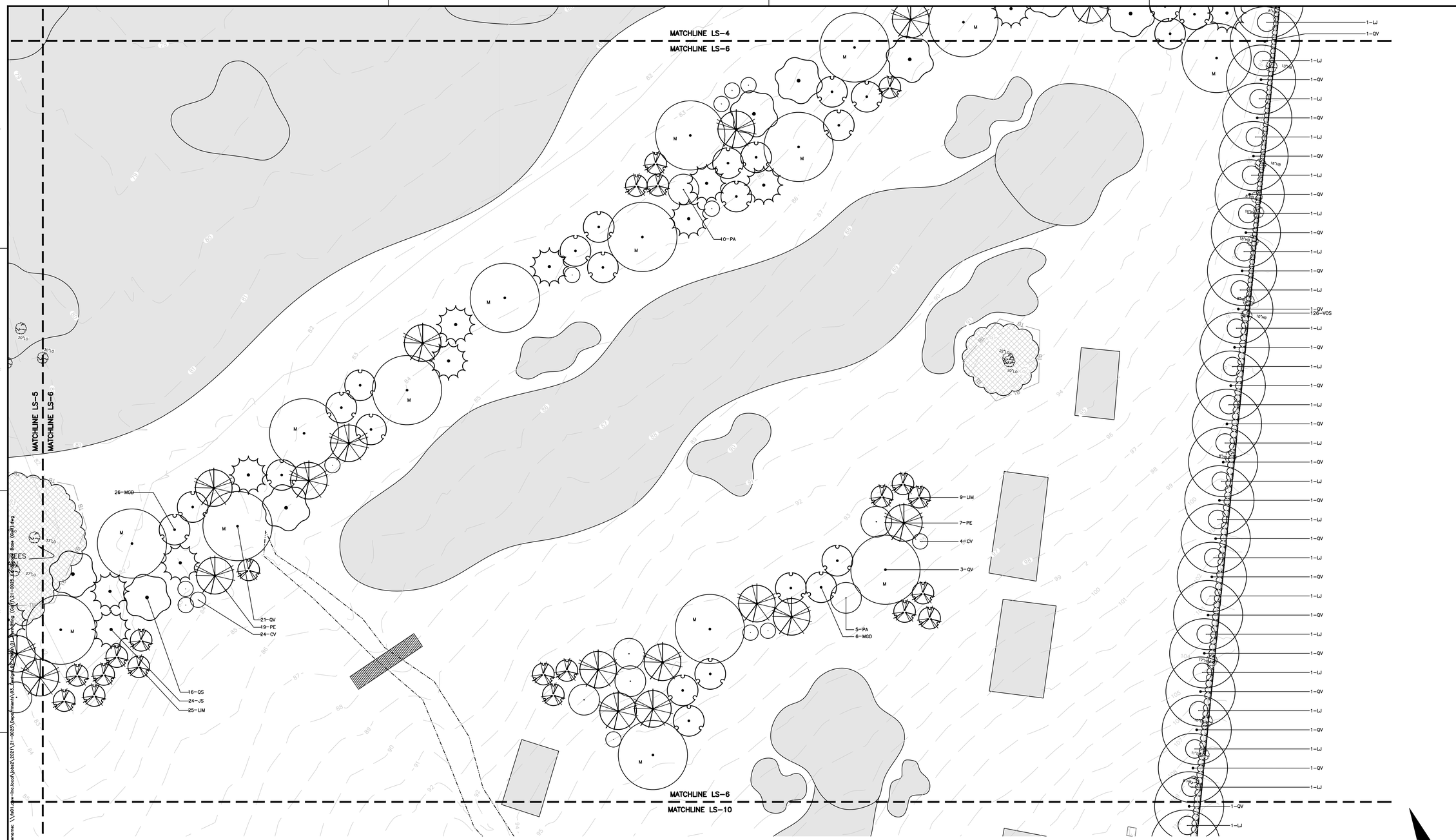

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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
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STATE OF FLORIDA

SHEET NO.: LS-6

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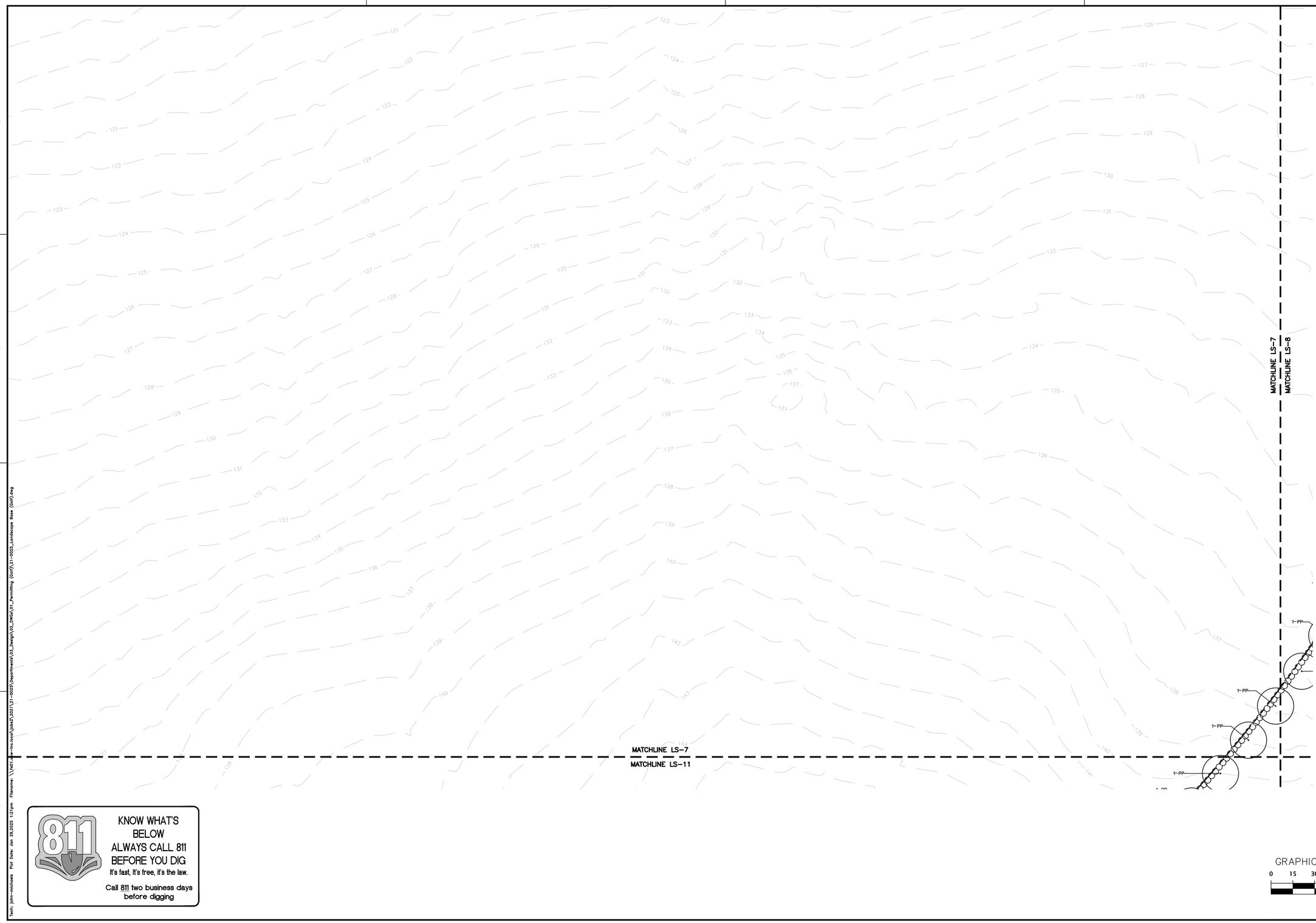

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CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
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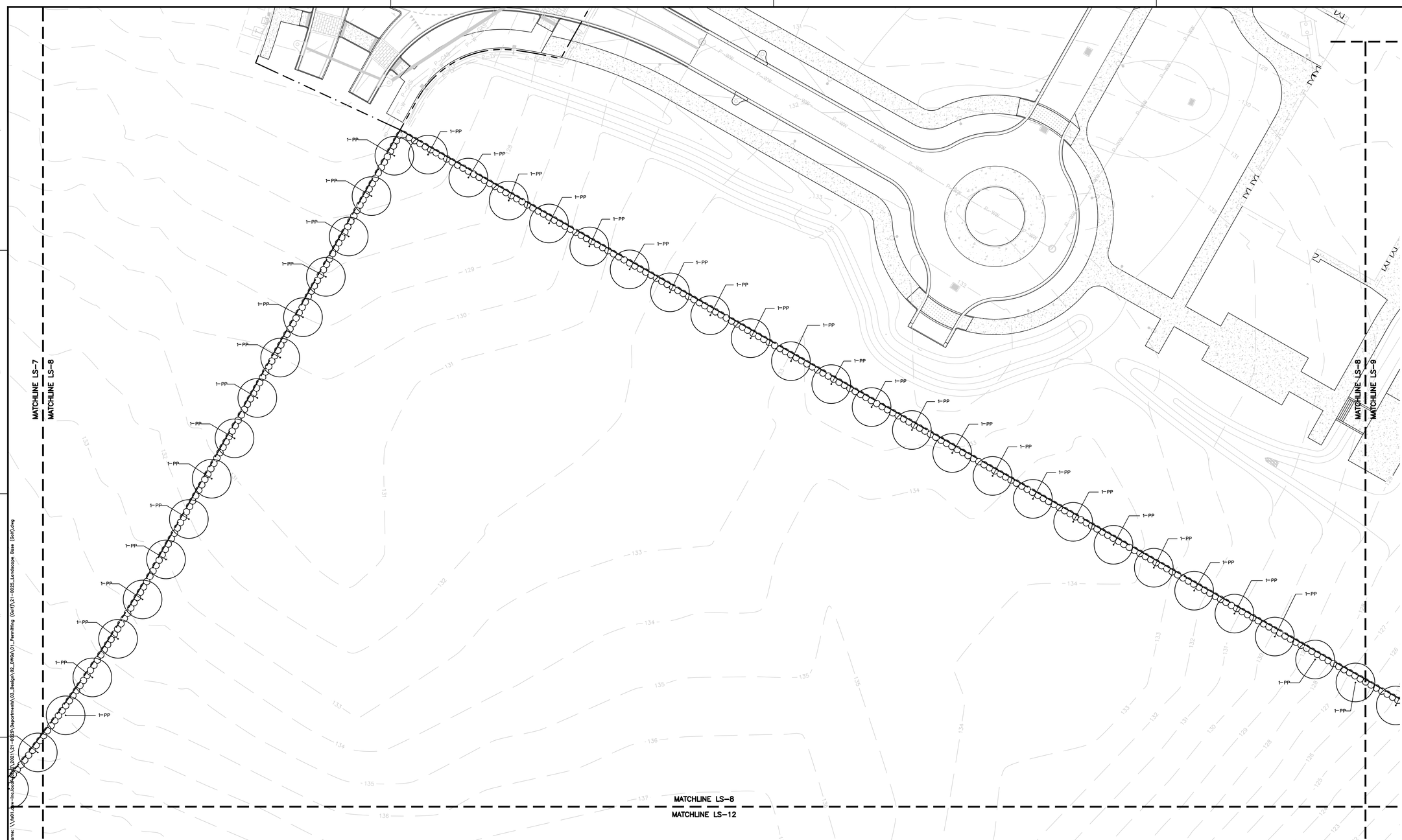

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CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
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SHEET NO.: LS-8

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CONSTRUCTION/BID REVISIONS:

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGN: MS
DRAWN BY: MS
QUALITY CONTROL: JWS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.:
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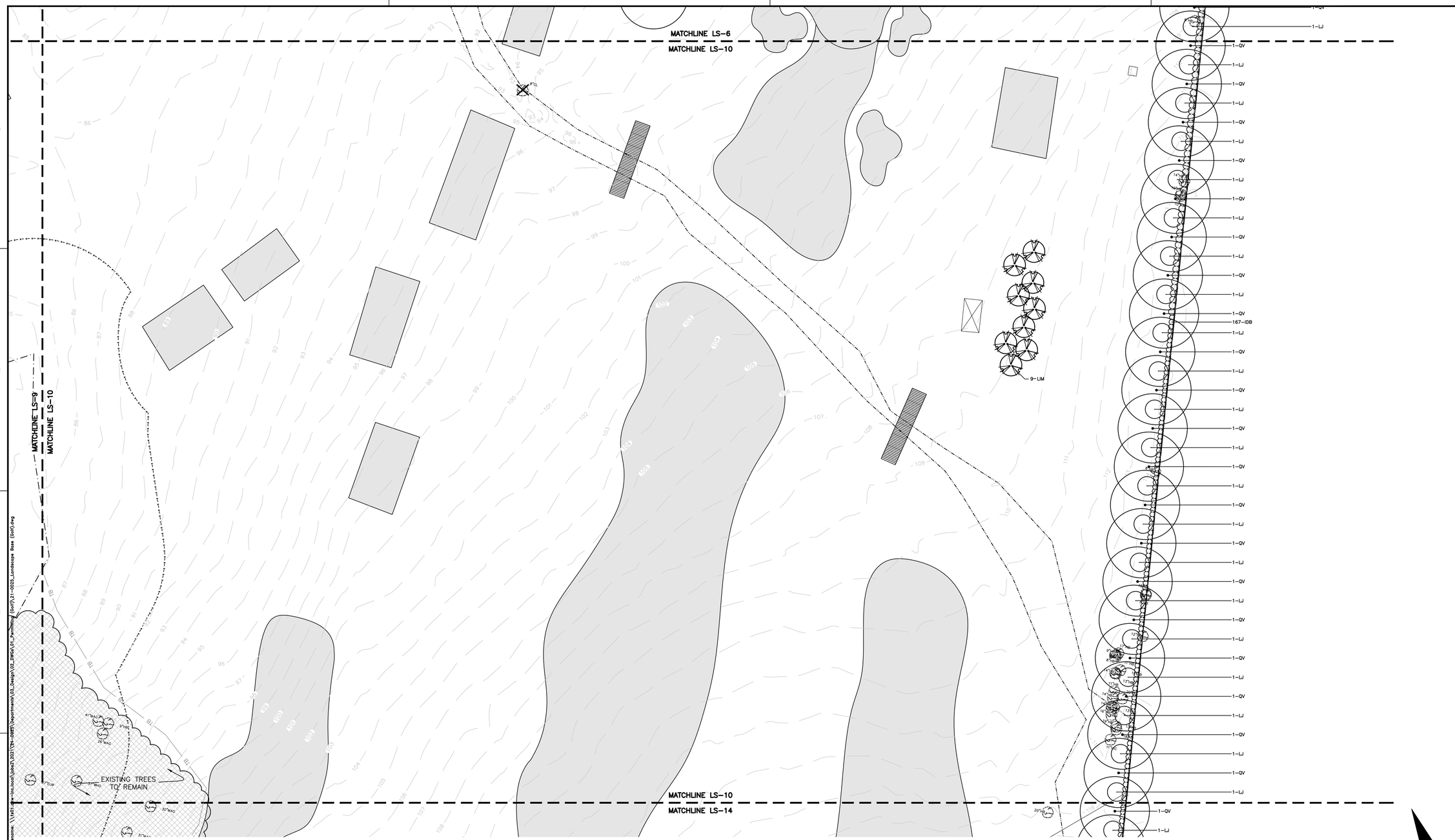

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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

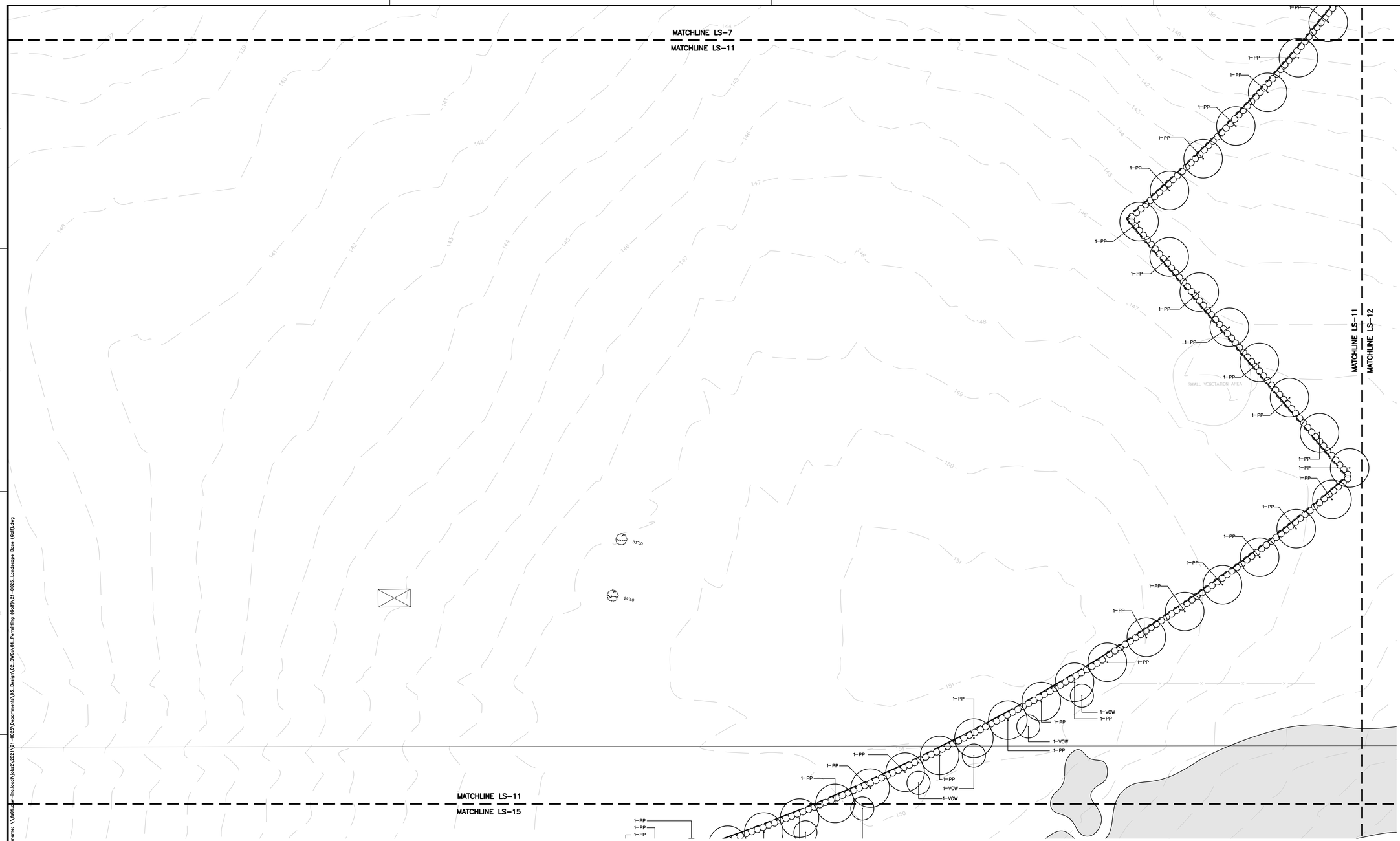
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-10

Tech: john-michaels Plot Date: Jan 29,2025 1:27pm Filename: \\ls01-chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg



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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

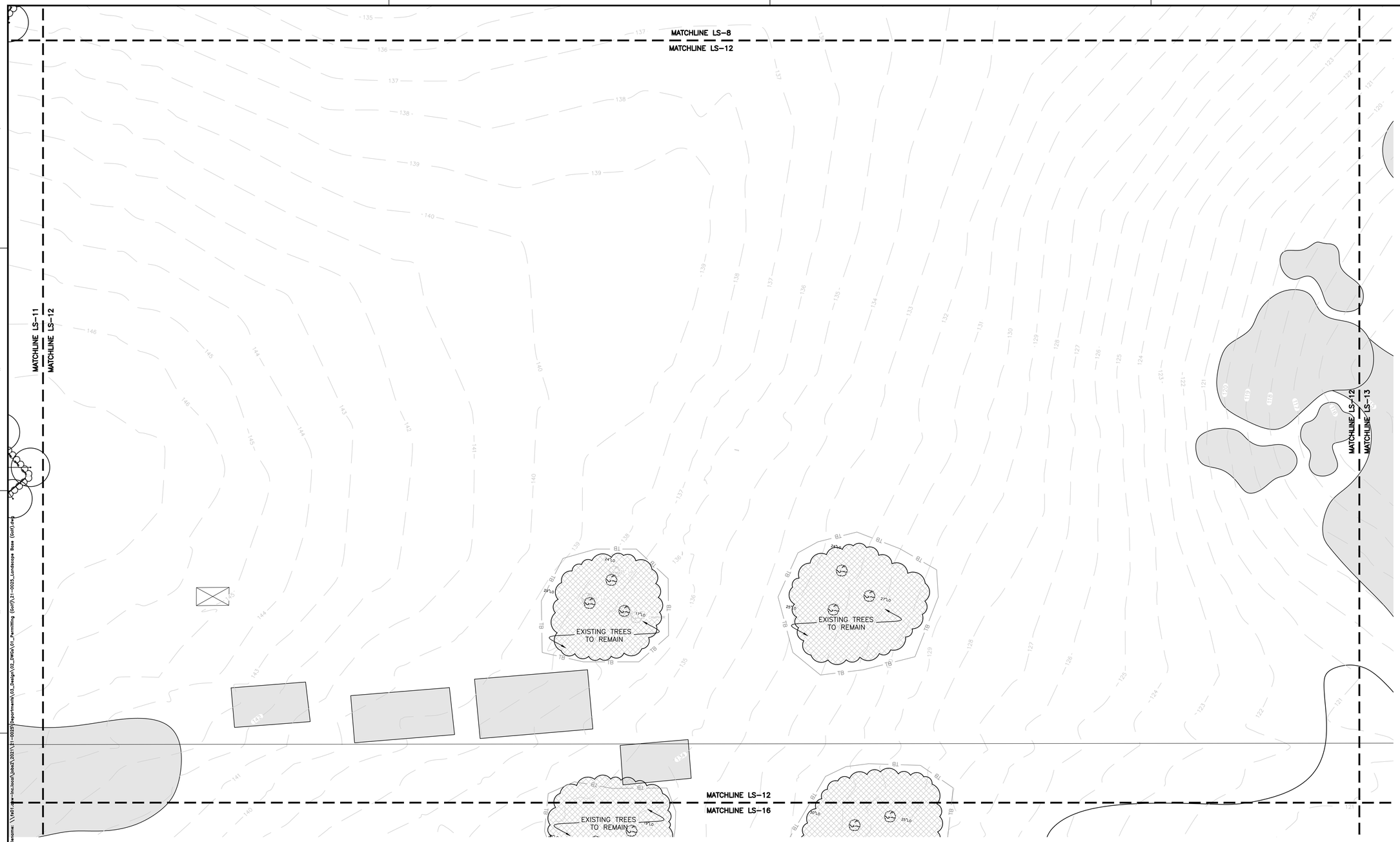
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-11

Tech: John-michaels Plot Date: Jan 29,2025 1:27pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg



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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-12

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-13

MATCHLINE LS-10
MATCHLINE LS-14

MATCHLINE LS-13
MATCHLINE LS-14

MATCHLINE LS-14
MATCHLINE LS-18

EXISTING TREES TO REMAIN

EXISTING TREES TO REMAIN

EXISTING TREES TO REMAIN

1-QV
1-LJ
125-VOS

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0 1" 2"

CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: MK
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-14

MATCHLINE LS-11
MATCHLINE LS-15

MATCHLINE LS-15
MATCHLINE LS-16

MATCHLINE LS-15
MATCHLINE LS-19

1-PP
1-VOW
M

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
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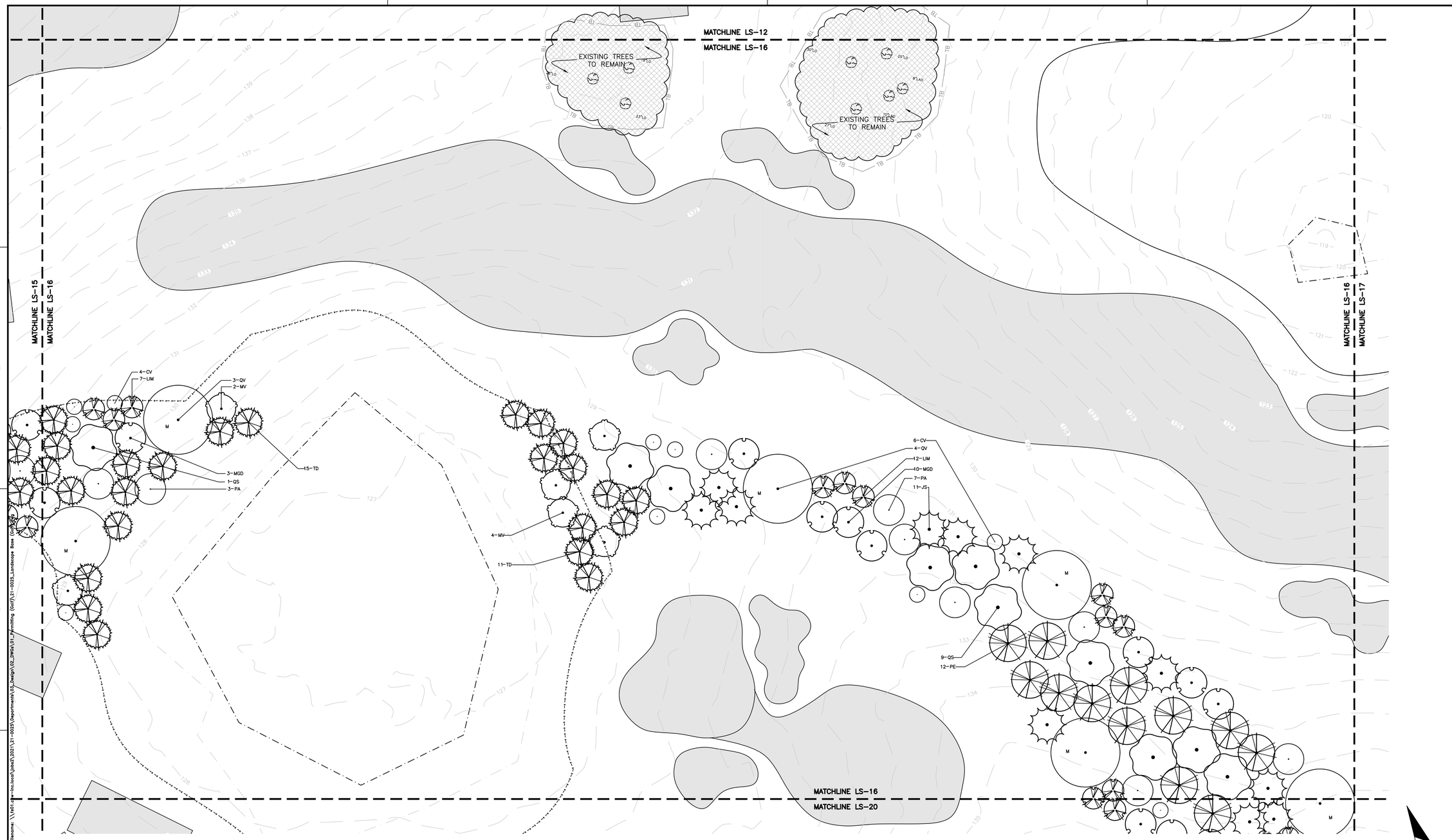
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: MS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

SHEET NO.: LS-15

Tech: john-michaels Plot Date: Jan 29,2025 - 1:29pm Filename: \\Vol1.chw-inc.local\Jobs\2.2021\21-0025\Departments\03_Design\02_Dwgs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg



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SUBMITTALS:
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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

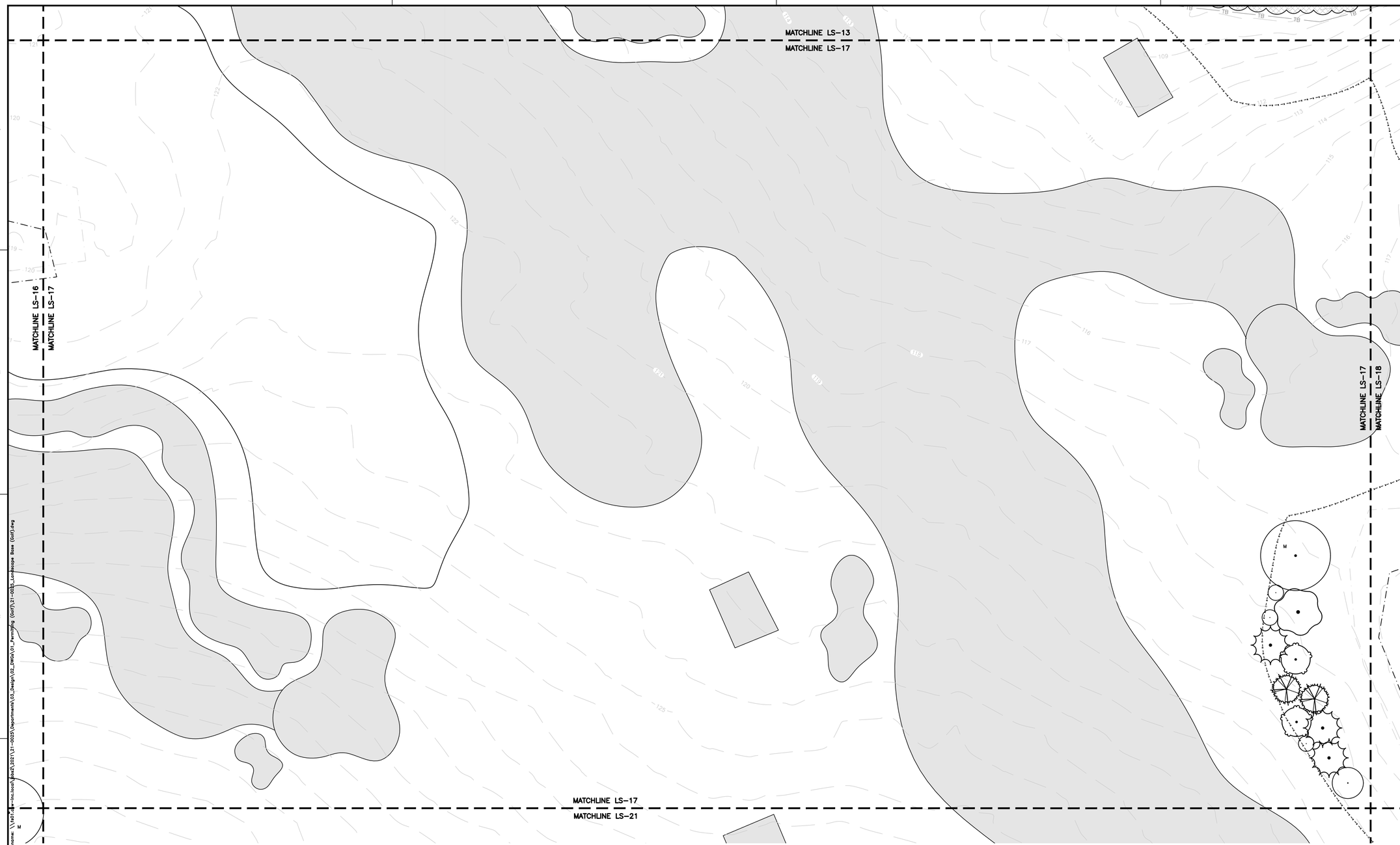
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-16

Tech: John-michaels Plot Date: Jan 29,2025 1:30pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg



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SUBMITTALS:
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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-17

Tech: john-michaels Plot Date: Jan 29,2025 1:50pm Filename: \\fs01.chw-inc.local\Jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg

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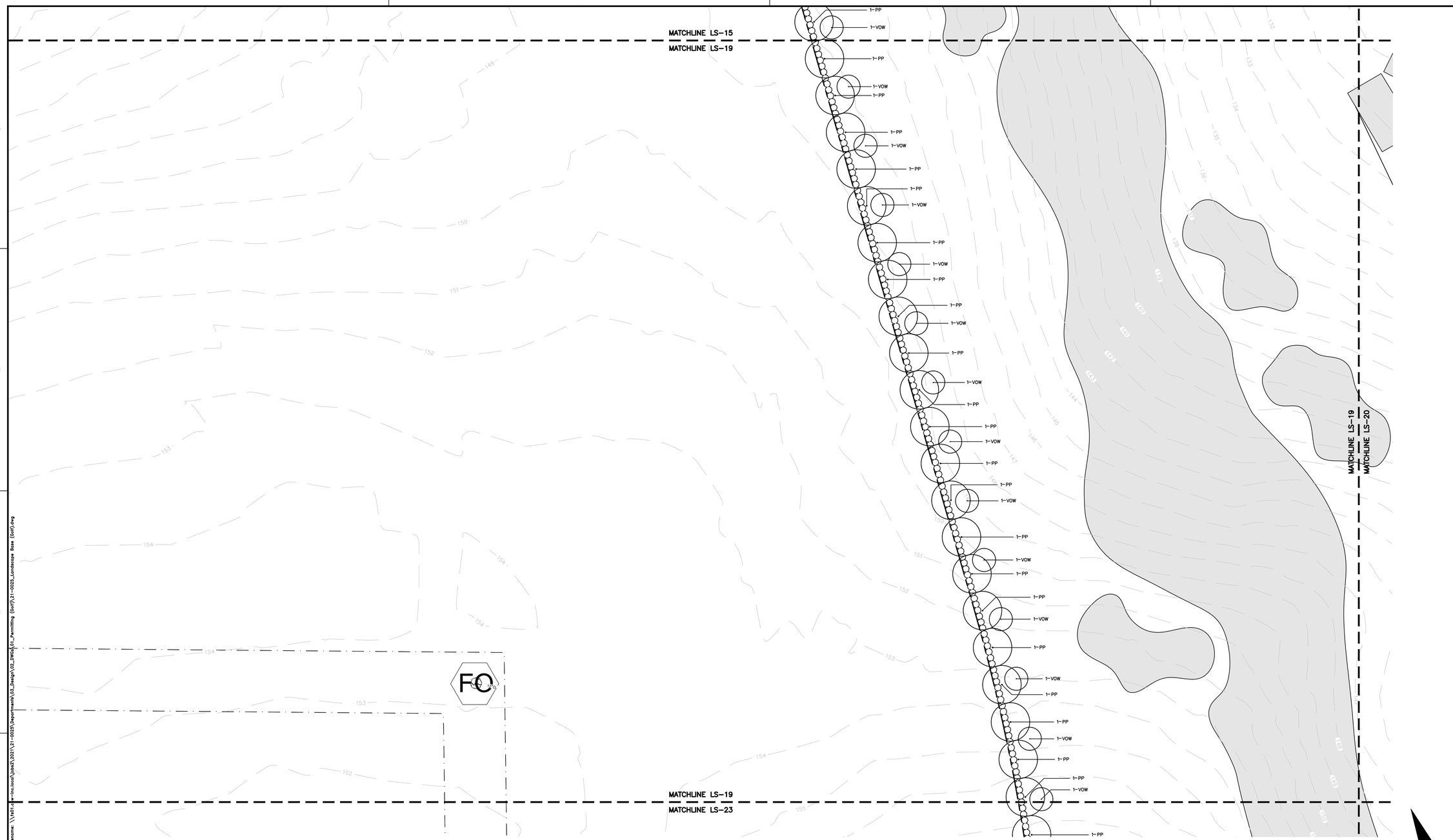
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-18



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CONSTRUCTION/BID REVISIONS:

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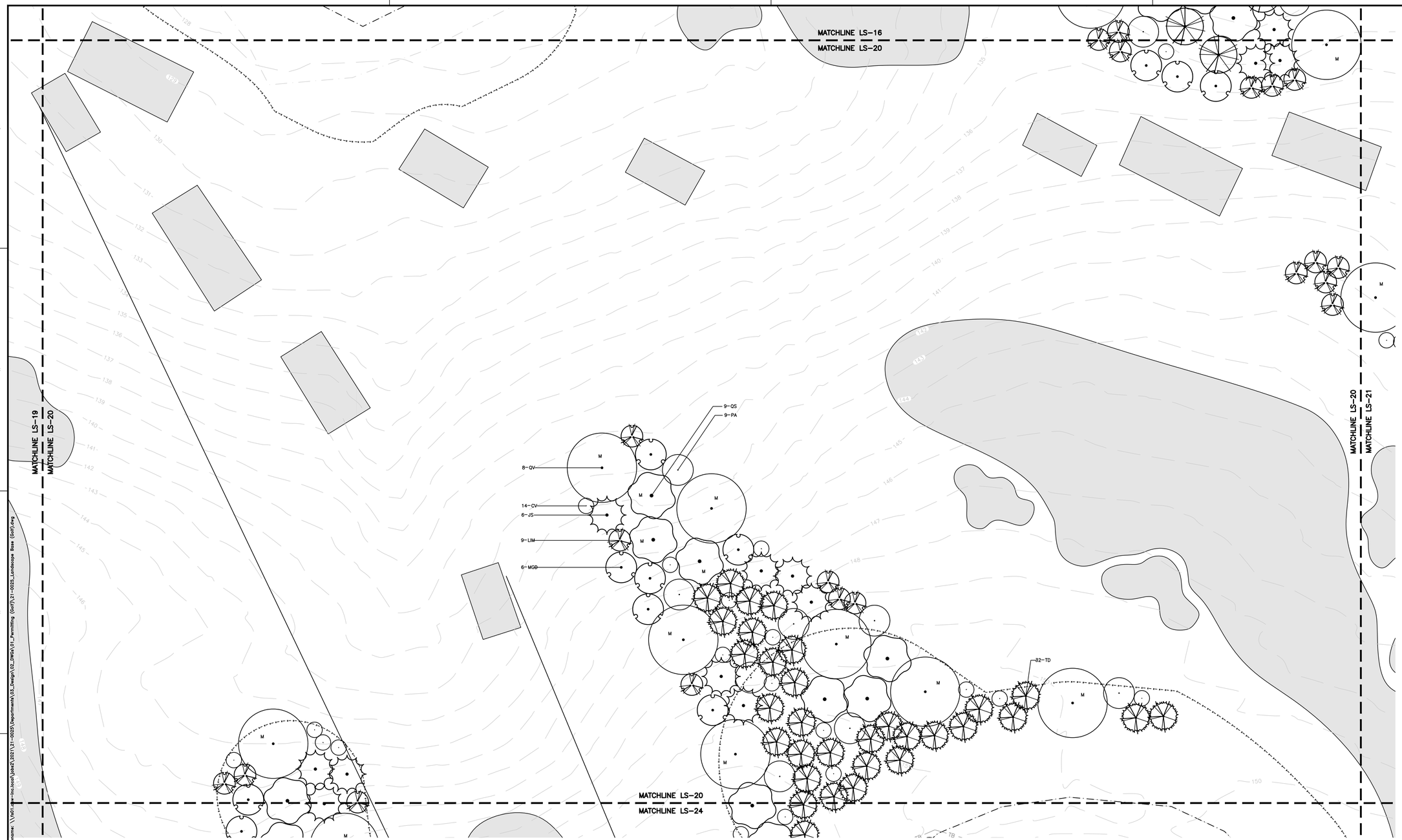
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-19

Tech: john-michaels Plot Date: Jan 29,2025 1:34pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg



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SUBMITTALS:
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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

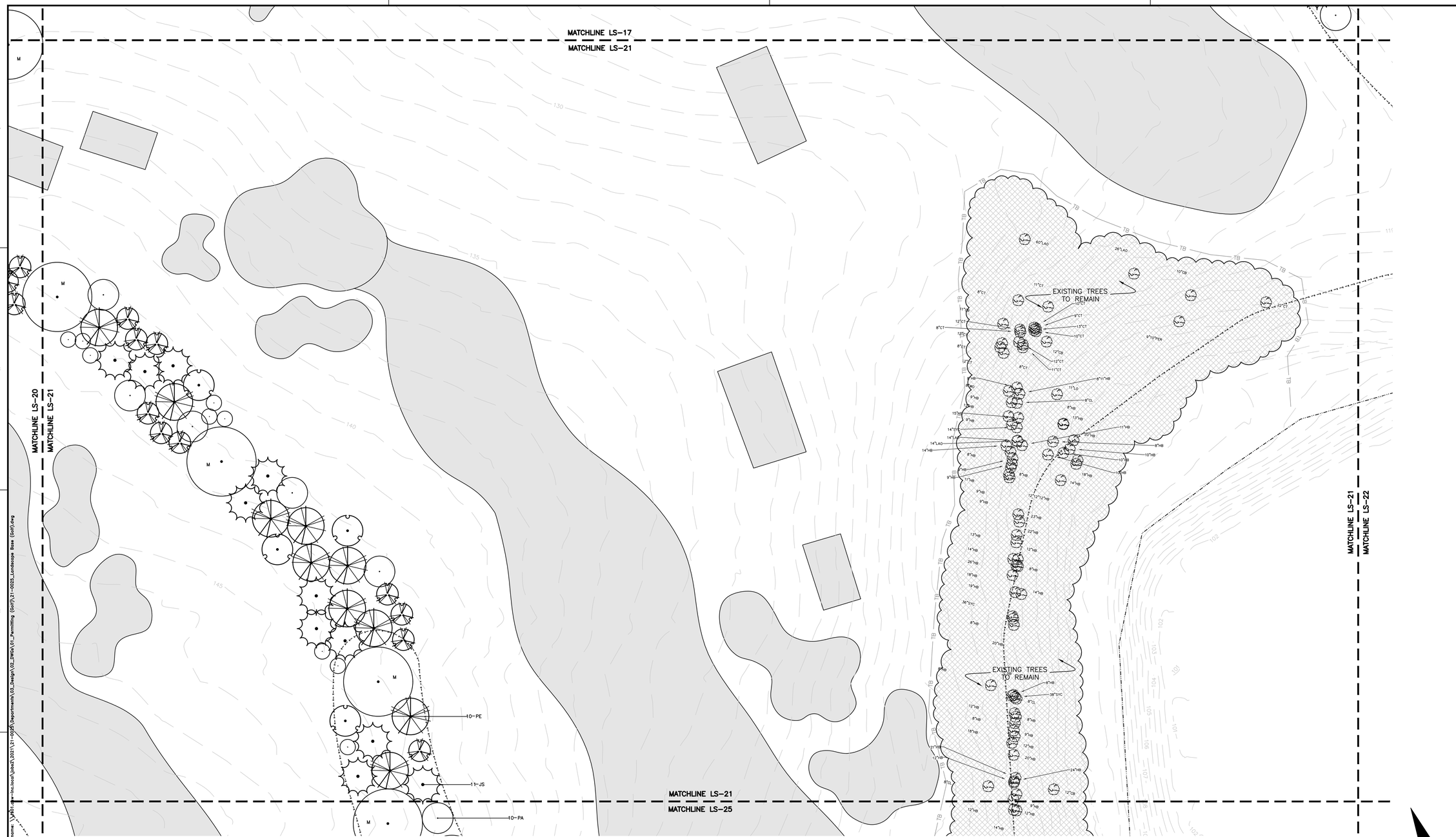
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-20

Tech: John-michaels Plot Date: Jan 29,2025 1:36pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg



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SUBMITTALS:
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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-21

Tech: john-michaels Plot Date: Jan 29,2025 1:38pm Filename: \\chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg

MATCHLINE LS-18
MATCHLINE LS-22

MATCHLINE LS-21
MATCHLINE LS-22

EXISTING TREES TO REMAIN

EXISTING TREES TO REMAIN

MATCHLINE LS-22
MATCHLINE LS-26

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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

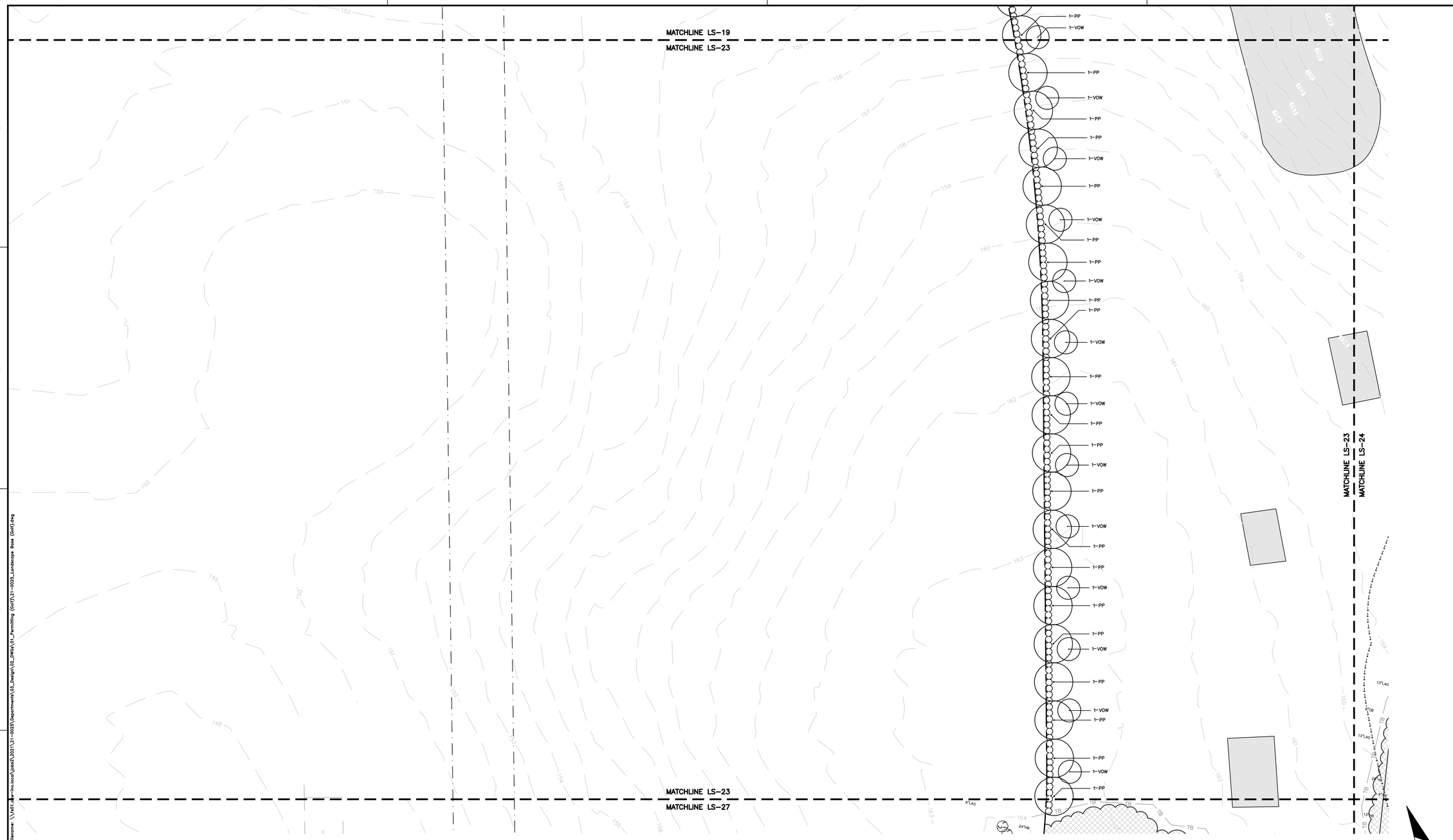
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: MAT
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-22

Tech: john-mitchele Plot Date: Jan 29,2025 1:39pm Filename: \\vol1.chw-inc.local\Jobs\2021\21-0025\Department\03_Design\02_Dwgs\01_Permitting (Set)\21-0025_Landscape Base (Set).dwg



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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

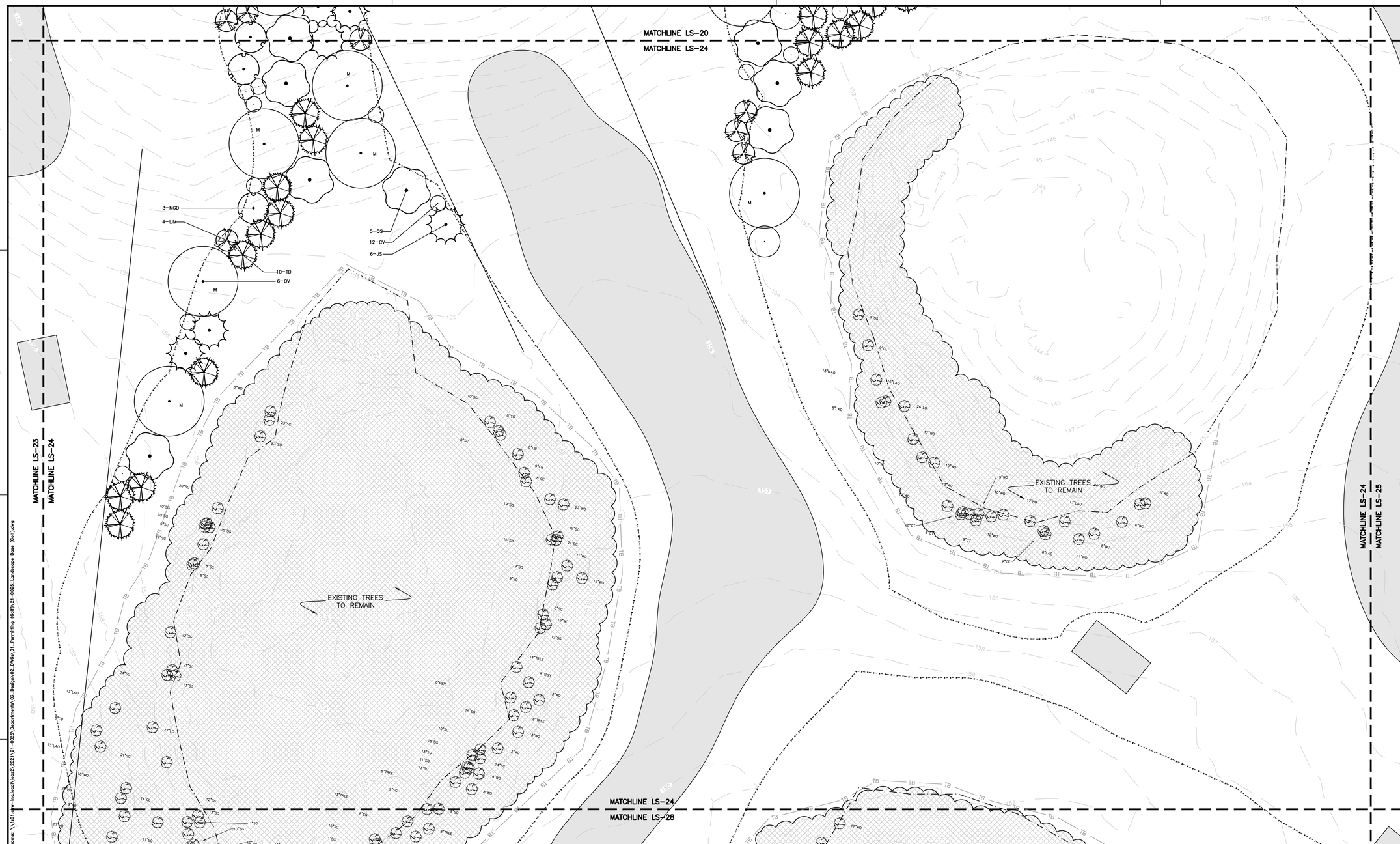
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-23

Tech: john-michaels Plot Date: Jan 29,2025 1:40pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg



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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

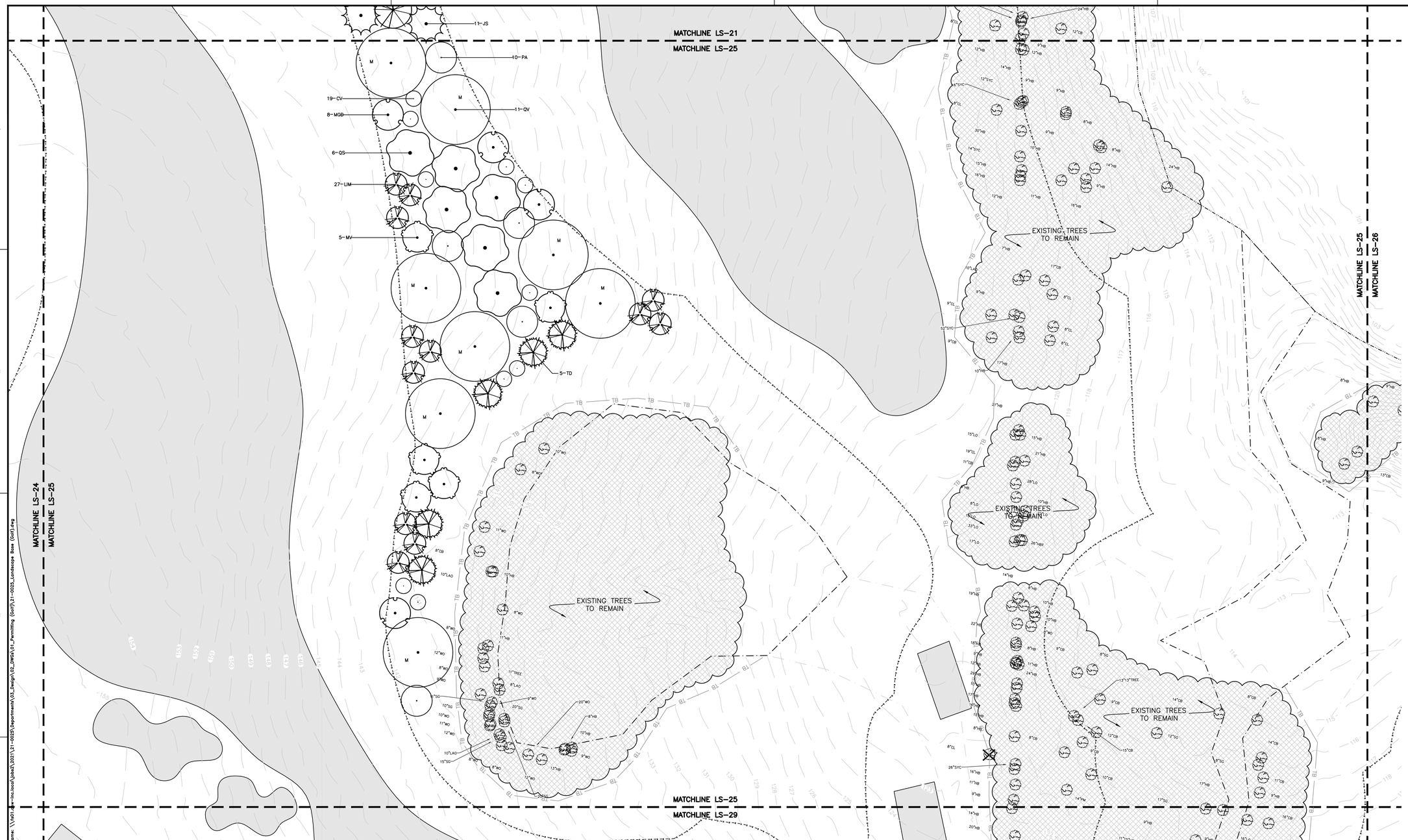
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-24

Tech: John-michaels Plot Date: Jan 29,2025 1:41pm Filename: \\fs01.cpw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg



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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-25

Tech: John-michaels Plot Date: Jan 29,2025 1:42pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg

MATCHLINE LS-22
MATCHLINE LS-26

MATCHLINE LS-25
MATCHLINE LS-26

EXISTING TREES TO REMAIN

EXISTING TREES TO REMAIN

MATCHLINE LS-26
MATCHLINE LS-30

1-QV
149-IDB
1-LJ
1-QV
1-LJ
1-QV
1-LJ
1-QV
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1-LJ
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1-QV
1-LJ
126-VOS
1-QV
1-QV

9-LIM
3-QV
3-MV
5-CV
9-TD
4-JS
5-PA

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SUBMITTALS:
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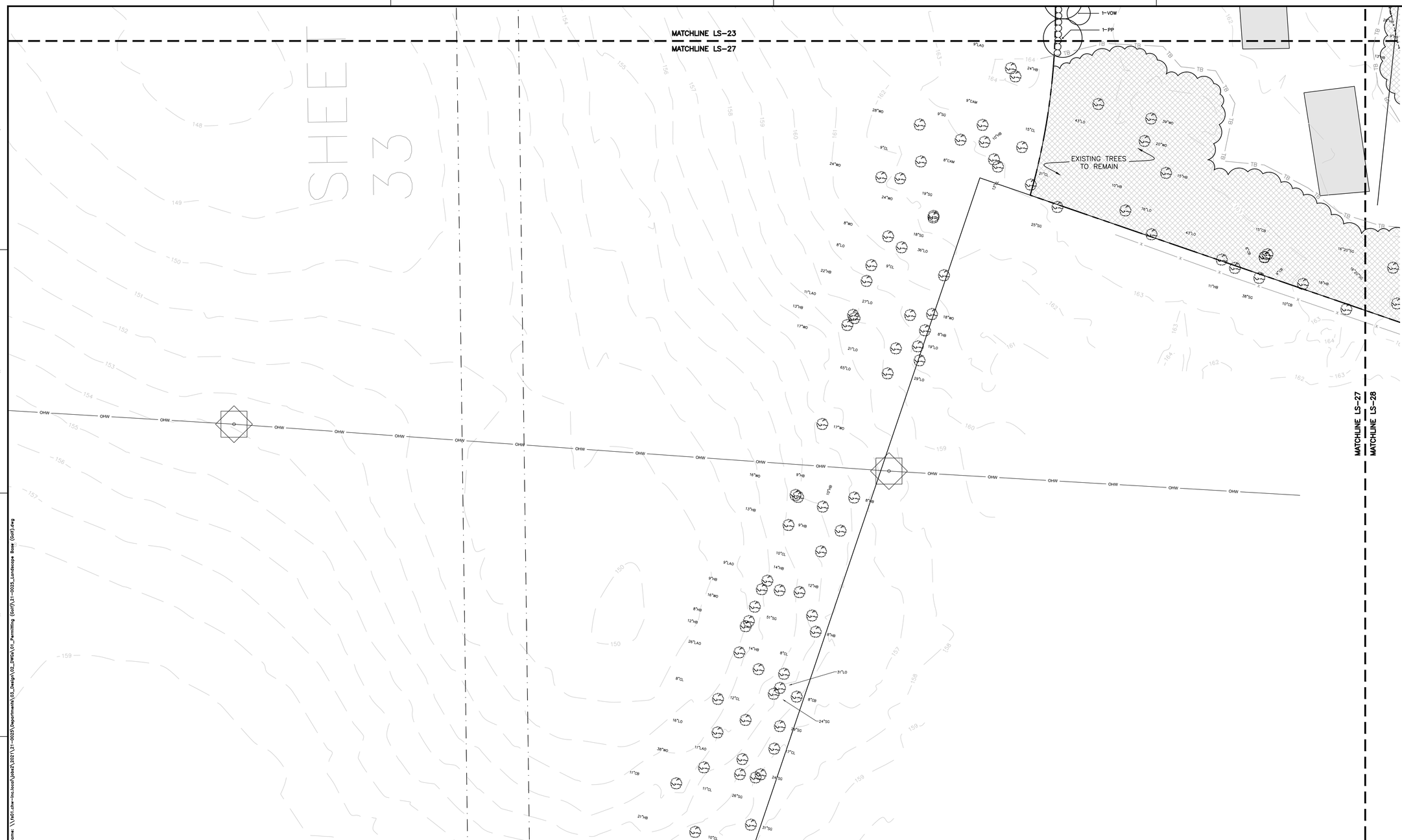
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: MLS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-26



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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-27

Tech: john-michaels Plot Date: Jan 29,2025 1:45pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-28

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

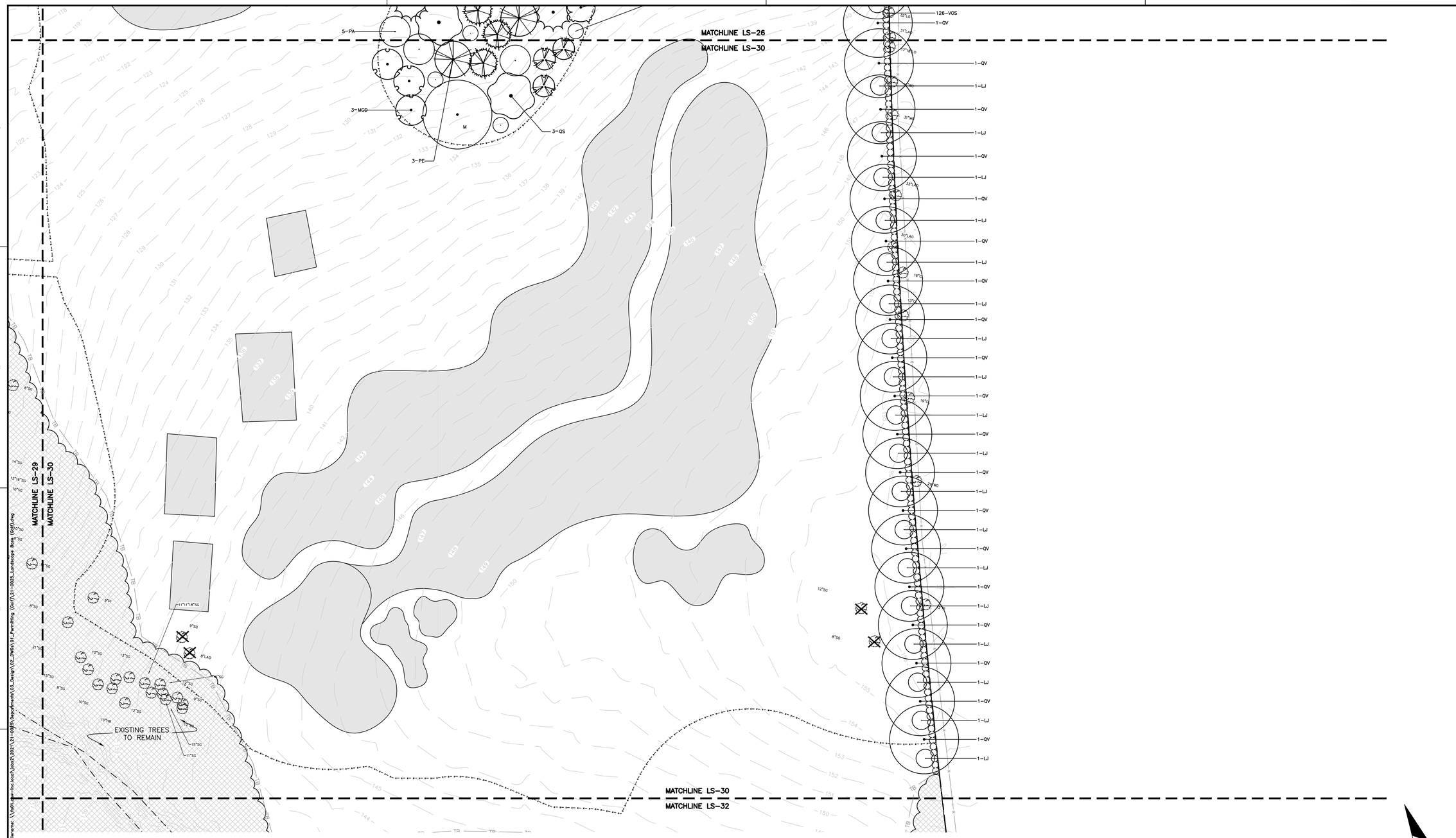
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-29

Tech: john-michaels Plot Date: Jan 29,2025 1:48pm Filename: \\fs01.chw-inc.local\jobs2\2024\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Plan (Golf).dwg



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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-30

Tech: john-michaels Plot Date: Jan 29,2025 1:50pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/23/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

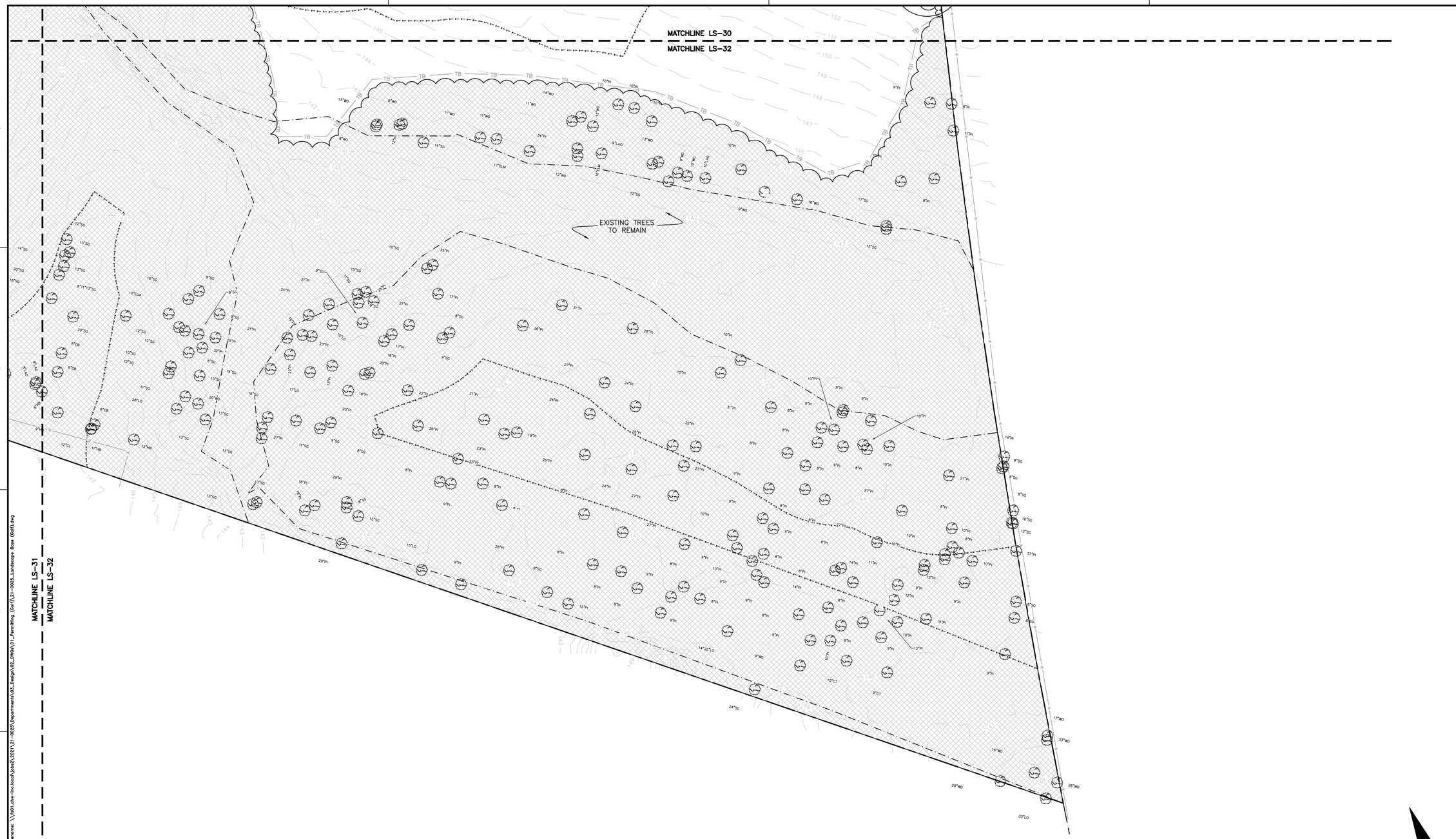
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: MS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-31

Tech: john--mitchele Plot Date: Jan 29,2025 - 1:52pm Filename: \\Vol1.chw-inc.local\Jobs\2021\21-0025\Department\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg



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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-32

Tech: john-michaels Plot Date: Jan 29,2025 1:54pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Landscape Base (Golf).dwg

TREE PRESERVATION/CREDITS LIST

TAG	TAG LABEL	SCIENTIFIC NAME	COMMON NAME	GRADE	CREDITS
5279	13"LO	Quercus virginiana	Live Oak	3.5	3
7775	12"MAG	Magnolia grandiflora	Magnolia	3	3
7777	28"SG	Liquidambar styraciflua	Sweetgum	4.5	6
7778	45"RO	Quercus falcata	Red Oak	3	20
7779	32"SG	Liquidambar styraciflua	Sweetgum	4.5	12
7781	38"CED	Juniperus silicicola	Cedar	3	12
7782	24"MAG	Magnolia grandiflora	Magnolia	3	6
7783	23"26"MAG	Magnolia grandiflora	Magnolia	3.5	6
7784	32"MAG	Magnolia grandiflora	Magnolia	3	12
7785	23"MAG	Magnolia grandiflora	Magnolia	4	6
7786	35"MAG	Magnolia grandiflora	Magnolia	3.5	12
7787	21"MAG	Magnolia grandiflora	Magnolia	3.5	6
7788	37"SG	Liquidambar styraciflua	Sweetgum	2.5	12
7789	39"MAG	Magnolia grandiflora	Magnolia	2.5	12
7790	19"MAG	Magnolia grandiflora	Magnolia	3.5	3
7791	32"MAG	Magnolia grandiflora	Magnolia	3.5	12
7792	33"MAG	Magnolia grandiflora	Magnolia	2.5	12
7793	36"MAG	Magnolia grandiflora	Magnolia	4.5	12
7794	44"MAG	Magnolia grandiflora	Magnolia	2.5	20
7798	38"SG	Liquidambar styraciflua	Sweetgum	3.5	12
7809	44"MAG	Magnolia grandiflora	Magnolia	3	20
7810	52"ELM	Ulmus spp.	Elm	2.5	25
7811	36"MAG	Magnolia grandiflora	Magnolia	3.5	12
22057	24"LO	Quercus virginiana	Live Oak	4	6
22058	25"LO	Quercus virginiana	Live Oak	4	6
22059	27"LO	Quercus virginiana	Live Oak	3.5	6
22082	29"LO	Quercus virginiana	Live Oak	4.5	6
22083	24"LO	Quercus virginiana	Live Oak	4.5	6
22084	17"LO	Quercus virginiana	Live Oak	3	3
22108	19"LO	Quercus virginiana	Live Oak	3	3
22109	23"LO	Quercus virginiana	Live Oak	3.5	6
22110	28"LO	Quercus virginiana	Live Oak	5	6
22113	25"LO	Quercus virginiana	Live Oak	4.5	6
22114	30"LO	Quercus virginiana	Live Oak	4.5	12
22115	27"LO	Quercus virginiana	Live Oak	4.5	6
22157	26"LO	Quercus virginiana	Live Oak	4.5	6
22181	24"SG	Liquidambar styraciflua	Sweetgum	4.5	6
22182	21"SG	Liquidambar styraciflua	Sweetgum	4.5	6
22183	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22184	22"SG	Liquidambar styraciflua	Sweetgum	3	6
22187	17"SG	Liquidambar styraciflua	Sweetgum	4.5	3
22188	15"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22189	10"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22190	10"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22192	20"SG	Liquidambar styraciflua	Sweetgum	4.5	6
22193	23"SG	Liquidambar styraciflua	Sweetgum	4.5	6
22194	23"SG	Liquidambar styraciflua	Sweetgum	4.5	6
22204	27"LO	Quercus virginiana	Live Oak	4	6
22205	21"SG	Liquidambar styraciflua	Sweetgum	4	6
22206	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22207	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22208	11"SG	Liquidambar styraciflua	Sweetgum	3	3
22209	11"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22210	10"SG	Liquidambar styraciflua	Sweetgum	3	3
22211	15"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22213	10"SG	Liquidambar styraciflua	Sweetgum	3	3
22214	15"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22215	17"SG	Liquidambar styraciflua	Sweetgum	4	3
22221	28"SG	Liquidambar styraciflua	Sweetgum	4.5	6
22225	30"SG	Liquidambar styraciflua	Sweetgum	4.5	12
22228	16"SG	Liquidambar styraciflua	Sweetgum	3	3
22229	18"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22230	11"SG	Liquidambar styraciflua	Sweetgum	3	3
22231	19"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22232	14"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22233	14"SG	Liquidambar styraciflua	Sweetgum	3	3
22237	16"SG	Liquidambar styraciflua	Sweetgum	3	3
22238	11"SG	Liquidambar styraciflua	Sweetgum	3	3
22255	12"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22261	16"SG	Liquidambar styraciflua	Sweetgum	3	3
22265	10"SG	Liquidambar styraciflua	Sweetgum	3	3
22266	14"SG	Liquidambar styraciflua	Sweetgum	3	3
22267	18"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22268	11"SG	Liquidambar styraciflua	Sweetgum	2.5	3
22270	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22271	21"SG	Liquidambar styraciflua	Sweetgum	4	6
22272	16"SG	Liquidambar styraciflua	Sweetgum	4	3
22273	19"SG	Liquidambar styraciflua	Sweetgum	4	3
22275	19"SG	Liquidambar styraciflua	Sweetgum	4.5	3
22281	10"SG	Liquidambar styraciflua	Sweetgum	3	3
22285	21"SG	Liquidambar styraciflua	Sweetgum	3	6
22286	17"SG	Quercus Nigra	Water Oak	3.5	3
22289	16"SG	Liquidambar styraciflua	Sweetgum	2.5	3
22293	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22294	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22295	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22296	15"SG	Liquidambar styraciflua	Sweetgum	3	3
22297	19"SG	Liquidambar styraciflua	Sweetgum	3	3
22298	15"SG	Liquidambar styraciflua	Sweetgum	3	3
22300	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22302	10"SG	Liquidambar styraciflua	Sweetgum	3	3
22303	20"SG	Liquidambar styraciflua	Sweetgum	3	6
22304	14"SG	Liquidambar styraciflua	Sweetgum	3	3
22305	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22306	17"SG	Liquidambar styraciflua	Sweetgum	3	3
22324	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22325	20"SG	Liquidambar styraciflua	Sweetgum	3	6
22326	11"SG	Liquidambar styraciflua	Sweetgum	3	3
22327	11"SG	Liquidambar styraciflua	Sweetgum	3	3
22328	19"SG	Liquidambar styraciflua	Sweetgum	3	3
22329	10"SG	Liquidambar styraciflua	Sweetgum	2.5	3
22330	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22331	14"SG	Liquidambar styraciflua	Sweetgum	3	3
22332	14"SG	Liquidambar styraciflua	Sweetgum	3	3
22333	11"SG	Liquidambar styraciflua	Sweetgum	3	3
22335	37"SG	Liquidambar styraciflua	Sweetgum	3.5	12
22357	16"20"SG	Liquidambar styraciflua	Sweetgum	3.5	6
22358	16"20"SG	Liquidambar styraciflua	Sweetgum	3.5	6
22366	43"LO	Quercus virginiana	Live Oak	3	20
22367	76"LO	Quercus virginiana	Live Oak	5	25
22378	43"LO	Quercus virginiana	Live Oak	5	20
22496	10"SG	Liquidambar styraciflua	Sweetgum	2.5	3
22511	14"SG	Liquidambar styraciflua	Sweetgum	3	3
22512	12"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22515	16"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22517	12"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22519	11"HIC	Carya tomentosa	Hickory	3	3
22528	16"SG	Liquidambar styraciflua	Sweetgum	2.5	3
22529	13"SG	Liquidambar styraciflua	Sweetgum	2.5	3
22532	13"HIC	Carya tomentosa	Hickory	3	3
22542	11"SG	Liquidambar styraciflua	Sweetgum	3	3
22544	24"SG	Liquidambar styraciflua	Sweetgum	3.5	6
22563	31"SG	Liquidambar styraciflua	Sweetgum	3.5	12
22564	23"HIC	Carya tomentosa	Hickory	3	6
22567	25"HIC	Carya tomentosa	Hickory	3.5	6
22569	21"HIC	Carya tomentosa	Hickory	3.5	6
22584	12"HIC	Carya tomentosa	Hickory	3.5	3
22593	39"SG	Liquidambar styraciflua	Sweetgum	3.5	12
22596	37"SG	Liquidambar styraciflua	Sweetgum	2	12
22602	27"HIC	Carya tomentosa	Hickory	3	6
22603	15"SG	Liquidambar styraciflua	Sweetgum	3	3
22604	27"SG	Liquidambar styraciflua	Sweetgum	2.5	6
22635	13"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22637	11"SG	Liquidambar styraciflua	Sweetgum	2	3
22638	28"LO	Quercus virginiana	Live Oak	3.5	6
22640	10"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22641	10"SG	Liquidambar styraciflua	Sweetgum	3	3
22642	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22644	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22645	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22646	10"ELM	Ulmus spp.	Elm	3	3
22647	16"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22653	8"11"13"SG	Liquidambar styraciflua	Sweetgum	3	3
22654	20"SG	Liquidambar styraciflua	Sweetgum	3	6
22655	18"SG	Liquidambar styraciflua	Sweetgum	3	3
22656	20"SG	Liquidambar styraciflua	Sweetgum	2.5	6
22657	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22658	14"SG	Liquidambar styraciflua	Sweetgum	3	3
22659	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22660	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22676	10"LO	Quercus virginiana	Live Oak	3	3
22678	33"LO	Quercus virginiana	Live Oak	4.5	12
22679	54"LO	Quercus virginiana	Live Oak	4.5	25
22681	14"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22683	40"SYC	Platanus occidentalis	Sycamore	4	20
22689	25"LO	Quercus virginiana	Live Oak	4	6
22693	21"LO	Quercus virginiana	Live Oak	4.5	6
22695	26"LO	Quercus virginiana	Live Oak	4.5	6
22696	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22704	23"SYC	Platanus occidentalis	Sycamore	3	6

TAG	TAG LABEL	SCIENTIFIC NAME	COMMON NAME	GRADE	CREDITS
22285	21"SG	Liquidambar styraciflua	Sweetgum	3	6
22286	17"SG	Quercus Nigra	Water Oak	3.5	3
22289	16"SG	Liquidambar styraciflua	Sweetgum	2.5	3
22293	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22294	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22295	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22296	15"SG	Liquidambar styraciflua	Sweetgum	3	3
22297	19"SG	Liquidambar styraciflua	Sweetgum	3	3
22298	15"SG	Liquidambar styraciflua	Sweetgum	3	3
22300	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22302	10"SG	Liquidambar styraciflua	Sweetgum	3	3
22303	20"SG	Liquidambar styraciflua	Sweetgum	3	6
22304	14"SG	Liquidambar styraciflua	Sweetgum	3	3
22305	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22306	17"SG	Liquidambar styraciflua	Sweetgum	3	3
22324	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22325	20"SG	Liquidambar styraciflua	Sweetgum	3	6
22326	11"SG	Liquidambar styraciflua	Sweetgum	3	3
22327	11"SG	Liquidambar styraciflua	Sweetgum	3	3
22328	19"SG	Liquidambar styraciflua	Sweetgum	3	3
22329	10"SG	Liquidambar styraciflua	Sweetgum	2.5	3
22330	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22331	14"SG	Liquidambar styraciflua	Sweetgum	3	3
22332	14"SG	Liquidambar styraciflua	Sweetgum	3	3
22333	11"SG	Liquidambar styraciflua	Sweetgum	3	3
22335	37"SG	Liquidambar styraciflua	Sweetgum	3.5	12
22357	16"20"SG	Liquidambar styraciflua	Sweetgum	3.5	6
22358	16"20"SG	Liquidambar styraciflua	Sweetgum	3.5	6
22366	43"LO	Quercus virginiana	Live Oak	3	20
22367	76"LO	Quercus virginiana	Live Oak	5	25
22378	43"LO	Quercus virginiana	Live Oak	5	20
22496	10"SG	Liquidambar styraciflua	Sweetgum	2.5	3
22511	14"SG	Liquidambar styraciflua	Sweetgum	3	3
22512	12"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22515	16"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22517	12"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22519	11"HIC	Carya tomentosa	Hickory	3	3
22528	16"SG	Liquidambar styraciflua	Sweetgum	2.5	3
22529	13"SG	Liquidambar styraciflua	Sweetgum	2.5	3
22532	13"HIC	Carya tomentosa	Hickory	3	3
22542	11"SG	Liquidambar styraciflua	Sweetgum	3	3
22544	24"SG	Liquidambar styraciflua	Sweetgum	3.5	6
22563	31"SG	Liquidambar styraciflua	Sweetgum	3.5	12
22564	23"HIC	Carya tomentosa	Hickory	3	6
22567	25"HIC	Carya tomentosa	Hickory	3.5	6
22569	21"HIC	Carya tomentosa	Hickory	3.5	6
22584	12"HIC	Carya tomentosa	Hickory	3.5	3
22593	39"SG	Liquidambar styraciflua	Sweetgum	3.5	12
22596	37"SG	Liquidambar styraciflua	Sweetgum	2	12
22602	27"HIC	Carya tomentosa	Hickory	3	6
22603	15"SG	Liquidambar styraciflua	Sweetgum	3	3
22604	27"SG	Liquidambar styraciflua	Sweetgum	2.5	6
22635	13"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22637	11"SG	Liquidambar styraciflua	Sweetgum	2	3
22638	28"LO	Quercus virginiana	Live Oak	3.5	6
22640	10"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22641	10"SG	Liquidambar styraciflua	Sweetgum	3	3
22642	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22644	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22645	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22646	10"ELM	Ulmus spp.	Elm	3	3
22647	16"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22653	8"11"13"SG	Liquidambar styraciflua	Sweetgum	3	3
22654	20"SG	Liquidambar styraciflua	Sweetgum	3	6
22655	18"SG	Liquidambar styraciflua	Sweetgum	3	3
22656	20"SG	Liquidambar styraciflua	Sweetgum	2.5	6
22657	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22658	14"SG	Liquidambar styraciflua	Sweetgum	3	3
22659	13"SG	Liquidambar styraciflua	Sweetgum	3	3
22660	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22676	10"LO	Quercus virginiana	Live Oak	3	3
22678	33"LO	Quercus virginiana	Live Oak	4.5	12
22679	54"LO	Quercus virginiana	Live Oak	4.5	25
22681	14"SG	Liquidambar styraciflua	Sweetgum	3.5	3
22683	40"SYC	Platanus occidentalis	Sycamore	4	20
22689	25"LO	Quercus virginiana	Live Oak	4	6
22693	21"LO	Quercus virginiana	Live Oak	4.5	6
22695	26"LO	Quercus virginiana	Live Oak	4.5	6
22696	12"SG	Liquidambar styraciflua	Sweetgum	3	3
22704	23"SYC	Platanus occidentalis	Sycamore	3	6

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SCALE: 1"=30'
VERIFY SCALE BAR IS ACCURATE ON PLOTTED PLANS
0 15 30 60 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/10/2025 - SUBMITTAL FOR THE CITY OF ALACHUA
03/03/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: TREE MITIGATION CALCULATIONS

TECHNICIAN: CP
DESIGNER: MS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-33

Tools: john-mitchele Plot Date: Mar 03,2025 4:13pm Filename: \\vol1.ohe-hq.local\Jobs\2021\21-0025\Department\03_Design\05_Design\05_DWGs\01_Permitting (Civil)\21-0025_Landscape Base (Civil).dwg

TREE PRESERVATION/CREDITS LIST

TAG	TAG LABEL	SCIENTIFIC NAME	COMMON NAME	GRADE	CREDITS
23063	12"HB	Celtis occidentalis	Hackberry	3.5	3
23064	22"HB	Celtis occidentalis	Hackberry	3.5	6
23065	13"HB	Celtis occidentalis	Hackberry	3.5	3
23066	23"HB	Celtis occidentalis	Hackberry	3.5	6
23077	14"LAO	Quercus virginiana	Live Oak	4	3
23080	14"SYC	Platanus occidentalis	Sycamore	3.5	3
23087	11"LO	Quercus virginiana	Live Oak	4	3
23129	10"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23131	15"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23132	34"HB	Celtis occidentalis	Hackberry	4	12
23141	16"SG	Liquidambar styraciflua	Sweetgum	3	3
23152	15"SG	Liquidambar styraciflua	Sweetgum	3	3
23154	19"HB	Celtis occidentalis	Hackberry	4	3
23157	23"SG	Liquidambar styraciflua	Sweetgum	3.5	6
23158	26"SG	Liquidambar styraciflua	Sweetgum	3.5	6
23162	24"HB	Celtis occidentalis	Hackberry	4	6
23164	11"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23165	12"SG	Liquidambar styraciflua	Sweetgum	2	3
23168	15"SG	Liquidambar styraciflua	Sweetgum	3	3
23169	16"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23171	10"MAP	Acer rubrum	Maple	3	3
23173	15"SG	Liquidambar styraciflua	Sweetgum	2	3
23178	11"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23179	11"SG	Liquidambar styraciflua	Sweetgum	3	3
23181	13"SG	Liquidambar styraciflua	Sweetgum	3	3
23183	14"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23185	15"LO	Quercus virginiana	Live Oak	3.5	3
23190	52"LO	Quercus virginiana	Live Oak	4.5	25
23191	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23192	14"SG	Liquidambar styraciflua	Sweetgum	3	3
23193	14"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23196	35"HIC	Carya tomentosa	Hickory	2.5	12
23197	24"SG	Liquidambar styraciflua	Sweetgum	3.5	6
23212	19"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23213	24"SG	Liquidambar styraciflua	Sweetgum	4	6
23214	21"SG	Liquidambar styraciflua	Sweetgum	3.5	6
23215	16"SG	Liquidambar styraciflua	Sweetgum	3	3
23216	16"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23217	20"SG	Liquidambar styraciflua	Sweetgum	3.5	6
23218	22"LO	Quercus virginiana	Live Oak	3	6
23227	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23229	11"SG	Liquidambar styraciflua	Sweetgum	3	3
23230	10"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23231	12"SG	Liquidambar styraciflua	Sweetgum	3	3
23232	11"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23233	11"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23234	10"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23236	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23238	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23240	16"LO	Quercus virginiana	Live Oak	3	3
23247	12"SG	Liquidambar styraciflua	Sweetgum	3	3
23249	41"SG	Liquidambar styraciflua	Sweetgum	4	20
23250	35"SG	Liquidambar styraciflua	Sweetgum	4	12
23260	15"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23261	14"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23262	14"SG	Liquidambar styraciflua	Sweetgum	3	3
23263	14"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23266	34"SG	Liquidambar styraciflua	Sweetgum	3.5	12
23270	11"SG	Liquidambar styraciflua	Sweetgum	3	3
23273	12"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23275	13"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23277	10"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23279	14"SG	Liquidambar styraciflua	Sweetgum	3	3
23282	16"SG	Liquidambar styraciflua	Sweetgum	3	3
23283	11"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23286	13"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23287	15"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23288	11"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23289	11"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23290	11"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23291	15"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23292	14"SG	Liquidambar styraciflua	Sweetgum	3	3
23293	12"SG	Liquidambar styraciflua	Sweetgum	3	3
23294	11"SG	Liquidambar styraciflua	Sweetgum	3	3
23295	16"SG	Liquidambar styraciflua	Sweetgum	3	3
23297	11"SG	Liquidambar styraciflua	Sweetgum	3	3
23299	15"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23300	11"SG	Liquidambar styraciflua	Sweetgum	3	3
23305	14"SG	Liquidambar styraciflua	Sweetgum	3	3
23306	10"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23307	14"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23312	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23313	16"SG	Liquidambar styraciflua	Sweetgum	3	3
23314	13"SG	Liquidambar styraciflua	Sweetgum	3	3
23315	12"SG	Liquidambar styraciflua	Sweetgum	3	3
23317	12"SG	Liquidambar styraciflua	Sweetgum	3	3
23318	11"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23322	14"SG	Liquidambar styraciflua	Sweetgum	3	3
23323	14"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23324	13"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23325	14"SG	Liquidambar styraciflua	Sweetgum	2	3
23328	10"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23330	11"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23332	10"SG	Liquidambar styraciflua	Sweetgum	2	3
23333	10"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23334	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23335	16"LO	Quercus virginiana	Live Oak	3.5	3
23348	30"LO	Quercus virginiana	Live Oak	4.5	12
23349	17"LO	Quercus virginiana	Live Oak	4.5	3
23350	18"LO	Quercus virginiana	Live Oak	4.5	3
23383	17"LO	Quercus virginiana	Live Oak	3.5	3
23390	24"LO	Quercus virginiana	Live Oak	3.5	6
23391	23"LO	Quercus virginiana	Live Oak	3.5	6
23392	24"LO	Quercus virginiana	Live Oak	4	6
23393	9"24"LO	Quercus virginiana	Live Oak	3.5	6
23394	11"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23395	11"SG	Liquidambar styraciflua	Sweetgum	3	3
23400	27"LO	Quercus virginiana	Live Oak	4	6
23404	29"LO	Quercus virginiana	Live Oak	4.5	6
23406	19"LO	Quercus virginiana	Live Oak	4	3
23408	23"LO	Quercus virginiana	Live Oak	4	6
23411	12"LAO	Quercus virginiana	Live Oak	3.5	3
23412	19"LO	Quercus virginiana	Live Oak	3.5	3
23417	18"LO	Quercus virginiana	Live Oak	3.5	3
23418	30"LO	Quercus virginiana	Live Oak	4.5	12
23419	27"LO	Quercus virginiana	Live Oak	4.5	6
23442	17"SG	Liquidambar styraciflua	Sweetgum	3	3
23443	13"SG	Liquidambar styraciflua	Sweetgum	2	3
23450	12"SG	Liquidambar styraciflua	Sweetgum	3	3
23456	16"ELM	Ulmus spp.	Elm	3.5	3
23462	17"ELM	Ulmus spp.	Elm	4	3
23465	14"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23470	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23480	15"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23481	11"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23485	10"LO	Quercus virginiana	Live Oak	3.5	3
23491	19"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23498	11"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23500	16"SG	Liquidambar styraciflua	Sweetgum	3	3
23501	13"SG	Liquidambar styraciflua	Sweetgum	3	3
23502	13"SG	Liquidambar styraciflua	Sweetgum	3	3
23504	13"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23509	13"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23517	15"LO	Quercus virginiana	Live Oak	3.5	3
23548	14"22"LO	Quercus virginiana	Live Oak	3.5	6
23549	24"SG	Liquidambar styraciflua	Sweetgum	3.5	6
23625	31"SG	Liquidambar styraciflua	Sweetgum	3.5	12
23630	19"SG	Liquidambar styraciflua	Sweetgum	4	3
23631	14"SG	Liquidambar styraciflua	Sweetgum	4	3
23632	11"SG	Liquidambar styraciflua	Sweetgum	4	3
23633	32"SG	Liquidambar styraciflua	Sweetgum	4	12
23634	30"SG	Liquidambar styraciflua	Sweetgum	4	12
23635	17"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23636	12"SG	Liquidambar styraciflua	Sweetgum	3	3
23640	11"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23641	13"SG	Liquidambar styraciflua	Sweetgum	4	3
23642	11"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23643	17"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23644	11"SG	Liquidambar styraciflua	Sweetgum	3	3
23645	12"SG	Liquidambar styraciflua	Sweetgum	3	3
23648	11"SG	Liquidambar styraciflua	Sweetgum	3	3
23649	16"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23650	12"SG	Liquidambar styraciflua	Sweetgum	3	3
23654	18"SG	Liquidambar styraciflua	Sweetgum	4	3
23655	20"SG	Liquidambar styraciflua	Sweetgum	4	6
23657	11"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23658	12"SG	Liquidambar styraciflua	Sweetgum	3	3
23660	13"SG	Liquidambar styraciflua	Sweetgum	3	3
23662	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23664	13"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23665	13"SG	Liquidambar styraciflua	Sweetgum	3	3
23666	13"ELM	Ulmus spp.	Elm	4.5	3
23668	11"SG	Liquidambar styraciflua	Sweetgum	3	3
23670	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23671	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23673	10"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23675	12"SG	Liquidambar styraciflua	Sweetgum	4	3
23676	17"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23677	22"SG	Liquidambar styraciflua	Sweetgum	3.5	6
23678	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23680	14"SG	Liquidambar styraciflua	Sweetgum	3	3
23681	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23682	12"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23684	13"SG	Liquidambar styraciflua	Sweetgum	3	3
23686	11"SG	Liquidambar styraciflua	Sweetgum	3	3
23687	12"SG	Liquidambar styraciflua	Sweetgum	3	3
23688	10"SG	Liquidambar styraciflua	Sweetgum	3	3
23689	13"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23694	10"HIC	Carya tomentosa	Hickory	3.5	3
23695	22"SG	Liquidambar styraciflua	Sweetgum	3.5	6
23696	15"SG	Liquidambar styraciflua	Sweetgum	3	3
23697	16"SG	Liquidambar styraciflua	Sweetgum	4	3
23698	16"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23699	14"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23700	17"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23701	18"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23702	20"SG	Liquidambar styraciflua	Sweetgum	3	6
23703	17"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23704	14"SG	Liquidambar styraciflua	Sweetgum	2.5	3
23706	34"SG	Liquidambar styraciflua	Sweetgum	4	12
23707	34"ELM	Ulmus spp.	Elm	4	12
23708	37"ELM	Ulmus spp.	Elm	4	12
23709	25"MAG	Magnolia grandiflora	Magnolia	3.5	6
23710	27"MAG	Magnolia grandiflora	Magnolia	4	6
23711	25"MAG	Magnolia grandiflora	Magnolia	4	6
23712	31"MAG	Magnolia grandiflora	Magnolia	4.5	12
23713	30"MAG	Magnolia grandiflora	Magnolia	2	12
23724	27"LO	Quercus virginiana	Live Oak	4	6
23725	33"LO	Quercus virginiana	Live Oak	4	12
23726	30"LO	Quercus virginiana	Live Oak	4.5	12
23727	30"LO	Quercus virginiana	Live Oak	4	12
23728	20"LO	Quercus virginiana	Live Oak	3.5	6
23729	31"LO	Quercus virginiana	Live Oak	4	12
23788	32"SG	Liquidambar styraciflua	Sweetgum	3.5	12
23789	11"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23790	16"SG	Liquidambar styraciflua	Sweetgum	3.5	3
23791	22"SG	Liquidambar styraciflua	Sweetgum	3	6

TREE PRESERVATION CREDITS

TOTAL TREE PRESERVATION CREDITS	2,224
TOTAL TREE PRESERVATION CREDITS ALLOCATED	2,222
TOTAL TREE PRESERVATION CREDITS REMAINING	2

NOTE: THE TREES LISTED ABOVE ARE BEING USED TO PARTIALLY FULFILL SITE LANDSCAPE REQUIREMENTS.

ALL THE ABOVE TREES WERE EVALUATED ONSITE TO REVIEW THEIR HEALTH AND CONDITION. ACCORDINGLY, GRADES OF 0–5 HAVE BEEN ASSIGNED TO EACH TREE BASED ON THE ASSESSED CONDITION AT THE TIME OF THE SITE REVIEWS WHICH WERE CONDUCTED IN FEBRUARY 2025. ANY TREES GRADED AT A 2 OR ABOVE HAVE BEEN DEEMED TO BE A CONDITION CONSISTENT WITH THE STANDARDS OF THE CITY OF ALACHUA CODE TO MEET THE CREDIT REQUIREMENTS. THESE TREES HAD NO OBVIOUS SIGNS OF IMMEDIATE FAILURE AND ARE OF A SPECIES NATIVE TO THIS AREA. ANY TREES GRADED BELOW A 2 WERE IN POOR HEALTH, HAD SIGNS OF POTENTIAL FAILURE, AND/OR WERE DEAD. THESE TREES WERE NOT PROPOSE TO COUNT TOWARDS THE LANDSCAPE REQUIREMENTS FOR THE SITE.

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SCALE: 1"=30'
VERIFY SCALE BAR IS ACCURATE ON PLOTTED DRAWINGS
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/10/2025 - SUBMITTAL FOR THE CITY OF ALACHUA
03/03/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: TREE MITIGATION CALCULATIONS

TECHNICIAN: CP
DESIGNER: MES
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-34

TREE MITIGATION/DEMOLITION LIST

TAG	TAG LABEL	SCIENTIFIC NAME	COMMON NAME	MITIGATION (INCHES)
7795	31"HIC	Carya tomentosa	Hickory	31
22314	14"WO	Quercus nigra	Water Oak	2
22792	11"WO	Quercus nigra	Water Oak	2
22794	29"SG	Liquidambar styraciflua	Sweetgum	2
22795	15"SG	Liquidambar styraciflua	Sweetgum	2
22796	14"WO	Quercus nigra	Water Oak	2
22797	19"WO	Quercus nigra	Water Oak	2
22802	11"SG	Liquidambar styraciflua	Sweetgum	2
22803	11"SG	Liquidambar styraciflua	Sweetgum	2
22804	23"WO	Quercus nigra	Water Oak	2
22806	14"SG	Liquidambar styraciflua	Sweetgum	2
22810	17"SG	Liquidambar styraciflua	Sweetgum	2
22812	15"SG	Liquidambar styraciflua	Sweetgum	2
22814	18"SG	Liquidambar styraciflua	Sweetgum	2
22815	20"SG	Liquidambar styraciflua	Sweetgum	2
22819	10"SG	Liquidambar styraciflua	Sweetgum	2
22820	20"SG	Liquidambar styraciflua	Sweetgum	2
22821	12"WO	Quercus nigra	Water Oak	2
22823	11"SG	Liquidambar styraciflua	Sweetgum	2
22825	16"SG	Liquidambar styraciflua	Sweetgum	2
23371	11"WO	Quercus nigra	Water Oak	2
23372	11"WO	Quercus nigra	Water Oak	2
23373	32"SG	Liquidambar styraciflua	Sweetgum	32
23403	21"LAO	Quercus laurifolia	Laurel Oak	2
23411	12"LAO	Quercus laurifolia	Laurel Oak	2
23434	12"SG	Liquidambar styraciflua	Sweetgum	2

TREE MITIGATION CALCULATIONS

CATEGORY	MITIGATION CALCULATIONS
INCH-FOR-INCH REPLACEMENT	HERITAGE TREES 32" SWEETGUM.....54" 31" HICKORY..... 50" TOTAL INCHES REQUIRED.....104" TOTAL TREE REQUIRED (2" PER TREE).....52 TREES
1:1 REPLACEMENT	TOTAL TREES TO BE MITIGATED AT 1:1 REPLACEMENT..... 24 TREES TOTAL TREES REQUIRED FOR MITIGATION @ 1:1 REPLACEMENT.....24 TREES
SUMMARY	TOTAL TREES TO BE MITIGATED AT INCH-FOR-INCH REPLACEMENT..... 52 TREES TOTAL TREES REQUIRED FOR MITIGATION @ 1:1 REPLACEMENT.....24 TREES TOTAL REPLACEMENT TREES PROVIDED.....76 TREES TOTAL MITIGATION DEFICIT.....0 TREES

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: TREE MITIGATION CALCULATIONS

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-35

A EXISTING BUFFER - VIEW A

B EXISTING BUFFER - VIEW B

BUFFER NOTES:

- THE SOUTHERN PERIMETER OF THE PROJECT HAS EXISTING VEGETATION ALONG THE ENTIRE PERIMETER THAT INCLUDES BOTH REGULATED AND NON-REGULATED TREES. THESE TREES ARE PROVIDING A BUFFER OF AT LEAST 40' IN WIDTH WHICH EXCEEDS THE BUFFER REQUIREMENTS.
- PORTIONS OF THE EASTERN ARTERIAL BUFFER ALSO CONTAIN EXISTING VEGETATION. THE VEGETATION IN TWO AREAS CONTAINS BOTH REGULATED AND NON-REGULATED TREES WHICH WORK TO FORM A FULLY OPAQUE BUFFER IN TWO LOCATIONS. THIS BUFFER IS TYPICALLY AT LEAST 40' IN WIDTH.

N

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03/03/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: LANDSCAPE BUFFER EXHIBIT

TECHNICIAN: CP
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMSON
LA6667436
STATE OF FLORIDA

SHEET NO.: LS-36

Mark John-nicholas Plot Date: Mar 03,2025 - 4:14pm File Name: \\nv5\Jax-Projects\2021\21-0025\Department\05_Design\01_Drawing (dwg)\21-0025_Landscape Buffer-Exhibit.dwg

LEGEND

VALVES

- 4"-10" D.I. Gate Valve w/ HDPE Ends
- 12" Clow D.I. Flang X Flang Gate Valve w/ HDPE Ends

HDPE MAINLINE PIPE

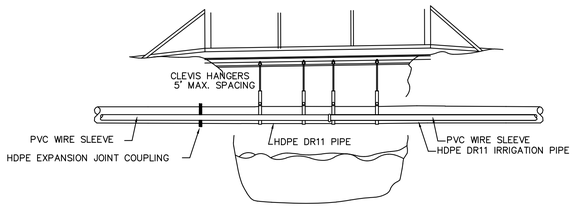
- 6" High Density Polyethylene PE 4710, DR 13.5
- 8" High Density Polyethylene PE 4710, DR 13.5
- 10" High Density Polyethylene PE 4710, DR 13.5
- 16" High Density Polyethylene PE 4710, DR 13.5

HDPE ROAD CROSSING PIPE

- 6" High Density Polyethylene SDR 11
- 8" High Density Polyethylene SDR 11

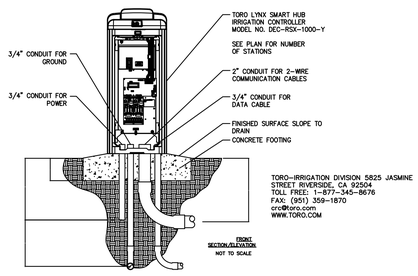
MISCELLANEOUS

- Pump Station (PS)



1 Bridge/Wetland Crossing Detail

N.T.S



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TOLL FREE: 1-877-345-8676
FAX: (951) 359-1870
crc@toro.com
WWW.TORO.COM

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. REFER TO TORO FORM NUMBER 373-0606 FOR APPROVED ELECTRICAL GROUNDING INSTRUCTIONS.
5. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND
APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
6. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info.

2 LYNX SMART HUB
PEDESTAL-MOUNT CONTROLLER, PLASTIC
REVISION DATE: DEC 2017

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NOTE: GROUND GRID ASSEMBLIES AND MANUFACTURE SURGE DEVICES SHALL BE INSTALLED ALONG EVERY WIRE PATH SUCH THAT NO MORE THAN 15 ICM/DECODERS POSITIONED BETWEEN TWO (2) GROUND GRID ASSEMBLIES AND SURGE DEVICES AND NO MORE THAN 500 FEET BETWEEN CONNECTED GROUND GRID ASSEMBLIES AND SURGE DEVICES ON THE SAME WIRE PATH, WHICHEVER IS LESS. EACH SURGE DEVICE SHALL BE ATTACHED TO A GROUND ROD, GROUND PLATE AND SHIELDING WIRE-(RB ONLY) TO ENSURE GOOD EARTH GROUND. A MAXIMUM RESISTANCE OF 45 OHMS SHALL BE ACHIEVED AND LOWER READINGS ARE HIGHLY DESIRABLE. DO NOT LOOP WIRE!

ELECTRICAL NOTES :

1. ALL 240 V.A.C. POWER SPLICES SHALL BE MADE IN A VALVE BOX IN FRONT OF THE FIELD SATELLITES UNLESS OTHERWISE INDICATED ON THE PLANS.
2. ALL POWER WIRE CONNECTIONS SHALL CONFORM WITH/TO ALL NATIONAL, LOCAL AND STATE CODES AND PERFORMED BY LICENSED ELECTRICIAN(S).
3. A TWENTY-FOUR (24") INCH COIL OF WIRE SHALL BE INSTALLED BELOW EACH SPRINKLER.
4. ALL 24 V.A.C. SECONDARY WIRING SHALL BE #14 HOT AND #12 COMMON.
5. SEPARATE COLOR 24 V.A.C. HOT WIRES SHALL BE INSTALLED FOR TRACER AND SPARE WIRES. EACH WIRE SHALL BE CLEARLY NUMBERED WITH AN ADHESIVE LABEL IN THE SATELLITE TO MATCH THE STATION NUMBER.
6. ALL WIRE SHALL HAVE ENOUGH SLACK AS TO ACCOMMODATE FOR EXPANSION AND/OR CONTRACTION.
7. ALL WIRE TO BE UL APPROVED FOR DIRECT BURIAL.
8. ALL 240 V.A.C. PRIMARY, AND 24 V.A.C. SECONDARY POWER TO BE INSTALLED AS PER STATE AND LOCAL CODES. SIZED AS PER PLAN WITH GROUND WIRE; MEETING N.E.C. REQUIREMENTS.
9. REFER TO PLANS FOR INFORMATION ON POWER SOURCES, WIRE SIZES, ROUTINGS, ETC.
10. A SPARE COMMON AND (3) HOT WIRES SHALL BE DROPPED AT EACH GREEN QUICK COUPLER VALVE AND THE LAST TEE SPRINKLER. THE LOCATION SHALL BE INDICATED ON THE AS-BUILT DRAWING.
11. INSTALL ALL 240 V.A.C. POWER WIRE IN MAIN TRENCH WHENEVER POSSIBLE.
12. ALL MAINLINE PIPE INSTALLED WITHOUT POWER WIRE SHALL BE INSTALLED TO INCLUDE A #14 BLUE TRACER WIRE.
13. ALL WIRES IN THE PEDESTAL SHALL BE CLEARLY NUMBERED WITH THE APPROPRIATE STATION NUMBER.
14. A #6 SOLID BARE COPPER BONDING GROUND SHALL BE INSTALLED WITH THE POWER WIRE PER THE GROUNDING SPECIFICATIONS. ANY SPLICES IN THE BONDED GROUND SHALL BE MADE IN A SPLICE KIT.
15. FINAL LOCATIONS OF FIELD SATELLITES WILL BE DETERMINED DURING CONSTRUCTION BY THE CONSULTANT OR OWNER'S REPRESENTATIVE.
16. ADEQUATELY IRRIGATE THE AREA OF THE GROUND GRID TO KEEP THE AREA MOIST AT ALL TIMES.
17. DO NOT INSTALL WIRES WITHIN THE GROUND GRID SPHERE OF INFLUENCE NOTED IN THE DETAIL.

DESIGN NOTES:

1. ALL PRODUCT APPLICATIONS AND INSTALLATIONS MUST MEET MANUFACTURER'S REQUIREMENTS.
2. FLOW RATES THROUGH PVC PIPING NOT TO EXCEED MANUFACTURER'S RECOMMENDATIONS.
3. NO MORE THAN THREE (3) SPRINKLERS SHOULD BE INSTALLED ON A DEAD-END LATERAL WITHOUT APPROVAL OF THE OWNER'S REPRESENTATIVE.
4. CONTRACTOR IS RESPONSIBLE FOR PROPER INSTALLATION OF MAINLINE SYSTEM. SYSTEM SHALL NOT EXCEED MANUFACTURER'S RECOMMENDATIONS. THE IRRIGATION PLAN IS INTENDED TO INCLUDE ALL COMPONENTS NECESSARY TO THE PROPER OPERATION OF SAID IRRIGATION SYSTEM. IF ADJUSTMENTS ARE REQUIRED, CONTRACTOR SHALL MAKE THE ADJUSTMENTS AT HIS EXPENSE.
5. ANY DISCREPANCIES BETWEEN THE IRRIGATION PLANS & THE SPECIFICATION DOCUMENTS MUST BE BROUGHT TO THE ATTENTION OF THE IRRIGATION CONSULTANT OR OWNER'S REPRESENTATIVE BEFORE INSTALLATION.
6. ARCS OF PART CIRCLE SPRINKLERS SHALL BE ADJUSTED TO PREVENT DIRECT OVER THROW OFF THE PROPERTY, ONTO BUILDINGS, ROADWAYS, AND/OR ENVIRONMENTALLY SENSITIVE AREAS.
7. THE SPACINGS AS INDICATED IN THE LEGEND SHALL NOT BE EXCEEDED WITHOUT PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.
8. ALL EASEMENT CROSSINGS SHALL CARRY WARNING TAPE BURIED TWELVE (12") INCHES FROM GRADE AND ALL WIRE SHALL BE CARRIED IN CONDUIT.
9. DO NOT OPERATE MORE STATIONS SIMULTANEOUSLY THAN THE FLOW CAPACITY OF THE ZONE BASED ON THE LATERAL TAP SIZE.
10. CONTROL ZONES WITH MULTIPLE SATELLITES FOR THE ZONE SHALL NOT OPERATE MORE SIMULTANEOUS SPRINKLERS THAN THE CAPACITY OF A SINGLE CONTROLLER.
11. THE CONTRACTOR MAY BE REQUIRED AT NO CHARGE TO THE OWNER TO REPLACE NOZZLES SUPPLIED BY THE DISTRIBUTOR AT NO CHARGE. THIS IS TO ALLOW FOR ADJUSTMENT IN THE SPACINGS FROM THE DESIGN TO THE FIELD.
12. PART CIRCLE SPRINKLERS SHALL BE INSTALLED ONE FOOT OFF CART PATHS.

CONTROL ZONE NOTES:

1. ALL SPRINKLERS SHALL BE INDIVIDUALLY WIRED TO THE SATELLITE FOR THAT ZONE.
2. ALL SPRINKLERS SHALL BE WIRED FOR INDIVIDUAL OPERATION.

PIPING NOTES:

1. PIPING AS SHOWN ON THE PLANS IS DIAGRAMMATIC IN NATURE DUE TO SCALE. FIELD ADJUSTMENTS FROM THE PLANS MAY BE REQUIRED IN THE FIELD AT THE CONTRACTORS EXPENSE.
2. ALL PIPING TO BE LOCATED WITHING OWNER'S PROPERTY LINES.
3. ALL PIPE FITTINGS SHALL UTILIZE STANDARD ANGLES AND CONNECTIONS.
4. ALL FITTINGS ON MAIN LINES 4" AND LARGER SHALL BE (EPOXY COATED) LEEMCO DUCTILE IRON OR APPROVED EQUAL, WITH GASKET CONNECTIONS. ALL DUCTILE IRON REDUCING TEES, ELLS, FITTINGS, CONNECTIONS, ETC SHALL UTILIZE CONNECTOR RINGS.
5. ALL DIRECTIONAL FITTINGS 2 1/2" OR LARGER SHALL BE (EPOXY COATED) LEEMCO DUCTILE IRON OR APPROVED EQUAL. UTILIZE LASCO THRUST PLUGS FOR LATERAL DEAD ENDS.. ALL SPRINKLERS SHALL BE MOUNTED ON LASCO PR315, 1-½" SERVICE TEES AND 1-½" SWING JOINTS. THE SWING JOINT SHALL BE ADAPTED AT THE SWING JOINT OUTLET TO MATCH THE SIZE OF THE SPRINKLER INLET IF NEEDED.
6. ALL PIPE CROSSING ROADWAYS SHALL BE HIGH DENSITY POLYETHYLENE AND INSTALLED IN PVC SLEEVE AS CALLED FOR IN THE DETAILS.
7. ALL LOCATIONS OF AIR RELIEF VALVES AND SYSTEM DRAIN VALVES WILL BE DETERMINED IN FIELD BASED ON SITE ELEVATIONS DURING CONSTRUCTION. LOCATE AIR RELIEF VALVES AT THE HIGHEST POINT IN THE AREA AND DRAIN VALVES AT THE LOW POINT IN THE MAINLINE NEAR A WATER RELIEF POINT (LAKE, CREEK, DRAIN BASIN, ETC.). ESTIMATED LOCATIONS ARE LOCATED ON THE PLANS.
8. LOCATIONS OF QUICK COUPLER VALVES SHALL BE IN THE REAR OR SIDE OF GREENS AND FINALIZED IN FIELD DURING CONSTRUCTION BY THE OWNER'S REPRESENTATIVE. ALL QUICK COUPLE VALVES LOCATED ON GREENS SHALL BE INSTALLED WITHIN THREE FEET (3') OF A SPRINKLER UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE.
9. ALL FITTINGS 2 1/2" - 16" SHALL BE RESTRAINED UTILIZING LEEMCO JOINT RESTRAINTS PER THE SPECIFICATIONS. ALL 2 1/2" DIRECTIONAL FITTINGS SHALL BE RESTRAINED AND END CAPS SHALL BE SECURED BY THRUST BLOCKS.
10. ALL FITTING CONNECTIONS FOR GREEN AND TEE SPRINKLERS SHALL BE DIRECTED AWAY FROM PUTTING OR TEE SURFACES WHERE PRACTICAL.
11. PIPING TO TEE SPRINKLERS WITHIN THE TEE SURFACES SHALL BE KEPT TO A MINIMUM.
12. IRRIGATION CONTRACTOR SHALL THOROUGHLY COMPACT ALL TRENCHES IN LIFTS NOT TO EXCEED TWELVE INCHES (12") WITH A VERMEER TRENCH COMPACTING MACHINE OR EQUIVALENT. FINAL ACCEPTANCE OF TRENCH BACKFILL SHALL REST WITH OWNER'S REPRESENTATIVE.
13. ROUTES OF MAIN LINE PIPES MAY REQUIRE ADDITIONAL FITTINGS TO AVOID EXISTING TREES OR VEGETATION, LAKES AND/OR STREAMS, FEATURES CONSTRUCTION OR UTILITIES WHICH MAY NOT BE CLEARLY IDENTIFIED UNTIL CONSTRUCTION HAS BEGUN. CONTRACTOR SHALL PROVIDE ALL FITTINGS, CONNECTORS, JOINT RESTRAINTS, ETC. AS MAY BE REQUIRED TO SO AS TO NOT EXCEED RECOMMENDED PIPE CURVATURE.
14. MAXIMUM DEFLECTION OF PVC PIPE SECTIONS IN PIPE JOINTS SHALL BE KEPT TO FIVE DEGREES OR LESS, OR AS DESIGNATED BY PIPE MANUFACTURER, WHICHEVER IS LESS.
15. ALL TRENCH LINES SHALL BE KEPT OUT OF DRIP LINES OF TREES EXCEPT AS DIRECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
16. ALL TRENCHES LOCATED IN ROCK OR OTHERWISE UNSUITABLE SOILS SHALL BE OVER-EXCAVATED TO A MINIMUM OF THREE INCHES (3") AND ALL TRENCH SPOILS REMOVED AND DISPOSED OF PROPERLY. A MINIMUM THREE INCHES (3") OF SAND SHALL BE PLACED BELOW ALL PIPING AND WIRING, AND A MINIMUM OF SIX INCHES (6") PLACED ABOVE ALL PIPING AND WIRING. THE REMAINING MATERIAL FOR TRENCH BACKFILL SHALL BE CLEAN AND FREE OF ORGANIC DEBRIS AND ROCKS AND APPROVED BY EITHER THE CONSULTANT OR OWNER'S REPRESENTATIVE BEFORE PLACEMENT IN TRENCH.
17. CONTRACTOR SHALL PROVIDE PERMANENT MARKERS FOR ENDS OF ALL PIPE SLEEVES AND ENDS OF ALL PIPES BURIED ACROSS STREAMS, DRAINAGE CHANNELS AND/OR EASEMENTS.
18. ALL PIPING CONNECTIONS TO GREENS PIPE LOOPS SHALL BE MADE WITH(EPOXY COATED) LEEMCO DUCTILE IRON FITTINGS.
19. CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL PIPING TO BE SUPPORTED OR SUSPENDED ON BRIDGES WITH OWNER'S REPRESENTATIVE DURING CONSTRUCTION.
20. ROUTING OF MAIN LINE PIPING AROUND CLUBHOUSE AREA, ROADWAYS AND/OR EXISTING STRUCTURES AND UTILITIES SHALL BE COORDINATED WITH OWNER'S REPRESENTATIVE(S) PRIOR TO EXCAVATION OF TRENCHES.
21. ALL QUICK COUPLER VALVES SHALL BE INSTALLED OUTSIDE OF GREEN SURFACES AND INSTALLED AS CALLED FOR IN THE DETAILS.
22. ALL MAINLINE STUB-OUTS ARE TO BE PLUGGED AT THE TEE AND THRUST BLOCKED. THE LOCATION SHALL BE MARKED BY A 10" ROUND VALVE BOX.
23. ALL END CAPS SHALL BE SECURED USING LASCO THRUST PLUG.
24. ALL MAINLINE GATE VALVES 12" AND BELOW SHALL BE LEEMCO LMV SERIES. WHEN LOCATED ADJACENT TO DIRECTIONAL TEE, THE VALVE SHALL BE INSTALLED RESTRAINED TO THE TEE.
25. ALL STREAM CROSSINGS SHALL BE MADE WITH HDPE DR11 PIPE.

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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

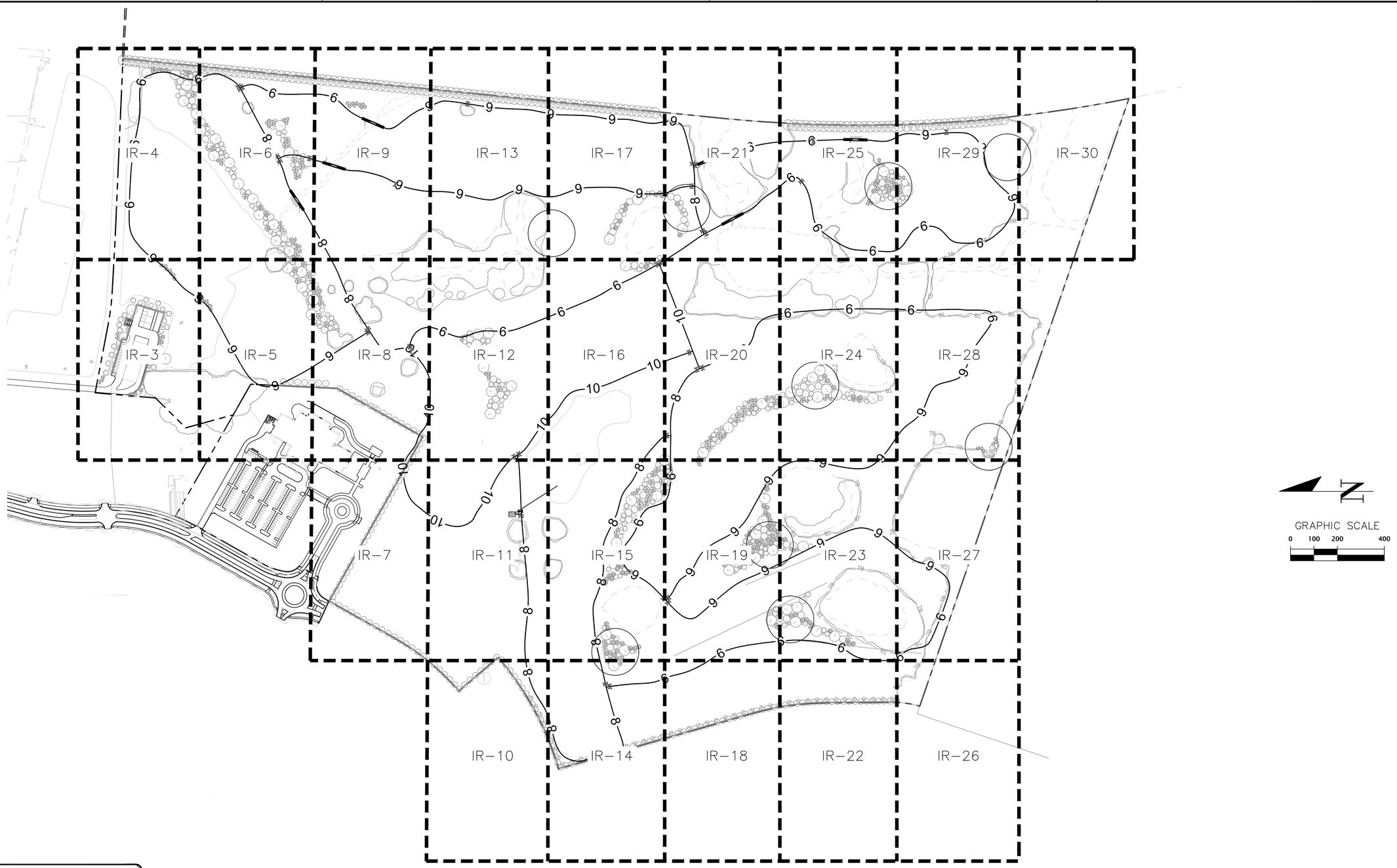
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION NOTES & DETAILS

TECHNICIAN:
DESIGNER: MS
QUALITY CONTROL: JWS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMMONS
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-1

Tech: john-michaels Plot Date: Jan 29,2025 1:40pm Filename: \\Civil-chw-fs\Local\Data\2021\21-0025\Department\03_Design\02_DWGs\01_Permitting (Civil)\21-0025_Irrigation Base (Civil).dwg



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CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION KEY SHEET

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-2

Tech: john-michaels Plot Date: Jan 29,2025 1:41pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg

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CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-3

Tech: john-michaels Plot Date: Jan 29,2025 1:45pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg

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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

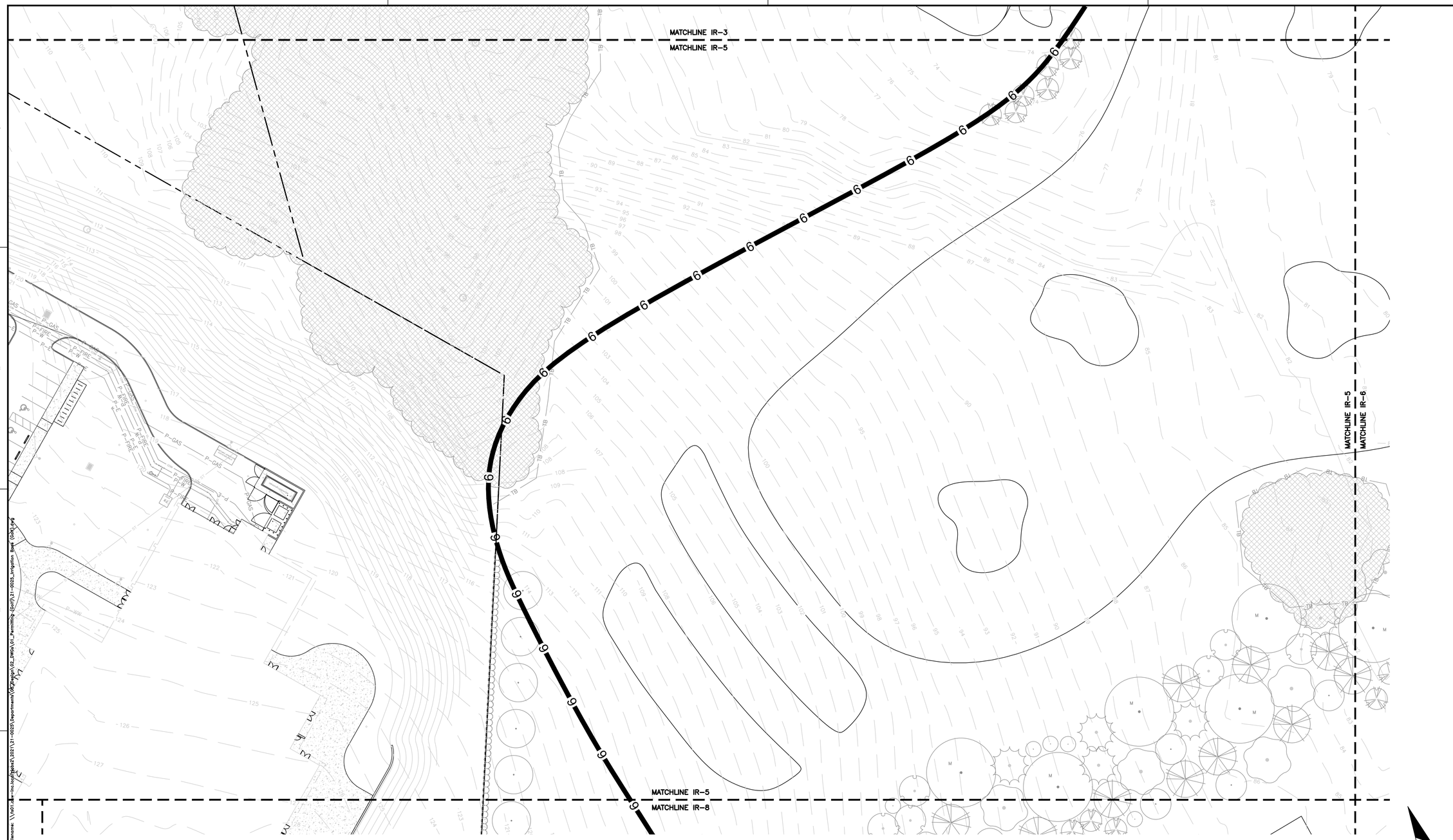
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-4

Tech: john-michaels Plot Date: Jan 29,2025 1:46pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg



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SUBMITTALS:
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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

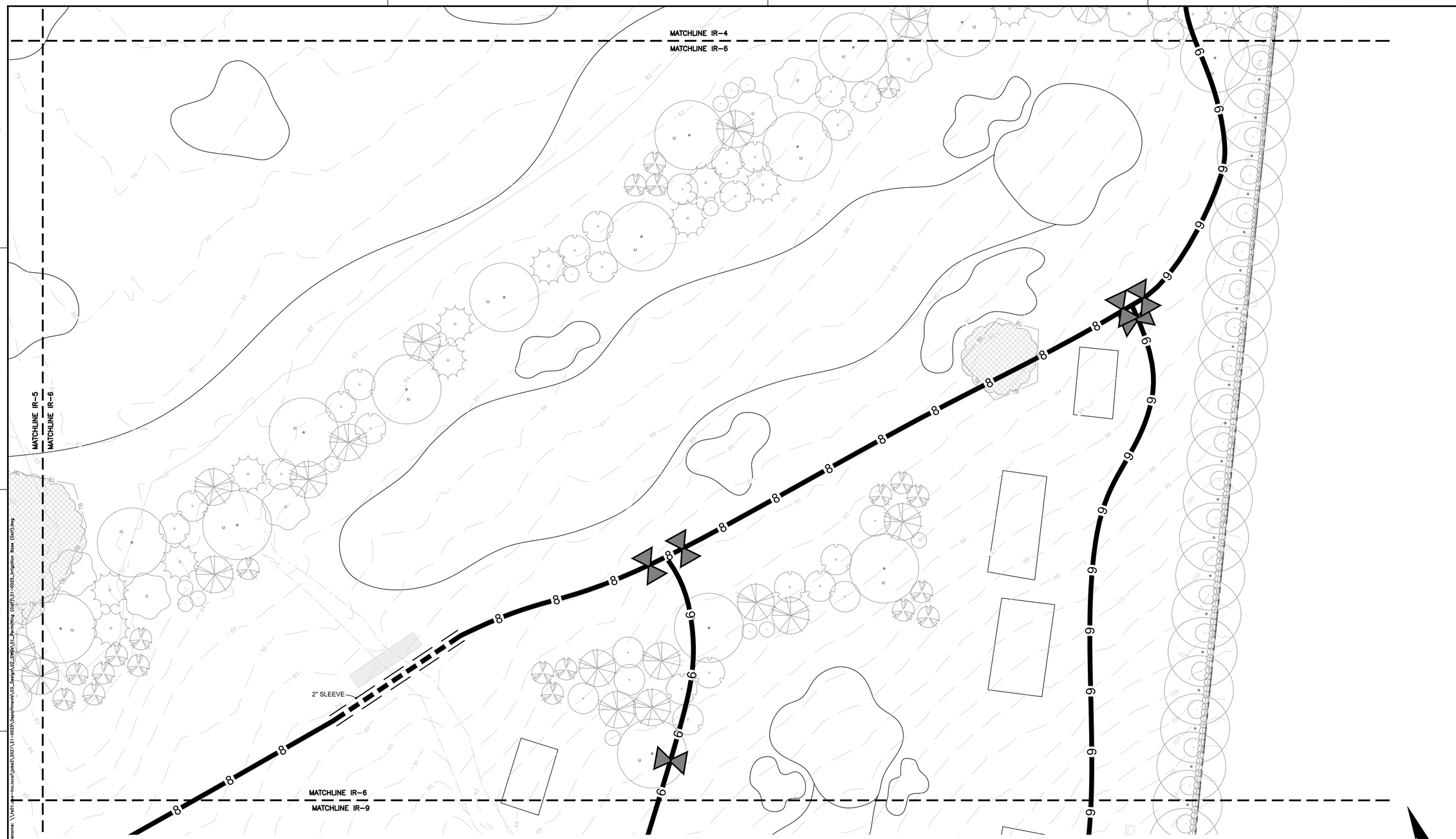
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-5

Tech: john-michaels Plot Date: Jan 29,2025 1:50pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\06_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg



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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

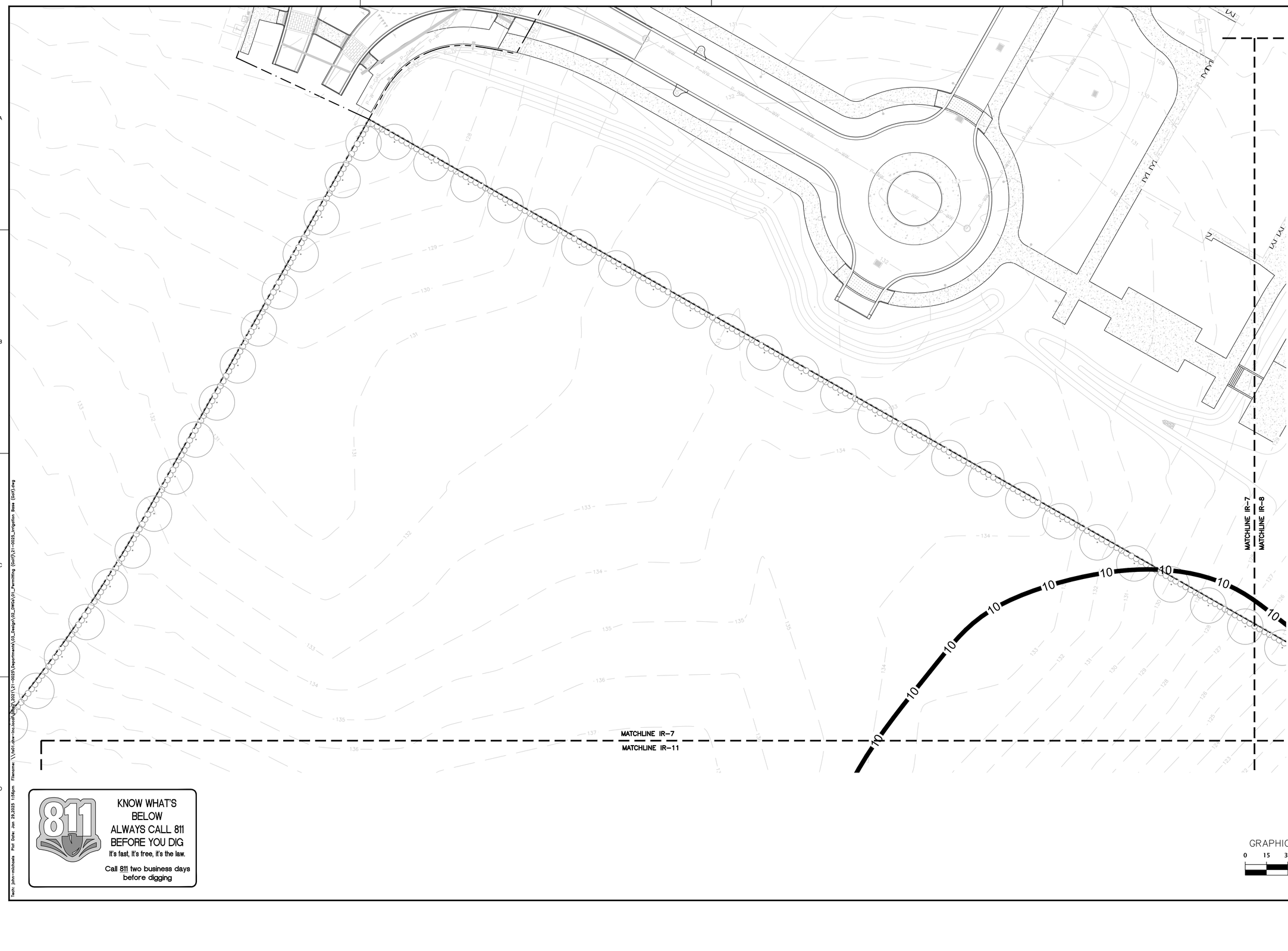
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-6

Tech: john-michaels Plot Date: Jan 29,2025 1:53pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg



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CONSTRUCTION/BID REVISIONS:

SUBMITALS:
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01/20/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

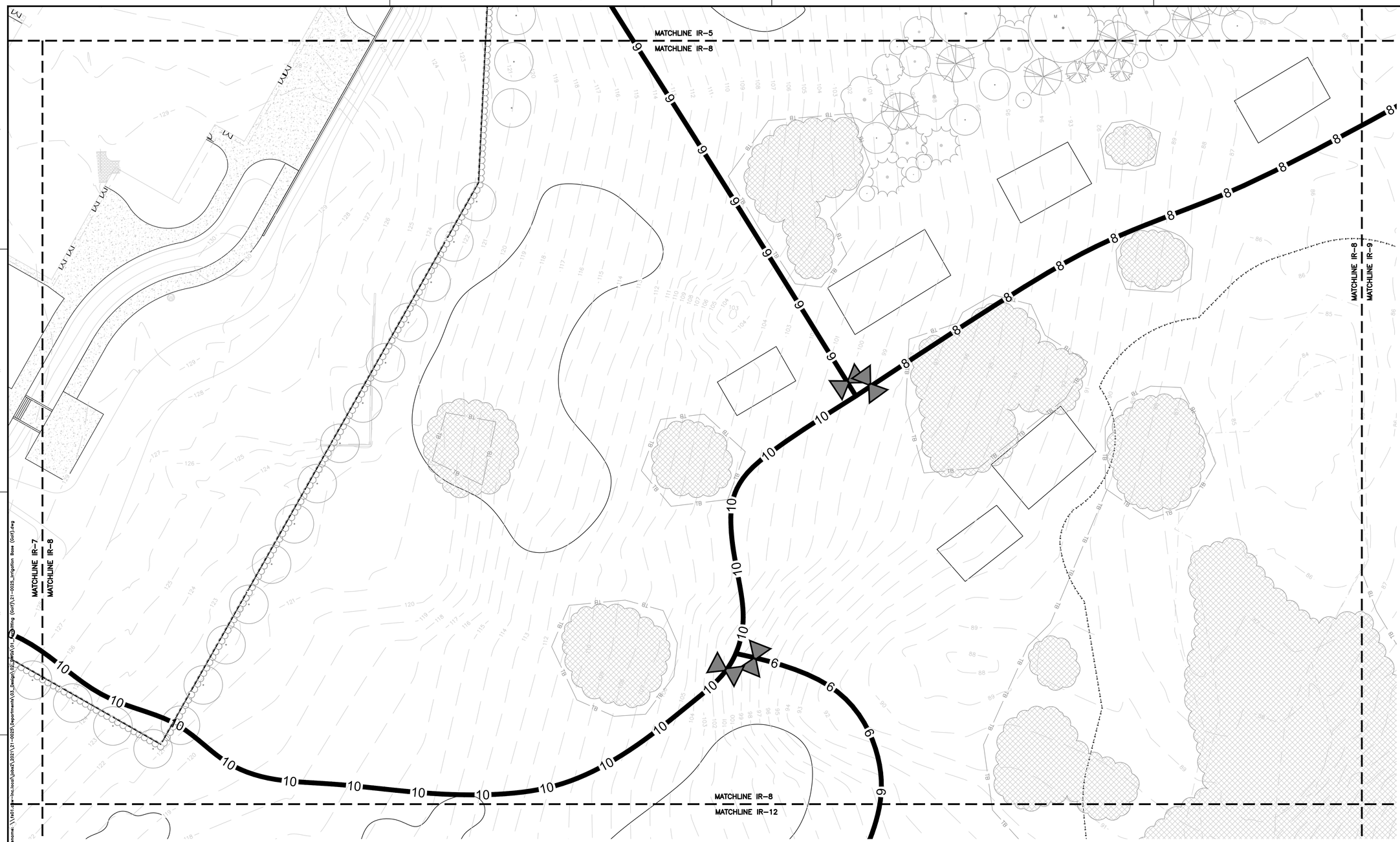
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: MS
QUALITY CONTROL: JWS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMMONS
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-7

Tech: john-michaels Plot Date: Jan 29,2025 1:56pm Filename: \\1401.chw-inc.local\Data\2021\21-0025\Departments\03_Design\02_CHWA\01_Permitting (Civil)\21-0025_Irrigation Base (Civil).dwg



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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

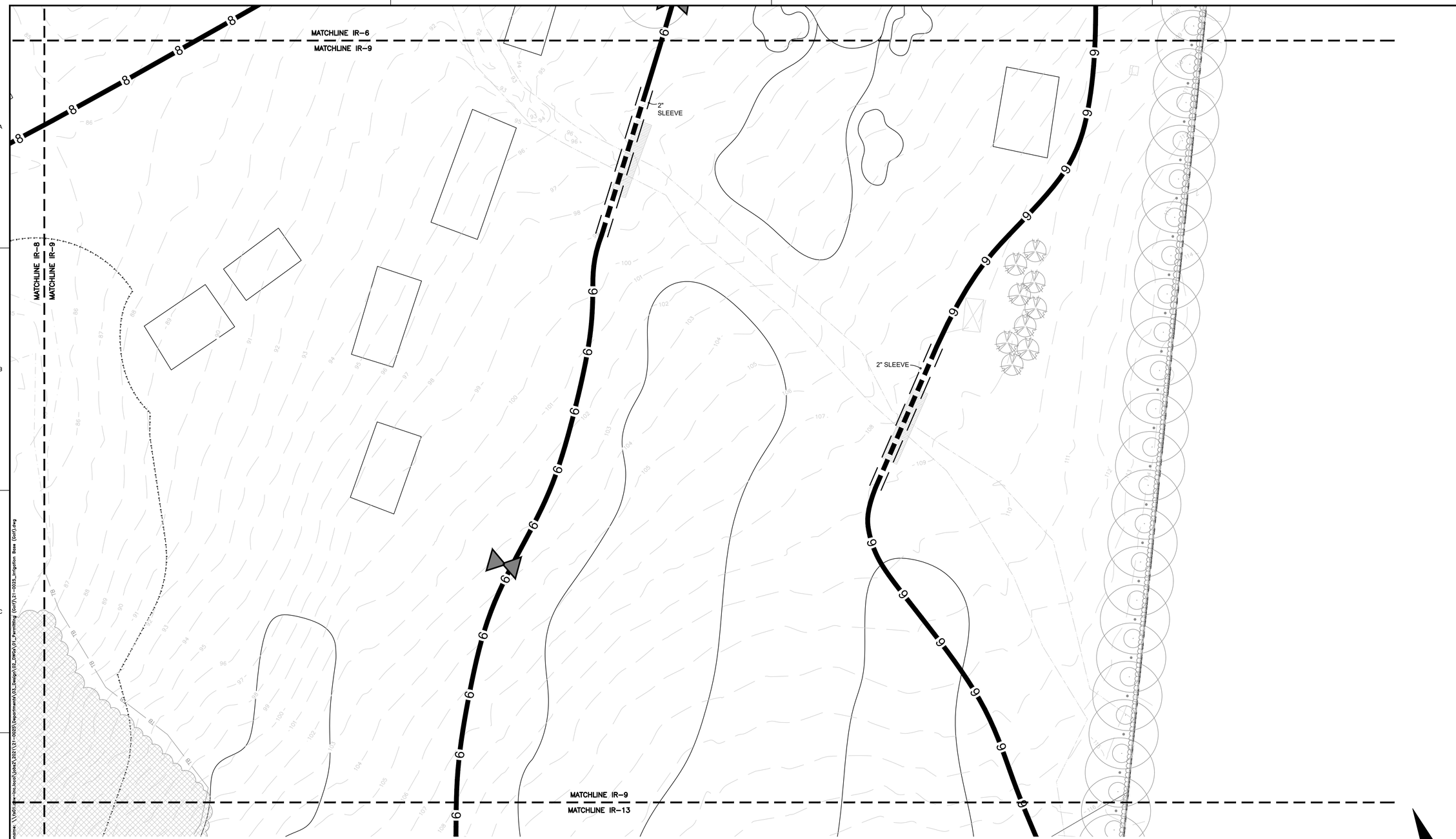
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-8

Tech: john-michaels Plot Date: Jan 29,2025 1:58pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg



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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.

PROJECT: TOWER HILL GOLF

SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:

DESIGNER: JMS

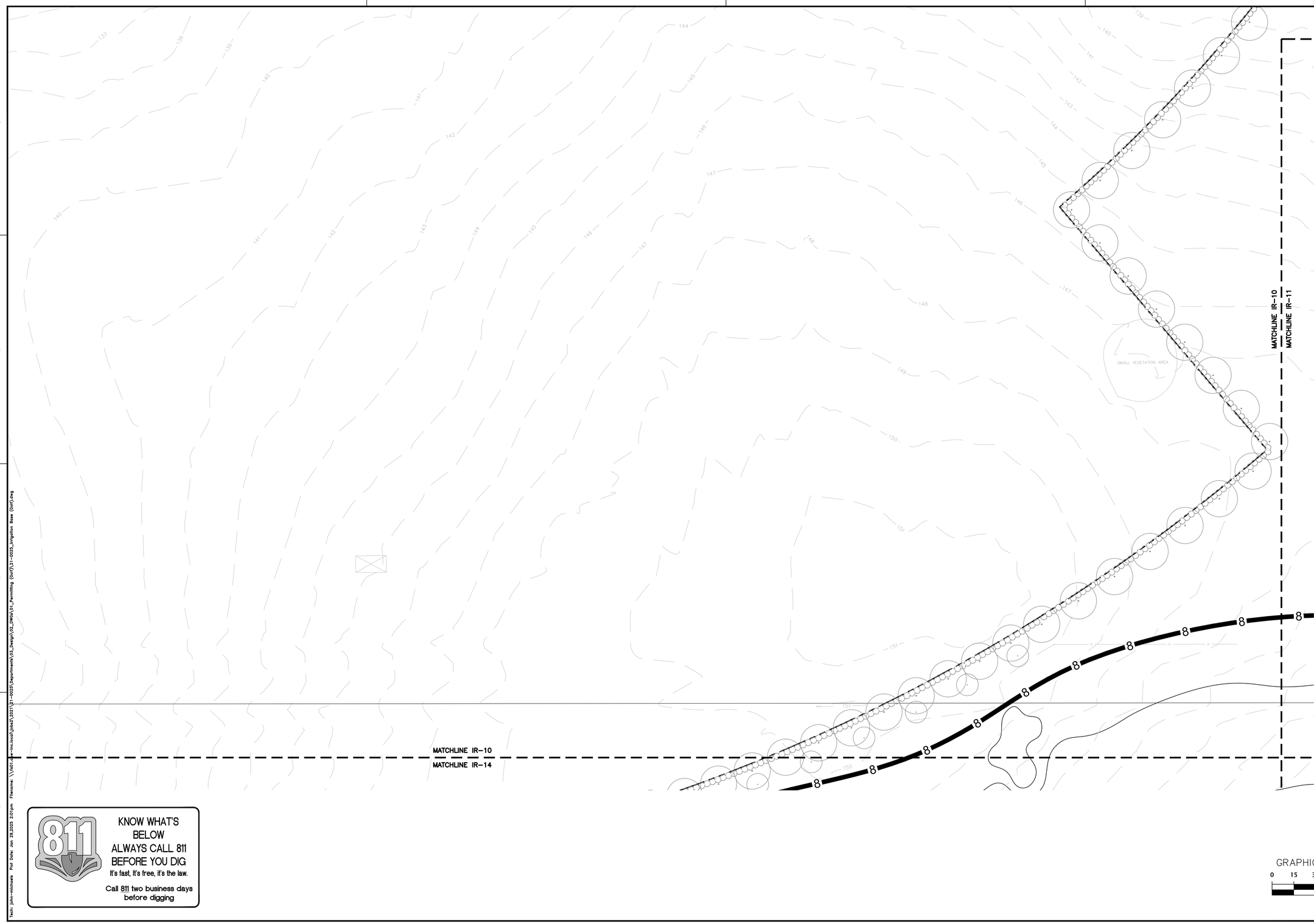
QUALITY CONTROL: JMS

PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-9

Tech: john-michaels Plot Date: Jan 29,2025 2:00pm Filename: \\fs01-chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg



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SUBMITTALS:
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01/20/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: MS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.:
IR-10

Tech: john-michaels Plot Date: Jan 29,2025 2:51pm Filename: \\Vol1.chw-inc.local\Jobs\2021\21-0025\Department\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg

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MATCHLINE IR–10
MATCHLINE IR–11

MATCHLINE IR–11
MATCHLINE IR–12

MATCHLINE IR–11
MATCHLINE IR–15

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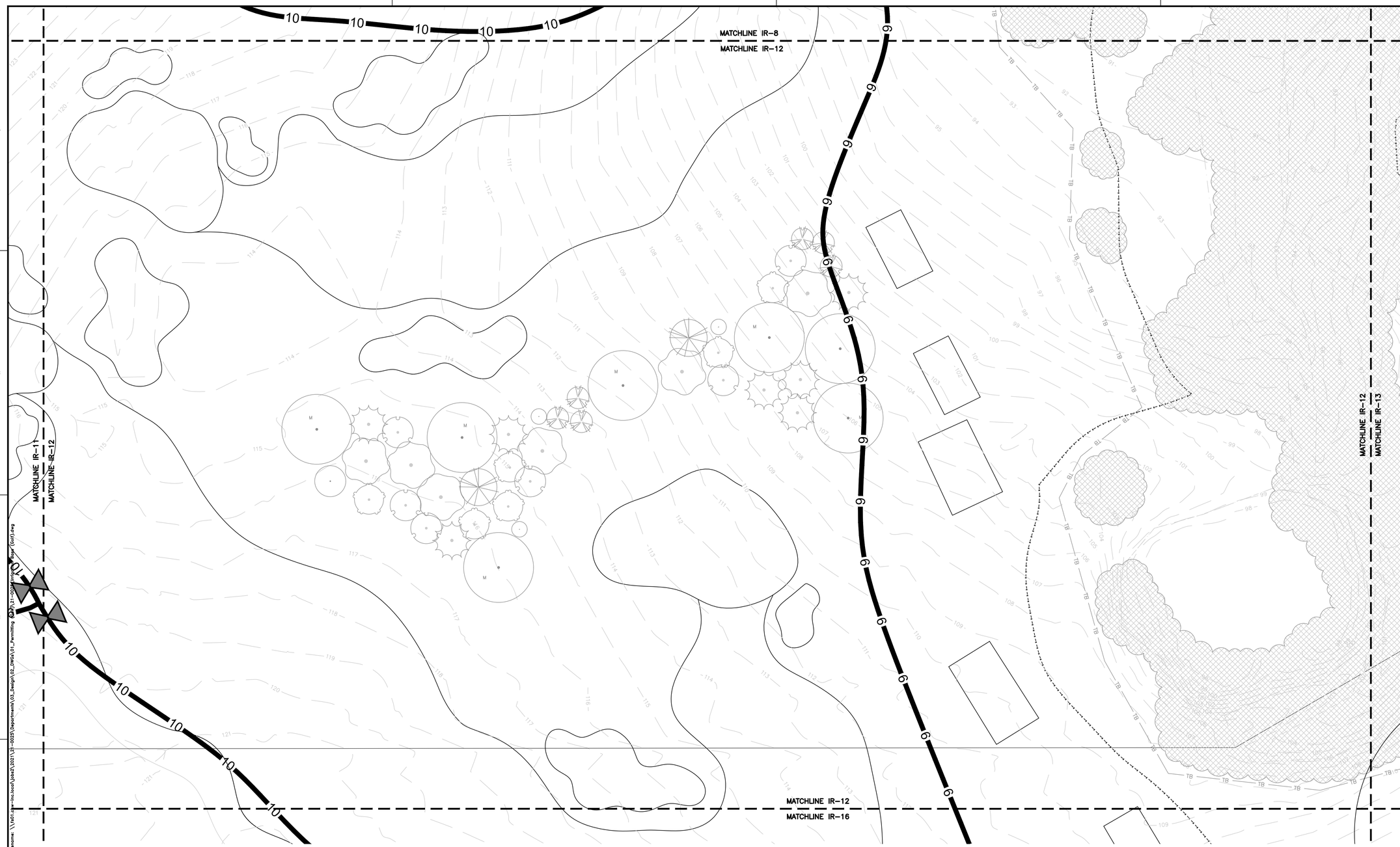

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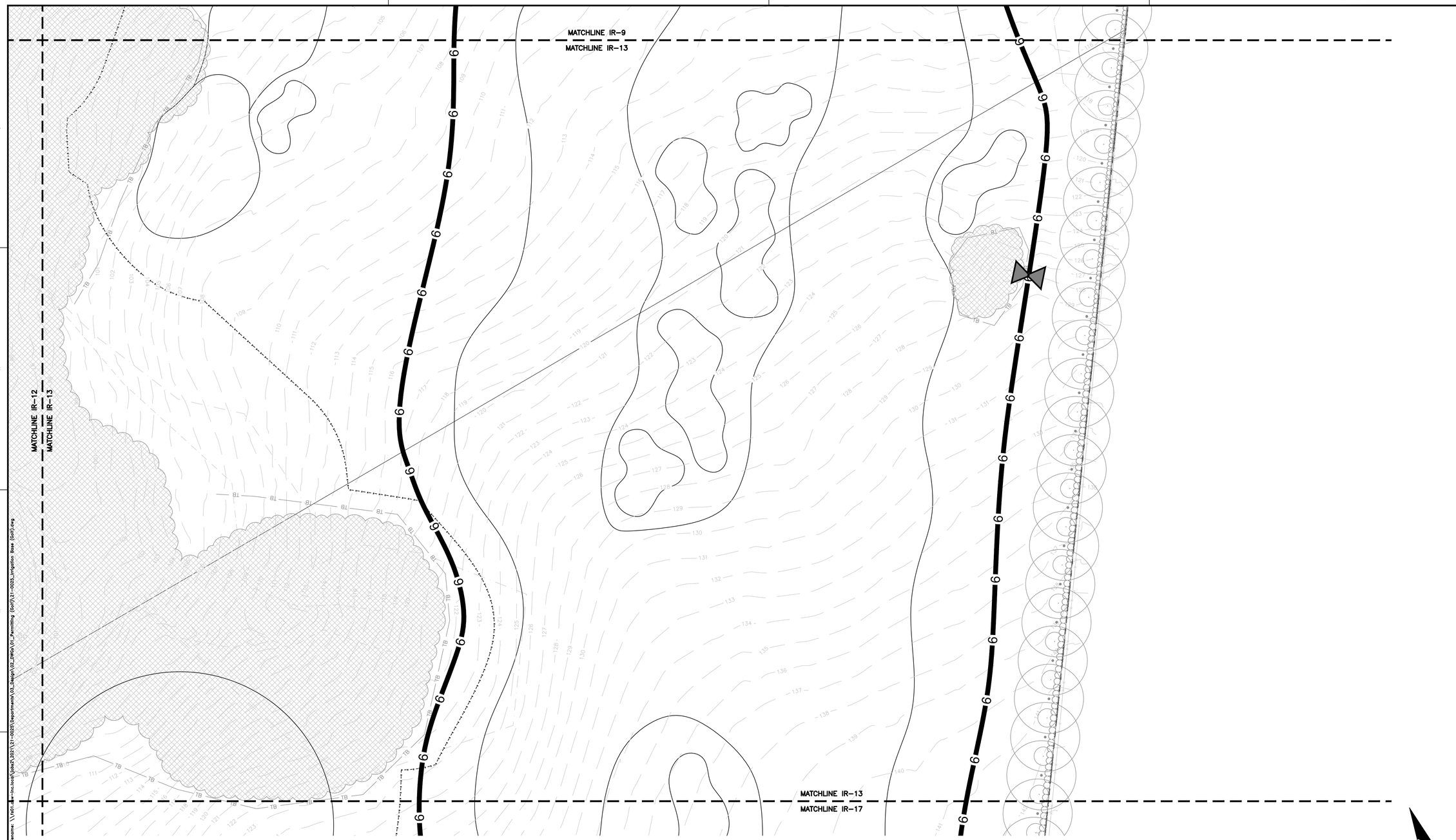
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-12

Tech: john-michaels Plot Date: Jan 29,2025 2:02pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Cont)\21-0025 Irrigation Base (Golf).dwg



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CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-13

Tech: john-michaels Plot Date: Jan 29,2025 2:02pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg

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CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-14

Tech: john-michaels Plot Date: Jan 29,2025 2:03pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg

MATCHLINE IR–11
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MATCHLINE IR–14
MATCHLINE IR–15

MATCHLINE IR–15
MATCHLINE IR–16

MATCHLINE IR–15
MATCHLINE IR–19

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CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: MS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.:
IR-15

Tech: john-mitchele Plot Date: Jan 29,2025 2:53pm Filename: \\Vol1.chw-inc.local\Data\Projects\2021\21-0025\Department\03_Design\02_Drafts\01_Permitting (Civil)\21-0025_Irrigation Base (Civil).dwg

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12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-16

Tech: john-michaels Plot Date: Jan 29,2025 2:04pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg

MATCHLINE IR-13
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MATCHLINE IR-16
MATCHLINE IR-17

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MATCHLINE IR-21

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
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01/20/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN: MS
DESIGNER: MS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-17

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01/20/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: MS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

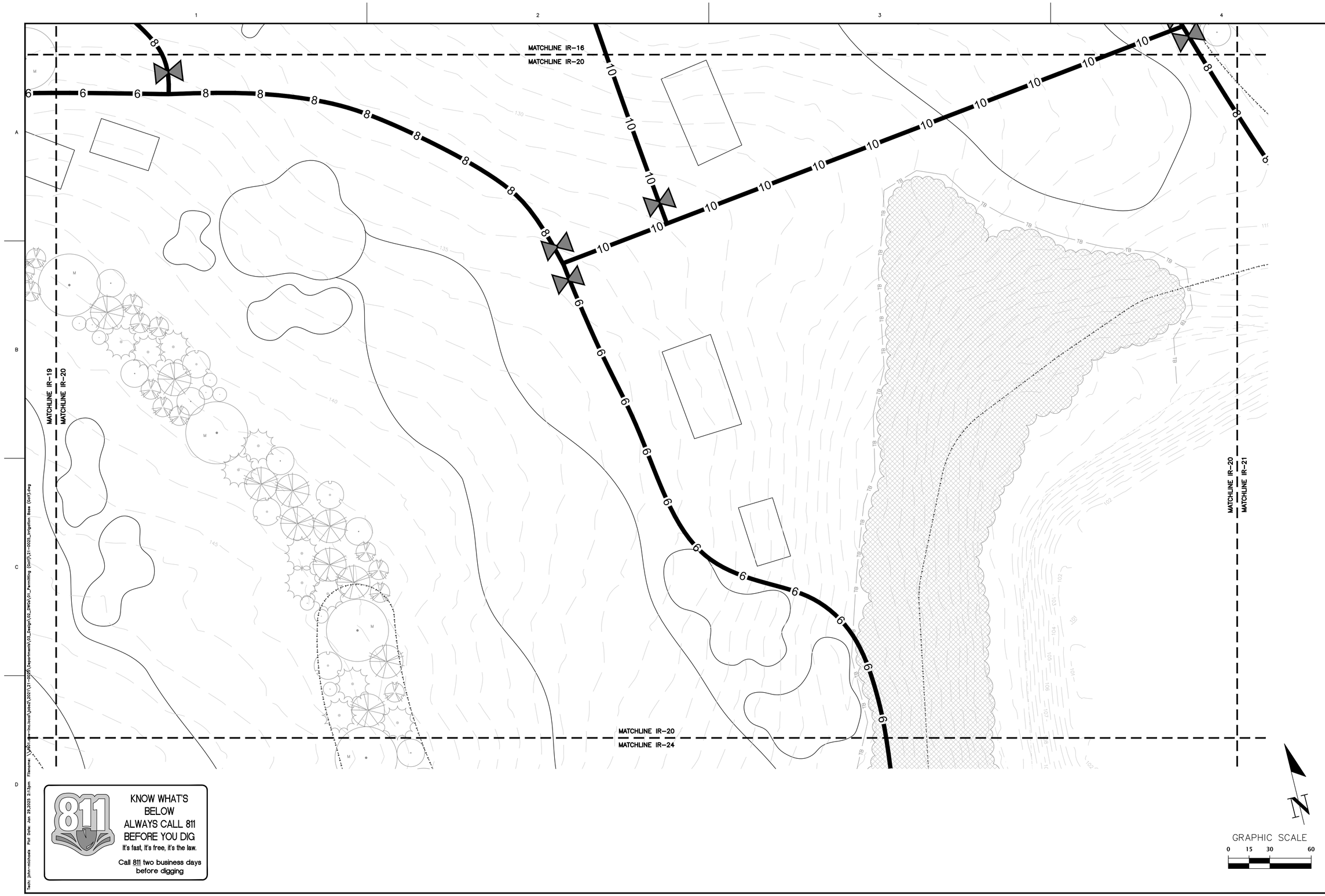
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-19

Tech: john-michaels Plot Date: Jan 29,2025 2:09pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg



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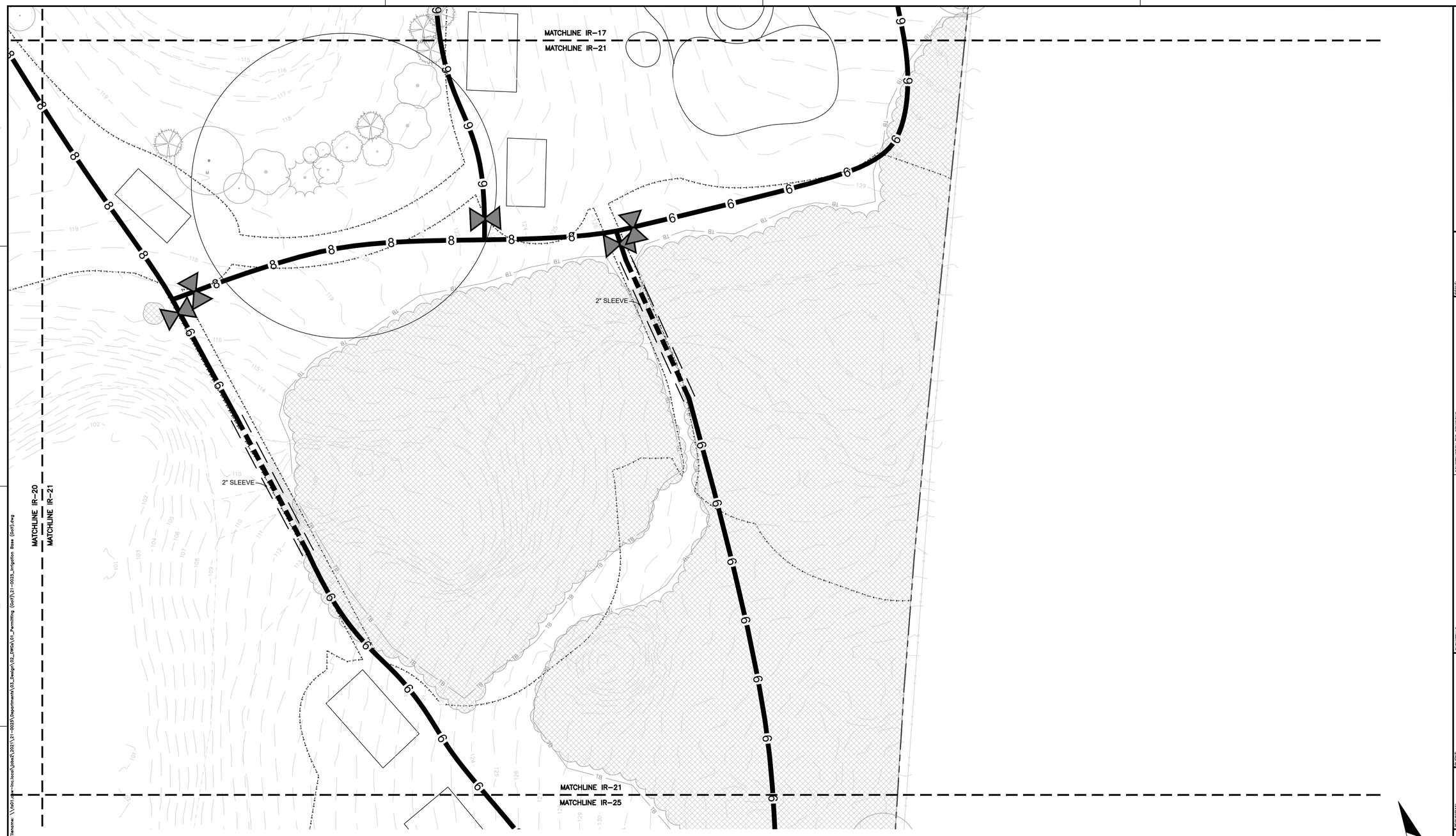
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-20

Tech: john-michaels Plot Date: Jan 29,2025 2:13pm Filename: \\jmi01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg



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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

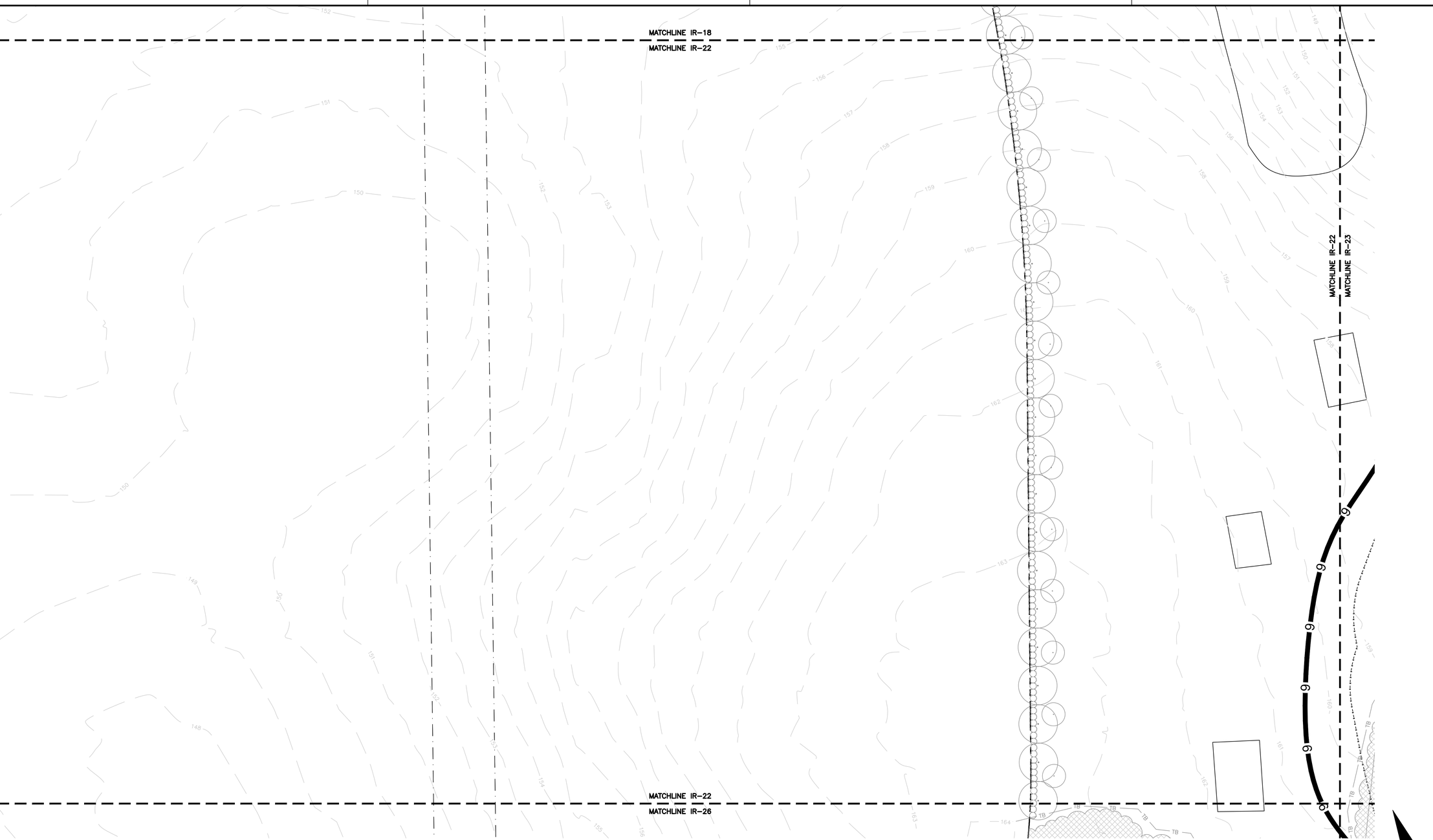
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: MAK
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-21

Tech: john-michaels Plot Date: Jan 29,2025 2:16pm Filename: \\Vol1.chw-inc.local\Jobs\2021\21-0025\Department\03_Design\02_Civil\03_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg



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CONSTRUCTION/BID REVISIONS:

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12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
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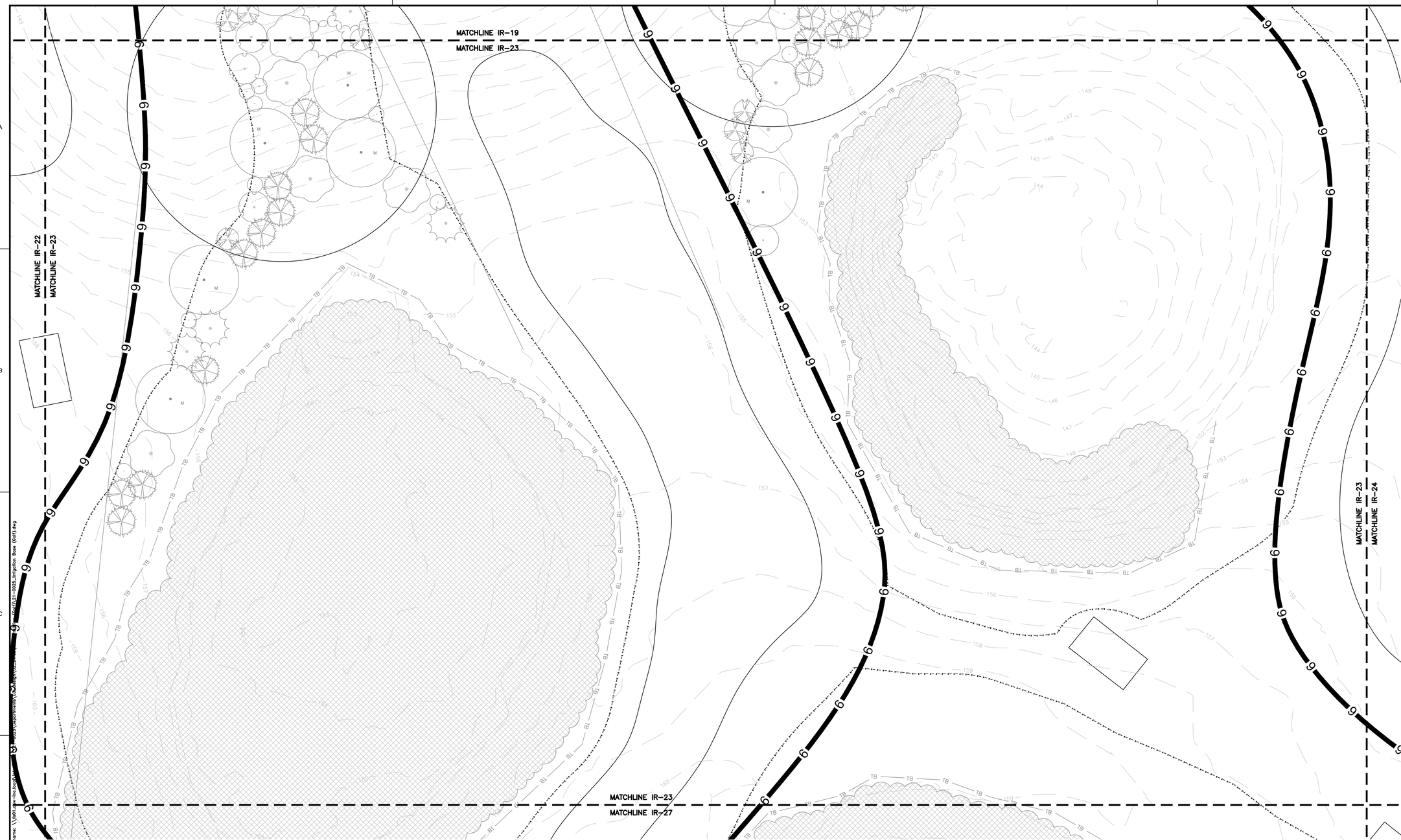
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-22



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www.chw-inc.com
est. 1988 FLORIDA LA0001683
CHW Professional Consultants

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CONSTRUCTION/BID REVISIONS:

SUBMITTALS:
12/04/2024 - SUBMITTAL FOR THE CITY OF ALACHUA
01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

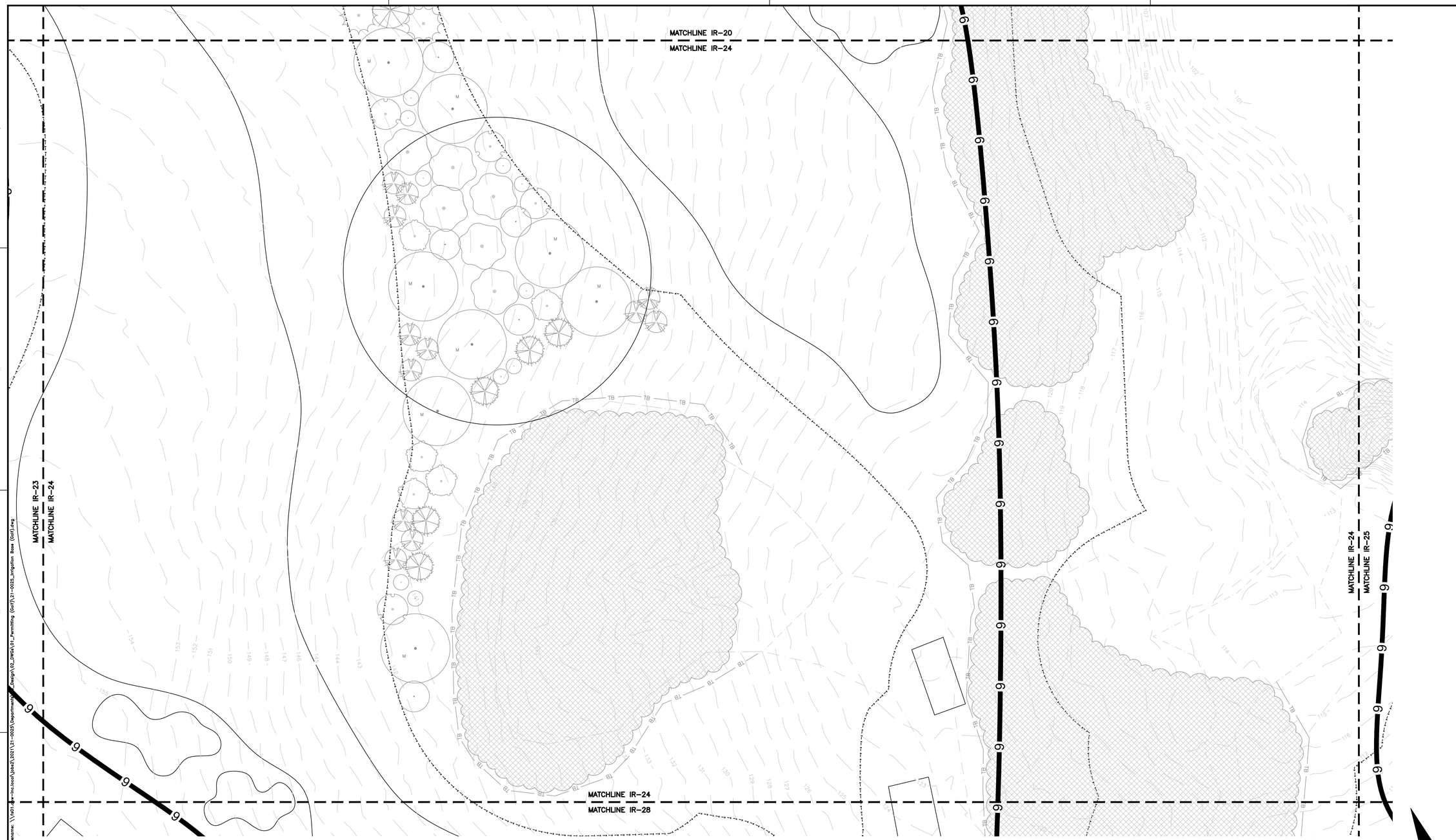
CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-23

Tech: john-michaels Plot Date: Jan 29,2025 2:22pm Filename: \\fs01.chw-inc.local\...\21-0025_Irrigation Base (Golf).dwg



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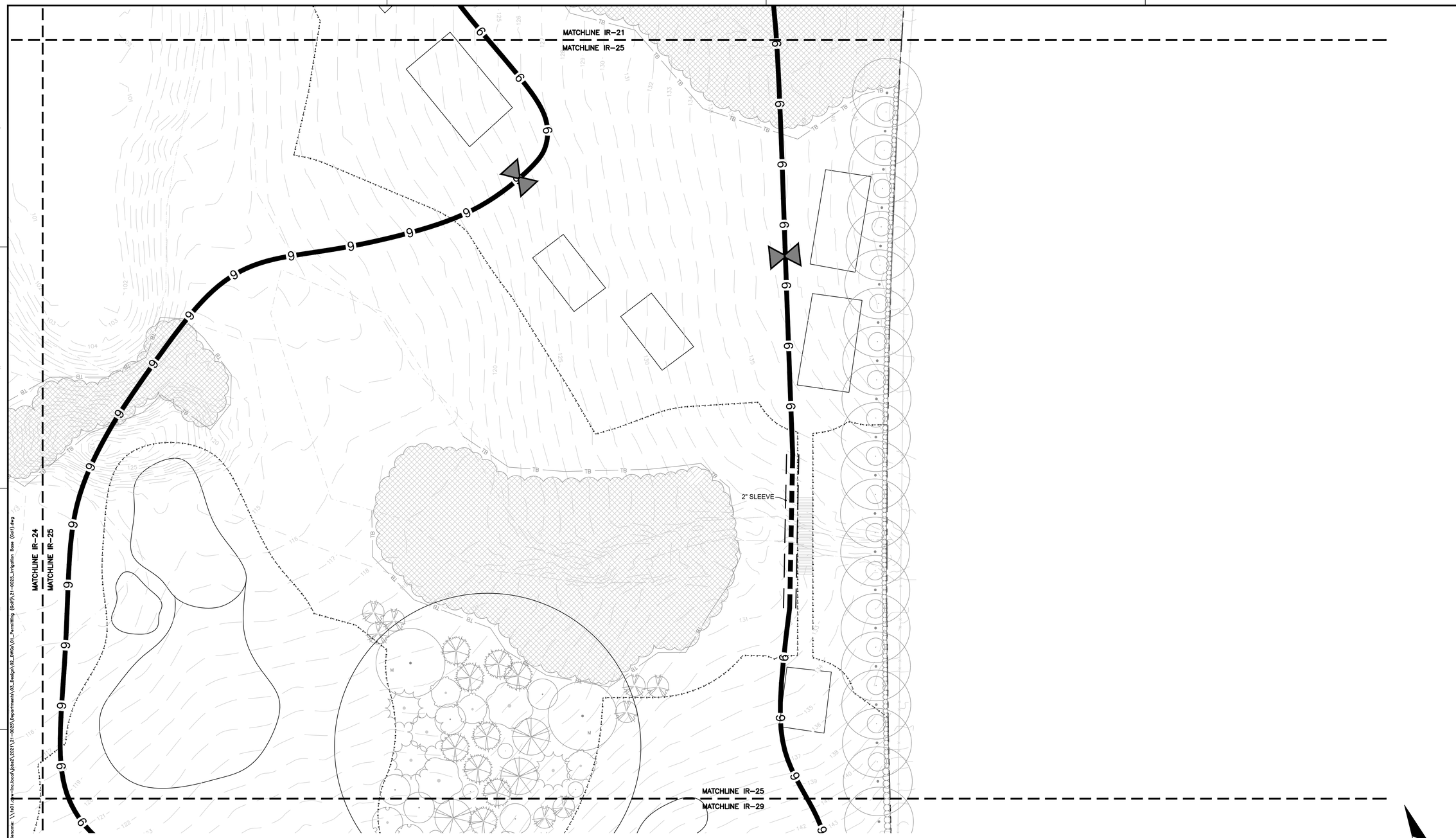
TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-24

Tech: john-michaels Plot Date: Jan 29,2025 2:25pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Department\Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg



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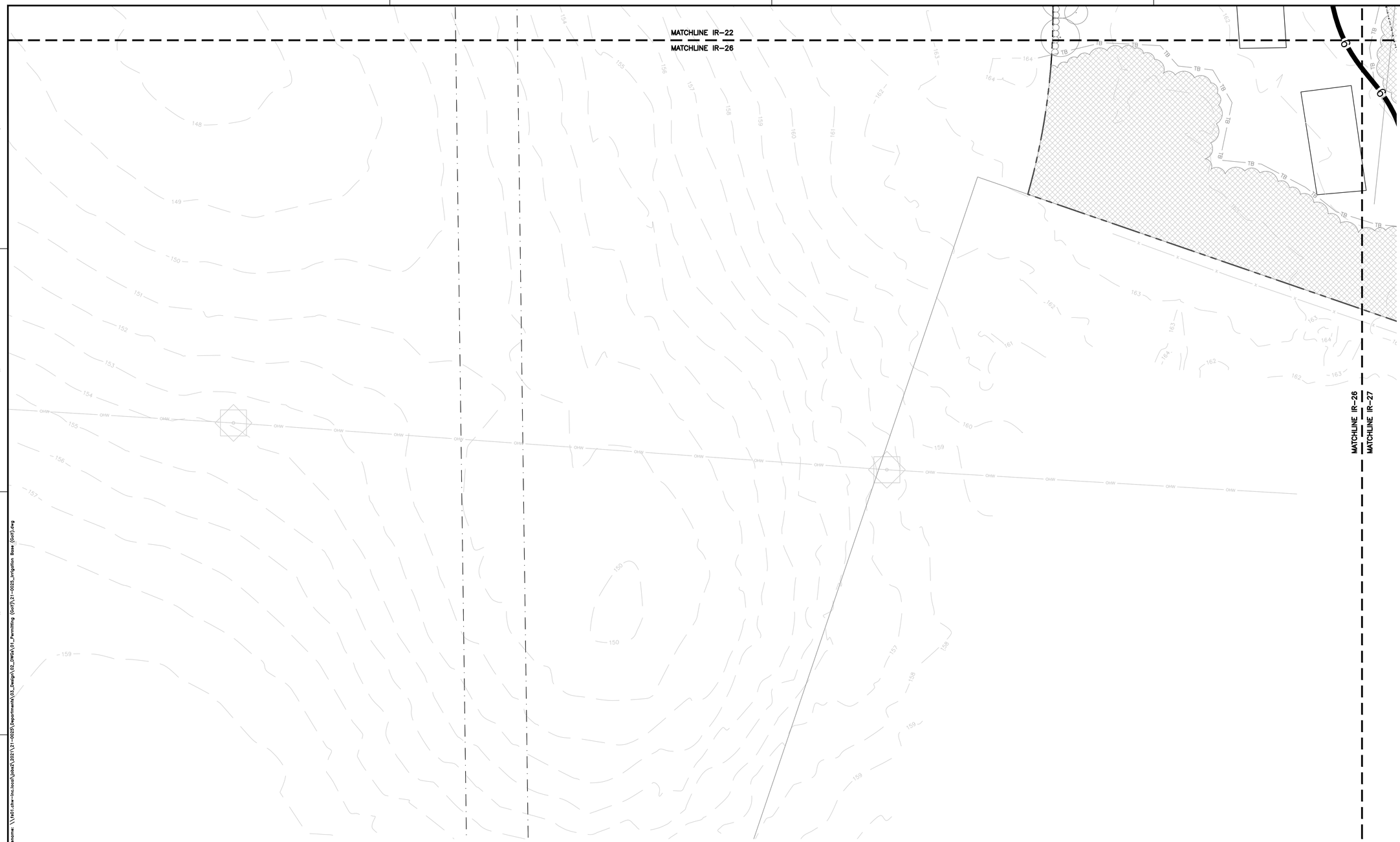
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-25

Tech: john-michaels Plot Date: Jan 29,2025 2:29pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg



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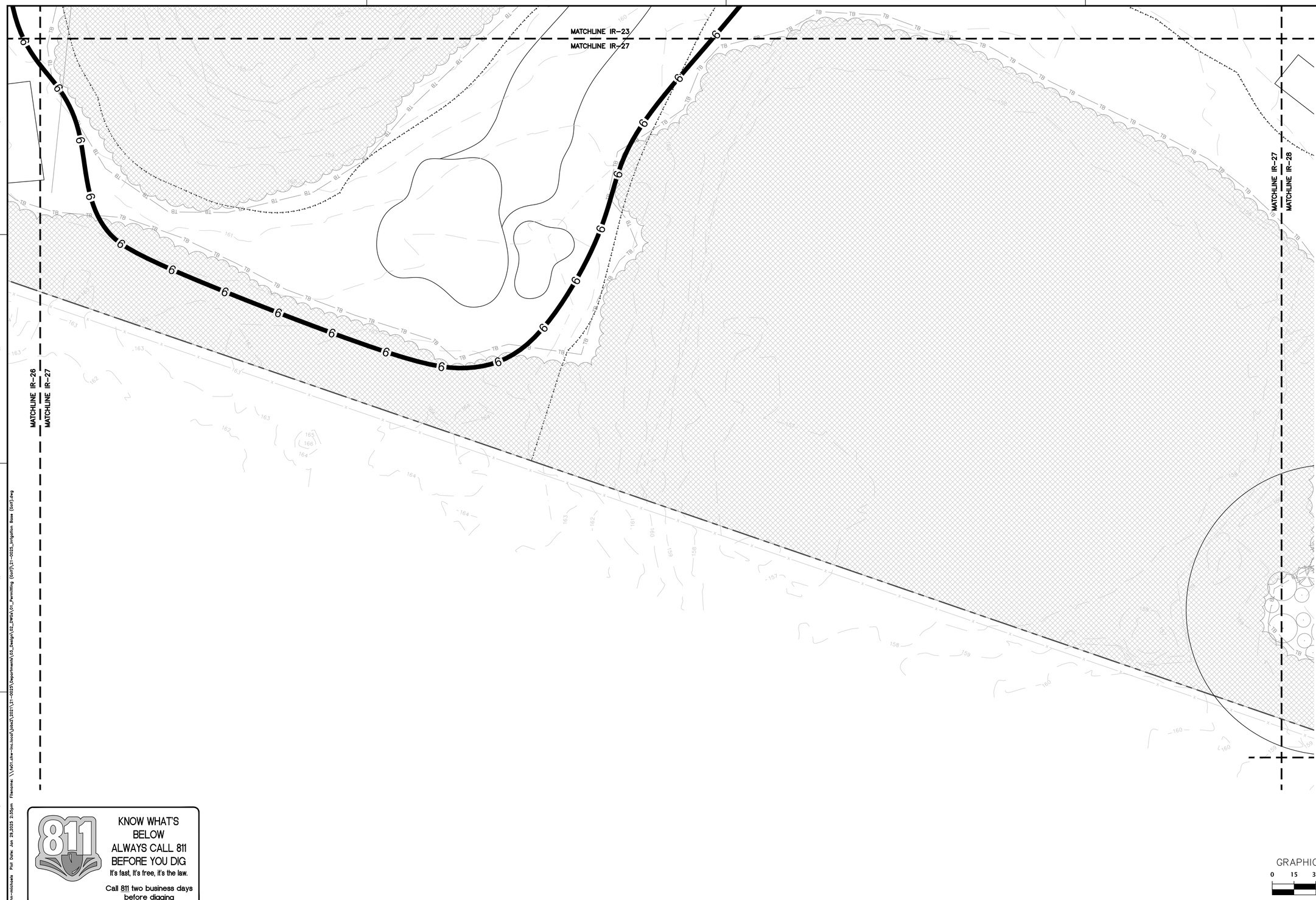
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-26

Tech: john-michaels Plot Date: Jan 29,2025 2:32pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg



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CONSTRUCTION/BID REVISIONS:

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01/23/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: MS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMMONS
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-27

Tech: John-michaels Plot Date: Jan 29,2025 2:53pm Filename: \\fs01.chw-inc.local\Jobs\2021\21-0025\Department\03_Design\02_DWGs\01_Permitting (Civil)\21-0025_Irrigation Base (Civil).dwg

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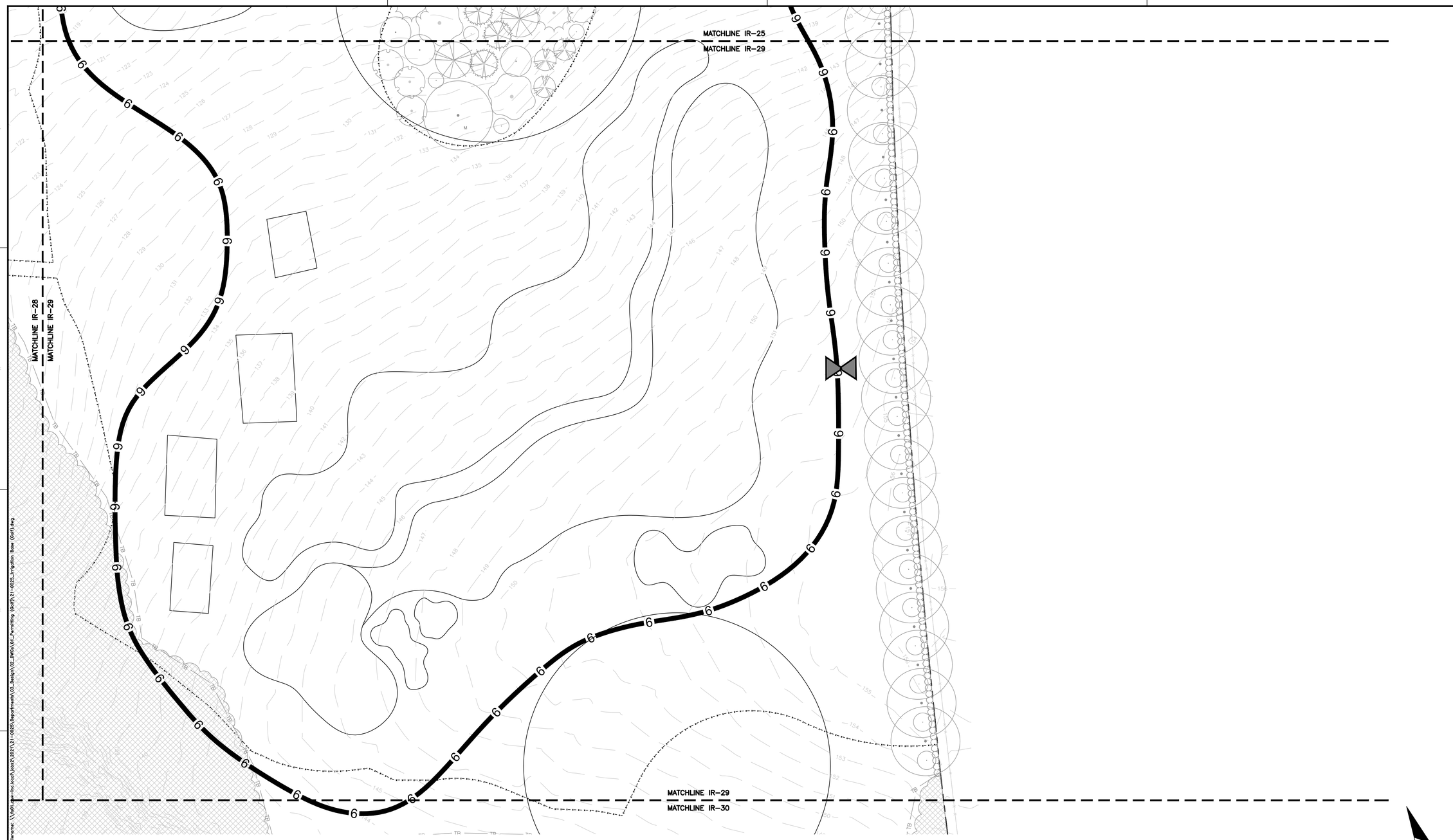
PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-28

Tech: john-michaels Plot Date: Jan 29,2025 2:38pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg



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01/29/2025 - SUBMITTAL FOR THE CITY OF ALACHUA

CLIENT: TOMOKA HILLS FARMS, INC.

PROJECT: TOWER HILL GOLF

SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:

DESIGNER: JMS

QUALITY CONTROL: JMS

PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-29

Tech: john-michaels Plot Date: Jan 29,2025 2:40pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg

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PROJECT: TOWER HILL GOLF
SHEET TITLE: IRRIGATION PLAN

TECHNICIAN:
DESIGNER: JMS
QUALITY CONTROL: JMS
PROJECT NUMBER: 21-0025

REGISTERED LANDSCAPE ARCHITECT
JOHN MICHAEL SIMPSON
LA6667436
STATE OF FLORIDA

SHEET NO.: IR-30

Tech: john-michaels Plot Date: Jan 29,2025 2:42pm Filename: \\fs01.chw-inc.local\jobs2\2021\21-0025\Departments\03_Design\02_DWGs\01_Permitting (Golf)\21-0025_Irrigation Base (Golf).dwg

NORTH

0' 50' 100' 200' 500'

Graphic Scale

Short Game Area/Course

No net fill per permit in 200-year floodplain zone

Practice Range

Putting Green

Lake

1

2

6

7

8

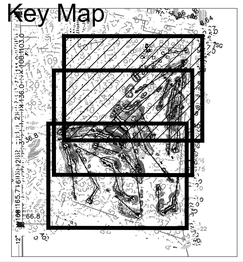
9

10

11

18

Key Map



Date:	12 October 2024
Scale:	1"=100'
Drawn By:	JDL
Revisions:	12 December 2024
	20 January 2025

Mark McCumber & Associates
Golf Course Architects

Tomoka Hills Golf Course
Alachua, Florida
A Tower Hill Insurance Project

Sheet Title: Grading Plan

Sheet Number:
GR-1

NORTH

0' 50' 100' 200' 500'

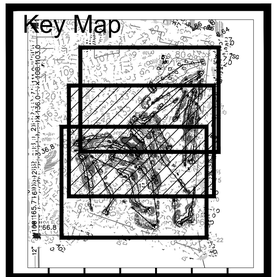
Graphic Scale

Putting Green

Lake

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Key Map



Date: 12 October 2024
Scale: 1"=100'
Drawn By: JDL
Revisions:
12 December 2024
20 January 2025

Mark McCumber & Associates
Golf Course Architects

Tomoka Hills Golf Course

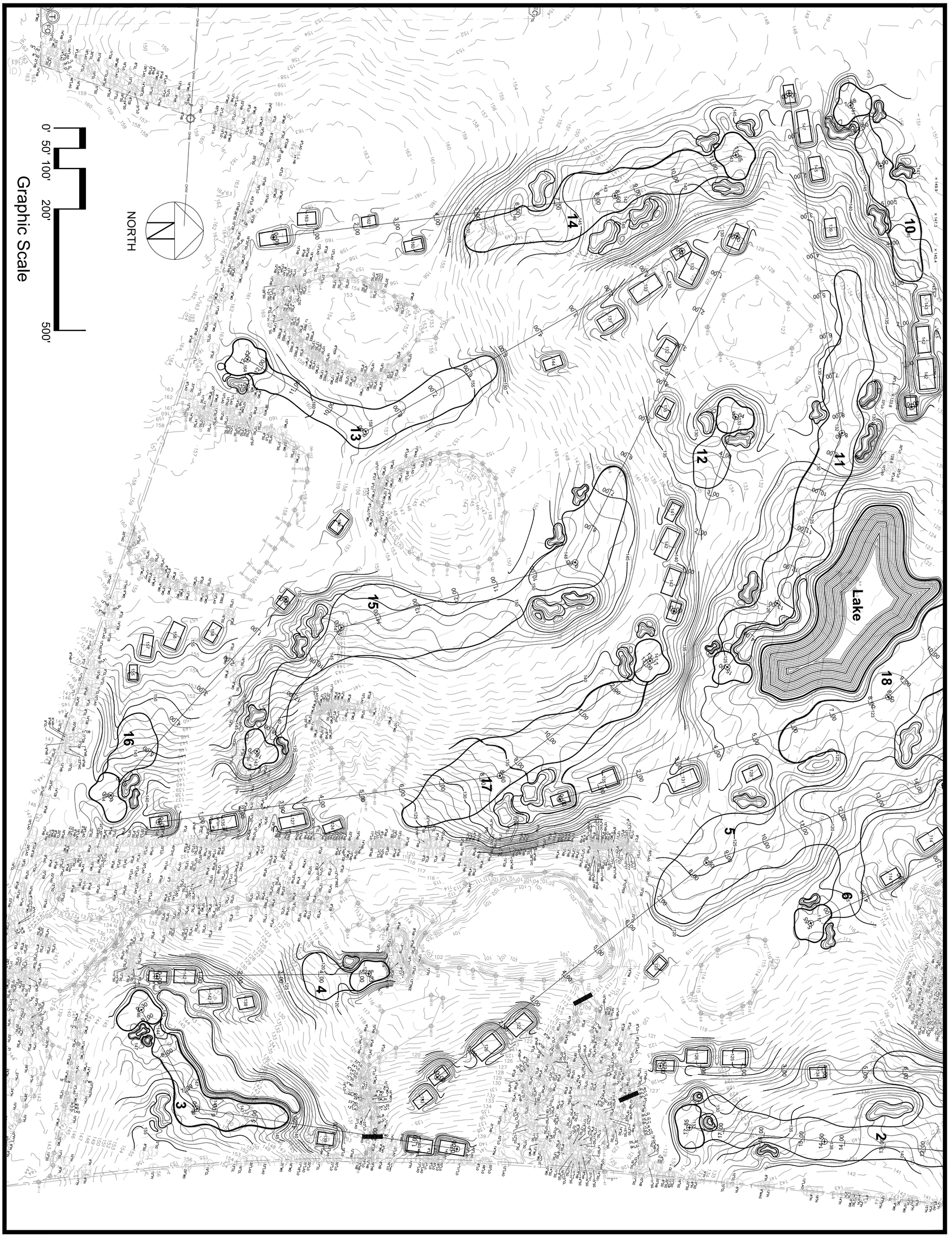
Alachua, Florida

A Tower Hill Insurance Project

Sheet Title: Grading Plan

Sheet Number:

GR-2



Tomoka Hills Golf Course

Alachua, Florida

A Tower Hill Insurance Project

Sheet Number: GR-3

Sheet Title: Grading Plan

Mark McCumber & Associates

Golf Course Architects

Date:	12 October 2024
Scale:	1"=100'
Drawn By:	JDL
Revisions:	
	12 December 2024
	20 January 2025

Key Map

City of ALACHUA

THE GOOD LIFE COMMUNITY

FOR OFFICE USE ONLY
Case #: _____
Application Fee: $_____
Filing Date: _____
Completeness Date: _____
Review Type: P&Z or PZB & CCOM

Site Plan Application

Reference City of Alachua Land Development Regulations (LDRs), Section 2.4.9

A. PROJECT

1. Project Name: Tower Hill Golf Facility
2. Pre-Application Conference Date: 7/23/2024
3. Neighborhood Meeting Date: 9/12/2024
4. Address of Subject Property: 15403 NW 173RD ST ALACHUA, FL 32615
5. Parcel ID Number(s): 03873-001-001, 03873-000-000
6. Existing Use of Property: Agriculture
7. Future Land Use Map Designation: Community Commercial Agriculture
8. Zoning Designation: Agricultural (A)
9. Acreage: 197.03
10. Total Existing Building Square Footage, if applicable: 0
11. Total Existing Impervious Area (not including existing building area), if applicable: 0
12. Total Building Square Footage Proposed: 10,180
13. Total New Impervious Area Proposed (not including building area): 45,532 SF

B. APPLICANT

1. Applicant's Status ☐ Owner (title holder) ■ Agent
2. Name of Applicant(s) or Contact Person(s): Walker Owen Title: Project Manager
   Company (if applicable): CHW
   Mailing address: 11801 Research Dr
   City: Alachua State: Florida ZIP: 32615
   Telephone: (352) 331-1976 FAX: _____ e-mail: walkero@chw-inc.com
3. If the applicant is agent for the property owner*:
   Name of Owner (title holder): Tomoka Hill Farms Inc.
   Mailing Address: 1301 Dixiana Domino Rd
   City: Lexington State: Kentucky ZIP: 40511

** Must provide an executed Authorized Agent Affidavit or other acceptable documentation (as deemed acceptable by the City in its sole discretion) authorizing the agent to act on behalf of the property owner.*

C. ADDITIONAL INFORMATION

1. Is there any additional contact for sale of, or options to purchase, the subject property? ☐ Yes ■ No
   If yes, list names of all parties involved: _____
2. Has the applicant discussed possible utility/infrastructure fees with the Public Services Department?
   If no, contact the Public Services Department at 386-418-6140. ■ Yes ☐ No

D. ATTACHMENTS

1. Site Plan. Sheet size shall be 24" X 36" with a 3" left margin and ½" top, bottom, and right margin.

Site Plan shall include:

a. Name and location of project.
b. Name and contact information (address, telephone, and email address) of property owner, developer (if applicable), and all professional consultants (i.e., landscape architect, photometric, electrical engineer, architect, etc.) for the project.
c. Zoning of the subject property.
d. Vicinity map - indicating general location of the site and major adjacent streets and all adjacent properties.
e. Boundary and topographic survey. Survey shall be signed and sealed by the surveyor, and shall be no older than two (2) years.
f. Complete legal description of the subject property.
g. Statement of proposed uses.
h. Location of the subject property in relation to adjacent properties.
i. Date, north arrow, and graphic scale (not to exceed one (1) inch equal to 50 feet.)
j. Area and dimensions of the subject property.
k. Structures and major features – fully dimensioned – including setbacks from property lines and right-of-ways, distances between structures (if structures are within 25 feet of one another), floor area of each building, floor area ratio, and property lines.
l. Location of all property lines, existing and proposed adjacent right-of-ways, sidewalks, curbs, and gutters.
m. Distance between ingress and egress connections for the project and the ingress / egress connections for all contiguous properties and for properties on the opposite side of the road, measured from the interior radius of all ingress/egress connections.
n. Location of all existing and proposed utilities (electric, potable water, sanitary sewer, gas, etc.) on the subject property, and on adjacent properties if located within 50 feet of the subject property, and within adjacent rights-of-way.
o. Location of all existing and proposed fire hydrants.
p. Location of all existing easements on the property and on adjacent properties if located within 50 feet of the subject property, and recording information for such easements.
q. Location of all proposed easements (legal descriptions and sketches of all proposed easements shall be provided by the applicant following a review of proposed utility locations by Public Services).
r. Location and dimensions of all existing and proposed vehicular parking spaces, dimensions of all drive aisles, and the angle of parking spaces.
s. Location of all bicycle parking areas and specifications of bicycle racks.
t. Location, dimensions, and vertical clearance of all off-street loading spaces, if required by Section 6.1 of the LDRs.
u. Location and dimensions of all vehicle stacking spaces, if required by Section 6.1 of the LDRs.
v. Vehicular parking calculations, indicating the minimum and maximum number of required spaces and the number of parking spaces provided (regular and accessible spaces) in accordance with Section 6.1 of the LDRs.
w. Bicycle parking calculations, if required by Section 6.1 of the LDRs.
x. Striping and signage for all traffic control devices.
y. Landscape Plan, indicating the location, size, and design of required and proposed landscaped areas. Landscape Plans shall identify the following with sufficient detail and calculations to demonstrate compliance with Section 6.2.2 of the LDRs:
    i. Location, identification of the species, and size of all existing trees.
    ii. Required perimeter buffer areas.
    iii. Parking lot perimeter landscaping.
    iv. Parking lot interior landscaping.
    v. Building façade landscaping.
    vi. Calculation of landscaped areas (see Policy 2.4.a of the Comprehensive Plan Future Land Use Element).
    vii. Calculation of open space provided (see Section 6.7 of the LDRs).
    viii. Calculation of tree credits, if applicable. Calculations shall be as set forth in Sections 6.2.1(D)(4) and 6.2.2(D)(6) of the LDRs and shall be shown on the plan in tabular format (if tree credits are utilized, the Landscape Plan must identify in the landscape calculations where credit is applied).
    ix. Tree protection detail in accordance with Section 6.2.1(D)(2) of the LDRs.
    x. If tree removal is proposed, a tree survey, showing:
        (a) Each tree proposed for removal;
        (b) Each tree proposed for retention;
        (c) The size and species (both common and scientific names) of all trees proposed for removal/retention;
        (d) Location, size, and species of all new trees proposed to meet mitigation requirements. Mitigation trees must be shown on the plans and a list of all mitigation trees and calculation of required mitigation must be provided on the plan in tabular format.

z. Location of waste receptacles and detail of waste receptacle screening, demonstrating compliance with Section 6.2.3(B) and, if within the Gateway Overlay District, with Section 3.7.2(C)(5)(c)(ii).
aa. Photometric Plan, demonstrating compliance with the applicable provisions of Section 6.4 of the LDRs.
bb. Location and size of any lakes, ponds, canals, or other waters and waterways, and required setbacks dimensioned on the plans from such waterways.
cc. For development consisting of a nonresidential use, except for single tenant retail sales and services uses greater than or equal to 20,000 square feet in area and except for use types within the industrial services, manufacturing and production, warehouse freight and movement, waste-related services, and wholesale sales use categories ***not*** located within 500 feet of the right-of-way of US Highway 441: Architectural plans demonstrating compliance with the design standards for business uses as provided in Section 6.8.2 of the LDRs. Architectural plans shall include:
    i. Calculation of glazing of:
        (a) the front façade;
        (b) any facade facing a street;
        (c) any façade facing a publicly-accessible parking area which is a part of the development and consisting of 15 percent or more of the minimum off-street parking required by Section 6.1.4(B) of the LDRs; and,
        (d) any façade facing vacant land classified as CSV, A, RSF-1, RSF-3, RSF-4, RSF-6, RMH-5, RMH-P, RMF-8 or RMF-15, or lands containing existing residential uses.
    ii. Calculation of the area of all façades subject to glazing.
    iii. Detail on the architectural plans depicting façade massing or a massing alternative as defined in Section 6.8.2(A)(2)(b).
    iv. Identification of each material utilized in each façade and the percentage of the total area of the façade for each material used.
dd. For development consisting of a nonresidential use where a single retail services tenant is greater than or equal to 20,000 square feet in area: Architectural plans demonstrating compliance with the design standards for single tenant retail sales and service uses greater than or equal to 20,000 square feet in area as provided in Section 6.8.3 of the LDRs. Architectural plans shall include:
    i. Color plans depicting the color of all materials used in the façade.
    ii. Identification of each material utilized in each façade and the percentage of the total area of the façade for each material used.
    iii. Calculation of glazing of:
        (a) the front façade;
        (b) any facade facing a street;
        (c) any façade facing a publicly-accessible parking area which is a part of the development and consisting of 15 percent or more of the minimum off-street parking required by Section 6.1.4(B) of the LDRs; and,
        (d) any façade facing vacant land classified as CSV, A, RSF-1, RSF-3, RSF-4, RSF-6, RMH-5, RMH-P, RMF-8 or RMF-15, or lands containing existing residential uses.
    iv. Calculation of the area of all façades subject to glazing.
    v. If a glazing alternative as defined in Section 6.8.3(A)(2)(a)(iv) is used, calculation of area of alternative materials used or identification of other architectural features meeting the requirements of Section 6.8.3 of the LDRs.
    vi. Detail on the architectural plans depicting façade massing or a massing alternative as defined in Section 6.8.2(A)(2)(b) of the LDRs.
ee. For development consisting multi-family residential uses and/or a mobile home park:
    i. Gross acreage.
    ii. Number of dwelling units proposed.
    iii. Density.
    iv. Location and percentage of total open space and recreation areas.
    v. Floor area of each dwelling unit.
    vi. Number of proposed parking spaces.
    vii. Street layout, if applicable.
    viii. Layout of mobile home stands (for mobile home parks only).
    ix. City of Alachua Public School Student Generation Form.

2. Stormwater management plan - including the following:
    a. Plans showing existing contours at one (1) foot intervals based on U.S. Coastal and Geodetic Datum.
    b. Proposed finished floor elevation of all buildings.
    c. Existing and proposed stormwater management facilities with size and grades.
    d. Proposed orderly disposal of surface water runoff.
    e. Drainage calculations.

3. Fire Department Access and Water Supply Plan. All fire protection plans are subject to review and approval by the Alachua County Fire Marshal and City of Alachua Public Services Department. Fire Department Access and Water Supply Plan shall include:
    a. Plans prepared by a professional engineer licensed in the State of Florida.

b. Fire flow calculations for each newly constructed building. Calculations shall be performed in accordance with Chapter 18, Section 18.4 of the Florida Fire Prevention Code.
c. Documentation from the water purveyor stating the available flow to the subject property.

4. Concurrency Impact Analysis showing the impact on public facilities, including potable water, sanitary sewer, transportation, solid waste, recreation, stormwater, and public schools (if applicable) in accordance with Section 2.4.14 of the LDRs.

5. Analysis of Consistency with the City of Alachua Comprehensive Plan (analysis must identify specific Goals, Objectives, and Policies and describe in detail how the application complies with the noted Goal, Objective, or Policy).

   For commercial/corporate park/industrial projects: In addition to submitting specific written information regarding the development's compliance with the relevant Goals, Objectives, and Policies of the City of Alachua Comprehensive Plan, a response to the design and performance standards as provided in Policy 1.3.d (for commercial projects), Policy 1.4.f (for corporate park projects), or Policy 1.5.d (for industrial projects) of the Future Land Use Element:

   The following criteria shall apply when evaluating commercial/corporate park/industrial development proposals:

   1. Integration of vehicular and non-vehicular access into the site and access management features of site in terms of driveway cuts and cross access between adjacent sites, including use of frontage roads and/or shared access;
   2. Buffering from adjacent existing/potential uses;
   3. Open space provisions and balance of proportion between gross floor area and site size;
   4. Adequacy of pervious surface area in terms of drainage requirements;
   5. Placement of signage;
   6. Adequacy of site lighting and intrusiveness of lighting upon the surrounding area;
   7. Safety of on-site circulation patterns (patron, employee and delivery vehicles), including parking layout and drive aisles, and points of conflict;
   8. Landscaping, as it relates to the requirements of the Comprehensive Plan and Land Development Regulations;
   9. Unique features and resources which may constrain site development, such as soils, existing vegetation and historic significance; and
   10. Performance based zoning requirements, which may serve as a substitute for or accompany land development regulations in attaining acceptable site design.
   11. Commercial/Corporate Park/Industrial uses shall be limited to an intensity of less than or equal to 0.50 floor area ratio for parcels 10 acres or greater, 0.50 floor area ratio for parcels less than 10 acres but 5 acres or greater, a 0.75 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.0 floor area ratio to parcels 1 acre or less.
   12. Complementary residential uses (corporate park only).

6. *For Site Plans for Buildings Less than 80,000 Square Feet in Area:* One (1) set of mailing labels for all property owners within 400 feet of the subject property boundaries – even if property within 400 feet falls outside of City limits (obtain from the Alachua County Property Appraiser's web site) – and all persons/organizations registered to receive notice of development applications (current list may be obtained from the Planning & Community Development Department).
   For Site Plans for Buildings Greater than or Equal to 80,000 Square Feet in Area: Two (2) sets of mailing labels for all property owners within 400 feet of the subject property boundaries – even if property within 400 feet falls outside of City limits (obtain from the Alachua County Property Appraiser's web site) – and all persons/organizations registered to receive notice of development applications (current list may be obtained from the Planning & Community Development Department).

7. Neighborhood Meeting Materials, including:
   i. Copy of the required published notice (advertisement) – must be published a newspaper of general circulation, as defined in Article 10 of the City's LDRs;
   ii. Copy of written notice (letter) sent to all property owners within 400 feet and to all persons/organizations registered with the City to receive notice, and a copy of the mailing labels or a list of those who received written notice; and,
   iii. Written summary of meeting – must include (1) those in attendance; (2) a summary of the issues related to the development proposal discussed; (3) comments by those in attendance about the development proposal; and, (4) any other information deemed appropriate.

8. Legal description: (1) on 8.5" x 11" paper; and (2) electronic file in Word format.

9. Proof of ownership (i.e., copy of deed.)

10. Proof of payment of taxes.

11. Traffic Impact Analysis or Statement, as deemed applicable to the project by the City of Alachua in its sole discretion.

12. Environmental Assessment or Study, as deemed applicable to the project by the City of Alachua in its sole discretion.

13. Environmental Resource Permit (or Letter of Exemption) from the Suwannee River Water Management District (SRWMD) or Self-Certification for a Stormwater Management System in Uplands Serving Less than 10 Acres of Total Project Area and Less than 2 Acres of Impervious Surfaces from the Florida Department of Environmental Protection (FDEP) pursuant to Section 403.814(12), Florida Statutes (or documentation which shows a permit application/exemption/self-certification has been submitted to SRWMD or FDEP).

14. If access is from a County Road, access management permit from Alachua County Public Works (or documentation which shows a permit application has been submitted).

15. If access is from a State Road, access management permit from Florida Department of Transportation (or documentation which shows a permit application has been submitted).

16. **Fee.** Please see fee schedule for fee determination. No application shall be accepted for processing until the required application fee is paid in full by the applicant. Any costs associated with outside professional consulting services deemed necessary by the City in its sole discretion will be billed to the applicant at the rate of the consultant. The invoice for such services shall be paid in full prior to any public hearing(s) on the application.

All applicable attachments are required for a complete application. A completeness review of the application will be conducted within five (5) business days of receipt. If the application is determined to be incomplete, the application will be returned to the applicant.

Under penalty of perjury, I/we certify and acknowledge that the information contained herein is true and correct to the best of my/our knowledge.

Signature of Applicant

Signature of Co-applicant

WALKER EVEN OWEN, PE - PROJECT MANAGER
Typed or printed name *and title* of applicant

Typed or printed name *and title* of co-applicant

STATE OF FLORIDA
COUNTY OF ALACHUA

The foregoing instrument was acknowledged before me by means of [X] physical presence or [ ] online notarization, this 31st day of October, 2024, by Walker Owen who executed the same and has ____ produced _____ as identification or [X] is personally known to me.

Signature of Notary

Notary Public State of Florida
Nicholle E Brockish
My Commission HH 397048
Expires 8/15/2027

Print Name: Nicholle Brockish
Notary Public, State of Florida

My Commission Expires: 8/15/2027

City of ALACHUA

THE GOOD LIFE COMMUNITY

Authorized Agent Affidavit

A. PROPERTY INFORMATION

Address of Subject Property: NW 173rd Street, Alachua, FL, 32615

Parcel ID Number(s): 03873-000-000; 03873-001-001

Acreage: 290

B. PERSON PROVIDING AGENT AUTHORIZATION

Name: Scott Rowe Title: Registered Agent

Company (if applicable): Tomoka Hills Farms, Inc.

Mailing Address: PO Box 147018

City: Gainesville State: FL ZIP: 32614-7018

Telephone: contact agent FAX: e-mail:

C. AUTHORIZED AGENT

Name: Walker F Owen Title: Project Manager

Company (if applicable): CHW

Mailing address: 11801 Research Dr

City: Alachua State: FL ZIP: 32615

Telephone: 352-331-1976 FAX: e-mail: walkero@chw-inc.com

D. REQUESTED ACTION:

To obtain approval from the City of Alachua

I hereby certify that I am the property owner of record, or I have received authorization from the property owner of record to file an application for a development permit related to the property identified above. I authorize the agent listed above to act on my behalf for purposes of this application.

Scott P. Rowe

Signature of Applicant

Signature of Co-applicant

Scott Rowe

Typed or printed name and title of applicant

Typed or printed name of co-applicant

State of Florida County of ALACHUA

The foregoing application is acknowledged before me this 13 day of MAY, 2024 by Scott P Rowe

, who is/are personally known to me, or who has/have produced

as identification.

Signature of Notary Public, State of FL

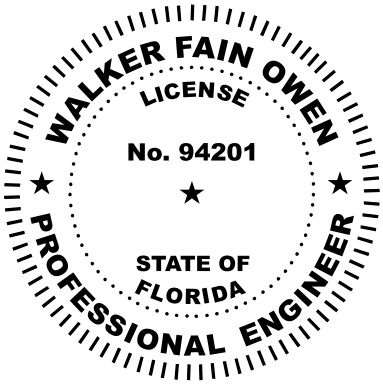
Notary Public State of Florida
Jessica Cowart
My Commission HH 392136
Expires 7/16/2027

October 22, 2024

Walker Fain Owen
State of Florida, Professional Engineer, License No. 94201

This item has been electronically signed and sealed by Walker Fain Owen, PE on 01/29/2025 using a Digital Signature.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



Division of Regulatory Services
Suwannee River Water Management District
9225 County Road 49
Live Oak, FL 32060

RE: Tower Hill New HQ
Major Modification to ERP No. 245365-1

Dear Staff:

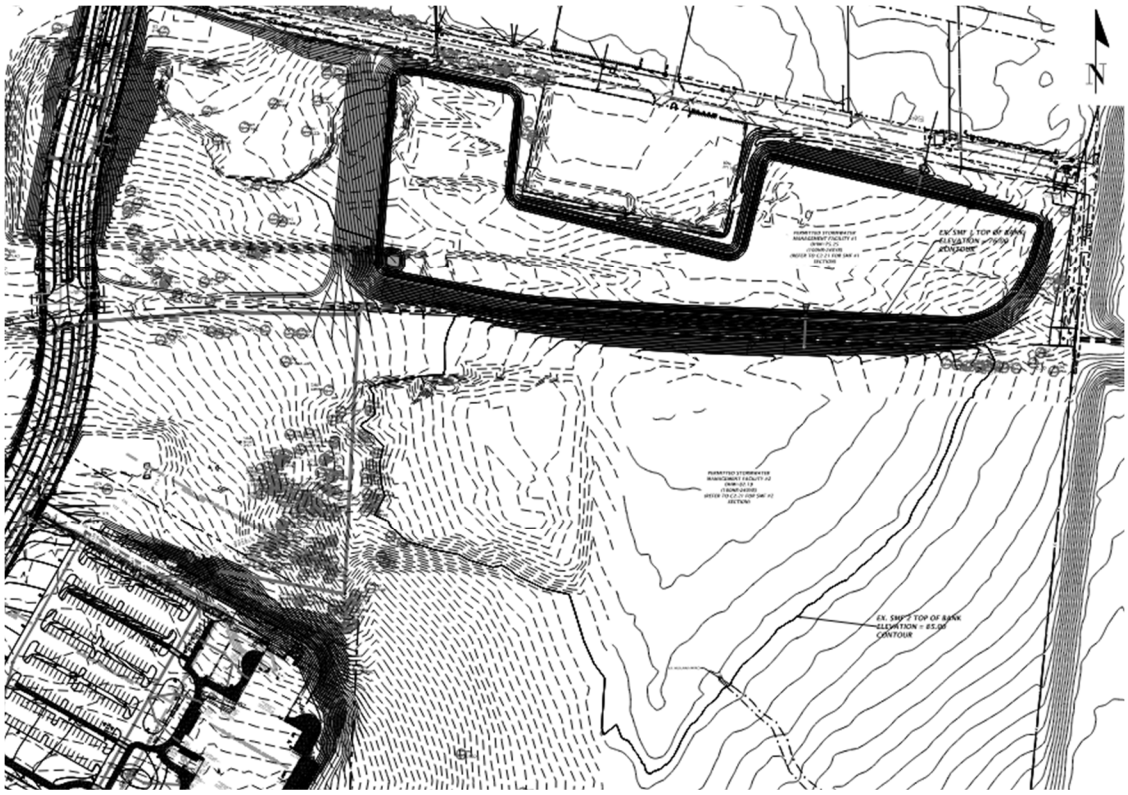
The Tower Hill Headquarters Site Plan Revision proposes the construction of a golf course with a maintenance facility within the previously permitted Tower Hill New HQ site. This site was permitted with the City of Alachua on April 17, 2024, and under SRWMD ERP no. 245365-1. This letter requests a major modification to the stormwater management system based on the below:

- Increase in post-development impervious in drainage area "AG-2" and associated increase in water quality treatment volume (WQTV) for the pond "SMF-2";
- Increase in post-development impervious in drainage area "POST-1" and associated increase in water quality treatment volume (WQTV) for the pond "SMF-1";
- Revised WQTV calculation to account for area of "SMF-2";
- Revised WQTV calculation for "SMF-1" based on the 1st inch of rainfall over the SMF's contributing basin area;
- Revised WQTV calculation for "SMF-2" based on the 1st inch of rainfall over the SMF's contributing basin area;
- Revised model inputs for drainage area "AG-2" and associated increase in runoff captured by "SMF-2";
- Revised model inputs for drainage area "POST-1" and associated increase in runoff captured by "SMF-1".

The proposed changes stem from the addition of a golf course. As in the previous permit, the headquarters facility is located on the western side of the site, in the commercial section. The Stormwater Management Facility #1 (SMF-1), as in the previous permit, is located near NW 162nd Lane on the north side of the site. The proposed changes consist of revised drainage analysis for the impervious area drainage from the proposed maintenance facility, access road, and parking area. There are no changes to the design of SMF-1, it continues to meet all design requirements.

The Stormwater Management Facility #2 (SMF-2), as in the previous permit, is located near the interstate on the east side of the site. The proposed changes consist of revised drainage analysis for the impervious area drainage from the proposed maintenance facility, existing Interstate-75 (I-75), and existing east of I-75 offsite contributing area. Refer to the drainage map attached to this letter for the new drainage boundary. The maintenance facility layout is proposed to reduce the size of SMF-2 with driveways, buildings, parking, and open space. SMF-2 continues to meet all design requirements. The 'permitted conditions' plan snip below shows the previously permitted condition. The 'proposed conditions' plan snip below shows the update to the permitted design, which is the addition of the maintenance facility:

Permitted conditions:



Proposed conditions:

The impervious area of the proposed maintenance facility and access road has been routed as directly connected. The impervious area draining to SMF-1 and SMF-2 will be increased and the WQTV will be increased accordingly.

The overall impervious area contributing to SMF-1 has increased by 36,436 SF for the maintenance facility and access road. The overall impervious area contributing to SMF-2 has increased by 20,629 SF for the maintenance facility and 139,789 SF for I-75. The permitted conditions are shown in Tables 1-3. The SMF-1 drainage areas (POST-1 and AG-2) are left the same as shown in Table 4. The SMF-2 drainage area (AG-2) has been expanded to 4,858,994 SF as shown in Table 5.

The highlighted numbers in the following tables are revised with the updated drainage analysis:

Table 1: Green-Ampt SMF-1 Basin Permitted Conditions

POST-1

Soil Number	Soil Name	Area (Ac)	% Imp	% DCIA	Depth to Water Table	Hyd. Cond.	Eff. Por.	Suction Head
3	Arredondo fine sand, 0 to 5 percent slopes	7.35	38.63	38.63	1.94	23.01	0.42	4.17
4	Land complex, 0 to 5 percent slopes	0.35	0.00	0.00	4.76	16.45	0.42	4.17
5	Fort Meade fine sand, 0 to 5 percent slopes	8.39	22.31	22.31	4.76	24.70	0.42	4.17
30	Millhopper sand, 0 to 5 percent slopes	1.54	36.00	36.00	3.22	9.24	0.41	8.74
35	Tavares Sand, 0 to 5 percent slopes	6.53*	56.75	56.75	6.56	25.84	0.42	4.17
35	SMF Area	3.71	100	100	6.56	25.84	0.42	4.17
38	Lochloosa fine sand, 2 to 5 percent slopes	13.47*	40.75	40.75	6.56	25.84	0.42	4.17
38	SMF Area	3.71	100	100	6.56	25.84	0.42	4.17
71	Kendrick sand, 2 to 5 percent slopes	1.10	52.98	52.98	4.56	17.58	0.40	5.59
73	Blichton sand, 0 to 2 percent slopes	5.51	58.80	58.80	1.77	11.03	0.41	8.74
	Total:	44.25						

*Includes the area of the SMF shown in the row below.

AG-1

Soil Number	Soil Name	Area (Ac)	% Imp	% DCIA	Depth to Water Table	Hyd. Cond.	Eff. Por.	Suction Head
3	Arredondo fine sand, 0 to 5 percent slopes	0.78	0.00	0.00	1.94	23.01	0.42	4.17
5	Fort Meade fine sand, 0 to 5 percent slopes	27.05	0.00	0.00	4.76	24.70	0.42	4.17
20	Millhopper sand, 0 to 5 percent slopes	2.41	0.00	0.00	4.66	51.40	0.42	4.17
30	Millhopper sand, 0 to 5 percent slopes	1.54	36.00	36.00	3.22	9.24	0.41	8.74
	Total:	34.20						

Table 2: Green-Ampt SMF-2 Basin Permitted Conditions

AG-2

Soil Number	Soil Name	Area (Ac)	% Imp	% DCIA	Depth to Water Table	Hyd. Cond.	Eff. Por.	Suction Head
3	Arredondo fine sand, 0 to 5 percent slopes	1.44	0.00	0.00	1.94	23.01	0.42	4.17
5	Fort Meade fine sand, 0 to 5 percent slopes	0.11	0.00	0.00	1.94	23.01	0.42	4.17
8	Arredondo-Urban land complex, 0 to 5 percent slopes	1.22	0.00	0.00	4.69	20.48	0.40	5.59
29	Fort Meade fine sand, 0 to 5 percent slopes	4.17	0.00	0.00	2.56	8.98	0.41	8.74
30	Millhopper sand, 0 to 5 percent slopes	4.88	0.00	0.00	3.22	9.24	0.41	8.74
31	Tavares Sand, 0 to 5 percent slopes	0.34	0.00	0.00	1.12	8.82	0.41	8.74
35*	Lochloosa fine sand, 2 to 5 percent slopes	35.83	31.39	31.39	6.56	25.84	0.42	4.17
38	Kendrick sand, 2 to 5 percent slopes	4.37	0.00	0.00	6.56	25.84	0.42	4.17
71	Blichton sand, 0 to 2 percent slopes	10.48	0.00	0.00	4.56	17.58	0.40	5.59
72	Lochloosa fine sand, 5 to 8 percent slopes	-	-	-	-	-	-	-
73	Gainesville sand, 0 to 5 percent slopes	11.58	0.00	0.00	1.77	11.03	0.41	8.74
75	Pits and Dumps	7.77	0.00	0.00	0.98	10.40	0.41	8.74
76	Millhopper sand, 5 to 8 percent slopes	11.09	0.00	0.00	1.15	1.44	0.32	18.37
78	Kendrick sand, 5 to 8 percent slopes	5.30	0.00	0.00	4.56	4.73	0.33	17.68
	Total:	98.58						

*Impervious shown in this row is solely the area of the permitted condition of SMF-2.

Table 3: WQTV Permitted Conditions

SRWMD WQTV Requirement

SMF-1 (Commercial)

Runoff from first 2" of Rainfall

	Area (sf)	C	A*C	i (ft)	CiA
Impervious Area	734,628	0.95	697,897		
Pervious Area	2,365,452	0.20	473,090		
SMF	317,276	1.00	317,276		
Total	3,417,357		1,488,264	0.17	248,044

Required WQTV =	**248,044**	**cf**

SMF-2 (Agricultural)

Runoff from first 2" of Rainfall

	Area (sf)	C	A*C	i (ft)	CiA
Impervious Area	0	0.95	0		
Pervious Area	4,416,958	0.20	883392		
SMF	0	1.00	0		
Total	4,416,958		883392	0.17	147,232

Required WQTV =	**147,232**	**cf**

The full proposed post-development conditions are as follows:

Table 4: Green-Ampt SMF-1 Basin Proposed Conditions

POST-1

Soil Number	Soil Name	Area (Ac)	% Imp	% DCIA	Depth to Water Table	Hyd. Cond.	Eff. Por.	Suction Head
3	Arredondo fine sand, 0 to 5 percent slopes	7.35	38.63	38.63	1.94	23.01	0.42	4.17
4	Land complex, 0 to 5 percent slopes	0.35	15.19	15.19	4.76	16.45	0.42	4.17
5	Fort Meade fine sand, 0 to 5 percent slopes	8.39	22.31	22.31	4.76	24.70	0.42	4.17
30	Millhopper sand, 0 to 5 percent slopes	1.54	36.00	36.00	3.22	9.24	0.41	8.74
35	Tavares Sand, 0 to 5 percent slopes	6.53*	65.01	65.01	6.56	25.84	0.42	4.17
35	SMF Area	3.71	100	100	6.56	25.84	0.42	4.17
38	Lochloosa fine sand, 2 to 5 percent slopes	13.47*	42.56	42.56	6.56	25.84	0.42	4.17
38	SMF Area	3.71	100	100	6.56	25.84	0.42	4.17
71	Kendrick sand, 2 to 5 percent slopes	1.10	52.98	52.98	4.56	17.58	0.40	5.59
73	Blichton sand, 0 to 2 percent slopes	5.51	58.80	58.80	1.77	11.03	0.41	8.74
	Total:	44.25						

*Includes the area of the SMF shown in the row below.

AG-1

Soil Number	Soil Name	Area (Ac)	% Imp	% DCIA	Depth to Water Table	Hyd. Cond.	Eff. Por.	Suction Head
3	Arredondo fine sand, 0 to 5 percent slopes	0.78	0.00	0.00	1.94	23.01	0.42	4.17
5	Fort Meade fine sand, 0 to 5 percent slopes	27.05	0.00	0.00	4.76	24.70	0.42	4.17
20	Millhopper sand, 0 to 5 percent slopes	2.41	0.00	0.00	4.66	51.40	0.42	4.17
30	Millhopper sand, 0 to 5 percent slopes	1.54	36.00	36.00	3.22	9.24	0.41	8.74
	Total:	34.20						

Table 5: Green-Ampt SMF-2 Basin Proposed Conditions

AG-2

Soil Number	Soil Name	Area (Ac)	% Imp	% DCIA	Depth to Water Table	Hyd. Cond.	Eff. Por.	Suction Head
3	Arredondo fine sand, 0 to 5 percent slopes	1.44	0.00	0.00	1.94	23.01	0.42	4.17
5	Fort Meade fine sand, 0 to 5 percent slopes	0.11	0.00	0.00	1.94	23.01	0.42	4.17
8	Arredondo-Urban land complex, 0 to 5 percent slopes	4.01	24.80	0.00	4.69	20.48	0.40	5.59
29	Fort Meade fine sand, 0 to 5 percent slopes	6.80	0.00	0.00	2.56	8.98	0.41	8.74
30	Millhopper sand, 0 to 5 percent slopes	4.88	0.00	0.00	3.22	9.24	0.41	8.74
31	Tavares Sand, 0 to 5 percent slopes	6.23	28.35	0.00	1.12	8.82	0.41	8.74
35*	Lochloosa fine sand, 2 to 5 percent slopes	35.83	35.94	35.94	6.56	25.84	0.42	4.17
38	Kendrick sand, 2 to 5 percent slopes	4.37	0.00	0.00	6.56	25.84	0.42	4.17
71	Blichton sand, 0 to 2 percent slopes	10.48	0.00	0.00	4.56	17.58	0.40	5.59
72	Lochloosa fine sand, 5 to 8 percent slopes	0.35	0.00	0.00	2.43	5.38	0.41	8.74
73	Gainesville sand, 0 to 5 percent slopes	11.58	0.00	0.00	1.77	11.03	0.41	8.74
75	Pits and Dumps	9.08	4.94	0.00	0.98	10.40	0.41	8.74
76	Millhopper sand, 5 to 8 percent slopes	11.09	0.00	0.00	1.15	1.44	0.32	18.37
78	Kendrick sand, 5 to 8 percent slopes	5.30	0.00	0.00	4.56	4.73	0.33	17.68
	Total:	111.55						

*Impervious shown in this row is solely the area of SMF-2 and the proposed maintenance facility.

Table 6: WQTV Proposed Conditions

SRWMD WQTV Requirement

SMF-1 (Commercial)

Runoff from first 1" of Rainfall

	Area (sf)	C	A*C	i (ft)	CiA
Impervious Area	771,064	0.95	732,511		
Pervious Area	2,329,016	0.20	465,803		
SMF	317,276	1.00	317,276		
Total	3,417,357		1,515,590	0.08	126,299

Required WQTV = 126,299 cf

SMF-2 (Agricultural)

Runoff from first 1" of Rainfall

	Area (sf)	C	A*C	i (ft)	CiA
Impervious Area	160,439	0.95	152,417		
Pervious Area	4,294,556	0.20	858,911		
SMF	404,000	1.00	404,000		
Total	4,858,994		1,415,328	0.08	117,944

Required WQTV = 117,944 cf

The permitted WQTV, associated recovery time, and stage are as follows:

Table 7: SMF-1 & SMF-2 Permitted WQTV, Recovery Time, and Stage

Bain ID	Required Treatment Volume (c.f.)	Peak Elevation (ft)	Recovery (hrs)
SMF-1	248,044	73.90	<18
SMF-2	147,232	77.20	<62

The new WQTV, associated recovery time, and stage are as follows:

Table 8: SMF-1 & SMF-2 Proposed WQTV, Recovery Time, and Stage

Bain ID	Required Treatment Volume (c.f.)	Peak Elevation (ft)	Recovery (hrs)
SMF-1	126,299	73.45	<9
SMF-2	127,030	77.34	<65

The WQTV was revised to be the 1st 1.0 inch of rainfall over the basin area. As with the previous permit, the basins are designed to be full retention and do not discharge to a sinkhole or Outstanding Florida Water. SMF-1 and SMF-2, up to the top of banks, were considered 100% impervious.

The peak stages, freeboard, and recovery analysis are summarized below in Table 9 and Table 10 for permitted and proposed conditions, respectively.

Table 9: SMF-1 & SMF-2 Permitted Peak Stage and Recovery

SMF-1

Storm Event	Peak Stage (ft)	Freeboard (ft)	Recovery (Days after event)	Time to ½ Volume Available (Days After Storm)
100 yr – 1 hr	73.95	2.30	<1	<1
100 yr – 2 hr	74.12	2.13	<1	<1
100 yr – 4 hr	74.34	1.94	<2	<2
100 yr – 8 hr	74.45	1.80	<2	<2
100 yr – 24 hr	74.52	1.73	<3	<3
100 yr – 72 hr	74.08	2.17	<18	<7
100 yr – 168 hr	74.72	1.53	>30	>7
100 yr – 168 hr B2B	75.02	1.23	N/A	N/A
100 yr – 240 hr	75.25	1.00	>30	>7
100yr – 240 hr B2B	75.96	0.29	N/A	N/A

SMF-2

Storm Event	Peak Stage (ft)	Freeboard (ft)	Recovery (Days after event)	Time to ½ Volume Available (Days After Storm)
100 yr – 1 hr	77.75	6.25	<4	<4
100 yr – 2 hr	77.92	6.08	<4	<4
100 yr – 4 hr	78.50	5.50	<4	<4
100 yr – 8 hr	78.97	5.03	<6	<6
100 yr – 24 hr	80.01	3.99	<15	<7
100 yr – 72 hr	80.37	3.63	>30	<7
100 yr – 72 hr B2B	80.39	3.61	N/A	N/A
100 yr – 168 hr	81.47	2.53	>30	<7
100 yr – 168 hr B2B	82.30	1.70	N/A	N/A
100 yr – 240 hr	82.19	1.81	>30	<7
100yr – 240 hr B2B	83.21	0.79	N/A	N/A

Table 10: SMF-1 & SMF-2 Proposed Peak Stage and Recovery

SMF-1

Storm Event	Peak Stage (ft)	Freeboard (ft)	Recovery (Days after event)	Time to ½ Volume Available (Days After Storm)
100 yr – 1 hr	74.00	2.00	<1	<1
100 yr – 2 hr	74.18	1.82	<1	<1
100 yr – 4 hr	74.40	1.60	<2	<1
100 yr – 8 hr	74.53	1.47	<2	<1
100 yr – 24 hr	74.62	1.38	<5	<1
100 yr – 72 hr*	74.24*	1.76*	>30*	<1*
100 yr – 72 hr B2B*	74.26*	1.74*	N/A*	N/A*
100 yr – 168 hr*	74.90*	1.10*	>30*	<5*
100 yr – 168 hr B2B*	75.22*	0.78*	N/A*	N/A*
100 yr – 240 hr*	75.47*	0.53*	>30*	<22*
100yr – 240 hr B2B*	76.37*	-0.37*	N/A*	N/A*

*No longer required by SRWMD.

SMF-2

Storm Event	Peak Stage (ft)	Freeboard (ft)	Recovery (Days after event)	Time to ½ Volume Available (Days After Storm)
100 yr – 1 hr	78.47	4.03	<4	<1
100 yr – 2 hr	78.82	3.68	<4	<1
100 yr – 4 hr	79.56	2.94	<5	<1
100 yr – 8 hr	80.13	2.37	<6	<1
100 yr – 24 hr	81.35	1.15	<18	<1
100 yr – 72 hr*	81.85*	0.65*	>30*	<2*
100 yr – 72 hr B2B*	81.87*	0.63*	N/A*	N/A*
100 yr – 168 hr*	82.82*	-0.32*	>30*	>30*
100 yr – 168 hr B2B*	83.84*	-1.34*	N/A*	N/A*
100 yr – 240 hr*	83.68*	-1.18*	>30*	>30*
100yr – 240 hr B2B*	84.87*	-2.37*	N/A*	N/A*

*No longer required by SRWMD.

For all design storms, basins have the required 1' of freeboard and recover in 30 days following the end of the storm events. Basins also provide half of the total volume in the pond within 7 days after the storm event.

Please refer to the attached calculations included with this letter.

We trust that you find the enclosed package complete and sufficient to provide approval and issuance of the requested permit modification. Should you have any questions or require any additional information to complete your review, please feel free to contact me at (352) -331-1976 or via email at walker.owen@nv5.com.

Sincerely,
CHW

Walker Owen, P.E.
Project Manager
N:\2021\21-0025\Departments\04_Engineering\03_Drainage\4_Report\Working Files\Tower Hill - WMD Permit Modification Narrative.docx

PERMITTED STAGE-STORAGE CALCULATIONS:

Post-Development SMF-1: Stage-Storage Relationship				
ELEV.	**AREA (SF)**	**AREA (AC)**	**VOLUME (CF)**	**VOLUME (AC-FT)**
73.00	276,279	6.3425	0	0.000
74.00	289,844	6.6539	283,062	6.498
75.00	303,510	6.9676	579,739	13.309
76.00	317,276	7.2837	890,132	20.435

Required WQTV = 248044 cf
WQTV Elevation = 73.90 ft
One-Half Vol. = 74.02 ft

Post-Development SMF-2: Stage-Storage Relationship				
ELEV.	**AREA (SF)**	**AREA (AC)**	**VOLUME (CF)**	**VOLUME (AC-FT)**
74.00	6,373	0.1463	0	0.000
75.00	24,134	0.5540	15,253	0.350
76.00	51,826	1.1898	53,233	1.222
77.00	100,420	2.3053	129,356	2.970
78.00	192,447	4.4180	275,790	6.331
79.00	251,828	5.7812	497,927	11.431
80.00	317,132	7.2804	782,407	17.962
81.00	372,721	8.5565	1,127,333	25.880
82.00	433,703	9.9565	1,530,545	35.136
83.00	491,192	11.2762	1,992,993	45.753
84.00	495,469	11.3744	2,486,324	57.078
85.00	589,777	13.5394	3,028,947	69.535

Required WQTV = 147232 cf
WQTV Elevation = 77.20 ft
One-Half Vol. = 81.34 ft

Stormwater Parameters for SMF-1 & SMF-2

Existing Ground Elevation =	74.00	ft
Base of Aquifer =	61.00	ft
Water Table =	61.50	ft
Horizontal Hydraulic Conductivity =	2.00	ft/day*
Fillable Porosity =	20%	
Unsaturated Vertical Infiltration Rate =	1.25	ft/day*

*A factor of safety of 2 was applied.

PROPOSED STAGE-STORAGE CALCULATIONS:

Post-Development SMF-1: Stage-Storage Relationship				
ELEV.	**AREA (SF)**	**AREA (AC)**	**VOLUME (CF)**	**VOLUME (AC-FT)**
73.00	276,279	6.3425	0	0.000
74.00	289,844	6.6539	283,062	6.498
75.00	303,510	6.9676	579,739	13.309
76.00	317,276	7.2837	890,132	20.435

Required WQTV = 126,299 cf
WQTV Elevation = 73.45 ft
One-Half Vol. = 74.55 ft

Post-Development SMF-2: Stage-Storage Relationship				
ELEV.	**AREA (SF)**	**AREA (AC)**	**VOLUME (CF)**	**VOLUME (AC-FT)**
74.00	5,786	0.1328	0	0.000
75.00	13,672	0.3139	9,729	0.223
76.00	27,299	0.6267	30,214	0.694
77.00	85,896	1.9719	86,812	1.993
78.00	148,472	3.4085	203,996	4.683
79.00	203,568	4.6733	380,016	8.724
80.00	266,567	6.1195	615,084	14.120
81.00	319,326	7.3307	908,031	20.846
82.00	377,583	8.6681	1,256,486	28.845
82.50	404,000	9.2746	1,451,882	33.331

Required WQTV = 117,944 cf
WQTV Elevation = 77.27 ft
One-Half Vol. = 80.38 ft

Stormwater Parameters for SMF-1 & SMF-2

Existing Ground Elevation =	74.00	ft
Base of Aquifer =	61.00	ft
Water Table =	61.50	ft
Horizontal Hydraulic Conductivity =	2.00	ft/day*
Fillable Porosity =	20%	
Unsaturated Vertical Infiltration Rate =	1.25	ft/day*

*A factor of safety of 2 was applied.

Project Number: 21-0025
Project Name: Tower Hill
Calculated by: NRC
Checked by: WFO
Date: 4/20/2023

Permitted Time of Concentration

	SHEET FLOW					SHALLOW CONCENTRATED FLOW							
BASIN	Manning's n (--)	Flow Length L (ft)	2-Year 24-Hour Rain, P2 (in)	Land Slope s (ft/ft)	Tt1 (hr)	Paved or Unpvd. (P or U)	Flow Length L (ft)	Water-course Slope, s (ft/ft)	Avg. Velocity V (ft/s)	Tt2 (hr)	ID #	Tc (hr)	Tc (min)
AG-2	0.24	100	4.5	0.030	**0.17**	U	3075	0.020	2.28	**0.37**	AG-2	**0.54**	32.69
AG-1	0.4	100	4.5	0.040	**0.23**	U	2200	0.029	2.75	**0.22**	AG-1	**0.45**	27.07
											0	**0.00**	0.00
											0	**0.00**	0.00

SHEET FLOW:

$$Tt = \frac{0.007\,(nL)^{0.8}}{(P2)^{0.5}s^{0.4}}$$

SHALLOW CONCENTRATED FLOW:

1. For slopes < 0.005 ft/ft
   Unpaved $V=16.1345\,s^{0.5}$
   Paved $V=20.3282\,s^{0.5}$

2. For slopes > 0.005 ft/ft
Velocity per Figure 3-1, TR-55

$$Tt = \frac{L}{3600\,V}$$

CHANNEL/PIPE FLOW:

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

$$Tt = \frac{L}{3600\,V}$$

Proposed Time of Concentration

	SHEET FLOW					SHALLOW CONCENTRATED FLOW							
BASIN	Manning's n (--)	Flow Length L (ft)	2-Year 24-Hour Rain, P2 (in)	Land Slope s (ft/ft)	Tt1 (hr)	Paved or Unpvd. (P or U)	Flow Length L (ft)	Water-course Slope, s (ft/ft)	Avg. Velocity V (ft/s)	Tt2 (hr)	ID #	Tc (hr)	Tc (min)
AG-2	0.15	100	4.5	0.030	**0.12**	U	2160	0.020	2.28	**0.26**	AG-2	**0.38**	22.80
AG-1	0.4	100	4.5	0.040	**0.23**	U	2200	0.029	2.75	**0.22**	AG-1	**0.45**	27.07
											0	**0.00**	0.00
											0	**0.00**	0.00

SHEET FLOW:

$$Tt = \frac{0.007\ (nL)^{0.8}}{(P2)^{0.5} s^{0.4}}$$

SHALLOW CONCENTRATED FLOW:

1. For slopes < 0.005 ft/ft

   Unpaved $V = 16.1345\ s^{0.5}$

   Paved $V = 20.3282\ s^{0.5}$

2. For slopes > 0.005 ft/ft

Velocity per Figure 3-1, TR-55

$$Tt = \frac{L}{3600\ V}$$

CHANNEL/PIPE FLOW:

$$V = \frac{49 r^{2/3} s^{1/2}}{n}$$

$$Tt = \frac{L}{3600\ V}$$

LEGEND

Drainage map permitted conditions

N

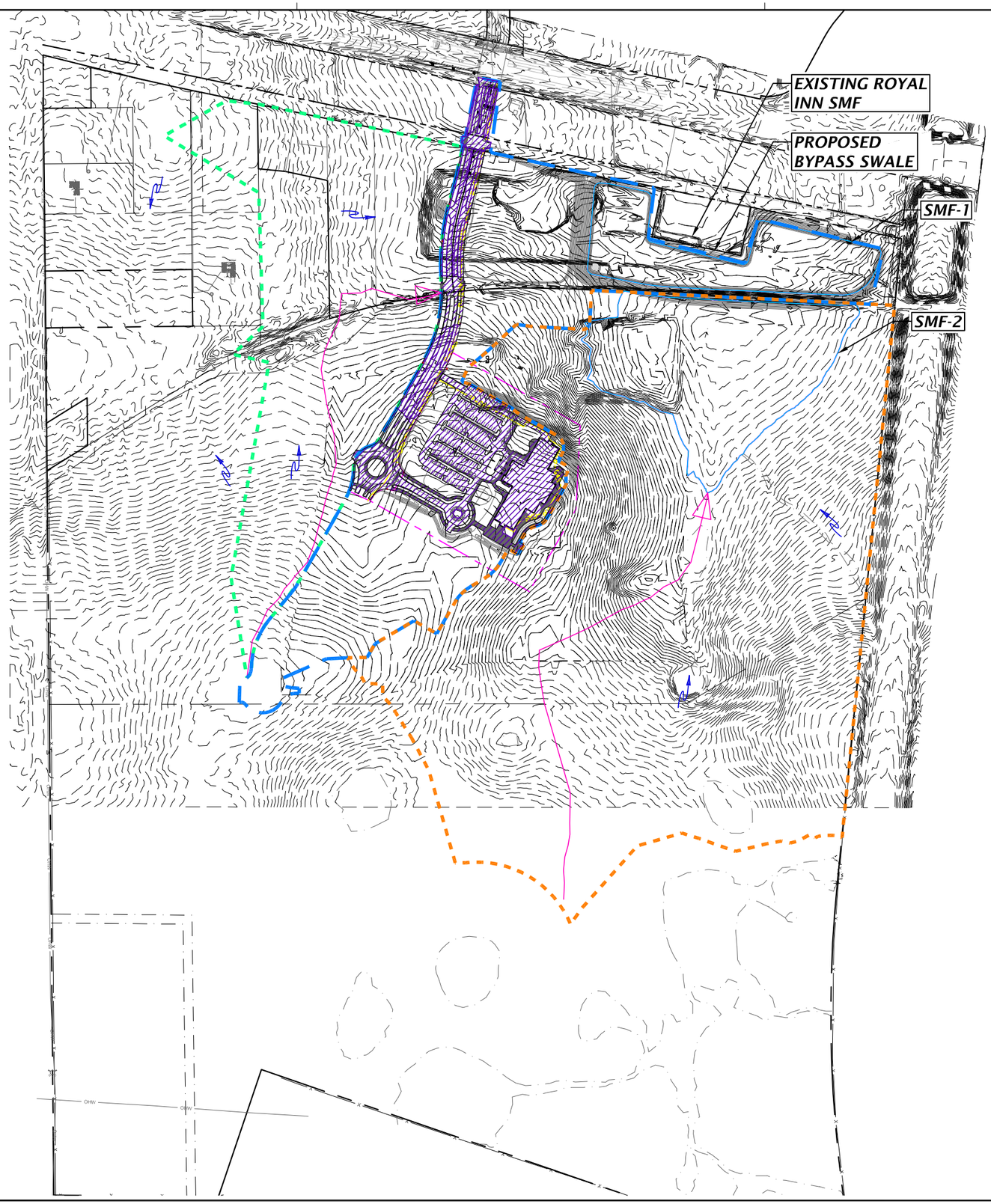
POST-1:

AG-1:

AG-2:

POST-DEVELOPMENT TIME OF CONCENTRATION:

POST-DEVELOPMENT DRAINAGE FLOW PATTERNS:



11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA CA-5075
CHW Professional Consultants

SCALE: 1"=500'

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/BID REVISIONS:

SUBMITTALS:

CLIENT: CAUSSEAUX, HEWETT, & WALPOLE, INC. ENGINEERING - SURVEYING - PLANNING

PROJECT: TOWER HILL HEADQUARTERS

SHEET TITLE: POST-DEVELOPMENT DRAINAGE MAP

TECHNICIAN: TFC

DESIGNER: NRC

QUALITY CONTROL: WFO

PROJECT NUMBER: 21-0025

SHEET NO.: 1

LEGEND

Drainage map proposed conditions

N

POST-1:

AG-1:

AG-2:

WETLAND DRAINAGE AREAS:

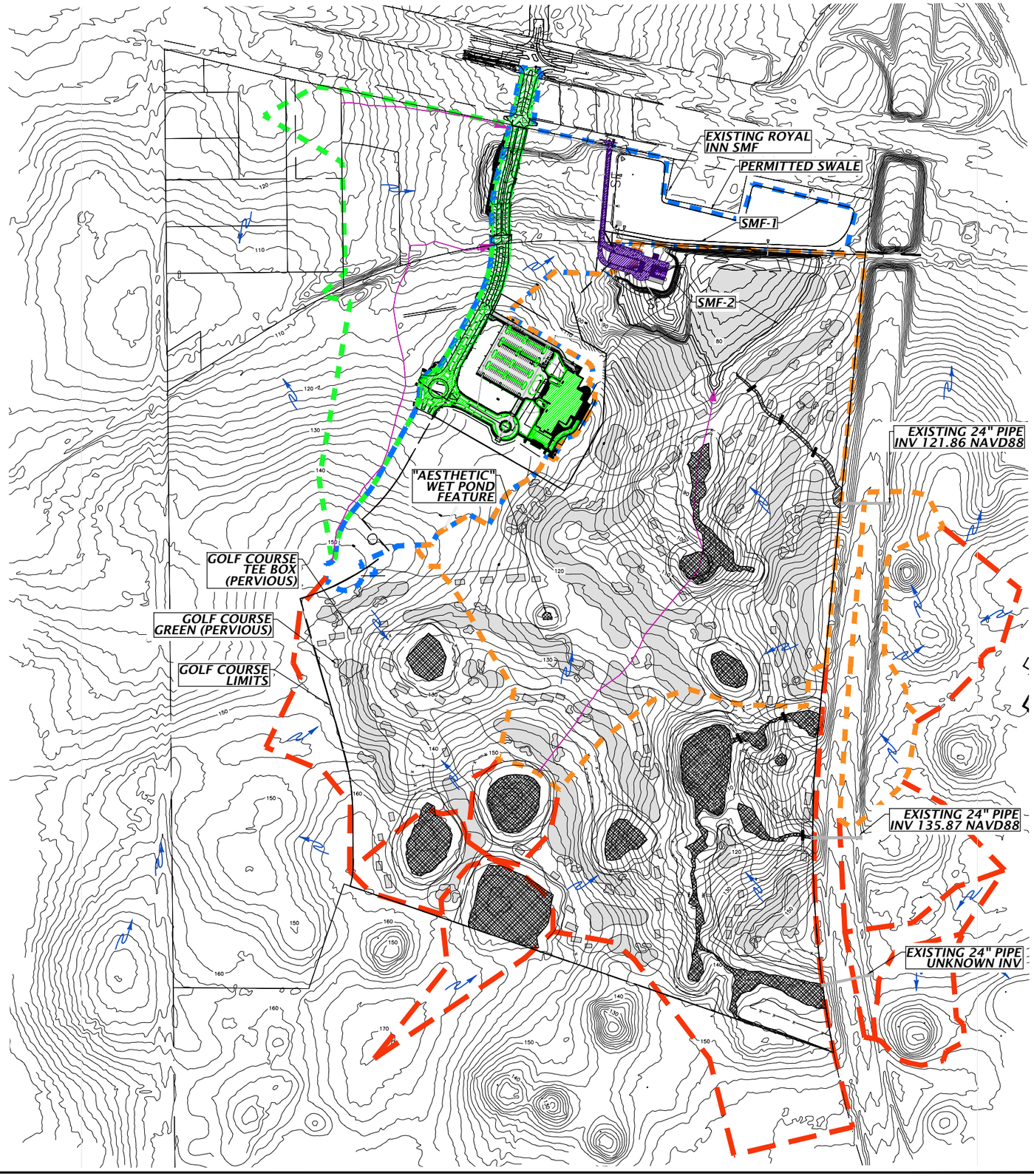
PROPOSED IMPERVIOUS AREA:

PREVIOUSLY PERMITTED IMPERVIOUS AREA:

WETLAND AREA:

POST-DEVELOPMENT DRAINAGE FLOW PATTERNS:

POST-DEVELOPMENT TIME OF CONCENTRATION:



CHW AN NV5 COMPANY

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Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com

est. 1988 FLORIDA CA-5075

SCALE: 1"=600'

VERIFY SCALE
BAR IS ONE HALF INCH ON ORIGINAL DRAWING
0 1/2" 1"
IF NOT ONE HALF INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONSTRUCTION/BID REVISIONS:

SUBMITTALS:

CLIENT: CAUSSEAUX, HEWETT, & WALPOLE, INC. ENGINEERING - SURVEYING - PLANNING

PROJECT: TOMOKA HILLS GOLF COURSE

SHEET TITLE: POST-DEVELOPMENT DRAINAGE MAP

TECHNICIAN: T. COWART

DESIGNER: K. REED

QUALITY CONTROL: W. OWEN

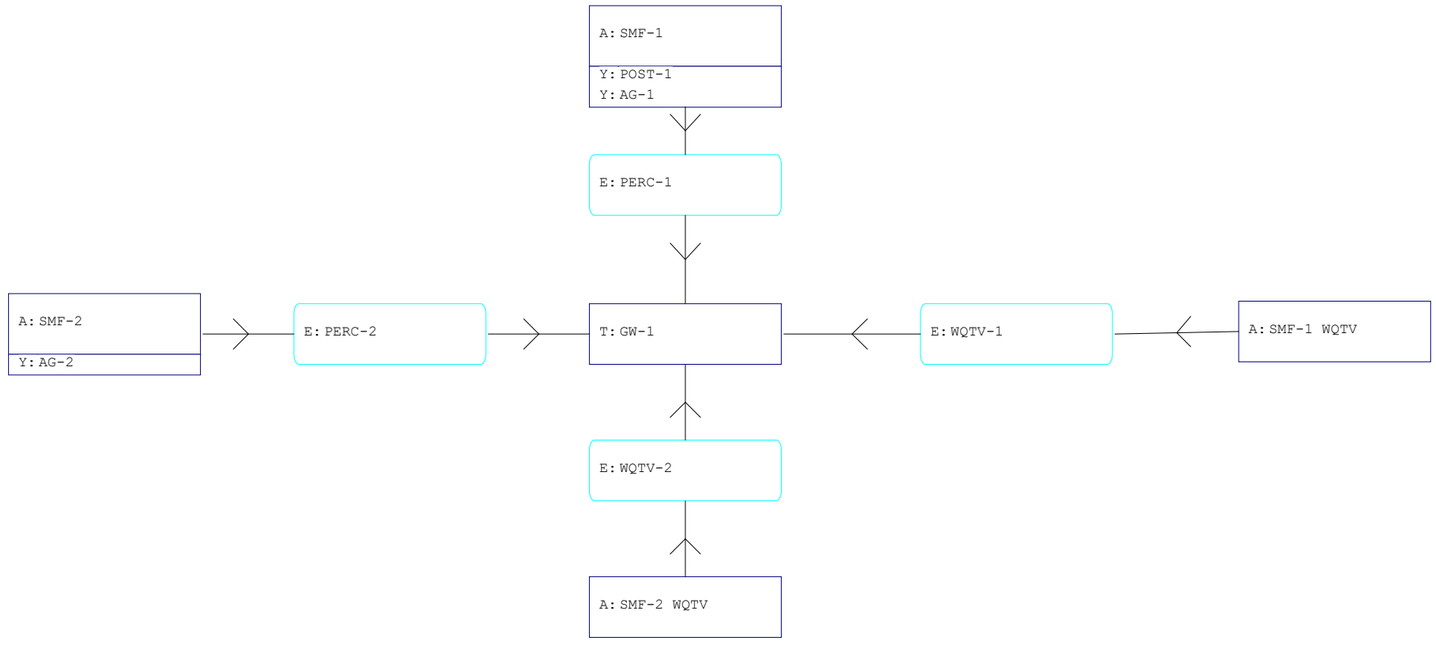
PROJECT NUMBER: 21-0025.18

SHEET NO.:

Nodes
A Stage/Area
V Stage/Volume
T Time/Stage
M Manhole

Basins
O Overland Flow
U SCS Unit CN
S SBUH CN
Y SCS Unit GA
Z SBUH GA

Links
P Pipe
W Weir
C Channel
D Drop Structure
B Bridge
R Rating Curve
H Breach
E Percolation
F Filter
X Exfil Trench



==========
==== Basins ==========
==========

Name: AG-1 Node: SMF-1 Status: Onsite
Group: Post-Dev Type: SCS Unit Hydrograph GA

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 27.07
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Area(ac)	Impervious(%)	DCIA(%)	Cutoff(ft)	**********	Eff Por(dec)	Suctn Hd(in)
0.780	0.000	0.00	1.940	23.010	0.420	4.170
27.050	0.000	0.00	4.760	24.700	0.420	4.170
2.410	0.000	0.00	4.660	51.400	0.420	4.170
3.980	0.000	0.00	3.220	9.240	0.410	8.740

Name: AG-2 Node: SMF-2 Status: Onsite
Group: Post-Dev Type: SCS Unit Hydrograph GA

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 22.80
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Area(ac)	Impervious(%)	DCIA(%)	Cutoff(ft)	**********	Eff Por(dec)	Suctn Hd(in)
1.440	0.000	0.00	1.940	23.010	0.420	4.170
0.110	0.000	0.00	1.940	23.010	0.420	4.170
4.010	24.800	0.00	4.690	20.480	0.400	5.590
6.800	0.000	0.00	2.560	8.980	0.410	8.740
4.880	0.000	0.00	3.220	9.240	0.410	8.740
6.230	28.350	0.00	1.120	8.820	0.410	8.740
35.830	35.940	35.94	6.560	25.840	0.420	4.170
4.370	0.000	0.00	6.560	25.840	0.420	4.170
10.480	0.000	0.00	4.560	17.580	0.400	5.590
0.350	0.000	0.00	2.430	5.380	0.410	8.740
11.580	0.000	0.00	1.770	11.030	0.410	8.740
9.080	4.940	0.00	0.980	10.400	0.410	8.740
11.090	0.000	0.00	1.150	1.440	0.320	18.370
5.300	0.000	0.00	4.560	4.730	0.330	17.680

Name: POST-1 Node: SMF-1 Status: Onsite
Group: Post-Dev Type: SCS Unit Hydrograph GA

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Area(ac)	Impervious(%)	DCIA(%)	Cutoff(ft)	**********	Eff Por(dec)	Suctn Hd(in)
7.350	38.630	38.63	1.940	23.010	0.420	4.170
0.350	15.187	15.19	4.760	16.450	0.420	4.170
8.390	22.310	22.31	4.760	24.700	0.420	4.170
1.540	36.000	36.00	3.220	9.240	0.410	8.740
6.530	65.010	65.01	6.560	25.840	0.420	4.170
13.470	42.563	42.56	6.560	25.840	0.420	4.170
1.100	52.980	52.98	4.560	17.580	0.400	5.590
5.510	58.800	58.80	1.770	11.030	0.410	8.740

==========
==== Nodes ==========

==========

Name: GW-1 Base Flow(cfs): 0.000 Init Stage(ft): 60.000
Group: Post-Dev Warn Stage(ft): 0.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	60.000
960.00	60.000

Name: SMF-1 Base Flow(cfs): 0.000 Init Stage(ft): 73.000
Group: Post-Dev Warn Stage(ft): 75.500
Type: Stage/Area

Stage(ft)	Area(ac)
73.000	6.3425
74.000	6.6539
75.000	6.9676
76.000	7.2837

Name: SMF-1 WQTV Base Flow(cfs): 0.000 Init Stage(ft): 73.450
Group: Post-Dev Warn Stage(ft): 75.500
Type: Stage/Area

Stage(ft)	Area(ac)
73.000	6.3425
74.000	6.6539
75.000	6.9676
76.000	7.2837

Name: SMF-2 Base Flow(cfs): 0.000 Init Stage(ft): 74.000
Group: Post-Dev Warn Stage(ft): 81.500
Type: Stage/Area

Stage(ft)	Area(ac)
74.000	0.1328
75.000	0.3139
76.000	0.6267
77.000	1.9719
78.000	3.4085
79.000	4.6733
80.000	6.1195
81.000	7.3307
82.000	8.6681
82.500	9.2746

Name: SMF-2 WQTV Base Flow(cfs): 0.000 Init Stage(ft): 77.270
Group: Post-Dev Warn Stage(ft): 81.500
Type: Stage/Area

Stage(ft)	Area(ac)
74.000	0.1328
75.000	0.3139
76.000	0.6267
77.000	1.9719
78.000	3.4085
79.000	4.6733
80.000	6.1195

81.000	7.3307
82.000	8.6681
82.500	9.2746

Percolation Links

Name: PERC-1 From Node: SMF-1 Flow: Both
Group: Post-Dev To Node: GW-1 Count: 1

Surface Area Option: Vary based on Stage/Area Table
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): 61.000 Perimeter 1(ft): 3098.265
Water Table Elev(ft): 61.500 Perimeter 2(ft): 3099.265
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 3416.789
Horiz Conductivity(ft/day): 2.000 Distance 1 to 2(ft): 50.000
Vert Conductivity(ft/day): 1.250 Distance 2 to 3(ft): 450.000
Effective Porosity(dec): 0.200 Num Cells 1 to 2: 15
Suction Head(in): 4.170 Num Cells 2 to 3: 45
Layer Thickness(ft): 11.500

Name: PERC-2 From Node: SMF-2 Flow: Both
Group: Post-Dev To Node: GW-1 Count: 1

Surface Area Option: Vary based on Stage/Area Table
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): 61.000 Perimeter 1(ft): 3721.975
Water Table Elev(ft): 61.500 Perimeter 2(ft): 3722.975
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 4664.748
Horiz Conductivity(ft/day): 2.000 Distance 1 to 2(ft): 50.000
Vert Conductivity(ft/day): 1.250 Distance 2 to 3(ft): 450.000
Effective Porosity(dec): 0.200 Num Cells 1 to 2: 15
Suction Head(in): 4.170 Num Cells 2 to 3: 45
Layer Thickness(ft): 12.500

Name: WQTV-1 From Node: SMF-1 WQTV Flow: Both
Group: Post-Dev To Node: GW-1 Count: 1

Surface Area Option: Vary based on Stage/Area Table
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): 61.000 Perimeter 1(ft): 3098.265
Water Table Elev(ft): 61.500 Perimeter 2(ft): 3099.265
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 3416.789
Horiz Conductivity(ft/day): 2.000 Distance 1 to 2(ft): 50.000
Vert Conductivity(ft/day): 1.250 Distance 2 to 3(ft): 450.000
Effective Porosity(dec): 0.200 Num Cells 1 to 2: 15
Suction Head(in): 4.170 Num Cells 2 to 3: 45
Layer Thickness(ft): 11.500

Name: WQTV-2 From Node: SMF-2 WQTV Flow: Both
Group: Post-Dev To Node: GW-1 Count: 1

Surface Area Option: Vary based on Stage/Area Table
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): 61.000 Perimeter 1(ft): 3721.975
Water Table Elev(ft): 61.500 Perimeter 2(ft): 3722.975
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 4664.748
Horiz Conductivity(ft/day): 2.000 Distance 1 to 2(ft): 50.000
Vert Conductivity(ft/day): 1.250 Distance 2 to 3(ft): 450.000
Effective Porosity(dec): 0.200 Num Cells 1 to 2: 15
Suction Head(in): 4.170 Num Cells 2 to 3: 45
Layer Thickness(ft): 12.500

```
================================================================================
==== Hydrology Simulations =====================================================
================================================================================

         Name: 100 YR 1 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 1.00
          Rainfall File: Fdot-1
    Rainfall Amount(in): 4.40

Time(hrs)       Print Inc(min)
--------------- ---------------
721.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 168 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 168.00
          Rainfall File: Fdot-168
    Rainfall Amount(in): 16.00

Time(hrs)       Print Inc(min)
--------------- ---------------
888.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 2 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 2.00
          Rainfall File: Fdot-2
    Rainfall Amount(in): 5.40

Time(hrs)       Print Inc(min)
--------------- ---------------
722.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 24 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Fdot-24
    Rainfall Amount(in): 11.04

Time(hrs)       Print Inc(min)
--------------- ---------------
744.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 240 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 240.00
          Rainfall File: Fdot-240
    Rainfall Amount(in): 18.00

Time(hrs)       Print Inc(min)
--------------- ---------------
960.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 4 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 4.00
          Rainfall File: Fdot-4
```

Rainfall Amount(in): 6.72

Time(hrs)	Print Inc(min)
744.000	5.00

Name: 100 YR 72 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Override Defaults: Yes
Storm Duration(hrs): 72.00
Rainfall File: Fdot-72
Rainfall Amount(in): 13.80

Time(hrs)	Print Inc(min)
792.000	5.00

Name: 100 YR 8 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Override Defaults: Yes
Storm Duration(hrs): 8.00
Rainfall File: Fdot-8
Rainfall Amount(in): 8.00

Time(hrs)	Print Inc(min)
728.000	5.00

Name: WQTV
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\W

Override Defaults: Yes
Storm Duration(hrs): 1.00
Rainfall File: Flmod
Rainfall Amount(in): 0.10

Time(hrs)	Print Inc(min)
72.000	5.00

==========
==== Routing Simulations ==========
==========

Name: 100 YR 1 HR Hydrology Sim: 100 YR 1 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 721.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 168 HR Hydrology Sim: 100 YR 168 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

```
     Execute: Yes         Restart: No            Patch: No
 Alternative: No

       Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                    End Time(hrs): 888.00
    Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
       Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         15.000

Group           Run
--------------- -----
BASE            Yes
Post-Dev        Yes
Pre-Dev         Yes


-------------------------------------------------------------------------------------------------
         Name: 100 YR 2 HR         Hydrology Sim: 100 YR 2 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

     Execute: Yes         Restart: No            Patch: No
 Alternative: No

       Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                    End Time(hrs): 722.00
    Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
       Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         15.000

Group           Run
--------------- -----
BASE            Yes
Post-Dev        Yes
Pre-Dev         Yes


-------------------------------------------------------------------------------------------------
         Name: 100 YR 24 HR        Hydrology Sim: 100 YR 24 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

     Execute: Yes         Restart: No            Patch: No
 Alternative: No

       Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                    End Time(hrs): 744.00
    Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
       Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         15.000

Group           Run
--------------- -----
BASE            Yes
Post-Dev        Yes
Pre-Dev         Yes


-------------------------------------------------------------------------------------------------
         Name: 100 YR 240 HR       Hydrology Sim: 100 YR 240 HR
```

Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 960.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 4 HR Hydrology Sim: 100 YR 4 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 724.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 72 HR Hydrology Sim: 100 YR 72 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 792.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

```
         Name: 100 YR 8 HR         Hydrology Sim: 100 YR 8 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 728.00
     Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         15.000

Group           Run
--------------- -----
BASE            Yes
Post-Dev        Yes
Pre-Dev         Yes


-------------------------------------------------------------------------------------------------------
         Name: WQTV                Hydrology Sim: WQTV
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\W

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 80.00
     Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         15.000

Group           Run
--------------- -----
BASE            Yes
Post-Dev        Yes
Pre-Dev         Yes
```

SMF-1 Max Stages

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
SMF-1	Post-Dev	100 YR 1 HR	1.12	74.00	75.50	0.0010	289819	0.58	170.5	1.12	4.2
SMF-1	Post-Dev	100 YR 168 HR	168.25	74.90	75.50	0.0025	302140	154.77	12.7	40.10	4.0
SMF-1	Post-Dev	100 YR 2 HR	2.15	74.18	75.50	0.0012	292318	0.83	125.4	2.15	4.2
SMF-1	Post-Dev	100 YR 24 HR	22.14	74.62	75.50	0.0027	298374	11.50	21.3	22.14	4.3
SMF-1	Post-Dev	100 YR 240 HR	240.16	75.47	75.50	0.0024	309998	179.09	16.7	40.13	4.0
SMF-1	Post-Dev	100 YR 4 HR	4.05	74.40	75.50	0.0014	295369	2.00	67.4	4.05	4.3
SMF-1	Post-Dev	100 YR 72 HR	72.14	74.24	75.50	0.0022	293068	59.91	18.4	60.82	4.1
SMF-1	Post-Dev	100 YR 8 HR	8.03	74.53	75.50	0.0032	297071	3.50	64.8	8.03	4.3

SMF-2 Max Stages

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
SMF-2	Post-Dev	100 YR 1 HR	1.53	78.47	81.50	0.0050	174437	0.75	150.1	1.53	2.5
SMF-2	Post-Dev	100 YR 168 HR	168.45	82.82	81.50	0.0050	421009	155.43	28.2	72.28	2.2
SMF-2	Post-Dev	100 YR 2 HR	2.47	78.82	81.50	0.0050	193778	0.92	109.2	2.47	2.8
SMF-2	Post-Dev	100 YR 24 HR	24.17	81.35	81.50	0.0050	339604	12.00	43.7	24.17	4.9
SMF-2	Post-Dev	100 YR 240 HR	240.36	83.68	81.50	0.0050	466096	182.01	37.2	72.20	2.0
SMF-2	Post-Dev	100 YR 4 HR	4.36	79.56	81.50	0.0050	239001	2.67	80.3	4.36	3.5
SMF-2	Post-Dev	100 YR 72 HR	68.34	81.85	81.50	0.0050	368654	58.76	36.1	68.34	5.3
SMF-2	Post-Dev	100 YR 8 HR	8.31	80.13	81.50	0.0050	273274	4.08	100.5	8.31	4.0

SMF-1 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 1 HR	SMF-1	Post-Dev	13.26	73.37	75.50	281285	0.0	4.1	6.9	4.5
100 YR 1 HR	SMF-1	Post-Dev	13.51	73.36	75.50	281109	0.0	4.1	6.9	4.6
100 YR 1 HR	SMF-1	Post-Dev	13.76	73.34	75.50	280932	0.0	4.1	6.9	4.6
100 YR 1 HR	SMF-1	Post-Dev	14.01	73.33	75.50	280756	0.0	4.1	6.9	4.7
100 YR 1 HR	SMF-1	Post-Dev	14.26	73.32	75.50	280579	0.0	4.1	6.9	4.8
100 YR 1 HR	SMF-1	Post-Dev	14.51	73.30	75.50	280402	0.0	4.1	6.9	4.9
100 YR 1 HR	SMF-1	Post-Dev	14.76	73.29	75.50	280226	0.0	4.1	6.9	5.0
100 YR 1 HR	SMF-1	Post-Dev	15.01	73.28	75.50	280049	0.0	4.1	6.9	5.1
100 YR 1 HR	SMF-1	Post-Dev	15.26	73.26	75.50	279872	0.0	4.0	6.9	5.2
100 YR 1 HR	SMF-1	Post-Dev	15.51	73.25	75.50	279696	0.0	4.0	6.9	5.2
100 YR 1 HR	SMF-1	Post-Dev	15.76	73.24	75.50	279519	0.0	4.0	6.9	5.3
100 YR 1 HR	SMF-1	Post-Dev	16.01	73.23	75.50	279343	0.0	4.0	6.9	5.4
100 YR 1 HR	SMF-1	Post-Dev	16.26	73.21	75.50	279166	0.0	4.0	6.9	5.5
100 YR 1 HR	SMF-1	Post-Dev	16.51	73.20	75.50	278989	0.0	4.0	6.9	5.6
100 YR 1 HR	SMF-1	Post-Dev	16.76	73.19	75.50	278813	0.0	4.0	6.9	5.7
100 YR 1 HR	SMF-1	Post-Dev	17.01	73.17	75.50	278636	0.0	4.0	6.9	5.7
100 YR 1 HR	SMF-1	Post-Dev	17.26	73.16	75.50	278459	0.0	4.0	6.9	5.8
100 YR 1 HR	SMF-1	Post-Dev	17.51	73.15	75.50	278283	0.0	4.0	6.9	5.9
100 YR 1 HR	SMF-1	Post-Dev	17.76	73.13	75.50	278106	0.0	4.0	6.9	6.0
100 YR 1 HR	SMF-1	Post-Dev	18.01	73.12	75.50	277930	0.0	4.0	6.9	6.1
100 YR 1 HR	SMF-1	Post-Dev	18.26	73.11	75.50	277753	0.0	4.0	6.9	6.2
100 YR 1 HR	SMF-1	Post-Dev	18.51	73.10	75.50	277576	0.0	4.0	6.9	6.2
100 YR 1 HR	SMF-1	Post-Dev	18.76	73.08	75.50	277400	0.0	4.0	6.9	6.3
100 YR 1 HR	SMF-1	Post-Dev	19.01	73.07	75.50	277223	0.0	4.0	6.9	6.4
100 YR 1 HR	SMF-1	Post-Dev	19.26	73.06	75.50	277046	0.0	4.0	6.9	6.5
100 YR 1 HR	SMF-1	Post-Dev	19.51	73.04	75.50	276870	0.0	4.0	6.9	6.6
100 YR 1 HR	SMF-1	Post-Dev	19.76	73.03	75.50	276693	0.0	4.0	6.9	6.6
100 YR 1 HR	SMF-1	Post-Dev	20.01	73.02	75.50	276517	0.0	4.0	6.9	6.7
100 YR 1 HR	SMF-1	Post-Dev	20.26	73.00	75.50	276340	0.0	4.0	6.9	6.8
100 YR 1 HR	SMF-1	Post-Dev	20.51	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	20.76	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	21.01	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	21.26	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	21.51	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	21.76	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	22.01	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	22.26	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	22.51	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	22.76	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	23.01	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	23.26	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	23.51	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	23.76	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	24.01	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	24.26	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	24.51	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	24.76	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	25.01	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	25.26	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	25.51	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	25.76	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	26.01	73.00	75.50	276279	0.0	0.0	6.9	6.9
100 YR 1 HR	SMF-1	Post-Dev	26.26	73.00	75.50	276279	0.0	0.0	6.9	6.9

SMF-1 100-1

SMF-1 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 2 HR	SMF-1	Post-Dev	20.26	73.24	75.50	279548	0.0	4.0	8.4	6.9
100 YR 2 HR	SMF-1	Post-Dev	20.51	73.23	75.50	279371	0.0	4.0	8.4	7.0
100 YR 2 HR	SMF-1	Post-Dev	20.76	73.21	75.50	279194	0.0	4.0	8.4	7.1
100 YR 2 HR	SMF-1	Post-Dev	21.01	73.20	75.50	279018	0.0	4.0	8.4	7.1
100 YR 2 HR	SMF-1	Post-Dev	21.26	73.19	75.50	278841	0.0	4.0	8.4	7.2
100 YR 2 HR	SMF-1	Post-Dev	21.51	73.18	75.50	278664	0.0	4.0	8.4	7.3
100 YR 2 HR	SMF-1	Post-Dev	21.76	73.16	75.50	278488	0.0	4.0	8.4	7.4
100 YR 2 HR	SMF-1	Post-Dev	22.01	73.15	75.50	278311	0.0	4.0	8.4	7.5
100 YR 2 HR	SMF-1	Post-Dev	22.26	73.14	75.50	278135	0.0	4.0	8.4	7.6
100 YR 2 HR	SMF-1	Post-Dev	22.51	73.12	75.50	277958	0.0	4.0	8.4	7.6
100 YR 2 HR	SMF-1	Post-Dev	22.76	73.11	75.50	277781	0.0	4.0	8.4	7.7
100 YR 2 HR	SMF-1	Post-Dev	23.01	73.10	75.50	277605	0.0	4.0	8.4	7.8
100 YR 2 HR	SMF-1	Post-Dev	23.26	73.08	75.50	277428	0.0	4.0	8.4	7.9
100 YR 2 HR	SMF-1	Post-Dev	23.51	73.07	75.50	277251	0.0	4.0	8.4	8.0
100 YR 2 HR	SMF-1	Post-Dev	23.76	73.06	75.50	277075	0.0	4.0	8.4	8.1
100 YR 2 HR	SMF-1	Post-Dev	24.01	73.05	75.50	276898	0.0	4.0	8.4	8.1
100 YR 2 HR	SMF-1	Post-Dev	24.26	73.03	75.50	276722	0.0	4.0	8.4	8.2
100 YR 2 HR	SMF-1	Post-Dev	24.51	73.02	75.50	276545	0.0	4.0	8.4	8.3
100 YR 2 HR	SMF-1	Post-Dev	24.76	73.01	75.50	276368	0.0	4.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	25.01	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	25.26	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	25.51	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	25.76	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	26.01	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	26.26	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	26.51	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	26.76	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	27.01	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	27.26	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	27.51	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	27.76	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	28.01	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	28.26	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	28.51	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	28.76	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	29.01	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	29.26	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	29.51	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	29.76	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	30.01	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	30.26	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	30.51	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	30.76	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	31.01	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	31.26	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	31.51	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	31.76	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	32.01	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	32.26	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	32.51	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	32.76	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	33.01	73.00	75.50	276279	0.0	0.0	8.4	8.4
100 YR 2 HR	SMF-1	Post-Dev	33.26	73.00	75.50	276279	0.0	0.0	8.4	8.4

SMF-1 100-2

SMF-1 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 4 HR	SMF-1	Post-Dev	24.01	73.37	75.50	281301	0.0	4.1	10.5	8.2
100 YR 4 HR	SMF-1	Post-Dev	24.26	73.36	75.50	281125	0.0	4.1	10.5	8.3
100 YR 4 HR	SMF-1	Post-Dev	24.51	73.34	75.50	280948	0.0	4.1	10.5	8.3
100 YR 4 HR	SMF-1	Post-Dev	24.76	73.33	75.50	280771	0.0	4.1	10.5	8.4
100 YR 4 HR	SMF-1	Post-Dev	25.01	73.32	75.50	280595	0.0	4.1	10.5	8.5
100 YR 4 HR	SMF-1	Post-Dev	25.26	73.31	75.50	280418	0.0	4.1	10.5	8.6
100 YR 4 HR	SMF-1	Post-Dev	25.51	73.29	75.50	280242	0.0	4.1	10.5	8.7
100 YR 4 HR	SMF-1	Post-Dev	25.76	73.28	75.50	280065	0.0	4.1	10.5	8.8
100 YR 4 HR	SMF-1	Post-Dev	26.01	73.27	75.50	279888	0.0	4.0	10.5	8.9
100 YR 4 HR	SMF-1	Post-Dev	26.26	73.25	75.50	279712	0.0	4.0	10.5	8.9
100 YR 4 HR	SMF-1	Post-Dev	26.51	73.24	75.50	279535	0.0	4.0	10.5	9.0
100 YR 4 HR	SMF-1	Post-Dev	26.76	73.23	75.50	279358	0.0	4.0	10.5	9.1
100 YR 4 HR	SMF-1	Post-Dev	27.01	73.21	75.50	279182	0.0	4.0	10.5	9.2
100 YR 4 HR	SMF-1	Post-Dev	27.26	73.20	75.50	279005	0.0	4.0	10.5	9.3
100 YR 4 HR	SMF-1	Post-Dev	27.51	73.19	75.50	278829	0.0	4.0	10.5	9.4
100 YR 4 HR	SMF-1	Post-Dev	27.76	73.17	75.50	278652	0.0	4.0	10.5	9.4
100 YR 4 HR	SMF-1	Post-Dev	28.01	73.16	75.50	278475	0.0	4.0	10.5	9.5
100 YR 4 HR	SMF-1	Post-Dev	28.26	73.15	75.50	278299	0.0	4.0	10.5	9.6
100 YR 4 HR	SMF-1	Post-Dev	28.51	73.14	75.50	278122	0.0	4.0	10.5	9.7
100 YR 4 HR	SMF-1	Post-Dev	28.76	73.12	75.50	277945	0.0	4.0	10.5	9.8
100 YR 4 HR	SMF-1	Post-Dev	29.01	73.11	75.50	277769	0.0	4.0	10.5	9.9
100 YR 4 HR	SMF-1	Post-Dev	29.26	73.10	75.50	277592	0.0	4.0	10.5	9.9
100 YR 4 HR	SMF-1	Post-Dev	29.51	73.08	75.50	277416	0.0	4.0	10.5	10.0
100 YR 4 HR	SMF-1	Post-Dev	29.76	73.07	75.50	277239	0.0	4.0	10.5	10.1
100 YR 4 HR	SMF-1	Post-Dev	30.01	73.06	75.50	277062	0.0	4.0	10.5	10.2
100 YR 4 HR	SMF-1	Post-Dev	30.26	73.04	75.50	276886	0.0	4.0	10.5	10.3
100 YR 4 HR	SMF-1	Post-Dev	30.51	73.03	75.50	276709	0.0	4.0	10.5	10.4
100 YR 4 HR	SMF-1	Post-Dev	30.76	73.02	75.50	276532	0.0	4.0	10.5	10.4
100 YR 4 HR	SMF-1	Post-Dev	31.01	73.01	75.50	276356	0.0	4.0	10.5	10.5
100 YR 4 HR	SMF-1	Post-Dev	31.26	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	31.51	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	31.76	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	32.01	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	32.26	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	32.51	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	32.76	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	33.01	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	33.26	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	33.51	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	33.76	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	34.01	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	34.26	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	34.51	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	34.76	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	35.01	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	35.26	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	35.51	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	35.76	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	36.01	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	36.26	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	36.51	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	36.76	73.00	75.50	276279	0.0	0.0	10.5	10.6
100 YR 4 HR	SMF-1	Post-Dev	37.01	73.00	75.50	276279	0.0	0.0	10.5	10.6

SMF-1 100-4

SMF-1 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 8 HR	SMF-1	Post-Dev	28.25	73.48	75.50	282813	0.0	4.1	12.6	9.5
100 YR 8 HR	SMF-1	Post-Dev	28.50	73.47	75.50	282637	0.0	4.1	12.6	9.6
100 YR 8 HR	SMF-1	Post-Dev	28.75	73.46	75.50	282460	0.0	4.1	12.6	9.7
100 YR 8 HR	SMF-1	Post-Dev	29.00	73.44	75.50	282283	0.0	4.1	12.6	9.8
100 YR 8 HR	SMF-1	Post-Dev	29.25	73.43	75.50	282107	0.0	4.1	12.6	9.8
100 YR 8 HR	SMF-1	Post-Dev	29.50	73.42	75.50	281930	0.0	4.1	12.6	9.9
100 YR 8 HR	SMF-1	Post-Dev	29.75	73.40	75.50	281754	0.0	4.1	12.6	10.0
100 YR 8 HR	SMF-1	Post-Dev	30.00	73.39	75.50	281577	0.0	4.1	12.6	10.1
100 YR 8 HR	SMF-1	Post-Dev	30.25	73.38	75.50	281400	0.0	4.1	12.6	10.2
100 YR 8 HR	SMF-1	Post-Dev	30.50	73.36	75.50	281224	0.0	4.1	12.6	10.3
100 YR 8 HR	SMF-1	Post-Dev	30.75	73.35	75.50	281047	0.0	4.1	12.6	10.3
100 YR 8 HR	SMF-1	Post-Dev	31.00	73.34	75.50	280870	0.0	4.1	12.6	10.4
100 YR 8 HR	SMF-1	Post-Dev	31.25	73.33	75.50	280694	0.0	4.1	12.6	10.5
100 YR 8 HR	SMF-1	Post-Dev	31.50	73.31	75.50	280517	0.0	4.1	12.6	10.6
100 YR 8 HR	SMF-1	Post-Dev	31.75	73.30	75.50	280341	0.0	4.1	12.6	10.7
100 YR 8 HR	SMF-1	Post-Dev	32.00	73.29	75.50	280164	0.0	4.1	12.6	10.8
100 YR 8 HR	SMF-1	Post-Dev	32.25	73.27	75.50	279987	0.0	4.1	12.6	10.8
100 YR 8 HR	SMF-1	Post-Dev	32.50	73.26	75.50	279811	0.0	4.0	12.6	10.9
100 YR 8 HR	SMF-1	Post-Dev	32.75	73.25	75.50	279634	0.0	4.0	12.6	11.0
100 YR 8 HR	SMF-1	Post-Dev	33.00	73.23	75.50	279458	0.0	4.0	12.6	11.1
100 YR 8 HR	SMF-1	Post-Dev	33.25	73.22	75.50	279281	0.0	4.0	12.6	11.2
100 YR 8 HR	SMF-1	Post-Dev	33.50	73.21	75.50	279104	0.0	4.0	12.6	11.3
100 YR 8 HR	SMF-1	Post-Dev	33.75	73.20	75.50	278928	0.0	4.0	12.6	11.3
100 YR 8 HR	SMF-1	Post-Dev	34.00	73.18	75.50	278751	0.0	4.0	12.6	11.4
100 YR 8 HR	SMF-1	Post-Dev	34.25	73.17	75.50	278574	0.0	4.0	12.6	11.5
100 YR 8 HR	SMF-1	Post-Dev	34.50	73.16	75.50	278398	0.0	4.0	12.6	11.6
100 YR 8 HR	SMF-1	Post-Dev	34.75	73.14	75.50	278221	0.0	4.0	12.6	11.7
100 YR 8 HR	SMF-1	Post-Dev	35.00	73.13	75.50	278045	0.0	4.0	12.6	11.8
100 YR 8 HR	SMF-1	Post-Dev	35.25	73.12	75.50	277868	0.0	4.0	12.6	11.8
100 YR 8 HR	SMF-1	Post-Dev	35.50	73.10	75.50	277691	0.0	4.0	12.6	11.9
100 YR 8 HR	SMF-1	Post-Dev	35.75	73.09	75.50	277515	0.0	4.0	12.6	12.0
100 YR 8 HR	SMF-1	Post-Dev	36.00	73.08	75.50	277338	0.0	4.0	12.6	12.1
100 YR 8 HR	SMF-1	Post-Dev	36.25	73.07	75.50	277161	0.0	4.0	12.6	12.2
100 YR 8 HR	SMF-1	Post-Dev	36.50	73.05	75.50	276985	0.0	4.0	12.6	12.3
100 YR 8 HR	SMF-1	Post-Dev	36.75	73.04	75.50	276808	0.0	4.0	12.6	12.3
100 YR 8 HR	SMF-1	Post-Dev	37.00	73.03	75.50	276632	0.0	4.0	12.6	12.4
100 YR 8 HR	SMF-1	Post-Dev	37.25	73.01	75.50	276455	0.0	4.0	12.6	12.5
100 YR 8 HR	SMF-1	Post-Dev	37.50	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	37.75	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	38.00	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	38.25	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	38.50	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	38.75	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	39.00	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	39.25	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	39.50	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	39.75	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	40.00	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	40.25	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	40.50	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	40.75	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	41.00	73.00	75.50	276279	0.0	0.0	12.6	12.6
100 YR 8 HR	SMF-1	Post-Dev	41.25	73.00	75.50	276279	0.0	0.0	12.6	12.6

SMF-1 100-8

SMF-1 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 24 HR	SMF-1	Post-Dev	132.52	73.02	75.50	276586	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	132.77	73.02	75.50	276577	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	133.02	73.02	75.50	276568	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	133.27	73.02	75.50	276559	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	133.52	73.02	75.50	276550	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	133.77	73.02	75.50	276540	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	134.02	73.02	75.50	276531	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	134.27	73.02	75.50	276522	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	134.52	73.02	75.50	276513	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	134.77	73.02	75.50	276504	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	135.02	73.02	75.50	276495	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	135.27	73.02	75.50	276486	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	135.52	73.01	75.50	276477	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	135.77	73.01	75.50	276468	0.0	0.2	18.4	18.3
100 YR 24 HR	SMF-1	Post-Dev	136.02	73.01	75.50	276459	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	136.27	73.01	75.50	276450	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	136.52	73.01	75.50	276441	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	136.77	73.01	75.50	276432	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	137.02	73.01	75.50	276423	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	137.27	73.01	75.50	276414	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	137.52	73.01	75.50	276405	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	137.77	73.01	75.50	276396	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	138.02	73.01	75.50	276387	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	138.27	73.01	75.50	276378	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	138.52	73.01	75.50	276369	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	138.77	73.01	75.50	276360	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	139.02	73.01	75.50	276351	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	139.27	73.00	75.50	276343	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	139.52	73.00	75.50	276334	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	139.77	73.00	75.50	276325	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	140.02	73.00	75.50	276316	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	140.27	73.00	75.50	276307	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	140.52	73.00	75.50	276298	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	140.77	73.00	75.50	276290	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	141.02	73.00	75.50	276281	0.0	0.2	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	141.27	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	141.52	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	141.77	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	142.02	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	142.27	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	142.52	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	142.77	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	143.02	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	143.27	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	143.52	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	143.77	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	144.02	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	144.27	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	144.52	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	144.77	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	145.02	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	145.27	73.00	75.50	276279	0.0	0.0	18.4	18.4
100 YR 24 HR	SMF-1	Post-Dev	145.52	73.00	75.50	276279	0.0	0.0	18.4	18.4

SMF-1 100-24

SMF-1 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 72 HR	SMF-1	Post-Dev	789.00	73.02	75.50	276571	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	789.25	73.02	75.50	276569	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	789.50	73.02	75.50	276566	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	789.75	73.02	75.50	276563	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	790.00	73.02	75.50	276561	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	790.25	73.02	75.50	276558	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	790.50	73.02	75.50	276555	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	790.75	73.02	75.50	276553	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	791.00	73.02	75.50	276550	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	791.25	73.02	75.50	276547	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	791.50	73.02	75.50	276545	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	791.75	73.02	75.50	276542	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	792.00	73.02	75.50	276539	0.0	0.1	24.6	24.4
100 YR 72 HR	SMF-1	Post-Dev	792.01	73.02	75.50	276539	0.0	0.1	24.6	24.4
100 YR 8 HR	SMF-1	Post-Dev	0.00	73.00	75.50	276279	0.0	0.0	0.0	0.0
100 YR 8 HR	SMF-1	Post-Dev	0.26	73.00	75.50	276279	0.0	0.0	0.0	0.0
100 YR 8 HR	SMF-1	Post-Dev	0.50	73.00	75.50	276279	0.0	0.0	0.0	0.0
100 YR 8 HR	SMF-1	Post-Dev	0.77	73.00	75.50	276282	1.8	1.8	0.0	0.0
100 YR 8 HR	SMF-1	Post-Dev	1.00	73.00	75.50	276281	3.2	3.2	0.1	0.1
100 YR 8 HR	SMF-1	Post-Dev	1.25	73.02	75.50	276543	16.0	4.0	0.3	0.1
100 YR 8 HR	SMF-1	Post-Dev	1.50	73.06	75.50	277103	17.0	4.0	0.6	0.2
100 YR 8 HR	SMF-1	Post-Dev	1.75	73.10	75.50	277670	17.0	4.0	1.0	0.3
100 YR 8 HR	SMF-1	Post-Dev	2.00	73.14	75.50	278240	17.0	4.0	1.3	0.4
100 YR 8 HR	SMF-1	Post-Dev	2.25	73.20	75.50	278936	22.7	4.0	1.7	0.5
100 YR 8 HR	SMF-1	Post-Dev	2.50	73.26	75.50	279771	23.1	4.0	2.2	0.6
100 YR 8 HR	SMF-1	Post-Dev	2.75	73.32	75.50	280599	23.1	4.1	2.7	0.6
100 YR 8 HR	SMF-1	Post-Dev	3.00	73.38	75.50	281437	23.5	4.1	3.2	0.7
100 YR 8 HR	SMF-1	Post-Dev	3.25	73.51	75.50	283143	61.8	4.1	4.0	0.8
100 YR 8 HR	SMF-1	Post-Dev	3.50	73.70	75.50	285716	64.8	4.1	5.3	0.9
100 YR 8 HR	SMF-1	Post-Dev	3.75	73.89	75.50	288284	64.8	4.2	6.7	1.0
100 YR 8 HR	SMF-1	Post-Dev	4.00	74.07	75.50	290842	64.7	4.2	8.0	1.1
100 YR 8 HR	SMF-1	Post-Dev	4.25	74.20	75.50	292577	27.6	4.2	9.0	1.2
100 YR 8 HR	SMF-1	Post-Dev	4.50	74.27	75.50	293466	24.7	4.2	9.5	1.2
100 YR 8 HR	SMF-1	Post-Dev	4.75	74.33	75.50	294325	24.7	4.3	10.0	1.3
100 YR 8 HR	SMF-1	Post-Dev	5.00	74.39	75.50	295183	24.5	4.3	10.5	1.4
100 YR 8 HR	SMF-1	Post-Dev	5.25	74.43	75.50	295712	10.4	4.3	10.9	1.5
100 YR 8 HR	SMF-1	Post-Dev	5.51	74.45	75.50	295937	9.3	4.3	11.1	1.6
100 YR 8 HR	SMF-1	Post-Dev	5.76	74.46	75.50	296144	9.3	4.3	11.3	1.7
100 YR 8 HR	SMF-1	Post-Dev	6.01	74.48	75.50	296351	9.2	4.3	11.5	1.8
100 YR 8 HR	SMF-1	Post-Dev	6.26	74.49	75.50	296526	7.8	4.3	11.7	1.9
100 YR 8 HR	SMF-1	Post-Dev	6.51	74.50	75.50	296671	7.7	4.3	11.8	2.0
100 YR 8 HR	SMF-1	Post-Dev	6.76	74.51	75.50	296813	7.7	4.3	12.0	2.0
100 YR 8 HR	SMF-1	Post-Dev	7.01	74.52	75.50	296954	7.6	4.3	12.1	2.1
100 YR 8 HR	SMF-1	Post-Dev	7.26	74.53	75.50	297028	4.8	4.3	12.3	2.2
100 YR 8 HR	SMF-1	Post-Dev	7.51	74.53	75.50	297043	4.6	4.3	12.4	2.3
100 YR 8 HR	SMF-1	Post-Dev	7.76	74.53	75.50	297057	4.6	4.3	12.5	2.4
100 YR 8 HR	SMF-1	Post-Dev	8.01	74.53	75.50	297071	4.4	4.3	12.6	2.5
100 YR 8 HR	SMF-1	Post-Dev	8.26	74.52	75.50	296982	0.3	4.3	12.6	2.6
100 YR 8 HR	SMF-1	Post-Dev	8.51	74.51	75.50	296807	0.0	4.3	12.6	2.7
100 YR 8 HR	SMF-1	Post-Dev	8.76	74.50	75.50	296629	0.0	4.3	12.6	2.8
100 YR 8 HR	SMF-1	Post-Dev	9.01	74.48	75.50	296451	0.0	4.3	12.6	2.8
100 YR 8 HR	SMF-1	Post-Dev	9.26	74.47	75.50	296273	0.0	4.3	12.6	2.9

SMF-1 100-72

SMF-1 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 168 HR	SMF-1	Post-Dev	881.52	73.74	75.50	286295	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	881.77	73.74	75.50	286292	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	882.02	73.74	75.50	286289	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	882.27	73.74	75.50	286287	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	882.52	73.74	75.50	286284	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	882.77	73.74	75.50	286281	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	883.02	73.74	75.50	286279	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	883.27	73.74	75.50	286276	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	883.52	73.74	75.50	286273	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	883.77	73.74	75.50	286270	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	884.02	73.74	75.50	286268	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	884.27	73.74	75.50	286265	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	884.52	73.74	75.50	286262	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	884.77	73.74	75.50	286259	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	885.02	73.74	75.50	286257	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	885.27	73.74	75.50	286254	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	885.52	73.74	75.50	286251	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	885.77	73.73	75.50	286248	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	886.02	73.73	75.50	286246	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	886.27	73.73	75.50	286243	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	886.52	73.73	75.50	286240	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	886.77	73.73	75.50	286237	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	887.02	73.73	75.50	286235	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	887.27	73.73	75.50	286232	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	887.52	73.73	75.50	286229	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	887.77	73.73	75.50	286227	0.0	0.1	29.5	24.8
100 YR 168 HR	SMF-1	Post-Dev	888.01	73.73	75.50	286224	0.0	0.1	29.5	24.8
100 YR 2 HR	SMF-1	Post-Dev	0.00	73.00	75.50	276279	0.0	0.0	0.0	0.0
100 YR 2 HR	SMF-1	Post-Dev	0.25	73.05	75.50	276963	47.3	4.0	0.5	0.0
100 YR 2 HR	SMF-1	Post-Dev	0.50	73.26	75.50	279806	86.6	4.0	1.9	0.1
100 YR 2 HR	SMF-1	Post-Dev	0.75	73.58	75.50	284087	121.1	4.1	4.0	0.2
100 YR 2 HR	SMF-1	Post-Dev	1.00	73.89	75.50	288330	64.2	4.2	5.9	0.3
100 YR 2 HR	SMF-1	Post-Dev	1.25	74.02	75.50	290075	32.5	4.2	6.9	0.4
100 YR 2 HR	SMF-1	Post-Dev	1.50	74.09	75.50	291087	24.3	4.2	7.5	0.5
100 YR 2 HR	SMF-1	Post-Dev	1.75	74.14	75.50	291789	17.4	4.2	7.9	0.6
100 YR 2 HR	SMF-1	Post-Dev	2.00	74.17	75.50	292228	11.1	4.2	8.2	0.6
100 YR 2 HR	SMF-1	Post-Dev	2.26	74.18	75.50	292276	0.7	4.2	8.4	0.7
100 YR 2 HR	SMF-1	Post-Dev	2.52	74.17	75.50	292101	0.0	4.2	8.4	0.8
100 YR 2 HR	SMF-1	Post-Dev	2.76	74.15	75.50	291924	0.0	4.2	8.4	0.9
100 YR 2 HR	SMF-1	Post-Dev	3.01	74.14	75.50	291746	0.0	4.2	8.4	1.0
100 YR 2 HR	SMF-1	Post-Dev	3.26	74.13	75.50	291568	0.0	4.2	8.4	1.1
100 YR 2 HR	SMF-1	Post-Dev	3.51	74.11	75.50	291390	0.0	4.2	8.4	1.2
100 YR 2 HR	SMF-1	Post-Dev	3.76	74.10	75.50	291212	0.0	4.2	8.4	1.3
100 YR 2 HR	SMF-1	Post-Dev	4.01	74.09	75.50	291035	0.0	4.2	8.4	1.3
100 YR 2 HR	SMF-1	Post-Dev	4.26	74.07	75.50	290857	0.0	4.2	8.4	1.4
100 YR 2 HR	SMF-1	Post-Dev	4.51	74.06	75.50	290679	0.0	4.2	8.4	1.5
100 YR 2 HR	SMF-1	Post-Dev	4.76	74.05	75.50	290501	0.0	4.2	8.4	1.6
100 YR 2 HR	SMF-1	Post-Dev	5.01	74.04	75.50	290323	0.0	4.2	8.4	1.7
100 YR 2 HR	SMF-1	Post-Dev	5.26	74.02	75.50	290145	0.0	4.2	8.4	1.8
100 YR 2 HR	SMF-1	Post-Dev	5.51	74.01	75.50	289967	0.0	4.2	8.4	1.9
100 YR 2 HR	SMF-1	Post-Dev	5.76	74.00	75.50	289789	0.0	4.2	8.4	2.0
100 YR 2 HR	SMF-1	Post-Dev	6.01	73.98	75.50	289613	0.0	4.2	8.4	2.0

SMF-1 100-168

SMF-1 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 240 HR	SMF-1	Post-Dev	950.51	74.37	75.50	294967	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	950.76	74.37	75.50	294964	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	951.01	74.37	75.50	294961	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	951.26	74.37	75.50	294958	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	951.51	74.37	75.50	294956	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	951.76	74.37	75.50	294953	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	952.01	74.37	75.50	294950	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	952.26	74.37	75.50	294947	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	952.51	74.37	75.50	294944	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	952.76	74.37	75.50	294942	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	953.01	74.37	75.50	294939	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	953.26	74.37	75.50	294936	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	953.51	74.37	75.50	294933	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	953.76	74.37	75.50	294931	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	954.01	74.37	75.50	294928	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	954.26	74.37	75.50	294925	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	954.51	74.37	75.50	294922	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	954.76	74.37	75.50	294920	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	955.01	74.37	75.50	294917	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	955.26	74.37	75.50	294914	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	955.51	74.37	75.50	294911	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	955.76	74.37	75.50	294909	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	956.01	74.37	75.50	294906	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	956.26	74.37	75.50	294903	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	956.51	74.37	75.50	294900	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	956.76	74.37	75.50	294897	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	957.01	74.37	75.50	294895	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	957.26	74.37	75.50	294892	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	957.51	74.37	75.50	294889	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	957.76	74.37	75.50	294886	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	958.01	74.37	75.50	294884	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	958.26	74.37	75.50	294881	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	958.51	74.37	75.50	294878	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	958.76	74.37	75.50	294875	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	959.01	74.37	75.50	294873	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	959.26	74.37	75.50	294870	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	959.51	74.37	75.50	294867	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	959.76	74.37	75.50	294864	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	960.01	74.37	75.50	294862	0.0	0.1	34.8	25.8
100 YR 240 HR	SMF-1	Post-Dev	960.02	74.37	75.50	294862	0.0	0.1	34.8	25.8
100 YR 4 HR	SMF-1	Post-Dev	0.00	73.00	75.50	276279	0.0	0.0	0.0	0.0
100 YR 4 HR	SMF-1	Post-Dev	0.26	73.00	75.50	276282	2.1	1.9	0.0	0.0
100 YR 4 HR	SMF-1	Post-Dev	0.50	73.01	75.50	276438	10.1	4.0	0.1	0.1
100 YR 4 HR	SMF-1	Post-Dev	0.75	73.06	75.50	277051	24.8	4.0	0.5	0.2
100 YR 4 HR	SMF-1	Post-Dev	1.00	73.13	75.50	278000	26.0	4.0	1.0	0.2
100 YR 4 HR	SMF-1	Post-Dev	1.25	73.23	75.50	279396	45.1	4.0	1.8	0.3
100 YR 4 HR	SMF-1	Post-Dev	1.50	73.37	75.50	281236	46.7	4.1	2.7	0.4
100 YR 4 HR	SMF-1	Post-Dev	1.75	73.53	75.50	283513	65.9	4.1	3.9	0.5
100 YR 4 HR	SMF-1	Post-Dev	2.00	73.73	75.50	286210	67.4	4.1	5.3	0.6
100 YR 4 HR	SMF-1	Post-Dev	2.25	73.91	75.50	288631	55.4	4.2	6.5	0.7
100 YR 4 HR	SMF-1	Post-Dev	2.50	74.07	75.50	290768	54.4	4.2	7.7	0.8
100 YR 4 HR	SMF-1	Post-Dev	2.75	74.20	75.50	292514	37.6	4.2	8.6	0.8

SMF-1 100-240

SMF-2 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 1 HR	SMF-2	Post-Dev	79.51	74.42	84.50	9081	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	79.76	74.40	84.50	8979	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	80.01	74.39	84.50	8876	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	80.26	74.38	84.50	8773	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	80.51	74.37	84.50	8670	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	80.76	74.35	84.50	8568	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	81.01	74.34	84.50	8465	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	81.26	74.33	84.50	8362	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	81.51	74.31	84.50	8260	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	81.76	74.30	84.50	8157	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	82.01	74.29	84.50	8054	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	82.26	74.27	84.50	7951	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	82.51	74.26	84.50	7849	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	82.76	74.25	84.50	7746	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	83.01	74.24	84.50	7643	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	83.26	74.22	84.50	7541	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	83.51	74.21	84.50	7438	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	83.76	74.20	84.50	7335	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	84.01	74.18	84.50	7232	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	84.26	74.17	84.50	7130	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	84.51	74.16	84.50	7027	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	84.76	74.14	84.50	6924	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	85.01	74.13	84.50	6822	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	85.26	74.12	84.50	6719	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	85.51	74.11	84.50	6616	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	85.76	74.09	84.50	6513	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	86.01	74.08	84.50	6411	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	86.26	74.07	84.50	6308	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	86.51	74.05	84.50	6205	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	86.76	74.04	84.50	6103	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	87.01	74.03	84.50	6000	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	87.26	74.01	84.50	5897	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	87.51	74.00	84.50	5794	0.0	0.1	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	87.76	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	88.01	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	88.26	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	88.51	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	88.76	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	89.01	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	89.26	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	89.51	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	89.76	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	90.01	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	90.26	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	90.51	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	90.76	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	91.01	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	91.26	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	91.51	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	91.76	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	92.01	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	92.26	74.00	84.50	5785	0.0	0.0	6.6	6.6
100 YR 1 HR	SMF-2	Post-Dev	92.51	74.00	84.50	5785	0.0	0.0	6.6	6.6

SMF-2 100-1

SMF-2 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 2 HR	SMF-2	Post-Dev	86.51	74.45	84.50	9373	0.0	0.1	8.3	8.2
100 YR 2 HR	SMF-2	Post-Dev	86.76	74.44	84.50	9270	0.0	0.1	8.3	8.2
100 YR 2 HR	SMF-2	Post-Dev	87.01	74.43	84.50	9167	0.0	0.1	8.3	8.2
100 YR 2 HR	SMF-2	Post-Dev	87.26	74.42	84.50	9065	0.0	0.1	8.3	8.2
100 YR 2 HR	SMF-2	Post-Dev	87.51	74.40	84.50	8962	0.0	0.1	8.3	8.2
100 YR 2 HR	SMF-2	Post-Dev	87.76	74.39	84.50	8859	0.0	0.1	8.3	8.2
100 YR 2 HR	SMF-2	Post-Dev	88.01	74.38	84.50	8756	0.0	0.1	8.3	8.2
100 YR 2 HR	SMF-2	Post-Dev	88.26	74.36	84.50	8654	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	88.51	74.35	84.50	8551	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	88.76	74.34	84.50	8448	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	89.01	74.32	84.50	8346	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	89.26	74.31	84.50	8243	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	89.51	74.30	84.50	8140	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	89.76	74.29	84.50	8037	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	90.01	74.27	84.50	7935	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	90.26	74.26	84.50	7832	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	90.51	74.25	84.50	7729	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	90.76	74.23	84.50	7627	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	91.01	74.22	84.50	7524	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	91.26	74.21	84.50	7421	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	91.51	74.19	84.50	7318	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	91.76	74.18	84.50	7216	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	92.01	74.17	84.50	7113	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	92.26	74.16	84.50	7010	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	92.51	74.14	84.50	6908	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	92.76	74.13	84.50	6805	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	93.01	74.12	84.50	6702	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	93.26	74.10	84.50	6599	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	93.51	74.09	84.50	6497	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	93.76	74.08	84.50	6394	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	94.01	74.06	84.50	6291	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	94.26	74.05	84.50	6189	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	94.51	74.04	84.50	6086	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	94.76	74.03	84.50	5983	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	95.01	74.01	84.50	5880	0.0	0.1	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	95.26	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	95.51	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	95.76	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	96.01	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	96.26	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	96.51	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	96.76	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	97.01	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	97.26	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	97.51	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	97.76	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	98.01	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	98.26	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	98.51	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	98.76	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	99.01	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	99.26	74.00	84.50	5785	0.0	0.0	8.3	8.3
100 YR 2 HR	SMF-2	Post-Dev	99.51	74.00	84.50	5785	0.0	0.0	8.3	8.3

SMF-2 100-2

SMF-2 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 4 HR	SMF-2	Post-Dev	103.51	74.41	84.50	9009	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	103.76	74.40	84.50	8906	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	104.01	74.38	84.50	8803	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	104.26	74.37	84.50	8701	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	104.51	74.36	84.50	8598	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	104.76	74.34	84.50	8495	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	105.01	74.33	84.50	8393	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	105.26	74.32	84.50	8290	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	105.51	74.30	84.50	8187	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	105.76	74.29	84.50	8084	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	106.01	74.28	84.50	7982	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	106.26	74.27	84.50	7879	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	106.51	74.25	84.50	7776	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	106.76	74.24	84.50	7674	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	107.01	74.23	84.50	7571	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	107.26	74.21	84.50	7468	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	107.51	74.20	84.50	7365	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	107.76	74.19	84.50	7263	0.0	0.1	12.3	12.2
100 YR 4 HR	SMF-2	Post-Dev	108.01	74.17	84.50	7160	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	108.26	74.16	84.50	7057	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	108.51	74.15	84.50	6955	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	108.76	74.14	84.50	6852	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	109.01	74.12	84.50	6749	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	109.26	74.11	84.50	6646	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	109.51	74.10	84.50	6544	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	109.76	74.08	84.50	6441	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	110.01	74.07	84.50	6338	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	110.26	74.06	84.50	6236	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	110.51	74.04	84.50	6133	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	110.76	74.03	84.50	6030	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	111.01	74.02	84.50	5927	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	111.26	74.01	84.50	5825	0.0	0.1	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	111.51	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	111.76	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	112.01	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	112.26	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	112.51	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	112.76	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	113.01	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	113.26	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	113.51	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	113.76	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	114.01	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	114.26	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	114.51	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	114.76	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	115.01	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	115.26	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	115.51	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	115.76	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	116.01	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	116.26	74.00	84.50	5785	0.0	0.0	12.3	12.3
100 YR 4 HR	SMF-2	Post-Dev	116.51	74.00	84.50	5785	0.0	0.0	12.3	12.3

SMF-2 100-4

SMF-2 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 8 HR	SMF-2	Post-Dev	134.25	74.46	84.50	9402	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	134.50	74.45	84.50	9299	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	134.75	74.43	84.50	9197	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	135.00	74.42	84.50	9094	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	135.25	74.41	84.50	8991	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	135.50	74.39	84.50	8888	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	135.75	74.38	84.50	8786	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	136.00	74.37	84.50	8683	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	136.25	74.35	84.50	8580	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	136.50	74.34	84.50	8477	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	136.75	74.33	84.50	8375	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	137.00	74.32	84.50	8272	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	137.25	74.30	84.50	8169	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	137.50	74.29	84.50	8067	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	137.75	74.28	84.50	7964	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	138.00	74.26	84.50	7861	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	138.25	74.25	84.50	7758	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	138.50	74.24	84.50	7656	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	138.75	74.22	84.50	7553	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	139.00	74.21	84.50	7450	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	139.25	74.20	84.50	7348	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	139.50	74.19	84.50	7245	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	139.75	74.17	84.50	7142	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	140.00	74.16	84.50	7039	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	140.25	74.15	84.50	6937	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	140.50	74.13	84.50	6834	0.0	0.1	16.5	16.4
100 YR 8 HR	SMF-2	Post-Dev	140.75	74.12	84.50	6731	0.0	0.1	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	141.00	74.11	84.50	6629	0.0	0.1	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	141.25	74.09	84.50	6526	0.0	0.1	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	141.50	74.08	84.50	6423	0.0	0.1	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	141.75	74.07	84.50	6320	0.0	0.1	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	142.00	74.05	84.50	6218	0.0	0.1	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	142.25	74.04	84.50	6115	0.0	0.1	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	142.50	74.03	84.50	6012	0.0	0.1	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	142.75	74.02	84.50	5910	0.0	0.1	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	143.00	74.00	84.50	5807	0.0	0.1	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	143.25	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	143.50	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	143.75	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	144.00	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	144.25	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	144.50	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	144.75	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	145.00	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	145.25	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	145.50	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	145.75	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	146.00	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	146.25	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	146.50	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	146.75	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	147.00	74.00	84.50	5785	0.0	0.0	16.5	16.5
100 YR 8 HR	SMF-2	Post-Dev	147.25	74.00	84.50	5785	0.0	0.0	16.5	16.5

SMF-2 100-8

SMF-2 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 24 HR	SMF-2	Post-Dev	185.52	77.64	84.50	125836	0.0	0.3	28.8	25.3
100 YR 24 HR	SMF-2	Post-Dev	185.77	77.64	84.50	125693	0.0	0.3	28.8	25.3
100 YR 24 HR	SMF-2	Post-Dev	186.02	77.63	84.50	125550	0.0	0.3	28.8	25.3
100 YR 24 HR	SMF-2	Post-Dev	186.27	77.63	84.50	125407	0.0	0.3	28.8	25.3
100 YR 24 HR	SMF-2	Post-Dev	186.52	77.63	84.50	125264	0.0	0.3	28.8	25.3
100 YR 24 HR	SMF-2	Post-Dev	186.77	77.63	84.50	125121	0.0	0.3	28.8	25.3
100 YR 24 HR	SMF-2	Post-Dev	187.02	77.62	84.50	124978	0.0	0.3	28.8	25.3
100 YR 24 HR	SMF-2	Post-Dev	187.27	77.62	84.50	124835	0.0	0.3	28.8	25.3
100 YR 24 HR	SMF-2	Post-Dev	187.52	77.62	84.50	124693	0.0	0.3	28.8	25.3
100 YR 24 HR	SMF-2	Post-Dev	187.77	77.62	84.50	124550	0.0	0.3	28.8	25.3
100 YR 24 HR	SMF-2	Post-Dev	188.02	77.62	84.50	124407	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	188.27	77.61	84.50	124264	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	188.52	77.61	84.50	124122	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	188.77	77.61	84.50	123979	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	189.02	77.61	84.50	123837	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	189.27	77.60	84.50	123694	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	189.52	77.60	84.50	123552	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	189.77	77.60	84.50	123409	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	190.02	77.60	84.50	123267	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	190.27	77.59	84.50	123124	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	190.52	77.59	84.50	122982	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	190.77	77.59	84.50	122839	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	191.02	77.59	84.50	122697	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	191.27	77.59	84.50	122555	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	191.52	77.58	84.50	122413	0.0	0.3	28.8	25.4
100 YR 24 HR	SMF-2	Post-Dev	191.77	77.58	84.50	122270	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	192.02	77.58	84.50	122128	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	192.27	77.58	84.50	121986	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	192.52	77.57	84.50	121844	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	192.77	77.57	84.50	121702	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	193.02	77.57	84.50	121560	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	193.27	77.57	84.50	121418	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	193.52	77.57	84.50	121276	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	193.77	77.56	84.50	121134	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	194.02	77.56	84.50	120992	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	194.27	77.56	84.50	120850	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	194.52	77.56	84.50	120708	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	194.77	77.55	84.50	120566	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	195.02	77.55	84.50	120424	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	195.27	77.55	84.50	120282	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	195.52	77.55	84.50	120140	0.0	0.3	28.8	25.5
100 YR 24 HR	SMF-2	Post-Dev	195.77	77.54	84.50	119999	0.0	0.3	28.8	25.6
100 YR 24 HR	SMF-2	Post-Dev	196.02	77.54	84.50	119857	0.0	0.3	28.8	25.6
100 YR 24 HR	SMF-2	Post-Dev	196.27	77.54	84.50	119715	0.0	0.3	28.8	25.6
100 YR 24 HR	SMF-2	Post-Dev	196.52	77.54	84.50	119573	0.0	0.3	28.8	25.6
100 YR 24 HR	SMF-2	Post-Dev	196.77	77.54	84.50	119432	0.0	0.3	28.8	25.6
100 YR 24 HR	SMF-2	Post-Dev	197.02	77.53	84.50	119290	0.0	0.3	28.8	25.6
100 YR 24 HR	SMF-2	Post-Dev	197.27	77.53	84.50	119148	0.0	0.3	28.8	25.6
100 YR 24 HR	SMF-2	Post-Dev	197.52	77.53	84.50	119007	0.0	0.3	28.8	25.6
100 YR 24 HR	SMF-2	Post-Dev	197.77	77.53	84.50	118865	0.0	0.3	28.8	25.6
100 YR 24 HR	SMF-2	Post-Dev	198.02	77.52	84.50	118724	0.0	0.3	28.8	25.6
100 YR 24 HR	SMF-2	Post-Dev	198.27	77.52	84.50	118582	0.0	0.3	28.8	25.6
100 YR 24 HR	SMF-2	Post-Dev	198.52	77.52	84.50	118441	0.0	0.3	28.8	25.6

SMF-2 100-24 7 Day

SMF-2 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 24 HR	SMF-2	Post-Dev	437.27	74.21	84.50	7437	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	437.52	74.20	84.50	7398	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	437.77	74.20	84.50	7358	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	438.02	74.19	84.50	7319	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	438.27	74.19	84.50	7279	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	438.52	74.18	84.50	7240	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	438.77	74.18	84.50	7200	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	439.02	74.17	84.50	7161	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	439.27	74.17	84.50	7121	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	439.52	74.16	84.50	7081	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	439.77	74.16	84.50	7042	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	440.02	74.15	84.50	7002	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	440.27	74.15	84.50	6962	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	440.52	74.14	84.50	6923	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	440.77	74.14	84.50	6883	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	441.02	74.13	84.50	6843	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	441.27	74.13	84.50	6803	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	441.52	74.12	84.50	6764	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	441.77	74.12	84.50	6724	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	442.02	74.11	84.50	6684	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	442.27	74.11	84.50	6644	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	442.52	74.10	84.50	6604	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	442.77	74.10	84.50	6564	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	443.02	74.09	84.50	6524	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	443.27	74.09	84.50	6484	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	443.52	74.08	84.50	6444	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	443.77	74.08	84.50	6404	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	444.02	74.07	84.50	6364	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	444.27	74.07	84.50	6324	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	444.52	74.06	84.50	6284	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	444.77	74.06	84.50	6244	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	445.02	74.05	84.50	6204	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	445.27	74.05	84.50	6164	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	445.52	74.04	84.50	6123	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	445.77	74.04	84.50	6083	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	446.02	74.03	84.50	6043	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	446.27	74.03	84.50	6003	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	446.52	74.02	84.50	5962	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	446.77	74.02	84.50	5922	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	447.02	74.01	84.50	5882	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	447.27	74.01	84.50	5841	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	447.52	74.00	84.50	5801	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	447.77	74.00	84.50	5785	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	448.02	74.00	84.50	5785	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	448.27	74.00	84.50	5785	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	448.52	74.00	84.50	5785	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	448.77	74.00	84.50	5785	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	449.02	74.00	84.50	5785	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	449.27	74.00	84.50	5785	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	449.52	74.00	84.50	5785	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	449.77	74.00	84.50	5785	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	450.02	74.00	84.50	5785	0.0	0.0	28.8	28.8
100 YR 24 HR	SMF-2	Post-Dev	450.27	74.00	84.50	5785	0.0	0.0	28.8	28.8

SMF-2

SMF-2 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 72 HR	SMF-2	Post-Dev	789.00	76.64	81.50	64894	0.0	0.1	41.6	40.2
100 YR 72 HR	SMF-2	Post-Dev	789.25	76.64	81.50	64831	0.0	0.1	41.6	40.3
100 YR 72 HR	SMF-2	Post-Dev	789.50	76.64	81.50	64768	0.0	0.1	41.6	40.3
100 YR 72 HR	SMF-2	Post-Dev	789.75	76.64	81.50	64704	0.0	0.1	41.6	40.3
100 YR 72 HR	SMF-2	Post-Dev	790.00	76.64	81.50	64641	0.0	0.1	41.6	40.3
100 YR 72 HR	SMF-2	Post-Dev	790.25	76.64	81.50	64578	0.0	0.1	41.6	40.3
100 YR 72 HR	SMF-2	Post-Dev	790.50	76.64	81.50	64515	0.0	0.1	41.6	40.3
100 YR 72 HR	SMF-2	Post-Dev	790.75	76.63	81.50	64452	0.0	0.1	41.6	40.3
100 YR 72 HR	SMF-2	Post-Dev	791.00	76.63	81.50	64388	0.0	0.1	41.6	40.3
100 YR 72 HR	SMF-2	Post-Dev	791.25	76.63	81.50	64325	0.0	0.1	41.6	40.3
100 YR 72 HR	SMF-2	Post-Dev	791.50	76.63	81.50	64262	0.0	0.1	41.6	40.3
100 YR 72 HR	SMF-2	Post-Dev	791.75	76.63	81.50	64198	0.0	0.1	41.6	40.3
100 YR 72 HR	SMF-2	Post-Dev	792.00	76.63	81.50	64135	0.0	0.1	41.6	40.3
100 YR 72 HR	SMF-2	Post-Dev	792.01	76.63	81.50	64135	0.0	0.1	41.6	40.3
100 YR 8 HR	SMF-2	Post-Dev	0.00	74.00	81.50	5785	0.0	0.0	0.0	0.0
100 YR 8 HR	SMF-2	Post-Dev	0.26	74.00	81.50	5785	0.0	0.0	0.0	0.0
100 YR 8 HR	SMF-2	Post-Dev	0.50	74.00	81.50	5785	0.0	0.0	0.0	0.0
100 YR 8 HR	SMF-2	Post-Dev	0.77	74.00	81.50	5805	0.2	0.1	0.0	0.0
100 YR 8 HR	SMF-2	Post-Dev	1.00	74.11	81.50	6640	1.5	0.1	0.0	0.0
100 YR 8 HR	SMF-2	Post-Dev	1.25	74.44	81.50	9219	5.7	0.1	0.1	0.0
100 YR 8 HR	SMF-2	Post-Dev	1.50	75.07	81.50	14574	10.2	0.2	0.3	0.0
100 YR 8 HR	SMF-2	Post-Dev	1.75	75.59	81.50	21691	11.2	0.3	0.5	0.0
100 YR 8 HR	SMF-2	Post-Dev	2.00	75.99	81.50	27210	11.4	0.4	0.7	0.0
100 YR 8 HR	SMF-2	Post-Dev	2.25	76.28	81.50	43890	13.0	0.6	1.0	0.0
100 YR 8 HR	SMF-2	Post-Dev	2.50	76.52	81.50	57980	15.1	0.8	1.3	0.0
100 YR 8 HR	SMF-2	Post-Dev	2.75	76.73	81.50	69814	15.5	1.0	1.6	0.1
100 YR 8 HR	SMF-2	Post-Dev	3.00	76.90	81.50	80093	15.6	1.2	1.9	0.1
100 YR 8 HR	SMF-2	Post-Dev	3.25	77.10	81.50	92258	30.6	1.3	2.4	0.1
100 YR 8 HR	SMF-2	Post-Dev	3.50	77.46	81.50	114588	51.0	1.7	3.2	0.1
100 YR 8 HR	SMF-2	Post-Dev	3.75	77.85	81.50	138966	65.0	2.0	4.4	0.2
100 YR 8 HR	SMF-2	Post-Dev	4.00	78.30	81.50	165157	94.8	2.4	6.1	0.2
100 YR 8 HR	SMF-2	Post-Dev	4.25	78.77	81.50	190835	81.1	2.8	7.9	0.3
100 YR 8 HR	SMF-2	Post-Dev	4.50	79.05	81.50	206851	56.2	3.0	9.3	0.3
100 YR 8 HR	SMF-2	Post-Dev	4.75	79.27	81.50	220272	51.7	3.2	10.4	0.4
100 YR 8 HR	SMF-2	Post-Dev	5.00	79.46	81.50	232343	50.7	3.4	11.5	0.5
100 YR 8 HR	SMF-2	Post-Dev	5.25	79.62	81.50	242545	38.3	3.5	12.4	0.5
100 YR 8 HR	SMF-2	Post-Dev	5.51	79.71	81.50	248589	22.9	3.6	13.0	0.6
100 YR 8 HR	SMF-2	Post-Dev	5.76	79.78	81.50	252498	19.7	3.7	13.5	0.7
100 YR 8 HR	SMF-2	Post-Dev	6.01	79.83	81.50	255995	19.1	3.7	13.9	0.8
100 YR 8 HR	SMF-2	Post-Dev	6.26	79.88	81.50	259306	17.7	3.8	14.3	0.8
100 YR 8 HR	SMF-2	Post-Dev	6.51	79.93	81.50	262175	16.2	3.8	14.6	0.9
100 YR 8 HR	SMF-2	Post-Dev	6.76	79.97	81.50	264804	15.9	3.8	14.9	1.0
100 YR 8 HR	SMF-2	Post-Dev	7.01	80.01	81.50	267236	15.8	3.9	15.3	1.1
100 YR 8 HR	SMF-2	Post-Dev	7.26	80.05	81.50	269186	13.1	3.9	15.6	1.2
100 YR 8 HR	SMF-2	Post-Dev	7.51	80.07	81.50	270501	10.3	3.9	15.8	1.2
100 YR 8 HR	SMF-2	Post-Dev	7.76	80.09	81.50	271544	9.6	3.9	16.0	1.3
100 YR 8 HR	SMF-2	Post-Dev	8.01	80.11	81.50	272526	9.5	3.9	16.2	1.4
100 YR 8 HR	SMF-2	Post-Dev	8.26	80.13	81.50	273245	5.4	4.0	16.4	1.5
100 YR 8 HR	SMF-2	Post-Dev	8.51	80.12	81.50	273047	1.1	4.0	16.4	1.6
100 YR 8 HR	SMF-2	Post-Dev	8.76	80.11	81.50	272455	0.2	3.9	16.5	1.7
100 YR 8 HR	SMF-2	Post-Dev	9.01	80.10	81.50	271783	0.0	3.9	16.5	1.7
100 YR 8 HR	SMF-2	Post-Dev	9.26	80.09	81.50	271097	0.0	3.9	16.5	1.8

SMF-2 100-72

SMF-2 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 168 HR	SMF-2	Post-Dev	881.52	80.85	81.50	311643	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	881.77	80.85	81.50	311623	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	882.02	80.85	81.50	311603	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	882.27	80.85	81.50	311584	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	882.52	80.85	81.50	311564	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	882.77	80.85	81.50	311545	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	883.02	80.85	81.50	311525	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	883.27	80.85	81.50	311506	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	883.52	80.85	81.50	311486	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	883.77	80.85	81.50	311467	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	884.02	80.85	81.50	311447	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	884.27	80.85	81.50	311428	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	884.52	80.85	81.50	311408	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	884.77	80.85	81.50	311389	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	885.02	80.85	81.50	311370	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	885.27	80.85	81.50	311350	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	885.52	80.85	81.50	311331	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	885.77	80.85	81.50	311311	0.0	0.1	52.6	32.8
100 YR 168 HR	SMF-2	Post-Dev	886.02	80.85	81.50	311292	0.0	0.1	52.6	32.9
100 YR 168 HR	SMF-2	Post-Dev	886.27	80.85	81.50	311272	0.0	0.1	52.6	32.9
100 YR 168 HR	SMF-2	Post-Dev	886.52	80.85	81.50	311253	0.0	0.1	52.6	32.9
100 YR 168 HR	SMF-2	Post-Dev	886.77	80.85	81.50	311233	0.0	0.1	52.6	32.9
100 YR 168 HR	SMF-2	Post-Dev	887.02	80.85	81.50	311214	0.0	0.1	52.6	32.9
100 YR 168 HR	SMF-2	Post-Dev	887.27	80.85	81.50	311195	0.0	0.1	52.6	32.9
100 YR 168 HR	SMF-2	Post-Dev	887.52	80.85	81.50	311175	0.0	0.1	52.6	32.9
100 YR 168 HR	SMF-2	Post-Dev	887.77	80.85	81.50	311156	0.0	0.1	52.6	32.9
100 YR 168 HR	SMF-2	Post-Dev	888.01	80.84	81.50	311138	0.0	0.1	52.6	32.9
100 YR 2 HR	SMF-2	Post-Dev	0.00	74.00	81.50	5785	0.0	0.0	0.0	0.0
100 YR 2 HR	SMF-2	Post-Dev	0.25	74.34	81.50	8442	10.1	0.1	0.1	0.0
100 YR 2 HR	SMF-2	Post-Dev	0.50	75.79	81.50	24493	40.4	0.4	0.6	0.0
100 YR 2 HR	SMF-2	Post-Dev	0.75	76.90	81.50	79843	82.4	1.2	1.9	0.0
100 YR 2 HR	SMF-2	Post-Dev	1.00	77.74	81.50	132049	102.3	1.9	3.8	0.1
100 YR 2 HR	SMF-2	Post-Dev	1.25	78.20	81.50	159564	55.3	2.3	5.4	0.1
100 YR 2 HR	SMF-2	Post-Dev	1.50	78.44	81.50	172761	40.8	2.5	6.4	0.1
100 YR 2 HR	SMF-2	Post-Dev	1.75	78.61	81.50	182294	32.8	2.6	7.2	0.2
100 YR 2 HR	SMF-2	Post-Dev	2.00	78.74	81.50	189179	23.3	2.7	7.8	0.3
100 YR 2 HR	SMF-2	Post-Dev	2.26	78.81	81.50	193069	10.7	2.8	8.1	0.3
100 YR 2 HR	SMF-2	Post-Dev	2.52	78.82	81.50	193760	2.1	2.8	8.3	0.4
100 YR 2 HR	SMF-2	Post-Dev	2.76	78.81	81.50	193302	0.4	2.8	8.3	0.4
100 YR 2 HR	SMF-2	Post-Dev	3.01	78.80	81.50	192623	0.0	2.8	8.3	0.5
100 YR 2 HR	SMF-2	Post-Dev	3.26	78.79	81.50	191907	0.0	2.8	8.3	0.5
100 YR 2 HR	SMF-2	Post-Dev	3.51	78.78	81.50	191189	0.0	2.8	8.3	0.6
100 YR 2 HR	SMF-2	Post-Dev	3.76	78.76	81.50	190472	0.0	2.8	8.3	0.7
100 YR 2 HR	SMF-2	Post-Dev	4.01	78.75	81.50	189754	0.0	2.7	8.3	0.7
100 YR 2 HR	SMF-2	Post-Dev	4.26	78.74	81.50	189037	0.0	2.7	8.3	0.8
100 YR 2 HR	SMF-2	Post-Dev	4.51	78.72	81.50	188320	0.0	2.7	8.3	0.8
100 YR 2 HR	SMF-2	Post-Dev	4.76	78.71	81.50	187602	0.0	2.7	8.3	0.9
100 YR 2 HR	SMF-2	Post-Dev	5.01	78.70	81.50	186885	0.0	2.7	8.3	0.9
100 YR 2 HR	SMF-2	Post-Dev	5.26	78.68	81.50	186168	0.0	2.7	8.3	1.0
100 YR 2 HR	SMF-2	Post-Dev	5.51	78.67	81.50	185450	0.0	2.7	8.3	1.1
100 YR 2 HR	SMF-2	Post-Dev	5.76	78.66	81.50	184733	0.0	2.7	8.3	1.1
100 YR 2 HR	SMF-2	Post-Dev	6.01	78.65	81.50	184015	0.0	2.7	8.3	1.2

SMF-2 100-168

SMF-2 Time-Series Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100 YR 240 HR	SMF-2	Post-Dev	950.51	82.06	81.50	380889	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	950.76	82.06	81.50	380872	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	951.01	82.06	81.50	380856	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	951.26	82.06	81.50	380839	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	951.51	82.06	81.50	380822	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	951.76	82.06	81.50	380805	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	952.01	82.06	81.50	380788	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	952.26	82.06	81.50	380771	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	952.51	82.06	81.50	380755	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	952.76	82.06	81.50	380738	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	953.01	82.06	81.50	380721	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	953.26	82.06	81.50	380704	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	953.51	82.06	81.50	380687	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	953.76	82.06	81.50	380670	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	954.01	82.06	81.50	380654	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	954.26	82.06	81.50	380637	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	954.51	82.06	81.50	380620	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	954.76	82.06	81.50	380603	0.0	0.1	63.7	34.3
100 YR 240 HR	SMF-2	Post-Dev	955.01	82.06	81.50	380586	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	955.26	82.06	81.50	380570	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	955.51	82.06	81.50	380553	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	955.76	82.06	81.50	380536	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	956.01	82.06	81.50	380519	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	956.26	82.06	81.50	380503	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	956.51	82.05	81.50	380486	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	956.76	82.05	81.50	380469	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	957.01	82.05	81.50	380452	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	957.26	82.05	81.50	380436	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	957.51	82.05	81.50	380419	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	957.76	82.05	81.50	380402	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	958.01	82.05	81.50	380385	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	958.26	82.05	81.50	380369	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	958.51	82.05	81.50	380352	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	958.76	82.05	81.50	380335	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	959.01	82.05	81.50	380318	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	959.26	82.05	81.50	380302	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	959.51	82.05	81.50	380285	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	959.76	82.05	81.50	380268	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	960.01	82.05	81.50	380251	0.0	0.1	63.7	34.4
100 YR 240 HR	SMF-2	Post-Dev	960.02	82.05	81.50	380251	0.0	0.1	63.7	34.4
100 YR 4 HR	SMF-2	Post-Dev	0.00	74.00	81.50	5785	0.0	0.0	0.0	0.0
100 YR 4 HR	SMF-2	Post-Dev	0.26	74.00	81.50	5792	0.2	0.1	0.0	0.0
100 YR 4 HR	SMF-2	Post-Dev	0.50	74.22	81.50	7537	4.0	0.1	0.0	0.0
100 YR 4 HR	SMF-2	Post-Dev	0.75	74.83	81.50	12324	10.5	0.2	0.2	0.0
100 YR 4 HR	SMF-2	Post-Dev	1.00	75.57	81.50	21419	16.0	0.3	0.5	0.0
100 YR 4 HR	SMF-2	Post-Dev	1.25	76.18	81.50	37730	22.7	0.5	0.9	0.0
100 YR 4 HR	SMF-2	Post-Dev	1.50	76.64	81.50	64629	29.6	0.9	1.4	0.0
100 YR 4 HR	SMF-2	Post-Dev	1.75	77.02	81.50	87346	40.8	1.3	2.1	0.1
100 YR 4 HR	SMF-2	Post-Dev	2.00	77.45	81.50	114007	55.3	1.6	3.1	0.1
100 YR 4 HR	SMF-2	Post-Dev	2.25	77.85	81.50	138962	59.8	2.0	4.3	0.1
100 YR 4 HR	SMF-2	Post-Dev	2.50	78.23	81.50	161038	74.6	2.3	5.7	0.2
100 YR 4 HR	SMF-2	Post-Dev	2.75	78.63	81.50	182995	75.8	2.6	7.3	0.2

SMF-2 100-240

SMF-1 WQTV Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af	
WQTV	SMF-1 WQTV	Post-Dev	0.00	73.45	75.50	282383	0.0	0.0	0.0	0.0	
WQTV	SMF-1 WQTV	Post-Dev	0.26	73.44	75.50	282202	0.0	4.1	0.0	0.0	SMF-1 WQTV Start
WQTV	SMF-1 WQTV	Post-Dev	0.50	73.42	75.50	282033	0.0	4.1	0.0	0.1	
WQTV	SMF-1 WQTV	Post-Dev	0.77	73.41	75.50	281845	0.0	4.1	0.0	0.2	
WQTV	SMF-1 WQTV	Post-Dev	1.02	73.40	75.50	281668	0.0	4.1	0.0	0.3	
WQTV	SMF-1 WQTV	Post-Dev	1.27	73.38	75.50	281492	0.0	4.1	0.0	0.4	
WQTV	SMF-1 WQTV	Post-Dev	1.52	73.37	75.50	281315	0.0	4.1	0.0	0.5	
WQTV	SMF-1 WQTV	Post-Dev	1.77	73.36	75.50	281138	0.0	4.1	0.0	0.6	
WQTV	SMF-1 WQTV	Post-Dev	2.02	73.35	75.50	280962	0.0	4.1	0.0	0.6	
WQTV	SMF-1 WQTV	Post-Dev	2.27	73.33	75.50	280785	0.0	4.1	0.0	0.7	
WQTV	SMF-1 WQTV	Post-Dev	2.52	73.32	75.50	280609	0.0	4.1	0.0	0.8	
WQTV	SMF-1 WQTV	Post-Dev	2.77	73.31	75.50	280432	0.0	4.1	0.0	0.9	
WQTV	SMF-1 WQTV	Post-Dev	3.02	73.29	75.50	280255	0.0	4.1	0.0	1.0	
WQTV	SMF-1 WQTV	Post-Dev	3.27	73.28	75.50	280079	0.0	4.1	0.0	1.1	
WQTV	SMF-1 WQTV	Post-Dev	3.52	73.27	75.50	279902	0.0	4.0	0.0	1.1	
WQTV	SMF-1 WQTV	Post-Dev	3.77	73.25	75.50	279726	0.0	4.0	0.0	1.2	
WQTV	SMF-1 WQTV	Post-Dev	4.02	73.24	75.50	279549	0.0	4.0	0.0	1.3	
WQTV	SMF-1 WQTV	Post-Dev	4.27	73.23	75.50	279372	0.0	4.0	0.0	1.4	
WQTV	SMF-1 WQTV	Post-Dev	4.52	73.21	75.50	279196	0.0	4.0	0.0	1.5	
WQTV	SMF-1 WQTV	Post-Dev	4.77	73.20	75.50	279019	0.0	4.0	0.0	1.6	
WQTV	SMF-1 WQTV	Post-Dev	5.02	73.19	75.50	278842	0.0	4.0	0.0	1.6	
WQTV	SMF-1 WQTV	Post-Dev	5.27	73.18	75.50	278666	0.0	4.0	0.0	1.7	
WQTV	SMF-1 WQTV	Post-Dev	5.52	73.16	75.50	278489	0.0	4.0	0.0	1.8	
WQTV	SMF-1 WQTV	Post-Dev	5.77	73.15	75.50	278313	0.0	4.0	0.0	1.9	
WQTV	SMF-1 WQTV	Post-Dev	6.02	73.14	75.50	278136	0.0	4.0	0.0	2.0	
WQTV	SMF-1 WQTV	Post-Dev	6.27	73.12	75.50	277959	0.0	4.0	0.0	2.1	
WQTV	SMF-1 WQTV	Post-Dev	6.52	73.11	75.50	277783	0.0	4.0	0.0	2.1	
WQTV	SMF-1 WQTV	Post-Dev	6.77	73.10	75.50	277606	0.0	4.0	0.0	2.2	
WQTV	SMF-1 WQTV	Post-Dev	7.02	73.08	75.50	277429	0.0	4.0	0.0	2.3	
WQTV	SMF-1 WQTV	Post-Dev	7.27	73.07	75.50	277253	0.0	4.0	0.0	2.4	
WQTV	SMF-1 WQTV	Post-Dev	7.52	73.06	75.50	277076	0.0	4.0	0.0	2.5	
WQTV	SMF-1 WQTV	Post-Dev	7.77	73.05	75.50	276900	0.0	4.0	0.0	2.6	
WQTV	SMF-1 WQTV	Post-Dev	8.02	73.03	75.50	276723	0.0	4.0	0.0	2.6	
WQTV	SMF-1 WQTV	Post-Dev	8.27	73.02	75.50	276546	0.0	4.0	0.0	2.7	
WQTV	SMF-1 WQTV	Post-Dev	8.52	73.01	75.50	276370	0.0	4.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	8.77	73.00	75.50	276279	0.0	0.0	0.0	2.8	SMF-1 WQTV End
WQTV	SMF-1 WQTV	Post-Dev	9.02	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	9.27	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	9.52	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	9.77	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	10.02	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	10.27	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	10.52	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	10.77	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	11.02	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	11.27	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	11.52	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	11.77	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	12.02	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	12.27	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	12.52	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	12.77	73.00	75.50	276279	0.0	0.0	0.0	2.8	
WQTV	SMF-1 WQTV	Post-Dev	13.02	73.00	75.50	276279	0.0	0.0	0.0	2.8	

SMF-2 WQTV Recovery Analysis

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out	
			hrs	ft	ft	ft2	cfs	cfs	af	af	
WQTV	SMF-2 WQTV	Post-Dev	0.00	77.27	81.50	102792	0.0	0.0	0.0	0.0	SMF-2 WQTV Start
WQTV	SMF-2 WQTV	Post-Dev	0.26	77.26	81.50	101957	0.0	1.5	0.0	0.0	
WQTV	SMF-2 WQTV	Post-Dev	0.50	77.24	81.50	101176	0.0	1.5	0.0	0.0	
WQTV	SMF-2 WQTV	Post-Dev	0.77	77.23	81.50	100308	0.0	1.5	0.0	0.1	
WQTV	SMF-2 WQTV	Post-Dev	1.02	77.22	81.50	99494	0.0	1.4	0.0	0.1	
WQTV	SMF-2 WQTV	Post-Dev	1.27	77.20	81.50	98679	0.0	1.4	0.0	0.1	
WQTV	SMF-2 WQTV	Post-Dev	1.52	77.19	81.50	97864	0.0	1.4	0.0	0.2	
WQTV	SMF-2 WQTV	Post-Dev	1.77	77.18	81.50	97049	0.0	1.4	0.0	0.2	
WQTV	SMF-2 WQTV	Post-Dev	2.02	77.17	81.50	96234	0.0	1.4	0.0	0.2	
WQTV	SMF-2 WQTV	Post-Dev	2.27	77.15	81.50	95419	0.0	1.4	0.0	0.3	
WQTV	SMF-2 WQTV	Post-Dev	2.52	77.14	81.50	94605	0.0	1.4	0.0	0.3	
WQTV	SMF-2 WQTV	Post-Dev	2.77	77.13	81.50	93790	0.0	1.4	0.0	0.3	
WQTV	SMF-2 WQTV	Post-Dev	3.02	77.11	81.50	92975	0.0	1.3	0.0	0.3	
WQTV	SMF-2 WQTV	Post-Dev	3.27	77.10	81.50	92160	0.0	1.3	0.0	0.4	
WQTV	SMF-2 WQTV	Post-Dev	3.52	77.09	81.50	91345	0.0	1.3	0.0	0.4	
WQTV	SMF-2 WQTV	Post-Dev	3.77	77.07	81.50	90531	0.0	1.3	0.0	0.4	
WQTV	SMF-2 WQTV	Post-Dev	4.02	77.06	81.50	89716	0.0	1.3	0.0	0.4	
WQTV	SMF-2 WQTV	Post-Dev	4.27	77.05	81.50	88901	0.0	1.3	0.0	0.5	
WQTV	SMF-2 WQTV	Post-Dev	4.52	77.03	81.50	88086	0.0	1.3	0.0	0.5	
WQTV	SMF-2 WQTV	Post-Dev	4.77	77.02	81.50	87271	0.0	1.3	0.0	0.5	
WQTV	SMF-2 WQTV	Post-Dev	5.02	77.01	81.50	86456	0.0	1.3	0.0	0.6	
WQTV	SMF-2 WQTV	Post-Dev	5.27	77.00	81.50	85658	0.0	1.2	0.0	0.6	
WQTV	SMF-2 WQTV	Post-Dev	5.52	76.98	81.50	84895	0.0	1.2	0.0	0.6	
WQTV	SMF-2 WQTV	Post-Dev	5.77	76.97	81.50	84132	0.0	1.2	0.0	0.6	
WQTV	SMF-2 WQTV	Post-Dev	6.02	76.96	81.50	83369	0.0	1.2	0.0	0.7	
WQTV	SMF-2 WQTV	Post-Dev	6.27	76.94	81.50	82606	0.0	1.2	0.0	0.7	
WQTV	SMF-2 WQTV	Post-Dev	6.52	76.93	81.50	81843	0.0	1.2	0.0	0.7	
WQTV	SMF-2 WQTV	Post-Dev	6.77	76.92	81.50	81080	0.0	1.2	0.0	0.7	
WQTV	SMF-2 WQTV	Post-Dev	7.02	76.90	81.50	80317	0.0	1.2	0.0	0.8	
WQTV	SMF-2 WQTV	Post-Dev	7.27	76.89	81.50	79554	0.0	1.2	0.0	0.8	
WQTV	SMF-2 WQTV	Post-Dev	7.52	76.88	81.50	78791	0.0	1.1	0.0	0.8	
WQTV	SMF-2 WQTV	Post-Dev	7.77	76.87	81.50	78028	0.0	1.1	0.0	0.8	
WQTV	SMF-2 WQTV	Post-Dev	8.02	76.85	81.50	77265	0.0	1.1	0.0	0.8	
WQTV	SMF-2 WQTV	Post-Dev	8.27	76.84	81.50	76502	0.0	1.1	0.0	0.9	
WQTV	SMF-2 WQTV	Post-Dev	8.52	76.83	81.50	75739	0.0	1.1	0.0	0.9	
WQTV	SMF-2 WQTV	Post-Dev	8.77	76.81	81.50	74976	0.0	1.1	0.0	0.9	
WQTV	SMF-2 WQTV	Post-Dev	9.02	76.80	81.50	74213	0.0	1.1	0.0	0.9	
WQTV	SMF-2 WQTV	Post-Dev	9.27	76.79	81.50	73450	0.0	1.1	0.0	1.0	
WQTV	SMF-2 WQTV	Post-Dev	9.52	76.77	81.50	72687	0.0	1.1	0.0	1.0	
WQTV	SMF-2 WQTV	Post-Dev	9.77	76.76	81.50	71924	0.0	1.0	0.0	1.0	
WQTV	SMF-2 WQTV	Post-Dev	10.02	76.75	81.50	71161	0.0	1.0	0.0	1.0	
WQTV	SMF-2 WQTV	Post-Dev	10.27	76.74	81.50	70398	0.0	1.0	0.0	1.0	
WQTV	SMF-2 WQTV	Post-Dev	10.52	76.72	81.50	69635	0.0	1.0	0.0	1.1	
WQTV	SMF-2 WQTV	Post-Dev	10.77	76.71	81.50	68872	0.0	1.0	0.0	1.1	
WQTV	SMF-2 WQTV	Post-Dev	11.02	76.70	81.50	68109	0.0	1.0	0.0	1.1	
WQTV	SMF-2 WQTV	Post-Dev	11.27	76.68	81.50	67346	0.0	1.0	0.0	1.1	
WQTV	SMF-2 WQTV	Post-Dev	11.52	76.67	81.50	66583	0.0	1.0	0.0	1.1	
WQTV	SMF-2 WQTV	Post-Dev	11.77	76.66	81.50	65820	0.0	1.0	0.0	1.2	
WQTV	SMF-2 WQTV	Post-Dev	12.02	76.64	81.50	65057	0.0	0.9	0.0	1.2	
WQTV	SMF-2 WQTV	Post-Dev	12.27	76.63	81.50	64294	0.0	0.9	0.0	1.2	
WQTV	SMF-2 WQTV	Post-Dev	12.52	76.62	81.50	63531	0.0	0.9	0.0	1.2	
WQTV	SMF-2 WQTV	Post-Dev	12.77	76.61	81.50	62768	0.0	0.9	0.0	1.2	
WQTV	SMF-2 WQTV	Post-Dev	13.02	76.59	81.50	62005	0.0	0.9	0.0	1.3	

SMF-2 WQTV Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
WQTV	SMF-2 WQTV	Post-Dev	13.27	76.58	81.50	61242	0.0	0.9	0.0	1.3
WQTV	SMF-2 WQTV	Post-Dev	13.52	76.57	81.50	60479	0.0	0.9	0.0	1.3
WQTV	SMF-2 WQTV	Post-Dev	13.77	76.55	81.50	59716	0.0	0.9	0.0	1.3
WQTV	SMF-2 WQTV	Post-Dev	14.02	76.54	81.50	58953	0.0	0.9	0.0	1.3
WQTV	SMF-2 WQTV	Post-Dev	14.27	76.53	81.50	58190	0.0	0.8	0.0	1.4
WQTV	SMF-2 WQTV	Post-Dev	14.52	76.51	81.50	57427	0.0	0.8	0.0	1.4
WQTV	SMF-2 WQTV	Post-Dev	14.77	76.50	81.50	56664	0.0	0.8	0.0	1.4
WQTV	SMF-2 WQTV	Post-Dev	15.02	76.49	81.50	55902	0.0	0.8	0.0	1.4
WQTV	SMF-2 WQTV	Post-Dev	15.27	76.48	81.50	55139	0.0	0.8	0.0	1.4
WQTV	SMF-2 WQTV	Post-Dev	15.52	76.46	81.50	54376	0.0	0.8	0.0	1.4
WQTV	SMF-2 WQTV	Post-Dev	15.77	76.45	81.50	53613	0.0	0.8	0.0	1.5
WQTV	SMF-2 WQTV	Post-Dev	16.02	76.44	81.50	52850	0.0	0.8	0.0	1.5
WQTV	SMF-2 WQTV	Post-Dev	16.27	76.42	81.50	52087	0.0	0.8	0.0	1.5
WQTV	SMF-2 WQTV	Post-Dev	16.52	76.41	81.50	51324	0.0	0.7	0.0	1.5
WQTV	SMF-2 WQTV	Post-Dev	16.77	76.40	81.50	50561	0.0	0.7	0.0	1.5
WQTV	SMF-2 WQTV	Post-Dev	17.02	76.38	81.50	49798	0.0	0.7	0.0	1.5
WQTV	SMF-2 WQTV	Post-Dev	17.27	76.37	81.50	49035	0.0	0.7	0.0	1.5
WQTV	SMF-2 WQTV	Post-Dev	17.52	76.36	81.50	48272	0.0	0.7	0.0	1.6
WQTV	SMF-2 WQTV	Post-Dev	17.77	76.34	81.50	47509	0.0	0.7	0.0	1.6
WQTV	SMF-2 WQTV	Post-Dev	18.02	76.33	81.50	46746	0.0	0.7	0.0	1.6
WQTV	SMF-2 WQTV	Post-Dev	18.27	76.32	81.50	45983	0.0	0.7	0.0	1.6
WQTV	SMF-2 WQTV	Post-Dev	18.52	76.31	81.50	45220	0.0	0.7	0.0	1.6
WQTV	SMF-2 WQTV	Post-Dev	18.77	76.29	81.50	44457	0.0	0.6	0.0	1.6
WQTV	SMF-2 WQTV	Post-Dev	19.02	76.28	81.50	43694	0.0	0.6	0.0	1.6
WQTV	SMF-2 WQTV	Post-Dev	19.27	76.27	81.50	42931	0.0	0.6	0.0	1.7
WQTV	SMF-2 WQTV	Post-Dev	19.52	76.25	81.50	42168	0.0	0.6	0.0	1.7
WQTV	SMF-2 WQTV	Post-Dev	19.77	76.24	81.50	41405	0.0	0.6	0.0	1.7
WQTV	SMF-2 WQTV	Post-Dev	20.02	76.23	81.50	40642	0.0	0.6	0.0	1.7
WQTV	SMF-2 WQTV	Post-Dev	20.27	76.21	81.50	39879	0.0	0.6	0.0	1.7
WQTV	SMF-2 WQTV	Post-Dev	20.52	76.20	81.50	39116	0.0	0.6	0.0	1.7
WQTV	SMF-2 WQTV	Post-Dev	20.77	76.19	81.50	38353	0.0	0.6	0.0	1.7
WQTV	SMF-2 WQTV	Post-Dev	21.02	76.18	81.50	37590	0.0	0.5	0.0	1.7
WQTV	SMF-2 WQTV	Post-Dev	21.27	76.16	81.50	36827	0.0	0.5	0.0	1.7
WQTV	SMF-2 WQTV	Post-Dev	21.52	76.15	81.50	36064	0.0	0.5	0.0	1.8
WQTV	SMF-2 WQTV	Post-Dev	21.77	76.14	81.50	35301	0.0	0.5	0.0	1.8
WQTV	SMF-2 WQTV	Post-Dev	22.02	76.12	81.50	34538	0.0	0.5	0.0	1.8
WQTV	SMF-2 WQTV	Post-Dev	22.27	76.11	81.50	33775	0.0	0.5	0.0	1.8
WQTV	SMF-2 WQTV	Post-Dev	22.52	76.10	81.50	33012	0.0	0.5	0.0	1.8
WQTV	SMF-2 WQTV	Post-Dev	22.77	76.08	81.50	32249	0.0	0.5	0.0	1.8
WQTV	SMF-2 WQTV	Post-Dev	23.02	76.07	81.50	31486	0.0	0.5	0.0	1.8
WQTV	SMF-2 WQTV	Post-Dev	23.27	76.06	81.50	30723	0.0	0.4	0.0	1.8
WQTV	SMF-2 WQTV	Post-Dev	23.52	76.05	81.50	29960	0.0	0.4	0.0	1.8
WQTV	SMF-2 WQTV	Post-Dev	23.77	76.03	81.50	29197	0.0	0.4	0.0	1.8
WQTV	SMF-2 WQTV	Post-Dev	24.02	76.02	81.50	28434	0.0	0.4	0.0	1.9
WQTV	SMF-2 WQTV	Post-Dev	24.27	76.01	81.50	27671	0.0	0.4	0.0	1.9
WQTV	SMF-2 WQTV	Post-Dev	24.52	75.99	81.50	27208	0.0	0.4	0.0	1.9
WQTV	SMF-2 WQTV	Post-Dev	24.77	75.98	81.50	27031	0.0	0.4	0.0	1.9
WQTV	SMF-2 WQTV	Post-Dev	25.02	75.97	81.50	26853	0.0	0.4	0.0	1.9
WQTV	SMF-2 WQTV	Post-Dev	25.27	75.95	81.50	26676	0.0	0.4	0.0	1.9
WQTV	SMF-2 WQTV	Post-Dev	25.52	75.94	81.50	26499	0.0	0.4	0.0	1.9
WQTV	SMF-2 WQTV	Post-Dev	25.77	75.93	81.50	26321	0.0	0.4	0.0	1.9
WQTV	SMF-2 WQTV	Post-Dev	26.02	75.92	81.50	26144	0.0	0.4	0.0	1.9
WQTV	SMF-2 WQTV	Post-Dev	26.27	75.90	81.50	25966	0.0	0.4	0.0	1.9

SMF-2 WQTV Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
WQTV	SMF-2 WQTV	Post-Dev	26.52	75.89	81.50	25789	0.0	0.4	0.0	1.9
WQTV	SMF-2 WQTV	Post-Dev	26.77	75.88	81.50	25611	0.0	0.4	0.0	1.9
WQTV	SMF-2 WQTV	Post-Dev	27.02	75.86	81.50	25434	0.0	0.4	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	27.27	75.85	81.50	25257	0.0	0.4	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	27.52	75.84	81.50	25079	0.0	0.4	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	27.77	75.82	81.50	24902	0.0	0.4	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	28.02	75.81	81.50	24724	0.0	0.4	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	28.27	75.80	81.50	24547	0.0	0.4	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	28.52	75.78	81.50	24370	0.0	0.4	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	28.77	75.77	81.50	24192	0.0	0.4	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	29.02	75.76	81.50	24015	0.0	0.3	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	29.27	75.75	81.50	23837	0.0	0.3	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	29.52	75.73	81.50	23660	0.0	0.3	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	29.77	75.72	81.50	23482	0.0	0.3	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	30.02	75.71	81.50	23305	0.0	0.3	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	30.27	75.69	81.50	23128	0.0	0.3	0.0	2.0
WQTV	SMF-2 WQTV	Post-Dev	30.52	75.68	81.50	22950	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	30.77	75.67	81.50	22773	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	31.02	75.65	81.50	22595	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	31.27	75.64	81.50	22418	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	31.52	75.63	81.50	22241	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	31.77	75.62	81.50	22063	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	32.02	75.60	81.50	21886	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	32.27	75.59	81.50	21708	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	32.52	75.58	81.50	21531	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	32.77	75.56	81.50	21353	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	33.02	75.55	81.50	21176	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	33.27	75.54	81.50	20999	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	33.52	75.52	81.50	20821	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	33.77	75.51	81.50	20644	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	34.02	75.50	81.50	20466	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	34.27	75.49	81.50	20289	0.0	0.3	0.0	2.1
WQTV	SMF-2 WQTV	Post-Dev	34.52	75.47	81.50	20112	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	34.77	75.46	81.50	19934	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	35.02	75.45	81.50	19757	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	35.27	75.43	81.50	19579	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	35.52	75.42	81.50	19402	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	35.77	75.41	81.50	19224	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	36.02	75.39	81.50	19047	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	36.27	75.38	81.50	18870	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	36.52	75.37	81.50	18692	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	36.77	75.36	81.50	18515	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	37.02	75.34	81.50	18337	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	37.27	75.33	81.50	18160	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	37.52	75.32	81.50	17983	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	37.77	75.30	81.50	17805	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	38.02	75.29	81.50	17628	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	38.27	75.28	81.50	17450	0.0	0.3	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	38.52	75.26	81.50	17273	0.0	0.2	0.0	2.2
WQTV	SMF-2 WQTV	Post-Dev	38.77	75.25	81.50	17095	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	39.02	75.24	81.50	16918	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	39.27	75.23	81.50	16741	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	39.52	75.21	81.50	16563	0.0	0.2	0.0	2.3

SMF-2 WQTV Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
WQTV	SMF-2 WQTV	Post-Dev	39.77	75.20	81.50	16386	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	40.02	75.19	81.50	16208	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	40.27	75.17	81.50	16031	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	40.52	75.16	81.50	15854	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	40.77	75.15	81.50	15676	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	41.02	75.13	81.50	15499	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	41.27	75.12	81.50	15321	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	41.52	75.11	81.50	15144	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	41.77	75.09	81.50	14966	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	42.02	75.08	81.50	14789	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	42.27	75.07	81.50	14612	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	42.52	75.06	81.50	14434	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	42.77	75.04	81.50	14257	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	43.02	75.03	81.50	14079	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	43.27	75.02	81.50	13902	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	43.52	75.00	81.50	13725	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	43.77	74.99	81.50	13600	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	44.02	74.98	81.50	13498	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	44.27	74.96	81.50	13395	0.0	0.2	0.0	2.3
WQTV	SMF-2 WQTV	Post-Dev	44.52	74.95	81.50	13292	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	44.77	74.94	81.50	13189	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	45.02	74.93	81.50	13087	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	45.27	74.91	81.50	12984	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	45.52	74.90	81.50	12881	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	45.77	74.89	81.50	12779	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	46.02	74.87	81.50	12676	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	46.27	74.86	81.50	12573	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	46.52	74.85	81.50	12470	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	46.77	74.83	81.50	12368	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	47.02	74.82	81.50	12265	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	47.27	74.81	81.50	12162	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	47.52	74.80	81.50	12060	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	47.77	74.78	81.50	11957	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	48.02	74.77	81.50	11854	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	48.27	74.76	81.50	11751	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	48.52	74.74	81.50	11649	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	48.77	74.73	81.50	11546	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	49.02	74.72	81.50	11443	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	49.27	74.70	81.50	11341	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	49.52	74.69	81.50	11238	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	49.77	74.68	81.50	11135	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	50.02	74.67	81.50	11032	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	50.27	74.65	81.50	10930	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	50.52	74.64	81.50	10827	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	50.77	74.63	81.50	10724	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	51.02	74.61	81.50	10622	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	51.27	74.60	81.50	10519	0.0	0.2	0.0	2.4
WQTV	SMF-2 WQTV	Post-Dev	51.52	74.59	81.50	10416	0.0	0.2	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	51.77	74.57	81.50	10313	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	52.02	74.56	81.50	10211	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	52.27	74.55	81.50	10108	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	52.52	74.53	81.50	10005	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	52.77	74.52	81.50	9902	0.0	0.1	0.0	2.5

SMF-2 WQTV Recovery Analysis

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
WQTV	SMF-2 WQTV	Post-Dev	53.02	74.51	81.50	9800	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	53.27	74.50	81.50	9697	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	53.52	74.48	81.50	9594	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	53.77	74.47	81.50	9492	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	54.02	74.46	81.50	9389	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	54.27	74.44	81.50	9286	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	54.52	74.43	81.50	9183	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	54.77	74.42	81.50	9081	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	55.02	74.40	81.50	8978	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	55.27	74.39	81.50	8875	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	55.52	74.38	81.50	8773	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	55.77	74.37	81.50	8670	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	56.02	74.35	81.50	8567	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	56.27	74.34	81.50	8464	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	56.52	74.33	81.50	8362	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	56.77	74.31	81.50	8259	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	57.02	74.30	81.50	8156	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	57.27	74.29	81.50	8054	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	57.52	74.27	81.50	7951	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	57.77	74.26	81.50	7848	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	58.02	74.25	81.50	7745	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	58.27	74.24	81.50	7643	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	58.52	74.22	81.50	7540	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	58.77	74.21	81.50	7437	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	59.02	74.20	81.50	7335	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	59.27	74.18	81.50	7232	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	59.52	74.17	81.50	7129	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	59.77	74.16	81.50	7026	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	60.02	74.14	81.50	6924	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	60.27	74.13	81.50	6821	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	60.52	74.12	81.50	6718	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	60.77	74.11	81.50	6616	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	61.02	74.09	81.50	6513	0.0	0.1	0.0	2.5
WQTV	SMF-2 WQTV	Post-Dev	61.27	74.08	81.50	6410	0.0	0.1	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	61.52	74.07	81.50	6307	0.0	0.1	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	61.77	74.05	81.50	6205	0.0	0.1	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	62.02	74.04	81.50	6102	0.0	0.1	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	62.27	74.03	81.50	5999	0.0	0.1	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	62.52	74.01	81.50	5897	0.0	0.1	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	62.77	74.00	81.50	5794	0.0	0.1	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	63.02	74.00	81.50	5785	0.0	0.0	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	63.27	74.00	81.50	5785	0.0	0.0	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	63.52	74.00	81.50	5785	0.0	0.0	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	63.77	74.00	81.50	5785	0.0	0.0	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	64.02	74.00	81.50	5785	0.0	0.0	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	64.27	74.00	81.50	5785	0.0	0.0	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	64.52	74.00	81.50	5785	0.0	0.0	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	64.77	74.00	81.50	5785	0.0	0.0	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	65.02	74.00	81.50	5785	0.0	0.0	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	65.27	74.00	81.50	5785	0.0	0.0	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	65.52	74.00	81.50	5785	0.0	0.0	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	65.77	74.00	81.50	5785	0.0	0.0	0.0	2.6
WQTV	SMF-2 WQTV	Post-Dev	66.02	74.00	81.50	5785	0.0	0.0	0.0	2.6

SMF-2 WQTV End

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==== Basins ==========
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Name: AG-1 Node: SMF-1 Status: Onsite
Group: Post-Dev Type: SCS Unit Hydrograph GA

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 27.07
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Area(ac)	Impervious(%)	DCIA(%)	Cutoff(ft)	**********	Eff Por(dec)	Suctn Hd(in)
0.780	0.000	0.00	1.940	23.010	0.420	4.170
27.050	0.000	0.00	4.760	24.700	0.420	4.170
2.410	0.000	0.00	4.660	51.400	0.420	4.170
3.980	0.000	0.00	3.220	9.240	0.410	8.740

Name: AG-2 Node: SMF-2 Status: Onsite
Group: Post-Dev Type: SCS Unit Hydrograph GA

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 22.80
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Area(ac)	Impervious(%)	DCIA(%)	Cutoff(ft)	**********	Eff Por(dec)	Suctn Hd(in)
1.440	0.000	0.00	1.940	23.010	0.420	4.170
0.110	0.000	0.00	1.940	23.010	0.420	4.170
4.010	24.800	0.00	4.690	20.480	0.400	5.590
6.800	0.000	0.00	2.560	8.980	0.410	8.740
4.880	0.000	0.00	3.220	9.240	0.410	8.740
6.230	28.350	0.00	1.120	8.820	0.410	8.740
35.830	35.940	35.94	6.560	25.840	0.420	4.170
4.370	0.000	0.00	6.560	25.840	0.420	4.170
10.480	0.000	0.00	4.560	17.580	0.400	5.590
0.350	0.000	0.00	2.430	5.380	0.410	8.740
11.580	0.000	0.00	1.770	11.030	0.410	8.740
9.080	4.940	0.00	0.980	10.400	0.410	8.740
11.090	0.000	0.00	1.150	1.440	0.320	18.370
5.300	0.000	0.00	4.560	4.730	0.330	17.680

Name: POST-1 Node: SMF-1 Status: Onsite
Group: Post-Dev Type: SCS Unit Hydrograph GA

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Area(ac)	Impervious(%)	DCIA(%)	Cutoff(ft)	**********	Eff Por(dec)	Suctn Hd(in)
7.350	38.630	38.63	1.940	23.010	0.420	4.170
0.350	15.187	15.19	4.760	16.450	0.420	4.170
8.390	22.310	22.31	4.760	24.700	0.420	4.170
1.540	36.000	36.00	3.220	9.240	0.410	8.740
6.530	65.010	65.01	6.560	25.840	0.420	4.170
13.470	42.563	42.56	6.560	25.840	0.420	4.170
1.100	52.980	52.98	4.560	17.580	0.400	5.590
5.510	58.800	58.80	1.770	11.030	0.410	8.740

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==== Nodes ==========

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      Name: GW-1                Base Flow(cfs): 0.000          Init Stage(ft): 60.000
     Group: Post-Dev                                           Warn Stage(ft): 0.000
      Type: Time/Stage


      Time(hrs)       Stage(ft)
--------------- ---------------
           0.00          60.000
         960.00          60.000

------------------------------------------------------------------------------------------------
      Name: SMF-1               Base Flow(cfs): 0.000          Init Stage(ft): 73.020
     Group: Post-Dev                                           Warn Stage(ft): 75.500
      Type: Stage/Area


      Stage(ft)        Area(ac)
--------------- ---------------
         73.000          6.3425
         74.000          6.6539
         75.000          6.9676
         76.000          7.2837

------------------------------------------------------------------------------------------------
      Name: SMF-2               Base Flow(cfs): 0.000          Init Stage(ft): 76.630
     Group: Post-Dev                                           Warn Stage(ft): 81.500
      Type: Stage/Area


      Stage(ft)        Area(ac)
--------------- ---------------
         74.000          0.1328
         75.000          0.3139
         76.000          0.6267
         77.000          1.9719
         78.000          3.4085
         79.000          4.6733
         80.000          6.1195
         81.000          7.3307
         82.000          8.6681
         82.500          9.2746

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==== Percolation Links =========================================================================
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        Name: PERC-1              From Node: SMF-1                   Flow: Both
       Group: Post-Dev              To Node: GW-1                   Count: 1

        Surface Area Option: Vary based on Stage/Area Table
  Vertical Flow Termination: Horizontal Flow Algorithm
      Aquifer Base Elev(ft): 61.000                       Perimeter 1(ft): 3098.265
       Water Table Elev(ft): 61.500                       Perimeter 2(ft): 3099.265
Ann Recharge Rate(in/year): 0.000                         Perimeter 3(ft): 3416.789
Horiz Conductivity(ft/day): 2.000                   Distance 1 to 2(ft): 50.000
 Vert Conductivity(ft/day): 1.250                   Distance 2 to 3(ft): 450.000
   Effective Porosity(dec): 0.200                      Num Cells 1 to 2: 15
          Suction Head(in): 4.170                      Num Cells 2 to 3: 45
       Layer Thickness(ft): 11.500



------------------------------------------------------------------------------------------------
        Name: PERC-2              From Node: SMF-2                   Flow: Both
       Group: Post-Dev              To Node: GW-1                   Count: 1

        Surface Area Option: Vary based on Stage/Area Table
  Vertical Flow Termination: Horizontal Flow Algorithm
      Aquifer Base Elev(ft): 61.000                       Perimeter 1(ft): 3721.975
       Water Table Elev(ft): 61.500                       Perimeter 2(ft): 3722.975
Ann Recharge Rate(in/year): 0.000                         Perimeter 3(ft): 4664.748
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  Horiz Conductivity(ft/day): 2.000                  Distance 1 to 2(ft): 50.000
   Vert Conductivity(ft/day): 1.250                  Distance 2 to 3(ft): 450.000
     Effective Porosity(dec): 0.200                     Num Cells 1 to 2: 15
             Suction Head(in): 4.170                    Num Cells 2 to 3: 45
         Layer Thickness(ft): 12.500
```

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================================================================================
==== Hydrology Simulations =====================================================
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         Name: 100 YR 1 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 1.00
          Rainfall File: Fdot-1
    Rainfall Amount(in): 4.40

Time(hrs)       Print Inc(min)
--------------- ---------------
721.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 168 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 168.00
          Rainfall File: Fdot-168
    Rainfall Amount(in): 16.00

Time(hrs)       Print Inc(min)
--------------- ---------------
888.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 2 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 2.00
          Rainfall File: Fdot-2
    Rainfall Amount(in): 5.40

Time(hrs)       Print Inc(min)
--------------- ---------------
722.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 24 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Fdot-24
    Rainfall Amount(in): 11.04

Time(hrs)       Print Inc(min)
--------------- ---------------
744.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 240 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 240.00
          Rainfall File: Fdot-240
    Rainfall Amount(in): 18.00

Time(hrs)       Print Inc(min)
--------------- ---------------
960.000         5.00
```

```
--------------------------------------------------------------------------------------------------------
         Name: 100 YR 4 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 4.00
          Rainfall File: Fdot-4
    Rainfall Amount(in): 6.72

Time(hrs)       Print Inc(min)
--------------- ---------------
744.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 72 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 72.00
          Rainfall File: Fdot-72
    Rainfall Amount(in): 13.80

Time(hrs)       Print Inc(min)
--------------- ---------------
792.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 8 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 8.00
          Rainfall File: Fdot-8
    Rainfall Amount(in): 8.00

Time(hrs)       Print Inc(min)
--------------- ---------------
728.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: WQTV
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\W

      Override Defaults: Yes
    Storm Duration(hrs): 1.00
          Rainfall File: Flmod
    Rainfall Amount(in): 0.10

Time(hrs)       Print Inc(min)
--------------- ---------------
72.000          5.00

================================================================================================
==== Routing Simulations ======================================================================
================================================================================================

         Name: 100 YR 1 HR         Hydrology Sim: 100 YR 1 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Execute: No          Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 721.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         15.000

Group           Run
--------------- -----
BASE            Yes
```

Post-Dev Yes
Pre-Dev Yes

Name: 100 YR 168 HR Hydrology Sim: 100 YR 168 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 888.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 2 HR Hydrology Sim: 100 YR 2 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 722.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 24 HR Hydrology Sim: 100 YR 24 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 744.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run

BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 240 HR Hydrology Sim: 100 YR 240 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 960.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 4 HR Hydrology Sim: 100 YR 4 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 724.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 72 HR Hydrology Sim: 100 YR 72 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 792.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run

BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 8 HR Hydrology Sim: 100 YR 8 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 728.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: WQTV Hydrology Sim: WQTV
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\W

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 80.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

SMF-1 B2B Max Stages

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
SMF-1	Post-Dev	100 YR 72 HR	72.14	74.26	75.50	0.0022	293413	59.92	18.4	60.21	4.1

SMF-2 B2B Max Stages

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
SMF-2	Post-Dev	100 YR 72 HR	68.34	81.87	81.50	0.0050	370147	58.76	36.1	68.34	5.4

==========
==== Basins ==========
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Name: AG-1 Node: SMF-1 Status: Onsite
Group: Post-Dev Type: SCS Unit Hydrograph GA

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 27.07
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Area(ac)	Impervious(%)	DCIA(%)	Cutoff(ft)	**********	Eff Por(dec)	Suctn Hd(in)
0.780	0.000	0.00	1.940	23.010	0.420	4.170
27.050	0.000	0.00	4.760	24.700	0.420	4.170
2.410	0.000	0.00	4.660	51.400	0.420	4.170
3.980	0.000	0.00	3.220	9.240	0.410	8.740

Name: AG-2 Node: SMF-2 Status: Onsite
Group: Post-Dev Type: SCS Unit Hydrograph GA

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 22.80
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Area(ac)	Impervious(%)	DCIA(%)	Cutoff(ft)	**********	Eff Por(dec)	Suctn Hd(in)
1.440	0.000	0.00	1.940	23.010	0.420	4.170
0.110	0.000	0.00	1.940	23.010	0.420	4.170
4.010	24.800	0.00	4.690	20.480	0.400	5.590
6.800	0.000	0.00	2.560	8.980	0.410	8.740
4.880	0.000	0.00	3.220	9.240	0.410	8.740
6.230	28.350	0.00	1.120	8.820	0.410	8.740
35.830	35.940	35.94	6.560	25.840	0.420	4.170
4.370	0.000	0.00	6.560	25.840	0.420	4.170
10.480	0.000	0.00	4.560	17.580	0.400	5.590
0.350	0.000	0.00	2.430	5.380	0.410	8.740
11.580	0.000	0.00	1.770	11.030	0.410	8.740
9.080	4.940	0.00	0.980	10.400	0.410	8.740
11.090	0.000	0.00	1.150	1.440	0.320	18.370
5.300	0.000	0.00	4.560	4.730	0.330	17.680

Name: POST-1 Node: SMF-1 Status: Onsite
Group: Post-Dev Type: SCS Unit Hydrograph GA

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Area(ac)	Impervious(%)	DCIA(%)	Cutoff(ft)	**********	Eff Por(dec)	Suctn Hd(in)
7.350	38.630	38.63	1.940	23.010	0.420	4.170
0.350	15.187	15.19	4.760	16.450	0.420	4.170
8.390	22.310	22.31	4.760	24.700	0.420	4.170
1.540	36.000	36.00	3.220	9.240	0.410	8.740
6.530	65.010	65.01	6.560	25.840	0.420	4.170
13.470	42.563	42.56	6.560	25.840	0.420	4.170
1.100	52.980	52.98	4.560	17.580	0.400	5.590
5.510	58.800	58.80	1.770	11.030	0.410	8.740

==========
==== Nodes ==========

Name: GW-1 Base Flow(cfs): 0.000 Init Stage(ft): 60.000
Group: Post-Dev Warn Stage(ft): 0.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	60.000
960.00	60.000

Name: SMF-1 Base Flow(cfs): 0.000 Init Stage(ft): 73.730
Group: Post-Dev Warn Stage(ft): 75.500
Type: Stage/Area

Stage(ft)	Area(ac)
73.000	6.3425
74.000	6.6539
75.000	6.9676
76.000	7.2837

Name: SMF-2 Base Flow(cfs): 0.000 Init Stage(ft): 80.840
Group: Post-Dev Warn Stage(ft): 81.500
Type: Stage/Area

Stage(ft)	Area(ac)
74.000	0.1328
75.000	0.3139
76.000	0.6267
77.000	1.9719
78.000	3.4085
79.000	4.6733
80.000	6.1195
81.000	7.3307
82.000	8.6681
82.500	9.2746

Percolation Links

Name: PERC-1 From Node: SMF-1 Flow: Both
Group: Post-Dev To Node: GW-1 Count: 1

Surface Area Option: Vary based on Stage/Area Table
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): 61.000 Perimeter 1(ft): 3098.265
Water Table Elev(ft): 61.500 Perimeter 2(ft): 3099.265
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 3416.789
Horiz Conductivity(ft/day): 2.000 Distance 1 to 2(ft): 50.000
Vert Conductivity(ft/day): 1.250 Distance 2 to 3(ft): 450.000
Effective Porosity(dec): 0.200 Num Cells 1 to 2: 15
Suction Head(in): 4.170 Num Cells 2 to 3: 45
Layer Thickness(ft): 11.500

Name: PERC-2 From Node: SMF-2 Flow: Both
Group: Post-Dev To Node: GW-1 Count: 1

Surface Area Option: Vary based on Stage/Area Table
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): 61.000 Perimeter 1(ft): 3721.975
Water Table Elev(ft): 61.500 Perimeter 2(ft): 3722.975
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 4664.748

```
  Horiz Conductivity(ft/day): 2.000                  Distance 1 to 2(ft): 50.000
   Vert Conductivity(ft/day): 1.250                  Distance 2 to 3(ft): 450.000
     Effective Porosity(dec): 0.200                     Num Cells 1 to 2: 15
             Suction Head(in): 4.170                    Num Cells 2 to 3: 45
         Layer Thickness(ft): 12.500
```

```
================================================================================
==== Hydrology Simulations =====================================================
================================================================================

         Name: 100 YR 1 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 1.00
          Rainfall File: Fdot-1
    Rainfall Amount(in): 4.40

Time(hrs)       Print Inc(min)
--------------- ---------------
721.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 168 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 168.00
          Rainfall File: Fdot-168
    Rainfall Amount(in): 16.00

Time(hrs)       Print Inc(min)
--------------- ---------------
888.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 2 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 2.00
          Rainfall File: Fdot-2
    Rainfall Amount(in): 5.40

Time(hrs)       Print Inc(min)
--------------- ---------------
722.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 24 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Fdot-24
    Rainfall Amount(in): 11.04

Time(hrs)       Print Inc(min)
--------------- ---------------
744.000         5.00

--------------------------------------------------------------------------------------------------------
         Name: 100 YR 240 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 240.00
          Rainfall File: Fdot-240
    Rainfall Amount(in): 18.00

Time(hrs)       Print Inc(min)
--------------- ---------------
960.000         5.00
```

```
--------------------------------------------------------------------------------------------------
         Name: 100 YR 4 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 4.00
          Rainfall File: Fdot-4
    Rainfall Amount(in): 6.72

Time(hrs)       Print Inc(min)
--------------- ---------------
744.000         5.00

--------------------------------------------------------------------------------------------------
         Name: 100 YR 72 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 72.00
          Rainfall File: Fdot-72
    Rainfall Amount(in): 13.80

Time(hrs)       Print Inc(min)
--------------- ---------------
792.000         5.00

--------------------------------------------------------------------------------------------------
         Name: 100 YR 8 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 8.00
          Rainfall File: Fdot-8
    Rainfall Amount(in): 8.00

Time(hrs)       Print Inc(min)
--------------- ---------------
728.000         5.00

--------------------------------------------------------------------------------------------------
         Name: WQTV
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\W

      Override Defaults: Yes
    Storm Duration(hrs): 1.00
          Rainfall File: Flmod
    Rainfall Amount(in): 0.10

Time(hrs)       Print Inc(min)
--------------- ---------------
72.000          5.00

==================================================================================================
==== Routing Simulations ========================================================================
==================================================================================================

         Name: 100 YR 1 HR         Hydrology Sim: 100 YR 1 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Execute: No          Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 721.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         15.000

Group           Run
--------------- -----
BASE            Yes
```

Post-Dev Yes
Pre-Dev Yes

Name: 100 YR 168 HR Hydrology Sim: 100 YR 168 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 888.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 2 HR Hydrology Sim: 100 YR 2 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 722.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 24 HR Hydrology Sim: 100 YR 24 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 744.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run

BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 240 HR Hydrology Sim: 100 YR 240 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 960.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 4 HR Hydrology Sim: 100 YR 4 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 724.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 72 HR Hydrology Sim: 100 YR 72 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 792.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run

BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 8 HR Hydrology Sim: 100 YR 8 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 728.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: WQTV Hydrology Sim: WQTV
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\W

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 80.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

SMF-1 B2B Max Stages

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
SMF-1	Post-Dev	100 YR 168 HR	168.27	75.22	75.50	0.0025	306536	154.77	12.7	0.01	4.1

SMF-2 B2B Max Stages

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
SMF-2	Post-Dev	100 YR 168 HR	168.47	83.84	81.50	0.0041	474686	155.43	28.2	0.01	4.5

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==== Basins ==========
==========

Name: AG-1 Node: SMF-1 Status: Onsite
Group: Post-Dev Type: SCS Unit Hydrograph GA

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 27.07
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Area(ac)	Impervious(%)	DCIA(%)	Cutoff(ft)	**********	Eff Por(dec)	Suctn Hd(in)
0.780	0.000	0.00	1.940	23.010	0.420	4.170
27.050	0.000	0.00	4.760	24.700	0.420	4.170
2.410	0.000	0.00	4.660	51.400	0.420	4.170
3.980	0.000	0.00	3.220	9.240	0.410	8.740

Name: AG-2 Node: SMF-2 Status: Onsite
Group: Post-Dev Type: SCS Unit Hydrograph GA

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 22.80
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Area(ac)	Impervious(%)	DCIA(%)	Cutoff(ft)	**********	Eff Por(dec)	Suctn Hd(in)
1.440	0.000	0.00	1.940	23.010	0.420	4.170
0.110	0.000	0.00	1.940	23.010	0.420	4.170
4.010	24.800	0.00	4.690	20.480	0.400	5.590
6.800	0.000	0.00	2.560	8.980	0.410	8.740
4.880	0.000	0.00	3.220	9.240	0.410	8.740
6.230	28.350	0.00	1.120	8.820	0.410	8.740
35.830	35.940	35.94	6.560	25.840	0.420	4.170
4.370	0.000	0.00	6.560	25.840	0.420	4.170
10.480	0.000	0.00	4.560	17.580	0.400	5.590
0.350	0.000	0.00	2.430	5.380	0.410	8.740
11.580	0.000	0.00	1.770	11.030	0.410	8.740
9.080	4.940	0.00	0.980	10.400	0.410	8.740
11.090	0.000	0.00	1.150	1.440	0.320	18.370
5.300	0.000	0.00	4.560	4.730	0.330	17.680

Name: POST-1 Node: SMF-1 Status: Onsite
Group: Post-Dev Type: SCS Unit Hydrograph GA

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Area(ac)	Impervious(%)	DCIA(%)	Cutoff(ft)	**********	Eff Por(dec)	Suctn Hd(in)
7.350	38.630	38.63	1.940	23.010	0.420	4.170
0.350	15.187	15.19	4.760	16.450	0.420	4.170
8.390	22.310	22.31	4.760	24.700	0.420	4.170
1.540	36.000	36.00	3.220	9.240	0.410	8.740
6.530	65.010	65.01	6.560	25.840	0.420	4.170
13.470	42.563	42.56	6.560	25.840	0.420	4.170
1.100	52.980	52.98	4.560	17.580	0.400	5.590
5.510	58.800	58.80	1.770	11.030	0.410	8.740

==========
==== Nodes ==========

```
================================================================================================

      Name: GW-1                Base Flow(cfs): 0.000          Init Stage(ft): 60.000
     Group: Post-Dev                                           Warn Stage(ft): 0.000
      Type: Time/Stage


      Time(hrs)       Stage(ft)
--------------- ---------------
           0.00          60.000
         960.00          60.000

------------------------------------------------------------------------------------------------
      Name: SMF-1               Base Flow(cfs): 0.000          Init Stage(ft): 74.370
     Group: Post-Dev                                           Warn Stage(ft): 75.500
      Type: Stage/Area


      Stage(ft)        Area(ac)
--------------- ---------------
         73.000          6.3425
         74.000          6.6539
         75.000          6.9676
         76.000          7.2837

------------------------------------------------------------------------------------------------
      Name: SMF-2               Base Flow(cfs): 0.000          Init Stage(ft): 82.050
     Group: Post-Dev                                           Warn Stage(ft): 81.500
      Type: Stage/Area


      Stage(ft)        Area(ac)
--------------- ---------------
         74.000          0.1328
         75.000          0.3139
         76.000          0.6267
         77.000          1.9719
         78.000          3.4085
         79.000          4.6733
         80.000          6.1195
         81.000          7.3307
         82.000          8.6681
         82.500          9.2746

================================================================================================
==== Percolation Links =========================================================================
================================================================================================

        Name: PERC-1              From Node: SMF-1                   Flow: Both
       Group: Post-Dev              To Node: GW-1                   Count: 1

        Surface Area Option: Vary based on Stage/Area Table
  Vertical Flow Termination: Horizontal Flow Algorithm
      Aquifer Base Elev(ft): 61.000                       Perimeter 1(ft): 3098.265
       Water Table Elev(ft): 61.500                       Perimeter 2(ft): 3099.265
Ann Recharge Rate(in/year): 0.000                         Perimeter 3(ft): 3416.789
Horiz Conductivity(ft/day): 2.000                   Distance 1 to 2(ft): 50.000
 Vert Conductivity(ft/day): 1.250                   Distance 2 to 3(ft): 450.000
   Effective Porosity(dec): 0.200                      Num Cells 1 to 2: 15
           Suction Head(in): 4.170                     Num Cells 2 to 3: 45
       Layer Thickness(ft): 11.500



------------------------------------------------------------------------------------------------
        Name: PERC-2              From Node: SMF-2                   Flow: Both
       Group: Post-Dev              To Node: GW-1                   Count: 1

        Surface Area Option: Vary based on Stage/Area Table
  Vertical Flow Termination: Horizontal Flow Algorithm
      Aquifer Base Elev(ft): 61.000                       Perimeter 1(ft): 3721.975
       Water Table Elev(ft): 61.500                       Perimeter 2(ft): 3722.975
Ann Recharge Rate(in/year): 0.000                         Perimeter 3(ft): 4664.748
```

```
  Horiz Conductivity(ft/day): 2.000                  Distance 1 to 2(ft): 50.000
   Vert Conductivity(ft/day): 1.250                  Distance 2 to 3(ft): 450.000
     Effective Porosity(dec): 0.200                     Num Cells 1 to 2: 15
            Suction Head(in): 4.170                     Num Cells 2 to 3: 45
         Layer Thickness(ft): 12.500
```

```
================================================================================
==== Hydrology Simulations =====================================================
================================================================================

         Name: 100 YR 1 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 1.00
          Rainfall File: Fdot-1
    Rainfall Amount(in): 4.40

Time(hrs)       Print Inc(min)
--------------- ---------------
721.000         5.00

--------------------------------------------------------------------------------
         Name: 100 YR 168 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 168.00
          Rainfall File: Fdot-168
    Rainfall Amount(in): 16.00

Time(hrs)       Print Inc(min)
--------------- ---------------
888.000         5.00

--------------------------------------------------------------------------------
         Name: 100 YR 2 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 2.00
          Rainfall File: Fdot-2
    Rainfall Amount(in): 5.40

Time(hrs)       Print Inc(min)
--------------- ---------------
722.000         5.00

--------------------------------------------------------------------------------
         Name: 100 YR 24 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Fdot-24
    Rainfall Amount(in): 11.04

Time(hrs)       Print Inc(min)
--------------- ---------------
744.000         5.00

--------------------------------------------------------------------------------
         Name: 100 YR 240 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 240.00
          Rainfall File: Fdot-240
    Rainfall Amount(in): 18.00

Time(hrs)       Print Inc(min)
--------------- ---------------
960.000         5.00
```

```
--------------------------------------------------------------------------------------------------
         Name: 100 YR 4 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 4.00
          Rainfall File: Fdot-4
    Rainfall Amount(in): 6.72

Time(hrs)       Print Inc(min)
--------------- ---------------
744.000         5.00

--------------------------------------------------------------------------------------------------
         Name: 100 YR 72 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 72.00
          Rainfall File: Fdot-72
    Rainfall Amount(in): 13.80

Time(hrs)       Print Inc(min)
--------------- ---------------
792.000         5.00

--------------------------------------------------------------------------------------------------
         Name: 100 YR 8 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Override Defaults: Yes
    Storm Duration(hrs): 8.00
          Rainfall File: Fdot-8
    Rainfall Amount(in): 8.00

Time(hrs)       Print Inc(min)
--------------- ---------------
728.000         5.00

--------------------------------------------------------------------------------------------------
         Name: WQTV
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\W

      Override Defaults: Yes
    Storm Duration(hrs): 1.00
          Rainfall File: Flmod
    Rainfall Amount(in): 0.10

Time(hrs)       Print Inc(min)
--------------- ---------------
72.000          5.00

==================================================================================================
==== Routing Simulations ========================================================================
==================================================================================================

         Name: 100 YR 1 HR         Hydrology Sim: 100 YR 1 HR
     Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

      Execute: No          Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 721.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         15.000

Group           Run
--------------- -----
BASE            Yes
```

Post-Dev Yes
Pre-Dev Yes

Name: 100 YR 168 HR Hydrology Sim: 100 YR 168 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 888.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 2 HR Hydrology Sim: 100 YR 2 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 722.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 24 HR Hydrology Sim: 100 YR 24 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 744.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run

BASE Yes
Post-Dev Yes
Pre-Dev Yes

Name: 100 YR 240 HR Hydrology Sim: 100 YR 240 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 960.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 4 HR Hydrology Sim: 100 YR 4 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 724.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 72 HR Hydrology Sim: 100 YR 72 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 792.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run

BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: 100 YR 8 HR Hydrology Sim: 100 YR 8 HR
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\1

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 728.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

Name: WQTV Hydrology Sim: WQTV
Filename: N:\2021\21-0025\Departments\04_Engineering\03_Drainage\2_Calculations\ICPR - PONDS\Post\Routing\W

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 80.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
Post-Dev	Yes
Pre-Dev	Yes

SMF-1 B2B Max Stage

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
SMF-1	Post-Dev	100 YR 240 HR	240.20	76.37	75.50	0.0031	322403	179.09	16.7	0.01	4.3

SMF-2 B2B Max Stage

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
SMF-2	Post-Dev	100 YR 240 HR	240.36	84.87	81.50	0.0050	529282	182.01	37.2	0.01	5.5

PROJECT NAME:	Tower Hill Golf Facility	
PROJECT No.:	21-0025.18	11:54 AM
FILE PATH:	N:\2021\21-0025\Departments\04_Engineering\01_Regulatory Permitting\Utilities\GOLF\Meter Sizing\	

AWWA FIXTURE DEMAND CALCULATION

10,180 SF Maintenance Facility

Fixture	Fixture Value 60 psi		No. of Fixtures		Fixture Value
Lavatory	1.5	x	2	=	3
Toilet - Tank	2	x	2	=	4
Hose 1/2"	2	x	1	=	2

Combined Fixture Value Total 9

Customer Peak Demand From Fig. 4-2 x Press. Factor 11.7 gpm

Min. meter size per AWWA Manual M22 2nd Edition Table 6-1 1 in.

Use 1" Meter with 2" RPZ BFP

Walker Fain Owen
State of Florida, Professional Engineer, License No. 94201

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Walker Fain Owen, FL PE 94201

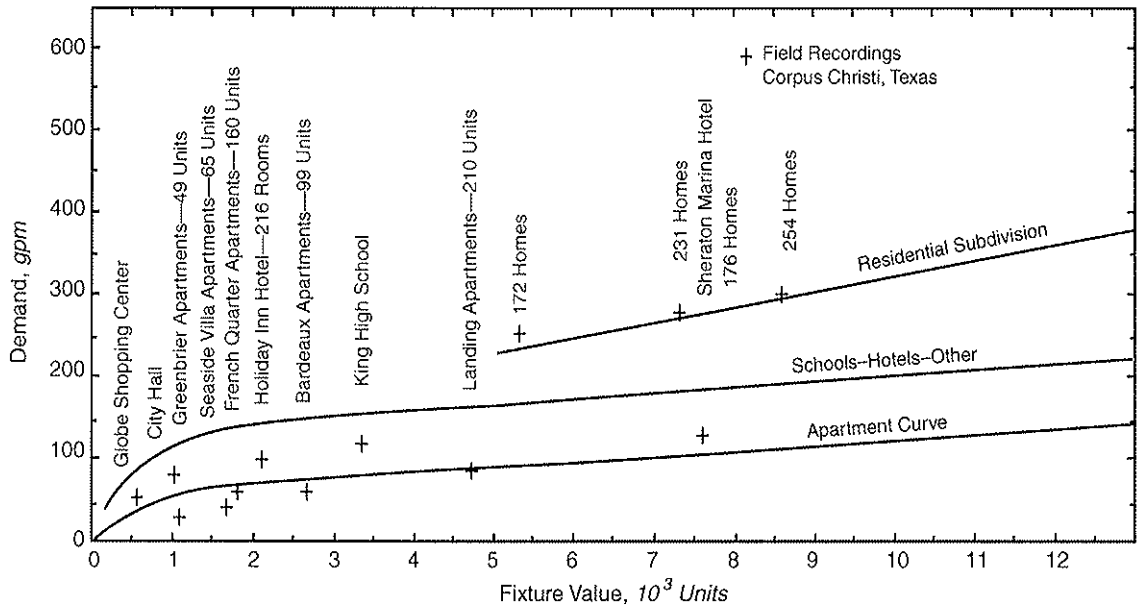

Figure 4-1 Peak flow demand of typical customer categories

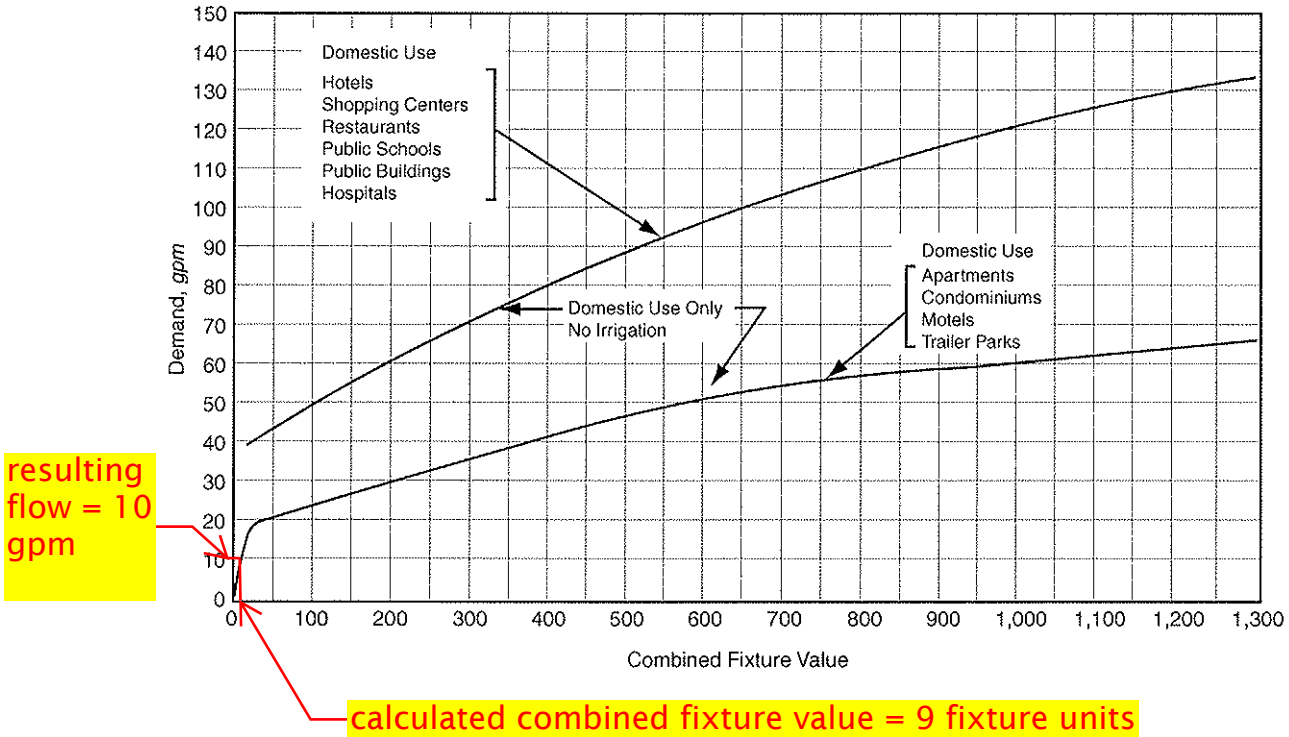

Figure 4-2 Water flow demand per fixture value—low range

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applied to a graph that compensates for a reduced average fixture demand as the number of fixtures increases. This general procedure is followed in this chapter, with the exception of the means of establishing the values.

Pressure adjustment. Because the pressure that is available at the fixture influences flows in fixtures that do not have a pressure-reducing valve, it is necessary to establish a base pressure for estimating fixture flows. The increase in flow through plastic garden hoses caused by pressure changes is readily seen in Figure 4-6. Utilities generally design from a minimum pressure at the outlet of the meter; therefore, this location was selected. All calculations in the current version are made on the base pressure of 60 psi at the meter outlet, and pressure adjustment factors are included in Table 4-1 to assist the estimator in adjusting data from the graphs to the standard minimum delivery pressure of the estimator's utility.

Fixture values. As defined in the 1975 M22, a fixture value (as opposed to a fixture "unit" used by Hunter) is simply the best estimate of the peak instantaneous demand of a given fixture or appliance, depending on circumstances and based on the actual conditions at its point of use. This parameter was arbitrarily chosen to serve as a simple variable against which measured peak demands could be plotted in order to develop demand probability curves. Some suggested fixture values are provided in Table 4-2. Fixture values represent the peak flow in gallons per minute of each fixture or appliance when it is operated without the interference of other fixtures at 60 psi (414 kPa). The user is reminded that these are only suggested values for domestic-type uses with 1/2-in. (13 mm) connections, and that actual demands for the fixtures and appliances being used in the proposed building should take preference. For example, the suggested shower value is 2.5 gpm (0.57 m^3/hr) and the bathtub flow rate is 8 gpm (1.8 m^3/hr). If the actual showers and baths being used have flow rates greater or less than these rates, then the actual values, not the values from Table 4-2, should be used. It is especially important to consider actual values in commercial, industrial, or institutional buildings and in cases where connections larger than 1/2-in. (13 mm) are used. Values for fixtures or appliances not listed in Table 4-2 should be obtained from the manufacturer.

Table 4-1 Pressure adjustment factors*

Table 4-1: Pressure Adjustment Factor

Working Pressure at Meter Discharge (*psi*)	Average Flow from 50 ft of 5/8-in. Hose and Sprinkler (*gpm*)	Pressure Adjustment Factor
35	6.7	0.74
40	7.2	0.80
50	8.1	0.90
60	9.0	1.00
70	9.8	1.09
80	10.5	1.17
90	11.2	1.25
100	12.1	1.34

*derived from Table 4-1 and 4-2 of Manual M22 (1975).

NOTE: To convert psi to kPa: psi × 6.89476; to convert gpm to m^3/hr: gpm × 0.227.

based on static pressure = 83 psi from fire flow test.

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Table 6-1 AWWA meter standards

Meter	Minimum Flow Rate (*gpm*)	Low Normal Flow Rate (*gpm*)	Change-over Range (Compound Meters)	High Normal Flow Rate (*gpm*)	Maximum Flow Rate (*gpm*)	Head Loss at Maximum Flow (*psi*)
Positive Displacement						
1/2 in.	0.25	1	N/A	7.5	15	15
5/8 in.	0.25	1		10	20	15
3/4 in.	0.5	2		15	30	15
1 in.	0.75	3		25	50	15
1 1/2 in.	1.5	5	N/A	50	100	15
2 in.	2	8		80	160	15
Multijet						
5/8 in.	0.25	1	N/A	10	20	15
3/4 in.	0.5	2		15	30	15
1 in.	0.75	3		25	50	15
1 1/2 in.	1.5	5		50	100	15
2 in.	2.0	8		80	160	15
Turbine class 1						
3/4 in.	1.5	N/A	N/A	20	30	15
1 in.	2			35	50	15
1 1/2 in.	3			65	100	15
2 in.	4			100	160	15
3 in.	6			220	350	15
4 in.	8			420	630	15
6 in.	15			865	1,300	15
Turbine class 2						
1 1/2 in.	4	N/A	N/A	80	120	7
2 in.	4			100	160	7
3 in.	8			240	350	7
4 in.	15			420	630	7
6 in.	30			920	1,400	7
8 in.	50			1,600	2,400	7
10 in.	75			2,500	3,800	7
12 in.	120			3,300	5,000	7
14 in.	150			5,200	7,500	7
16 in.	200			6,500	10,000	7
18 in.	250			8,500	12,500	7
20 in.	300			10,000	15,000	7
Compound						
2 in.	0.25	2	20	80	160	20
3 in.	0.5	4	23	160	320	20
4 in.	0.75	6	28	250	500	20
6 in.	1.5	10	32	500	1,000	20
8 in.	2	16	50	800	1,600	20
Singlejet						
1 1/2 in.	0.5	1.5	N/A	50	100	15
2 in.	0.5	2.0		80	160	15
3 in.	0.5	2.5		160	320	15
4 in.	0.75	3.0		250	500	15
6 in.	1.5	4.0		500	1000	15

Source: Data are drawn from AWWA Standards C700, C701, C702, C708, C710, and C712, of latest revision as of December 2002.
N/A = not applicable

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INSTRUMENT # 2207220 2 PGS
2006 JAN 18 04:18 PM BK 3299 PG 210
J. K. "BUDDY" IRBY
CLERK OF CIRCUIT COURT
ALACHUA COUNTY, FLORIDA
CLERK12 Receipt#268482
Doc Stamp-Deed: 0.70

Prepared by Charles M. Gadd, Jr.
Clayton-Johnston, P.A.
18 NW 33rd Court
Gainesville, FL 32607

Parcel ID Number: 03873-000-000

Warranty Deed

This Indenture, Made this 18th day of January, 2006 A.D., **Between** William J. Shively

of the County of Alachua, State of Florida, **grantor,** and Tomoka Hills Farms, Inc., a corporation existing under the laws of the State of Florida

whose address is: P.O. Box 147018, Gainesville, FL 32614

of the County of Alachua, State of Florida, **grantee.**

Witnesseth that the GRANTOR, for and in consideration of the sum of ----------TEN DOLLARS ($10)---------- DOLLARS, and other good and valuable consideration to GRANTOR in hand paid by GRANTEE, the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said GRANTEE and GRANTEE'S heirs, successors and assigns forever, the following described land, situate, lying and being in the County of Alachua State of Florida to wit:

Those certain lands as are more particularly described in the attached Exhibit "A" which is made apart hereof by reference.

Subject to taxes for 2006 and subsequent years.

Subject to restrictions and easements of record.

This deed is being given by the grantor to a corporation which he owns one hundred percent of the outstanding stock in and is a transfer of unencumbered property to a corporation wholey owned by grantor and is exempt from Florida Documentary Stamp Tax.

The grantor covenants and warrants that the above described property is neither his homestead nor his residence.

2207220

and the grantor does hereby fully warrant the title to said land, and will defend the same against lawful claims of all persons whomsoever.

In Witness Whereof, the grantor has hereunto set his hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

Printed Name: Charles M. Gadd, Jr.
Witness

Printed Name: Jeannie Brazy
Witness

William J. Shively (Seal)
P.O. Address: P.O. Box 147018, Gainesville, Florida 32614-7018

STATE OF Florida
COUNTY OF Alachua

The foregoing instrument was acknowledged before me this 18th day of January, 2006 by William J. Shively

he is personally known to me or he has produced his Florida driver's license as identification.

Comm. number DD 235053
Expires: Aug 16, 2007

Printed Name: Charles M. Gadd, Jr.
Notary Public
My Commission Expires:

Notary Public State of Florida

EXHIBIT "A"

A tract of land situated in Fractional Section 16 and the William Garvin Grant, Township 8 South, Range 18 East, Alachua County, Florida, said tract of lane being more particularly described as follows:

Commence at a concrete monument at the Northeast corner of the aforementioned Fractional Section 16, Township 8 South, Range 18 East for a point of reference and run South 00 degs., 27 mins., 55 secs. West, a distance of 3.76 feet to the South right of way line of the Seaboard Coastline Railroad (200 foot right of way abandoned); thence run North 88 degs., 37 mins., 15 secs. West, along said right of way line of Interstate Highway No. 75 (300 foot tight of way); thence run South 04 degs., 11 mins., 43 secs. West along said right of way line , a distance of 1090.69 feet to the West right of way line of Interstate No. 75 a distance pf 1200.36 feet to a concrete monument at the intersection of the South line of that certain parcel of land described in Official Records Book 1195, at page 66 of the Public Records of Alachua County, Florida with said West right of way line, of Interstate Highway No.75 and the True Point of Beginning; thence continue South 04 degs., 11 mins., 43 secs. West, along said right of way line, a distance of 1257.04 feet to a concrete monument at the point of curvature of a 00 degs., 58 mins., 28 sec. curve, having a radius of 5879.58 feet, a total internal angle of 28 degs., 38 mins., 28 secs. and being concave to an Easterly direction; thence run Southeasterly, along the arc of the said right of way curve, an arc distance of 1734.82 feet to a concrete monument, said concrete monument being the Southeast corner of the certain parcel of land described in Official Records Book 742, at page 153 of the Public Records of Alachua County, Florida; thence run North 72 degs., 29 mins., 54 secs. West, along the South line of said parcel of land recorded in Official Records Book 742, at page 153, a distance of 2775.69 feet to a concrete monument; thence run South 17 degs., 05 mins., 50 secs. West, along said South line, a distance of 592.04 feet to a concrete monument; thence run South 89 degs., 04 mins., 44 secs. West, along said South line, a distance of 725.63 feet to the East right of way line of State Road No. S-235-A (100 foot right of way); thence run North 01 degs., 59 mins., 55 secs. West, along said right of way line, a distance of 2164.71 feet to a concrete monument at the Southwest corner of said parcel of land described in Official Records Book 1195, at page 66; thence ruin North 88 degs., 29 mins., 13 secs. East, along the South line of said parcel of land, a distance of 2807.17 feet to a concrete monument; thence run North 58 degs., 14 mins., 10 secs. East, along said South line, a distance of 917.09 feet to the True Point of Beginning.

INSTRUMENT # 2207220
2 PGS

Record 15.00
Doc. Stamps 6,384.00
Int.Tax
Total 6,399.00

CIRCUIT COURT CLERK
J.K. "Buddy" Irby
ALACHUA COUNTY, FL
Date 01/25/1999 16:28
Document ID 1587372
Book/Page 2213/ 1501

DTAX 6,384.00

Prepared by and return to:
Philip A. DeLaney
Attorney at Law
Scruggs & Carmichael, P.A.
3426 N.W. 43rd Street, Suite B
Gainesville, Florida 32606
352-374-4120
File No.: **98-3148**

[Space Above This Line For Recording Data]

Warranty Deed

This Warranty Deed made this **22nd** day of **January**, **1999** between

New Life Corporation of America, a Tennessee corporation
whose Social Security/FEIN Number is: [redacted]
whose post office address is
123 Walnut Drive, Hendersonville, Tennessee 37075
grantor, and

Tomoka Hills Farms, Inc., a Florida corporation
whose Social Security/FEIN Number(s) are: 59-3551165
whose post office address is
Post Office Box 141150, Gainesville, Florida 32614
grantee:

(Whenever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives, and assigns of individuals, and the successors and assigns of corporations, trusts and trustees)

WITNESSETH, that said grantor, for and in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in **Alachua County, Florida** to-wit:

Legal Description Labeled Exhibit "A" Attached Hereto and By Reference Incorporated Herein

Parcel Identification Number: 03873-001-000

Subject to taxes for 1999 and subsequent years; covenants, conditions, restrictions, easements, reservations and limitations of record, if any.

TOGETHER WITH: Double Wide Mobile Home MVID numbers GEO729214 and GEO729215, which is permanently affixed to, a part of, and being sold with the real property described above.

TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD, the same in fee simple forever.

AND the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land; that the grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 1998 .

IN WITNESS WHEREOF, grantor has hereunto set grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

New Life Corporation of America
a Tennessee corporation

By: _____
Norvell Olive
Executive Director

_____
Witness Name: _____

_____
Witness Name: _____

(Corporate Seal)

STATE OF Tennessee
COUNTY OF DAVIDSON

The foregoing instrument was acknowledged before me this 21st day of January, 1999 by Norvell Olive, Executive Director of New Life Corporation of America, a Tennessee corporation, on behalf of the corporation. He/she is personally known to me or has produced a Driver's License as identification.

[Notary Seal]

_____
Notary Public
Printed Name: Ronald L. Stone
My Commission Expires: 03-25-2000

Exhibit A

A tract of land situated in Fractional Sections 9 & 16 and Section 37 (William Garvin Grant), Township 8 South, Range 18 East, Alachua County, Florida, said tract of land being more particularly described as follows:

Commence at a concrete monument at the Southeast corner of the aforementioned Fractional Section 9, Township 8 South, Range 18 East for a point of reference and run S. 01° 54'57" W., a distance of 3.76 feet to a concrete monument on the Southerly right of way line of the abandoned Seaboard Coastline Railroad (200 foot right of way); thence run N. 87°08'33" W., along said Southerly right of way line, a distance of 1090.74 feet to a concrete monument on the Westerly right of way line of State Road No. 93, also known as Interstate Highway No. 75 (300 foot right of way); thence run N. 05°41'41" E., along said Westerly right of way line, a distance of 100.12 feet to an iron pipe on the centerline of said railroad right of way and the True Point of Beginning; thence run N. 87°08'33" W., along said centerline, a distance of 1480.63 feet to an iron pipe at the point of curvature of a curve concave Southerly, said curve having a radius of 2864.79 feet, a central angle of 34°35'30", and a chord bearing and distance of S. 75°33'42" W., 1703.44 feet respectively; thence run Southwesterly, with said curve and along said centerline, an arc distance of 1729.58 feet to an iron pipe at the point of tangency of said curve; thence run S. 58°15'57" W., along said centerline, a distance of 716.12 feet to a concrete monument on the Easterly right of way line of County Road No. 235A (100 foot right of way); thence run S. 00°30'42" E., along said right of way line, a distance of 1030.00 feet to a concrete monument; thence run N. 89°58'49" E., a distance of 2807.17 feet to a concrete monument; thence run N. 59°41'41" E., a distance of 917.50 feet to a concrete monument on said Westerly right of way line of State Road No. 93; thence run N. 05°41'41" E., along said right of way line, a distance of 1300.00 feet to the True Point of Beginning.

TOGETHER WITH rights of the "parent tract" (dominant tenement) set forth in the easement recorded in O. R. Book 1195, at Page 68, of the Public Records of Alachua County, Florida.

Sign Up for Property Watch

Parcel Summary

Parcel ID	03873-000-000
Prop ID	15088
Location Address	UNASSIGNED LOCATION RE
Neighborhood/Area	233200.00
Subdivision	
Legal Description	FRAC SEC & GARVIN GRT COM NE COR SEC S 3.76 FT TO S R/W ACL RR (ABANDONED) W ALG R/W 1090.69 FT TO W R/W I-75 S ALG R/W 1200.36 FT POB S ALG R/W 1257.04 FT SELY ALG R/W 1734.82 FT N 72 DEG W 2775.69 FT S 17 DEG W 592.04 FT W 725.63 FT TO E R/W SR-235A N 2 (Note: *The Description above is not to be used on legal documents.)
Property Use Code	GRZGSOIL CLASS6 (06500)
Sec/Twp/Rng	16-08-18
Tax Area	ALACHUA (1700)
Acres	168.92
Homesteaded	False

No Image Available

View Map

Millage Rate Value

Millage Rate: 21.8298

Owner Information

TOMOKA HILLS FARMS INC
1301 DIXIANA DOMINO RD
LEXINGTON, KY 40511

Valuation

	2023 Certified Values	2022 Certified Values	2021 Certified Values	2020 Certified Values	2019 Certified Values
Improvement Value	$1,080	$1,080	$1,080	$1,080	$1,080
Land Value	$0	$0	$0	$0	$0
Land Agricultural Value	$59,700	$59,700	$59,700	$59,700	$59,700
Agricultural (Market) Value	$298,176	$298,176	$298,176	$298,176	$298,176
Just (Market) Value	**$299,256**	**$299,256**	**$299,256**	**$299,256**	**$299,256**
Assessed Value	$60,780	$60,780	$60,780	$60,780	$60,780
Exempt Value	$0	$0	$0	$0	$0
Taxable Value	$60,780	$60,780	$60,780	$60,780	$60,780
Maximum Save Our Homes Portability	$0	$0	$0	$0	$0

"Just (Market) Value" description - This is the value established by the Property Appraiser for ad valorem purposes. This value does not represent anticipated selling price.

TRIM Notice

2023 TRIM Notice (PDF)

Land Information

Land Use	Land Use Desc	Acres	Square Feet	Eff. Frontage	Depth	Zoning
6550	HAY	155.00	6751800	0	0	A
5501	TIMBER 2-N	10.00	435600	0	0	A
5930	SWAMP/WATER	3.92	170755.2	0	0	A

Building Information

Type	SOH MISC	**Heat**	
Total Area	1	**HC&V**	
Heated Area		**HVAC**	
Exterior Walls		**Bathrooms**	
Interior Walls		**Bedrooms**	
Roofing		**Total Rooms**	
Roof Type		**Stories**	1.0
Frame		**Actual Year Built**	0
Floor Cover		**Effective Year Built**	1998

Sub Area

Type	Description	Sq. Footage	Quality	Imprv Use	Imprv Use Descr
2400	WELL	1		R5	RES

Sales

Sale Date	Sale Price	Instrument	Book	Page	Qualification	Vacant/Improved	Grantor	Grantee	Link to Official Records
1/18/2006	$100	WD	3299	210	Unqualified (U)	Improved	* SHIVELY WILLIAM J	TOMOKA HILLS FARMS INC	Link (Clerk)
9/23/1998	$98,600	WD	2193	1160	Unqualified (U)	Vacant	* KEFFER & MATTHEWS TRUSTEES M	* SHIVELY WILLIAM J	Link (Clerk)
9/23/1998	$493,000	WD	2193	1126	Unqualified (U)	Vacant	* KEFFER & MATTHEWS TRUSTEES /	* KEFFER & MATTHEWS TRUSTEES M	Link (Clerk)
5/17/1995	$100	WD	2012	1545	Unqualified (U)	Vacant	* MARY JOSEPHINE MATTHEWS	* KEFFER & MATTHEWS TRUSTEES	Link (Clerk)
4/11/1994	$63,500	WD	1959	2058	Unqualified (U)	Vacant	* DONALD G AHEARN & MARILYNN R	* MARY JOSEPHINE MATTHEWS	Link (Clerk)
1/30/1989	$17,000	WD	1725	342	Unqualified (U)	Vacant		* DONALD G AHEARN & MARILYNN R	Link (Clerk)
12/31/1988	$55,000	WD	1723	2020	Unqualified (U)	Vacant		* UNASSIGNED	Link (Clerk)
2/1/1980	$405,500	WD	1262	94	Unqualified (U)	Vacant		* UNASSIGNED	Link (Clerk)

Official Public Records information is provided by the Alachua County Clerk's Office. Clicking on these links will direct you to their web site displaying the document details for this specific transaction.

Permits

Permit Number	Type	Primary	Active	Issue Date	Value
05-09826	ROOFING	Yes	No	3/28/2005	$26,820
6896	MECHANICAL	Yes	No	2/16/1999	$2,500

Our permitting information is pulled from the Alachua County Permitting Offices. Permitting information shown here is all the Property Appraiser has on file for this property. Any detailed questions about permits should be directed to the Permitting Offices.

Map

No data available for the following modules: Extra Features, Sketches, Photos.

This web application and the data herein is prepared for the inventory of real property found within Alachua County and is compiled from recorded deeds, plats, and other public records and data. Users of this web application and the data herein are hereby notified that the aforementioned public primary information sources should be consulted for verification of the information. Alachua County Property Appraiser's Office assumes no legal responsibility for the information contained herein.
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Contact Us

Developed by Schneider GEOSPATIAL

Sign Up for Property Watch

Parcel Summary

Parcel ID	03873-001-001
Prop ID	507279
Location Address	UNASSIGNED LOCATION RE
Neighborhood/Area	233200.00
Subdivision	
Legal Description	TRACT IN FRAC SECTIONS 9 16 TWP 8 RNG 18 AND GARVIN GRANT COM SE COR OF SEC 9-8-18 RUN S 3.76 FT N 87 DEG W ALONG RR R/W 1090.74 FT TO W R/W I-75 N 5 DEG E 100.12 FT THE POB N 87 DEG W 1480.63 FT SYLY AN ARC DISTANCE OF 1729.58 FT S 58 DEG W 716.12 FT TO (Note: *The Description above is not to be used on legal documents.)
Property Use Code	GRZGSOIL CLASS6 (06500)
Sec/Twp/Rng	16-08-18
Tax Area	ALACHUA (1700)
Acres	121.99
Homesteaded	False

No Image Available

View Map

Millage Rate Value

Millage Rate: 21.8298

Owner Information

TOMOKA HILLS FARMS INC
1301 DIXIANA DOMINO RD
LEXINGTON, KY 40511

Valuation

	2023 Certified Values
Improvement Value	$0
Land Value	$0
Land Agricultural Value	$46,800
Agricultural (Market) Value	$219,582
Just (Market) Value	**$219,582**
Assessed Value	$46,800
Exempt Value	$0
Taxable Value	$46,800
Maximum Save Our Homes Portability	$0

"Just (Market) Value" description - This is the value established by the Property Appraiser for ad valorem purposes. This value does not represent anticipated selling price.

TRIM Notice

2023 TRIM Notice (PDF)

Land Information

Land Use	Land Use Desc	Acres	Square Feet	Eff. Frontage	Depth	Zoning
6550	HAY	121.99	5313884.4	0	0	A

Sales

Sale Date	Sale Price	Instrument	Book	Page	Qualification	Vacant/Improved	Grantor	Grantee	Link to Official Records
1/22/1999	$912,000	WD	2213	1501	Qualified (Q)	Improved	* NEW LIFE CORPORATION OF AMER	TOMOKA HILLS FARMS INC	Link (Clerk)
4/10/1998	$100	CT	2162	2267	Unqualified (U)	Improved	* SOUTHERN CROSS OSTRICH FARM	* NEW LIFE CORPORATION OF AMER	Link (Clerk)
12/27/1994	$255,000	WD	2003	236	Unqualified (U)	Improved	* OSTRICH AMERICA CORP	* SOUTHERN CROSS OSTRICH FARM	Link (Clerk)
12/27/1994	$255,000	WD	1994	1479	Unqualified (U)	Improved	* OSTRICH AMERICA CORP	* OSTRICH AMERICA CORP	Link (Clerk)
4/9/1993	$385,000	WD	1902	834	Unqualified (U)	Improved	* DICKINSON HUNT DIC	* OSTRICH AMERICA CORP	Link (Clerk)
3/1/1979	$243,000	WD	1195	66	Unqualified (U)	Vacant		* DICKINSON HUNT DIC	Link (Clerk)

Official Public Records information is provided by the Alachua County Clerk's Office. Clicking on these links will direct you to their web site displaying the document details for this specific transaction.

Map

No data available for the following modules: Building Information, Sub Area, Extra Features, Permits, Sketches, Photos.

This web application and the data herein is prepared for the inventory of real property found within Alachua County and is compiled from recorded deeds, plats, and other public records and data. Users of this web application and the data herein are hereby notified that the aforementioned public primary information sources should be consulted for verification of the information. Alachua County Property Appraiser's Office assumes no legal responsibility for the information contained herein.
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Developed by
Schneider GEOSPATIAL

John Power TAX COLLECTOR
Serving Alachua County
FLORIDA STERLING AWARD RECIPIENT

2023 PAID REAL ESTATE 507279

NOTICE OF AD VALOREM TAXES AND NON-AD VALOREM ASSESSMENTS

ACCOUNT NUMBER	PROPERTY ADDRESS	MILLAGE CODE
03873 001 001	15405 NW 173RD ST	1700

TOMOKA HILLS FARMS INC
1301 DIXIANA DOMINO RD
LEXINGTON, KY 40511

EXEMPTIONS:

SCAN TO PAY ONLINE

AD VALOREM TAXES

TAXING AUTHORITY	MILLAGE RATE	ASSESSED VALUE	EXEMPTION(S)	TAXABLE VALUE	TAXES LEVIED
COUNTY GENERAL	7.6414	46,800	0	46,800	357.62
LIBRARY GENERAL	1.0339	46,800	0	46,800	48.39
SCHOOL CAP PROJECT	1.5000	46,800	0	46,800	70.20
SCHOOL DISCRNRY & CN	0.7480	46,800	0	46,800	35.01
SCHOOL GENERAL	3.1840	46,800	0	46,800	149.01
SCHOOL VOTED	1.0000	46,800	0	46,800	46.80
CHILDREN'S TRUST	0.4612	46,800	0	46,800	21.58
SUWANNEE RIVER WATER MGT DIST	0.3113	46,800	0	46,800	14.57
CITY OF ALACHUA	5.9500	46,800	0	46,800	278.46

TOTAL MILLAGE 21.8298 AD VALOREM TAXES $1,021.64

LEGAL DESCRIPTION

TRACT IN FRAC SECTIONS 9 16 TWP 8 RNG 18 AND GARVIN GRANT COM SE COR OF SEC 9-8-
See Additional Legal on Tax Roll

NON-AD VALOREM ASSESSMENTS

LEVYING AUTHORITY	UNIT	RATE	AMOUNT

NON-AD VALOREM ASSESSMENTS $0.00

PAY ONLY ONE AMOUNT.

COMBINED TAXES AND ASSESSMENTS $1,021.64

IF PAID BY	Nov 30, 2023				
PLEASE PAY	$0.00				

Please Retain this Portion for your Records. Receipt Available Online.

JOHN POWER, CFC
ALACHUA COUNTY TAX COLLECTOR

2023 PAID REAL ESTATE 507279

NOTICE OF AD VALOREM TAXES AND NON-AD VALOREM ASSESSMENTS

PLEASE PAY IN U.S. FUNDS TO JOHN POWER, TAX COLLECTOR • P.O. Box 44310 • Jacksonville, FL 32231-4310

ACCOUNT NUMBER	PROPERTY ADDRESS
03873 001 001	15405 NW 173RD ST

TOMOKA HILLS FARMS INC
1301 DIXIANA DOMINO RD
LEXINGTON, KY 40511

PAY ONLY ONE AMOUNT

	IF PAID BY	PLEASE PAY
☐	Nov 30, 2023	$0.00
☐		
☐		
☐		
☐		

WANT TO RECEIVE YOUR BILL ELECTRONICALLY NEXT YEAR? VISIT www.AlachuaCollector.com AND SIGN UP FOR E-BILLS!

Receipt # 23-0021245 $980.77 Paid 11/15/2023

John Power TAX COLLECTOR
Serving Alachua County
FLORIDA STERLING AWARD RECIPIENT

2023 PAID REAL ESTATE 15088

NOTICE OF AD VALOREM TAXES AND NON-AD VALOREM ASSESSMENTS

ACCOUNT NUMBER	PROPERTY ADDRESS	MILLAGE CODE
03873 000 000	UNASSIGNED LOCATION RE	1700

TOMOKA HILLS FARMS INC
1301 DIXIANA DOMINO RD
LEXINGTON, KY 40511

EXEMPTIONS:

SCAN TO PAY ONLINE

AD VALOREM TAXES

TAXING AUTHORITY	MILLAGE RATE	ASSESSED VALUE	EXEMPTION(S)	TAXABLE VALUE	TAXES LEVIED
COUNTY GENERAL	7.6414	60,780	0	60,780	464.44
LIBRARY GENERAL	1.0339	60,780	0	60,780	62.84
SCHOOL CAP PROJECT	1.5000	60,780	0	60,780	91.17
SCHOOL DISCRNRY & CN	0.7480	60,780	0	60,780	45.46
SCHOOL GENERAL	3.1840	60,780	0	60,780	193.52
SCHOOL VOTED	1.0000	60,780	0	60,780	60.78
CHILDREN'S TRUST	0.4612	60,780	0	60,780	28.03
SUWANNEE RIVER WATER MGT DIST	0.3113	60,780	0	60,780	18.92
CITY OF ALACHUA	5.9500	60,780	0	60,780	361.64
TOTAL MILLAGE	21.8298			AD VALOREM TAXES	$1,326.80

John Power TAX COLLECTOR Serving Alachua County

Please Retain this Portion for your Records. Receipt Available Online.

LEGAL DESCRIPTION

FRAC SEC & GARVIN GRT COM NE COR SEC S 3.76 FT TO S R/W ACL RR (ABANDONED) W ALG
See Additional Legal on Tax Roll

NON-AD VALOREM ASSESSMENTS

LEVYING AUTHORITY	UNIT	RATE	AMOUNT

NON-AD VALOREM ASSESSMENTS $0.00

PAY ONLY ONE AMOUNT.

COMBINED TAXES AND ASSESSMENTS	$1,326.80

IF PAID BY	Nov 30, 2023				
PLEASE PAY	$0.00				

JOHN POWER, CFC
ALACHUA COUNTY TAX COLLECTOR

2023 PAID REAL ESTATE 15088

NOTICE OF AD VALOREM TAXES AND NON-AD VALOREM ASSESSMENTS

PLEASE PAY IN U.S. FUNDS TO JOHN POWER, TAX COLLECTOR • P.O. Box 44310 • Jacksonville, FL 32231-4310

ACCOUNT NUMBER	PROPERTY ADDRESS
03873 000 000	UNASSIGNED LOCATION RE

TOMOKA HILLS FARMS INC
1301 DIXIANA DOMINO RD
LEXINGTON, KY 40511

PAY ONLY ONE AMOUNT

	IF PAID BY	PLEASE PAY
☐	Nov 30, 2023	$0.00
☐		
☐		
☐		
☐		

WANT TO RECEIVE YOUR BILL ELECTRONICALLY NEXT YEAR? VISIT www.AlachuaCollector.com AND SIGN UP FOR E-BILLS!

Receipt # 23-0021245 $1,273.73 Paid 11/15/2023

MEMORANDUM

Tower Hill Golf Facility

21-0025.18

Professional Consultants

To: Fire Review

From: Walker F. Owen, P.E.

Date: October 31, 2024

RE: Tower Hill Golf Facility– Required Fire Flow

The following is a calculation for required fire flow for the proposed project based on the NFPA-1: Fire Code.

Building data is based on the information available from the project architect at the time of this memo. Any changes to the building data will void the provided fire flow calculation and requires a revised analysis to verify the building complies with the applicable fire protection criteria. The building will be protected by an approved automatic fire sprinkler system. Refer to NFPA calculations for details.

NFPA Required Flow Calculations:

Building: **Maintenance Facility**
Construction Type: V (000)
Fire Flow Area: ±10,180 SF

Required Fire Flow per Florida Fire Prevention Code Table 18.4.5.1.2: **2,750 gpm**

Conclusions

Minimum Required Fire Flow to be provided: **2,750 gpm**

Available Fire Flow per Fire Hydrant Flow Test: **5,860 gpm**

The total available flow (5,860 GPM) is higher than the minimum required fire flow (2,750 GPM).

Walker Fain Owen
State of Florida, Professional Engineer, License No. 94201

This item has been electronically signed and sealed by Walker Fain Owen, PE on 10/31/2024 using a Digital Signature.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Walker Fain Owen
FL PE No. 94201

Table 18.4.5.1.2 Minimum Required Fire Flow and Flow Duration for Buildings

Fire Flow Area ft^2 (× 0.0929 for m^2)					Fire Flow gpm[1] (× 3.785 for L/min)	Flow Duration (hours)
I(443), I(332), II(222)*	II(111), III(211)*	IV(2HH), V(111)*	II(000), III(200)*	V(000)*		
0–22,700	0–12,700	0–8200	0–5900	0–3600	1500	2
22,701–30,200	12,701–17,000	8201–10,900	5901–7900	3601–4800	1750	
30,201–38,700	17,001–21,800	10,901–12,900	7901–9800	4801–6200	2000	
38,701–48,300	21,801–24,200	12,901–17,400	9801–12,600	6201–7700	2250	
48,301–59,000	24,201–33,200	17,401–21,300	12,601–15,400	7701–9400	2500	
59,001–70,900	33,201–39,700	21,301–25,500	15,401–18,400	9401–11,300	2750	
70,901–83,700	39,701–47,100	25,501–30,100	18,401–21,800	11,301–13,400	3000	3
83,701–97,700	47,101–54,900	30,101–35,200	21,801–25,900	13,401–15,600	3250	
97,701–112,700	54,901–63,400	35,201–40,600	25,901–29,300	15,601–18,000	3500	
112,701–128,700	63,401–72,400	40,601–46,400	29,301–33,500	18,001–20,600	3750	
128,701–145,900	72,401–82,100	46,401–52,500	33,501–37,900	20,601–23,300	4000	4
145,901–164,200	82,101–92,400	52,501–59,100	37,901–42,700	23,301–26,300	4250	
164,201–183,400	92,401–103,100	59,101–66,000	42,701–47,700	26,301–29,300	4500	
183,401–203,700	103,101–114,600	66,001–73,300	47,701–53,000	29,301–32,600	4750	
203,701–225,200	114,601–126,700	73,301–81,100	53,001–58,600	32,601–36,000	5000	
225,201–247,700	126,701–139,400	81,101–89,200	58,601–65,400	36,001–39,600	5250	
247,701–271,200	139,401–152,600	89,201–97,700	65,401–70,600	39,601–43,400	5500	
271,201–295,900	152,601–166,500	97,701–106,500	70,601–77,000	43,401–47,400	5750	
Greater than 295,900	Greater than 166,500	106,501–115,800	77,001–83,700	47,401–51,500	6000	
		115,801–125,500	83,701–90,600	51,501–55,700	6250	
		125,501–135,500	90,601–97,900	55,701–60,200	6500	
		135,501–145,800	97,901–106,800	60,201–64,800	6750	
		145,801–156,700	106,801–113,200	64,801–69,600	7000	
		156,701–167,900	113,201–121,300	69,601–74,600	7250	
		167,901–179,400	121,301–129,600	74,601–79,800	7500	
		179,401–191,400	129,601–138,300	79,801–85,100	7750	
		Greater than 191,400	Greater than 138,300	Greater than 85,100	8000	

*Types of construction are based on NFPA 220.

[1]Measured at 20 psi (139.9 kPa).

Hydrant Flow Test Report

Test Date 9/1/2022 **Test Time** 9:00AM

Location

16305 NW 162 Lane Alachua for Parcel 03873-001-000

Tested by

Gator Fire Equipment Co., Inc.
Conducted by: J. Mallard & J. Wishard
Witnessed by: Billy Gourley City of Alachua

Notes

Read Hydrant along NW 162 Lane Alachua East of Royal Inn
Flowing Hydrant along NW 162 Lane Alachua West of Royal Inn

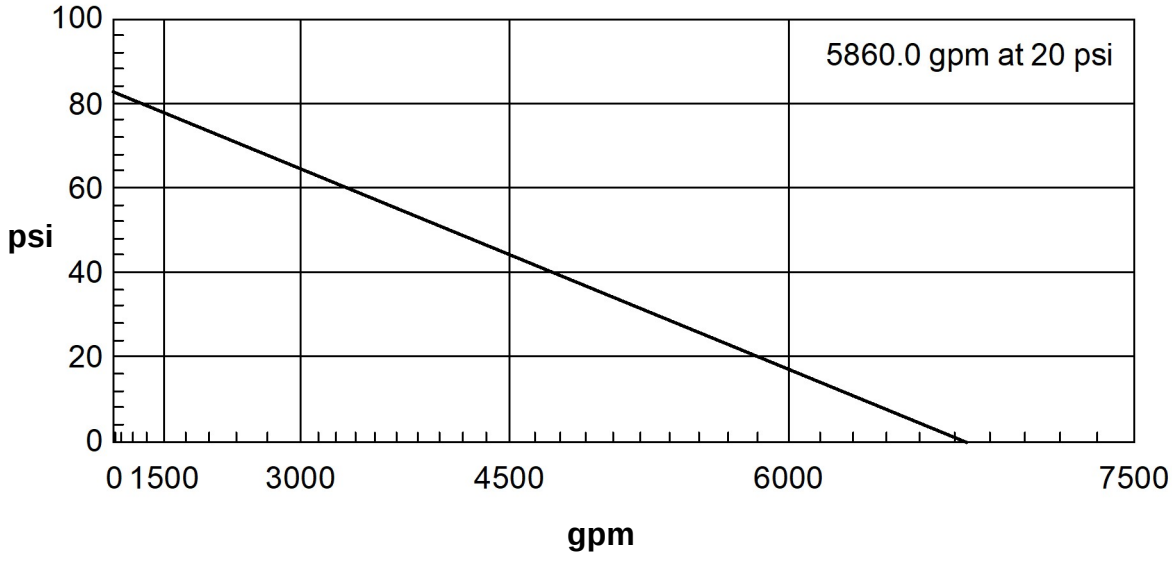
Read Hydrant

83 psi **static pressure**
77 psi **residual pressure**
0 ft **hydrant elevation**

Flow Hydrant(s)

Outlet	Elev	Size	C	Pitot Pressure	Flow
#1	0	2.5	.9	24	822 gpm
#2	0	2.5	.9	24	822 gpm
				Total	1644 gpm

Flow Graph



Created with the free hydrant flow test program from www.igneusinc.com

MEMORANDUM

To:	Justin Tabor, AICP City of Alachua Planning & Development	**Date:**	01/29/2025
From:	Walker Fain Owen, PE NV5	**Project:**	Tomoka Hills Golf Course
CC:			
Subject:	Shared Parking Plan - Tomoka Hills Golf		

On January 8th, 2025, the following comment was issued by the City of Alachua Planning and Zoning Department regarding the proposed Tower Hill Golf Course project:

i. Table 6.1-1 establishes a parking standard of 4 spaces per hole per course. The parking standard utilized is 1 space per 1,000 square feet of floor area. Staff cannot identify the source of this parking standard.

The Tomoka Hills Private Golf Course is only for employees of the Tower Hill office building, which is currently under construction. While some additional parking is proposed at the maintenance facility for golf course staff, it is proposed that all users of the golf course are Tower Hill employees that will park at the Tower hill Office building and walk to the golf course.

Response:

- Building 1, Office Building Under Construction**:** (Refer to C0.00) will consist of a business services office, which requires 1 parking space per 330 sf of floor area per Sec. 6.1 in the City of Alachua Land Development Code.

- Building 2, Golf Course Maintenance Building & Private Golf Course**:** (Refer to C0.00) will consist of a private golf course and maintenance building. The closest use directly related to maintaining the golf course and machinery is “farm machinery repair”, which requires 1 parking space per 1,000 sf of floor area or outdoor repair area. The closest applicable standard is “Public Golf Course” which requires 4 spaces per hole per course.

In total, the two proposed buildings require 265 total parking spaces based on the City of Alachua LDR parking requirements, 9 of which are required to be accessible spaces. The project proposes 209 total parking spaces, 7 of which are accessible spaces. The intent is to demonstrate sufficient parking through shared parking with the Tower Hill Headquarters development to the west. NV5 is currently in the process of submitting a revised Tower Hill Golf Course plan set. The revised Tomoka Hills Golf Course maintenance building parking lot will include 16 spaces, 1 of which is accessible space.

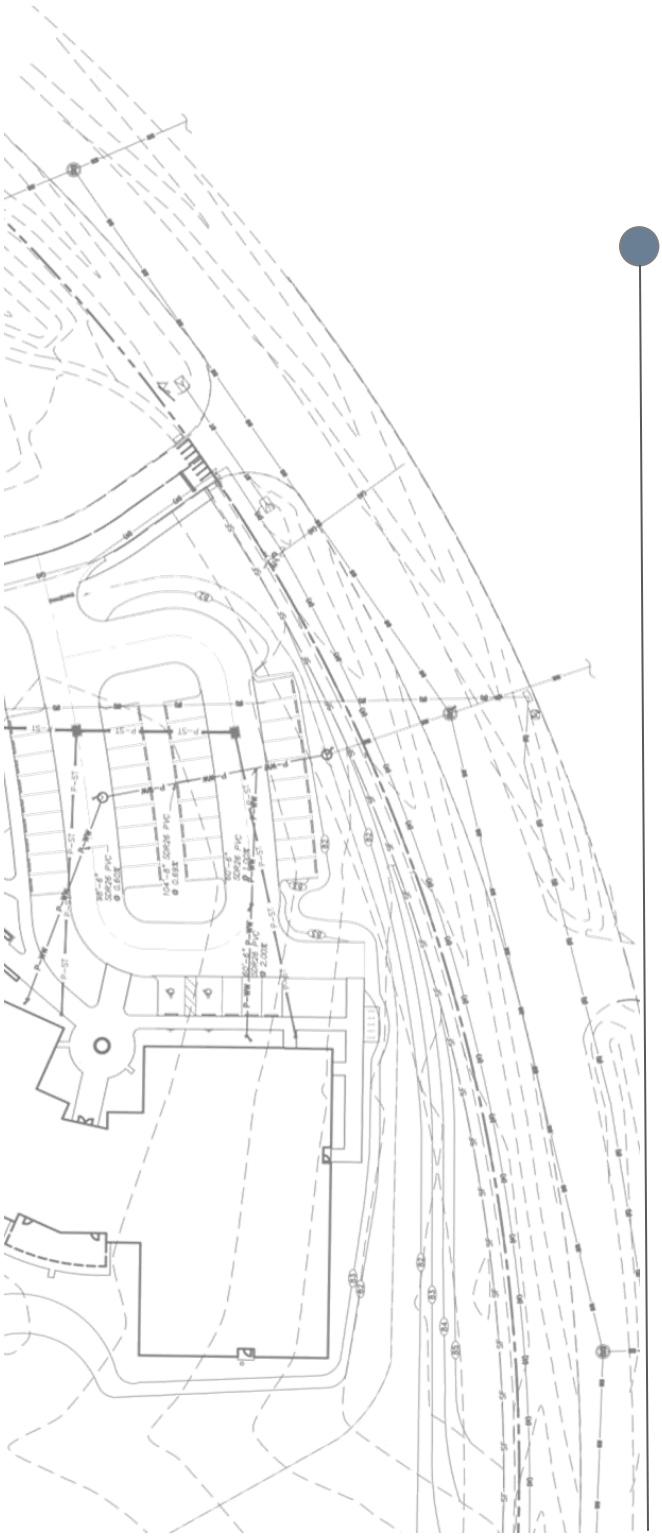
Conclusion:

The unique characteristics of the site and proposed uses include the golf course exclusively being used by the office employees and colleagues that would otherwise be conducting business services at the Tower Hill office building. Due to these circumstances, we believe that the amount of parking provided will be adequate to serve the developments.

Should you have any questions or require additional information, please contact walker.owen@nv5.com or (352) 331-1976.

Sincerely,
NV5

Walker Fain Owen, PE
Project Manager



Tomoka Hills

Large-scale Comprehensive Plan Amendment And Planned Development Rezoning

Neighborhood Meeting package

Date:
September 12, 2024

Prepared on behalf of:
Tower Hill Insurance Group, LLC and
Tomoka Hills Farms, Inc.

Prepared by:
CHW

PN# 21-0025.09

Mailed Memorandum

NEIGHBORHOOD MEETING PUBLIC NOTICE

Tomoka Hills PD and Site Plan
21-0025.09,.18

To:	Neighbors of the Southwest quadrant of US 441 / I-75 Interchange
From:	Ryan Thompson, AICP, Sr. Project Manager
Date:	28 August 2024
RE:	Neighborhood Meeting Public Notice

A Neighborhood Meeting will be held to discuss three (3) proposed applications on a ±345.55-acre site in the City of Alachua (Alachua County Tax Parcel #'s 3054-1-2, 3055-1-1, 3055-1-3, 3055-10-1, 3055-10-3, 3871, 3873, 3873-1, and 3873-1-1).

The first application is a Large-scale Comprehensive Plan Amendment (LSCPA) to amend Future Land Use (FLU) designations from Community Commercial, Moderate Density Residential (0-4 dwelling units per acre), and Agriculture to Community Commercial, High Density Residential (8-15 dwelling units per acre), and Low Density Residential (0-1 dwelling units per acre.)

The second application is a Rezoning to change the zoning designations from Commercial Intensive (CI), Community Commercial (CC), Residential Multiple Family-8 (RMF-8), Residential Single-Family-4 (RSF-4), and Agriculture to Planned Development-Commercial (PD-COMM) and PD-Residential (PD-R). This application will bring the zoning in compliance with the proposed Future Land Use designations.

The third application is a Site Plan for a ±197-acre golf course with maintenance and storage buildings, and associated infrastructure. Approval of the golf course is not contingent on the LSCPA and/or Rezoning applications' approval. The golf course is permitted in the existing Agriculture FLU and zoning designations.

The site is in the southwest quadrant of the US 441/I-75 interchange, 15405 NW 173rd Street. The applications allow a combination of community-scale commercial retail sales and service uses, office, single- and multi-family residents, and golf course with a clubhouse.

Meeting Details

Date:	12 September 2024
Time:	6:00 PM
Location:	CHW Office, 11801 Research Drive, Alachua, FL, 32615
Contact:	Ryan Thompson, AICP 11801 Research Drive Alachua, FL 32615 (352) 331-1976

This is not a public hearing. The purpose of the neighborhood meeting is to inform the public about the nature of the proposal and seek their comments.

If you are unable to attend the meeting, please contact CHW using the information above, and we will provide materials after the meeting is held. Comments may also be submitted in writing to the address or email above or by phone at the phone number above.

Mailing Labels

Neighborhood Workshop Notice
ACKLEY ROBERT L & MARY J
15817 NW 173RD ST
ALACHUA, FL 32615

Neighborhood Workshop Notice
ALACHUA 441/235 LLC
496 S HUNT CLUB BLVD
APOPKA, FL 32703

Neighborhood Workshop Notice
ALACHUA COUNTY
PO BOX 2877
GAINESVILLE, FL 32602

Neighborhood Workshop Notice
BLACK NANCY BURGESS
6827 41ST ST NW APT 121
WASHINGTON, DC 20012

Neighborhood Workshop Notice
BRADLEY & WILLIAMS
16919 NW 162ND LN
ALACHUA, FL 32615

Neighborhood Workshop Notice
CITY OF ALACHUA
15100 NW 142ND TER
ALACHUA, FL 32615

Neighborhood Workshop Notice
M3 ALACHUA LLC
1276 MINNESOTA AVE
WINTER PARK, FL 32789

Neighborhood Workshop Notice
CAMPBELL MENZIE G
16903 NW 162ND LN
ALACHUA, FL 32615

Neighborhood Workshop Notice
CORNERSTONE ALACHUA LLC
426 SW COMMERCE DR STE 130
LAKE CITY, FL 32025

Neighborhood Workshop Notice
M & L 441 LLC
1113 OLD POPO POINT
ST JOHNS, FL 32259

Neighborhood Workshop Notice
ROUX JOHN P
PO BOX 1673
ALACHUA, FL 32616

Neighborhood Workshop Notice
SINGH LAKHVIR
PO BOX 2092
ALACHUA, FL 32616

Neighborhood Workshop Notice
ALACHUA HOLDINGS LTD
PO BOX 1990
ALACHUA, FL 32616

Neighborhood Workshop Notice
ALSPAUGH & BROWN TRUSTEE & DIXO
% HIMMERLRICH AND COMPANY
898 SW 21ST ST
BOCA RATON, FL 33486

Neighborhood Workshop Notice
BURGESS & BURGESS
15008 NW 173RD ST
ALACHUA, FL 32615

Neighborhood Workshop Notice
CITY OF ALACHUA
PO BOX 9
ALACHUA, FL 32616

Neighborhood Workshop Notice
DELOACH VIRGIL C & HOLLY H
PO BOX 532
FT WHITE, FL 32038

Neighborhood Workshop Notice
FIRST STREET GROUP L C
PO BOX 1990
ALACHUA, FL 32616

Neighborhood Workshop Notice
HARKINS JAMES E JR & RENEE
PO BOX 6307
MARIANNA, FL 32447

Neighborhood Workshop Notice
MAKENNA PARKER HOMES LLC
2714 SW 130TH TER
ARCHER, FL 32618

Neighborhood Workshop Notice
MALBEC II LLC
100 S BISCAYNE BLVD SUITE 900
MIAMI, FL 33131

Neighborhood Workshop Notice
MALLARD MITCHELL E & ESTHER R
14614 NW 173RD ST
ALACHUA, FL 32615

Neighborhood Workshop Notice
SHIRES CYNTHIA H
PO BOX 1259
ALACHUA, FL 32616

Neighborhood Workshop Notice
VICKORY WILLIAM A & SUSAN S
15404 NW 173RD ST
ALACHUA, FL 32615

Neighborhood Workshop Notice
VICKORY WILLIAM HENRY LIFE ESTATE
15310 NW 173RD ST
ALACHUA, FL 32615

Neighborhood Workshop Notice
ALL AMERICAN OIL LLC
380 COMMERCE PARKWAY
ROCKLEDGE, FL 32955

Neighborhood Workshop Notice
CATA LIGHTS CORP
630 VASSAR ST #2506
ORLANDO, FL 32804

Neighborhood Workshop Notice
CAVACEPPI SHARLEEN O TRUSTEE
PO BOX 1325
ALACHUA, FL 32616

Neighborhood Workshop Notice
CHASING CHICKEN 2 INC
501 E TENNESSEE ST A
TALLAHASSEE, FL 32308

Neighborhood Workshop Notice
DWARKADHISH INVESTMENTS INC
1800 S ATLANTIC AVE
DAYTONA BEACH, FL 32118

Neighborhood Workshop Notice
FDOT RIGHT OF WAY DEPT
MAIL STATION 2020 1109 S MARION AVE
LAKE CITY, FL 32025

Neighborhood Workshop Notice
HOOVER RESTAURANTS LLC
4030 JOHNS CREEK PARKWAY
SUWANEE, GA 30024

Neighborhood Workshop Notice
IMPERIAL AIRPORT
489 CROCKER SPERRY DR
MONTECITO, CA 93108

Neighborhood Workshop Notice
JP & KP LLC
11149 CONISTON WAY
WINDERMERE, FL 34786

Neighborhood Workshop Notice
LE STORE LLC
22211 W NEWBERRY RD
NEWBERRY, FL 32669

Neighborhood Workshop Notice
MCDONALD'S CORP (009/0551)
C/O JUAN PRADO
6625 VAN DYKE RD
LUTZ, FL 33558

Neighborhood Workshop Notice
MOHAN-LERRA FAMILY PARTNERSHIP
16715 NW 129TH TER
ALACHUA, FL 32615

Neighborhood Workshop Notice
NORTH FLORIDA REGIONAL MEDICAL
PO BOX 80610
INDIANAPOLIS, IN 46280

Neighborhood Workshop Notice
SARCAV LLC
8303 AUTUMWIND DR
JACKSONVILLE, FL 32218

Neighborhood Workshop Notice
SARCAV LLC
C/O SILVIO CAVACEPPI
8303 AUTUMNWIND DR
JACKSONVILLE, FL 32218

Neighborhood Workshop Notice
SHREE LAXMI NARAYAN INC
1800 S ATLANTIC AVE
DAYTONA BEACH, FL 32118

Neighborhood Workshop Notice
TLC PROPERTIES INC
2065 NW 57TH ST
OCALA, FL 34475

Neighborhood Workshop Notice
TOMOKA HILLS FARMS INC
1301 DIXIANA DOMINO RD
LEXINGTON, KY 40511

Neighborhood Workshop Notice
TOWER HILL INSURANCE GROUP LLC
7201 NW 11TH PL
GAINESVILLE, FL 32605

Neighborhood Workshop Notice
ALACHUA COUNTY
12 SE 1ST ST
GAINESVILLE, FL 32601

Neighborhood Workshop Notice
THOMAS & THOMAS & THOMAS HEIRS
312 MCBRIEN RD APT 423
CHATTANOOGA, TN 37411

Neighborhood Workshop Notice
Roux John P
16260 NW US HWY 441
Alachua, FL 32615

Neighborhood Workshop Notice
Cornerstone Alachua LLC
16286 NW US HWY 441
Alachua, FL 32615

Neighborhood Workshop Notice
Cata Lights Corp
16134 NW US HWY 441
Alachua, FL 32615

Neighborhood Workshop Notice
JP & KP LLC
15901 NW 158TH LN
Alachua, FL 32615

Neighborhood Workshop Notice
Shree Laxmi Narayan INC
16305 NW 162ND LN
Alachua, FL 32615

Neighborhood Workshop Notice
Sarcav LLC
16807 NW 162ND LN
Alachua, FL 32615

Neighborhood Workshop Notice
McDonald's Corp (009/0551)
16018 NW US HWY 441
Alachua, FL 32615

Neighborhood Workshop Notice
Chasing Chicken 2 INC
16088 NW US HWY 441
Alachua, FL 32615

Neighborhood Workshop Notice
Dwarkadhish Investments INC
16100 NW US HWY 441
Alachua, FL 32615

Neighborhood Workshop Notice
Imperial Airport
16130 NW US HWY 441
Alachua, FL 32615

Neighborhood Workshop Notice
Hoover Restaurants LLC
16070 NW US HWY 441 STE 100
Alachua, FL 32615

Neighborhood Workshop Notice
Le Store LLC
16070 NW US HWY 441
Alachua, FL 32615

Neighborhood Workshop Notice
Mohan-Lerra Family Partnership
15981 NW US HWY 441
Alachua, FL 32615

Neighborhood Workshop Notice
All American Oil LLC
15980 NW US HWY 441
Alachua, FL 32615

Neighborhood Workshop Notice
Shires Cynthia H
14433 NW 173RD ST
Alachua, FL 32615

Neighborhood Workshop Notice
Burgess & Burgess
15010 NW 173RD ST
Alachua, FL 32615

Neighborhood Workshop Notice
Makenna Parker Homes LLC
14706 NW 173RD ST
Alachua, FL 32615

Neighborhood Workshop Notice
Tomoka Hills Farms INC
17103 NW 162ND LN
Alachua, FL 32615

Neighborhood Workshop Notice
Tower Hill Insurance Group LLC
15403 NW 173RD ST
Alachua, FL 32615

Neighborhood Workshop Notice
City Manager
Mike DaRoza
PO Box 9
Alachua FL 32615

Neighborhood Workshop Notice
Assistant Director Planning
Linda Dixion, AICP
PO Box 115050
GAINESVILLE FL 32611

Neighborhood Workshop Notice
Joseph & Phyllis Strickland
14103 NW 156th Place
Alachua FL 32615

Neighborhood Workshop Notice
County Manager
Michele L. Lieberman
12 SE 1st Street
Gainesville FL 32601

Neighborhood Workshop Notice
Tamara Robins
PO Box 2317
Alachua FL 32616

Neighborhood Workshop Notice
Jean Calderwood
14095 NW 174th Ave
Alachua FL 32615

Neighborhood Workshop Notice
Antoinette Endelicato
5562 NW 93rd Ave
Gainesville FL 32653

Neighborhood Workshop Notice
Lynda Coon
7216 NW 126 Ave
Alachua FL 32615

Neighborhood Workshop Notice
Lynn Horton
19005 NW 138th Ave
Alachua FL 32615

Newspaper Advertisement

PUBLIC NOTICE

A Neighborhood Meeting will be held to discuss three (3) proposed applications on a ±345.55-acre site in the City of Alachua (Alachua County Tax Parcel #'s 3054-1-2, 3055-1-1, 3055-1-3, 3055-10-1, 3055-10-3, 3871, 3873, 3873-1, and 3873-1-1). 1. A Large-scale Comprehensive Plan Amendment application to amend Future Land Use (FLU) designations from Community Commercial, Moderate Density Residential (0-4 dwelling units per acre), and Agriculture to Community Commercial, High Density Residential (8-15 dwelling units per acre), and Low Density Residential (0-1 dwelling units per acre.) 2. A Rezoning application to change the zoning designations from Commercial Intensive (CI), Community Commercial (CC), Residential Multiple Family-8 (RMF-8), Residential Single-Family-4 (RSF-4), and Agriculture to Planned Development-Commercial (PD-COMM) and PD-Residential (PD-R). 3. A Site Plan application for a ±197-acre golf course with maintenance and storage buildings, and associated infrastructure.

The site is in the southwest quadrant of the US 441/I-75 interchange, 15405 NW 173rd Street. The applications allow a combination of community-scale commercial retail sales and service uses, office, single- and multi-family residents, and golf course with a clubhouse.

This is not a public hearing. The purpose of this meeting is to inform the public about the nature of the proposals and seek their comments.

Time: 6:00 pm on September 12, 2024
Location: CHW Office, 11801 Research Drive, Alachua, FL, 32615

Contact: Ryan Thompson, AICP
Phone Number: (352) 331-1976

CHW
AN NV5 COMPANY

Scientists to respond to new mpox strain

Experts in Africa say they're 'working blind' as virus rapidly changes

Jennifer Rigby and Julie Steenhuysen
REUTERS

A passenger walks past a banner about mpox on Monday at Soekarno-Hatta International Airport in Tangerang, Indonesia. A new strain of the virus, known as clade Ib, has the world's attention again after the World Health Organization declared a new health emergency. YASUYOSHI CHIBA/AFP VIA GETTY IMAGES

LONDON – Scientists studying the new mpox strain that has spread out of Democratic Republic of Congo say the virus is changing faster than expected, and often in areas where experts lack the funding and equipment to properly track it.

That means there are numerous unknowns about the virus itself, its severity and how it is transmitting, complicating the response, half a dozen scientists in Africa, Europe and the United States told Reuters.

Mpox, formerly known as monkeypox, has been a public health problem in parts of Africa since 1970, but received little global attention until it surged internationally in 2022, prompting the World Health Organization to declare a global health emergency. That declaration ended 10 months later.

A new strain of the virus, known as clade Ib, has the world's attention again after the WHO declared a new health emergency.

The strain is a mutated version of clade I, a form of mpox spread by contact with infected animals that has been endemic in Congo for decades. Mpox typically causes flu-like symptoms and pus-filled lesions and can be deadly.

Congo has had more than 18,000 suspected clade I and clade Ib mpox cases and 615 deaths this year, according to the WHO. There have also been 222 confirmed clade Ib cases in four African countries in the last month, plus a case each in Sweden and Thailand in people with a travel history in Africa.

"I worry that in Africa, we are working blindly," said Dr. Dimie Ogoina, an infectious diseases expert at Niger Delta University Hospital in Nigeria who chairs the WHO's mpox emergency committee. He first raised the alarm about potential sexual transmission of mpox in 2017, now an accepted route of spread for the virus.

"We don't understand our outbreak very well, and if we don't understand our outbreak very well we will have difficulty addressing the problem in terms of transmission dynamics, the severity of the disease, risk factors of the disease," Ogoina said. "And I worry about the fact that the virus seems to be mutating and producing new strains."

He said it took clade IIb in Nigeria five years or more to evolve enough for sustained spread among humans, sparking the 2022 global outbreak. Clade Ib has done the same thing in less than a year.

Mutating 'more rapidly'

Mpox is an orthopoxvirus, from the family that causes smallpox. Population-wide protection from a global smallpox vaccine campaign 50 years ago has waned, as vaccinating stopped when the disease was eradicated.

Genetic sequencing of clade Ib infections, which the WHO estimates emerged mid-September 2023, show they carry a mutation known as APOBEC3, a signature of adaptation in humans.

The virus that causes mpox has typically been fairly stable and slow to mutate, but APOBEC-driven mutations can accelerate viral evolution, said Dr. Miguel Paredes, who is studying the evolution of mpox and other viruses at Fred Hutchison Cancer Center in Seattle.

"All the human-to-human cases of mpox have this APOBEC signature of mutations, which means that it's mutating a little bit more rapidly than we would expect," he said.

Paredes and other scientists said a response was complicated by several mpox outbreaks happening at once.

In the past, mpox was predominantly acquired through human contact with infected animals. That is still driving a rise in Congo in clade I cases – also known as clade Ia – likely due in part to deforestation and increased consumption of bushmeat, scientists said.

The mutated versions, clade Ib and IIb, can now essentially be considered a sexually transmitted disease, said Dr. Salim Abdool Karim, a South African epidemiologist and chair of the Africa CDC's mpox advisory committee. Most of the mutated clade Ib cases are among adults, driven at first by an epidemic among sex workers in Congo.

The virus also can spread through close contact with an infected person, which is likely how clusters of children have been infected with clade Ib, particularly in Burundi and in eastern Congo's displacement camps, where crowded living conditions may be contributing.

Children, pregnant people and people with weakened immune systems or other illnesses may be at greater risk of serious mpox disease and death, say the WHO and mpox scientists.

Clade I has typically caused more severe disease, with fatality rates of 4% to 11%, compared to around 1% for clade II. Ogoina said data from Congo suggests few have died of the new Ib version, but he feared some data is being mixed up.

> **"If we don't understand our outbreak very well we will have difficulty addressing the problem."**
>
> **Dr. Dimie Ogoina**
> Niger Delta University Hospital in Nigeria

More research is urgently needed, but three teams tracking mpox outbreaks in Africa say they cannot even access chemicals needed for diagnostic tests. Clade Ib can also be missed by some diagnostic tests.

Planning a response, including vaccination strategies, without this is difficult, the scientists said.

Karim said around half of cases in eastern Congo, where Ib is prevalent, are only being diagnosed by doctors, with no laboratory confirmation.

Getting samples to labs is difficult because the health care system is already under pressure, he said. And around 750,000 people have been displaced amid fighting between the M23 rebel group and the government.

Many African labs cannot get the supplies they need, said Dr. Emmanuel Nakoune, an mpox expert at the Institut Pasteur in Bangui, Central African Republic, which also has clade Ia cases.

"This is not a luxury," he said, but necessary to track deadly outbreaks.

Dow reaches record close as Wall Street ends higher

Noel Randewich
REUTERS

The S&P 500 ended higher on Tuesday and the Dow Jones notched a record-high close ahead of a much-anticipated quarterly report from Nvidia on Wednesday and economic data expected later in the week that could give clues about the path of interest rate cuts.

Heavyweight tech-related stocks were mixed, with the focus on upcoming results from Nvidia, the chipmaker at the center of Wall Street's rally in AI-related stocks.

Nvidia's shares climbed 1.5% and it was the most-traded company on U.S. stock exchanges, according to LSEG data.

Up 159% in 2024, Nvidia is viewed as the biggest winner so far from AI technology, and its results follow recent concerns about increases in already-hefty spending by Microsoft, Alphabet and other major players in their race to dominate emerging AI technology.

"There's a really, really high bar to clear for not just Nvidia's earnings and guidance, but the story they tell about the state of AI that kind of lifts the tech sector out of its recent funk," said Ross Mayfield, investment strategy analyst at Baird.

Apple shares closed 0.4% higher, while Amazon dipped 1.4%.

The S&P 500 climbed 0.16% to end the session at 5,625.80 points.

The Nasdaq gained 0.16% to 17,754.82 points, while the Dow Jones Industrial Average rose 0.02% to 41,250.50 points, closing for the second day in a row at a record high.

Of the 11 S&P 500 sector indexes, six rose, led by information technology, up 0.63%, followed by a 0.48% gain in financials.

Data on Tuesday showed U.S. consumer confidence rose to a six-month high in August, while consumers also became more anxious about the labor market after the unemployment rate jumped to near a three-year high of 4.3% last month.

Investors will look to July Personal Consumption Expenditure data due on Friday for additional hints at the potential pace of rate cuts.

Traders are now betting on an interest rate cut of either 25 or 50 basis points in September, according to CME Group's Fed Watch tool.

Meanwhile, UBS Global Wealth Management raised the odds of a U.S. recession to 25% from 20%, citing weakness in the labor market.

Paramount Global slid more than 7% after Edgar Bronfman Jr. abandoned his bid for the company, clearing the way for Skydance Media to take control of Shari Redstone's media empire.

Tesla fell 1.9% after Canada said it will impose a 100% tariff on the imports of Chinese electric vehicles. The duties apply to all EVs shipped from China, which would include those made by Tesla.

Super Micro Computer declined 2.6% after short seller Hindenburg Research said it had a short position in the AI server maker.

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A Neighborhood Meeting will be held to discuss three (3) proposed applications on a ±345.55-acre site in the City of Alachua (Alachua County Tax Parcel #'s 3054-1-2, 3055-1-1, 3055-1-3, 3055-10-1, 3055-10-3, 3871, 3873, 3873-1, and 3873-1-1). 1. A Large-scale Comprehensive Plan Amendment application to amend Future Land Use (FLU) designations from Community Commercial, Moderate Density Residential (0-4 dwelling units per acre), and Agriculture to Community Commercial, High Density Residential (8-15 dwelling units per acre), and Low Density Residential (0-1 dwelling units per acre.) 2. A Rezoning application to change the zoning designations from Commercial Intensive (CI), Community Commercial (CC), Residential Multiple Family-8 (RMF-8), Residential Single-Family-4 (RSF-4), and Agriculture to Planned Development-Commercial (PD-COMM) and PD-Residential (PD-R). 3. A Site Plan application for a ±197-acre golf course with maintenance and storage buildings, and associated infrastructure.

The site is in the southwest quadrant of the US 441/I-75 interchange, 15405 NW 173rd Street. The applications allow a combination of community-scale commercial retail sales and service uses, office, single- and multi-family residents, and golf course with a clubhouse.

This is not a public hearing. The purpose of this meeting is to inform the public about the nature of the proposals and seek their comments.

Time: 6:00 pm on September 12, 2024
Location: CHW Office, 11801 Research Drive, Alachua, FL, 32615
Contact: Ryan Thompson, AICP
Phone Number: (352) 331-1976

CHW
an NV5 company

Club P

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Workshop Presentation

Tomoka Hills Planned Development

Large-Scale Comprehensive Plan Amendment (LSCPA),

Rezoning to Planned Development, and Site Plan Applications

CHW AN NV5 COMPANY

City of Alachua
Neighborhood Meeting
September 12, 2024

21-0025.09 and :18: Tomoka Hills

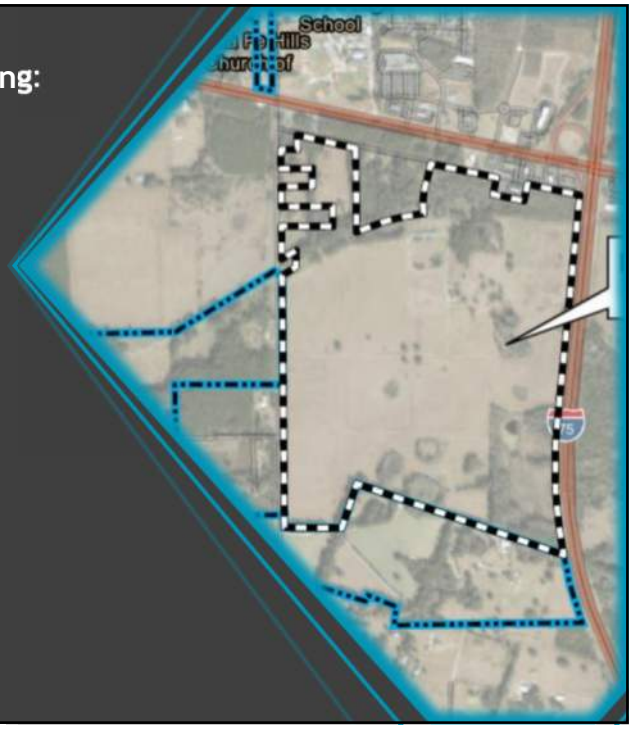
1

The purpose of the neighborhood meeting:

The City of Alachua requires Comprehensive Plan Amendment, Rezoning, and Site Plan applicants to host a neighborhood meeting.

The purpose is to inform neighbors of the proposed action's nature and to get feedback early in the process.

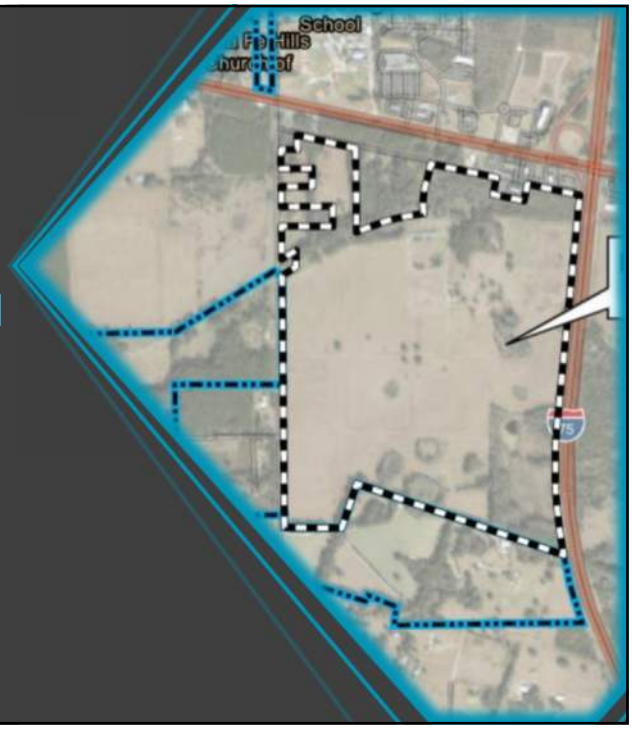
This meeting provides the applicant with an opportunity to identify concerns prior to the application's submission.



2

REQUEST:

- LsCPA Application
  - *FROM:* Medium Density Residential, Moderate Density Residential, Commercial, Community Commercial & Agriculture
  - *TO:* **Low Density Residential, Moderate Density Residential, High Density Residential, Community Commercial**
- Rezoning Application
  - *FROM*: Residential Single Family (RSF -4), Residential Multi-Family (RMF-8), Community Commercial (CC), Commercial, Intensive (CI), & Agriculture (A)
  - *TO*: **Planned Development, Commercial (PD-Comm), Planned Development, Residential (PD-R)**

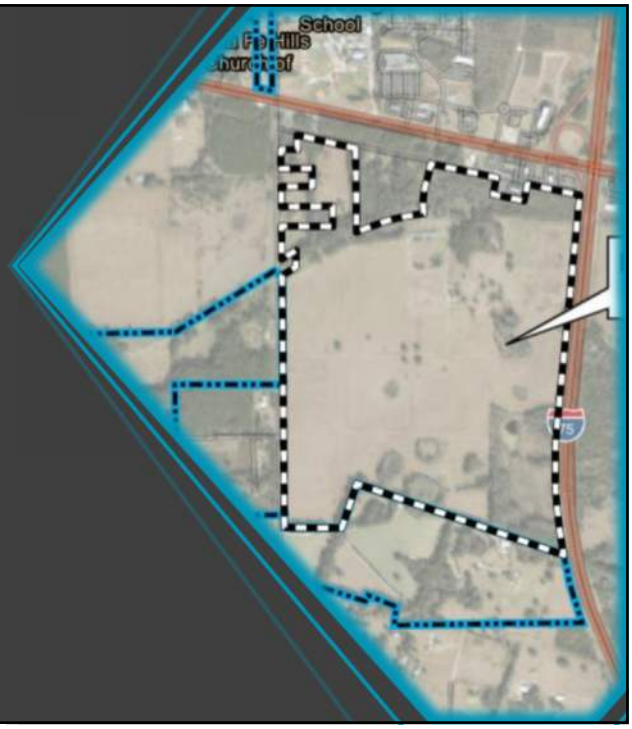


3

REQUEST:

- Site Plan Application
  - Golf course with a maintenance and storage buildings, and associated infrastructure

The Site Plan is not contingent on the LSCPA and rezoning applications' approval. A golf course is permitted in the existing Agriculture Future Land Use (FLU) and Zoning.



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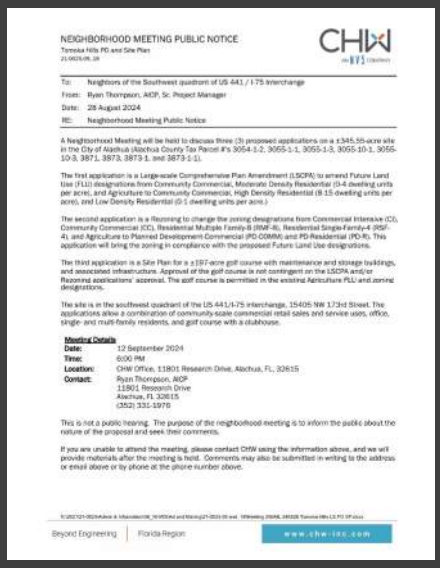
PUBLIC NOTIFICATION



NEIGHBORHOOD MEETING PUBLIC NOTICE

CHW

Tomoka Hills PD and Site Plan

To: Neighbors of the Southwest quadrant of US 441 / 175 Interchange

From: Ryan Thompson, AICP, Sr. Project Manager

Date: 28 August 2024

RE: Neighborhood Meeting Public Notice

A Neighborhood Meeting will be held to discuss three (3) proposed applications on a ±345.55-acre site in the City of Alachua (Alachua County Tax Parcel #'s 3054-1-2, 3055-1-1, 3055-1-3, 3055-10-1, 3055-10-3, 3871, 3873, 3873-1, and 3873-1-1).

The first application is a Large-scale Comprehensive Plan Amendment (LSCPA) to amend Future Land Use (FLU) designations from Community Commercial, Moderate Density Residential (0-4 dwelling units per acre), and Agriculture to Community Commercial, High Density Residential (8-15 dwelling units per acre), and Low Density Residential (0-1 dwelling units per acre.)

The second application is a Rezoning to change the zoning designations from Commercial Intensive (CI), Community Commercial (CC), Residential Multiple Family-8 (RMF-8), Residential Single-Family-4 (RSF-4), and Agriculture to Planned Development-Commercial (PD-COMM) and PD-Residential (PD-R). This application will bring the zoning in compliance with the proposed Future Land Use designations.

The third application is a Site Plan for a ±197-acre golf course with maintenance and storage buildings, and associated infrastructure. Approval of the golf course is not contingent on the LSCPA and/or Rezoning applications' approval. The golf course is permitted in the existing Agriculture FLU and zoning designations.

The site is in the southwest quadrant of the US 441/I-75 interchange, 15405 NW 173rd Street. The applications allow a combination of community-scale commercial retail sales and service uses, office, single- and multi-family residents, and golf course with a clubhouse.

Meeting Details

Date: 12 September 2024
Time: 6:00 PM
Location: CHW Office, 11801 Research Drive, Alachua, FL, 32615
Contact: Ryan Thompson, AICP
11801 Research Drive
Alachua, FL 32615
(352) 331-1976

This is not a public hearing. The purpose of the neighborhood meeting is to inform the public about the nature of the proposal and seek their comments.

If you are unable to attend the meeting, please contact CHW using the information above, and we will provide materials after the meeting is held. Comments may also be submitted in writing to the address or email above or by phone at the phone number above.

Beyond Engineering | Florida Region www.chw-inc.com

Scientists to respond to new mpox strain

Experts in Africa say they're 'working blind' as virus rapidly changes

BE AWARE MPOX

Dow reaches record close as Wall Street ends higher

Saving starts at signup.

PUBLIC NOTICE

A Neighborhood Meeting will be held to discuss three (3) proposed applications on a ±345.55-acre site in the City of Alachua (Alachua County Tax Parcel #'s 3054-1-2, 3055-1-1, 3055-1-3, 3055-10-1, 3055-10-3, 3871, 3873, 3873-1, and 3873-1-1). 1. A Large-scale Comprehensive Plan Amendment application to amend Future Land Use (FLU) designations from Community Commercial, Moderate Density Residential (0-4 dwelling units per acre), and Agriculture to Community Commercial, High Density Residential (8-15 dwelling units per acre), and Low Density Residential (0-1 dwelling units per acre.) 2. A Rezoning application to change the zoning designations from Commercial Intensive (CI), Community Commercial (CC), Residential Multiple Family-8 (RMF-8), Residential Single-Family-4 (RSF-4), and Agriculture to Planned Development-Commercial (PD-COMM) and PD-Residential (PD-R). 3. A Site Plan application for a ±197-acre golf course with maintenance and storage buildings, and associated infrastructure.

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Location: CHW Office, 11801 Research Drive, Alachua, FL, 32615
Contact: Ryan Thompson, AICP
Phone Number: (352) 331-1976

CHW

CHW

5

ESTIMATED TIMELINE
LSCPA, REZONING, AND SITE PLAN

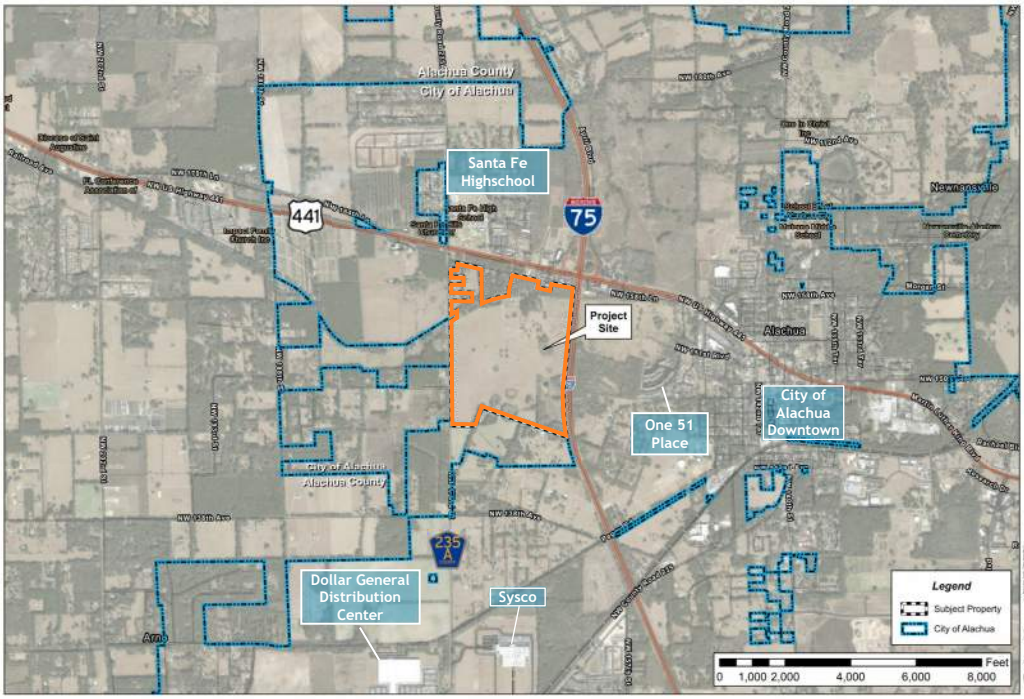
Pre-Application Meeting	First Neighborhood Meeting	Submit LSCPA & Rezoning applications	Second Neighborhood Meeting	Submit Site Plan application
July 23, 2024	August 21, 2024	August 29, 2024	September 12, 2024	Sept. 30, 2024

Staff Review	Planning & Zoning Board (LSCPA/Rez)	City Commission (LSCPA/Rez)	Planning & Zoning Board (Site Plan)	City Commission (LSCPA/Rez)
Sept.-Oct. 2024	November 12, 2024 (TENTATIVE)	December 9, 2024 (TENTATIVE)	January 14, 2025 (TENTATIVE)	February 10, 2025 (TENTATIVE)

CHW

6

Context Map



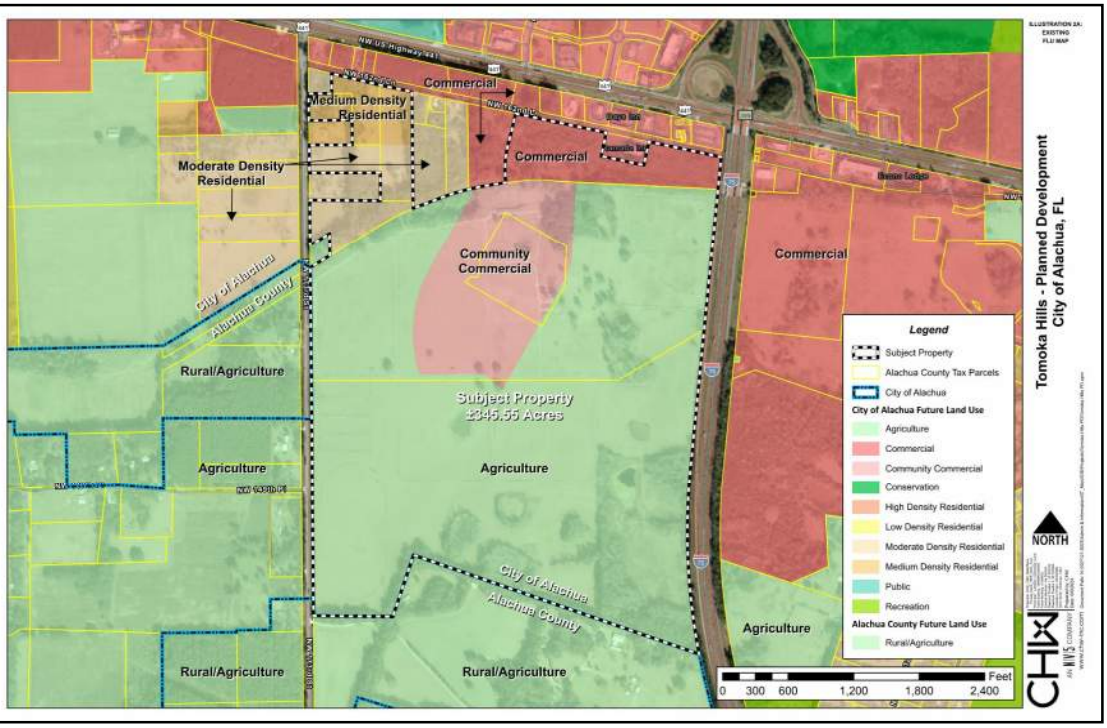
7

Aerial Map

8

Existing Future Land Use Map

Existing FLU: Medium Density Residential; Moderate Density Residential; Commercial; Community Commercial; & Agriculture



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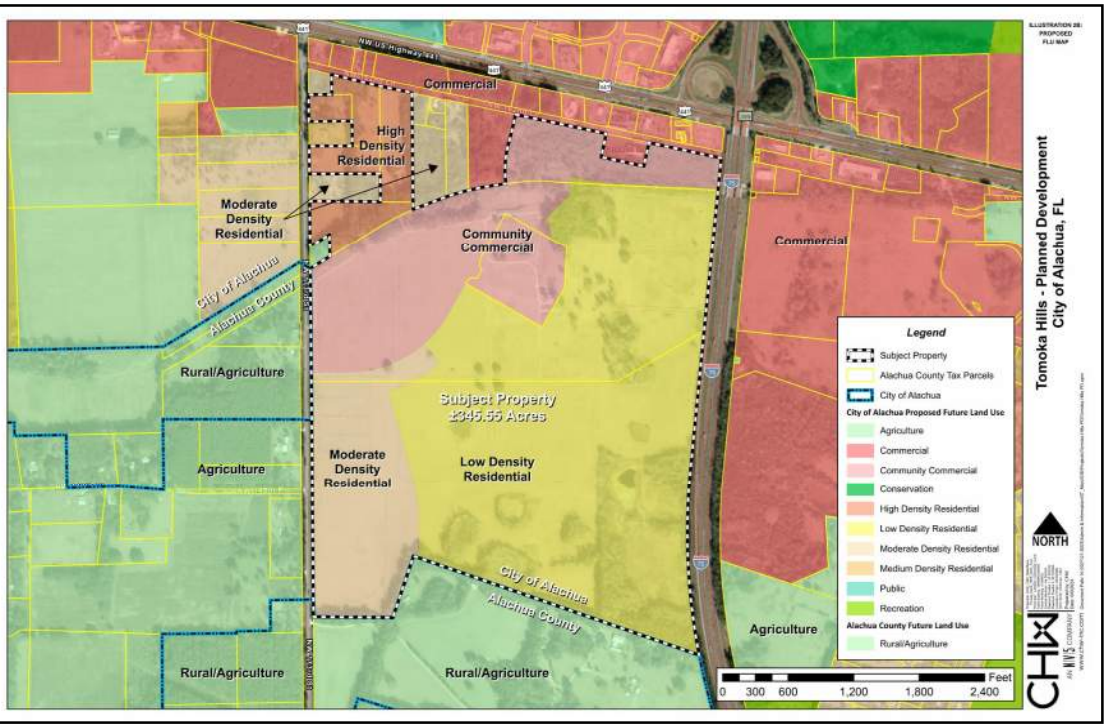
Proposed Future Land Use Map

Proposed FLU: High Density Residential; Community Commercial; Moderate Density Residential; & Low Density Residential



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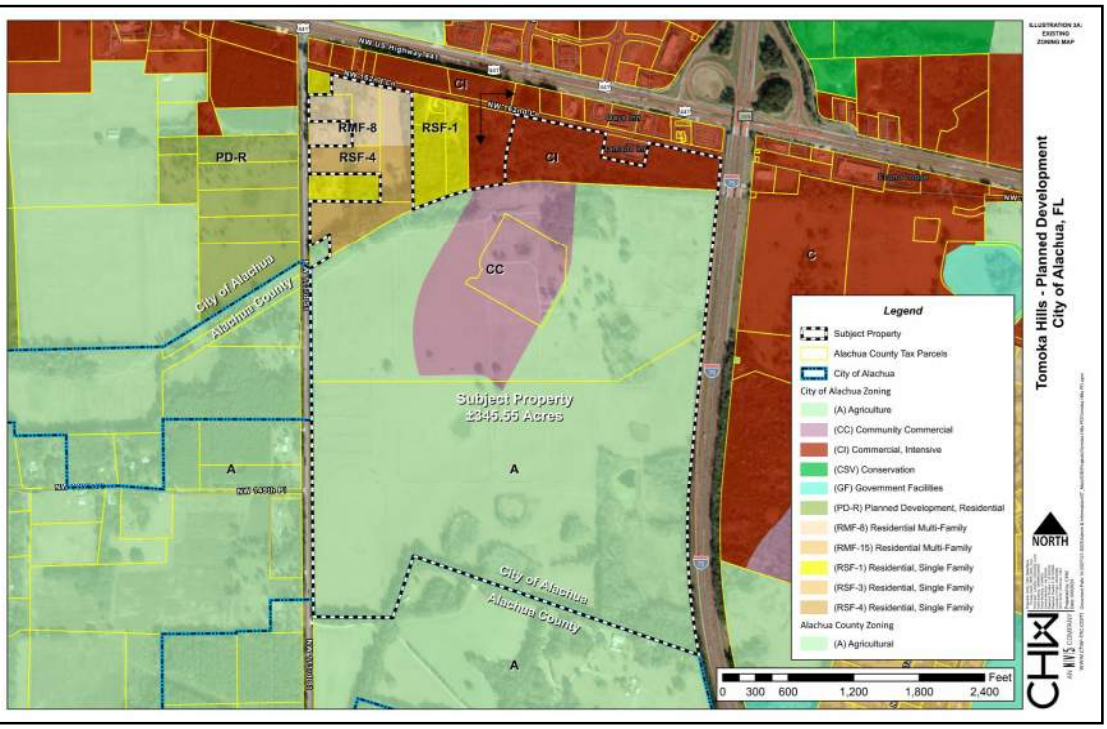
Existing Zoning Map

Zoning: Residential, Single Family (RSF-4); Residential, Multi-Family (RMF-8); Commercial, Intensive (CI); Community Commercial (CC); & Agriculture (A)

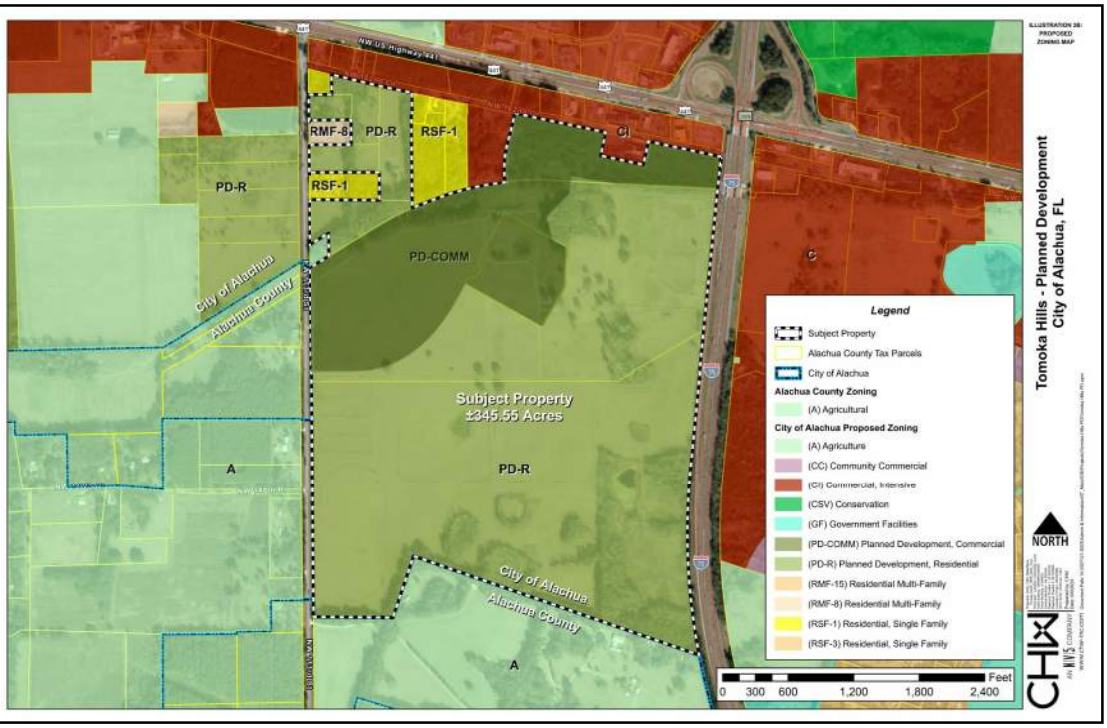


11

Proposed Zoning Map

Proposed Zoning: Planned Development, Commercial (PD-Comm); and Planned Development, Residential (PD-R)

PD-R permits a golf course



12

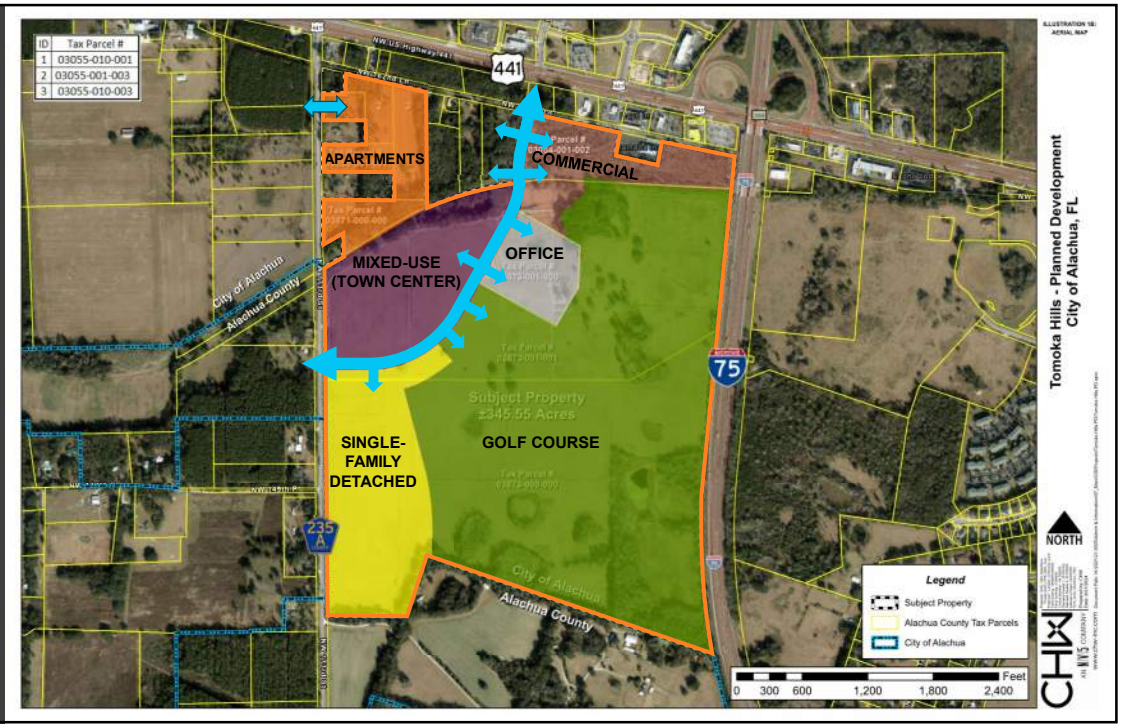
Concept

Office, Commercial, and mixed-use: 300 units and 540,000 sf

Apartments: 350 units

Single-family detached: 100 units

Golf course:
- Single-family detached: 10 units
- Clubhouse, maintenance building(s), and other accessory uses: 200,000 sf



13

Golf Course

14

Sign-in Sheet

SIGN-IN SHEET

Tomoka Hills PD and Site Plan

21-0025.09 and .18

CHW AN NV5 COMPANY

Event: Neighborhood Meeting

Date/Time: September 12, 2024 @ 6:00 PM

Place: CHW (11801 Research Drive, Alachua, FL 32615)

Re: Large-scale Comprehensive Plan Amendment, Rezoning to Planned Development, and Site Plan

IPET @ VETCOACH.COM

	Print Name	Street Address	Signature
1	Bryan Buescher	15202 NW 147th Dr STE 1200-332 Alachua	[signature]
2	Vickie Bashor	15202 NW 147th Dr STE 1200-332 Alachua	[signature]
3	Jonathan Wallace	NW 241 Alachua Fl	[signature]
4	Virgil & Holly DeLoach	P.O. Box 532 Ft White FL	[signature]
5	Busy Shires	busyshires333@gmail.com	
6		386-853-4437	
7			
8			
9			
10			
11			
12			
13			

Workshop Minutes

NEIGHBORHOOD MEETING MINUTES

Tomoka Hills PD

21-0025.09

Event:	Neighborhood Meeting
Date:	September 12, 2024 @ 6:00 PM
Location:	CHW Office – 11801 Research Drive, Alachua, FL, 32615
RE:	Large-scale Comprehensive Plan Amendment (LSCPA), Rezoning, and Site Plan Applications

CHW (Agent) Attendees: Ryan Thompson, Walker Owen
Public Attendees: Five (5) (See Sign-In Sheet)

CHW, on behalf of Tomoka Hills Farms, Inc., hosted the required Neighborhood Meeting and presented the following: the meeting's purpose; the applications' requests and intents; the opportunities presented by the applications; the general application review process and estimated project timeline; maps illustrating the site's regulatory and physical characteristics, and a conceptual site layout with proposed uses, densities, and intensities. This was the second of two (2) neighborhood meetings. The first meeting was held on August 21, 2024.

Questions and comments from public attendees are described below, with agent responses.

Question: If the road [connecting US 441 to CR 235A] is going to be private, will it be designed to City standards, open to the public?
Response: Yes, the road will be designed to City standards and open to the public. This additional road could relieve some congestion at the US 441/CR 235A intersection by providing an alternate route.

Comment: There are wetlands on the site and possible open karst features. Development on this site needs to respect those features and make sure there are no negative environmental impacts.
Response: Our own professional ecologist has walked the site with Alachua County Environmental Protection Department (EPD) and Suwannee River Water Management District (SRWMD). Wetlands have been documented and are located entirely within the golf course. [The LSCPA and Rezoning applications included two (2) environmental exhibits: SRWMD Formal Wetland Jurisdictional Determination and Listed Species Survey Memorandum.]

The Tower Hill Insurance building is served by a 100% retention basin located to the north of the site behind the hotels located along US 441. That SMF is sized for the 100-year event to not discharge. Soils were 2 to 4 ft per day so NOT rapidly infiltrating. The basin is sized for a future clubhouse, future retail along the entrance road and a possible expansion of the world HQ in the distant future. The storm water is all piped to the SMF. Any prior surface water discharge from the entire Tomoka Farms site to Mill Creek Sink has been eliminated. The HQ SMF allows any runoff from the course to be naturally infiltrated through native soils at 2-4 Ft/day.

The planned golf course is private for the use of Tower Hill Insurance and its invited guests and is planned on approximately 160 acres of the farm and is designed to fit the land thus requiring minimal grading except at greens and tee boxes. There will be no paved cart paths linking holes on the golf course. Existing wetlands or other surface water features are being saved with buffers, an average of 75'-wide, as required by Alachua County. The wetlands are being preserved to the maximum extent practicable with only a couple instances with noninvasive impacts, such as an elevated boardwalk to cross a narrow stretch of wetland. Non fairways are being left rough with the existing pasture grass. Fairways, greens and Tees make up approximately 15% of the 160 acres and are the extent of the irrigated areas.

Comment: It is inherent that the developer will meet minimum standards. This site has special environmental features and should be held to a higher standard.
Response: The ±345 acres have been master planned with consideration for the site's environmental features at the forefront. The wetlands will meet the County's wetland buffer requirements, which are significantly wider than the Water Management District and all other jurisdictions within Alachua County. Further, the wetlands are completely located within the golf course, essentially serving as ±160-acre buffer.

Comment: The golf course is not a sufficient buffer, since they will be using fertilizer to make it nice for their executives. The water features need to be investigated, could be spring fed.
Response: Best Management Practices (BMPs) for the golf course will be followed to reduce potential impacts from irrigation, fertilizers, and pesticides.

Comment: This site was planted with sweet corn for decades and was sprayed heavily with fertilizers and pesticides six weeks out of the year. A golf course will have much less impact than what's been done historically. Also, I've been on the property throughout my life and have seen every one of those areas dry. I've seen nothing that indicates they are spring fed.

Question: The site directly accesses a segment of US 441 that this anticipated to operate at a LOS F in 2035. What will the segment operate at with your added development?
Response: The Tower Hill Insurance headquarters building Site Plan included a Traffic Impact Analysis and Florida Department of Transportation (FDOT) conducted their own Intersection Control Evaluation (ICE) analysis based on a full buildout of the site. The modifications currently under construction for the US 441 / NW 167th Blvd intersection are based on the ICE analysis.

Question: What did the FDOT ICE include?
Response: The FDOT ICE analysis was for the entire ±345 acres, including the commercial, multi-family, single-family, and mixed-use areas. I do not have the specific number of units and nonresidential square footage on-hand but will follow up with you. The analysis also only considered a connection at US 441, which concentrates a high demand on the US 441/NW 167th Blvd intersection.

[As a follow up to the attendee, CHW sent the FDOT ICE 2044 full build-out details on September 13, 2024, which included the following:

- Phase 1 2024 (Tower Hill Headquarters)
    - 71,000 Square Feet (SF) – General Office Building

- Design Year 2044 (Full Buildout of Tomoka Hills)
    - 72 Dwelling Units (DU) – Single-Family Detached Housing
    - 300 DU – Multifamily Housing (Low-Rise)
    - 130 DU – Hotel
    - 140,000 SF – General Office
    - 235,000 SF – Shopping Center]

Question: I was OK with the Moderate and Medium density residential at the north but now it is high density?
Response: Yes, the client would like the option to construct an apartment complex in that area, if the market demand warrants such. Anything from townhomes to apartments could be permitted in a high density residential area. Now that the entire site is proposed as a Planned Development and a mixed-use area is designated adjacent to the north, High Density Residential is compatible.

Question: The Moderate Density Residential in the south is not compatible with the adjacent agriculture. I have a farm there and single-family homes abutting my property are not acceptable. How many units will that be?
Response: The Moderate Density Residential permits up to four (4) dwelling units per acre. However, the Planned Development – Residential zoning further restricts that to 100 units, which is approximately two (2) dwelling units per acre. Typical subdivisions are four (4) dwelling units per acre. So, these lots would be a little larger than what you typically see in subdivisions today.

Comment: My farm is going into conservation. I'm already negotiating with the County and they have the funding. I will never sell my property.

Comment: I own the farm across CR 235A from you. I want the right to sell my property. Several others in the area have said they will sell if the right opportunity comes along. This site [the subject property] is adjacent to the interchange. They should be able to develop their property and what they're proposing is reasonable.

The meeting concluded at 7:30 PM.

To:	Kathy Winburn, AICP, City of Alachua Planning & Community Development, Director
From:	Romy Garraud, Project Planner
Date:	October 31st, 2024
RE:	Tower Hill Golf Facility, – Concurrency Impact Analysis

This Concurrency Analysis is submitted for Tower Hill Golf Facility. The proposed use is a private golf course with a ±10,180-square-foot maintenance building on Alachua County Tax Parcel 03873-001-001. The site is located on 15601 NW 167th Blvd, within the southwest quadrant of the US 441/I-75 interchange. The onsite Future Land Use (FLU) categories are Agriculture and Community Commercial, and concurrent with this site plan is a Large-Scale Comprehensive Plan Amendment (LSCPA), which requests Low Density Residential FLU. The Zoning District classifications are Agriculture (A) and Community Commercial (CC), and concurrent with this site plan is a Rezoning, which requests a Planned Development, Residential (PD-R) Zoning District classification.

The following analysis estimates potential impacts on City of Alachua public facilities that may result from the proposed development. Please note, building square footage, rather than building footprint area, is used for all calculations.

Roadways / Transportation

Approval of this application will generate a de minimis number of daily vehicle trips, limited to occasional supply deliveries. Therefore, it is not anticipated that this maintenance building will negatively impact the adopted LOS for adjacent and nearby roadways.

Per City LDR §2.4.14(H)(2), affected roadways for developments generating *less* than 1,000 external average daily trips (ADT) are those within one-half mile of the development's ingress/egress, or to the nearest intersecting major street, whichever is greater. Due to the significantly low daily trips (less than one per day), no roadway segments are impacted as a result of the maintenance facility.

Potable Water/Sanitary Sewer

Table 1: Projected Potable Water Impact

System Category	Gallons Per Day (GPD)
Current Permitted Capacity[1]	2,300,000
Less actual Potable Water Flows[1]	1,548,250
Reserved Capacity[1]	468,945
Available Capacity[1]	282,805
Percentage of Permitted Design Capacity Utilized[1]	87.70%
Projected Potable Water Demand from Proposed Project	400
Residual Capacity after Proposed Project	**282,405**

1. *Source: City of Alachua September 2024 Development Monitoring Report*

Conclusion: There is residual capacity with this application's approval. Therefore, the proposed development *will not* cause the City's potable water facilities to fall below LOS standards.

Table 2: Projected Sanitary Sewer Impact

System Category	Gallons Per Day (GPD)
Treatment Plant Current Permitted Capacity[1]	1,500,000
Less actual Treatment Plant Flows[1]	764,000
Reserved Capacity[1]	437,084
Available Capacity[1]	298,916
Percentage of Permitted Design Capacity Utilized[1]	80.07%
Projected Sanitary Sewer Demand from Proposed Project	400
Residual Capacity after Proposed Project	**298,516**

1. *Source: City of Alachua September 2024 Development Monitoring Report*

Conclusion: There is residual capacity with this application's approval. Therefore, the proposed development *will not* cause the City's sanitary sewer facilities to fall below LOS standards.

Solid Waste

Table 3: Projected Solid Waste Impact

System Category	LBs Per Day	Tons Per Year
Existing Demand[1]	44,060.00	8,040.95
Reserved Capacity[1]	50,407.82	9,199.43
New River Solid Waste Facility Capacity[1]	50 years	
Solid Waste Generated by Proposed Project[2]	0	**0**

1. *Source: City of Alachua September 2024 Development Monitoring Report.*

Conclusion: There is available capacity with this application's approval. Therefore, the proposed development *will not* cause the City's solid waste facilities to fall below LOS standards.

To: Kathy Winburn, AICP, City of Alachua Planning & Community Development, Director

From: Romy Garraud, Project Planner

Date: November 20th, 2024

RE: Tower Hill Golf Facility – Comprehensive Plan Consistency Analysis

This application is for Tower Hill Golf Facility. The proposed use is a private golf course with a ±10,180-square-foot maintenance building on a portion of Alachua County Tax Parcel 03873-001-001. The site is located on 15601 NW 167th Blvd, within the southwest quadrant of the US 441/I-75 interchange. The onsite Future Land Use (FLU) categories are Agriculture and Community Commercial, and concurrent with this application is a Large-Scale Comprehensive Plan Amendment (LSCPA), which requests Low Density Residential FLU. The Zoning District classifications are Agriculture (A) and Community Commercial (CC), and concurrent with this application is a Rezoning, which requests a Planned Development, Residential (PD-R) Zoning District classification.

The following identifies specific City of Alachua Comprehensive Plan Goals, Objectives, and Policies and explains how this application is consistent with each. Comprehensive Plan text is provided in normal font while consistency statements are provided in **bold font**.

Future Land Use Element

Objective 1.1: The City shall establish an Agriculture land use category in order to maintain agriculture operations within the city limits as well as preserve the rural character and small-town charm of Alachua.

The project site has Agriculture FLU category designation. This application seeks to construct a private golf course with a maintenance facility that will support the ongoing upkeep and management of the golf course. Agriculture FLU is consistent with the existing Agriculture Zoning, as the Agriculture Zoning district permits the use of golf courses per the Land Development Regulations (LDR) Table 4.1-1.

Policy 1.3.a: Community Commercial: The Community Commercial land use category is established to provide neighborhood and community scale goods and services to adjacent neighborhood and residential areas. The following uses are allowed within the Community Commercial land use category:

1. Neighborhood commercial establishments;
2. Residential/offices and live-work units;
3. Business and professional offices;
4. Personal services;
5. Financial institutions;
6. Retail sales and services that serve the community;

7. Eating establishments;

8. Indoor recreation/entertainment;

9. Single-family and multi-family residential above first floor commercial uses;

10. Bed and breakfasts;

11. Supporting community services such as schools, houses of worship, parks, and community centers; and,

12. Traditional Neighborhood Planned Developments.

A small portion of the Subject Property has a Community Commercial FLU category designation. This application does not propose improvements such as the built environment (structure, just minor earth work infrastructure, etc.), with an exception to minor earthwork, within the existing Community Commercial FLU designated area.

Policy 1.3.d: Design and performance standards: The following criteria shall apply when evaluating commercial development proposals:

1. Integration of vehicular and non-vehicular access into the site and access management features of site in terms of driveway cuts and cross access between adjacent sites, including use of frontage roads and/or shared access;

2. Buffering from adjacent existing/potential uses;

3. Open space provisions and balance of proportion between gross floor area and site size;

4. Adequacy of pervious surface area in terms of drainage requirements;

5. Placement of signage;

6. Adequacy of site lighting and potential impacts of lighting upon the surrounding area. Lighting should be designed to minimize impacts to preserve the ambiance and quality of the nighttime sky by reducing light trespass and light pollution on adjacent properties by utilizing lighting at appropriate intensities, directions and times to ensure light is not overused or impacting areas where it is not intended;

7. Safety of on-site circulation patterns (patron, employee, and delivery vehicles), including parking layout, drive aisles, and points of conflict;

8. Landscaping, as it relates to the requirements and goals of the Comprehensive Plan and Land Development Regulations;

9. Unique features and resources which may constrain site development such as soils, existing vegetation and historic significance;

10. Performance based zoning requirements, which may serve as a substitute for or accompany land development regulations in attaining acceptable site design; and,

11. Commercial uses shall be limited to an intensity of less than or equal to 0.50 floor area ratio for parcels 5 acres or greater, 0.75 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.0 floor area ratio for parcels 1 acre or less.

Development to follow approval of this application will adhere to all prescribed Design and Performance Standards, as prescribed in the City of Alachua's LDR.

Policy 1.3.e: The creation/promotion of strip pattern commercial development shall be discouraged. Infill within established commercial areas is preferred over extension of a strip commercial pattern. Extension of a commercial land use designation may be considered in circumstances where the extension is compatible with the existing land uses surrounding the land or the land use categories of surrounding lands. Extensions of a commercial land use category shall not encroach into a residential area. The following criteria shall be applied to limit the impacts of commercial development upon surrounding areas:

1. Impacts upon traffic circulation should be anticipated and mitigated through the reservation of right-of-way for road widening and marginal access streets when appropriate.

2. Access points for commercial development shall minimize points of conflict by utilizing frontage roads, providing cross access between parcels, or installing shared use ingress and egress access driveways connections to roadways.

3. Setbacks and landscaped or other appropriate buffers shall be established to mitigate the visual impacts of commercial development upon surrounding land uses.

4. A sidewalk or bicycle path shall be required where appropriate, to provide convenient access to the development from surrounding areas and to reduce traffic volumes on the roadways.

The application is not proposing a strip pattern commercial development. The Subject Property is for a private golf course, which is considered outdoor commercial recreation in LDR Table 4.1-1. The natural character of the golf course will serve to protect onsite natural features and buffer adjacent properties from more intense development adjacent to US 441. The private golf course will be accessed via the new roadway that is under construction for the office building and will adhere to the LDR setback requirements.

Objective 2.4: The City shall adopt landscaping and tree protection standards in order to achieve the aesthetic design values of the community and preserve tree canopies, as well as to protect exceptional specimens and champion trees.

Policy 2.4.b: Landscaping: Buffering – A buffer consists of horizontal space (land) and vertical elements (plants, berms, fences, walls) that physically separate and visually screen adjacent land uses. The City shall establish buffer yard requirements that are based on the compatibility of the adjacent uses and the desired result of the buffer.

Development of the property will adhere to all buffer standards as prescribed in LDR Section 6.2, which implements Objective 2.4 and Policy 2.4.b.

Policy 2.4.c: Tree Protection: Heritage Trees and Champion Trees – The City shall require the preservation of heritage trees and champion trees when possible. Standards shall be set for determining the health and safety risks associated with heritage and champion trees both on individual residential lots, and existing and proposed developments.

All existing heritage trees will be preserved to the greatest extent practicable throughout the project limits. No champion trees exist on-site. Proposed structures and amenities will be located to best reduce impacts and conflicts to the existing vegetation on site.

Policy 2.4.d: Tree Protection: Regulated Trees – The City shall establish standards for the preservation of regulated trees. Particular attention shall be given to preserving specimen and preferred species of regulated trees, where feasible.

All existing regulated trees will be preserved to the greatest extent practicable throughout the project limits. Proposed structures and amenities will be located to best reduce impacts and conflicts to the existing vegetation on site. Please refer to the Tower Hill Golf Landscape Notes, Details, and Schedule for more information regarding tree protection.

Policy 2.4.e: Tree Protection: Removal and Mitigation – Along with establishing standards for tree removal and mitigation, the City shall establish a tree banking program to provide flexibility for re-planting trees through the mitigation process. Funds within the tree bank may be utilized to plant landscaping on city-owned properties, in public parks, and in road rights of way, where appropriate.

When the removal of existing trees is required for safety or functionality purposes on site, the trees will be mitigated via on-site plantings to the greatest extent practicable. In the event that on-site mitigation is insufficient, the plans will propose providing mitigation through the tree bank program with the fees required per code.

Objective 5.1: The City shall coordinate land use categories with appropriate topography, soils, areas of seasonal flooding, wetlands and habitat during review of proposed amendments to the Future Land Use Map and the development review process. Natural features may be included as amenities within a development project.

The topography of the site and the soil composition is suitable for development on the site. There are documented wetland features on the site that have been jurisdictionally delineated. There are no portions of this site within a FEMA floodplain. A list of habitats can be referred to in the Tomoka Hills Golf FLUCFCS Descriptions, that is part of this submittal package.

Policy 5.1.a: Topography: The City shall protect the natural topography of the City, including steep and seepage slopes, by requiring new development to include techniques to minimize negative impacts on the natural terrain. An emphasis will be placed on retaining the natural function of seepage slopes during development. Additionally, retention of existing native vegetation will be encouraged as one method of protecting slopes.

The topography of the site is conducive to development of a golf course. The topographic form will be protected as will steep and seepage slopes. The topography of the site will aid the enhancement of the design of this project, as it will be a golf course.

Policy 5.1.b: Soils: The City shall ensure soil protection and intervention measures are included in the development review process.

The site is composed of 16 different soil types:

1. **Arredondo fine sand, 0 to 5 percent slopes, Hydro group: A**
2. **Fort meade fine sand, 0 to 5 percent slopes, Hydro group: A**
3. **Millhopper sand, 0 to 5 percent slopes, Hydro group: A**
4. **Lochloosa fine sand, 2 to 5 percent slopes, Hydro group: A**
5. **Kendrick sand, 2 to 5 percent slopes, Hydro group: B**
6. **Blichton sand, 0 to 2 percent slopes, Hydro group: B**
7. **Bivans sand, 2 to 5 percent slopes, Hydro group: C/D**
8. **Norfolk loamy fine sand, 2 to 5 percent slopes, Hydro group: B**
9. **Gainesville sand, 0 to 5 percent slopes, Hydro group: A**
10. **Pits and dumps**
11. **Millhopper sand, 5 to 8 percent slopes, Hydro group: A**

12. **Lochloosa fine sand, 5 to 8 percent slopes, Hydro group: B**
13. **Kendrick sand, 5 to 8 percent slopes, Hydro group: B**
14. **Blichton sand, 5 to 8 percent slopes, Hydro group: C/D**
15. **Bivans sand, 5 to 8 percent slopes, Hydro group: C/D**
16. **Norfolk loamy fine sand, 5 to 8 percent slopes, Hydro group: B**

According to the Natural Resources Conservation Service (NRCS) soil database, the largely A,B, and C/D soils are well suited for the proposed project proposed development.

Policy 5.1.c: Flood prone areas: The City shall require as part of the development review process the identification of FEMA flood zone areas. Where necessary, base flood elevations and minimum finished floor elevations shall be established. The City shall also require finished floor elevations on subdivision plats, site plans and building permit plans when necessary to determine compliance with flood prone area regulations. The City shall establish standards for a limitation on filling in flood prone areas.

There are no portions of this site within a FEMA flood zone area.

Policy 5.1.d: Wetlands: The City shall utilize statewide wetland delineation methodology in accordance with Florida Administrative Code (FAC) and regulations adopted by the FDEP and the Suwannee River Water Management District.

There are documented wetland features on the site that have been jurisdictionally delineated in accordance with FAC and regulations adopted by the FDEP and Suwannee River Management District. Only 0.05 acres of wetland will be impacted and to offset the impact a wetland mitigation plan has been prepared. The wetland mitigation plan includes a 1-acre Enhancement Area (EA), consisting of approximately 0.59 acres of wetland enhancement and 0.40 acres of upland buffer enhancement. The non-impacted wetlands will be protected through use protections to promote native vegetation. More detail regarding wetlands mitigation plans can be found in the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan.

Policy 5.1.e: Habitat: The City shall require as part of the development review process, an inventory of listed species for all new developments in areas identified as known habitat for listed species if listed species are known to exist in close proximity to the development. The survey shall include detailed information regarding type, quantity, location, and habitat requirements for any listed species identified. A de minimus threshold for properties required to complete the inventory may be established in the City's Land Development Regulations.

No listed species was found on-site. For information regarding an inventory of species on the project site, please refer to The Listed Species Survey. For information regarding habitats that are located within the project boundary, please refer to the Tomoka Hills Golf FLUCFCS Descriptions.

Community Facilities Element

Objective 5.1: The City recognizes the importance of the protection of high aquifer recharge areas, wellfield protection areas, lakes, streams, drainage basins, wetlands and stream-to-sink features as vital to the protection of groundwater resources. The City shall, through partnerships and using the best available data, provide protection for groundwater resources.

The site contains documented wetland features that have been jurisdictionally delineated. Proper measures will be taken to protect non-impacted wetland areas through entry and use restrictions. There will be perimeter signage to inform golfers that the wetlands are off-limits. Wetland areas will be buffered by an average of 75 ft. of natural vegetation. Impact to wetlands is minimal, with only 0.05 acres of wetland being impacted.

Policy 5.1.a: The City shall consider the best available hydrogeological information (e.g, Suwannee River Water Management District high aquifer recharge potential maps or site-specific data), and may require the collection of site-specific hydrogeological data, such as soil borings or electric resistivity tests, when assessing the impacts of proposed land use changes and developments in areas of high aquifer recharge potential. This information should be used in the determination of land use decisions on a case-by-case basis.

Soil borings of the site were collected and analyzed, concluding that the soils consist of silty sand, silty sand with clay and rock, very clayey sand, and sandy clay. During the time of field exploration groundwater was not encountered on the site, but it is anticipated that localized temporarily "perched" groundwater condition may occur during the wet season in areas with clay-rich materials. However, none of these conditions will hinder the development of a golf course facility. Recommendations based on the construction proposal are outlined in the GSE Summary Report, attached to this submittal package.

Policy 5.1.b: The City shall prioritize the acquisition of high aquifer recharge areas for protection as conservation or open space areas and consider the use of bonds, lease agreements, property donations, private or public trusts and partnerships, and grants to achieve these acquisitions.

This project does not propose any impacts to any natural features, as this will be an open space, recreational use.

Policy 5.1.c: The City shall coordinate with the Suwannee River Water Management District to protect the functions of natural groundwater recharge areas and natural drainage features by requiring that all development proposals which have the potential to impact water resources to be reviewed by the Suwannee River Water Management District, in accordance with Chapter 373, Florida Statutes and Rules 40B-4 and 40B-400, Florida Administrative Code, or subsequent provisions.

The stormwater management facilities have been designed in accordance with the Suwannee River Management District, City of Alachua, and Alachua County requirements.

Objective 5.2: The City shall establish groundwater water quality and quantity protection strategies to protect the quality of water and maintain the quantity of water entering the aquifer.

Policy 5.2.a: In an effort to protect groundwater quality, the City shall:

1. Adopt design criteria for stormwater management practices that minimize the leaching or discharge of nutrients.

2. Promote the Florida Yards and Neighborhoods program and Florida Friendly landscaping practices to educate the public about proper lawn and landscaped area fertilization and irrigation;
3. Incorporate the principles of the Florida Yards and Neighborhoods and Florida-Friendly Landscaping practices program into local landscaping ordinances;
4. Adopt water conservation programs;
5. Educate the public about the proper operation and maintenance of onsite sewage treatment and disposal systems;
6. Implement a local onsite sewage treatment and disposal systems management program to assure that these systems are regularly inspected, pumped out, or brought up to current standards when required by Florida Administrative Code; and,
7. Participate in intergovernmental efforts which encourage the protection of groundwater quality.

The stormwater management facilities have been designed to meet the criteria set forth by the Suwannee River Management, the City of Alachua, and Alachua County. The stormwater facility will provide water quality treatment volume, discharge rate and volume attenuation, provide volume recovery, and the retention ponds will have a freeboard. Detailed plans regarding the stormwater management facilities are outlined in the Stormwater Management System Report and the Tomoka Hills Golf Course Best Management Practices Planning Guide.

Policy 5.2.b: The City shall require demonstration from engineering design and reports that post-development recharge volumes will equal pre-development recharge volumes to the Floridian aquifer.

Engineering design and reports regarding development recharge volumes are demonstrated in the Stormwater Management System Report, which is part of this submittal package.

Policy 5.2.c: Applicants for new development, expansions, or redevelopment shall employ one or more of the following techniques to address potential groundwater quality and quantity impacts:

1. Construction and maintenance of shallow, landscaped retention basins;
2. Decreasing the amount of stormwater runoff through the use of pervious surfaces or increased open space;
3. Development of a stormwater pollution prevention plan;
4. Development of a sinkhole remediation plan; and,
5. Development of a groundwater monitoring plan.

The development on the project site will include the construction and maintenance of shallow retention basins that are landscaped, a stormwater pollution prevention plan, a sinkhole remediation plan, and a groundwater monitoring plan. Please refer to the Stormwater Management System Report for more information.

Policy 5.2.d.: Best management practices and performance standards shall be utilized to maximize open space, limit impervious surfaces, minimize the use of fertilizers on turf grass areas, promote protection of natural vegetation, promote the use of pervious parking areas, and treat stormwater to protect water quality.

Best management practices (BMPs) will be utilized to control erosion, sedimentation, and an operation and maintenance entity will be established. Please refer to the Tomoka Hills Golf Course Best Management Practices Planning Guide for more detailed information.

Objective 5.3: The City shall assist the Suwannee River Water Management District with the implementation of its water conservation rules and programs. During water shortage events, the City shall encourage and promote water conservation measures to be

implemented for the use and reuse of water. The City shall make educational materials regarding the conservation of water resources available to the prior to peak seasonal demand.

BMPs will be implemented to conserve water on the golf course. BMPs include irrigation under normal conditions, moisture sensors, out-of-play areas will be planted with drought resistant native plants, and planting plants that require little to no irrigation. Please refer to the Tomoka Hills Golf Course Best Management Practices Planning Guide for more detailed information.

Policy 5.3.a: The City shall assist in the enforcement of water use restrictions during a declared water shortage and will assist the Suwannee River Water Management District with the distribution of educational materials regarding the conservation of water prior to peak seasonal demand.

An irrigation-system will be designed to ensure that water is only provided to turfgrass plants based on evapotranspiration (ET) rate monitoring. The irrigation-system will be computer-controlled and will run efficiently to ensure that water is conserved as much as possible and not wasted. Please refer to the Tomoka Hills Golf Course Best Management Practices Planning Guide for more detailed information.

Conservation and Open Space Element

Objective 1.2: The City shall preserve and protect native communities and ecosystems, particularly those considered endangered or threatened.

Policy 1.2.a: The City shall ensure that land use designations, development practices and regulations protect native communities and ecosystems, and environmentally sensitive lands.

There will be a three-tier buffer system in place to maintain the protection of local native communities and ecosystems. The three-tier plan includes management practices that will eliminate the use of fertilization, dumping, and the use of golf carts within the buffer areas that surround the native species. For more information regarding the three-tier buffer system, please refer to the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan that is part of this submittal package.

Policy 1.2.b: Notwithstanding any site-specific environmental assessment, the City may use the Florida Natural Area Inventory to identify native communities, ecosystems, and environmentally sensitive lands and potential locations of threatened and endangered species, communities and ecosystems.

A field survey of the site was conducted to determine if the project is being utilized by any threatened or endangered species. The results of the survey concluded that there are no threatened or endangered species on the site. Please refer to the Listed Species Survey for more detailed information.

Policy 1.2.d: The City shall coordinate with the City of Gainesville, the City of High Springs and Alachua County to ensure the protection of native communities and ecosystems that exist across jurisdictional boundaries.

For any native communities or ecosystems that exist along the jurisdictional boundary of the City of Alachua and Alachua County, the same protection measures and BMPs will be applied to ensure environmental well-being.

Policy 1.2.e: The City shall maintain any developed management plans for all City owned or managed natural areas as needed. Management plans shall allow for uses that preserve the intrinsic characteristics of the natural area.

A maintenance management plan has been created to ensure the protection of natural vegetation and species. Details regarding the plan can be found in the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan that is part of this submittal package.

Policy 1.2.f: Where appropriate, the City shall work to acquire, conserve, protect and manage environmentally sensitive lands and native communities and ecosystems.

The Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan and Tomoka Hills Golf Course Best Management Practices Planning Guide outlines what precautions will be put in place to manage the native plant species on the site.

Policy 1.2.g: The City shall encourage the eradication of invasive exotic plant species, and whenever possible, recommend their replacement with native plant species alone, or in conjunction with other erosion control techniques. The City shall refer to the Pest Plant List provided by the Florida Exotic Pest Plant Council for guidance.

Maintenance plans include perpetual treatment to control exotic and nuisance species. Native plant species will be planted to replace the exotic and nuisance plant species. Details regarding this can be found in the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan and the Tomoka Hills Golf Course Best Management Practices Planning Guide that is part of this submittal package.

Policy 1.2.h: The City shall work with the Florida Yards and Neighborhoods program and incorporate the program's best management practices (BMPs) to promote sustainable landscaping practices.

The project will retain a qualified Director of Agronomy/Golf Course Superintendent certified in Florida Golf Course Best Management Practices to design and construct a process that will promote sustainable maintenance practices. Details regarding this can be found in the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan and the Tomoka Hills Golf Course Best Management Practices Planning Guide that is part of this submittal package.

Policy 1.2.i: The City shall, as a condition of development, prohibit the planting of Pest Plant Species, and require perpetual maintenance of preserved and landscaped areas to eradicate invasive exotics.

Exotic/invasive plant species will not be planted on the project site. Treatment to remove exotic/invasive species includes but is not limited to hand pulling, herbicide, and hand-held power equipment. Details regarding this can be found in the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan and the Best Management Practices Planning Guide that is part of this submittal package.

Policy 1.2.j: The City shall require all new development to maintain internal and external connectivity of all open and natural space to the maximum extent practicable.

Both internal and external connectivity will be reflected in open and natural spaces to the maximum extent practicable. This green connection plan will promote more seamless integration of the proposed use into the context of the landscape, as well as the surrounding natural space.

Policy 1.2.k: The City shall establish criteria for the removal of vegetation that is neither threatened nor endangered, distinguishing between native, noninvasive exotics, and invasive exotics.

The course will be designed to minimize the removal of native vegetation.

Policy 1.2.l: The City shall protect regulated, heritage, and champion trees. The City may continue to participate in the Florida Champion Tree Program. Additionally the City will require tree removal permits to protect regulated, heritage, and champion trees from accidental removal and other development related disturbances to the extent allowed by 163.045 and 163.3209, Florida Statutes.

All existing heritage trees will be preserved to the greatest extent practicable throughout the project limits. These trees will only be removed when no other viable option to work around them is found to be feasible.

Objective 1.3: The City shall protect species listed by State and Federal agencies as endangered, threatened or of special concern, and their habitats.

A listed species survey was conducted to determine if the project was being utilized by endangered or protected species. The survey concluded that there are no threatened or endangered species within the project site. Please refer to the Listed Species Survey for more information.

Policy 1.3.a: The City shall ensure that its ordinances, regulations and policies protect listed species and their habitats.

A listed species survey was conducted to determine if the project was being utilized by endangered or protected species. The survey concluded that there are no threatened or endangered species within the project site. Please refer to the Listed Species Survey for more information.

Policy 1.3.b: The City shall utilize the development review process, land acquisition programs, environmental regulatory partnerships, stewardship programs and public education to protect listed species and their habitat, and prevent extinction of or reduction in populations of listed species.

A listed species survey was conducted to determine if the project was being utilized by threatened or endangered species. The survey concluded that there are no threatened or endangered species within the project site. Should any species be found during the development of the project, then they will be properly dealt with. Please refer to the Listed Species Survey for more information.

Policy 1.3.c: The City shall obtain data from the Florida Fish and Wildlife Conservation Commission, Alachua County Environmental Protection Department, Florida Department of Environmental Protection, to maintain a periodically updated inventory of listed species and habitats located within City limits or immediately adjacent to City limits. The City will use the Florida Natural Areas Inventory as a base inventory.

The Subject Property was surveyed for state and federal listed species identified by the Florida Fish and Wildlife Conservation Commission's (FFWCC) official list of Florida's Endangered Species, Threatened Species, and Special of Special Concern (December 2022). The evaluation included literature review for species records of occurrence as well as survey by qualified ecologists conducted within the bounds of the Subject Property. This assessment found no plant species listed as "threatened" or "endangered" by either the Florida Department of Agriculture (FDA) or the United States Fish and Wildlife Service (USFWS). Please refer to the Listed Species Survey for more information.

Policy 1.3.d: The City shall require prior to development approval, an inventory of listed species for all new developments in areas identified as known habitat for listed species. The inventory shall include detailed information regarding type, quantity, location and habitat requirements for any listed species identified. De minimus threshold for properties required to complete the inventory shall be established in the City's Land Development Regulations.

A listed species survey was conducted to determine if the project site is being utilized by any species. The findings of the survey are recorded in the Listed Species Survey.

Policy 1.3.e: The City's land use designations shall provide for the protection of threatened and endangered species.

A listed species survey was conducted to determine if the project site was being utilized by endangered or protected species. There are no threatened or endangered species within the project site. The findings of the survey are recorded in the Listed Species Survey.

Objective 1.5: The City shall protect soil resources through erosion and sedimentation control, by requiring proper design criteria on specific soils.

The site is composed of 16 different soil types:

1. **Arredondo fine sand, 0 to 5 percent slopes, Hydro group: A**
2. **Fort meade fine sand, 0 to 5 percent slopes, Hydro group: A**
3. **Millhopper sand, 0 to 5 percent slopes, Hydro group: A**
4. **Lochloosa fine sand, 2 to 5 percent slopes, Hydro group: A**
5. **Kendrick sand, 2 to 5 percent slopes, Hydro group: B**
6. **Blichton sand, 0 to 2 percent slopes, Hydro group: B**
7. **Bivans sand, 2 to 5 percent slopes, Hydro group: C/D**
8. **Norfolk loamy fine sand, 2 to 5 percent slopes, Hydro group: B**
9. **Gainesville sand, 0 to 5 percent slopes, Hydro group: A**
10. **Pits and dumps**
11. **Millhopper sand, 5 to 8 percent slopes, Hydro group: A**
12. **Lochloosa fine sand, 5 to 8 percent slopes, Hydro group: B**
13. **Kendrick sand, 5 to 8 percent slopes, Hydro group: B**
14. **Blichton sand, 5 to 8 percent slopes, Hydro group: C/D**
15. **Bivans sand, 5 to 8 percent slopes, Hydro group: C/D**
16. **Norfolk loamy fine sand, 5 to 8 percent slopes, Hydro group: B**

According to the NRCS soil database, the soil types are conducive to the proposed development.

Policy 1.5.a: The City shall ensure soil protection and intervention measures are included in the development review process.

Policy 1.5.b: The City shall require land clearing for development to be phased with construction activity, and to adhere to techniques which minimize soil erosion, minimize removal of native and non-invasive trees and vegetation, and protect champion and designated heritage trees. After clearing, soils shall be stabilized in accordance with best

management practices (BMPs) identified in “The Florida Stormwater, Erosion, and Sedimentation Control Inspector’s Manual”.

BMP’s will be implemented to minimize disruption to the soil that make up the site. For more detailed information regarding the sequence of soil disturbing activities, please refer to Sheet NO: C0.20

Policy 1.5.c: The City shall protect the natural topography of the City, including steep and seepage slopes, by requiring new development to include techniques to minimize negative impacts on the natural terrain. An emphasis will be placed on retaining the natural function of seepage slopes during development. Additionally, retention of existing native vegetation will be encouraged as one method of protecting slopes.

A seepage slope has been documented on the project site, but it will not be disturbed during and after the development of the site. For more detailed information regarding seepage slopes, please refer to Sheet NO: C0.20

Policy 1.5.d: The City shall coordinate with appropriate Alachua County agencies, the Suwannee River Water Management District (SRWMD), the Florida Geological Survey (FGS), the Florida Department of Agriculture and Consumer Services (FDACS), the U.S. Geological Survey (USGS), U.S. Department of Agriculture Natural Resources Conservation Service (NRCS), and the Army Corps of Engineers to identify the best available soil erosion potentials, best management practices and technically sound erosion reduction techniques.

Erosion and sedimentation control measures will be provided, as required by the City of Alachua and Suwannee River Water Management District.

Objective 1.7: The City shall identify, protect and conserve significant geological resources and their natural functions.

There are no significant geological resources documented on this site.

Policy 1.7.a: The City shall work with the Florida Geological Survey (FGS), Florida Department of Environmental Protection (FDEP), Suwannee River Water Management District, and the Alachua County Environmental Protection Department, to identify and map significant geological resources, including karst features such as sinkholes, caves, and entire stream to sink basins. Significance of a feature should reflect its potential contribution to the area’s network of natural resources.

There are no significant geological resources documented on this site.

Policy 1.7.b: The City may utilize FGS Florida Aquifer Vulnerability Assessment (FAVA) maps, in conjunction with site-specific data, when available, to determine karst related aquifer contamination potentials. The City may utilize the FAVA map created specifically for Alachua County.

The Tomoka Hills Golf Course Best Management Practices Planning Guide outlines how pollutants are dealt with, should they found in the future, to ensure that pollutants do not enter the aquifer.

Policy 1.7.c: The City shall prepare an emergency management plan to address the opening of a sinkhole when it poses a threat to public infrastructure, and the public’s health, safety or welfare.

In the event of a sinkhole, the project engineer will be notified and will assist with remediation efforts. For more detailed information regarding sinkhole management, please refer to Sheet NO: C0.20

Policy 1.7.d: The City shall review the possibility of acquiring and managing, when feasible, unique geological features and their surrounding natural areas. If a subject feature is privately owned, the City shall encourage the owner to create a management plan in cooperation with the appropriate agencies, and investigate the possibility of acquiring and preserving the surrounding property.

There are no significant geological resources documented on this site.

Policy 1.7.e: The City shall utilize regulatory and stewardship techniques to ensure that stormwater, wastewater and landscaping practices do not negatively impact the structural integrity, hydrology, biodiversity and other natural functions of significant geologic resources.

The design of stormwater management facilities has been designed to meet the criteria set forth by the Suwannee River Management district, City of Alachua, and Alachua County.

Objective 1.10: The City shall protect and preserve wetland values and functions from adverse, human caused, physical and hydrologic disturbances.

A wetland mitigation plan has been put in place to protect and preserve larger, high-quality natural wetland features on the project site. Only a minimal amount of wetlands will be impacted, 0.05 acres. Wetland features will be buffered by natural vegetation and there will be signage along the perimeter informing golfers not to enter the site. Please refer to the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan for more information.

Policy 1.10.a: The City shall utilize statewide wetland delineation methodology in accordance with Florida Administrative Code and regulations adopted by the DEP and the Suwannee River Water Management District.

The project has received a formal wetland determination authorization from the Suwannee River Water Management District in accordance with the Florida Administrative Code. The authorization number is 245365_2.

Policy 1.10.b: The City shall conserve wetlands by prohibiting, where the alternative of clustering all structures in the non-wetland portion of the site exists, any development or dredging and filling which would alter their natural functions. If no other alternative for development exists, the City shall allow only minimal development activity in those areas designated as wetlands within this Comprehensive Plan and that such development activity comply with the following performance standards:

III. Limited development activity with impacts to isolated wetlands (and/or associated buffers) that meet all of the following conditions:

a. Less than .25 acres in size; and,

b. Determined to be of poor quality by a certified environmental specialist; and,

c. The applicant has demonstrated that every reasonable step has been taken to minimize impact to wetland; and,

d. The applicant has provided for appropriate on-site or off-site mitigation for impact to wetland.

Limited development activity includes, but is not limited to, park amenities such as trails or boardwalks, minimum necessary roadways and/or sidewalks for access or internal site connectivity, and underground utility line crossings.

We are coordinating with the Suwannee River Water Management District, the City of Alachua, and Alachua County to ensure wetland impacts are in compliance. 0.05 acres will be impacted, and 0.49 acres of wetland will incur tree trimming impacts. The applicant will also apply appropriate mitigation for wetlands. Please refer to the Wetlands Impact Map and the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan for more information.

Policy 1.10.c: The City shall review wetland mitigation and monitoring proposals to allow limited development activity in wetlands and wetland buffers. Applicants must provide documentation which indicates that the following steps have been taken: the applicant has attempted every reasonable measure to avoid adverse impacts; the applicant has taken every reasonable measure to minimize unavoidable adverse impacts; the applicant has provided adequate mitigation to compensate for wetland impacts. The property owner shall incur any and all expenses associated with wetland mitigation.

The Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan documents the wetland features on the site as well as measures that will be taken to minimize impact to the wetlands. The construction of this project will impact 0.05 acres of wetland features and to offset these impacts a wetland enhancement area will be created. The mitigation plan also outlines efforts that will be taken to protect and preserve non-impacted wetlands within the project area.

Policy 1.10.d: The City shall provide all wetland mitigation and monitoring proposals for review by the County, Suwannee River Water Management District and any other applicable agencies.

The Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan is in accordance with City of Alachua, Alachua County, and Suwannee River Water Management District requirements.

Policy 1.10.g: The City shall require natural vegetative buffers around wetlands to protect the fragile ecosystems they sustain. Buffers, measured from the outer edge of the wetland, shall be created as established in the following table:

Resource Addressed Required Buffer (feet)	Resource Addressed Required Buffer (feet)
Wetlands less than or equal to 0.5 acre that do not support federally and/or state regulated vertebrate wetland/aquatic dependent animal species. 50’ average 35’ minimum	Wetlands less than or equal to 0.5 acre that do not support federally and/or state regulated vertebrate wetland/aquatic dependent animal species. 50’ average 35’ minimum
Wetlands greater than 0.5 acre that do not support the animal species described above. 75’ average 50’ minimum	Wetlands greater than 0.5 acre that do not support the animal species described above. 75’ average 50’ minimum
Areas where the animal species described above have been documented within 300 feet of a wetland. 100’ average 75’ minimum	Areas where the animal species described above have been documented within 300 feet of a wetland. 100’ average 75’ minimum

Larger, high-quality wetlands will be buffered by an average of 75 ft. of existing vegetation on the project site. Please refer to the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan for more information.

Objective 1.12: The City shall protect and conserve the quantity and quality of water resources, not only for the benefit of residents of the City, but for all in North Florida who depend on the Floridian Aquifer for drinking water, and for the benefit of all connected springs, streams, and rivers which may be impacted by the City's land use and development practices.

The applicant will abide by BMP to ensure that Florida water resources are protected and conserved. Please refer to the Tomoka Hills Golf Course Best Management Practices Planning Guide for more information.

Policy 1.12.a: The City shall recognize the interconnectivity of surface and ground water systems and shall work to minimize degradation of water resources, which extend beyond the City limits.

No impacts will occur to wetlands that extend beyond City limits. The applicant is in coordination with the Suwannee River Water Management District, the City of Alachua, and Alachua County to ensure wetlands are approached with the utmost care.

Policy 1.12.b: The City shall inventory flowing surface water bodies within the City, utilizing topographic maps, or obtain an established inventory from an appropriate government agency. The inventory utilized should not identify water bodies in isolation; water bodies should be identified relative to their watersheds and basins.

Surface water bodies are illustrated in the Environmental maps attached to this package.

Policy 1.12.c: The City shall consider, through an interlocal agreement with the Florida DEP, SRWMD or other appropriate agency, the monitoring of surface water bodies within the City, identification of human and ecological health risks, point and non-point pollutant sources, the establishment of remediation protocol, identification of significant aquatic ecosystems and habitats, and the eradication of aquatic pest plant species.

Following set criteria by the City of Alachua, Alachua County, and the Suwannee River Water Management District, a monitoring plan has been set in place to supervise surface water bodies. Please refer to the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan for more information.

Policy 1.12.d: The City shall require the following buffers for development along surface water bodies. Buffers shall be measured from the outer edge of the water body, and created as established in the following table:

Resource Addressed Required Buffer (feet)	Resource Addressed Required Buffer (feet)
Surface waters less than or equal to 0.5 acre that do not support federally and/or state regulated vertebrate wetland/aquatic dependent animal species. 50' average 35' minimum	Surface waters less than or equal to 0.5 acre that do not support federally and/or state regulated vertebrate wetland/aquatic dependent animal species. 50' average 35' minimum
Surface waters greater than 0.5 acre that do not support the animal species described above. 75' average 50' minimum	Surface waters greater than 0.5 acre that do not support the animal species described above. 75' average 50' minimum

Areas where the animal species described above have been documented within 300 feet of a surface water. 100' average 75' minimum	Areas where the animal species described above have been documented within 300 feet of a surface water. 100' average 75' minimum

Larger, high-quality wetlands will be buffered by an average of 75 ft. of existing vegetation on the project site. Please refer to the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan for more information.

Policy 1.12.e: The City shall protect the natural function of floodplains, recognizing the role of flood patterns in maintaining water quality and quantity. Flood plain regulations will be based on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM).

The project site does not contain any FEMA floodplains.

Policy 1.12.f: The City shall work with FEMA, SRWMD, DEP and the County to regulate development within special flood hazard areas susceptible to the one percent (1%) annual chance flood established by FEMA. The City will require development activity to occupy only the non-floodplain portion of a site when feasible; allow dredging and filling within floodplains only if it preserves the natural function of the floodplain and adequately provides for stormwater management; require the minimum floor elevation of any structure to be at least one foot above the established base flood elevation; and will prohibit the storage of hazardous materials or waste within the floodplain, and development activity that threatens to raise the base flood elevation.

The project site does not contain any FEMA floodplains.

Policy 1.12.g: The City shall restrict the siting of wastewater treatment plants and spray field areas in flood prone areas.

This project does not include wastewater treatment plants or spray field areas, as this will be a golf course.

Policy 1.12.i: The City shall restrict the use of chemical, biological and mechanical agents to control aquatic pest plants, animals, insects and fish to those that are consistent with state and federal regulations and are known to minimize impacts on water quality and surroundings.

Herbicides will be broadcast using low volume backpack and handheld sprayers, only to be performed by State Certified Pesticide Applicators with Aquatic Pest Control for wetland treatment. Please refer to the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan for more information.

Policy 1.12.j: The City shall consider instituting a water conservation program that includes best management practices (BMPs) such as xeriscaping, effluent reuse, and leak detection schedules for all City properties, facilities and infrastructure.

BMPs shall be used to enforce an efficient use of water resources. BMPs shall include but are not limited to moisture sensors, the planting of native plants that require little to no irrigation, and computer-controlled irrigation systems. Please refer to the Tomoka Hills Golf Course Best Management Practices Planning Guide for more information.

Policy 1.12.k: The City may consult with the Suwannee River Water Management District (SRWMD), the Florida Department of Environmental Protection (DEP) and the Alachua County Environmental Protection Department to ensure that City water resource practices are in compliance with all federal, state and local laws and regulations.

The use of water within this project site will abide by the set local, state, and federal regulations.

Policy 1.12.l: The City's Public Services Department shall continue to review the domestic per capita water consumption and amend domestic per capita water consumption rates as necessary. The City should consult with the SRWMD and the DEP to determine sustainable consumption values.

The projected water consumption estimate can be found in the Concurrency Impact Analysis submitted as part of this application. Based on the projected water consumption there will be residual water capacity.

Policy 1.12.n: The City shall maintain a wellhead protection program to protect the public water supply. Under the program, new and existing wells will be inspected on a regular schedule, and abandoned wells will be closed and sealed; technical analysis will be used to determine the suitability of wellfield expansion or additions; and modifications and additions will be reviewed by the County and the SRWMD.

The project site will not use a wellhead system and will be connected to the municipal water supply system.

Policy 1.12.o: The City shall prohibit the development or expansion of landfills, wastewater treatment plants, and commercial mining operations, within wellhead protection areas.

The project site is not within a wellhead protection area.

Policy 1.12.p: The City shall coordinate with the SRWMD to review plans for new stormwater retention and detention basins, and to monitor existing basins.

The project site has proposed the construction of two stormwater management facility ponds to serve the project site. The design criteria of the ponds are based on the set criteria of the City of Alachua, Alachua County, and the Suwannee River Water Management District.

Policy 1.12.r: The City shall protect groundwater resources by establishing maximum impervious surface requirements for new development and by providing incentives to developers for utilizing environmentally beneficial techniques and materials, such as pervious materials for parking lots, water reclamation practices, and high filtration landscape design.

Development of this project will incur a very limited impervious surface area, as this will be a golf course. The applicant will ensure that groundwater resources are protected in accordance with City of Alachua regulations.

Policy 1.12.s: The City may work with the Alachua County Extension Service to create a sustainable landscaping and yard care program for development within the City. The objective of the program could be to create site elevation, soil, fertilization, irrigation, integrated pest management, stormwater runoff management and plant selection guidelines and best management practices for development within the City. The program may provide continued guidance for long-term yard care, supporting homeowners as they maintain their individual yards. The City may provide educational materials to the public regarding landscaping requirements and recommendations.

BMPs will be instituted to ensure that the project site maintains a sustainable landscape. Please refer to the Tomoka Hills Golf Course Best Management Practices Planning Guide.

Policy 1.12.t: The City shall continue to utilize a utility billing system that encourages reduced consumption.

The project site will be connected to City utilities; therefore, it will utilize the utility billing system.

Policy 1.12.u: The City shall consider adopting an official water conservation policy to prevent drought related water shortages. These procedures should be consistent with applicable SRWMD policy, and should specify the City's role in water conservation and drought management. Prior to establishment of this policy, the City shall use "Waterwise Florida Landscapes: Landscaping to Promote Water Conservation Using the Principles of Xeriscape™"

The project site shall comply with the City of Alachua's water conservation policies.

Policy 1.12.v: The City shall utilize the most current Water Supply Assessment prepared by the Suwannee River Water Management District to plan for the current and projected needs and sources for water resources.

The potential impacts of this development on City of Alachua public facilities is documented in the Concurrency Impact Analysis submitted as part of this application. The analysis shows that there will be residual capacity for potable water, sanitary sewer, and solid waste.

Ecological Report

TOMOKA HILLS GOLF COURSE

Date: 12/04/2024
PN# 21-0025
PM: Andy Woodruff

Prepared For: City of Alachua

Submitted For Review To: City of Alachua

Address: 15100 NW 142 Terrace
Alachua, FL 32615

CHW
AN NV5 COMPANY

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1.0 Introduction

This ecological assessment documents current site conditions, listed species concerns, and the Ecological permitting history for Tomoka Hills Golf (Project). The Project totals ±196.68 acres and is located in Sections 9, 16, and 37, Township 8 South, Range 18 East, Alachua County (Exhibit 1). The Project's surrounding land uses include low density single family residential and agriculture to the west and south, commercial land uses to the north, and US Interstate 75 to the east. An aerial photograph with the Project boundary is provided as Exhibit 2.

2.0 Soils Map

A soils map of the Project site is provided as Exhibit 3.

3.0 Land Use and Land Cover Map

Mapping of vegetation associations and land uses was conducted in March 2024 by ground truthing and using 2023 FDOT rectified aerial photographs. The mapping utilized the nomenclature of the Florida Land Use, Cover and Forms Classification System (FLUCFCS) Levels III (Florida Department of Transportation 1999). AutoCAD Map 3D 2024 software was used to determine the acreage of each mapping area. An aerial with FLUCFCS map is provided as Exhibit 4.

The dominant land use on the property is Improved Pasture (FLUCFCS Code 211), accounting for approximately 66.5 percent of the property (131.00± acres). A table summarizing the vegetative association and land use acreages along with a description of each are provided in Exhibit 5.

4.0 Listed Plants and Wildlife

A listed species survey report is provided as Exhibit 6. The survey limits included in the attached report include the limits of ownership for Tomoka Hills Farms, while the proposed Project boundary in this ecological assessment only includes a portion of total ownership.

No documented records of occurrences exist on the Project. No federally listed species were observed during the listed species survey, habitat mapping, wetland delineation fieldwork. Evidence of state listed species observed within the Project boundary included one gopher tortoise burrow (Gopherus polyphemus). Impacts to any potentially occupied gopher tortoise burrows or habitat will be reviewed with Florida Fish and Wildlife Conservation Commission and permitted as necessary prior to development activities.

5.0 Ecological Permitting History

In July 2024, the initial golf plan (Exhibit 7) was submitted as part of the Environmental Resource Permit application to the SRWMD and included:

- 0.44 acres of direct wetland impacts;

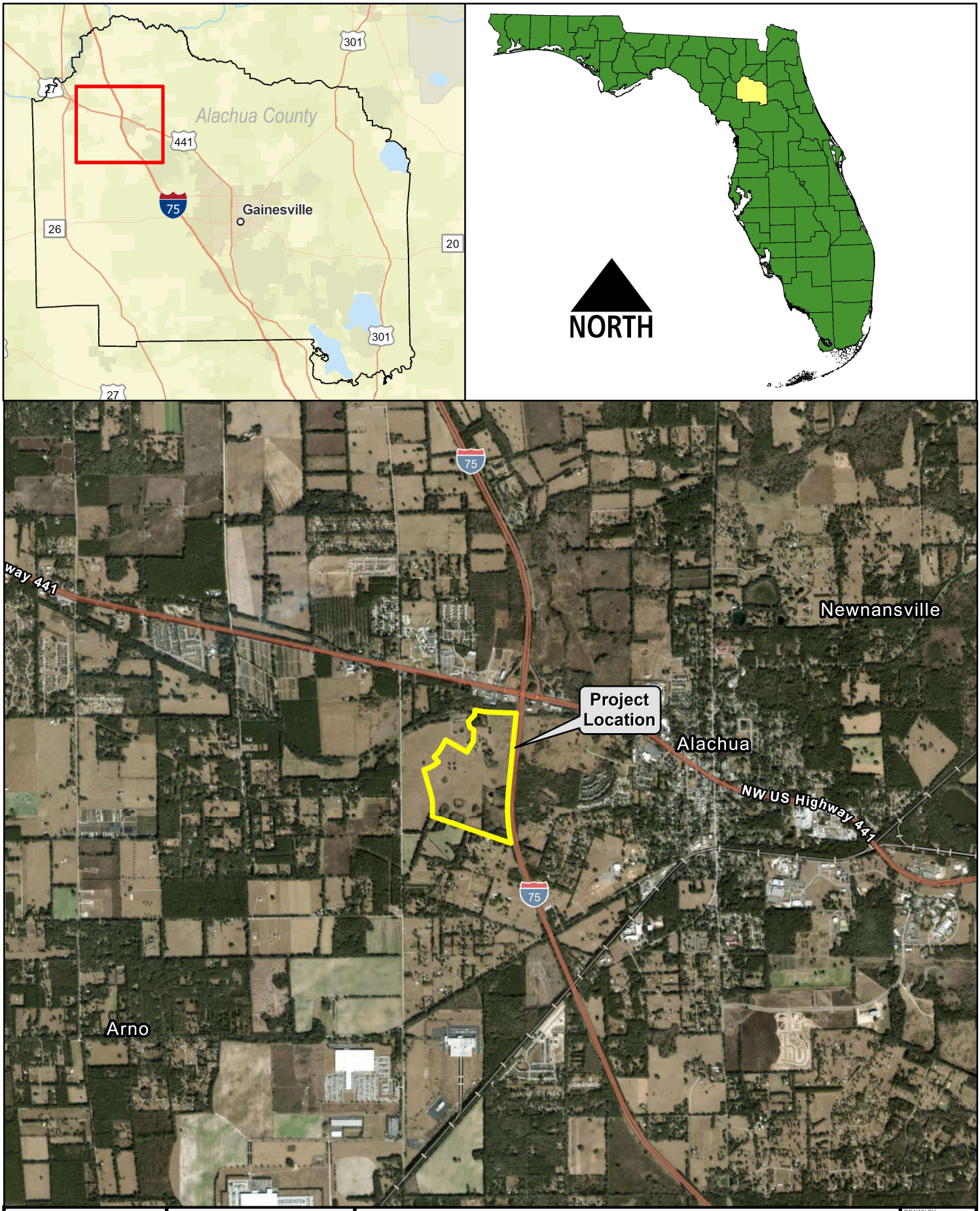
- 2.68 acres of wetland impacts for tree trimming;
- 0.39 acres of direct impacts to other surface waters;
- 1.47 acres of impacts to other surface waters for tree trimming.

Avoidance and minimization of wetland impacts was accomplished by field analysis of the initial golf course layout with agency staff to review resource conditions; assess the potential for impacts; and investigate alternative options to course development that could be implemented while still maintaining course objectives. Based on assessment of field conditions and input from the commenting agencies the course layout was revised with significantly reduced impacts to wetlands and buffers (Exhibit 8). Impacts were reduced to 0.05 acres of direct wetland impacts and 0.49 acres of tree trimming impacts that will only be utilized if trees in these areas cause a hazard in the line of play. Direct impacts include:

- Wetland No. 3 is a small low quality isolated herbaceous pasture habitat that would be difficult to maintain interior to golf. It is being replaced by a larger open water catchment basin that will provide some replacement wetland habitat function around its perimeter in addition to providing water quality functions.
- Wetland No. 1 is in the line of play and would only require trimming and maintenance of a minor amount of immature trees that would present playability issues to the 9th fairway if woody vegetation is allowed to mature. Tee shot was aligned to avoid impacts to a large sweetgum that is being retained at the north end of this wetland.
- Wetland No. 8 (Fairway No. 17) exists at a pinch point in the landscape that presents safety and playability issues with having large trees very near the center of play on the golf hole. Two large sweetgums in this area are identified to be retained if the initial trimming can provide playability and safe visibility from the tee boxes to the fairway. Removal of camphor tree and trimming of medium to small laurel oaks, sugarberry and sweetgums on the east side of this wetland is preferred to shifting the tee boxes and shot alignment to the fairway further to the east. Shifting the tees would encroach into the upland buffer for the Wetland No. 11 flow way and necessitate the removal of large sycamores and live oaks. Shifting the tees east would also place them in the hillside slope that is buffering Wetland No. 11 and require a greater amount of fill to construct that could contribute to erosional concerns.
- Trimming impacts in Wetland No. 10 allow for access to Holes 3 and 4 and have been reduced to the area adjacent to the cart crossing which will allow for visibility and safe play through. Tree buffer will be maintained and may be supplemented adjacent to the Interstate. Based on field inspection the trimming limits have been adjusted eastward to preserve two larger live oaks on the west side of the play over.
- Elevated wooden cart bridge crossings totaling less than 0.01 acres in Wetland 9, 10, and 11. Impacts include 4 cart crossings over the wetland flow ways in the southeast corner that allow for a safe rotation of play and maintenance access. Bridges will clear span the wetlands, be piling supported and constructed no wider than 10 feet (Exhibit 9).

Following onsite inspection with County and SRWMD staff, plans were revised to avoid and minimize impacts to wetlands and other surface waters. The golf plan was redesigned to

maintain a minimum 50-foot, average 75-foot natural upland buffer area around each wetland. A mitigation analysis (Exhibit 10) helped guide the mitigation strategy to offset direct and secondary wetland impacts (Exhibit 11), and a golf Best Management Practices (BMP) plan (Exhibit 12) was developed in conjunction with a supplemental planting list (Exhibit 13) to maintain ecological integrity to remaining undeveloped natural resources. The BMP plan, and Mitigation, Monitoring, and Maintenance Plan outline the limited maintenance activities that will be allowed in these upland buffer areas.



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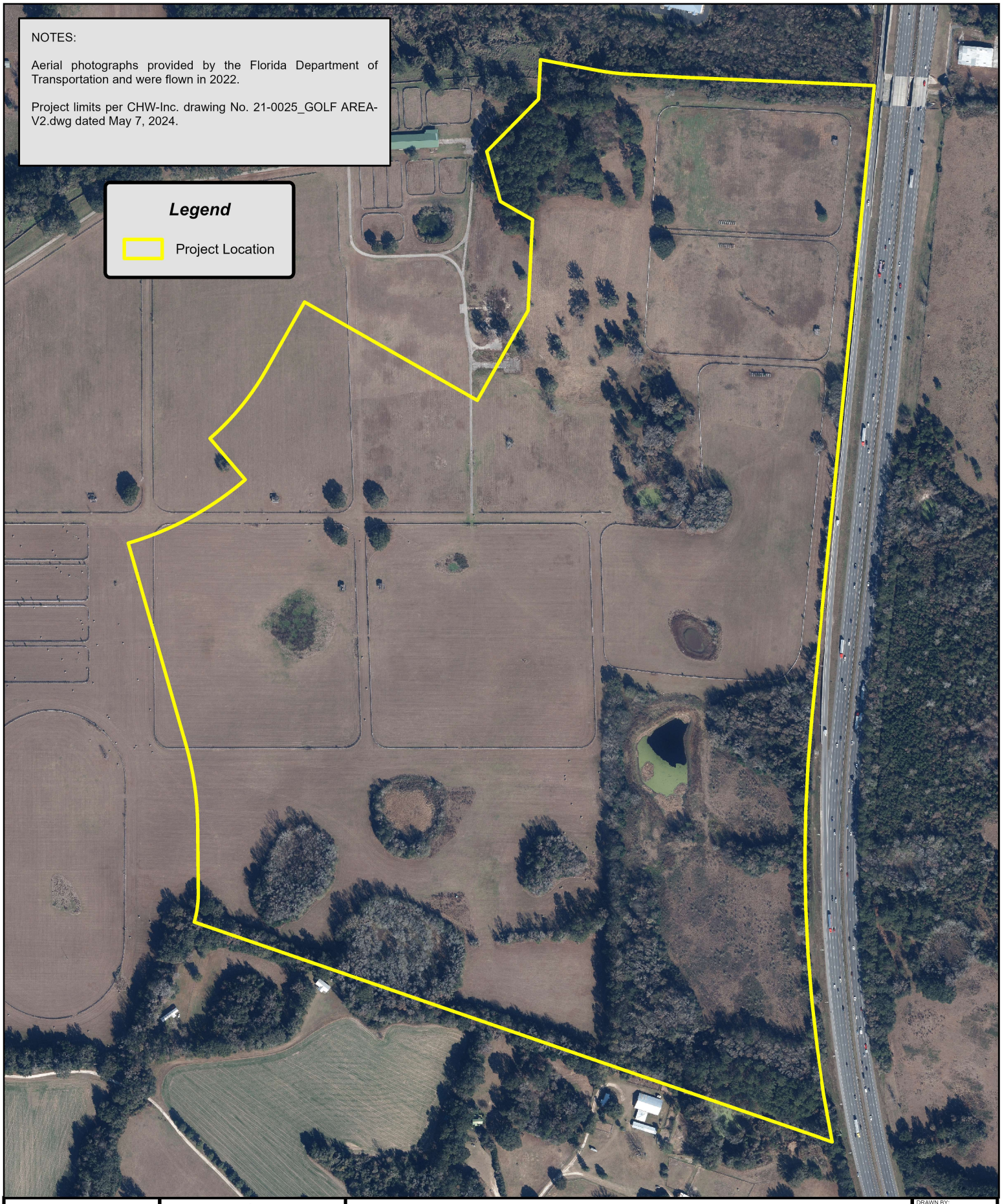
NORTH
0 0.5 1
Miles

Project Location Map
Tomoka Hills

DRAWN BY:	D.B.
DRAWING DATE:	05/16/24
REVIEWED BY:	A.W.
EXHIBIT NUMBER:	1

Document Path: N:\2021\21-0025\Admin & Information\07_Maps\GIS\MXDs\SRWMD Wetland JD for Tomoka Hills\SRWMD Wetland JD for Tomoka Hills_240516.aprx Prepared by: DB Date: 6/6/2024



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NORTH
0 100 200 400
Feet

Aerial With Boundary
Tomoka Hills

DRAWN BY: D.B.
DRAWING DATE: 06/06/24
REVIEWED BY: A.W.
EXHIBIT NUMBER: 2

Document Path: N:\2021\21-0025\Admin & Information\07_Maps\GIS\MXDs\SRWMD Wetland JD for Tomoka Hills\SRWMD Wetland JD for Tomoka Hills_240516.aprx Prepared by: DB Date: 6/6/2024

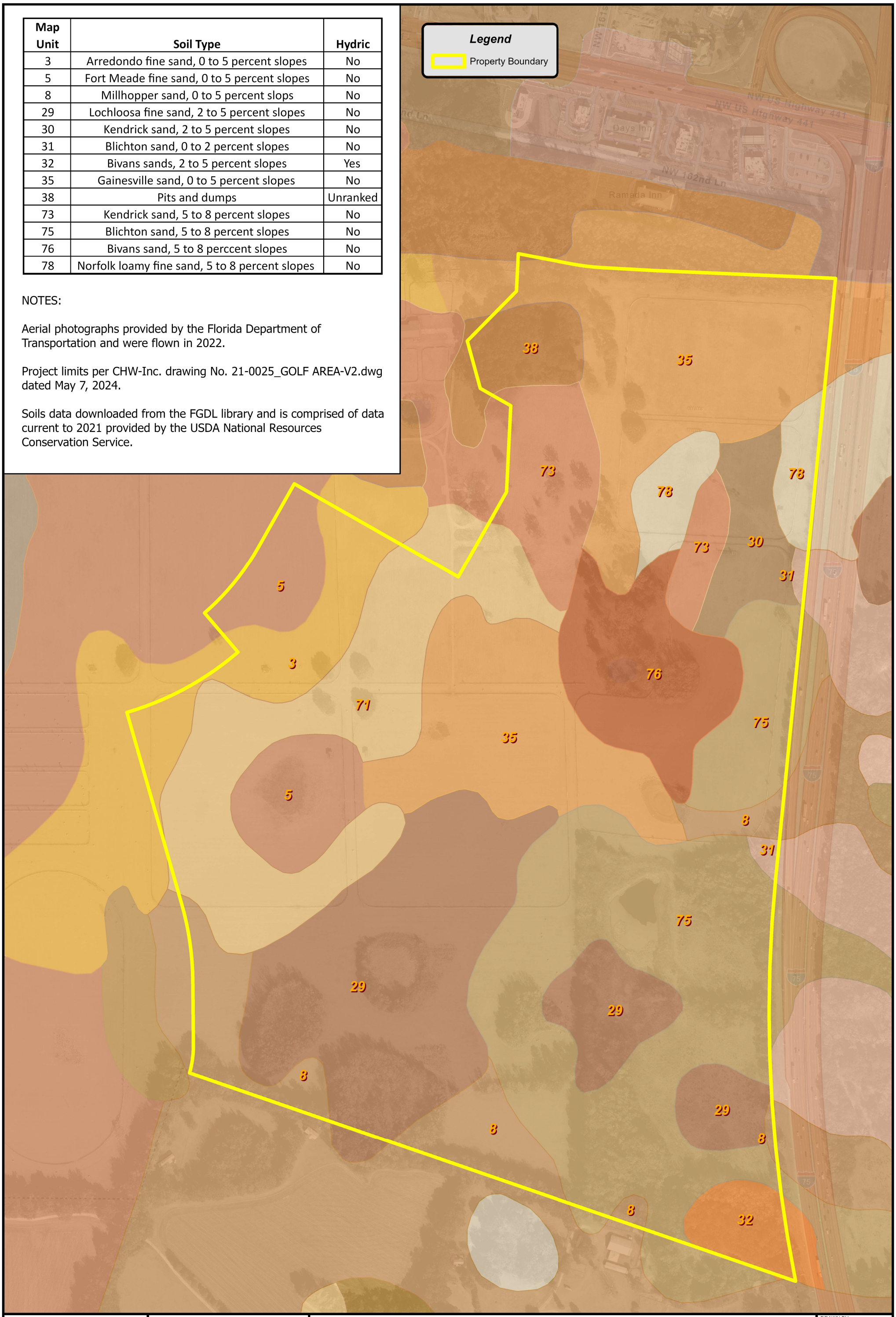
Map Unit	Soil Type	Hydric
3	Arredondo fine sand, 0 to 5 percent slopes	No
5	Fort Meade fine sand, 0 to 5 percent slopes	No
8	Millhopper sand, 0 to 5 percent slops	No
29	Lochloosa fine sand, 2 to 5 percent slopes	No
30	Kendrick sand, 2 to 5 percent slopes	No
31	Blichton sand, 0 to 2 percent slopes	No
32	Bivans sands, 2 to 5 percent slopes	Yes
35	Gainesville sand, 0 to 5 percent slopes	No
38	Pits and dumps	Unranked
73	Kendrick sand, 5 to 8 percent slopes	No
75	Blichton sand, 5 to 8 percent slopes	No
76	Bivans sand, 5 to 8 perccent slopes	No
78	Norfolk loamy fine sand, 5 to 8 percent slopes	No

NOTES:

Aerial photographs provided by the Florida Department of Transportation and were flown in 2022.

Project limits per CHW-Inc. drawing No. 21-0025_GOLF AREA-V2.dwg dated May 7, 2024.

Soils data downloaded from the FGDL library and is comprised of data current to 2021 provided by the USDA National Resources Conservation Service.



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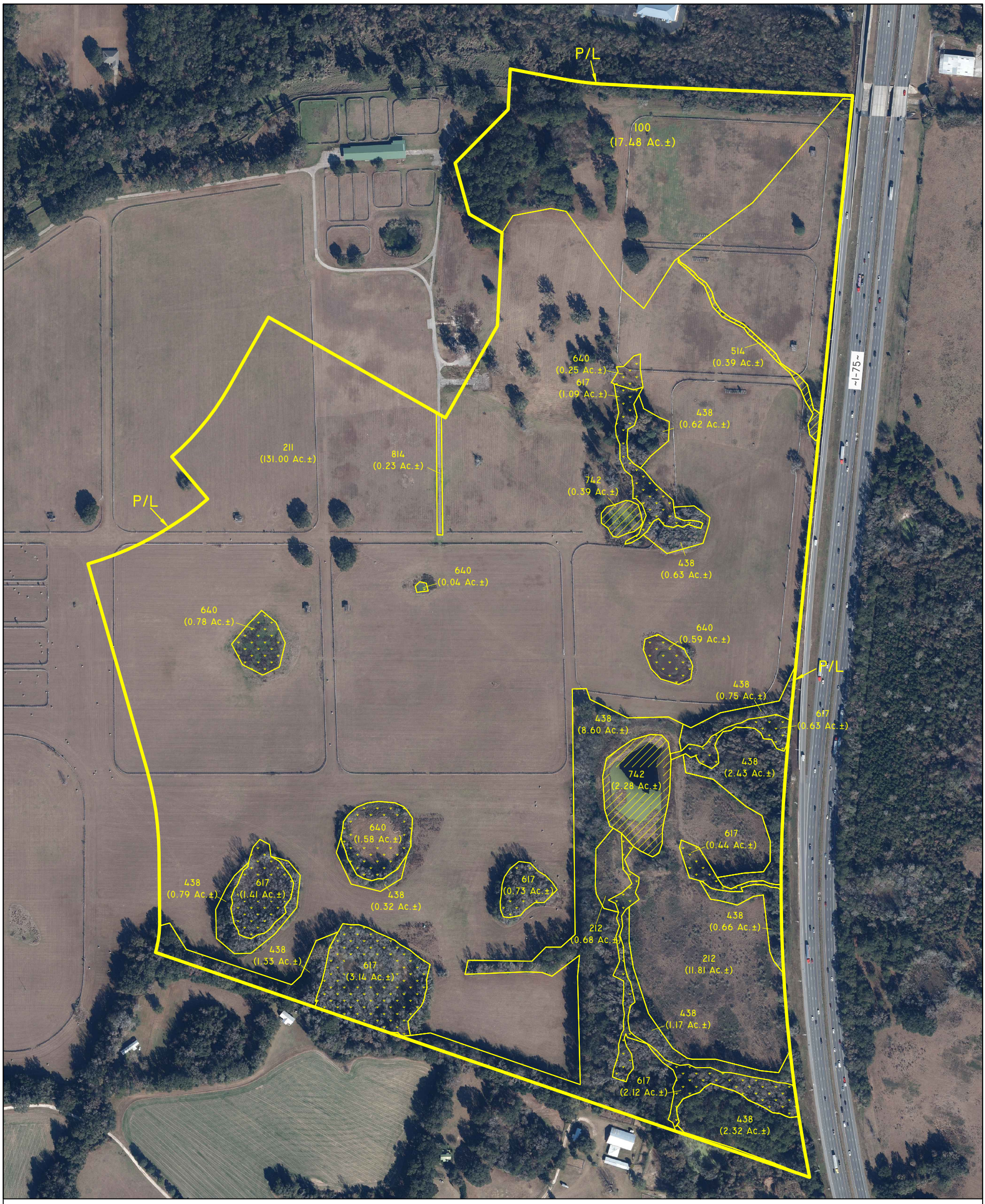
NORTH
0 300 600
Feet

Soils Map
Tomoka Hills

DRAWN BY: D.B.
DRAWING DATE: 05/09/24
REVIEWED BY: A.W.
EXHIBIT NUMBER: 3



FLUCFCS CODES	DESCRIPTIONS	ACREAGE	% OF TOTAL
100	DEVELOPED	17.48 Ac.±	8.9%
211	IMPROVED PASTURE	131.00 Ac.±	66.5%
212	UNIMPROVED PASTURE	12.49 Ac.±	6.4%
438	MIXED HARDWOODS	19.62 Ac.±	10.0%
514	DITCH	0.39 Ac.±	0.2%
617	MIXED WETLAND HARDWOODS	9.56 Ac.±	4.9%
640	VEGETATED NON-FORESTED WETLAND	3.24 Ac.±	1.6%
742	BORROW AREA	2.67 Ac.±	1.4%
814	ROAD	0.23 Ac.±	0.1%
	TOTAL	**196.68 Ac.±**	**100.0%**

N

0 200 400 Feet

LEGEND:

SRWMD WETLANDS (12.80 Ac.±)

OTHER SURFACE WATERS (3.06 Ac.±)

NOTES:

PROJECT LIMITS PER CHW-INC. DRAWING No. 21-0025_GOLF AREA_v2.DWG DATED MAY 7, 2024.

AERIAL PHOTOGRAPHS PROVIDED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AND WERE FLOWN IN 2022.

FLUCFCS PER FLORIDA LAND USE, COVER, AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

WETLAND LINES REVIEWED AND APPROVED IN THE FIELD BY SRWMD STAFF ON SEPTEMBER 14, 2023 AND OCTOBER 3, 2023.

CHW
AN NV5 COMPANY

11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com

est. 1988 FLORIDA CA-5075

Aerial With FLUCFCS and Wetlands Map

Tomoka Hills

DRAWN BY: D.B.
DRAWING DATE: 05/07/24
REVISED:
EXHIBIT NUMBER: 4

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Tomoka Hills Golf
FLUCFCS Descriptions

FLUCFCS CODES	DESCRIPTIONS	ACREAGE	% OF TOTAL
100	Developed	17.48 Ac.±	8.9%
211	Improved Pasture	131.00 Ac.±	66.5%
212	Unimproved Pasture	12.49 Ac.±	6.4%
438	Mixed Hardwood Forest	19.62 Ac.±	10.0%
514	Ditch	0.39 Ac.±	0.2%
617	Mixed Wetland Hardwoods	9.81 Ac.±	5.0%
640	Vegetated Non-Forested Wetland	2.99 Ac.±	1.5%
742	Borrow Area	2.67 Ac.±	1.4%
814	Road	0.23 Ac.±	0.1%
	TOTAL	**196.68 Ac.±**	**100.0%**

Developed (FLUCFCS Code 100)
This upland land use includes portions of the Project that are under construction authorized by separate permits.

Improved Pasture (FLUCFCS Code 211)
This upland land use has been maintained for livestock. The canopy includes scattered live oaks, and southern magnolias. The subcanopy is open. The groundcover is primarily bahia grass with varying amounts of blackberry, and dog fennel.

Unimproved Pasture (FLUCFCS Code 212)
This upland land use is maintained as open. The canopy is open while the sub canopy has scattered salt bush, and sweetgum. The groundcover includes bahia grass, blackberry, dog fennel, and kudzu.

Mixed Hardwoods (FLUCFCS Code 438)
This upland forested ecosystem is composed of canopy species that include sweetgum, hackberry, water oak, laurel oak, southern magnolia, live oak, and invasive species like chinaberry, and popcorn tree. The subcanopy species are similar to the canopy, and include flamegold, elderberry, and Carolina laurel cherry. The groundcover in this forest type is primarily open, but may include young oaks, and greenbriar.

Ditch (FLUCFCS Code 514)
This other surface water includes an erosional feature that formed from runoff from US interstate 75. The canopy is open. The Sub canopy includes salt bush, and wax myrtle. The ground cover includes Bahia grass, blackberry, smartweed, and giant sedge.

Mixed Wetland Hardwoods (FLUCFCS Code 617)
The canopy of this wetland habitat includes canopy species such as tupelo, bald cypress, red maple, water oak, laurel oak, sugarberry, and sweetgum. Sub canopy includes button bush, water oak, laurel oak, red maple, and wax myrtle. The ground cover includes a wide variety of ferns, sedges, and rushes.

Vegetated Non-Forested Wetland (FLUCFCS Code 640)
The canopy of this wetland habitat type is primarily open, but may include water oak, sweetgum, and sugarberry along the edges. The sub canopy is primarily open, but may include button bush, wax myrtle, and salt bush. The ground cover may include smartweed, beggars tick, and dog fennel.

Borrow Area (FLUCFCS Code 742)
The canopy and sub canopy of these man-made surface waters are open, emergent vegetation and ground cover may include cattail, smart weed, marsh pennywort, and dog fennel.

Road (FLUCFCS Code 814)
This upland land use includes a paved roadway within the project boundary. The canopy, sub canopy, and groundcover are open.

Tomoka Hills
Listed Species Survey

June 2024

1.0 Introduction

This report documents the results of a listed species survey conducted on May 22nd, 2024, by CHW LLC, an NV5 company for Tomoka Hills Farms. The Project totals approximately 292.24± acres and is located in Sections 9, 16, & 37, Township 8 South, and Range 18 East, Alachua County, Florida (Exhibit 1). The Project's surrounding land uses include low density single family residential and agriculture to the south, commercial land uses to the north, NW 173rd Street as well as commercial and residential homes to the west, and US Interstate 75 to the east. The Project contains forested and unforested uplands and wetlands and other surface waters (Exhibit 2).

2.0 Methods

A literature review involved an examination of available information on listed/designated species in the Project's geographical region. The literature sources reviewed included the FWCC's Florida's Endangered and Threatened Species (2021); Florida Atlas of Breeding Sites for Herons and Their Allies (Runde et al. 1991); Audubon Eagle Watch database of bald eagle (*Haliaeetus leucocephalus*) nest locations; and database information from the United States Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Conservation Commission (FWCC).

A field survey was conducted on May 22nd, 2024, during daylight hours by qualified ecologists walking parallel belt transects across suitable habitat types on the Project site. Transects were oriented east west and spaced to ensure that sufficient visual coverage of ground and flora were obtained. Depictions of transects are depicted on Exhibit 3. At regular intervals the ecologists stopped, remained quiet, and listened for wildlife vocalizations. The survey was conducted with the aid of 8x power binoculars. Weather conditions in the pedestrian transects during the survey had temperatures in the mid-80s, clear skies, and no precipitation.

3.0 Results

The Project is not within any USFWS consultation areas for Threatened and Endangered species.

According to the Audubon Eagle Watch and FWCC databases, the closest bald eagle nest (AL-056) is located approximately 5 miles southeast of the Project (Exhibit 4). This distance is beyond the FWCC and the USFWS recommended 660-foot buffer protection zone for active and alternate bald eagle nests (National Bald Eagle Management Guidelines, USFWS 2007). The bald eagle was delisted under the federal Endangered Species Act in 2007, but it is still protected under the Bald and Golden Eagle Protection Act.

The Florida Atlas of Breeding Sites for Herons and Their Allies (Runde et al. 1991) and the FWCC database were referenced for the locations of breeding colonies for both listed and non-listed wading birds including, but not limited to, snowy egret (*Egretta thula*), roseate spoonbill (*Ajaia ajaja*), little blue heron (*Egretta caerulea*), and tri-colored heron (*Egretta tricolor*). The FWCC information is current through 1999. According to these sources a rookery exists approximately 4.2 miles southeast of the Project, which is beyond the FWCC recommended 250-foot buffer (Exhibit 4).

Three potentially occupied gopher tortoise (Gopherus polyphemus) burrows were documented within the Project boundary during the field survey (Exhibit 3). The gopher tortoise is a state threatened species. Project development may require review for adequacy of protective measures including 25-foot buffering, or relocation onsite or offsite permitting with the FWCC.

4.0 Summary

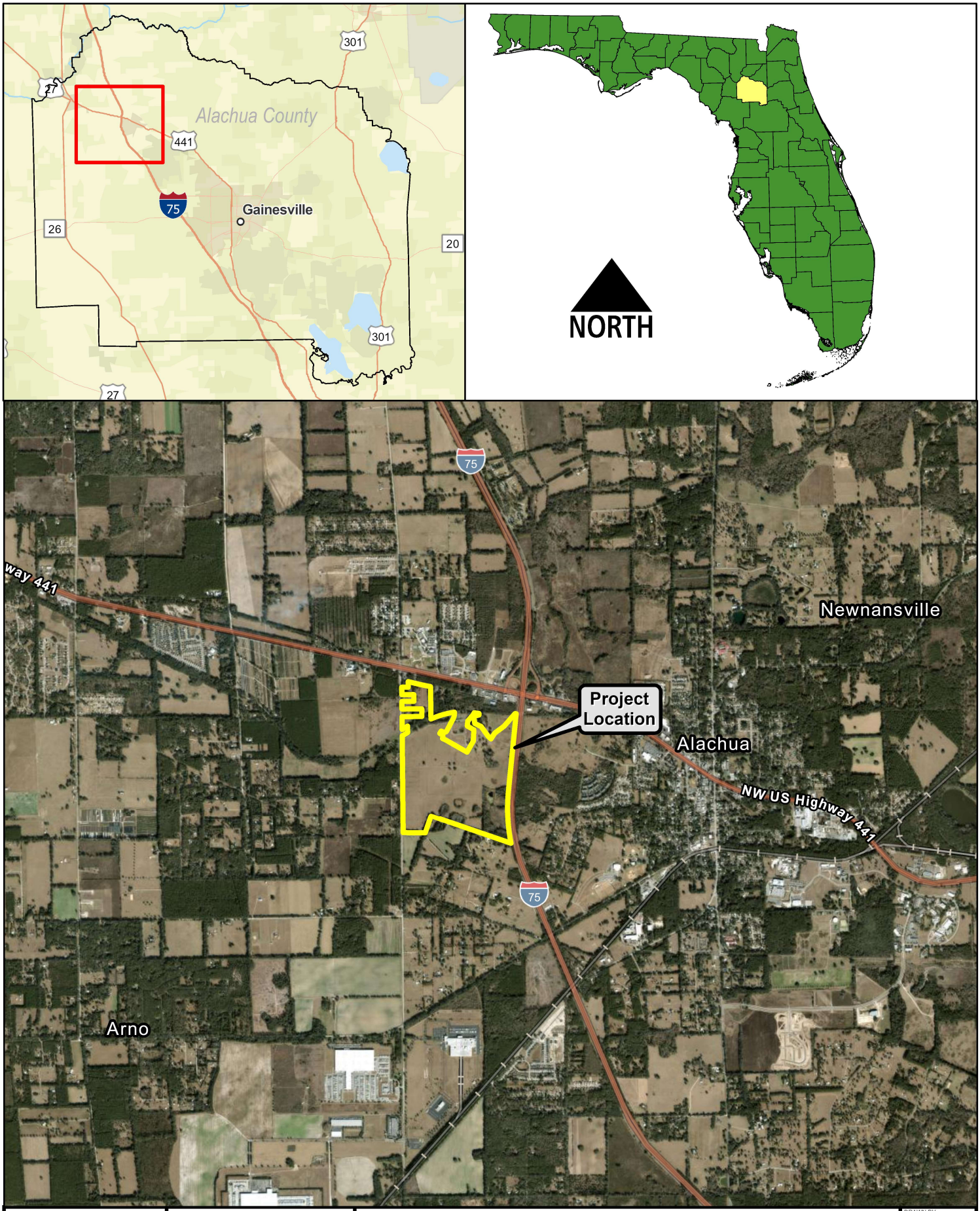
CHW ecologists conducted a literature review and field survey to determine if the Project is being utilized by threatened and endangered species. The Project is not within any USFWS consultation areas. There are no agency documented occurrences of threatened or endangered species on or in the vicinity of the Project site. Three potentially occupied gopher tortoise burrows were located within the Project boundary.

5.0 References

Florida Fish and Wildlife Conservation Commission. 2022. Florida's Endangered and Threatened Species. Official Lists, Bureau of Non-Game Wildlife, Division of Wildlife.

Runde, D.E., J.A. Gore, J.A. Hovis, M.S. Robson, and P.D. Southall. 1991. Florida Atlas of Breeding Sites for Herons and Their Allies, Update 1986 - 1989. Nongame Wildlife Program Technical Report No. 10. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida. E6-5

U.S. Fish and Wildlife Service. 2007. National Bald Eagle Management Guidelines.



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NORTH
0 0.5 1
Miles

Project Location Map
Tomoka Hills

DRAWN BY: D.B.
DRAWING DATE: 06/10/24
REVIEWED BY: A.W.
EXHIBIT NUMBER: 1

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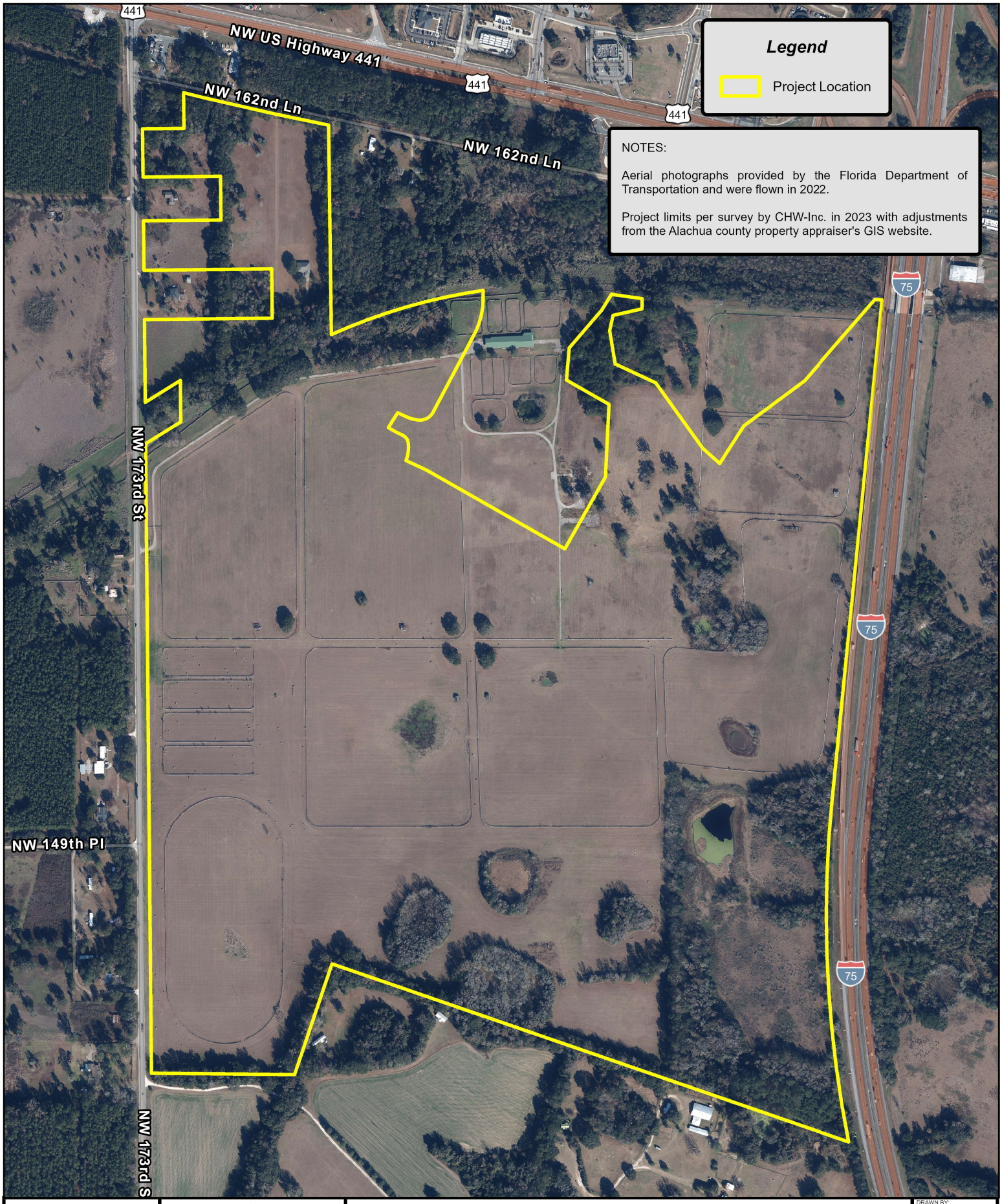

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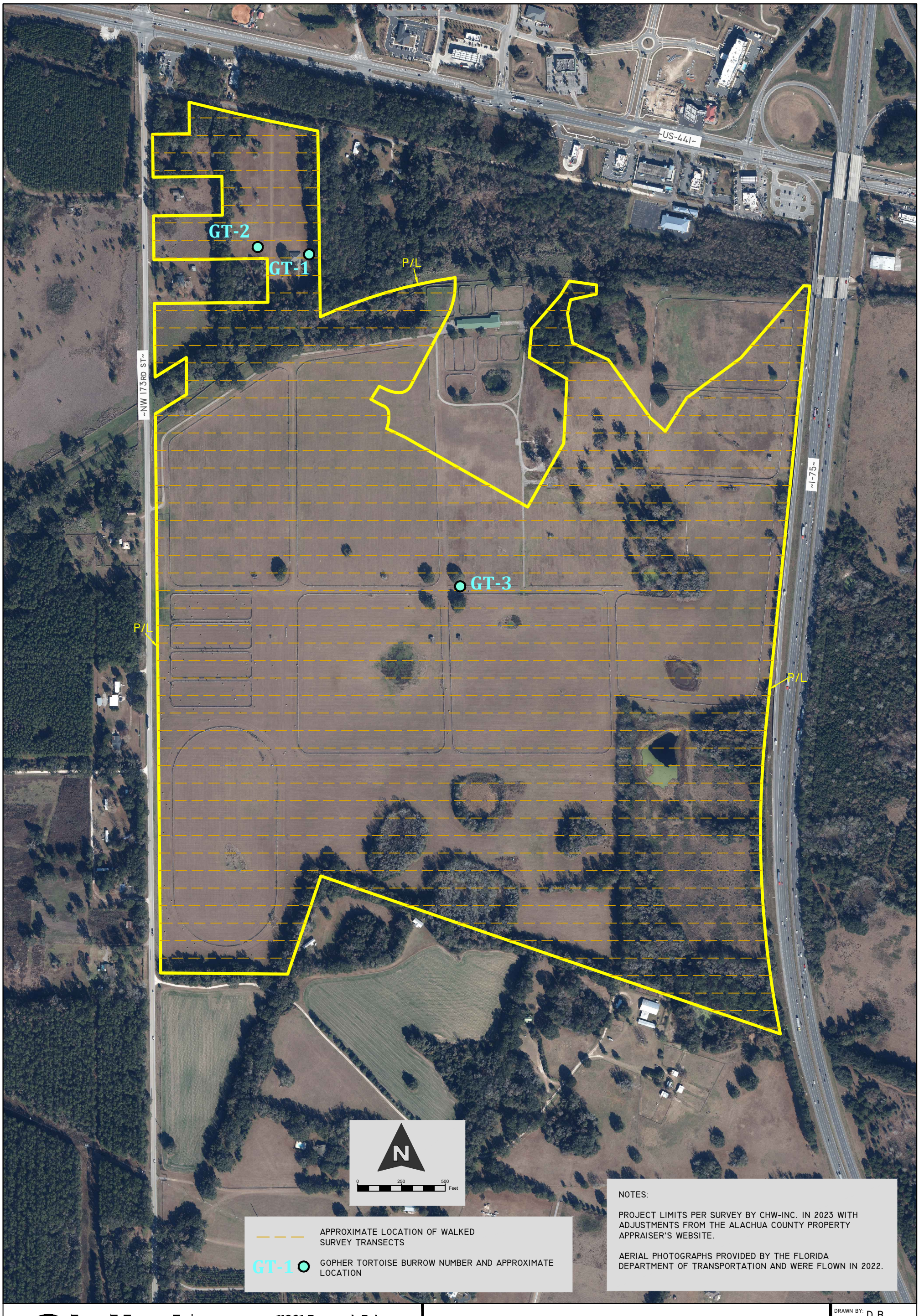
NORTH
0 150 300 600
Feet

Aerial With Boundary
Tomoka Hills

DRAWN BY:	D.B.
DRAWING DATE:	06/10/24
REVIEWED BY:	A.W.
EXHIBIT NUMBER:	2

Document Path: N:\2021\21-0025\Admin & Information\07_Maps\GIS\MXDs\240610 Listed Species Memo\Listed Species Memo.aprx Prepared by: DB Date: 6/10/2024



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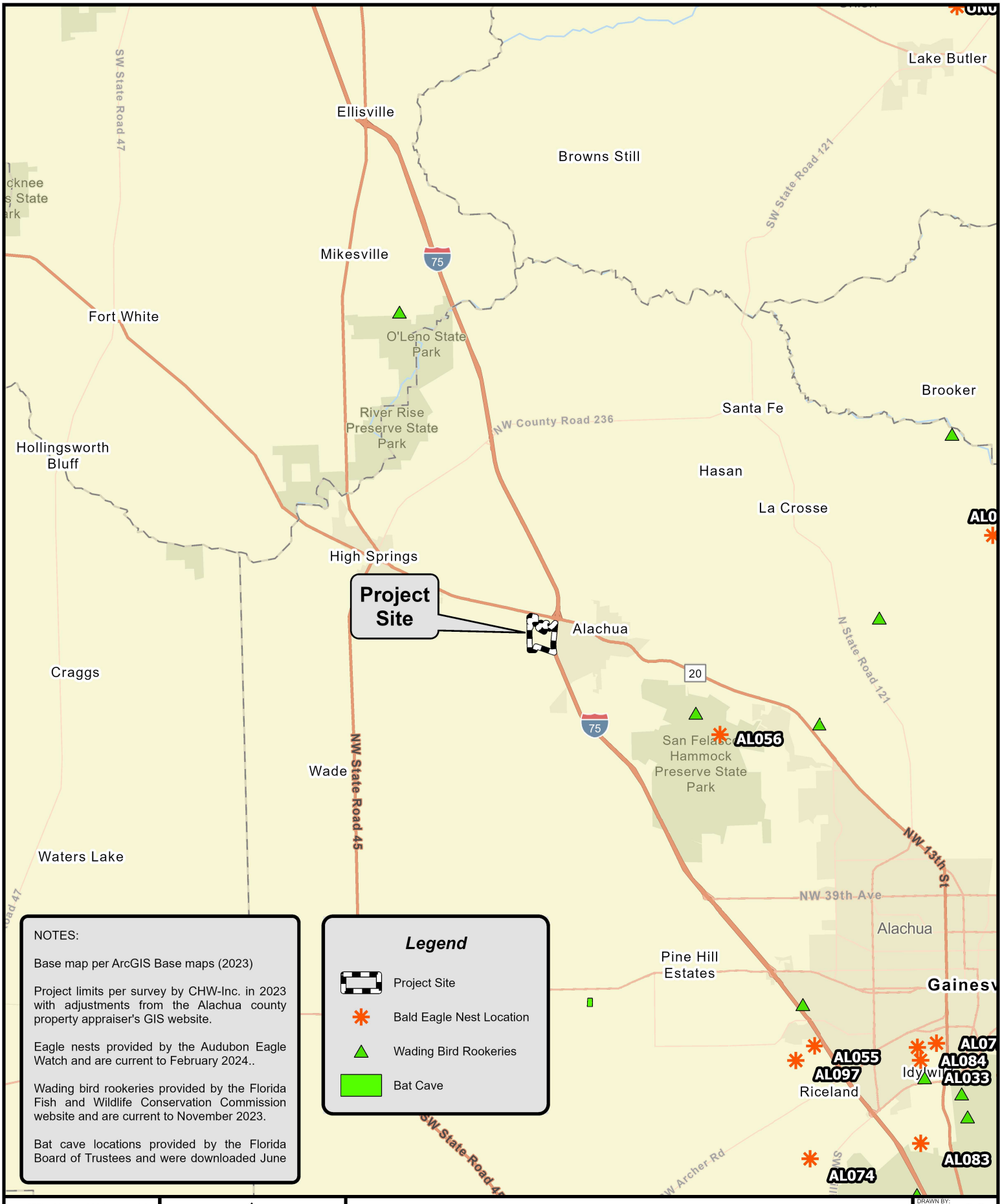
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA
CA-5075

Aerial With Survey Transects and Listed Species Location Map

Tomoka Hills

DRAWN BY: D.B.
DRAWING DATE: 06/10/24
REVISED:
EXHIBIT NUMBER: 3

Tech: donb Plot Date: Jun 10, 2024 3:01pm Filename: N:\2021\21-0025\Admin & Information\07_Maps\GIS\MXDs\240610 Listed Species Memo\Aerial with Survey Transects and Listed Species Locations.dwg



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NORTH
0 0.5 1 2
Miles

Documented Occurrences of Listed Species
Tomoka Hills

DRAWN BY: D.B.
DRAWING DATE: 06/10/24
REVIEWED BY: A.W.
EXHIBIT NUMBER: 4

Document Path: N:\2021\21-0025\Admin & Information\07_Maps\GIS\MXDs\240610 Listed Species Memo\Listed Species Memo.aprx Prepared by: DB Date: 6/10/2024

US 441

NW 162 LN.

CR 235A

I-75

OFFICE BLDG AND ROAD
(UNDER CONSTRUCTION)

STORMWATER POND
(UNDER CONSTRUCTION)

STORMWATER POND
(UNDER CONSTRUCTION)

MAINTENANCE BLDG

PRACTICE RANGE

GOLF/RECREATION AREA
(196.678 Ac.)

PUTTING GREEN

PROPOSED STORMWATER POND

25' WETLAND BUFFER, TYP.

MAINTENANCE ROAD

MAINTENANCE BLDG

LEGEND:

- WETLANDS (12.79 Ac.±)
- OTHER SURFACE WATERS (3.06 Ac.±)
- WETLAND IMPACTS (0.44 Ac.±)
- WETLAND SECONDARY IMPACTS (1.00 Ac.±)
- TREE TRIMMING IMPACTS (2.68 Ac.±)
- OTHER SURFACE WATERS IMPACTS (0.39 Ac.±)
- OTHER SURFACE WATERS TRIMMING IMPACTS (1.47 Ac.±)
- SILVICULTURE AREA (438 AND 617) (29.10 Ac.±)

NOTES:

AERIAL PHOTOGRAPHS PROVIDED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AND WERE FLOWN IN 2022.

FLUCFCS PER FLORIDA LAND USE, COVER, AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

WETLAND LINES REVIEWED AND APPROVED IN THE FIELD BY SRWMD STAFF ON SEPTEMBER 14, 2023 AND OCTOBER 3, 2023.

N

GRAPHIC SCALE
0 100 200 400

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Wetlands Impact Map
Tomoka Hills

DRAWN BY: JMS
DRAWING DATE: 05/31/24
REVISED:
EXHIBIT NUMBER: 7

Tech: john-michaels Plot Date: May 31, 2024 9:22am Filename: N:\2021\21-0025\Departments\02_Planning\Dwg\Golf Files\21-0025 Golf Concept (WMD).dwg

LEGEND:

- WETLANDS - PRESERVED (12.79 Ac.±)
- OTHER SURFACE WATERS (ARTIFICIAL) - PRESERVED (3.06 Ac.±)
- WETLAND IMPACTS (0.05 Ac.±)
- WETLAND TREE TRIMMING IMPACTS (0.49 Ac.±) (MAINTAINED ≤ 4 Ft)
- OTHER SURFACE WATERS (ARTIFICIAL) IMPACTS (0.39 AC.±) (REGRADE/REPLANT)
- BUFFER ENCROACHMENT - OPEN PASTURE (2.47 Ac.±)
- BUFFER ENCROACHMENT - TREE TRIMMING (0.63 Ac.±) (MAINTAINED ≤ 4 Ft.)
- WETLAND MITIGATION AREA (0.85 Ac.±) (SUPPLEMENTAL PLANTING)
- BUFFER MITIGATION AREAS (3.10 Ac.±) (MIN. AREA IN FOREST: 1.17 Ac.±)
- 50' UPLAND BUFFER
- 75' UPLAND BUFFER

NOTES:

AERIAL PHOTOGRAPHS PROVIDED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AND WERE FLOWN IN 2022.

FLUCFCS PER FLORIDA LAND USE, COVER, AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

WETLAND LINES REVIEWED AND APPROVED IN THE FIELD BY SRWMD STAFF ON SEPTEMBER 14, 2023 AND OCTOBER 3, 2023.

GRAPHIC SCALE
0 100 200 400

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AN NV5 COMPANY
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Alachua, Florida 32615
(352) 331-1976
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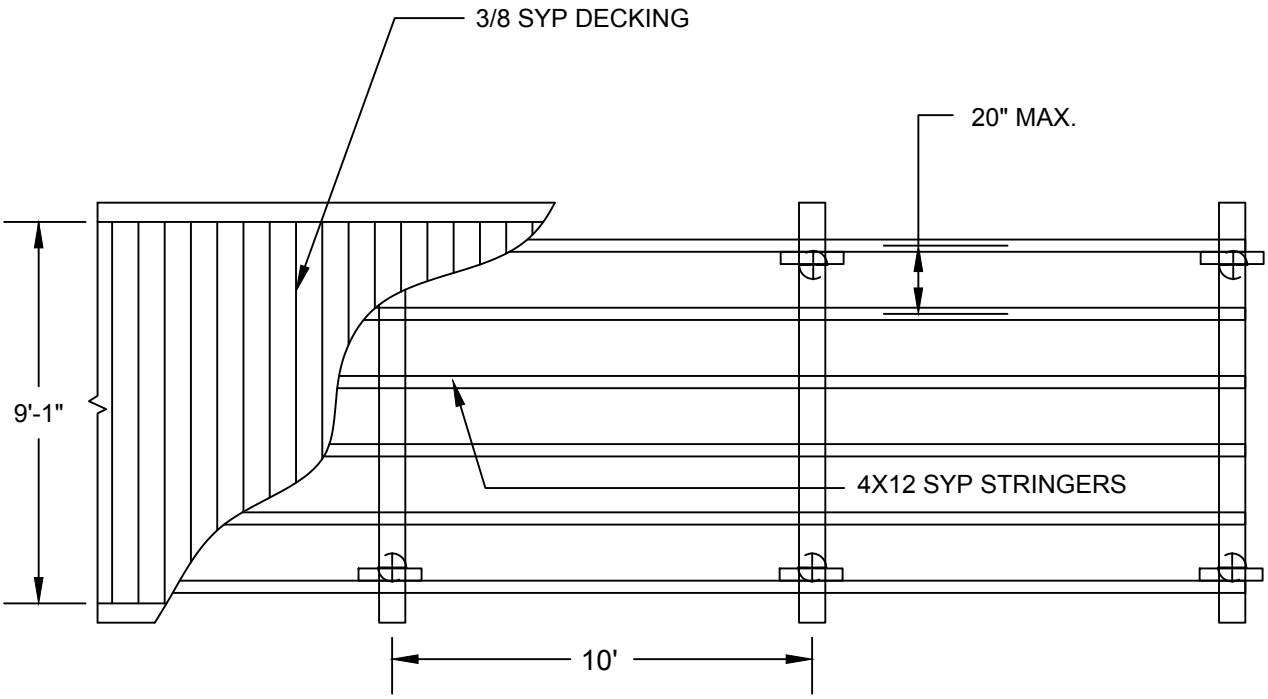
est. 1988 FLORIDA
CA-5075

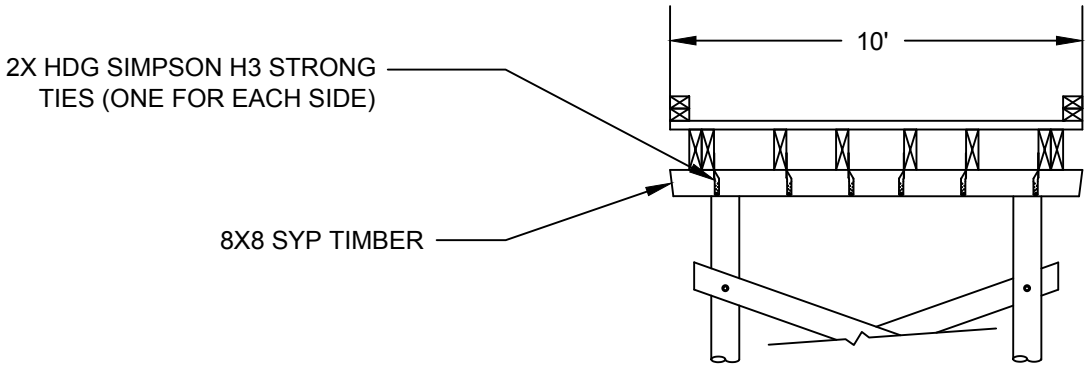
Wetlands and Buffer Impact Map
Tomoka Hills Golf

DRAWN BY: JMS
DRAWING DATE: 11/08/24
REVISED:
EXHIBIT NUMBER: 8

Tech: john-michaels Plot Date: Nov 08, 2024 3:42pm Filename: N:\2021\21-0025\Departments\02_Planning\Dwg\Golf Files\21-0025 Golf Concept (County)_R.dwg



1 PLAN VIEW



2 SECTION VIEW

NOTES

1. TOP RAILS AND POSTS ARE OMITTED FOR CLARITY IN THE PLAN VIEW.
2. ALL LUMBER TO BE 0.60 CCA TREATED AT FRESHWATER CONTACT AND 2.50 CCA TREATED AT SALTWATER CONTACT.
3. ALL LUMBER TO BE SOUTHERN YELLOW PINE (SYP) UNLESS OTHERWISE SPECIFIED.

Greenway BRIDGE CO. BRIDGE CONSTRUCTION

PROJECT NO.	GREENWAY BRIDGE, LLC.	
SHEET NO.	SPECIFICATION SHEETS: 10' CART AND EQUIPMENT BRIDGE: PLAN & SECTION VIEW	

REVISIONS			DRAWING INFO	
NO	DESCRIPTION	DATE	DATE:	
			DRAWN:	JW
			CHECKED:	Z.Uzman
			APPROVED:	
			FILE:	

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Tomoka Hills Golf UMAM Summary

Table 1: Tomoka Hills Impact Analysis

ID	Impacts	Location Current Condition	Location Post Development	Water Current Condition	Water Post Development	Community Current Condition	Community Post Development	Delta	Aproximate Acres	Functional Loss/Gain
Wetland 3	Direct	7	0	3	0	3	0	-0.43	0.036	-0.016
Wetland 9 (East)	Direct/cart path	4	3	4	3	6	0	-0.27	0.005	-0.001
Wetland 9 (West)	Direct/cart path	5	4	5	4	6	0	-0.27	0.004	-0.001
Wetland 10	Direct/cart path	4	3	4	3	6	0	-0.27	0.003	-0.001
Wetland 11	Direct/cart path	5	4	5	4	6	0	-0.27	0.006	-0.002
Wetland 1	Tree trimming	6	5	7	6	6	5	-0.10	0.274	-0.027
Wetland 8	Tree trimming	7	6	7	6	6	6	-0.07	0.154	-0.010
Wetland 10	Tree trimming	4	3	4	3	6	5	-0.10	0.030	-0.003
Wetland 9 (East)	Secondary	4	3	4	3	6	5	-0.10	0.027	-0.003
Wetland 9 (West)	Secondary	5	4	5	4	6	5	-0.10	0.030	-0.003
Wetland 11	Secondary	5	4	5	4	6	5	-0.10	0.031	-0.003
								Total	**0.60**	**-0.07**

Table 2: Tomoka Hills Enhancement as Mitigation

ID	Mitigation Type	location Current Condition	Location Post Development	Water Current Condition	Water Post Development	Community Current Condition	Community Post Development	Delta	Time Lag	Risk	Aproximate Acres	Relative Functional Gain
Wetland 4	Supplemental planting	6	6	5	6	4	7	0.13	1.03	1.00	0.59	0.08
										Total	**0.59**	**0.08**

TOMOKA HILLS GOLF
SUWANNEE RIVER WATER MANAGEMENT DISTRICT
WETLAND MITIGATION/MONITORING/MAINTENANCE PLAN

November 2024

INTRODUCTION

The following outlines the wetland mitigation, monitoring, and maintenance plan for the Tomoka Hills Golf Course (Project) located in Sections 9, 16, and 37, Township 8 South, Range 18 East, Alachua County. The construction of the Project will result in unavoidable impacts to Suwannee River Water Management District (SRWMD) jurisdictional wetlands. In order to offset these impacts the wetland mitigation plan includes a 1± acre Enhancement Area (EA) consisting of approximately 0.59 acres of wetland enhancement and 0.40± acres of upland buffer enhancement (Exhibits 1 and 2).

Remaining non-impacted wetlands and upland buffers will be protected by implementing entry and use restrictions and conducting management activities to promote native vegetation. Wetlands will be buffered from golf course activity by retention of existing vegetation extending 75 feet on average. Maintenance will include perpetual treatment to control exotic and nuisance species, supplemental planting of native species, perimeter signage, and GPS monitored geofencing to limit unauthorized entry.

NON-IMPACTED WETLANDS AND UPLANDS

The EA and the remainder of wetlands onsite will be preserved and managed based on a three-tiered buffer system (Exhibit 1). Tier 1 are the most restrictive use areas intended to be preserved and managed as natural areas. They include the regulated wetland or other surface water resource extending to a minimum 25’ upland buffer. Tier 2 areas include areas of additional upland buffer extending on average 50’ beyond Tier 1. Remaining Tier 3 areas include managed areas with site specific protocols pertaining to tree trimming and other surface water regrading and replanting (Tier 3). Protocols to be followed for each of the tiers are outlined below.

<u>Tier 1 - Wetland/OSW and 25’ Upland Buffer</u>

- Maintained as natural area, no cutting or removal of vegetation unless presenting hazard
- Controlled for exotic and nuisance species by qualified personnel using hand removal methods
- Staked with environmentally sensitive area stakes (golfers and staff will be notified of rules pertaining to this area)
- “Out of Bounds”, Golfers not permitted to “play” if a ball enters this area
- No entry except where permitted by established golf cart crossings.
- Supplemental planting of appropriate native species as necessary for restoration purposes
- No irrigation

- No fertilization
- No golf carts
- No dumping

Tier 2 - 75’ average / 50’ minimum Upland Buffer

- No clearing, existing pasture to be retained as natural golf rough or existing forested condition to remain as natural
- Removal of dead or dying vegetation limited to material that presents a hazard
- Existing herbaceous areas to be maintained as golf rough by periodic mechanized mowing
- Golfers permitted to “play” ball
- Herbaceous areas may be supplementally planted with native grasses
- No dumping of grass clippings or sand implementation
- No irrigation
- No fertilization
- No golf carts

Tier 3 - Managed Areas

- Please see site specific managed areas map Exhibit 1
- Tree trimming allowed to control woody vegetation for play over
- OSW Tier 3 to be regraded and replanted with native vegetation
- Otherwise maintained in accordance with Tier 1 and 2 restrictions

Protection Markers

All maintenance personnel and persons using the property will be made aware of the buffer limitations and associated rules of entry and play. The perimeter of the Tier 1 buffer will have protective markers installed to indicate the area is an environmentally sensitive area (Exhibit 1). The Tier 2 buffer may be similarly demarcated with perimeter markers and/or georeferenced using GPS to establish the managed limits of surrounding course. Tier 3 buffer will be georeferenced using GPS to establish the managed limits for maintenance purposes.

ENHANCMENT AREA (EA) MITIGATION PLAN

The EA used to offset permitted wetland impacts includes both upland and wetland supplemental plantings, exotic and nuisance vegetation maintenance, and three years of monitoring and reporting. Existing habitats in this area include:

Improved Pasture (FLUCFCS Code 211)
This upland land use has been historically maintained as pasture. The canopy and subcanopy are open. The groundcover is primarily bahia grass (*Paspalum notatum*) with varying amounts of blackberry (*Rubus pensilvanicus*), and dog fennel (*Eupatorium capillifolium*).

Vegetated Non-Forested Wetland (FLUCFCS Code 640)

The canopy of this wetland habitat type is open, with localized presence of some water oak (*Quercus nigra*), sweetgum (*Liquidambar styraciflua*) and sugarberry (*Celtis* sp.). The sub canopy is primarily open, but includes limited presence of button bush (*Cephalanthus occidentalis*), wax myrtle (*Morella cerifera*), and salt bush (*Baccharis halimifolia*). The ground cover includes bahia grass, smartweed (*Polygonum punctatum*), beggars tick (*Bidens alba*), and dog fennel.

Exotic/Invasive Species Treatment

The EA will be initially treated to control nuisance and exotic species using hand removal methods. The nuisance and exotic species to be controlled include, but are not limited to, camphor tree (*Camphora officinarum*), Chinese tallow (*Triadica sebifera*), coral ardisia (*Ardisia crenata*), dog-fennel, and old-world climbing fern (*Lygodium microphyllum*). Treatment will be implemented through ecologically sound techniques including but not limited to herbicidal treatment, hand-held power equipment, and/or hand pulling. Herbicides will be broadcast using low volume backpack and handheld sprayers, and only performed by a State Certified Pesticide Applicator with Aquatic Pest Control (for wetland treatment) and Natural Areas endorsements in accordance with labels. Control of non-native trees which are in use as a nesting site shall be postponed until the nesting season is over. All non-native woody vegetative debris shall be disposed of outside of the EA. Supplemental plantings will be installed following initial treatment activities and in accordance with restrictions listed on the herbicide label.

Supplemental Wetland Plantings (Zones 2 and 3)

The Wetland EA is divided into planting zones based on observed ecotone boundaries of existing plant assemblages and anticipated hydrologic regime (Exhibit 2). Wetland Zone 1 is the lowest elevation area which experiences the greatest depth and duration of inundation. This Zone is anticipated to remain primarily as seasonal open water habitat for waterfowl and will not be supplementally planted. Remaining zones will be supplementally planted with canopy, sub-canopy, and ground cover in accordance with Table 1. Tree plantings will include a minimum of three of the seven species listed in Table 1, subcanopy plantings will include a minimum of one of the three species listed, and ground cover plantings will include a minimum of two of the five species listed. Substitutions to the selections in Table 1 are permitted based on availability at time of planting, so long as plantings are appropriate for the area of installation based on range of natural species occurrence, soils, and anticipated hydrologic regime.

Table 1. Wetland Planting List

Common Name	Scientific Name	Minimum Container Size	Planting Instruction (On Center)	Zone 2	Zone 3
Canopy					
Cypress	*Taxodium distichum*	3 gal.	15 ft.	✓	✓
Dahoon holly	*Ilex cassine*	3 gal.	15 ft.		✓
Pop ash	*Fraxinus caroliniana*	3 gal.	15 ft.	✓	✓

Red maple	*Acer rubrum*	3 gal.	15 ft.		✓
Slash pine	*Pinus elliottii*	3 gal.	15 ft.		✓
Swamp tupelo	*Nyssa biflora*	3 gal.	15 ft.	✓	✓
Basswood	*Tilia americana*	3 gal.	15 ft.		✓
Sub-canopy					
Wax myrtle	*Myrica cerifera*	1 gal.	8 ft.		✓
Gallberry	*Ilex glabra*	1 gal.	8 ft.		✓
Buttonbush	*Cephalanthus occidentalis*	1 gal.	8 ft.		✓
Gallberry	*Ilex glabra*	1 gal.	8 ft.		✓
Ground Cover					
Pickerelweed	*Pontederia cordata*	Liner	3 ft.	✓	✓
Duck potato	*Sagittaria lancifolia*	Liner	3 ft.	✓	✓
Blue flag iris	*Iris hexagona*	Liner	3 ft.		✓
Fireflag	*Thalia geniculata*	Liner	3 ft.	✓	✓
Soft rush	*Juncus effusus*	Liner	3 ft.	✓	✓
Yellow canna	*Canna flaccida*	Liner	3 ft.	✓	✓

Supplemental Upland Planting

Supplemental upland canopy, sub-canopy, and ground cover plantings will be installed from the upland/wetland interface extending 25 foot landward of the wetland line (Exhibit 2). Tree plantings will include a minimum of three of the seven species listed in Table 2, sub-canopy plantings will include a minimum of two of the three species listed, and ground cover plantings will include a minimum of three of the four species listed. Substitutions to the selections in Table 1 are permitted based on availability at time of planting, so long as plantings are appropriate for the area of installation based on range of natural species occurrence, soils, and anticipated hydrologic regime.

Table 2. Upland Planting List

Common Name	Scientific Name	Minimum Container Size	Planting Instruction (On Center)
Canopy			
Live oak	*Quercus virginiana*	3 gal.	15 ft.
Longleaf pine	*Pinus palustris*	3 gal.	15 ft.
Pignut hickory	*Carya glabra*	3 gal.	15 ft.
Hophornbeam	*Ostra virginiana*	3 gal.	15 ft.
Loblolly bay	*Gordonia lasianthus*	3 gal.	15 ft.
Shumard oak	*Quercus shumardii*	3 gal.	15 ft.
Tulip tree	*Liriodendron tulipifera*	3 gal.	15 ft.
Southern magnolia	*Magnolia grandiflora*	3 gal.	15 ft.
Sub-canopy			
Saw palmetto	*Serenoa repens*	1 gal.	8 ft.
Beauty berry	*Callicarpa americana*	1 gal.	8 ft.
Dogwood	*Cornus florida*	1 gal.	8 ft.
Rusty blackhaw	*Viburnum rufidulum*	1 gal.	8 ft.

Ground Cover			
Muhlygrass	*Muhlenbergia capillaris*	Liner	3 ft.
Sand cordgrass	*Spartina bakeri*	Liner	3 ft.
Wiregrass	*Aristida stricta*	Liner	3 ft.
Elliott's lovegrass	*Eragrostis elliottii*	Liner	3 ft.
Blazing star	*Liatris gracilis*	Liner	3 ft.
Blanket flower	*Gaillardi pulchella*	Seed	3 ft.
Yellow Indian grass	*Sorghastrum nutans*	Liner	3 ft.
Pawpaw	*Asimina obovate*	Liner	3 ft.

EA MITIGATION SUCCESS CRITERIA

Success criteria for the EA includes documentation of initial treatment of exotic and nuisance vegetation; documentation of supplemental plantings in accordance with Tables 1 and 2, submittal of monitoring reports demonstrating successful survivorship and increase cover by desirable plant species, and maintenance of exotic vegetation to less than 10% cover. Exotic vegetation species are identified as those species listed by the Florida Invasive Species Council (FISC) at the time of mitigation activities.

Timeline for Treatment and Reporting

Treatments will be conducted annually or as needed to maintain the success criteria. A total of one baseline and three annual monitoring reports shall be submitted to the SRWMD.

Baseline – A baseline report shall be prepared to document existing condition prior to initiation of exotic and nuisance treatment and supplemental planting activities. The baseline report will include fixed point photographs and approximate percent cover of existing vegetation along fixed transect locations.

Year 1 (Time Zero)- The First Annual Monitoring Report will be prepared and submitted to the SRWMD within approximately 90 days following initial treatment and supplemental plantings.

Year 2 – Contingent on the findings of the First Annual Report and any comments from the SRWMD, subsequent maintenance or corrective actions will continue as necessary to address success criteria. Upon the second anniversary date, the EA will be re-evaluated by a qualified environmental professional and a Second Annual Monitoring Report will be prepared for the SRWMD that includes photographs, the approximate percent survival of supplemental plantings and estimated percent cover by exotic and nuisance vegetation. Supplemental plantings may be installed following monitoring activities to maintain survivability requirements.

Year 3 – Contingent on the findings of the Second Annual Report and any comments from the SRWMD, subsequent maintenance or corrective actions will continue as necessary to address success criteria. Upon the third anniversary date, the EA will be re-evaluated by a qualified environmental professional. Within six months after the end of the period established for initial

management and monitoring, the applicant shall submit a third and final report that details and certifies compliance with the requirements per the SRWMD. If the Third Annual Monitoring Report documents success criteria has been satisfied, then monitoring and reporting requirements will be discontinued.

Vegetation Monitoring

Wetland and upland vegetation will be monitored prior to and following enhancement activities within the EA. Canopy, sub-canopy, and ground vegetation species survivability will be monitored along (2) transects that are approximately 165 feet in length, stem counts will be conducted for woody vegetation greater than 3 feet in height located 10 feet on either side of the transect line for a total (165ft x 20ft) x 2 = 6,600 square feet of quantitative stem count analysis (Exhibit 2). Species richness and visual estimate of percent cover will be calculated along each transect to document groundcover.

EA enhancement will also be monitored via fixed point photo-stations that surround the EA. A total of four photo stations will be placed around the perimeter; depictions of the photo station's approximate locations are depicted on Exhibit 2. Photographs will be incorporated into reports until success criteria are met.

US 441

NW 162 LN.

CR 235A

I-75

STORMWATER POND
(UNDER CONSTRUCTION)

MAINTENANCE
BUILDING

STORMWATER POND
(UNDER CONSTRUCTION)

OFFICE BLDG AND ROAD
(UNDER CONSTRUCTION)

Short Game
Area/Course

Practice
Range

Putting
Green

OSW-1

W-1

OSW-2

GOLF/RECREATION AREA
(196.678 Ac.)

PROPOSED STORMWATER POND

W-3

Lake

W-2

W-4

SEE MITIGATION AND MONITORING PLAN

W-9

CART PATH - ROUTED TO AVOID
ANY NATIVE TREE CLEARING

OSW-3

W-6

W-5

W-8

W-10

LIVE OAKS TO BE PRESERVED

W-7

LARGE TREE RETENTION AREA

MAINTENANCE ACCESS -
ALIGNED TO AVOID TREE CLEARING

W-11

SWEETGUMS TO BE PRESERVED
IN FIRST STAGE OF TRIMMING
AND RETAINED IF NO SAFETY
OR PLAYABILITY CONCERNS.

NOTES:

FLUCFCS PER FLORIDA LAND USE, COVER, AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

WETLAND LINES REVIEWED AND APPROVED IN THE FIELD BY SRWMD STAFF ON SEPTEMBER 14, 2023 AND OCTOBER 3, 2023.

MAINTAINED NATURAL AREAS
(TIER 1 - NO ENCROACHMENT)

WETLANDS - PRESERVE

OTHER SURFACE WATERS - PRESERVE

SUPPLEMENTAL PLANT AREA
(SEE MITIGATION AND MONITORING PLAN)

25' UPLAND BUFFER

MAINTAINED NATURAL AREAS
(TIER 2 - EXISTING PASTURE RETAINED AS NATURAL GOLF ROUGH OR EXISTING FOREST TO REMAIN)

50' MINIMUM / 75' AVERAGE UPLAND BUFFER

MANAGED AREAS
(TIER 3)

OTHER SURFACE WATERS PRESERVE
(REGRADE/REPLANT)

MANAGED TREE TRIMMING AREA

TYPICAL TIER 1 PROTECTIVE BUFFER MARKERS

N

GRAPHIC SCALE
0 100 200 400

CHW
AN NV5 COMPANY
11801 Research Drive
Alachua, Florida 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA
CA-5075

Wetlands Preserve and Buffering Plan
Tomoka Hills Golf

DRAWN BY: JMS
DRAWING DATE: 11/08/24
REVISED:
EXHIBIT NUMBER: 1

PS-4 *

* PS-1

T-2

T-1

PS-3 *

* PS-2

WETLAND NATURAL AREAS
(TIER I - NO ENCROACHMENT)

WETLANDS - PRESERVE

ZONE I - OPEN WATER - NO PLANTING
(0.13 Ac.±)

ZONE 2 - WETLAND GROUND AND TREE SUPPLEMENTAL PLANTING (0.15 Ac.±)

ZONE 3 - WETLAND CANOPY/
SUB-CANOPY/GROUND SPECIES
SUPPLEMENTAL PLANTING (0.31 Ac.±)

25' UPLAND BUFFER

UPLAND BUFFER - CANOPY / SUB-CANOPY /
GROUND SPECIES PLANTING (0.39 Ac.±)

MONITORING TRANSECT

STEM COUNT BOX

* PS-2 PHOTO STATION (TYP.)

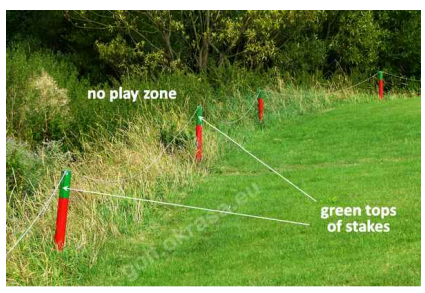
T-1 TRANSECT NUMBER (TYP.)

SURVEYED WETLAND LINE

MAINTAINED NATURAL AREAS
(TIER 2 - EXISTING PASTURE RETAINED AS
NATURAL GOLF ROUGH)

50' MINIMUM / 75' AVERAGE UPLAND BUFFER

TYPICAL TIER I
PROTECTIVE BUFFER MARKERS



NOTES:

WETLAND LINES REVIEWED AND APPROVED IN THE FIELD BY SRWMD STAFF ON SEPTEMBER 14, 2023 AND OCTOBER 3, 2023.

SITE PLAN PER CHW LLC, AN NV5 COMPANY, DRAWING NUMBER 21-0025 GOLF CONCEPT (WMD)_R.DWG ACCESSED ON SEPTEMBER 5, 2024.

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Mitigation and Monitoring Plan (Wetland 4)

Tomoka Hills Golf

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Best Management Practices

Tomoka Hills Golf Course

BMP Best Management Practices

GCSAA

Best Management Practices Planning Guide & Template

In partnership with

PGA TOUR USGA

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Acknowledgement

Who We Are/ Acknowledgments

Golf Course Superintendents Association of America

The Golf Course Superintendents Association of America (GCSAA) is the professional association for the men and women who manage and maintain the game's most valuable resource — the golf course. Today, GCSAA and its members are recognized by the golf industry as one of the key contributors in elevating the game and business to its current state.

Since 1926, GCSAA has been the top professional association for the men and women who manage golf courses in the United States and worldwide. From its headquarters in Lawrence, Kansas, the association provides education, information and representation to more than 17,000 members in more than 72 countries. GCSAA's mission is to serve its members, advance their profession and enhance the enjoyment, growth and vitality of the game of golf.

GCSAA Foundation

The GCSAA Foundation, formerly the Environmental Institute for Golf, is focused on providing funding to strengthen advocacy, education, and research that advances the work of golf course management professionals. Founded in 1955 as the GCSAA Scholarship & Research Fund for the Golf Course Superintendents Association of America, the Foundation serves as the association's philanthropic organization. The Foundation relies on the support of many individuals and organizations to fund programs to advance stewardship on golf courses in the areas of research, scholarships, education, and advocacy. The results from these activities, conducted by GCSAA, are used to position golf courses as properly managed landscapes that contribute to the greater good of their communities. Supporters of the GCSAA Foundation know they are fostering programs and initiatives that will benefit the game and its environment for years to come.

Acknowledgments

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Additional Acknowledgement

A Best Management Practices document such as this is a living document that evolves and is modified over time as new knowledge is gained and practices are improved. As such, not only does the list of contributors grow, so to does the likelihood of the unfortunate omission of the names of contributors.

This document is built upon three prior versions dating back to the mid-1990s. The most significant contributor to this early work is Dr. Michael Thomas who devoted much energy and determination to this effort during his tenure at the Florida Department of Environmental Protection. The legacy of his work is contained on each page of this current edition.

Those listed below graciously took the mantle, reviewed and improved upon the earlier work, yielding this current version.

Section 1: Environmental Concepts

- Ralph Dain, Golf Course Superintendents Association of America
- Kyle Sweet, CGCS, The Sanctuary Golf Club
- Dr. Mark Clark, University of Florida

Section 2: Environmental Monitoring

- Ralph Dain, Golf Course Superintendents Association of America
- Kyle Sweet, CGCS, The Sanctuary Golf Club
- Dr. Mark Clark, University of Florida

Section 3: Planning, Design and Construction

- Jan Bel Jan, ASGCA, Jan Bel Jan Golf Course Design
- Ralph Dain, Golf Course Superintendents Association of America

Section 4: Irrigation

- Don Rainey, University of Florida, IFAS Extension
- Dr. Michael Dukes, University of Florida

Section 5: Nutrition and Fertilization

- Dr. Travis Shaddox, University of Kentucky (formerly with the University of Florida)
- Dr. Jason Kruse, University of Florida
- Christy Lyle, ProPlus Products, Inc.

Section 6: Cultural Practices

- Todd Lowe, Bayer Environmental Sciences (formerly with the USGA)
- Andy Jorgensen, CGCS, On Top of the World Communities, LLC
- Dr. Jason Kruse, University of Florida
- Mark Kann, University of Florida

Section 7: Lake and Aquatic Management

- Mark Hoyer, University of Florida
- Dr. Chuck Cichra, University of Florida

Section 8: Turf Pest Management

- Dr. Adam Dale, University of Florida
- Dr. Phil Harmon, University of Florida
- Dr. Billy Crow, University of Florida
- Dr. J. Bryan Unruh, University of Florida

Section 9: Pesticide Management

- Dr. Adam Dale, University of Florida
- Dr. Phil Harmon, University of Florida
- Dr. Fred Fishel, University of Florida
- Dr. J. Bryan Unruh, University of Florida

Section 10: Maintenance Operations

- Todd Lowe, Bayer Environmental Sciences (formerly with the USGA)
- Andy Jorgensen, CGCS, On Top of the World Communities, LLC

Section 11: Pollinator Protection

- Dr. Adam Dale, University of Florida
- Kyle Sweet, CGCS, The Sanctuary Golf Club

Section 12: Energy Conservation

- Tim Hiers, CGCS, White Oak Conservation
- Andy Neiswender, Belleair Country Club
- Andy Jorgensen, CGCS, On Top of the World Communities, LLC

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Environmental Concepts

Preface

Tomoka Hills Golf Course will employ a **Director of Agronomy** (**DOA**) who has been certified in **Florida Golf Course Best Management Practices (BMP'S)** to oversee and manage the green spaces of the entire 196.68 acres of **Tomoka Hills Golf Course** property. This certification is recognized by the **Florida Department of Environmental Protection (FDEP)** and the **Florida Department of Agriculture and Consumer Services (FDACS)** and is issued through the University of Florida's **UF/IFAS extension service**. The **DOA** will oversee and assist the golf course project's employees, contractors and sub-contractors from the beginning of construction and on through grow-in and eventual course opening and long-term maintenance and/or renovations ensuring **BMP's** are implemented.

The **DOA** will hire a Golf Course Superintendent **(GCS)** at a point just prior to initial irrigation installation to assist in maintaining **BMP's** implementation practices. A **BMP'S** certified **GCS** will be preferred at hiring, however, if the **GCS** has not obtained **BMP'S** certification he will be required to obtain the certification in a reasonable amount of time. This will ensure that **BMP's** management staff is readily available year-round due to vacation time and/or extended time away from property of one of the individuals.

Steps will be taken to preserve wildlife and native plant habitats within the **Tomoka Hills Golf Course** environment. It is also important to consider how course management practices impact the surrounding natural ecosystems.

These natural systems support, maintain and service renewable functions such as filtering runoff, immobilizing air particulate, carbon sequestration, and temperature moderation. All of which contributes to sustaining good air, soil and water quality conditions for both humans and animals.

The Tomoka Hills Golf Course ecosystem:

- Provides wildlife habitat
- Protects topsoil from water and wind erosion
- Improves community aesthetics
- Absorbs and filters rain water run-off
- Improves air quality
- Discourages pests (e.g. ticks, fire ants and mosquitoes)
- Makes contributions to the community's economy

Air Quality

Tomoka Hills Golf Course will have a positive impact on air quality, compared to other greenspaces. The air-purifying actions of healthy turf and plant life are offset only by impacts such as the limited air pollution of the maintenance machinery, increased traffic, and the energy used to heat and cool the buildings and run the irrigation system.

Tomoka Hills Golf Course will be purchasing the most environmentally friendly maintenance equipment available. Industry proven electric and hybrid equipment will make up a significant percentage of the maintenance fleet to help reduce noise and greenhouse gas emissions.

A full time, well-qualified equipment manager will be employed to ensure that any equipment using a petroleum fueled power source is kept properly tuned and running at peak efficiency to keep harmful emissions at their minimum.

Atmospheric volatilization of nitrogen and other compounds from applications of fertilizers and pesticides will be reduced when required by labeling and sound maintenance practices, typically by light irrigation cycles following applications.

Soil and Water Quality

The prevention of soil and water contamination is a key component of all aspects of the Tomoka Hills Golf Course property and will be discussed in further detail in each pertinent BMP category in this plan.

Wildlife Habitat

Tomoka Hills Golf Course will maintain significant, high-quality habitat for native wildlife. All efforts will be made to not only support and not disturb the wildlife in the non-play and wetland areas but also create new opportunities for native species to populate out-of-play areas via nesting boxes and pollinator friendly landscaping.

The modern golf course can truly become a wildlife sanctuary by implementing features that encourage use of the course by local fauna:

- Maintaining the nonplay areas in varied types of native vegetation
- Leaving dead trees (snags) where they do not pose a hazard
- Using sound Integrated Pest Management (**IPM**, explained under its own category later in this publication) , fertilization, and cultural maintenance practices

Water Conservation

There are many ways to conserve water on a golf course. At **Tomoka Hills Golf Course** only the play and practice areas will be irrigated under normal conditions. Out-of-play landscaped areas will be planted with drought-resistant native or other well-adapted, noninvasive plants that provide an attractive and low-maintenance landscape. These landscaped areas will be irrigated during installment to help ensure a successful establishment period then will be valved off from irrigation once established with a healthy functioning root mass. After establishment, site-appropriate plants normally require little to no irrigation. **Tomoka Hills Golf Course** is also being designed with a concept that minimizes the acreage of irrigated turf while providing ample and fair playing room for golfers of all skill levels.

A well-designed irrigation system that will be maintained at peak efficiency will be installed at **Tomoka Hills Golf Course** to ensure that the water used is not wasted. The system will be operated to provide only the water that is actually needed by the turfgrass plants based on evapotranspiration (ET) rate monitoring, or to meet occasional special needs such as watering in fertilizers to move them into the turf canopy to prevent run-off, or to move pesticides into the turf/soil zones where the target pests reside. This irrigation system will be computer controlled with weather stations, automatic rain- and soil moisture–sensing controls, multiple small, grouped zones and individual head control to water different areas accordingly and with extreme efficiency. This allows specific areas on a course that were missed by a passing storm to be irrigated while suspending irrigation in areas that don’t need additional water. Irrigation cycles are adjusted daily based on visual and physical data.

Environmental Monitoring

Preface

Every golf course should have a plan to monitor the state of the environment and the effects the golf course may be having on the environment. Monitoring is the method used to determine if outside events are changing the water quality entering the golf course, or if the golf course is having a positive, neutral, or negative effect on water quality. It also provides a body of evidence to substantiate these changes should allegations be made that the golf course is responsible for environmental changes. It should be noted that a single sample is rarely meaningful in isolation and that most sampling results should be reviewed as trends over time.

Quality Assurance/Quality Control

The purpose of quality assurance/quality control (QA/QC) is to ensure that chemical, physical, biological, microbiological, and toxicological data are appropriate and reliable, and are collected and analyzed using scientifically sound procedures. To this end, Subsection 62-160.110, Florida Administrative Code (F.A.C.), defines FDEP's minimum field and laboratory quality assurance, methodological, and reporting requirements. This rule applies to all programs, projects, studies, or other activities that are required by FDEP, and that involve the measurement, use, or submission of environmental data or reports to FDEP.

However, even if the data are only for proprietary use and are not reported to any regulatory agency, it is strongly recommended that a certified laboratory is used, and all QA/QC procedures followed. Golf course management must have good data to make good decisions, and if a golf course should ever want to produce data for an agency or in court to defend the facility from unwarranted charges, those data must meet QA/QC standards to be defensible as evidence.

The National Environmental Laboratory Accreditation Conference (NELAC) is a voluntary association of state and federal agencies with input from the private sector. NELAC's purpose is to establish and promote mutually acceptable performance standards for the operation of environmental laboratories. The EPA's National Environmental Laboratory Accreditation Program (NELAP) office provides support to NELAC and evaluates the accrediting authority programs. In Florida, the Florida Department of Health (FDOH) provides NELAP environmental laboratory certification. More information and a list of certified laboratories are available at https://fldeploc.dep.state.fl.us/aams/index.asp. Sample specific standard operating procedures (SOPs) are available at https://floridadep.gov/dear/quality-assurance/content/dep-sops.

As construction commences at **Tomoka Hills Golf Course** the **DOA** shall, in reasonable time, contact the appropriate Alachua county EPA representative to help determine the best methods and locations to be used for initial and continuing soil

and/or water tests for quality control and assurance. The **Tomoka Hills Golf Course Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan** shall also be considered for quality control and assurance within the planned tests.

Postconstruction Operational Monitoring

A water quality monitoring plan should be prepared to ensure the ongoing protection of ground water and surface water quality after construction is completed. The same sites should be monitored as during the preconstruction phase, although the monitoring plan will be modified based on site-specific conditions. The plan should include the following:

1. Postconstruction surface water quality sampling should begin with the installation and maintenance of golf course turf and landscaping. Samples should be collected a minimum of three times per year, with one sampling event scheduled during at the beginning of the historical wet season, , a second sampling event scheduled towards the end of the wet season, and a third sampling event scheduled during they typical dry season. Should there be no discharge on the scheduled sample date, samples should be taken during the next discharge event.
2. Postconstruction surface water quality sampling should continue through the first three years of operation and during the wet and dry seasons every third year thereafter, provided that all required water quality monitoring has been completed and the development continues to implement all current management plans. It may also be wise to sample if a future significant change is made in course operation or design that could affect nearby water quality.
3. Sampling parameters should be determined based on golf course operation and any basin-specific parameters of concern.

Planning, Design and Construction

Preface

The construction phase of Tomoka Hills Golf Course and its ancillary support facilities will pose the greatest risk of ecosystem alteration. Proper planning, design and construction of the golf facilities will be used and maintained with the goal of minimal impact to existing wildlife and their habitat.

Environmental Considerations

For almost any site, local environmental issues and conditions will need to be addressed. Therefore, the careful evaluation of design criteria and proper routing/ siting of golf amenities at **Tomoka Hills Golf Course** a will be essential during the planning process. **McCumber Golf and its associates** will be focused on the four key steps listed below.

There are four key steps to designing, building, and operating an environmentally responsible golf course. While the following steps are very general, each is subsequently broken down into more detail as a project proceeds:

1. Consider the property and its surroundings in relationship to the local watershed and ecological community.
2. Identify biologic, agronomic, hydrogeologic, and topographic resources and features including invasive species. Determine areas that merit special protection or restoration.
3. Identify those management practices that will protect environmental resources during the construction phase and later during golf course operation. Create a natural resources management plan.
4. Implement an environmental monitoring program (see Environmental Monitoring chapter). This establishes a baseline for conditions when the project started and provides an early warning of potential problems that may arise, before they become serious or expensive to address. It also may defuse potential controversy later on, if problems should occur, by demonstrating the intended environmental stewardship provided by the golf course.

The design of a course should be based on the information gathered in the first three steps listed above. A good design flows in harmony with the natural landscape. The course should be designed and routed to preserve and enhance wildlife habitat, and the design should be environmentally proactive, with creative design used to enhance ecological sensitivity and biodiversity.

Design and Construction Best Management Practices:

- **Retain a qualified** Director of Agronomy/Golf Course Superintendent certified in the Florida Golf Course Best Management Practices at the beginning of the design and construction process to integrate sustainable maintenance practices in the development, maintenance, and operation of the course.
- **Design the course to minimize** the need to alter or remove existing native landscapes. The routing should identify the areas that provide opportunities for restoration.
- **Design the course to retain** as much natural vegetation as possible. Where appropriate, consider enhancing existing vegetation through the supplemental planting of native vegetation/materials next to long fairways, out-of-play areas, and along water sources supporting fish and other water-dependent species.
- **Design out-of-play areas** to retain or restore existing native vegetation where possible. Nuisance, invasive, and exotic plants should be removed and replaced with native species that are adapted to that particular site.
- **Locate the course** so that critical wildlife habitat is conserved and the development does not adversely affect viable, occupied native wildlife habitat on the site.
- **Identify regional wildlife corridors** and configure the course to maintain and/or enhance native habitat to facilitate the use of these corridors. Any existing or proposed crossings of wildlife corridors associated with golf course operations and maintenance should be minimized, and unavoidable crossings should be designed to accommodate wildlife movement.
- **Use only qualified** contractors who are experienced in the special requirements of golf course construction.
- Develop and implement strategies to effectively control sediment, minimize the loss of topsoil, protect water resources, and reduce disruption to wildlife, plant species, and designed environmental resource areas.
- **Schedule construction** and turf establishment to allow for the most efficient progress of the work, while optimizing environmental conservation and resource management.

Watershed

A watershed is a land area that channels rainfall to creeks, streams, and rivers, and eventually to outflow points such as reservoirs, bays, and the ocean. Florida has 29 major watersheds, also known as a drainage basins, that funnel surface and ground water and drains it into a single stream, lake, ocean, or other reservoir. Golf courses are situated within and are connected to these watersheds. Consequently, this connectivity can present both opportunities and challenges for managing golf courses. Care will be taken at **Tomoka Hills Golf Course** to ensure that pollutants that originate on the golf course remain on the golf course and are not conveyed beyond the area of desired effect/application to areas of unintended impact.

Drainage

This quality BMP plan for drainage will address the containment of runoff, adequate buffer zones, and filtration techniques in the design and construction process to achieve acceptable water quality. Swales and other parts of the system will be properly maintained. Debris and unwanted plant growth can build up and clog the system, so that the required volume of water cannot be moved as designed. This may result in saturated soils, leading to oxygen deprivation in the root zone and upstream flooding.

Drainage Best Management Practices:

- When constructing drainage systems, close attention will be paid to engineering details such as subsoil preparation, slopes, the placement of gravel and backfilling.
- Internal golf course drains will not drain directly into an open waterbody, but instead discharge through pretreatment zones and/or vegetative buffers to help remove nutrients and sediments.
- Drainage will discharge through proper drainage and stormwater management devices, for example, vegetative buffers, swales, etc.
- The drainage system will be routinely inspected to ensure proper function.

Adequate drainage is necessary for growing healthy grass. In Florida, where high rainfall events are common in the summer and fall, installation of an internal drainage system may be necessary. The qualified golf course architects, **McCumber Golf and its associates**, will work in conjunction with a stormwater engineer and the DOA to review soils and site conditions to develop an effective stormwater management system that complies with the requirements of the water management district or other permitting agency.

Irrigation

Water Sources

Tomoka Hills Golf Course will require the use of a suitable size well drawing from the underground aquifer. The size of the well is contingent upon permitted daily withdrawal volumes approved by the Suwannee River Water Management District (SRWMD). This volume of water should ensure all turf and landscaping areas can be maintained as healthy plants under the most demanding conditions. An emergency well that can provide enough water to keep all greens watered sufficiently for a period of time shall be considered in the event that there is a main well failure that may require a several weeks to repair. The greens are the most important play areas and have a significantly higher cost per square foot to repair/replace.

System Design

Tomoka Hills Golf Course has employed a professional irrigation system design team (Aqua Turf International) to provide the overall irrigation plan with the following guidelines.

System total irrigated acres = 78.2 which includes only new golf course irrigated areas (greens, tees, fairways, bermudagrass roughs), see attached **Tomoka Hills Golf Course** color coded design map and sprinkler layout plan

System sprinkler layout designed so no irrigation overlaps or sprays into any of the 3-tier wetlands, their buffers or non-irrigated roughs.

Application

Tomoka Hills Golf Course irrigation run times will be adjusted daily based on visual grounds inspections by the **DOA**, the **GCS**, the assistant superintendent and a qualified irrigation system technician as well as using data collected by on site weather stations and soil moisture probes.

A central irrigation computer will control the automated start times of irrigation heads based on preset parameters set by the management staff. The precipitation rate of every irrigation head is entered into the database to allow the precisely distributed volumes of water. The **typical main cycle will be scheduled to run at night** during off-peak electrical demand periods to lessen the impact to the electrical grid and keep electrical costs down for the club. The system designer will call for a pumping station with enough horsepower and flow capacity to complete a peak water demand cycle within a short enough time window to stay within off-peak energy hours, typically within 3-4 hours for a system of this size. The central computer will automatically adjust the

start time of the individual heads within the window to allow for proper flow and pressure ensuring maximum efficiency.

Daytime irrigation will be used for purposes mentioned in the water conservation component of the Environmental Concepts category.

To further maximize efficiency of daytime watering, when possible, hand spot watering with hoses will be used for small scale watering needs.

The management staff will continuously monitor the system for leaks and malfunctions causing unnecessary use of water.

A main component to quality golf conditions is healthy turf that is firm and not over-watered or saturated. At no time will irrigation be intentionally applied to encourage run-off as this moves nutrients and/or control products off from their intended locations which is economically unsound.

Nutrient Management

Preface

Proper nutrient management plays a key role in the reduction of environmental risk and increases course appeal and playability. Among other benefits, applied nutrients inflate the available pool of nutrients and allow turfgrass to recover from damage, increase its resistance to stress, and increase its playability. However, the increase in available nutrients also increases the potential risk of environmental impact. Nutrients may move beyond the turfgrass via leaching or runoff, which may directly impact the environment. Other organisms also respond to increases in nutrients and, in some cases, these organisms may deleteriously alter the ecosystem. The goal of a proper nutrient management plan should be to apply the minimum necessary nutrients to achieve an acceptable playing surface and apply these nutrients in a manner that maximizes their plant uptake.

Tomoka Hills Golf Course will be installing a state of the art "fertigation" system tied to the irrigation system. A fertigation system is calibrated to deliver very small amounts of nutrients through the irrigation water when it runs. This "spoon feeding" of nutrients is highly efficient in that no more nutrient is applied than what the plants can rapidly absorb through leaf and/or root tissue. This results in a very low chance of leaching and/or run-off of nutrients to unintended surroundings. During the "grow-in" phase of the golf course and at certain times of agronomic beneficial aeration and dethatching, granular fertilizers may be applied due to the need of higher concentrations of nutrients to stimulate faster growth and turf recovery. Under normal maintenance operations the foliar regular spoon feeding will allow the turfgrass plants to remain healthy and aesthetically pleasing without over-stimulating growth.

Regulatory Considerations

Principles

The state of Florida has unique and delicate ecosystems consisting of waterways flowing above and below ground. Florida’s golf courses with healthy turf can serve as natures best water filter for these systems. Florida Golf Course Managers, through the proper use of nutrients, can ensure the positive impact. Planning, practicing and recording applications, following the 4R’s (Right Place, Right Time, Right Source, and Right Rate) and teaching others are key to the successful harmony. Rules and regulations have been put in place around the state regarding fertilizer use and applications. The goal of a Golf Course Manager is to not only be in compliance but to go above and beyond regulations with the Florida Golf Course BMP’s.

It is the personal responsibility of Florida Golf Course Managers to know, understand, and follow state and local laws pertaining to fertilizer and fertilizer applications. Golf course areas of play, the clubhouse, and main entrance may have restrictions and licensing specific to each area. Understand fertilizer. Know the laws. Follow the rules.

Testing and Nutrient Management

The **DOA** will call for initial and periodic soil and leaf tissue testing on **Tomoka Hills Golf Course's** various in-play areas.

The initial testing will be done after the **McCumber Golf's** design team has signed off on the final grading of the soil prior to the planting of those areas. Random samples of soil will be taken from the different play areas and analyzed for nutrient and chemistry composition. This will allow the **DOA** to formulate the initial grow-in fertility program to best suit the needs of the newly planted grasses/plants for rapid turf development to lessen the chance of soil erosion during the grow-in phase. Test results will also indicate nutrients or compounds already in the existing soil that will not need supplementation to reduce unnecessary input costs and prevent "over-fertilization".

On-going soil and leaf tissue testing will be conducted at least twice in a 12 month period on all play areas and at times more frequent if turf or landscape plants are showing signs of weakness or stress.

All long-term fertility decisions will be based on the results of these tests, but on occasion the need for stress recovery may require the multiple applications of quick release nitrogen and/or potassium supplements not associated with long term planning.

All testing samples will be sent to accredited laboratories with a positive history of agronomic testing.

Integrated Pest Management

Integrated Pest Management (IPM)

Preface

IPM is a method of combining proper plant selection, correct cultural practices, the monitoring of pest and environmental conditions, the use of biological controls, and the judicious use of pesticides to manage pest problems. Under Florida law (Chapter 482, F.S.), IPM is defined as the following:

> . . . the selection, integration, and implementation of multiple pest control techniques based on predictable economic, ecological, and sociological consequences, making maximum use of naturally occurring pest controls, such as weather, disease agents, and parasitoids, using various biological, physical, chemical, and habitat modification methods of control, and using artificial controls only as required to keep particular pests from surpassing intolerable population levels predetermined from an accurate assessment of the pest damage potential and the ecological, sociological, and economic cost of other control measures.

Regulation

Tomoka Hills Golf Course's management team will follow Integrated Pest Management (IPM) as a year-round activity on Florida's golf courses. The state's temperate to subtropical/tropical climate—which is marked by high temperatures, abundant moisture, and year-round growing conditions—makes it prone to increased pest activity. To grow healthy turfgrass in Florida, it is important for golf course managers to know what IPM is and how to implement it for each pest group (arthropods, nematodes, diseases, and weeds). They must be well-versed in pest identification, understand pest life cycles and/or conditions that favor pests, and know about all possible methods of controlling pests.

Before any pesticide product is sold or distributed in Florida, it must be registered by the U.S. Environmental Protection Agency (EPA) and Florida Department of Agriculture and Consumers Services (FDACS).

Tomoka Hills Golf Course will employ 4 staff members that are licensed by **FDACS** as commercial pesticide applicators. The **DOA, GCS**, assistant superintendent and a licensed Integrated Pest Management **(IPM)** technician will be state licensed and responsible for all pesticide applications on the golf course property. Pesticide applications will be made with the addition of drift retarding agents when possible to help prevent the product from drifting off the targeted sites.

Tomoka Hills Golf Course will:

- Only apply pesticides that are legally registered at all levels of jurisdiction
- Only apply pesticides that are legally registered for use on the facility (for example, do not apply pesticides labeled for agricultural uses even though they may have the same active ingredient).
- Apply according to manufacturer recommendations as seen on label.

Tomoka Hills Golf Course will comply with restricted use pesticide (RUP) law by keeping proper records for RUP applications that must include:

- Brand or product name,
- EPA registration number,
- Total amount applied,
- Location of application site,
- Size of area treated,
- Crop/variety/target site,
- Month/day/year and start and end times of application,
- Name and license number of applicator (if applicator is not licensed, record his/her name and his/her supervisor's name and license number),
- Method of application, and
- Name of the person authorizing the application, if the licensed applicator does not own or lease the property.

All non-RUP pesticide applications will also be recorded in this fashion without the EPA registration number or name of person authorizing the application.

Pesticides and Water Quality

Because Florida's climate favors the growth of many harmful insects, nematodes, weeds, and plant diseases, golf courses are typically dependent on pesticides for turfgrass management. In Florida, concern about the presence of pesticides in the environment and the threat they pose to surface water and ground water quality is significant.

Tomoka Hills Golf Course will follow careful use of applying pesticides to avoid environmental contamination at all times through the use of **IPM** and following **EPA** registered labels.

Pesticide Handling and Storage

Tamoka Hills Golf Course will construct a chemical and pesticide storage facility which will be detached from other structures for the safe and efficient storage of products. There will be sufficient containment measures installed on the facility to reduce/eliminate the chance of outside contamination. The facility will also have

adequate ventilation to prevent the unintended buildup of potentially toxic fumes inside the structure for human safety.

Tomoka Hills Golf Course will construct a mixing/loading facility or structure that is designed for the safe handling of all products that are to be mixed into application equipment such as small volume spot spray tanks up to large volume self-contained or trailered spray vehicles. The structure will have containment boundaries and/or sufficient EPA recommended filtration to eliminate off-site contamination. The water supply lines for filling the application equipment will have anti-siphon devices or construction techniques to prevent backflow contamination.

All applicators/handlers, being licensed for commercial pesticide application, will follow label directions for the mixing, loading and container disposal of each product including wearing the required personal protective equipment **(PPE)**

Pesticide Spill Management and Emergency Preparedness

Accidents happen. Advance preparation on what to do when an accident occurs is essential to mitigate the human health effects and the impact on the environment. The size and scope of the accident dictates the necessary response.

Tamoka Hills Golf Course management will follow the following 4 guidelines and use the emergency response phone numbers, if necessary, which will be clearly posted at relevant locations at the facility.

1. **CONTROL** actively spilling or leaking materials by setting the container upright, plugging leak(s), or shutting the valve,
2. **CONTAIN** the spilled material using barriers and absorbent material.
3. **COLLECT** spilled material, absorbents, and leaking containers and place them in a secure and properly labeled container, and
4. **STORE** the containers of spilled material until they can be applied as a pesticide or appropriately disposed of.

For emergency (only) information on hazards or actions to take in the event of a spill, call CHEMTREC, at (800) 424–9300. CHEMTREC is a service of the Chemical Manufacturers Association. For information on whether a spilled chemical requires reporting, call the CERCLA/RCRA help line at (800) 424–9346.

Pesticide Spill Management and Emergency Response Best Management Practices

- Develop a golf course facility emergency response plan which includes procedures to control, contain, collect, and store spilled materials.
- Prominently post “Important Telephone Numbers” including CHEMTREC, for emergency information on hazards or actions to take in the event of a spill.
- Ensure an adequately sized spill containment kit is readily available.

- Designate a spokesperson who will speak on behalf of the facility should an emergency occur.
- Host a tour for local emergency response teams (for example, fire fighters, etc.) to show them the facilities and to discuss the emergency response plan. Seek advice on ways to improve the plan.
- Absorbents such as cat litter or sand may be used to clean up small spills and then applied as a topdressing in accordance with the label rates or disposed of as a waste.
- Sweep up solid materials and use as intended.

Maintenance Operations

Good Housekeeping

Good housekeeping within and outside the maintenance facility is critical to protecting Florida’s natural resources. **Tomoka Hills Golf Course's** managers responsible for the operation, training and supervising of employees will audit routinely to measure BMP effectiveness, repair needs, and future improvements.

There are five important areas of concern that requires constant attention: Fueling Areas, Equipment Washing Facilities, Chemical Mixing Centers, Equipment Storage Areas, and Waste Handling Sites. Each area will have a separate BMP checklist to ensure employee safety; to minimize environmental risks and support reliable equipment operation and longevity.

Energy

Preface

According to the GCSAA Golf Course Environmental Profile, Vol. IV (GCSAA 2012), six major energy sources were identified for golf course use: electricity, gasoline, diesel, natural gas, propane and heating oil. In addition, operational uses were segmented to meet irrigation, turf maintenance, buildings, clubhouse operations, swimming pools and various amenity needs. The overall conclusion of the study suggests that golf facility managers must take steps toward identifying options for conservation, efficiency, and cost savings.

To address current needs and future energy reduction opportunities, **Tomoka Hills Golf Course's** managers will evaluate current energy conservation performance practices based on the following categories:

- General energy conservation position statements on policy and planning
- Buildings and amenities statements –buildings, infrastructure and facility amenities such as the clubhouse, swimming pool, restaurant, parking lot, kitchen, offices, maintenance building(s), tennis courts, etc.
- Golf course statements – the golf course and surrounding landscapes, pump station, irrigation system and related agronomic operations (playing surfaces, equipment, turfgrass maintenance etc.)

When incorporating new energy efficient pieces, apply the 93% rule suggested by Dr. Pierce Jones from the University of Florida. The 93% rule= Instead of investing money to be 100% compliant with every possible scenario relating to energy efficiency do 93% which will get you at 99% efficiency. The other 7% is not worth the investment long or short term for the remaining 1%.

The first step is to perform a thorough energy audit on the entire Golf Course Maintenance Operation. Energy audits are typically performed by the energy supplier and are offered at little to no expense. Each of the following areas on the golf course should be evaluated using the following Best Management Practices:

Tomoka Hills Golf Course's managers will monitor each of the following areas implementing the Best Management Practices:

Irrigation

Understand that the irrigation pump system is the largest user of energy. A well-engineered pump station is critical to reducing energy consumption.

- Establish a baseline for performance parameters to optimize irrigation pumps. It may be necessary to bring in an electrical engineer to assist with developing these parameters.
- Consider benchmarking performance against similar-sized facilities.
- Ensure efficient design, selection, operation, and maintenance of irrigation pumps, irrigation controls, and other irrigation components. A poorly maintained system will result in low efficiency leading to longer run times and excessive energy utilized. Additionally, repairing of leaks in a timely manner will reduce pump cycling further limiting energy usage.
- Conduct an irrigation audit to determine system efficiency. Efficiency can often be improved with very little costs.
- Consider reducing pump station pressures to maximize efficiency and reduce vaporization of water due to excessively high pressures.
- Assess irrigation pump efficiency; consider alternative equipment, products, and practices; use energy efficiently to maximize the output of the pump station. Consider switching from pressure valve-controlled systems to variable frequency drives.
- Add low horsepower “jockey” pump to pump station so if irrigation (syringing) is necessary during peak energy demand times the cost to run that smaller pump will be less and the demand charge will be less.
- Install adequate meters, gauges, etc. Inspect meters on a regular basis to identify abnormal watering usage or leaks in the field. Ensure accuracy of all meters by having them checked once every five years, or more frequently as required.
- Identify the lowest cost time to operate the pump station and use that window to irrigate when possible. Install lock out devices on pump stations to avoid peak demand charges or time of use charges.
- Reduce the amount of irrigated turf (without slowing the pace of play) and replace with native plants (right plant, right location, right size, right time of year, right density and maintain until fully established) to increase habitat and reduce water usage. If irrigation usage is not reduced, then the native plant installation will not be worth the effort.
- Maintaining a proper balance of nutrients in the soil. Using moisture controlling amendments, such as wetting agents or incorporating organic materials, may help reduce water and fertilizer use.

Buildings

Establish an energy management plan for the facility based on current energy use baselines to optimize efficiency.

- Continually track and measure energy use at the facility based on energy assessment units, for example, kilowatt hour. Evaluate billing meters.
- Invite your energy supplier to provide an energy audit for your building.
- Monitor temperature/environmental settings (heat loss, etc.)

- Implement schedules/controlled use. For instance, ensure that large energy using items are only powered when needed.
- Consider the materials: use insulation and color selection. A lighter colored building and roof will reduce demand for air conditioners and fans.
- Ensure efficient lighting in both interior and exterior areas. Tubular L.E.D. lights provide more light (brightness) than t-5 or t-8 electronic ballast fluorescent lights. In many cases, the cost of switching to L.E.D. is comparable to the replacement of existing fixtures and bulbs.
- Consider motion sensors, light sensors (photocells), temperature sensors and timers to turn off lights, fans, motors, etc., when not needed.
- Adding timers on washwater recycling system pumps and motors will reduce electrical usage during non-use hours.
- Consider installing air locks on doors to all temperature-controlled rooms where practical, especially in high traffic areas like break rooms. These will reduce energy loss.
- Evaluate needs on soda machines to determine if the benefit outweighs the energy use. Consider installing energy miser devices on soda machines. Energy mizer devices can actually reduce electricity use on soda vending machines by running the compressor or cooler only when the temperature rises to a certain level.
- Consider replacing low efficiency “window unit” type air conditioners with more efficient mini-split units. Sometimes energy suppliers will offer a rebate for this upgrade.
- a/c units should have a seer rating of at least 18 with variable speed air handlers
- a/c units should be serviced by professionals every six months and the air filters changed or cleaned every month.
- The proper use of ceiling fans in rooms with a/c can allow the thermostat to be raised 2-3 degrees higher and maintain the same comfort level.
- Thermostats should be under lock so employees cannot manipulate the temperature controls. Additionally, using a programmable thermostat to adjust temperature controls when the room is not being utilized can further offset energy usage.
- Train staff to buy into the program. Turning off fans and lights, planning your trips out onto the course, etc. can result in significant savings over the long run.
- Utilize sleep mode on computers when not in use, or turn them off at the end of each work day.
- Consider adding a photovoltaic solar energy system to offset, meet or exceed your energy usage. Golf course maintenance facilities are ideal for these systems because they are often hidden from view, provide a roof free of obstructions and often have a roof that is at the ideal pitch for installation. These systems can offer a short return on investment that will continue to pay off for the life of the system.

Equipment

Consider alternative equipment, products, and practices.

- Evaluate golf car equipment/operations and ensure proper selection, operation, charging, and maintenance. Maintain proper tire pressure to improve fuel efficiency. Check battery water in electric carts on a monthly to maximize charge cycles.
- Optimize equipment use data including hours operated, use patterns, etc. Monitoring equipment use and flow patterns on the course can reduce fuel consumption, equipment repair as well as labor cost.
- Ensure proper selection (type, size, etc.), operation, and equipment maintenance. Consider utilizing larger mowers to reduce fuel usage and labor needs.
- Evaluate use of alternative energy/fuels.
- Evaluate cleaning practices (dry vs. wet). Using a broom to clean equipment before washing can reduce water usage and energy to recycle washwater.
- Evaluate alternative transportation. Combine tasks to reduce trips onto the course and the additional labor needed.
- Identify the lowest cost time to operate the charging systems and use that window to re-charge when possible.
- Consider using solar powered pond fountains and aerators to eliminate energy usage.

Evaluate All Energy Providers

Evaluate all energy providers (electricity, natural gas, solar and liquid petroleum fuels) for costs, efficiency/assistance programs, and incentives.

- Work with energy providers and evaluate existing programs, resources, etc.
- Identify incentives and programs from energy providers.
- Identify state/local programs and certification.
- Consider U.S. Green Building Council’s LEED program.
- Consider EPA’s EnergyStar, Portfolio Manager, etc.
- Consider energy management software, services, etc.

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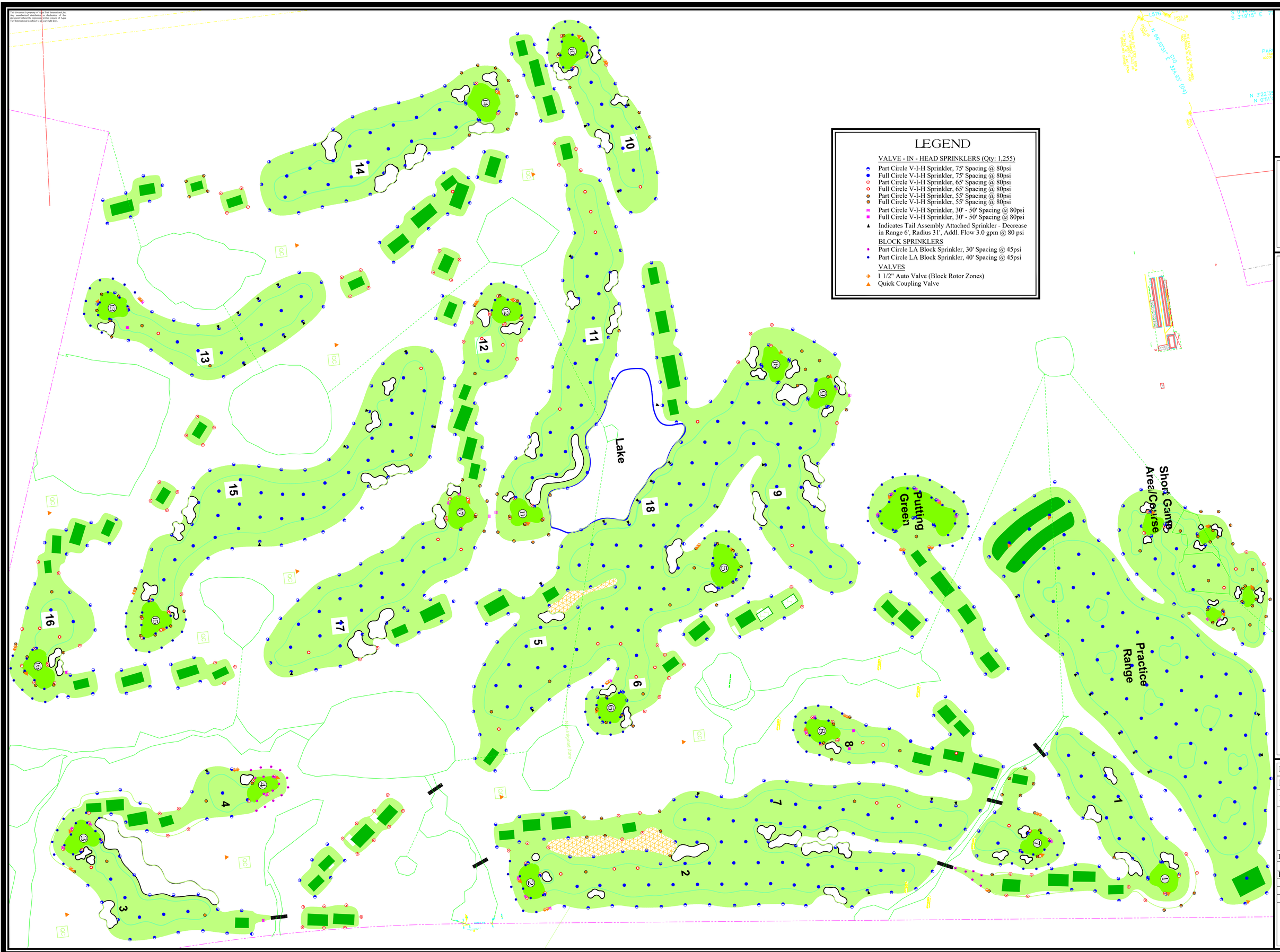


AQUA TURF INTERNATIONAL
19940 Mona Road
Suite 2
Tequesta, FL 33469
Phone: (561) 222-2650
Fax: (561) 666-6696
www.aquaturfintl.com

SCALE
1" = 100'

0' 50' 100' 200'
1 inch = 100ft.

NORTH

TOWER HILL GOLF COURSE

CITY, FLORIDA

IRRIGATION SPRINKLER LAYOUT

DATE - 09-09-24
DESIGN BY - SH
DRAWN BY - SH
FILE NAME
ATI_DRAFT-?!?.dwg
PROJECT NO. 000-00
DESCRIPTION:

REVISION	DATE

SHEET
OV

SCALE: 1" = 200'

- GREENS
- TEES
- FAIRWAYS
- BERMUDAGRASS ROUGHS
- UNIRRIGATED ROUGHS
- BUNKERS
- WETLANDS
- UPLAND WETLAND BUFFERS

TOMOKA HILLS GOLF COURSE

ALACHUA, FLORIDA

Tomoka Hills Golf Preserve and Buffer Supplemental Planting List

for Buffer Mitigation Areas 3.1 Acres as Depicted on Wetlands and Buffer Impact Map 11/08/24

Canopy	
Common Name	Scientific Name
Red Maple	Acer rubrum
River Birch	Betula nigra
Pignut Hickory	Carya glabra
Mockernut Hickory	Carya tomentosa
East Palatka Holly	Ilex x attenuata
Sweetgum	Liquidambar styraciflua
Tulip Tree	Liriodendron tulipifera
Southern Magnolia	Magnolia grandiflora
Sweetbay Magnolia	Magnolia virginiana
Blackgum	Nyssa sylvatica
Red Bay	Persea borbonia
Slash Pine	Pinus elliottii
Spruce Pine	Pinus glabra
Longleaf Pine	Pinus palustris
Loblolly Pine	Pinus taeda
American Sycamore	Plantanus occidentalis
Bluff Oak	Quercus austrina
Southern Red Oak	Quercus falcata
Sand Live Oak	Quercus geminata
Turkey Oak	Quercus laevis
Basket Oak	Quercus michauxii
Shumard oak	Quercus shumardii
Post Oak	Quercus stellata
Southern Live Oak	Quercus virginiana
Pond Cypress	Taxodium ascendens
Bald Cypress	Taxodium distichum
Basswood	Tilia americana
Winged Elm	Ulmus alata
Rusty Blackhaw	Viburnum rufidulum
Subcanopy	
False Indigo	Amorpha fruticose
Eastern Redbud	Cercis canadensis
Flowering Dogwood	Cornus florida
Swamp Dogwood	Cornus foemina
Inkberry	Ilex glabra
Yaupon Holly	Ilex vomitoria
Saw Palmetto	Serenoa repens
Walter's viburnum	Viburnum obovatum

Tomoka Hills Golf Preserve and Buffer Supplemental Planting List

for Buffer Mitigation Areas 3.1 Acres as Depicted on Wetlands and Buffer Impact Map 11/08/24

Ground	
False Indigo	Amorpha fruticose
Broomsedge Bluestem	Andropogon virginicus
Wiregrass	Aristida stricta
Beautyberry	Callicarpa americana
Bandanna of the Everglades	Canna flaccida
Blanket Flower	Gaillardia pulchella
Dune Sunflower	Helianthus debilis
Oakleaf Hydrangea	Hydrangea quercifolia
Blue Flag Iris	Iris virginica
Soft Rush	Juncus effusus
Slender gayfeather	Liatris gracilis
Bracken Fern	Pteridium aquilinum
Muhly Grass	Muhlenbergia capillaris
Sand Cordgrass	Spartina bakeri
Gulf Cordgrass	Spartina spartinae
Pineywoods Dropseed	Sporobolus junceus
Sparkleberry	Vaccinium arborem
Lowbush Blueberry	Vaccinium darrowii
Fakahatchee Grass	Tripsacum dactyloides
Yellow Indiangrass	Sorghastrum nutans
Coontie	Zamia integrifolia

1. The applicant acknowledges and agrees that the golf course is for the private use of the employees of Tower Hill Insurance Group, Inc., its affiliates and subsidiaries and their guests. General admittance may not be granted for play on the course, whether for a fee or otherwise, unless admittance is otherwise granted through a special exception permit or future approval of a site plan that provides facilities to accommodate general admittance. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
2. The applicant acknowledges and agrees that the property owner, successor, or their agent must obtain an approved local business tax receipt before play on the course may begin. An updated approved local business tax receipt must be obtained, demonstrating compliance with the Land Development Regulations, including parking requirements, should the property owner, successor, or their agent allow anyone other than those described in condition 1 to play on the course. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
3. The applicant acknowledges and agrees that play may only take place on the golf course during daylight hours unless otherwise granted by a special exception permit. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
4. The applicant acknowledges and agrees that the Tomoka Hills Golf Facility Best Management Practices Planning Guide and the Wetlands Mitigation/Maintenance/Monitoring Plan are incorporated into this site plan approval as governing documents and must be maintained and followed. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
5. The applicant acknowledges and agrees to Coordinate with the Suwannee River Water Management District, any state required water monitoring plan. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.
6. The applicant acknowledges and agrees that herbicide applications may only be performed by State Certified Pesticide Applicators. Herbicide applications may only be applied with low volume backpack or handheld sprayers, except during the grow-in period for new turf, and once in the spring and once in the fall for pre-emergent herbicide applications. Herbicide and fertilizer use may not occur in the wetland buffer areas as shown on the approved site plan. This condition shall be

the obligation of any subsequent party with interest in the property subject to this development order.

7. The applicant acknowledges and agrees that a 100% gopher tortoise survey of the project area and 25 feet around the project area shall be performed consistent with the State of Florida Fish and Wildlife regulations. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order

8. The applicant acknowledges and agrees that it shall implement the United States Fish & Wildlife Service Standard Protection Measures for the Eastern Indigo Snake on the subject property while construction activity is occurring on-site. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order

9. The applicant acknowledges and agrees it shall monitor the subject property for evidence of any sinkhole activity while construction activity is occurring on-site. The Applicant further agrees that if any sinkhole activity is observed It shall be remediated as required by the Suwannee River Water Management District.This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.

10. The applicant acknowledges and agrees that construction activities associated with any approval or permit issued as part of the site plan shall occur subject to the following:

a. Construction activities may only occur between the hours of 7:00 AM and 7:00 PM, Monday through Friday and between the hours of 9:00 AM and 7:00 PM, Saturday and Sunday; and,

b. Dust and debris from construction activities must be minimized as to not spread dust and debris off-site. This may include, but is not limited to, dust control achieved through water trucks, removal of mud/soil from vehicle tires before exiting the site, and street cleaning.

11. The applicant acknowledges and agrees it shall obtain all other applicable local, state, and federal permits before the commencement of site plan work. This condition shall be the obligation of any subsequent party with interest in the property subject to this development order.

12. The applicant acknowledges and agrees that Conditions 1 – 11 as stated above do not inordinately burden the land and shall be binding upon the property owner, including any subsequent property owners, successors, or assigns, and that the site plan shall comply with Conditions 1 –12 as stated herein.

To: Kathy Winburn, AICP, City of Alachua Planning & Community Development, Director

From: Romy Garraud, Project Planner

Date: November 20th, 2024

RE: Tower Hill Golf Facility – Comprehensive Plan Consistency Analysis

This application is for Tower Hill Golf Facility. The proposed use is a private golf course with a ±10,180-square-foot maintenance building on a portion of Alachua County Tax Parcel 03873-001-001. The site is located on 15601 NW 167th Blvd, within the southwest quadrant of the US 441/I-75 interchange. The onsite Future Land Use (FLU) categories are Agriculture and Community Commercial, and concurrent with this application is a Large-Scale Comprehensive Plan Amendment (LSCPA), which requests Low Density Residential FLU. The Zoning District classifications are Agriculture (A) and Community Commercial (CC), and concurrent with this application is a Rezoning, which requests a Planned Development, Residential (PD-R) Zoning District classification.

The following identifies specific City of Alachua Comprehensive Plan Goals, Objectives, and Policies and explains how this application is consistent with each. Comprehensive Plan text is provided in normal font while consistency statements are provided in **bold font**.

Future Land Use Element

Objective 1.1: The City shall establish an Agriculture land use category in order to maintain agriculture operations within the city limits as well as preserve the rural character and small-town charm of Alachua.

The project site has Agriculture FLU category designation. This application seeks to construct a private golf course with a maintenance facility that will support the ongoing upkeep and management of the golf course. Agriculture FLU is consistent with the existing Agriculture Zoning, as the Agriculture Zoning district permits the use of golf courses per the Land Development Regulations (LDR) Table 4.1-1.

Policy 1.3.a: Community Commercial: The Community Commercial land use category is established to provide neighborhood and community scale goods and services to adjacent neighborhood and residential areas. The following uses are allowed within the Community Commercial land use category:

1. Neighborhood commercial establishments;
2. Residential/offices and live-work units;
3. Business and professional offices;
4. Personal services;
5. Financial institutions;
6. Retail sales and services that serve the community;

7. Eating establishments;

8. Indoor recreation/entertainment;

9. Single-family and multi-family residential above first floor commercial uses;

10. Bed and breakfasts;

11. Supporting community services such as schools, houses of worship, parks, and community centers; and,

12. Traditional Neighborhood Planned Developments.

A small portion of the Subject Property has a Community Commercial FLU category designation. This application does not propose improvements such as the built environment (structure, just minor earth work infrastructure, etc.), with an exception to minor earthwork, within the existing Community Commercial FLU designated area.

Policy 1.3.d: Design and performance standards: The following criteria shall apply when evaluating commercial development proposals:

1. Integration of vehicular and non-vehicular access into the site and access management features of site in terms of driveway cuts and cross access between adjacent sites, including use of frontage roads and/or shared access;

2. Buffering from adjacent existing/potential uses;

3. Open space provisions and balance of proportion between gross floor area and site size;

4. Adequacy of pervious surface area in terms of drainage requirements;

5. Placement of signage;

6. Adequacy of site lighting and potential impacts of lighting upon the surrounding area. Lighting should be designed to minimize impacts to preserve the ambiance and quality of the nighttime sky by reducing light trespass and light pollution on adjacent properties by utilizing lighting at appropriate intensities, directions and times to ensure light is not overused or impacting areas where it is not intended;

7. Safety of on-site circulation patterns (patron, employee, and delivery vehicles), including parking layout, drive aisles, and points of conflict;

8. Landscaping, as it relates to the requirements and goals of the Comprehensive Plan and Land Development Regulations;

9. Unique features and resources which may constrain site development such as soils, existing vegetation and historic significance;

10. Performance based zoning requirements, which may serve as a substitute for or accompany land development regulations in attaining acceptable site design; and,

11. Commercial uses shall be limited to an intensity of less than or equal to 0.50 floor area ratio for parcels 5 acres or greater, 0.75 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.0 floor area ratio for parcels 1 acre or less.

Development to follow approval of this application will adhere to all prescribed Design and Performance Standards, as prescribed in the City of Alachua's LDR.

Policy 1.3.e: The creation/promotion of strip pattern commercial development shall be discouraged. Infill within established commercial areas is preferred over extension of a strip commercial pattern. Extension of a commercial land use designation may be considered in circumstances where the extension is compatible with the existing land uses surrounding the land or the land use categories of surrounding lands. Extensions of a commercial land use category shall not encroach into a residential area. The following criteria shall be applied to limit the impacts of commercial development upon surrounding areas:

1. Impacts upon traffic circulation should be anticipated and mitigated through the reservation of right-of-way for road widening and marginal access streets when appropriate.

2. Access points for commercial development shall minimize points of conflict by utilizing frontage roads, providing cross access between parcels, or installing shared use ingress and egress access driveways connections to roadways.

3. Setbacks and landscaped or other appropriate buffers shall be established to mitigate the visual impacts of commercial development upon surrounding land uses.

4. A sidewalk or bicycle path shall be required where appropriate, to provide convenient access to the development from surrounding areas and to reduce traffic volumes on the roadways.

The application is not proposing a strip pattern commercial development. The Subject Property is for a private golf course, which is considered outdoor commercial recreation in LDR Table 4.1-1. The natural character of the golf course will serve to protect onsite natural features and buffer adjacent properties from more intense development adjacent to US 441. The private golf course will be accessed via the new roadway that is under construction for the office building and will adhere to the LDR setback requirements.

Objective 2.4: The City shall adopt landscaping and tree protection standards in order to achieve the aesthetic design values of the community and preserve tree canopies, as well as to protect exceptional specimens and champion trees.

Policy 2.4.b: Landscaping: Buffering – A buffer consists of horizontal space (land) and vertical elements (plants, berms, fences, walls) that physically separate and visually screen adjacent land uses. The City shall establish buffer yard requirements that are based on the compatibility of the adjacent uses and the desired result of the buffer.

Development of the property will adhere to all buffer standards as prescribed in LDR Section 6.2, which implements Objective 2.4 and Policy 2.4.b.

Policy 2.4.c: Tree Protection: Heritage Trees and Champion Trees – The City shall require the preservation of heritage trees and champion trees when possible. Standards shall be set for determining the health and safety risks associated with heritage and champion trees both on individual residential lots, and existing and proposed developments.

All existing heritage trees will be preserved to the greatest extent practicable throughout the project limits. No champion trees exist on-site. Proposed structures and amenities will be located to best reduce impacts and conflicts to the existing vegetation on site.

Policy 2.4.d: Tree Protection: Regulated Trees – The City shall establish standards for the preservation of regulated trees. Particular attention shall be given to preserving specimen and preferred species of regulated trees, where feasible.

All existing regulated trees will be preserved to the greatest extent practicable throughout the project limits. Proposed structures and amenities will be located to best reduce impacts and conflicts to the existing vegetation on site. Please refer to the Tower Hill Golf Landscape Notes, Details, and Schedule for more information regarding tree protection.

Policy 2.4.e: Tree Protection: Removal and Mitigation – Along with establishing standards for tree removal and mitigation, the City shall establish a tree banking program to provide flexibility for re-planting trees through the mitigation process. Funds within the tree bank may be utilized to plant landscaping on city-owned properties, in public parks, and in road rights of way, where appropriate.

When the removal of existing trees is required for safety or functionality purposes on site, the trees will be mitigated via on-site plantings to the greatest extent practicable. In the event that on-site mitigation is insufficient, the plans will propose providing mitigation through the tree bank program with the fees required per code.

Objective 5.1: The City shall coordinate land use categories with appropriate topography, soils, areas of seasonal flooding, wetlands and habitat during review of proposed amendments to the Future Land Use Map and the development review process. Natural features may be included as amenities within a development project.

The topography of the site and the soil composition is suitable for development on the site. There are documented wetland features on the site that have been jurisdictionally delineated. There are no portions of this site within a FEMA floodplain. A list of habitats can be referred to in the Tomoka Hills Golf FLUCFCS Descriptions, that is part of this submittal package.

Policy 5.1.a: Topography: The City shall protect the natural topography of the City, including steep and seepage slopes, by requiring new development to include techniques to minimize negative impacts on the natural terrain. An emphasis will be placed on retaining the natural function of seepage slopes during development. Additionally, retention of existing native vegetation will be encouraged as one method of protecting slopes.

The topography of the site is conducive to development of a golf course. The topographic form will be protected as will steep and seepage slopes. The topography of the site will aid the enhancement of the design of this project, as it will be a golf course.

Policy 5.1.b: Soils: The City shall ensure soil protection and intervention measures are included in the development review process.

The site is composed of 16 different soil types:

1. **Arredondo fine sand, 0 to 5 percent slopes, Hydro group: A**
2. **Fort meade fine sand, 0 to 5 percent slopes, Hydro group: A**
3. **Millhopper sand, 0 to 5 percent slopes, Hydro group: A**
4. **Lochloosa fine sand, 2 to 5 percent slopes, Hydro group: A**
5. **Kendrick sand, 2 to 5 percent slopes, Hydro group: B**
6. **Blichton sand, 0 to 2 percent slopes, Hydro group: B**
7. **Bivans sand, 2 to 5 percent slopes, Hydro group: C/D**
8. **Norfolk loamy fine sand, 2 to 5 percent slopes, Hydro group: B**
9. **Gainesville sand, 0 to 5 percent slopes, Hydro group: A**
10. **Pits and dumps**
11. **Millhopper sand, 5 to 8 percent slopes, Hydro group: A**

12. **Lochloosa fine sand, 5 to 8 percent slopes, Hydro group: B**
13. **Kendrick sand, 5 to 8 percent slopes, Hydro group: B**
14. **Blichton sand, 5 to 8 percent slopes, Hydro group: C/D**
15. **Bivans sand, 5 to 8 percent slopes, Hydro group: C/D**
16. **Norfolk loamy fine sand, 5 to 8 percent slopes, Hydro group: B**

According to the Natural Resources Conservation Service (NRCS) soil database, the largely A,B, and C/D soils are well suited for the proposed project proposed development.

Policy 5.1.c: Flood prone areas: The City shall require as part of the development review process the identification of FEMA flood zone areas. Where necessary, base flood elevations and minimum finished floor elevations shall be established. The City shall also require finished floor elevations on subdivision plats, site plans and building permit plans when necessary to determine compliance with flood prone area regulations. The City shall establish standards for a limitation on filling in flood prone areas.

There are no portions of this site within a FEMA flood zone area.

Policy 5.1.d: Wetlands: The City shall utilize statewide wetland delineation methodology in accordance with Florida Administrative Code (FAC) and regulations adopted by the FDEP and the Suwannee River Water Management District.

There are documented wetland features on the site that have been jurisdictionally delineated in accordance with FAC and regulations adopted by the FDEP and Suwannee River Management District. Only 0.05 acres of wetland will be impacted and to offset the impact a wetland mitigation plan has been prepared. The wetland mitigation plan includes a 1-acre Enhancement Area (EA), consisting of approximately 0.59 acres of wetland enhancement and 0.40 acres of upland buffer enhancement. The non-impacted wetlands will be protected through use protections to promote native vegetation. More detail regarding wetlands mitigation plans can be found in the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan.

Policy 5.1.e: Habitat: The City shall require as part of the development review process, an inventory of listed species for all new developments in areas identified as known habitat for listed species if listed species are known to exist in close proximity to the development. The survey shall include detailed information regarding type, quantity, location, and habitat requirements for any listed species identified. A de minimus threshold for properties required to complete the inventory may be established in the City's Land Development Regulations.

No listed species was found on-site. For information regarding an inventory of species on the project site, please refer to The Listed Species Survey. For information regarding habitats that are located within the project boundary, please refer to the Tomoka Hills Golf FLUCFCS Descriptions.

Community Facilities Element

Objective 5.1: The City recognizes the importance of the protection of high aquifer recharge areas, wellfield protection areas, lakes, streams, drainage basins, wetlands and stream-to-sink features as vital to the protection of groundwater resources. The City shall, through partnerships and using the best available data, provide protection for groundwater resources.

The site contains documented wetland features that have been jurisdictionally delineated. Proper measures will be taken to protect non-impacted wetland areas through entry and use restrictions. There will be perimeter signage to inform golfers that the wetlands are off-limits. Wetland areas will be buffered by an average of 75 ft. of natural vegetation. Impact to wetlands is minimal, with only 0.05 acres of wetland being impacted.

Policy 5.1.a: The City shall consider the best available hydrogeological information (e.g, Suwannee River Water Management District high aquifer recharge potential maps or site-specific data), and may require the collection of site-specific hydrogeological data, such as soil borings or electric resistivity tests, when assessing the impacts of proposed land use changes and developments in areas of high aquifer recharge potential. This information should be used in the determination of land use decisions on a case-by-case basis.

Soil borings of the site were collected and analyzed, concluding that the soils consist of silty sand, silty sand with clay and rock, very clayey sand, and sandy clay. During the time of field exploration groundwater was not encountered on the site, but it is anticipated that localized temporarily "perched" groundwater condition may occur during the wet season in areas with clay-rich materials. However, none of these conditions will hinder the development of a golf course facility. Recommendations based on the construction proposal are outlined in the GSE Summary Report, attached to this submittal package.

Policy 5.1.b: The City shall prioritize the acquisition of high aquifer recharge areas for protection as conservation or open space areas and consider the use of bonds, lease agreements, property donations, private or public trusts and partnerships, and grants to achieve these acquisitions.

This project does not propose any impacts to any natural features, as this will be an open space, recreational use.

Policy 5.1.c: The City shall coordinate with the Suwannee River Water Management District to protect the functions of natural groundwater recharge areas and natural drainage features by requiring that all development proposals which have the potential to impact water resources to be reviewed by the Suwannee River Water Management District, in accordance with Chapter 373, Florida Statutes and Rules 40B-4 and 40B-400, Florida Administrative Code, or subsequent provisions.

The stormwater management facilities have been designed in accordance with the Suwannee River Management District, City of Alachua, and Alachua County requirements.

Objective 5.2: The City shall establish groundwater water quality and quantity protection strategies to protect the quality of water and maintain the quantity of water entering the aquifer.

Policy 5.2.a: In an effort to protect groundwater quality, the City shall:

1. Adopt design criteria for stormwater management practices that minimize the leaching or discharge of nutrients.

2. Promote the Florida Yards and Neighborhoods program and Florida Friendly landscaping practices to educate the public about proper lawn and landscaped area fertilization and irrigation;
3. Incorporate the principles of the Florida Yards and Neighborhoods and Florida-Friendly Landscaping practices program into local landscaping ordinances;
4. Adopt water conservation programs;
5. Educate the public about the proper operation and maintenance of onsite sewage treatment and disposal systems;
6. Implement a local onsite sewage treatment and disposal systems management program to assure that these systems are regularly inspected, pumped out, or brought up to current standards when required by Florida Administrative Code; and,
7. Participate in intergovernmental efforts which encourage the protection of groundwater quality.

The stormwater management facilities have been designed to meet the criteria set forth by the Suwannee River Management, the City of Alachua, and Alachua County. The stormwater facility will provide water quality treatment volume, discharge rate and volume attenuation, provide volume recovery, and the retention ponds will have a freeboard. Detailed plans regarding the stormwater management facilities are outlined in the Stormwater Management System Report and the Tomoka Hills Golf Course Best Management Practices Planning Guide.

Policy 5.2.b: The City shall require demonstration from engineering design and reports that post-development recharge volumes will equal pre-development recharge volumes to the Floridian aquifer.

Engineering design and reports regarding development recharge volumes are demonstrated in the Stormwater Management System Report, which is part of this submittal package.

Policy 5.2.c: Applicants for new development, expansions, or redevelopment shall employ one or more of the following techniques to address potential groundwater quality and quantity impacts:

1. Construction and maintenance of shallow, landscaped retention basins;
2. Decreasing the amount of stormwater runoff through the use of pervious surfaces or increased open space;
3. Development of a stormwater pollution prevention plan;
4. Development of a sinkhole remediation plan; and,
5. Development of a groundwater monitoring plan.

The development on the project site will include the construction and maintenance of shallow retention basins that are landscaped, a stormwater pollution prevention plan, and a sinkhole remediation plan. Please refer to the Stormwater Management System Report for more information.

Policy 5.2.d.: Best management practices and performance standards shall be utilized to maximize open space, limit impervious surfaces, minimize the use of fertilizers on turf grass areas, promote protection of natural vegetation, promote the use of pervious parking areas, and treat stormwater to protect water quality.

Best management practices (BMPs) will be utilized to control erosion, sedimentation, and an operation and maintenance entity will be established. Please refer to the Tomoka Hills Golf Course Best Management Practices Planning Guide for more detailed information.

Objective 5.3: The City shall assist the Suwannee River Water Management District with the implementation of its water conservation rules and programs. During water shortage events, the City shall encourage and promote water conservation measures to be

implemented for the use and reuse of water. The City shall make educational materials regarding the conservation of water resources available to the prior to peak seasonal demand.

BMPs will be implemented to conserve water on the golf course. BMPs include irrigation under normal conditions, moisture sensors, out-of-play areas will be planted with drought resistant native plants, and planting plants that require little to no irrigation. Please refer to the Tomoka Hills Golf Course Best Management Practices Planning Guide for more detailed information.

Policy 5.3.a: The City shall assist in the enforcement of water use restrictions during a declared water shortage and will assist the Suwannee River Water Management District with the distribution of educational materials regarding the conservation of water prior to peak seasonal demand.

An irrigation-system will be designed to ensure that water is only provided to turfgrass plants based on evapotranspiration (ET) rate monitoring. The irrigation-system will be computer-controlled and will run efficiently to ensure that water is conserved as much as possible and not wasted. Please refer to the Tomoka Hills Golf Course Best Management Practices Planning Guide for more detailed information.

Conservation and Open Space Element

Objective 1.2: The City shall preserve and protect native communities and ecosystems, particularly those considered endangered or threatened.

Policy 1.2.a: The City shall ensure that land use designations, development practices and regulations protect native communities and ecosystems, and environmentally sensitive lands.

There will be a three-tier buffer system in place to maintain the protection of local native communities and ecosystems. The three-tier plan includes management practices that will eliminate the use of fertilization, dumping, and the use of golf carts within the buffer areas that surround the native species. For more information regarding the three-tier buffer system, please refer to the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan that is part of this submittal package.

Policy 1.2.b: Notwithstanding any site-specific environmental assessment, the City may use the Florida Natural Area Inventory to identify native communities, ecosystems, and environmentally sensitive lands and potential locations of threatened and endangered species, communities and ecosystems.

A field survey of the site was conducted to determine if the project is being utilized by any threatened or endangered species. The results of the survey concluded that there are no threatened or endangered species on the site. Please refer to the Listed Species Survey for more detailed information.

Policy 1.2.d: The City shall coordinate with the City of Gainesville, the City of High Springs and Alachua County to ensure the protection of native communities and ecosystems that exist across jurisdictional boundaries.

For any native communities or ecosystems that exist along the jurisdictional boundary of the City of Alachua and Alachua County, the same protection measures and BMPs will be applied to ensure environmental well-being.

Policy 1.2.e: The City shall maintain any developed management plans for all City owned or managed natural areas as needed. Management plans shall allow for uses that preserve the intrinsic characteristics of the natural area.

A maintenance management plan has been created to ensure the protection of natural vegetation and species. Details regarding the plan can be found in the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan that is part of this submittal package.

Policy 1.2.f: Where appropriate, the City shall work to acquire, conserve, protect and manage environmentally sensitive lands and native communities and ecosystems.

The Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan and Tomoka Hills Golf Course Best Management Practices Planning Guide outlines what precautions will be put in place to manage the native plant species on the site.

Policy 1.2.g: The City shall encourage the eradication of invasive exotic plant species, and whenever possible, recommend their replacement with native plant species alone, or in conjunction with other erosion control techniques. The City shall refer to the Pest Plant List provided by the Florida Exotic Pest Plant Council for guidance.

Maintenance plans include perpetual treatment to control exotic and nuisance species. Native plant species will be planted to replace the exotic and nuisance plant species. Details regarding this can be found in the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan and the Tomoka Hills Golf Course Best Management Practices Planning Guide that is part of this submittal package.

Policy 1.2.h: The City shall work with the Florida Yards and Neighborhoods program and incorporate the program's best management practices (BMPs) to promote sustainable landscaping practices.

The project will retain a qualified Director of Agronomy/Golf Course Superintendent certified in Florida Golf Course Best Management Practices to design and construct a process that will promote sustainable maintenance practices. Details regarding this can be found in the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan and the Tomoka Hills Golf Course Best Management Practices Planning Guide that is part of this submittal package.

Policy 1.2.i: The City shall, as a condition of development, prohibit the planting of Pest Plant Species, and require perpetual maintenance of preserved and landscaped areas to eradicate invasive exotics.

Exotic/invasive plant species will not be planted on the project site. Treatment to remove exotic/invasive species includes but is not limited to hand pulling, herbicide, and hand-held power equipment. Details regarding this can be found in the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan and the Best Management Practices Planning Guide that is part of this submittal package.

Policy 1.2.j: The City shall require all new development to maintain internal and external connectivity of all open and natural space to the maximum extent practicable.

Both internal and external connectivity will be reflected in open and natural spaces to the maximum extent practicable. This green connection plan will promote more seamless integration of the proposed use into the context of the landscape, as well as the surrounding natural space.

Policy 1.2.k: The City shall establish criteria for the removal of vegetation that is neither threatened nor endangered, distinguishing between native, noninvasive exotics, and invasive exotics.

The course will be designed to minimize the removal of native vegetation.

Policy 1.2.l: The City shall protect regulated, heritage, and champion trees. The City may continue to participate in the Florida Champion Tree Program. Additionally the City will require tree removal permits to protect regulated, heritage, and champion trees from accidental removal and other development related disturbances to the extent allowed by 163.045 and 163.3209, Florida Statutes.

All existing heritage trees will be preserved to the greatest extent practicable throughout the project limits. These trees will only be removed when no other viable option to work around them is found to be feasible.

Objective 1.3: The City shall protect species listed by State and Federal agencies as endangered, threatened or of special concern, and their habitats.

A listed species survey was conducted to determine if the project was being utilized by endangered or protected species. The survey concluded that there are no threatened or endangered species within the project site. Please refer to the Listed Species Survey for more information.

Policy 1.3.a: The City shall ensure that its ordinances, regulations and policies protect listed species and their habitats.

A listed species survey was conducted to determine if the project was being utilized by endangered or protected species. The survey concluded that there are no threatened or endangered species within the project site. Please refer to the Listed Species Survey for more information.

Policy 1.3.b: The City shall utilize the development review process, land acquisition programs, environmental regulatory partnerships, stewardship programs and public education to protect listed species and their habitat, and prevent extinction of or reduction in populations of listed species.

A listed species survey was conducted to determine if the project was being utilized by threatened or endangered species. The survey concluded that there are no threatened or endangered species within the project site. Should any species be found during the development of the project, then they will be properly dealt with. Please refer to the Listed Species Survey for more information.

Policy 1.3.c: The City shall obtain data from the Florida Fish and Wildlife Conservation Commission, Alachua County Environmental Protection Department, Florida Department of Environmental Protection, to maintain a periodically updated inventory of listed species and habitats located within City limits or immediately adjacent to City limits. The City will use the Florida Natural Areas Inventory as a base inventory.

The Subject Property was surveyed for state and federal listed species identified by the Florida Fish and Wildlife Conservation Commission's (FFWCC) official list of Florida's Endangered Species, Threatened Species, and Special of Special Concern (December 2022). The evaluation included literature review for species records of occurrence as well as survey by qualified ecologists conducted within the bounds of the Subject Property. This assessment found no plant species listed as "threatened" or "endangered" by either the Florida Department of Agriculture (FDA) or the United States Fish and Wildlife Service (USFWS). Please refer to the Listed Species Survey for more information.

Policy 1.3.d: The City shall require prior to development approval, an inventory of listed species for all new developments in areas identified as known habitat for listed species. The inventory shall include detailed information regarding type, quantity, location and habitat requirements for any listed species identified. De minimus threshold for properties required to complete the inventory shall be established in the City's Land Development Regulations.

A listed species survey was conducted to determine if the project site is being utilized by any species. The findings of the survey are recorded in the Listed Species Survey.

Policy 1.3.e: The City's land use designations shall provide for the protection of threatened and endangered species.

A listed species survey was conducted to determine if the project site was being utilized by endangered or protected species. There are no threatened or endangered species within the project site. The findings of the survey are recorded in the Listed Species Survey.

Objective 1.5: The City shall protect soil resources through erosion and sedimentation control, by requiring proper design criteria on specific soils.

The site is composed of 16 different soil types:

1. **Arredondo fine sand, 0 to 5 percent slopes, Hydro group: A**
2. **Fort meade fine sand, 0 to 5 percent slopes, Hydro group: A**
3. **Millhopper sand, 0 to 5 percent slopes, Hydro group: A**
4. **Lochloosa fine sand, 2 to 5 percent slopes, Hydro group: A**
5. **Kendrick sand, 2 to 5 percent slopes, Hydro group: B**
6. **Blichton sand, 0 to 2 percent slopes, Hydro group: B**
7. **Bivans sand, 2 to 5 percent slopes, Hydro group: C/D**
8. **Norfolk loamy fine sand, 2 to 5 percent slopes, Hydro group: B**
9. **Gainesville sand, 0 to 5 percent slopes, Hydro group: A**
10. **Pits and dumps**
11. **Millhopper sand, 5 to 8 percent slopes, Hydro group: A**
12. **Lochloosa fine sand, 5 to 8 percent slopes, Hydro group: B**
13. **Kendrick sand, 5 to 8 percent slopes, Hydro group: B**
14. **Blichton sand, 5 to 8 percent slopes, Hydro group: C/D**
15. **Bivans sand, 5 to 8 percent slopes, Hydro group: C/D**
16. **Norfolk loamy fine sand, 5 to 8 percent slopes, Hydro group: B**

According to the NRCS soil database, the soil types are conducive to the proposed development.

Policy 1.5.a: The City shall ensure soil protection and intervention measures are included in the development review process.

Policy 1.5.b: The City shall require land clearing for development to be phased with construction activity, and to adhere to techniques which minimize soil erosion, minimize removal of native and non-invasive trees and vegetation, and protect champion and designated heritage trees. After clearing, soils shall be stabilized in accordance with best

management practices (BMPs) identified in “The Florida Stormwater, Erosion, and Sedimentation Control Inspector’s Manual”.

BMP’s will be implemented to minimize disruption to the soil that make up the site. For more detailed information regarding the sequence of soil disturbing activities, please refer to Sheet NO: C0.20

Policy 1.5.c: The City shall protect the natural topography of the City, including steep and seepage slopes, by requiring new development to include techniques to minimize negative impacts on the natural terrain. An emphasis will be placed on retaining the natural function of seepage slopes during development. Additionally, retention of existing native vegetation will be encouraged as one method of protecting slopes.

A seepage slope has been documented on the project site, but it will not be disturbed during and after the development of the site. For more detailed information regarding seepage slopes, please refer to Sheet NO: C0.20

Policy 1.5.d: The City shall coordinate with appropriate Alachua County agencies, the Suwannee River Water Management District (SRWMD), the Florida Geological Survey (FGS), the Florida Department of Agriculture and Consumer Services (FDACS), the U.S. Geological Survey (USGS), U.S. Department of Agriculture Natural Resources Conservation Service (NRCS), and the Army Corps of Engineers to identify the best available soil erosion potentials, best management practices and technically sound erosion reduction techniques.

Erosion and sedimentation control measures will be provided, as required by the City of Alachua and Suwannee River Water Management District.

Objective 1.7: The City shall identify, protect and conserve significant geological resources and their natural functions.

There are no significant geological resources documented on this site.

Policy 1.7.a: The City shall work with the Florida Geological Survey (FGS), Florida Department of Environmental Protection (FDEP), Suwannee River Water Management District, and the Alachua County Environmental Protection Department, to identify and map significant geological resources, including karst features such as sinkholes, caves, and entire stream to sink basins. Significance of a feature should reflect its potential contribution to the area’s network of natural resources.

There are no significant geological resources documented on this site.

Policy 1.7.b: The City may utilize FGS Florida Aquifer Vulnerability Assessment (FAVA) maps, in conjunction with site-specific data, when available, to determine karst related aquifer contamination potentials. The City may utilize the FAVA map created specifically for Alachua County.

The Tomoka Hills Golf Course Best Management Practices Planning Guide outlines how pollutants are dealt with, should they found in the future, to ensure that pollutants do not enter the aquifer.

Policy 1.7.c: The City shall prepare an emergency management plan to address the opening of a sinkhole when it poses a threat to public infrastructure, and the public’s health, safety or welfare.

In the event of a sinkhole, the project engineer will be notified and will assist with remediation efforts. For more detailed information regarding sinkhole management, please refer to Sheet NO: C0.20

Policy 1.7.d: The City shall review the possibility of acquiring and managing, when feasible, unique geological features and their surrounding natural areas. If a subject feature is privately owned, the City shall encourage the owner to create a management plan in cooperation with the appropriate agencies, and investigate the possibility of acquiring and preserving the surrounding property.

There are no significant geological resources documented on this site.

Policy 1.7.e: The City shall utilize regulatory and stewardship techniques to ensure that stormwater, wastewater and landscaping practices do not negatively impact the structural integrity, hydrology, biodiversity and other natural functions of significant geologic resources.

The design of stormwater management facilities has been designed to meet the criteria set forth by the Suwannee River Management district, City of Alachua, and Alachua County.

Objective 1.10: The City shall protect and preserve wetland values and functions from adverse, human caused, physical and hydrologic disturbances.

A wetland mitigation plan has been put in place to protect and preserve larger, high-quality natural wetland features on the project site. Only a minimal amount of wetlands will be impacted, 0.05 acres. Wetland features will be buffered by natural vegetation and there will be signage along the perimeter informing golfers not to enter the site. Please refer to the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan for more information.

Policy 1.10.a: The City shall utilize statewide wetland delineation methodology in accordance with Florida Administrative Code and regulations adopted by the DEP and the Suwannee River Water Management District.

The project has received a formal wetland determination authorization from the Suwannee River Water Management District in accordance with the Florida Administrative Code. The authorization number is 245365_2.

Policy 1.10.b: The City shall conserve wetlands by prohibiting, where the alternative of clustering all structures in the non-wetland portion of the site exists, any development or dredging and filling which would alter their natural functions. If no other alternative for development exists, the City shall allow only minimal development activity in those areas designated as wetlands within this Comprehensive Plan and that such development activity comply with the following performance standards:

III. Limited development activity with impacts to isolated wetlands (and/or associated buffers) that meet all of the following conditions:

a. Less than .25 acres in size; and,

b. Determined to be of poor quality by a certified environmental specialist; and,

c. The applicant has demonstrated that every reasonable step has been taken to minimize impact to wetland; and,

d. The applicant has provided for appropriate on-site or off-site mitigation for impact to wetland.

Limited development activity includes, but is not limited to, park amenities such as trails or boardwalks, minimum necessary roadways and/or sidewalks for access or internal site connectivity, and underground utility line crossings.

We are coordinating with the Suwannee River Water Management District, the City of Alachua, and Alachua County to ensure wetland impacts are in compliance. 0.05 acres will be impacted, and 0.49 acres of wetland will incur tree trimming impacts. The applicant will also apply appropriate mitigation for wetlands. Please refer to the Wetlands Impact Map and the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan for more information.

Policy 1.10.c: The City shall review wetland mitigation and monitoring proposals to allow limited development activity in wetlands and wetland buffers. Applicants must provide documentation which indicates that the following steps have been taken: the applicant has attempted every reasonable measure to avoid adverse impacts; the applicant has taken every reasonable measure to minimize unavoidable adverse impacts; the applicant has provided adequate mitigation to compensate for wetland impacts. The property owner shall incur any and all expenses associated with wetland mitigation.

The Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan documents the wetland features on the site as well as measures that will be taken to minimize impact to the wetlands. The construction of this project will impact 0.05 acres of wetland features and to offset these impacts a wetland enhancement area will be created. The mitigation plan also outlines efforts that will be taken to protect and preserve non-impacted wetlands within the project area.

Policy 1.10.d: The City shall provide all wetland mitigation and monitoring proposals for review by the County, Suwannee River Water Management District and any other applicable agencies.

The Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan is in accordance with City of Alachua, Alachua County, and Suwannee River Water Management District requirements.

Policy 1.10.g: The City shall require natural vegetative buffers around wetlands to protect the fragile ecosystems they sustain. Buffers, measured from the outer edge of the wetland, shall be created as established in the following table:

Resource Addressed Required Buffer (feet)	Resource Addressed Required Buffer (feet)
Wetlands less than or equal to 0.5 acre that do not support federally and/or state regulated vertebrate wetland/aquatic dependent animal species. 50’ average 35’ minimum	Wetlands less than or equal to 0.5 acre that do not support federally and/or state regulated vertebrate wetland/aquatic dependent animal species. 50’ average 35’ minimum
Wetlands greater than 0.5 acre that do not support the animal species described above. 75’ average 50’ minimum	Wetlands greater than 0.5 acre that do not support the animal species described above. 75’ average 50’ minimum
Areas where the animal species described above have been documented within 300 feet of a wetland. 100’ average 75’ minimum	Areas where the animal species described above have been documented within 300 feet of a wetland. 100’ average 75’ minimum

Larger, high-quality wetlands will be buffered by an average of 75 ft. of existing vegetation on the project site. Please refer to the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan for more information.

Objective 1.12: The City shall protect and conserve the quantity and quality of water resources, not only for the benefit of residents of the City, but for all in North Florida who depend on the Floridian Aquifer for drinking water, and for the benefit of all connected springs, streams, and rivers which may be impacted by the City's land use and development practices.

The applicant will abide by BMP to ensure that Florida water resources are protected and conserved. Please refer to the Tomoka Hills Golf Course Best Management Practices Planning Guide for more information.

Policy 1.12.a: The City shall recognize the interconnectivity of surface and ground water systems and shall work to minimize degradation of water resources, which extend beyond the City limits.

No impacts will occur to wetlands that extend beyond City limits. The applicant is in coordination with the Suwannee River Water Management District, the City of Alachua, and Alachua County to ensure wetlands are approached with the utmost care.

Policy 1.12.b: The City shall inventory flowing surface water bodies within the City, utilizing topographic maps, or obtain an established inventory from an appropriate government agency. The inventory utilized should not identify water bodies in isolation; water bodies should be identified relative to their watersheds and basins.

Surface water bodies are illustrated in the Environmental maps attached to this package.

Policy 1.12.c: The City shall consider, through an interlocal agreement with the Florida DEP, SRWMD or other appropriate agency, the monitoring of surface water bodies within the City, identification of human and ecological health risks, point and non-point pollutant sources, the establishment of remediation protocol, identification of significant aquatic ecosystems and habitats, and the eradication of aquatic pest plant species.

Following set criteria by the City of Alachua, Alachua County, and the Suwannee River Water Management District, a monitoring plan has been set in place to supervise surface water bodies. Please refer to the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan for more information.

Policy 1.12.d: The City shall require the following buffers for development along surface water bodies. Buffers shall be measured from the outer edge of the water body, and created as established in the following table:

Resource Addressed Required Buffer (feet)	Resource Addressed Required Buffer (feet)
Surface waters less than or equal to 0.5 acre that do not support federally and/or state regulated vertebrate wetland/aquatic dependent animal species. 50' average 35' minimum	Surface waters less than or equal to 0.5 acre that do not support federally and/or state regulated vertebrate wetland/aquatic dependent animal species. 50' average 35' minimum
Surface waters greater than 0.5 acre that do not support the animal species described above. 75' average 50' minimum	Surface waters greater than 0.5 acre that do not support the animal species described above. 75' average 50' minimum

Areas where the animal species described above have been documented within 300 feet of a surface water. 100’ average 75’ minimum	Areas where the animal species described above have been documented within 300 feet of a surface water. 100’ average 75’ minimum

Larger, high-quality wetlands will be buffered by an average of 75 ft. of existing vegetation on the project site. Please refer to the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan for more information.

Policy 1.12.e: The City shall protect the natural function of floodplains, recognizing the role of flood patterns in maintaining water quality and quantity. Flood plain regulations will be based on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM).

The project site does not contain any FEMA floodplains.

Policy 1.12.f: The City shall work with FEMA, SRWMD, DEP and the County to regulate development within special flood hazard areas susceptible to the one percent (1%) annual chance flood established by FEMA. The City will require development activity to occupy only the non-floodplain portion of a site when feasible; allow dredging and filling within floodplains only if it preserves the natural function of the floodplain and adequately provides for stormwater management; require the minimum floor elevation of any structure to be at least one foot above the established base flood elevation; and will prohibit the storage of hazardous materials or waste within the floodplain, and development activity that threatens to raise the base flood elevation.

The project site does not contain any FEMA floodplains.

Policy 1.12.g: The City shall restrict the siting of wastewater treatment plants and spray field areas in flood prone areas.

This project does not include wastewater treatment plants or spray field areas, as this will be a golf course.

Policy 1.12.i: The City shall restrict the use of chemical, biological and mechanical agents to control aquatic pest plants, animals, insects and fish to those that are consistent with state and federal regulations and are known to minimize impacts on water quality and surroundings.

Herbicide applications may only be applied with low volume backpacks or handheld sprayers, except during the grow-in period for new turf, and once in the spring and in the fall for pre-emergent herbicide applications. Herbicide applications may only be performed by State Certified Pesticide Applicators with Aquatic Pest Control for wetland treatment. Please refer to the Tomoka Hills Golf Suwannee River Water Management District Wetland Mitigation/Monitoring/Maintenance Plan for more information.

Policy 1.12.j: The City shall consider instituting a water conservation program that includes best management practices (BMPs) such as xeriscaping, effluent reuse, and leak detection schedules for all City properties, facilities and infrastructure.

BMPs shall be used to enforce an efficient use of water resources. BMPs shall include but are not limited to moisture sensors, the planting of native plants that require little to no irrigation, and computer-controlled irrigation systems. Please refer to the Tomoka Hills Golf Course Best Management Practices Planning Guide for more information.

Policy 1.12.k: The City may consult with the Suwannee River Water Management District (SRWMD), the Florida Department of Environmental Protection (DEP) and the Alachua County Environmental Protection Department to ensure that City water resource practices are in compliance with all federal, state and local laws and regulations.

The use of water within this project site will abide by the set local, state, and federal regulations.

Policy 1.12.l: The City's Public Services Department shall continue to review the domestic per capita water consumption and amend domestic per capita water consumption rates as necessary. The City should consult with the SRWMD and the DEP to determine sustainable consumption values.

The projected water consumption estimate can be found in the Concurrency Impact Analysis submitted as part of this application. Based on the projected water consumption there will be residual water capacity.

Policy 1.12.n: The City shall maintain a wellhead protection program to protect the public water supply. Under the program, new and existing wells will be inspected on a regular schedule, and abandoned wells will be closed and sealed; technical analysis will be used to determine the suitability of wellfield expansion or additions; and modifications and additions will be reviewed by the County and the SRWMD.

The project site will not use a wellhead system and will be connected to the municipal water supply system.

Policy 1.12.o: The City shall prohibit the development or expansion of landfills, wastewater treatment plants, and commercial mining operations, within wellhead protection areas.

The project site is not within a wellhead protection area.

Policy 1.12.p: The City shall coordinate with the SRWMD to review plans for new stormwater retention and detention basins, and to monitor existing basins.

The project site has proposed the construction of two stormwater management facility ponds to serve the project site. The design criteria of the ponds are based on the set criteria of the City of Alachua, Alachua County, and the Suwannee River Water Management District.

Policy 1.12.r: The City shall protect groundwater resources by establishing maximum impervious surface requirements for new development and by providing incentives to developers for utilizing environmentally beneficial techniques and materials, such as pervious materials for parking lots, water reclamation practices, and high filtration landscape design.

Development of this project will incur a very limited impervious surface area, as this will be a golf course. The applicant will ensure that groundwater resources are protected in accordance with City of Alachua regulations.

Policy 1.12.s: The City may work with the Alachua County Extension Service to create a sustainable landscaping and yard care program for development within the City. The objective of the program could be to create site elevation, soil, fertilization, irrigation, integrated pest management, stormwater runoff management and plant selection guidelines and best management practices for development within the City. The program may provide continued guidance for long-term yard care, supporting homeowners as they maintain their individual yards. The City may provide educational materials to the public regarding landscaping requirements and recommendations.

BMPs will be instituted to ensure that the project site maintains a sustainable landscape. Please refer to the Tomoka Hills Golf Course Best Management Practices Planning Guide.

Policy 1.12.t: The City shall continue to utilize a utility billing system that encourages reduced consumption.

The project site will be connected to City utilities; therefore, it will utilize the utility billing system.

Policy 1.12.u: The City shall consider adopting an official water conservation policy to prevent drought related water shortages. These procedures should be consistent with applicable SRWMD policy, and should specify the City's role in water conservation and drought management. Prior to establishment of this policy, the City shall use "Waterwise Florida Landscapes: Landscaping to Promote Water Conservation Using the Principles of Xeriscape™"

The project site shall comply with the City of Alachua's water conservation policies.

Policy 1.12.v: The City shall utilize the most current Water Supply Assessment prepared by the Suwannee River Water Management District to plan for the current and projected needs and sources for water resources.

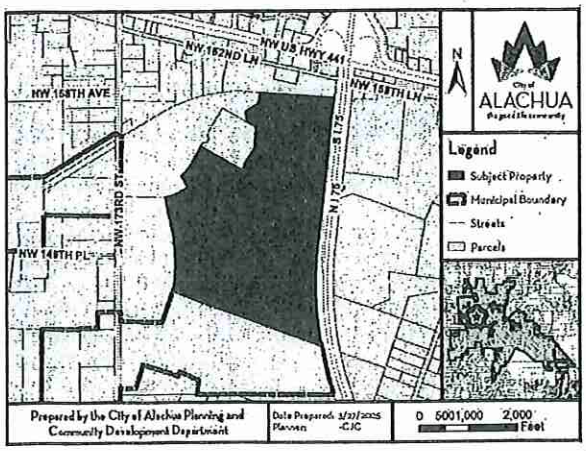
The potential impacts of this development on City of Alachua public facilities is documented in the Concurrency Impact Analysis submitted as part of this application. The analysis shows that there will be residual capacity for potable water, sanitary sewer, and solid waste.

was recorded. The officer was disciplined...without

City of ALACHUA

NOTICE OF PUBLIC HEARING BEFORE THE PLANNING AND ZONING BOARD OF THE CITY OF ALACHUA, FLORIDA

Notice is hereby given that the Planning and Zoning Board of the City of Alachua will hold a public hearing on April 15, 2025, at 6:00 p.m. The hearing will be held in the James A. Lewis Commission Chambers in City Hall, located 15100 NW 142nd Terrace, Alachua, Florida, to consider the following:
A request by CHW, LLC, on behalf of Tomoka Hills Farms, Inc. for the Tomoka Hills Golf Course site plan application, which proposes an 18-hole private golf course, associated maintenance facilities, and associated site improvements on a ± 197.03-acre subject property located at 156012 NW 167th Boulevard. Tax parcels 03873-000-000; 03873-001-001. FLU: Agriculture; Zoning: Agricultural (A); Overlay District: Gateway Overlay District.



At the public hearing, all interested parties may appear and be heard with respect to the application. Copies of the application are available for public inspection at the Planning and Community Development Department, 15100 NW 142nd Terrace, Alachua, Florida, on any regular business day between the hours of 7:30 a.m. to 6:00 p.m. Written comments on the application may be sent to the following address: City of Alachua, Planning and Community Development, P.O. Box 9, Alachua, FL, 32616. Notice is given pursuant to Section 286.0105, Florida Statutes, that, in order to appeal any decision made at the public hearing, you will need a record of the proceedings, and that, for such purpose, you may need to ensure that a verbatim record of the proceedings is made, which includes the testimony and evidence upon which the appeal is to be based. In accordance with the Americans with Disabilities Act, any persons with a disability requiring reasonable accommodation in order to participate in this meeting should call the City Clerk at (386) 418-6100 x 1501 at least 48 hours prior to the public hearing.

(Published: Alachua County Today - April 3, 2025)

City of ALACHUA
the good life community

MAILED
MAR 3 1 2025

MIKE DAROZA
CITY MANAGER

PLANNING & COMMUNITY DEVELOPMENT

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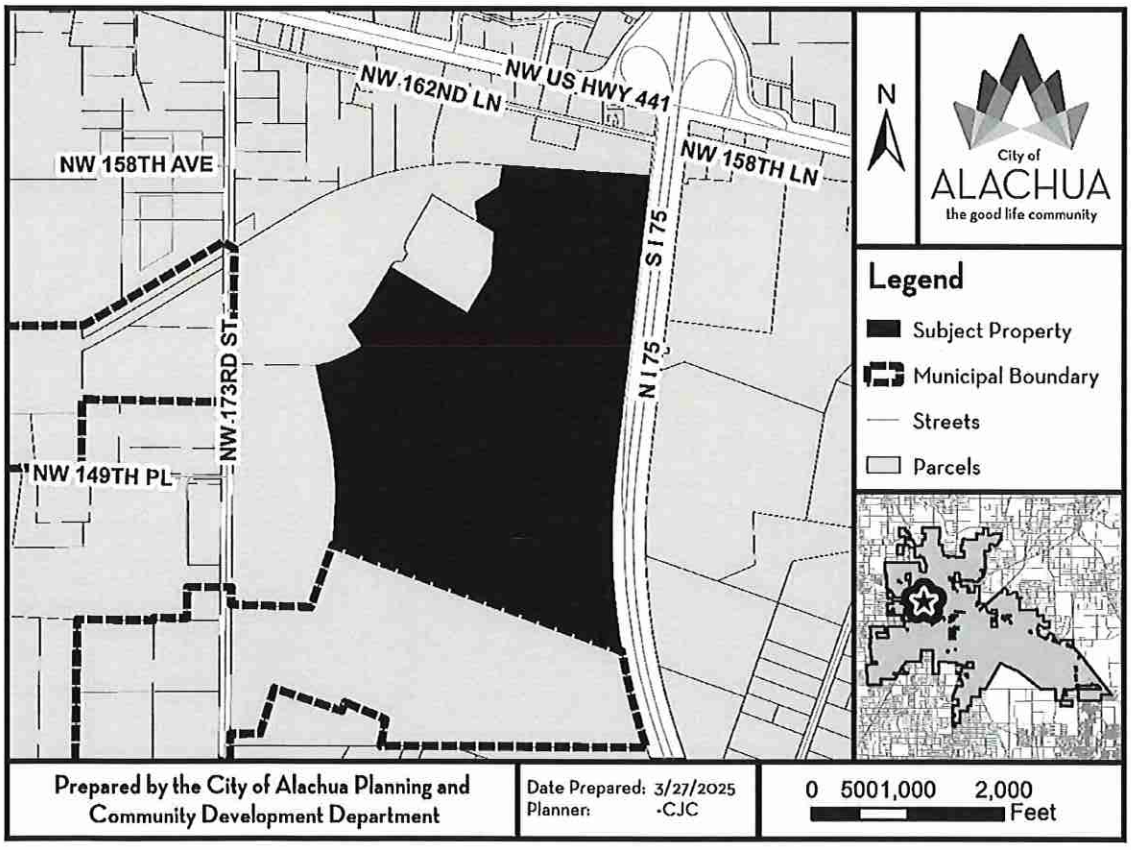

ACKLEY ROBERT L & MARY J
15817 NW 173RD ST
ALACHUA, FL 32615

ALACHUA 441/235 LLC
496 S HUNT CLUB BLVD
APOPKA, FL 32703

ALACHUA COUNTY
PO BOX 2877
GAINESVILLE, FL 32602

MAILED
MAR 3 1 2025

BLACK NANCY BURGESS
6827 41ST ST NW APT 121
WASHINGTON, DC 20012

BRADLEY & WILLIAMS
16919 NW 162ND LN
ALACHUA, FL 32615

CITY OF ALACHUA
15100 NW 142ND TER
ALACHUA, FL 32615

M3 ALACHUA LLC
1276 MINNESOTA AVE
WINTER PARK, FL 32789

CAMPBELL MENZIE G
16903 NW 162ND LN
ALACHUA, FL 32615

CORNERSTONE ALACHUA LLC
426 SW COMMERCE DR STE 130
LAKE CITY, FL 32025

M & L 441 LLC
1113 OLD POPO POINT
ST JOHNS, FL 32259

ROUX JOHN P
PO BOX 1673
ALACHUA, FL 32616

SINGH LAKHVIR
PO BOX 2092
ALACHUA, FL 32616

ALACHUA HOLDINGS LTD
PO BOX 1990
ALACHUA, FL 32616

ALSPAUGH & BROWN TRUSTEE & DIXO
% HIMMERLRICH AND COMPANY
898 SW 21ST ST
BOCA RATON, FL 33486

BURGESS & BURGESS
15008 NW 173RD ST
ALACHUA, FL 32615

CITY OF ALACHUA
PO BOX 9
ALACHUA, FL 32616

DELOACH VIRGIL C & HOLLY H
PO BOX 532
FT WHITE, FL 32038

FIRST STREET GROUP L C
PO BOX 1990
ALACHUA, FL 32616

HARKINS JAMES E JR & RENEE
PO BOX 6307
MARIANNA, FL 32447

MAKENNA PARKER HOMES LLC
2714 SW 130TH TER
ARCHER, FL 32618

MALBEC II LLC
100 S BISCAYNE BLVD SUITE 900
MIAMI, FL 33131

MALLARD MITCHELL E & ESTHER R
14614 NW 173RD ST
ALACHUA, FL 32615

SHIRES CYNTHIA H
PO BOX 1259
ALACHUA, FL 32616

VICKORY WILLIAM A & SUSAN S
15404 NW 173RD ST
ALACHUA, FL 32615

VICKORY WILLIAM HENRY LIFE ESTATE
15310 NW 173RD ST
ALACHUA, FL 32615

ALL AMERICAN OIL LLC
380 COMMERCE PARKWAY
ROCKLEDGE, FL 32955

CATA LIGHTS CORP
630 VASSAR ST #2506
ORLANDO, FL 32804

CAVACEPPI SHARLEEN O TRUSTEE
PO BOX 1325
ALACHUA, FL 32616

CHASING CHICKEN 2 INC
501 E TENNESSEE ST A
TALLAHASSEE, FL 32308

DWARKADHISH INVESTMENTS INC
1800 S ATLANTIC AVE
DAYTONA BEACH, FL 32118

AVERY 5960 Easy Peel® Address Labels Bend along line to expose Pop-up Edge® Go to avery.com/templates Use Avery Template 5160

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MAR 3 1 2025

FDOT RIGHT OF WAY DEPT
MAIL STATION 2020 1109 S MARION AVE
LAKE CITY, FL 32025

HOOVER RESTAURANTS LLC
4030 JOHNS CREEK PARKWAY
SUWANEE, GA 30024

IMPERIAL AIRPORT
489 CROCKER SPERRY DR
MONTECITO, CA 93108

JP & KP LLC
11149 CONISTON WAY
WINDERMERE, FL 34786

LE STORE LLC
22211 W NEWBERRY RD
NEWBERRY, FL 32669

MCDONALD'S CORP (009/0551)
C/O JUAN PRADO
6625 VAN DYKE RD
LUTZ, FL 33558

MOHAN-LERRA FAMILY PARTNERSHIP
16715 NW 129TH TER
ALACHUA, FL 32615

NORTH FLORIDA REGIONAL MEDICAL
PO BOX 80610
INDIANAPOLIS, IN 46280

SARCAV LLC
8303 AUTUMWIND DR
JACKSONVILLE, FL 32218

SARCAV LLC
C/O SILVIO CAVACEPPI
8303 AUTUMNWIND DR
JACKSONVILLE, FL 32218

SHREE LAXMI NARAYAN INC
1800 S ATLANTIC AVE
DAYTONA BEACH, FL 32118

TLC PROPERTIES INC
2065 NW 57TH ST
OCALA, FL 34475

TOMOKA HILLS FARMS INC
1301 DIXIANA DOMINO RD
LEXINGTON, KY 40511

TOWER HILL INSURANCE GROUP LLC
7201 NW 11TH PL
GAINESVILLE, FL 32605

ALACHUA COUNTY
12 SE 1ST ST
GAINESVILLE, FL 32601

THOMAS & THOMAS & THOMAS HEIRS
312 MCBRIEN RD APT 423
CHATTANOOGA, TN 37411

City Manager
Mike DaRoza
PO Box 9
Alachua FL 32615

County Manager
Michele L. Lieberman
12 SE 1st Street
Gainesville FL 32601

Antoinette Endelicato
5562 NW 93rd Ave
Gainesville FL 32653

Assistant Director Planning
Linda Dixion, AICP
PO Box 115050
GAINESVILLE FL 32611

Tamara Robins
PO Box 2317
Alachua FL 32616

Lynda Coon
7216 NW 126 Ave
Alachua FL 32615

Joseph & Phyllis Strickland
14103 NW 156th Place
Alachua FL 32615

Jean Calderwood
14095 NW 174th Ave
Alachua FL 32615

Lynn Horton
19005 NW 138th Ave
Alachua FL 32615

Stephen Hoffstetter
14 NE 1st Street
Gainesville, FL 32601

Pat: avery.com/patents Étiquettes d'adresse Easy Peel® Repliez à la hachure afin de révéler le rebord Pop-up Allez à avery.ca/gabarits Utilisez le

AFFIDAVIT FOR POSTED LAND USE SIGN

I, Ethan Vroonland, POSTED THE LAND USE SIGN(S)
(Print Name)

ON 3/31/2025 FOR THE Tomoka Hills Golf Course Site Plan
(Date) (Project name & type of action)

LAND USE ACTION AS PER ARTICLE 2.2.9(D) OF THE LAND DEVELOPMENT

REGULATIONS. THIS WILL BE INCLUDED IN THE STAFF REPORT.

(Signature)

Six
(Number of signs)

City of ALACHUA
the good life community

PSP24-0014

IMPORTANT INFORMATION REGARDING POSTED NOTICE SIGNS

Pursuant to Section 2.2.9(D) of the City's Land Development Regulations, posted notice signs must be placed on the land that is the subject of the application, along each street which is adjacent to or runs through the land in a manner that makes them clearly visible. Signs shall be posted at intervals of not more than 400 feet when the land subject to the application has less than 1,500 feet of road frontage. When the land subject to the application has 1,500 feet or more of road frontage, signs shall be posted at intervals of not more than 1,320 feet.

Signs shall be inspected by the City subsequent to their posting. The applicant shall be responsible for ensuring that the posted notice is maintained on the land subject to the application until the completion of the final public hearing on the application.

SIGNS MUST BE REMOVED BY THE APPLICANT WITHIN TEN DAYS AFTER THE FINAL DECISION ON THE APPLICATION

N

0 500 1,000 2,000 Feet

Legend

Sign Locations

Prepared by the City of Alachua
Planning & Community Development Department

Date Prepared: 3/27/2025
Planner: -CJC

DISCLAIMER: Data is provided "as is" without warranty of any representation of accuracy, timeliness, or completeness. The burden of determining accuracy, timelineness, or completeness for use rests solely on the requestor. The City makes no warranties, expressed or implied, as to the use of the data. The requestor acknowledges and accepts the limitations of the data, including the fact that the data is dynamic and in a constant state of maintenance, correction, and update.

CITY OF ALACHUA

NOTICE OF LAND USE DEVELOPMENT ACTION

PUBLIC HEARING(S) ARE SCHEDULED TO CONSIDER THE FOLLOWING:

PROJECT NAME: Tomoka Hills Golf Course **APPLICATION NO.:** PSP24-0014

APPLICATION TYPE: Site Plan **CURRENT ZONING:** Agricultural (A)

NATURE/SCOPE OF PROPOSAL: Site plan for an 18-hole private golf course, associated maintenance facilities, and associated site improvements

DATE OF PUBLIC HEARING(S): April 15, 2025 **AT** 6:00 **PM**

_____ **AT** _____ **PM**

_____ **AT** _____ **PM**

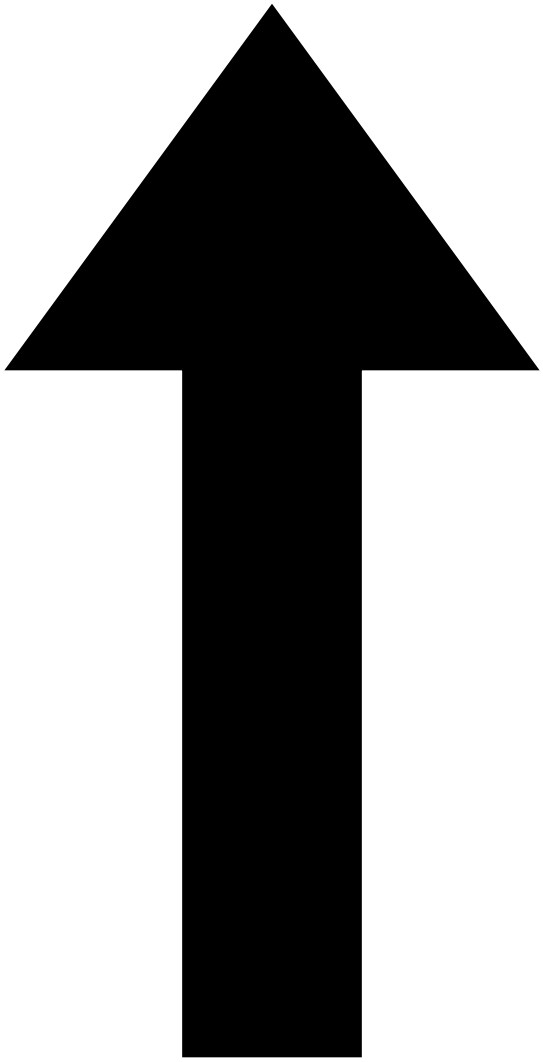
LOCATION OF PUBLIC HEARING(S):
ALACHUA CITY HALL - 15100 NW 142ND TERRACE

FOR MORE INFORMATION CONTACT:
CITY OF ALACHUA PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT

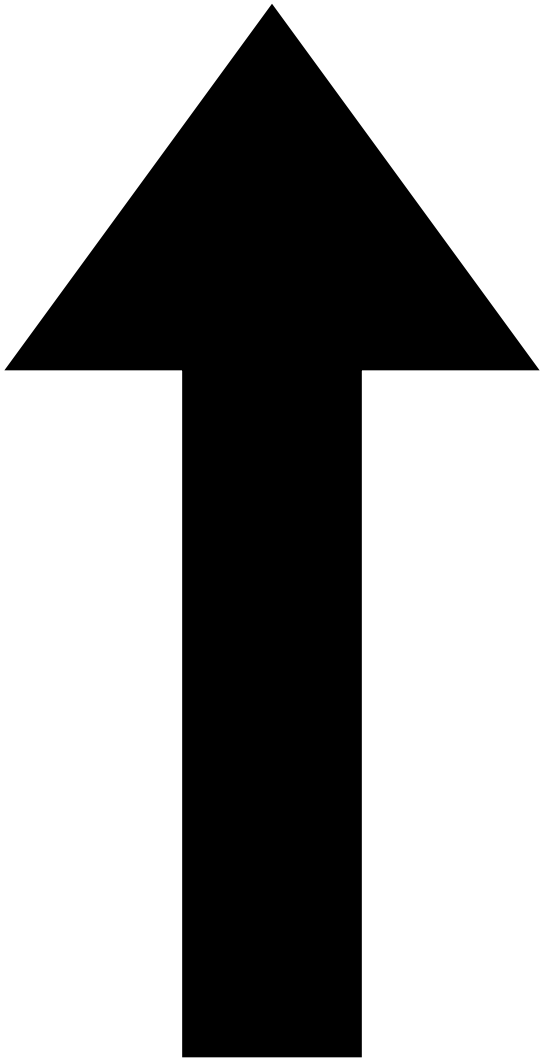
386-418-6121

planning@cityofalachua.com

ALL INTERESTED PARTIES MAY APPEAR AT THE PUBLIC HEARING(S) AND BE HEARD WITH RESPECT TO THE APPLICATION.COPIES OF THE APPLICATION, STAFF REPORT, AND RELATED MATERIALS ARE AVAILABLE FOR PUBLIC INSPECTION AT THE PLANNING & COMMUNITY DEVELOPMENT, 15100 NW 142ND TERRACE, ALACHUA, FLORIDA, ON ANY REGULAR BUSINESS DAY DURING NORMAL BUSINESS HOURS. WRITTEN COMMENTS MAY BE SENT TO: CITY OF ALACHUA, PLANNING & COMMUNITY DEVELOPMENT, P.O. BOX 9, ALACHUA FL 32616. NOTICE IS GIVEN PURSUANT TO SECTION 286.0105, FLORIDA STATUES, THAT, IN ORDER TO APPEAL ANY DECISION MADE AT THE PUBLIC HEARING(S), YOU WILL NEED A RECORD OF THE PROCEEDINGS, AND THAT, FOR SUCH PURPOSE, YOU MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE, WHICH INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS BASED. IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT, ANY PERSONS WITH A DISABILITY REQUIRING REASONABLE ACCOMMODATION IN ORDER TO PARTICIPATE IN THIS MEETING SHOULD CALL THE CITY CLERK AT (386) 418-6100 x 1501 AT LEAST 48 HOURS PRIOR TO THE PUBLIC HEARING(S).



Site Located Approximately 500 Feet South



Site Located Approximately 1,000 Feet East

Carson J. Crockett, AICP Candidate
Planner, Planning and Community Development Department

Carson J. Crockett, AICP Candidate, is a Planner for the City of Alachua. He supports the functions of the Planning and Community Development Department, assists in the development review process and regularly communicates with members of the public. Crockett holds a master's degree in Urban and Regional Planning from the University of Florida, and he is currently working toward an American Institute of Certified Planners (AICP) certification.

EDUCATION

University of Florida
Bachelor of Science in Sustainability and the Built Environment
Graduated: April 2022
Master of Urban and Regional Planning
Graduated: May 2023

St. Petersburg Collegiate High School
High School Diploma
Graduated: May 2019

WORK EXPERIENCE

City of Alachua, Florida | Planner | Jun 2023-Present
15100 NW 142nd Ter, Alachua, Fl 32615 | (386) 418-6121

George F. Young, Inc. | Planning Intern | May-Aug 2021 and 2022
299 Dr. Martin Luther King Jr. St N, Saint Petersburg, Fl 33701 | (727) 822-4317

PROFESSIONAL ORGANIZATIONS

American Planning Association | San Felasco Section, Florida Chapter
Member | Nov 2020-Present
Student Planning Association | University of Florida
Member | August 2020-May 2023

CERTIFICATES AND OTHER SKILLS

AICP Candidate | Nov 2023-Present
ArcGIS Pro | Competent
ArcGIS Desktop | Competent
Microsoft Office Certified | Word PowerPoint | Excel

Robert's Rules of Order | Proficient
Public Speaking | Proficient

Alachua County
Board of County Commissioners

Michele Lieberman
County Manager

April 4, 2025

City Manager Mike DaRoza
City of Alachua
15100 NW 142 Terrace
Alachua, FL 32615

via email: mdaroza@cityofalachua.org

Re: Affected Party Status at the City's April 15, 2025, Planning and Zoning Board hearing

Dear Mr. DaRoza,

The Alachua County Board of County Commissioners appreciates the City of Alachua's continued dedication to sound planning and protection of our community's shared water resources. In furtherance of these shared interests, and pursuant to Section 2.3.1 of the City's Land Development Regulations, the County hereby requests affected party status and the opportunity to present testimony and evidence for the Tomoka Hills Golf Course site plan application on the City's Planning and Zoning Board's April 15, 2025 agenda.

The County is a substantially affected party due to its receivership and operation of the public water utility named the Santa Fe Hills Water System and its status as the beneficial holder of a conservation easement covering approximately 198 acres of Camp Kulaqua in northwestern Alachua County. In 2005 and 2006, a dye trace study was performed in the Mill Creek Sink area and demonstrated the direct hydrological connection between Mill Creek Sink and the Santa Fe Hills Water System, as well as Camp Kulaqua. Impacts to the Mill Creek Sink from the water consumption associated with the proposed Tomoka Hills Golf Course development could more directly or more significantly harm the County's property interests when compared to the general impacts on the public at large. A copy of the dye trace study is attached to this correspondence for your review, as well as a related letter to Suwannee River Water Management District regarding the proposed consumptive use permit associated with the project. Please advise regarding any requirements on affected parties for submitting proposed evidence prior to the hearing on the Tomoka Hills Golf Course, including any applicable timelines.

The County has data and analysis regarding the sensitivity of Mill Creek Sink and its associated watershed, and the connection of this system to our shared springs and aquifer, that can be shared and presented at the hearing on April 15, 2025.

12 SE 1st Street ■ Gainesville, Florida 32601
Tel: (352) 374-5204
www.alachuacounty.us

If you have any questions, please contact me or Stephen Hofstetter, Director of our Environmental Protection Department. I look forward to hearing from you and working together to preserve our community and protect our water resources.

Sincerely,

Michele Lieberman,
County Manager

Attachments - 2

cc: Board of County Commissioners
Sylvia Torres, County Attorney
Stephen Hofstetter, County Environmental Protection Department Director
Marian Rush, City Attorney

Commission Agenda Item

MEETING DATE: April 15, 2025

SUBJECT: ADMIN - Mixed-Use Staff-Initiated Text Amendment to the City of Alachua Land Development Regulations - A request by the City of Alachua, applicant, for consideration of a text amendment to the City of Alachua Land Development Regulations: amending Article 2, Administration, relating to the powers and duties of the Planning and Zonning Board; amending Article 3, Zone Districts, relating to the permitted density and intensity and purposes of the business districts; amending Article 4, Use Regulations, relating to use specific standards and the creation of mixed-use specific standards; amending Article 5, Density, Intensity, and Dimensional Standards, relating to the permitted density and intensity of the business districts and establishing dimensional standards for mixed-use development; amending Article 6, Development Standards, relating to off-street parking and loading standards and tree protection and landscaping standards for mixed-use development; and amending Article 10, Definitions, relating to the definitions of "development area" and "mixed-use"; (Legislative Hearing).

PREPARED BY: Carson Crockett

RECOMMENDED ACTION:

Staff recommends that the Planning & Zoning Board find the proposed text amendment to the City of Alachua Land Development Regulations to be consistent with the City of Alachua Comprehensive Plan and in compliance with the City's Land Development Regulations and transmit such findings to the City Commission with a recommendation to approve.

Recommended Motion: *I move that, based upon the competent substantial evidence presented at this hearing, the presentation before this Board, and Staff's recommendation, this Board finds the proposed text amendment to the City of Alachua Land Development Regulations to be consistent with the City of Alachua Comprehensive Plan and in compliance with the City's Land Development Regulations and transmit such findings to the City Commission with a recommendation to approve.*

Summary

The City of Alachua Fiscal Year 2025 Strategic Plan was adopted by the City Commission on September 23, 2024, renewing Strategic Initiative 4.2 with higher priority to "develop strategies to ensure cohesive and compatible residential development to accommodate the growth of infill development and redevelopment within the City." Strategic Initiative 4.2 directs the

Planning & Community Development Department to "complete the public hearing process for Staff-initiated Comprehensive Plan and LDR text amendments which will allow for more residential development to occur in areas designated as non-residential" and to "revise dimensional tables to increase densities and intensities in a targeted manner, and promote mixed-use development with a residential component."

On December 9, 2024, the City Commission adopted Ordinance 24-12, establishing mixed-use future land use categories in the City of Alachua Comprehensive Plan. This proposed text amendment to the City's Land Development Regulations implements the mixed-use future land use categories adopted by Ordinance 24-12 in the Comprehensive Plan by establishing mixed-use specific development standards, including use-specific standards, density and intensity standards, and dimensional standards in the City's Land Development Regulations.

The proposed text amendment to the Land Development Regulations also furthers the desired outcome of Strategic Initiative 4.2: to "ensure infill development and redevelopment occurs alongside greenfield and existing residential development in a cohesive manner." Staff researched and considered different strategies from various peer communities across Florida.

Summary of Proposed Amendment

1. **Article 2, Administration**
    1. **Amend Section 2.1.3(A)**, *Designation as the local planning agency*, to clarify the powers and duties of the Planning and Zoning Board to be completed with the assistance of the Planning and Community Development Department.

2. **Article 3, Zone Districts**
    1. **Amend Table 3.1-1.**, *Establishment of Base Zone Districts*, to include density standards specific to mixed-use development in the OR, CN, CC, and CBD zone districts; to establish density standards for the CI and ILW zone districts; and to establish intensity standards specific to mixed-use development.
    2. **Amend Section 3.5**, *Business Districts*, to reflect the addition of mixed-use development in the purposes of the business zone districts and for consistency with amended Table 3.1-1.

3. **Article 4, Use Regulations**
    1. **Amend Section 4.2.1(C)**, *Developments with multiple principal uses*, to reflect the addition of mixed-use development.
    2. **Amend Section 4.3**, *Use specific standards*, to permit multiple-family dwellings, single-family attached dwellings, townhomes, and two- to four-family dwellings in the CI zone district without requiring the presence of affordable housing units.
    3. **Amend Section 4.3**, *Use specific standards*, to ensure that any compatible business uses that co-locate with residential uses in a mixed-use development are exempt from separation requirements from said residential uses within the mixed-use development.

4. **Establish Section 4.7**, *Mixed-use specific standards*, to establish criteria that a development must meet to be classified as mixed-use development for the purposes of the Land Development Regulations.
5. **Establish Section 4.7**, *Mixed-use specific standards*, to provide additional standards for mixed-use developments, including off-street parking, building orientation, and protections for buildings adjacent to single-family detached development.

4. **Article 5, Density, Intensity, and Dimensional Standards**
    1. **Establish Table 5.1-4**, *Table of Dimensional Standards for Mixed-Use Developments in the Business Zoning Districts*, to establish dimensional standards specific to mixed-use development.

5. **Article 6, Development Standards**
    1. **Amend Section 6.1.4(B)** to include a new required off-street parking reduction of 25% for mixed-use developments located in the OR, CN, or CC zone districts.
    2. **Amend Section 6.2.2**, Landscaping standards, to establish mixed-use development landscape standards.
    3. **Amend Section 6.2.2(D)(3)**, *Perimeter buffers*, to ensure any conflict between land uses in a mixed-use development results in the greater perimeter buffer being provided.

6. **Article 10, Definitions**
    1. **Amend Definition** for “development area” to apply to both mixed-use development and conservation subdivisions.
    2. **Amend Definition** for “mixed-use” to refer to the criteria established in new Section 4.7, *Mixed-use specific standards*.

FINANCIAL IMPACT

ADDITIONAL FINANCIAL INFORMATION

ATTACHMENTS

1. Staff Report & Draft Ordinance
2. Public Notice Materials
3. Carson J. Crockett, AICP Candidate - Resume on File

City of Alachua

Planning & Community Development Department

Staff Report

Planning & Zoning Board Hearing Date: April 15, 2025
Legislative Hearing **Staff-Initiated**

SUBJECT: A Staff-initiated text amendment to the City of Alachua Land Development Regulations: amending Article 2, *Administration,* relating to the powers and duties of the Planning and Zoning Board; amending Article 3, *Zone Districts*, relating to the permitted density and intensity and purposes of the business districts; amending Article 4, *Use Regulations*, relating to use specific standards and the creation of mixed-use specific standards; amending Article 5, *Density, Intensity, and Dimensional Standards*, relating to the permitted density and intensity of the business districts and establishing dimensional standards for mixed-use development; amending Article 6, *Development Standards*, relating to off-street parking and loading standards and tree protection and landscaping standards for mixed-use development; and amending Article 10, *Definitions*, relating to the definitions of "development area" and "mixed-use."

APPLICANT/AGENT: City of Alachua

PROJECT PLANNER: Carson J. Crockett, AICP Candidate

RECOMMENDATION: Staff recommends that the Planning & Zoning Board find the proposed text amendment to the City of Alachua Land Development Regulations to be consistent with the City of Alachua Comprehensive Plan and in compliance with the City's Land Development Regulations and transmit such findings to the City Commission with a recommendation to approve.

RECOMMENDED MOTION: *I move that, based upon the competent substantial evidence presented at this hearing, the presentation before this Board, and Staff's recommendation, this Board finds the proposed text amendment to the City of Alachua Land Development Regulations to be consistent with the City of Alachua Comprehensive Plan and in compliance with the City's Land Development Regulations and transmit such findings to the City Commission with a recommendation to approve.*

SUMMARY

The City of Alachua Fiscal Year 2025 Strategic Plan was adopted by the City Commission on September 23, 2024, renewing Strategic Initiative 4.2 with higher priority to "develop strategies to ensure cohesive and compatible residential development to accommodate the growth of infill development and redevelopment within the City." Strategic Initiative 4.2 directs the Planning & Community Development Department to "complete the public hearing process for Staff-initiated Comprehensive Plan and LDR text amendments which will allow for more residential development to occur in areas designated as non-residential" and to "revise dimensional tables to increase densities and intensities in a targeted manner, and promote mixed-use development with a residential component."

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The proposed text amendment to the Land Development Regulations also furthers the desired outcome of Strategic Initiative 4.2: to "ensure infill development and redevelopment occurs alongside greenfield and existing residential development in a cohesive manner." Staff researched and considered different strategies from various peer communities across Florida.

Mixed-Use Development

A mixed-use development is a development that combines multiple types of land uses (such as residential, commercial, industrial, institutional, etc.) into one building or distinct area[1]. Mixed-use development differs from traditional development where residential, commercial, industrial, institutional, and other uses are segregated into distinct development areas and buildings. The proposed text amendment does not change the type or style of development currently permitted in the City; rather, the amendment adds a new option for development in the City, potentially promoting and encouraging added flexibility in infill development opportunities, in diversifying housing stock, and in local businesses opportunities.

Existing residential protection and environmental protection standards will not be altered by this proposed amendment. This amendment only proposes the addition of mixed-use developments in the Office Residential (OR), Neighborhood Commercial (CN), Community Commercial (CC), Central Business District (CBD), Commercial Intensive (CI), Planned Development – Residential (PD-R), Planned Development - Commercial (PD-COMM), Planned Development – Traditional Neighborhood (PD-TND), and Planned Development – Employment Center (PD-EC) zone districts (see Figure 1.). Additionally, no amendments to Table 4.1-1., *Table of Allowed Uses*, are proposed. Uses must be permitted by the applicable future land use category and zone district to be part of a mixed-used development.

[1] Davidson, M., & Dolnick, F. (2004). *A Planner's Dictionary.* Chicago: American Planning Association.

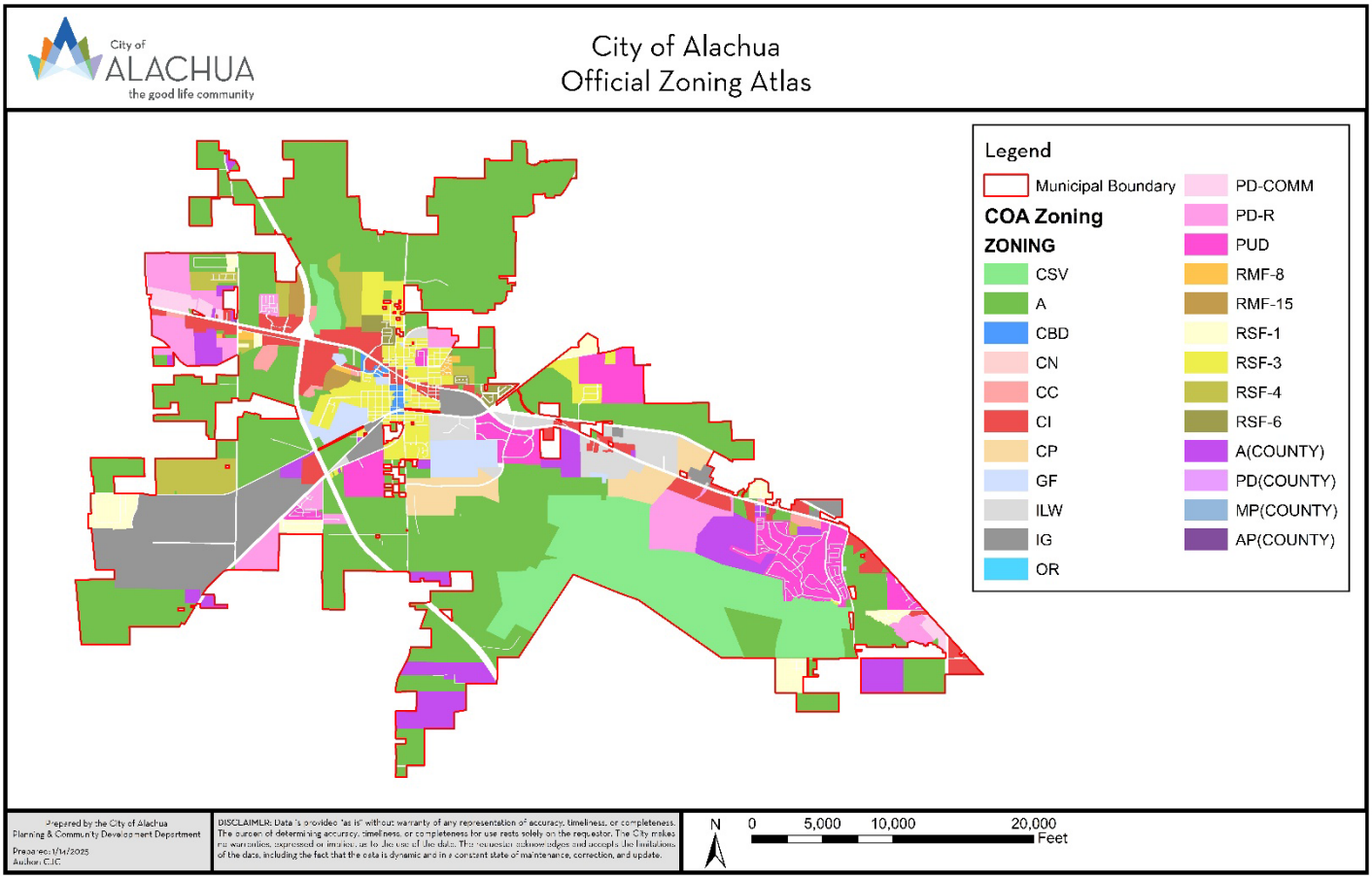

Figure 1. Official Zoning Atlas

Summary of Proposed Amendment

The text amendment in full is identified in the next section of this report. Summarized, the proposed text amendment is as follows:

1. **Article 2, Administration**
    a. **Amend Section 2.1.3(A)**, *Designation as the local planning agency*, to clarify the powers and duties of the Planning and Zoning Board to be completed with the assistance of the Planning and Community Development Department.
2. **Article 3, Zone Districts**
    a. **Amend Table 3.1-1.**, *Establishment of Base Zone Districts*, to include density standards specific to mixed-use development in the OR, CN, CC, and CBD zone districts; to establish density standards for the CI and ILW zone districts; and to establish intensity standards specific to mixed-use development.

b. **Amend Section 3.5**, *Business Districts*, to reflect the addition of mixed-use development in the purposes of the business zone districts and for consistency with amended Table 3.1-1.

3. **Article 4, Use Regulations**
   a. **Amend Section 4.2.1(C)**, *Developments with multiple principal uses*, to reflect the addition of mixed-use development.
   b. **Amend Section 4.3**, *Use specific standards*, to permit multiple-family dwellings, single-family attached dwellings, townhomes, and two- to four-family dwellings in the CI zone district without requiring the presence of affordable housing units.
   c. **Amend Section 4.3**, *Use specific standards*, to ensure that any compatible business uses that co-locate with residential uses in a mixed-use development are exempt from separation requirements from said residential uses within the mixed-use development.
   d. **Establish Section 4.7**, *Mixed-use specific standards*, to establish criteria that a development must meet to be classified as mixed-use development for the purposes of the Land Development Regulations.
   e. **Establish Section 4.7**, *Mixed-use specific standards*, to provide additional standards for mixed-use developments, including off-street parking, building orientation, and protections for buildings adjacent to single-family detached development.
4. **Article 5, Density, Intensity, and Dimensional Standards**
   a. **Establish Table 5.1-4**, *Table of Dimensional Standards for Mixed-Use Developments in the Business Zoning Districts*, to establish dimensional standards specific to mixed-use development.
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   a. **Amend Section 6.1.4(B)** to include a new required off-street parking reduction of 25% for mixed-use developments located in the OR, CN, or CC zone districts.
   b. **Amend Section 6.2.2**, Landscaping standards, to establish mixed-use development landscape standards.
   c. **Amend Section 6.2.2(D)(3)**, *Perimeter buffers*, to ensure any conflict between land uses in a mixed-use development results in the greater perimeter buffer being provided.
6. **Article 10, Definitions**
   a. **Amend Definition** for "development area" to apply to both mixed-use development and conservation subdivisions.
   b. **Amend Definition** for "mixed-use" to refer to the criteria established in new Section 4.7, *Mixed-use specific standards*.

PROPOSED LAND DEVELOPMENT REGULATIONS TEXT AMENDMENT

Text that is underlined is to be added and text that is shown as ~~strikethrough~~ is to be removed.

ARTICLE 2 ADMINISTRATION

2.1.3 *Planning and Zoning Board (PZB).*

(A) *Designation as the local planning agency.* The Planning and Zoning Board (PZB) is authorized by the City Commission as the local planning agency (LPA), and in that role shall, with the assistance of the Planning and Community Development Department~~have the following powers and duties~~:

(1) *Acquire and maintain information to understand trends and conditions.* Acquire and maintain such information and materials as are necessary to gain an understanding of past trends, present conditions and forces at work to cause changes in these conditions. Such information and materials may include maps and photographs of manmade and natural physical features of the areas subject to the Comprehensive Plan, statistics on past trends and present conditions with respect to population, property values, economic base, land use and such other information as is important or likely to be important in determining the amount, direction and kind of development to be expected in the areas subject to the Comprehensive Plan.

(2) *Make recommendations to City Commission on Comprehensive Plan.* Prepare, update, and recommend to the City Commission and from time to time amend the Comprehensive Plan for meeting present requirements and such future requirements as may be foreseen.

(3) *Recommend principles and policies for guiding actions.* Recommend principles and policies for guiding action affecting development in the City.

(4) *Prepare and recommend land development regulations.* Prepare and make recommendations to the City Commission on proposed land development regulations, land development codes, ordinances, regulations, and other proposals promoting orderly development along the lines indicated as desirable by the Comprehensive Plan.

(5) *Review developments for consistency with Comprehensive Plan.* Determine whether specific proposed developments conform to the principles and requirements of the Comprehensive Plan.

(6) *Public hearings.* Conduct such public hearings as may be required to gather information necessary for the drafting, establishment, and maintenance of the Comprehensive Plan and ordinances, codes, and regulations related to it and establish public committees when deemed necessary for the purpose of collecting and compiling information necessary for the plan, or for the purpose of promoting the accomplishment of the plan in whole or in part.

(7) *Special studies.* Make or cause to be made any necessary special studies on the location, adequacy, and conditions of specific facilities which are subject to the Comprehensive Plan. These may include but are not limited to studies on housing, commercial and industrial conditions and facilities, recreation, public and private utilities, roads and traffic, transportation, parking and the like.

(8) *Advise City Commission.* Keep the City Commission informed and advised on preceding matters.

(9) *Operate in conformity with Charter.* Operate in conformity with the Charter and other ordinances of the City, unless the Charter and/or the ordinances are inconsistent with F.S. ch. 166.

(10) *Other duties.* Perform such other duties as may be lawfully assigned to it, or which may have bearing on the preparation or implementation of the Comprehensive Plan.

(B) *Designation as the Historic Preservation Agency.* The PZB shall serve as the City's Historic Preservation Agency to implement the policies and responsibilities related to historic presentation in the Comprehensive Plan and these LDRs.

(C) *Powers and duties.* The PZB is authorized by the City Commission with the following powers and duties under these LDRs:

(1) *Special exception permits.* To review and make recommendations to the City Commission on special exception permit applications for a building greater than 80,000 square feet in area, and to review and decide applications for all other special exception permit applications (Section 2.4.4).

(2) *Certificate of appropriateness.* To review and decide applications for certificates of appropriateness (major review) (Section 2.4.6).

(3) *Site plan.* To review and make recommendations to the City Commission on site plan applications consisting of a building greater than or equal to 80,000 square feet in area (Section 2.4.9(D)(2)(c)), and to review and decide applications for site plan applications consisting of a building less than 80,000 square feet in area (Section 2.4.9(D)(2)(b)).

(4) *Amendments to LDR text.* To initiate, review, and make recommendations to the City Commission to approve or deny applications to amend the text of these LDRs (Section 2.4.1, Text amendment).

(5) *General amendments to Official Zoning Atlas.* To initiate, review, and make recommendations to the City Commission to approve or deny applications to general amendments to the Official Zoning Atlas (Section 2.4.1).

(6) *Site-specific amendments to Official Zoning Atlas (rezone).* To initiate, review, and make recommendations to the City Commission to approve or deny applications to for site-specific amendments to the Official Zoning Atlas (rezone) (Section 2.4.2).

(7) *Planned development.* To review and make recommendations to the City Commission on PD Master Plans and amendments to the Official Zoning Atlas to a planned development (PD) district (Section 2.4.3).

(8) *Historic Overlay (HO) District classification.* To initiate, review, and make recommendations to the City Commission to approve or deny amendments to the Official Zoning Atlas to apply a Historic Overlay (HO) Zone District classification (Section 2.4.5).

(9) *Subdivision variance permits.* To review and make recommendations to the City Commission on subdivision variance permits (Section 2.4.7(D)).

(10) *Minor subdivisions.* To review and make recommendations to the City Commission on minor subdivisions (Section 2.4.10(F)).

(11) *Major subdivision preliminary plats.* To review and make recommendations to the City Commission on major subdivision preliminary plats (Section 2.4.10(G)).

(12) *Special permit.* To review and make recommendations to the City Commission on special permits (Section 2.4.16).

(13) *Wellfield exemption permits.* To review and make recommendations to the City Commission on wellfield exemption permits (Section 2.4.24).

(14) *Development agreements.* To review and make recommendations to the City Commission on development agreements (Section 2.5).

(15) *Make special knowledge and expertise available.* To make its special knowledge and expertise available upon written request and authorization of the City Commission to any official, department, board, commission or agency of the City.

(16) *Studies.* To make studies of the resources, possibilities and needs of the City upon the authorization of the City Commission, and report its findings and recommendations, with reference thereto, to the City Commission.

(17) *Annual review of Capital Improvement Plan.* To receive and review ~~conduct an annual review of~~ the capital improvement element of the Comprehensive Plan annually to ensure that the fiscal resources necessary to maintain adopted level of service standards are available.

(D) *Membership.*

(1) *Number.* The PZB shall consist of six members: five voting members and one nonvoting member appointed by the School Board of Alachua County.

(2) *Appointment.* Each voting member shall be appointed by the City Commission.

(3) *Other office.* No voting member shall hold another municipal office or be an employee of the City.

(4) *Terms of office.*

(a) Terms of office shall be three years.

(b) A member shall continue to serve until the member is reappointed or replaced.

(5) *Resignation.* Any member who resigns prior to the end of the member's term shall do so in writing to the Chair.

(6) *Removal.* Any member shall be removed for more than three unexcused absences during any calendar year.

(7) *Filling of vacancy.*

(a) When a vacancy occurs due to expiration of term or removal, the City shall advertise to fill the vacancy through a public posting and in a newspaper of general circulation at least 14 days prior to the date of expiration. The City Commission shall fill the vacancy from among the applications received.

(b) Vacancies occurring other than through expiration of a term shall be filled for the unexpired term by appointment from the City Commission.

(8) *Compensation.* The members of the PZB shall serve without compensation, except that the City Commission may prescribe a per diem for attendance at meetings.

(9) *Filing of financial disclosure form.* Members of the Planning and Zoning Board shall file the appropriate financial disclosure forms as required by the State of Florida.

(E) *Chair and other officers.*

(1) *Generally.* The PZB shall elect a Chair and Vice-Chair from among the appointed members and create and fill such other of its offices as it may determine.

(2) *Term of office.* The term of office of the Chair or Vice-Chair shall be one year, and there shall be no limits placed on the number of consecutive terms as Chair or Vice-Chair.

(3) *General duties.*

(a) The Chair shall preside at all meetings of the PZB, decide all points of order on procedure, compel the attendance of witnesses, and take such action as shall be necessary to preserve the order and integrity of all proceedings before the PZB.

(b) In the absence of the Chair, the Vice-Chair shall act as Chair and shall have all powers of the Chair. In the absence of the Chair and Vice-Chair, the most senior PZB member shall act as Chair and shall have the powers of the Chair.

(F) *Staff.* The LDR Administrator shall serve as the secretary and professional staff to the PZB and provide it with administrative support.

(G) *Meetings.*

(1) *Monthly meetings.* The PZB shall hold at least one regular meeting in each month, if necessary.

(a) *Special meetings.* In addition to its regular meetings, the PZB may meet at the call of the Chair or within 30 days after receipt of a matter to be acted upon by the PZB, or at the written request of one member submitted to the LDR Administrator for the Chair's consideration.

(b) *Quorum.* No meeting of the PZB shall be called to order, nor may any business be transacted by the PZB, without a quorum consisting of three voting members being present. If at any time during a public meeting or public hearing a quorum is lost, it shall be stated in the minutes and no final action on a matter shall be taken by the PZB.

(c) *Decisions.* The concurring vote of a simple majority of a quorum in attendance and voting shall be necessary to pass any motion of the PZB.

(d) *Abstention.* Any PZB member with a private or personal interest in matters coming before the PZB shall declare such interest and abstain from all participation regarding that matter. No member of the PZB shall appear before the PZB as an agent or attorney representing another person.

(e) *Open to the public.* All meetings of the PZB shall be open to the public.

(f) *Official record.*

(i) The PZB shall adopt rules for the transaction of business and shall keep a record of its recommendations, transactions, findings, and determinations.

(ii) Such record shall be a public record, and shall be maintained in the office of the LDR Administrator.

(g) *Disbursement of funds.* Funds may be appropriated by the City Commission in connection with the work of the PZB as determined necessary by the City Commission.

(H) *Rules.* The PZB shall establish written rules for its operation in accordance with these LDRs and any applicable State laws, which shall be made available to the public.

(I) *Assistance to PZB.* All employees of the City and public officials shall, upon written request, furnish to the PZB, within a reasonable time, such available information as it may require for its work.

(J) *Right of entry.* The PZB and its members, officers and staff, in the performance of their functions, may enter upon any land for which an application for development permit is being considered, and make examinations and surveys and place and maintain necessary monuments and marks thereon, as allowed under relevant public meeting laws outlined in the Florida Statutes.

ARTICLE 3 ZONE DISTRICTS

3.1.1 *Establishment of base zone districts.* The following base zone districts are established:

Table 3.1-1. Establishment of Base Zone Districts		
Abbreviation	**District Name**	**Max. Gross Density (DU/AC) [1]**
Conservation Districts		
CSV	Conservation	N/A
Agricultural Districts		
A	Agricultural	0.20; 0.50 if homesteaded
Residential Districts		
RSF-1	Residential Single-Family – 1	1
RSF-3	Residential Single-Family – 3	3
RSF-4	Residential Single-Family – 4	4
RSF-6	Residential Single-Family – 6	6
RMH-5	Residential Mobile Home – 5	5; 2 without public utilities
RMH-P	Residential Mobile Home Park	8
RMF-8	Residential Multiple Family – 8	8
RMF-15	Residential Multiple Family – 15	15
Business Districts		
OR	Office Residential	5; 8 for mixed-use developments
CN	Neighborhood Commercial	~~None~~5; 8 for mixed-use developments
CC	Community Commercial	~~None~~10; 15 for mixed-use developments
CBD	Central Business District	~~None~~15; 20 for mixed-use developments
CI	Commercial Intensive	~~None~~15
CP	Corporate Park	~~0.04~~4 [2]
ILW	Light and Warehouse Industrial	~~None~~8
IG	Industrial General	N/A
GF	Governmental Facilities	~~None~~N/A
Planned Development Districts		
PD-R	Planned Development – Residential	See Section 3.6.3(A)
PD-TND	Planned Development – Traditional Neighborhood	See Section 3.6.3(B)
PD-EC	Planned Development – Employment Center	See Section 3.6.3(C)
PD-COMM	Planned Development – Commercial	See Section 3.6.3(D)
Notes:		
[1] Maximum gross residential density may be increased by 20 percent for the provision of affordable housing in the RSF-6, RMF-8, and RMF-15 zone districts. Floor area ratios for business districts are as follows: 0.5 FAR for parcels five acres or greater; 0.75 FAR for parcels less than five acres but greater than one acre; 1.0 FAR for parcels one acre or less. Floor area ratios for business districts are increased to be as follows for mixed-use developments: 0.6 FAR for parcels five acres or greater; 0.85 FAR for parcels less than five acres but greater than one acre; 1.25 FAR for parcels one acre or less.		
[2] Residential density shall be consistent with the criteria outlined in Sec. 3.5.2(F).		

3.5.1 *General purposes.* The business zone districts are established for the general purpose of ensuring there are lands in the City that provide a wide range of office, retail, service, light industrial, mixed-use development and related uses to meet household and business needs, and more specifically:

3.5.2 *Business district specific purposes.*

(A) *OR, Office Residential District.* The OR district is established and intended to provide for a mix of business and professional office uses together with single-family detached, single-family attached, townhouse, and two- to four-family dwellings, on lands that in the past were primarily residential in character. The professional office uses shall be located in buildings that are residential in physical design and character. The maximum residential density allowed is five dwelling units an acre, and may be increased to eight dwelling units an acre for mixed-use developments.

(B) *CN, Neighborhood Commercial District.* The CN district is established and intended to provide for small-scale retail and service establishments and professional offices which provide goods and services to serve the residents of the surrounding neighborhood. Residential uses are encouraged on the upper floors of nonresidential establishments. The district should not include establishments that attract traffic from areas of the City outside the neighborhood which is being served by the use. Nonresidential ~~buildings~~floor area in the CN district should not exceed 10,000 square feet in area. The district should typically be located at the intersection of two collector streets or a collector street and arterial street in close proximity to the residential neighborhood which it serves. The maximum residential density allowed is five dwelling units an acre, and may be increased to eight dwelling units an acre for mixed-use developments.

(C) *CC, Community Commercial District.* The CC district is established and intended to provide lands for business uses that provide goods and services to residents of the entire community. Because these commercial uses are subject to public view, they should provide appropriate appearance, adequate parking, controlled traffic movement, suitable landscaping, appropriate pedestrian facilities, and protect abutting residential areas from adverse impacts. Residential uses are encouraged on the upper floors of nonresidential establishments. The CC district should typically be located along major arterials or at the intersection of an arterial and highway. The maximum residential density allowed is 10 dwelling units an acre, and may be increased to 15 dwelling units an acre for mixed-use developments.

(D) *CBD, Central Business District.* The CBD district is established and intended to encourage the development of the City's historic downtown as the focal point in Alachua for an intense mix of office, retail, service, restaurant, entertainment, cultural, government, civic, and residential uses. Residential uses are encouraged on the upper floors of nonresidential establishments. More specifically, the district is intended to:

(1) *Protect and enhance architectural character.* Protect and enhance the unique aesthetic and architectural character of Alachua's downtown;

(2) *Support economic vitality.* Support the economic vitality of the downtown;

(3) *Allow for diverse mix of uses.* Allow for a diverse mix of business, office, institutional, recreational, and residential uses;

(4) *Encourage pedestrian friendliness.* Encourage pedestrian-friendly development; and

(5) *Discourage highway-oriented uses.* Discourage highway-oriented uses.

The maximum residential density allowed is 15 dwelling units an acre, and may be increased to 20 dwelling units an acre for mixed-use developments.

(E) *CI, Commercial Intensive District.* The CI District is established and intended to provide lands and facilitate highway-oriented development opportunities within the City, for uses that require high public visibility and an accessible location. Higher density residential uses and affordable housing may be developed in conjunction with nonresidential uses. The CI district should be located along major arterials or highways and at the US 441/Interstate-75 interchange. The maximum residential density allowed is 15 dwelling units an acre.

(F) *CP, Corporate Park District.*

(2) *Residential development criteria.*

(a) In order to ensure that the purpose and intent of the CP District is achieved, development within the Corporate Park zoning district that includes residential uses as permitted by this subsection shall include a functional mix of residential and non-residential uses. The number of residential units within the CP District shall be limited. A final development order for residential units shall not be granted unless the minimum floor area of non-residential uses as set forth in Table 3.5-1, Residential to Non-Residential Ratios within the CP District, has been constructed within the CP District, or shall be constructed concurrent with development proposed by a singular Site Plan that includes both residential and nonresidential uses ~~residential units as a part of a mixed use development~~.

(G) *ILW, Light and Warehouse Industrial District.* The ILW district is established and intended to accommodate a wide range of employment-generating office, institutional, research and development, and light manufacturing uses. Such uses shall be developed in a manner compatible with surrounding land uses, and to minimize potential nuisances or damage to the environment. In addition, by allowing a wide range of permitted uses, the ILW district is intended to accommodate the development of "flex space" arrangements, where the developer can establish different combinations of uses on a site over time, as the market dictates, as long as all uses and development conform to the standards established by these LDRs to protect adjacent land uses and the natural environment. Residential uses are limited to caretaker dwellings~~,~~ and live/work units~~, and upper-story dwellings~~. The maximum residential density allowed is 8 dwelling units an acre.

3.5.3 *Use regulations and development standards.* The following Table 3.5-2, Use Regulations and Development Standards in the Business Districts, indicates the location of standards in these LDRs related to allowable uses, density and intensity limitations, dimensional standards, and subdivision standards for the business zone districts:

Table 3.5-2. Use Regulations and Development Standards in the Business Districts

Type of Standard	Location in these LDRs
Allowable uses	Table 4.1-1
Density/intensity/dimensional standards	Table 5.1-3; Table 5.1-4
Development standards	Article 6
Subdivision standards	Article 7

4.2.1 *Generally.*

(C) *Developments with multiple principal uses and mixed-uses.* When all principal uses of a development fall within one use category, the entire development is assigned to that use category. A development that contains a coffee shop, bookstore, and bakery, for example, would be classified in the retail sales and service category because all of the development's principal uses are in that use category. When the principal uses of a development fall within different use categories, each principal use is classified in the applicable use category and each use is subject to applicable regulations within that category. Developments with multiple principal uses, such as shopping centers, and mixed-use developments shall incorporate only those uses allowed in the underlying zone district.

4.3.1 *Residential uses.*

(A) *Household living.*

(3) *Multiple-family dwellings, single-family attached dwellings, townhomes, and two- to four-family dwellings.* Multiple-family dwellings, single-family attached dwellings, townhomes, and two- to four-family dwellings shall comply with the following standards:

~~(a) *Permitted in the CI district as affordable housing.* Single-family attached, townhouse, two- to four-family, or multiple-family dwelling units may be permitted within the CI zone district provided that 50 percent or more of the dwelling units are deed-restricted affordable housing for low-income residents.~~

~~(b)~~(a) *Orientation of buildings to street and open space.* To the maximum extent practicable, be oriented to the street or frame open space.

~~(c)~~(b) *Building adjacent to single-family detached development.*

(i) Not allow the height of buildings located within 100 feet of land in a single-family residential district (RSF-1, RSF-3, RSF-4, and RSF-6) exceed two stories, except for buildings defined as a mixed-use development.

(ii) Not allow the height of buildings located within 100 feet of an existing single-family ~~attached~~ detached development to exceed two stories, except for buildings defined as a mixed-use development.

~~(d)~~(c) *Design features on side facades adjacent to single-family districts or single-family detached development.* When located adjacent to single-family detached development or vacant land in a single-family residential district (RSF-1, RSF-3, RSF-4, and RSF-6), incorporate a minimum of two design features (e.g., bay windows with a minimum 12-inch projection, eaves with a minimum six-inch projection, or multiple windows with minimum four-inch trim) on adjacent side facades.

~~(e)~~(d) *Off-street parking for multifamily uses, including townhomes.*

(i) Provide a minimum of 50 percent of off-street surface parking on the side of the building, rear of the building or enclosed individual garage units that are integrated into individual residential units.

(ii) Where off-street surface parking lots are located adjacent to a public right-of-way, screen them with a completely opaque ~~vegetative screen,~~ fence or wall~~,~~ a minimum of three feet in height or with landscaping using evergreen materials, capable of providing a substantially opaque, hedge-like barrier and attaining a minimum height of three feet within three years of planting.

~~(f)~~(e) *Garages with multifamily buildings.* Design garages with multifamily development as side or rear entry, located on the side or rear of the building, except no side entry garage door shall face an adjacent single-family detached development, or vacant land in a single-family district (RSF-1, RSF-3, RSF-4, and RSF-6).

~~(g)~~(f) *Garages with single-family attached, and two- to four-family dwellings.* In single-family attached, townhouses and two- to four-family development:

(i) Limit individual garage doors facing a street to no more than ten feet in width per door, with a maximum of two doors facing the street per dwelling, with a minimum separation of two feet between the doors; or limit individual garage doors facing a street to no more than eighteen feet in width per door, with a maximum of one door facing the street per dwelling.

(ii) Design detached garages so as to be located at least four feet behind the front facade of the principal structure. (For the purposes of measurement, the front facade will be the front facade plane that is furthest from the front lot line.)

(iii) Design attached garages to not extend beyond the front façade line of any living area or covered porch. The roof over the living area or covered porch shall extend to be equidistant to or project beyond the roofline of the garage. For purposes of this section, the front façade line of any living area means the closest façade located between the front property line and air conditioned space intended for non-automotive uses.

~~(h) *Landscaped buffer adjacent to single-family detached development.* Provide a landscaped buffer adjacent to existing single-family development a minimum of 15 feet in width along the yard which the single-family detached development abuts.~~

4.3.4 *Business uses.*

(A) *Eating establishments.*

(1) *Restaurants with outdoor seating.*

(a) *Setback from residential district.* The outdoor seating area shall be located no closer than 100 feet from any residential zone district or use, except for those residential uses that have been incorporated into a mixed-use development.

(F) *Recreation/entertainment.*

(1) *Banquet hall.*

(a) Outdoor seating areas shall be located no closer than 100 feet from any residential zone district or use, except for those residential uses that have been incorporated into a mixed-use development.

(G) *Retail sales and services.*

(1) *Bar, nightclub or cocktail lounge.*

(b) *Outdoor activities as part of a special exception permit.*

(i) Locate the use no closer than 100 feet from any residential zone district or use, except for those residential uses that have been incorporated into a mixed-use, development.

(11) *Microbreweries.*

(a) *Minimum separation from residential uses and zoning.*

(i) *Microbreweries with indoor seating only.* Except for microbreweries within the Corporate Park (CP) zoning district, a microbrewery with indoor seating only shall be located no closer than 100 feet from any residential district or use, except for those residential uses that have been incorporated into a mixed-use development. The distance shall be measured by extending a straight line from the center of the main entrance of the microbrewery to the nearest property line of the residential zone district or use.

(ii) *Microbreweries with outdoor seating.* Outdoor seating areas for a microbrewery shall be located no closer than 250 feet from any residential district or use, except for those residential uses that have been incorporated into a mixed-use development. The distance shall be measured by extending a straight line from the nearest point of the outdoor seating area to the nearest property line of the residential zone district or use.

4.7 *Mixed-use specific standards.*

4.7.1 *Purpose and intent.* The purpose of the mixed-use specific standards is to provide flexibility for the creation of mixed-use developments in appropriate districts within the City. The unique nature of mixed-use developments and structures presents a need for supplemental use-specific standards. In the event of a conflict between the use-specific standards governing a principal use and the standards of this section, the standards of this section shall prevail.

4.7.2 *Applicability and relevant provisions.* The standards of this section apply to all developments that meet the definition of a mixed-use development and the following criteria:

(A) The proposed development area is less than 10-acres in size, or if the proposed development area is equal to or greater than 10-acres, the proposed development is part of a planned development;

(B) The proposed development is located in the OR, CN, CC, CBD, CI, PD-COMM, PD-R, PD-TND, or PD-EC zone district;

(C) The proposed development area is contained within a 1/8-mile radius or less;

(D) The proposed development includes a minimum number of dwelling units equal to 20 percent of the maximum permitted density of the development area; and,

(E) The proposed development devotes a minimum of 15 percent of the total floor area to non-residential uses. Uses accessory to dwelling units or other residential uses are not applicable to fulfill this standard.

4.7.3 *Standards.*

(A) *Complies with use-specific standards.* The proposed development must comply with all applicable and relevant use specific standards in Section 4.3, Use specific standards. In the case that the use-specific standards of two or more principal uses conflict, the stricter of the use-specific standards shall prevail.

(B) *Off-street parking.*

(1) Locate a minimum of 50 percent of provided off-street parking on the side or rear of the structure or development. Minimize off-street parking located to the front of the structure or development to the maximum extent practicable.

(2) Where off-street parking areas are located adjacent to a public right-of-way, screen them with a completely opaque fence or wall a minimum of three feet in height or with landscaping using evergreen materials, capable of providing a substantially opaque, hedge-like barrier and attaining a minimum height of three feet within three years of planting.

(C) *Orientation of buildings to street.* Orient structures to face the street or frame open space to the maximum extent practicable.

(D) *Building adjacent to single-family detached development.* The height of a mixed-use building located within 100 feet of a single-family district (RSF-1, RSF-3, RSF-4, and RSF-6) or located within 100 feet of an existing single-family detached development must not exceed three stories.

(E) *Driveways and curb cuts.* Minimize driveways that cross pedestrian pathways to the maximum extent practicable and where alternative means of access exist.

(F) *Parking structures and residential garages.* Parking structures or garages (including residential garages) must not face or be located within the front yard of a structure/development.

5.1.3 *Dimensional standards in Business Districts.* All primary and accessory structures in the business zoning districts are subject to the dimensional standards set forth in Table 5.1-3, Table of Dimensional Standards in the Business Zoning Districts. Primary and accessory structures in the business zoning districts that are part of a development meeting both the definition of mixed-use development and the criteria established in Section 4.7.2, Applicability and relevant provisions, are exempt from Table 5.1-3, Table of Dimensional Standards in the Business Zoning Districts, and are subject to Table 5.1-4, Table of Dimensional Standards for Mixed-Use Developments. These standards may be further limited or modified by other applicable sections of these LDRs. Rules of measurement and permitted exceptions are set forth in Sections 5.2.1, Lots; 5.2.2, Setbacks and required yards; 5.2.3, Height; and 5.2.4, Bulk.

Table 5.1-3. Table of Dimensional Standards in the Business Zoning Districts

District and Use	Lots		Minimum Yards and Setbacks				Max Height (ft.)	Max. Lot Coverage (incl. accessory structures) [1]	Max. Intensity/Density	
	Min. Area (sq. ft.)	Min Width (ft.)	Front (ft.) [5]	Side (ft.)	Rear (ft.)	Wetland and Water-course (ft.)			Max. Non-Residential FAR [2]	Max. Gross Residential Density (DU/acre) [2]
OR										
Dwelling, single-family detached	6,000	50	20	7.5 for each	15	Sec. 5.2.2(B)	65	40%	N/A	5
Dwelling, single-family attached, townhouse, two- to four-family, and multiple-family	10,000	40	15	5 for each building side	10					
Public and institutional uses	None	None	35	25 for each	35			35%	~~None~~ See note [2]	N/A
All other uses			30	20 for each	20					5
CN										
Public and institutional uses	None	None	20	10 for each	15	Sec. 5.2.2(B)	65	40%	Lesser of that provided in note [2] or 10,000 sq. ft.	~~None~~N/A
All other uses			25							~~None~~5
CC										
All uses	None	None	20	None	15	Sec. 5.2.2(B)	65	None	See note [2]	~~None~~10

CBD										
All uses	None	None	None	None	None	Sec. 5.2.2(B)	65	None	See note [2]	~~None~~15
CI [3]										
All uses	None	None	20	None	15	Sec. 5.2.2(B)	65 See note [8]	None	See note [2]	~~None~~15
ILW										
All uses	None	None	20	15, except where railroad spur abuts side or rear property line, then none		Sec. 5.2.2(B)	65	None	See note [2]	~~None~~8
CP [4]										
Dwelling, single-family detached	3,500 See note [6]	40 See note [6]	20 See note [7]	5 for each See note [7]	10 See note [7]	Sec. 5.2.2(B)	65	60%	N/A	4 ~~N/A~~
Dwelling, single-family attached, townhouse, and multiple-family	2,700 See note [6]	30 See note [6]	10 See note [7]	5 for each building side See note [7]	10 See note [7]					
Cottage home	2,700 See note [6]	30 See note [6]	5 See notes [7], [9]	5 for each building side See note [7]	10 See notes [7], [9]		35	70%		
All other uses	None	None	20	15, except where railroad spur abuts side or rear property line, then none			100 See note [8]	None	See note [2]	

IG									
All uses	None	None	20	15, except where railroad spur abuts side or rear property line, then none	Sec. 5.2.2(B)	65	None	See note [2]	N/A
GF									
All uses	None	None	20	15, except where railroad spur abuts side or rear property line, then none	Sec. 5.2.2(B)	65	None	See note [2]	N/A
PD-EC									
See Section 3.6.3(C).									
PD-TND									
See Section 3.6.3(B).									
PD-COMM									
See Section 3.6.3(D).									
Notes:									
[1] The maximum lot coverage in the OR district may be increased up to 65 percent by the provision of three or more upper story dwelling units above retail or office uses, provided such units are deed-restricted affordable housing for low income residents. The maximum lot coverage for cottage homes shall be measured over the entire cottage neighborhood, not individual lots.									
[2] The building square footage occupied by ~~upper story~~ dwelling units ~~that are deed-restricted as affordable housing for low income residents~~ shall not be counted towards the maximum FAR. Floor area ratios for business districts are as follows: 0.5 FAR for parcels five acres or greater; 0.75 FAR for parcels less than five acres, but greater than one acre; 1.0 FAR for parcels one acre or less.									
[3] Minimum lot area, minimum lot width, minimum yard, and minimum setback standards may be reduced by up to 75 percent in the CI Districts to accommodate deed-restricted affordable housing units.									
[4] Residential uses in the CP District shall be consistent with the criteria specified in Section 3.5.2(F).									
[5] Front setbacks shall be consistent with the definition of "yard, front" as provided in Subsection 5.2.2(A)(7).									
[6] Lot dimensional standards apply only to individual platted lots.									
[7] Building setbacks apply only to individual platted lots or if no platting is proposed, the setback standards apply to the project permitter. However, all building separation requirements specified in the Florida Building Code are applicable. As used within Table 5.1-3, "project" shall mean all contiguous land zoned CP.									
[8] The maximum height for structures in the CI and CP zoning districts may be increased up to a maximum of 200 feet using the Special Exception process consistent with the applicable standards found in Sections 2.4.4(D) and 5.2.3(B).									
[9] If a garage is provided, then the garage face shall be set back a minimum 20-feet to prevent parked vehicles from blocking the sidewalk.									

5.1.4 *Dimensional standards for mixed-use developments.* All primary and accessory structures in the business zoning districts that are part of a development meeting both the definition of mixed-use development and the criteria established in Section 4.7.2, Applicability and relevant provisions, are subject to the dimensional standards set forth in Table 5.1-4, Table of Dimensional Standards for Mixed-Use Developments in the Business Zoning Districts. These standards may be further limited or modified by other applicable sections of these LDRs. Rules of measurement and permitted exceptions are set forth in Sections 5.2.1, Lots; 5.2.2, Setbacks and required yards; 5.2.3, Height; and 5.2.4, Bulk.

Table 5.1-4. Table of Dimensional Standards for Mixed-Use Developments in the Business Zoning Districts

District and use	Lots		Minimum Yards and Setbacks				Max Height (ft.)	Max. Lot Coverage (incl. accessory structures) [1]	Max. Intensity/Density	
	Min. Area (sq. ft.)	Min Width (ft.)	Front (ft.) [4][6]	Side (ft.) [6]	Rear (ft.) [6]	Wetland and Water-course (ft.)			Max. Non-Residential FAR [2]	Max. Gross Residential Density (DU/acre) [2]
OR										
Mixed-use development See note [7]	10,000	50	10	5 for each building side	15	Sec. 5.2.2(B)	65	50%	See note [2]	8
CN										
Mixed-use development See note [7]	7,500	50	10	5 for each building side	15	Sec. 5.2.2(B)	65	50%	Lesser of that provided in note [2] or 10,000 sq. ft.	8
CC										
Mixed-use development See note [7]	None	None	10	None	15	Sec. 5.2.2(B)	65	None	See note [2]	15
CBD										
Mixed-use development See note [7]	None	None	None	None	None	Sec. 5.2.2(B)	65	None	See note [2]	20
CI [3]										
Mixed-use development See note [7]	None	None	10	None	15	Sec. 5.2.2(B)	65 See note [5]	None	See note [2]	15

PD-R
See Section 3.6.3(A).
PD-EC
See Section 3.6.3(C).
PD-TND
See Section 3.6.3(B).
PD-COMM
See Section 3.6.3(D).
Notes:
[1] The maximum lot coverage in the OR district may be increased up to 65 percent by the provision of three or more upper story dwelling units above retail or office uses, provided such units are deed-restricted affordable housing for low income residents.
[2] The building square footage occupied by dwelling units shall not be counted towards the maximum FAR. Floor area ratios for mixed-use developments in the business districts are as follows: 0.6 FAR for parcels five acres or greater; 0.85 FAR for parcels less than five acres, but greater than one acre; 1.25 FAR for parcels one acre or less.
[3] Minimum lot area, minimum lot width, minimum yard, and minimum setback standards may be reduced by up to 75 percent in the CI Districts to accommodate deed-restricted affordable housing units.
[4] Front setbacks shall be consistent with the definition of "yard, front" as provided in Subsection 5.2.2(A)(7).
[5] The maximum height for structures in the CI zone district may be increased up to a maximum of 200 feet using the Special Exception process consistent with the applicable standards found in Sections 2.4.4(D) and 5.2.3(B).
[6] If a garage is provided, then the garage face shall be set back a minimum 20-feet to prevent parked vehicles from blocking the sidewalk.
[7] The dimensional standards for mixed-use development shall only apply to developments meeting both the definition of mixed-use development and the criteria established in Section 4.7.2, Applicability and relevant provisions. Developments with multiple principle uses not meeting either the definition of mixed-use development nor the criteria established in Section 4.7.2, Applicability and relevant provisions, are subject to the standards of Table 5.1-1, Table 5.1-2, and Table 5.1-3 as applicable.

5.2.1 *Lots.*

(B) *General Lot Requirements.*

(3) ~~*Erection of more than one principal structure on a platted lot.*~~ Whenever any land is subdivided, a building permit for the construction of a building or other principal structure (excluding commercial buildings under common ownership or unified control) shall not be issued unless the land is subdivided pursuant to the procedures and standards of these LDRs.

6.1.4 *Off-street parking standards.*

(B) *Amount required.*

(6) *Reductions for affordable housing units.* The minimum off-street parking requirements in Table 4.1-1, Table of Allowed Uses, may be reduced by up to 50 percent for single-family detached and attached, two- to four-family dwellings, townhouse, multiple-family, live/work and upper story dwellings provided that such uses are:

(a) Located in the RSF-6, RMF-8, RMF-15, ~~RO~~OR and CI zone districts;

(b) Deed restricted as affordable housing for low-income residents; and

(c) Constructed under the density bonus provisions in Article 5 for such uses.

(7) *Exceptions for mixed-use development.* The minimum number of off-street parking spaces shall be reduced by 25 percent for mixed-use developments located in the OR, CN, or CC districts.

6.2.2 *Landscaping standards.*

(B) *Applicability.* These standards shall apply to the following development in the City:

(1) *Single-family lots or dwellings.* The subdivision or development of eight or more single-family residential lots or dwellings.

(2) *Single-family attached dwellings.* The subdivision or development of eight or more single-family attached dwellings.

(3) *Two- to four-family dwellings.* The subdivision or development of eight or more two- to four-family dwellings.

(4) *Manufactured home park.* Subdivision for a manufactured home park.

(5) *Existing multifamily structure.* Development of a multifamily structure or redevelopment of an existing multifamily structure that results in an increase in building square footage of 60 percent or more.

(6) *Cottage neighborhoods.* Cottage neighborhoods located in the CP zoning district.

(7) *Nonresidential.* Development of a nonresidential structure or redevelopment of a nonresidential structure that results in an increase in building square footage or impervious surface by 50 percent or more.

(8) *Parking lot.* Development of a parking lot for eight or more spaces.

(9) *Existing parking lot.* Redevelopment or expansion of an existing parking lot that results in an increase of 20 or more spaces. Redevelopment or expansion includes items such as repaving, changes in ingress or egress, and reconstruction of stormwater drainage systems.

(10) *Mixed-use developments.* Development of a mixed-use development or redevelopment of an existing mixed-use development that results in an increase in building square footage or impervious surface by 50 percent or more.

(D) *Landscape standards.*

(1) *Site landscaping.* For purposes of this section the number of trees required is rounded to nearest whole tree or shrub (e.g., if number of canopy trees needed to meet site landscaping requirements is calculated at 9.5 trees then ten trees would be required). The following site landscaping shall be required for the following:

(a) *Multifamily, ~~and~~ townhouses, and mixed-use developments.*

(i) Two canopy trees per acre, planted on the primary or street-facing side, and one canopy tree~~s~~ per acre planted on each of the exterior sides and exterior rear of each primary structure. An existing canopy tree that is a native species and in good or better health can be utilized to fulfill this requirement. It is encouraged that the tree be located so that it may provide shade on the structure during the summer afternoon.

(ii) Six ornamental/understory trees per acre~~, with 50 percent planted in front and 25 percent on each side~~. For sites in the CBD district, the ornamental/understory trees may be planted in any yard. For sites outside the CBD district, 50 percent of the required ornamental/understory trees must be planted in front and 25 percent on each side.

(iii) A row of shrubs along the front facade of the structure, with consideration given to access to utility meters or mechanical equipment. Shrubs shall not be planted directly against the structure, but a minimum of two feet from the facade to facilitate adequate air circulation. In lieu of a horizontal line of shrubs along the front facade, shrub masses of three or more species may be utilized.

(iv) For sites with multiple buildings, for each 100 feet of facade of the longest building face of any buildings at least one of the following options, located between all structures:

a. Two canopy trees;

b. Four understory trees;

c. A row of shrubs along facades facing each other;

d. Community garden area of at least 1,500 square feet;

e. Fountain or other water feature;

f. Shaded table or bench;

g. Other significant landscape improvement as approved by LDR Administrator.

(v) A combination of solid sod, seeding, and sprigs shall be used to cover 100 percent of the lot site disturbed by construction activities. Areas of native vegetation are not required to be sodded. An area within 20 feet of the front building facade shall be sodded with other disturbed areas to be sodded, seeded or sprigged.

(vi) The site landscaping requirements found in [Subsection] 6.2.2(D)(1)(a)(i) and (ii) are reduced by 50% for those developments on sites which are 43,560 square feet or less.

(3) *Perimeter buffers.*

(c) *Buffer class application.* Table 6.2-2, Buffer Class Application, below specifies the type of landscaped perimeter buffer that must be installed adjacent to an existing use or vacant land. The proposed uses are designated with their associated use class and cross-referenced with the numbered columns along the horizontal row under the adjacent use heading. The buffer type is indicated by letter and the total buffer width in feet is indicated by number. For mixed-use developments, utilize whichever use type present in the mixed-use development results in the greater buffer requirement.

ARTICLE 10 DEFINITIONS

10.2 Definitions.

Development area means as used in Section 4.7, Mixed-use specific standards, the portion of land in a mixed-use development designated for clearing, grading, ingress, egress, utilities, landscaping and other forms of development. In cases where mixed-use development is proposed as part of a planned development, the development area encompasses the entirety of the property subject to the PD Ordinance. As used in Section 7.9, Conservation subdivision, the portion of land in a conservation subdivision designated for clearing, grading, ingress, egress, wells, septic systems, utilities and other forms of development.

Mixed-use development means a building or ~~an~~ distinct development area ~~containing~~ consisting of a mix of multiple use types from at least two use classifications, including at least one use type from the residential use classification, ~~uses~~ which functionally integrate and interconnect with one another and meets the criteria of Section 4.7.2. Uses are generally arranged in a walkable manner and may be arranged such that they occupy one structure or separate structures in close proximity. ~~Uses may include, but is not limited to, retail, professional services, restaurants and eating establishments, offices, and single and multifamily residential.~~

COMPREHENSIVE PLAN CONSISTENCY ANALYSIS

The goals, objectives, and policies (GOPs) identified below are provided to establish a basis of the amendment's consistency with the Comprehensive Plan. There may be additional GOPs which the application is consistent with that are not identified within this report. An evaluation and findings of consistency with the identified GOPs is provided below.

Vision Element

II. VISION STATEMENT

The City has a strong image as the "Good Life Community." The image is woven throughout the work of the City with a commitment to premium service delivery and a high quality of life. The City will be a business friendly community, encouraging economic development and the establishment and expansion of major job centers in the industries of logistics, manufacturing, high-tech and bio-tech. The City will continue to invest in providing high quality recreational and cultural arts facilities and programs that create a sense of community. Alachua will be a place where housing choices are available to meet the needs of all citizens. Alachua will be a leader in fostering quality well-planned growth and redevelopment. Alachua will be a community where citizens can safely choose one of several multi-modal transportation options, including cycling, walking, and innovative options such as ride shares. Alachua will strive to be continually known for its collaboration between citizens, business communities, schools and government and will continue working together for the common good.

Evaluation & Findings: The proposed text amendment supports the City's vision by providing additional opportunities to diversify housing stock and to increase housing affordability while encouraging economic development and local businesses. Additionally, mixed-use development is more compact by nature and often supports increased mobility options in the form of walking and cycling.

III. GOALS TO IMPLEMENT THE VISION

Goal 1: *Economic Development*

The City of Alachua has a unique business climate. The City is home to corporations, technology incubators, local businesses and start-up companies. The City will maintain its focus on a welcoming business environment and encourage business development in the downtown area and along the US 441 corridor. The City supports a sustainable, thriving Main Street with a variety of businesses and a downtown area that attracts shoppers and patrons through cutting edge marketing strategies. The City will continue to support the redevelopment and revitalization of the historic center of the community. Alachua desires to continue to be a home to innovative businesses and an employment center where jobs are available to citizens of all educational and skill levels and ages. The City will continue to encourage the growth of and development of established industries, such as the life sciences, technologies and emerging industries and encourage the diversification and expansion of commercial businesses which provide integral services to the City's residents.

The City will encourage a sustainable use of natural resources to ensure that economic growth and development will responsibly continue within the community. The City will build strong relationships with local, regional and state-wide economic development organizations in order to work together to retain existing businesses and attract future businesses. The City will pursue business incentives that encourage additional private investment from new or existing businesses that will enhance employment opportunities and the quality of life of residents.

Evaluation & Findings: The proposed text amendment supports the goal of economic development by encouraging business and infill development within the central city area and downtown. Mixed-use development provides housing in close proximity to businesses, including retail, dining, and office, further supporting the customer and employment base of those businesses.

Goal 3: *Transportation Mobility*

The City of Alachua transportation system includes a heavily traveled US 441 corridor and a walkable downtown Main Street. The City will provide efficient traffic circulation that is safe and convenient, while maintaining or improving the level of service on roadways. The City will encourage multi-modal enhancement and trail systems, and provide for an atheistically pleasing gateway between the I-75 interchange and downtown. The City will further a safe and connected pedestrian network that helps ensure a high quality of life for residents and visitors of all ages and abilities. New roadway construction and significant reconstruction projects will incorporate the principles embodied by the Complete Streets approach whenever possible. The City will explore opportunities for public transportation for Alachua residents, including innovative options such as ride shares and other emerging and technology-based options. The City will continue to pursue the interconnectivity of development in order to limit access points onto roadways thereby reducing negative impacts upon the transportation network. The City will strengthen connections between major hubs within the community, such as those between the historic core and Progress Park and Legacy Park.

Evaluation & Findings: The proposed text amendment supports the transportation mobility of residents by encouraging compact and infill development in urban areas of the City, promoting a walkable atmosphere and an extended sidewalk system.

Goal 4: *Residential Opportunities*

The City of Alachua recognizes that residential development is tied to growth and employment opportunities and supports a diversity of housing types in order to enhance the City's physical and social fabric. The City will encourage the provision of housing types to serve a wide range of people, from those moving to Alachua to work and/or raise families to those seeking senior housing and assisted living options. The City supports the provision of safe, affordable housing for all income levels. The City will encourage the construction of housing types including single-family conventional dwelling units, duplexes and quadplexes, apartments and town homes, traditional mixed use neighborhood planned development, live/work units, conservation subdivisions, and other innovative housing options that respond to societal changes and needs and are appropriate for the character of the City. The City supports enhancements that strengthen and improve existing neighborhoods, thereby maintaining a livable community for all demographics.

Evaluation & Findings: The proposed text amendment places an emphasis on targeted increases to the density of mixed-use developments in certain zone districts, allowing for an increase in housing choice and opportunity. The proposed text amendment supports this goal by encouraging the placement of housing units of varying types in commercial developments that would otherwise not contain residential components, increasing housing stock diversity and supply.

Future Land Use Element

Goal 1: *Future Land Use Map 2035*

The City shall maintain a Future Land Use Map in order to effectively guide development in a sustainable manner and to ensure economic prosperity and stability while maintaining a high quality of life for all of its present and future citizens, businesses, and visitors.

Objective 1.3: *Commercial & Mixed-Use*

The City shall establish three commercial and mixed-use land use categories: Community Commercial, Commercial, and Central Business District. These land use categories shall provide a broad range of commercial uses, including retail sales and services, personal services, offices, and tourist-oriented uses, and the potential for mixed-use developments in order to provide for the availability of goods and services, both to the citizens and visitors of Alachua and to the citizens of the North Central Florida region while diversifying the housing stock.

Evaluation & Findings: The proposed text amendment focuses on establishing standards for mixed-use development in zone districts compatible with the Commercial & Mixed-Use future land use categories. The OR, CN, CC, CBD, CI, PD-R, PD-COMM, PD-TND, and PD-EC zone districts provide for a broad range of permitted commercial uses and the proposed text amendment will provide for the potential for mixed-use developments to provide for the availability of goods and services while diversifying the housing stock.

Policy 1.3.e: *Density and intensity standards*.

1. *Non-mixed-uses*. The following density and intensity standards shall apply to non-mixed-use development proposals in the commercial & mixed-use land use categories:
    a. *Density*. Residential uses are limited to a density of 10 dwelling units per acre in the Community Commercial land use category and 15 dwelling units per acre in the Commercial and Central Business District land use categories.
    b. *Intensity*. Non-residential uses are limited to an intensity of less than or equal to 0.5 floor area ratio for parcels 5 acres or greater, 0.75 floor area ratio for parcels less than 5 acres but greater than 1 acre, and 1.0 floor area ratio for parcels 1 acre or less.
2. *Mixed-uses*. The following density and intensity standards shall apply to mixed-use development proposals in the commercial & mixed-use land use categories:
    a. *Density*. Residential uses are limited to a density of 15 dwelling units per acre in the Community Commercial and Commercial future land use categories and 20 dwelling units per acre in the Central Business District land use category.
    b. *Intensity*. Non-residential uses are limited to an intensity of 0.6 floor area ratio for parcels 5 acres or greater, 0.85 for parcels less than 5 acres but greater than 1 acre, and 1.25 floor area ratio for parcels less than 1 acre.

Evaluation & Findings: The proposed maximum densities and intensities set forth in the text amendment do not exceed the maximum density and intensity standards established by Policy 1.3.e, and is therefore consistent.

Transportation Element

Policy 1.3.b: The City shall establish standards that emphasize shared parking and parking reduction incentives to provide flexibility for businesses and to discourage excessive parking areas.

Evaluation & Findings: The proposed text amendment introduces a new parking reduction specifically for mixed-use development in the OR, CN, or CC zone districts as the City recognizes that mixed-use development reduces transportation needs – including parking needs – by placing necessary shopping and employment within close proximity to housing.

Policy 1.5.e: Where feasible, the City will encourage strategies to facilitate development patterns that support multi-modal solutions, including urban design and appropriate land use mixes, including intensity and density.

Evaluation & Findings: The proposed text amendment focuses on mixed-use developments, which the City recognizes reduces transportation needs by placing necessary shopping and employment within close proximity to housing and supports multi-mobility, including walking and cycling.

Housing Element

Policy 1.1.a The City shall encourage development of a variety of housing types including conventional single family homes, accessory dwelling units, multi-family units, group homes, assisted living facilities, foster care facilities, mobile homes, and manufactured homes, and shall ensure that appropriate land use designations and zoning districts exist to accommodate each type.

Evaluation & Findings: The proposed text amendment will support the development of a variety of housing types as the amendment focuses on increasing housing choice and opportunity by encouraging the placement of housing units of varying types in commercial developments that would otherwise not contain residential components.

Policy 1.1.i The City shall establish land use designations and zoning districts that accommodate mixed-use development consisting of residential with commercial and/or retail.

Evaluation & Findings: The proposed text amendment establishes mixed-use specific standards that explicitly permit for zone districts that accommodate mixed-use development consisting of residential with commercial and/or retail.

Conservation and Open Space Element

Policy 1.4.f The City shall promote mixed use and compact development to promote pedestrian, golf cart and bicycle traffic and reduce automobile dependency.

Evaluation & Findings: The proposed text amendment focuses on mixed-use developments, containing a variety of uses, that encourage compact and infill development to reduce automobile dependency. The City recognizes that mixed-use development reduces transportation needs – including automobile dependency – by placing necessary shopping and employment within close proximity to housing.

FINDINGS OF FACT: COMPLIANCE WITH LAND DEVELOPMENT REGULATIONS

Text Amendments to the Land Development Regulations Standards

Section 2.4.1(E)(1) of the City's Land Development Regulations (LDRs) establishes the standards with which all text amendments to the Land Development Regulations must be found compliant. The proposed amendment has been reviewed for compliance with the standards of Section 2.4.1(E)(1). An evaluation of the findings of compliance with the standards of Section 2.4.1(E)(1) is provided below.

(1) **Text Amendments**. Amending the text of these LDRs is a matter committed to the legislative discretion of the City Commission. In determining whether to adopt or deny the proposed amendment, the City Commission shall consider and weigh the relevance of the following factors:

(a) ***Consistent with Comprehensive Plan***. Whether and the extent to which the proposed amendment is consistent with the Comprehensive Plan.

Evaluation & Findings: The proposed text amendment does not conflict with any goals, objectives, or policies in the City's Comprehensive Plan. An analysis of consistency with the City's Comprehensive Plan has been included in this report.

(b) ***Consistent with ordinances***. Whether the proposed amendment is in conflict with any provision of these LDRs or the City Code of Ordinances.

Evaluation & Findings: The proposed text amendment does not conflict with any other provisions of the City's Land Development Regulations of Code of Ordinances.

(c) ***Changed conditions***. Whether and the extent to which there are changed conditions that require an amendment.

Evaluation & Findings: The proposed text amendment was initiated in response to the adoption of Ordinance 24-12, which amended the City's Comprehensive Plan by establishing Commercial & Mixed-Use future land use categories. This text amendment would implement both the amended sections and some existing sections of the City's Comprehensive Plan.

(d) *Community need*. Whether and the extent to which the proposed amendment addresses a demonstrated community need.

Evaluation & Findings: The City of Alachua Fiscal Year 2025 Strategic Plan, adopted on September 23, 2024, outlines the community need for the proposed text amendment. Goal 4 focuses on residential opportunities, with Strategic Initiative 4.2 stating that "it is important the City continues to examine how infill development and redevelopment are best encouraged and facilitated, particularly via the Comprehensive Plan and LDRs, with a focus on the efficient utilization of land resources, compatibility with existing density residential development, a variety of residential development options and efficient delivery of public services." The proposed text amendment focuses on mixed-use development and targeted density increases to promote infill development and housing stock diversity, helping to fulfill Strategic Initiative 4.2 and this community need.

(e) *Compatible with surrounding uses*. Whether and the extent to which the proposed amendment is consistent with the purpose and intent of the zone districts in these LDRs, or will improve compatibility among uses and will ensure efficient development within the City.

Evaluation & Findings: The proposed text amendment does not alter existing residential protection or other compatibility standards, except where it improves compatibility among a mix of residential and business uses specifically co-located within mixed-use developments. The proposed text amendment focuses on mixed-use development and targeted density increases to promote infill development, which is expected to result in a more efficient long-term pattern of development.

(f) *Development patterns*. Whether and the extent to which the proposed amendment would result in a logical and orderly development pattern.

Evaluation & Findings: The proposed text amendment focuses on mixed-use development and targeted density increases to promote infill development, which is expected to result in a more efficient and logical pattern of development.

(g) *Effect on natural environment*. Whether and the extent to which the proposed amendment would result in significantly adverse impacts on the natural environment, including but not limited to water, air, noise, stormwater management, wildlife, vegetation, wetlands, and the natural functioning of the environment.

Evaluation & Findings: The proposed text amendment does not alter existing environmental protection standards and will not impact the natural environment.

(h) *Public facilities*. Whether and the extent to which the proposed amendment would result in development that is adequately served by public facilities (roads, potable water, sewage, stormwater management, parks, and solid wastes).

Evaluation & Findings: The proposed text amendment includes targeted density and intensity increases; however, the amendment promotes more compact mixed-use development and infill development, reducing the need and cost of public utility extensions and maintenance in the long-term. Additionally, the City recognizes that mixed-use development reduces transportation needs – including automobile trip generation – by placing necessary shopping and employment within close proximity to housing, improving multi-mobility. The proposed text amendment does not alter the requirement that a certificate of concurrency compliance be obtained prior to development occurring, ensuring adequate service of public facilities.

EXHIBIT "A"
TO
MIXED-USE STANDARDS
STAFF-INITITATED LDR TEXT AMENDMENT
STAFF REPORT

DRAFT ORDINANCE
25-05

ORDINANCE 25-05

AN ORDINANCE OF THE CITY OF ALACHUA, FLORIDA, RELATING TO THE AMENDMENT OF THE CITY'S LAND DEVELOPMENT REGULATIONS ("LDRS"); AMENDING SUBPART B OF THE CITY OF ALACHUA CODE OF ORDINANCES, LAND DEVELOPMENT REGULATIONS; AMENDING ARTICLE 2 RELATING TO THE POWERS AND DUTIES OF THE PLANNING AND ZONING BOARD; AMENDING ARTICLE 3 RELATING TO THE PERMITTED DENSITY AND INTENSITY AND PURPOSES OF THE BUSINESS DISTRICTS; AMENDING ARTICLE 4 RELATING TO USE SPECIFIC STANDARDS AND THE CREATION OF MIXED-USE SPECIFIC STANDARDS; AMENDING ARTICLE 5 RELATING TO THE PERMITTED DENSITY AND INTENSITY OF THE BUSINESS DISTRICTS AND ESTABLISHING DIMENSIONAL STANDARDS FOR MIXED-USE DEVELOPMENT; AMENDING ARTICLE 6 RELATING TO OFF-STREET PARKING AND LOADING STANDARDS AND TREE PROTECTION AND LANDSCAPING STANDARDS FOR MIXED-USE DEVELOPMENT; AMENDING ARTICLE 10 RELATING TO THE DEFINITIONS OF DEVELOPMENT AREA AND MIXED-USE; PROVIDING A REPEALING CLAUSE; PROVIDING SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

RECITALS

WHEREAS, the City Commission adopted the City of Alachua Land Development Regulations ("LDRs") through Ordinance 06-11, as amended from time to time; and,

WHEREAS, a text amendment ("Amendment") to the City's LDRs, as described below, has been proposed; and,

WHEREAS, a duly advertised public hearing was conducted on the Amendment on April 15, 2025, by the Planning and Zoning Board, sitting as the Local Planning Agency ("LPA") and the LPA reviewed and considered all comments received during the public hearing concerning the Amendment and made its recommendation to the City Commission; and,

WHEREAS, the City Commission conducted a duly advertised public hearing on the proposed Amendment, provided for and received public participation, and approved Ordinance 25-05 upon first reading on _____, and scheduled second and final reading for _____; and,

WHEREAS, the City Commission conducted a duly advertised public hearing on the proposed Amendment, provided for and received public participation, and approved Ordinance 25-05 upon second and final reading on _____; and,

WHEREAS, the City Commission has determined and found the Amendment to be consistent with the City's Comprehensive Plan and the City's LDRs; and,

WHEREAS, for reasons set forth in this ordinance that is hereby adopted and incorporated as findings of fact, that the Alachua City Commission finds and declares that the enactment of this Amendment is in the furtherance of the public health, safety, morals, order, comfort, convenience, appearance, prosperity, or general welfare;

NOW THEREFORE BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF ALACHUA, FLORIDA:

DRAFT

Section 1. Interpretation of Recitals

The above recitals are true and correct and incorporated in this ordinance.

Section 2. Findings of Fact and Conclusions of Law

The authority for the enactment of this ordinance is Chapter 163, Part I, Florida Statutes; Sections 166.021 and 166.041; and the City's Comprehensive Plan.

Section 3. Amendment to the Land Development Regulations, Article 2

Article 2 of the City of Alachua Land Development Regulations is hereby amended as follows. The remainder of Article 2 remains in full force and effect (text that is underlined is to be added and text that is shown as ~~strikethrough~~ is to be removed):

2.1.3 *Planning and Zoning Board (PZB).*

(A) *Designation as the local planning agency.* The Planning and Zoning Board (PZB) is authorized by the City Commission as the local planning agency (LPA), and in that role shall, with the assistance of the Planning and Community Development Department ~~have the following powers and duties~~:

(1) *Acquire and maintain information to understand trends and conditions.* Acquire and maintain such information and materials as are necessary to gain an understanding of past trends, present conditions and forces at work to cause changes in these conditions. Such information and materials may include maps and photographs of manmade and natural physical features of the areas subject to the Comprehensive Plan, statistics on past trends and present conditions with respect to population, property values, economic base, land use and such other information as is important or likely to be important in determining the amount, direction and kind of development to be expected in the areas subject to the Comprehensive Plan.

(2) *Make recommendations to City Commission on Comprehensive Plan.* Prepare, update, and recommend to the City Commission and from time to time amend the Comprehensive Plan for meeting present requirements and such future requirements as may be foreseen.

(3) *Recommend principles and policies for guiding actions.* Recommend principles and policies for guiding action affecting development in the City.

(4) *Prepare and recommend land development regulations.* Prepare and make recommendations to the City Commission on proposed land development regulations, land development codes, ordinances, regulations, and other proposals promoting orderly development along the lines indicated as desirable by the Comprehensive Plan.

(5) *Review developments for consistency with Comprehensive Plan.* Determine whether specific proposed developments conform to the principles and requirements of the Comprehensive Plan.

(6) *Public hearings.* Conduct such public hearings as may be required to gather information necessary for the drafting, establishment, and maintenance of the Comprehensive Plan and ordinances, codes, and regulations related to it and establish public committees when deemed necessary for the purpose of collecting and compiling information necessary for the plan, or for the purpose of promoting the accomplishment of the plan in whole or in part.

(7) *Special studies.* Make or cause to be made any necessary special studies on the location, adequacy, and conditions of specific facilities which are subject to the Comprehensive Plan. These may include but are not limited to studies on housing, commercial and industrial conditions and facilities, recreation, public and private utilities, roads and traffic, transportation, parking and the like.

(8) *Advise City Commission.* Keep the City Commission informed and advised on preceding matters.

(9) *Operate in conformity with Charter.* Operate in conformity with the Charter and other ordinances of the City, unless the Charter and/or the ordinances are inconsistent with F.S. ch. 166.

DRAFT

(10) *Other duties*. Perform such other duties as may be lawfully assigned to it, or which may have bearing on the preparation or implementation of the Comprehensive Plan.

(B) *Designation as the Historic Preservation Agency*. The PZB shall serve as the City's Historic Preservation Agency to implement the policies and responsibilities related to historic presentation in the Comprehensive Plan and these LDRs.

(C) *Powers and duties*. The PZB is authorized by the City Commission with the following powers and duties under these LDRs:

(1) *Special exception permits*. To review and make recommendations to the City Commission on special exception permit applications for a building greater than 80,000 square feet in area, and to review and decide applications for all other special exception permit applications (Section 2.4.4).

(2) *Certificate of appropriateness*. To review and decide applications for certificates of appropriateness (major review) (Section 2.4.6).

(3) *Site plan*. To review and make recommendations to the City Commission on site plan applications consisting of a building greater than or equal to 80,000 square feet in area (Section 2.4.9(D)(2)(c)), and to review and decide applications for site plan applications consisting of a building less than 80,000 square feet in area (Section 2.4.9(D)(2)(b)).

(4) *Amendments to LDR text*. To initiate, review, and make recommendations to the City Commission to approve or deny applications to amend the text of these LDRs (Section 2.4.1, Text amendment).

(5) *General amendments to Official Zoning Atlas*. To initiate, review, and make recommendations to the City Commission to approve or deny applications to general amendments to the Official Zoning Atlas (Section 2.4.1).

(6) *Site-specific amendments to Official Zoning Atlas (rezone)*. To initiate, review, and make recommendations to the City Commission to approve or deny applications to for site-specific amendments to the Official Zoning Atlas (rezone) (Section 2.4.2).

(7) *Planned development*. To review and make recommendations to the City Commission on PD Master Plans and amendments to the Official Zoning Atlas to a planned development (PD) district (Section 2.4.3).

(8) *Historic Overlay (HO) District classification*. To initiate, review, and make recommendations to the City Commission to approve or deny amendments to the Official Zoning Atlas to apply a Historic Overlay (HO) Zone District classification (Section 2.4.5).

(9) *Subdivision variance permits*. To review and make recommendations to the City Commission on subdivision variance permits (Section 2.4.7(D)).

(10) *Minor subdivisions*. To review and make recommendations to the City Commission on minor subdivisions (Section 2.4.10(F)).

(11) *Major subdivision preliminary plats*. To review and make recommendations to the City Commission on major subdivision preliminary plats (Section 2.4.10(G)).

(12) *Special permit*. To review and make recommendations to the City Commission on special permits (Section 2.4.16).

(13) *Wellfield exemption permits*. To review and make recommendations to the City Commission on wellfield exemption permits (Section 2.4.24).

(14) *Development agreements*. To review and make recommendations to the City Commission on development agreements (Section 2.5).

(15) *Make special knowledge and expertise available*. To make its special knowledge and expertise available upon written request and authorization of the City Commission to any official, department, board, commission or agency of the City.

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(16) *Studies*. To make studies of the resources, possibilities and needs of the City upon the authorization of the City Commission, and report its findings and recommendations, with reference thereto, to the City Commission.

(17) *Annual review of Capital Improvement Plan*. To receive and review ~~conduct an annual review of~~ the capital improvement element of the Comprehensive Plan annually to ensure that the fiscal resources necessary to maintain adopted level of service standards are available.

(D) *Membership*.

(1) *Number*. The PZB shall consist of six members: five voting members and one nonvoting member appointed by the School Board of Alachua County.

(2) *Appointment*. Each voting member shall be appointed by the City Commission.

(3) *Other office*. No voting member shall hold another municipal office or be an employee of the City.

(4) *Terms of office*.

(a) Terms of office shall be three years.

(b) A member shall continue to serve until the member is reappointed or replaced.

(5) *Resignation*. Any member who resigns prior to the end of the member's term shall do so in writing to the Chair.

(6) *Removal*. Any member shall be removed for more than three unexcused absences during any calendar year.

(7) *Filling of vacancy*.

(a) When a vacancy occurs due to expiration of term or removal, the City shall advertise to fill the vacancy through a public posting and in a newspaper of general circulation at least 14 days prior to the date of expiration. The City Commission shall fill the vacancy from among the applications received.

(b) Vacancies occurring other than through expiration of a term shall be filled for the unexpired term by appointment from the City Commission.

(8) *Compensation*. The members of the PZB shall serve without compensation, except that the City Commission may prescribe a per diem for attendance at meetings.

(9) *Filing of financial disclosure form*. Members of the Planning and Zoning Board shall file the appropriate financial disclosure forms as required by the State of Florida.

(E) *Chair and other officers*.

(1) *Generally*. The PZB shall elect a Chair and Vice-Chair from among the appointed members and create and fill such other of its offices as it may determine.

(2) *Term of office*. The term of office of the Chair or Vice-Chair shall be one year, and there shall be no limits placed on the number of consecutive terms as Chair or Vice-Chair.

(3) *General duties*.

(a) The Chair shall preside at all meetings of the PZB, decide all points of order on procedure, compel the attendance of witnesses, and take such action as shall be necessary to preserve the order and integrity of all proceedings before the PZB.

(b) In the absence of the Chair, the Vice-Chair shall act as Chair and shall have all powers of the Chair. In the absence of the Chair and Vice-Chair, the most senior PZB member shall act as Chair and shall have the powers of the Chair.

(F) *Staff*. The LDR Administrator shall serve as the secretary and professional staff to the PZB and provide it with administrative support.

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(G) *Meetings.*

(1) *Monthly meetings*. The PZB shall hold at least one regular meeting in each month, if necessary.

(a) *Special meetings*. In addition to its regular meetings, the PZB may meet at the call of the Chair or within 30 days after receipt of a matter to be acted upon by the PZB, or at the written request of one member submitted to the LDR Administrator for the Chair's consideration.

(b) *Quorum*. No meeting of the PZB shall be called to order, nor may any business be transacted by the PZB, without a quorum consisting of three voting members being present. If at any time during a public meeting or public hearing a quorum is lost, it shall be stated in the minutes and no final action on a matter shall be taken by the PZB.

(c) *Decisions*. The concurring vote of a simple majority of a quorum in attendance and voting shall be necessary to pass any motion of the PZB.

(d) *Abstention*. Any PZB member with a private or personal interest in matters coming before the PZB shall declare such interest and abstain from all participation regarding that matter. No member of the PZB shall appear before the PZB as an agent or attorney representing another person.

(e) *Open to the public*. All meetings of the PZB shall be open to the public.

(f) *Official record*.

(i) The PZB shall adopt rules for the transaction of business and shall keep a record of its recommendations, transactions, findings, and determinations.

(ii) Such record shall be a public record, and shall be maintained in the office of the LDR Administrator.

(g) *Disbursement of funds*. Funds may be appropriated by the City Commission in connection with the work of the PZB as determined necessary by the City Commission.

(H) *Rules*. The PZB shall establish written rules for its operation in accordance with these LDRs and any applicable State laws, which shall be made available to the public.

(I) *Assistance to PZB*. All employees of the City and public officials shall, upon written request, furnish to the PZB, within a reasonable time, such available information as it may require for its work.

(J) *Right of entry*. The PZB and its members, officers and staff, in the performance of their functions, may enter upon any land for which an application for development permit is being considered, and make examinations and surveys and place and maintain necessary monuments and marks thereon, as allowed under relevant public meeting laws outlined in the Florida Statutes.

Section 4. Amendment to the Land Development Regulations, Article 3

Article 3 of the City of Alachua Land Development Regulations is hereby amended as follows. The remainder of Article 3 remains in full force and effect (text that is <u>underlined</u> is to be added and text that is shown as ~~strikethrough~~ is to be removed):

3.1.1 Establishment of base zone districts. The following base zone districts are established:

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Table 3.1-1. Establishment of Base Zone Districts		
Abbreviation	**District Name**	**Max. Gross Density (DU/AC) [1]**
Conservation Districts		
CSV	Conservation	N/A
Agricultural Districts		
A	Agricultural	0.20; 0.50 if homesteaded
Residential Districts		
RSF-1	Residential Single-Family – 1	1
RSF-3	Residential Single-Family – 3	3
RSF-4	Residential Single-Family – 4	4
RSF-6	Residential Single-Family – 6	6
RMH-5	Residential Mobile Home – 5	5; 2 without public utilities
RMH-P	Residential Mobile Home Park	8
RMF-8	Residential Multiple Family – 8	8
RMF-15	Residential Multiple Family – 15	15
Business Districts		
OR	Office Residential	5; 8 for mixed-use developments
CN	Neighborhood Commercial	~~None~~5; 8 for mixed-use developments
CC	Community Commercial	~~None~~10; 15 for mixed-use developments
CBD	Central Business District	~~None~~15; 20 for mixed-use developments
CI	Commercial Intensive	~~None~~15
CP	Corporate Park	~~0.04~~4 [2]
ILW	Light and Warehouse Industrial	~~None~~8
IG	Industrial General	N/A
GF	Governmental Facilities	~~None~~N/A
Planned Development Districts		
PD-R	Planned Development – Residential	See Section 3.6.3(A)
PD-TND	Planned Development – Traditional Neighborhood	See Section 3.6.3(B)
PD-EC	Planned Development – Employment Center	See Section 3.6.3(C)
PD-COMM	Planned Development – Commercial	See Section 3.6.3(D)
Notes:		
[1] Maximum gross residential density may be increased by 20 percent for the provision of affordable housing in the RSF-6, RMF-8, and RMF-15 zone districts. Floor area ratios for business districts are as follows: 0.5 FAR for parcels five acres or greater; 0.75 FAR for parcels less than five acres but greater than one acre; 1.0 FAR for parcels one acre or less. Floor area ratios for business districts are increased to be as follows for mixed-use developments: 0.6 FAR for parcels five acres or greater; 0.85 FAR for parcels less than five acres but greater than one acre; 1.25 FAR for parcels one acre or less.		
[2] Residential density shall be consistent with the criteria outlined in Sec. 3.5.2(F).		

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3.5.1 *General purposes.* The business zone districts are established for the general purpose of ensuring there are lands in the City that provide a wide range of office, retail, service, light industrial, mixed-use development and related uses to meet household and business needs, and more specifically:

3.5.2 *Business district specific purposes.*

(A) *OR, Office Residential District.* The OR district is established and intended to provide for a mix of business and professional office uses together with single-family detached, single-family attached, townhouse, and two- to four-family dwellings, on lands that in the past were primarily residential in character. The professional office uses shall be located in buildings that are residential in physical design and character. The maximum residential density allowed is five dwelling units an acre, and may be increased to eight dwelling units an acre for mixed-use developments.

(B) *CN, Neighborhood Commercial District.* The CN district is established and intended to provide for small-scale retail and service establishments and professional offices which provide goods and services to serve the residents of the surrounding neighborhood. Residential uses are encouraged on the upper floors of nonresidential establishments. The district should not include establishments that attract traffic from areas of the City outside the neighborhood which is being served by the use. Nonresidential ~~buildings~~floor area in the CN district should not exceed 10,000 square feet in area. The district should typically be located at the intersection of two collector streets or a collector street and arterial street in close proximity to the residential neighborhood which it serves. The maximum residential density allowed is five dwelling units an acre, and may be increased to eight dwelling units an acre for mixed-use developments.

(C) *CC, Community Commercial District.* The CC district is established and intended to provide lands for business uses that provide goods and services to residents of the entire community. Because these commercial uses are subject to public view, they should provide appropriate appearance, adequate parking, controlled traffic movement, suitable landscaping, appropriate pedestrian facilities, and protect abutting residential areas from adverse impacts. Residential uses are encouraged on the upper floors of nonresidential establishments. The CC district should typically be located along major arterials or at the intersection of an arterial and highway. The maximum residential density allowed is 10 dwelling units an acre, and may be increased to 15 dwelling units an acre for mixed-use developments.

(D) *CBD, Central Business District.* The CBD district is established and intended to encourage the development of the City's historic downtown as the focal point in Alachua for an intense mix of office, retail, service, restaurant, entertainment, cultural, government, civic, and residential uses. Residential uses are encouraged on the upper floors of nonresidential establishments. More specifically, the district is intended to:

(1) *Protect and enhance architectural character.* Protect and enhance the unique aesthetic and architectural character of Alachua's downtown;

(2) *Support economic vitality.* Support the economic vitality of the downtown;

(3) *Allow for diverse mix of uses.* Allow for a diverse mix of business, office, institutional, recreational, and residential uses;

(4) *Encourage pedestrian friendliness.* Encourage pedestrian-friendly development; and

(5) *Discourage highway-oriented uses.* Discourage highway-oriented uses.

The maximum residential density allowed is 15 dwelling units an acre, and may be increased to 20 dwelling units an acre for mixed-use developments.

(E) *CI, Commercial Intensive District.* The CI District is established and intended to provide lands and facilitate highway-oriented development opportunities within the City, for uses that require high public visibility and an accessible location. Higher density residential uses and affordable housing may be developed in conjunction with nonresidential uses. The CI district should be located along major arterials or highways and at the US 441/Interstate-75 interchange. The maximum residential density allowed is 15 dwelling units an acre.

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(F) *CP, Corporate Park District.*

(2) *Residential development criteria.*

(a) In order to ensure that the purpose and intent of the CP District is achieved, development within the Corporate Park zoning district that includes residential uses as permitted by this subsection shall include a functional mix of residential and non-residential uses. The number of residential units within the CP District shall be limited. A final development order for residential units shall not be granted unless the minimum floor area of non-residential uses as set forth in Table 3.5-1, Residential to Non-Residential Ratios within the CP District, has been constructed within the CP District, or shall be constructed concurrent with development proposed by a singular Site Plan that includes both residential and nonresidential uses ~~residential units as a part of a mixed-use development~~.

(G) *ILW, Light and Warehouse Industrial District.* The ILW district is established and intended to accommodate a wide range of employment-generating office, institutional, research and development, and light manufacturing uses. Such uses shall be developed in a manner compatible with surrounding land uses, and to minimize potential nuisances or damage to the environment. In addition, by allowing a wide range of permitted uses, the ILW district is intended to accommodate the development of "flex space" arrangements, where the developer can establish different combinations of uses on a site over time, as the market dictates, as long as all uses and development conform to the standards established by these LDRs to protect adjacent land uses and the natural environment. Residential uses are limited to caretaker dwellings~~,~~ and live/work units~~, and upper-story dwellings~~. The maximum residential density allowed is 8 dwelling units an acre.

3.5.3 *Use regulations and development standards.* The following Table 3.5-2, Use Regulations and Development Standards in the Business Districts, indicates the location of standards in these LDRs related to allowable uses, density and intensity limitations, dimensional standards, and subdivision standards for the business zone districts:

Table 3.5-2. Use Regulations and Development Standards in the Business Districts

Type of Standard	Location in these LDRs
Allowable uses	Table 4.1-1
Density/intensity/dimensional standards	Table 5.1-3; Table 5.1-4
Development standards	Article 6
Subdivision standards	Article 7

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Section 5. Amendment to the Land Development Regulations, Article 4

Article 4 of the City of Alachua Land Development Regulations is hereby amended as follows. The remainder of Article 4 remains in full force and effect (text that is underlined is to be added and text that is shown as ~~strikethrough~~ is to be removed):

4.2.1 *Generally.*

(C) *Developments with multiple principal uses and mixed-uses.* When all principal uses of a development fall within one use category, the entire development is assigned to that use category. A development that contains a coffee shop, bookstore, and bakery, for example, would be classified in the retail sales and service category because all of the development's principal uses are in that use category. When the principal uses of a development fall within different use categories, each principal use is classified in the applicable use category and each use is subject to applicable regulations within that category. Developments with multiple principal uses, such as shopping centers, and mixed-use developments shall incorporate only those uses allowed in the underlying zone district.

4.3.1 *Residential uses.*

(A) *Household living.*

(3) *Multiple-family dwellings, single-family attached dwellings, townhomes, and two- to four-family dwellings.* Multiple-family dwellings, single-family attached dwellings, townhomes, and two- to four-family dwellings shall comply with the following standards:

~~(a) *Permitted in the CI district as affordable housing.* Single-family attached, townhouse, two- to four-family, or multiple-family dwelling units may be permitted within the CI zone district provided that 50 percent or more of the dwelling units are deed-restricted affordable housing for low-income residents.~~

~~(b)~~(a) *Orientation of buildings to street and open space.* To the maximum extent practicable, be oriented to the street or frame open space.

~~(c)~~(b) *Building adjacent to single-family detached development.*

(i) Not allow the height of buildings located within 100 feet of land in a single-family residential district (RSF-1, RSF-3, RSF-4, and RSF-6) exceed two stories, except for buildings defined as a mixed-use development.

(ii) Not allow the height of buildings located within 100 feet of an existing single-family ~~attached~~ detached development to exceed two stories, except for buildings defined as a mixed-use development.

~~(d)~~(c) *Design features on side facades adjacent to single-family districts or single-family detached development.* When located adjacent to single-family detached development or vacant land in a single-family residential district (RSF-1, RSF-3, RSF-4, and RSF-6), incorporate a minimum of two design features (e.g., bay windows with a minimum 12-inch projection, eaves with a minimum six-inch projection, or multiple windows with minimum four-inch trim) on adjacent side facades.

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~~(e)~~(d) *Off-street parking for multifamily uses, including townhomes.*

(i) Provide a minimum of 50 percent of off-street surface parking on the side of the building, rear of the building or enclosed individual garage units that are integrated into individual residential units.

(ii) Where off-street surface parking lots are located adjacent to a public right-of-way, screen them with a completely opaque ~~vegetative screen,~~ fence or wall~~,~~ a minimum of three feet in height or with landscaping using evergreen materials, capable of providing a substantially opaque, hedge-like barrier and attaining a minimum height of three feet within three years of planting.

~~(f)~~(e) *Garages with multifamily buildings.* Design garages with multifamily development as side or rear entry, located on the side or rear of the building, except no side entry garage door shall face an adjacent single-family detached development, or vacant land in a single-family district (RSF-1, RSF-3, RSF-4, and RSF-6).

~~(g)~~(f) *Garages with single-family attached, and two- to four-family dwellings.* In single-family attached, townhouses and two- to four-family development:

(i) Limit individual garage doors facing a street to no more than ten feet in width per door, with a maximum of two doors facing the street per dwelling, with a minimum separation of two feet between the doors; or limit individual garage doors facing a street to no more than eighteen feet in width per door, with a maximum of one door facing the street per dwelling.

(ii) Design detached garages so as to be located at least four feet behind the front facade of the principal structure. (For the purposes of measurement, the front facade will be the front facade plane that is furthest from the front lot line.)

(iii) Design attached garages to not extend beyond the front façade line of any living area or covered porch. The roof over the living area or covered porch shall extend to be equidistant to or project beyond the roofline of the garage. For purposes of this section, the front façade line of any living area means the closest façade located between the front property line and air conditioned space intended for non-automotive uses.

~~(h) *Landscaped buffer adjacent to single-family detached development.* Provide a landscaped buffer adjacent to existing single-family development a minimum of 15 feet in width along the yard which the single-family detached development abuts.~~

4.3.4 *Business uses.*

(A) *Eating establishments.*

(1) *Restaurants with outdoor seating.*

(a) *Setback from residential district.* The outdoor seating area shall be located no closer than 100 feet from any residential zone district or use, except for those residential uses that have been incorporated into a mixed-use development.

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(F) *Recreation/entertainment.*

(1) *Banquet hall.*

(a) Outdoor seating areas shall be located no closer than 100 feet from any residential zone district or use, except for those residential uses that have been incorporated into a mixed-use development.

(G) *Retail sales and services.*

(1) *Bar, nightclub or cocktail lounge.*

(b) *Outdoor activities as part of a special exception permit.*

(i) Locate the use no closer than 100 feet from any residential zone district or use, except for those residential uses that have been incorporated into a mixed-use, development.

(11) *Microbreweries.*

(a) *Minimum separation from residential uses and zoning.*

(i) *Microbreweries with indoor seating only.* Except for microbreweries within the Corporate Park (CP) zoning district, a microbrewery with indoor seating only shall be located no closer than 100 feet from any residential district or use, except for those residential uses that have been incorporated into a mixed-use development. The distance shall be measured by extending a straight line from the center of the main entrance of the microbrewery to the nearest property line of the residential zone district or use.

(ii) *Microbreweries with outdoor seating.* Outdoor seating areas for a microbrewery shall be located no closer than 250 feet from any residential district or use, except for those residential uses that have been incorporated into a mixed-use development. The distance shall be measured by extending a straight line from the nearest point of the outdoor seating area to the nearest property line of the residential zone district or use.

Section 6. Amendment to the Land Development Regulations, Creation of Section 4.7

Section 4.7 of the City of Alachua Land Development Regulations is hereby created as follows (text that is underlined is to be added and text that is shown as ~~strikethrough~~ is to be removed):

4.7 *Mixed-use specific standards.*

4.7.1 *Purpose and intent.* The purpose of the mixed-use specific standards is to provide flexibility for the creation of mixed-use developments in appropriate districts within the City. The unique nature of mixed-use developments and structures presents a need for supplemental use-specific standards. In the event of a conflict between the use-specific standards governing a principal use and the standards of this section, the standards of this section shall prevail.

4.7.2 *Applicability and relevant provisions.* The standards of this section apply to all developments that meet the definition of a mixed-use development and the following criteria:

(A) The proposed development area is less than 10-acres in size, or if the proposed development area is equal to or greater than 10-acres, the proposed development is part of a planned development;

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(B) The proposed development is located in the OR, CN, CC, CBD, CI, PD-COMM, PD-R, PD-TND, or PD-EC zone district;

(C) The proposed development area is contained within a 1/8-mile radius or less;

(D) The proposed development includes a minimum number of dwelling units equal to 20 percent of the maximum permitted density of the development area; and,

(E) The proposed development devotes a minimum of 15 percent of the total floor area to non-residential uses. Uses accessory to dwelling units or other residential uses are not applicable to fulfill this standard.

4.7.3 *Standards.*

(A) *Complies with use-specific standards.* The proposed development must comply with all applicable and relevant use specific standards in Section 4.3, Use specific standards. In the case that the use-specific standards of two or more principal uses conflict, the stricter of the use-specific standards shall prevail.

(B) *Off-street parking.*

(1) Locate a minimum of 50 percent of provided off-street parking on the side or rear of the structure or development. Minimize off-street parking located to the front of the structure or development to the maximum extent practicable.

(2) Where off-street parking areas are located adjacent to a public right-of-way, screen them with a completely opaque fence or wall a minimum of three feet in height or with landscaping using evergreen materials, capable of providing a substantially opaque, hedge-like barrier and attaining a minimum height of three feet within three years of planting.

(C) *Orientation of buildings to street.* Orient structures to face the street or frame open space to the maximum extent practicable.

(D) *Building adjacent to single-family detached development.* The height of a mixed-use building located within 100 feet of a single-family district (RSF-1, RSF-3, RSF-4, and RSF-6) or located within 100 feet of an existing single-family detached development must not exceed three stories.

(E) *Driveways and curb cuts.* Minimize driveways that cross pedestrian pathways to the maximum extent practicable and where alternative means of access exist.

(F) *Parking structures and residential garages.* Parking structures or garages (including residential garages) must not face or be located within the front yard of a structure/development.

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Section 7. Amendment to the Land Development Regulations, Article 5

Article 5 of the City of Alachua Land Development Regulations is hereby amended as follows. The remainder of Article 5 remains in full force and effect (text that is underlined is to be added and text that is shown as ~~strikethrough~~ is to be removed):

5.1.3 *Dimensional standards in Business Districts*. All primary and accessory structures in the business zoning districts are subject to the dimensional standards set forth in Table 5.1-3, Table of Dimensional Standards in the Business Zoning Districts. Primary and accessory structures in the business zoning districts that are part of a development meeting both the definition of mixed-use development and the criteria established in Section 4.7.2, Applicability and relevant provisions, are exempt from Table 5.1-3, Table of Dimensional Standards in the Business Zoning Districts, and are subject to Table 5.1-4, Table of Dimensional Standards for Mixed-Use Developments. These standards may be further limited or modified by other applicable sections of these LDRs. Rules of measurement and permitted exceptions are set forth in Sections 5.2.1, Lots; 5.2.2, Setbacks and required yards; 5.2.3, Height; and 5.2.4, Bulk.

Table 5.1-3. Table of Dimensional Standards in the Business Zoning Districts

District and Use	Lots		Minimum Yards and Setbacks				Max Height (ft.)	Max. Lot Coverage (incl. accessory structures) [1]	Max. Intensity/Density	
	Min. Area (sq. ft.)	Min Width (ft.)	Front (ft.) [5]	Side (ft.)	Rear (ft.)	Wetland and Water-course (ft.)			Max. Non-Residential FAR [2]	Max. Gross Residential Density (DU/acre) [2]
OR										
Dwelling, single-family detached	6,000	50	20	7.5 for each	15	Sec. 5.2.2(B)	65	40%	N/A	5
Dwelling, single-family attached, townhouse, two- to four-family, and multiple-family	10,000	40	15	5 for each building side	10					
Public and institutional uses	None	None	35	25 for each	35			35%	~~None~~ See note [2]	N/A
All other uses			30	20 for each	20					5
CN										
Public and institutional uses	None	None	20	10 for each	15	Sec. 5.2.2(B)	65	40%	Lesser of that provided in note [2] or 10,000 sq. ft.	~~None~~N/A
All other uses			25							~~None~~5

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CC										
All uses	None	None	20	None	15	Sec. 5.2.2(B)	65	None	See note [2]	~~None~~10
CBD										
All uses	None	None	None	None	None	Sec. 5.2.2(B)	65	None	See note [2]	~~None~~15
CI [3]										
All uses	None	None	20	None	15	Sec. 5.2.2(B)	65 See note [8]	None	See note [2]	~~None~~15
ILW										
All uses	None	None	20	15, except where railroad spur abuts side or rear property line, then none		Sec. 5.2.2(B)	65	None	See note [2]	~~None~~8
CP [4]										
Dwelling, single-family detached	3,500 See note [6]	40 See note [6]	20 See note [7]	5 for each See note [7]	10 See note [7]	Sec. 5.2.2(B)	65	60%	N/A	4 ~~N/A~~
Dwelling, single-family attached, townhouse, and multiple-family	2,700 See note [6]	30 See note [6]	10 See note [7]	5 for each building side See note [7]	10 See note [7]					
Cottage home	2,700 See note [6]	30 See note [6]	5 See notes [7], [9]	5 for each building side See note [7]	10 See notes [7], [9]		35	70%		

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All other uses	None	None	20	15, except where railroad spur abuts side or rear property line, then none		100 See note [8]	None	See note [2]	
IG									
All uses	None	None	20	15, except where railroad spur abuts side or rear property line, then none	Sec. 5.2.2(B)	65	None	See note [2]	N/A
GF									
All uses	None	None	20	15, except where railroad spur abuts side or rear property line, then none	Sec. 5.2.2(B)	65	None	See note [2]	N/A
PD-EC									
See Section 3.6.3(C).									
PD-TND									
See Section 3.6.3(B).									
PD-COMM									
See Section 3.6.3(D).									
Notes:									
[1] The maximum lot coverage in the OR district may be increased up to 65 percent by the provision of three or more upper story dwelling units above retail or office uses, provided such units are deed-restricted affordable housing for low income residents. The maximum lot coverage for cottage homes shall be measured over the entire cottage neighborhood, not individual lots.									
[2] The building square footage occupied by ~~upper story~~ dwelling units ~~that are deed-restricted as affordable housing for low income residents~~ shall not be counted towards the maximum FAR. Floor area ratios for business districts are as follows: 0.5 FAR for parcels five acres or greater; 0.75 FAR for parcels less than five acres, but greater than one acre; 1.0 FAR for parcels one acre or less.									
[3] Minimum lot area, minimum lot width, minimum yard, and minimum setback standards may be reduced by up to 75 percent in the CI Districts to accommodate deed-restricted affordable housing units.									
[4] Residential uses in the CP District shall be consistent with the criteria specified in Section 3.5.2(F).									
[5] Front setbacks shall be consistent with the definition of "yard, front" as provided in Subsection 5.2.2(A)(7).									

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[6] Lot dimensional standards apply only to individual platted lots.
[7] Building setbacks apply only to individual platted lots or if no platting is proposed, the setback standards apply to the project permitter. However, all building separation requirements specified in the Florida Building Code are applicable. As used within Table 5.1-3, "project" shall mean all contiguous land zoned CP.
[8] The maximum height for structures in the CI and CP zoning districts may be increased up to a maximum of 200 feet using the Special Exception process consistent with the applicable standards found in Sections 2.4.4(D) and 5.2.3(B).
[9] If a garage is provided, then the garage face shall be set back a minimum 20-feet to prevent parked vehicles from blocking the sidewalk.

5.2.1 *Lots.*

(B) *General Lot Requirements.*

(3) ~~*Erection of more than one principal structure on a platted lot.*~~ Whenever any land is subdivided, a building permit for the construction of a building or other principal structure (excluding commercial buildings under common ownership or unified control) shall not be issued unless the land is subdivided pursuant to the procedures and standards of these LDRs.

Section 8. Amendment to the Land Development Regulations, Creation of Section 5.1.4

Section 5.1.4 of the City of Alachua Land Development Regulations is hereby created as follows (text that is underlined is to be added and text that is shown as ~~strikethrough~~ is to be removed):

5.1.4 *Dimensional standards for mixed-use developments.* All primary and accessory structures in the business zoning districts that are part of a development meeting both the definition of mixed-use development and the criteria established in Section 4.7.2, Applicability and relevant provisions, are subject to the dimensional standards set forth in Table 5.1-4, Table of Dimensional Standards for Mixed-Use Developments in the Business Zoning Districts. These standards may be further limited or modified by other applicable sections of these LDRs. Rules of measurement and permitted exceptions are set forth in Sections 5.2.1, Lots; 5.2.2, Setbacks and required yards; 5.2.3, Height; and 5.2.4, Bulk.

Table 5.1-4. Table of Dimensional Standards for Mixed-Use Developments in the Business Zoning Districts

District and use	Lots		Minimum Yards and Setbacks				Max Height (ft.)	Max. Lot Coverage (incl. accessory structures) [1]	Max. Intensity/Density	
	Min. Area (sq. ft.)	Min Width (ft.)	Front (ft.) [4][6]	Side (ft.) [6]	Rear (ft.) [6]	Wetland and Water-course (ft.)			Max. Non-Residential FAR [2]	Max. Gross Residential Density (DU/acre) [2]
OR										
Mixed-use development See note [7]	10,000	50	10	5 for each building side	15	Sec. 5.2.2(B)	65	50%	See note [2]	8
CN										
Mixed-use development See note [7]	7,500	50	10	5 for each building side	15	Sec. 5.2.2(B)	65	50%	Lesser of that provided in note [2]	8

									or 10,000 sq. ft.	
CC										
Mixed-use development See note [7]	None	None	10	None	15	Sec. 5.2.2(B)	65	None	See note [2]	15
CBD										
Mixed-use development See note [7]	None	None	None	None	None	Sec. 5.2.2(B)	65	None	See note [2]	20
CI [3]										
Mixed-use development See note [7]	None	None	10	None	15	Sec. 5.2.2(B)	65 See note [5]	None	See note [2]	15
PD-R										
See Section 3.6.3(A).										
PD-EC										
See Section 3.6.3(C).										
PD-TND										
See Section 3.6.3(B).										
PD-COMM										
See Section 3.6.3(D).										
Notes:										
[1] The maximum lot coverage in the OR district may be increased up to 65 percent by the provision of three or more upper story dwelling units above retail or office uses, provided such units are deed-restricted affordable housing for low income residents.										
[2] The building square footage occupied by dwelling units shall not be counted towards the maximum FAR. Floor area ratios for mixed-use developments in the business districts are as follows: 0.6 FAR for parcels five acres or greater; 0.85 FAR for parcels less than five acres, but greater than one acre; 1.25 FAR for parcels one acre or less.										
[3] Minimum lot area, minimum lot width, minimum yard, and minimum setback standards may be reduced by up to 75 percent in the CI Districts to accommodate deed-restricted affordable housing units.										
[4] Front setbacks shall be consistent with the definition of "yard, front" as provided in Subsection 5.2.2(A)(7).										
[5] The maximum height for structures in the CI zone district may be increased up to a maximum of 200 feet using the Special Exception process consistent with the applicable standards found in Sections 2.4.4(D) and 5.2.3(B).										

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[6] If a garage is provided, then the garage face shall be set back a minimum 20-feet to prevent parked vehicles from blocking the sidewalk.
[7] The dimensional standards for mixed-use development shall only apply to developments meeting both the definition of mixed-use development and the criteria established in Section 4.7.2, Applicability and relevant provisions. Developments with multiple principle uses not meeting either the definition of mixed-use development nor the criteria established in Section 4.7.2, Applicability and relevant provisions, are subject to the standards of Table 5.1-1, Table 5.1-2, and Table 5.1-3 as applicable.

Section 9. Amendment to the Land Development Regulations, Article 6

Article 6 of the City of Alachua Land Development Regulations is hereby amended as follows. The remainder of Article 6 remains in full force and effect (text that is underlined is to be added and text that is shown as ~~strikethrough~~ is to be removed):

6.1.4 *Off-street parking standards.*

(B) *Amount required.*

(6) *Reductions for affordable housing units.* The minimum off-street parking requirements in Table 4.1-1, Table of Allowed Uses, may be reduced by up to 50 percent for single-family detached and attached, two- to four-family dwellings, townhouse, multiple-family, live/work and upper story dwellings provided that such uses are:

(a) Located in the RSF-6, RMF-8, RMF-15, ~~RO~~OR and CI zone districts;

(b) Deed restricted as affordable housing for low-income residents; and

(c) Constructed under the density bonus provisions in Article 5 for such uses.

(7) *Exceptions for mixed-use development.* The minimum number of off-street parking spaces shall be reduced by 25 percent for mixed-use developments located in the OR, CN, or CC districts.

6.2.2 *Landscaping standards.*

(B) *Applicability.* These standards shall apply to the following development in the City:

(1) *Single-family lots or dwellings.* The subdivision or development of eight or more single-family residential lots or dwellings.

(2) *Single-family attached dwellings.* The subdivision or development of eight or more single-family attached dwellings.

(3) *Two- to four-family dwellings.* The subdivision or development of eight or more two- to four-family dwellings.

(4) *Manufactured home park.* Subdivision for a manufactured home park.

(5) *Existing multifamily structure.* Development of a multifamily structure or redevelopment of an existing multifamily structure that results in an increase in building square footage of 60 percent or more.

(6) *Cottage neighborhoods.* Cottage neighborhoods located in the CP zoning district.

(7) *Nonresidential.* Development of a nonresidential structure or redevelopment of a nonresidential structure that results in an increase in building square footage or impervious surface by 50 percent or more.

(8) *Parking lot.* Development of a parking lot for eight or more spaces.

(9) *Existing parking lot.* Redevelopment or expansion of an existing parking lot that results in an increase of 20 or more spaces. Redevelopment or expansion includes items such as repaving, changes in ingress or egress, and reconstruction of stormwater drainage systems.

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(10) *Mixed-use developments*. Development of a mixed-use development or redevelopment of an existing mixed-use development that results in an increase in building square footage or impervious surface by 50 percent or more.

(D) *Landscape standards.*

(1) *Site landscaping*. For purposes of this section the number of trees required is rounded to nearest whole tree or shrub (e.g., if number of canopy trees needed to meet site landscaping requirements is calculated at 9.5 trees then ten trees would be required). The following site landscaping shall be required for the following:

(a) *Multifamily, ~~and~~ townhouses, and mixed-use developments*.

(i) Two canopy trees per acre, planted on the primary or street-facing side, and one canopy tree~~s~~ per acre planted on each of the exterior sides and exterior rear of each primary structure. An existing canopy tree that is a native species and in good or better health can be utilized to fulfill this requirement. It is encouraged that the tree be located so that it may provide shade on the structure during the summer afternoon.

(ii) Six ornamental/understory trees per acre~~, with 50 percent planted in front and 25 percent on each side~~. For sites in the CBD district, the ornamental/understory trees may be planted in any yard. For sites outside the CBD district, 50 percent of the required ornamental/understory trees must be planted in front and 25 percent on each side.

(iii) A row of shrubs along the front facade of the structure, with consideration given to access to utility meters or mechanical equipment. Shrubs shall not be planted directly against the structure, but a minimum of two feet from the facade to facilitate adequate air circulation. In lieu of a horizontal line of shrubs along the front facade, shrub masses of three or more species may be utilized.

(iv) For sites with multiple buildings, for each 100 feet of facade of the longest building face of any buildings at least one of the following options, located between all structures:

a. Two canopy trees;

b. Four understory trees;

c. A row of shrubs along facades facing each other;

d. Community garden area of at least 1,500 square feet;

e. Fountain or other water feature;

f. Shaded table or bench;

g. Other significant landscape improvement as approved by LDR Administrator.

(v) A combination of solid sod, seeding, and sprigs shall be used to cover 100 percent of the lot site disturbed by construction activities. Areas of native vegetation are not required to be sodded. An area within 20 feet of the front building facade shall be sodded with other disturbed areas to be sodded, seeded or sprigged.

(vi) The site landscaping requirements found in [Subsection] 6.2.2(D)(1)(a)(i) and (ii) are reduced by 50% for those developments on sites which are 43,560 square feet or less.

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(3) *Perimeter buffers.*

(c) *Buffer class application.* Table 6.2-2, Buffer Class Application, below specifies the type of landscaped perimeter buffer that must be installed adjacent to an existing use or vacant land. The proposed uses are designated with their associated use class and cross-referenced with the numbered columns along the horizontal row under the adjacent use heading. The buffer type is indicated by letter and the total buffer width in feet is indicated by number. For mixed-use developments, utilize whichever use type present in the mixed-use development results in the greater buffer requirement.

Section 10. Amendment to the Land Development Regulations, Article 10

Article 10 of the City of Alachua Land Development Regulations is hereby amended as follows. The remainder of Article 10 remains in full force and effect (text that is underlined is to be added and text that is shown as ~~strikethrough~~ is to be removed):

10.2 Definitions.

Development area means as used in Section 4.7, Mixed-use specific standards, the portion of land in a mixed-use development designated for clearing, grading, ingress, egress, utilities, landscaping and other forms of development. In cases where mixed-use development is proposed as part of a planned development, the development area encompasses the entirety of the property subject to the PD Ordinance. As used in Section 7.9, Conservation subdivision, the portion of land in a conservation subdivision designated for clearing, grading, ingress, egress, wells, septic systems, utilities and other forms of development.

Mixed-use development means a building or ~~an~~ distinct development area ~~containing~~ consisting of a mix of multiple use types from at least two use classifications, including at least one use type from the residential use classification, ~~uses~~ which functionally integrate and interconnect with one another and meets the criteria of Section 4.7.2. Uses are generally arranged in a walkable manner and may be arranged such that they occupy one structure or separate structures in close proximity. ~~Uses may include, but is not limited to, retail, professional services, restaurants and eating establishments, offices, and single and multifamily residential.~~

Section 11. Codification of and Correction of Scrivener's Errors

The City Manager or designee, without public hearing, is authorized to correct any typographical errors which do not affect the intent of this ordinance. A corrected copy shall be posted in the public record.

Section 12. Ordinance to be Construed Liberally

This ordinance shall be liberally construed in order to effectively carry out the purposes hereof which are deemed to be in the best interest of the public health, safety, and welfare of the citizens and residents of the City of Alachua, Florida.

Section 13. Repealing Clause

All ordinances or parts of ordinances in conflict herewith are, to the extent of the conflict, hereby repealed.

Section 14. Severability

It is the declared intent of the City Commission of the City of Alachua that, if any section, sentence, clause, phrase, or provision of this ordinance is for any reason held or declared to be unconstitutional, void, or inoperative by any court or agency of competent jurisdiction, such holding of invalidity or unconstitutionality shall not affect the remaining provisions of this ordinance, and the remainder of the ordinance after the exclusions of such part or parts shall be deemed to be valid.

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Section 15. Effective Date

This ordinance shall become effective immediately upon passage and adoption.

Passed on First Reading the _____ day of _____, 2025.

PASSED and ADOPTED, in regular session, with a quorum present and voting, by the City Commission, upon second and final reading this _____ day of _____, 2025.

CITY COMMISSION OF THE
CITY OF ALACHUA, FLORIDA

_____
Gib Coerper, Mayor
SEAL

ATTEST:

_____
Mike DaRoza, City Manager/Clerk

APPROVED AS TO FORM

_____
Marian B. Rush, City Attorney

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who alerted the agency to the violation, pointing out that the law enforcement indicated he was directed to unlawfully intercept communications involving

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City of ALACHUA

NOTICE OF PUBLIC HEARING BEFORE THE PLANNING AND ZONING BOARD OF THE CITY OF ALACHUA, FLORIDA

Notice is hereby given that the Planning and Zoning Board of the City of Alachua will hold a public hearing on April 15, 2025, at 6:00 p.m. The hearing will be held in the James A. Lewis Commission Chambers in City Hall, located 15100 NW 142nd Terrace, Alachua, Florida, to consider the following:

A Staff-initiated text amendment to the City of Alachua Land Development Regulations: amending Article 2, Administration, relating to the powers and duties of the Planning and Zoning Board; amending Article 3, Zone Districts, relating to the permitted density and intensity and purposes of the business districts; amending Article 4, Use Regulations, relating to use specific standards and the creation of mixed-use specific standards; amending Article 5, Density, Intensity, and Dimensional Standards, relating to the permitted density and intensity of the business districts and establishing dimensional standards for mixed-use development; amending Article 6, Development Standards, relating to off-street parking and loading standards and tree protection and landscaping standards for mixed-use development; and amending Article 10, Definitions, relating to the definitions of "development area" and "mixed-use."

At the public hearing, all interested parties may appear and be heard with respect to the application. Copies of the application are available for public inspection at the Planning and Community Development Department, 15100 NW 142nd Terrace, Alachua, Florida, on any regular business day between the hours of 7:30 a.m. to 6:00 p.m. Written comments on the application may be sent to the following address: City of Alachua, Planning and Community Development, P.O. Box 9, Alachua, FL, 32616. Notice is given pursuant to Section 286.0105, Florida Statutes, that, in order to appeal any decision made at the public hearing, you will need a record of the proceedings, and that, for such purpose, you may need to ensure that a verbatim record of the proceedings is made, which includes the testimony and evidence upon which the appeal is to be based. In accordance with the Americans with Disabilities Act, any persons with a disability requiring reasonable accommodation in order to participate in this meeting should call the City Clerk at (386) 418-6100 x 1501 at least 48 hours prior to the public hearing.

(Published: Alachua County Today - April 3, 2025)

Carson J. Crockett, AICP Candidate
Planner, Planning and Community Development Department

Carson J. Crockett, AICP Candidate, is a Planner for the City of Alachua. He supports the functions of the Planning and Community Development Department, assists in the development review process and regularly communicates with members of the public. Crockett holds a master's degree in Urban and Regional Planning from the University of Florida, and he is currently working toward an American Institute of Certified Planners (AICP) certification.

EDUCATION

University of Florida
Bachelor of Science in Sustainability and the Built Environment
Graduated: April 2022
Master of Urban and Regional Planning
Graduated: May 2023

St. Petersburg Collegiate High School
High School Diploma
Graduated: May 2019

WORK EXPERIENCE

City of Alachua, Florida | Planner | Jun 2023-Present
15100 NW 142nd Ter, Alachua, Fl 32615 | (386) 418-6121

George F. Young, Inc. | Planning Intern | May-Aug 2021 and 2022
299 Dr. Martin Luther King Jr. St N, Saint Petersburg, Fl 33701 | (727) 822-4317

PROFESSIONAL ORGANIZATIONS

American Planning Association | San Felasco Section, Florida Chapter
Member | Nov 2020-Present
Student Planning Association | University of Florida
Member | August 2020-May 2023

CERTIFICATES AND OTHER SKILLS

AICP Candidate | Nov 2023-Present
ArcGIS Pro | Competent
ArcGIS Desktop | Competent
Microsoft Office Certified | Word
PowerPoint | Excel

Robert's Rules of Order | Proficient
Public Speaking | Proficient