



# BLUEPRINT

INTERGOVERNMENTAL AGENCY



## **Maclay Road Multi-Use Trail Feasibility Study**

From Bobbin Brook East  
to  
Maclay Boulevard

November 2021

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Blueprint Intergovernmental  
Agency

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# Issue and revision record

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# Executive Summary

Blueprint Intergovernmental Agency (Blueprint) selected Mott MacDonald to perform a feasibility study for the addition of an 8-10' multi-use path along Maclay Road from Bobbin Brook East to Maclay Boulevard. A project location map showing the proposed limits of the study can be seen below and in **Figure 1**. Other Figures can be found in **Appendix A**.

Two alternatives were evaluated for this study, the first alternative would be to construct the multi-use path on the North side of Maclay Road, while the second alternative would evaluate the South side. A plan view of both alternatives is shown in **Figure 2**. Each alternative was evaluated based on five (5) major factors: environmental impact, connectivity, constructability, utility impacts and approximate construction cost. The analysis was conducted using Leon County GIS data, survey sheets provided by Blueprint, Natural Resource Environmental Report provided by EGS, and field reviews.

After an evaluation of the available data, it was determined that the South side alternative is the most feasible alternative alignment. The deciding factors were primarily better connectivity, superior constructability, and lower construction cost.

## Project Limits



# 1 Purpose

As part of the Market District Placemaking Project, Mott MacDonald conducted this study to determine if the addition of a multi-use path along the existing roadway shoulder of Maclay Road was feasible. The path will remain in the existing right of way within the project limits and run adjacent to Maclay Road from Bobbin Brook East to Maclay Boulevard in Leon County. The study will determine a preferred alignment by evaluating both the North and the South sides of Maclay Road and provide a recommendation based on findings. The study will assess all potential impacts, both beneficial and adverse, and considered constructability, engineering design, environmental, social, and economic factors.

Sidewalk already exists along the North side of Maclay Road east of the project limits from Thomasville Road to Maclay Boulevard. This study area for the multi-use path would extend the pedestrian and bike facility westward to the project limit at Bobbin Brook East. The location is on the border of the city limits and has an existing trail head on the north side of the road for the Lake Overstreet Trail that enters the Alfred B. Maclay Gardens State Park. The proposed multi-use path would provide a connecting link to the state park trail system for the neighborhoods along Maclay Road and the Market District.

A separate study is being conducted by Leon County to provide sidewalk along the North side of Maclay Road from Meridian Road to the city limit line at Bobbin Brook East.

## 2 General

### 2.1 Existing Conditions

Maclay Road is classified as a major collector and connects North Meridian Road to Thomasville Road. The current posted speed limit within the project limits is 40 MPH. Maclay Road has a rural typical section consisting of two, 12-foot travel lanes with grassed shoulders. Open ditches are currently used to convey stormwater runoff collected within the project limits. Existing utilities are present on both sides of Maclay Road and can be seen in **Figure 11**.

According to existing right of way maps, approximately 66 feet is available with generally 33 feet left and right of the existing road center line. Additionally, the City of Tallahassee owns a stormwater pond on the South side with usable property directly adjacent to Maclay Road. The right of way maps provided by the City of Tallahassee can be seen in **Appendix D**

#### 2.1.1 Existing Topography

Topographic features for this study were obtained using Leon County GIS; therefore, all information should be considered approximate and not suitable for final design purposes. A topographic map of the project area is shown in **Figure 3**. Within the study area, Maclay Road has a rolling terrain along the roadway alignment. At Bobbin Brook East, the existing elevation is approximately elevation 135 feet. The elevation at the Maclay Road and Millers Bridge Road intersection climbs to approximately 220 feet, which is the highest elevation within the project limits. The elevation then falls back down to roughly 206 feet at the Maclay Boulevard intersection.

#### 2.1.2 Soils

The soils found within the project limits are primarily fine sands with the following specific classifications: Pelham fine sand, Orangeburg fine sandy loam, Lucy fine sand, Ocillia fine sand, Lynchburg fine sandy loam and Plummer fine sand. A soils map provided by EGS is shown in **Figure 4**.

#### 2.1.3 100-Year Floodplain

A flood insurance rate map was obtained from the FEMA website as shown in **Figure 5**. The project site is located outside of the FEMA 100-year floodplain and is not located within a flood zone. The project limits are considered an area of minimal flood hazard by the FIRM map.

#### 2.1.4 Existing Traffic Data

The annual average daily traffic in 2020 for Maclay Road was 6500 vehicles per day, 96.8% of the vehicles were passenger vehicles and 3.2% were trucks according to data from the FDOT's portable traffic monitoring site number 555128. The AADT traffic volumes were 8,200

in 2017 and 2018. We realize that traffic volumes are currently lower due to the COVID-19 pandemic, but we expect them to return to the higher volumes in the near future.

Crash data within the project limits were obtained from the FDOT GIS website. A table showing the crashes occurring from 2014 to 2018 is shown below.

<b>CRASH DATA</b>					
<b>Year</b>	<b>Nonfatal Injuries</b>	<b>Bicyclists</b>	<b>Pedestrians</b>	<b>Fatalities</b>	<b>Total Crashes</b>
<b>2014</b>	0	0	0	1	1
<b>2015</b>	3	0	0	0	5
<b>2016</b>	4	0	1	0	5
<b>2017</b>	3	0	0	0	3
<b>2018</b>	2	0	0	0	1
<b>Total</b>	12	0	1	1	15

From the years 2014-2018 from Maclay Boulevard to Bobbin Brook E, there were a total of 15 vehicle related accidents. Of these 15 accidents, one fatality occurred in 2014. Other significant statistics include one pedestrian injury in 2016, and a total of 12 other nonfatal injuries that span over the five years.



## 3 Summary of Findings

### 3.1 North Side Alternative

The North Side alternative would include approximately 4,750 feet of a ten-foot-wide multi-use path. The path would begin across from Bobbin Brook East at the entrance to the Maclay Gardens State Park walking trail, as shown in the photo below. The path would then extend eastward along the north side of Maclay Road and terminate at the existing 6-foot sidewalk located at the back of curb in the northeast corner of the intersection with Maclay Boulevard and Maclay Road. A pedestrian crossing is located on the east side of the intersection.



**Begin Project location of North Side Alternative**





**End Project Location of North Side Alternative**

There are three typical sections proposed for the North Side alternative (**Figure 6**). Typical section #1 consists of a ten-foot multi-use path with a five-foot horizontal buffer to the shoulder break point as required by Florida Greenbook. Due to the added width, this design would require filling in the existing ditch with embankment material. To maintain adequate drainage, a new concrete swale would be constructed adjacent to the existing roadway shoulder in the 5-foot horizontal buffer zone. The concrete swale would continue to allow stormwater runoff to follow existing conditions, while simultaneously providing a buffer zone between pedestrians, bikes, and traffic on Maclay Road.

Typical section #2 would be required in areas where there is already existing ditch pavement and in areas where higher velocities could occur. The photo below shows an example of one of these areas with steeper terrain.





**North side Concrete Ditch Pavement**

In these areas, higher velocities occur that could possibly encroach onto the travel lanes if capacity is reduced. It may be necessary to consider curb & gutter and inlets with a closed pipe system to collect and convey the stormwater with energy dissipators, such as riprap, at the outfall points to reduce velocities and prevent erosion. This typical section calls for Type F curb and gutter along with a 4.5' utility strip that separates the multi-use path from the back of curb as required by Florida Greenbook. The curb and gutter, along with the 4.5' utility strip provides a 6.5' offset from the travel way.

A section of the North Side Alternative multi-use path will require approximately 100 linear feet of gravity wall and 250 linear feet of retaining wall. These walls are necessary due to the existing steep slopes in this area. This condition is shown in Typical Section #3. Instead of a concrete ditch, a five-foot sodded area connected to the existing shoulder is shown in this section. This provides the required separation from the roadway and allows runoff to flow across the multi-use path to its natural outfall. Standards require retaining walls in areas where drop offs of five feet or more occur, and gravity walls are



required where drop offs of five feet or less occur. Because both drop off conditions occur near the path, appropriate aluminum handrail installation is necessary to provide drop off protection for pedestrian safety.

The goal of this alternative is to place the multi-use path as far away from the travel lane on Maclay Road as possible, while minimizing the amount of clearing of trees necessary for construction. Some other key factors that were considered while evaluating this alternative included maintaining canopy growth and the natural beauty of this corridor while also keeping pedestrians safe.

### 3.1.1 Environmental Impacts

EGS performed an environmental study within the project limits along Maclay Road. The following paragraphs is a summary of key findings in the report, which can be found in **Appendix C**.

Figure 7 of **Appendix C** shows that wetlands are present at the culvert crossing. The North Side Alternative will impact this wetland area during the construction of the retaining walls required in that same area. While the walls will decrease the construction footprint, clearing will still be necessary to within a foot of the right of way. Appropriate erosion control methods will be essential in this area. This area of wetlands will require State and local permitting, along with further evaluation during the design phase to ensure these areas are properly protected.

Potential impacts to wildlife and habitat should also be assessed within the project limits. The protected species in this area could include: Golden Banded-Skippers, Wood Storks, Eastern Indigo Snakes, and Gopher Tortoises. Impacts to these species and their habitat should be minimal for this alternative but still should be important things to consider in final design and permitting.

The Leon County comprehensive plan regulates severe and significant grades. Severe grades are defined as grades with slopes greater than 20% and significant grades are slopes between 10-20%. There are several of these grades within the project limits. They are listed in Figure 10 of **Appendix C**. Areas of significant and severe slopes were primarily identified within the front slopes of existing swales. The North Side Alternative would impact both types of slopes during construction of the walls and the multi-use path; however, these impacts would provide needed stabilization to these slopes due to walls and filling that would occur to construct the trail.

Another potential impact regulated by the Leon County comprehensive plan is removal of protected trees. Protected trees include any tree of 18-inch diameter at breast height (DBH) or greater, any tree within a canopy road protection zone, any hardwood tree or long leaf pine tree of 12-inch DBH or greater, any dogwood tree of 4-inch DBH or greater, and any tree in a wetland. A protected tree cannot be removed or

damaged without permit approval. The North Side Alternative would impact some of these protected trees to achieve the appropriate clear zone width and construct the walls. A detailed tree survey will be necessary during the design phase to further specify impact. Possible mitigation measures could be employed to avoid and minimize the impacts in certain areas during the design phase.

### 3.1.2 Connectivity

The north side of Maclay Road has numerous intersecting residential driveways. Field review analysis determined that there are 13 existing active driveways and 11 existing mailboxes located on the North side of Maclay Road. This alternative also allows for a direct connection into the existing sidewalk located at the Maclay Boulevard intersection. This tie in allows pedestrians to continue from the existing sidewalk onto the multi-use path without having to cross Maclay Road. Additionally, it also allows direct access to the Maclay Gardens State Park walking trail without requiring a midblock crossing. If this alternative were selected, homeowners along the north side would enjoy easy access to the new shared use path.

### 3.1.3 Constructability

Overall, construction of the North Side alternative would be extremely challenging. Issues with limited space, existing driveways, and construction of the walls could impact both construction and design.

The north side of Maclay Road has areas of very limited space due to steep embankments like the one seen below.



**North Side Limited Space Area**



On the north side of Maclay, scenarios like this occur at multiple locations. Steep embankment along with limited space would make constructing the shared use path through these areas very difficult. It would be necessary to either decrease the path width or decrease the separation from roadway width throughout these areas. Either of these options could cause pedestrian safety issues and would require approved exceptions during the design phase. These areas are a major concern for the overall feasibility of this alternative.

Driveways along the north side of Maclay Road would also present challenges. As previously stated, there are 13 driveways along the north side roadway. Most of the driveways look like the one pictured below.



**Existing Driveway & Mailbox**

It is not likely that all these driveways will meet ADA grade requirements. Each driveway along the north side would need to be reconstructed so they could meet ADA requirements and seamlessly connect to the multi-use path. Additionally, the mailboxes and brick end walls would be impacted by the multi-use path. Each of these impacted items would need to be accounted for and replaced, adding cost to the project. Further, during construction these driveways would have to be maintained to allow residents access to their property.

Another possible challenge would be the construction of the retaining wall. The retaining wall is necessary but would cause an increase in construction time due to the added work effort of constructing the walls. Residents and commuters alike would feel this impact.

Lane closures would likely be required for this alternative. These closures would likely occur during off peak time periods to allow the construction to be completed. This would be further evaluated during the design phase to establish suitable lane closure periods that will facilitate construction to occur and minimize impacts to commuter traffic and school access

### 3.1.4 Utility Impacts

The known utilities located on the north side of Maclay Road are shown in the **Figure 7** GIS map. There is a 10" water main with fire hydrant fixtures, overhead electric lines, and buried telephone/fiber within the project limits.

Impacts to the utilities should not be severe enough to cause relocations; however, a detailed survey will be needed to determine the specific impacts that construction could cause. There are several areas where these impacts could occur. The first and most serious would be to the existing water main within the limits of the proposed wall sections. There is a high probability the wall footers would conflict with the existing water main. Conflicting water valves will need to be adjusted and properly incorporated into the multi-use path throughout the project. Exact locations of the existing fire hydrants should be surveyed to pinpoint where they conflict with the path.

The main impact to the overhead electric that should be carefully evaluated is the potential for pole conflicts. In areas where conflict is unavoidable, it will be necessary to either leave the poles in the multi-use path or relocate them closer to the edge of right of way. If the pole needs to remain in the path - a minimum of 36" of unobstructed width would be required to meet ADA criteria.

The buried telephone and/or fiber located within the project limits should be evaluated during the design phase. It may be necessary to work around or relocate existing fiber pedestals that the multi-use path would impact. Pictured below is a utility pedestal that would likely fall within the shared use path.





### Embarq Telephone Pedestal

This Embarq telephone pedestal would need to be relocated prior to construction as it would likely fall directly in the proposed shared use path. A detailed survey would be necessary during design to find other locations where this situation might occur.

### 3.1.5 Construction Cost Estimate

An estimate of probable construction cost has been provided in **Appendix B**. According to the estimate the North Side Alternative would cost approximately \$1,349,200.00. Unit cost pricing was estimated using the FDOT historical cost system for Area 3 which covers Tallahassee. It should be considered that this estimate is preliminary and only as accurate as the available data. Due to the recent rise in construction materials and labor costs, construction cost could change drastically by the time construction occurs.

## 3.2 South Side Alternative

The South Side Alternative consists of approximately 4,700 feet of ten-foot-wide multi-use path. The proposed path would begin at the



entrance to Maclay Gardens State Park trail head, where a crosswalk would safely direct pedestrians to the south side of Maclay Road. The alignment would then head east along the roadway shoulder, before exiting the southern right of way and traveling along a drainage berm within City of Tallahassee owned stormwater facility as shown graphically in **Figure 8**. The slight jog would take pedestrians further away from traffic and allow for a scenic route alongside the existing detention pond as shown below.



**View from drainage berm for South Side alternative**

After traversing the length of the berm adjacent to the pond, the path would then transition back northward into the Maclay Road right of way and continue along the south side of the road. Finally, the path would terminate at the sidewalk located in the southwest corner of the Maclay Boulevard intersection.

**Figure 9** shows the three different typical sections for this South Side Alternative. Typical Section #4 consists of a ten-foot multi-use path with a five-foot horizontal buffer to the existing shoulder break point as required by Florida Greenbook. Due to the added width, this design would require filling in the existing ditch with embankment material. To maintain adequate drainage, a new five-foot concrete swale would need to be constructed adjacent to the existing roadway shoulder. The concrete swale would continue to allow stormwater runoff to follow



existing conditions, while simultaneously providing a buffer zone between pedestrians, bikes, and traffic on Maclay Road.

Typical section #5 would be required in areas where existing ditch pavement is present and in areas where higher velocities could occur. The photo below shows an example of one of these areas.



**South Side Concrete Ditch Pavement**

In these areas, high velocities occur that could possibly encroach onto the travel lanes if capacity is reduced. It may be necessary to consider curb & gutter and inlets with a closed pipe system to collect and convey the stormwater with energy dissipators, such as riprap, at the outfall points to reduce velocities and prevent erosion. The typical section calls for type F curb and gutter along with a 4.5' utility strip that separates the multi-use path from the back of curb as required by Florida Greenbook. The curb and gutter, along with the 4.5' utility strip provides a 6.5' offset from the travel way.

In the section where the path transitions onto detention pond property, the design could follow Typical Section #6. This typical section shows the 10-foot-wide multi-use path on top of the existing pond berm with five-foot flat grassed areas on either side. Gravity walls and retaining wall are not necessary in this alternative since the pond berm is being utilized.

The goal of this alternative was to place the multi-use path as far away from the travel lane as possible, while minimizing the amount of clearing and grubbing necessary. Some other key factors that were considered while evaluating this alternative included maintaining canopy growth and the natural beauty of this corridor while also keeping pedestrians safe.

### 3.2.1 Environmental Impacts

EGS performed an environmental study within the project limits along Maclay Road. The following paragraphs is a summary of key findings in the report, which can be found in **Appendix C**.

Wetlands are present at the culvert crossing as shown in Figure 7 of **Appendix C**. The wetland impacts in this area due to the South Side Alternative, if any, will be minimal. The wetland referenced above would be mostly avoided by diverting the path onto detention pond property and adjacent to the existing overflow structure shown below. The pathway could be placed at the same elevation as the existing overflow structure. This will allow for the structure to function normally in case of emergency overflow conditions.



**Existing Detention Pond Concrete Spillway**

Even though minimal wetland impacts are expected for this alternative, appropriate erosion control methods are still necessary to protect the wetlands surrounding the pond. These wetlands would require state and local permitting and further evaluation during the design phase to ensure these areas are properly protected.



Potential impacts to wildlife and habitat should also be assessed within the project limits. The protected species in this area could include: Golden Banded-Skippers, Wood Storks, Eastern Indigo Snakes, and Gopher Tortoises. Impacts to these species and their habitat should be minimal for this alternative but still should be important things to consider in final design and permitting.

Like the North Side Alternative, the South Side Alternative will also affect severe and significant slopes. The South Side Alternative would impact both types of slopes during construction of the multi-use path; however, these impacts would not be negative. This alternative would provide stabilization to these slopes due to filling that would occur.

The South Side Alternative would also impact protected trees. The South Side Alternative would impact some of these protected trees to achieve the appropriate clear zone width. Impacts to protected trees could also occur when the path exits the right of way and enters detention pond property. A detailed tree survey would be necessary during the design phase to further specify and mitigate impacts.

### 3.2.2 Connectivity

There is only one driveway that will be impacted by the South Side alternative; however, this alternative will still service countless residents in the area. Residents of the Bobbin Brook and Bobbin Trace neighborhoods will enjoy ease of access to the multi-use path without having to cross Maclay Road. This alternative would also allow a seamless tie-in to the future Maclay Boulevard sidewalk, allowing pedestrians to access Maclay Boulevard amenities without crossing Maclay Road. A mid-block crossing would be provided to connect the multi-use path to Maclay Gardens State Park walking trail. During field reviews bicyclists were observed riding east on the north side shoulder and then crossing Maclay Road where the powerline easement intersects the roadway. The mid-block crossing would provide a safer path for these cyclists to take.



**Intersection of Millers Bridge Road and Maclay Road**

### **3.2.3 Constructability**

There are a few challenges that could arise during construction of the South Side Alternative. First, maintaining access to both Bobbin Trace and Bobbin Brook during construction will be essential. Traffic must be allowed to continue to flow freely in and out of these neighborhoods as necessary due to the lack of alternative access routes into the neighborhood.

Another potential constructability issue may arise when attempting to minimize impacts to protected trees. As seen in the picture below, field measurements show there is only eight feet of space between the tree and the existing headwall. If both the headwall and the tree must remain, it will be difficult to squeeze the path through this opening. There are likely other locations like this that will need to be further evaluated during design. A detailed survey will be imperative to prevent conflicts during construction. Using this survey, designers will be able to make the client aware of all trees that may conflict with the proposed design so that key decisions can be made.





**8' Space between Headwall & Tree**

There are also a few existing drainage structures within the project limits on the South side of Maclay Road. Structures like the one seen below would need to be incorporated into the new system during the design phase. This could require modifying the existing structure or replacing the structure entirely if necessary. This would increase cost and duration of this alternative.



**Existing Drainage Structure**

Lane closures would likely be required for this alternative. These closures would likely occur during off peak time periods to allow the construction to be completed. This would be further evaluated during the design phase to establish suitable lane closure periods that will facilitate construction and minimize impacts to commuter traffic and school access.

### 3.2.4 Utility Impacts

The south side of Maclay Road has an existing 6" Sewer Force Main, an existing 8" and 10" Gravity Mains as shown in the **Figure 10** GIS map. An existing gas line of unknown size and existing overhead electric lines are also present. All these utilities exist inside of the existing Maclay Road right of way.

Utility relocation is not anticipated for the existing force main, gravity lines, and gas line because construction should be shallow. It will be necessary however to adjust manholes and valves throughout the project limits. A detailed survey will be necessary to determine the location and possible impacts during the design phase.

The main impact to the overhead electric that should be carefully evaluated is the potential for pole conflicts. In areas where this is impractical due to clear zone requirements, it will be necessary to either leave the poles in the multi-use path or relocate them closer to the edge of right of way. If the pole needs to remain in the path minimum of 36" of unobstructed width would be required according to ADA criteria.

### 3.2.5 Construction Cost Estimate

An estimate of probable construction cost has been provided in **Appendix B**. According to the estimate the South Side Alternative would cost approximately \$1,061,900.00. Unit cost pricing was estimated using the FDOT historical cost system for Area 3 which covers Tallahassee. It should be considered that this estimate is preliminary and only as accurate as the available data.

## 4 Conclusion and Recommendation

During this feasibility study, each alternative was evaluated using an assessment matrix. The assessment matrix includes weighted scoring based upon the following criteria: Environmental Impacts, Connectivity, Constructability, Utility Impacts, and Construction Cost. Each criterion was scored based on a scale of 1-5, with 1 being poor and 5 being excellent. Each category was weighted based on perceived importance to the project. The completed assessment matrix can be reviewed below.

ASSESSMENT MATRIX					
		North Side Alternative		South Side Alternative	
Factors	% Weight	Assessment (1-5)	Weighted Score	Assessment (1-5)	Weighted Score
Environmental Impact	20	4	80	4	80
Connectivity	15	4	60	5	75
Constructability	25	1	25	4	100
Utility Impact	15	4	60	4	60
Construction Cost	25	2	50	4	100
<b>Total Score</b>			275		415

The South Side Alternative was given the highest score based on the assessment matrix and was therefore the recommended alternative. This alternative excelled in all categories and outperformed the North Side Alternative in Connectivity, Constructability, and Construction Cost. The South Side Alternative scored similarly to the North Side in environmental impacts, and utility impact. The South Side Alternative's separation comes from better connectivity throughout the project, and a significant construction cost difference of approximately \$287,300.00 less. The South side also has easier constructability due to the elimination of the need for the retaining walls, more usable right of way, and less driveways along the south side of Maclay Road. The South Side Alternative will provide the City of Tallahassee and its residents with a functional and aesthetically pleasing multi-use path to enjoy for years to come.

# Appendix A. Figures

**Figure 1 - Project Map**

**Figure 2 - Design Alternatives**

**Figure 3 - Topographic Map**

**Figure 4 - USDA Soil Survey**

**Figure 5 - National Flood Hazard Layer FIRMette**

**Figure 6 – North Side Typical Sections**

**Figure 7 - Water Mains**

**Figure 8 - South Side Alternative Detail**

**Figure 9 – South Side Typical Sections**

**Figure 10 - Sanitary Sewer**

**Figure 11 – Utility Typical Section**





REVISIONS		DATE	DESCRIPTION

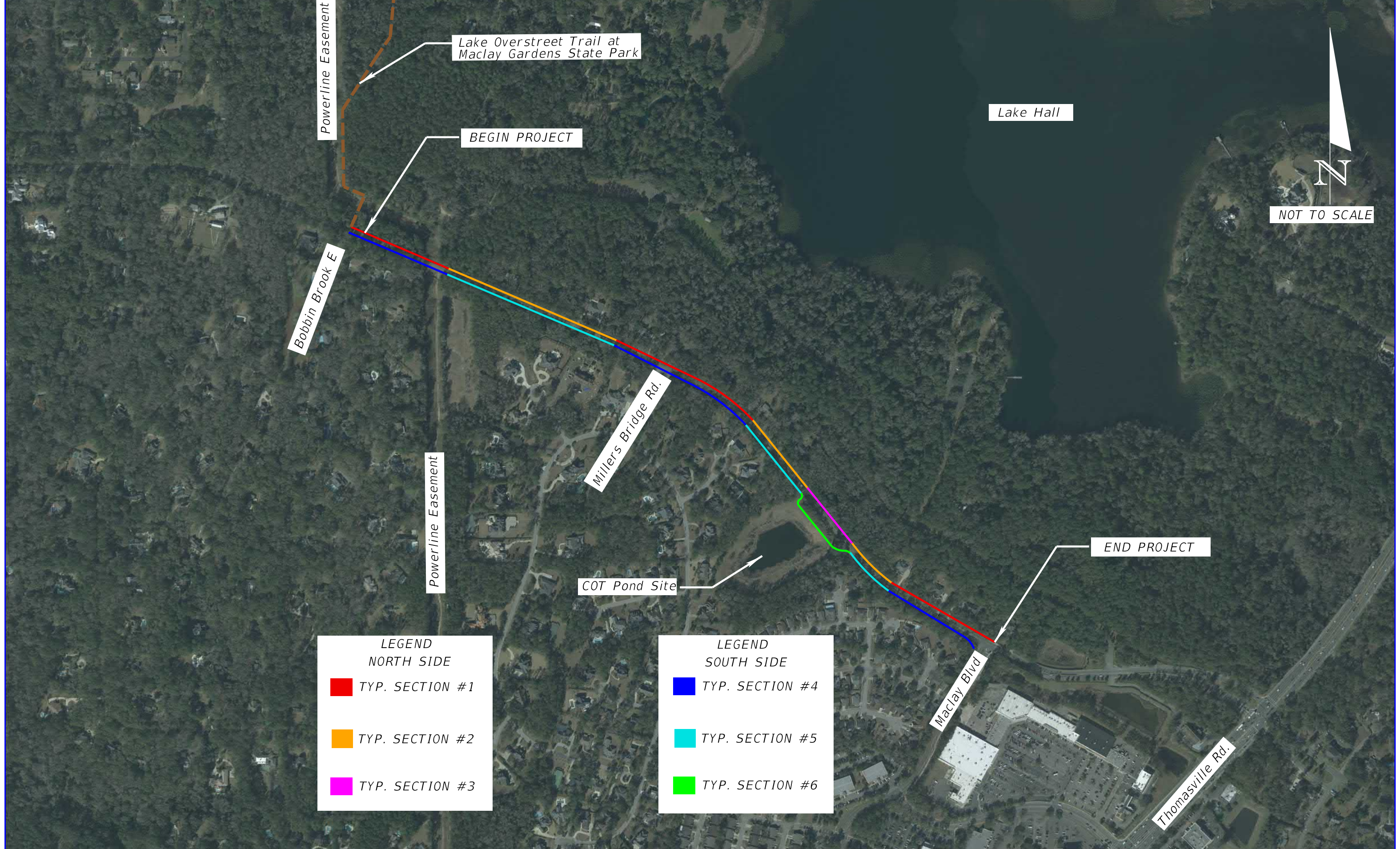
**MOTT MACDONALD**

BLUEPRINT INTERGOVERNMENTAL AGENCY		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
MACLAY	LEON	N/A

**PROJECT MAP**

FIGURE NO.  
**1**





**LEGEND**  
NORTH SIDE

<span style="color: red;">■</span>	TYP. SECTION #1
<span style="color: orange;">■</span>	TYP. SECTION #2
<span style="color: magenta;">■</span>	TYP. SECTION #3

**LEGEND**  
SOUTH SIDE

<span style="color: blue;">■</span>	TYP. SECTION #4
<span style="color: cyan;">■</span>	TYP. SECTION #5
<span style="color: green;">■</span>	TYP. SECTION #6

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

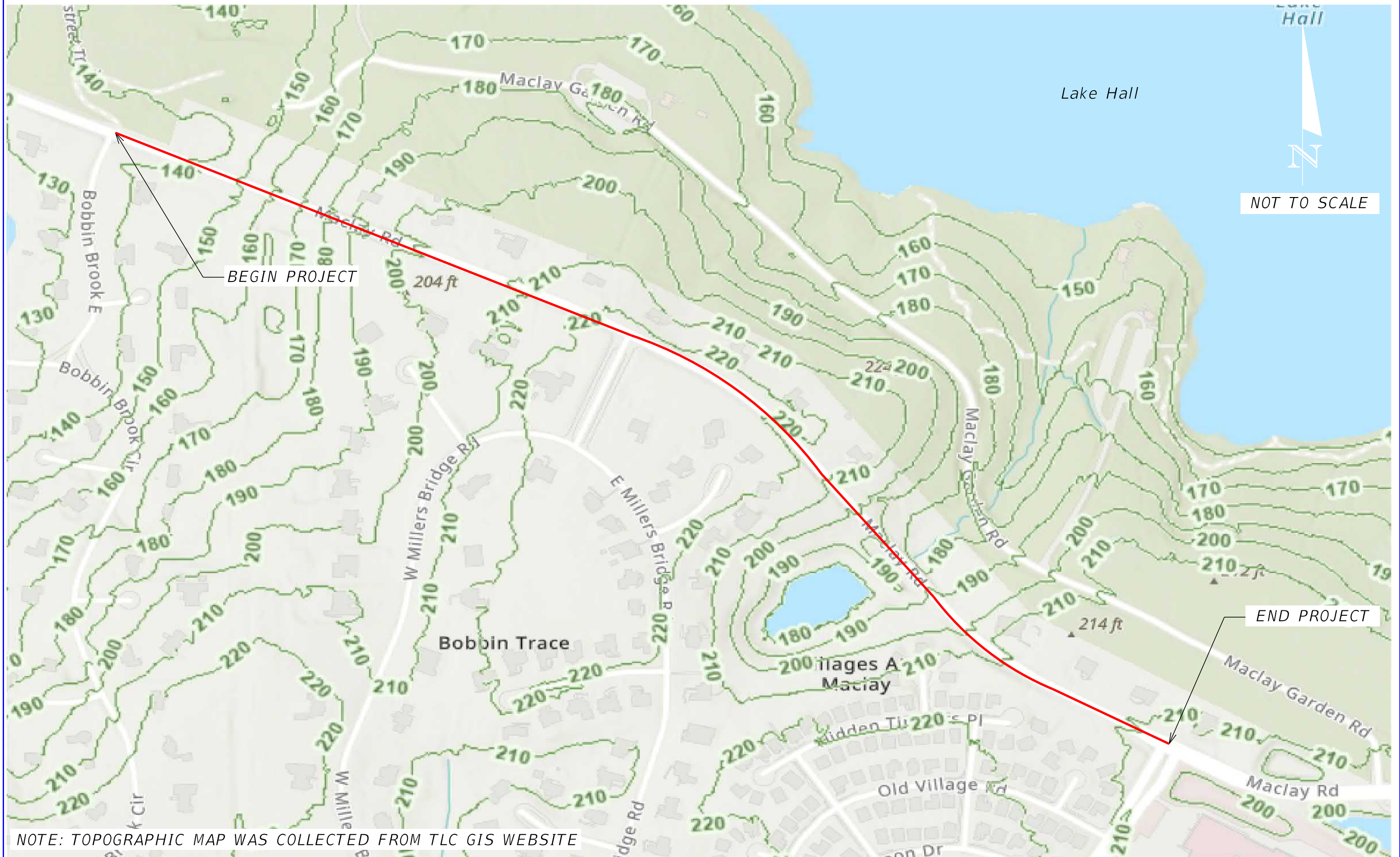
**MOTT MACDONALD**

BLUEPRINT INTERGOVERNMENTAL AGENCY		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
MACLAY	LEON	N/A

**DESIGN ALTERNATIVES**

FIGURE NO.  
**2**





NOTE: TOPOGRAPHIC MAP WAS COLLECTED FROM TLC GIS WEBSITE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

**MOTT MACDONALD**

BLUEPRINT INTERGOVERNMENTAL AGENCY		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
MACLAY	LEON	N/A

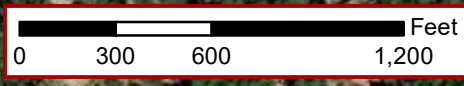
**TOPOGRAPHIC MAP**

FIGURE NO.  
3



- Legend**
- Approximate Centerline of Project Location
  - USDA Soil Survey (SHWT)**
  - 24, Lucy fine sand, 0 to 5 percent slopes
  - 25, Lucy fine sand, 5 to 8 percent slopes
  - 27, Lynchburg fine sandy loam
  - 32, Ocala fine sand
  - 33, Orangeburg fine sandy loam, 2 to 5 percent slopes
  - 34, Orangeburg fine sandy loam, 5 to 8 percent slopes
  - 35, Orangeburg fine sandy loam, 8 to 12 percent slopes
  - 39, Pelham fine sand
  - 41, Plummer fine sand

COLOR	DEPTH TO SHWT (FEET)
DARK BLUE	Ponded Water (Rivers, Lakes)
BLUE	0 to 1.0
LIGHT BLUE	1.0 to 3.0
YELLOW	3.0 to 6.0
BROWN	> 6.0
HATCH	MATERIAL
	MUCK (ORG. > 5.0%)
	SWELLING CLAY (LL > 50)
	MUCK AND CLAY



START PROJECT

END PROJECT



DRAWN: P. AUSTIN	CHECKED: C. GORMAN, P.E.
ENGINEER: C. GORMAN, P.E.	
CLIENT: MOTT MACDONALD	
PROJ. NO.: 046-024-21-01	SCALE:

**ENVIRONMENTAL AND GEOTECHNICAL SPECIALISTS, INC.**  
 104 North Magnolia Drive, Tallahassee, Florida 32301  
 Office #: (850) 386-1253 Fax #: (850) 385-8050

TITLE: USDA SOIL SURVEY (SHWT) MAP MACLAY MULTI-USE TRAIL FROM BOBBIN BROOK EAST TO MACLAY BOULEVARD LEON COUNTY, FLORIDA	
DATE: OCTOBER 2021	FIGURE NO.: 4



# National Flood Hazard Layer FIRMMette



84°15'38"W 30°31'20"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000 84°15'1"W 30°30'49"N  
 Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

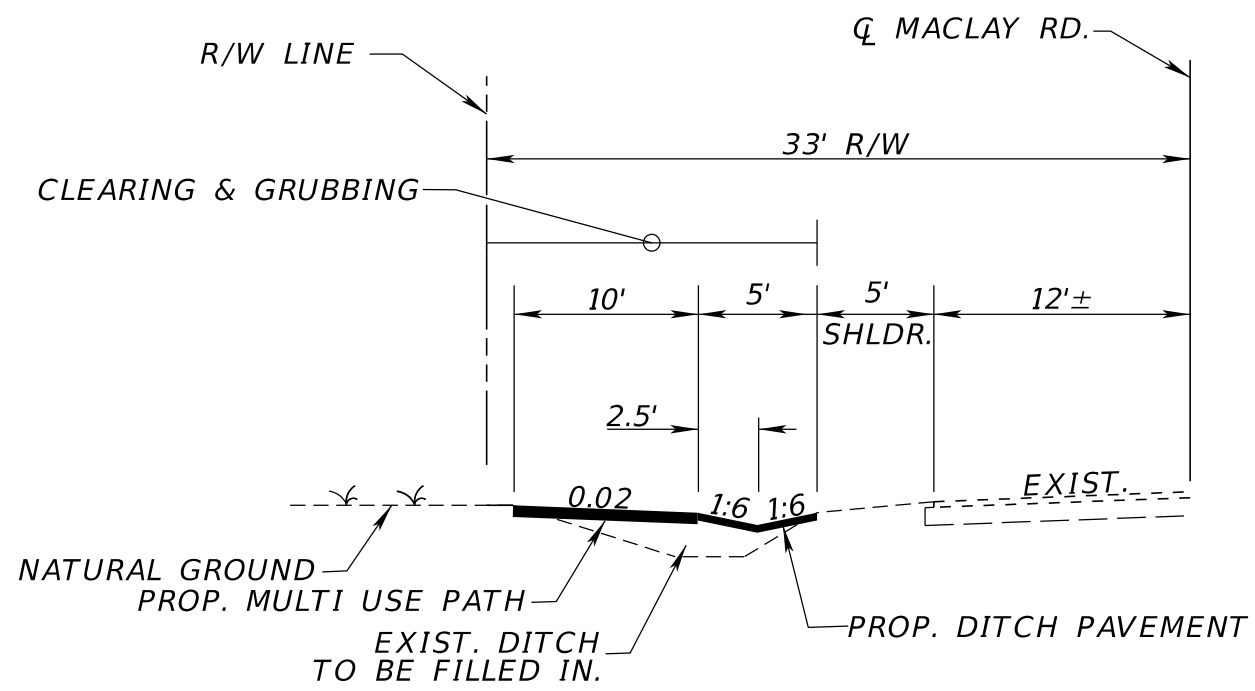


This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

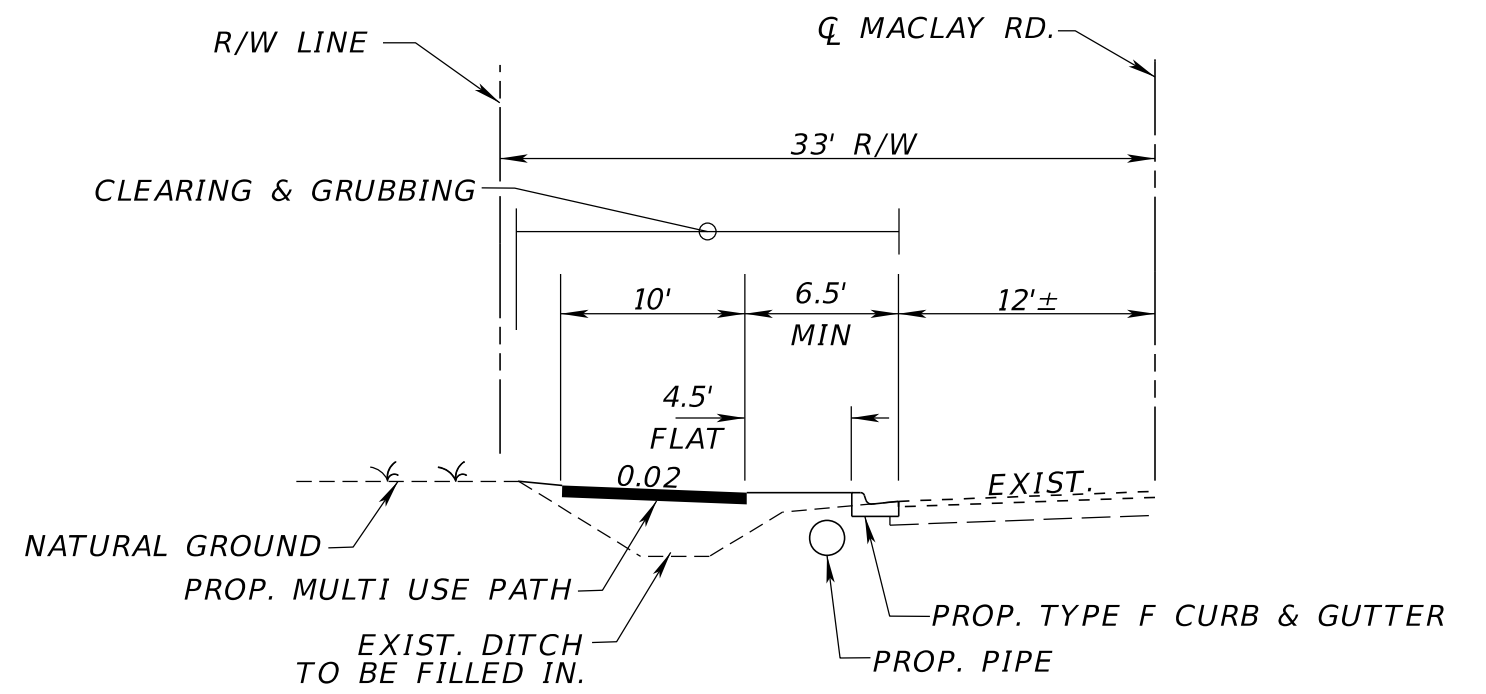
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/3/2021 at 11:21 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

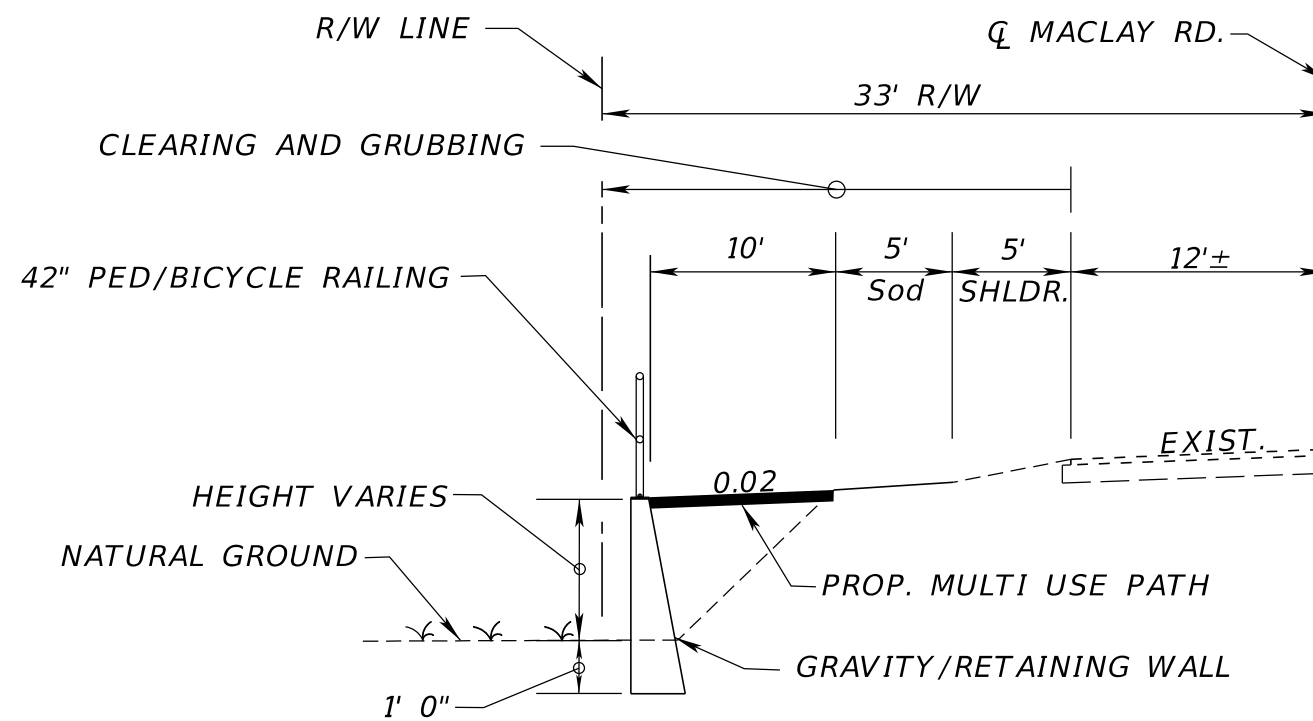
Figure 5



NORTH SIDE ALTERNATIVE  
TYPICAL SECTION #1



NORTH SIDE ALTERNATIVE  
TYPICAL SECTION #2



NORTH SIDE ALTERNATIVE  
TYPICAL SECTION #3

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

MOTT MACDONALD

BLUEPRINT  
INTERGOVERNMENTAL AGENCY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
MACLAY	LEON	N/A

NORTH SIDE TYPICAL SECTIONS

FIGURE  
NO.

6



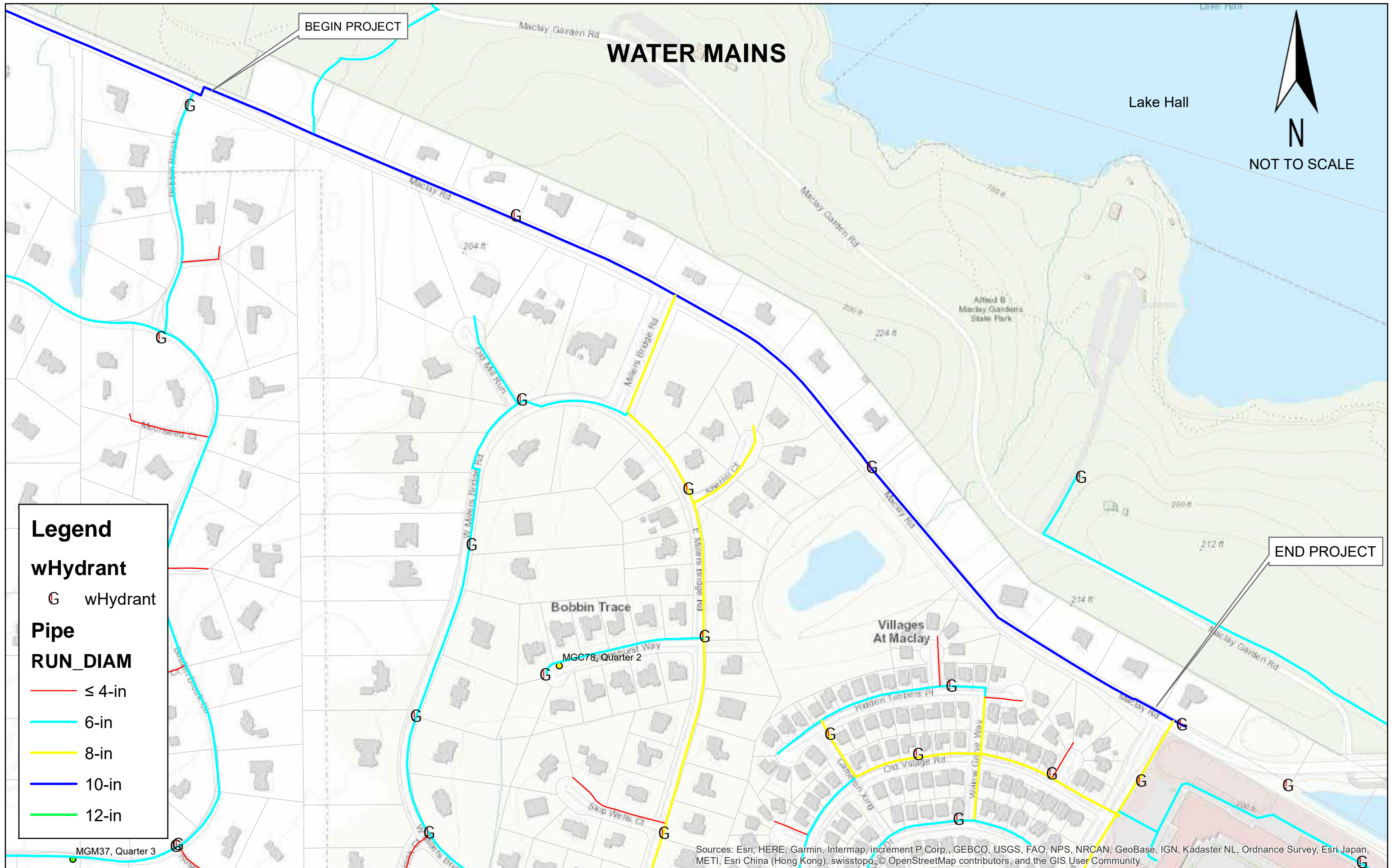
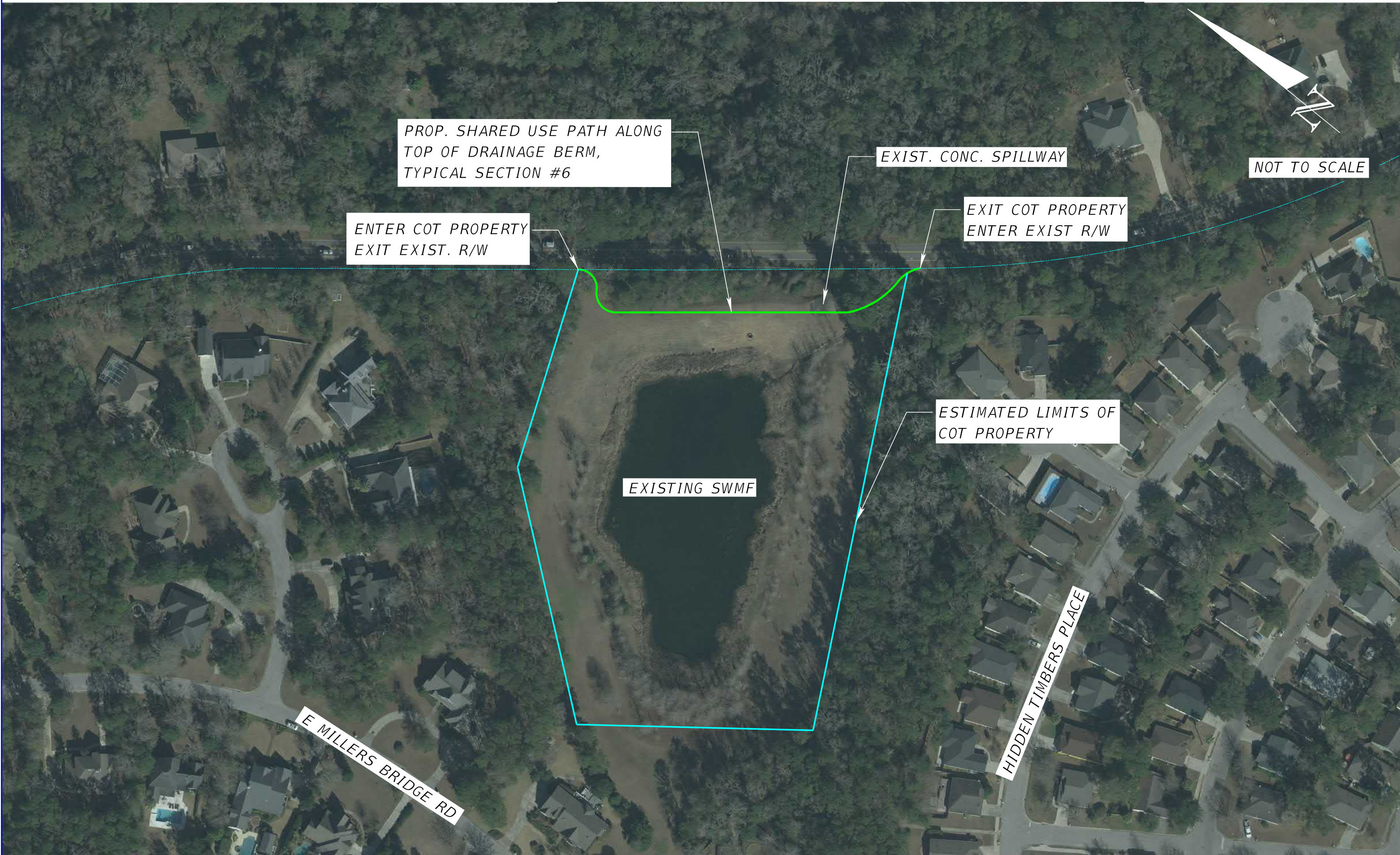


FIGURE 7





REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

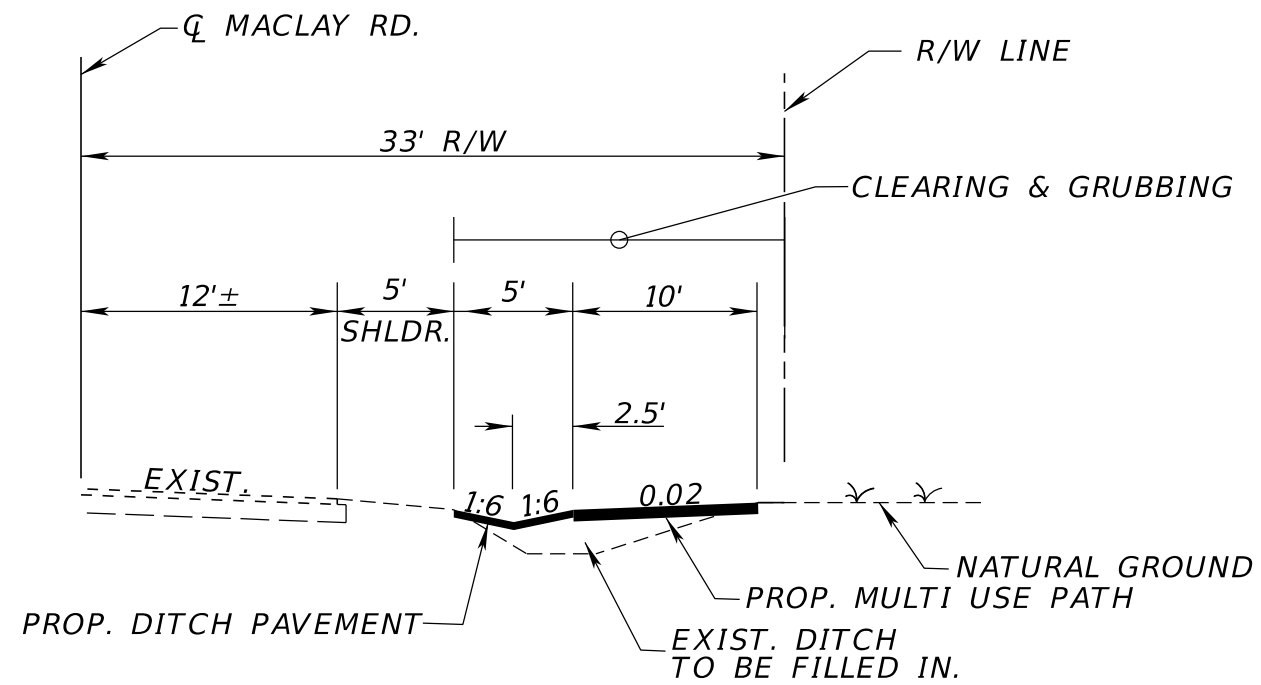
**MOTT MACDONALD**

BLUEPRINT INTERGOVERNMENTAL AGENCY		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
MACLAY	LEON	N/A

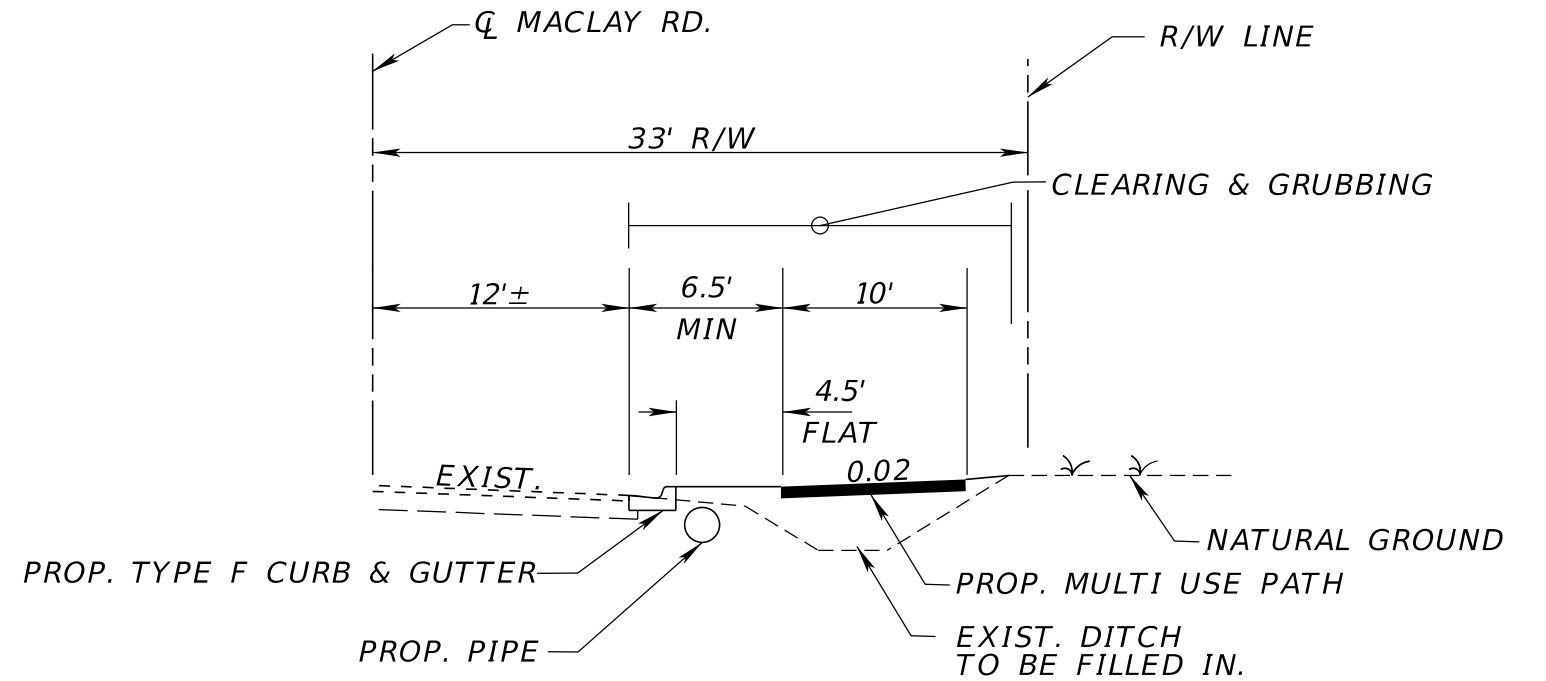
**SOUTH SIDE ALTERNATIVE  
DETAIL**

FIGURE NO.  
**8**

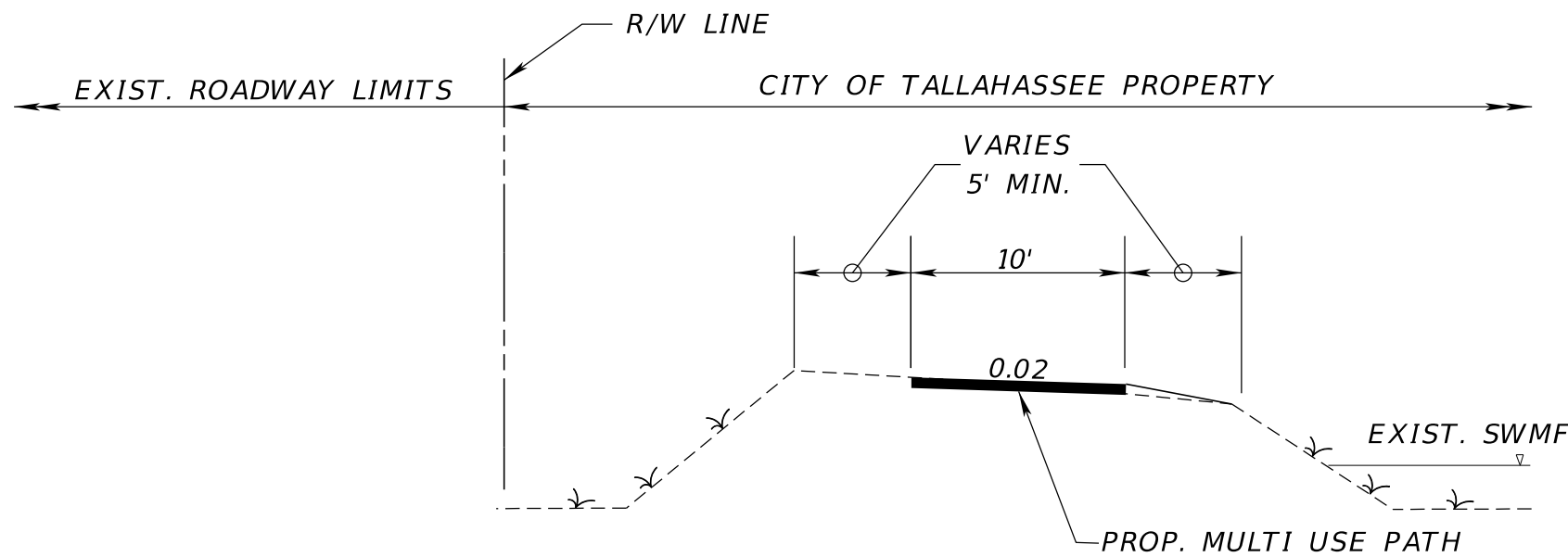




SOUTH SIDE ALTERNATIVE  
TYPICAL SECTION #4



SOUTH SIDE ALTERNATIVE  
TYPICAL SECTION #5



SOUTH SIDE ALTERNATIVE  
TYPICAL SECTION #6

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

**MOTT MACDONALD**

BLUEPRINT  
INTERGOVERNMENTAL AGENCY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
MACLAY	LEON	N/A

**SOUTH SIDE TYPICAL SECTIONS**

FIGURE  
NO.

9

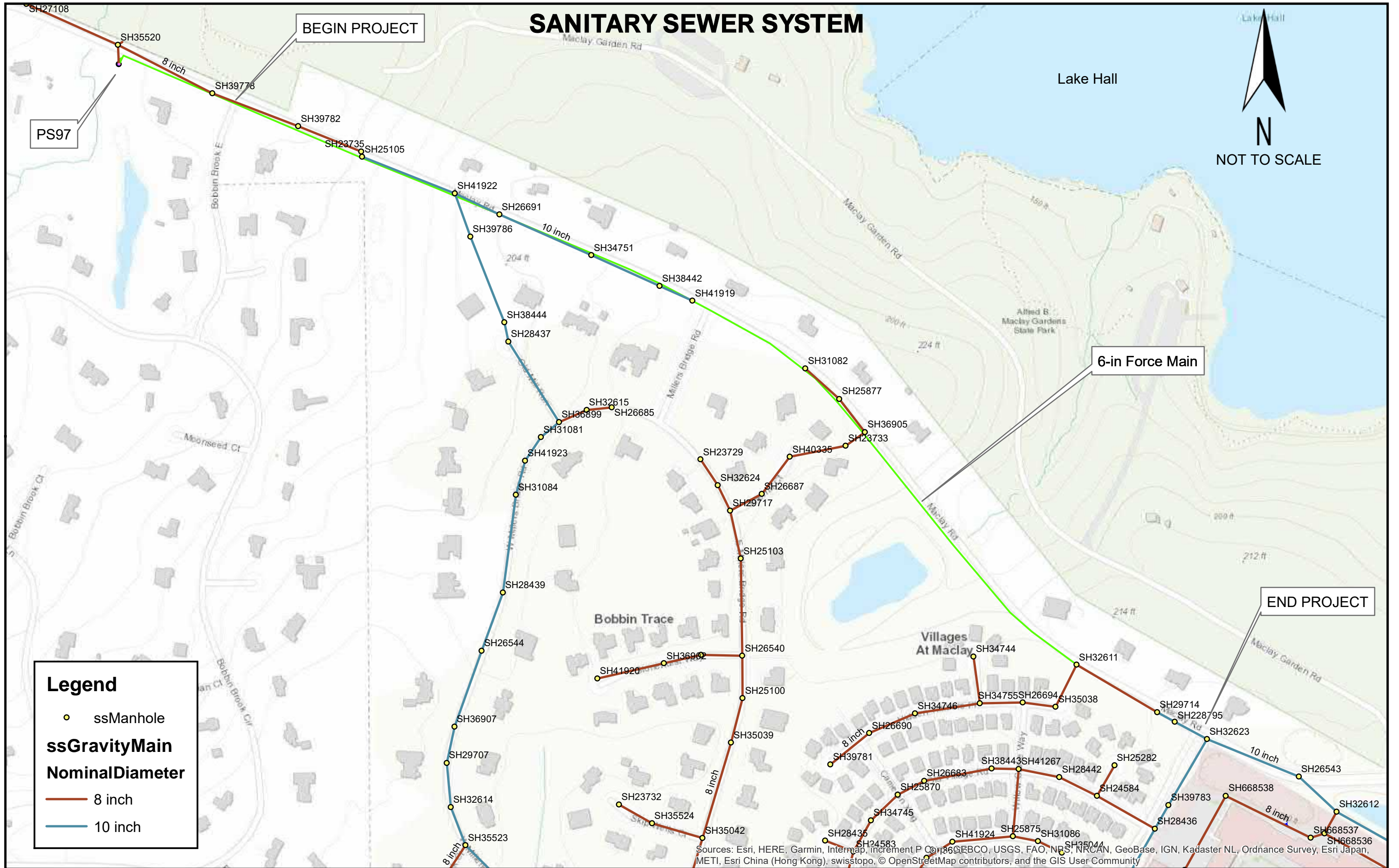
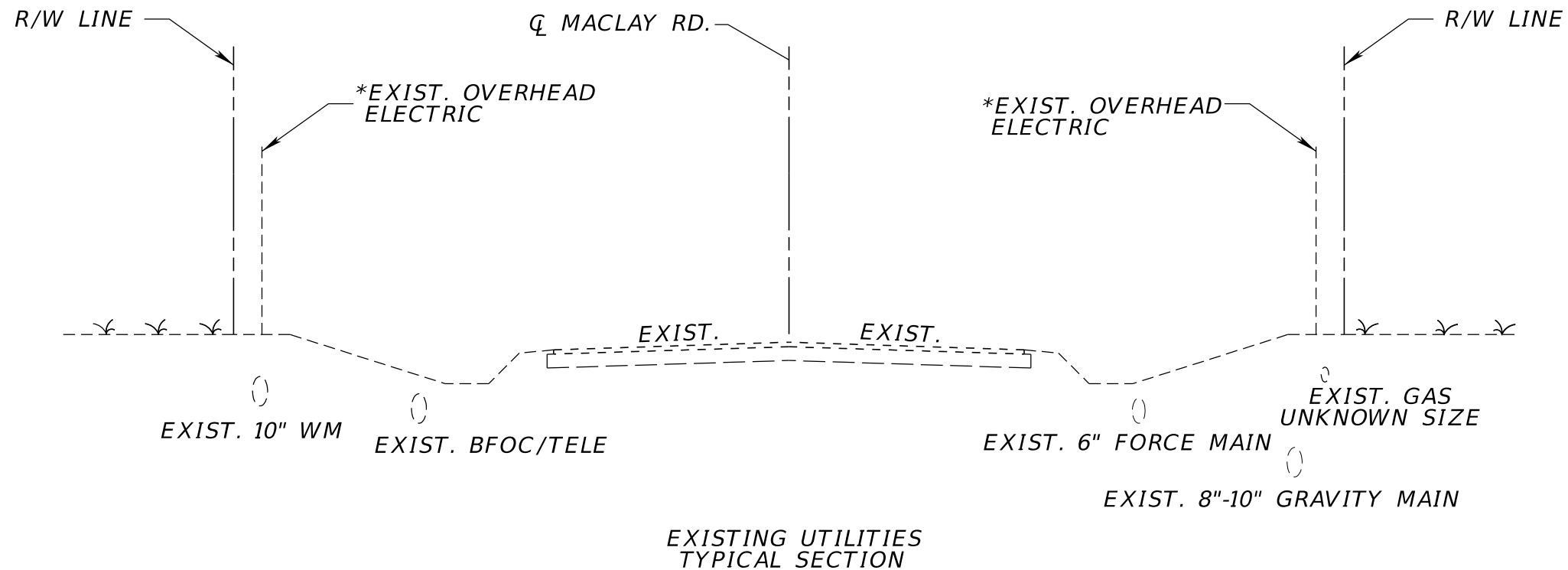


FIGURE 10





*\*OVERHEAD ELECTRIC VARIES BETWEEN THE NORTH AND SOUTH SIDE OF MACLAY ROAD THROUGHOUT THE PROJECT LIMITS*

**SUNSHINE 811 INFORMATION**

PROVIDER	UTILITY TYPES	CONTACT INFO
CENTURY LINK	FIBER, TELEPHONE	DISPATCH (855) 742-6062
CITY OF TALLAHASSEE	ELECTRIC, GAS, SEWER, WATER	WILLIAM TOLAR (850) 556-5873
CITY OF TALLAHASSEE TRAFFIC	TRAFFIC SIGNALS	DOUG HOLIFIELD (850) 879-0916
COMCAST COMMUNICATIONS	CATV	USIC DISPATCH (800) 778-9140

NOTE: LOCATION AND DEPTH OF UTILITIES ARE APPROXIMATE AND SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES

REVISIONS				MOTT MACDONALD	BLUEPRINT INTERGOVERNMENTAL AGENCY			UTILITY TYPICAL SECTION	FIGURE NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					MACLAY	LEON	N/A		

## **Appendix B. (Cost Estimate)**

### Engineer's Cost Estimate - North Side Alternative

FDOT Pay Item No	Pay Item Description	Unit	Quantity	Unit Cost	Total Cost
0101 1	MOBILIZATION	LS	1	See end of estimate	See end of estimate
0102 1	MAINTENANCE OF TRAFFIC	LS	1	See end of estimate	See end of estimate
0104 10 3	SEDIMENT BARRIER	LF	350	\$2.48	\$ 868.00
0104 12	STAKED TURBIDITY BARRIER	LF	250	\$8.00	\$ 2,000.00
0110 1 1	CLEARING & GRUBBING	AC	1.85	\$12,103.95	\$ 22,392.31
0110 7 1	MAILBOX, F&I SINGLE	EA	11	\$138.73	\$ 1,526.03
0120 2 2	BORROW EXCAVATION	CY	4750	\$21.57	\$ 102,457.50
0400 0 11	CONCRETE CLASS NS, GRAVITY WALL	CY	19	\$731.35	\$ 13,895.65
0400 1 11	CONCRETE CLASS 1, RETAINING WALL*	CY	84	\$1,535.00	\$ 128,940.00
0425 5	MANHOLE, ADJUST	EA	3	\$1,225.00	\$ 3,675.00
0425 6	VALVE BOXES, ADJUST	EA	2	\$837.30	\$ 1,674.60
0425 131 1	INLETS, CURB, TYPE P-1, < 10'	EA	8	\$5,200.00	\$ 41,600.00
0430 174 118	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 18" SD	LF	1700	\$86.87	\$ 147,679.00
0430 984 125	MITERED END SECTION, OPTIONAL ROUND, 18" SD	EA	26	\$1,253.17	\$ 32,582.42
0515 2 111	PEDESTRIAN/BICYCLE RAILING 42", NS TYPE 1	LF	350	\$125.00	\$ 43,750.00
0520 1 10	CONCRETE CURB & GUTTER, TYPE F	LF	1700	\$25.50	\$ 43,350.00
0522 1	CONCRETE SIDEWALK AND DRIVEWAYS, 4" THICK	SY	5105	\$55.73	\$ 284,501.65
0522 2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	347	\$60.86	\$ 21,118.42
0524 1 2	DITCH PAVT, CONC, NON REINFORCED 4"	SY	1417	\$100.00	\$ 141,700.00
0527 2	DETECTABLE WARNINGS	SF	25	\$29.76	\$ 744.00
0570 1 2	PERFORMANCE TURF, SOD	SY	1919	\$1.77	\$ 3,396.63

NOTES: PRICES ARE BASED ON 2021 FDOT AREA 3 AVERAGES

\*PRICE FOR RETAINING WALL IS BASED ON STATE AVERAGE DUE TO NO AREA UNIT COSTS  
 MAINTENANCE OF TRAFFIC COST INCLUDES POSSIBLE LANE CLOSURES

SUBTOTAL:	\$	1,037,851.21
MOBILIZATION 10%:	\$	103,785.12
MAINTENANCE OF TRAFFIC 10%:	\$	103,785.12
CONTINGENCY 10%:	\$	103,785.12
<b>TOTAL:</b>	\$	<b>1,349,206.57</b>

### Engineer's Cost Estimate - South Side Alternative

FDOT Pay Item No	Pay Item Description	Unit	Quantity	Unit Cost	Total Cost
0101 1	MOBILIZATION	LS	1	See end of estimate	See end of estimate
0102 1	MAINTENANCE OF TRAFFIC	LS	1	See end of estimate	See end of estimate
0104 10 3	SEDIMENT BARRIER	LF	250	\$2.48	\$ 620.00
0104 12	STAKED TURBIDITY BARRIER	LF	250	\$8.00	\$ 2,000.00
0110 1 1	CLEARING & GRUBBING	AC	1.88	\$12,103.95	\$ 22,755.43
0120 2 2	BORROW EXCAVATION	CY	4700	\$21.57	\$ 101,379.00
0425 5	MANHOLE, ADJUST	EA	12	\$1,225.00	\$ 14,700.00
0425 6	VALVE BOXES, ADJUST	EA	4	\$837.30	\$ 3,349.20
0425 131 1	INLETS, CURB, TYPE P-1, < 10'	EA	8	\$5,200.00	\$ 41,600.00
0430 174 118	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 18" SD	LF	1700	\$86.87	\$ 147,679.00
0430 984 125	MITERED END SECTION, OPTIONAL ROUND, 18" SD	EA	2	\$1,253.17	\$ 2,506.34
0520 1 10	CONCRETE CURB & GUTTER, TYPE F	LF	1700	\$25.50	\$ 43,350.00
0522 1	CONCRETE SIDEWALK AND DRIVEWAYS, 4" THICK	SY	5209	\$55.73	\$ 290,297.57
0522 2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	27	\$60.86	\$ 1,643.22
0524 1 2	DITCH PAVT, CONC, NON REINFORCED 4"	SY	1389	\$100.00	\$ 138,900.00
0527 2	DETECTABLE WARNINGS	SF	25	\$29.76	\$ 744.00
0570 1 2	PERFORMANCE TURF, SOD	SY	2242	\$1.77	\$ 3,968.34
0711 11 125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	272	\$5.05	\$ 1,373.60

SUBTOTAL:	\$	816,865.70
MOBILIZATION 10%:	\$	81,686.57
MAINTENANCE OF TRAFFIC 10%:	\$	81,686.57
CONTIGENCY 10%:	\$	81,686.57
<b>TOTAL:</b>	<b>\$</b>	<b>1,061,925.40</b>

NOTES: PRICES ARE BASED ON 2021 FDOT AREA 3 AVERAGES  
 MAINTENANCE OF TRAFFIC COST INCLUDES POSSIBLE LANE CLOSURES



# Appendix C. (Natural Resource Evaluation Report)

**NATURAL RESOURCE EVALUATION REPORT**

**MACLAY MULTI-USE TRAIL  
FEASIBILITY STUDY**

**FROM BOBBIN BROOK EAST TO MACLAY BOULEVARD  
CITY OF TALLAHASSEE, LEON COUNTY, FLORIDA**

*Prepared For:*

**BLUEPRINT INTERGOVERNMENTAL AGENCY**

**AND**

**MOTT MACDONALD FLORIDA, LLC**

*Prepared By:*

**ENVIRONMENTAL AND GEOTECHNICAL SPECIALISTS, INC.**

104 NORTH MAGNOLIA DRIVE  
TALLAHASSEE, FLORIDA 32301  
(850) 386-1253

OCTOBER 2021  
046-024-01

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FIGURE 2	PROJECT LOCATION MAP
FIGURE 3	AERIAL PHOTOGRAPH OF PROJECT LOCATION
FIGURE 4	USDA SOIL SURVEY (SHWT) MAP
FIGURE 5	NATIONAL WETLAND INVENTORY MAP
FIGURE 6	2015 FLUCCS LAND USE MAP
FIGURE 7	HYDROLOGIC FEATURES MAP
FIGURE 8	PHOTOGRAPHS OF WATER CROSSING AREA
FIGURE 9	WOOD STORK NESTING COLONIES AND CORE FORAGING AREAS MAP
FIGURE 10	SEVERE AND SIGNIFICANT GRADES
FIGURE 11	POTENTIAL KARST FEATURES

## **APPENDICES**

APPENDIX A	FLORIDA NATURAL AREAS INVENTORY BIODIVERSITY MATRIX
APPENDIX B	NATURAL FEATURES INVENTORY CHECKLIST

## 1.0 PROJECT DESCRIPTION

The proposed project involves a Feasibility Analysis to determine if adding a multi-use path along the existing roadway of Maclay Road is feasible. The proposed improvements are to be within the existing right-of-way of Maclay Road with a width of 8 to 10 feet. The limits of the project are from Bobbin Brook East to Maclay Boulevard within the City of Tallahassee. The review has included an evaluation of both the north and south sides of the road assessing the potential impacts to the environmentally sensitive features within the project corridor.

The study area between Bobbin Brook East and Maclay Boulevard is predominately single-family residential homes with the lot sizes ranging from 0.5 acres to over 3 acres. Vacant parcels are primarily forested. The project vicinity map is included as **Figure 1**. The project location map and an aerial photograph of the project limits have been included as **Figures 2 and 3**.

## 2.0 ENVIRONMENTAL IMPACTS: WETLANDS, WATERCOURSES, AND WATERBODIES

Preliminary wetland evaluations were initiated with a map and literature review from the United States Department of Agriculture's (USDA) Natural Resource Conservation Service (NRCS) *Soil Survey of Leon County*, the U.S. Fish and Wildlife Service's (USFWS) National Wetlands Inventory Maps, the Florida Department of Transportation's (FDOT) *Florida Land Use Cover and Forms Classification System (FLUCCS)*, and the Leon County/City of Tallahassee GIS Database.

### 2.1 USDA NRCS SOIL SURVEY

The review of the USDA Soil Survey for this area of Leon County has been included as **Figure 4**. The following soil series were identified within or immediately adjacent to the proposed project:

Map Unit ID 24/25:	Lucy Fine Sand Seasonal High Water Table: > 6 feet
Map Unit ID 32:	Ocilla Fine Sand Seasonal High Water Table: 1 - 3 feet
Map Unit ID 33/34/35:	Orangeburg Fine Sandy Loam Seasonal High Water Table: > 6 feet
Map Unit ID 39:	Pelham Fine Sand Seasonal High Water Table: 0 - 1 feet Material: Muck
Map Unit ID 41:	Plummer Fine Sand Seasonal High Water Table: 1 - 3 feet

The soils most likely to be located within wetland areas would have seasonal high water tables between 0 and 3 feet. As a result, the following soils could support wetland species: Ocilla Fine Sand, Pelham Fine Sand, and Plummer Fine Sand. It should also be noted that areas of muck have been identified within the Pelham Fine Sand, indicating potential construction impacts could occur.



## 2.2 USFWS NATIONAL WETLANDS INVENTORY MAPS

A review of the National Wetlands Inventory (NWI) maps for this area was conducted as a preliminary review of potential wetland limits. The review did not identify any wetland or water crossings within the limits of the project. The NWI map for this area of Leon County has been included as **Figure 5**.

## 2.3 FLORIDA LAND USE COVER AND FORMS CLASSIFICATION SYSTEM (FLUCCS)

The FLUCCS land use map was reviewed to identify the various land uses found within and adjacent to the project location. The FLUCCS map identified the following land use adjacent to the project corridor:

- **1110: Low Density, Fixed Single Family Units** – This category is reserved for all residential areas with dwellings located on parcels ranging in size from half an acre to two acres. This category typically includes farmsteads that are less than five acres in size.
- **1130: Low Density, Mixed Units (Fixed/Mobile)** – This category includes a combination of map unit 1110 and 1120.
- **1400: Commercial and Services** – This category is reserved for a wide range of uses which can be very difficult to differentiate for each parcel. This includes clothing retail stores, gasoline retail stores, professional services, day care facilities, and dry-cleaning facilities, resorts that cater to tourists, and light industrial. These sites often have large paved parking lots which provide easy accessibility to patrons.
- **3100: Herbaceous (Dry Prairie)** – Reserved for upland nonagricultural, non-forested lands that are not used for cattle grazing, this category has over 67% herbaceous cover and allows for a maximum of 25% forested areas. Often this classification is reserved for ‘transitional’ zones between forested and other herbaceous communities. This area is not used for agriculture; however, brush clearing and hay cutting can be conducted.
- **4100: Upland Coniferous Forests** – The upland coniferous forest is reserved for areas where 75% of the tree canopy contains coniferous vegetation. This classification does not include pine plantations.
- **4340: Upland Mixed – Coniferous/Hardwood** – This category is reserved for forested areas in which neither conifers nor hardwoods achieve a 67% crown canopy dominance. These can include forests dominated with oak-pine-hickory or oak-wax myrtle-willow, and mixed communities of pine, both slash and long leaf.

- **6170: Mixed Wetland Hardwoods** – This category contains all wetland hardwood forests that do not fall within another category (such as bay swamps, mangroves, etc.). Features have a wide range of species including willow swamps, black gum, water hickory, and bays. Cypress is allowed to be present but cannot dominate the canopy.
- **6440: Emergent Aquatic Vegetation** – This category is characterized by flooded aquatic areas with floating vegetation. These can be either deep marshes or shallow ‘floating’ marshes. The difference between these features and a typical water body is the vegetation.
- **8140: Roads and Highways** – This category includes all roadways that are four lanes or greater with substantial median strips. Since a median is required, many four-lane ‘down-town’ roads are excluded.
- **8320: Electrical Power Transmission Lines** – This category is reserved for electric power lines usually occurring within a right-of-way or an easement. They are long, linear features that are easily identifiable on an aerial. Vegetation within electric utility easements is cleared of tall vegetation and can extend over wetland features. This category also includes power generating stations or substations.
- **8370: Surface Water Collection Features** - This category is characterized by excavated open spaces that occur within residential communities or along freeway corridors. They are for the temporary collection of surface water runoff. These features can also be for the treatment of stormwater runoff.

The land use found within the proximity of the project corridor associated with wetland areas would include Mixed Wetland Hardwoods (6170) and Emergent Aquatic Vegetation (6440). These areas were identified within the western limits of the project corridor on the north side of the roadway. The 2015 FLUCCS map has been included as **Figure 6**.

## **2.4 TALLAHASSEE – LEON COUNTY GIS DATABASE**

A review of the Tallahassee – Leon County GIS Database was also reviewed for wetland locations. The review identified one wetland and channel crossing located approximately 1,200 feet west of the end of the project. This system is associated with the discharge from the Villages of Maclay Stormwater Facility. The Hydrologic Features Map for this area of Leon County has been included as **Figure 7**.

## **2.5 FIELD REVIEW**

A field review was conducted by EGS personnel to verify the location of the wetlands within the proposed project corridor on July 24, 2020. The wetland limits identified within the proposed project corridor were consistent with those identified on the Tallahassee – Leon County GIS database. Photographs of the adjacent water crossing AREA have been included as **Figure 8**.



### 3.0 ENVIRONMENTAL IMPACTS: WILDLIFE AND HABITAT

The objectives of a wildlife and habitat assessment are to determine if any protected species inhabit the project area, to determine if any protected species will be adversely impacted by the proposed project, and if necessary, to develop recommendations to avoid, minimize or mitigate impacts. A detailed field review and analysis of potential impact will be conducted during the Project Development and Environment (PD&E) Phase of this project.

#### 3.1 FEDERAL AND STATE LISTED SPECIES

A literature review was conducted for information on federally listed species in the project vicinity. The review included information from the U.S. Fish and Wildlife Service (USFWS), the Florida Fish and Wildlife Conservation Commission (FWC), and the Florida Natural Areas Inventory (FNAI). The FNAI Matrix Query for this segment of Maclay Road is included as **Appendix A**.

The FNAI report identified 40 species with a potential to occur in this area of Leon County. The species most likely to occur in this area due to existing habitat include the following:

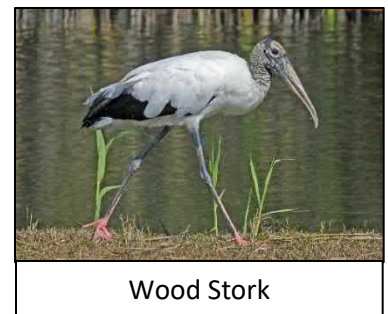
- Golden Banded-Skipper (*Autochton cellus*)

The golden banded-skipper is identified as a species at High Risk due to potentially declining numbers. This butterfly is a chocolate brown color with a golden median band on the wing. The hindwing has a checkered fringe. This species is found in Florida during the months of February to September, preferring the open areas near slopes with woodlands nearby. The FNAI report identified 1 documented siting of this species within 1 mile of the project area.



- Wood Stork (*Mycteria americana*)

The wood stork is a very large, white wading bird with black coloring in the wings and a short black tail. Their habitat is within lowland wetlands with scattered trees. Wood storks live in colonies building as many as 25 stick nests within a single tree. In Florida, they favor cypress swamp areas. There are 3 wood stork colonies located within Leon County. This project is located within the core foraging area (CFA) of the 3 colonies (within the 13-mile radius of a



colony). The USFWS Wood Stork Nesting Colonies and Core Foraging Areas Map has been provided as **Figure 9**.

- Eastern Indigo Snake (*Drymarchon corais couperi*)  
The eastern indigo snake is a large, black, non-venomous snake which reaches length of 60 to 74 inches. It is widely distributed throughout Florida. The habitat for the eastern indigo includes pine flatwoods, scrubby flatwoods, high pine, dry prairie, and hardwood hammocks.



Eastern Indigo Snake

- Gopher Tortoise (*Gopherus polyphemus*)  
The gopher tortoise is a medium-sized reptile that feeds primarily on grasses and other herbaceous plants. It is commonly associated with a pine overstory and an open understory with a grassed non-woody groundcover and sunny areas for nesting. Gopher tortoises can sometimes be found in more marginal habitats such as roadside cleared zones, ditch banks, utility and pipeline right-of-way, and pastures.



Gopher Tortoise

### 3.2 ESSENTIAL FISH HABITAT

The Essential Fish Habitat (EFH) mapper provided by the National Oceanic and Atmospheric Administration (NOAA) was reviewed. The database did not identify any EFH within the project area. Therefore, the project will have no effect on essential fish habitat.

## 4.0 ADDITIONAL NATURAL FEATURES REGULATED BY THE CITY OF TALLAHASSEE

The Leon County Comprehensive Plan mandates that significant environmental features be identified and preserved prior to land development. Because this project corridor is located within the City of Tallahassee, the permitting agency will be the Growth Management Department, Environmental Services Division. The checklist of environmental features regulated by the City of Tallahassee has been included in **Appendix B**. The environmental features that have not been previously described are included below.

### 4.1 GRADES AND SLOPES

Severe grades include slopes greater than 20-percent. Severe grade areas shall remain undisturbed if located adjacent to or within 100 feet of wetlands, waterbodies, watercourses, floodways, floodplains, karst features or special development zones. Isolated severe grade areas (one-quarter acre or less) located within significant grades may be regulated using the criteria for significant grades. All undisturbed severe grades are to be preserved in their pre-development state by a conservation easement.

Significant grades include those areas with slopes between 10 and 20 percent. A minimum of 50 percent of significant grade areas must be left undisturbed if located adjacent to or within 100 feet of wetlands, waterbodies, watercourses, floodways, floodplains, karst features or special development zones. This requirement may be met by preserving 50 percent of each individual area or 50 percent of the total grade areas.

Areas of significant and severe slopes were primarily identified within the side slopes of the existing swales. **Figure 10** identifies the locations where significant and severe grades are located.

### 4.2 POTENTIAL KARST FEATURES

A review of the Tallahassee/Leon County GIS database did not identify any karst features within or adjacent to the project corridor. The GIS map for Potential Karst Features has been included as **Figure 11**.

### 4.3 NATIVE OR HIGH QUALITY SUCCESSIONAL FORESTS

Areas identified as native or high quality successional forest (HQSF) are restricted to developing no more than 20 percent disturbance of the designated forest with the



remaining 80 percent to be placed in a conservation easement. An initial review of the project corridor did not identify any native or HQSF.

#### **4.4 PROTECTED TREES**

Protected trees include any tree of 18 inch diameter at breast height (DBH) or greater, any tree within a canopy road protection zone, any hardwood tree or long leaf pine tree of 12 inch DBH or greater, any dogwood tree of 4 inch DBH or greater, and any tree in a wetland. A protected tree cannot be removed or damaged without permit approval. It should be noted that all trees with a DBH of 4 inches or greater are protected within wetland areas as well as within a canopy road protection zone. A tree survey will be required during the environmental permitting phase of the project.

## **5.0 COORDINATION WITH PERMITTING AGENCIES**

The following environmental permits are anticipated for the construction of this project:

City of Tallahassee, Growth Management Department, Environmental Services Division

- Natural Features Inventory
- Environmental Impact Analysis
- Tree Removal
- Environmental Management Permit

Northwest Florida Water Management District

- General Environmental Resource Permit

Florida Department of Environmental Protection

- State 404 Program General Permit

Florida Department of Environmental Protection

- NPDES Permit for Erosion Control

## **6.0 CONCLUSION**

### **6.1 IMPACT TO WETLANDS, WATERCOURSES, AND WATERBODIES**

The Maclay Road Multi-Use Path will likely impact wetlands at the following location:

- Watercourse

Culvert Crossing located 1,200 feet west of the end of the project.

The area of impact and the functional loss of the wetland will be evaluated during the Design Phase of this project. Due to the anticipated wetland impacts, the project will require State and Local permitting.

### **6.2 IMPACT TO LISTED SPECIES**

The objectives of a wildlife and habitat assessment are to determine if any protected species inhabit the project area, to determine if any protected species will be adversely impacted by the proposed project, and if necessary, to develop recommendations to avoid, minimize or mitigate impacts. A detailed field review and analysis of potential impact will need to be conducted during the Design Phase of this project.

### **6.3 ESSENTIAL FISH HABITAT**

The Essential Fish Habitat (EFH) mapper provided by the National Oceanic and Atmospheric Administration (NOAA) was reviewed. The project will have no effect on essential fish habitat.

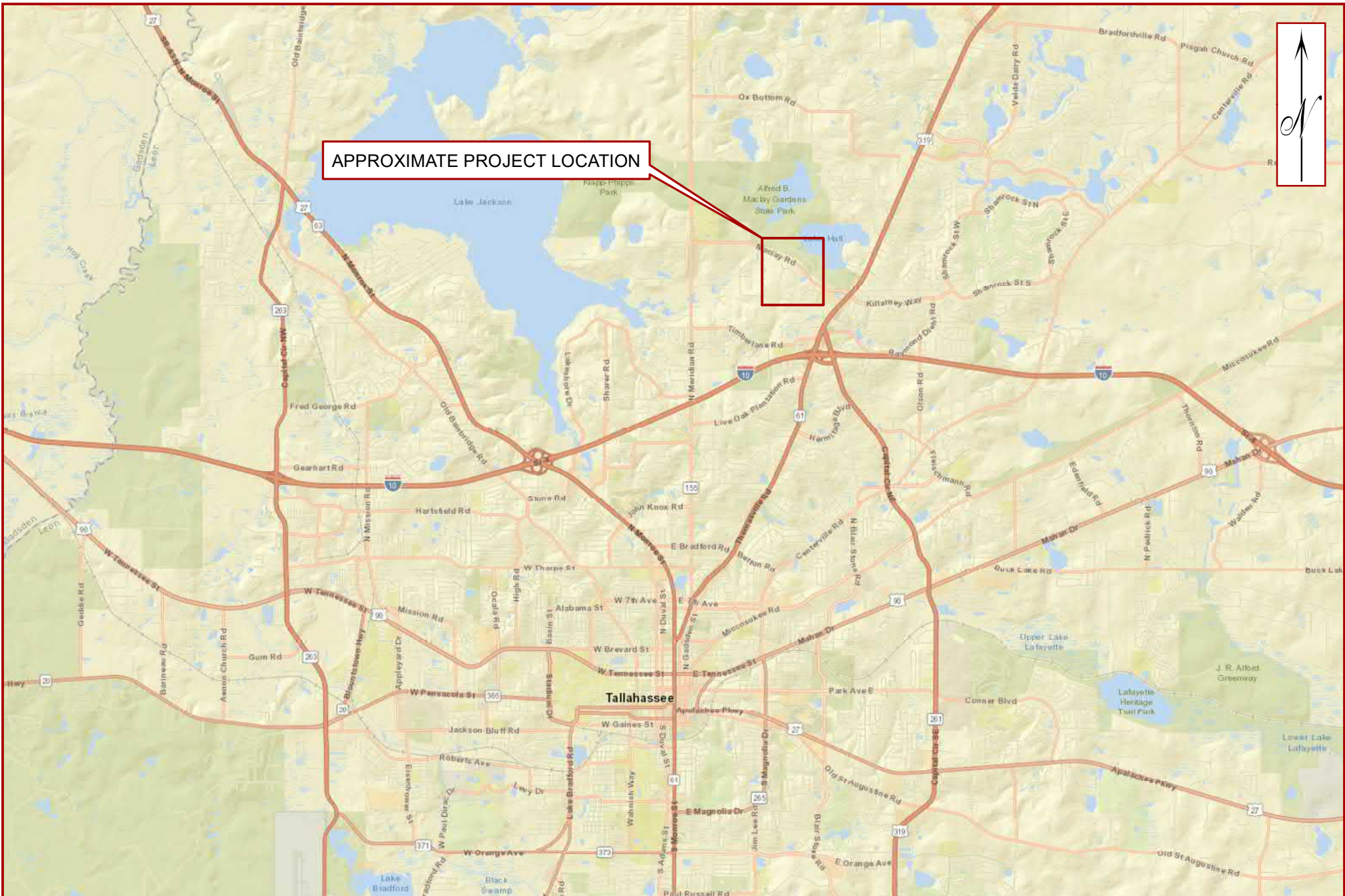
### **6.4 ADDITIONAL NATURAL FEATURES REGULATED BY LEON COUNTY**

In addition to the impacts identified above, the improvements to the Maclay Road Multi-Use Path will likely impact the following natural features which are regulated by the Leon County Comprehensive Plan:

- Severe and Significant Grades
- Protected Trees



# **FIGURES**



APPROXIMATE PROJECT LOCATION



DRAWN:	P. AUSTIN	CHECKED:	C. GORMAN, P.E.
ENGINEER:	C. GORMAN, P.E.		
CLIENT:	MOTT MACDONALD		
PROJ. NO.:	046-024-21-01	SCALE:	

**ENVIRONMENTAL AND GEOTECHNICAL  
SPECIALISTS, INC.**

104 North Magnolia Drive, Tallahassee, Florida 32301  
Office #: (850) 386-1253 Fax #: (850) 385-8050

TITLE:	PROJECT VICINITY MAP MACLAY MULTI-USE TRAIL FROM BOBBIN BROOK EAST TO MACLAY BOULEVARD LEON COUNTY, FLORIDA		
DATE:	OCTOBER 2021	FIGURE NO.:	1.1



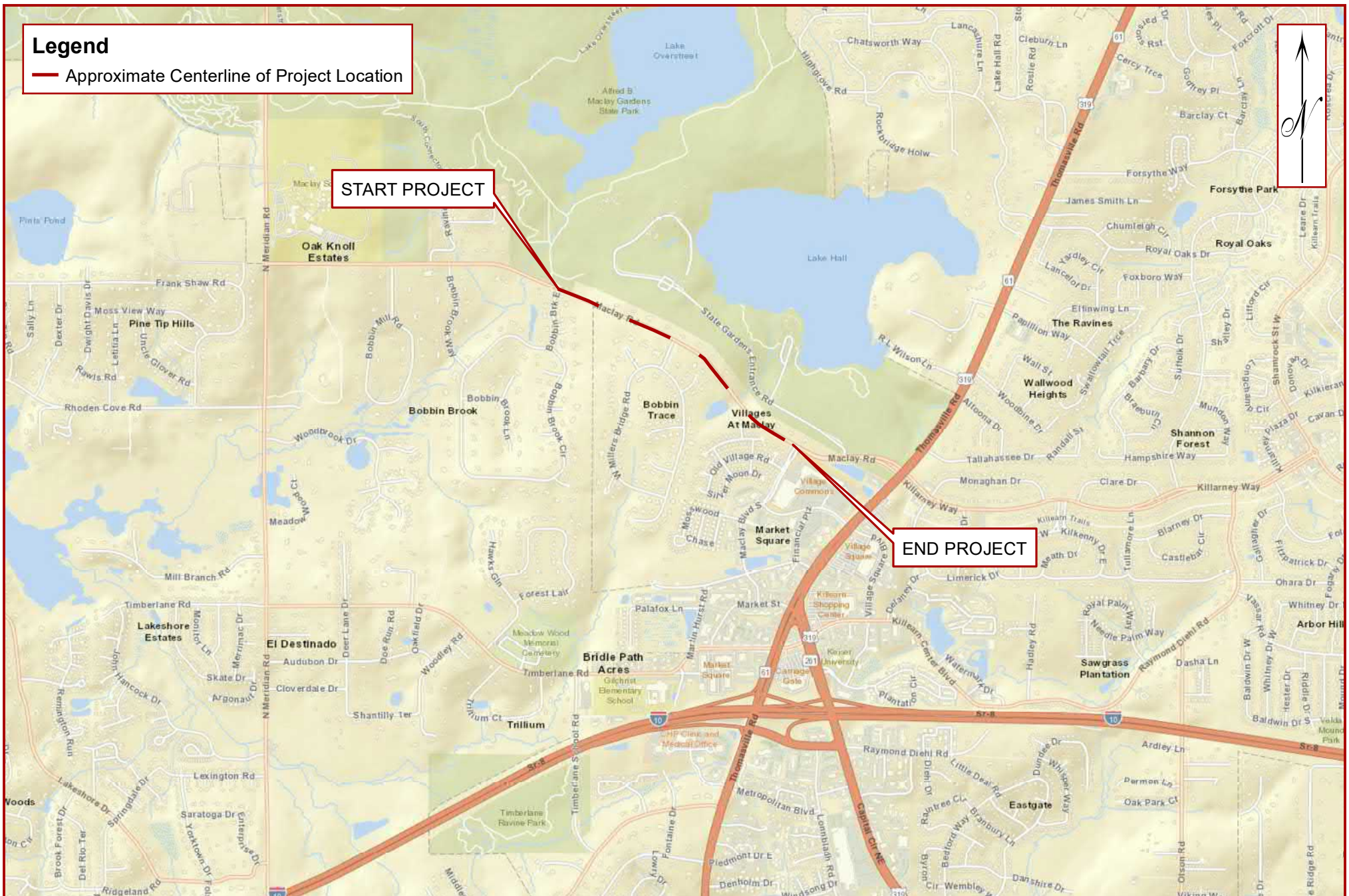
**Legend**

— Approximate Centerline of Project Location



**START PROJECT**

**END PROJECT**



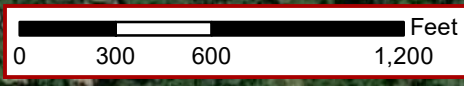
DRAWN:	P. AUSTIN	CHECKED:	C. GORMAN, P.E.
ENGINEER:	C. GORMAN, P.E.		
CLIENT:	MOTT MACDONALD		
PROJ. NO.:	046-024-21-01	SCALE:	

**ENVIRONMENTAL AND GEOTECHNICAL  
SPECIALISTS, INC.**  
 104 North Magnolia Drive, Tallahassee, Florida 32301  
 Office #: (850) 386-1253 Fax #: (850) 385-8050

TITLE:	PROJECT LOCATION MAP MACLAY MULTI-USE TRAIL FROM BOBBIN BROOK EAST TO MACLAY BOULEVARD LEON COUNTY, FLORIDA		
DATE:	OCTOBER 2021	FIGURE NO.:	1.2



**Legend**  
 — Approximate Centerline of Project Location



DRAWN:	P. AUSTIN	CHECKED:	C. GORMAN, P.E.
ENGINEER:	C. GORMAN, P.E.		
CLIENT:	MOTT MACDONALD		
PROJ. NO.:	046-024-21-01	SCALE:	

**ENVIRONMENTAL AND GEOTECHNICAL  
 SPECIALISTS, INC.**  
 104 North Magnolia Drive, Tallahassee, Florida 32301  
 Office #: (850) 386-1253 Fax #: (850) 385-8050

TITLE:	AERIAL PHOTOGRAPH OF PROJECT LOCATION MACLAY MULTI-USE TRAIL FROM BOBBIN BROOK EAST TO MACLAY BOULEVARD LEON COUNTY, FLORIDA		
DATE:	OCTOBER 2021	FIGURE NO.:	3






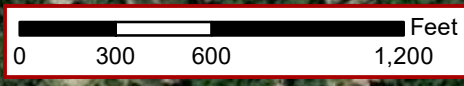
**Legend**

— Approximate Centerline of Project Location

**USDA Soil Survey (SHWT)**

- 24, Lucy fine sand, 0 to 5 percent slopes
- 25, Lucy fine sand, 5 to 8 percent slopes
- 27, Lynchburg fine sandy loam
- 32, Ocilla fine sand
- 33, Orangeburg fine sandy loam, 2 to 5 percent slopes
- 34, Orangeburg fine sandy loam, 5 to 8 percent slopes
- 35, Orangeburg fine sandy loam, 8 to 12 percent slopes
- 39, Pelham fine sand
- 41, Plummer fine sand

COLOR	DEPTH TO SHWT (FEET)
DARK BLUE	Ponded Water (Rivers, Lakes)
BLUE	0 to 1.0
LIGHT BLUE	1.0 to 3.0
YELLOW	3.0 to 6.0
BROWN	> 6.0
HATCH	MATERIAL
	MUCK (ORG. > 5.0%)
	SWELLING CLAY (LL > 50)
	MUCK AND CLAY



START PROJECT

END PROJECT



DRAWN: P. AUSTIN	CHECKED: C. GORMAN, P.E.
ENGINEER: C. GORMAN, P.E.	
CLIENT: MOTT MACDONALD	
PROJ. NO.: 046-024-21-01	SCALE:

**ENVIRONMENTAL AND GEOTECHNICAL SPECIALISTS, INC.**  
 104 North Magnolia Drive, Tallahassee, Florida 32301  
 Office #: (850) 386-1253 Fax #: (850) 385-8050

TITLE: USDA SOIL SURVEY (SHWT) MAP MACLAY MULTI-USE TRAIL FROM BOBBIN BROOK EAST TO MACLAY BOULEVARD LEON COUNTY, FLORIDA	
DATE: OCTOBER 2021	FIGURE NO.: 4





DRAWN:	P. AUSTIN	CHECKED:	C. GORMAN, P.E.
ENGINEER:	C. GORMAN, P.E.		
CLIENT:	MOTT MACDONALD		
PROJ. NO.:	046-024-21-01	SCALE:	

**ENVIRONMENTAL AND GEOTECHNICAL SPECIALISTS, INC.**  
 104 North Magnolia Drive, Tallahassee, Florida 32301  
 Office #: (850) 386-1253 Fax #: (850) 385-8050

TITLE:	NATIONAL WETLAND INVENTORY MAP MACLAY MULTI-USE TRAIL FROM BOBBIN BROOK EAST TO MACLAY BOULEVARD LEON COUNTY, FLORIDA		
DATE:	OCTOBER 2021	FIGURE NO.:	5



**Legend**

- Approximate Centerline of Project Location
- 2015 FLUCCS Land Use**
- 1110: Low Density, Fixed Single Family Units
- 1310: High Density, Fixed Single Family Units
- 1400: Commercial and Services
- 3100: Herbaceous (Dry Prairie)
- 4100: Upland Coniferous Forests
- 4340: Upland Mixed - Coniferous / Hardwood
- 6170: Mixed Wetland Hardwoods
- 6440: Emergent Aquatic Vegetation
- 8140: Roads and Highways
- 8320: Electrical Power Transmission Lines
- 8370: Surface Water Collection Features



DRAWN:	P. AUSTIN	CHECKED:	C. GORMAN, P.E.
ENGINEER:	C. GORMAN, P.E.		
CLIENT:	MOTT MACDONALD		
PROJ. NO.:	046-024-21-01	SCALE:	

**ENVIRONMENTAL AND GEOTECHNICAL SPECIALISTS, INC.**  
 104 North Magnolia Drive, Tallahassee, Florida 32301  
 Office #: (850) 386-1253 Fax #: (850) 385-8050

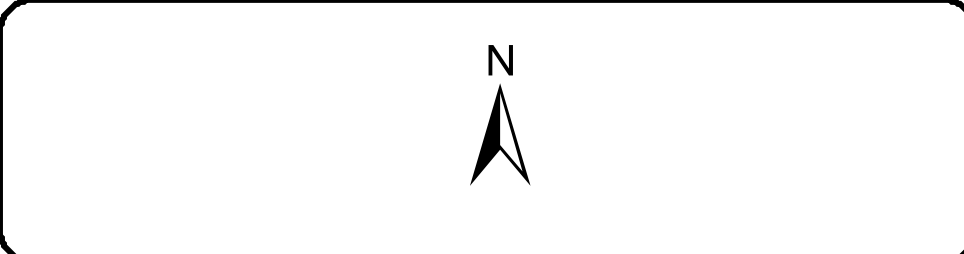
TITLE:	2015 FLUCCS LAND USE MAP MACLAY MULTI-USE TRAIL FROM BOBBIN BROOK EAST TO MACLAY BOULEVARD LEON COUNTY, FLORIDA		
DATE:	OCTOBER 2021	FIGURE NO.:	6





**DISCLAIMER**

This product has been compiled from the most accurate source data from Leon County, the City of Tallahassee, and the Leon County Property Appraiser's Office. However, this product is for reference purposes only and is not to be construed as a legal document or survey instrument. Any reliance on the information contained herein is at the user's own risk. Leon County, the City of Tallahassee and the Leon County Property Appraiser's Office assume no responsibility for any use of the information contained herein or any loss resulting therefrom.



**Figure 7: Hydrologic Features Map**

<b>Scale:</b>	Management Information Services Leon County Courthouse 301 S. Monroe St, P3 Level Tallahassee, FL 32301 850/606-5504 <a href="http://www.tlccgis.org">http://www.tlccgis.org</a>
Not To Scale	
<b>Date Drawn:</b>	October 25, 2021





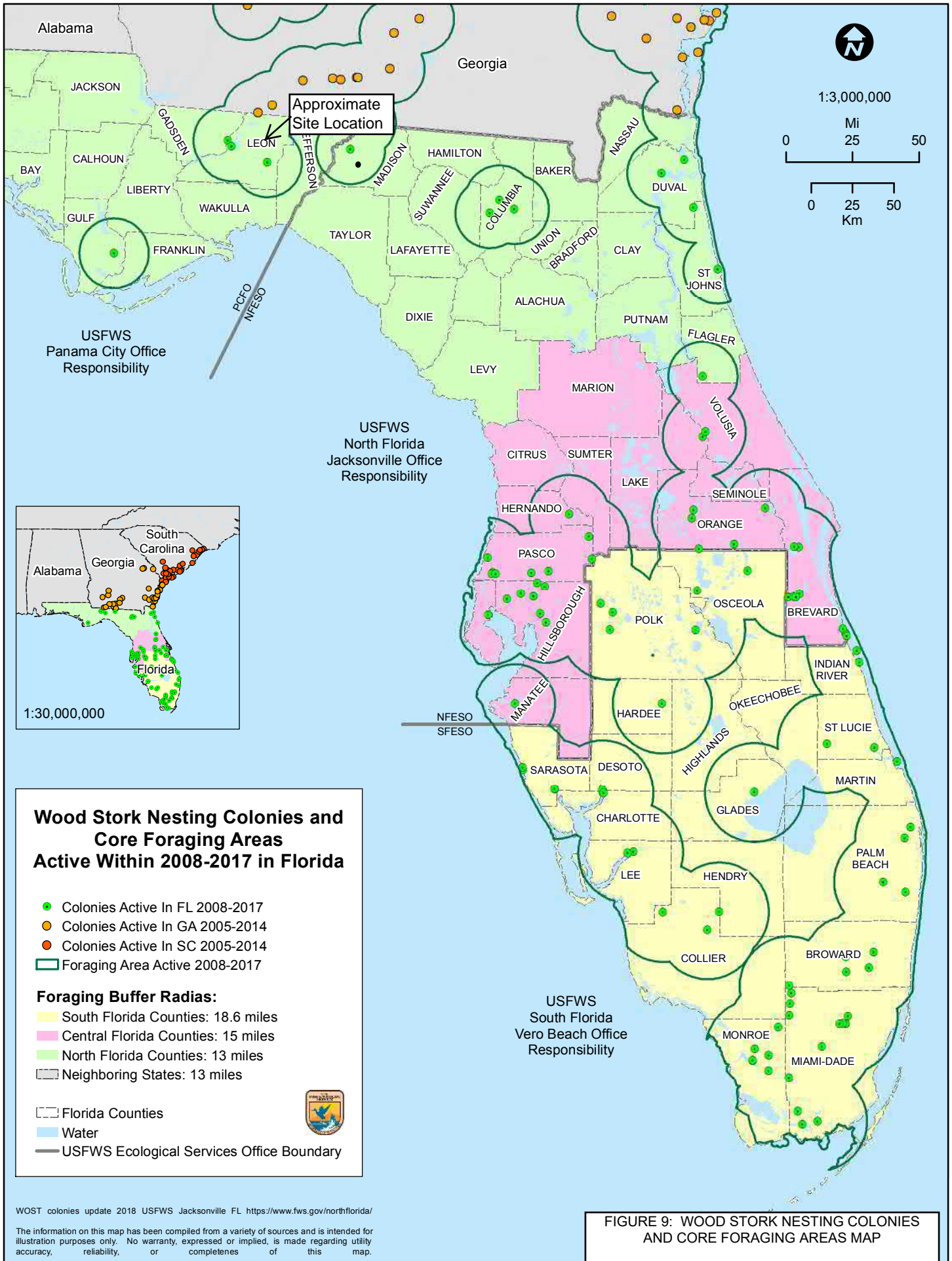
DRAWN:  
P. AUSTIN

FIGURE:  
8

ENVIRONMENTAL AND  
GEOTECHNICAL SPECIALISTS, INC.

TITLE:  
PHOTOGRAPHS OF WATER  
CROSSING AREA

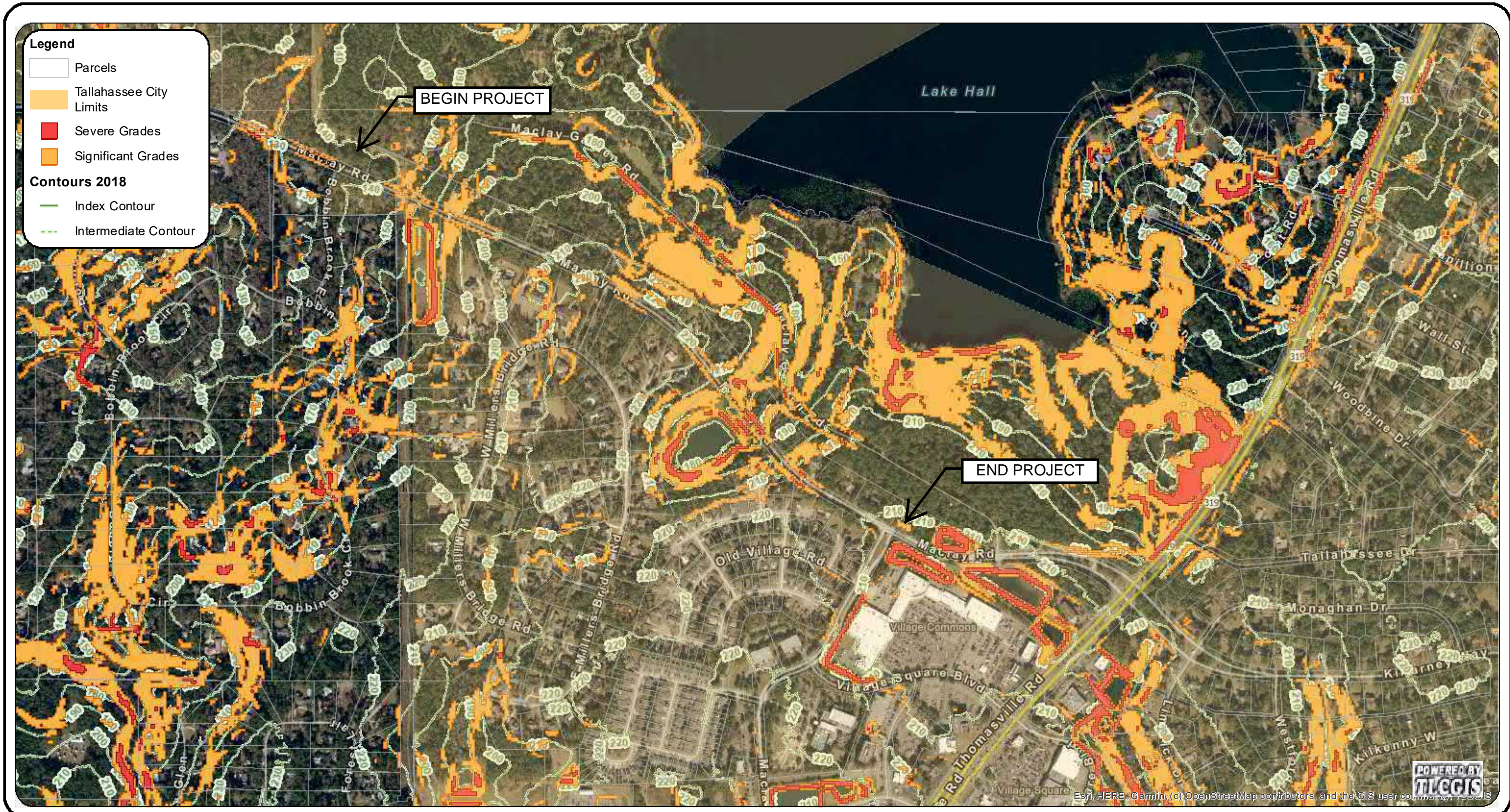




**FIGURE 9: WOOD STORK NESTING COLONIES AND CORE FORAGING AREAS MAP**

WOST colonies update 2018 USFWS Jacksonville FL <https://www.fws.gov/northflorida/>  
 The information on this map has been compiled from a variety of sources and is intended for illustration purposes only. No warranty, expressed or implied, is made regarding utility accuracy, reliability, or completeness of this map.





**DISCLAIMER**

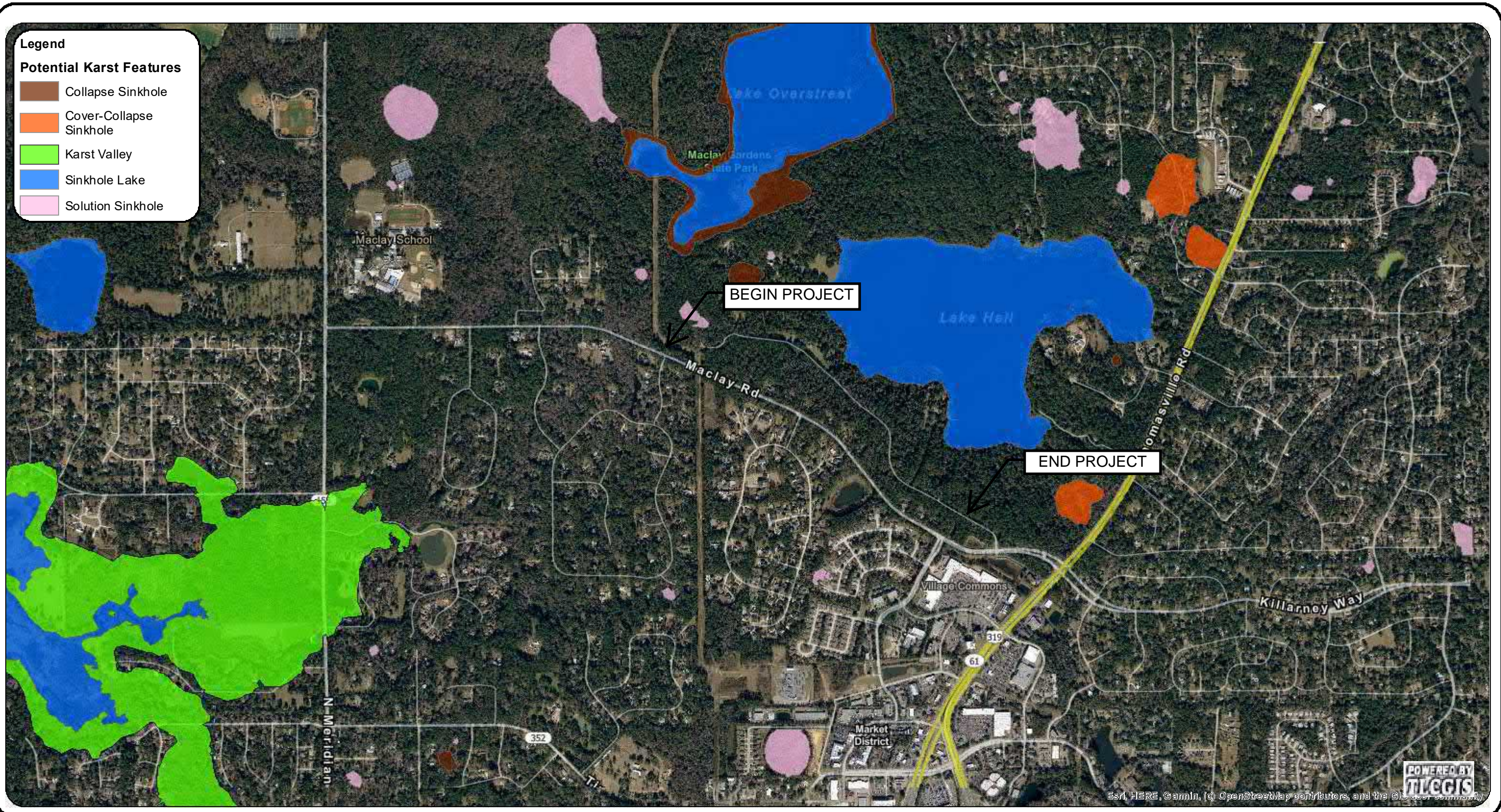
This product has been compiled from the most accurate source data from Leon County, the City of Tallahassee, and the Leon County Property Appraiser's Office. However, this product is for reference purposes only and is not to be construed as a legal document or survey instrument. Any reliance on the information contained herein is at the user's own risk. Leon County, the City of Tallahassee and the Leon County Property Appraiser's Office assume no responsibility for any use of the information contained herein or any loss resulting therefrom.



**Figure 10 Severe and Significant Grades**

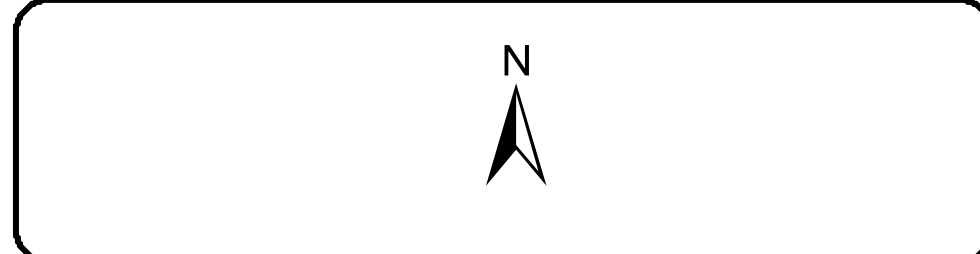
<b>Scale:</b>	Management Information Services Leon County Courthouse 301 S. Monroe St, P3 Level Tallahassee, FL 32301
Not To Scale	850/606-5504
<b>Date Drawn:</b>	http://www.tlccgis.org
October 26, 2021	





**DISCLAIMER**

This product has been compiled from the most accurate source data from Leon County, the City of Tallahassee, and the Leon County Property Appraiser's Office. However, this product is for reference purposes only and is not to be construed as a legal document or survey instrument. Any reliance on the information contained herein is at the user's own risk. Leon County, the City of Tallahassee and the Leon County Property Appraiser's Office assume no responsibility for any use of the information contained herein or any loss resulting therefrom.



**Figure 11: Potential Karst Features**

<b>Scale:</b>	Management Information Services Leon County Courthouse 301 S. Monroe St, P3 Level Tallahassee, Fl. 32301 850/606-5504 <a href="http://www.tlccgis.org">http://www.tlccgis.org</a>
Not To Scale	
<b>Date Drawn:</b>	
October 26, 2021	



# **APENDICES**



**APPENDIX A**

**FLORIDA NATURAL AREAS INVENTORY  
BIODIVERSITY MATRIX**



1018 Thomasville Road  
 Suite 200-C  
 Tallahassee, FL 32303  
 850-224-8207  
 850-681-9364 fax  
 www.fnai.org

FLORIDA  
**Natural Areas**  
 INVENTORY

# Florida Natural Areas Inventory

## Biodiversity Matrix Query Results

### UNOFFICIAL REPORT

Created 10/26/2021

(Contact the FNAI Data Services Coordinator at 850.224.8207 or kbrinegar@fnai.fsu.edu for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

### Report for 1 Matrix Unit: 12988

	<p><b>Descriptions</b></p> <p><b>DOCUMENTED</b> - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.</p> <p><b>DOCUMENTED-HISTORIC</b> - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.</p> <p><b>LIKELY</b> - The species or community is <i>known</i> to occur in this vicinity, and is considered likely within this Matrix Unit because:</p> <ol style="list-style-type: none"> <li>1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; <i>or</i></li> <li>2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.</li> </ol> <p><b>POTENTIAL</b> - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.</p>
--	--

### Matrix Unit ID: 12988

1 Documented Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Autochton cellus</i> Golden-banded Skipper	G4	S1	N	N

0 Documented-Historic Elements Found

4 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<a href="#">Alligator mississippiensis</a> American Alligator	G5	S4	SAT	FT(S/A)
<a href="#">Mycteria americana</a> Wood Stork	G4	S2	LT	FT



<i>Najas filifolia</i> Narrowleaf Naiad	G1	S1	N	T
<i>Upland hardwood forest</i>	G5	S3	N	N

**Matrix Unit ID: 12988****36 Potential Elements for Matrix Unit 12988**

<b>Scientific and Common Names</b>	<b>Global Rank</b>	<b>State Rank</b>	<b>Federal Status</b>	<b>State Listing</b>
<i>Agrimonia incisa</i> Incised Groove-bur	G3	S2	N	T
<i>Amphiuma pholeter</i> One-toed Amphiuma	G3	S3	N	N
<i>Andropogon arctatus</i> Pine-woods Bluestem	G3	S3	N	T
<a href="#"><i>Asplenium heteroresiliens</i></a> Wagner's Spleenwort	GNA	S1	N	N
<a href="#"><i>Brickellia cordifolia</i></a> Flyr's Brickell-bush	G2G3	S2	N	E
<i>Calamintha dentata</i> Toothed Savory	G3	S3	N	T
<a href="#"><i>Conradina glabra</i></a> Apalachicola Rosemary	G1	S1	LE	E
<a href="#"><i>Corynorhinus rafinesquii</i></a> Rafinesque's Big-eared Bat	G3G4	S2	N	N
<a href="#"><i>Drymarchon couperi</i></a> Eastern Indigo Snake	G3	S3	LT	FT
<i>Eucanthus alutaceus</i> Mat Red Globe Scarab Beetle	G2G3	S1S2	N	N
<a href="#"><i>Gopherus polyphemus</i></a> Gopher Tortoise	G3	S3	C	ST
<i>Hexastylis arifolia</i> Heartleaf	G5	S3	N	T
<a href="#"><i>Linum westii</i></a> West's Flax	G1	S1	N	E
<a href="#"><i>Litsea aestivalis</i></a> Pondspice	G3?	S2	N	E
<a href="#"><i>Magnolia ashei</i></a> Ashe's Magnolia	G2	S2	N	E
<a href="#"><i>Matelea alabamensis</i></a> Alabama Spiny-pod	G2	S2	N	E
<i>Matelea floridana</i> Florida Spiny-pod	G2	S2	N	E
<a href="#"><i>Myotis austroriparius</i></a> Southeastern Bat	G3G4	S3	N	N
<i>Onthophagus polyphemi polyphemi</i> Punctate Gopher Tortoise Onthophagus Beetle	G2G3T2T3	S2	N	N
<i>Oxypolis greenmanii</i> Giant Water-dropwort	G3	S3	N	E
<i>Peucaea aestivalis</i> Bachman's Sparrow	G3	S3	N	N
<a href="#"><i>Picoides borealis</i></a> Red-cockaded Woodpecker	G3	S2	LE	FE
<i>Pinguicula primuliflora</i> Primrose-flowered Butterwort	G3G4	S3	N	E
<a href="#"><i>Pituophis melanoleucus mugitus</i></a> Florida Pine Snake	G4T3	S3	N	SSC
<i>Pityopsis flexuosa</i> Zigzag Silkgrass	G3	S3	N	E
<i>Platanthera integra</i> Yellow Fringeless Orchid	G3G4	S3	N	E
<i>Pycnanthemum floridanum</i> Florida Mountain-mint	G3	S3	N	T
<a href="#"><i>Rhexia parviflora</i></a>	G2	S2	N	E

Small-flowered Meadowbeauty <a href="#">Rhododendron austrinum</a> Florida Flame Azalea	G3	S3	N	E
<a href="#">Ruellia noctiflora</a> Nightflowering Wild Petunia	G2	S2	N	E
<i>Sarracenia leucophylla</i> White-top Pitcherplant	G3	S3	N	E
<a href="#">Torreya taxifolia</a> Florida Torreya	G1	S1	LE	E
<a href="#">Ursus americanus floridanus</a> Florida Black Bear	G5T2	S2	N	N
<a href="#">Uvularia floridana</a> Florida Merrybells	G3	S1	N	E
<a href="#">Xyris longisepala</a> Karst Pond Xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i> Harper's Yellow-eyed Grass	G3	S3	N	T

**Disclaimer**

The data maintained by the Florida Natural Areas Inventory represent the single most comprehensive source of information available on the locations of rare species and other significant ecological resources statewide. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. FNAI shall not be held liable for the accuracy and completeness of these data, or opinions or conclusions drawn from these data. FNAI is not inviting reliance on these data. Inventory data are designed for the purposes of conservation planning and scientific research and are not intended for use as the primary criteria for regulatory decisions.

**Unofficial Report**

These results are considered unofficial. FNAI offers a [Standard Data Request](#) option for those needing certifiable data.



**APPENDIX B**

**NATURAL FEATURES  
INVENTORY CHECKLIST**

# Checklist

Please check to indicate items that have been addressed.

1. This completed **Application form, Checklist, Owner's Affidavit (original), and Required Fee.**
2. **Location Map** with north arrow.
3. Color documents should also be submitted in electronic form in one of the following formats: .tif, .pdf, .jpeg, or .bmp.
4. **Narrative (s).** Provide a narrative that describes the conservation and preservation areas identified on or adjacent to the site. Include detailed descriptions of the vegetation and wildlife observed or anticipated to be on site. Include any information about past activities that may have contributed to the present day site conditions. It may be helpful to compare the site vegetation to the community types identified in "Guide to the Natural Communities of Florida" or comparable reference materials that provide qualitative or quantitative descriptions of Leon County vegetation. The guide is available for purchase from the Florida Forever Program, Office of Environmental Services, Division of the State Lands, (850) 487-1750. Ecosystems of Florida, Meyers and Ewel, 1991, University of Central Florida Press is another useful reference. Additional resources for listed species information include the Florida Game & Fresh Water Fish Commission at (850) 488-6661, FAX (850) 922-5679 and the Florida Natural Areas Inventory at (850) 224-8207. If the site is greater than 20 acres, a Florida Natural Areas Inventory will be required and a copy must be included with this submittal.
5. **Site reference information.** Include property boundary corner stakes, wetland boundary flags, other environmental constraint boundary flags, survey points, numbered trees, etc. Use highly visible surveyor's tape to delineate features. Tree Tags - On sites with dense vegetation or numerous trees, tagging and numbering of some protected trees should be provided for on site orientation. Numbers should correspond to trees noted on the contour map. Consult with Review staff before undertaking extensive tree tagging or surveying.
6. **Aerial Photograph.** Provide original full sheet blueline aerial or other comparable aerial photo. GIS or DOT aeriels are acceptable. Xerox copies are not acceptable. Label site property boundaries on the aerial. Large sites or sites with multiple natural features may require additional aerial photos. Photos may be purchased from the Tallahassee Leon County GIS Dept. - 488-8020, the Dept. of Transportation Aerial Surveys Division - 488-2250, or local blueprint stores.
7. **Natural Features Map.** A Natural Features Map is the boundary and topographic survey (contour map) that depicts the boundaries of all conservation and preservation areas found on or adjacent to the site. The map should include the site's contours at a 1 foot contour interval, property boundaries, wells, existing structures and utilities and general tree locations. The NFI Map will be 24" x 36" and have a scale of 1" to 60' or larger (i.e. 1" to 40'). Public Infrastructure projects may use alternate mapping methods at the discretion of the Growth Management Department. The NFI Map will serve as a reference map throughout the land development review process.
8. **Conservation or Preservation Areas.** Boundaries of the conservation and preservation areas listed on page 1 of the application form or in the Tallahassee Land Development Code must be surveyed and depicted on the NFI map. A qualified professional retained by the applicant shall demarcate the jurisdictional boundary of conservation or preservation areas.
9. Identify the **25 and 100 year Floodplains** on the NFI map. Distinguish between altered and undisturbed floodplain. The 100 year flood elevation must be identified for projects that have all or a portion of the property located within the 100 year floodplain. The base flood elevation should be determined as follows: 1. Under no circumstances can a base flood elevation be accepted which is lower than that specified in the latest FEMA study; 2. For sites within a 100 year floodplain, as defined by the City of Tallahassee Land Development Code, where a FEMA base flood elevation was not provided, the applicant should either: a) use the best available data from the inventory of drainage studies to determine the base flood elevation (studies may include, but are not limited to, the USGS-91 study, a local government approved drainage study, or a private engineering study) or b) use the certified results of a drainage study performed by a professional engineer.
10. **Drainage Basin Map.** Provide a drainage basin map that includes basin area and flows.
11. Indicate the **soil types** on site. Refer to the Soil series as indicated in the Soil Survey of Leon County.
12. **Karst features:** Discuss the method of detection in the NFI narrative and indicate if they are active or inactive.
13. Show the location of all **wells** (water supply or monitoring), areas susceptible to **groundwater contamination** or areas known to be contaminated on the NFI map.
14. **Listed Species.** Map the location of all endangered species, threatened species, or species of special concern. Additionally, delineate the habitat boundaries of each listed species. Listed species habitat must be preserved in its entirety. As per the City of Tallahassee Land Development Code, if the applicant can prove that development activities will provide a net benefit to each listed species, the preservation area of habitat for listed species may be reduced. A management plan approved by local, state, and federal resource management agencies is required prior to environmental impact analysis approval.
15. **Cultural Resource Assessment.** A Cultural Resource Assessment is a process through which the applicant must submit information to the State of Florida, Bureau of Historic Preservation, Compliance Review Section (850) 245-6333 to determine whether there are known or there is a potential for significant archaeological or historical resources to exist on site. A copy of the clearance letter must be received by the Growth Management Department prior to approval of the NFI .



## Appendix D. (Right of Way Maps)



POINT OF B  
THE NOR  
OF SECT  
RANGE  
FLORID

MACLAY ROAD  
(66' RIGHT OF WAY)

9.51 AC ±  
49

10 AC ±  
48

3.16 AC ±  
5

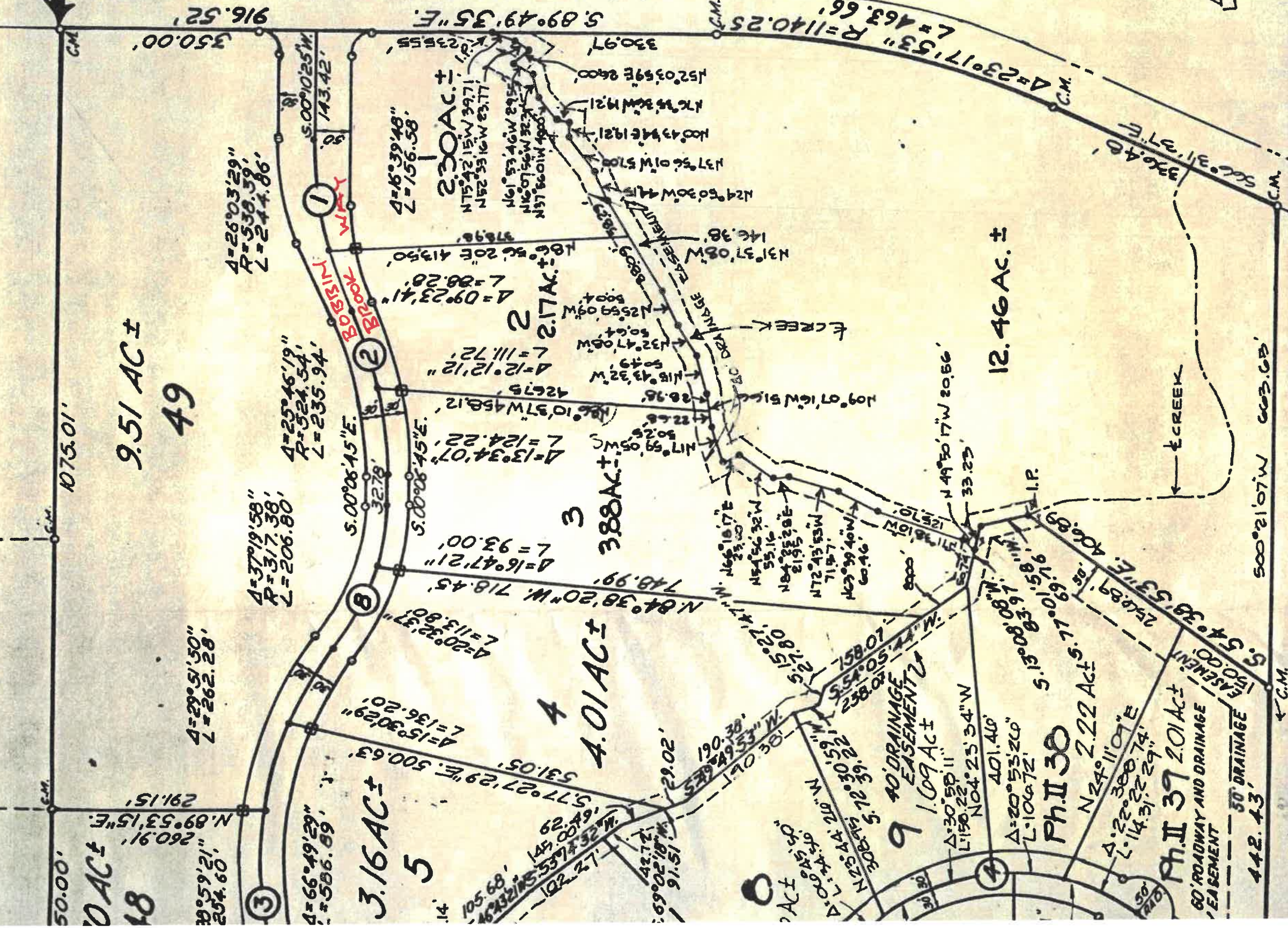
4.01 AC ±  
4

3.88 AC ±  
3

2.7 AC ±  
2

2.30 AC ±  
1

12.46 AC ±

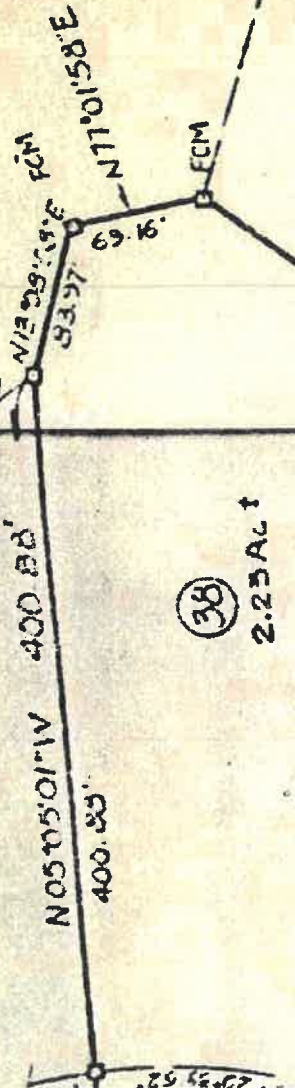


OTHERWISE NOTED ALL BEARINGS  
DISTANCES ARE TO STREET



BROOK

I



(38) 2.23 AC ±

N24°24'16\"/>

NOT PLATTED

(39) 1.97 AC ±

20' DRAINAGE EASEMENT

(BEARING BASE) N00°21'07\"/>

44'22\"/>

(41) 1.82 AC ±

S79°43'27\"/>

(42) 1.62 AC ±

N89°03'46\"/>

(43) 1.51 AC ±

S78°38'04\"/>

663.65'

300.00'

359.85'

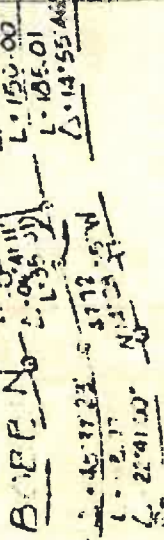
S78°38'04\"/>

(44) 2.59 AC ±

566.92'24\"/>

ROAD

BEECH BROOK EAST

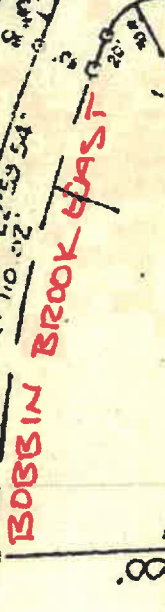


(2) 1.55 AC ±

N89°24'36\"/>

S78°38'04\"/>

BOBBIN BROOK EAST



(3) 1.51 AC ±

(1) 2.52 AC ±

S57°52'58\"/>

935.37'

MACLAY

(4) 1.50 AC ±

155.00'

130.00'

FCM 1254

1' (SURVEY)

2' (PLAT)

FCM 1254  
R-1140.25' L-463.66'  
L-23'17.53'  
S89°49'35\"/>

66' SW

50' BUFFER (NO ACCESS)  
50' BUFFER (NO ACCESS)  
50' BUFFER (NO ACCESS)  
R/W

INF







ES:  
 : FOR ADDITIONAL NOTES  
 RERS SET WITH 5/8" REBAR AND PLASTIC  
 LS 5051 UNLESS OTHERWISE NOTED.  
 AT FOR CLARITY.  
 OF PERMANENT STRUCTURES INCLUDING  
 JONG DRIVEWAYS BY PROPERTY OWNERS  
 MIN UTILITY AND DRAINAGE EASEMENTS.

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	TANGENT	BEARING	CHORD
C26	350.00	68.89	117.40	34.61	S 82°16'30" W	68.88
C27	350.00	76.64	125°39'53"	68.19	S 70°23'47" W	62.27
C28	350.00	82.47	125°39'53"	73.08	S 70°23'47" W	67.26
C29	350.00	299.21	45°43'00"	158.08	N 80°30'50" W	291.34
C30	350.00	299.21	45°43'00"	158.08	N 80°30'50" W	291.34
C31	350.00	299.21	45°43'00"	158.08	N 80°30'50" W	291.34
C32	350.00	299.21	45°43'00"	158.08	N 80°30'50" W	291.34
C33	350.00	71.24	105°3'04"	35.73	N 52°12'48" W	71.13
C34	350.00	332.23	26°26'16"	169.13	N 33°33'08" W	329.29
C35	350.00	126.51	19°55'55"	126.51	N 10°22'02" W	249.21
C36	350.00	582.70	46°22'11"	308.37	N 23°35'10" W	566.93
C37	300.00	64.44	12°18'25"	32.34	S 83°28'43" W	64.32
C38	300.00	212.32	17°22'42"	106.88	N 88°17'16" E	211.50
C39	350.00	284.63	46°35'52"	150.73	N 46°22'05" E	276.82
C40	400.00	302.20	44°00'11"	161.62	S 87°08'07" W	299.70

LINE TABLE

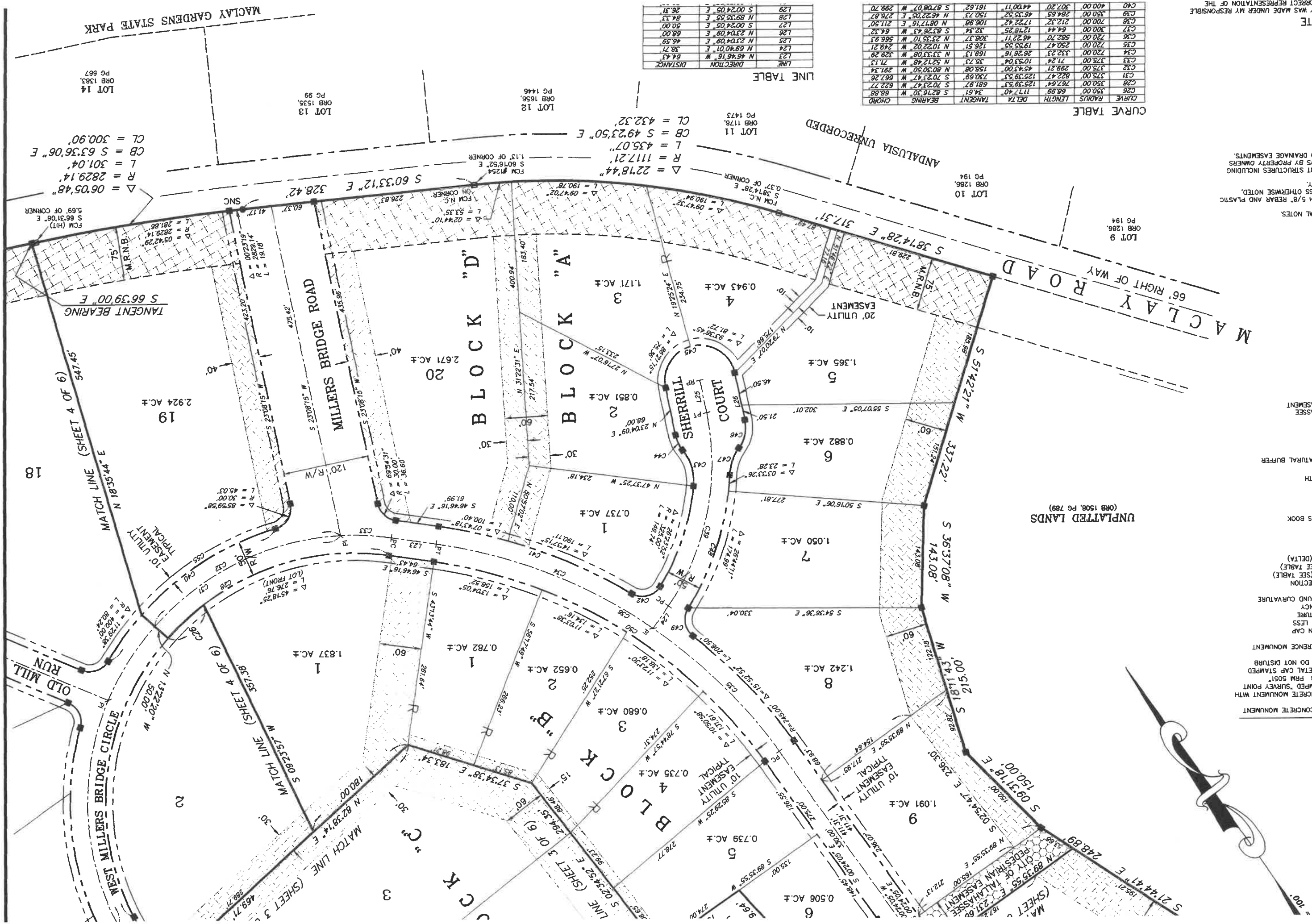
LINE	DIRECTION	DISTANCE
L23	N 46°46'16" W	64.43
L24	N 69°40'01" E	38.71
L25	N 23°04'09" E	46.59
L26	N 23°04'09" E	68.00
L27	S 00°24'05" E	50.00
L28	N 89°35'55" E	84.33
L29	S 00°24'05" E	26.31

LOT 11  
 ORB 1178  
 PG 1473  
 CL = 432.32  
 CB = S 49°23'50" E  
 L = 435.07  
 R = 1117.21  
 Δ = 22°18'44"

LOT 12  
 ORB 1656  
 PG 1446

LOT 13  
 ORB 1535  
 PG 99

LOT 14  
 ORB 1383  
 PG 687



Δ = 06°05'48"  
 R = 2829.14'  
 L = 301.04'  
 CB = S 63°36'06" E  
 CL = 300.90'

FCM (H11)  
 S 66°31'06" E  
 5.69' OF CORNER

TANGENT BEARING  
 S 66°39'00" E

MATCH LINE (SHEET 4 OF 6)  
 N 18°55'44" E  
 547.45'

2.924 AC.F.  
 19

10' UTILITY EASEMENT TYPICAL

OLD MILL RUN

WEST MILLERS BRIDGE CIRCLE

MATCH LINE (SHEET 1 OF 6)  
 S 51°38' W  
 561.38'

MATCH LINE (SHEET 3 OF 6)  
 N 82°38'14" E  
 180.00'

MATCH LINE (SHEET 4 OF 6)  
 S 09°23'57" W  
 592.537'

FCM #1254  
 S 60°16'52" E  
 1.13' OF CORNER

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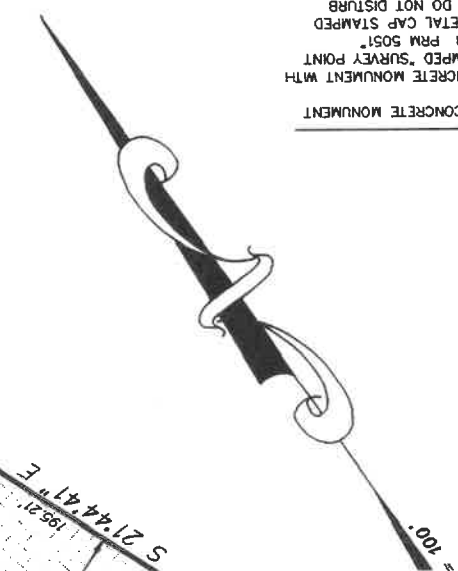
FCM N.C.  
 ON CORNER

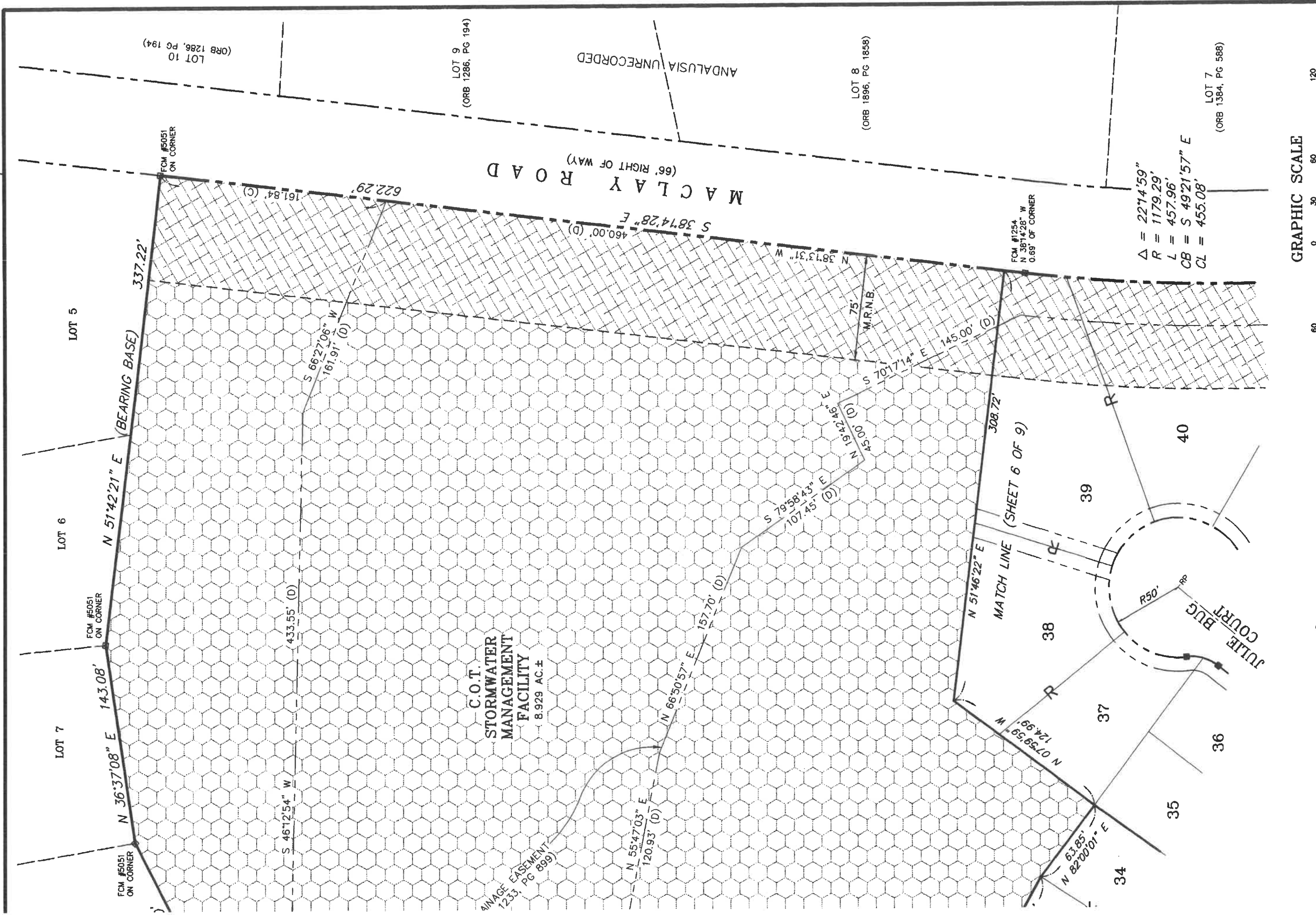
FCM N.C.  
 ON CORNER

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UNPLATTED LANDS  
 (ORB 1508, PG 789)





$\Delta = 22'14".59"$   
 $R = 1179.29'$   
 $L = 457.96'$   
 $CB = S 49°21'57" E$   
 $CL = 455.08'$

GRAPHIC SCALE

0 30 60 90 120



# VILLAGES AT MACLAY

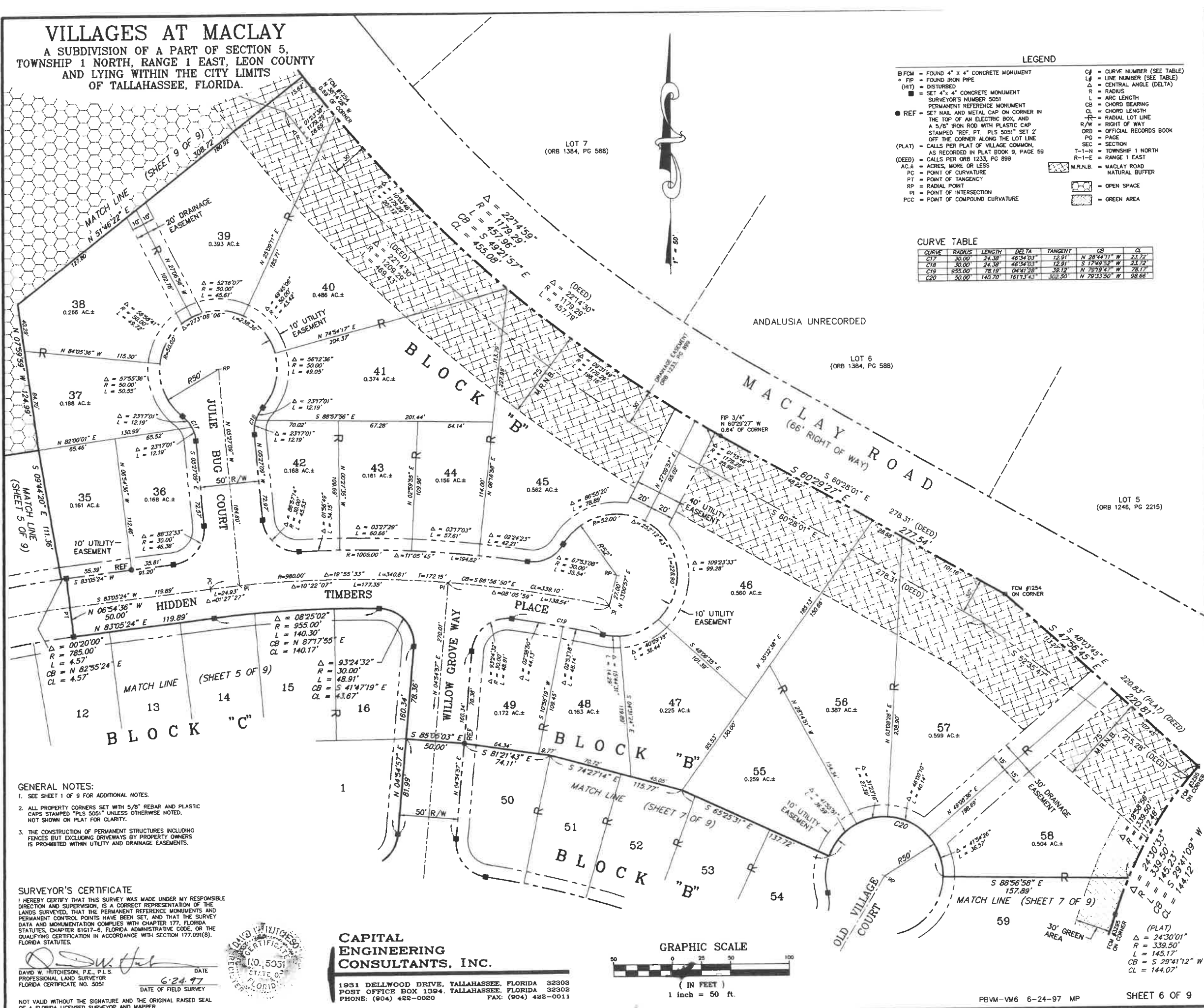
A SUBDIVISION OF A PART OF SECTION 5,  
TOWNSHIP 1 NORTH, RANGE 1 EAST, LEON COUNTY  
AND LYING WITHIN THE CITY LIMITS  
OF TALLAHASSEE, FLORIDA.

## LEGEND

- BFM = FOUND 4" X 4" CONCRETE MONUMENT
- FP = FOUND IRON PIPE
- (HT) = DISTURBED
- = SET 4" X 4" CONCRETE MONUMENT SURVEYOR'S NUMBER 5051
- PERMANENT REFERENCE MONUMENT
- REF = SET NAIL AND METAL CAP ON CORNER IN THE TOP OF AN ELECTRIC BOX, AND A 5/8" IRON ROD WITH PLASTIC CAP STAMPED "REF. PT. PLS 5051" SET 2' OFF THE CORNER ALONG THE LOT LINE
- (PLAT) = CALLS PER PLAT OF VILLAGE COMMON, AS RECORDED IN PLAT BOOK 9, PAGE 59
- (DEED) = CALLS PER DEED 1233, PG 899
- AC± = ACRES, MORE OR LESS
- PC = POINT OF CURVATURE
- PT = POINT OF TANGENCY
- RP = RADIAL POINT
- PI = POINT OF INTERSECTION
- PCC = POINT OF COMPOUND CURVATURE
- C# = CURVE NUMBER (SEE TABLE)
- L# = LINE NUMBER (SEE TABLE)
- Δ = CENTRAL ANGLE (DELTA)
- R = RADIUS
- L = ARC LENGTH
- CB = CHORD BEARING
- CL = CHORD LENGTH
- RL = RADIAL LOT LINE
- R/W = RIGHT OF WAY
- ORB = OFFICIAL RECORDS BOOK
- PG = PAGE
- SEC = SECTION
- T-1-N = TOWNSHIP 1 NORTH
- R-1-E = RANGE 1 EAST
- M.R.N.B. = MACLAY ROAD NATURAL BUFFER
- = OPEN SPACE
- = GREEN AREA

## CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	TANGENT	CB	CL
C17	30.00	24.38	46°34'03"	12.91	N 28°44'11" W	23.72
C18	30.00	24.38	46°34'03"	12.91	S 17°48'32" W	23.72
C19	955.00	78.19	04°41'28"	39.12	N 78°18'42" W	78.17
C20	50.00	140.70	161°13'43"	502.50	N 79°33'50" W	98.66



**GENERAL NOTES:**  
 1. SEE SHEET 1 OF 9 FOR ADDITIONAL NOTES.  
 2. ALL PROPERTY CORNERS SET WITH 5/8" REBAR AND PLASTIC CAPS STAMPED "PLS 5051" UNLESS OTHERWISE NOTED. NOT SHOWN ON PLAT FOR CLARITY.  
 3. THE CONSTRUCTION OF PERMANENT STRUCTURES INCLUDING FENCES BUT EXCLUDING DRIVEWAYS BY PROPERTY OWNERS IS PROHIBITED WITHIN UTILITY AND DRAINAGE EASEMENTS.

**SURVEYOR'S CERTIFICATE**  
 I HEREBY CERTIFY THAT THIS SURVEY WAS MADE UNDER MY RESPONSIBLE DIRECTION AND SUPERVISION, IS A CORRECT REPRESENTATION OF THE LANDS SURVEYED, THAT THE PERMANENT REFERENCE MONUMENTS AND PERMANENT CONTROL POINTS HAVE BEEN SET, AND THAT THE SURVEY DATA AND MONUMENTATION COMPLIES WITH CHAPTER 177, FLORIDA STATUTES, CHAPTER 81G17-6, FLORIDA ADMINISTRATIVE CODE OR THE QUALIFYING CERTIFICATION IN ACCORDANCE WITH SECTION 177.091(8), FLORIDA STATUTES.

DAVID W. HUTCHESON, P.E., P.L.S.  
 PROFESSIONAL LAND SURVEYOR  
 FLORIDA CERTIFICATE NO. 5051  
 DATE OF FIELD SURVEY: 6-24-97



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