5. Land Use and Transportation

Purpose

Increase housing density while conserving undeveloped land and maximizing transportation choices to reduce greenhouse gas emissions and adapt to climate change impacts.

Introduction

Land Use, Transportation, and Climate Change

Both land development and transportation have a substantial impact on the environment and climate. Around "three-quarters of the Earth's land surface has been altered by humans within the last millennium," whether it be for agriculture, residences, or large urban infrastructure.[1] The process of extracting resources and developing the land for human use contributes to a significant amount of GHG emissions. It also removes necessary carbon sinks, which "take in" atmospheric CO_2, decreasing the amount of GHGs in the atmosphere.[2] Conservation of carbon sinks plays a large role in mitigating climate change (see the Natural Resources Chapter for more information).

Transportation is particularly interconnected with land development. Historically, transportation provided access to trade goods, migration, and previously unsettled areas, increasing the demand in those areas for housing, services, commerce, etc. This, combined with other factors, helped create car-dependent societies and urban sprawl. Transportation policy decisions can also contribute to climate change because vehicles emit GHGs. In 2022, transportation made up the largest percentage of GHG emissions in the United States (28%).[3] 57% of transportation emissions came from light-duty vehicles, which everyday people drive.[4]

[1] Winkler et al., "Global land use changes are four times greater than previously estimated," *Nat Commun,* 2021.
[2] United Nations Climate Change, "Land Use, Land-Use Change and Forestry (LULUCF)."
[3] EPA, *Fast Facts on Transportation Greenhouse Gas Emissions,* 2022.
[4] *Ibid* footnote 3.

Land Development and Transportation in Alachua County

While regulated in Alachua County, land development and transportation have had a notable impact on the environment and climate. The combination of an increasing population and more demand for housing and other services has made it difficult to minimize development.

Most developed land is concentrated in central Alachua County (due largely to the University of Florida as a major employment center). Land development is expanding westward, in part because of the favorable conditions, including better stormwater drainage, a relative lack of water bodies and wetlands, and the presence of relatively new water, sewer and transportation infrastructure (Figure 5.1). Most of this land development is for residential and commercial use (e.g., residential housing) and is guided by the Future Land Use Map adopted in the Alachua County Comprehensive Plan 2019-2040.

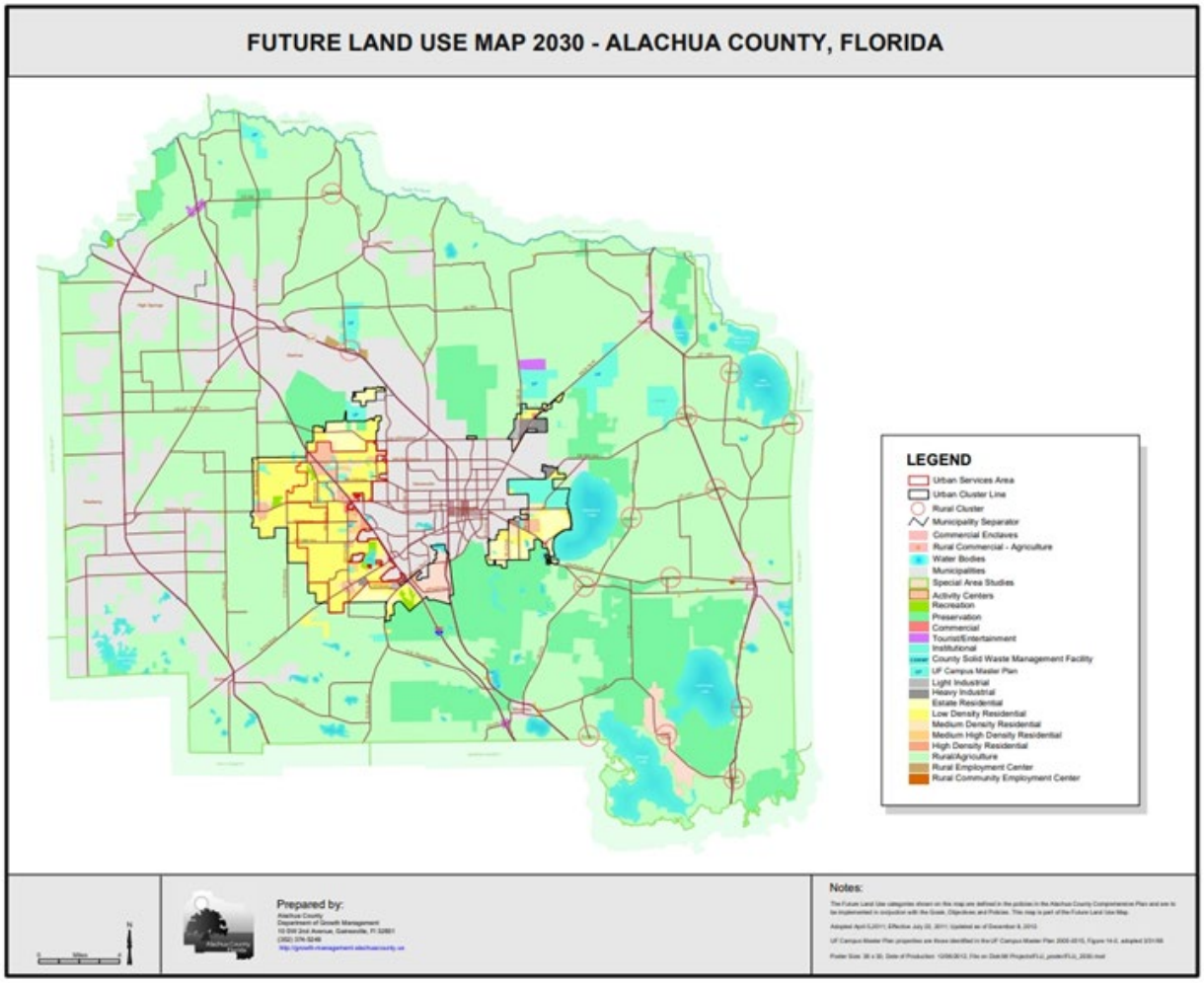

Figure 5.1: Alachua County Future Land Use Map 2030

The Future Land Use Map depicts areas within the unincorporated area of the County which are most appropriate for development as residential, commercial, industrial, agriculture, conservation, and includes other related categories. It includes the Urban Services Line, which maintains a distinction between urban development areas and rural or agricultural areas and limits the extension of urban services into the rural area. The Future Land Use element adopted in the Comprehensive Plan establishes the Principles, Goals, Objectives, and Policies that guide land use and development in the County.

Transportation in Alachua County is also of great concern. The Alachua County Greenhouse Gas Inventory Report found that 39% of total emissions within the County came from the transportation sector, the highest of any sector (including energy) in 2019. Most of these emissions came from private vehicles (cars and trucks), highlighting car dependency in Alachua County.

Alachua County Comprehensive Plan

Land Use and Transportation Policies

Recognizing the importance of the issues described above, the Alachua County Comprehensive Plan directly addresses both land development and transportation management in depth. Principles and objectives of the plan include promoting sustainable land development, establishing efficient and environmentally friendly transportation systems and infrastructure, and protecting natural and historic resources. For the complete language referenced in the Comprehensive Plan, see Appendix B.

Alachua County Mobility Plan

The Mobility Plan is a series of amendments to the Comprehensive Plan that aims to reduce vehicle miles travelled (VMT) and GHG emissions per capita. It provides for enhanced transportation mobility options, land use changes that bring services closer to residents, and development densities that are transit supportive.

Some key features of the plan include:

- **Traditional neighborhood developments (TND)** allow residents to walk and bike to a village center containing a mixture of commercial, residential, office and civic uses.
- **Transit-oriented developments (TOD)** contain a mix of uses and provide a higher density focal point for transit. They also will be the location of park and ride lots to serve residents in outlying areas.

- **Bicycle and pedestrian connectivity** include a connected bicycle and pedestrian network with new on-road bicycle lanes and off-road multi-use paths (Figure 5.2). These facilities will connect existing and future residential development to TODs, TNDs and Activity Centers.

For more information, please see the Alachua County website and Appendix B.

Past and Current Efforts

Bicycle/Pedestrian and Future Roadway Network

In line with the Comprehensive and Mobility Plan, the County is expanding bicycle and pedestrian roadways (Figure 5.2). This includes paved multi-use trails, and methods of providing bicycling facilities in combination with roadway maintenance or improvement projects.

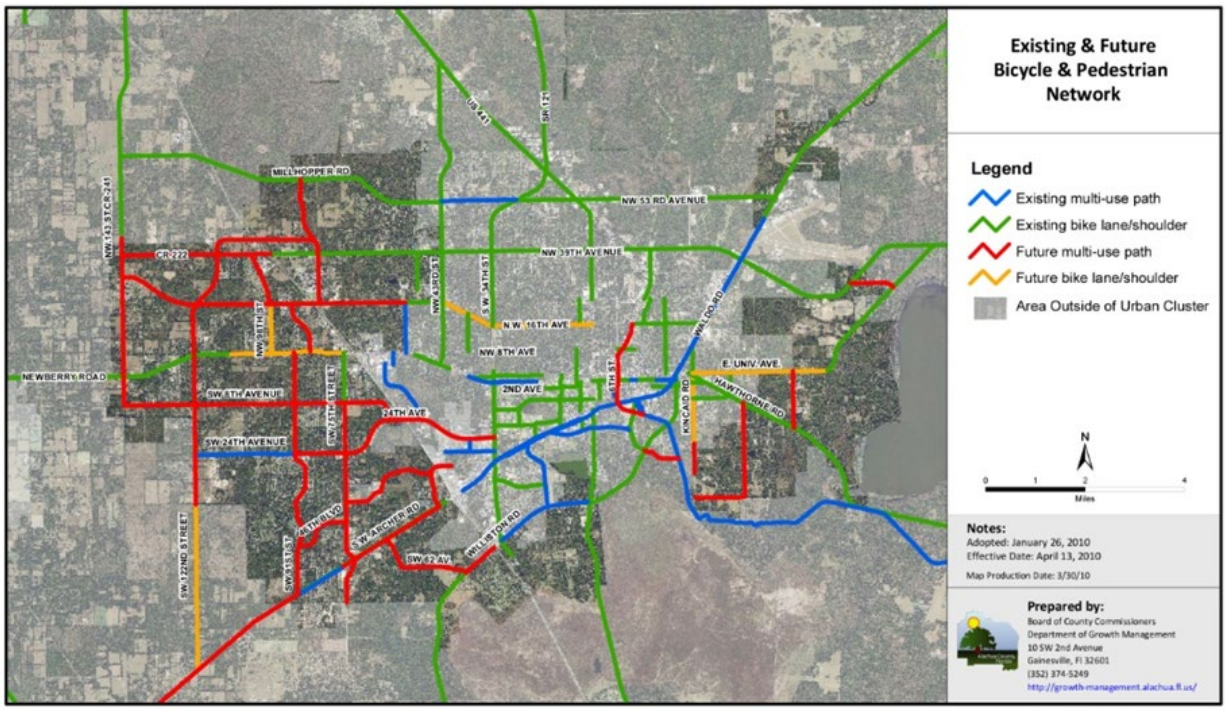

Figure 5.2 Alachua County Bike/Pedestrian Existing and Future Network

Greenways, Blueways, and Strategic Ecosystems

Greenways typically refer to undeveloped land used for recreation and/or conservation with a trail system and are near an urban area, Blueways are paddling routes or trails within lakes, rivers, and

streams. Alachua County's greenways and blueways are shown in Figure 5.3. Both systems were adopted as part of the 2019 update of the Comprehensive Plan, with the goal of identifying key corridors for investment. Some may be funded with State or Federal dollars. They are also included in Mobility Fee Update (included in Capital Infrastructure Projects in fall 2025).

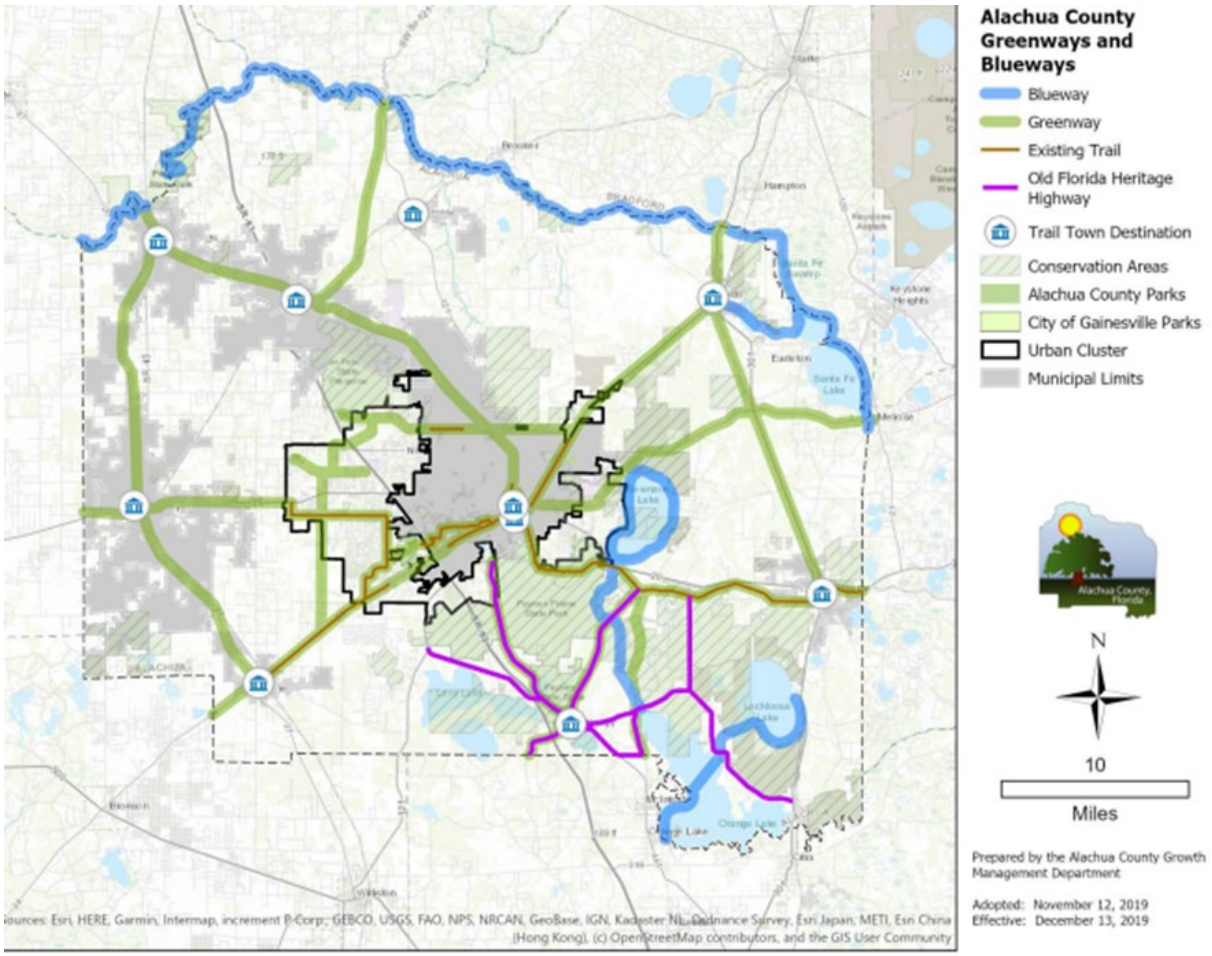

Figure 5.3. Alachua County Greenways and Blueways

Program Highlight

Pine Hills Forest Special Area Study

The Pine Hills Forest Strategic Ecosystem is one of the largest areas within the Urban Cluster that is identified as having outstanding examples of natural resources. Much of the approximately 1,200-acre planning area is designated in the County's Comprehensive Plan as a "Strategic Ecosystem," a designation which applies to the most significant contiguous natural resource areas

in Alachua County that remain in private ownership. The County's Comprehensive Plan calls for the County to conduct special area studies and plans for such areas to ensure that the natural resources of these ecosystems are protected while also recognizing existing property rights and future development expectations of landowners.

The Pine Hills Forest Special Area Study is intended to bring together landowners, neighbors and stakeholders, and local government representatives to collaboratively and proactively consider and evaluate the possible future land use and development scenarios for the area. The Special Area Study will identify natural resources within the Planning Area that are required to be protected in accordance with the County's Comprehensive Plan policies for Strategic Ecosystems and identify and plan for infrastructure needed to serve the Planning Area, such as roads, water, sewer, and stormwater facilities. Developing a collaborative vision for the community's needs will help ensure the goals are met, including natural resource protection, dense development patterns, multi-modal transportation network, reduction of greenhouse gas emissions, and minimization of flood risk.

Figure 5.4: Preliminary Pine Hill Road Network Concept

Strategies and Action Items

Goal 5.1 – Acquiring Metrics

STRATEGY 5.1.1 *– Acquire metrics for developing timelines and targets for all strategies and action items within the Land Development and Transportation Chapter.*

The 2022 Greehhouse Gas Inventory includes transportation data for the County's government vehicle and equipment fleet and employee commute. However, as shown in Table 5.3, there are many transportation sectors that are not captured in the Greenhouse Gas Inventory. The Introduction Chapter of the CAP explains that many chapters are missing specified data sources, but acquiring these metrics will allow staff to develop specific targets. For instance, targets could set for achieving a 100% EV fleet by 20XX, which interim goals for 25%, 50%, and 75% by 20XX.

Table 5.1 Action Items for Acquiring Land Development and Transportation Metrics (Strategy 5.1.1)

Action Items	Jurisdiction	Pros	Cons	Status
Acquire necessary metrics (VMT, transit ridership, aviation, mode share, etc.) to develop more concrete strategies and action items for future versions of the CAP.	Alachua County	Quantitative data to measure progress	Costly, lengthy process.	Emerging.

Activity/Source	Data Source	Data Gaps/Assumptions/Notes
Communitywide		
Vehicle Miles Travelled	Google Environmental Insights Explorer	• VMT provided from Google EIE[13] represents all on-road private vehicles • Data does not include Gainesville Regional Transit System activity
Transit Ridership	Gainesville Regional Transit System	N/A
Aviation	Gainesville Regional Airport	GRA provided consumption but could not provide travel bounds
Off-Road	EPA National Emissions Inventory	The NEI does not provide N2O emissions for Off-Road
Freight Rail	Eastern Regional Technical Advisory Committee	N/A
Local Government Operations		
Government Vehicle And Equipment Fleet	Department of Public Works	• 21 vehicles had hours tracked, rather than mileage • Mileage for the 21 vehicles was estimated based on an average Miles Per Gallon
Employee Commute	382 Alachua County Employees	To collect Employee Commute data, Alachua County staff were surveyed to determine their commute mileage, vehicle type and fuel type. A 31.8% response rate was achieved for the survey and the mileage collected from the 31.8% of employees was extrapolated to estimate commute emissions for all 1,200 employees.

Table 5.2: Transportation Data Sources for 2019 GHG Inventory (ICLEI)

Goal 5.2 – Sustainable Future Land Development

STRATEGY 5.2.1 – Increase sustainable land development practices.

While land development is inevitable in a growing Alachua County, several policies, measures, and actions can be taken to do it in a sustainable and smart fashion. Maintaining land use development within the urban cluster boundary, or the geographical boundary for an urban area, can limit sprawl and increase density. Greater density within the urban cluster boundary spreads

the cost of infrastructure (water, sewer, roads, etc.) over a greater number of units or parcels, thus lowering cost per unit.

Table 5.3 Action Items for Sustainable Land Development (Strategy 5.2.1)				
Action Items	**Jurisdiction**	**Pros**	**Cons**	**Status**
Maintain urban cluster boundary	Alachua County	Increase density, reduce travel distances, increase affordable housing	Market pressure to expand urban cluster	Ongoing.
Incentivize higher residential densities	Alachua County	Efficient use of land & infrastructure, increased revenue	Market conflicts	Emerging.
Ensure development approval timed to supporting urban services (water, sewer, roads, transit, schools, etc.)	Alachua County, GRU, ACPS	Higher density, efficient provision of infrastructure, public health and safety	Conflicts between public benefit and private profit	Ongoing.
Encourage infill development and mixed-use redevelopment	Alachua County	Community revitalization, increased revenue, serve community needs	Greater development expense for demolition, infrastructure upgrades	Ongoing.
Create compact, connected neighborhoods with limited mixed uses at centers, and interconnected, mixed modal streets with pedestrian, bicycle, and transit friendly areas	Alachua County	Increase density, increase mobility choices, reduce travel distances, increase access to goods and services,	Higher design and construction costs, environmental protection may affect design and density, public perception and acceptance	Ongoing.

Integrate civic, institutional, and commercial activity in neighborhoods and districts	Alachua County	Efficient use of land & infrastructure, reduce travel distance, increase access to goods and services	Higher design and construction costs, limited demand, public perception and acceptance	Ongoing.
Diversify mix of land uses, housing types and densities	Alachua County	Increase density, greater choice in housing types, location, and design, greater mobility options	Higher design and construction costs for new and redevelopment sites, public perception and acceptance	Ongoing.

Goal 5.3 – Transportation Mobility Districts

STRATEGY 5.3.1– Implement and expand Transportation Mobility Districts in Alachua County.

Urban Transportation Mobility Districts encourage future land use and transportation patterns that emphasize mixed-use and interconnected developments, promote walking and biking, reduce vehicle miles of travel and per capita GHG emissions, and provide the densities and intensities needed to support transit and affordable housing. Creating a connectivity index can address connectivity for bicycles, pedestrians, and motor vehicles (See also, Comprehensive Plan, TME, Policy 1.1.6.1(c)).

There is also a need to address car dependency in rural areas, which lack the most interconnectedness due to physical distance and lack of resources. To protect and support agricultural activities, preserve the character of rural communities, and encourage development in areas where infrastructure can be provided in a financially feasible manner, the unincorporated area outside the Urban Cluster as identified in the Comprehensive Plan can be established as Rural Transportation Mobility Districts. Developments within Rural Transportation Mobility Districts are required to mitigate impacts on roadways within the Rural and Urban Transportation Mobility Districts as established in the adopted Mobility Fee.

Table 5.4 Action Items for Expanding Transportation Mobility Districts (Strategy 5.3.1)

Action Items	Jurisdiction	Pros	Cons	Status

Develop a connectivity index standard to ensure adequate internal connections as well as connections to adjacent and nearby uses.	Alachua County	Increased connectivity	None.	In development.
Re-evaluate density standards to better suit transit-supportive density and intensity to expand transit-supportive availability and incentivize providing density within short distance of bus rapid transit and Express Transit corridors.	Alachua County	Increased connectivity; increased access to transit	None.	Ongoing.
Re-evaluate adopted parking requirements with goals of reducing minimums and, where appropriate, eliminating off-street parking lots.	Alachua County	Less development of land for parking space	Potential pushback from community and other stakeholders	Not started

Goal 5.4 – Electric Vehicle Infrastructure

STRATEGY 5.4.1 *– Increase the use of electric vehicles and supporting infrastructure.*

The growth in popularity and use of electric vehicles presents an opportunity for the County to decrease GHGs from the transportation sector. Due to the relative novelty of electric vehicles, however, the County still needs to develop plans and policies to ensure that services and infrastructure are available. This can include a Fleet Electrification Plan, which should have an ultimate goal of 100% EVs, interim goals, and potential funding mechanisms (grants, public/private partnerships). A Vehicle Charging Infrastructure Plan would also be a next step towards regularizing EVs, with an ultimate goal for charging infrastructure (e.g., # of Level 2 and 3 chargers; level of service/area metrics, countywide coverage, and coverage by 'vulnerability focus areas'), interim goals, and potential funding mechanisms.

Table 5.5 Action Items for Increasing Electric Vehicles and Supporting Infrastructure (Strategy 5.4.1)				
Action Items	**Jurisdiction**	**Pros**	**Cons**	**Status**
Develop a Fleet Electrification Plan for Alachua County.	Alachua County	Progress towards electrifying Alachua County fleet; lower GHG emissions from transportation	Cost	Not started
Develop an EV charging infrastructure plan for Alachua County.	Alachua County	Progress towards advancing EV infrastructure in Alachua County; increase accessibility/viability of EVs	Cost	Not started
Implement ordinance requiring new and leased municipal vehicles to meet minimum efficiency standards.	Alachua County	Lower GHG emissions from transportation; encourages transition to EVs or hybrids	Cost; potential pushback from municipalities	Not started

Goal 5.5 – Expand Integrated Natural, Historic and Scenic Resources

STRATEGY 5.5.1 – Develop a muti-use, integrated network of routes throughout Alachua County.

From a land use and transportation perspective, integrating routes enhances multi-modal commuting by providing scenic routes that remain true to the County's natural and historic culture. One way to do this is by developing an integrated network of multi-use paths, connecting the natural, historic, and scenic parts of Alachua County. Work has already been started through the development of the Alachua County 2040 Mobility Plan and Mobility Fee.

Table 5.6 Action Items for Integrating Multi-Use Routes (Strategy 5.5.1)				
Action Items	**Jurisdiction**	**Pros**	**Cons**	**Status**

Within the Urban Cluster, integrate Safe Routes to Recreation and Conservation Area projects to support more sustainable transportation modes (walking, biking, transit).	Alachua County	Promotes multi-modal transportation	Cost	Ongoing.
Outside the Urban Cluster, integrate Safe Routes to Recreation and Conservation Area projects where existing or planned multi-use paths are within one mile of an AAA[5] facility (i.e., provide last mile AAA connectivity).	Alachua County	Promotes multi-model transportation; increases interconnectivity in rural areas	Cost	Ongoing.

Goal 5.6: Bicycle and Pedestrian Transportation

STRATEGY 5.6.1 – Strategically plan bicycle and pedestrian transportation routes.

To encourage multi-modal forms of transportation such as bicycle and pedestrian transportation, there needs to be a well-planned network of routes accessible to the community. The County is currently developing a Countywide Bicycle-Pedestrian Plan to achieve this. The plan will:

- Update current pedestrian practices and policies,
- Close gaps on networks and paths, and
- Provide recommendations for pedestrian-conducive infrastructure.

The Countywide Bicycle-Pedestrian Plan is estimated to be adopted in 2026. For more information, please see the Alachua County Growth Management website: BikePedMasterPlan

Table 5.7 Action Items for Strategically Planning Bicycle-Pedestrian Routes (Strategy 5.6.1)

Action Items	Jurisdiction	Pros	Cons	Status
Develop, Implement, and Maintain policy changes and recommendations in the Countywide Bicycle-Pedestrian Master Plan.	Alachua County	Promotes multi-model transportation, safety and comfort	Cost	Ongoing

[5] All Ages and Abilities transportation facility, such as a sidewalk or shared use path. This principle refers to having a bicycle and pedestrian network that is accessible and comfortable for all users of any age and ability.

STRATEGY 5.6.2 *– Increase bicycle safety for general public.*

Safety is a huge factor in deciding whether to use a car or other forms of transportation. In 2022, there were a total of 127 bicycle crashes in Alachua County, with 124 people injured and 5 people killed.[6] Most crashes (47%) occurred on state and US routes, followed by city streets (36%). Most of these crashes occurred with passenger cars (51%). Increasing the safety of pedestrian-bicycle routes can increase the number of people who decide to use them. Not only should the routes be made safer, but those also who decide to use their bicycle should be well-informed about bicycle safety and signals.

Alachua County was awarded a $262,500 grant from the U.S. Department of Transportation (DOT) to implement the Safe Streets and Roads for All Action Plan in 2023. Since the project began, Alachua County staff have been collecting public feedback, stakeholder meetings, and public workshops. The Safe Streets for All Action Plan is still currently under development. For more information, please see the Alachua County Growth Management website: SS4AActionPlan.

Table 5.8 Action Items for Increasing Bicycle Safety for Citizens (Strategy 5.6.2)

Action Items	Jurisdiction	Pros	Cons	Status
Ensure safety is a main component of the Countywide Bicycle-Pedestrian Master Plan	Alachua County	Increase safety for cyclists and pedestrians; encourages non-car transportation	None.	Ongoing
Continue development, implementation, and receiving community feed for the Alachua County Safe Streets and Roads for All Action Plan.	Alachua County	Increase safety for cyclists and pedestrians	Cost	Ongoing

STRATEGY 5.6.3 *– Increase pedestrian-bicycle safety for students.*

Many students live within walking or biking distance from their school, making it an easy transportation option for them. Establishing specific routes for students can increase safety and allow public school staff to be able to know students' routes, allowing them to ensure they get to

[6] FDOT, "Alachua County 2022 Bicycle Crash Data."

school safely. Additionally, teaching citizens from a young age bicycle safety and signals can lower bicycle crashes in the future.

Table 5.9 Action Items for Increasing pedestrian-bicycle safety for Students (Strategy 5.6.3)				
Action Items	**Jurisdiction**	**Pros**	**Cons**	**Status**
Create a Countywide Safe Routes to School Program.	Alachua County	Promotes multi-modal transportation; increases safety for students commuting	Cost.	Not started.
Coordinate with Alachua County Public Schools and/or the MTPO to hire and fund a Full-time Safe Routes to School Coordinator to plan, implement, and monitor a Countywide Safe Routes to School program.	Alachua County	Promotes multi-modal transportation; increases safety for students commuting	Cost.	Not started.

Goal 5.7 – Develop and Maintain Transit

STRATEGY 5.7.1 *- Assist the providers of mass transit in Alachua County in their planning efforts through coordination, informational support, and participation in planning efforts.*

By improving inter-agency collaboration and access to data, mass transit agencies can more effectively design and implement services that are reliable, convenient, and accessible. Moreover, coordinated planning allows transit systems to better serve the needs of the entire community, particularly low-income and transit-dependent populations who rely on public transportation for access to jobs, education, and healthcare.

By using data to understand travel patterns and service gaps, agencies can promote greater mobility. Participation in regional and local planning efforts also ensures that mass transit is aligned with broader sustainability goals, including compact development, reduced traffic congestion, and long-term climate resilience. This leads to greater public confidence in mass transit, encouraging more residents to choose buses or other shared modes over personal vehicles. This strategy supports a shift away from car-dependent infrastructure toward a more efficient and environmentally responsible transportation system in Alachua County.

Table 5.10 Action Items for Mass Transit (Strategy 5.7.1)				
Action Items	**Jurisdiction**	**Pros**	**Cons**	**Status**
Design and construct dedicated transit lane(s) in conjunction with any new roadway projects consistent with the Rapid Transit Corridors map as well as expanding on existing projects to increase range of network. Dedicated Transit Lane(s) shall connect transit supportive development with regional employment, educational and entertainment centers	Alachua County	Increase transit connection; encourages use of public transportation; increases accessibility and convenience of mass transit	Cost, potential pushback	Ongoing.
Transition from providing new capital infrastructure for a multi-modal transportation network to providing frequent transit service along rapid transit corridors.	Alachua County	Increase transit connection; encourages use of public transportation; increases accessibility and convenience of mass transit	None	Not started.
Identify and implement 'first and last mile' improvements via the Countywide Bicycle/Pedestrian Master Plan.	Alachua County	May help decrease the distance and time between traveler's origins and final stop; may help lower GHG emissions by lowering VMT	None	Ongoing
The County shall coordinate the provision of park and ride facilities with transit supportive developments located along Rapid Transit Corridors consistent with the Capital Improvements	Alachua County	Increase transit connection; encourages use of public transportation; increases accessibility and	None.	Not started.

Element and associated maps		convenience of mass transit		

Goal 5.8 – Rail Transportation

STRATEGY 5.8.1 – Investigate possibility of rail transportation systems in Alachua County.

Rail transportation has been championed as an efficient form of public transportation for decades, but due to lack of resources and technological constraints, passenger rail transportation does not exist in Alachua County. Extensive research must be done to determine whether a rail transportation system could work in Alachua County. To begin the process, feasibility studies should be conducted to determine whether it is technologically possible and cost efficient.

Table 5.11 Action Items for Rail Transportation (Strategy 5.8.1)

Action Items	Jurisdiction	Pros	Cons	Status
The County shall coordinate with the Metropolitan Transportation Planning Organization, FDOT, and other applicable entities to conduct a feasibility study for a regional light rail system.	Alachua County	Obtain a better picture on whether rail is possible in Alachua County	Cost	Not started.
Increase utilization of existing rail infrastructure and promote expansion of network for freight transit within the County	Alachua County	Decrease reliance on truck freight transportation.	Limited existing rail lines and acquisition expense for new right of way	Not started.
Assess feasibility and initiate passenger rail service within the County.	Alachua County	New form of fast, mass transit for residents	Cost, may not feasible (depends on results of studies)	Not started.

Goal 5.9 – Increase Telecommuting and Remote Work Alternatives

STRATEGY 5.9.1 *- Promote online telecommunication and remote work for Alachua County residents.*

A way to reduce GHGs from transportation is by traveling less. By providing more opportunities for telecommuting and remote work, vehicle, parking, and VMT can decrease. Making remote work more available to staff lowers emissions from transportation.

Table 5.12 Action Items for Telecommunication and Remote Work (Strategy 5.9.1)

Action Items	Jurisdiction	Pros	Cons	Status
The County shall allow for appropriate staff to participate in remote work and telecommuting to decrease the necessity for daily commute.	Alachua County	Lowers VMT for County staff and GHG emissions from transportation	Loss of in-person communication, connection, and socializing	Ongoing.

Triple Bottom Line

People

Implementing sustainable land development practices increases interconnectivity and density of communities. TOD and mixed-use development bring citizens closer to local businesses, parks, and other services. This can foster more community engagement, citizen participation, and social connection.[7]

Safer, more accessible routes for cyclists and pedestrians can improve citizen health. Through more TOD or mixed-use development practices, citizens can normalize daily physical activity. Increasing activity levels via cycling or walking is associated with lower risk of cardiovascular diseases and diabetes. Some studies also found that substituting daily car rides with cycling and walking can improve mental health by lowering stress and increasing perceived quality of life.[8] Additionally, less cars on the road means less traffic-related pollution (e.g., nitrogen oxides, carbon monoxide, particulate matter, and more), which is known to increase risk of respiratory illnesses, lung cancer, and heart diseases.[9]

[7] Zamorano and Kulpa, "People-Oriented Cities: Mixed-Use Development Creates Social and Economic Benefits," *World Resources Institute,* 2014.
[8] Logan et al., "Benefits, risks, barriers, and facilitators to cycling: a narrative review," *Front Sports Act Living,* 2023.
[9] Miner et al., "Car harm: A global review of automobility's harm to people and the environment," *Journal of Transport Geography,* 2024.

Profit

Sustainable construction and land development practices can lead to cost savings in various ways. Transitioning to cycling or walking as a method of transportation can save citizens money on gas by using their car less. This is especially the case if routes allow access from a citizen's home to their job. In general, compact land use patterns result in cost savings because less money is spent on infrastructure to support the end user. Further, compact land uses have the potential to generate higher revenues for lower costs. This is illustrated when comparing Haile Plantation to Celebration Pointe in the table below. Each development has the same number of dwelling units but Celebration Pointe's compact design results in fewer road miles and total acres of land developed.

Development	Haile Plantation	Celebration Pointe
Acres	1,628	154 (w/out CMA) 246.99 (w/CMA)
Miles of Road	37	3
Linear ft. of road/Unit	72.73	7.04
Residential Units	2,686	2,500
Residential Density	1.65 DU / ACRE	16 DU / ACRE (Net) 10 DU/ACRE (w/CMA)
Non-Residential	280,000	1,500,000
Non-Residential Density Intensity	104 SF / DU	600 SF / DU
Hotels	0	2 hotels/265 units

Table 5.13: Haile Plantation and Celebration Pointe Density Data

The land use patterns above result in drastically different fiscal outcomes for the County as shown in the tables below.

•TOD: 2012-2035 resulted in $33.7 million surplus after TID is funded

Table 4. Cumulative Fiscal Impacts for Southwest TID as proposed (30%-25% Tax Increment), 2012-2035

	Total
Total Operating Revenue	$120,524,518
Total Contribution to TID	$16,533,667
Operating Revenue for General Use	$103,990,851
Total Operating Cost	$70,252,739
Net Operating Impact	**$33,738,112**

Table 5.14: Cumulative Fiscal Impacts for Southwest TID as proposed (30%-25% Tax Increment), 2012-2035[10]

Low Density: 2012-2035 resulted in $-195,910 deficit after TID is funded

Table 6. Cumulative Fiscal Impact for Southwest TID using Single-family Development Scenario, 2012-2035

	Total
Total Operating Revenue	$16,323,567
Total Contribution to TID	$2,276,060
Operating Revenue for General Use	$14,047,507
Total Operating Cost	$14,243,218
Net Operating Impact	**-$195,910**

Based on 600 units consistent with underlying land use

Table 5.15: Cumulative Fiscal Impacts for Southwest TID using Single-Family Development Scenario, 2012-2035[11]

Dense development appears less green at the site level but overall helps save productive rural and agricultural land that might otherwise be developed and creates productive places within the land the County has identified for urban development.

[10] Hay et al., *Policy Review of TND and TODs,* Presentation, 2024.
[11] *Ibid* footnote 10.

Planet

Sustainable land development practices prioritize minimizing the amount of land required. This can assist with land conservation efforts made by the County, ensuring that development works with nature rather than against it (see the Natural Resources Chapter for more information on the County's conservation efforts). Mixed-use development is particularly efficient in bringing

As stated previously, transportation produces the most GHG emissions compared to any other sector in Alachua County (39% in 2019). By providing alternatives to fossil-fuel powered vehicles such as passenger cars, the County can lower GHG emissions from transportation.

Community Engagement

Encourage That New Development Occur in a Manner That Expands or Protects Availability and Access to Land and Water for Hunting, Fishing, Hiking and Other Beneficial Uses

Alachua County has a wealth of environmental resources enjoyed by thousands of people. To protect and expand these resources for County residents and visitors, new land use patterns must occur. Continued expansion of low-density development is wasteful to our natural resources and costly to County residents. Efficient and affordable development must occur. One way to make this happen is through increased density and compact development patterns.

Use Public Transportation, Bike, or Walk

One of the most effective ways to lower one's carbon footprint and the amount of GHGs emitted from transportation is by changing the one's method of transportation. A great option is to make use of Gainesville Regional Transit System's (RTS) fleet of buses. The GNV RideRTS app provides information on the location of bus stops and tracks buses in real time. Ridesharing or carpooling is another way to minimize the amount of passenger cars on the road.

Another option is to bike, walk, or even skate when traveling short distances. Electric bikes and scooters are less physically demanding and faster options. Many of Alachua County's multi-use trails and bike lanes connect to urban clusters for easier access to stores, restaurants and jobs. However, it is important to acknowledge that many places in Alachua County are not pedestrian or bike-friendly, giving people limited options to travel without a private vehicle. The County is currently working towards more interconnected multi-use roadways to facilitate easier access to modes of transportation other than private vehicles.

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