

# **Preliminary Engineering Report**

**For:**

**City of Chipley**

**Stormwater Drainage Study  
(CHI22DS)**

**Prepared For:**



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## TABLE OF CONTENTS

TABLE OF CONTENTS.....	ii
LIST OF FIGURES.....	iii
LIST OF TABLES.....	iv
LIST OF APPENDICES .....	iv
1.0 INTRODUCTION.....	1
1.1 Project Scope .....	2
1.2 Report Limitations and Assumptions.....	2
2.0 BACKGROUND AND DATA COLLECTION .....	2
2.1 Location.....	2
2.2 FEMA Flood Maps .....	3
2.3 LiDAR Topographic Data .....	3
2.4 Field Investigations .....	3
2.5 Hand-held Camera Inspections.....	3
2.6 Coordination with Adjacent Projects.....	4
3.0 EXISTING CONDITIONS.....	4
3.1 Site Overview .....	4
3.2 Topography and Drainage Patterns.....	5
3.3 Land Cover and Vegetative Communities.....	6
3.4 Soil Characteristics .....	7
3.5 Summary of Field Investigation and Observations.....	7
4.0 PROPOSED IMPROVEMENTS .....	8
4.1 Griffin Road Ditch Area Improvements .....	8
4.2 Citywide Proposed Improvement Projects.....	8
5.0 CONCLUSIONS AND RECOMMENDATIONS.....	10
5.1 Recommendations for Future Studies .....	10
APPENDICES .....	12





## LIST OF TABLES

<i>Table 1. Drainage Sub-Basins.....</i>	<i>5</i>
<i>Table 2. Major Land Use Categories .....</i>	<i>6</i>
<i>Table 3. Detailed Land Use Summary .....</i>	<i>6</i>
<i>Table 4. Soil Characteristics .....</i>	<i>7</i>
<i>Table 5. Individual Stormwater Improvement Locations .....</i>	<i>9</i>

## LIST OF APPENDICES

APPENDIX A. EXHIBITS

APPENDIX B. PRELIMINARY DRAWINGS OF MITIGATION ACTION

APPENDIX C. GRIFFIN ROAD DITCH AREA IMPROVEMENT CONCEPT SHEETS

APPENDIX D. PROPOSED IMPROVEMENT CONCEPT WORKSHEETS

APPENDIX E. OPINION OF PROBABLE CONSTRUCTION COSTS

APPENDIX F. DRAINAGE CALCULATIONS

APPENDIX G. SITE VISITS AND PHOTOGRAPHS

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## 1.0 INTRODUCTION

The purpose of this Preliminary Engineering Report (PER) is to evaluate the existing stormwater infrastructure within the City of Chipley to identify feasible options to reduce flood stages to the greatest extent practical. Clearview Land Design, P.L., (Clearview) was tasked by David H. Melvin Engineering, Inc. (DHME) to develop this report as part of a contract with the City of Chipley (City) in conjunction with the City's agreement with the State of Florida, Department of Economic Opportunity (DEO) under the Rural Infrastructure Fund (RIF) grant program authorized under Section 288.0655, Florida Statutes (F.S.). Funds from this grant program may be awarded for infrastructure feasibility studies, design and engineering activities, and other infrastructure planning and preparation activities to facilitate timely response and induce the location or expansion of specific job creating opportunities in rural communities. The evaluation of existing conditions, identification of proposed improvements, and ultimately the reduction of flooding within the City of Chipley will support the viability of existing businesses and allow for the redevelopment and refurbishment of the downtown core.

The City of Chipley (City) is located in the northeastern corner of Washington County, Florida and is home to approximately 3,660 residents. Two major state roadway systems, US 90 (Jackson Avenue) and State Road 77 (Main Street), intersect near the center of the City which generally divide it into four quadrants. US 90 (State Road 10) runs east and west and State Road 77 runs north and south. According to the Florida Department of Transportation (FDOT) the average annual daily Traffic (AADT) for State Road 77 is 12,000 and the AADT for US 90 is 7,400. In addition, Interstate 10 (I-10) is located near the southern border of the City and runs east and west.

The City has identified serious and repeated flooding issues in specific areas around the City, with the problem areas being exacerbated by recent Hurricanes Michael in 2018 and Sally in 2020. A number of commercial and residential buildings within the City have suffered flood damage. Essential services and critical facilities were adversely impacted by these storms, including first responders and City Hall.

Consequently, the City is committed to identifying and implementing measures to reduce and mitigate the flooding issues in the downtown area to provide a safe evacuation route during natural disasters, reduce unsafe conditions for residents and businesses in the area, and provide an opportunity for sustainable economic growth.

The purpose of this report is to provide an evaluation of the existing conditions within the project area, identify the critical points of failure, and develop preliminary solutions to mitigate and reduce flood stages.

### 1.1 Project Scope

The purpose of this report is to facilitate the City of Chipley's planning, preparation, and ultimately financing of stormwater infrastructure project(s) to encourage job creation, capital investment, and the strengthening and diversification of rural economies. To that end, the report will include the following:

- Acquisition of background and project site data required to complete the study, including the existing topographic conditions and project boundary.
- Conducting field investigations to verify existing drainage patterns and stormwater infrastructure.
- Identification and description of stormwater drainage problems and infrastructure threats.
- Development of mitigation solutions, including conceptual engineering drawings, and the associated opinion of probable costs.

### 1.2 Report Limitations and Assumptions

This study was conducted under the following limitations and assumptions:

- All elevations shown in this report reference the North American Vertical Datum of 1988 (NAVD 88)
- To remain consistent with the Washington County Flood Insurance Study (FIS #12133CV000A) all hydraulic analysis in this study were based on unobstructed flow and are only valid if the hydraulic structures remain unobstructed, operate properly, and do not fail.
- The proposed mitigation solutions and associated conceptual drawings are based on the available data and subject to change based on additional survey data, availability of property, presences of underground utilities, and unforeseen conditions.
- Estimates on the opinion of the probable costs of construction for the described improvements are based upon the available information and previous project experience. Final project costs are a function of a variety of factors, such as the cost of land acquisition or easements, labor, materials or equipment, the Contractor's methods of determining bid prices, competitive bidding, and market or negotiating conditions.

## 2.0 BACKGROUND AND DATA COLLECTION

### 2.1 Location

The City of Chipley is located in northeastern Washington County, which is in the Florida Panhandle. The City has an area of 4.1 square miles, all land. The City is generally split by two major state roadway systems, US 90 and State Road 77, intersect near the center of the City

which generally divide it into four quadrants. Interstate 10 (I-10) intersects a small portion of the southern limit of the City.

## 2.2 FEMA Flood Maps

The Flood Insurance Rate Map (FIRM) for the site was obtained from the Federal Emergency Management Administration (FEMA) website. The project area is depicted on FEMA Community Panel 12133C 0070D & 0185D, with an effective date of July 4, 2011. There are Zone AE floodplains within the west and north City limits associated with Tributary 2 and 3 of Alligator Creek, as well as some Zone AE from Helms Branch on the east side of the City. The flood stages range from 75 to 102 feet NAVD88. There are also a number of unnumbered Zone A floodplains within the City. Please refer to Appendix A for the FEMA flood map exhibit for specific details.

## 2.3 LiDAR Topographic Data

This study utilized LiDAR data collected in 2017 by Dewberry for the Northwest Florida Water Management District (NFWFMD), project title Florida Lower Choctawhatchee. The Digital Elevation Model (DEM) was acquired from the National Oceanic and Atmospheric Administration (NOAA) Digital Coast: Data Access Viewer. The DEM and 1-foot contours derived from this data were used to assist in delineating the contributing drainage basin. The horizontal datum for the original data is Universal Transverse Mercator (UTM), Zone 16 North, North American Datum of 1983, adjustment 1999 (NAD 83/99), but was re-projected into State Plane Florida Fips North 0903. The vertical datum for the data is NAVD 88. A survey Report FL Lower Choctawhatchee NFWFMD Lidar 2017 B17 dated 9/11/2018 is included with this Report.

## 2.4 Field Investigations

Site visits were conducted to review and verify the conditions of the roadway, existing drainage patterns, extent of flooding, and to determine the effectiveness and feasibility of the proposed improvements. Field visits occurred both prior to and following record rainfall from Hurricane Sally in September 2020. Witness reports, photographs, and subsequent damage from this storm event are specifically noted in this report.

## 2.5 Hand-held Camera Inspections

Alternative survey techniques were used in select areas to verify the location, size, and disposition of the stormwater infrastructure (inlets, junctions, pipes, etc.). Photographs with Global Position System (GPS) latitude and longitudinal coordinates were taken to document the type, disposition, and location of stormwater infrastructure. In addition, limited camera inspection was used on structures with bolted lids or restricted access. Please refer to Appendix G for Site Visit and Photographs.

## 2.6 Coordination with Adjacent Projects

Although not directly adjacent to the City of Chipley, the City of Bonifay had a Stormwater Drainage Study completed in 2021 by DHM, which served as a reference for available data.

## 3.0 EXISTING CONDITIONS

### 3.1 Site Overview

The City of Chipley is located in the northeast corner of Washington County, Florida. Originally called "Orange", the City was renamed Chipley in 1882 for William Dudley Chipley, president of the Pensacola and Atlantic Railroad and Florida state senator from 1895 to 1897. The City comprises a total area of roughly 4.25 square miles, all land. In general, the climate of the City is characterized by long, warm, humid summers and mostly mild winters. The average annual rainfall is around 60 inches with the heaviest rainfall occurring from early March through April and mid-June through mid-September.

Two major state highways, US 90 and State Road 77, intersect near the center of the City and divide it into four quadrants. US 90 (State Road 10) runs east and west and State Road 77 (Main Street) runs north and south. In addition, Interstate 10 is located near the southern border of the City and runs east and west.

The City has historically experienced increasing difficulty with managing stormwater runoff. A significant contributor to this challenge is the natural topography of the City, which is located near the headwaters of multiple branches of Alligator Creek. Additionally, much of the City was developed before modern land development and stormwater management regulations and best management practices (BMPs). Consequently, the existing infrastructure is ill-equipped to handle stormwater runoff during high intensity/extreme precipitation events.

The City has identified flooding issues between North Railroad Avenue and West Jackson Avenue (US 90). This area contains a number of essential services such as the Fire Department, Police Department, City Hall, and Public Library. The Public Works Department and Wastewater Treatment Plant are also in this vicinity off of North Railroad Avenue. The system drains west to Alligator Creek and appears to have a number of hydraulic restrictions along the way. Additionally, there are a number of structures and roadways that are at a low enough elevation where the backwater effects from regional flooding of Alligator Creek can cause severe flooding. The damage from the severe weather events of Hurricane Michael in 2018 and Hurricane Sally in 2020 have further exacerbated the existing flooding problems.

In addition to the improvements in the main problem area, the City also identified reoccurring flooding issues in the following general vicinities:

- 5<sup>th</sup> Street and Glenwood Avenue (5<sup>th</sup> Street Basin Area)

Preliminary Engineering Report  
Stormwater Drainage Study – Chipley, Florida

- Bennett Drive between Coggin Avenue and East Church Avenue (Glenwood Basin)
- Gilbert Acres Neighborhood (Grace Basin)
- 5<sup>th</sup> Street and South Boulevard (South Boulevard Basin)
- Farm Bureau and Sinclair Avenue
- Coleman Avenue Ditch
- 4<sup>th</sup> Street between Wells Avenue and Forrest Avenue

The locations of these problem areas, and a sample of flooding photographs are included in Appendix G.

Accordingly, these areas are the focus of this study and development of recommended mitigation measures.

### 3.2 Topography and Drainage Patterns

The City of Chipley is generally situated approximately 3.5 miles upstream of the confluence of Alligator Creek and Holmes Creek. The elevation generally falls from the southeast to northwest, with elevations ranging from 68.5 to 177 feet NAVD88. Based on zonal statistics of the City limits, the average elevation is around 108 feet and the median is 102 feet.

There are three primary drainage basins within the City limits, which are Alligator Creek Tributary 2 (west City Boundary), Alligator Creek Tributary 3 (North City Boundary), and Helms Branch (east City Boundary). Also, a small portion of the southern City limits have closed drainage basins and/or small drainage systems that lead to Brock Mill Branch. All systems discharge to reach Alligator Creek, which reaches Holmes Creek, which ultimately discharges to the Choctawhatchee River Basin. Please refer to Appendix A for details regarding sub-basins and major outfalls.

*Table 1. Drainage Sub-Basins*

<b>City Sub-Basins</b>	<b>Area (Acres)</b>	<b>Percent</b>
Alligator Creek Trib 3	686.1	25.5
Alligator Creek Trib 2	982.8	36.6
Helms Branch Trib 2	335.7	12.5
Helms Branch Trib 1	207.7	7.7
Helms Brach	234.3	8.7
Brock Mill Branch	241.2	9.0
<b>Total</b>	<b>2687.8</b>	<b>100</b>

An exhibit showing the delineation of these areas is included in Appendix A.

### 3.3 Land Cover and Vegetative Communities

The major land use category within the City of Chipley is considered urban and built-up. Within that category, the major land use types are medium density residential and commercial services. The next major category is upland forest. Tables 2 and 3 below show a breakdown of the land use categories present in the City of Chipley.

*Table 2. Major Land Use Categories*

Land Use Class	Area	Percent
URBAN AND BUILT-UP	1680.6	62.5
AGRICULTURE	138.1	5.1
RANGELAND	56.3	2.1
UPLAND FOREST	485.3	18.1
WATER	10.8	0.4
WETLANDS	136.3	5.1
BARREN LAND	1.3	0.0
TRANSPORTATION, COMMUNICATION AND UTILITIES	179.1	6.7
<b>Total</b>	<b>2687.8</b>	<b>100</b>

*Table 3. Detailed Land Use Summary*

Land Use Type	Area (Acres)	Percent
Commercial and Services	333.2	12.4
Communications	1.4	0.1
Cropland and Pastureland	122.6	4.6
Disturbed Lands	1.3	0.0
Extractive	9.0	0.3
Herbaceous	26.6	1.0
Institutional	207.6	7.7
Mixed Rangeland	15.0	0.6
Open Land	103.8	3.9
Other Open Lands <Rural>	6.0	0.2
Recreational	41.0	1.5
Reservoirs	10.8	0.4
Residential High Density	20.7	0.8
Residential Low Density	216.2	8.0
Residential Medium Density	749.2	27.9
Shrub and Brushland	14.7	0.5
Transportation	116.1	4.3
Tree Crops	9.5	0.4
Tree Plantations	164.5	6.1



Preliminary Engineering Report  
Stormwater Drainage Study – Chipley, Florida

Land Use Type	Area (Acres)	Percent
Upland Coniferous Forests	38.1	1.4
Upland Hardwood Forests	158.2	5.9
Upland Mixed Forests	124.4	4.6
Utilities	61.7	2.3
Vegetated Non-Forested Wetlands	5.0	0.2
Wetland Coniferous Forests	20.3	0.8
Wetland Forested Mixed	63.7	2.4
Wetland Hardwood Forests	47.4	1.8
<b>Total</b>	<b>2687.8</b>	<b>100</b>

### 3.4 Soil Characteristics

Over two thirds of the City is Dothan Loamy Sand, which is classified as hydrologic soil group (HSG) C, non-hydric, and fairly well drained. The next highest soil types are Lynchburg Loamy Fine Sand (B/D), and Rains and Bayboro Soils Depressional (B/D). These soil types are classified as Somewhat to Very Poorly Drained. Table 4 shows the summary of HSG types within the City.

*Table 4. Soil Characteristics*

Soil Group	Area (acres)	Percent
Water	6.0	0.2
A	127.3	4.7
A/D	6.3	0.2
B	44.7	1.7
B/D	529.8	19.7
C	1929.4	71.8
C/D	12.3	0.5
D	32.0	1.2
<b>Total</b>	<b>2687.8</b>	<b>100</b>

### 3.5 Summary of Field Investigation and Observations

Site visits were conducted on multiple occasions from April 2023 to April 2024. Selective topographic survey was obtained by Southeastern Surveyors in October 2023. Data was collected to review and verify the conditions of the roadway, existing drainage patterns, and extent of flooding. Please refer to the drainage maps in Appendix A and the photographs in Appendix G for additional information. A map of the survey points and identified stormwater structures is included as a deliverable and an exhibit is included in Appendix A.

## 4.0 PROPOSED IMPROVEMENTS

The proposed improvement projects identified in this section were developed through a process that included discussions with City Staff and review of the existing conditions. A variety of potential improvements were considered to reduce or mitigate flooding within the project area. In general, these alternatives focused on the two primary areas of stormwater management: conveyance and storage. Through discussion with the City, the Griffin Road Area was identified as the number one priority and was therefore evaluated in further detail. The proposed improvement concept is detailed in plan and profile sketches and a detailed opinion of probable cost, which are both located in Appendix C. Separately, 27 locations were identified by the City as problem areas for potential improvements. A summary table for these improvements, including description and Opinion of probable construction cost are included within this section. One-page summaries for each of these improvements, including conceptual improvement sketches, are included in Appendix D. Relevant supporting calculations are in Appendix F, and detailed Opinion of Probable Costs are in Appendix E.

### 4.1 Griffin Road Ditch Area Improvements

The proposed Griffin Road Ditch Area improvement project extends from Chipley City Hall property and west out past Griffin Road, ending at the Florida Gulf & Atlantic Railroad Trestle. The project consists of a combination of ditch and culvert improvements to improve conveyance capacity along the ditch to the confluence with Alligator Creek.

The project elements include:

- Realignment of the ditch to shorten ditch length and increase channel bed slope.
- Excavate and reshape ditch to improve conveyance capacity and improve channel slope.
- Replace and upsize culverts on Griffin Road and the Townbro LLC driveway.

The proposed improvements are detailed in Griffin Road Ditch Realignment Plan and Profile Concept Sheets in Appendix C. The opinion of probable construction cost is \$2,567,000, which is also detailed in Appendix C.

The proposed improvements focus on improving conveyance during extreme rainfall events to provide flood damage reduction benefits. The primary permissibility items for consideration are demonstration of no adverse impacts in stages and limiting or mitigating any wetland impacts from the ditch realignment.

### 4.2 Citywide Proposed Improvement Projects

A total of 27 locations were identified and prioritized by the City as problem areas for potential improvements. One-page summaries for each of these improvements, including conceptual improvement sketches, are included in Appendix D. The supporting calculations are in Appendix

Preliminary Engineering Report  
Stormwater Drainage Study – Chipley, Florida

D, and detailed Opinion of Probable Costs are in Appendix F. Please note that the cost presented in Table 5 are based on the conceptual mitigation plans and do not include costs for general construction items, such as mobilization, nor do they include professional design and inspection services.

*Table 5. Individual Stormwater Improvement Locations*

Priority ID	Projects	OPCC
A1	GRIFFIN ROAD DITCH REMEDIATION	\$ 1,416,000
A2	GRIFFIN ROAD REPLACE EXISTING CULVERTS	\$ 430,000
A3	GRIFFIN ROAD WEST DITCH REMEDIATION	\$ 195,250
B1	NORTH RAILROAD AVENUE OUTFALL DITCH	\$ 2,010,500
B2	NORTH RAILROAD CROSS DRAIN & DITCH REMEDIATION	\$ 329,250
B3	NORTH RAILROAD CROSS DRAIN RESTORATION	\$ 625,895
C	SOUTH RAILROAD AVENUE DITCH REMEDIATION	\$ 132,735
D	WATTS AVENUE CROSS DRAIN, DITCH, AND OUTFALL	\$ 75,000
E1	OLD HIGH SCHOOL SITE STORM SYSTEM REHABILITATION	\$ 325,700
E2	OLD HIGH SCHOOL SITE STORMWATER MANAGEMENT FACILITY	\$ 159,900
F1	GILBERT ACRES NEW STORM SYSTEM OUTFALL	\$ 43,300
F2	EZY GLIDE INC DITCH REMEDIATION	\$ 101,375
G1	BENNETT DRIVE SIDE DRAIN REHABILITATION	\$ 174,906
G2	DEERMONT CIRCLE STORM SEWER REROUTE	\$ 67,000
H1	2ND STREET CROSS DRAIN AND DITCH IMPROVEMENTS	\$ 32,550
H2	2ND STREET CROSS DRAIN IMPROVEMENTS	\$ 290,750
I	GLENWOOD AVENUE CROSS DRAIN & DITCH IMPROVEMENTS	\$ 514,250
J	5TH STREET OUTFALL PIPE	\$ 27,250
K1	1ST STREET CROSS DRAIN REHABILITATION	\$ 187,000
K2	1ST STREET CROSS DRAIN REHABILITATION	\$ 90,750
L	MARTIN LUTHER KING DRIVE OUTFALL IMPROVEMENT	\$ 118,500
M	US 90 AND SINCLAIR AVENUE CULVERT CLEANING	\$ 145,400
N	COLEMAN AVENUE DITCH IMPROVEMENTS	\$ 276,500
O	4TH STREET BETWEEN WELLS AVENUE AND FOREST AVENUE	\$ 290,750
P	4TH STREET & GLENWOOD AVENUE DRAINAGE IMPROVEMENTS	\$ 72,700
Q	5TH STREET & SOUTH BLVD. DRAINAGE IMPROVEMENTS	\$ 1,416,000

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## 5.0 CONCLUSIONS AND RECOMMENDATIONS

The City of Chipley Stormwater Drainage Study has undertaken a comprehensive analysis to address critical flooding issues that threaten the community's safety, economic stability, and environmental health. Our findings underscore the pressing need for infrastructural improvements to mitigate flooding risks, enhance stormwater management, and support the City's vision for sustainable development. This report has identified key problem areas, proposed viable engineering solutions, and outlined a strategic approach to prioritize projects based on urgency, impact, and cost-effectiveness.

The proposed improvements, spanning conveyance enhancements and storage solutions, are designed to reduce flood stages and protect critical infrastructure and residential areas from future storm events. These measures, coupled with ongoing maintenance and monitoring, lay the groundwork for a resilient stormwater management system in Chipley.

### 5.1 Recommendations for Future Studies

The recommendations for future studies presented herein are designed to build on the foundational work of this report, addressing emerging challenges, leveraging innovative solutions, and fostering a collaborative approach to stormwater management. With a commitment to continuous improvement and adaptive management, the following recommendations seek to guide the city towards a more resilient and sustainable community that protects the public and environment:

- **Citywide Hydrologic and Hydraulic Modeling:** Develop a detailed citywide model that is calibrated and validate to establish current flood conditions. This model will help direct future stormwater capital improvements and be utilized as a tool to refine the design of proposed improvements and ensure they are optimized for the unique challenges of each basin area.
- **Climate Change Adaptation Strategy:** With the increasing unpredictability of weather patterns, it is imperative to incorporate climate change projections into stormwater management planning. The Citywide model can be used to incorporate increased rainfall volume and intensity to lead future studies that assess the resilience of Chipley's stormwater infrastructure against more extreme weather scenarios.
- **Community and Stakeholder Engagement:** Engage with the community and stakeholders in the planning and implementation phases of stormwater projects. Their insights can provide valuable inputs on local issues, priorities, and opportunities for collaboration.

- **Monitoring and Evaluation:** Implement a robust monitoring and evaluation program to assess the effectiveness of completed projects and conditions of existing assets. This will provide critical feedback for continuous improvement and inform the design of future initiatives.
- **Funding and Financing Strategies:** Continue to explore diverse funding and financing options to support the implementation of stormwater projects. This includes federal and state grants, public-private partnerships, and innovative financing mechanisms like stormwater utility fees.

By addressing these recommendations, the City of Chipley can ensure a proactive, adaptive, and integrated approach to stormwater management, safeguarding its residents and securing its future against the challenges of flooding and climate change.

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## APPENDICES

## APPENDIX A

### EXHIBITS

*Figure 1 Project Location*

*Figure 2 Historical Aerial*

*Figure 3 Topography*

*Figure 4 Soils*

*Figure 5a Level 2 Land use*

*Figure 6b Level 3 Land use*

*Figure 7 Wetlands*

*Figure 8 FEMA Flood Hazard*

*Figure 9 National Hydrography Dataset*

*Figure 10 Field Survey*

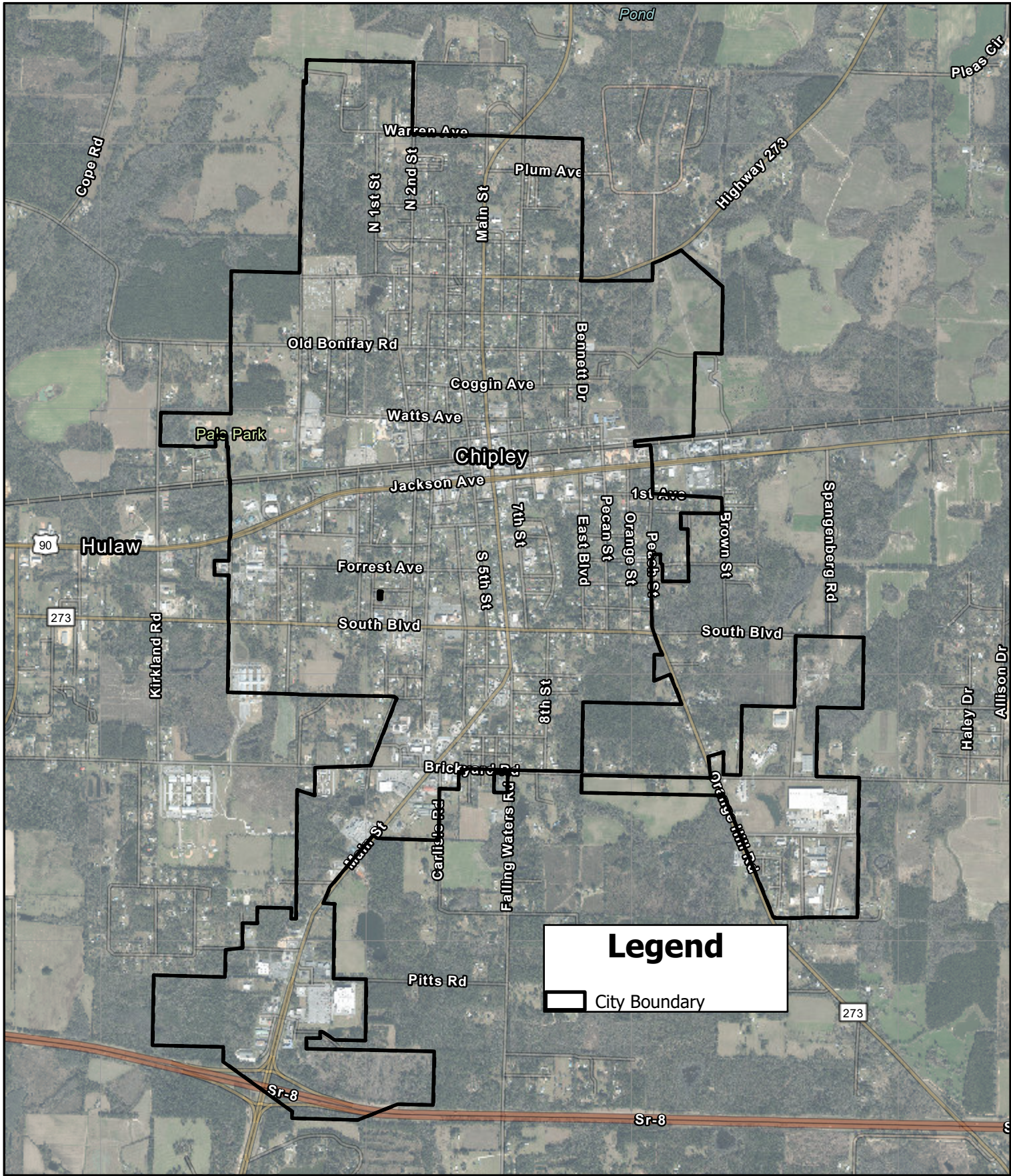
*Figure 11 Drainage Catchments*

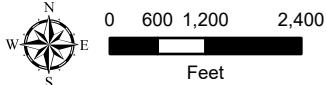
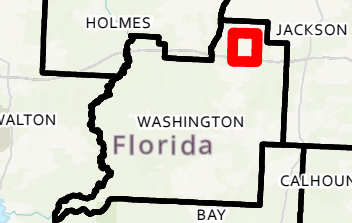
*Figure 12 City Sub-Basins*

*Figure 13 Facilities*

*Figure 14 Proposed Projects*


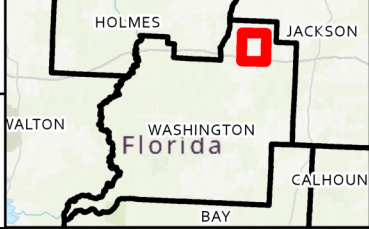




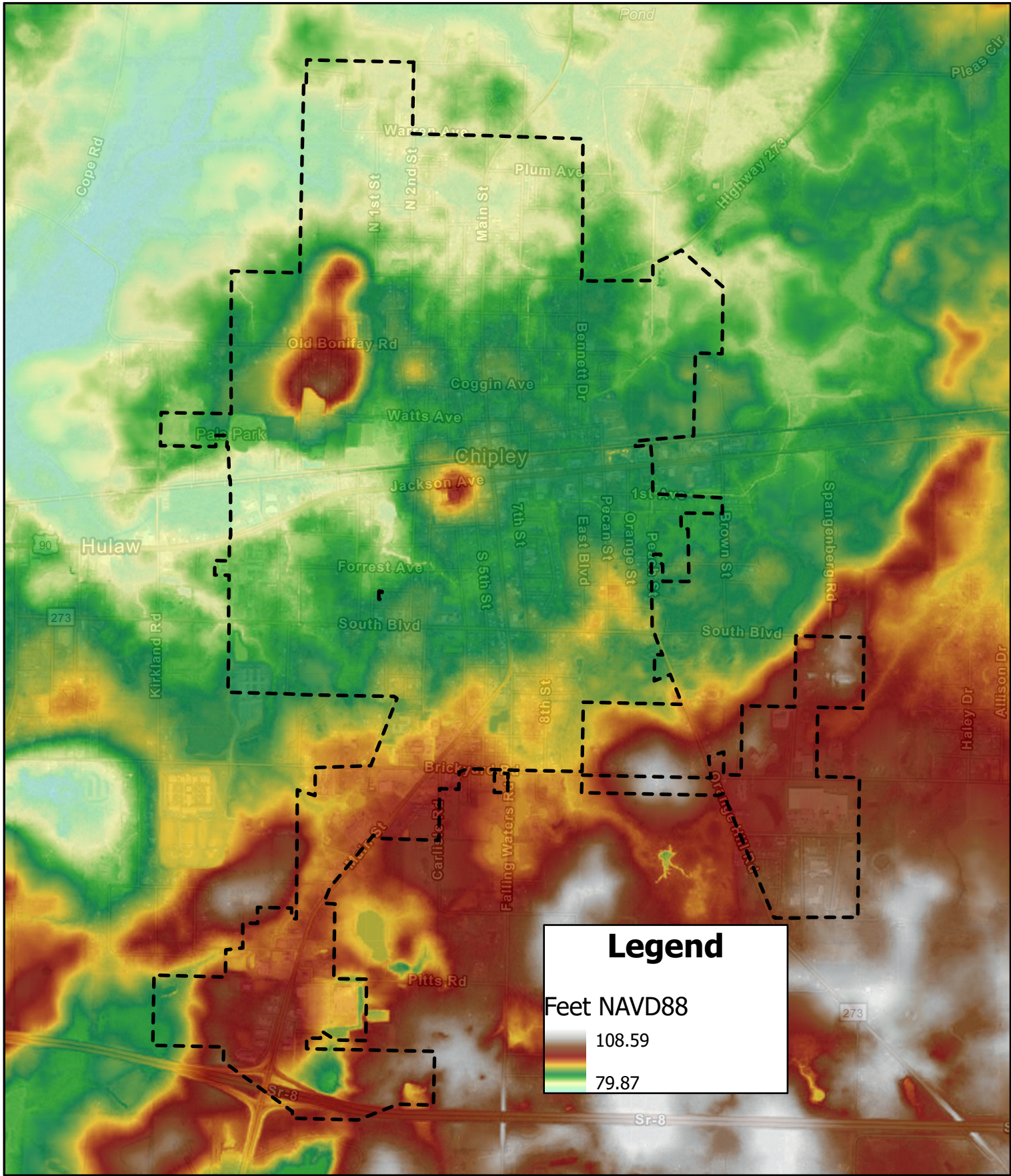
 <p><b>Clearview</b> LAND DESIGN, P.L.</p> <p>3010 W. Azele Street Suite 150 Tampa, FL 33609 (813) 223-3919</p>	 <p>HOLMES JACKSON VALTON WASHINGTON BAY CALHOUN</p>	<p>CLIENT <b>DHM MELVIN ENGINEERING</b></p> <p>PROJECT <b>PRELIMINARY ENGINEERING REPORT CITY OF CHIPLEY STORMWATER DRAINAGE STUDY</b></p> <p>FIGURE TITLE <b>Figure 1 Project Location</b></p>	<p>NOTE: Clearview Land Design, P.L. or Pasco County make no warranty, representation or guaranty as to the content, sequence, accuracy, timeliness, or completeness of any of the geodata information provided herein. Aerial: Esri, 2020</p> <p>MAP DATE: <b>7/12/2023</b></p>
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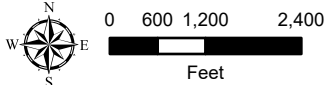





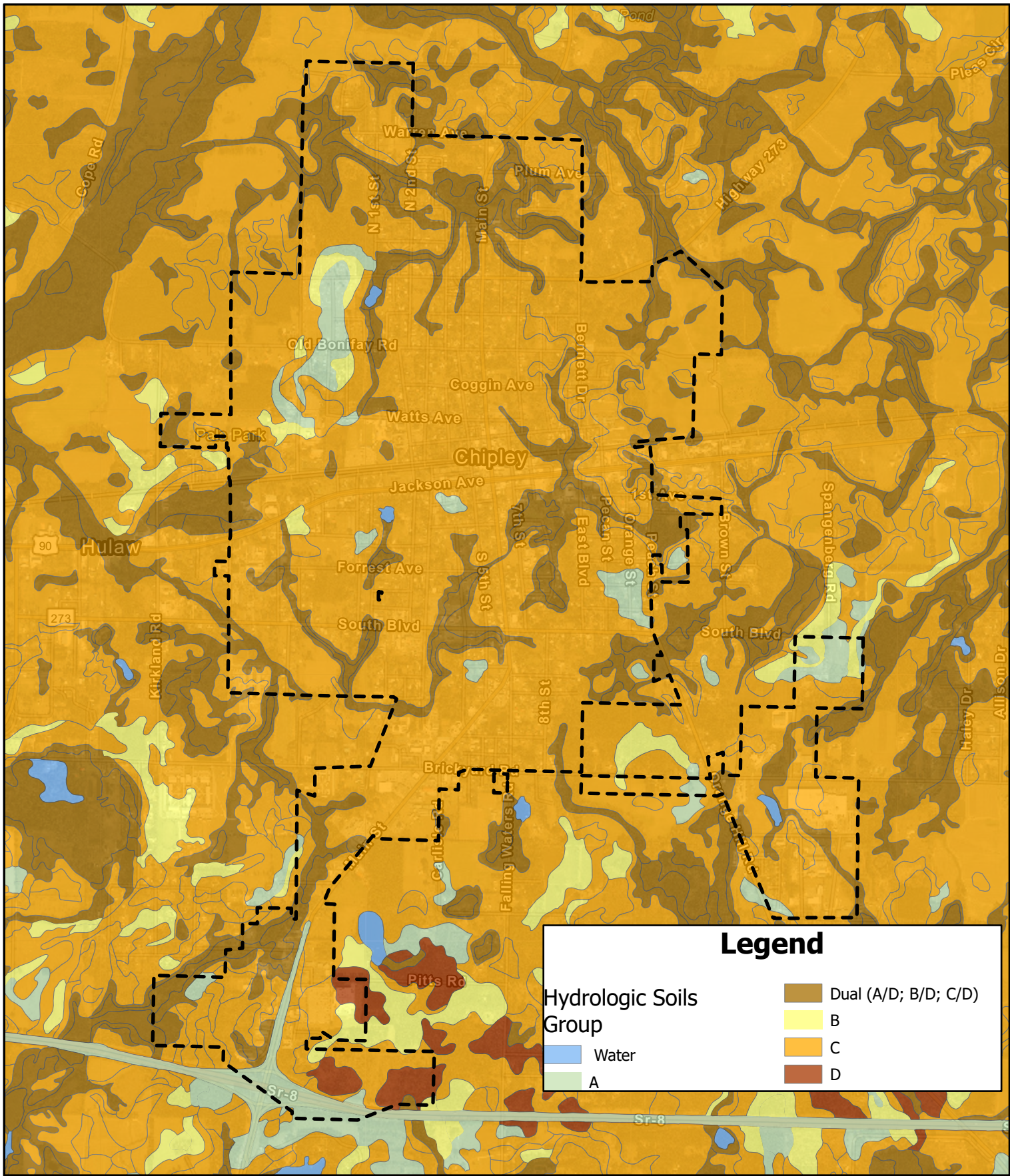
 <p><b>Clearview</b> LAND DESIGN, P.L.</p> <p>3010 W. Azeele Street Suite 150 Tampa, FL 33609 (813) 223-3919</p>		<p>CLIENT <b>DHM</b> <b>MELVIN ENGINEERING</b></p> <p>PROJECT <b>PRELIMINARY ENGINEERING REPORT</b> <b>CITY OF CHIPLEY STORMWATER DRAINAGE STUDY</b></p> <p>FIGURE TITLE <b>Figure 2 Historical Aerial 1955</b></p>	<p>NOTE: Clearview Land Design, P.L. or Pasco County make no warranty, representation or guaranty as to the content, sequence, accuracy, timeliness, or completeness of any of the geodata information provided herein. Aerial: Esri, 2020</p> <p>MAP DATE: <b>7/12/2023</b></p>
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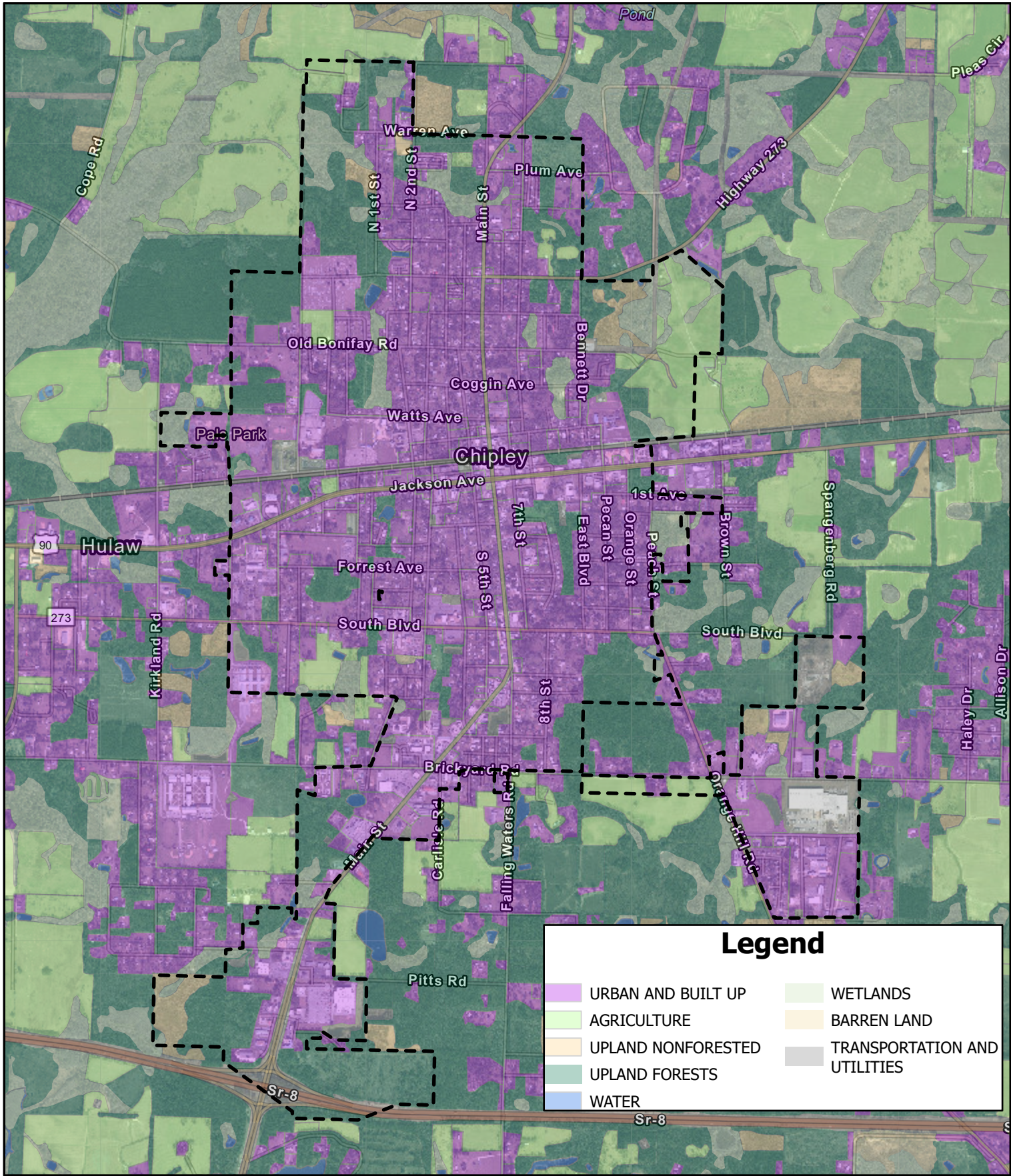






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		PROJECT <b>PRELIMINARY ENGINEERING REPORT CITY OF CHIPLEY STORMWATER DRAINAGE STUDY</b>	MAP DATE: <b>7/12/2023</b>

Figure 4 Soils

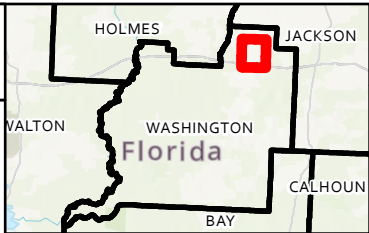





 0 600 1,200 2,400  
 Feet


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**MELVIN ENGINEERING**

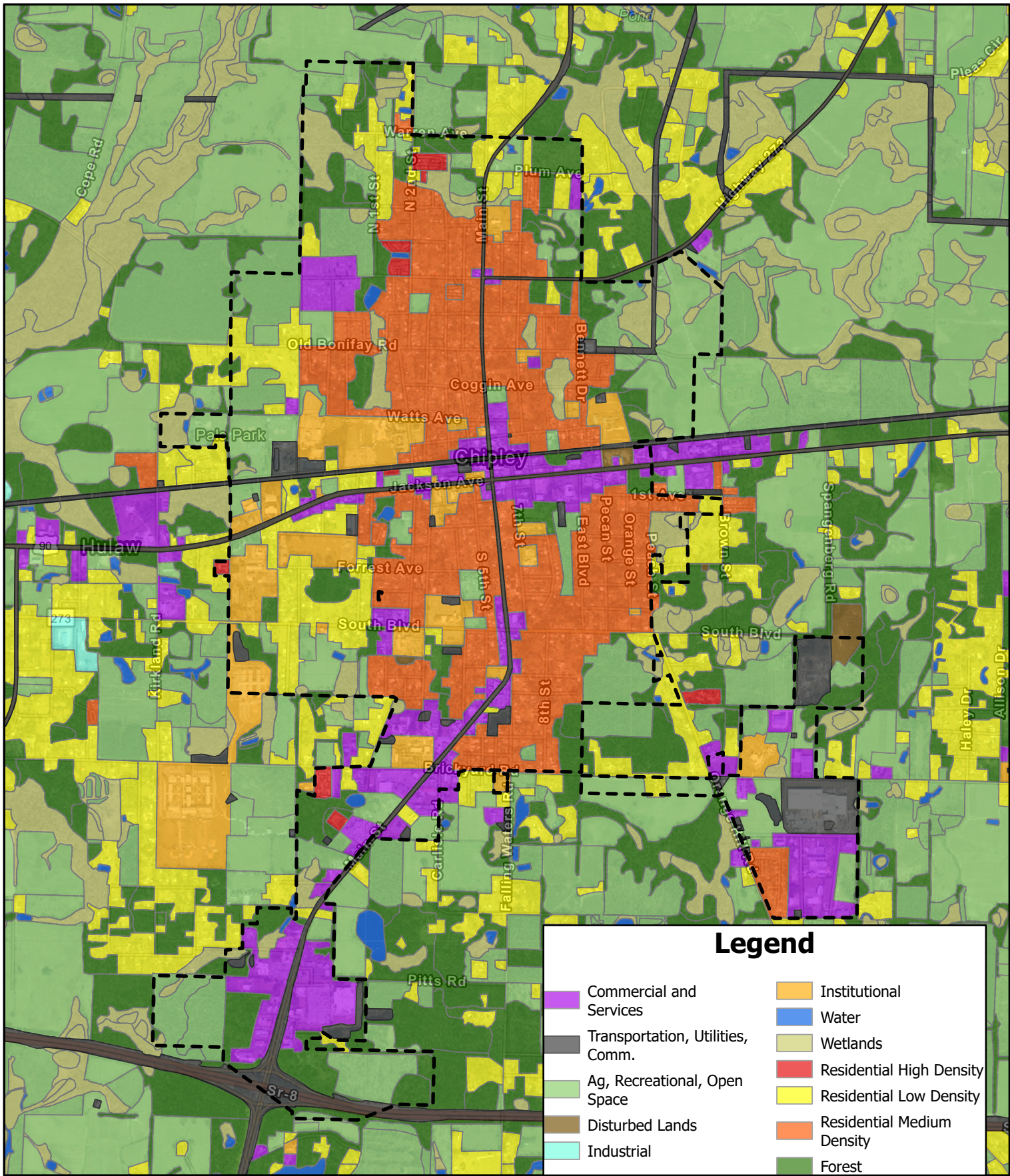
PROJECT **PRELIMINARY ENGINEERING REPORT**  
**CITY OF CHIPLEY STORMWATER DRAINAGE STUDY**

FIGURE TITLE **Figure 5a Landuse**

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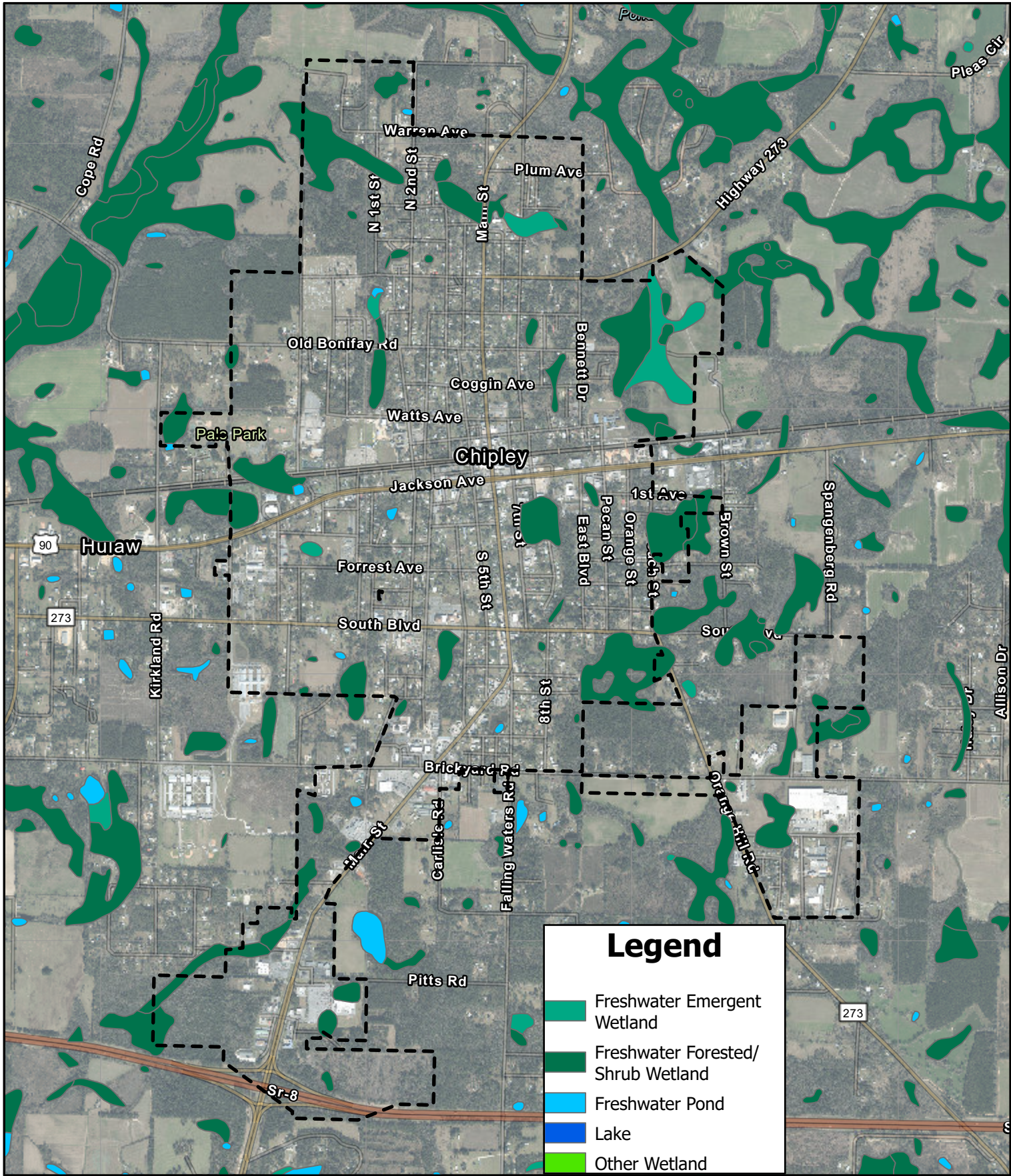
MAP DATE: **7/12/2023**





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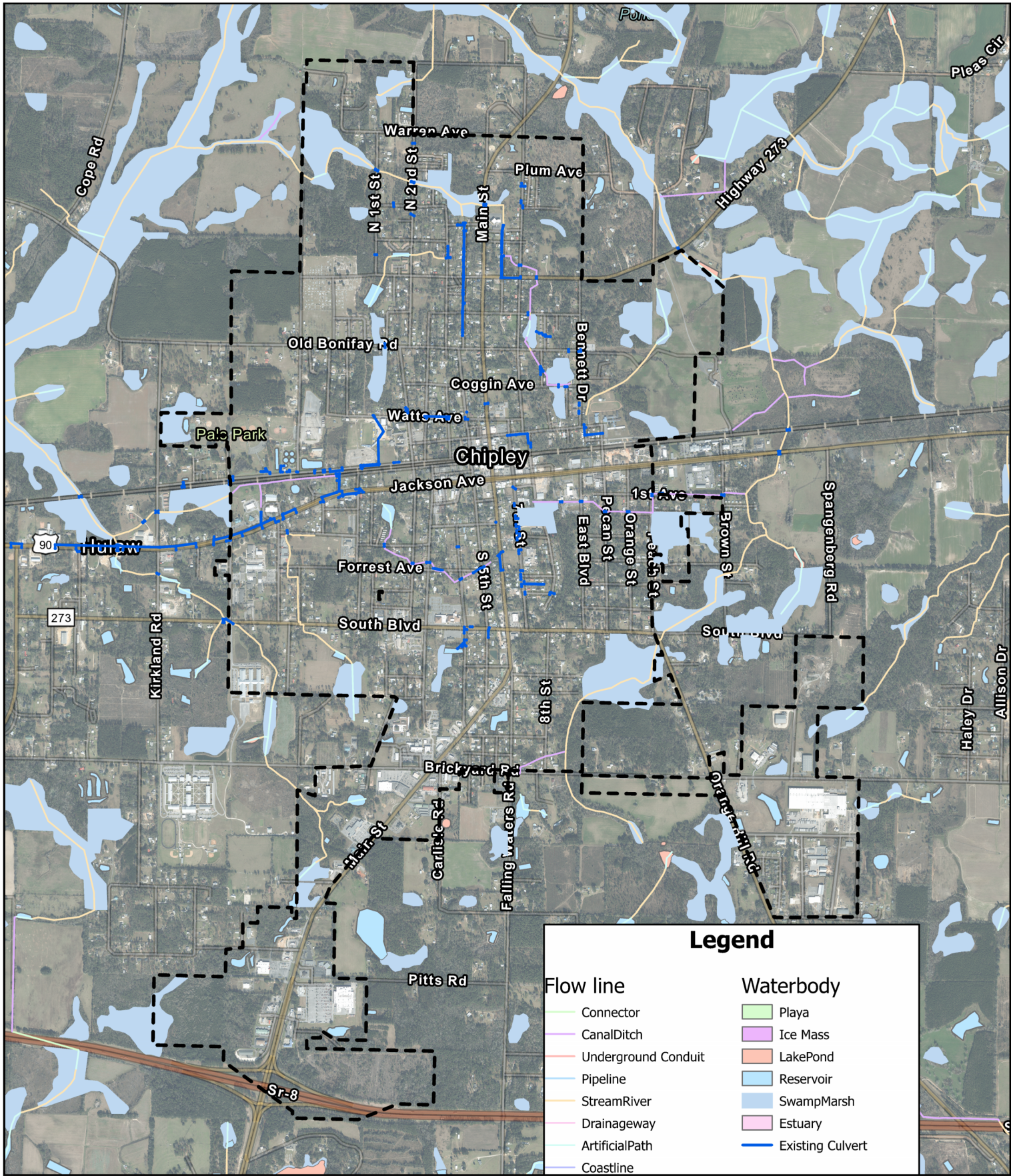


<p><b>Clearview</b> LAND DESIGN, P.L.</p> <p>3010 W. Azeele Street Suite 150 Tampa, FL 33609 (813) 223-3919</p>	<p>HOLMES JACKSON VALTON WASHINGTON BAY CALHOUN</p>	<p>CLIENT <b>DHM</b> <b>MELVIN ENGINEERING</b></p> <p>PROJECT <b>PRELIMINARY ENGINEERING REPORT</b> <b>CITY OF CHIPLEY STORMWATER DRAINAGE STUDY</b></p> <p>FIGURE TITLE <b>Figure 6 Wetlands</b></p>	<p>NOTE: Clearview Land Design, P.L. or Pasco County make no warranty, representation or guaranty as to the content, sequence, accuracy, timeliness, or completeness of any of the geodata information provided herein. Aerial: Esri, 2020</p> <p>MAP DATE: <b>7/12/2023</b></p>
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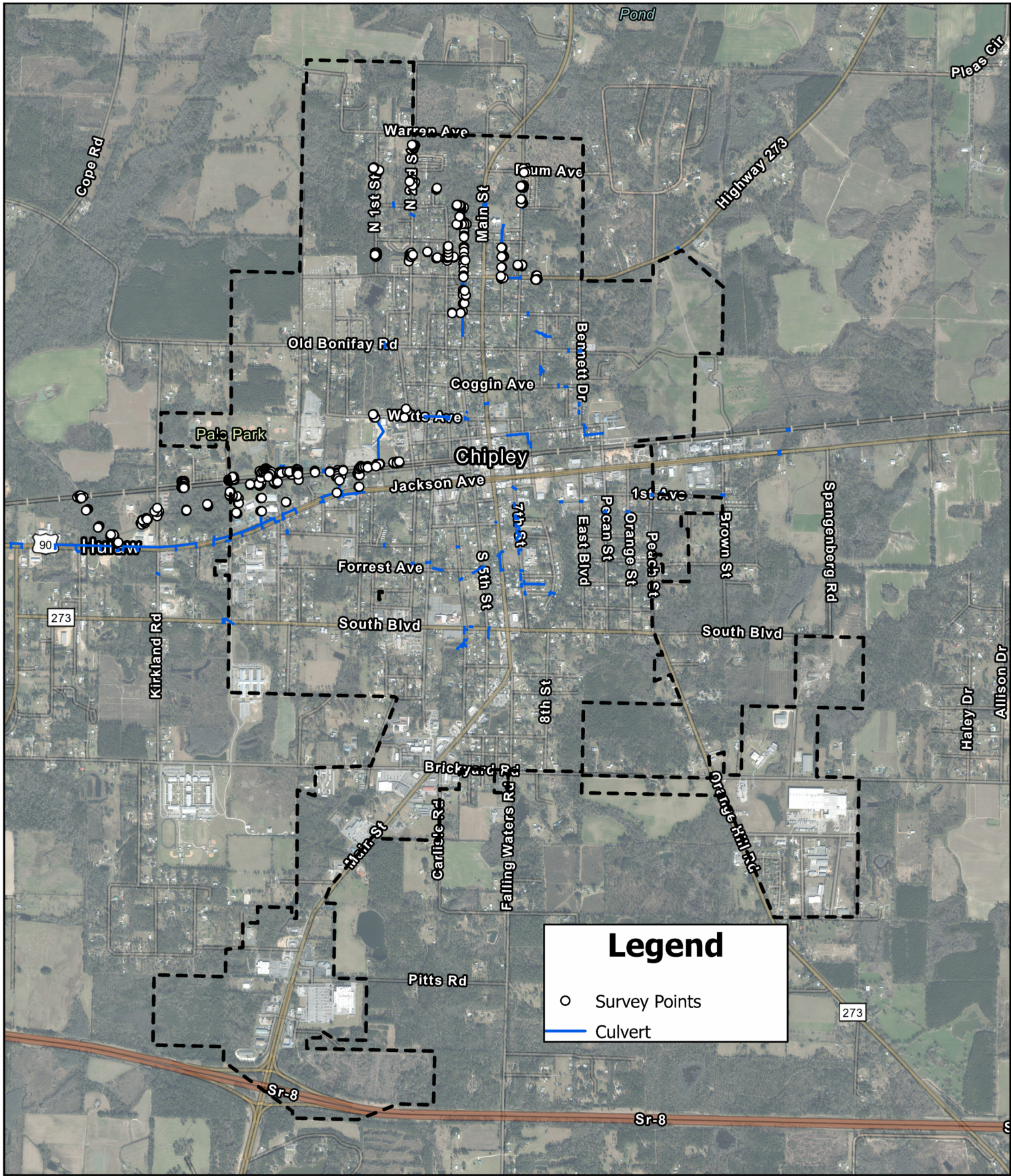






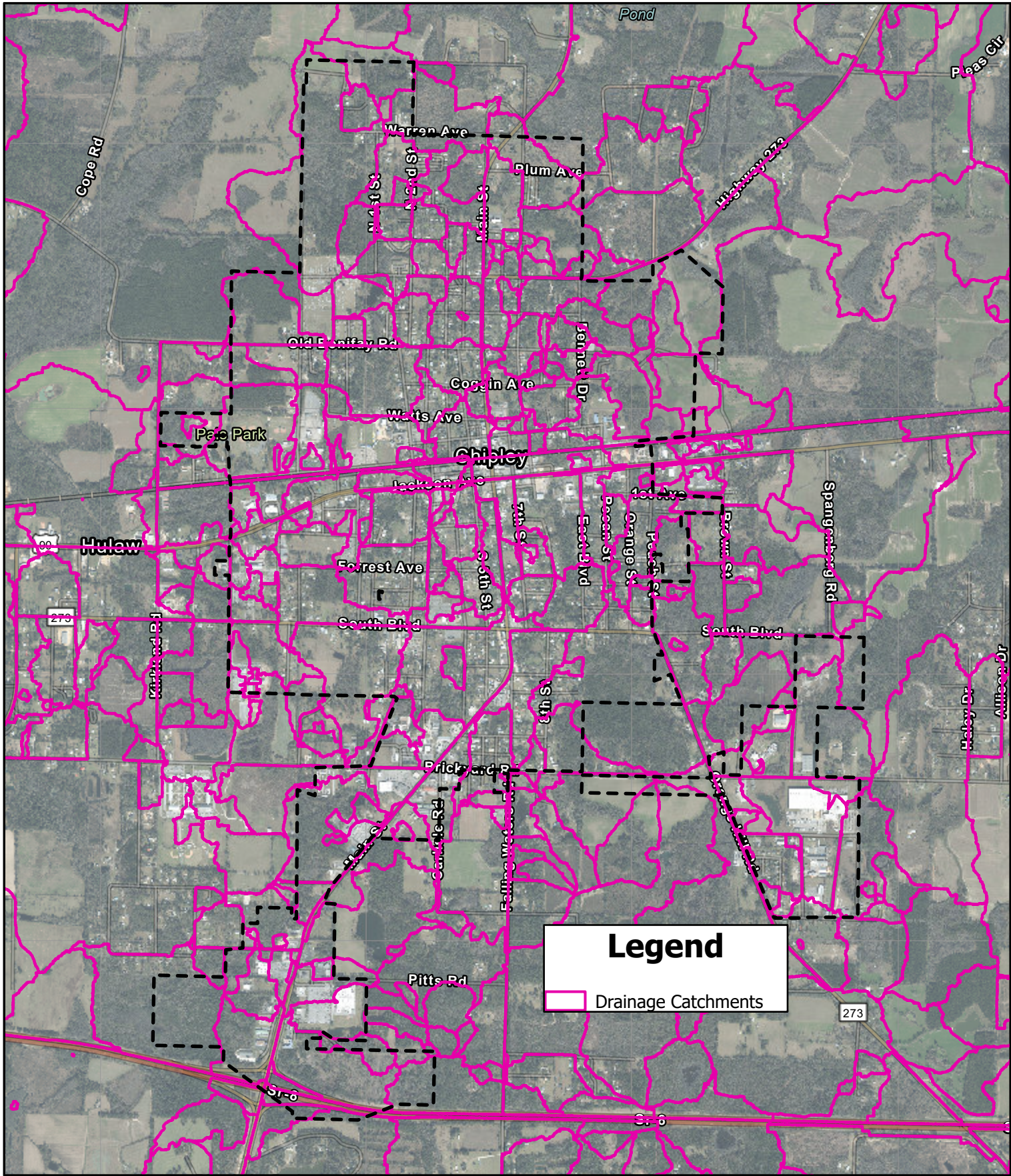
		<b>CLIENT</b> DHM MELVIN ENGINEERING	NOTE: Clearview Land Design, P.L. or Pasco County make no warranty, representation or guaranty as to the content, sequence, accuracy, timeliness, or completeness of any of the geodata information provided herein. Aerial: Esri, 2020
		<b>PROJECT</b> PRELIMINARY ENGINEERING REPORT CITY OF CHIPLEY STORMWATER DRAINAGE STUDY	
<b>Clearview</b> LAND DESIGN, P.L. 3010 W. Azeele Street Suite 150 Tampa, FL 33609 (813) 223-3919		<b>FIGURE TITLE</b> Figure 8 National Hydrography Dataset	<b>MAP DATE:</b> 7/12/2023





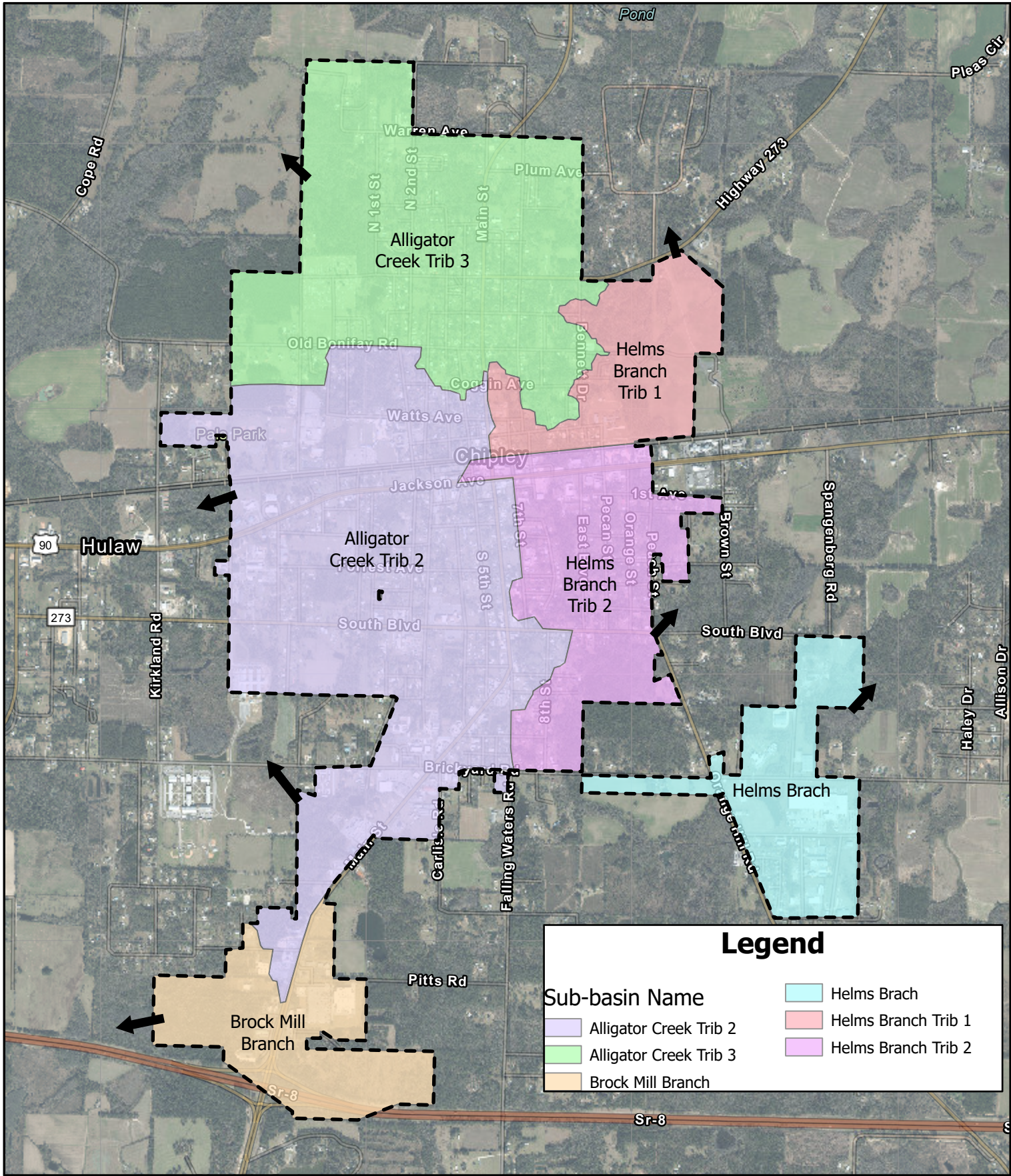
  3010 W. Azeele Street Suite 150 Tampa, FL 33609 (813) 223-3919		<p>CLIENT DHM MELVIN ENGINEERING</p> <p>PROJECT PRELIMINARY ENGINEERING REPORT CITY OF CHIPLEY STORMWATER DRAINAGE STUDY</p> <p>FIGURE TITLE Figure 9 Field Survey</p>	<p>NOTE: Clearview Land Design, P.L. or Pasco County make no warranty, representation or guaranty as to the content, sequence, accuracy, timeliness, or completeness of any of the geodata information provided herein. Aerial: Esri, 2020</p> <p>MAP DATE: 7/12/2023</p>
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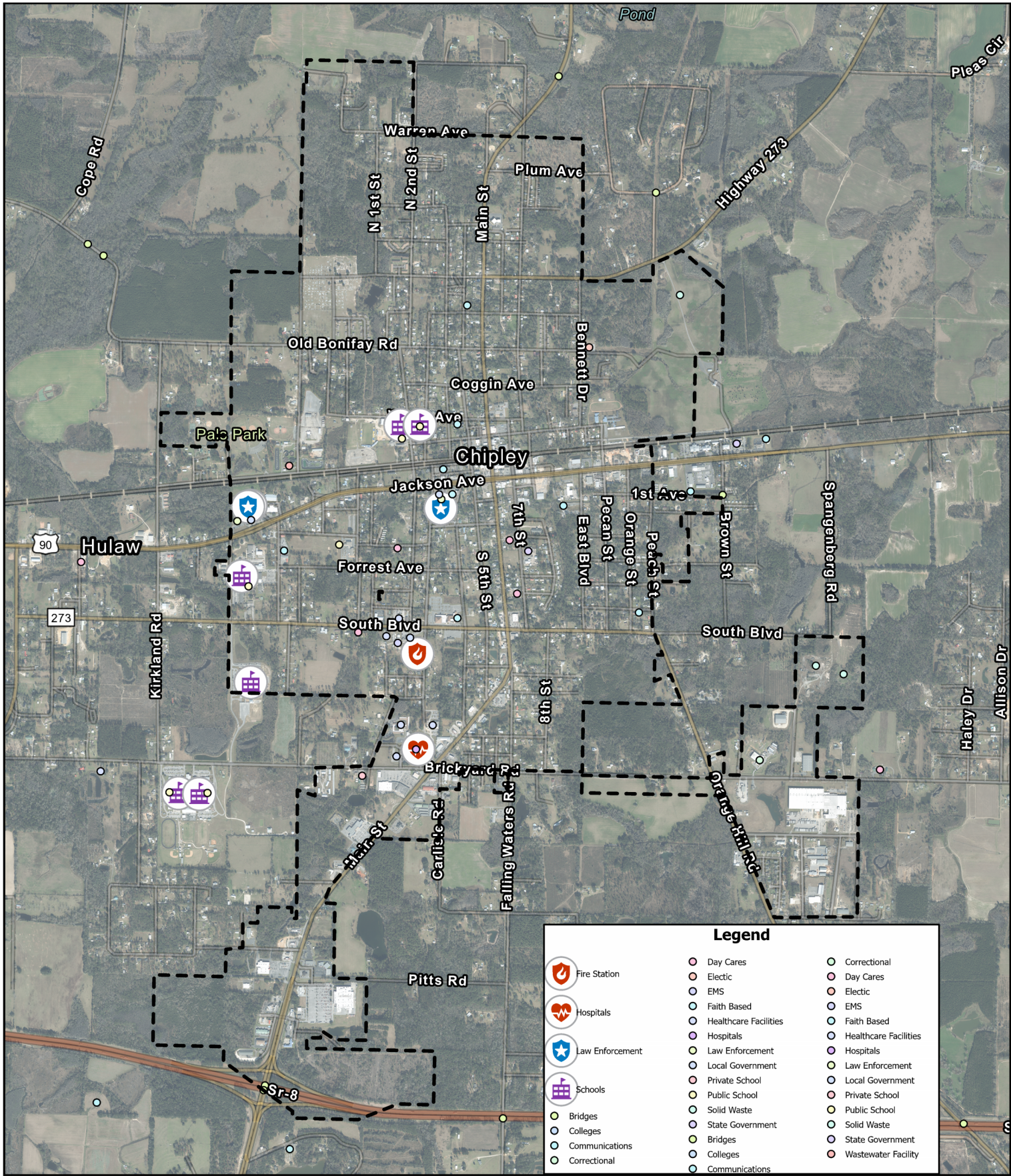
  3010 W. Azeele Street Suite 150 Tampa, FL 33609 (813) 223-3919		CLIENT <b>DHM MELVIN ENGINEERING</b>	NOTE: Clearview Land Design, P.L. or Pasco County make no warranty, representation or guaranty as to the content, sequence, accuracy, timeliness, or completeness of any of the geodata information provided herein. Aerial: Esri, 2020
		PROJECT <b>PRELIMINARY ENGINEERING REPORT CITY OF CHIPLEY STORMWATER DRAINAGE STUDY</b>	
		FIGURE TITLE <b>Figure 10 Drainage Catchments</b>	MAP DATE: <b>7/12/2023</b>





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