CULTIVATING ECONOMIC DEVELOPMENT ALONG URBAN TRAILS IN ATHENS-CLARKE COUNTY

by

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(Under the Direction of Katherine Melcher)

ABSTRACT

Businesses tend to thrive along urban trails due to the high level of foot traffic, and in turn, these businesses act as catalysts for community in various ways, such as providing visitors with "third places" and "eyes on the street." However, with growth and development often comes gentrification, when existing neighborhood residents are pushed out of the area due to rising rents. This thesis proposes several locations in Athens, GA in which to cultivate small business districts along urban trails, while also seeking ways to preserve the local community. Methodology includes exploring best practices from gentrification research and case studies, utilizing GIS layers to inform development, researching future development plans to suggest suitable locations, and using design to reimagine the proposed spaces. Site selection for these nodes is based on redevelopment plans, parcels that are consistent with ecological goals, available or underutilized properties, and existing structures that could be repurposed. The outcome of this thesis provides suggestions for creating business "nodes" along urban trails.

INDEX WORDS: economic development, business node, urban trail, greenway

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DEDICATION

To my grandmother.

ACKNOWLEDGEMENTS

To my major professor and committee.

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CHAPTER 1

INTRODUCTION

Pedestrian-oriented areas of cities can create community and stimulate the economy; locals and tourists alike congregate in these spaces. Urban planners recognize how important pedestrian areas are to the vitality of a city and can implement them in various ways, one of which is by creating urban trails. Urban trails are multi-use paths that wind their way through and around the built environment, connecting people with green spaces, places, and communities. When designing trails in an urban environment, planners often work with "leftover" land to create connectivity (Hecksher 1977). The trails can end up taking the place of abandoned railways or following alongside an undeveloped feature in the landscape, such as a river or ridgeline (Little 1990). The former urban trails are known as "rail trails" and the latter are referred to as "greenway trails." Urban trails can contribute to the social, environmental, and economic aspects of the communities in which they are built.

Economic development may be emphasized around urban trails, while others may be created with the goal of ecological preservation. In Athens, GA, trails are built along streams and in areas with environmental goals. Keeping in mind the importance of environmental goals, this thesis proposes that businesses can be beneficial for urban trails and the community; the intersection of economic development and public space is the inspiration for this thesis. Because economic development can cause gentrification, methods to preserve the existing community are researched. This thesis seeks to answer the question of how to create business districts along urban trails while benefiting the local community. Athens was chosen as a site to explore this

question as the city currently lacks business development surrounding its trails. The following paragraphs set the context for trails in Athens.

About the site: Athens-Clarke County

The city of Athens formed in tandem with the University of Georgia. The charter for the University was crafted in 1784, and 40,000 acres of land was allocated for the school's establishment (Boney 1984). The University was officially chartered by the Georgia General Assembly in 1785 as the first land-grant institution in the nation (Boney 1984). In 1801, John Milledge, later governor of the state, donated 633 acres to the University; the school was established for male students and classical education was emphasized (Boney 1984). In the same year, Clarke County was also established and named after Revolutionary War officer and Georgia legislator Elijah Clarke. Four years later, Athens was officially established as a town and the first building on the University's North Campus was constructed (Boney 1984). The town was appropriately named after the birthplace of classical education: Athens, Greece. Classical architecture is evident throughout the University's campus as well as in town. The arch, a popular classical-style landmark in Athens, connects the University's popular North Campus and downtown Athens. North Campus has an abundance of greenspace enclosed on three sides by University buildings. The fourth side is left open to overlook bustling East Broad Street, and people pass in and out through the arch. Allowing the campus to be visually and physically open to the town was a campus planning trend during the early 19th century.

Figure 1.1 Historic Photograph of North Campus overlooking East Broad Street (Source: UGA)

The trend originated to democratize university campuses and open them up to the world beyond. In turn, Athens has developed as a college town, and many of its bars and restaurants downtown cater to University students. In fact, Athens was ranked as the #1 college town in the state (Reviews 2019). Thus, development of the University and town heavily influenced and shaped one another.

Today, Athens-Clarke County has a unified government, meaning that city and county governments merged. This move to consolidate governments came to fruition in 1990, though attempts had been made starting in the 1960's (Thomas 1992). The reasoning behind unification comes from the small size of the county and the rapid growth of the area (Thomas 1992). School systems were consolidated in 1955, and other services were already jointly run between both governments (Thomas 1992). Today, the unified government is run by the Mayor and 10

commissioners. Athens-Clarke County was the second in the state and 28th in the nation to unify governments (Thomas 1992). Clarke county is the 19th most populous county in the state and Athens is the fifth most populous city (US Census Bureau 2010).

Athens has a population of over 126,000 people (US Census Bureau 2019). About 37,000 students enroll in classes at the University of Georgia (US Census Bureau 2020). Median age of those living in Athens is 28 (US Census Bureau 2010). Of those above the age of 25, 87.9% have graduated from high school and 44% hold bachelor's degrees (US Census Bureau 2019). According to a five-year estimate, median household income is $38,311 (US Census Bureau 2019). 29.9% of citizens experience poverty (US Census Bureau 2010). Approximately 63.2% of citizens are White, 28% are Black, 10.9% are Hispanic/Latino, and 3.9% are Asian (US Census Bureau 2019). Though only a little over 10% of the population is over 65 years old, Athens has been ranked as one of the best cities in which to retire (Forbes 2019). Both students and retirees alike make use of the urban trails in Athens.

Urban Trails in Athens-Clarke County

Athens has several types of urban trails, including a greenway, a rail-to-trail, a rail-with-trail, and road connectors. All of these trails, to some extent, are in the process of being planned and constructed. Currently, there is a lack of documentation for planning for economic development surrounding these trails. The trails lack businesses along them and do not connect directly to business districts. This thesis proposes the creation of business districts along urban trails, with the goal that these nodes would increase usership rates of the trail, create community, and enhance the local economy. This thesis will examine the existing North Oconee Greenway Trail, Firefly Trail, and Athens Line Trail as well as proposed trails.

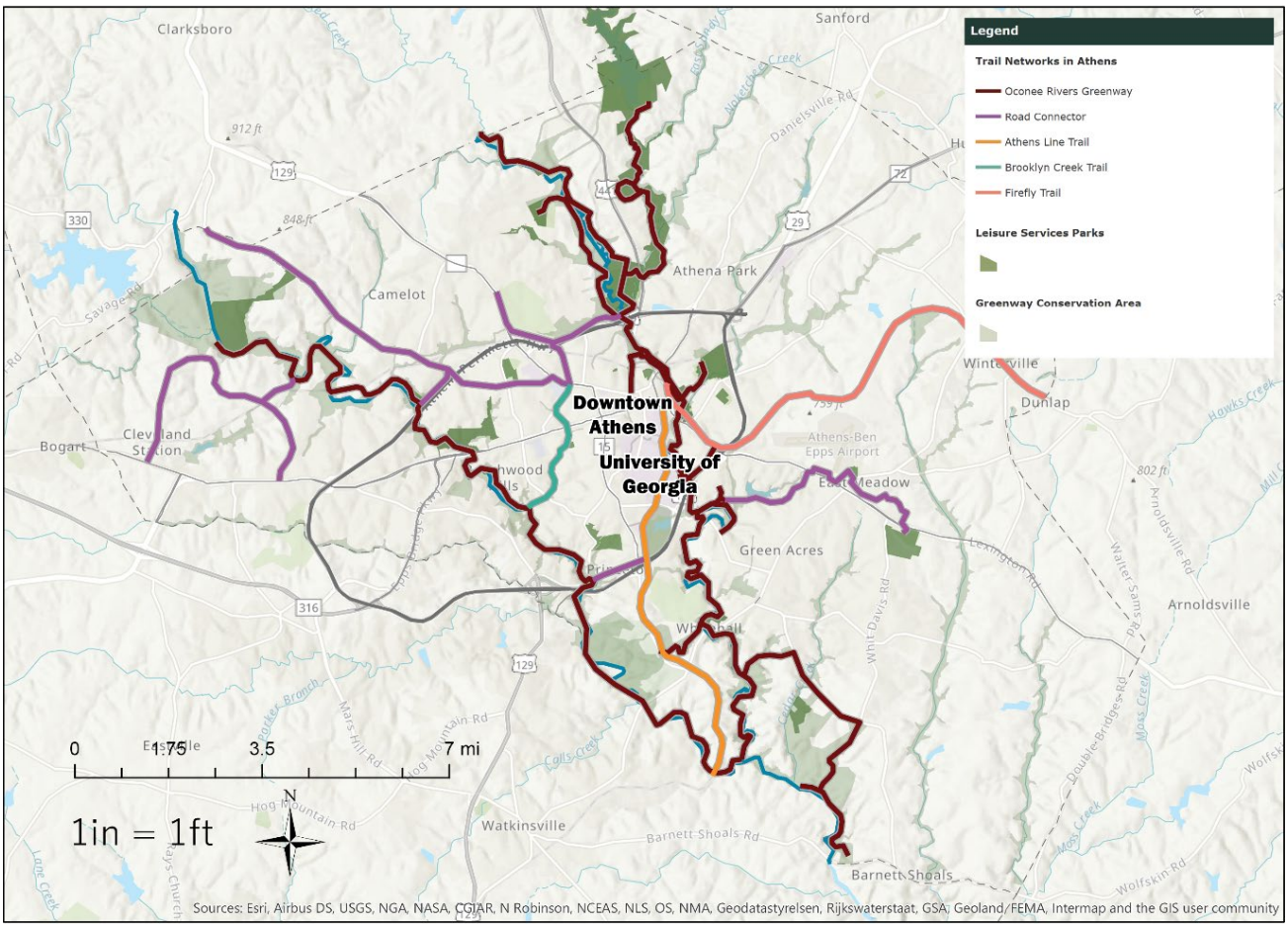


Figure 1.2 Map of the ACC Greenway Network (Source: accgov.com)

The North Oconee River Greenway was created to protect the land surrounding the North Oconee River. The land primarily serves as a riparian buffer and as habitat for wildlife, while also providing a trail for people to walk on. The conservation land is called the "Greenway" and the ten-foot-wide concrete trail is called the "Greenway Trail." Though the trail is often mistakenly called the "Greenway," the distinction is important to note as the trail and conservation land have different functions. The conservation land provides space for native habitat while visitors use the trail for recreation purposes. Business districts will be evaluated whilst keeping the purpose of conservation in mind.

The Firefly Trail is a planned rail-to-trail project that will span thirty-nine miles and connect three counties, including Athens-Clarke County. The trail is designed to accommodate multiple uses, but the cause is championed predominantly by cyclists. Cycling events are held in order to raise awareness and funds for the construction of future expansions of the trail. Currently three miles of the trail have been built in three separate locations. These three miles are called "model miles" which are built to give communities a sense of what the full trail will look like. Though only one mile in Athens currently exists, the proposed route is examined in terms of suitable spaces for businesses to be located.

The Athens Line Trail is a planned rail-with-trail project that will follow alongside the existing railroad previously operated by CSX Transportation. The project proposes rail-with-trail through the University of Georgia's campus to Whitehall Forest. Currently a portion of this trail exists along East Campus Road by Lake Herrick and the intramural fields. Most of the trail has yet to be built. This thesis looks at the existing portion of the trail as well as the proposed route in terms of developing districts for businesses.

In the next section, the author provides a brief justification for proposing business districts along the aforementioned trails in Athens.

Trails and Economy in Athens

Economy is one of three pillars--the others being society and the environment--that city planners must consider when creating a sustainable community. Plans for urban trails in Athens-Clarke County address both society and the environment; the Firefly Trail provides opportunities for cycling events and festivals while the Greenway Trail provides space for native wildlife and plants, signs for environmental education, and observation areas for nature appreciation.

However, current plans do not address economic development associated with the trails. Addressing economic development surrounding urban trails does not have to hinder the other two objectives; in fact, businesses can directly and indirectly enhance both society and the environment.

In her thesis "Perceptions of Safety on the North Oconee River Greenway," Emily Reed Feagan found that 36% of survey respondents who use the trail perceive it to be unsafe (2011). Feagan proposed that any future development that may occur should face the trail to increase "natural surveillance," or surveillance that occurs naturally with higher amounts of people per area (2011). This concept hearkens back to Jane Jacobs' idea of "eyes on the street" which will be discussed further in the literature review (1961). The events that are currently held on the urban trails in Athens are sporadic and certainly not enough to provide a consistent flow of people. Thus, business nodes along urban trails in Athens-Clarke County could help to create an environment that promotes trail usership and enhances community.

Businesses along an urban trail can also indirectly encourage citizens to appreciate nature and go for walks when they may not have otherwise. With more people using the trail, environmental education and appreciation can reach more people. Walking the Greenway Network is not only a recreational experience but can be an educational one. Educational signs and flyers explain the importance of riparian buffers, native plants, and wildlife corridors. Greenway trails can also provide an interactive form of public science education through wildlife viewing stations. Visitors can view wildlife in a decaying log or watch bats fly in and out of bat boxes, which are intentionally installed in places that are easy for visitors to view. Naturalized seating arrangements, such as a grouping of rocks, encourage people to inhabit the space for a while and observe their surroundings. Consistently using a space can create "topophilia," or love

for a place. When people love and appreciate a landscape, they are more likely to advocate for its protection. Thus, if businesses attract people, which they are found to do, more people can also enjoy and appreciate nature while also visiting shops along the way. In the following section, the current business environment in Georgia and Athens-Clarke County is examined.

Business Environment in Athens

For eight consecutive years, Georgia has been ranked as the #1 state for business (Site Selection 2020). This ranking is due, in part, to the various tax credits offered by the State of Georgia, which work to support both large and small businesses. Businesses that increase imports or exports by 10% are eligible to receive a Port Tax Credit. A Research & Development Tax Credit is applied towards businesses that are expending resources on research and development. Businesses are encouraged to invest in innovative technology through the provision of a Retraining Tax Credit, which enables employees to be retrained on how to use the new equipment. A Quality Jobs Tax Credit supports larger businesses that create 50 or more high-paying jobs within a span of a year; high-paying jobs are those that pay 10% higher than the county average. Businesses that provide childcare for their employees are rewarded by a Childcare Tax Credit; purchase or construction of a childcare facility is fully covered by the credit. A Parolee Tax Credit is given to those businesses that hire employees granted parole within a year of hire. Finally, a Job Tax Credit can be applied to businesses that create full time jobs. The benefits of the credit depend on the location of the job creation. In less developed areas, benefits will be higher. Counties in Georgia are assigned to one of four "tiers," with businesses in the least developed counties qualifying for the most benefits in the top tier. In

addition to those in tier 1, businesses in designated special zones, such as Less Developed Census Tracts, Opportunity Zones, and Military Zones, also qualify for greater benefits.

Resources are also available for small businesses, which is the most ideal type of economic development to be established along an urban trail. The Georgia Department of Economic Development defines small businesses as "independently owned and operated and have fewer than 300 employees; or [those that] bring in less than $30 million in yearly gross receipts" (Georgia n.d.). Two Georgia programs are offered to help small businesses: the State Small Business Credit Initiative, which allows banks and Community Development Financial Institutions to provide loans to small businesses, and the Angel Investor Tax Credit, which provides a 35% income tax credit to individuals investing in qualified small businesses. There are four types of small businesses that can, in some cases, receive preferential treatment: women owned small businesses, minority owned small businesses, youth owned small businesses, and veteran owned small businesses. Georgia ranks #5 in the nation for having the most women-owned businesses and #2 in terms of the growth of these businesses throughout the state. The Minority Business Development Agency in Atlanta has worked with Minority Owned Small Businesses throughout the state to create over 3,700 jobs and bring in $600 million worth of contracts and sales.

In terms of a local business environment, Athens-Clarke County was ranked 6th in the nation for cities adding jobs (Frohlich 2017). Athens has several community partners, including 1 Million Cups, Athensmade, UGA Small Business Development Center, Athens Downtown Development Authority, and the Georgia Department of Economic Development (Athens Area Chamber of Commerce n.d.). 1 Million Cups is a "weekly event that brings together entrepreneurs and the Athens community over coffees and conversations." Athensmade

combines tech and high-growth resources with creative entrepreneurship support and education. The UGA Small Business Development Center (SBDC) "provides tools, training and resources to help small businesses grow and succeed." The center has offices throughout the state of Georgia and receives funding from the US Small Business Administration. With the help of the SBDC, over 1,741 new businesses have been opened, 13,849 jobs have been created, $9.7 billion sales have been made, and $885 million capital has been raised through loans and equity financing. The Athens Downtown Development Authority (ADDA) provides start-up assistance, micro-loans, and grants to businesses in Athens. ADDA offers one micro-loan and three grants, the Facade Grant, Reach Grant, and Marketing Grant. The Facade Grant is eligible for street-facing businesses looking to improve the facades of their buildings. The Reach Grant offers a 50% matching grant up to $10,000. The Marketing Grant provides funding for branding, logo, web, and social media design. Finally, the Georgia Department of Economic Development has resources for small businesses that were listed in the previous paragraph.

The city, University, and various nonprofits work to create a favorable environment for economic development in Athens. Thus, incentivizing businesses in Athens, GA, to establish along urban trails seems doable considering the county and state's pro-business environment.

Gentrification in Athens

When considering economic development, one must also consider gentrification that may be occurring. In order to do that, one must determine where lower-income residents live. As previously mentioned, about 30% of Athens' population experiences poverty (US Census Bureau 2010). One in four families in Athens earn less than the "low income" threshold determined by

the Department of Housing and Urban Development (Georgia Initiative for Community Housing 2019). This poverty is demonstrated on the map in Figure 1.3.

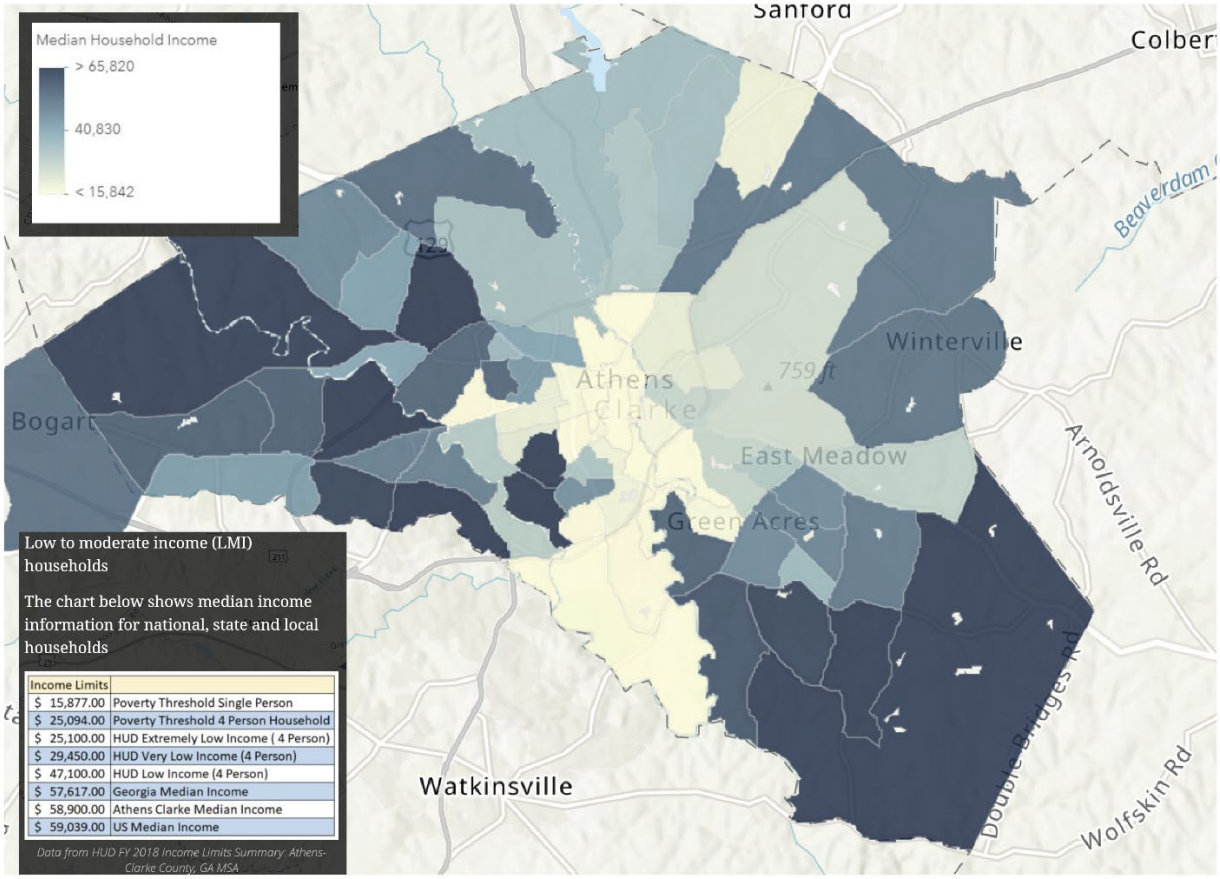


Figure 1.3. Map of Athens Income Levels

East Athens, a historically Black neighborhood, is becoming gentrified as the University of Georgia's student population looks for affordable housing. Though there are luxury student housing apartments downtown, these are expensive, and students have looked for other options (Yoganathan 2018). Realty agencies in Athens have bought up houses in these neighborhoods to meet student demand. In fact, over 60% of housing units in Athens are rented, and nearly half of them are occupied by students (Georgia Initiative for Community Housing 2019). Students want to be able to walk or ride the bus to class, so East Athens has become a feasible option for many.

However, this means that existing families in these neighborhoods are under the pressures of rising rents and property values, and some of these families are already struggling to afford to live there (Yoganathan 2018). In addition, the population in Athens is growing faster than its housing market can provide. Over the past century, population has grown by 7% and housing has grown by 2% (Georgia Initiative for Community Housing 2019). This trend drives up prices of rentals in Athens, accelerating the effects of gentrification.

Incentivizing affordability in Athens

The following paragraphs briefly cover a few of the ways in which Athens has demonstrated their goal of maintaining affordability.

Community Benefits are one way in which Athens seeks to preserve affordability. In September of 2020, the Mayor and Commission unanimously voted to approve the plans for six Tax Allocation Districts (TADs) in the county (Drukman 2020). Forming these TADs would encourage the redevelopment of these areas. Because TADs can play a role in spurring gentrification, Commissioner Ovita Thornton proposed a Community Benefits Agreement to the plans which would help ensure that those within the TAD would benefit from the redevelopment (Drukman 2020).

The use of grants helps to mitigate the effects of gentrification. Athens currently utilizes the previously mentioned tools of Community Development Block Grants and HOME grants to direct funds to underserved communities. The monies from these grants are put into various objectives: affordable housing; micro-enterprise, economic development, and neighborhood revitalization; public services; and administration and planning. Federal funding through

Community Development Block Grant and HOME funds are then distributed among various Athens agencies and nonprofits.

There are several nonprofits in Athens that seek to increase affordable housing. Grant funds are distributed to nonprofits such as Athens Area Habitat for Humanity, Athens-Clarke Heritage Foundation, Athens Housing Authority, Athens Land Trust, East Athens Development Corporation, Goodwill of North Georgia, Advantage Behavioral Health Systems, Athens Area Homeless Shelter, Athens Community Council on Aging, Casa de Amistad, Chess and Community, Feed My Sheep, the Ark, and YWCO. Projects include constructing ADA ramps, repairing owner-occupied historic homes, acquiring properties for redevelopment of affordable housing, rehabilitating/reconstructing affordable housing units, conducting business coaching for West Broad Farmers Market vendors, microenterprise vendors, and Young Urban Farmers, tutoring elementary students, conducting rapid rehousing programs, and providing case management to families experiencing homelessness.

Chapter Summaries

In the next chapter, the literature review, the author describes the history of urban trails in the US. Next, the relationship between urban trails and economic development is described, as well as the positive aspects of having business nodes along trails. Finally, the chapter concludes with a discussion of a challenge presented by economic development, gentrification.

The third chapter goes over various approaches to mitigating gentrification. Those included range from city government to grassroots-level approaches. The chapter describes the following methods: engaging the community, creating Equitable Development Plans, establishing Community Benefits Agreements, forming Community Land Trusts, implementing

measures to preserve and establish small businesses, designing sidewalk living rooms, and refraining from implementing economic development-centric designs in low-income communities.

The fourth chapter goes over relevant case studies of urban trails in the Southeast and how they relate to economic development. Case studies included are the Swamp Rabbit Trail in Greenville, SC, the Community Landmarks Trail in Thomasville, GA, and the Tennessee Riverwalk in Chattanooga, TN. Design decisions are influenced by design elements found within the case studies, which include: stores opening up to the trail, separate vehicular and pedestrian areas, new urbanist principles, and infill development and adaptive reuse.

The fifth chapter provides an overview of the site selection process used to determine potential business nodes. Methods include the use of GIS and future development plans. Site selection is based on (1) parcels that do not pose a threat to the ecological goals of the greenway network (2) a current need for redevelopment, based on existing planning documents (3) available and underutilized parcels and (4) an ability to reuse existing structures.

The sixth chapter provides an overview of the design methodology used. Design methods include the use of AutoCAD, Photoshop, Illustrator, and InDesign to imagine the nodes. The designs include the following elements (1) stores opening up to the trail (2) vehicular and pedestrian areas are separated, with the notion that those who use the trails should not have to interact with vehicular traffic (3) new urbanist principles are kept in mind, such as the emphasis on walkability, density, mixed uses, accessible public spaces and parks, and (4) infill development and adaptive reuse.

In the seventh chapter, five business nodes are proposed along the existing and proposed trails found in the Athens-Clarke County Greenway Network Plan. Nodes are proposed in the

context of long-term planning, in regard to both the trail and economic development. In some cases, development is proposed where existing development already exists. In these cases, redevelopment plans are considered.

CHAPTER 2

LITERATURE REVIEW

This chapter begins with a brief overview of the history of urban trails. Urban trails across the nation have many benefits, including economic ones. However, gentrification poses a major challenge. The findings of this literature review help answer the question of how to preserve the local community while exploring the possibility of economic development along an urban trail.

History of urban trails / greenways

In the late 19th century, the greenway concept is considered to have been invented by the father of landscape architecture, Frederick Law Olmsted, though the term was not formally introduced to the public until the 1950's by William Whyte (Little 1990). One of the first greenways Olmsted designed was to link Berkeley's campus to the city of Oakland in 1865 (Little 1990). Later, in 1887, Olmsted proposed a more well-known plan for Olmsted Parkway in Boston, now referred to as the "Emerald Necklace" (Little 1990). These early trails were designed to be used by pedestrians, carriages, and horseback riders (Little 1990). The way these early trails were built and used changed with the mass production of the automobile in the early 1900s, which led to suburban expansion and highway development characteristic of the mid-20th century. During the mid-20th century, most Americans led car dependent lives and urban trails were not yet widely implemented or used, and thus not as popular as they are today (Flink 2020).

Legislative efforts made in the late 1950s and early 1960s, however, helped pave the way for urban trails as they are now used (Flink 2020). In 1958, under Eisenhower's direction, the Outdoor Recreation Resources Review Commission (ORRRC) evaluated all of the outdoor recreation resources in the nation (Flink 2020). In 1962, the ORRRC submitted a report to President Kennedy that defined how many Americans currently view their local greenspaces, such as how outdoor recreation is compatible with wildlife management and how it can stimulate the local economy (Flink 2020). A few years later, in 1965, President Johnson called for an "abundance of trails" in a speech delivered to Congress that focused on conservation and preservation (Flink 2020). The National Trails System Act of 1968 defined three types of trails--national scenic trails, national recreation trails, and connecting and side trails--which helped to further emphasize the importance of urban trails (Flink 2020).

In the 1980s and 90s, people began to look to greenspace with a revived interest in outdoor recreation (Flink 2020). In 1985, the movement towards urban trails was continued by President Reagan, who appointed the Commission on Americans Outdoors (PCAO). The PCAO recommended the creation of "a network of greenways across America" (Little 1990, Flink 2020). In the 1990s, a cultural shift began in which cities became more attractive to live in than suburbs (Ehrenhalt 2012, Flink 2020). This played a role in citizens wanting to see greenspaces in their cities, where they lived. In 1990, PCAO Commissioner Patrick Noonan commissioned Charles Little to write *Greenways for America* and in 1993 commissioned Searns and Flink to compose *Greenways: a guide to planning, design, and development* (Flink 2020). These influential books helped to educate readers on urban trails and serve as a resource for those working to establish them, whether from a community advocacy group or a city planning office. In 1991, federal funding for greenway development was made available for the first time when

President George HW Bush signed into law the Intermodal Surface Transportation Efficiency Act (ISTEA) (Flink 2020). For the past three decades, ISTEA and similar following laws have invested over 10 billion dollars into urban trails (Flink 2020).

Thus, a combination of factors over the previous century and a half led to the popularity of urban trails as they are known today. Olmsted's early greenways in the 19th century, legislative efforts in the mid-20th century, the provision of federal funding in 1991, and a general growing enthusiasm for urban trails in the late 20th century allowed for trails to be implemented and expanded throughout the country.

Social, Environmental, and Economic Benefits of Urban Trails

The trails benefit communities by creating space for walkers, joggers, bikers, skaters, scooterers, and other forms of transportation that do not require a vehicle. People predominantly use the trails for recreation and transportation purposes, while the surrounding greenspace can provide environmental benefits. The greenspace along a trail can function as an ecological corridor in which wildlife migrate or take refuge. Wildlife habitat can also provide necessary "green infrastructure" for cities. The infrastructure, composed of trees, shrubs, ground cover, and other permeable surfaces is needed for various environmental benefits, such as air purification, stormwater infiltration, flood mitigation, and reduction of the urban heat island effect (Little, Hilty et al.).

In addition to their social and environmental benefits, various studies have found that urban trails can produce positive economic effects within communities. A study conducted by Seattle's engineering department examined the effects that the Burke-Gilman Trail had on three groups of stakeholders: real estate agents, police officers, and homeowners; the study concluded

that the trail ultimately helped "sell homes, increase property values, and improve the quality of life" (Little 1990). Another greenway in Grand Forks, North Dakota also demonstrates how an urban trail can boost the economy (Flink 2020). Two financial models for the greenway, both prepared separately, found similar results: that the trail would be used by over 200,000 tourists each year and help generate $16 million annually, which would offset operational costs (Flink 2020). Yet another greenway, Great Allegheny Passage, generated over $14 million annually while the trail was still partially built (Kapp 2020). Greenways and other public greenspaces across the nation generate approximately $200 billion in economic activity and support almost 1 million jobs annually (NRPA 2015).

Thus, urban trails, due to their various social, environmental, and economic contributions, have become widely popular over the last several decades. They are valued by city planners, landscape architects, trail users, developers, and businesses alike. The trails' popularity is evidenced by millions of Americans using thousands of miles of greenways every year (Flink 2020). In fact, over 50,000 miles of greenways and urban trails have been built since 1985 (Flink 2020). The origins of urban trails and greenways as they are used today, however, goes back to over a century and a half ago (Little 1990).

Economic development + urban trails

The creation of an urban greenway is like a city park; the amenity attracts people to the greenspace and surrounding area. Greenspace projects generally increase the value of adjacent properties, and what was previously referred to as "leftover" land often becomes a desirable place to live, work, and play. A recent study conducted by the National Recreation and Park Association found that though noise, congestion, and reduced privacy can deter some people from wanting to live by a public park, the data generally show that properties adjacent to parks

typically result in positive premiums (NRPA 2020). A study conducted by the Trust for Public Land found that properties within 500 feet of a park increased in value by 5% (TPL 2009). Another study showed that property values increased by 4.9% with views of forested open space and 8% with views of a park (Wolf 2010). Some significant parks can cause property values to increase by 15% (TPL 2009). This adjacent land is more valuable not just to property owners but also to businesses. According to the Trust for Public Land, "a park often becomes one of a city's signature attractions, a prime marketing tool to attract tourists, conventions, and businesses" (2006). The businesses that crop up around urban trails seeking customers from passersby can also provide various benefits to the community, including increased trail usage, access to groceries, provision of third places, increased imageability and sense of place, increased perception of safety, and a boost to the local economy. The last item also presents the challenge of gentrification when not thoughtfully planned for. The benefits and challenge of economic development along trails will be discussed in the following paragraphs.

Benefits of economic development along urban trails

Businesses along trails can act as a catalyst for community through their influence on trail usership. The establishment of businesses along a trail can act as reinforcing feedback (Harris and Roach 2014). An initial change in the community is reinvested to further that sense of community in the future; foot traffic brings business and business reinforces foot traffic. A trail devoid of businesses is likely used primarily for recreation or transportation. As businesses begin to appear along an urban trail, a third category of trail users will likely enter the scene: shoppers. Their main purpose of using the trail may be to shop, but in doing so they are exercising, reducing fossil fuel emissions, and increasing trail usership. Thus, trail usership increases to include those who use the trail to visit the surrounding attractions.

The presence of businesses and shops along an urban trail can also provide locals a way to run their errands without having to drive far. For example, the architect behind the Atlanta BeltLine, Ryan Gravel, writes about a photograph he's taken of the urban trail: "the reason I love it isn't the brilliant blue sky or the bright green leaves fluttering in the wind...it isn't the mobs of people getting healthy and being social...it's the red-haired lady on the right. She is carrying her groceries, and in the process, she's validating everything we always said the Atlanta BeltLine would do" (Gravel 2016). The author witnesses people carrying groceries almost every time she visits the urban trail.

Figure 2.1 Lady carrying groceries (Gravel) and Figure 2.2 Couple carrying groceries (author).

The main purpose of the BeltLine is to provide a transportation corridor that connects 45 neighborhoods in Atlanta; those living in the neighborhoods can choose to use the trail to shop for groceries or do other errands. Thus, a trail with business along it, including grocery stores, can provide access to food within walking or biking distance.

The businesses along urban trails help provide for those who want to shop or need to run quick errands but can also provide places to go for leisure. The presence of shops and businesses

can serve the vital function of "third place." Shops, cafes, and restaurants provide third places for people to spend time in that are not work or home (Oldenburg 1999). Third places are often used for relaxation and socialization (Oldenburg 1999). With the presence of businesses, the trail itself may become a third place. An urban trail can allow people to travel to their third places without depending on a vehicle, affording an opportunity for socializing which is not an option for those driving separately (Gravel 2016). This way, the means of transportation becomes the third place and one's idea of third place is geographically expanded. Thus, a variety of businesses along an urban trail provides people with attractions and things to do in their leisure time, and can even increase the desirability of using the trail itself as a third place.

A cluster of "third places" along a well-used urban trail is likely to make an impression on an observer. Consider walking along a linear path that opens into an area where people are passing in and out of store fronts facing the path. This scene would likely be considered "imageable" according to Kevin Lynch (1960). Imageable places are ones that have a strong identity. Lynch explains that there are five elements that create a city with a strong identity: paths, edges, districts, nodes, and landmarks. The elements of paths and nodes are most relevant to a scenario of an urban trail with store frontage. Paths are channels along which the observer moves, and nodes are strategic spots within the city through which people move in and out (Lynch 1960). Lynch writes that a junction in a path, along with a concentration of shopping, can create a memorable node. Thus, business nodes along an urban trail helps make a city "imageable" and creates a sense of place for locals and tourists alike.

In addition to helping create an imageable experience of the city, these businesses nodes also provide "eyes on the street," a phrase coined by Jane Jacobs, author of "The Death and Life of Great American Cities." The phrase refers to the pedestrian traffic that makes an area feel

safer (Jacobs 1961). Today, we might refer to this concept as "natural surveillance" (Feagan 2006). Jacobs writes that surveillance best occurs in stores, bars, and restaurants, which also happen to be some of the best third places according to Oldenburg. These places work in four ways to make public spaces feel safer (Jacobs 1961). First, the shops provide reasons for using the public space. Second, the variety of storefronts that face the public space serve to populate it with walkers of various purposes. Third, store owners are the best at surveillance, as they aim to create an environment in which their customers feel safe. Fourth, the activity generated by people using the shops generates more activity. In other words, people attract people. Jacobs writes that "people's love of watching activity and other people is constantly evident in cities everywhere." Thus, in Jacobs' vision for a safe city, everyday users survey the street (or urban trail) and keep crime low due to their presence.

People tend to use, visit, and vacation places in which they feel safe and comfortable. A well used urban trail with the presence of businesses can attract tourists to visit and spend money while using it (Flink 2020). To capture this revenue, cities and towns seek to highlight their best attributes and promote them. The state of Georgia boasts of its thriving outdoor recreation tourism industry. In fact, $23 billion dollars were generated from outdoor recreation activity in 2015 alone (GA DNR 2017). Greenways and rail trails are often listed in travel brochures as recreational opportunities, and the presence of businesses attracts further tourists. Tourists may choose to rent bikes, have lunch along the trail, and stop to shop in some of the stores along the way. The money spent is then further reinvested in the area and more businesses are likely to be established there. Thus, the presence of businesses along an urban trail can be used to facilitate further growth and bring in tourism money to boost the local economy.

Challenge of gentrification along urban trails

Unfortunately, a boost to the economy can cause negative impacts in some communities, such as those that are extremely poor or on the brink of poverty—typically these communities are segregated Black and brown. Where people are already struggling to pay rents and afford property taxes, improved home valuations, rents, and taxes will ultimately push out those who cannot afford the increase, resulting in gentrification. This entails the displacement of people from their homes and neighborhoods, some of which have been lived in since childhood; the buildings may have been passed down for generations. Gentrification is most prevalent in urban areas; economist Daniel Hartley identifies a gentrifying neighborhood as an urban one in which home prices go from being in the bottom half of a metropolitan area to the top half (Price 2014). The reason for this is due to a shift at the turn of the century; in the mid-20th century, affluent people flocked to the suburbs, leaving marginalized communities to remain in cities (Ehrenhalt 2012). At the beginning of the 21st century, affluent people began to move back into cities in search of walkable neighborhoods and the various amenities which cities provide (Ehrenhalt 2012). In turn, low-income communities are now being pushed into the suburbs. According to UGA Professor Kimberly Skobba, even poverty is becoming suburbanized (Yoganathan 2018). Thus, developments that financially influence housing prices in low-income urban communities have the potential to displace those already living there.

Gentrification almost always presents a challenge with any type of open space development within an urban community. With the movement of affluent people back into cities, greenspace and urban trails are major amenities which are sought after -- to use and to live nearby. Creating a greenspace or park within a low-income community will not benefit that community if those living there are forced to move in a few decades; both existing and proposed

greenspaces within the city are at high risk of being gentrified. Creating a greenspace or urban trail in a low-income community will likely lead to gentrification if measures to counteract displacement are not enacted. However, planners and developers face a dilemma when proposing a greenspace design in a low-income community; often the potential for redevelopment is what brings in funding for such projects. This is the case for two high profile urban trails: the Atlanta BeltLine and the New York City HighLine. Both projects - tremendous undertakings that have become wildly popular - were enabled, in part, by the surrounding area being low income and deemed as in need of redevelopment.

In Atlanta, the Tax Allocation District (TAD) surrounding the Atlanta BeltLine was created with a goal to improve the tax base in areas surrounding the trail. The TAD, which helps to fund the development of the trail, was implemented based on the premise that the urban trail would help to improve "blighted land" and generate new growth. In fact, Ryan Gravel writes that the economic challenges of an area are what "make the larger effort possible by attracting both public and philanthropic funding alongside private development interests." Though the Beltline had originally set goals to maintain affordability along the trail, a lot of these goals were not implemented. Unless there are clear actionable items, goals may not be enforced. Today, the Eastside trail is a gentrified area, whereas the Westside trail is experiencing some economic development, but not to the extent that the Eastside trail has. The BeltLine drew inspiration from the Highline, and they are similar in several ways, including the way the projects were able to find a source of funding.

The New York City HighLine, in conjunction with a rezoning of West Chelsea, was created with a goal to stimulate property values in the area. Property values rose to the extent that many local businesses--established prior to the creation of the park--could no longer afford to

operate and closed their doors (Yoon and Currid-Hackett 2014). Tom Lunke, a city official who served on the Chelsea community board, stated that there was an economic analysis that "determined you could invest in the High Line and make it a park without changing any land use along the corridor. The naturally occurring rate of return would be enough to justify the investment. But City Planning wanted to put that area on steroids and really capitalize on rapid large-scale development…" (Gibson 2016). Now, the surrounding area has changed so much that some locals who live near the HighLine in New York City feel that the park was not built for them and are therefore reluctant to use it (Linder and Rosa 2017). Urban trails can be used by urban planners and designers to facilitate growth in an area, but this can be overdone to the point where the local community is disenfranchised from the public amenity.

The next chapter will discuss various strategies that seek to address the detrimental effects of gentrification.

CHAPTER 3

APPROACHES TO MITIGATING GENTRIFICATION

To preserve the existing character and community composition of the area, local governments and nonprofits seek ways to mitigate the effects of gentrification. This can be addressed through various approaches by city governments, developers, and citizens themselves. Approaches include engaging the community, creating Equitable Development Plans, establishing Community Benefit Agreements, forming Community Land Trusts, implementing measures to preserve and establish small businesses, designing sidewalk living rooms, and refraining from implementing development-centered designs in low-income communities. These approaches are drawn from various sources, most of which deal with gentrification specifically surrounding high-profile urban trails, such as the High Line and BeltLine. The approaches outlined in the following paragraphs are certainly not fully comprehensive, but are intended to give an introduction to some of the ways in which gentrification can be mitigated.

For projects in which gentrification has already commenced, efforts must be made to engage those who are underrepresented in the community. Danya Sherman, the Founding Director of Public Programs, Education, & Community Engagement, devoted seven years to making the HighLine a more equitable place. Despite struggling with "some of the decisions the organization had to make to get the High Line built," Sherman worked with the nonprofit Friends of the High Line to involve those who lived alongside the park (Linder and Rosa 2017, pg. 29). This involved reaching out to and including teenagers, the aging population, youth and families. A performing arts program, "Step to the High Line," engaged teenagers through step, while

"Dances for a Variable Population" involved elderly in dance on the High Line (Linder and Rosa 2017). Youth from the surrounding neighborhood were hired as paid interns to work for a few days per week each summer (Linder and Rosa 2017). Children were also engaged through play with the High Line Children's Workyard Kit (Linder and Rosa 2017). Programs such as these seek to empower diverse groups of people to own and reclaim the space. Thus, community outreach, though not an economic solution, at least addresses reclamation of space.

While working to mitigate gentrification after the completion of a project is certainly a commendable effort, a more effective method would be for project managers to keep the issue at the forefront during planning stages. This is often done by drafting an Equitable Development Plan and referencing it throughout the entire process of design. Equitable Development Plans are formal ways that local governments can seek to mitigate gentrification. These plans typically have lists of objectives or goals to meet during the implementation of the project. For example, objectives found in the Atlanta BeltLine's plan include (1) enhancing quality of life for residents along the trail (2) creating long term job opportunities for existing and new residents (3) preserving existing single-family neighborhoods (4) minimizing involuntary economic displacement (5) preserving and enhancing cultural and historic qualities, and (6) retaining and developing local small businesses (ABI 2009). Another example is found in the 11th Street Bridge Park in Washington D.C. Strategies in the plan include (1) preserving and expanding affordable housing (2) creating partnerships with those in the housing community (3) creating construction and post construction jobs (4) engaging local artists and youth, and (5) supporting small businesses surrounding the park (11^{th} Street Bridge Park 2015). Though the success of implementing the plans varies from project to project, similar goals and language are typical of such documents. Both plans also address supporting and preserving local small businesses.

In addition to an Equitable Development Plan, a legally binding contract between community and developer can be an effective tool for mitigating gentrification. Community Benefit Agreements, or CBAs, are agreements in which a developer outlines the way their project will directly contribute to the community. Community support for the project is central to the agreement. Local governments can also enter the agreement and can be responsible for ensuring that the developer meets the terms of the agreement (Partnership for Working Families n.d.). Sometimes, when CBAs have been found to be consistently effective, local governments will adopt a Community Benefits Policy (Partnership for Working Families n.d.). This policy requires that community benefits are maintained in any type of development, whether private or public (Partnership for Working Families n.d.). Community benefits, as outlined in these policies, range from local hiring to affordable housing (Partnership for Working Families n.d.). The language found in CBAs can be adopted and used in other types of agreements; for example, the Atlanta BeltLine Ordinance includes community benefits verbiage such as affordable housing and economic incentives for private development.

Community Land Trusts are nonprofit organizations that also seek to preserve the makeup of communities over time. The goal of a Community Land Trust (CLT) is to preserve and maintain affordable housing in communities that are experiencing a rise in real estate values (Hawkins-Simons and Axel-Lute 2018). Oftentimes, a land trust works to preserve the historic character of the neighborhood by purchasing and renovating older, vacant homes and then selling them to low-income families at an affordable price. The house is affordable because the land trust retains ownership of the land; homeowners pay only a minimal lease fee to the land trust. Ground leases offered by Athens Land Trust in Athens, GA, last 99 years, allowing homeowners full use of the land (ALT, n.d.). The house can even be passed down to children (ALT, n.d.). If

homeowners decide to move, they sell the property back to the land trust, and the land trust then resells the house to another low-income family. Restrictions on resale prices keep the houses affordable over time. Land trusts seek to keep properties in the hands of low-income property owners instead of landlords with elevated rents (ALT, n.d.).

In addition to preserving homes, preserving local existing businesses within the community is also important. As neighborhoods become gentrified, businesses face similar stressors that homeowners and renters experience. Restaurants, bars, and shops that have existed in communities for decades are under threat of being replaced by chain restaurants. Ironically, the stores that give communities character are what attract tourists; and tourist areas attract upscale and chain restaurants. The businesses under financial stress may require economic incentives to stay. Cities have approached this issue in various ways. San Francisco Heritage, a nonprofit that seeks to preserve both physical buildings and local businesses, drafted up a plan in which they recommend ways in which the city can preserve its cultural resources. In their plan, they recommend identifying and documenting cultural heritage assets and preserving them through assistance programs, tax benefits, land acquisition, land trusts, mentoring programs, and more. In terms of mentoring programs, one successful example is found in the Atlanta BeltLine's Breakfast for Business Leaders. In this workshop, local business owners learn about state and federal funding opportunities.

In contrast to the previous approaches to gentrification which are found at city/nonprofit levels, a grassroots level approach seeks to deter gentrifiers from moving into the community by creating sidewalk living rooms. This "DIY" method is useful because it can be done by community members themselves (Hammett 2006). Landscape architect Steve Rasmussen-Cancian had the idea to design sidewalk living rooms for low-income neighborhoods in West

Oakland and Los Angeles. To create these living rooms, Rasmussen-Cancian installed affordable furniture along sidewalks to encourage residents to sit outside and be seen, especially by those potential gentrifiers who may be deterred by their presence. In West Oakland, city officials first resisted the movement and removed some of the furniture, but then began to informally accept it (The Urbanist 2010). In Los Angeles, the installations were fully permitted, and the mayor even came out to build a piece of the furniture (The Urbanist 2010). This way, locals can enjoy seating installations throughout the community while also working to prevent gentrifiers moving in.

Finally, in some cases, the "do-nothing" approach may be the best way to prevent gentrification. The best approach may be to not build a large up-scale project with a pro-development agenda within an at-risk neighborhood. Scott Larson, in his chapter "A High Line for Queens: Celebrating Diversity or Displacing It?" writes that the best alternative for Queens may be to not build the QueensWay, a project that would be similar in several ways to the High Line (2017). Larson raises a couple of pertinent questions on the nature of the plan and its goals. He questions whether the goal of preserving the neighborhood's diversity can be achieved when the proposal's emphasis lies in redevelopment. Larson writes, "Does the QueensWay plan, with its orientation towards real estate values, economic development, and attractions such as trendy event spaces, food vendors, and shops, truly reflect nearby communities and their interests?" Some of the residents of the surrounding community have even called for a do-nothing approach (Linder and Rosa 2017). They fear the change that the project will bring to their neighborhoods and backyards (Linder and Rosa 2017).

Thus, instead of entering a neighborhood with a plan to recruit advocates for a certain project, first ask the neighborhood what type of project they may want to see. However, even when the city and community have good dialogue throughout the process, gentrification can still

occur if mitigation measures are not taken. (Flink 2020). Though this thesis proposes that shops and store frontage along an urban trail can be a good thing for enhancing community and trail, it acknowledges that a spike in real estate values is not always desired by every community, and thus a pro-development approach may not always be appropriate. The following table summarizes the approaches outlined in this chapter.

Category	Mitigation Approaches	Example(s)
Space Reclamation	Community Engagement	Community engagement programs implemented along HighLine
	Sidewalk Living Rooms	Affordable furniture installed along sidewalks in West Oakland & Los Angeles
	Identify/document cultural heritage with the goal of preservation	San Francisco Heritage's plan for preserving cultural heritage
Neighborhood Stabilization Measures	"Do Nothing" Approach	Scott Larson's argument for not building QueensWay in Queens, NY
	Initiatives to preserve local businesses	Breakfast for Business Leaders along Atlanta BeltLine
Planning Approaches	Equitable Development Plan	Formal ways in which local governments can seek to mitigate gentrification – EDPs for Atlanta BeltLine and 11th Street Bridge Park
	Community Benefits Agreement	Legally binding contract between community and developer – verbiage found in Atlanta BeltLine Ordinance
Housing Support	Community Land Trust	Nonprofit organizations seeking to preserve the makeup of communities over time – Athens Land Trust in Athens, GA

Table 3.1 Summary Chart of Approaches to Gentrification Mitigation

In the following pages, this thesis will continue to pose the question where development in Athens is appropriate, and how to mitigate any gentrification that may occur. The next chapter discusses relevant urban trail case studies in the southeast. The chapter examines the interaction

between trail and surrounding economic development, and what methods, if any, the local governments take to mitigate gentrification.

CHAPTER 4

RELEVANT CASE STUDIES OF URBAN TRAILS IN THE SOUTH

In order to address economic development surrounding the Greenway Network in Athens, GA, relevant urban trails must be examined. Case studies drew from towns in the Southeast with similar population sizes as Athens (within a population of 120,000 more or less than Athens). In researching relevant trails, this thesis seeks to learn about how other cities have implemented economic nodes along urban trails. This was done by examining the following elements (1) the urban context in which the trail is constructed/being constructed (2) the trail itself (3) the economic impacts from development along the trail and (4) the measures that were used to mitigate gentrification. The author personally visited all three of the following urban trails and associated businesses nodes.

Swamp Rabbit Trail - Greenville, SC

Urban Context

Greenville, SC, located in Greenville County, has a population of 68,563 people. Around 1770, colonists established over 100,000 acres of plantation on what was Cherokee hunting ground. Modern Greenville came into being in the 1880's, when amenities such as water, sewer, electric, and public school were implemented (City of Greenville n.d.). In the late 1880's, Greenville became a cotton mill town, and its Camperdown Mill was the second largest in the state (City of Greenville n.d.). The mill would open and close over the years with changes in the economy, until being demolished in 1959 (City of Greenville n.d.). In the late 1950s and 60s,

shopping centers and highways drew people away from downtown and stores along main street were vacated (City of Greenville n.d.).

Beginning in 1968, a downtown development plan was drafted to help stimulate the declining downtown (City of Greenville n.d.). The plan recommended cultivating a pedestrian oriented Main Street (City of Greenville n.d.). A little over ten years later, a complete redesign of the street was implemented; the main street was narrowed, sidewalks were expanded, and lighting and tree cover were added (City of Greenville n.d.). Due to the sidewalk expansion, many of the restaurants downtown today offer outdoor seating. In the 1980s, multiple public-private investments helped to spur economic development in the downtown area (City of Greenville n.d.). Tax Increment Financing enabled the city to make use of property tax revenue increases in a specific district designated for redevelopment (City of Greenville n.d.). These revenues were reinvested into infrastructure improvements in the area.

In the late 1980s, attention turned for the first time to Reedy River as a potential asset (City of Greenville n.d.). The river flows past downtown but was previously underutilized, and views of the river's falls were obscured by a highway bridge. A planning study conducted in 1987 recommended that the bridge be removed (City of Greenville n.d.). It was not until the early 2000s that efforts to improve the view of the river began (City of Greenville n.d.). The bridge was removed in 2002 and Falls Park opened in 2004, spurring development in adjacent areas, South Main Street and in the West End (City of Greenville n.d.). Falls Park, which cost $13 million to implement, generated over $100 million in private investments just two years after opening (City of Greenville n.d.). Cancer Survivors Park, which opened in 2018 adjacent to Falls Park, will likely only help to further these investments. The combination of private and public

investment into Greenville's downtown and riverfront makes it a desirable destination for 2.5 million visitors per year.

Figure 4.1 Map of Falls Park and Cancer Survivors Park

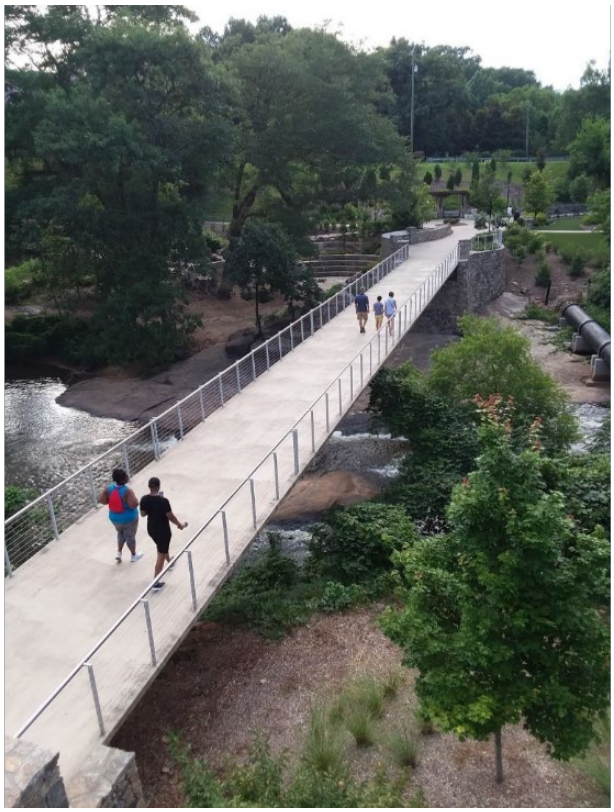


Figure 4.2 Bridge to Cancer Survivors Park and Figure 4.3 Falls Park (photos by author)

Trail Overview

In 2010, Greenways Incorporated and Arbor Engineering drafted the "Greenville County Comprehensive Greenway Plan." The plan identified several goals for a greenway network, including connecting transit centers and destinations, emphasizing alternative transportation and active lifestyles, attracting tourists, incentivizing private investment, and others (Greenways Incorporated and Arbor Engineering 2010). The following year, the first phase of the Swamp Rabbit Trail opened, which aligns with many of the goals listed in the plan. Today, all 22 miles of the original planned trail have been completed, and new expansions of the trail are in concept/planning stages.

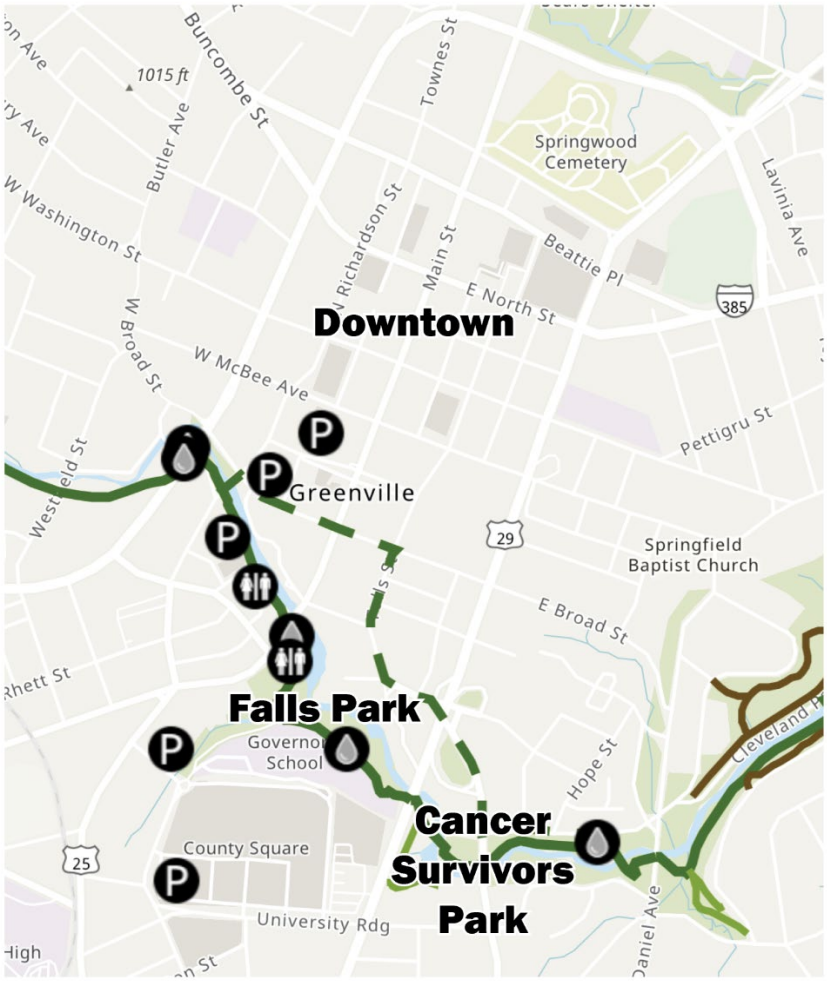


Figure 4.4 Map of Downtown Greenville, Trail, and Relevant Parks

The multi-use trail follows along the Reedy River as well as an abandoned railway. In the early 2000s, the community was notified that the owner of the Greenville Railroad was filing for abandonment, and the city was prepared to move quickly and obtain the rail to convert it into a rail-to-trail. The name of the trail comes from the rail's nickname "Swamp Rabbit" due to a bouncy ride. The rail-trail connects the towns of Greenville, Fountain's Inn, and Traveler's Rest. Travelers Rest, with a population just over 5,000 people, is named after the travelers that rested here when traveling by rail. Today, trail users stop here to rest and visit local shops and groceries. Travelers Rest is characterized by a small town feel with multiple small businesses.

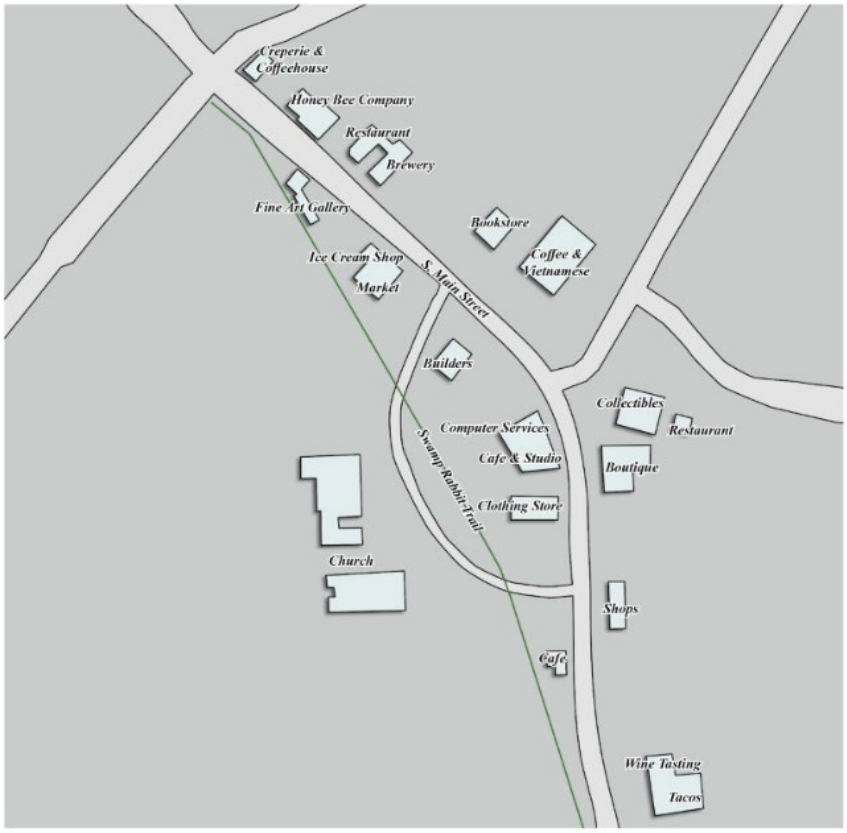


Figure 4.5 Travelers Rest Context Map (graphic by author)

Figure 4.6 Close-up Map (graphic by author)

Figure 4.7 Business-Trail Interaction in Travelers Rest (Google Street View)

Economic Impacts

In addition to the large public-private investments in downtown Greenville and the areas surrounding Falls Park, small businesses, such as those in Travelers Rest, have been faring well. In a study conducted by Julian Reed, Associate Professor of Health Sciences at Furman University, trail users were monitored between 2010 and 2014. The study found that almost 2 million people visited the trail with an average of 455,771 users per year (Reed 2014). Over the course of the four-year period, trail users generated over $14 million in revenue (Reed 2014). Shop owners along the trail have witnessed increases in sales due to the proximity of their establishment to the greenway. Reported revenue increases ranged from 10% to 85% (Reed 2014). Owners of bike shops along the trail were interviewed, and two shops reported earnings between $300,000 and $400,000 from trail users (Reed 2014). Another bike rental reported that about half of their customers were local and the other half were from outside of the county (Reed 2014). Thus, both large and small businesses in Greenville are profiting from the passersby using the trail.

Figure 4.8 Falls Park Context Map (graphic by author)

Figure 4.9 Reedy River Close-up Map (graphic by author)

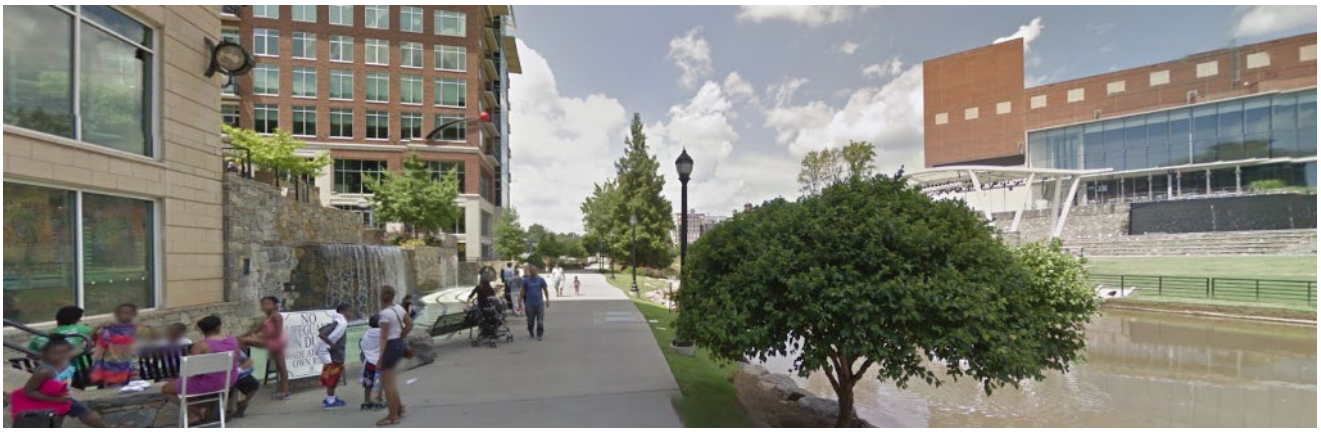


Figure 4.10 Business-Trail Interaction along Reedy River (Google Street View)

Gentrification Measures

The Swamp Rabbit Trail runs past downtown and through Greenville's West Side. The West Side is composed of three neighborhoods, Southernside, West Greenville, and West End. Historically, textile industries and old mill villages composed the West Side. Today, the communities are experiencing vacant lots and economic challenges. The populations in these neighborhoods are aging; almost half of the population is age 50-64 (City of Greenville 2014). Educational attainment is relatively low compared to the rest of Greenville with only 14% of people over 25 having an associate's degree or higher (City of Greenville 2014). Again, compared to the rest of Greenville, household median income is lower with ⅙ of the households in West Side earning less than $25,000 per year (City of Greenville 2014). Over 60% of the homes in West Side are rented (City of Greenville 2014). However, despite the economic challenges that the West Side faces, gentrification is beginning to occur (City of Greenville 2014).

In terms of keeping housing affordable and preventing gentrification, the city drafted a plan for Greenville's West Side in 2014. The plan lays out a variety of goals, such as stabilizing

the neighborhood, keeping "eyes on the street" and preventing displacement (City of Greenville 2014). Recommended mechanisms for stabilizing the neighborhood and making it more community friendly include creating a community land trust, expanding mobile farmer's markets, making streets more human scaled with homes over shops, and creating more community squares (City of Greenville 2014). Recommendations for preventing displacement include property acquisition by the city, implementation of a tax-cap for fixed income homeowners, support of residents with incomes below 80% AMI, creation of educational workshops on renters' rights, and preservation of neighborhood character with infill housing regulations (City of Greenville 2014). Thus, the city recognizes the changes that are occurring in the neighborhood, spurred by downtown's economic growth, the trail, and multiple other factors, and has accordingly drafted a plan for a stabilized community that maintains affordability.

Community Landmarks Trail - Thomasville, GA

Urban Context

Thomasville is in Thomas County, GA, and is home to over 18,000 people. The town and county are likely named after Major General Jett Thomas who served in Georgia's Militia during the war of 1812 (City of Thomasville n.d.). The town was founded in 1825 and grew to be popular as a winter destination for northerners in the late 1800s (City of Thomasville n.d.). Visitors from the north would stay in winter cottages and spend time hunting, fishing, horseback riding, and playing golf (City of Thomasville n.d.). The town promotes its historic, deep south atmosphere and continues to attract visitors to this day. Downtown attractions include shopping, antique stores, and dining along the main street. In fact, Thomasville was one of the first cities to become a designated "Main Street City" certified by the Main Street America Institute. In 2019, Thomasville's Main Street Program facilitated the investment of 5.3 million dollars into

downtown, the creation of 34 new jobs, and the rehabilitation of 11 buildings. In addition to Thomasville's historic downtown and main street businesses, outdoor attractions also continue to bring in visitors. Large bobwhite quail populations allow for abundant hunting opportunities. Natural attractions in the Thomasville area tend to exist on large plantations. For example, Tall Timbers Research Station preserves and conducts research on thousands of acres of the dwindling longleaf pine ecosystem close to Thomasville.

Trail Overview

Though city and natural attractions appear separate at first glance, the city of Thomasville has worked to integrate nature into the town. Multiple parks are dispersed throughout the town, and the city is in the process of creating an urban trail that connects 17 of these parks, as well as various historic landmarks and economic nodes (City of Thomasville n.d.). The Community Landmarks Trail was first envisioned in 2009, and the first phases of construction were completed in 2013 (City of Thomasville n.d.).

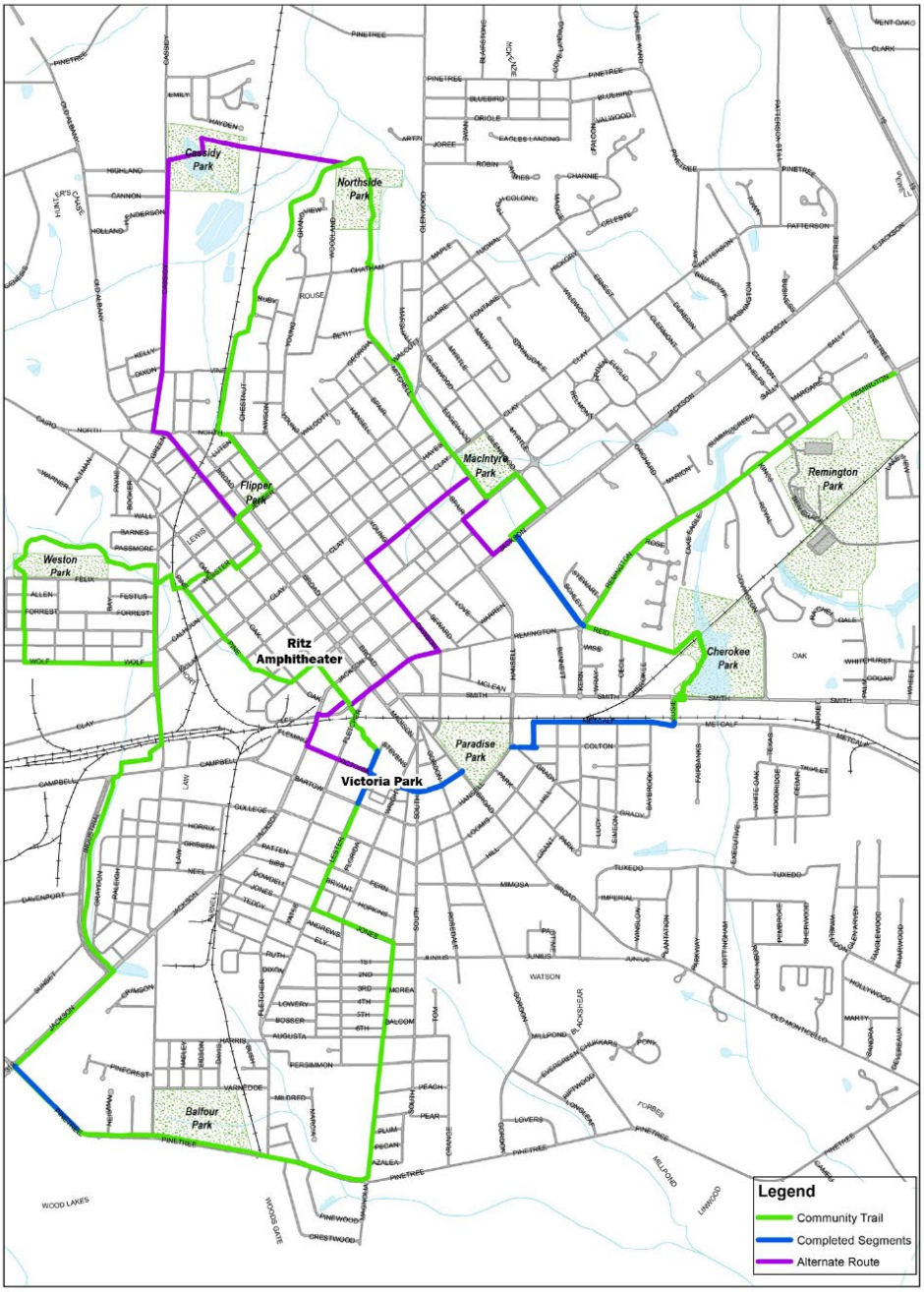


Figure 4.11 Map of Thomasville's Trails (City of Thomasville)

The Community Landmarks Trail is planned to be 15 miles long, and so far, 12,246 linear feet have been completed (City of Thomasville n.d.). The planning department seeks to make

Thomasville even more walkable than it already is; inspiration is derived from the Garden City Movement (City of Thomasville n.d.). The trailhead, which features the outdoor Ritz Amphitheater, creates a link between the trail and downtown. The amphitheater backs up to various businesses that surround the green space. Multiple community events are hosted here, and in turn the events bring business to the surrounding shops and restaurants. In Thomasville, greenspace development and economic development work together closely to create community. Though Thomasville is a small town with lots of surrounding greenspace, planners have worked to maintain greenspaces within city limits. The greenspace and surrounding businesses, in combination with the city's small size, allows for a human-scaled, walkable environment that has a sense of place.

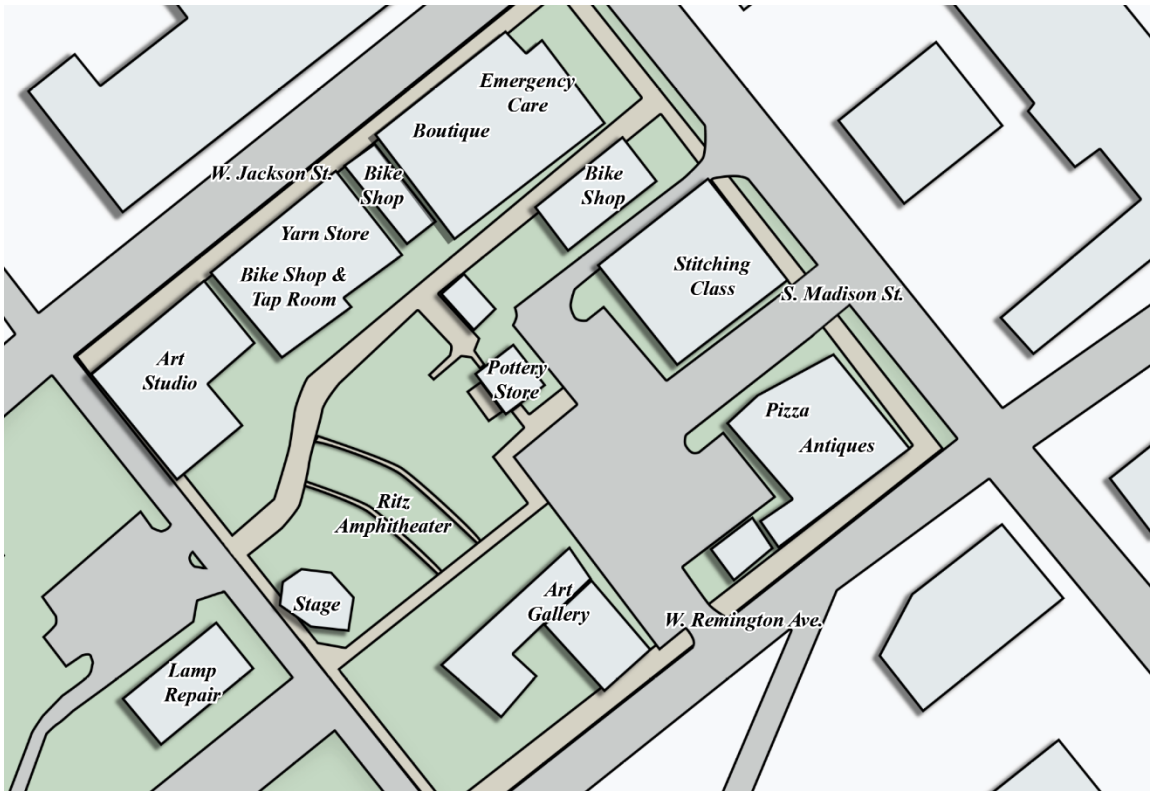


Figure 4.12 Map of Ritz Amphitheater and Surrounding Businesses (graphic by author)


Figure 4.13 Ritz Amphitheater and Figure 4.14 Businesses Around Amphitheater (by author)

Economic Impacts

As the Community Trail has not yet been completed, the economic impacts are not yet fully realized. As previously mentioned, Thomasville has historically been known to attract visitors and this continues today; the development of the Community Trail will only help reinforce the small town feel by connecting the city's landmarks and parks. This thesis predicts that those businesses that surround the trail and trailhead (amphitheater) will benefit from those using the trail and greenspace.

Gentrification Measures

Thomasville is characterized as a low-income community (City of Thomasville 2018). The poverty rate is 28%, which is higher than the state average of 17% (City of Thomasville 2018). Over 50% of the population is Black and 42% is White (City of Thomasville 2018). There is a discrepancy in income in that the white population is making a salary over 40,000 per year

and the Black population is earning around 20,000 per year (City of Thomasville 2018). Homeownership rate is just under 50% (City of Thomasville 2018). This lower-than-average ownership rate indicates that affordable housing options are scarce (City of Thomasville 2018).

The "Thomasville Community Landmarks Trail: Multi-Use Trail Master Plan and Recreational Amenity Analysis" addresses socioeconomic concerns by identifying Opportunity Zones, which are designated by the IRS as economically distressed communities in which new investments can qualify for preferential tax treatment (Smith and Associates 2011). Opportunity Zones were created by the Tax Cuts and Jobs Act of 2017. In addition to identifying potential Opportunity Zones, the city's investment in the urban trail was used to leverage funds to bring in an $800,000 Community Development Block Grant (Smith and Associates 2011). The grant was used to improve infrastructure and construct new homes in an adjacent infill neighborhood, Victoria Park, with the goal of providing affordable housing. In 2015, Thomasville's Planning Department was awarded the Georgia Initiative for Community Housing's Homeownership Award for initiatives that promote affordable homeownership (City of Thomasville 2015).

Furthermore, the City of Thomasville utilizes Community Home Investment Program (CHIP) funds to assist qualified, low-income homebuyers with a $14,999 deferred payment loan. The purpose of the program, according to the Georgia Department of Community Affairs, is to "provide safe, decent, and affordable housing in Georgia by granting funds to city and county governments, public housing authorities, and nonprofits to rehabilitate owner-occupied homes and build and renovate affordable single-family homes for sale to eligible homebuyers." Those who qualify for the program choose a house on a property owned by the land bank and the minimum down payment is $1,000. To qualify, buyers must have an income below 80% AMI. Homebuyer education and counseling is required if participating in the program.

Thus, the Community Trail, in combination with adjacent neighborhood infill development and affordable housing measures, works to create a more walkable community that emphasizes both economic development and affordability. City Manager Steve Sykes writes, "As you can see, the trail is more than just a recreational amenity; it is also an amenity that has the potential to enhance our community's vibrant, livable, sustainable development."

Tennessee Riverwalk - Chattanooga, TN

Urban Context

Chattanooga, Tennessee is located along the Tennessee River in the southeastern part of the state. Four highways converge on Chattanooga, which is the fourth largest city in the state and has an estimated population of about 180,557 people. Originally, the site was called "Ross's Landing" after John Ross, who established a trading post on the Tennessee River (Britannica n.d.). In 1838, the city was renamed "Chattanooga," from a Creek word that describes nearby Lookout Mountain (Britannica n.d.). Chattanooga developed around a river port and expanded when railroads reached the city in the 1840s and 50s (Britannica n.d.). In the 1930s, the establishment of Tennessee Valley Authority's headquarters, along with the company's construction of the Chickamauga Dam, has served as a major economic driver for the city (Britannica n.d.). Today, Chattanooga has a thriving downtown with pedestrian-only areas that teem with tourists and locals alike.

Chattanooga did not always have a thriving downtown, however. In the 1980s, downtown Chattanooga was suffering from disinvestment and closed storefronts (TPL n.d.). During this time, the Tennessee River was not viewed as an asset that could benefit downtown (TPL n.d.). To revitalize downtown, Chattanooga's economic development office turned to the Tennessee River as a valuable resource. The existing boat dock was converted to public river frontage and

named the “21s Century Waterfront” (HDR n.d.). The design includes linear, amphitheater-like terracing and large swaths of open greenspace, creating ample space for public gatherings and events. An emphasis on public art is evident throughout the park; a budget of $1.2 million enabled the installation of two permanent pieces and a rotating sculpture garden (City of Chattanooga n.d.). The project, which redeveloped 129 acres of river front, was completed in 2005 (City of Chattanooga n.d.).

Figure 4.15 Walnut Street Bridge and Figure 4.16 the 21st Century Waterfront and Tennessee Aquarium (by author)

Around the same time attention was turning back to the riverfront, the concept of an urban trail also became desirable. In the late 1980s, multiple Vision 2000 planning meetings set the stage for what would soon become the Tennessee Riverwalk. By the end of the decade, the first 2-mile section of the Riverwalk was completed. During the early 1990’s, work began to extend the trail to the Chickamauga Dam, which is owned by the Tennessee Valley Authority (Williams 2019). In 1994, the Trust for Public Land joined efforts with the city to continue Chattanooga’s urban trail network (TPL n.d.). Over the course of the next ten years, the Trust for

Public Land acquired land used to build the trail, as well as assisted with public outreach and fundraising (TPL n.d.).

Trail Overview

The Tennessee Riverwalk extends 13 miles along the Tennessee River from the city's thriving downtown to a riverfront park by Chickamauga Dam (Hamilton County Parks and Recreation n.d.). The trail provides a route for various forms of alternative transportation. Multiple canoe/kayak launches are found along the trail. Bike Chattanooga stations are also abundant along the trail and throughout downtown, with a total of 400 bikes located at 42 stations (Bike Chattanooga n.d.). For tourists, renting a bike for the day only costs $8.00 (Bike Chattanooga n.d.). Locals may decide to invest in a $50 annual pass (Bike Chattanooga n.d.). The trail is well used by those seeking exercise, but it also provides access to other activities as well, such as dining at restaurants that are "dotted along its length." In downtown, the Riverwalk provides direct access to attractions such as the art museum and aquarium. The Walnut Street Bridge is one of the trail's highlights; it crosses the Tennessee River at the heart of Chattanooga. The bridge was constructed in 1891 and exists today as one of the longest pedestrian bridges in the world (City of Chattanooga n.d.).

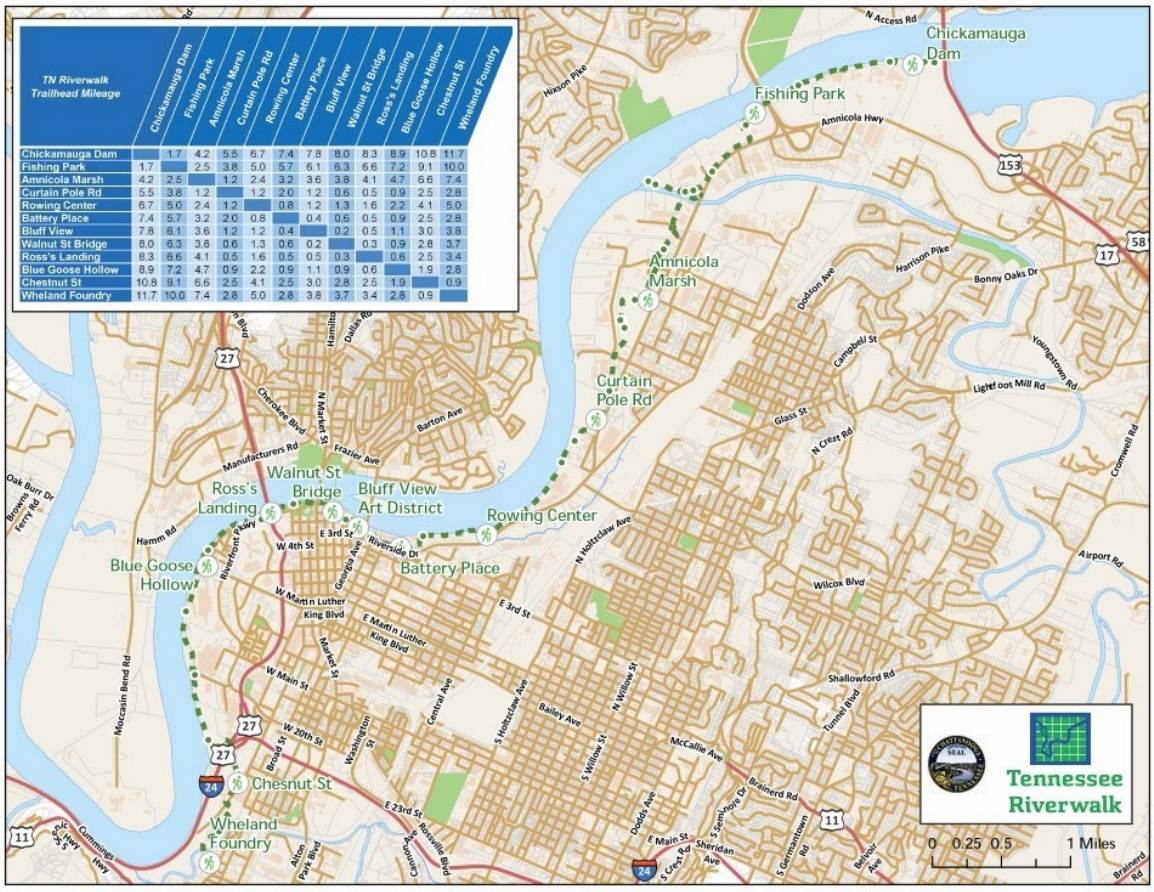


Figure 4.17 Map of Tennessee Riverwalk (City of Chattanooga)

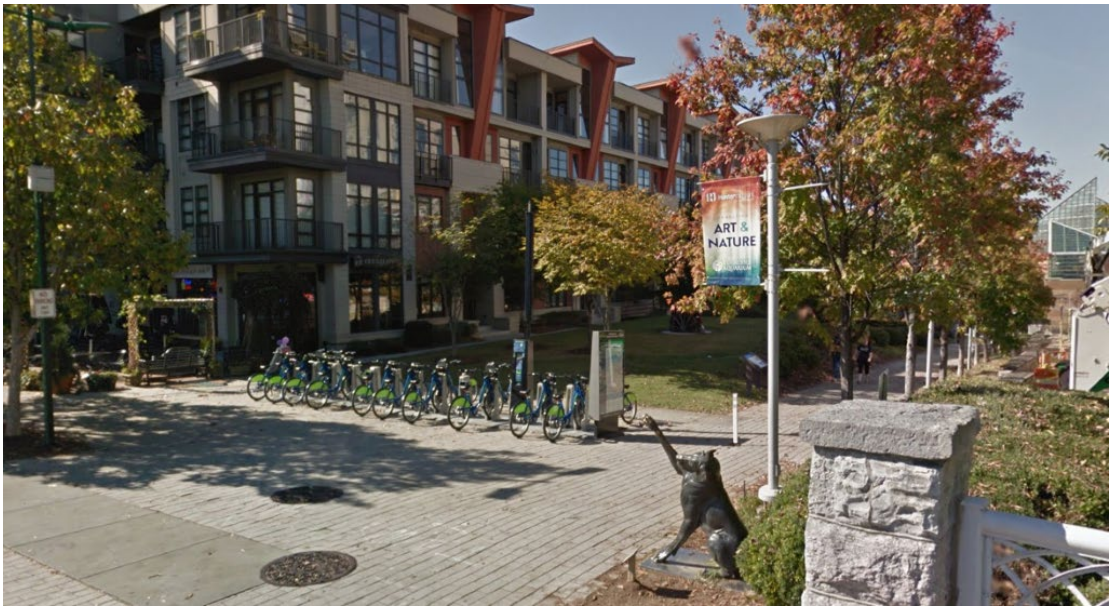


Figure 4.18 Photo of Bike Station (Google Street View)

Economic Impacts

Throughout the trail's construction, various public and private grants have been invested into the Riverwalk, exceeding $150 million. In turn, these investments have brought in over $1 billion from tourists. An estimated 150,000 tourists visit the Riverwalk each year (Pace 2019). In turn, the tourism industry in the county supports 8,500 jobs. In addition to tourists, citizens of Chattanooga also enjoy the trail. According to a community survey conducted in 2019, Tennessee Riverpark is the most-used park in the region (Hamilton County Parks and Recreation 2020). Survey respondents use the park on average every few months (Hamilton County Parks and Recreation 2020). The Director of Parks and Recreation, Tom Lamb, writes that "the Riverwalk is such an important part of our riverfront renaissance story -- that is now told internationally" (Pace 2019).

In fact, when compared to other trails with economic development, Chattanooga's Riverwalk has a higher proportion of businesses to trail than other greenways (Little 1990). The path traverses through the heart of the city, and as evidenced by the maps below, businesses surround the urban trail on either side of the river. Major attractions include the Tennessee Aquarium and Hunter Museum of American Art. These quasi-public spaces also attract businesses and make the city a more vibrant place. This quantity of businesses has been ideal for Chattanooga and has worked to bring in tourism monies.

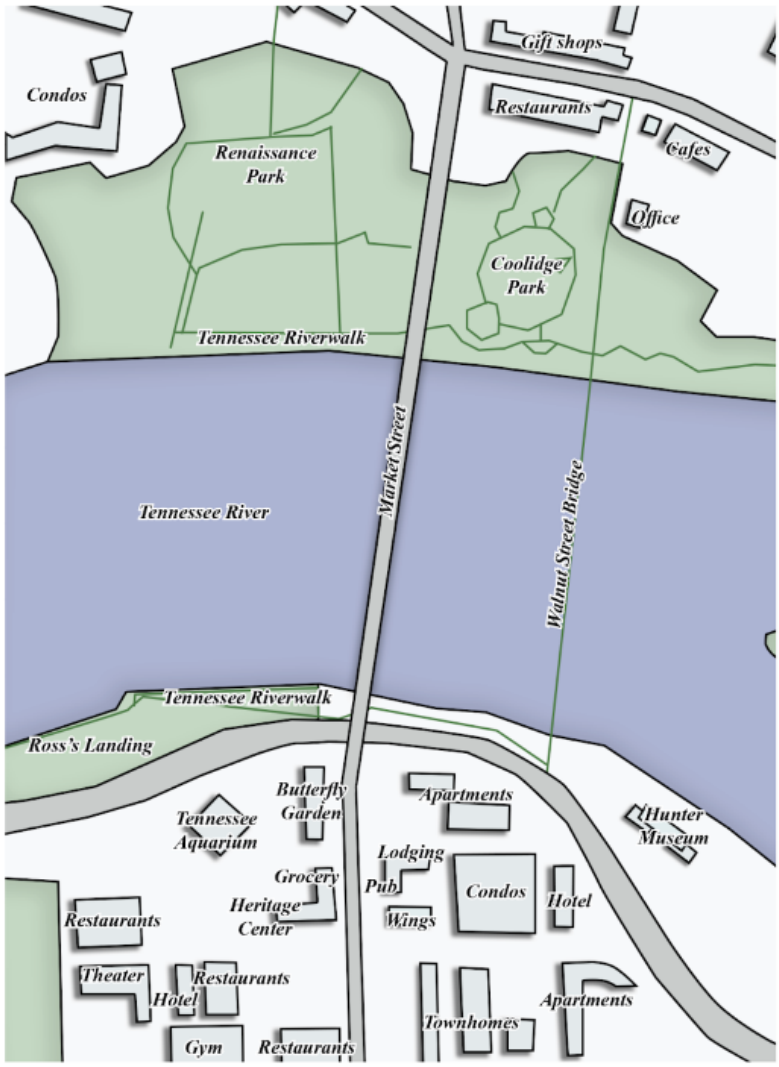


Figure 4.19 Riverwalk, Parks, and Businesses (graphic by author)

Figure 4.20 Businesses, Riverwalk, and Coolidge Park (Google Street View)

Gentrification Measures

According to the Hamilton County Parks and Recreation Master Plan, Chattanooga had a median home value of $163,395 with a median household income of $42,196. 20% of households received food stamps (2020). In order to maintain affordability, the city has worked to provide affordable housing, and has won national awards for their programs (City of Chattanooga n.d.). The city brings in funds "to produce or preserve affordable housing" from HUD's Community Development Block Grants, Home Investment Partnership Act, and Neighborhood Stabilization Program. The city also offers assistance with home repair and renovations. Citizens can apply for assistance through the city's Community Development web page. In 2016, Chattanooga took two steps further towards increasing city-wide affordable housing: first, by amending the housing PILOT program by requiring developers to increase the percentage of required affordable housing units from 20% to 50%, and second, by replacing an outdated zoning code with form-based code in downtown neighborhoods, including along the riverfront. Form-based code allows for the construction of a wider range of housing types, including both low- and middle-income housing.

Case Studies - Findings

As evidenced by the above case studies, urban trail development and economic development often occur simultaneously and positively reinforce one another. Economic development surrounding the urban trails in Greenville, Thomasville, and Chattanooga has been planned for and encouraged. Though development surrounding urban trails in Athens will not be emphasized as much as in these three cities, elements of design found in these case studies may prove to be useful in developing business nodes in Athens.

The case studies revealed the following best practices: allowing stores to be able to open up directly to the trail, separating vehicle and pedestrian areas, emphasizing principles that are considered new urbanist, and developing dense urban areas through infill development and adaptive reuse. The Thomasville case study reveals how stores can surround a public greenspace and neighboring communities can be emphasized through infill development. Chattanooga and Greenville have created an abundance of pedestrian oriented spaces that connect people to economic centers and that keep people and vehicles separate. All three of the cities utilized new urbanist principles to an extent; walkability, density, public art, accessible public greenspaces, and proximity of living, work, and leisure spaces are evident in all case studies.

In terms of gentrification, the case studies helped to further the mitigation research started earlier in this thesis. Some of the case studies' approaches to gentrification were outlined in the literature review and some case studies revealed new approaches. The following chart (Table 4.1) summarizes the approaches discussed in both the literature review and the case studies.

Category	Mitigation Approaches	Example(s)
Space Reclamation	Community Engagement	Community engagement programs implemented along HighLine
	Sidewalk Living Rooms	Affordable furniture installed along sidewalks in West Oakland & Los Angeles
	Identify/document cultural heritage with the goal of preservation	San Francisco Heritage's plan for preserving cultural heritage
Neighborhood Stabilization Measures	"Do Nothing" Approach	Scott Larson's argument for not building QueensWay in Queens, NY
	Initiatives to preserve local businesses	Breakfast for Business Leaders along Atlanta BeltLine
	Educational workshops	Renter's Rights workshop – Greenville's West Side
	Expanding mobile farmer's markets	Recommended in stabilization plan for Greenville's West Side
	Human scaled streets	Recommended in stabilization plan for Greenville's West Side
	Community squares	Recommended in stabilization plan for Greenville's West Side
	City acquisition of land	Recommended in stabilization plan for Greenville's West Side
Planning Approaches	Equitable Development Plan	Formal ways in which local governments can seek to mitigate gentrification – EDPs for Atlanta BeltLine and 11th Street Bridge Park
	Community Benefits Agreement	Legally binding contract between community and developer – verbiage found in Atlanta BeltLine Ordinance
	Form-based Code	Allows for a wider range of housing types -- Chattanooga, TN
Federal Funding/Programs	Community Development Block Grant	Chattanooga, TN; Thomasville, GA
	Community Home Investment Program	Chattanooga, TN; Thomasville, GA
	Neighborhood Stabilization Program	Chattanooga, TN
Housing Support	Community Land Trust	Nonprofit organizations seeking to preserve the makeup of communities over time – Athens Land Trust in Athens, GA
	Required Percentage Affordable Housing Units	Chattanooga, TN – 50% required
	Tax-cap for Fixed Income	Greenville, SC
	Financial Support to Residents Below 80% AMI	Greenville, SC; Thomasville, GA

Table 4.1 Further Approaches to Mitigating Gentrification

Thomasville, GA, was able to leverage funds from urban trail construction to assist in revitalizing adjacent infill neighborhoods. Greenville and Chattanooga utilized urban trails and the redesign of waterfronts to help revitalize their downtowns. In addition, these cities also used various methods to help mitigate gentrification, including using Community Development Block Grants and HOME funds as well as other tools. The three case studies help to show how cities can incentivize both economic development and affordability at the same time.

CHAPTER 5

SITE SELECTION PROCESS

Methods to determine potential business nodes are explained; Geographic Information Systems (GIS) layers and future development plans are used to propose economic development nodes along the existing and future urban trails in Athens-Clarke County. Finally, selected sites are presented and the process used to select them is discussed.

Methodology for determining potential business nodes

The methodology in this thesis utilizes GIS data, future Athens-Clarke County development plans, and the use of design to explore potential locations for business nodes along trails. The thesis will also use the findings from the literature review and case studies to propose suggestions for mitigating gentrification in each node.

This thesis derives insight from the Metropolitan Landscape Planning Model (METLAND) for determining economic development. The METLAND method first eliminates already developed land from consideration (Ahern 2002). Then, critical natural resources are further excluded from developable land (Ahern 2002). Next, the method addresses hazardous areas in the landscape, and cautions against these areas for development (Ahern 2002). Finally, the remaining land is assessed for suitability based on soils and accessibility (Ahern 2002). Three guiding principles inform the METLAND analysis (Ahern 2002):

1. Development should be discouraged in areas of significant resource value
2. Development should be discouraged in areas of natural and human-caused hazards
3. Development should be encouraged in areas best suited for it

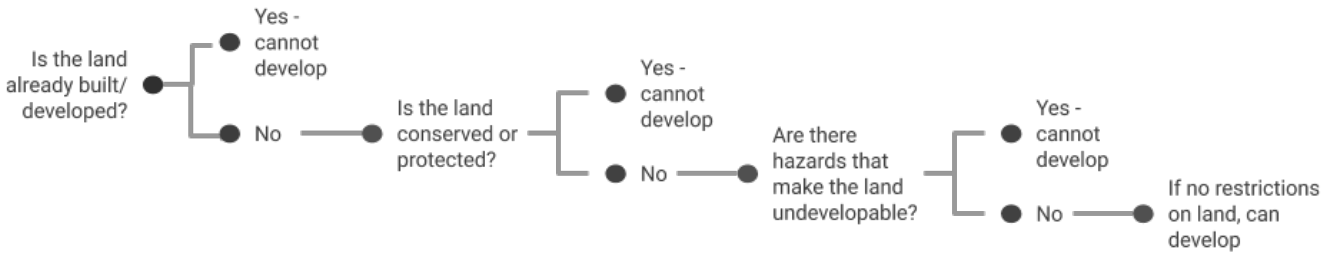


Figure 5.1 METLAND Analysis (graphic by author)

Developed Land	**Conservation Land**	**Hazardous Land**
• Roads • Buildings • Impervious Surfaces • Future development (land use)	• Jurisdictional wetlands • Conservation easements • Public parks • Designated Greenway Conservation Areas	• 100 Year Flood Zone • 500 Year Flood Zone

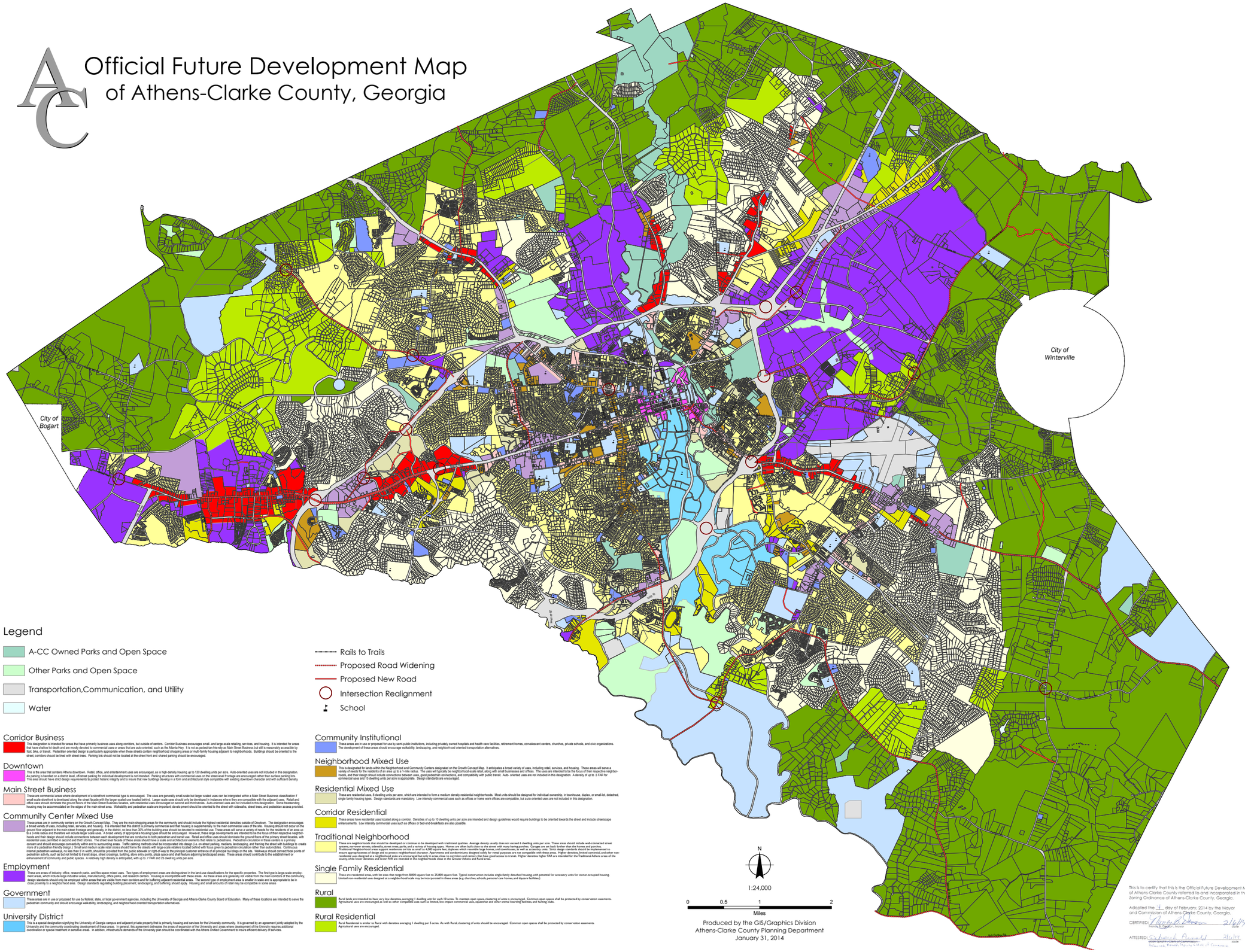
Table 5.1: Necessary Shapefiles (Data) for METLAND Analysis

Potential business nodes are informed by several layers of data listed in the above chart. A buffer analysis is used to determine suitable land that is within walking distance from the trail. Originally, the scope was within 500 feet of the trail, but this was expanded to a quarter mile away. A quarter of a mile is a comfortable walking distance to detour from a public park, or in this case, a trail.

Future Development Plans

Though the METLAND model proved to be quite useful when considering land that may be available to develop in the present, this thesis did not adhere to the method entirely. Ruling out already developed land proved to be too limiting. Looking 20-40 years into the future, land that is currently developed may be repurposed and the land use may be converted. Athens has made plans available that show future areas deemed in need of redevelopment. These plans helped inform the locations of proposed business nodes along Athens' trails. The Official Future Development Map (Figure 5.2), Opportunity Zones Map (Figure 5.3), and Tax Allocation Districts Map (Figure 5.4) are ways in which Athens has made its plans for development and redevelopment available. Figures 5.5 and 5.6 shows the trails overlaid on top of the Tax Allocation Districts and Opportunity Zones for reference.

Official Future Development Map of Athens-Clarke County, Georgia



Legend

- A-CC Owned Parks and Open Space
- Other Parks and Open Space
- Transportation,Communication, and Utility
- Water

- Rails to Trails
- Proposed Road Widening
- Proposed New Road
- Intersection Realignment
- School

Corridor Business
This designation is intended for areas that have primarily business uses along corridors, but outside of centers. Corridor Business encourages small- and large-scale retailing, services, and housing. It is intended for areas that have shallow lot depth and are mostly devoted to commercial uses or areas that are auto-oriented, such as the Atlanta Hwy. It is not as pedestrian-friendly as Main Street Business but still is reasonably accessible by foot, bike, or transit. Pedestrian oriented design is particularly appropriate when these streets contain neighborhood shopping areas or multi-family housing adjacent to neighborhoods. Buildings should be oriented to the street, corridors should be lined with street trees. Parking lots should not be located at the street front and shared parking should be encouraged.

Downtown
This is the area that contains Athens downtown. Retail, office, and entertainment uses are encouraged, as is high-density housing up to 120-dwelling units per acre. Auto-oriented uses are not included in this designation. As parking is handled on a district level, off-street parking for individual development is not intended. Parking structures with commercial uses on the street-level frontage are encouraged rather than surface parking lots. This area should have strict design requirements to protect historic integrity and to insure that new buildings develop in a form and architectural style compatible with existing downtown character and with sufficient density.

Main Street Business
These are commercial areas where development of a storefront commercial type is encouraged. The uses are generally small-scale but larger scaled uses can be intergrated within a Main Street Business classification if small-scale storefront is developed along the street facade with the larger-scaled use located behind. Larger scale uses should only be developed in instances where they are compatible with the adjacent uses. Retail and office uses should dominate the ground floors of the Main Street Business facades, with residential uses encouraged on second and third stories. Auto-oriented uses are not included in this designation. Some freestanding housing may be accommodated on the edges of the main street area. Walkability and pedestrian scale are important; development should be oriented to the street with sidewalks, street trees, and pedestrian access provided.

Community Center Mixed Use
These areas are in community centers on the Growth Concept Map. They are the main shopping areas for the community and should include the highest residential densities outside of Downtown. The designation encourages a broad variety of uses, including retail, services, and housing. It is intended that this district is primarily commercial and that housing is supplementary to the main commercial uses of the site. Housing should not occur on the ground floor adjacent to the main street frontage and generally, in the district, no less than 30% of the building area should be devoted to residential use. These areas will serve a variety of needs for the residents of an area up to a 3-mile radius and therefore will include larger scale uses. A broad variety of appropriate housing types should be encouraged. However, these large developments are intended to be the focus of their respective neighborhoods and their design should include connections between each development that are conducive to both pedestrian and transit use. Retail and office uses should dominate the ground floors of the primary street facades, with residential uses encouraged on second and third stories. Auto-oriented uses are not included in this designation. Pedestrian connections, and compatibility with public transit are of concern and should encourage connectivity within and to surrounding areas. Traffic calming methods shall be incorporated into design (i.e. on-street parking, medians, landscaping, and framing the street with buildings to create more of a pedestrian friendly design.) Small and medium scale retail stores should frame the streets with large-scale retailers located behind with focus given to pedestrian circulation rather than automobiles. Continuous internal pedestrian walkways, no less than 5' in width, should be provided from the public sidewalk or right-of-way to the principal customer entrance of all principal buildings on the site. Walkways should connect focal points of pedestrian activity, such as but not limited to transit stops, street crossings, building, store entry points, plaza space and shall feature adjoining landscaped areas. These areas should contribute to the establishment or enhancement of community and public spaces. A relatively high density is anticipated, with up to 7 FAR and 25 dwelling units per acre.

Employment
These are areas of industry, office, research parks, and flex-space mixed uses. Two types of employment areas are distinguished in the land-use classifications for the specific properties. The first type is large-scale employment areas, which include large industrial areas, manufacturing, office parks, and research centers. Housing is incompatible with these areas. As these areas are generally not visible from the main corridors of the community, design standards should only be employed within areas that are visible from main corridors and for buffering adjacent residential areas. The second type of employment area is smaller in scale and is appropriate to be in close proximity to a neighborhood area. Design standards regulating building placement, landscaping, and buffering should apply. Housing and small amounts of retail may be compatible in some areas.

Government
These areas are in use or proposed for use by federal, state, or local government agencies, including the University of Georgia and Athens-Clarke County Board of Education. Many of these locations are intended to serve the pedestrian community and should encourage walkability, landscaping, and neighborhood oriented transportation alternatives.

University District
This is a special designation signifying the University of Georgia campus and adjacent private property that is primarily housing and services for the University community. It is governed by an agreement jointly adopted by the University and the community coordinating development of these areas. In general, this agreement delineates the areas of expansion of the University and areas where development of the University requires additional coordination or special treatment in sensitive areas. In addition, infrastructure demands of the University plan should be coordinated with the Athens Unified Government to insure efficient delivery of services.

Community Institutional
These areas are in use or proposed for use by semi-public institutions, including privately-owned hospitals and health care facilities, retirement homes, convalescent centers, churches, private schools, and civic organizations. The development of these areas should encourage walkability, landscaping, and neighborhood oriented transportation alternatives.

Neighborhood Mixed Use
This is designated for lands within the Neighborhood and Community Centers designated on the Growth Concept Map. It anticipates a broad variety of uses, including retail, services, and housing. These areas will serve a variety of needs for the residents of an area up to a 1-mile radius. The uses will typically be neighborhood-scale retail, along with small businesses and offices. The uses are intended to be the focus of their respective neighborhoods, and their design should include connections between uses, good pedestrian connections, and compatibility with public transit. Auto- oriented uses are not included in this designation. A density of up to .5 FAR for commercial uses and 15 dwelling units per acre is appropriate. Design standards are encouraged.

Residential Mixed Use
These are residential uses, 8 dwelling units per acre, which are intended to form a medium density residential neighborhoods. Most units should be designed for individual ownership, in townhouse, duplex, or small-lot, detached, single family housing types. Design standards are mandatory. Low intensity commercial uses such as offices or home work offices are compatible, but auto-oriented uses are not included in this designation.

Corridor Residential
These areas have residential uses located along a corridor. Densities of up to 10 dwelling units per acre are intended and design guidelines would require buildings to be oriented towards the street and include streetscape enhancements. Low intensity commercial uses such as offices or bed-and-breakfasts are also possible.

Traditional Neighborhood
These are neighborhoods that should be developed or continue to be developed with traditional qualities. Average density usually does not exceed 6 dwelling units per acre. These areas should include well-connected street systems, narrower streets, sidewalks, street trees, parks, and a variety of housing types. Homes are often built close to the street with many having porches. Garages are set back farther than the homes and porches. Traditional Neighborhood areas support residences on lots as small as 4,000 square feet, duplexes which resemble large homes, and townhouses, as well as accessory units. Strict design standards should be implemented to ensure appropriate development. Large tracts of land should not be subdivided into a single lot size. Appropriate zoning districts for rural purposes are not compatible with these areas. Higher densities, limited commercial, and other non-residential uses designed at a neighborhood scale are encouraged but only in areas close to downtown and where adequate access to transit. Higher densities higher FAR are intended for the Traditional Athens areas of the county, while lower densities and lower FAR are intended in the neighborhoods close in the Greater Athens and Rural areas.

Single Family Residential
These are residential areas, with lot sizes that range from 8,000 square feet to 25,000 square feet. Typical construction includes single-family detached housing, with potential for accessory units for owner-occupied housing. Limited non-residential uses designed at a neighborhood scale may be incorporated in these areas (e.g. churches, schools, personal care homes, and daycare facilities.)

Rural
Rural lands are intended to have very low densities, averaging 1 dwelling unit for each 10 acres. To maintain open space, clustering of units is encouraged. Common open spaces shall be protected by conservation easements. Agricultural uses are encouraged, as well as other compatible uses such as limited, low-impact commercial uses, equestrian and other animal boarding facilities, and hunting clubs.

Rural Residential
Rural Residential is similar to Rural with densities averaging 1 dwelling per 5 acres. As with Rural, clustering of units should be encouraged. Common open spaces shall be protected by conservation easements. Agricultural uses are encouraged.

N

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Miles

Produced by the GIS/Graphics Division
Athens-Clarke County Planning Department
January 31, 2014

This is to certify that this is the Official Future Development Map of Athens-Clarke County referred to and incorporated in the Zoning Ordinance of Athens-Clarke County, Georgia.

Adopted the 4 day of February, 2014 by the Mayor and Commission of Athens-Clarke County, Georgia.

CERTIFIED: Vernita D. Gibson 2/6/14
Vernita D. Gibson, Notary Date

ATTESTED: Cindy Rowell 2/6/14
Clerk of Commission Date

Figure 5.2

Athens-Clarke County
Opportunity Zones

Tract 1303
BG 2

Tract 301
BG 1

Tract 301
BG 2

Tract 19
BG 2

Tract 18
BG 1

Tract 18
BG 3

Tract 9
BG 1

Tract 9
BG 3

Tract 9
BG 2

Tract 6
BG 2

Tract 6
BG 3

Tract 6
BG 1

Tract 1
BG 1

Tract 20
BG 1

Tract 21
BG 1

Tract 302
BG 3

Tract 302
BG 2

Tract 302
BG 1

Tract 1405
BG 3

Tract 1506
BG 1

Tract 1506
BG 3

Tract 1507
BG 1

Legend
- Chase Street/Newton Bridge Road
- Lexington Road
- Oak Street
- North Avenue
- Hawthorne Avenue
- W Broad Street
- Baxter Street

Tract 99
BG 9
Urban Redevelopment Areas

N

0 0.25 0.5 1 Miles

Figure 5.3

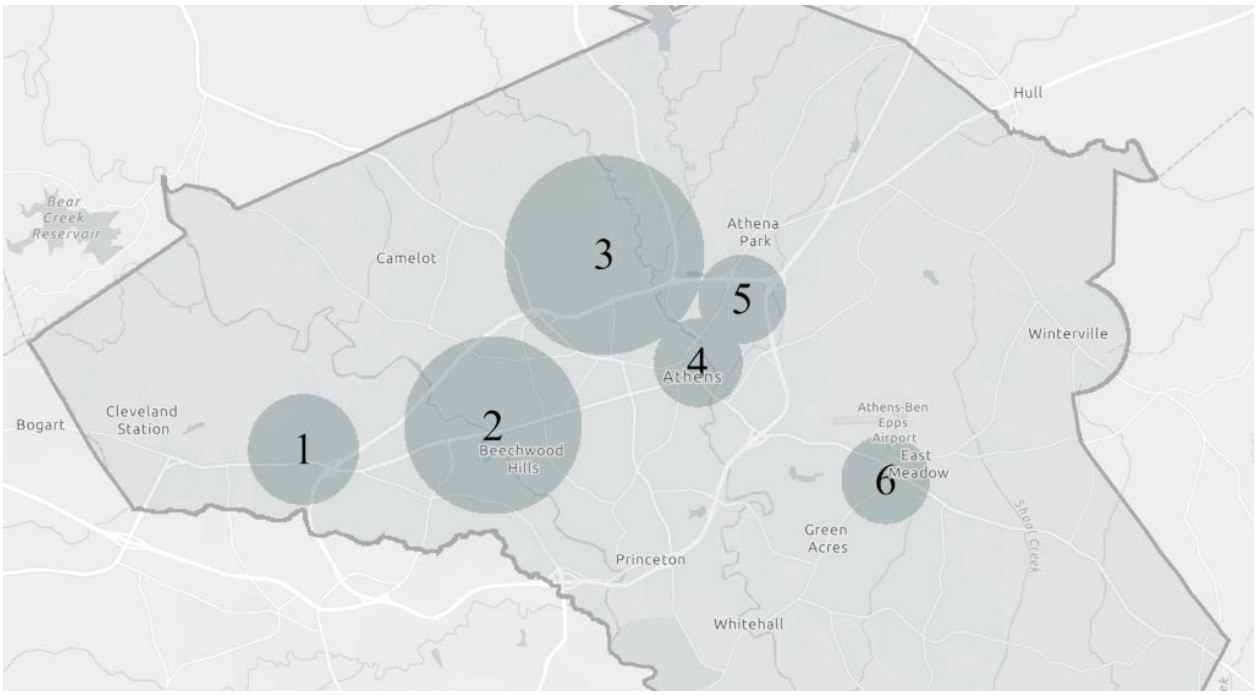

Figure 5.4 Athens-Clarke County Tax Allocation Districts Map

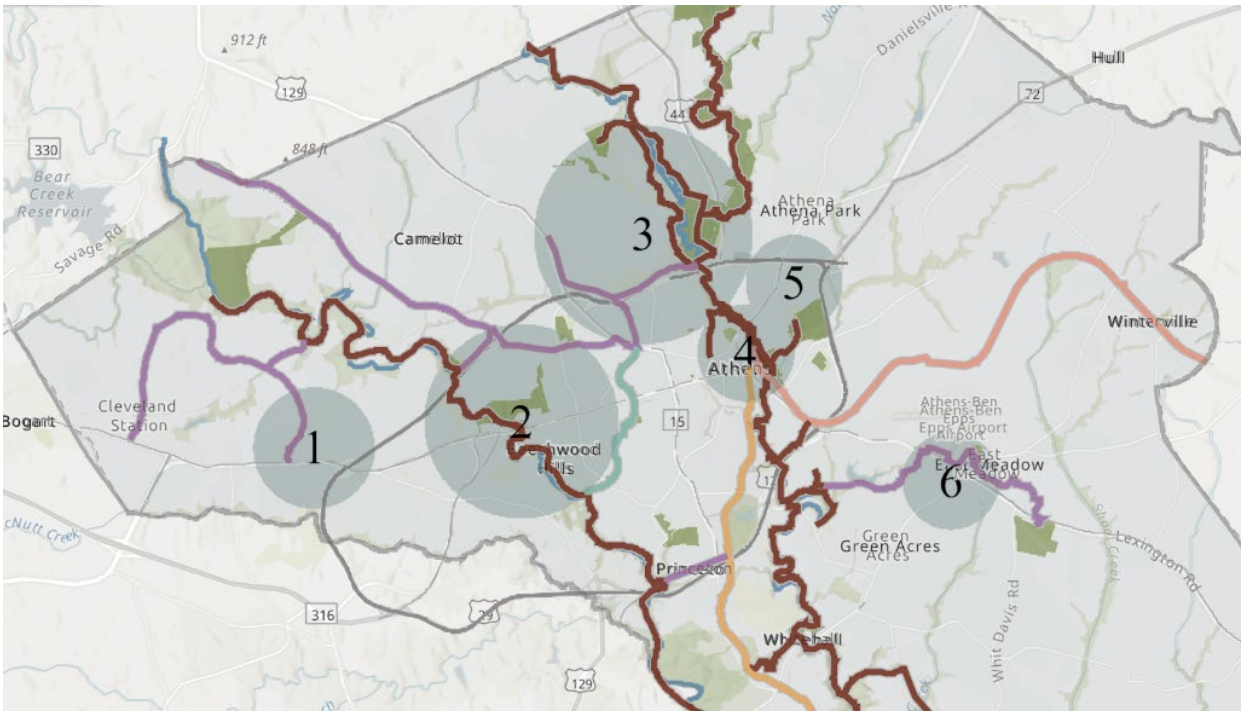

Figure 5.5 Tax Allocation Districts with Trails Overlay

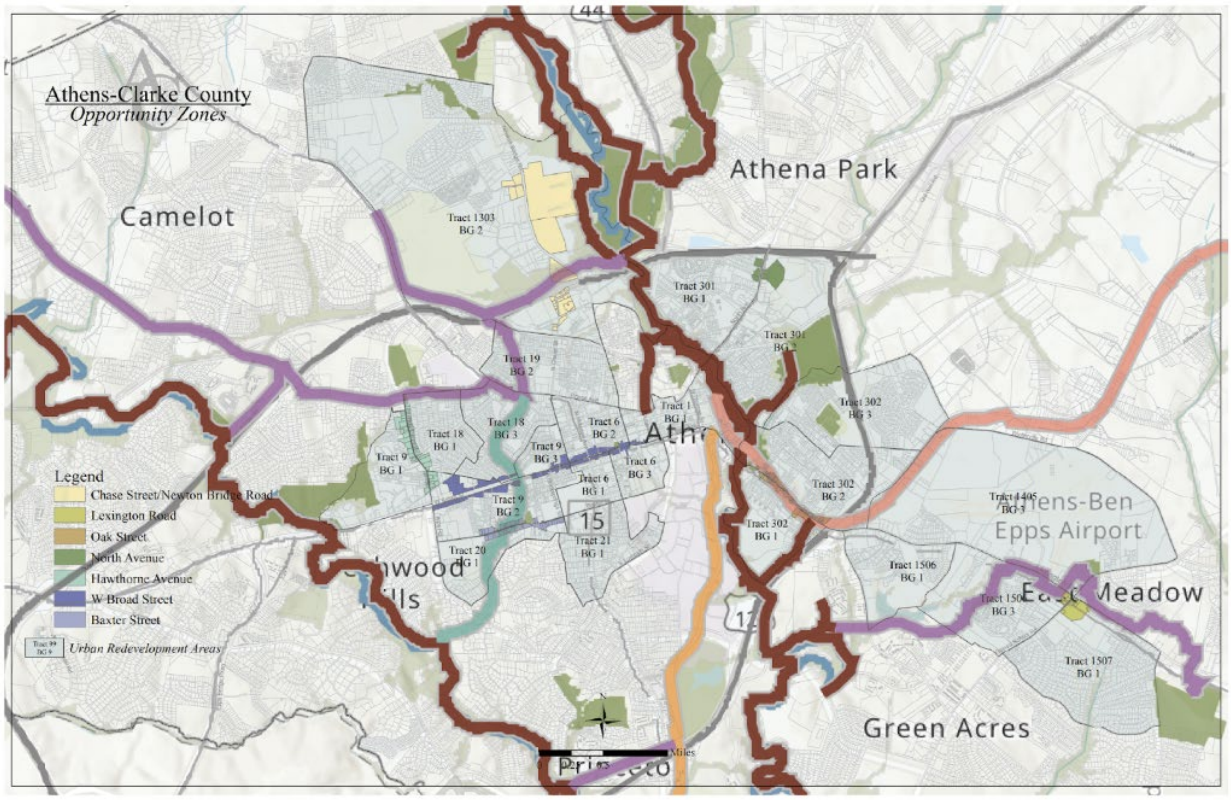

Figure 5.6 Opportunity Zones with Trails Overlay

Site Selection

The locations of the following proposed nodes were selected based on multiple factors. The original GIS METLAND methodology proved to be too limiting for the scope of this project, and the search for appropriate parcels was expanded to include those properties in which development had already occurred. Though GIS was ultimately not used as a primary method for determining locations, the software did inform where environmentally sensitive areas existed, and these were immediately excluded from the list of possible sites. The following factors influenced the selection of locations: (1) parcels that do not pose a threat to the ecological goals of the greenway network (2) a current need for redevelopment, based on existing planning

documents (3) available and underutilized parcels and (4) an ability to reuse existing structures.

The following properties were selected for potential economic development:

1. Georgia Square Mall
2. Oak Street
3. Old Commerce Road
4. Lexington Road
5. Quarry

The nodes are highlighted along the greenway network trails in Figure 6.1.

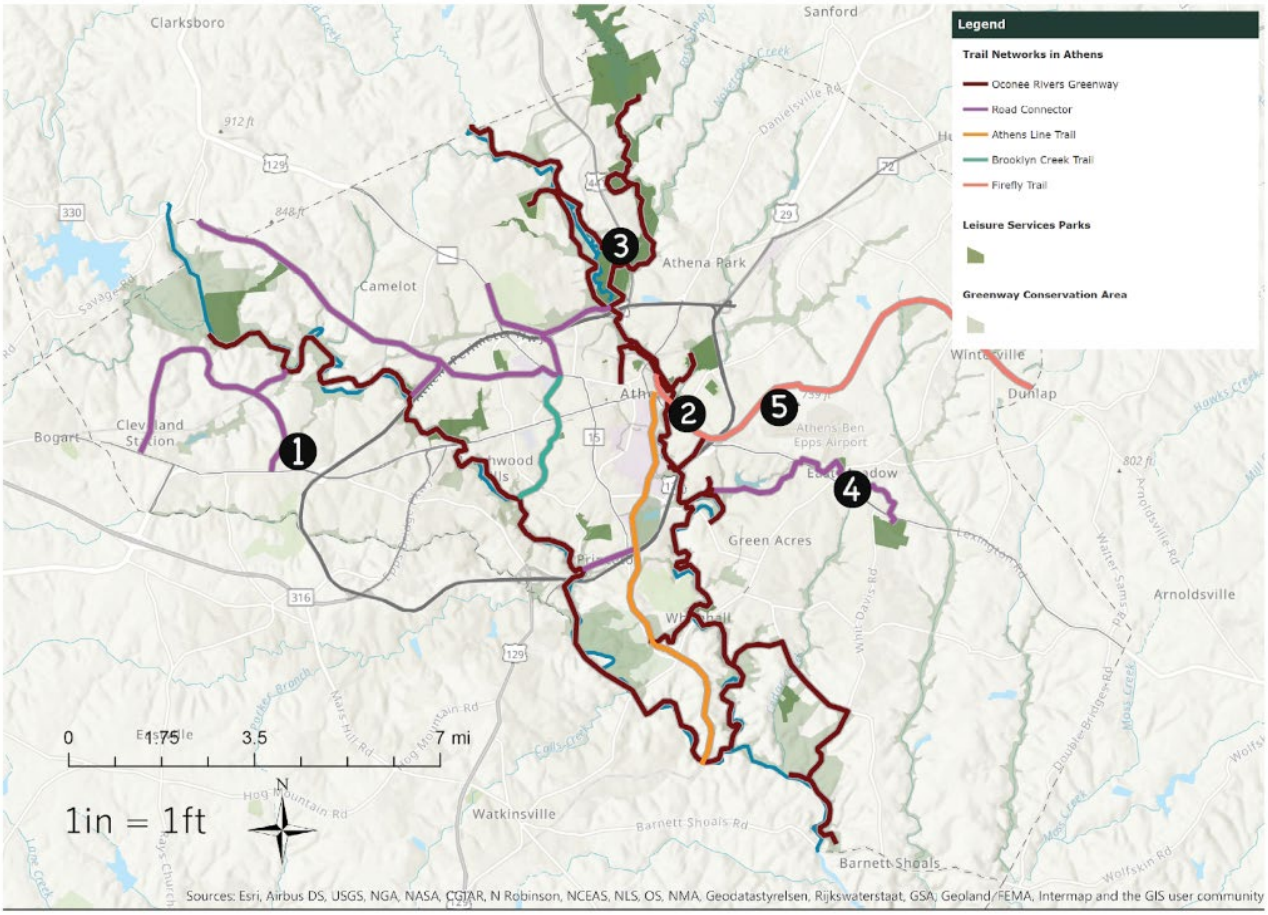

Figure 5.7 Proposed Business Nodes along Athens Trails

	1. **Georgia Square Mall**	2. **Oak Street**	3. **Old Commerce Road**	4. **Lexington Road**	5. **Quarry**
Block Group	130600	030200	140300	140600	140500
Reason for Redevelop	Outdated/ aging infrastructure (ability to restore existing buildings)	Vacant/ underutilized space	Lot for sale - zoned commercial; lack of commercial uses in area	Underutilized parcels	Land use conversion
Redevelop-ment plans	TAD	OZ	--	TAD	Convert quarry to reservoir
Trail	Proposed	Existing	Proposed	Proposed	Funded
Income levels	ACC Median income (58,736)	Very low income (27,720)	Low - very low income (35,222)	Very low income (29,086)	Very low - extremely low income (25,661)
Ethnicity composition	68% White 22% Black 9.3% Asian	45.5% Black 26.4% White 22.2% Hisp.	43.7% Black 37.4% Hisp. 18.6% White	49.3% Black 33.1% White	66% Black 17.3% White 15.2% Hisp.

Table 5.2 Nodes: Summary of Existing Conditions

Table 5.2 summarizes the existing conditions within the proposed nodes, including reasons why redevelopment is appropriate and general demographic information which will help determine anti-gentrification measures. None of the five selected properties pose threats to environmental goals. Georgia Square Mall, Oak Street, Lexington Road, and the Quarry have been identified in planning documents outlining Opportunity Zones and Tax Allocation Districts as areas that would benefit from redevelopment. Georgia Square Mall is composed of over 100 acres of underutilized impervious surface and outdated, partially vacant infrastructure. The Oak Street corridor has several deteriorating and vacant structures, some of which could be repurposed. This corridor has also been identified as an opportunity zone by city planners. Lexington Road is vehicular-oriented and lacks a sense of place. Parcels along Lexington Road

have been included in one of several proposed tax allocation districts. The Quarry will be converted into a reservoir, and abandoned structures along Winterville Road could possibly be restored. Though no existing plans to rework Old Commerce Road were identified, this site was selected based on its availability (listed on Zillow) and proximity to the greenway network.

Figures 6.2 and 6.3 show where these nodes are located in regards to income and ethnic background. Because gentrification predominantly affects lower income and Black communities, it is important to consider where these populations are located.

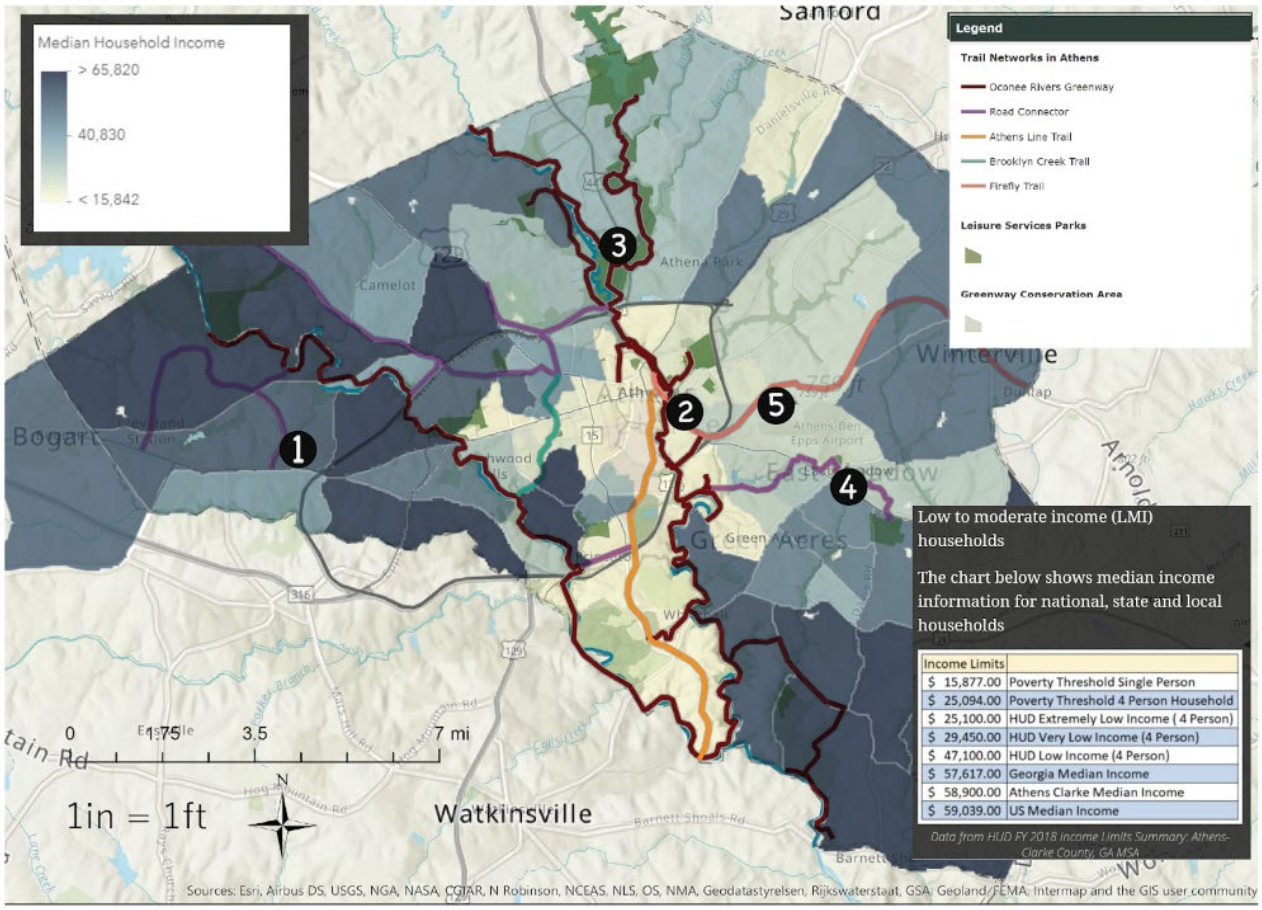

Figure 5.8 Nodes highlighted on Income Map

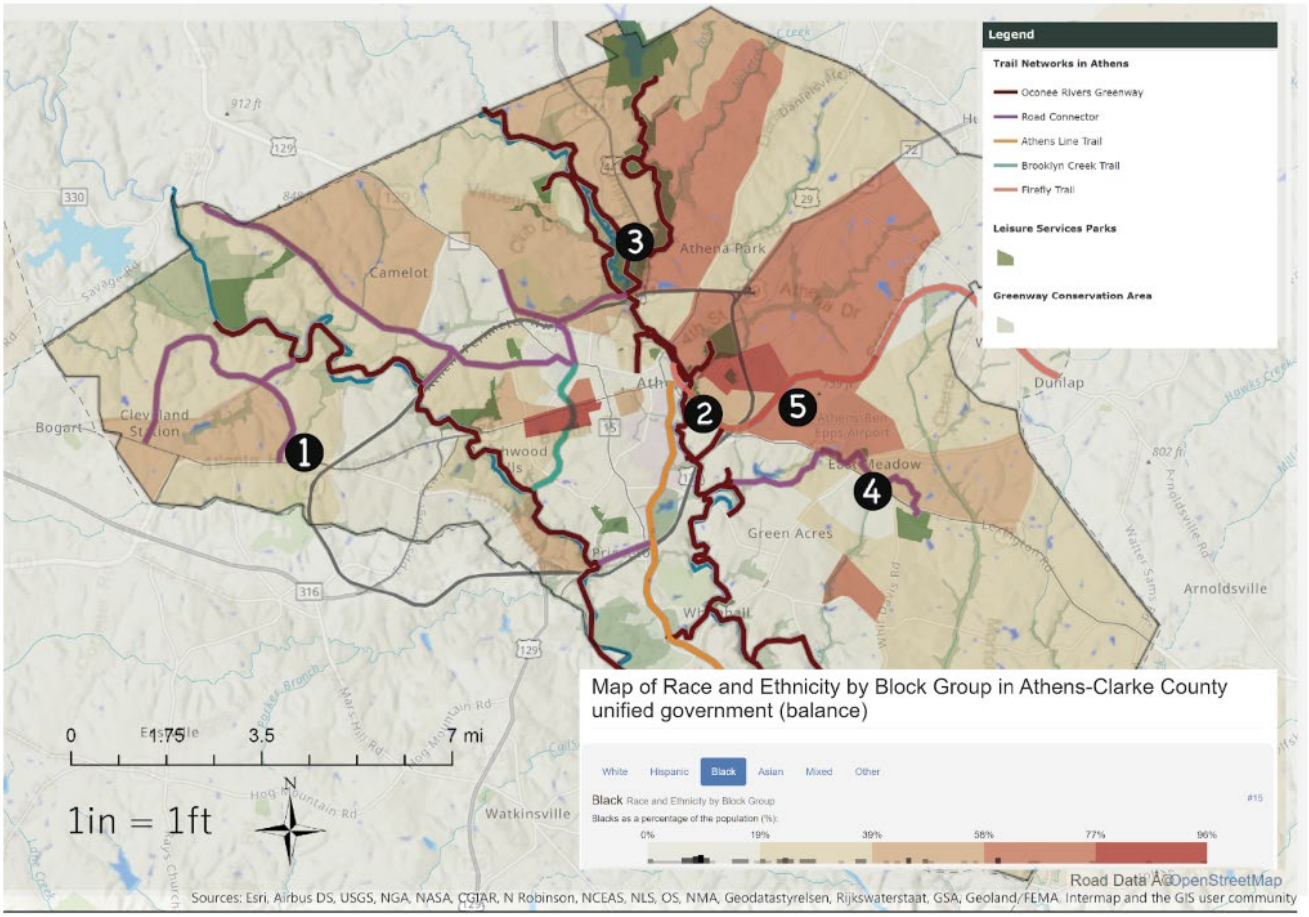

Figure 5.9 Nodes highlighted on Race and Ethnicity Map

As mentioned previously, historically Black communities in Athens face gentrification as a predominantly white student body seeks affordable housing. Gentrification will be further discussed in terms of each node in Chapter 7.

CHAPTER 6

DESIGN METHODOLOGY

In this chapter, the author discusses the reasoning behind the design of the sites and the logic behind the design decisions that were made. Design decisions for the proposed Athens nodes were inspired by elements demonstrated in the case studies listed in Chapter 4. Many of these decisions place emphasis on the experience of the pedestrian and walkability.

Site Design

Design methods include the use of AutoCAD, Photoshop, Illustrator, and InDesign to imagine how the proposed nodes may look. Conceptual designs include a broad overview of how the site could be transformed and how building footprints may be arranged in relation to the trail. Ideally, businesses will open up to the trail and provide sidewalks that meet the trail. Sidewalk material and widths would be up to the business owner to decide within the limits of existing zoning; however, using similar materials and dimensions as the city's urban trail could provide continuity within the site. Preferably, vehicular use should be discouraged between business and trail to place emphasis on and encourage pedestrian use of the space. Some businesses, such as restaurants and cafes, may choose to create patio space that overlooks the trail. Tree planting should be encouraged to create a shady and comfortable outdoor atmosphere, though adequate spacing may produce better sight lines and visibility. The designs are not highly detailed but are schematic in nature, intended to demonstrate the relationship between trails and business nodes.

Design Decisions

The decisions for the design of each site were influenced by the case studies outlined in Chapter 4. In Greenville, economic development borders the Swamp Rabbit Trail and Reedy River, creating a vibrant and dense urban area. The trail continues alongside the Reedy to Falls Park; this part of the trail is most applicable to development in Athens, which prioritizes parks and natural areas surrounding rivers. In Thomasville, shops open up to an amphitheater and park, which also serves as an event space and trailhead to the planned Community Trail.
The proximity between storefront and greenspace will be applicable in the design of the proposed nodes. In Chattanooga, planners have prioritized pedestrians and bikers by separating spaces, such as with the popular pedestrian Walnut Street Bridge. Prioritizing a pedestrian-centric environment is relevant to the greenway network in Athens.

The designs for the proposed nodes include the following elements (1) stores opening up to the trail (2) vehicular and pedestrian areas are separated, with the notion that those who use the trails should not have to interact with vehicular traffic (3) new urbanist principles are kept in mind, such as the emphasis on walkability, density, mixed uses, accessible public spaces and parks, and (4) infill development and adaptive reuse. All of the proposed designs have store fronts opening up to the trails, and all of the designs have separate pedestrian and vehicular use. Elements of new urbanism are found in the Georgia Square Mall design, Lexington Road design, and Quarry design. Infill development and adaptive reuse is found in the Oak Street proposed node.

CHAPTER 7

PROPOSED NODES AND CONCEPTUAL DESIGNS

In this chapter, the sites of the following five proposed nodes are discussed: the Georgia Square Mall, Oak Street, Old Commerce Road, Lexington Road, and the Quarry.

Georgia Square Mall

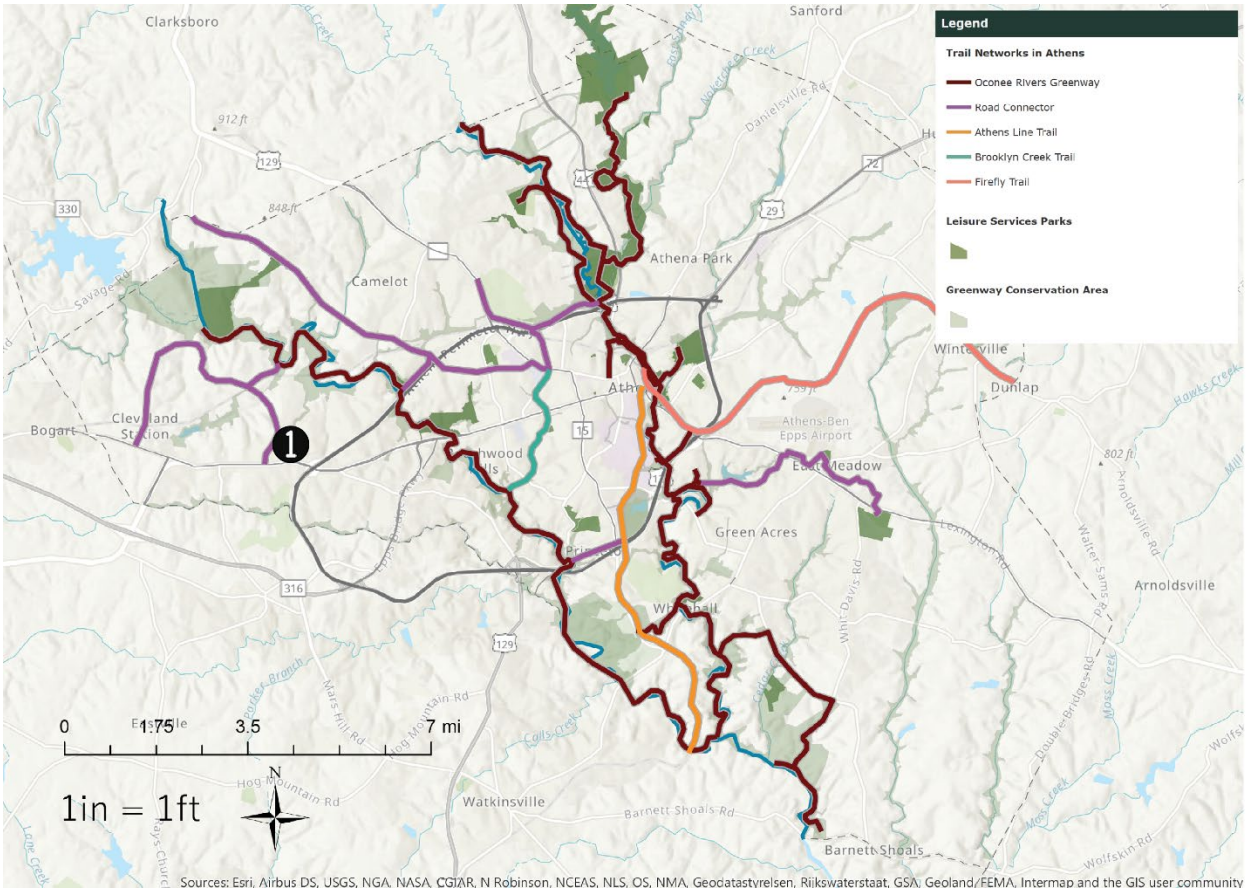

Figure 7.1 Georgia Square Mall Location Map

About

Georgia Square Mall is a regional mall that serves Athens-Clarke County. The Mall comprises 182 parcels, taking up a total of 134 acres, the majority of which is impervious surface. The land is currently valued at about $122 million. The planned greenway network is currently connected to the mall. However, the mall is largely outdated, and indoor mall usage is dwindling across the nation. Athens planners are now reevaluating the site for future redevelopment; one of the six proposed Tax Allocation Districts centers around Georgia Square Mall. Planners are considering a stormwater facility, housing, and a park for the site (Shearer 2020).

Figure 7.2 Relevant Parcels

Figure 7.3 Greenway Network Map; Figure 7.4 TAD Map

Demographics

In terms of demographics, the mall's campus is located within Block Group 130600. This block group has a median household income of $58,736, which is the Athens-Clarke Median Income. The population is 68% white, 22% Black, and 9.3% Asian. Though gentrification does not pose a large threat to this largely white and largely affluent population, publicly funded housing on the site would help create and maintain affordability after redevelopment for those that are not white and affluent.

Design Elements

In this location, small businesses would be ideal to help create a sense of place and community in this vast landscape of big box businesses and vehicle-oriented design. Businesses are portrayed at the southernmost part of the design, facing the trail. In the redesign, the greenway network trail has been extended throughout the park, creating a loop. The trail, a parking lot, recreational courts, a ball field, and a reforestation area compose the park. A

stormwater facility and housing have also been added to the site plan, according to possible elements proposed by Athens planners.

Figure 7.5 Proposed Redesign of Georgia Square Mall

The current view from existing businesses is of a large swath of impervious surface with little shade, which is unattractive and may deter visitors. Once converted into a park, views would be improved, and the location would become more desirable for businesses to choose this location in which to establish. Businesses surrounding the park can make use of the urban trail and those that use it.

Figure 7.6 Existing View and Figure 7.7 Proposed View

Appropriate businesses may include restaurants, cafes, boutiques, and sports stores that will be able to market to those using the park for recreational purposes. To foster interaction with trail users, businesses may use landscape design to attract visitors and help create a sense of continuity between trail and business. The design may include outdoor patio space that faces the park, with trees to shade the space. In turn, those that visit the businesses may choose to use or come back on another occasion to use the trail.

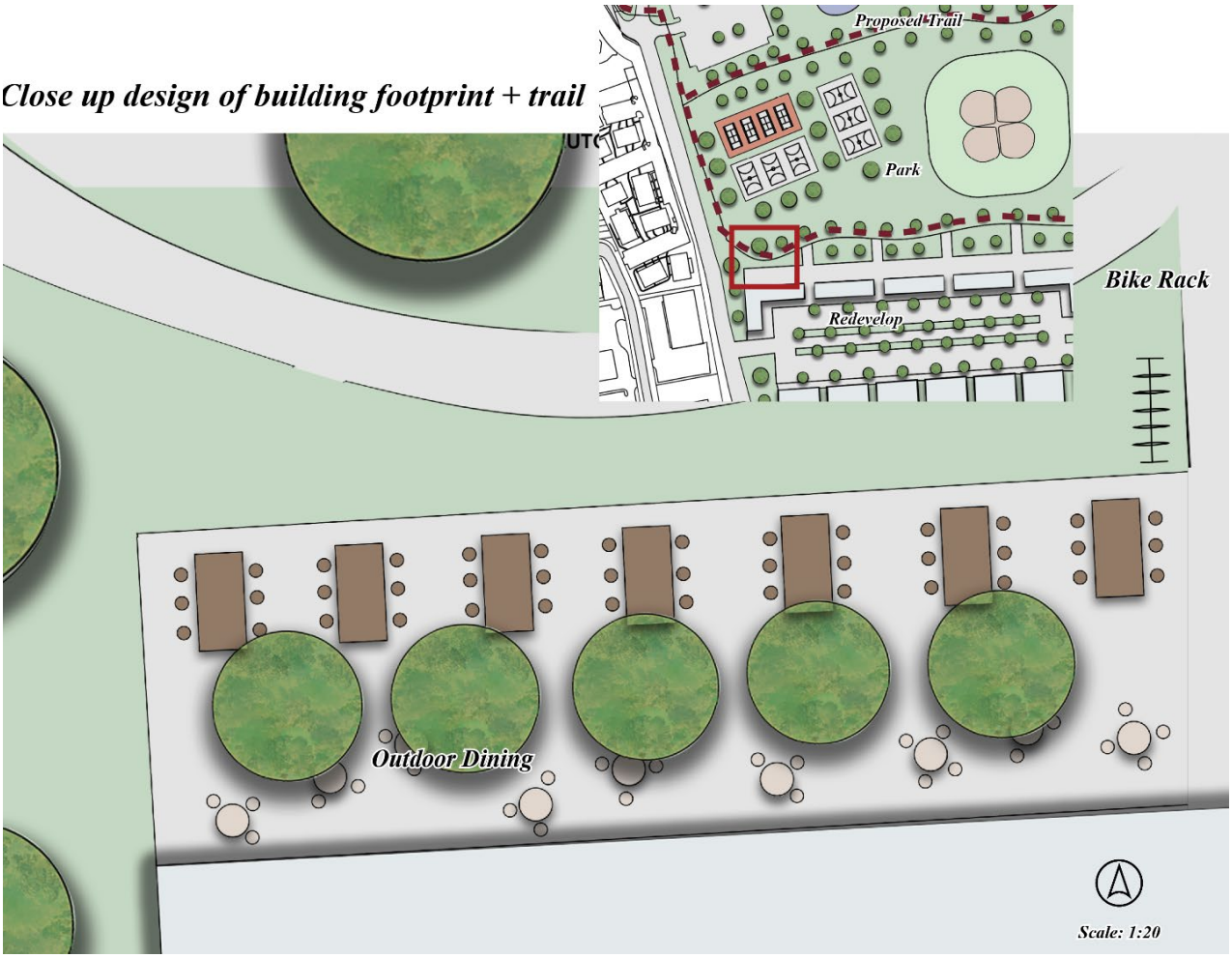

Figure 7.8 Close-up design of building footprint and trail

Oak Street

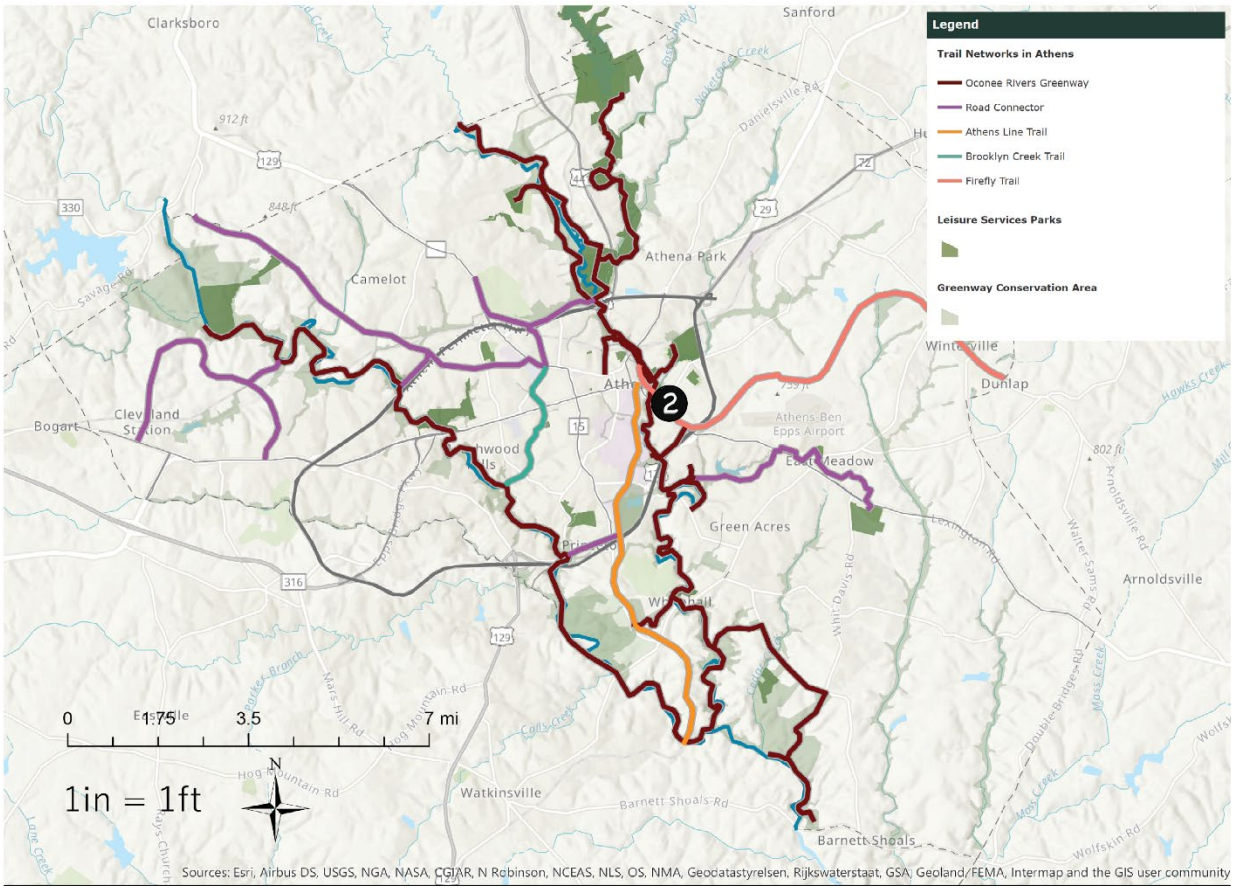

Figure 7.9 Oak Street Location Map

About

Oak Street is a street in Athens that runs alongside the Firefly Trail. The trail extends from Dudley Park along Oak Street. A crosswalk connects the Firefly to the Greenway Trail which leads to the University of Georgia's East Campus. Oak Street features multiple aging and outdated structures which make up what the Athens-Clarke County Urban Redevelopment Plan categorizes as a "slum area." The Oak Street corridor has been designated as one of Athens' opportunity zones. Three parcels within this zone will be highlighted for redesign in the following paragraphs.

Figure 7.10 Relevant Parcels

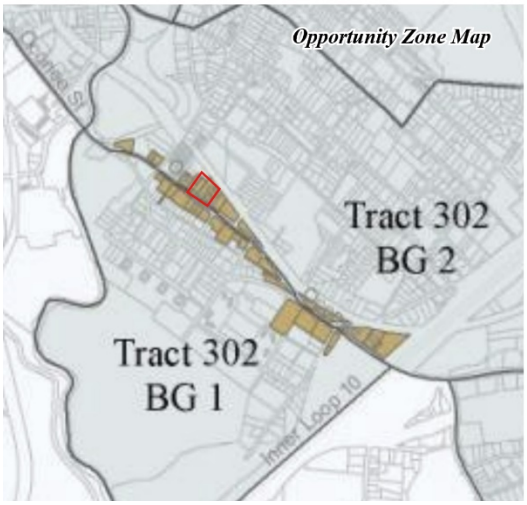

Figure 7.11 Greenway Network Map; Figure 7.12 OZ Map

Demographics

The Firefly Trail passes through Block Group 030200, and those living in this area have a median household income of $27,720, which is categorized as very low income. This area is considered at risk of gentrification; in fact, gentrification has already ensued. College students seeking affordable housing have moved into rental houses in what has historically been a predominantly Black neighborhood. 45.5% of the population is Black, 22.2% is Hispanic, and 26.4% is white. While the creation of new businesses in vacant lots/abandoned properties can be a good thing, Equitable Development Plans and Community Benefits Agreements would be recommended on the parts of developers to ensure that their projects would preserve and benefit the existing community's residents and business owners. Sidewalk living rooms also provide a way for existing residents to occupy the space; benches currently occupy intermittent locations along the Firefly trail and function as "living rooms" of sorts.

Design Elements

This thesis proposes a business node at the intersection of S. Peter Street and Oak Street. Three parcels are suggested for economic development: adaptive reuse of the westernmost parcel and infill development in the two easternmost parcels.

Figure 7.13 Proposed Redesign of Oak Street Parcels

The two easternmost parcels have an abundance of underutilized flat, impervious surface adjacent to the Firefly. In the proposed redesign, one structure was removed to allow improved access to the proposed building.

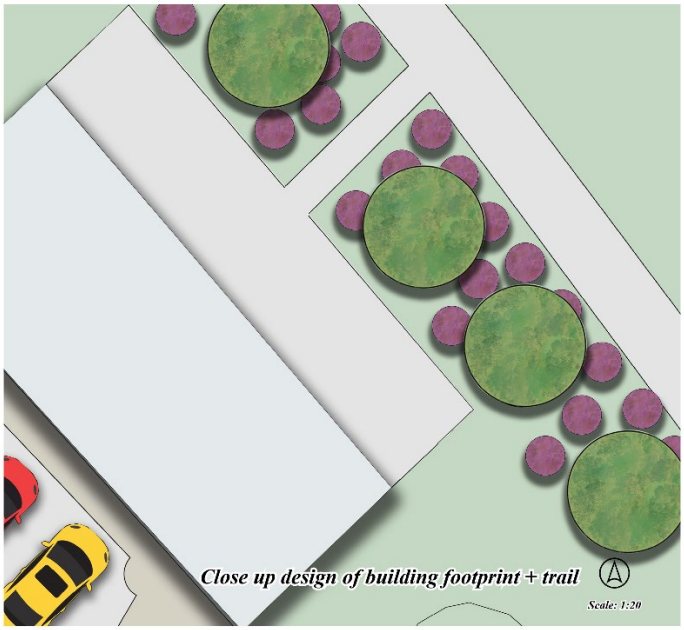

Figure 7.14 Relevant Parcels and Figure 7.15 Close-up design of building footprint and trail

Shops are imagined to occupy the proposed building that borders the existing trail. The shops will likely be small as they are occupying limited space; however, multiple shops would allow there to be multiple reasons to visit this node. Passersby using the trail for other purposes may choose to stop in a store on their walk or bike ride. Before redesign, the trail along Oak Street is isolated from any alternative uses.

Figure 7.16 Proposed Perspective and Figure 7.17 Before Redesign

In the westernmost parcel, the existing but unused tire depot is reimagined into a cafe. In this reimagining, the new owner chooses to preserve elements of the historic use while incorporating

new signage, as was done in other places in Athens, such as in the cases of Creature Comforts and Automatic Pizza. Creature Comforts Brewing Company preserved several Michelin Snow Tires Signs as well as the glass dock door typical of car shops, while Automatic Pizza has retained the structure of the gas station that it has rehabilitated. The redesign of the below tire depot continues this trend.

Figure 7.18 Unused Tire Depot and Figure 7.19 Proposed Café

Old Commerce Road

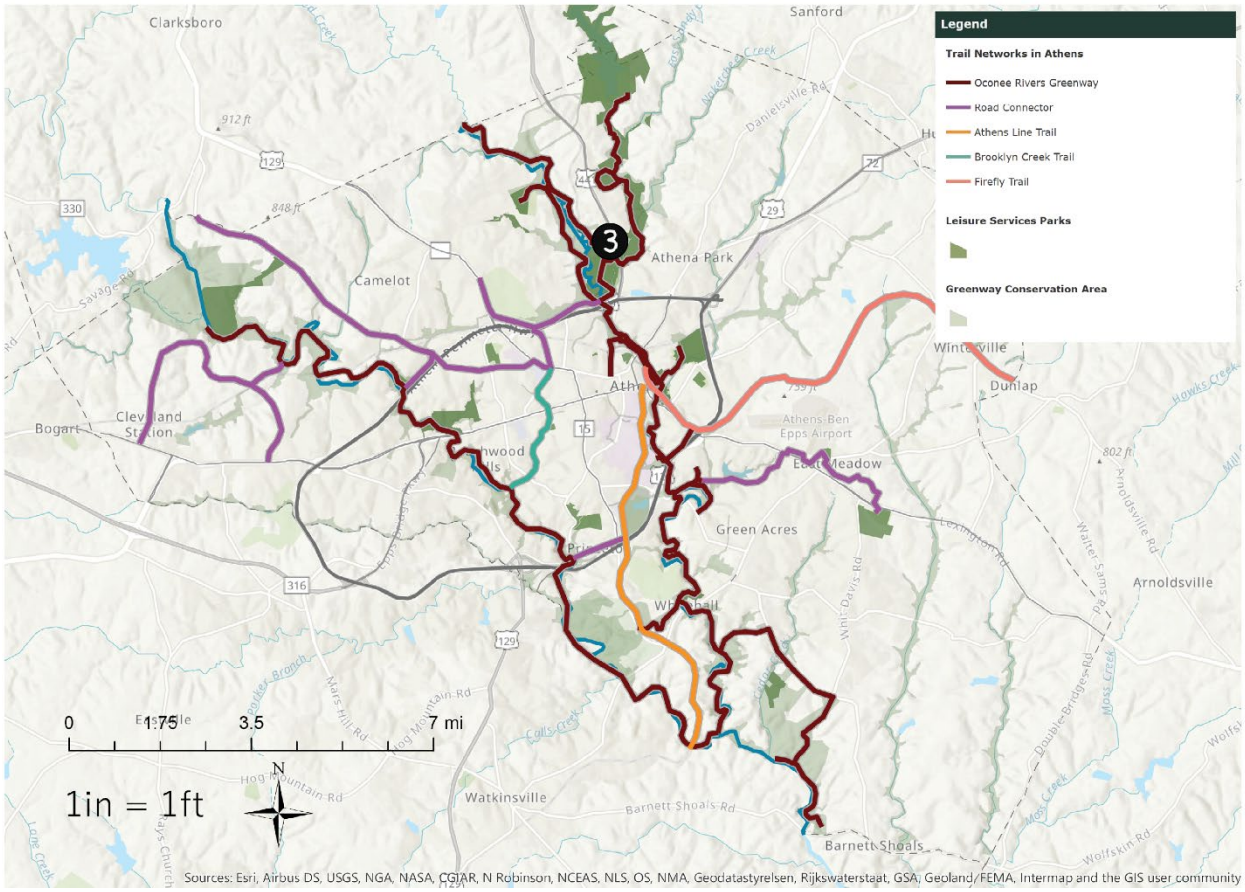

Figure 7.20 Old Commerce Road Location Map

About

A business node located north of Sandy Creek Nature Center could provide walkers and bikers with a respite between traverses along the greenway through nature. The parcel just north of the Nature Center property is located across the street (Nature Center Road) from where the proposed trail will run. The parcel is zoned commercial and is listed at $315,000 on Zillow. For the purposes of this thesis, the parcel listed for sale is reimagined as an opportunity for economic development.

Figure 7.21 Relevant Parcel

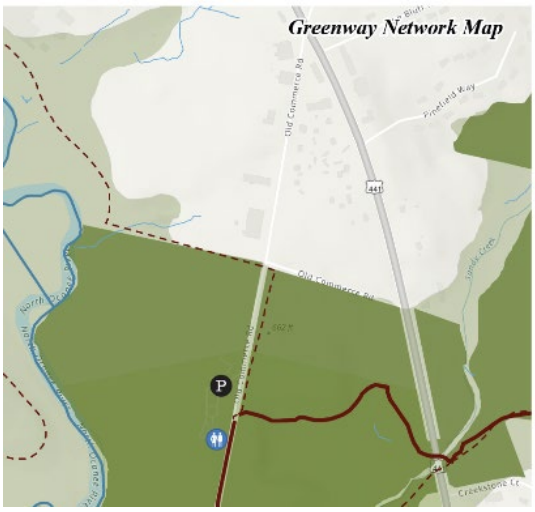

Figure 7.22 Greenway Network Map; Figure 7.23 Zillow Map

Demographics

The trail and proposed economic node are found in Block Group 140300. The population is 43.7% Black, 37.4% Hispanic, and 18.6% white. The median household income in the area is considered low to very low income, with a median household income of $35,222. With populations that are considered low income and are predominantly nonwhite, the possibility of raised property taxes surrounding any future development should be considered. This thesis recommends an Equitable Development Plan and Community Benefits Agreement be implemented by developers of this site.

Design Elements

The design of this parcel proposes a multi-use building at the intersection of Nature Center Road and Old Commerce Road. A combination of shops and eateries would provide a "destination" spot along the proposed route. An outdoors store would also be appropriate given the proximity to the Nature Center. Old Commerce Road, which leads to the Nature Center has a smattering of existing commercial uses but none that would attract those using the trail for leisure purposes.

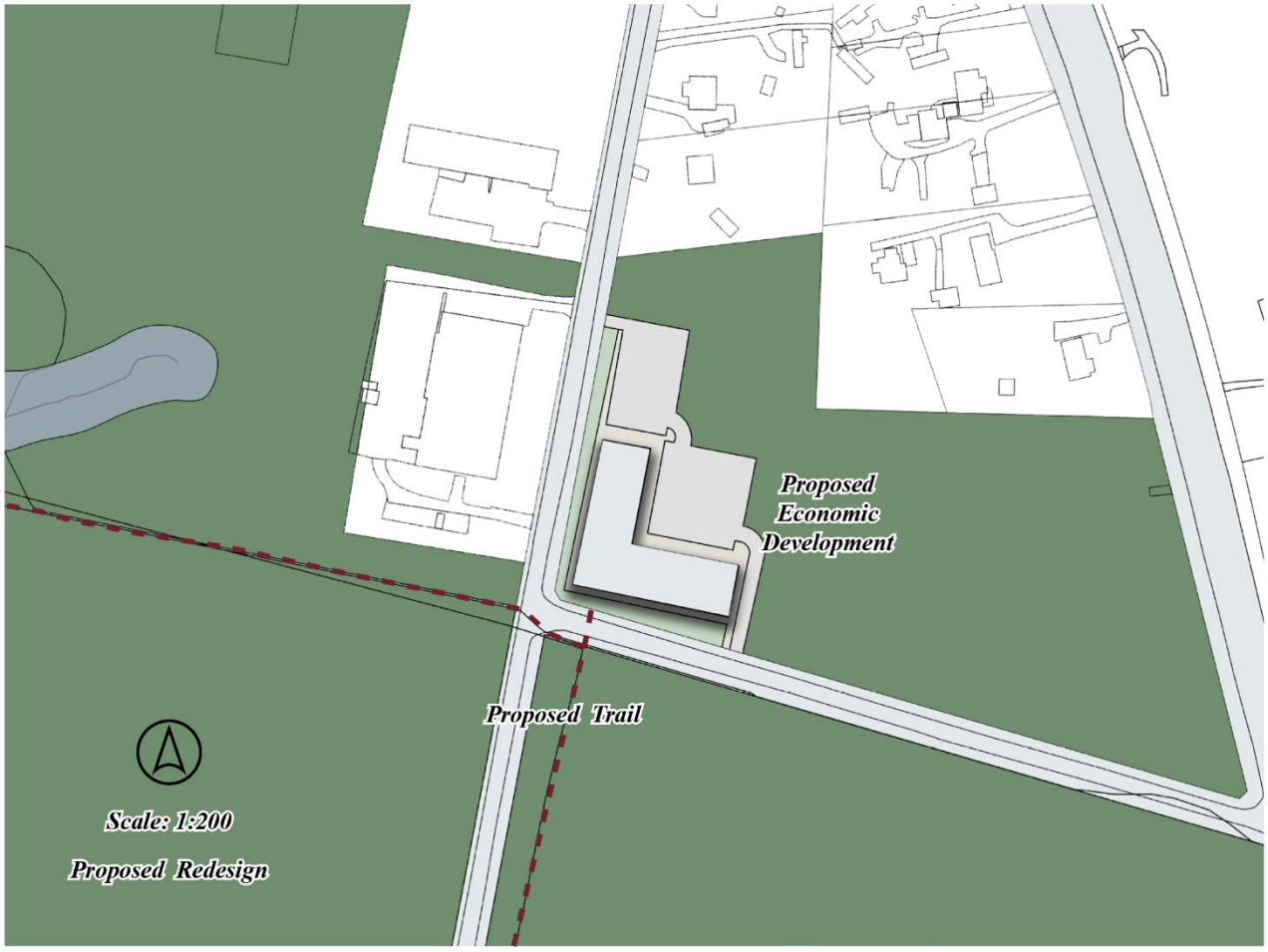

Figure 7.24 Proposed Redesign of Old Commerce Road Parcel

It is recommended that the development be constructed close to the trail for enhanced visibility and to serve as a landmark upon entering the natural area. Those utilizing the trail can stop in to pick up a pair of binoculars for a day of birding or stop in for a bite to eat before continuing on their route. Once both trail and development have been constructed, the area will become more vibrant and populated.

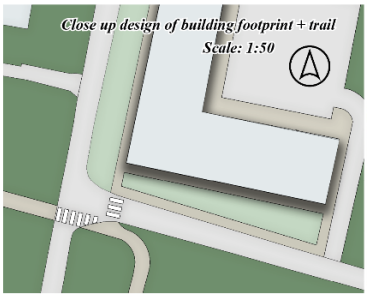

Figure 7.25 Close-up design of building footprint and trail; Figure 7.26 proposed perspective

Lexington Road

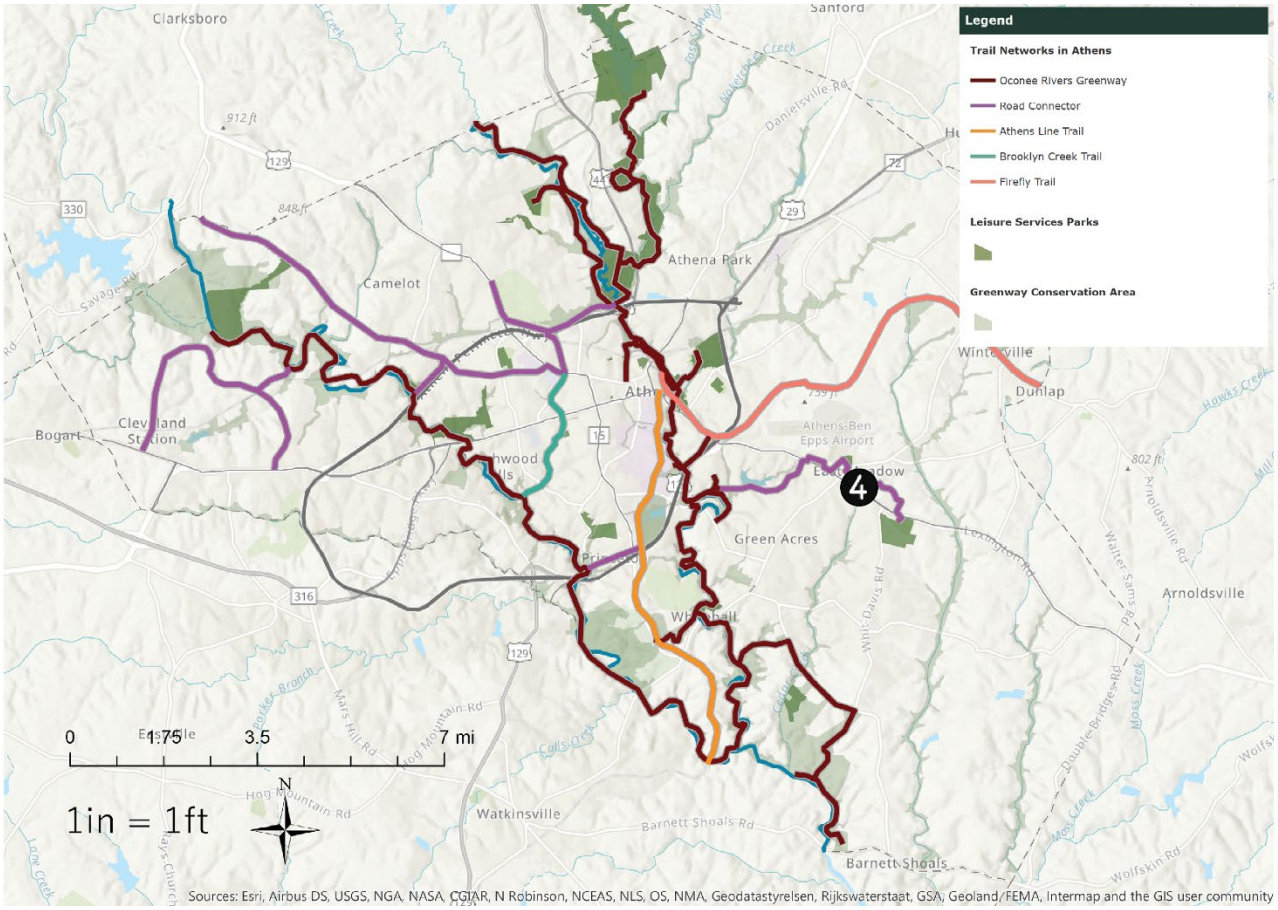

Figure 7.27 Lexington Road Location Map

About

Lexington Road, where the proposed trail and proposed tax allocation district intersect, is a prime spot for establishing a business node. The tax allocation district was proposed to encourage redevelopment in this area. The area currently lacks a sense of place, and several parcels in proximity to the trail have an abundance of surface area parking but lack attractions. The arrival of businesses that face the trail, in contrast to the existing chain restaurants and big-box stores, would help provide a sense of destination, character, and identity. When walking through the area as it is now, trail users will pass a neighborhood on the north side and a commercial district on the south. While Satterfield Park just north of the area provides a recreational attraction, a shopping node to the south could provide a complimentary economic draw.

Figure 7.28 Relevant Parcels

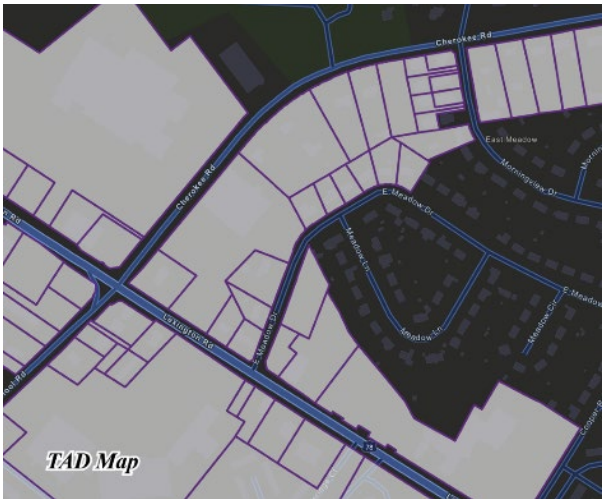

Figure 7.29 TAD Map; Figure 7.30 Greenway Network Map

Demographics

The trail runs through Block Group 140600 which contains populations that are categorized as very low income, with a median income of $29,086. The population is 49.3% Black and 33.1% white. A Community Benefits Agreement would be helpful for ensuring those community members are benefited by the development.

Design Elements

Proposed economic development would do best to have store fronts facing both Lexington Road and the trail, as seen in the Thomasville, GA case study. Though parking in front of the building is not considered "good" planning, in this case pedestrians will ideally approach the store from the Greenway trail and not have to interact with cars on Lexington Road.

Figure 7.31 Proposed Redesign of Lexington Road Parcels

After redesigning the underutilized site, trail users will on one side enjoy the buffer of trees between them and adjacent houses and on the other can visit the businesses that open up to the trail. Appropriate business may be a breakfast/coffee place or antiques shop; this type of economic development is found along the Swamp Rabbit Trail in Greenville, SC.

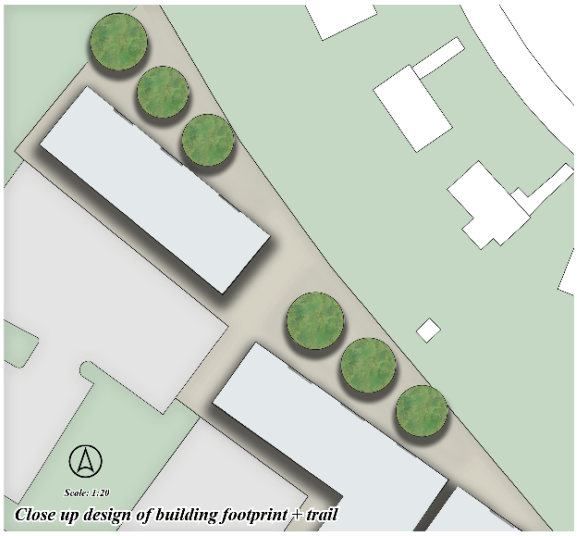

Figure 7.32 Relevant Parcels and Figure 7.33 Close-up design of building footprint and trail

Quarry

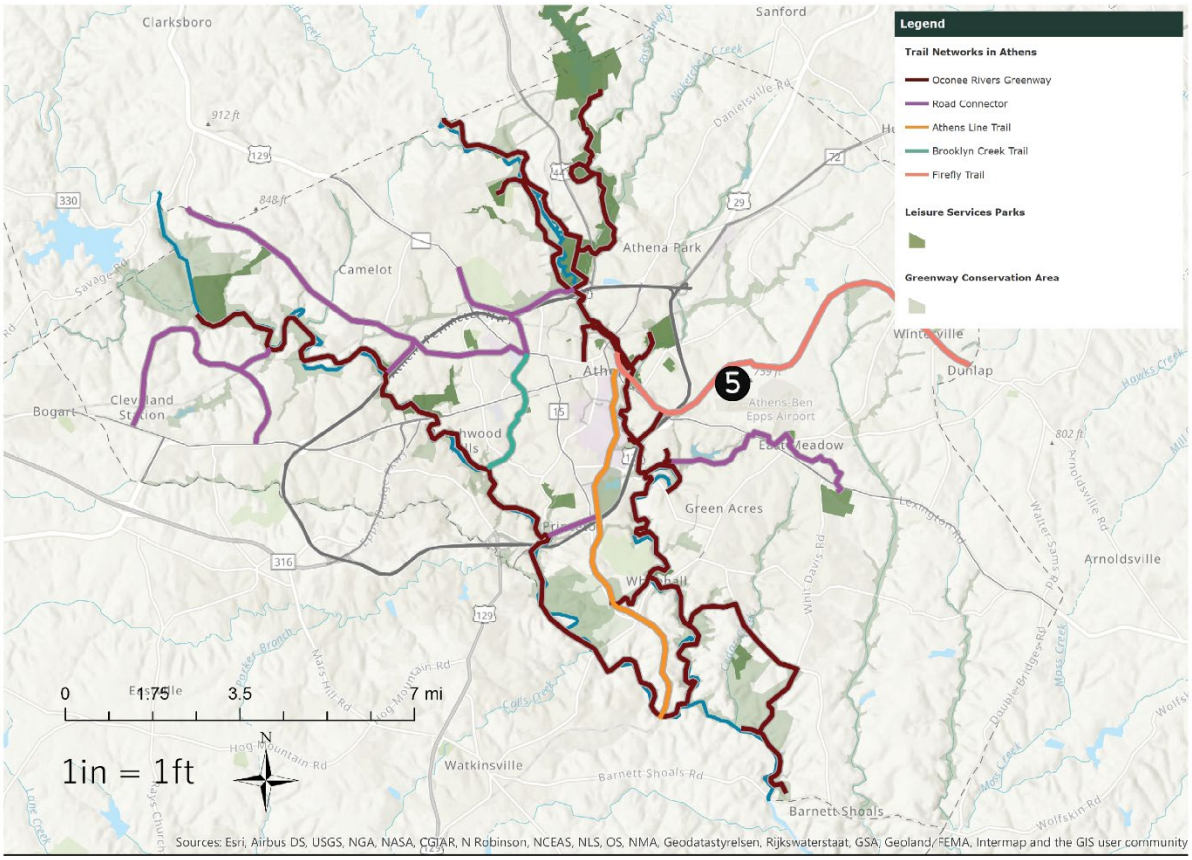

Figure 7.34 Quarry Location Map

About

On October 6, 2020, the Athens-Clarke County Mayor and Commission approved the purchase of the Rock Hill Quarry to convert into a reservoir for long-term water storage. This conversion into a reservoir is predicted to be completed by 2034 (Classic City News 2020). The purchase will cost $23 million but will be offset by $8 million from mining royalties. The reservoir, when full, will hold between 4 and 5 billion gallons of water. The site, which includes land surrounding the mine, is composed of approximately 190 acres. Like Bear Creek Reservoir, the future reservoir may also provide space for recreation such as walking, swimming, and boating. A future portion of the Firefly, which has been funded but not yet constructed, will run past the site. The airport is located to the south of the site; however, no buildings are proposed within the airport overlay zone. Nevertheless, proposed buildings are imagined to be only 1-2 stories high.

Figure 7.35 Relevant Parcels

Figure 7.36 Greenway Network Map

Demographics

The quarry and surrounding area are contained in Block Group 140500. Demographics in the project area show that the median household income of $25,661 is considered very or extremely low income. The population is 66% Black, 15.2% Hispanic, and 17.3% white. Thus, methods to deter displacement should be considered; methods recommended are an Equitable Development Plan or Community Benefits Agreement.

Design Elements

The site will primarily be used for the reservoir and possibly recreation. The proposed plan features walking trails and a Nature/Welcome Center. Additionally, economic development

could be included along the trail at the west side of the site. Some abandoned warehouses currently stand empty along the Winterville Road corridor; possibly, some of these buildings may be restored to reuse. However, most of the structures would likely be torn down to make way for new projects. Ideally, these new projects would be built facing the trail, with parking kept behind the businesses, separating pedestrian and vehicular use. Businesses that would be appropriate for the site include bike and kayak rentals, a fishing store, and a diner or eatery (Figure 6.36).

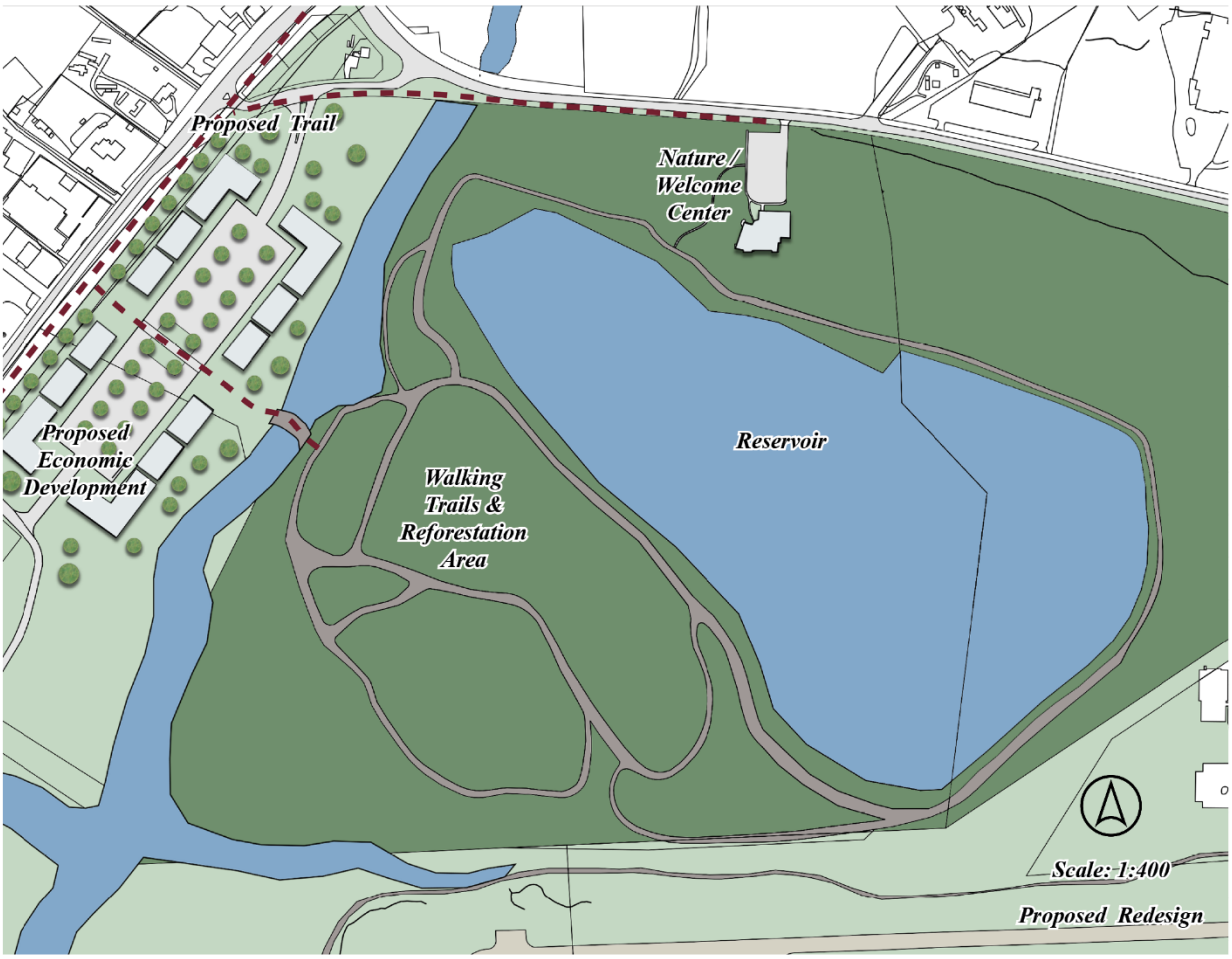

Figure 7.37 Proposed Redesign of Quarry

Figure 7.38 Proposed Perspective of Quarry

Discussion: mitigating gentrification within the nodes

Mitigating gentrification within the proposed nodes will ultimately depend on the type and scope of projects that are implemented. For example, large mixed-use projects seen along urban trails such as the High Line or BeltLine tend to have large economic impacts. In the cases of the Georgia Square Mall and Quarry sites, which provide free range in terms of redesign and redevelopment, mixed use developments are depicted in the designs, as developers may ultimately be the ones that would most likely want to purchase and occupy these spaces. In that case, it is recommended that these developers work closely with the city and the community to create specific documents that outline the goals for the site and how they benefit the surrounding community. If the project is mixed-use with housing above shops, then it is recommended that 50% of these are required to be affordable units, as was done in Chattanooga.

On the other three properties, small businesses are a more feasible option. It is recommended that the small business owners hire contractors and employees from their communities. In the case of Oak Street, it would be ideal for those small businesses to be owned

by and/or employ those that reflect the demographic and ethnic background of the community in which their businesses exist. Though benches are prevalent along the trail, sidewalk living rooms are encouraged throughout the neighborhood. On Old Commerce Road and Lexington Road there is room for multiple businesses but not a large-scale development. Thus, development in these locations would not pose as great a threat to existing residents. Nevertheless, a Community Benefits Agreement is suggested for all sites with Tax Allocation Districts or anything that would spur development (Opportunity Zones), inspired by Athens Commissioner Ovita Thornton's recommendation. The length and scope of each agreement would be decided upon depending on the needs of each community.

The following chart summarizes the business nodes proposed along the Athens greenway and associated suggestions for mitigating gentrification.

	1. **Georgia Square Mall**	2. **Oak Street**	3. **Old Commerce Road**	4. **Lexington Road**	5. **Quarry**
Redevelop-ment plans	TAD	OZ	--	TAD	Convert quarry to reservoir
Design Elements	Park, stormwater facility, housing, and economic development	Adaptive reuse of existing structure and infill development	Economic development on vacant property	Infill development along trail	Reservoir, walking trails, nature center, proposed development facing trail
Income levels	ACC Median income (58,736)	Very low income (27,720)	Low - very low income (35,222)	Very low income (29,086)	Very low - extremely low income (25,661)
Ethnicity composition	68% White 22% Black 9.3% Asian	45.5% Black 26.4% White 22.2% Hisp.	43.7% Black 37.4% Hisp. 18.6% White	49.3% Black 33.1% White	66% Black 17.3% White 15.2% Hisp.
Suggestions for anti-gentrification measures	Community Benefits Agreement, Affordable housing (publicly funded)	Community Benefits Agreement, Equitable Development Plans, Neighborhood Stabilization Program, initiatives to preserve local businesses, sidewalk living rooms	Equitable Development Plan, Community Benefits Agreement	Community Benefits Agreement	Equitable Development Plan, Community Benefits Agreement, Neighborhood Stabilization Program,

Table 7.1 Summary Chart: Gentrification Mitigation within Nodes

CHAPTER 8

CONCLUSION

This thesis explored the relationship between urban trails and businesses through projective planning and design of five sites in Athens, GA. As urban trails have grown in popularity, businesses have benefited from foot traffic while also serving as a vehicle for creating community. Gentrification, however, has posed an issue in cases of unfettered economic growth. Various ways to mitigate gentrification exist: engaging the community, creating Equitable Development Plans, establishing Community Benefit Agreements, forming Community Land Trusts, implementing measures to preserve and establish small businesses, designing sidewalk living rooms, and refraining from implementing development-centered designs in low income communities are a few methods. The Greenville, Thomasville, and Chattanooga case studies also helped to bring to light more ways in which cities can work towards affordability in the wake of economic development, such as through Community Development Block Grants and HOME funds.

The case studies of Greenville, Thomasville, and Chattanooga demonstrate how businesses surround urban trails and parks to create a hub of activity. The urban trails in Athens are typically surrounded by greenspace; however, economic development could attract more people to use the trail and also enhance the feeling of safety by providing more eyes on the street. Economic nodes, if proposed in places that would not contradict the environmental goals of the greenway network, could enhance community, connectivity, and sense of place along the

trails. The designs proposed in this thesis reflect the goals of having store fronts open up to the trail, separating pedestrians from vehicles, utilizing new urbanist principles, and using infill development and adaptive reuse when possible. In designing in this way, businesses gain more visitors and trail usership increases.

This thesis recommends that those planning for economic development along urban trails work with businesses to create community and benefit surrounding neighborhoods. Upon embarking on the initial site selection, it is encouraged that selected parcels will support environmental goals, preserve existing structures when possible, and increase density by utilizing vacant and underutilized land. Through the process of elimination, potential sites will become evident. Once viable sites have been selected, understanding existing conditions allows for an appropriate site design. Site design in this thesis prioritized pedestrians and alternative forms of transportation, greenspace, and economic development.

Limitations of this thesis are found in gentrification mitigation research, design, and the implementation of economic development. A non-exhaustive list of resources for mitigating gentrification and limited case studies are presented, which are intended to introduce the reader to the topic. The proposed node designs are preliminary, schematic drawings and their purpose is to show how building footprints can relate to the trail and to relevant greenspace. Upon implementing such designs, a higher level of attention to detail would be required; paving patterns, bike rack placement, and more intricate planting patterns would need to be considered. Finally, more research will be necessary for implementing business nodes along trails in Athens. In terms of economic development, further research is needed on how to attract and retain businesses, specifically small businesses. In terms of mitigating gentrification within proposed nodes, further research is needed in how to draft Community Benefits Agreements or Equitable

Development Plans and how such documents would be utilized. Developers and planners will need to work together to reach out to the community to ensure that their concerns and needs are addressed.

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