



# Thunderbolt

Comprehensive Plan 2016-2036

DRAFT





# Thunderbolt 2016-2036 Comprehensive Plan Acknowledgments

## **Thunderbolt Mayor and Council Members**

Beth E. Goette, Mayor  
Kimberly Chappell-Stevens, Mayor Pro-Tem  
John M. Henry  
David P. Crenshaw  
Sherry L. Elmore-Phillips  
Clair Alvin (Al) Henderson, Jr.  
Dr. Edward M. Drohan, III

## **Steering Committee Members**

Beth E. Goette, Mayor  
Kimberly Chappell-Stevens, Mayor Pro-Tem  
John M. Henry, Council Member  
David P. Crenshaw, Council Member  
Sherry L. Elmore-Phillips, Council Member  
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**“If you don’t know where you’re going,  
you’ll end up someplace else.”**

*-Yogi Berra*







## **Executive Summary**

Since the adoption of the 2008 Comprehensive Plan for Thunderbolt, the Georgia Department of Community Affairs (DCA) standards that Comprehensive Plans in Georgia are required to meet have been revised and updated. This update reassesses where Thunderbolt is today, and how it intends to develop in the future, as well as reorganizes the document to meet the requirements of the new state standards. It presents a community vision, corresponding goals and how Thunderbolt is to address working towards its vision; and includes a work program designed to make its vision a reality.

## Community Vision

Thunderbolt's Vision Statement is:

*The Town of Thunderbolt will protect, maintain, and enhance our sense of small town community, historical heritage, and maritime environment.*

Thunderbolt is committed to achieving this Vision by adhering to their Mission Statement:

*To provide the Town of Thunderbolt residents, businesses, and visitors with an exceptional experience and quality of life through advanced public safety and community services while retaining the appeal and affordability of a small town through visionary leadership, coordination, and integrity.*

The vision addresses the community's desire to maintain a community-oriented feel with commercial, employment, and economic development opportunities. The vision is supported by the following overarching goals created to help shape Thunderbolt's future development.

- **Upgrading Thunderbolt's Infrastructure**
- **Updating Thunderbolt's Zoning Ordinance**
- **Retaining Thunderbolt's Small Town Village Atmosphere**
- **Retaining Thunderbolt's Access to Water, Views, and Nature**
- **Addressing Thunderbolt's Traffic Issues**
- **Retaining and Expanding Thunderbolt's Maritime Industry**

Thunderbolt's vision is further defined by the **Character Area Map**. The Character Area Map plays a role in guiding future development and is further supported by the **Future Land Use Map** which also provides guidance on future land use that is in keeping with the community vision.

# Needs and Opportunities

The recommendations of the Thunderbolt’s plan were crafted to address the **Needs and Opportunities** identified through the public outreach effort and existing conditions analysis.

# Key Recommendations

Among the recommendations of the Thunderbolt’s plan, the following six items are key in achieving the community’s vision for the future. These help the Town to achieve multiple goals and its long-term vision.

- Upgrading Thunderbolt’s Infrastructure
- Updating Thunderbolt’s Zoning Ordinance
- Retaining Thunderbolt’s Small Town Village Atmosphere
- Retaining Thunderbolt’s Access to Water, Views, and Nature
- Addressing Thunderbolt’s Traffic Issues
- Retaining and Expanding Thunderbolt’s Maritime Industry



## Table of Contents

<b>1 Plan Overview</b> .....	3
1.1 Purpose .....	5
1.2 Scope .....	5
1.3 Methodology .....	7
<b>2 Needs and Opportunities</b> .....	9
2.1 Public Input .....	11
2.2 Needs and Opportunities Matrix .....	13
<b>3 Community Vision and Goals</b> .....	19
3.1 Vision Statement .....	21
3.2 Goals .....	22
3.3 Community Policies .....	28
3.4 Quality Community Objectives .....	35
3.5 Character Areas .....	39
3.5.1 Character Areas Map .....	40
3.5.2 Traditional Neighborhood .....	41
3.5.3 Commercial .....	43
3.5.4 Mixed-Use / Town Center .....	45
3.5.5 Industrial .....	47
3.5.6 Transportation / Communications / Utilities .....	49
3.5.7 Public / Institutional .....	51
3.5.8 Parks / Recreation / Conservation .....	53
3.6 Zoning .....	54
3.6.1 Zoning Map .....	56
3.6.2 Land use Districts .....	57
3.7 Future Land Use .....	59
3.7.1 Future Land Use Map .....	60
<b>4 Community Work Program</b> .....	61
4.1 Implementation Program .....	63
4.1.1 Upgrading Thunderbolt’s Infrastructure .....	64
4.1.2 Updating Thunderbolt’s Zoning Ordinance .....	65
4.1.3 Retaining the Small Town Village Atmosphere of Thunderbolt .....	65
4.1.4 Retaining Thunderbolt’s Access to Water, Views, and Nature .....	66
4.1.5 Addressing Thunderbolt’s Traffic Issues .....	66
4.1.6 Retaining and Expanding Thunderbolt’s Maritime Industry .....	66
4.2 Thunderbolt Community Work Program .....	67
4.3 Thunderbolt Report of Accomplishments .....	73
<b>5 Coastal Vulnerability and Resilience</b> .....	83





# 1

Plan Overview



## 1.1 Purpose

Thunderbolt's Comprehensive Plan is a living document that is updated and shaped by its leadership, staff and citizens. It is a policy guide for making zoning and land use decisions and sets policies for officials and staff concerning the future development of Thunderbolt.

The Comprehensive Plan is a long-range land use plan to guide future growth and the physical development of the town. The goals and policies within the Comprehensive Plan are designed to help Thunderbolt become a prosperous, health, equitable, and resilient town.

Thunderbolt's Comprehensive Plan is a five year update as required by the "The Minimum Standards and Procedures for Local Comprehensive Planning," (Minimum Standards) adopted by the Georgia Department of Community Affairs (DCA). The latest version of these standards can be found in O.C.G.A Chapter 110-12-1, effective March 2014.

In meeting these standards, this plan enables the Town to maintain its Qualified Local Government Status, making it eligible to receive certain types of state funding. This update reassesses where Thunderbolt is today and how it intends to grow in the future. Following the requirements of the Minimum Standards, it presents a community vision, goals and a work program designed to make the vision a reality.

## 1.2 Scope

In keeping with the Minimum Standards, this plan is presented in three components:

1. **Community Vision** - which lays out the future vision and goals that the community wants to achieve in text and maps;
2. **Needs and Opportunities** – which provides a list of the various needs and opportunities that the community will address; and
3. **Community Work Program** – which provides a 5-year Short Term Work Program designed to address the needs and opportunities. This program include activities, initiatives, programs, ordinances and administrative systems to be put into place or maintained in order to implement the plan.

In addition, the plan incorporates planning elements as defined by the DCA Minimum Standards that are important to shaping the future of Thunderbolt.

A **Record of Accomplishments** highlighting the success of the previous Short Term Work Program, a description of the public involvement process, and a report on how this plan is consistent with the Regional Water Plan and Environmental Planning Criteria is a part of this report.

Thunderbolt is a small town located in Chatham County about five miles southeast of downtown Savannah. As of the 2010 census, Thunderbolt had a total population of 2,668; the 2016 estimated population is 2,728 and is expected to grow to 2,920 by 2021 according to ESRI Business Analyst Online.

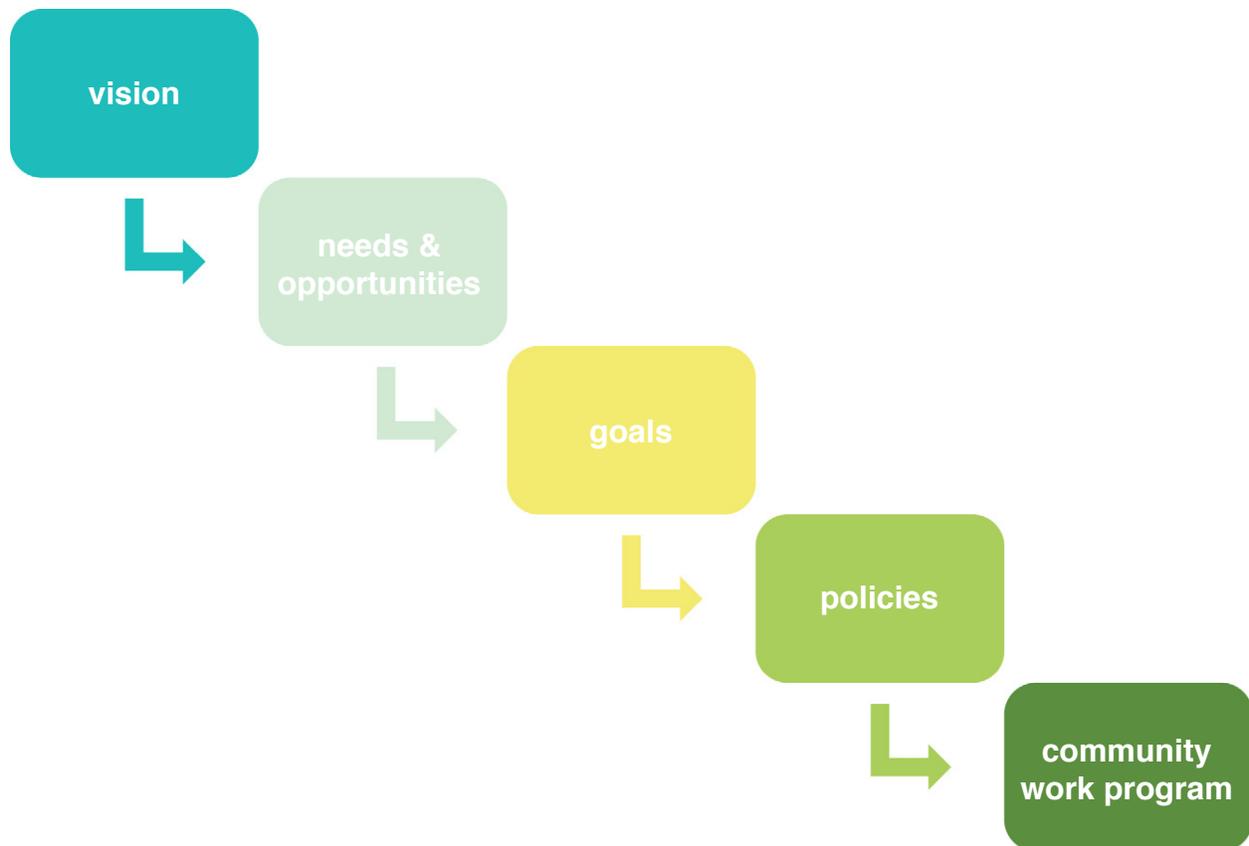
Thunderbolt runs along the western edge of the Wilmington River, with a small community, Isle of Armstrong, on the eastern shore of the river. Thunderbolt has a total area of 1.5 square miles, of which, 1.3 square miles of it is land and 0.2 square miles of it is water. The total area is 12.41% water.

The Town of Thunderbolt, a small town who owes its name to a legend of a lightning strike that created a freshwater spring on the Wilmington bluff. Native Americans were found to be among the first inhabitants.

Thunderbolt was a settlement which evolved into a shipping point for local plantation needs which also serviced the river traffic. In 1856, the Town of Thunderbolt was incorporated as Warsaw and then began its history as a processing port for the fishing community. In 1890, Georgia State College was founded for the education of African Americans. This college continues to be a historically black institution and is known today as Savannah State University.

In 1921, Warsaw's name was restored to Thunderbolt and the seafood processing continued to play a large part in this community's development. In 1939, yacht racing became popular and saw the construction of a yacht basin. Annually, the "Blessing of the Fleet" was celebrated until recent years and shrimping evolved into the primary seafood product.

Today, the Town of Thunderbolt remains a unique community with a distinct personality all of its own. Families dwell in this town for many generations which becomes a part of our town's rich history.



### 1.3 Methodology

The public outreach effort launched for this plan update includes two public hearings, a kick-off meeting, and three Steering Committee/Stakeholder meetings.

Announcements and notifications of these meetings were included on the Town’s website, and for those who could not make the workshops, comments were solicited through Constant Contact.

Additionally, the Graduate Program in Urban Studies and Planning at Savannah State University performed a Comprehensive Plan Survey during the Fall 2015 semester. The surveyors were 10 students enrolled in the Research Methods Class led by Dr. Deden Rukmana. The survey instrument provides data in three sections: 1) The Future of Thunderbolt, 2) Housing, and 3) Demographics. This information has been used by CRC and the Steering Committee to augment information gathered in other forums to develop the Needs and Opportunities.

A Citizen Planning Committee was formed comprised of members from the Steering Committee and Stakeholders representing a cross-section of the community including an elected official, civic/religious organizations, local business interests, key staff, County staff, and residents (see page 2 and page 3 for a listing of members).

The goals of the committee were to:

1. Seek agreement on key issues.
2. Help to craft a common vision for the future.
3. Provide guidance on action needed to achieve that vision.
4. Affirm public input.

## Needs and Opportunities

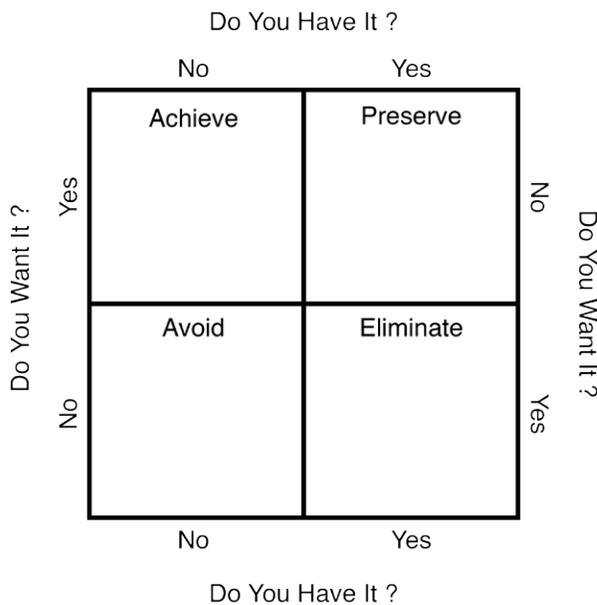


In order to achieve Thunderbolt’s vision and goals for the future there are a number of needs and opportunities that the community must address. A need can be defined as a condition of something that is required or wanted, while an opportunity is a chance for progress or advancement.

The process identified needs and opportunities which are unique to the community based on the technical assessment as well as input collected as part of the engagement process.

## 2.1 Public Input

Community members participated in a Needs and Opportunities workshop held by Thunderbolt on July 29, 2015. Members of the public had an opportunity to participate in identifying Needs and Opportunities as well as provide comment during a public meeting on October 14, 2015.



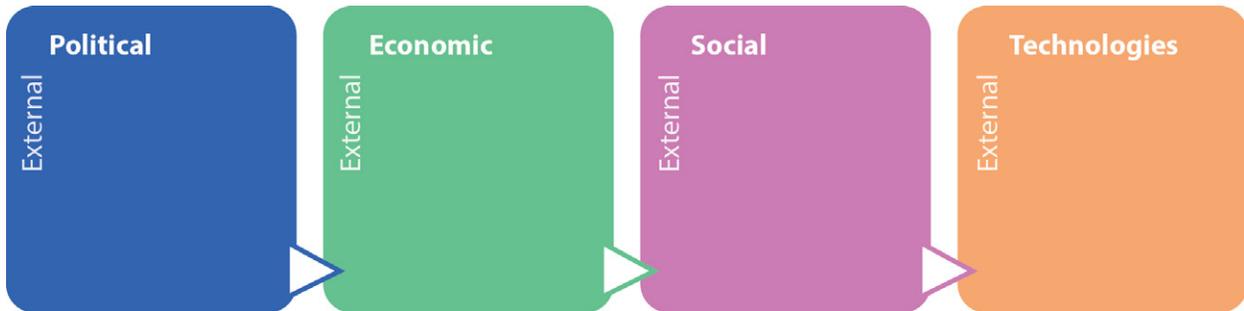
These needs and opportunities were identified through a facilitated discussion of the Strengths, Weaknesses, Opportunities and Threats in Thunderbolt, or a SWOT Analysis.

The SWOT analysis was designed to identify priorities for the Town and was conducted through a “Matrix” that included an exercise with the interplay of ‘yes’ and ‘no’ to the following questions?

Do we have it? Do we want it?

The interplay of Yes and No answer to these questions defines four basic categories, Achieve, Preserve, Avoid or Eliminate.

Once the four categories were identified, the analyses of the **external environment** such as social changes, new technologies, political environments to determine how, if at all might affect Thunderbolt. A chart for analyzing the external environment is the PEST chart, an acronym for Political, Economic, Social and Technologies analysis that encompass the process.



A critical component in the planning process is also documenting what Thunderbolt knows about itself, analyzing the internal environment. What defines Thunderbolt’s culture? What is its image in the eyes of its stakeholders and others?

A critical component in the planning process is also documenting what Thunderbolt knows about itself, analyzing the internal environment. What defines Thunderbolt’s culture? What is its image in the eyes of its stakeholders and others?

The information derived from the external analysis feeds into the Opportunities and Threats segments of the SWOT analysis.

The information derived from the internal analysis drives the Strengths and Weaknesses components of the SWOT.



## 2.2 Needs and Opportunities Matrix

The matrix below shows the relationship between the Town of Thunderbolt’s goals and its identified needs and opportunities as they related to economic development, development patterns, housing, mobility, community, conservation, livability, and resiliency.

A need can be defined as a condition of something that is required or wanted, while an opportunity is a chance for progress or advancement. More specifically, a “need” refers to the gap or discrepancy between a present state (what is) and a desired state (what should be). The need is neither the present nor the future state; it is the gap between them. An “opportunity” refers to something that the community has that should be maintained, promoted; or that the town can capitalize on to improve the community.

The matrix is intended to create an alignment between the goals of the Town of Thunderbolt and its Needs and Opportunities as ultimately strategic planning, the community work plan, and performance are inextricably linked.

Needs and Opportunities

GOALS	Upgrading Thunderbolt's Infrastructure	Updating Thunderbolt's Zoning Ordinance	Retaining Thunderbolt's Small Town Village Atmosphere	Retaining Thunderbolt's Access to Water, Views, and Nature	Addressing Thunderbolt's Traffic Issues	Retaining and Expanding Thunderbolt's Maritime Industry
<b>Economic Development</b>						
1. Thunderbolt should develop a Strategic Economic Development plan.	X	X	X	X	X	X
2. The community needs to determine where public facility capacity needs to be improved in order to attract new development.	X		X	X		X
3. Thunderbolt has a solid financial foundation which offers it the opportunity to keep ahead of the demands for growth.	X		X	X		X
4. Thunderbolt recognizes it is important to maintain its user-friendly government.		X	X	X		X
<b>Development Patterns</b>						
5. The community should continue to improve the appearance of all areas in the community.	X	X	X	X	X	X
6. Thunderbolt needs to address blighting influences in residential and non-residential areas.	X	X	X	X	X	X
7. Guidelines are needed throughout the community for established and currently developing areas.	X	X	X	X	X	X
8. The community should provide incentives for desirable redevelopment and infill projects.	X	X	X	X	X	X
9. The community should promote infill development and redevelopment of suitable sites.	X	X	X	X	X	X

**Needs and Opportunities**

GOALS	Upgrading Thunderbolt's Infrastructure	Updating Thunderbolt's Zoning Ordinance	Retaining Thunderbolt's Small Town Village Atmosphere	Retaining Thunderbolt's Access to Water, Views, and Nature	Addressing Thunderbolt's Traffic Issues	Retaining and Expanding Thunderbolt's Maritime Industry
10. There is a need for specific design guidelines in an anticipated mixed-use corridor where a higher cost, long term business investment is anticipated.	X	X	X	X	X	X
11. Thunderbolt should require preservation of open space in new development.	X	X	X	X	X	X
<b>Housing</b>						
12. The community should analyze housing costs versus wages to determine if affordable housing options are needed.			X			X
13. The community needs to rehabilitate older homes.	X	X	X			
<b>Mobility</b>						
14. There is a demand for an improved pedestrian environment.	X		X	X	X	
15. The community would like to provide more sidewalks and pedestrian opportunities.	X		X	X	X	
16. The community would like to provide more bike paths, trails, and other multi-modal opportunities.	X		X	X	X	
17. Thunderbolt needs to address alleviating peak traffic congestion along Victory Drive (Highway 80).	X		X	X	X	
18. Improvements need to be made to Victory Drive (Highway 80), Bonaventure Road, and Mechanics Avenue to create safer areas for pedestrians.	X		X	X	X	

**Needs and Opportunities**

GOALS	Upgrading Thunderbolt's Infrastructure	Updating Thunderbolt's Zoning Ordinance	Retaining Thunderbolt's Small Town Village Atmosphere	Retaining Thunderbolt's Access to Water, Views, and Nature	Addressing Thunderbolt's Traffic Issues	Retaining and Expanding Thunderbolt's Maritime Industry
<b>Community</b>						
19. Thunderbolt recognizes it is important to maintain its sense of community.		X	X	X		
20. The community encourages an increase of greenspace and parkland.		X	X	X		
21. The community would like to provide more protection of its historic resources.		X	X	X		
22. The community needs to market its historic structures.		X	X	X		
23. Thunderbolt needs to identify and protect significant cultural and natural areas in the community.		X	X	X		
24. The community should link existing and potential greenspace through a network of trails and green infrastructure.		X	X	X		
<b>Conservation</b>						
25. The community would like to better protect its natural resources; streams, rivers, wetlands, and coastal habitats.		X	X	X		X
26. The community needs to continue to address water management in order to ensure water capacity.		X	X	X		X
27. The community needs to continue to implement best practices for stormwater runoff and drainage.	X	X	X		X	

Needs and Opportunities

GOALS	Upgrading Thunderbolt's Infrastructure	Updating Thunderbolt's Zoning Ordinance	Retaining Thunderbolt's Small Town Village Atmosphere	Retaining Thunderbolt's Access to Water, Views, and Nature	Addressing Thunderbolt's Traffic Issues	Retaining and Expanding Thunderbolt's Maritime Industry
28. The community needs to continue to protect its trees.	X	X	X	X		X
<b>Livability</b>						
29. More developed areas within the community need to manage traffic congestion and commute times.	X	X	X		X	
30. The community needs to increase the mix of uses – commercial/retail/residential.		X	X		X	
31. The community would like to coordinate with neighboring jurisdictions on shared needs and opportunities.	X	X	X	X	X	X
32. The community would like to improve its development review process, especially as it relates to Developments of Regional Impact.	X	X	X	X	X	X
<b>Resiliency</b>						
33. The community would like to assess the nature of vulnerable populations; the very young, the elderly, and persons living in poverty.			X			
34. The community would like to assess the vulnerability of its significant infrastructure; water and sewer, roads and bridges, and critical facilities.	X	X	X			X





**Community Vision and Goals**



The Community Vision and Goals identify the Thunderbolt's direction for the future and are intended to serve as a guide to Thunderbolt officials in day-to-day decision making. They are the product of public involvement and the following components:

- Vision Statement
- Overarching Community Goals
- General policies
- Character Areas Map and Narrative
- Future Land Use Map

Each of these components was previously established in the Town's prior Comprehensive Plan. Through the Thunderbolt Plan Update process community members were given opportunity to revisit and update each component.

### **3.1 Vision Statement**

The Community Vision paints a picture of what Thunderbolt desires to become. The vision statement offered below was refined through discussion with the Citizen Advisory Board and participants.

Thunderbolt's Vision Statement is:

*The Town of Thunderbolt will protect, maintain, and enhance our sense of small town community, historical heritage, and maritime environment.*

Thunderbolt is committed to achieving this Vision by adhering to their Mission Statement:

*To provide the Town of Thunderbolt residents, businesses, and visitors with an exceptional experience and quality of life through advanced public safety and community services while retaining the appeal and affordability of a small town through visionary leadership, coordination, and integrity.*

The vision addresses the community's desire to maintain a community-oriented feel with commercial, employment, and economic development opportunities. The vision is supported by the following overarching goals created to help shape Thunderbolt's future development.

This vision is supported by the following overarching goals created to help shape Thunderbolt's future development.

## 3.2 Goals

Goals are long-term outcomes that Thunderbolt hopes to achieve by implementing the Comprehensive Plan. They are aspirational, expressing Thunderbolt's collective desires and values.

The community identified a number of goals to achieve in order to make Thunderbolt's vision a continuing reality. The following goals represent the recurring themes, and like the vision statement, were derived from a vetting process involving Town staff, the members of the Steering Committee and Stakeholders group, and members of the general public.



### **Upgrading Thunderbolt's Infrastructure**



### **Updating Thunderbolt's Zoning Ordinance**



### **Retaining Thunderbolt's Small Town Village Atmosphere**



### **Retaining Access to Water, Views, Nature**



### **Addressing Thunderbolt's Traffic Issues**



### **Retaining and Expanding Thunderbolt's Maritime Industry**



## **Upgrading Thunderbolt's Infrastructure**

It is a primary goal of the Town of Thunderbolt to upgrade its infrastructure – including water, sewer, streets, stormwater, and other utilities. The town understands that sufficient infrastructure capacity is a strong component to economic development and must be addressed concurrently with any plans for future residential and commercial growth.

Thunderbolt recognizes that it has issues with its infrastructure, particularly aging water and sewer lines. The town is actively addressing these issues and will continue to do so. Some members of the Steering Committee noted that the condominium developments along the waterfront occurred after public sewer became available and that these developments are now considered to be a detriment to Thunderbolt. However, proper planning and zoning would have prevented these developments at the time. Currently the Isle of Armstrong area on the east side of the Wilmington River is using septic systems. Representatives of that area do not want to install sewer; however, given its geographic location and surrounding marshlands, this is something the Town of Thunderbolt should continue to consider for the future.

The Town of Thunderbolt will continue to place infrastructure projects into its Capital Improvement Plan and seek appropriate funding for these projects, including Community Development Block Grants, Economic Development Administration Public Works grants, and Georgia Environmental Finance Authority grants and low interest loans if such funding is deemed suitable for specific projects.



## **Updating Thunderbolt's Zoning Ordinance**

This goal centers on Thunderbolt's desire to manage and guide growth and development while retaining and improving upon its livability and maintaining its small town feel that is so important to Thunderbolt's residents. The goal of auditing and updating ordinances is to ensure residents have the opportunity to live in a safe and healthy community with access to affordable homes, amenities, and services; making good use of natural resources which surround the community.

The Steering Committee feels that an updated Zoning Ordinance will help staff and appointed and elected officials better implement the Comprehensive Plan and provide guidance for growth and development. Some issues that were recognized as needing to be addressed were substandard or nonconforming lots, siting and permitting of tiny houses and other types of accessory dwelling structures, mixed-uses, and the preservation of green space. A project that Thunderbolt particularly wants to include in its Zoning Ordinance update is the creation of a Mixed-Use District along River Drive – Thunderbolt's main corridor and gateway.



## **Retaining Thunderbolt’s Small Town Village Atmosphere**

Thunderbolt’s Vision Statement: “The Town of Thunderbolt will protect, maintain, and enhance our sense of small town community, historical heritage, and maritime environment” speaks to how important the community considers this goal is. In the Savannah State University (SSU) survey 62.5% of respondents said they strongly agree that keeping Thunderbolt’s small town atmosphere is important. Thunderbolt began as an agrarian outpost to keep watch on the Wilmington River and notify the City of Savannah of any potential invasion by Spanish galleons. Throughout its history it has been a small vibrant community with many of its activities focused on its waterfront and maritime and fishing endeavors.

Thunderbolt will use development tools such as its updated Comprehensive Plan and an update to its Zoning Code to guide growth and development to ensure it maintains its small town atmosphere. The town will continue to market itself as a convenient and safe place to live with access to the Savannah region.



## **Retaining Access to Water, Views, Nature**

Thunderbolt recognizes that access to water, views of the Wilmington River and surrounding marshes, and other elements of the natural environment are key assets for the community that the town wishes to retain and capitalize upon to the extent possible. Thunderbolt perceives the large condominium developments along River Drive as a detriment due to their height and massing that seems excessive in comparison to the village atmosphere that Thunderbolt desires to achieve. The town realizes that these developments are here to stay; however, they can learn from this experience and make efforts to retain access to water, views, and nature going forward. Thunderbolt will achieve this goal by updating its zoning ordinance and creating a mixed-use overlay district for River Drive.



## **Addressing Thunderbolt's Traffic Issues**

Thunderbolt has several traffic issues that it has identified and would like to address. Some of these issues, for example traffic congestion on Victory Drive (Highway 80), are largely out of its control; and some issues, such as traffic calming on Bonaventure Road and the creation of sidewalks and bicycle paths are clearly goals the community can set for short term achievement.

The desire for sidewalks was the only item in the SSU survey that scored higher than the desire to retain its small town village atmosphere. This citizens' survey also indicated strong demand for more bicycle paths and a walking trail on Town owned property next to Johnson High School on Sunset Boulevard. A sidewalk inventory for the town has been completed, and their next steps should include developing a Bicycle and Pedestrian Plan to identify and prioritize specific bike/ped projects.

Bonaventure Road begins at Mechanics Avenue and runs generally north for about three-quarters of a mile until it reaches the entrance to the historic Bonaventure Cemetery and the town line. From that point it runs west for nearly a mile and intersects with Skidaway Road. Bonaventure Road is two-lanes, narrow and winding among ancient oaks. It has limited right-of-way and no existing sidewalks. Its first two blocks have the traditional smaller lots of the urban village and then it gives way to less dense development. The road is entirely residential. Many residents of Thunderbolt use Bonaventure Road as an alternate route to Victory Dive and a short cut to Skidaway Road and access to downtown Savannah. Unfortunately, many commuters have discovered the same short cut leading to an increase in traffic through this residential area. In its current condition Bonaventure Road is unwelcoming and dangerous to pedestrians and bicyclists. A detailed study of this corridor with recommendations for traffic calming and bicycle/pedestrian safety features is strongly recommended.

Another traffic related issue that Thunderbolt needs to address is road maintenance. Due to the marine industrial activities at Hinckley Yachts and Thunderbolt Marine occasional over-sized loads must travel through the town to reach these destinations. This traffic is not often enough to generate an traffic or safety problem, but it does exacerbate wear and tear on the roads.



## **Retaining and Expanding Thunderbolt's Maritime Industry**

The Town of Thunderbolt has prioritized retaining and expanding its maritime industry. Thunderbolt is home to two facilities, Thunderbolt Marine and Hinkley Yachts, that specialize in repairing and refitting yachts. Thunderbolt Marine was honored as 2014 Boatyard of the Year by the American Boat Builders & Repairers Association.

Thunderbolt Marine provides a great example of the economic development impact of this particular industry. In 2013, they serviced 225 vessels, employing an average of 100 people directly and another 125 seasonal subcontractors. The operation also generates significant indirect economic impact – a typical crew on a 150-foot yacht is 10 to 12 people, with most vessels staying at the facility for an average of six weeks. During that time, crews stay in rental properties, rent cars and go to local restaurants and stores.

The Town of Thunderbolt is uniquely positioned to offer these types of industries along the Atlantic Intracoastal Waterway, well away from Port of Savannah operations, yet conveniently close to the Savannah metro area. Ship fitting and repair, plus the shrimp fleet, and other watersports related activities make Thunderbolt unique in the area and offer an opportunity to maintain and further develop a niche industry.

### 3.3 Community Policies

The following policies are intended to provide on-going guidance and direction to local government officials for making decisions consistent with achieving the Community Goals. For this reason these policies are organized by goals, although individual policies will likely achieve multiple goals.



#### Upgrading Thunderbolt's Infrastructure

The Town of Thunderbolt recognizes the need to upgrade its infrastructure – including water, sewer, streets, stormwater, and other utilities. The town understands that sufficient infrastructure capacity is a strong component to economic development and must be addressed concurrently with any plans for future residential and commercial growth. To meet this need, the town has developed the following policies.

The Town of Thunderbolt will develop a comprehensive approach to upgrading its infrastructure that includes a needs assessment, budget, and funding plan.

- The Town will perform a needs assessment of its potable water and sanitary sewer systems that includes:
  - Repair and replacement priorities
  - Budget
  - Identification of actual and potential funding sources
- The Town will perform a needs assessment of its stormwater system that includes:
  - Repair and replacement priorities
  - Budget
  - Identification of actual and potential funding sources
- The Town will perform a needs assessment of its roadway system that includes:
  - Repair and replacement priorities
  - Budget
  - Identification of actual and potential funding sources
- The Town will perform a needs assessment of its sidewalk system that includes:
  - Repair and replacement priorities
  - Budget
  - Identification of actual and potential funding sources



## Updating Thunderbolt's Zoning Ordinance

- Thunderbolt will update their zoning ordinance to be user friendly and easy to understand.
- Thunderbolt's zoning ordinance will be illustrated with graphics, diagrams, and concise tables.
- Thunderbolt's zoning ordinance will allow for a streamlined development process.
- Thunderbolt's zoning ordinance update will be designed to foster the town's desired type of redevelopment and future development.
- Thunderbolt's zoning ordinance will include design standards and specific building material to retain Thunderbolt's small town aesthetics.
- Thunderbolt will establish a mixed-use overlay district for the River Drive corridor.
- Thunderbolt will establish overlay districts for hazards (flood, hurricane, storm surge) to incorporate a separate set of guidelines for properties that fall inside the boundaries of these overlay districts.
- Thunderbolt shall reduce requirements that result in additional impervious surfaces such as driveway widths, roadway widths, and parking standards.
- Thunderbolt shall establish maximum parking requirements versus minimum requirements to encourage safe growth.



## **Retaining Thunderbolt's Small Town Village Atmosphere**

- Thunderbolt will use its Comprehensive Plan and Zoning Code to guide growth and development; and any redevelopment that may occur in a manner that retains its small town village atmosphere.
- Thunderbolt will recognize and preserve its historic structures.
- Thunderbolt will develop and codify design standards for all allowable and/or conditional uses that promote urban village development in all new development and redevelopment.
- Thunderbolt will develop residential lot standards for new development and infill redevelopment that preserve the traditional density of the town.
- Thunderbolt will develop height and mass standards for multi-family residential and non-residential development that preserve viewsheds, especially along waterways and marshes, and maintain the traditional building type standards appropriate to urban village development.
- Thunderbolt will develop street and sidewalk standards compatible with urban village development.



## **Retaining Access to Water, Views, Nature**

- Thunderbolt will use its Comprehensive Plan and Zoning Code to guide growth and development; and any redevelopment that may occur in a manner that retains access to water, views, and nature.
- Thunderbolt will develop and codify design standards for all allowable and/or conditional uses that promote access to water, views, and nature.
- Thunderbolt will develop height and mass standards for multi-family residential and non-residential development that preserve viewsheds, especially along waterways and marshes, and maintain the traditional building type standards appropriate to retain access to water, views, and nature.



## Addressing Thunderbolt's Traffic Issues

- The Town will perform a needs assessment of its roadway system that includes:
  - Repair and replacement priorities
  - Budget
  - Identification of actual and potential funding sources
- The Town will perform a needs assessment of its sidewalk system that includes:
  - Repair and replacement priorities
  - Budget
  - Identification of actual and potential funding sources
- Thunderbolt, in coordination with Chatham County and GDOT, will develop a plan to address traffic issues on Victory Drive.
- Thunderbolt, in coordination with Chatham County and GDOT, will develop a plan to address traffic issues on Bonaventure Road.
- 
- Thunderbolt will develop street and sidewalk standards compatible with urban village development.
- Thunderbolt will explore a “complete streets policy.”
- Thunderbolt will improve connectivity throughout the Town.
- Thunderbolt will address safety and mobility issues that may arise for all road uses.



## **Retaining and Expanding Thunderbolt's Maritime Industry**

- Thunderbolt will update its zoning code to designate specific locations for maritime industrial activity.
- Thunderbolt will continue to promote and market its maritime industry.

## 3.4 Quality Community Objectives

The Department of Community Affairs (DCA) requires local governments to evaluate the community's current policies, activities, and development patterns by comparing them with the Department's Quality Community Objectives and supporting Best Practices as shown below.

The Town of Thunderbolt has reviewed these and provides its analysis of how Thunderbolt embraces these model objectives.

***DCA's Vision: Every Georgia community offers a quality of life where people and businesses can grow and prosper.***

The 10 objectives outlined below are adapted from generally accepted community development principles to fit the unique qualities of Georgia's communities. Although these are only recommendations, we at DCA are convinced that if a community implements these principles, it will result in greater efficiency, cost savings, and a higher quality of life for Georgia citizens. These objectives are intentionally crafted with significant areas of overlap, such that, by addressing one or more of the objectives, a community will also end up addressing aspects of others. DCA stands ready to partner with communities to assist with any of these objectives to help create a climate of success for Georgia's families and businesses.

### The Quality Community Objectives

#### 1. Economic Prosperity

Encourage development or expansion of businesses and industries that are suitable for the community. Factors to consider when determining suitability include job skills required; long-term sustainability; linkages to other economic activities in the region; impact on the resources of the area; or prospects for creating job opportunities that meet the needs of a diverse local workforce.

*Thunderbolt is strategically located on a bluff along the Wilmington River. The town is committed to retaining its small town village atmosphere and its history as a maritime community. As such, Thunderbolt is committed to updating its zoning code to guide and control development and redevelopment in a manner that will maintain its image, encourage maritime activity, and retain the community's access to water, views, and nature.*

#### 2. Resource Management

Promote the efficient use of natural resources and identify and protect environmentally sensitive areas of the community. This may be achieved by promoting energy efficiency and renewable energy generation; encouraging green building construction and renovation;

utilizing appropriate waste management techniques; fostering water conservation and reuse; or setting environmentally sensitive areas aside as green space or conservation reserves.

*Thunderbolt is located on the Wilmington River and is bordered by extensive marshlands, and a wide variety of plants and animals that rely upon these resources; thus it promotes efficient use of natural resources. The town has a stated goal to retain access to water, views, and nature.*

### **3. Efficient Land Use**

Maximize the use of existing infrastructure and minimize the costly conversion of undeveloped land at the periphery of the community. This may be achieved by encouraging development or redevelopment of sites closer to the traditional core of the community; designing new development to minimize the amount of land consumed; carefully planning expansion of public infrastructure; or maintaining open space in agricultural, forestry, or conservation uses.

*Thunderbolt has made updating its zoning ordinance a goal with the specific intent of guiding the efficient use of land in new development and redevelopment.*

### **4. Local Preparedness**

Identify and put in place the prerequisites for the type of future the community seeks to achieve. These prerequisites might include infrastructure (roads, water, sewer) to support or direct new growth; ordinances and regulations to manage growth as desired; leadership and staff capable of responding to opportunities and managing new challenges; or undertaking an all-hazards approach to disaster preparedness and response.

*Thunderbolt recognizes a need to upgrade and improve its infrastructure (roads, water, and sewer) to improve the quality of life for its residents and to provide guidance for growth and redevelopment. Thunderbolt intends to update its zoning ordinances and regulations to manage development and redevelopment. The town's leadership and staff desire to maintain their capability of responding to opportunities and managing new challenges; or undertaking an all-hazards approach to disaster preparedness and response.*

### **5. Sense of Place**

Protect and enhance the community's unique qualities. This may be achieved by maintaining the downtown as focal point of the community; fostering compact, walkable, mixed-use development; protecting and revitalizing historic areas of the community; encouraging new development that is compatible with the traditional features of the community; or protecting scenic and natural features that are important to defining the community's character.

*Thunderbolt has a goal of maintaining its small town village atmosphere. This will be achieved by updating its zoning code and fostering compact, walkable, mixed-use development; encouraging new development that is compatible with the traditional features of the community; or protecting scenic and natural features that are important to defining the community's character.*

## **6. Regional Cooperation**

Cooperate with neighboring jurisdictions to address shared needs. This may be achieved by actively participating in regional organizations; identifying joint projects that will result in greater efficiency and less cost to the taxpayer; or developing collaborative solutions for regional issues such as protection of shared natural resources, development of the transportation network, or creation of a tourism plan.

*Thunderbolt actively participates in regional organizations; and looks towards developing collaborative solutions for regional issues such as protection of shared natural resources, development of the transportation network, or creation of a tourism plan.*

## **7. Housing Options**

Promote an adequate range of safe, affordable, inclusive, and resource efficient housing in the community. This may be achieved by encouraging development of a variety of housing types, sizes, costs, and densities in each neighborhood; promoting programs to provide housing for residents of all socioeconomic backgrounds, including affordable mortgage finance options; instituting programs to address homelessness issues in the community; or coordinating with local economic development programs to ensure availability of adequate workforce housing in the community.

*Thunderbolt achieves this by encouraging development of a variety of housing types, sizes, costs, and densities in neighborhoods.*

## **8. Transportation Options**

Address the transportation needs, challenges and opportunities of all community residents. This may be achieved by fostering alternatives to transportation by automobile, including walking, cycling, and transit; employing traffic calming measures throughout the community; requiring adequate connectivity between adjoining developments; or coordinating transportation and land use decision-making within the community.

*Thunderbolt encourages alternatives to transportation by automobile, including walking, cycling, and transit; employing traffic calming measures throughout the community; requiring adequate connectivity between adjoining developments; or coordinating transportation and land use decision-making within the community.*

## **9. Educational Opportunities**

Make educational and training opportunities readily available to enable all community residents to improve their job skills, adapt to technological advances, manage their finances, or pursue life ambitions.

This can be achieved by expanding and improving local educational institutions or programs; providing access to other institutions in the region; instituting programs to improve local graduation rates; expanding vocational education programs; or coordinating with local economic development programs to ensure an adequately trained and skilled workforce.

*Educational and training opportunities are readily available to Thunderbolt residents as there are a number of colleges, universities, technical training opportunities in Chatham County.*

## **10. Community Health**

Ensure that all community residents, regardless of age, ability, or income, have access to critical goods and services, safe and clean neighborhoods, and good work opportunities. This may be achieved by providing services to support the basic needs of disadvantaged residents, including the disabled; instituting programs to improve public safety; promoting programs that foster better health and fitness; or otherwise providing all residents the opportunity to improve their circumstances in life and to fully participate in the community.

*The World Health Organization defines a healthy city or community as “one that is safe with affordable housing and accessible transportation systems, work for all who want to work, a healthy and safe environment with a sustainable ecosystem, and offers access to healthcare services which focus on prevention and staying healthy.” A healthy community is also defined as one in which a diverse group of stakeholders collaborate to use their expertise and local knowledge to create a community that is socially and physically conducive to health.*

*Thunderbolt, through this planning process, and through its participation in the work towards this goal achieved by the Chatham County Blueprint, strives to ensure community health for all of its residents.*

## 3.5 Character Areas

The Character Area Map is a visual representation of the Town's future development policy. This plan also includes a Future Land Use Map.

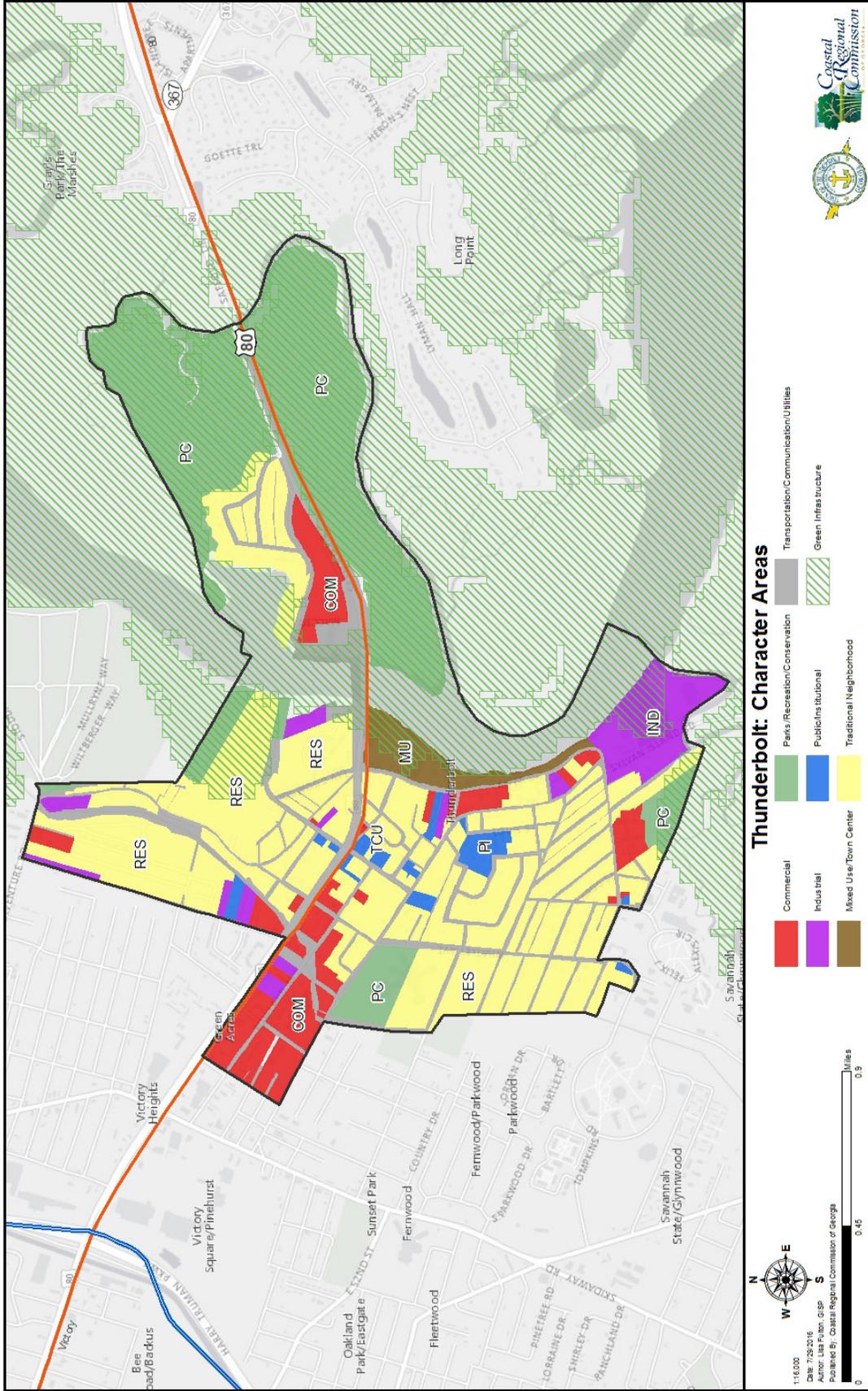
Interpretation of the Character Area Map is provided in the supporting text to be considered along with the Town's zoning, the Future Land Use map, and other local policies when decision-makers consider land development questions or requests. The supporting text provides written description of the patterns of development that the Town will encourage in each area.

The supporting narrative provides policy direction for regulating development with the goal of furthering consistent character within each area as defined by a 'vision.' Where appropriate, statements for policy and goals are also established.

The Character Areas for the Thunderbolt include:

- Traditional Neighborhood
- Commercial
- Mixed-Use/Town Center
- Industrial
- Transportation/Communications/Utilities
- Public/Institutional
- Parks/Recreation/Conservation

### 3.5.1 Character Areas Map



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## 3.5.2 Traditional Neighborhood

### Vision / Intent

The Traditional Neighborhood Character Area in Thunderbolt is an eclectic mix ranging from a mobile home park to luxury waterfront condominiums and including single-family homes, small townhome developments, apartment complexes, and large condominium developments. Styles range from modest cottages to grand two-story homes and the age of housing ranges from the 1880s to new construction. All of this creates a vibrant assortment of styles and sizes meeting the housing needs of different sized families with very different income levels. However, it is this very robust mix that gives Thunderbolt its small town village feel that Thunderbolt residents find so attractive. The Traditional Neighborhood Character Area is primarily residential; this land use makes up approximately thirty-eight percent (38%) of the developed land in Thunderbolt.

### Current Zoning

R-1: One-Family Residential  
R-2: Two-Family Residential  
R-3: Multi-Family Residential  
R-M-H: Residential – Mobile Home

### Future Zoning Considerations

The Future Land Use Map indicates that this area will remain residential in nature.

### Implementation Measures

- Thunderbolt's Zoning Code will be updated to provide clarification and guidance for uses within this Character Area.
- Applicable development proposed within this area shall be subject to procedures, standards, and guidelines.
- Allowed uses reflect the community's desire to maintain a small village atmosphere.
- Design and architectural standards should be compatible with surrounding area.



### **3.5.3 Commercial**

#### **Vision / Intent**

Thunderbolt's Commercial area is primarily along Victory Drive as you enter the town from Savannah. Other commercial areas exist along River Drive near Town Hall, towards the southern edge of town near Thunderbolt Marine, and on Isle of Armstrong near Savannah Bend Marina. True to the village nature of Thunderbolt, these commercial uses are interspersed throughout the town in logical and convenient locations. Commercial use represents approximately nine percent (9%) of the land use in Thunderbolt.

#### **Current Zoning**

B: Business  
P-B: Planning District-Business  
R-2: Two-Family Residential  
I-P: Institutional-Professional  
W-I: Waterfront Industry

#### **Future Zoning Considerations**

The Town of Thunderbolt is considering a new Mixed Use/Town Center zoning district, and has reflected this on their Character Areas map. The purpose of the district will be to create a vibrant mixed-use district along River Drive in the area commonly perceived as "Main Street" Thunderbolt. Creation of this district will guide growth and redevelopment of commercial uses to a focused area, creating critical mass key to commercial success and key to the creation of a village center. The Mixed Use/ Town Center will augment Thunderbolt's stated goal of maintaining a small town village atmosphere.

#### **Implementation Measures**

- Thunderbolt's Zoning Code will be updated to provide clarification and guidance for uses within this Character Area.
- Thunderbolt will create a Mixed Use/Town Center district to guide commercial development in a very specific area within the town.
- Applicable development proposed within this area shall be subject to procedures, standards, and guidelines.
- Allowed uses reflect the community's desire to maintain a small village atmosphere.
- Design and architectural standards should be compatible with surrounding area.
- standards, and guidelines.
- Allowed uses reflect the community's desire to maintain a small village atmosphere.
- Design and architectural standards should be compatible with surrounding area.



## 3.5.4 Mixed-Use / Town Center

### Vision / Intent

The purpose of the district will be to create a vibrant mixed-use district along River Drive in the area commonly perceived as “Main Street” Thunderbolt. Creation of this district will guide growth and redevelopment of commercial uses to a focused area, creating critical mass key to commercial success and key to the creation of a village center. The Mixed Use/ Town Center will augment Thunderbolt’s stated goal of maintaining a small town village atmosphere.

### Current Zoning

B: Business

I-P: Institutional-Professional

W-I: Waterfront Industry

### Future Zoning Considerations

As Thunderbolt updates its Zoning Ordinance the community will need to evaluate development trends and future market demand to determine the best way to create a robust mixed-use town center as desired by the community. Special attention needs to be made to ensure that this new overlay district enhances the small town village feel of the community and does not detract from it.

### Implementation Measures

- Thunderbolt’s Zoning Code will be updated to provide clarification and guidance for uses within this Character Area.
- Thunderbolt will create a Mixed Use/Town Center district to guide commercial development in a very specific area within the town.
- Applicable development proposed within this area shall be subject to procedures, standards, and guidelines.
- Allowed uses reflect the community’s desire to maintain a small village atmosphere.
- Design and architectural standards should be compatible with surrounding area.
- Residential development and commercial uses should be designed to complement each other and create a live/work environment.
- Varied residential densities and housing types should be allowed.
- Commercial uses should include a mix of retail, services, and offices to serve neighborhood residents’ day-to-day needs, and should match the character of the neighborhood.
- Mixed use area design should be very pedestrian-oriented, with strong, walkable connections between different uses.



## 3.5.5 Industrial

### Vision / Intent

The Town of Thunderbolt maintains a niche market in maritime related industrial activities, specifically commercial shrimping and ship fitting and repair. The Town of Thunderbolt is uniquely positioned to offer these types of industries along the Atlantic Intracoastal Waterway, well away from Port of Savannah operations, yet conveniently close to the Savannah metro area. In addition to commercial activities, recreational watersports and related activities are popular and encouraged. Thunderbolt has a stated goal of retaining and expanding its maritime industry. The vision and intent of the Industrial Character Area is to achieve this goal.

### Current Zoning

I: Industrial

W-I: Waterfront Industry

I-P: Institutional-Professional

B: Business

### Future Zoning Considerations

The majority of land in this character area is zoned Waterfront Industry; that is consistent with the stated goals of the Town of Thunderbolt.

### Implementation Measures

- Thunderbolt's Zoning Code will be updated to provide clarification and guidance for uses within this Character Area.
- Thunderbolt may choose to expand this district to guide maritime industrial development in suitable areas within the town.
- Applicable development proposed within this area shall be subject to procedures, standards, and guidelines.
- Allowed uses reflect the community's desire to maintain a small village atmosphere.
- Design and architectural standards should be compatible with surrounding area.



## 3.5.6 Transportation / Communications / Utilities

### Vision / Intent

This area has the specific use of providing utility easements and the transportation network throughout the town.

### Current Zoning

B: Business

I: Industrial

R-2: Two-Family Residential

R-M-H: Residential Mobile Home

I-P: Institutional-Professional

H-M: Hotel-Motel

M-C: Marsh Conservation

R-1: One-Family Residential

R-3: Multi-Family Residential

W-I: Waterfront Industry

L-I: Light Industrial

### Future Zoning Considerations

This activity will continue to occur in all land uses.

### Implementation Measures

- Updates to the Zoning Code should specifically address how best to monitor these uses, especially when infrastructure upgrades and repairs occur.
- Sufficient right-of-way should be maintained to create sidewalks and bicycle/ pedestrian paths wherever possible.
- Right-of-way acquisition should be considered to create sidewalks and bicycle/ pedestrian paths.
- Preservation and conservation of marshes, wetlands, and waterways must be prioritized during any development or redevelopment of the transportation network and any communications and/or utility infrastructure.
- Special attention must be paid to areas designated as “green infrastructure” given these areas vital role in the community’s resiliency from storm surge and flooding events.



## 3.5.7 Public / Institutional

### Vision / Intent

This designation sets aside land for public and institutional uses – churches, schools, town hall, museum, police station, fire station, and library. These uses are found in all zoning districts except industrial and provide services equitably throughout the community.

### Current Zoning

B: Business

I: Industrial

R-2: Two-Family Residential

R-M-H: Residential Mobile Home

M-C: Marsh Conservation

R-1: One-Family Residential

R-3: Multi-Family Residential

I-P: Institutional-Professional

### Future Zoning Considerations

This activity will continue to occur in appropriate land use areas.

### Implementation Measures

- Thunderbolt's Zoning Code will be updated to provide clarification and guidance for uses within this Character Area.
- Development of public and/or institutional uses shall be subject to procedures, standards, and guidelines.
- Allowed uses should reflect the community's desire to maintain a small village atmosphere.
- Design and architectural standards should be compatible with surrounding area.



## 3.5.8 Parks / Recreation / Conservation

### Vision / Intent

The availability of parks with active and passive recreation, green spaces, and conservation areas speak to the quality of life. These areas should be found in conjunction with well-planned and promoted cultural and historic resources and with town centers.

### Current Zoning

B: Business

I: Industrial

R-2: Two-Family Residential

R-M-H: Residential Mobile Home

M-C: Marsh Conservation

R-1: One-Family Residential

R-3: Multi-Family Residential

I-P: Institutional-Professional

### Future Zoning Considerations

This activity will continue to occur in appropriate land use areas.

### Implementation Measures

- Preserve scenic vistas and natural ecological features.
- Promote conservation easements and other incentives for natural space preservation.
- Work towards establishing greenspace as the first step in the land-use planning and design process.
- Identify the key physical, natural, ecological, landscape, historical, access and recreational assets.
- Coordinate greenspace planning with planning for gray infrastructure — roads, bike trails, water, electric, telecommunication and other essential community support systems.
- Identify new and enhanced assets including opportunities for landscape and habitat enhancement, and the provision of new green spaces and green links.
- Provide guidance such as Green Growth Guidelines (G3) for developers and
- Provide a strategic framework for the implementation of a connected and multi-functional network of wildlife sites, public open spaces and green links with mapping and analysis.

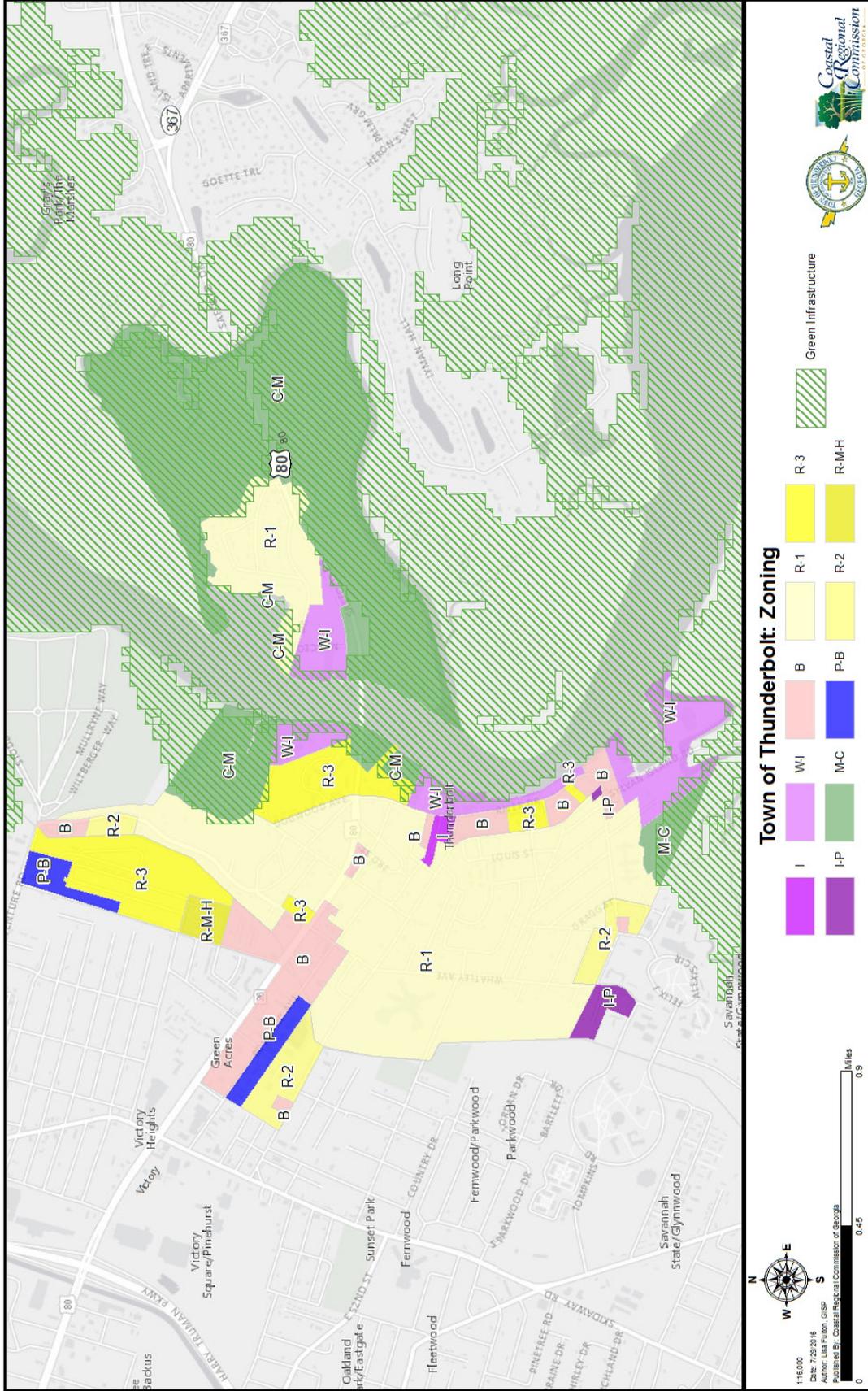


## 3.6 Zoning

The Zoning Map is a visual representation of the Town's current zoning districts.

Interpretation of the Zoning Map is provided in the supporting **Land Use Districts** table.

### 3.6.1 Zoning Map



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### 3.6.2 Land Use Districts

The Town of Thunderbolt has the following Land Use Districts.

Land Use Districts	Description	Zoning Categories
B: Business	An area designated for development of, and occupied exclusively by, businesses providing for the retailing of goods and the furnishing of services.	B
M-C: Marsh Conservation	The purpose of the M-C District is to encourage all reasonable public and private uses and developments of the marshlands, such as rice farming, marshland grass cultivation and harvesting, grazing, boating, fishing, hunting, and swimming that will not be significantly detrimental to the biological ecology, aquatic life, wildlife, recreation, and scenic resources of the marshlands and will not pollute the inlets and coastal waters with human or industrial waste or the long term silting that would result from unduly disturbing the marshlands, all for the purpose of furthering the social and economic welfare of the citizens of Thunderbolt, of the State of Georgia, and the nation.	M-C
I: Industrial	An Area set aside and so situated as to be well adapted to industrial and commercial development, but where the proximity to residential and commercial districts will not be undesirable.	I
P: Planning district	The purpose of this district shall be to provide areas within which comprehensive development plans shall be prepared and reviewed by the Planning and Zoning Commission in order to secure an orderly development pattern. Such districts shall be considered an overlay district and the uses permitted in such districts shall be those uses permitted in the zoning district which it overlays.	P
R-1: One-Family Residential	The purpose of this district shall be to create an environment in which one-family dwellings are permitted in order to promote stability and character of low density residential development with adequate open space. No uses other than One-Family Residences will be permitted unless the Board of Zoning Appeals grants a variance.	R-1
R-2: Two-Family Residential	An area designated for the development of up to two-family dwellings, with compatible nonresidential uses.	R-2
R-3: Multiple Unit Residential	An area designated for the development of multi-family dwellings, with compatible nonresidential uses.	R-3

Land Use Districts	Description	Zoning Categories
R-M-H: Residential Mobile Home	The purpose of this district shall be to establish a residential district in which uses and regulations are restricted to permit the development of mobile homes, single-family residences, and certain compatible nonresidential uses; and to permit the development in a manner which protects and preserves property values of adjacent properties.	R-M-H
W-I: Waterfront Industry	The purpose of this district shall be to create and protect areas for commercial fishing operations and other activities that are dependent upon a waterfront location.	W-I
I-P: Institutional-Professional	An area set aside and so situated as to be well adapted to professional and institutional development as outlined in the use schedule, but where proximity to residential districts will not be undesirable.	I-P
L-I: Light Industrial	This district is composed of land and structures so situated as to be well adapted to industrial development, but where the proximity to residential and commercial districts makes it desirable to limit the manner and extent of industrial operations. Development within this district is subject to the approval of the governing body. The purpose of the district is to permit the normal operation of a limited number of light industrial uses under such conditions of operation as will protect abutting residential and commercial uses and adjacent industrial uses.	L-I
H-M: Hotel-Motel	Any area designated or to be designated for development of hotels or motels. This District shall be composed of land and structures so situated as to be well adapted to Hotel or Motel development where the proximity to residential and commercial districts makes it desirable to limit the manner and extent of hotel or motel operations. Development within this district is subject to approval of the governing body. The purpose of the district is to permit the normal operation of a limited number of motel and/or hotel uses under such conditions as will protect the abutting residential and commercial use or other adjacent uses.	H-M

## 3.7 Future Land Use

The Town of Thunderbolt has the following Future Land Use Categories as shown on its Future Land Use map.

### Future Land Use Categories

**Residential** – this area is predominately single-family and multi-family homes and makes up the largest land use category within Thunderbolt.

**Commercial** – commercial corridors are found in highly trafficked areas such as Victory Drive and River Drive.

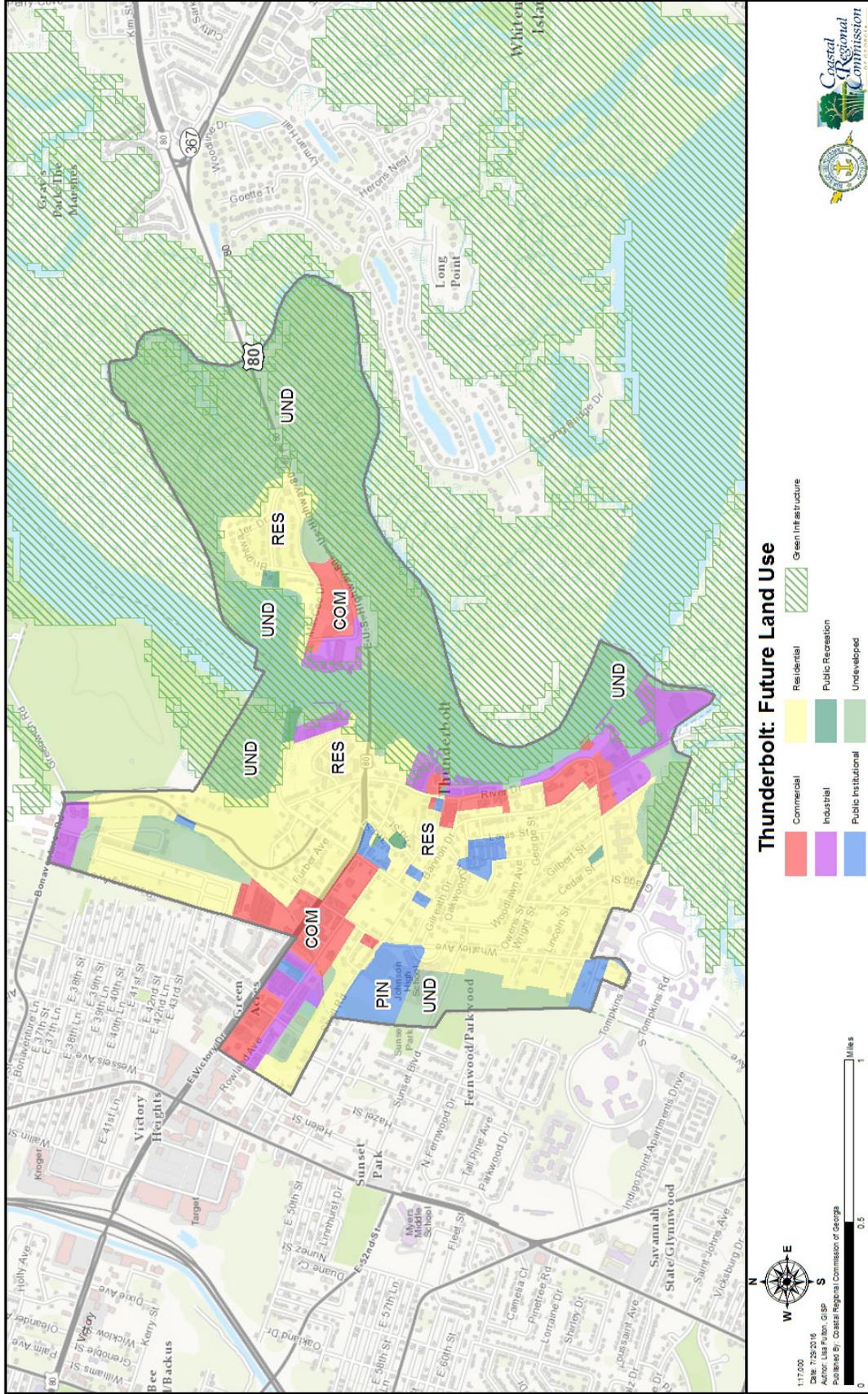
**Industrial** – industrial use in Thunderbolt is located primarily along Victory Drive and adjacent to the Wilmington River, serving Thunderbolt’s maritime related industries.

**Public/Institutional** – these uses, town hall, police and fire, schools, churches, the library, and the museum are found throughout the community.

**Public Recreation** – Thunderbolt offers both passive and active recreation throughout the community with access to its waterfront.

**Undeveloped** – Thunderbolt has a few areas of undeveloped land that may be developed at a later date, or reserved as conservation areas.

# 3.7 Future Land Use



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# 4

## Community Work Program



The Community Work Program outlines the overall strategy and action items for achieving the Community Vision and Goals and for addressing the Community Needs and Opportunities laid out in Chapter 3. These actions are supported by the policies provided as part of the Community Vision and Goals laid out in Chapter 2, and are presented here in two parts. The first part is the Implementation Program which outlines how the community addresses each of the needs and opportunities. The second part is the short-term work program which lists the specific actions the Town government and other partner entities will undertake to implement this plan within the first five-years of the planning horizon.

## **4.1 Implementation Program**

The implementation program outlines a variety of action items that need to be undertaken to address the needs and opportunities. These action items include policies, ongoing efforts, short term efforts, and long term efforts. Short term efforts are those that can be accomplished in the next five years and are included in the Short Term Work Program. Long term item efforts are those that may be accomplished beyond the 5 year immediate time frame or an opportunity may arise.

### 4.1.1 Upgrading Thunderbolt's Infrastructure

- The Town of Thunderbolt will develop a comprehensive approach to upgrading its infrastructure that includes a needs assessment, budget, and funding plan.
- The Town will perform a needs assessment of its potable water and sanitary sewer systems that includes:
  - Repair and replacement priorities
  - Budget
  - Identification of actual and potential funding sources
- The Town will perform a needs assessment of its stormwater system that includes:
  - Repair and replacement priorities
  - Budget
  - Identification of actual and potential funding sources
- The Town will perform a needs assessment of its roadway system that includes:
  - Repair and replacement priorities
  - Budget
  - Identification of actual and potential funding sources
- The Town will perform a needs assessment of its sidewalk system that includes:
  - Repair and replacement priorities
  - Budget
  - Identification of actual and potential funding sources

## **4.1.2 Updating Thunderbolt's Zoning Ordinance**

- Thunderbolt will update their zoning ordinance to be user friendly and easy to understand.
- Thunderbolt's zoning ordinance will be illustrated with graphics, diagrams, and concise tables.
- Thunderbolt's zoning ordinance will allow for a streamlined development process.
- Thunderbolt's zoning ordinance update will be designed to foster the town's desired type of redevelopment and future development.
- Thunderbolt's zoning ordinance will include design standards and specific building material to retain Thunderbolt's small town aesthetics.
- Thunderbolt will establish a mixed-use overlay district for the River Drive corridor.
- Thunderbolt will establish overlay districts for hazards (flood, hurricane, storm surge) to incorporate a separate set of guidelines for properties that fall inside the boundaries of these overlay districts.
- Thunderbolt shall reduce requirements that result in additional impervious surfaces such as driveway widths, roadway widths, and parking standards.
- Thunderbolt shall establish maximum parking requirements versus minimum requirements to encourage safe growth.

## **4.1.3 Retaining the Small Town Village Atmosphere of Thunderbolt**

- Thunderbolt will use its Comprehensive Plan and Zoning Code to guide growth and development; and any redevelopment that may occur in a manner that retains its small town village atmosphere.
- Thunderbolt will recognize and preserve its historic structures.
- Thunderbolt will develop and codify design standards for all allowable and/or conditional uses that promote urban village development in all new development and redevelopment.
- Thunderbolt will develop residential lot standards for new development and infill redevelopment that preserve the traditional density of the town.
- Thunderbolt will develop height and mass standards for multi-family residential and non-residential development that preserve viewsheds, especially along waterways and marshes, and maintain the traditional building type standards appropriate to urban village development.
- Thunderbolt will develop street and sidewalk standards compatible with urban village development.

#### **4.1.4 Retaining Thunderbolt’s Access to Water, Views, and Nature**

- Thunderbolt will use its Comprehensive Plan and Zoning Code to guide growth and development; and any redevelopment that may occur in a manner that retains access to water, views, and nature.
- Thunderbolt will develop and codify design standards for all allowable and/or conditional uses that promote access to water, views, and nature.
- Thunderbolt will develop height and mass standards for multi-family residential and non-residential development that preserve viewsheds, especially along waterways and marshes, and maintain the traditional building type standards appropriate to retain access to water, views, and nature.

#### **4.1.5 Addressing Thunderbolt’s Traffic Issues**

- The Town will perform a needs assessment of its roadway system that includes:
  - Repair and replacement priorities
  - Budget
  - Identification of actual and potential funding sources
- The Town will perform a needs assessment of its sidewalk system that includes:
  - Repair and replacement priorities
  - Budget
  - Identification of actual and potential funding sources
- Thunderbolt, in coordination with Chatham County and GDOT, will develop a plan to address traffic issues on Victory Drive.
- Thunderbolt, in coordination with Chatham County and GDOT, will develop a plan to address traffic issues on Bonaventure Road.
- Thunderbolt will develop street and sidewalk standards compatible with urban village development.
- Thunderbolt will explore a “complete streets policy.”
- Thunderbolt will improve connectivity throughout the Town.
- Thunderbolt will address safety and mobility issues that may arise for all road uses.

#### **4.1.6 Retaining and Expanding Thunderbolt’s Maritime Industry**

- Thunderbolt will update its zoning code to designate specific locations for maritime industrial activity.
- Thunderbolt will continue to promote and market its maritime industry.

## 4.2 Thunderbolt Community Work Program (2016-2020)

Activities	Implementation Schedule					Responsible Party	Budget	Funding Source
	2016	2017	2018	2019	2020			
<b>Natural, Cultural and Historic Resources</b>								
Continue to support Countywide implementation and enforcement of NPDES Phase I MS4 permit.	X	X	X	X	X	Administration	\$17,500/year	General Fund
Continue to participate fully in the National Flood Insurance Program.	X	X	X	X	X	Administration	Staff time	General Fund
Continue to participate in the Community Rating System (CRS) program offered by FEMA.	X	X	X	X	X	Administration	\$1,000/year	General Fund
Continue to support Savannah-Chatham Metropolitan Planning Commission public awareness programs to encourage natural resource protection.	X	X	X	X	X	Administration	Staff time	General Fund
Continue to support water conservation programs through public awareness campaigns.	X	X	X	X	X	Administration	\$1,000/year	General Fund
Continue to support Thunderbolt Museum historical preservation project.	X	X	X	X	X	Administration	TBD	General Fund & Grants
Add a ramp and addition to the Thunderbolt Museum making is more ADA accessible.		X	X			Administration	\$50,000	General Fund & Grants
Replace roof on Thunderbolt Museum	X					Administration	\$15,000	General Fund
Renovate the front and side of the Thunderbolt Museum.	X					Administration	\$40,000	General Fund
Take proactive measures to protect valued historic and natural resources through inventories.	X	X	X			Administration	\$3,000	General Fund & Grants
Encourage and cooperate with the tourism industry to promote a greater emphasis on environmental protection, education, and preservation of local natural resources in order to promote the area as an ecotourism center.	X	X	X	X	X	Administration	Staff Time	General Fund

Activities	Implementation Schedule					Responsible Party	Budget	Funding Source
	2016	2017	2018	2019	2020			
<b>Natural, Cultural and Historic Resources</b>								
Improve participation in the current Recycling Program.	X	X	X	X	X	Administration/ Contract Hauler	Staff Time	Enterprise Fund
Develop plans for using land contiguous to Placentia Canal for a public bicycle and pedestrian trail.	X					Administration and MPC	Staff Time	General Fund & Grants
<b>Economic Development</b>								
Support Chamber of Commerce to actively recruit retail commercial and appropriate industries to the Town.	X	X	X	X	X	Administration	Staff Time	General Fund
Explore ways to encourage commuters and tourists passing through Thunderbolt t to support the local economy, such as providing more local, service-oriented businesses.	X	X	X	X	X	Administration	Staff Time	General Fund
Continue to support community events such as the Thunderbolt Festival and National Night Out.	X	X	X	X	X	Town	Up to \$4,000/year based upon funding availability	General Fund
In order to capitalize on its water access, Thunderbolt should explore ways to capitalize on its waterfront location with improved water access, more restaurants, and entertainment.	X	X	X	X	X	Administration	Staff Time	General Fund

Activities	Implementation Schedule					Responsible Party	Budget	Funding Source
	2016	2017	2018	2019	2020			
<b>Community Facilities</b>								
Continue ongoing water tower and pump maintenance program.	X	X	X	X	X	Public Works Department	\$20,000/year	Water & Sewer Fund
Continue with beautification of town by planting trees, shrubs and plants.	X	X	X	X	X	Public Works Department	\$1,000/year	General Fund/ Grants
Continue to improve sanitary sewer lines throughout Town.	X	X	X	X	X	Public Works Department	\$750,000/year	SPLOST/Water & Sewer Fund
Install combined telephone system at Town facilities.	X					Administration	\$20,000	General Fund
Replace windows at Town Hall.	X	X				Administration	TBD	General Fund/ SPLOST
Install combination operating system.	X	X				Administration	\$100,000	General Fund
Improve ADA compliance at Town Hall.	X					Administration	\$10,000	General Fund
Complete the update to the HVAC system at Town Hall.	X					Administration	\$10,000	General Fund
Explore and install disaster recovery equipment for IT purposes.	X					Administration	TBD	General Fund
Develop Geographic Information System to include layers such as: drainage, wastewater, tax parcels and fire hydrants.	X	X				Administration	\$2,000/year	Water & Sewer Fund/Grants/ General Fund
Complete construction of new well.	X					Public Works Department	\$950,000	GO Bond/ SPLOST/Water & Sewer Fund
Continue to maintain interior roads.	X	X	X	X	X	Public Works Department	\$40,000/year	SPLOST/LMIG

Activities	Implementation Schedule					Responsible Party	Budget	Funding Source
	2016	2017	2018	2019	2020			
<b>Public Safety - Police Department</b>								
Purchase new cruisers and outfitting.	X	X	X	X	X	Police Department	\$150,000	General Fund/ SPLOST
Purchase new cameras.	X	X	X	X	X	Police Department	\$30,000	General Fund/ SPLOST
Purchase new light bars.	X	X	X	X	X	Police Department	\$5,000	General Fund/ SPLOST
Purchase new radars.	X	X	X	X	X	Police Department	\$5,000	General Fund/ SPLOST
Purchase Intoximeter.			X			Police Department	\$12,000	General Fund/ SPLOST
Public safety training for all new officers.	X	X	X	X	X	Police Department	\$1,000/year	General Fund/ SPLOST
Purchase computer equipment for Police Administration and Court.	X	X	X			Police Department	\$3,000	General Fund
<b>Public Safety - Fire Department</b>								
Purchase new Fire Pumper.				X		Fire Department	\$300,000	General Fund/ SPLOST
Construct new fire training classroom.	X	X				Fire Department	\$50,000	General Fund/ SPLOST
Purchase incident command vehicle.			X			Fire Department	\$25,000	General Fund/ SPLOST
Purchase and/or update breathing apparatuses and cylinders.	X	X	X	X	X	Fire Department	\$50,000	General Fund/ SPLOST
Update HVAC at Fire Department.	X					Fire Department	\$20,000	General Fund/ SPLOST
Install dry fire hydrants on the Isle of Armstrong.	X					Fire Department	\$2,000	General Fund/ SPLOST

Activities	Implementation Schedule					Responsible Party	Budget	Funding Source
	2016	2017	2018	2019	2020			
<b>Public Safety - Fire Department</b>								
Install firefighting suppression water system on Macceo Drive including water pump and fire hydrants.	X	X	X			Fire Department	\$500,000	General Fund/ SPLOST
Public safety training for all Fire officers.	X	X	X	X	X	Fire Department	\$1,000/year	General Fund/ SPLOST
Replacement of personal protective equipment (ongoing.)	X	X	X	X	X	Fire Department	\$150,000	General Fund/ SPLOST
<b>Parks and Recreation</b>								
Continue to upgrade and maintain Town parks.	X	X	X	X	X	Public Works Department	\$50,000	General Fund
Upgrade the HVAC system at the Senior Center.	X					Administration	\$10,000	General Fund
<b>Public Works</b>								
Upgrade water lines.	X	X	X	X	X	Public Works Department	TBD	Water & Sewer Fund/ SPLOST
Maintain fire hydrants.	X	X	X	X	X	Public Works Department	\$3,000/year	Water & Sewer Fund
Purchase 2 portable generators.	X	X				Public Works Department	\$8,000	General Fund/ SPLOST
Install ADA compliant sidewalks.	X	X	X			Public Works Department	\$60,000	General Fund/ SPLOST
Purchase new vehicle				X		Public Works Department	\$20,000	SPLOST
Purchase trailer for backhoe		X				Public Works Department	\$25,000	SPLOST
<b>Transportation</b>								
Explore options for reducing traffic congestion on commercial corridors (Highway 80.)	X	X	X	X	X	Administration	TBD	SPLOST
Explore ways to encourage the development of bike paths to connect commercial and residential areas.	X	X	X	X	X	Administration	Staff Time	General Fund

Activities	Implementation Schedule					Responsible Party	Budget	Funding Source
	2016	2017	2018	2019	2020			
<b>Transportation</b>								
Explore ways to capitalize on the Town's access to water for recreational use or commercialized boat use.	X	X	X	X	X	Administration	Staff Time	General Fund
<b>Housing</b>								
Continue to eliminate or upgrade dilapidated buildings.	X	X	X	X	X	Administration	TBD	General Fund
Continue to encourage a sense of neighborhood pride in keeping property and streets clean.	X	X	X	X	X	Administration	Staff Time	General Fund
Continue to upgrade and enforce zoning ordinance.	X	X	X	X	X	Administration	Staff Time	General Fund
Continue to support the Neighborhood Crime Watch community program.	X	X	X	X	X	Police Department	Staff Time	General Fund
Continue to eliminate incompatible land uses which negatively impact neighborhood quality of life.	X	X	X	X	X	Administration	Staff Time	General Fund
<b>Land Use</b>								
Review land use and zoning regulations.	X	X	X	X	X	Administration	Staff Time	General Fund
Develop a Disaster Recovery Plan	X					Administration	\$25,000	General Fund/ Grants
Explore the creation of a future land use plan for the Town of Thunderbolt.	X	X				Administration	\$10,000	General Fund
<b>Intergovernmental Coordination</b>								
Continue to explore ways to improve communication and coordination with the County and surrounding municipalities.	X	X	X	X	X	Administration	Staff Time	General Fund
Explore ways to improve coordination with other agencies such as DNR on enforcement issues related to marine safety.	X	X	X	X	X	Administration	Staff Time	General Fund
Explore partnering with DCA to host a Quality Growth Resources Team to help Thunderbolt with growth and development issues.	X	X				Administration	Staff Time	General Fund

### 4.3 Thunderbolt Report of Accomplishments (2012 - 2016)

The Report of Accomplishments is an assessment of the Town of Thunderbolt’s existing Short-Term Work Program (STWP). This requirement gives Thunderbolt the opportunity to evaluate how many of the tasks previously defined have been implemented and eliminate activities that are no longer desirable or feasible for the town to pursue. At a minimum, the Report of Accomplishments shall include the following information about activities listed in the existing STWP:

- Have been completed;
- Are currently underway (including a projected completion date);
- Have been postponed (explaining why and when it will be resumed); or
- Have not been accomplished and are no longer activities the local government intends to undertake (explaining why).

<i>Activities</i>	<i>Status</i>	<i>Explanation</i>
<b>Natural, Cultural and Historic Resources</b>		
Continue to support Countywide implementation and enforcement of NPDES Phase I MS4 permit.	Underway	This is an annual, ongoing program.
Continue to participate fully in the National Flood Insurance Program.	Underway	This is an annual, ongoing program.
Investigate the Community Rating System (CRS) program offered by FEMA, and submit application.	Completed	The Town was accepted into the program May 2015 and this will become an annual, ongoing program.
Continue to support Savannah-Chatham Metropolitan Planning Commission public awareness programs to encourage natural resource protection.	Underway	This is an annual, ongoing program.
Continue to support water conservation programs through public awareness campaigns.	Underway	This is an annual, ongoing program.
Continue to support Thunderbolt Museum historical preservation project.	Underway	This is an annual, ongoing program.

<i>Activities</i>	<i>Status</i>	<i>Explanation</i>
<b>Natural, Cultural and Historic Resources</b>		
Add a ramp and addition to the Thunderbolt Museum making is more ADA accessible.	Postponed	The Town has postponed this program due to a lack of funding.
Replace roof on Thunderbolt Museum	Postponed	The Town has postponed this program due to a lack of funding.
Install a new HVAC system at the Thunderbolt Museum.	Completed	Two new HVAC units were installed at the Museum in 2013.
Renovate the front and side of the Thunderbolt Museum.	Postponed	The Town has postponed this program due to a lack of funding.
Renovate the electrical/cabling at the Thunderbolt Museum.	Canceled	The Museum no longer needs renovation of electrical/cabling.
Purchase computer hardware for the Thunderbolt Museum.	Completed	New computers were purchased and installed in 2014.
Take proactive measures to protect valued historic and natural resources through inventories.	Postponed	The Town has postponed this program due to limited staff.
Encourage and cooperate with the tourism industry to promote a greater emphasis on environmental protection, education, and preservation of local natural resources in order to promote the area as an ecotourism center.	Underway	This is an ongoing activity.
Improve participation in the current Recycling Program.	Underway	This is an ongoing activity.
Explore the feasibility of using land contiguous to Placentia Canal for a public bicycle and pedestrian trail.	Underway	The Chatham County - Savannah Metropolitan Planning Commission completed a Greenway Implementation Study. The Town also applied for a Coastal Incentive Grant for this activity in 2016. The Technical Review Committee recommended the application for funding.

<i>Activities</i>	<i>Status</i>	<i>Explanation</i>
<b>Economic Development</b>		
Support Chamber of Commerce to actively recruit retail commercial and appropriate industries to the Town.	Underway	This is an ongoing activity.
Install wayfinding and welcome signage on Victory Ave.	Completed	The Town's welcome sign was installed at the corner of Victory Drive and River Drive in 2014.
Explore ways to encourage commuters and tourists passing through Thunderbolt t to support the local economy, such as providing more local, service-oriented businesses.	Underway	This is an ongoing activity.
Continue to support community events such as the Thunderbolt Festival and National Night Out.	Underway	This is an ongoing activity.
In order to capitalize on its water access, Thunderbolt should explore ways to capitalize on its waterfront location with improved water access, more restaurants, and entertainment.	Underway	The Town continues to participate in the annual Thunderbolt Holiday Boat Parade.
<b>Community Facilities</b>		
Continue ongoing water tower and pump maintenance program.	Underway	This is an annual, ongoing program.
Continue with beautification of town by planting trees, shrubs and plants.	Underway	This is an annual, ongoing program hosted by the Town's Tree Commission.
Continue to improve sanitary sewer lines throughout Town.	Underway	This is an ongoing system maintenance process as old lines require repair.
Install combined telephone system at Town facilities.	Postponed	The Town has postponed this program due to a lack of funding.
Purchase vehicle for Administration Department.	Canceled	The Town no longer needs an Administration vehicle.
Replace roof and windows at Town Hall.	Underway	The Town installed a Silicone Insulated Roof System at Town Hall in 2013.
Install combination operating system.	Postponed	The Town has postponed this program due to a lack of funding.

<i>Activities</i>	<i>Status</i>	<i>Explanation</i>
<b>Community Facilities</b>		
Improve ADA compliance at Town Hall.	Postponed	The Town has postponed this program due to a lack of funding.
Update the HVAC system at Town Hall.	Underway	The Town has installed four new HVAC systems at Town Hall with one system left to be replaced.
Install Sonic firewall and disaster recovery.	Postponed	The Town is reassessing the disaster recovery needs with Information Technology department.
Purchase computer hardware for Town Hall.	Completed	New computers were purchased in 2012 and 2013 for general administration.
Develop Geographic Information System to include layers such as: drainage, wastewater, tax parcels and fire hydrants.	Underway	The Town has contracted with Ecological Planning Group to assist and maintain the development of the Town's GIS system in 2016.
Complete construction of new well.	Underway	Construction of new well located at Downing Avenue has begun and is estimated to be completed Fall 2016.
Water meter replacement program	Completed	The Town has completed the water meter replacement program in 2016.
Continue to maintain interior roads.	Underway	This is an ongoing activity.
Complete sidewalk from Falligant to River Drive	Completed	The sidewalk on River Drive has been completed.
Conduct a sidewalk masterplan.	Completed	Coastal Regional Commission completed a Sidewalk and Facilities Inventory in 2014.

<i>Activities</i>	<i>Status</i>	<i>Explanation</i>
<b>Public Safety - Police Department</b>		
Purchase 6 new cruisers and outfitting.	Underway	The Town continues to lease a new vehicle at least once a year.
Purchase 3 new cameras.	Underway	Cameras were purchased with new vehicles.
Complete office renovations.	Canceled	The Town no longer needs office renovations on at the Police Department
Purchase 8 new light bars.	Underway	Light bars were purchased with new vehicles.
Purchase 6 new radars.	Underway	Radars were purchased with new vehicles.
Install Variable Speed Limit Signs.	Completed	The Town purchased two variable speed limit signs in 2014.
Purchase Intoximeter.	Underway	A new intoximeter was purchased in 2013.
Public safety training for all new officers.	Underway	This is an annual, ongoing program.
Purchase computer equipment for office and Court.	Underway	New computers were purchased and installed for the Court in 2013.
Purchase transportation van.	Postponed	The Town no longer needs a transportation van.
<b>Public Safety - Fire Department</b>		
Purchase 1 new Fire Pumper.	Completed	The Town purchased a new Mini EVO Fire Pumper in 2015.
Purchase incident command vehicle.	Postponed	The Town has postponed this program due to a lack of funding.
Construct new fire training classroom.	Postponed	The Town has postponed this program due to a lack of funding.
Purchase 1 new rescue truck.	Canceled	The Town does not need a new rescue truck as the new mini pumper provides this service.

<i>Activities</i>	<i>Status</i>	<i>Explanation</i>
<b>Public Safety - Fire Department</b>		
Purchase 1 fire truck with water cannon and stick.	Canceled	The Town no longer needs a fire truck with water cannon and stick.
Replace 25 year old engine.	Underway	One engine was replaced in 2015 with the Mini EVO fire pumper there is an additional two engines that needs to be replaced.
Purchase 30 self-contained breathing apparatuses and cylinders.	Underway	The Town has updated the breathing apparatuses and cylinders in 2015. This will be an ongoing activity as needed.
Update HVAC at Fire Department.	Underway	The Town has replaced bay heaters in the Fire Station in 2013.
Install dry fire hydrants on the Isle of Armstrong.	Postponed	The fire suppression system at Isle of Armstrong has been reviewed.
Install fire fighting suppression water system on Macceo Drive including water pump and fire hydrants.	Postponed	The Town contracted with Thomas and Hutton to provide a study with various fire suppression options and the Town has postponed the project due to lack of funding.
Purchase 1 new heavy duty 4x4 truck.	Canceled	The Town does not need a heavy duty 4x4 truck.
Purchase new extrication equipment.	Completed	The Town purchased new extrication equipment in 2012.
Public safety training for all Fire officers.	Underway	This is an ongoing activity.
Replacement of personal protective equipment (ongoing.)	Underway	This is an ongoing activity.

<i>Activities</i>	<i>Status</i>	<i>Explanation</i>
<b>Parks and Recreation</b>		
Continue to upgrade and maintain Town parks.	Underway	This is an ongoing activity.
Explore forming a recreational department to invest in youth-based programs and organized sports.	Canceled	The Town is no longer reviewing recreational programs due to lack of staff and funding.
Build a permanent storage area at the Senior Center	Canceled	The Senior Center no longer needs a permanent storage area.
Upgrade the HVAC system at the Senior Center.	Underway	The Town has installed three new HVAC systems in the Senior Center with and additional units to be replaced.
<b>Public Works</b>		
Upgrade water lines.	Underway	This is an ongoing activity. The Town replaced water lines on Victory Drive, Bannon Avenue, and various other areas.
Purchase manager truck.	Completed	The Town purchased a new vehicle in 2014.
Purchase tractor.	Completed	The Town purchased a back hoe.
Construct addition to Public Works Yard.	Canceled	The Town no longer needs an addition to the Public Works yard.
Maintain fire hydrants.	Underway	This is an ongoing activity. The Town replaced and installed new hydrants in various areas.
Purchase 1 mobile jet device.	Completed	The Town purchased a jet trailer in 2014.
Purchase 2 portable generators.	Underway	The Town purchased a used generator.
Purchase 1 riding mower.	Canceled	The Town no longer needs a riding mower due to contracting landscaping services for Town right of ways.
Purchase mowing equipment.	Canceled	The Town no longer needs mowing equipment.
Install ADA compliant sidewalks.	Underway	The Town completed the ADA sidewalk project for River Drive. The second phase will include Whatley Avenue.
Purchase 1 new covered dump truck.	Canceled	The Town no longer needs a covered dump truck.

<i>Activities</i>	<i>Status</i>	<i>Explanation</i>
<b>Transportation</b>		
Explore options for reducing traffic congestion on commercial corridors (Highway 80.)	Underway	The Town routinely coordinates with DOT and the MPO to address this issue.
Explore ways to encourage the development of bike paths to connect commercial and residential areas.	Underway	The Town coordinates with MPC and MPO to explore this activity.
Explore ways to capitalize on the Town's access to water for recreational use or commercialized boat use.	Underway	The Town has many public access points for recreational and commercial boat use.
<b>Housing</b>		
Continue to eliminate or upgrade dilapidated buildings.	Underway	Town Code Enforcement continuously addresses this issue. One dilapidated building has been demolished in 2016.
Continue to encourage a sense of neighborhood pride in keeping property and streets clean.	Underway	The Neighborhood Improvement Association works to promote these issues.
Continue to upgrade and enforce zoning ordinance.	Underway	This task is implemented as needed.
Continue to support the Neighborhood Crime Watch community program.	Underway	This is an ongoing activity that is managed by the Police Department
Continue to eliminate incompatible land uses which negatively impact neighborhood quality of life.	Underway	The Town's Zoning ordinance addresses incompatible land uses.
Land Use	Completed	The Town has a Land Use Preliminary Study completed in 2010.
Review land use and zoning regulations.	Underway	This is an ongoing activity that is managed by the Planning and Zoning Commission and Zoning Administrator.
Develop a Disaster Recovery Plan	Underway	The Town is working with Chatham Emergency Management Agency on this activity.

<i>Activities</i>	<i>Status</i>	<i>Explanation</i>
<b>Housing</b>		
Explore the creation of a future land use plan for the Town of Thunderbolt.	Underway	The Town is working with Simbioscity in regards to future land use on River Drive.
Explore the implementation of ordinances requiring infill development (residential and commercial) to include infrastructure improvements and upgrades.	Completed	The Town contracted with Thomas and Hutton to provide a Development Process Study in 2014.
<b>Intergovernmental Coordination</b>		
Continue to explore ways to improve communication and coordination with the County and surrounding municipalities.	Underway	This is an ongoing activity.
Explore ways to improve coordination with other agencies such as DNR on enforcement issues related to marine safety.	Underway	This is an ongoing activity.
Explore partnering with DCA to host a Quality Growth Resources Team to help Thunderbolt with growth and development issues.	Postponed	The Town would be happy to participate in a Quality Growth Resources Team should DCA offer the opportunity.



# 5

## Coastal Vulnerability and Resilience



Thunderbolt reviewed its comprehensive plan to determine the degree to which resiliency planning has been considered, where it best fits based on local planning requirements, and how it can be incorporated/implemented in the future. The town is incorporating the results of this review into its comprehensive planning efforts. More specifically, including a section on resiliency where specific implementation activities are included in the Short-Term Work Plan to increase resiliency to potential coastal hazards.

## Population Growth

The population of Thunderbolt has increased slowly but steadily between 2000 and 2010. The population is projected to grow to 2,920 by 2021 and to 3,101 by 2030. This indicates an increase of 13 percent between the two most recent census counts, and a projected growth of 23 percent from the current census count to 2030.

Thunderbolt Population Growth				
2000	2010	2016	2021	2030
2,207	2,514	2,728	2,920	3,101
Source: U. S. Census; ESRI Business Analyst Online; Georgia Coast 2030: Population Projections for the 10-County Region				

## Vulnerable Populations

In Thunderbolt the percentage of the children under age 5 is estimated to increase nominally by 5 percent from 2000 to 2021, while the percentage of persons 65 and older is projected to grow by a more significant 29 percent during the same period.

Thunderbolt Age Vulnerable Populations			
	2010	2021	Percent Change
<b>Children under 5</b>	175	183	5%
<b>Persons 65 and older</b>	496	641	29%
Source: U. S. Census; ESRI; Business Analyst Online			

## Income and Poverty Level

Income can directly relate to a family’s ability to have reliable transportation, which then directly relates to a family’s ability to evacuate in the event of an evacuation order. Income also impacts a family’s ability to secure temporary lodging (hotels or motels) beyond publically provided shelter, or to obtain replacement housing should they lose their homes due to a storm event or natural disaster.

According to the U. S. Census’ American Community Survey 2014 – Economic Characteristics, Thunderbolt’s Median Household Income is \$40,774. Poverty levels are established by the federal government and are based upon income and family size. For Thunderbolt, approximately, 9 percent of the population falls below the poverty level.

## Means of Transportation

The U. S. Census reports on the number of vehicles available to households. This is an important indicator of the percentage of the population that has reliable transportation should they need to evacuate in the event of a storm or other natural disaster. Forty-eight households (4.2 percent) have no vehicles available.

The U.S. Census also reports on the following means of transportation to work for workers age 16 and older: drove alone; carpooled; public transportation; walked; bicycle; taxi, motorcycle, or other; and worked at home.

The percentage for the number who drove alone is another reasonable indicator of the percentage of the population that has reliable transportation should they need to evacuate their homes in the event of a storm or other natural disaster. In Thunderbolt 84 percent of workers drove alone to work and 7 percent of workers carpooled.

## Disability

According to American Community Survey 2010-2014, there are 328 people are with any disabilities in Thunderbolt.

Thunderbolt Disability By Age			
	People under 18	People 18 to 64	People 65 and over
<b>With one Disability</b>	0	117	85
<b>With Two or More Types of Disability</b>	0	46	80
<b>Total Disability</b>	0	163	165
Source: U. S. Census			

## **Vulnerable Housing Type**

184 housing units (15.5%) in Thunderbolt are mobile homes.

# APPENDIX



## **PUBLIC PARTICIPATION PROCESS**

- **STEERING COMMITTEE**
- **STAKEHOLDERS**
- **SWOT ANALYSIS**
- **RESULTS OF SWOT ANALYSIS**
- **MINUTES OF MEETINGS**





## MEMORANDUM

TO: INVITED STAKEHOLDER COMMITTEE MEMBERS  
FROM: CAROLINE R. NGUYEN, TOWN ADMINISTRATOR  
DATE: JUNE 26, 2015  
RE: CITIZEN PLANNING COMMITTEE – TOWN COMPREHENSIVE PLAN

The purpose of this memorandum is to request your participation in the Town of Thunderbolt Citizen Planning Committee in connection with the Town's efforts to prepare its 2016 Comprehensive Plan (Comp Plan). The Town is being assisted by the staff of the Coastal Regional Commission (CRC) who serves as the regional planning agency for coastal Georgia.

The Georgia Department of Community Affairs (DCA) requires that communities throughout the state complete and maintain a Comp Plan to direct future growth and development. The Comp Plan is required to address a set of minimum requirements that include the identification of community goals, needs and opportunities within the community, and a community short term work program (STWP), which identifies the specific action items the Town plans to undertake to achieve the established goals, address the documented needs, and maximize opportunities for community success.

The Town recognizes the importance of having a Comp Plan that enhances the quality of life of its residents and businesses within the community while at the same time provides guidance for future growth. The Town also understands that our existing character and future growth plans must be balanced to address the different visions that individual stakeholders have for the future of the Town. It is the Town's intent, with assistance from our invited stakeholders, to build upon the process utilized for the 2008 Town of Thunderbolt Comprehensive Plan, and other recently developed data, to produce an updated Comp Plan with the assistance of community stakeholders such as you. We anticipate that by conducting an active public participation program involving each of you, the Town staff and elected officials will have a better understanding of the community's overall vision and perspective which should provide us the necessary tools to successfully complete this project.

The Citizen Planning Committee will likely convene 3 to 4 times over 6 to 9 months to provide input and to make recommendations on the Town's Comprehensive Plan. Public involvement is critical to the planning process and the development of a Comp Plan that accurately reflects the community's vision. The first meeting is on Wednesday, July 29, 2015 6:00p.m. at Town Hall where light refreshments will be served. Kindly RSVP to Caroline Nguyen at [cnguyen@thunderboltga.org](mailto:cnguyen@thunderboltga.org) or 912.629.4650 or Teresa Townsend at [ttownsend@crc.ga.gov](mailto:ttownsend@crc.ga.gov) or 912.437.0813.

Please contact me with any questions regarding the information contained in this memo at [cnguyen@thunderboltga.org](mailto:cnguyen@thunderboltga.org).



## Thunderbolt Citizen Planning Committee

**Steering Committee**

Beth Goette - Mayor	<a href="mailto:bgoette@thunderboltga.org">bgoette@thunderboltga.org</a>
Dave Crenshaw - Council Member	<a href="mailto:dcrenshaw@internationaldunnage.net">dcrenshaw@internationaldunnage.net</a>
John Henry - Council Member	<a href="mailto:johnmhenry@comcast.net">johnmhenry@comcast.net</a>
Ed Drohan - Council Member	<a href="mailto:tboltfordr.ed@gmail.com">tboltfordr.ed@gmail.com</a>
Al Henderson - Council Member	<a href="mailto:al_henderson6@yahoo.com">al_henderson6@yahoo.com</a>
Sherry Phillips - Council Member	<a href="mailto:Sherry.phillips@gulfstream.com">Sherry.phillips@gulfstream.com</a>
Kimberly Chappell-Stevens – Council Member	<a href="mailto:kimberly_chappellstevens@hotmail.com">kimberly_chappellstevens@hotmail.com</a>

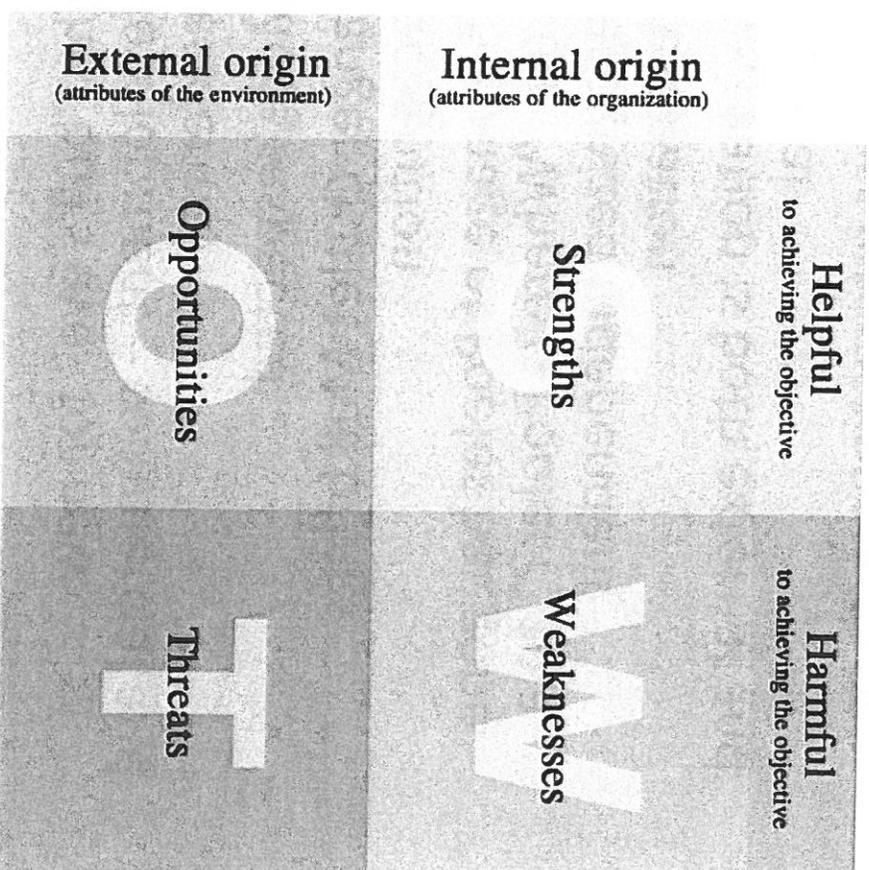
**Stakeholders**

Jan Yarborough – Planning & Zoning Chairperson	<a href="mailto:iyarbrough@huntermaclean.com">iyarbrough@huntermaclean.com</a>
Linda Buttersworth – Planning & Zoning Member	<a href="mailto:towtowto@aol.com">towtowto@aol.com</a>
Patricia Rountree – Planning & Zoning Member	<a href="mailto:Par21@comcast.net">Par21@comcast.net</a>
Ruthie Seese – Planning & Zoning Member	<a href="mailto:rseese@seaboltbrokers.com">rseese@seaboltbrokers.com</a>
Luree Bonner – Business Owner & Condo Association	<a href="mailto:Jbonner50@comcast.net">Jbonner50@comcast.net</a>
Ernie D’Alto – Thunderbolt Marine Inc.	<a href="mailto:edalto@thunderboltmarine.us">edalto@thunderboltmarine.us</a>
Shandra Clark – Business Owner	<a href="mailto:Tubbys99@comcast.net">Tubbys99@comcast.net</a>
Anna Maria Thomas – Resident and Former Mayor	<a href="mailto:athomas@chathamcounty.org">athomas@chathamcounty.org</a>
Sonny Longo – Isle of Armstrong Association President	<a href="mailto:sonnylongo@att.net">sonnylongo@att.net</a>
John Henderson – Business Owner	<a href="mailto:john@coachs.net">john@coachs.net</a>
Mike Teeple – Resident	<a href="mailto:momteep@aol.com">momteep@aol.com</a>
Dave Chiver – Planning and Zoning Member	<a href="mailto:Chivers.andrewd@gmail.com">Chivers.andrewd@gmail.com</a>
Len Heirs – Planning and Zoning Member	<a href="mailto:tboltdoubledawg@comcast.net">tboltdoubledawg@comcast.net</a>
Michelle Gergacs – Planning and Zoning Member	<a href="mailto:mickgergacs@gmail.com">mickgergacs@gmail.com</a>



# SWOT

- The information derived from the external analysis feeds into the Opportunities and Threats segments of the SWOT analysis, and
- The information derived from the internal analysis will drive the Strengths and Weaknesses components of the SWOT



# Strengths

Internal origin  
(attributes of the organization)

Strengths

- Sidewalk usage
- Greenspace
- Amenities
- Character and history
- Safe community
- Good school systems
- Diverse population
- Robust economy/prosperity
- Strong and diverse tax space
- Low crime rate
- Great stop off before Tybee Island and Savannah
- Not in debt
- Traffic not too congested
- Inclusive community
- The “bull’s eye” for new development – commercial and residential
- More respected
- Tanger Outlet Mall brings recognition
- The image of Pooler has gone from “Where is Pooler?” to a recognized independent destination
- Recreation is both external and internal
- Business interactions with non-residents

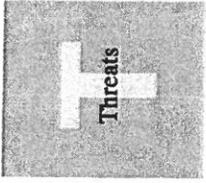
# Weaknesses

- No multi-purpose center
- No architectural review or Design Guidelines
- No plan for cultural resources
- Need more robust business community (higher paying jobs)
- Not enough single family housing compared to multi-family
- Need better drainage system
- Need better inter-governmental coordination
- Need additional parking for commercial areas
- No adoption of overlay district
- Need better connectivity between neighborhoods and districts
- Infrastructure and maintenance issues
- Traffic problems
- Need to integrated historic Pooler with “new Pooler”
- Need higher paying employers
- Need more diverse economy
- PUDs need to be connected
- Bad hotels (a few exceptions)
- Need wider right-of-ways in some areas
- Selected roads need improvement
- No documentation of history of Pooler
- Drainage problems
- Traffic congestion caused by Gulfstream Burning
- Waste and duplication of paperwork (City ordinances)
- Buying water from Savannah
- Not enough medical facilities
- Lack of reliable high-speed Internet connectivity
- Increased power outages
- Mental blur of Pooler/Savannah City limits
- Need better defined Development Standards
- Not enough walking opportunities (need more sidewalks)
- Too commercial
- Some issues with electric and cable
- Need to six-lane the Parkway
- Need cultural events outside of sports



# Opportunities

- Plan for cultural resources
  - Newer communities have club houses and are becoming more connected
- Revitalize “Old Pooler”\historic Pooler (adopt an overlay district)
  - Tanger Outlet brings recognition
  - Six-lane the Parkway
  - Business interactions with non-residents
  - Youth development
  - Rapid growth
- Add amenities
- Robust economy/prosperity
- Housing market
- Georgia Ports Authority
- Airport Commission
- The “bull’s eye” for new development – commercial and residential
- Change in growth



# Threats

- Change and growth
    - City in flux
    - Rural agriculture to urban
    - Becoming multi-cultural
    - Changing to Metro – not everyone stays connected
    - Transitory population - military
  - Drainage problems
  - Traffic congestions caused by Gulfstream
  - Burning
  - State agencies (unfunded mandates)
  - Buying water from Savannah
  - Right-of-way conflicts – roads
  - Neighboring jurisdictions
  - Airport Commission
  - Housing market
  - Georgia Ports Authority
  - Crime
- Cyber crime
  - Lack of medical facilities
  - Aging population
  - Vulnerable populations
  - Unreliable high-speed Internet
  - Increased power outages
  - Infrastructure and maintenance issues
  - Rapid growth
  - Traffic problems
  - Surrounding activity affects Pooler and Pooler provider services
  - Mental blur of Pooler/Savannah city limits
  - Vulnerable to weather events
  - Too commercial
    - Too many franchises/commercial chains









**TOWN OF THUNDERBOLT  
COMPREHENSIVE PLAN PUBLIC HEARING AND REGULAR MONTHLY MEETING  
WEDNESDAY, OCTOBER 14, 2015  
6:00 PM**

1. **Call to order** - Roll Call by presiding officer with invocation, followed by the Pledge of Allegiance
2. **Approval of Minutes from Previous Meeting:**  
September 9, 2015
3. **OLD BUSINESS:** Waste Pro representative Jen Ruzicka
4. **NEW BUSINESS:** a) **Petitioner:** Edward Drohan  
**Request:** 11.25 foot rear variance  
**Address:** 3220 Louis Street  
**Planning/Zoning Commission Vote: Motion failed, 2 yes, 3 no at the August 19, 2015 Meeting**  
  
b) **administration- Municipal Tax Report Represents September 2015 Collection**  
  

<b>Years 2009 - 2015</b>	
Collection -	\$ 289,452.56
Adjustments-	862.59
Outstanding-	\$403,832.24
5. **FINANCE DEPARTMENT:**
  - a) Monthly report
6. **TOWN ADMINISTRATOR'S REPORT:**  
(Attached and made a Part of Agenda)
7. **DEPARTMENT REPORTS:**
  - **Police / Municipal Court / Neighborhood Watch/ Fire - Robert Merriman, Public Safety Director**
  - **Public Works Department – Ray O'Neill, Public Works Manager**
  - **Thunderbolt Tree Commission – Wendy Hall, President**
  - **Planning/Zoning Commission – Jan Yarbrough, Chairperson**
8. **SPECIAL COMMITTEE REPORT:**
9. **MAYOR AND COUNCIL:**
10. **LEGAL REPORT:** Second Reading, of amendment to Article XV. Article X information only.

11. **ANNOUNCEMENTS:** Thunderbolt Night Out/Fire Department Open House Saturday, October 17, 2015 at the Fire House and Cesaroni Ball Park 10:00 AM to 2:00 PM  
Ginny Car Show/Trunk or Treat Saturday October 31, 2015 10:00 AM – 2:00 PM,  
American Legion Post 184  
Administrative Offices closed Wednesday, November 11 for Veteran's Day  
November Town Council meeting will be on Tuesday, November 10, 2015

12. **EXECUTIVE SESSION-** for Purpose of Legal and/or Personnel Concerns

13. **ADJOURNMENT:**







**TOWN OF THUNDERBOLT  
COMPREHENSIVE PLAN PUBLIC HEARING AND REGULAR MONTHLY MEETING  
WEDNESDAY, OCTOBER 14, 2015  
6:00 PM**

**1. Call to order -**

The Public Hearing for the Town of Thunderbolt's Comprehensive Plan was called to order by the presiding official, Mayor Goette.

**Attendance:** Mayor Beth Goette, Council Members: Dave Crenshaw, Al Henderson, Jr. and John Henry. Also in attendance were the Town Attorney, Charles Barrow as well as Town Staff: Town Administrator, Caroline Hankins, Clerk of Council, Kay McCafferty and Finance Clerk, Molly Sims.

Town Administrator, Hankins stated the public hearing is to inform the public that the Town is starting the process for the Comprehensive Plan update for the 2016-2026 Plan. Mrs. Hankins presented a power point outlining the Comprehensive Plan which is included as part of these minutes.

After completion of the power point Mrs. Hankins explained that the Town has been collaborating with Savannah State College students who are going door to door conducting a survey to reach out to residents that might not come to Town Hall. Town Administrator, Hankins offered a copy the survey to residents in the audience for their participation. She further stated two students from Savannah State are present here tonight.

One of the Savannah State students asked about tiny homes. Mrs. Hankins stated that tiny homes are usually mobile and are not permitted to be placed on a plotted lot in R-1 zoning. She further stated that the Town does not currently have an ordinance to address tiny homes but this is under review by the Planning & Zoning Commission. This same student also stated the survey showed resident's concerned about traffic. Town Administrator, Hankins asked Chief Merriman to address the traffic concerns. Chief Merriman stated that the intersection of East Victory Drive and Whatley Avenue has the highest accident occurrences.

Resident, Chad Faries asked who are the members of the Comprehensive Planning Stakeholder Group. Mrs. Hankins shared the list from the power point slides. Mr. Faries asked about establishing a ramp on the Wilmington River accessible from Honey Park for canoes and kayaks.

Town Building Inspector, Fischer inquired as to if there was an overlay plan for River Drive to eliminate spot zoning. Town Administrator, Hankins voiced that suggestions were received at the previous Comprehensive Planning meeting.

Several residents expressed concern over vehicles speeding on Mechanics and Furber and asked if speed bumps and/or radar were feasible for that area. Chief Merriman stated that LIDAR is used in that area and further stated that speed bumps could damage first responder vehicles. Another resident voiced concern about speeding in the 3200 block of Bannon Drive and the safety risk to residents posed by the speeding vehicles.

Mayor Goette thanked residents for attending the public hearing and invited all to stay for the Town Council meeting.

**At 6:30 the October Council meeting was called to order by the presiding official, Mayor Goette. Mayor Goette welcomed everyone to the meeting followed by the invocation and the Pledge of Allegiance recited in unison.**

**Attendance:** Mayor Beth Goette, Council Members: Kimberly Chappell-Stevens, Dave Crenshaw, Dr. Edward Drohan, Al Henderson, Jr., John Henry and Sherry Phillips. Also in attendance were the Town Attorney, Charles Barrow as well as Town Staff: Town Administrator, Caroline Hankins, Clerk of Council, Kay McCafferty, Finance Clerk, Molly Sims, Public Safety Director, Robert Merriman, Building Inspector, Bob Fischer and Public Works Manager, Ray O'Neill.

## **2. Approval of Minutes from the previous meeting:**

**Councilman Henry made a motion to approve the minutes from the September 9, 2015 Council meeting then seconded by Councilman Crenshaw. There being no further discussion, the motion carried unanimously.**

**3. Old Business:** Waste Pro representative Jen Ruzicka introduced the Town's points of contact, Randy Rogers, Waste Pro Division Manager and Scott Tucker, the route supervisor. Mr. Tucker will be following the truck to make sure everything is getting picked up; and he will verify that all track ease requests are being opened. Ms. Ruzicka announced that once the track ease request has been closed an email or phone call to the resident will follow. A resident recalled that at last month's meeting Ms. Ruzicka stated that recycle would be rejected if it gets wet. Ms. Ruzicka explained that because the recycle is mixed, wet items cannot be accepted and further stated that the 96 gallon recyclable cans would eliminate the items getting wet. Councilman Crenshaw asked to confirm the unnamed storm service provided by Waste Pro; that if debris is in the right of way it is Waste Pro's responsibility to pick it up. Ms. Ruzicka stated she will represent Waste Pro at the Town's event on Saturday and will have recycle information available.

## **4. New Business:**

- a) **Petitioner:** Edward Drohan  
**Request:** 11.25 foot rear variance  
**Address:** 3220 Louis Street

## **Planning/Zoning Commission Vote: Motion failed, 2 yes, 3 no at the August 19, 2015 Meeting**

Councilman Drohan thanked Council for the opportunity to present his variance request and recused himself from voting. Mr. Drohan presented a power point outlining his request for a rear yard setback variance at 3220 Louis Street.

Discussion began as Councilman Henry pointed out that the variance request is a 45% reduction in the required setback; he further stated that granting the variance sets precedence. Discussion continued at length concerning the ambiguity of the Town's ordinance, consistency with other municipalities; the origin of the 25 foot setback requirement; existing properties with odd property lines; and the deck on Mr. Drohan existing home in relation to his request. Town Administrator, Hankins voiced that there have been four variances granted over the past five years and cautioned Council that residents have been previously denied. Councilman Henry reminded all that the Planning & Zoning Commission turned down the request.

**Councilwoman Chappell-Stevens made a motion to approve the petitioner's request for a rear setback variance, seconded by Councilwoman Phillips. Councilmembers Henry and Chappell-Stevens voted against**

the setback request, Councilmembers Crenshaw, Henderson and Phillips voted in favor. The motion carried by majority rule.

b) Administration – Municipal Tax Report – Represents September 2015 Collections

Mayor Goette read aloud the figures from provided report

Years 2009 - 2015	
Collection -	\$ 289,452.56
Adjustments-	862.59
Outstanding-	\$403,832.24

**5. Finance Department:** Finance Clerk, Sims reported the second half of taxes have been billed and collections are coming in. Ms. Sims stated that a 2016 budget workshop will be held in conjunction with the November 10 Council meeting. Ms. Sims addressed moving money into the Money Market Contingency Fund to bring the balance to \$1million by year end. She further stated that the Town's six month emergency overhead fund is just over \$900,000 and asked if Council intends to earmark the Money Market funds for that purpose. Ms. Sims voiced she will have a firm number at the November Council meeting that the Town will save in interest by paying off the loans on a police vehicle and the jetter trailer.

**6. Town Administrator's Report:**

(Document attached and made a part of these minutes)

Town Administrator, Hankins reported the annual CRS renewal has been submitted. Mrs. Hankins stated she attended a City Manager's meeting with the surrounding municipalities and they are working on a regional water plan in regards to the EPD water reduction, County wide strategic plan update and the emergency 911 surcharge fees.

**Items Recommended for Council Action:**

There were no items the Town Administrator recommended for Council action.

**7. Department Reports:**

(All written department reports were addressed and made a part of these minutes)

**Police/Fire/Neighborhood Watch: Public Safety Director Robert Merriman** – Director Merriman reported arrests have been made in the July and August burglaries. Mr. Merriman stated the new police vehicle has arrived.

**Public Works Department: Public Works Manager, Raymond O'Neill** – Mr. O'Neill informed all that he will be meeting with DNR at Isle of Armstrong Friday, October 16 to discuss what legal ramifications might be as to what type of repairs the Town can do to the tide gates. Mr. O'Neill reported the tide gates worked during the last high tide. Councilman Crenshaw asked Mr. O'Neill to discuss the need for a master meter at the Regency Mobile Home Park. Mr. O'Neill reported some water and sewer lines are running under mobile homes and that the system is not in compliance because sewage lines are too close to the potable water. He further stated he has discussed the Town's liability with Attorney Barrow. Attorney Barrow recalled that the Town at one time owned the streets and the water and sewer lines were within the street right of way. The Town deeded the streets back to the mobile home park owners the Town retained an easement. The Town has legal easements through Prescriptive easement. Councilman Crenshaw asked that a motion be in place at next month's Council meeting to propose a master meter at the Regency Mobile Home Park.

Councilman Crenshaw asked about the progress in making the sidewalks ADA compliant. Mr. O'Neill stated the sidewalk project is scheduled to begin on November 18.

Sonny Longo, a resident at Isle of Armstrong, asked if the Town had contacted an engineering firm to participate with Mr. O'Neill in meeting with DNR. Mr. O'Neill stated he was looking at what opportunities for repair the DNR will allow before an engineering firm is involved.

Councilwoman Phillips asked Attorney Barrow if he had contacted Hussey, Gay and Bell regarding recourse on the flood gates project, pursuant to the discussion regarding this matter at last month's meeting. Neither Attorney Barrow nor Mr. O'Neill has contacted the engineering firm; Mr. Barrow suggested the Town approach Hussey, Gay and Bell after Mr. O'Neill meets with the DNR. Further discussion confirmed that the Isle of Armstrong tidal gates performance is inconsistent.

**Thunderbolt Tree Commission:** Chairperson, Wendy Hall was not present.

**Planning/Zoning Commission: Chairperson, Jan Yarbrough:** Chairperson Yarbrough had nothing to report. Mayor Goette reminded Council that the workshop with the Planning & Zoning Commission is next Wednesday, October 21.

**8. Special Committee Report:** Councilman Drohan noted the Water and Sewer Ad Hoc Committee met several times this month. He stated the 2 ½ mile sewer force main is at risk of failing and needs serious consideration. The Committee is looking at developing a Savannah, water only district from Falligant Avenue to River Drive to help the Town in the EPD water withdrawal limit. Councilman Drohan read the following motion: 1) As a central component of this pending capital projects reports, the previously approved motion to create a 2, 5 and 10 year projected construction goals for the Town's water and sewer system shall be formulated and estimates made for the individual and aggregate costs of construction year by year, the estimates for fiscal year 2016 to be completed prior to the end of the fiscal year 2015 and the full capital project estimates to be completed by March 31, 2016. 2) The fee system for the water and sewer system shall be adjusted to allow for the full funding of each year's anticipated projects. 3) As a part of each year's budget the Town Council will assess the dollar amount of SPLOST and other funding sources, including grants, borrowed funds and other tax resources that are to be set aside specifically toward supplementing the full funding of that year's projects. 4) The fee system shall be adjusted downward to reflect that total anticipated external funding and that adjusted level shall be reflected in the billings to the users. 5) This projected capital plan shall be revisited bi-annually to assess project achievement, funding adjustments and necessary changes in the fee structure. 6) Monthly billings shall reflect the impact of SPLOST and other funding sources on each customer's bill in order to provide the customers with a transparent accounting of the cost of the services that they are receiving and the relative value of SPLOST and other funding sources towards reducing the costs of those services.

**Councilman Crenshaw made a motion to table Councilman Drohan's motion seconded by Councilwoman Phillips. There being no further discussion, the motion to table carried unanimously.**

**9. Mayor and Council:** Mayor Goette asked Council Members if they had anything to discuss; there were no further reports.

**10. Legal Report: Town Attorney, Charlie Barrow:** Attorney Barrow introduced the second reading and adoption of the proposal to Amendment XV of the Zoning Ordinances by adding to paragraph J a subparagraph (f) to read as follows:

(f) Exception: An applicant requesting development of a single family home on an existing lot that is properly zoned, after meeting with staff and presenting the requirements of subparagraph (b) and (c) hereinabove,

that received staff approval of the site plan as presented, does not need further review by the Zoning Commission or the Mayor and Council and the applicant may then apply for the necessary permits to proceed with building.

**Councilwoman Phillips made a motion to accept the second reading and adoption of the amendment to Article XV, seconded by Councilman Drohan. There being no further discussion, the motion carried unanimously.**

Attorney Barrow read the first reading for proposed amendment to Chapter 4, Section 4.205C to clarify penalties for delinquent water accounts and Town residents being on the water cutoff list.

Water bills shall be due and payable as shown on the bill. If a bill is not paid by the water cutoff date shown on the bill the account will be placed on water cut off list. Once an account has been listed on the water cut-off list, there shall be an additional fee owed to reinstate the customer as a customer in good standing. The additional fee shall be known as a reconnection fee and shall be \$25 for the first reconnection fee, \$75 for the second reconnection fee and \$125 for the third reconnection fee or any subsequent reconnection fee. The reconnection fee shall be imposed once the account is placed on the water cut off list regardless of whether the water has actually been cut off. Once the reconnection fee is paid, the customer will be considered in good standing and water service shall be reconnected, if it had actually been disconnected. If disconnected, the water shall be reconnected within 24 hours after the appropriate fee has been paid, unless the reconnection fee is paid on a Friday or on a day for a legal holiday, in which event, the Town will have the next business day to make the physical reconnection of the water.

**11. Announcements:** Mayor Goette read the following announcements:

Fire Safety Festival in conjunction with the Fire Department's Open House event will be held on Saturday, October 17, 2015 at the Fire House and Cesaroni Ball Park.

Ginny fund raiser Car Show/Trunk or Treat will be held Saturday, October 31, 2015 from 10:00 AM – 2:00 PM at the American Legion Post 184 on Rowland Ave.

**12. Executive Session:** Mayor Goette asked for a motion and a second to adjourn to Executive Session for the purpose to discuss legal and/or personnel matters.

**Councilman Drohan made a motion to adjourn into Executive Session for the purpose to discuss legal and/or personnel matters, seconded by Councilwoman Phillips. The motion carried unanimously.**

Mayor Goette asked for a motion and a second to reconvene into Open Session.

**Councilwoman Phillips motioned to reconvene into Open Session and was seconded by Councilman Henderson. The motion carried unanimously.**

**13. Adjournment:**

Mayor Goette requested a motion and a second to adjourn the meeting.

**A motion tendered by Councilwoman Phillips to adjourn the meeting and was seconded by Councilman Henderson. Motion carried unanimously.**

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Beth E. Goette  
Mayor

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Kay M. McCafferty  
Clerk of Council





# Thunderbolt Comprehensive Plan Update Citizens Advisory Committee Meeting #1 July 29 2015 Minutes

## Opening Remarks -Lupita McClenning, Planning and Government Services Director – Coastal Regional Commission (CRC)

Lupita explained that Teresa Townsend, CRC's Administrative Assistant, will compose the minutes of this meeting, gather the feedback, and create a Constant Contact correspondence summarizing the meeting and next steps to take.

She told the group she was going to leave it open for about 10 minutes for remarks from constituents and then move into an exercise that was adopted by the Harvard Business Review. She asked if there were any comments relating to planning, economic development, historic preservations, trends that committee members are seeing, etc.

## Open Discussion with Group to Request Feedback on What they are Seeking from their Involvement in this Process

### **Comments and Questions from the Committee:**

- Mixed Use becoming more of a priority – certain areas in the Town of Thunderbolt such as River Drive and Victory Drive could use mixed-use to develop vacant properties.
- Old Tybee Road (Mechanics Avenue) needs to be beautified; there is a median.
- Thunderbolt is somewhat known for its haphazard development over the past 100 years; do we want to continue on this pattern or develop a more integrated approach?
- Caroline explained that this is a planning process – Thunderbolt has an old 2008 draft that needs to be updated. This update process covers several different topics such as: identifying areas that need attention, development patterns, land use and issues and opportunities. Basically, staff uses the Comp Plan as a guide for planning initiatives and moving forward. The plan is drafted based on what the residents of Thunderbolt want to see.
- Jackie reiterated what Caroline said and stated that the Comprehensive Plan is meant to be a vision for your individual specific community; it is what the residents, homeowners, businesses see for the next 5-10 years. Do you want to keep things the same or make changes relating to connectivity, parks and recreation, housing, roads, etc.? The goals, strategies and individual steps that come out of this process will be crucial for the town council as recommendations, development, or whatever it may be. The county got a grant and is working on a Greenway master plan and Thunderbolt is at the top of the list per request from the State to look at, specifically, the Placentia Canal and that area to see if there are opportunities to multi use pedestrian access, hiking trails, etc. and connect to other sources. It is important to look at the process from a bigger scale (what you want the vision to be) but also to get to the nitty-gritty of how you need to get there. What are the individual steps that need to be taken?
- One of the residents mentioned the biggest thing that hurt Thunderbolt was condos and providing sewage. When Thunderbolt went away from well and septic systems and put in water and sewer it could have been one of the worst things Thunderbolt put in. Some people wanted it; we have it now. Does Isle of Armstrong want sewage and if so, why not? "We are paying on this side of the river and you don't want it on that side of the river." The representatives of Isle of Armstrong are not in favor of installing sewer lines.
- There may be an issue when it comes to a weight limit on trucks. Thunderbolt seems to be a cut-through and our streets are totally torn up most of the time. Maybe there is something we can do to keep the bigger trucks from coming through.
- Substandard lots (nonconforming) – we have a lot of these. Is there a right way to handle this? It comes up frequently. Is there a one-size fits all? It has been handled on a case-by-case basis. Should we develop some standard or sub-standard lots? Years ago the lots were smaller and then they increased the lot widths to a larger 60

feet. Many of the sub-standard lots are 50 feet; Lupita mentioned that Fernandina has 50-foot wide lots. She recommended that zoning be changed to allow 50-foot lots. Lupita also stated that the CRC could look at this through GIS and mapping services and see how many lots fall under 60-feet and see if it would be enough to warrant a zoning change.

- Someone in Thunderbolt recently wanted to create some smaller lots so she could develop. For future development, guidance is needed.
- The Comprehensive Plan is simply a plan and a vision to move forward.
- The Short-Term Work Program (a part of the Comp Plan) is a document that lays out, every year, over a 5-year period, goals, who is going to be in charge, where the funding is going to come from, and a report of accomplishments. The report of accomplishments is an annual requirement of the Coastal Regional Commission and local government.
- Another topic we should discuss is the vision of River Drive (our main corridor/gateway). The park across the street from Town Hall and other areas should not be excluded from the beautification process. Some areas are less-traffic areas of Thunderbolt and they are looking at sidewalks and bike trails. In some areas, more trees, sidewalks, traffic-calming and amenities would be nice.
- Thunderbolt has an aged infrastructure. Before we can really start planning things, we need to address this. This is a strong component of economic development. This affects residents and businesses.

### **Needs and Opportunities through Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis**

The SWOT Analysis is an effective exercise that was adopted by Smart Grove and started by the Harvard Business Review. The reason that this is an effective exercise is because it gets right to the heart of the matter with a simple yes or no to the questions. This exercise included the following question: "What do you like about Thunderbolt?" The answers to this question are what we want to preserve about Thunderbolt. The committee came up with items to fit these 4 pieces of the exercise: preserve, achieve, avoid and eliminate.

#### **Achieve (Do you want it? Yes. Do you have it? No)**

- Upgrade infrastructure (water, sewer, streets, Stormwater utility)
- Mixed Use (upstairs residential, downstairs business)
- Financial Stability (Tax Base)
- Historic Preservation
- Bed and Breakfast
- Destination
- Examine zoning regulations
- Traffic calming on Bonaventure Road
- Bike/ped
- Greenspace

#### **Preserve (Do you want it? Yes. Do you have it? Yes)**

- Small town/village atmosphere
- Convenient place to live
- Accessible to region
- Safe place to live
- Access to water/views/nature
- Tree canopy/ordinance

#### **Avoid (Do you want it? No. Do you have it? No.)**

- Hotels/condos
- Tiny homes
- Dysfunctional zoning patterns
- Strip malls
- Losing Elementary School
- Traffic

**Eliminate (Do you want it? No. Do you have it? Yes)**

- Traffic
- Mobile home park
- Incompatible redevelopment

**The next exercise was Analyzing External Environment: Looking Outward – How it Impacts Thunderbolt.** There are 4 parts to analyze: Economic, Political, Social and Technologies (PEST). The group divided into groups of 4 to discuss and report back how these components impact Thunderbolt.

**Political:**

- SPLOST
- Town Council
- Highway 80 uses
- Chatham School Board
- DOT

**Economic:**

- Thunderbolt Marine
- Land locked

**Social:**

- Losing elementary and middle schools
- Aging population

**Technologies:**

- Access to local Government

The final exercise was *Analyzing the Internal Environment: Looking Forward*

**Analyzing the Internal Environment: Looking Inward**

1. What does Thunderbolt know about itself?
  - a. It's small but we like that!
  - b. Good food
  - c. Marine industry
  - d. Friendly
2. What defines the culture of Thunderbolt?

- a. Waterfront village
  - b. Bedroom community
  - c. Affordable housing
  - d. Safe, friendly
  - e. Low crime
3. What is the image of Thunderbolt in the eyes of stakeholders?
    - a. 21% of county population
    - b. Water problems persist
    - c. Residents like Police/Fire/EMS
    - d. Close-knit community
    - e. Responsive/accountable/transparent
  4. What is the City's capacity as it relates to complex systems of sanitation, utilities, land usage, housing and transportation?
    - a. Need to overcome inertia
    - b. Water/sewer/storm – limited
    - c. Sanitation/recycling – explore options
  5. What are the interactions between people and business, people and recreation, and how is the City managing urban growth?
    - a. City management – internal staff meetings
    - b. Responsible elected officials
    - c. Examine zoning and Comp Plan as to how it relates to future growth

This exercise will be left open for one week; we will send a reminder. Comments can be emailed to Teresa Townsend – [ttownsend@crc.ga.gov](mailto:ttownsend@crc.ga.gov)

**Next Steps/Meeting**

Review of SWOT Summary by Steering Committee in 3-4 weeks

Citizen Advisory Meeting #2

Sharing of Information via Constant Contact - Ongoing



**Thunderbolt Comprehensive Plan Update  
Citizens Advisory Committee Meeting  
January 27, 2016  
Minutes**

**Opening Remarks –Bill Compton- Senior Planner – Coastal Regional Commission (CRC)**

Bill Compton opened the meeting by asking committee members to use the sign in sheet to record their attendance and to update any contact information that needs to be updated. During this meeting, the SWOT Analysis that was completed in June 2015 will be reviewed, mapping will be discussed and we will work on the Vision Statement.

Bill asked that since it had been a while since the last meeting, for everyone to briefly introduce themselves:

1. John Henry – Council member
2. Dave Crenshaw – Council member
3. Mike Teeple – resident
4. Ray O’Neal – Public Works
5. Caroline Hankins – Town Administrator
6. Patty Rountree – resident
7. Linda Buttersworth-resident
8. Tara Jennings – Coastal GA Indicator Coalition

Others present (may have arrived later) included:

1. Ed Drohan – Council Member
2. Beth Goette – Mayor
3. Tom Thomson – MPC Director
4. Linda Morgan - resident

Coastal Regional Commission (CRC) is tasked with assisting the City of Thunderbolt in updating the Comprehensive Plan which DCA requires to be done periodically and to assure it meets their requirements. Having the Comp Plan approved by DCA allows the City to maintain its qualified local government status and to apply for funds through the State of Georgia. Bill asked if anyone had questions about the process.

**Questions:**

Question about sewage:

Answer: Sewer and water improvements would have to go into your capital improvements plan and there are some funding sources depending on the cost of the project. The State Community Block Grant Program offers some opportunities but it is tied to income levels of residents and Thunderbolt may not qualify because it is usually for low to moderate-low income levels. Another source is the Economic Development Administration at the federal level but that has to be tied to providing infrastructure to an industry that is going to provide so many jobs. GEPA offers low interest loans to communities.

## **Needs and Opportunities through Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis**

The SWOT Analysis is an effective exercise that was adopted by Smart Grove and started by the Harvard Business Review. The reason that this is an effective exercise is because it gets right to the heart of the matter with a simple yes or no to the questions. This exercise included the following question: "What do you like about Thunderbolt?" The answers to this question are what we want to preserve about Thunderbolt.

When the SWOT Analysis was conducted the following items were discussed:

### **Achieve (Do you want it? Yes. Do you have it? No)**

- Upgrade infrastructure (water, sewer, streets, Stormwater utility)
- Mixed Use (upstairs residential, downstairs business)
- Financial Stability (Tax Base)
- Historic Preservation
- Bed and Breakfast
- Destination
- Examine zoning regulations
- Traffic calming on Bonaventure Road
- Bike/Ped
- Greenspace

Comments from Bill about the above:

1. Financial stability clears ties into infrastructure.
2. Historic preservation – I think we all recognize Thunderbolt as one of the most historic communities in Chatham County.
3. The Bed and Breakfast could certainly be a low-impact economic development opportunity. A lot of people dock at the Marina and sometimes stay for 3-4 days while they are having ships repaired. A Bed and Breakfast would capture that captive audience.
4. Marketing and branding could be part of working on the Vision Statement and that would certainly help boost Thunderbolt as a destination.
5. The CRC can assist with updating zoning regulations as a separate project from the Comp Plan. The CRC is currently working on updating the Zoning Ordinance for Bryan County and would be happy to assist Thunderbolt as well.
6. Bike and Ped facilities are certainly something the community would like to achieve. A group at Savannah State did a community survey and according to the survey, that was clearly what people wanted – sidewalks and bike paths.

### **Preserve (Do you want it? Yes. Do you have it? Yes)**

- Small town/village atmosphere
- Convenient place to live
- Accessible to region
- Safe place to live
- Access to water/views/nature
- Tree canopy/ordinance

**Avoid (Do you want it? No. Do you have it? No.)**

- Hotels/condos
- Tiny homes
- Dysfunctional zoning patterns
- Strip malls
- Losing Elementary School
- Traffic

**Comments from Bill and Committee members about Avoid topics:**

1. Bill - Not sure what the objection was to tiny homes. If you have space on an existing lot and can add to your housing mixture and can offer affordable housing for seniors and students that is good.
2. An example of an objection to tiny houses is an RV parked in someone's front yard and being lived in.
3. Bill – If we do zoning codes updates in the future, if the tiny code issue is something you want to look at, we could say we don't like the idea of RVs being parked in someone's front yard, but no objection to them parking it in the back yard and on a foundation with steps.
4. Individual stores are fine, not strip malls. Strip malls involve more traffic.

**Eliminate (Do you want it? No. Do you have it? Yes)**

- Traffic
- Mobile home park
- Incompatible redevelopment

**Strengths**

- Small town/village atmosphere
- Accessible to region
- Safe place to live
- Access to water/views/nature
- Tree canopy/ordinance
- "It's small but we like that!"
- Good food
- Marine industry
- Friendly
- Waterfront village
- 21% of county population
- Bedroom community
- Affordable housing
- Safe place to live
- Low crime
- Residents like the Police/Fire/EMS
- Close-knit community
- Responsive/accountable/transparent
- Thunderbolt Marine

- SPLOST
- Town Council are engaged

Comments:

1. Question: Where does the 21% of the county population come from? Answer: That must be an error – will check into that. 2.1% might be the correct population figure.

**Weaknesses**

- Mixed use – areas could utilize vacant properties infill
- Haphazard development over the past 200 years
- Cut-through paths for trucks (some streets torn up)
- Substandard lots
- Aged infrastructure
- Financial stability (tax base)
- Zoning regulations
- Bike/Ped
- Greenspace
- Traffic
- Mobile home park
- Incompatible redevelopment
- Water problems persist
- Inertia
- Water/sewer/storm – limited
- Land locked

Comments

1. The Reverse 911 calls about water outages are a good service that the town offers.

**Opportunities**

- Old Tybee Road (Mechanics Ave. needs to be beautified)
- Develop more integrated approach to Thunderbolt’s haphazard development
- County grant – Greenway Master Plan (Thunderbolt at top of list)
- Zoning updates re: standard/substandard lots
- Update infrastructure
- Some areas of Thunderbolt need more sidewalks, trees and bike trails
- Explore sanitation/recycling options
- Examine zoning and Comp Plan as it relates to future growth

### Threats:

- Hotels /condos
- Tiny homes
- Dysfunctional zoning patterns
- Strip malls
- Losing elementary and middle schools
- Traffic
- Aging populations
- Condos and sewer system
- SPLOST (if it goes away)
- Highway 80 usage (traffic)
- Mixed use – certain areas could utilize vacant properties infill
- Sewage system
- Streets being torn up due to being a cut through
- Substandard lots
- Aged infrastructure
- Financial stability

### Comments about the SWOT Analysis:

1. One of the council members might address the Bed and Breakfast idea. Thunderbolt had a couple of them in the past but there was some discussion that it might not have been a good thing. The cost and maintenance to keep it up – the Town does not have the capacity to do that.
2. The Council did discuss the Bed and Breakfast idea. Ed and Dave went and visited one of the former Bed and Breakfasts. One of the concerns is the liabilities the Town would take on. One concern is if a B and B burned down or someone got severely injured. Also, if we tax them, we are liable to make sure they keep the books correctly.
3. Instead of taxing a bed and breakfast, maybe we should increase the annual license fee so that we don't have the responsibility of making sure the books are kept correctly. You could avoid liability by getting certain forms signed. We were thinking about sending in the ordinance and grandfathering the two that we have.
4. The State doesn't make us tax bed and breakfasts. We could leave that out of the ordinance or put it in –it would be up to the Town of Thunderbolt. The bed and breakfasts have to pay taxes but if we don't add it to the ordinance, we are not responsible for collecting tax.
5. We might want to limit the number of bed and breakfasts we have – we are a small town.
6. We don't want the Bed and Breakfast to turn into a boarding house.

### Developing a Vision Statement:

There are mission statements and vision statements. An example of a mission statement is “what is wrong with the World and how do you intend of fixing it?” A vision statement is what the world will look like after you finish changing it. What is your vision for Thunderbolt? It should:

- Align citizens
- Facilitate goal setting and planning
- Unleash energy and excitement
- Embody the community's core beliefs

Your Mission Statement, which often follows your Vision Statement, defines activities in greater detail and supports what the Town wants to do in achieving its mission.

At this point in the meeting, Bill said he brought a flip chart with him and the group could work on developing the Vision Statement.

The items that came out of the SWOT Analysis begin to have some of the elements of the Vision Statement.

Comments:

1. At the Planning and Zoning meeting last Wednesday night, the room was full of people that wanted the small town atmosphere and didn't want a big apartment complex to come to the town.
2. Maybe we could start with "We envision the Town of Thunderbolt having a small town atmosphere."
3. "We envision Thunderbolt maintaining the small town community atmosphere that preserves its maritime heritage and natural resources."
4. We should be able to recognize who we are in 10 words.
5. "I think what we should do is take what we have so far for the Vision Statement (see #3), give it to the Mayor and Caroline and let them develop it into a concise statement and send it back to Bill."
6. "The Town of Thunderbolt protects, maintains and enhances our sense of community, historical heritage and maritime environment."

Bill - The next topic was mapping requirements. He brought six sets of maps with him. The CRC's GIS Dept. created some maps for Thunderbolt. DCA requires that these maps be updated and the data CRC has right now is about five years old. The CRC needs the committee's input on zoning or other changes. The maps show some of the basics: county and city limit lines and transportation.

We have a base map that lists some of the main facilities (libraries, Police, etc.). If there is anything you want to include on the base map, please let Bill know. Please review zoning map and make sure it is correct. Please verify any areas of critical areas, historic resources, and essential facilities on the base map. The Character Area map is required for the Comp Plan. Russell Oliver, Senior Planner II, will take pictures involved with the character areas to be a part of the Comp Plan. The CRC will also deliver a Future Development Map; zoning changes will need to be verified. The CRC needs committee members to review the maps and consider any changes that have occurred. Mark up the maps and report the changes, ask questions, make sure everything is correct. Lisa Fulton, Senior Planner/GIS Analyst will be making requested changes to the maps.

Caroline will let Bill know about two weeks in advance of the date of the next meeting. Bill said we certainly will be getting back together sooner than we did between the first meeting and this one because we have to get all of this wrapped up in October; October is DCA's deadline. Once the Plan is drafted, a second public hearing will need to be scheduled and take place. The public hearing is an opportunity for the public to comment on the draft Comp

Plan and give final feedback. There are some transmittal procedures and then it will be transmitted to DCA and approved.

**Comments and Questions from Committee Members:**

- Going back to the Mission Statement, what about the responsibility of the Thunderbolt Government to provide services to the citizens at reasonable costs and protect their interests? The Comp Plan is more what the Government needs to provide as we go forward. The Plan tends to be procedural as in checking the box. (Bill answered that if you don't have a Comp Plan that has been accepted by the Department of Community Affairs, you lose your qualified local government status and that prohibits you from getting certain State funding. The Comp Plan, Vision Statement and Mission Statement should all be used as a guide for your community. If you put in your Comp Plan, as an example, that you wanted to do sidewalks and you didn't, you are not going to get in trouble; however, in the Report of Accomplishments you have to state that you didn't do it and why. Some common reasons for not accomplishing a goal such as sidewalks would be lack of money or something else took priority.)
- To reiterate, the Comp Plan is the vision document for the community, but the reason public meetings and public input are required is so the Comp Plan is not just another local government document. The community plays a role in the process. The Comp Plan should be used consistently when we are making day-to-day decisions.
- Boil it down to the really important things and focus on the things you think you can accomplish. Ideally, when you are working on the budget, you should look at the Comp Plan items and budget for those items. You don't want to have too many things on your list; keep it narrow.
- Bill – planning and zoning must be done in accordance with the Comp Plan.

**Next Steps/Meeting**

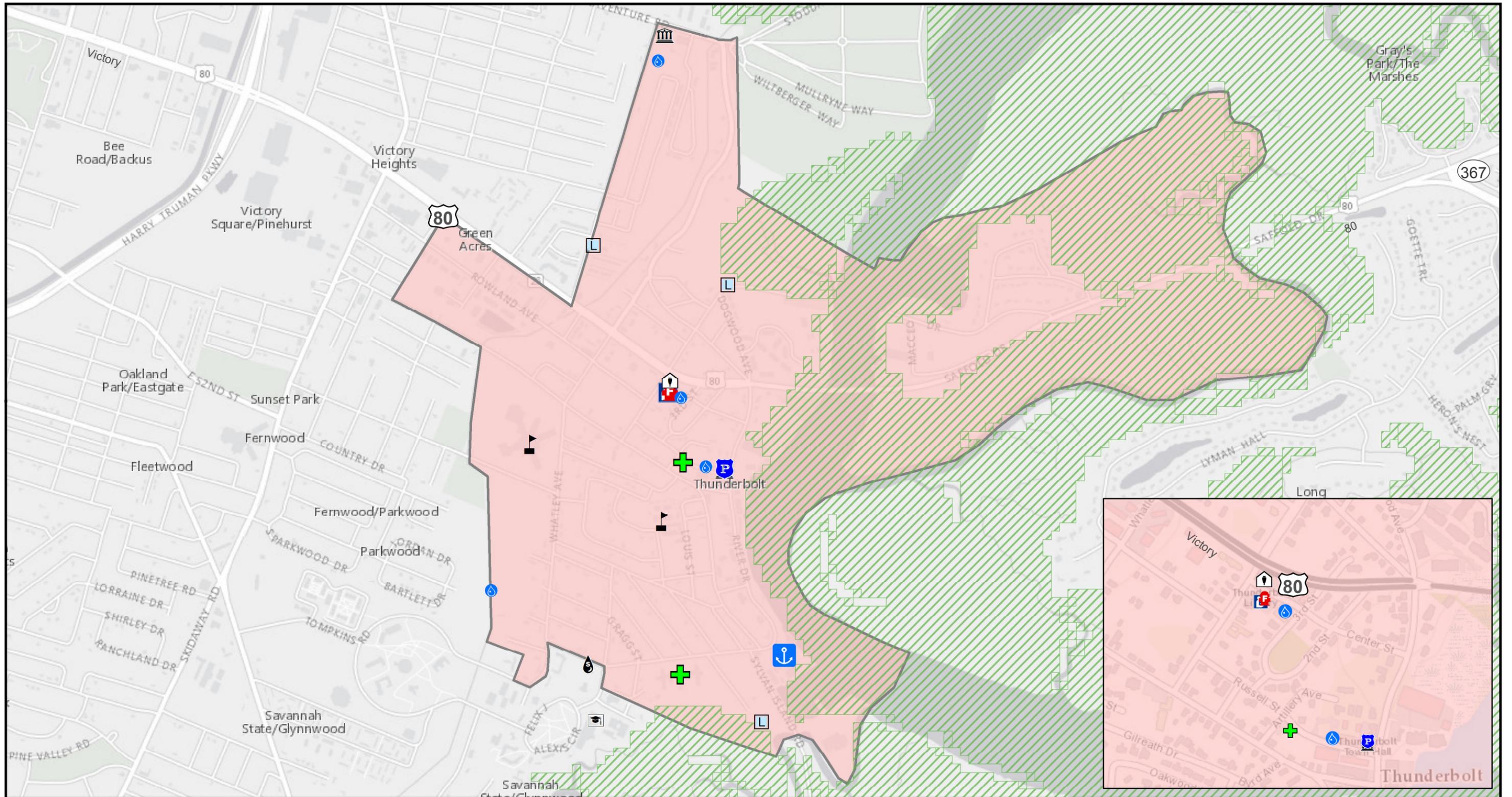
Begin drafting some of the Comp Plan elements.

Hold another Public Hearing.

Sharing of Information via Constant Contact – Ongoing.

## **MAPS**

- **BASE MAP SHOWING CRITICAL FACILITIES**
- **CHARACTER AREAS MAP**
- **ZONING MAP**
- **FUTURE LAND USE MAP**
- **REGIONALLY IMPORTANT RESOURCES MAP**
- **FEMA DIGITAL FLOOD INSURANCE RATE MAP (DFIRM)  
2016**
- **STORM SURGE MAP**

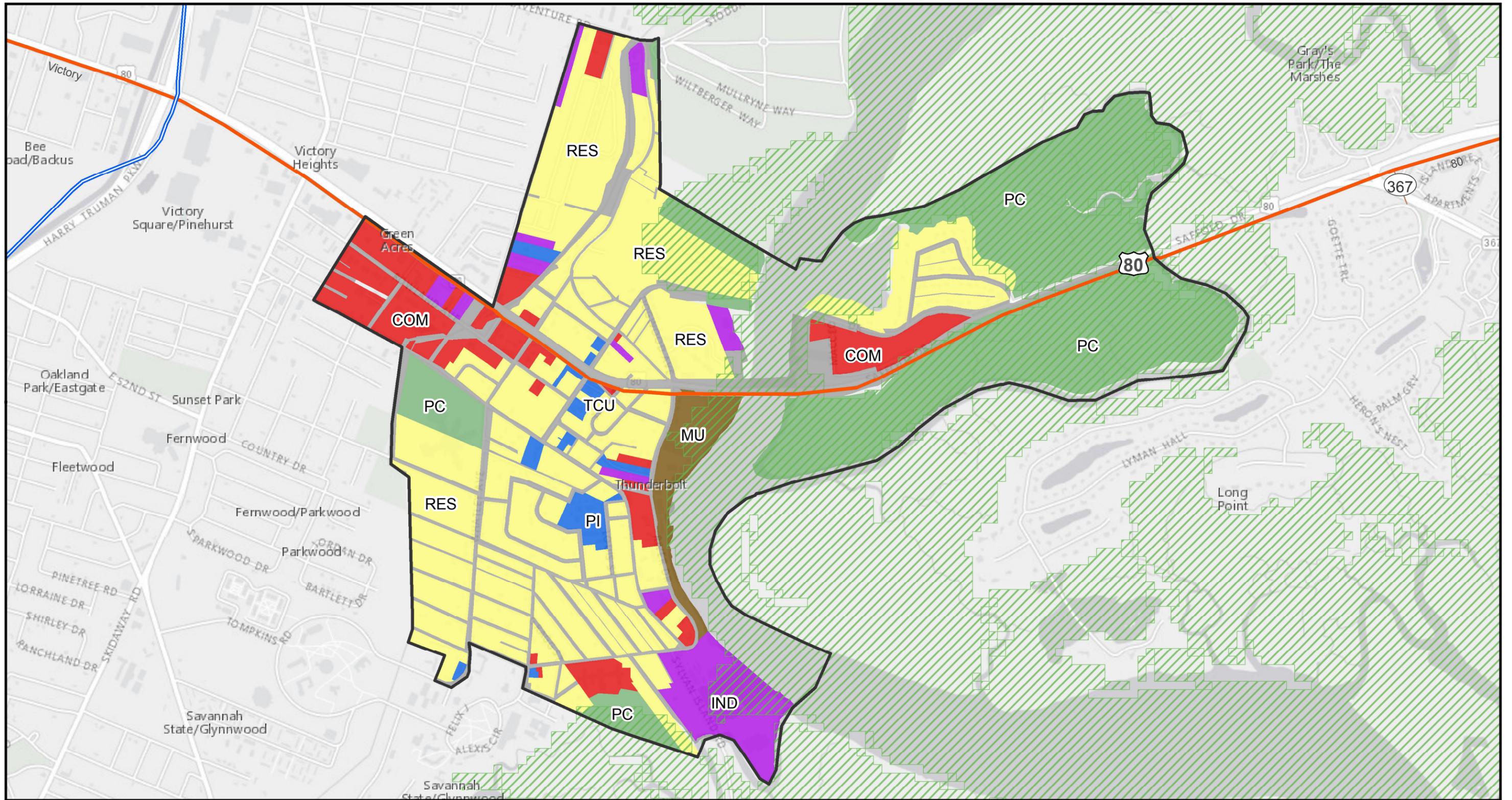


### Thunderbolt: Critical Facilities Base Map

1:16,000  
 Date: 7/29/2016  
 Author: Lisa Fulton, GISP  
 Published By: Coastal Regional Commission of Georgia

- |                     |                 |                          |                   |                      |
|---------------------|-----------------|--------------------------|-------------------|----------------------|
| Critical Facilities | Senior Center   | Thunderbolt Lift Station | Museum            | Sewer Utility        |
| School              | Library         | Marine                   | Police Department | Water Utility        |
| College/University  | Fire Department | Municipal Complex        | Public Works      | Green Infrastructure |

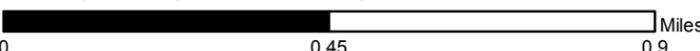


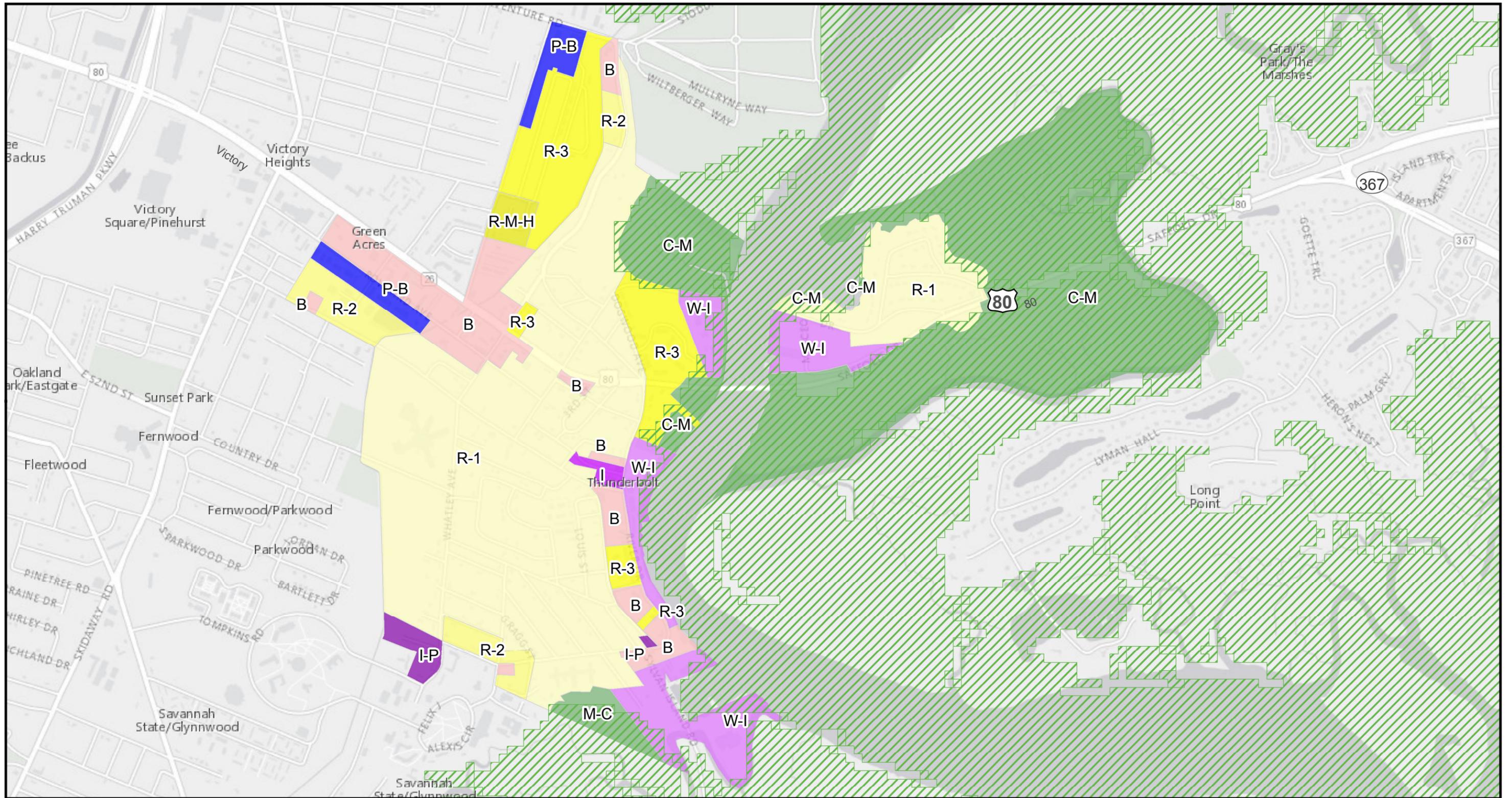


### Thunderbolt: Character Areas

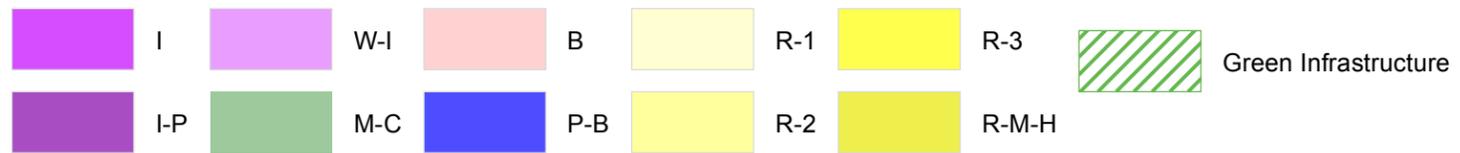
- |  |   |  |
|--|---|--|
|  Commercial            |  Parks/Recreation/Conservation |  Transportation/Communication/Utilities |
|  Industrial            |  Public/Institutional          |  Green Infrastructure                   |
|  Mixed Use/Town Center |  Traditional Neighborhood      |  |

1:16,000  
 Date: 7/29/2016  
 Author: Lisa Fulton, GISP  
 Published By: Coastal Regional Commission of Georgia

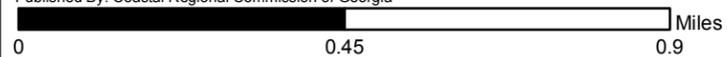



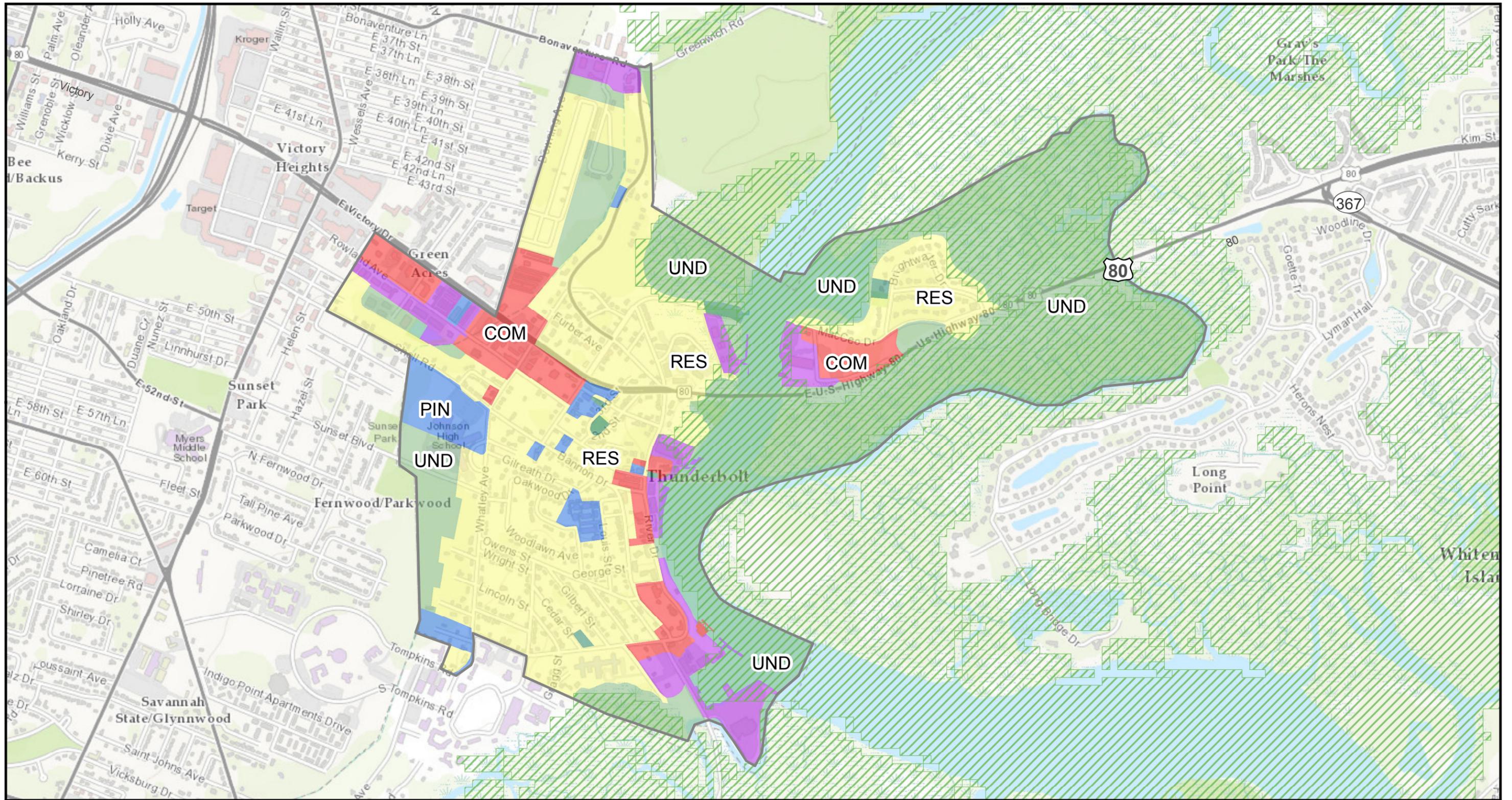



### Town of Thunderbolt: Zoning



1:16,000  
 Date: 7/29/2016  
 Author: Lisa Fulton, GISP  
 Published By: Coastal Regional Commission of Georgia

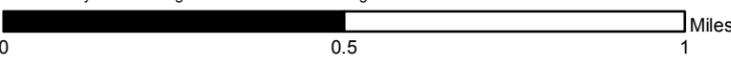


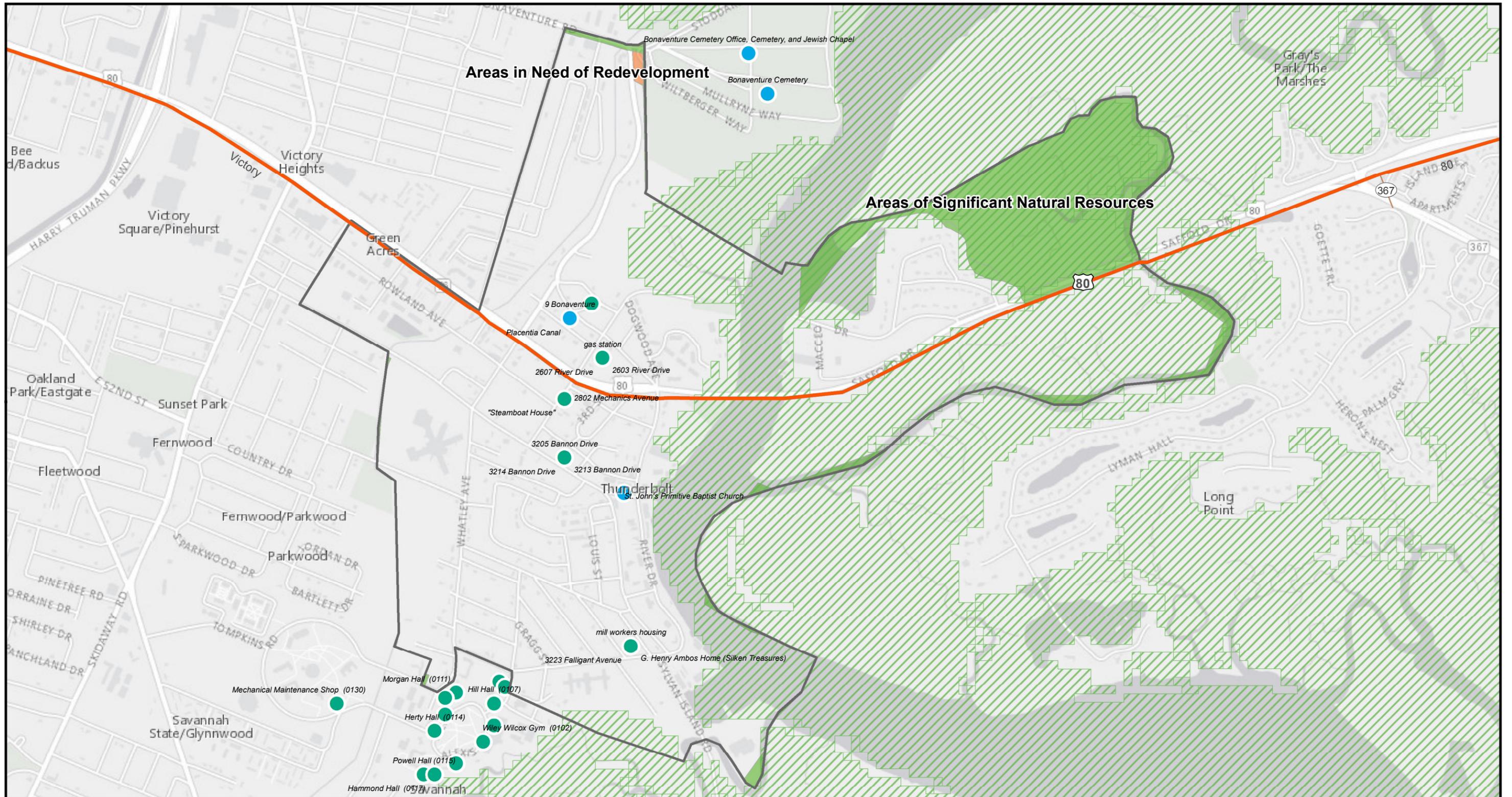



### Thunderbolt: Future Land Use

- |   |                      |   |                   |   |                      |
|---|----------------------|---|-------------------|---|----------------------|
|  | Commercial           |  | Residential       |  | Green Infrastructure |
|  | Industrial           |  | Public Recreation |   |                      |
|  | Public Institutional |  | Undeveloped       |   |                      |

1:17,000  
 Date: 7/29/2016  
 Author: Lisa Fulton, GISP  
 Published By: Coastal Regional Commission of Georgia

**Areas in Need of Redevelopment**

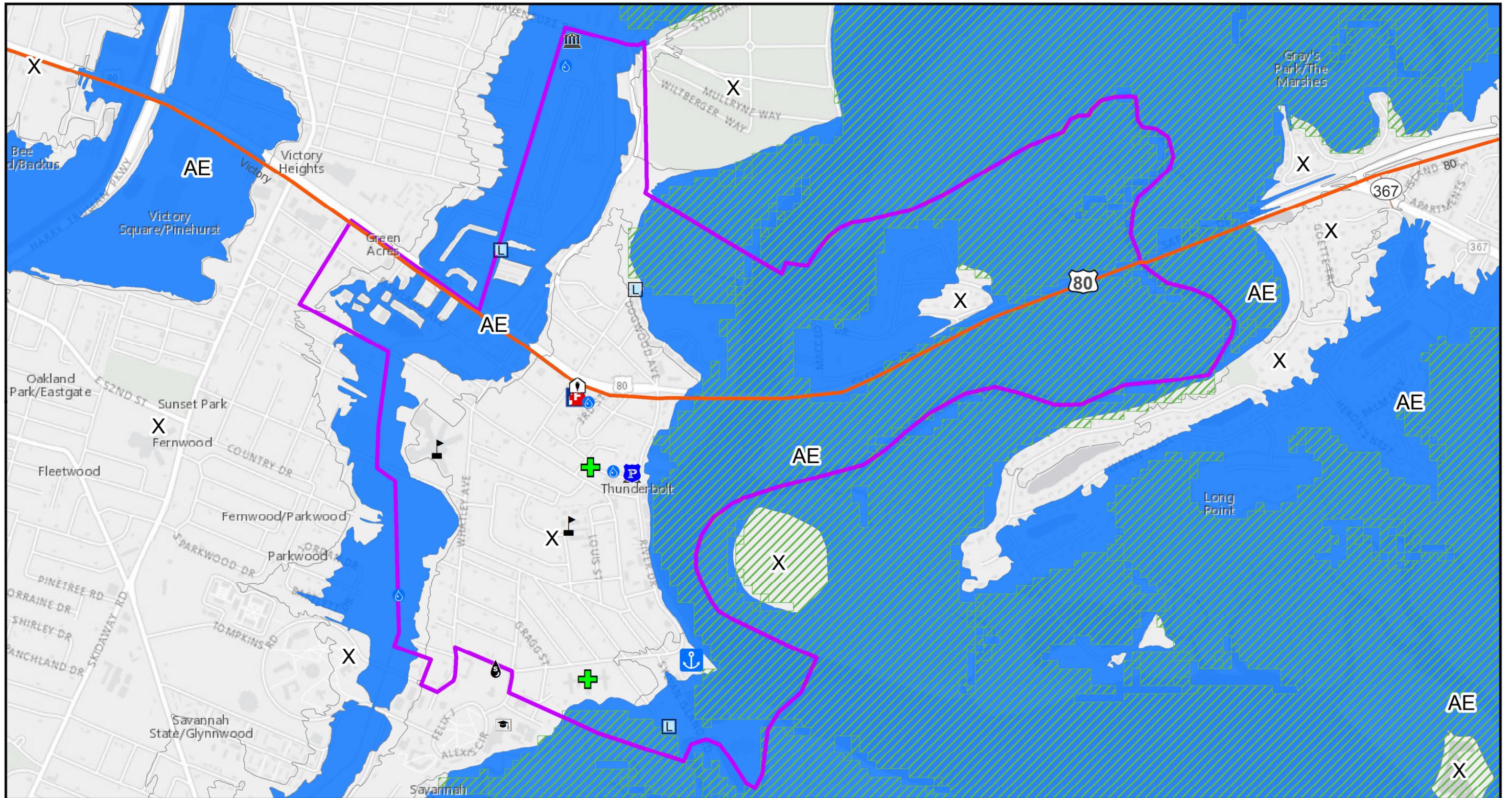
**Areas of Significant Natural Resources**

## Thunderbolt: Regional Important Resources

1:16,000  
 Date: 7/29/2016  
 Author: Lisa Fulton, GISP  
 Published By: Coastal Regional Commission of Georgia

Historic Resources	Areas Requiring Special Attention	
<span style="color: purple;">●</span> 1400s	<span style="background-color: lightblue; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Large Abandoned Structures or Sites	<span style="background-color: pink; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Areas of Rapid Development
<span style="color: blue;">●</span> 1700s	<span style="background-color: lightgreen; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Areas of Significant Natural Resources	<span style="background-color: magenta; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Areas of Significant Infill
<span style="color: cyan;">●</span> 1800s	<span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Areas in Need of Infrastructure	<span style="background-color: lightgreen; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Green Infrastructure
<span style="color: teal;">●</span> 1900s	<span style="background-color: orange; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Areas in Need of Redevelopment	

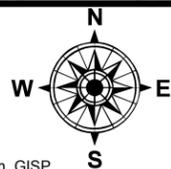




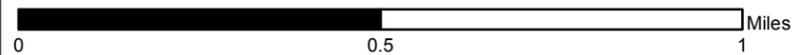
### FEMA Digital Flood Insurance Rate Map (DFIRM) 2016

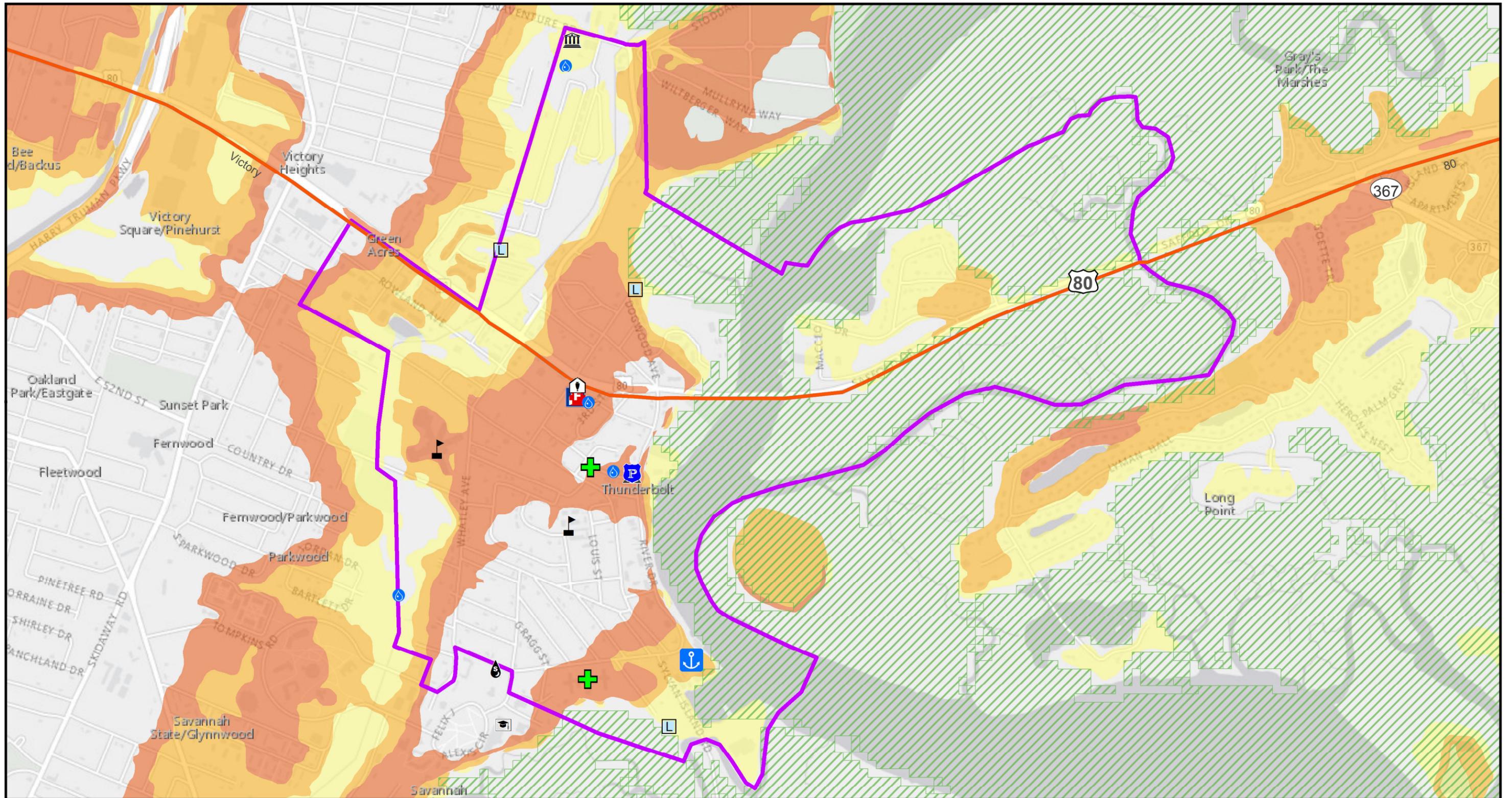
#### City of Thunderbolt

- X: Outside SFHA
- VE: 1% Velocity Hazard
- A: 1% Floodplain
- Green Infrastructure
- AE: 1% Floodplain BFE



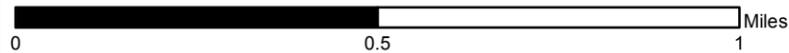
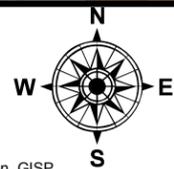
1:16,000  
 Date: 7/29/2016  
 Author: Lisa Fulton, GISP  
 Published By: Coastal Regional Commission of Georgia





### Thunderbolt: Storm Surge

1:16,000  
 Date: 7/29/2016  
 Author: Lisa Fulton, GISP  
 Published By: Coastal Regional Commission of Georgia



- |            |                      |                 |                          |                   |               |
|------------|----------------------|-----------------|--------------------------|-------------------|---------------|
| Category 1 | Green Infrastructure | Senior Center   | Thunderbolt Lift Station | Museum            | Sewer Utility |
| Category 2 | School               | Library         | Marine                   | Police Department | Water Utility |
| Category 3 | College/University   | Fire Department | Municipal Complex        | Public Works      |               |



## **DATA**

- **DEMOGRAPHICS**
- **HOUSING**
- **ECONOMICS**
- **VULNERABLE POPULATIONS**



# Comprehensive Plan Appendix

Thunderbolt Town, GA  
Geography: Place

Prepared by Coastal Regional Commission

## Appendix A - Land Use

Town of Thunderbolt Land Use	Acres	Percentage
<b>Total</b>	<b>1017.92</b>	<b>100%</b>
<b>Business</b>	<b>62.61</b>	<b>6%</b>
<b>Planned Business</b>	<b>16.74</b>	<b>2%</b>
<b>Residential-Single Family</b>	<b>353.31</b>	<b>35%</b>
<b>Residential-Multi Family</b>	<b>101.17</b>	<b>10%</b>
<b>Residential Mobile Home</b>	<b>6.8</b>	<b>1%</b>
<b>Public/Institution</b>	<b>7.38</b>	<b>1%</b>
<b>Industry/Light</b>	<b>2.99</b>	<b>0.3%</b>
<b>Industry/Heavy (Waterfront)</b>	<b>70.61</b>	<b>7%</b>
<b>Parks/Recreation/Preservation</b>	<b>396.31</b>	<b>39%</b>

Source:



# Comprehensive Plan Appendix

Thunderbolt Town, GA  
Geography: Place

Prepared by Coastal Regional Commission

## 2021 Population by Age

Total		2,921
0 - 4		5.2%
5 - 9		4.5%
10 - 14		4.6%
15 - 24		16.4%
<b>25 - 34</b>	<b>(1)</b>	<b>13.4%</b>
<b>35 - 44</b>	<b>(2)</b>	<b>12.7%</b>
<b>45 - 54</b>	<b>(3)</b>	<b>10.2%</b>
55 - 64		11.1%
65 - 74		11.3%
75 - 84		6.8%
85 +		3.9%
18 +		82.0%

## 2010 Population by Race/Ethnicity

Total	2,514
White Alone	56.0%
Black Alone	31.5%
American Indian Alone	0.6%
Asian Alone	4.9%
Pacific Islander Alone	0.0%
Some Other Race Alone	4.4%
Two or More Races	2.6%
Hispanic Origin	9.2%
Diversity Index	65.4

Source:

July 28, 2016



# Comprehensive Plan Appendix

Thunderbolt Town, GA  
Geography: Place

Prepared by Coastal Regional Commission

## Household Summary

Household Summary	997
2000 Average Household Size	2.10
2010 Households	1,088
2010 Average Household Size	2.19
2016 Households	1,168
2016 Average Household Size	2.10
2021 Households	1,249
2021 Average Household Size	2.12
2015-2020 Annual Rate	1.35%
2010 Families	565
2010 Average Family Size	2.85
2016 Families	591
2016 Average Family Size	2.77
2021 Families	627
2021 Average Family Size	2.81
2015-2020 Annual Rate	1.19%

## Median Household Income

2016	\$40,774
2021	\$48,641

## Per Capita Income

2016	\$25,501
2021	\$27,464

Source:

July 28, 2016



# Comprehensive Plan Appendix C - Housing

Thunderbolt Town, GA  
Geography: Place

Prepared by Coastal Regional Commission

## Population

2010 Total Population	2,514
2016 Total Population	2,728
2021 Total Population	2,920
2015-2020 Annual Rate	1.37%

## Households

2016 Median Household Income	\$40,774
2021 Median Household Income	\$48,641
2015-2020 Annual Rate	3.59%

Housing Units by Occupancy Status and Tenure	Census 2010		2016		2021	
	Number	Percent	Number	Percent	Number	Percent
Total Housing Units	1,262	100.0%	1,353	100.0%	1,447	100.0%
Occupied	1,088	86.2%	1,169	86.4%	1,249	86.3%
Owner	595	47.1%	573	42.4%	604	41.7%
Renter	493	39.1%	596	44.1%	645	44.6%
Vacant	174	13.8%	185	13.7%	198	13.7%

Owner Occupied Housing Units by Value	2016		2021	
	Number	Percent	Number	Percent
Total	573	100.0%	604	100.0%
<\$50,000	81	14.1%	50	8.3%
\$50,000-\$99,999	91	15.9%	54	8.9%
\$100,000-\$149,999	103	18.0%	95	15.7%
\$150,000-\$199,999	31	5.4%	61	10.1%
\$200,000-\$249,999	121	21.1%	154	25.5%
\$250,000-\$299,999	35	6.1%	50	8.3%
\$300,000-\$399,999	43	7.5%	51	8.4%
\$400,000-\$499,999	19	3.3%	22	3.6%
\$500,000-\$749,999	24	4.2%	32	5.3%
\$750,000-\$999,999	4	0.7%	9	1.5%
\$1,000,000+	21	3.7%	26	4.3%
Median Value	\$168,548		\$213,636	
Average Value	\$230,977		\$272,144	

Census 2010 Owner Occupied Housing Units by Mortgage Status	Number	Percent
Total	595	100.0%
Owned with a Mortgage/Loan	357	60.0%
Owned Free and Clear	238	40.0%

Census 2010 Vacant Housing Units by Status	Number	Percent
Total	174	100.0%
For Rent	64	36.8%
Rented- Not Occupied	0	0.0%
For Sale Only	28	16.1%
Sold - Not Occupied	7	4.0%
Seasonal/Recreational/Occasional Use	40	23.0%
For Migrant Workers	0	0.0%
Other Vacant	35	20.1%

Source:



# Comp Plan Appendix D Economic Characteristics

Thunderbolt Town, GA  
Geography: Place

Prepared by Coastal Regional Commission

## Data for all businesses in area

Total Businesses:	161
Total Employees:	1,693
Total Residential Population:	2,728
Employee/Residential Population Ratio:	0.62:1

Industry Summary	NAICS	Demand (Retail Potential)	Supply (Retail Sales)	Retail Gap	Businesses Leakage/ Factor	Employees Number of Businesses
Total Retail Trade and Food & Drink	44-45,722	\$32,455,433	\$54,896,932	-\$22,441,499	-25.7	33
Total Retail Trade	44-45	\$29,316,453	\$52,380,200	-\$23,063,747	-28.2	28
Total Food & Drink	722	\$3,138,980	\$2,516,732	\$622,248	11.0	5

## 2010-2014 ACS Population by Journey to Work

2010-2014 ACS Workers Age 16 or Older	1,240
2010-2014 ACS Workers Age 16 or Older: Worked in State/County of Residence	1,202
2010-2014 ACS Workers Age 16 or Older: Worked in State/Outside County of Residence	15
2010-2014 ACS Workers Age 16 or Older: Worked Outside State of Residence	23
2010-2014 ACS Workers Age 16 or Older: Drove Alone to Work	1,036
2010-2014 ACS Workers Age 16 or Older: Carpooled to Work	91
2010-2014 ACS Workers Age 16 or Older: Public Transportation to Work	12
2010-2014 ACS Workers Age 16 or Older: Bus/Trolley Bus to Work	12
2010-2014 ACS Workers Age 16 or Older: Streetcar/Trolley to Work	0
2010-2014 ACS Workers Age 16 or Older: Subway/Elevated to Work	0
2010-2014 ACS Workers Age 16 or Older: Railroad to Work	0
2010-2014 ACS Workers Age 16 or Older: Ferryboat to Work	0
2010-2014 ACS Workers Age 16 or Older: Taxicab to Work	0
2010-2014 ACS Workers Age 16 or Older: Motorcycle to Work	4
2010-2014 ACS Workers Age 16 or Older: Bicycle to Work	5
2010-2014 ACS Workers Age 16 or Older: Walked to Work	53
2010-2014 ACS Workers Age 16 or Older: Other Means of Transportation to Work	23
2010-2014 ACS Workers Age 16 or Older: Worked at Home	16
2010-2014 ACS Workers Age 16 or Older by Travel Time to Work: less than 5 minutes	4
2010-2014 ACS Workers Age 16 or Older by Travel Time to Work: 5-9 minutes	148
2010-2014 ACS Workers Age 16 or Older by Travel Time to Work: 10-14 minutes	113
2010-2014 ACS Workers Age 16 or Older by Travel Time to Work: 15-19 minutes	959
2010-2014 ACS Average Travel Time to Work for Workers Age 16 or Older	N/A

## 2016 Labor Force by Industry (Esri)

2016 Unemployed Population Age 16+ (Esri)	56
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## 2016 Labor Force by Industry (Esri)

2016 Unemployment Rate (Esri)	4.1
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Source:



# Comprehensive Plan Vulnerable Population

Thunderbolt Town, GA  
Geography: Place

Prepared by Coastal Regional Commission

Summary	Census 2010	2016	2021	2015-2020 Change	2015-2020 Annual Rate
Population	2,514	2,728	2,920	192	1.37%
Households	1,088	1,168	1,249	81	1.35%
Average Household Size	2.19	2.10	2.12	0.02	0.19%

Vulnerable Population by Detailed Age	Census 2010		2016		2021	
	Number	Percent	Number	Percent	Number	Percent
Total	2,514	100.0%	2,728	100.0%	2,923	100.0%
<1 to 5	175	7.0%	158	5.8%	183	6.3%
65+	496	19.7%	547	20.1%	641	22.0%
<18	467	18.6%	495	18.1%	527	18.0%

Households by Income	2016		2021	
	Number	Percent	Number	Percent
<\$15,000	187	16.0%	201	16.1%
\$15,000 - \$24,999	142	12.2%	148	11.9%
\$25,000 - \$34,999	173	14.8%	185	14.8%
\$35,000 - \$49,999	176	15.1%	97	7.8%
\$50,000 - \$74,999	219	18.8%	259	20.8%
\$75,000 - \$99,999	169	14.5%	229	18.3%
\$100,000 - \$149,999	57	4.9%	76	6.1%
\$150,000 - \$199,999	24	2.1%	28	2.2%
\$200,000+	21	1.8%	25	2.0%

Median Household Income	\$40,774	\$48,641
Average Household Income	\$54,290	\$59,784
Per Capita Income	\$25,501	\$27,464

2009-2014 Household below Poverty Level	9.2%
2009-2014 Household received Food Stamp/SNAP in the past 12 months	96

Race and Ethnicity	Census 2010		2016		2021	
	Number	Percent	Number	Percent	Number	Percent
White Alone	1,408	56.0%	1,399	51.3%	1,452	49.7%
Black Alone	792	31.5%	926	34.0%	976	33.4%
American Indian Alone	15	0.6%	16	0.6%	17	0.6%
Asian Alone	122	4.9%	160	5.9%	196	6.7%
Pacific Islander Alone	0	0.0%	0	0.0%	0	0.0%
Some Other Race Alone	111	4.4%	145	5.3%	178	6.1%
Two or More Races	66	2.6%	81	3.0%	101	3.5%
Hispanic Origin (Any Race)	232	9.2%	294	10.8%	365	12.5%

Source:

