Future Conditions

CRTPA
REGIONAL
FREIGHT STUDY

RS&H

Contents

Figures

Tables

Future Conditions

Identifying future conditions of the transportation system's framework and characteristics is imperative for understanding the benefits, needs, and issues experienced by the Capital Region Transportation Planning Agency (CRTPA) region (the region). The following future conditions assessment identifies CRTPA future freight-related conditions and trends that build from the existing conditions framework relative to impacts on the region.

It analyzes factors that collectively define the regional freight mobility impact profile while providing a point of reference for impacts on the benefits, needs, or issues experienced by the region. The profile primarily includes assessment of shifts in socioeconomic and business patterns, freight network performance, land-use activities, and freight activity profiles. Equally important, the assessment will support development of the study's findings and recommendations for improving freight mobility needs.

Alignment with Goals and Objectives

The impacts identified in these future conditions assessment build on the freight mobility framework defined in the existing conditions assessment. The combined assessments will promote safe and efficient movement of freight and contribute to the economic viability for the region.

In addition, the assessment aligns with federal and state freight mobility goals, objectives, and recommendations to promote a collective freight vision, meet policy requirements, leverage funding opportunities, and foster partnerships.

The combined assessment framework follows CRTPA's six freight objectives to ensure alignment with the National Freight Strategic Plan Goals, the Florida Transportation Plan Goals, and the Florida Freight Mobility and Trade Plan Objectives:

1. Improve freight transportation safety through data driven implementation.
2. Maintain and improve the CRTPA freight system for more resiliency.
3. Improve CRTPA freight system connectivity and function to reduce congestion, bottlenecks and improve reliability.
4. Implement strategies to improve supply-chain efficiencies and last mile connections.
5. Enhance collaboration with stakeholders to improve trade and logistics partnerships.
6. Implement strategies that capitalize on emerging technologies to improve freight system performance.

Socioeconomic Trends

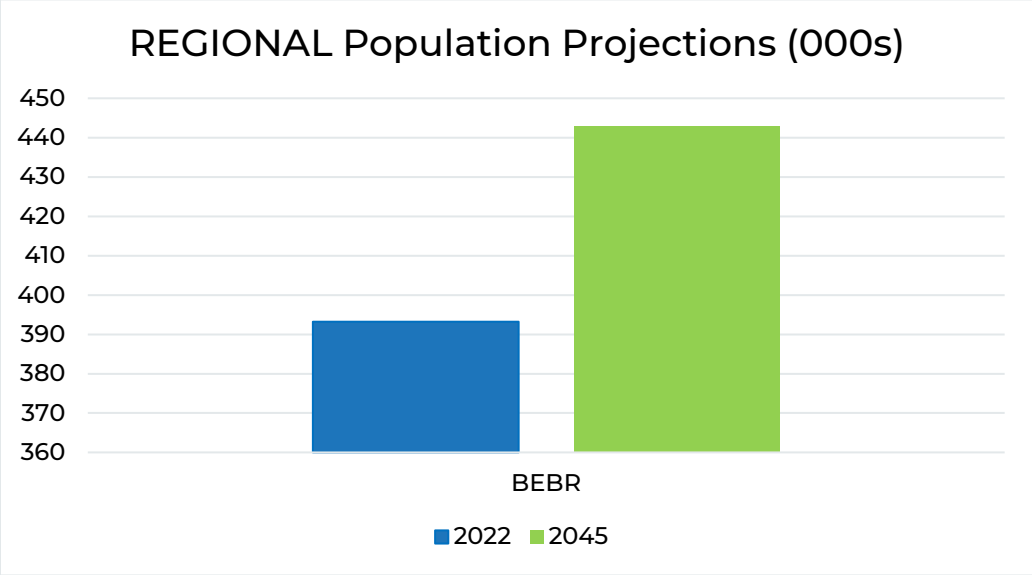
Socioeconomic factors are key indicators for characterizing growth impacts within an area. These factors account for shared cultures and norms that shape the area's social decision, activities, and policies. In the assessment of freight mobility impacts, population growth, freight labor supply changes, business environment changes, and tourism are key socioeconomic factors that influence freight mobility within an area. The following assessments analyzes the existing and future trends for CRTPA's population, freight labor, business environment, and tourism. The assessments provide a foundation for defining the freight mobility impact profile in reference to the benefits, needs, or issues experienced by the region.

Population

Population changes have a direct impact on demand for goods and services and thus is a key indicator for influencing freight mobility.

Due to the inherent variability of population projections, the Bureau of Economic and Business Research (BEBR) and Woods and Poole Projection data were compared. Though both datasets were very similar, the BEBR population projections were more conservative and therefore chosen as the preferred data source (Figure 1). A comparison of the sources and their data is included within Appendix 1.

Figure 1: Regional Population Projections

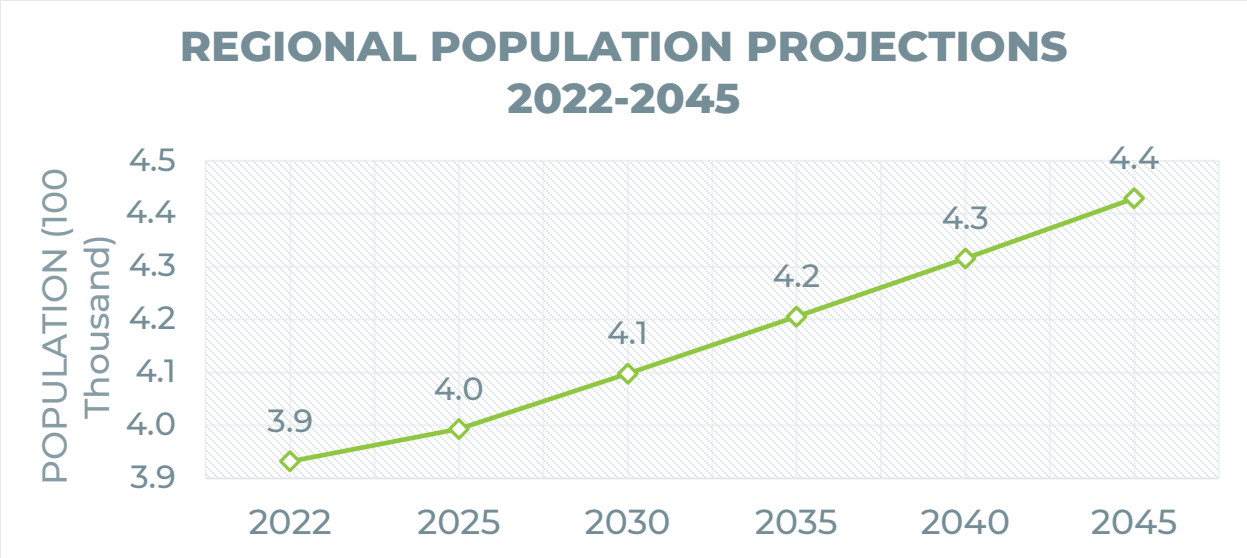


Source: BEBR Volume 56, Bulletin 195: April 2023

CRTPA's population is projected to sustain growth with the highest concentration in Leon County. The region's 2022 population was approximately 393,000 with a

projected 15% increase to reach over 442,000 by 2045[1] as shown in Figure 2. This indicates that the region will add over 56,000 new residents during this period. Both the population within the region and within the state are anticipated to grow; the state growth rate of 18.31% is anticipated to outpace the regional growth rate of 11.22%.

Figure 2: Regional 2022 to 2045 BEBR Population Projections

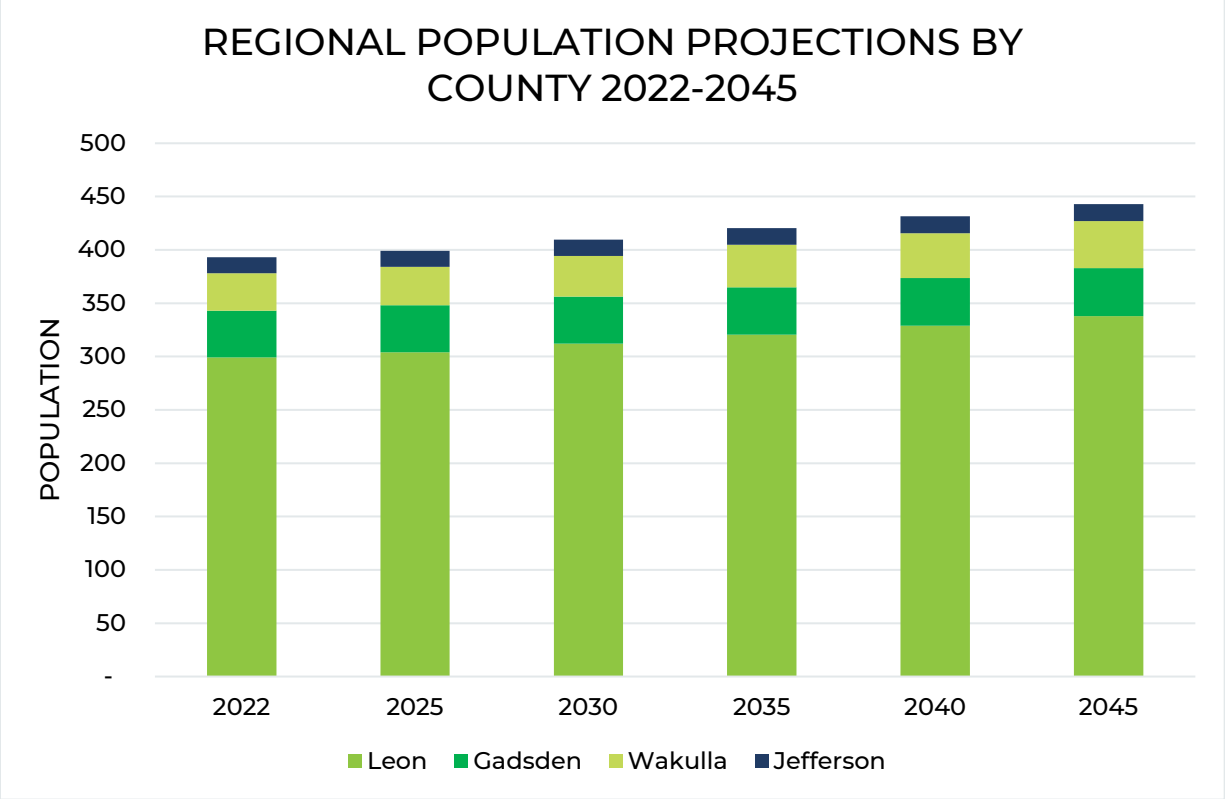


Source: BEBR Volume 56, Bulletin 195, April 2023

Leon County is projected to experience the highest absolute population growth while Wakulla County will have the highest population growth rate, increasing an average of 1% annually between 2022 and 2045. Figure 3 and Table 1 depict the predicted population growth by county in the region.

[1] BEBR Volume 56, Bulletin 195, April 2023

Figure 3: Regional Projected Population Growth (BEBR 2022-2045)



Source: BEBR

Table 1: CRTPA Projected Population Growth (2022-2045)

	Leon	Gadsden	Wakulla	Jefferson	CRTPA Region	Florida
2022 Population (000s)	299.13	43.97	35.17	14.92	393.19	22,276.13
2045 Population Medium Projection (000s)	337.9	44.9	44.1	16	442.9	27,270.00
Total Population Change 2022-2045 (000s)	38.77	0.93	8.93	1.08	49.71	4,993.87
% Population Change 2022-2045	11.47%	2.07%	20.25%	6.75%	11.22%	18.31%
Annual Average Population Growth Rate 2022-2045	0.50%	0.09%	0.88%	0.29%	0.49%	0.80%

Source: BEBR Volume 56, Bulletin 195, April 2023

Benefits to the region: the overall CRTPA population future growth is at a slower pace than the state; however, the region can expect to have future increases in demand for goods and services that align with its population growth. Additionally, these activities and demand will create a requirement for more efficient freight mobility so that impacts are reduced.

Issues for the region: Population change is not anticipated to have a negative impact on the region; however, development can increase congestion on the roadway network.

Freight Labor Supply

Freight labor supply plays a critical role in defining the freight industry's ability to respond to demand for goods and services generated within an area. Assessing existing and future conditions for freight labor supply provides an indication of how freight mobility is impacted within an area. The following defines CRTPA's freight labor conditions through analyzing the freight industry employment and earnings.

Observing national trends, truck drivers and rail operators are experiencing staffing shortages which can reduce efficiency and create safety concerns as existing employees fill the deficit. The U.S. Bureau of Labor Statistics (BLS) 2019 and 2022 data indicates the following changes between 2019 and 2022(Table 2).[2]

Table 2: National Freight Occupation Employment

Occupation	2019	2020	2021	2022
Truck Transportation NAICS 484000	1,521,590	1,470,940	1,492,240	1,557,370
Rail Transportation NAICS 482100	233,830	213,790	219,790	183,670

Source: BLS Occupational Tables

Both rail and trucking industries saw a decline in employment beginning in 2020; however, truck transportation has seen an increase after the initial 2020 decline. Rail employment has lessened along with headlines of recent employee strikes which the Federal Government was needed to address. It is likely that these conditions will begin to stabilize, as we are recovering from the worldwide impacts of the Covid-19 Pandemic; however, the recovery times will vary by industry.

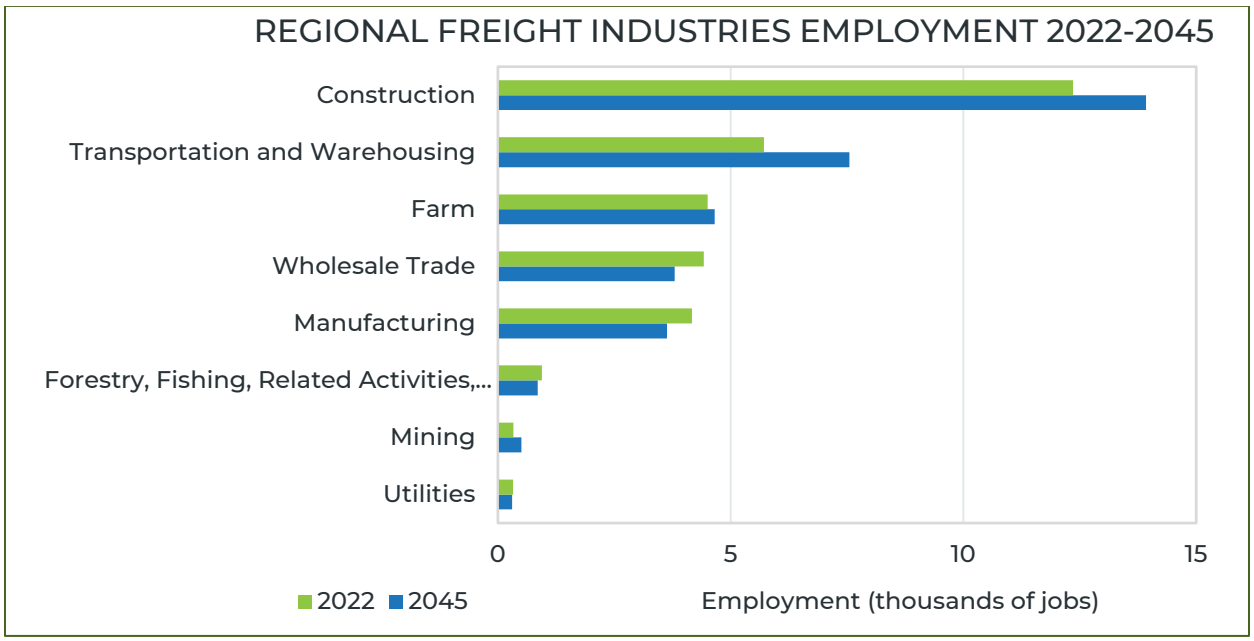
Freight Employment

An analysis of freight-related employment was conducted utilizing Woods and Poole (2022 – 2045) and Florida Department of Commerce (FDOC, 2022 - 2030) projection data sets to determine the trends in the area. Overall, the freight-related employment in the region shows a positive outlook with projections pointing towards growth over the planning horizon.

The analysis shows Construction, Transportation and Warehousing as the two largest freight-related industries currently in the region; they are expected to sustain their growth momentum in the coming years. Conversely, other industries, such as Farm, Manufacturing, Forestry, and Utilities have fewer employees and are projected to experience declines as shown in Figure 4.

[2] https://www.bls.gov/oes/tables.htm

Figure 4: Regional Freight Industry Employment Projection (2022-2045)



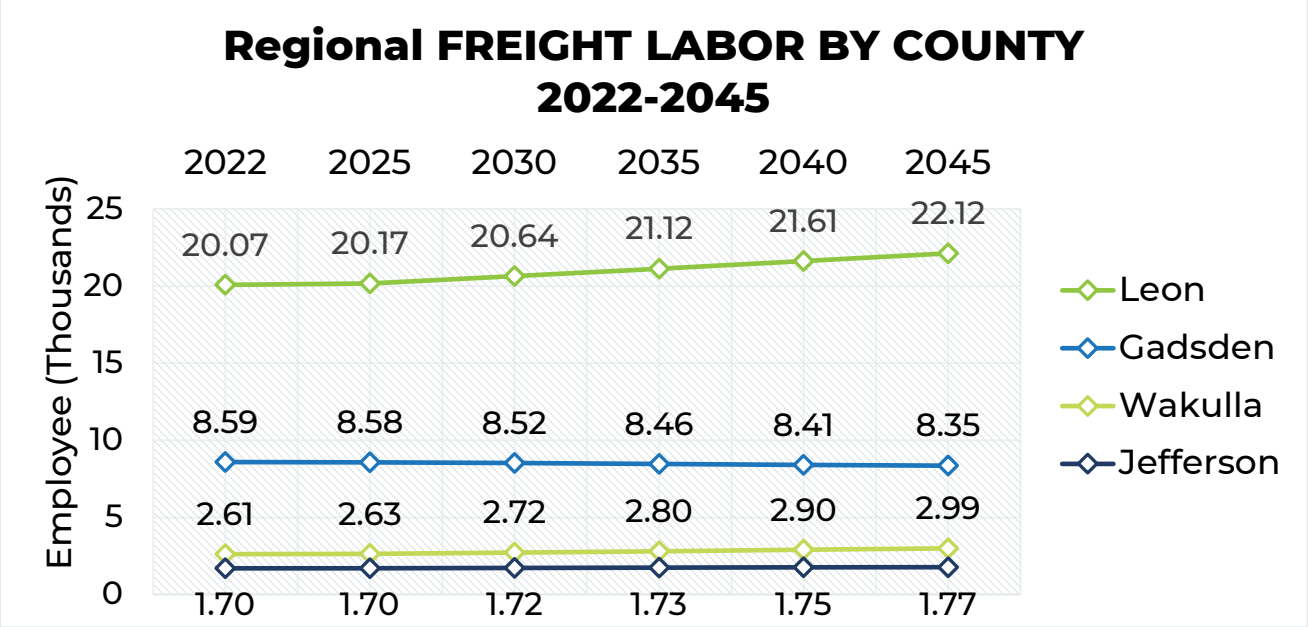
Source: Woods and Poole

In 2022, freight-related industries employed a total of 32,766 people in the region, and projections from Woods and Poole indicate that this number is expected to increase by approximately 7.5% over the time frame, reaching over 35,000 in 2045. The majority of freight-related employment is concentrated in Leon County, followed by Gadsden County, Wakulla County, and Jefferson County.

Projections from Woods and Poole indicate that Gadsden County is likely to see slight decreases in freight-related employment, while Wakulla County is likely to see the highest growth rate of nearly 0.7% per year until 2045 (Figure 5 and Table 3).

Recent development initiatives related to freight and logistics, in connection with the Apalachicola Northern (AN) Railroad and I-10, indicate that Gadsden County is actively promoting industries that rely on freight movement. These initiatives will likely contribute to continued economic growth and employment opportunities in the freight sector in the future.

Figure 5: Regional Freight Industry Employment Projection (2022-2045)



Source: Woods and Poole

Table 3: Freight Employment Projection (2022-2045)

	Leon	Gadsden	Wakulla	Jefferson	CRTPA Region
2022 Freight Employment (000s)	19.89	8.61	2.58	1.69	32.77
2045 Freight Employment (000s)	22.12	8.35	2.99	1.77	35.03
Total Freight Employment Change 2022-2045	2.23	(0.26)	0.41	0.08	2.26
% Freight Employment Change 2022-2045	11.24%	(3.08%)	15.96%	4.78%	7.52%
Annual Average Freight Employment Growth Rate 2022-2045	0.46%	(0.12%)	0.65%	0.20%	0.32%

Source: Woods and Poole

Florida Department of Commerce (FDOC) data was also utilized to review the projections; however, this data grouped the counties together preventing a direct comparison (Table 4). Appendix 1 depicts the FDOC data which projects similar outcomes out to 2030.

FDOC projections for statewide freight employment indicate 0.79% growth. This growth rate is higher than the expected region rate of 0.32%, indicating that freight employment will be focusing on higher percentages outside of the region.

Table 4: Statewide Freight Industry Employment Projection (2022-2030)

	Florida Department of Commerce[3]
	Statewide Freight employment
2022 Freight Employment (000s)	1,812.12
2030 Freight Employment (000s)	1,972.02
Total Freight Employment Change 2022-2030	159.83
% Freight Employment Change 2022-2030	6.28%
Annual Average Freight Empl. Growth Rate 2022-2030	0.79%

Source: FDOC

Benefits to the region: Generally, freight employment is projected to grow within the region, highlighting continued opportunities within the region.

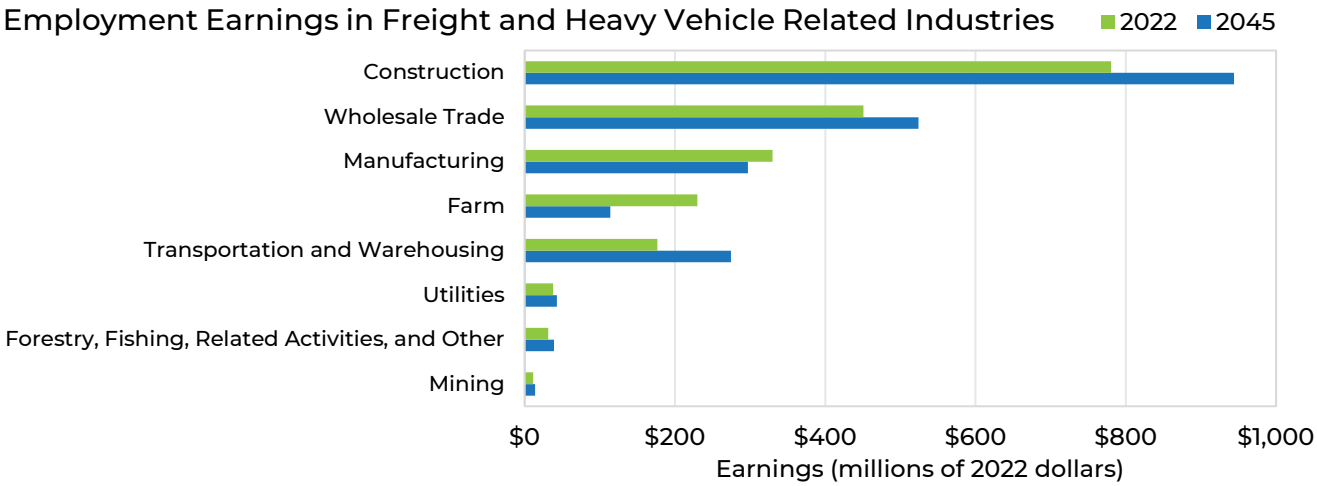
Needs and Issues for the region: Similar to population increases, freight-related employment can also represent an increased need for overall freight movement on the roadway network. These increases will likely be along major corridors and employment centers.

Freight Employment Earnings

Woods and Poole provide data on employment earnings, which represent the total earnings of all paid wages and salaries and offer a measure of the overall economic performance and prosperity of freight-related industries within the region. By 2045, most freight-related industries are projected to see increases in total employment earnings. The highest growth will be in the Transportation and Warehousing industry, where earnings are projected to increase from 2022 to 2045 (Table 5 and Figure 6). The construction industry is projected to have the most total earnings growth, and the freight-related industries seeing declines in earnings include Manufacturing and Farm.

[3] https://floridajobs.org/economic-data/employment-projections

Figure 6: Freight Related Employment Earnings



Source: Woods and Poole (note: values have been updated from 2012 to 2022 using a conversion rate of 1.2747, based on Consumer Price Index (CPI) 2022)

Similar to the total population and total freight-related employment trends, the highest total earnings increase over the next three decades will be in Leon County, but Wakulla will see the highest percent growth in freight-related employment earnings. Overall, earnings in the region are projected to increase by more than $202 million by 2045.

As discussed within the freight employment section, Gadsden County is expected to see a decline in overall freight-related earnings. The county and its Development Council are actively promoting growth in the region. These efforts are likely not represented within the projection models; therefore, it is likely that the reduction projections will be mitigated by these efforts.

Table 5: Freight-Related Employment Earnings (2022-2045)

	Gadsden	Jefferson	Leon	Wakulla	CRTPA Region
2022 Freight Earnings (million $2022)	$578.11	$68.84	$1,261.86	$138.06	$2,046.87
2045 Freight Earnings (million $2022)	$529.19	$82.09	$1,456.27	$181.97	$2,249.52
Total Freight Earnings Change 2022-2045	$(48.92)	$13.25	$194.41	$43.91	$202.65
% Freight Earnings Change 2022-2045	(8.46%)	19.25%	15.41%	31.80%	9.90%
Annual Average Freight Earnings Growth Rate 2022-2045	(0.30%)	0.77%	0.63%	1.21%	0.42%

Source: Woods and Poole (note: values have been updated from $2012 to $2022 using a conversion rate of 1.2747, based on CPI 2022)

Benefits to the region: Increasing earnings are indicative of healthy industries and economic growth in the region. This healthy economy can promote growth outside of just freight considerations.

Needs and Issues for the region: Projection data indicates that Gadsden County is expected to see a decrease in employment and earnings over the planning horizon. Though it is possible that a decline will happen, county staff and representatives are actively pursuing freight related development and promoting growth. Overall, the region is susceptible to tropical storm activity which can shift population and business projections, impacting projections. For example, Gadsden County experienced population decline between 2010 and 2020 Census counts[4], which coincides with hurricane Michael impacts to the community.

Business Environment

Business environments directly influence freight mobility by both generating demand for goods for customers and product development, and by employing workers who generate demand for goods. Increasing in the number of establishments means an increase in demand for goods by both the industry and the general consumer. This section analyzes the changes (increases) in CRTPA's business establishments and the impacts and compares the changes with the State as a point of reference.

Business Establishments

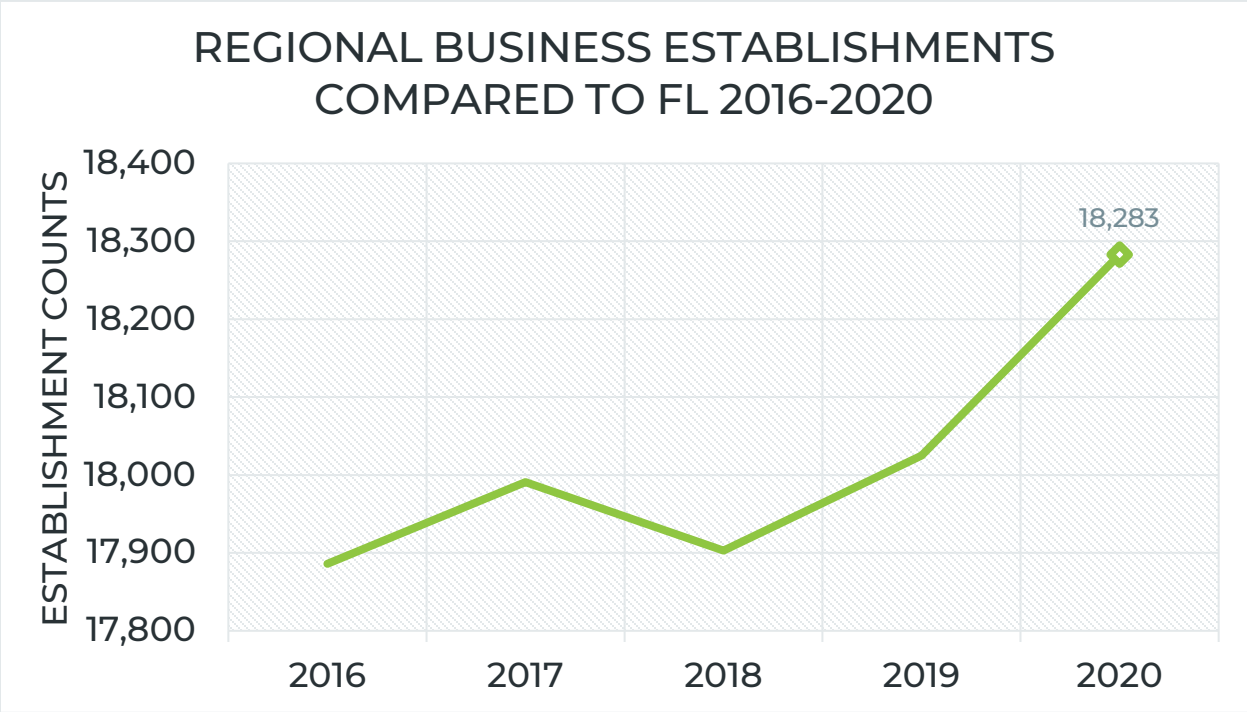
The region's business establishments have grown 2% (14,886 to 18,283) between 2016 and 2020 (Figure 7) indicating a low level of growth in comparison to the state which

[4] https://data.census.gov/

experienced 8% growth (1,089,950 to 1,176,855). This means that small changes in business establishments are expected in the region though not at the same rate as the state.

Business establishment for the counties show a range of -2% to 3%; these changes fall below CRTPA and have small impact for growth and decline. Table 6 and Figure 8 depict the business establishment figures by county.

Figure 7: Regional Business Establishments Compared to FL 2016-2020



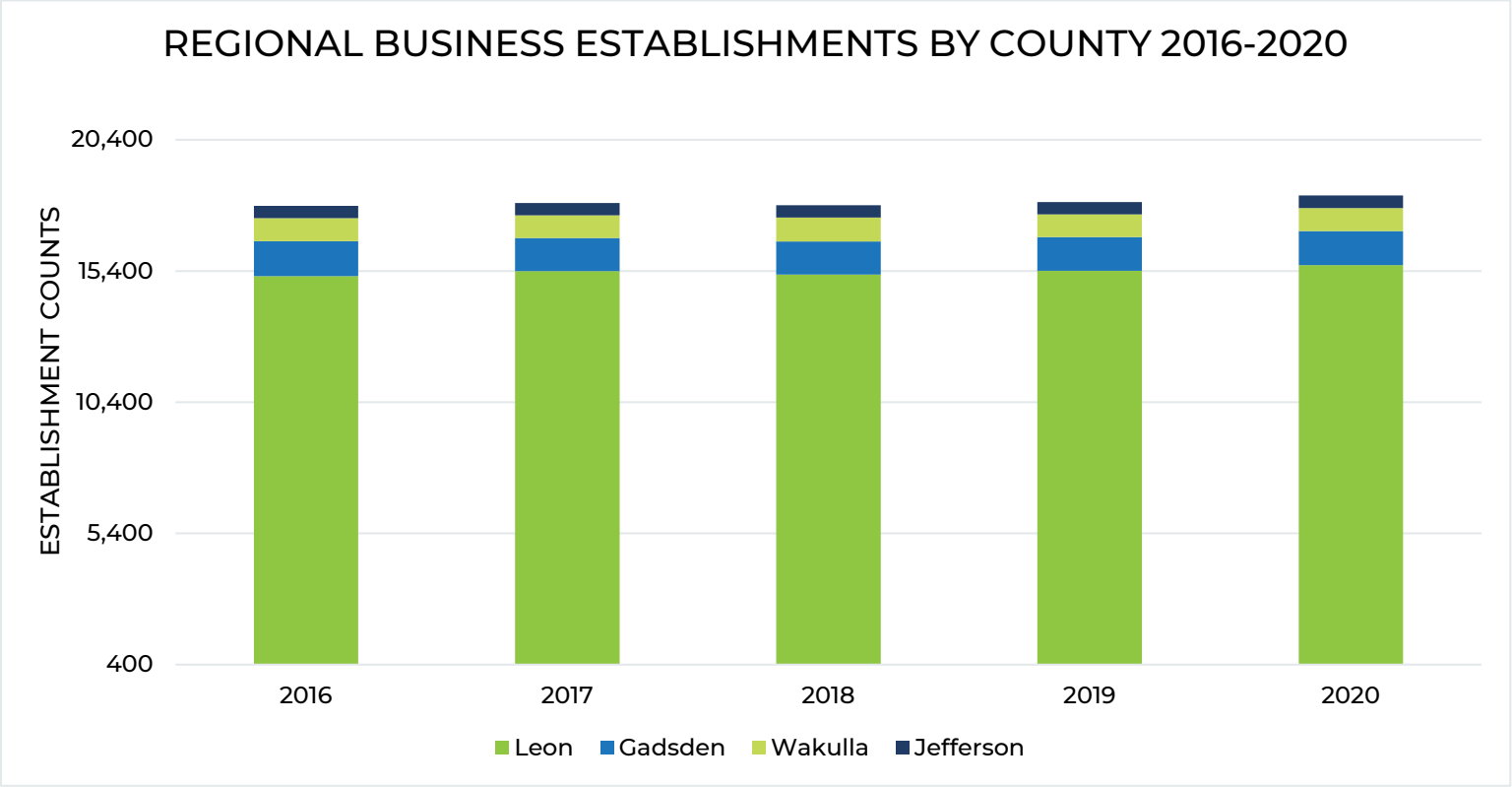
Source: US Census Bureau County Business Patterns

Table 6: Business Establishments by County 2016-2024

Geography	2016	2017	2018	2019	2020	Change 2016-2020
Florida	1,089,950	1,109,725	1,128,716	1,143,739	1,176,855	0.08
CRTPA	17,886	17,991	17,903	18,025	18,283	0.02
Leon	15,206	15,401	15,259	15,409	15,619	0.03
Gadsden	1,328	1,259	1,270	1,278	1,298	(0.02)
Wakulla	880	856	904	874	880	-
Jefferson	472	475	470	464	486	0.03

Source: US Census Bureau County Business Patterns

Figure 8: Regional Business Establishments by County 2016-2020



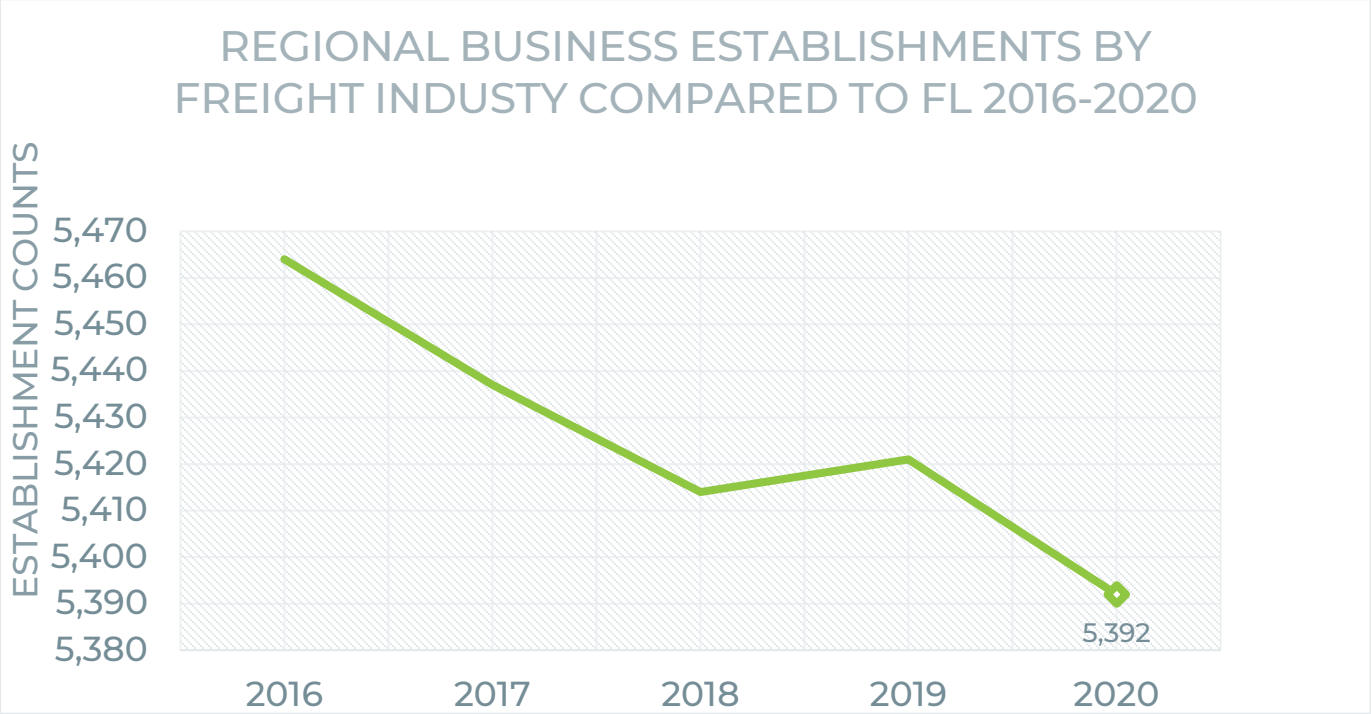
Source: US Census Bureau County Business Patterns

Business Establishment by Freight Industry

An additional analysis of the freight industry business establishments was conducted to determine if there was a freight-focused impact by changes in the business environment. These industries included retail trade, construction, wholesale trade, manufacturing, transportation and warehousing, agriculture, and mining.

CRTPA freight industry business establishments declined 1.3% (5,464 to 5,292) over the 2016-2020 period (Figure 9); while the state experienced a 49% increase (37,2974 to 392,269) 5%. This means that changes in freight industry business establishments are expected to slightly decline in the region opposite to the state.

Figure 9: Regional Business Establishment by Freight Industry Compared to FL 2016-2020



Source: US Census Bureau County Business Patterns

Business establishment by freight industry show a range of -100% to 11%; there is a 10% gap between construction at 11% and all the other industries that fall below 0% change. Construction has the highest expected growth for CRTPA's freight industry business establishments. Table 7 and Figure 10 depict this data.

Benefits to the region: Understanding the growth and industry sectors will be an important feature in future land use and policy planning. Industry clustering and encouragement can be prioritized throughout the region.

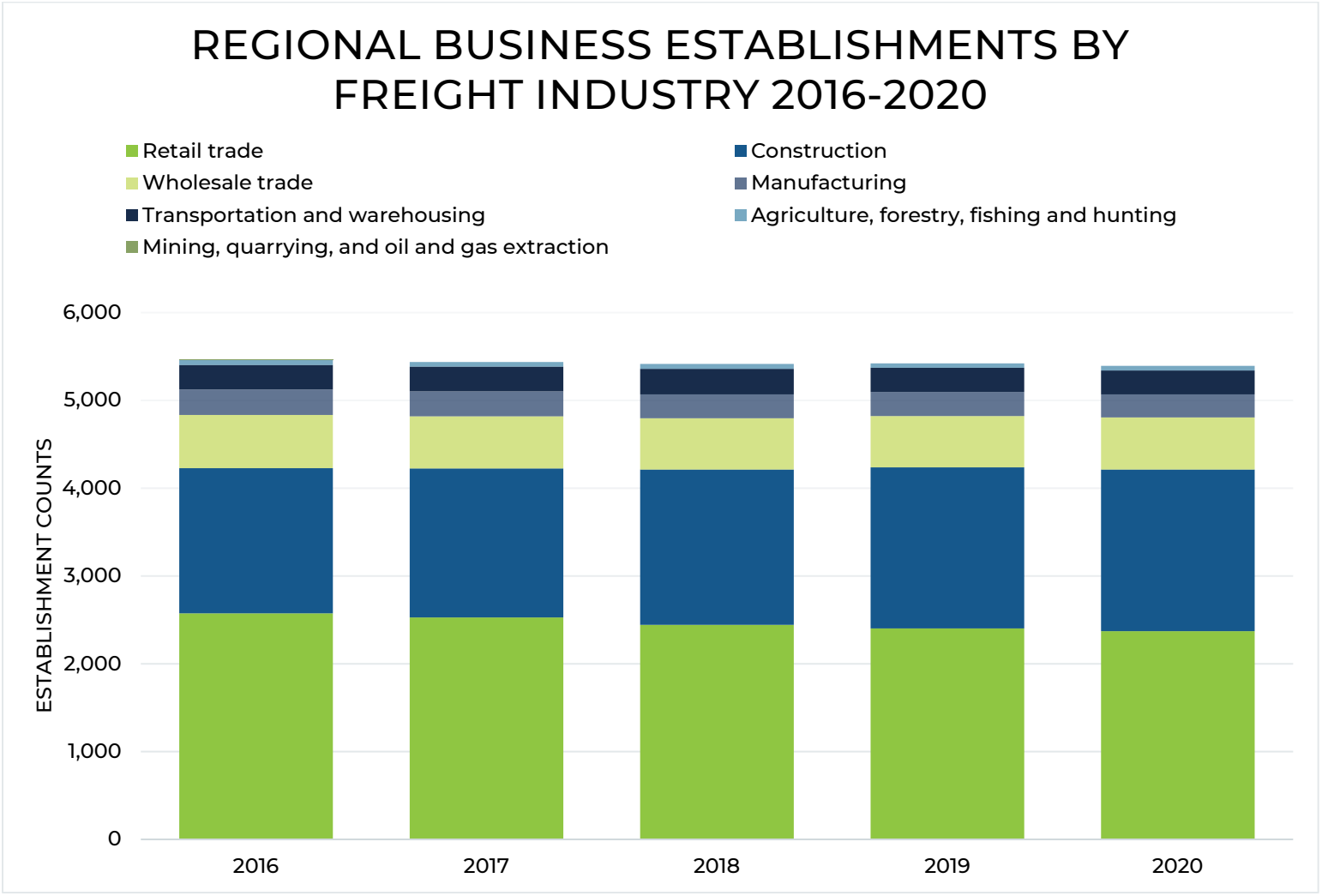
Needs and Issues for the region: The region is not anticipated to keep pace with the state's growth, highlighting the possible need for targeted development efforts.

Table 7: Business Establishments by Freight Industry 2016-2024

Industry	2016	2017	2018	2019	2020	Change 2016-2020
Florida Freight Industry	372,974	377,741	383,179	385,811	392,269	0.05
CRTPA Freight Industry	5,464	5,437	5,414	5,421	5,392	-0.01
Retail trade	2,574	2,528	2,444	2,404	2,372	-0.08
Construction	1,654	1,698	1,768	1,833	1,840	0.11
Wholesale trade	606	594	585	586	593	-0.02
Manufacturing	292	282	270	273	265	-0.09
Transportation and warehousing	278	283	293	276	271	-0.03
Agriculture, forestry, fishing and hunting	56	52	54	49	51	-0.09
Mining, quarrying, and oil and gas extraction	4	-	-	-	-	-1.00

Source: US Census Bureau County Business Patterns

Figure 10: Regional Business Establishment by Freight Industry 2016-2020



Source: US Census Bureau County Business Patterns

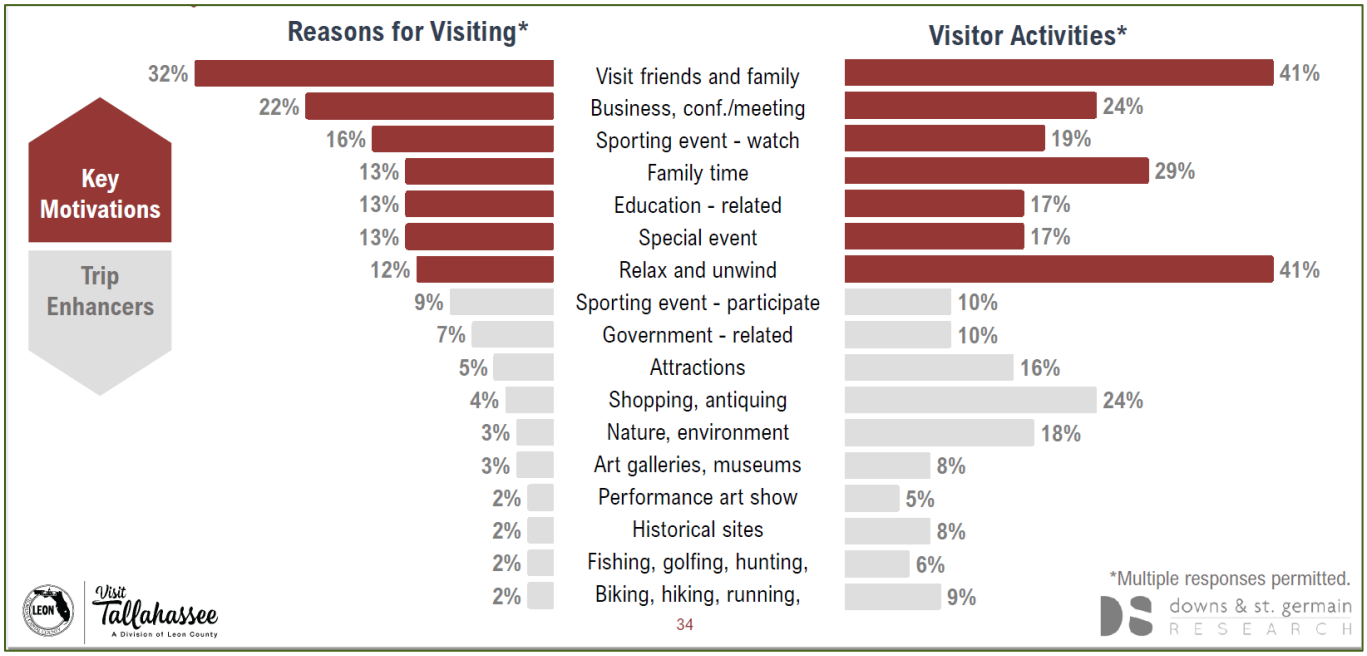
Tourism

Tourism directly influences freight mobility by both generating more vehicle traffic from attracting traveling visitors; and by generating more freight traffic from the traveling visitors demanding more goods. Therefore, increases in the number of visitors represent an increased impact on freight mobility. This section analyzes CRTPA's tourism and the expected impacts on freight mobility.

Each CRTPA county has organized offices for promoting tourism; however, only Visit Tallahassee (Leon) has an identified process for researching and documenting the impacts tourism has on the county. Visit-Tallahassee data source used social marketing methodologies to capture and estimate tourism supply components along with analyzing key economic performance indicators including the number of visitors, the mode of travel, and origins. Notably, Tallahassee is the principal urban core for CRTPA; in addition, there was limited data available to conduct tourism analyses for Gadsden, Wakulla, and Jefferson counties. Therefore, CRTPA tourism profile is based on visitor motivators for Tallahassee-Leon area and used as an indicator benchmark for regional impact overall.

Reasons for visits: Research shows visits to friends and family, business meetings, and sporting events were the key motivations for visiting up to 70% of the FY 2022 trips (Figure 11). These trips were enhanced by related activities including participation in attractions, shopping, and other recreational activities.

Figure 11: Visit Tallahassee FY2022 Reasons for Visiting



Source: Visit Tallahassee Economic Impact of Tourism Report Fiscal Year 2022

Number of Visitors: Tallahassee-Leon area had a 34% increase resulting in total economic impact of nearly $1.2 billion (Table 8).

Table 8: Visit Tallahassee Key Performance Indicators FY2022

Economic Indicators	FY 2021	FY 2022	% Change
Visitors	1,740,900	2,333,400	34.0%
Direct Expenditures	$559,099,200	$728,969,400	30.4%
Total Economic Impact	$883,376,800	$1,151,771,700	30.4%
Room Nights Generated	1,243,480	1,442,543	16.0%
Jobs Created	12,868	14,708	14.3%
Wages Paid	$341,6147,100	$414,123,500	21.2%
Taxes Paid	$62,159,100	$89,874,900	44.6%
Tourist Development Tax	$5,310,178	$7,886,542	48.5%

Source: Visit Tallahassee Economic Impact of Tourism Report Fiscal Year 2022

Benefits to the region: the 34% increase of visitors and $1.2 billion impact for CRTPA's urban core mean more vehicle and freight traffic from the traveling visitors demanding more goods, and also mean an increased impact on freight mobility.

Needs and Issues for the region: additional evaluation of the tourism impact is needed to capture a more complete regional profile of the tourism influence on freight demand.

Network Performance

Network performance indicators help to define the network's ability to support efficient freight mobility within an area. The following assessment takes a strategic approach for defining network performance by measuring connectivity and reliability of the multimodal network. Along with safety, connectivity, and reliability are freight mobility indicators important to industry operators. This assessment defines CRTPA's highway and rail multimodal network performance through analyzing connectivity and reliability. See the Existing Conditions Section for the safety analysis.

Highway Mobility

The highway network is the primary link for the freight network; it includes the first and last mile and the connection with all other modal nodes. Reliable highway mobility is a direct indication for reliable freight mobility and can be measured through AADT, truck percentage, level of service.

Annual Average Daily Traffic

The Average Annual Daily Traffic (AADT) is a good indicator for mobility conditions of vehicle traffic. The AADT values used in this section are based on observed data

captured by telemetered traffic monitoring sites (TTMS) and accounts for all highway vehicle classifications. As such, freight traffic is influenced by traffic conditions created from passenger, utility, and freight vehicles.

Top Ten Major Routes by AADT

CRTPA has an extensive network of highways segments that vary in functionality to serve a full range of traffic demand. However, it's important to focus on highway segments that generally carry more traffic. These higher traffic values relate to commonly used segments which become major routes when a pattern and frequency-of-use is identified. Additionally, these commonly used segments influence policy and investments for improving these segments which then shape travel pattern and frequency to become major routes for freight mobility. This section identifies CRTPA's existing and future top ten major routes to show where the highest AADT values occur (and expected to occur) and the conditions of travel pattern and frequency-of-use.

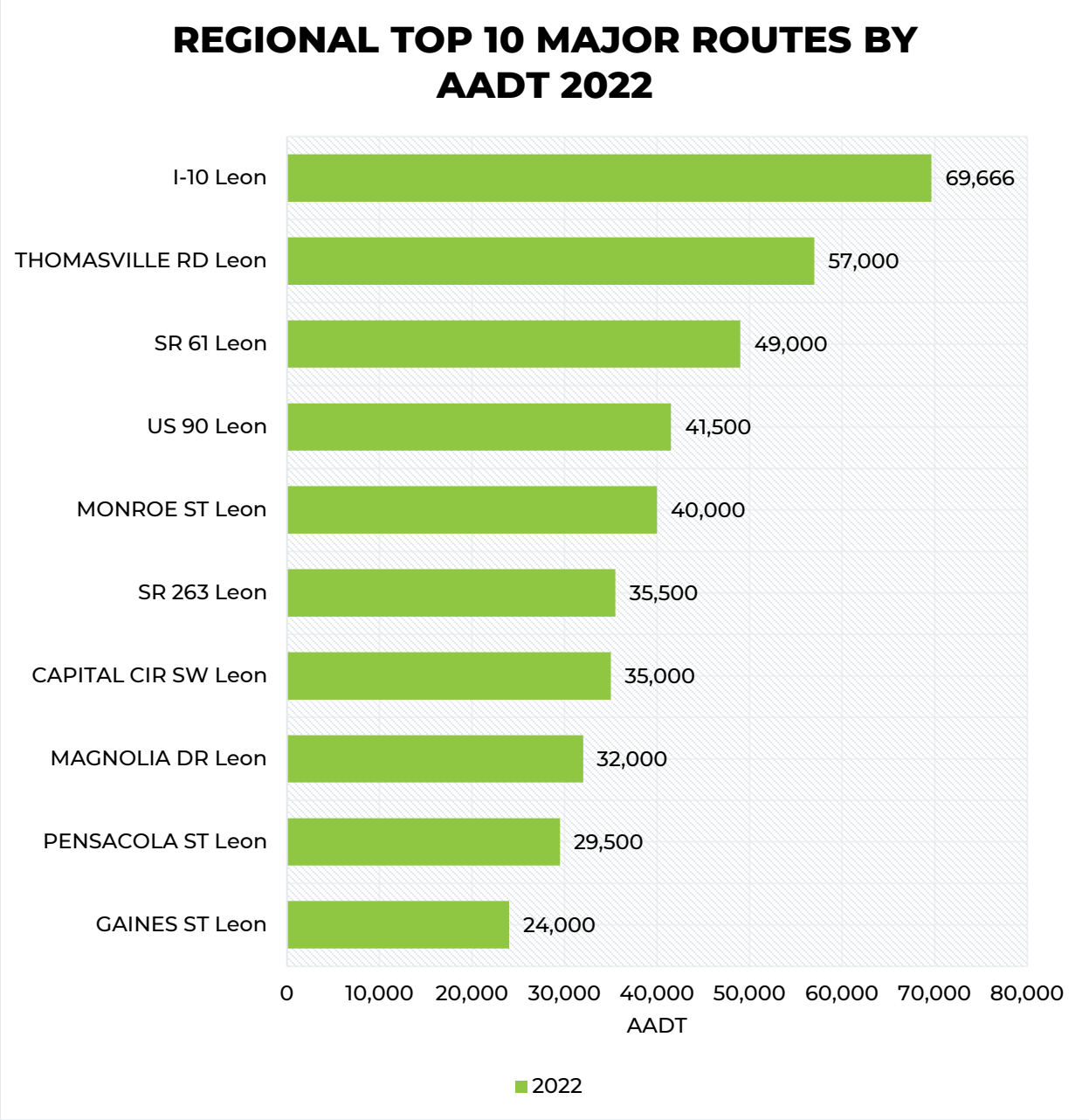
Figure 12 depicts Leon County has all of the top ten routes based on AADT values. These routes are mostly interstate and principal arterial which are generally designed to carry more volume (capacity), commonly known and used, and consistently maintained and improved. The capacity and upkeep of the identified routes will serve as an indicator for reliability of highway mobility and thus for reliability of freight mobility.

Major Routes by AADT Changes

Equally important for identifying the top ten major routes for highest volumes is to also identify the major routes for volume changes. Identifying the AADT changes over a period provides an indication of how the conditions of the travel patterns and frequency-of-use are shifting. The shifts shape policy and investments which influence shifts in maintenance and improvements and shifts in reliability of highway mobility and freight mobility. AADT changes are depicted in Figure 13.

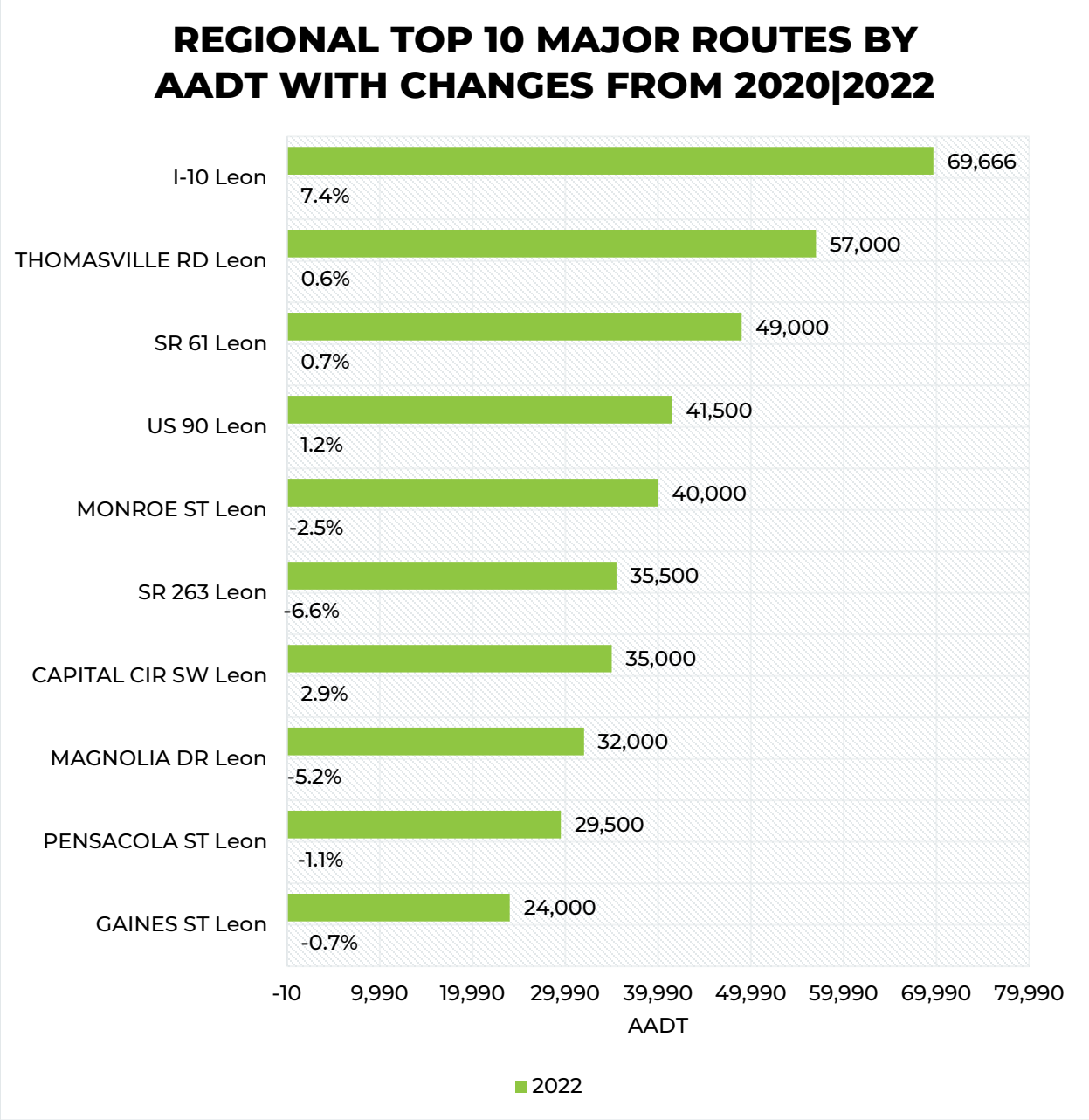
The following chart shows distribution of all the counties major routes based on AADT changes. These routes are State roads which are commonly known and used, and consistently maintained and improved. Similar to the top ten major routes, the change value of the identified routes along with the upkeep will serve as an indicator for reliability of highway mobility and thus for reliability of freight mobility.

Figure 12: Regional Top 10 Major Routes AADT 2022



Source: Florida Department of Transportation - Transportation Data and Analytics Office

Figure 13: Regional Major Routes – AADT Changes 2020|2022



Source: Florida Department of Transportation - Transportation Data and Analytics Office

Annual Average Daily Truck Traffic

The annual average daily truck traffic (AADTT), as a percentage of AADT, is a great indicator for mobility conditions of freight traffic. The truck percentage values used

in this section are based on observed data captured by Telemetered Traffic Monitoring Sites[5] and accounts for vehicle classifications 8 and above[6].

Top Ten Major Routes by AADTT

This section identifies CRTPA's top ten major routes to show where the highest truck percentage values occur (and expected to occur) and the conditions of travel pattern and frequency-of-use. Figure 14 shows all counties except Leon have top ten routes based on truck percentage values.

These routes are State roads which are commonly known and used, and consistently maintained and improved. The percentage values upkeep of the identified routes will serve as an indicator for reliability of freight mobility.

Major Routes by AADTT Changes

Equally important for identifying the top ten major routes for highest TFCTR is to also identify the major routes for TFCTR changes. As with AADT changes, TFCTR changes indicate how the conditions of the travel patterns and frequency-of-use are shifting. This influences investment policies and reliability of freight mobility. AADTT changes are depicted in Figure 15.

Figure 15 depicts distribution of all the counties' major routes based on TFCTR changes. These routes are State roads which are commonly known and used, and consistently maintained and improved. Similar to the top ten major routes, the change value of the identified routes along with the upkeep will serve as an indicator for reliability of freight mobility.

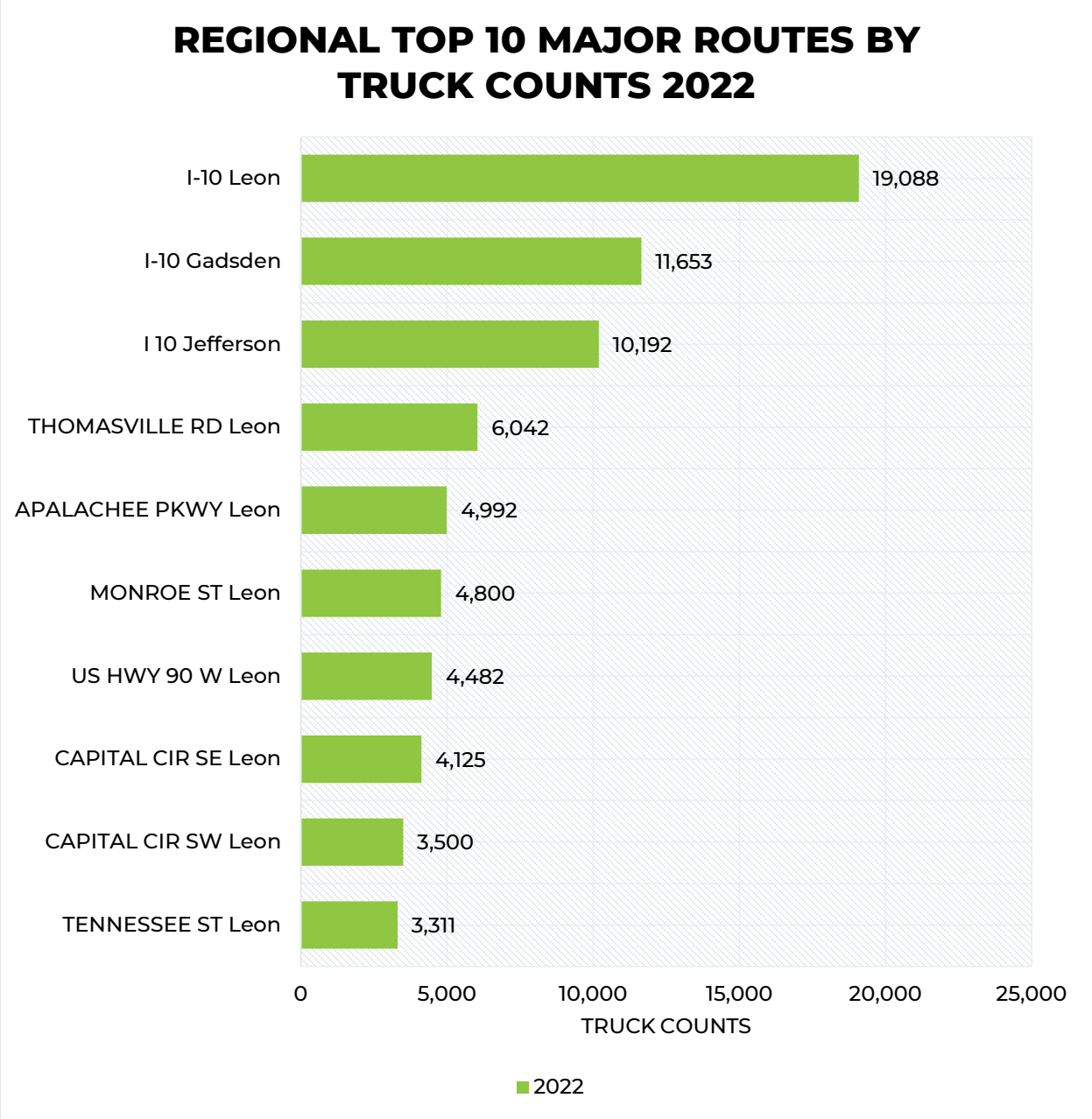
Benefits to the region: The identification of AADT and AADTT changes provide an indication of impact to the corridors that are important to the freight network. Equally, it will help CRTPA stay abreast of the shaping of policy and investments which are influenced by the shifts in reliability of highway mobility and freight mobility.

Needs and Issues for the region: High volume corridors represent significant routes throughout the region. Higher volumes often have a direct correlation to maintenance costs which may highlight increased funding needs along these corridors. Additionally, these routes should be prioritized for the safe and efficient movement of people and goods.

[5] Telemetered Traffic Monitoring Sites (TTMS) - A continuous traffic monitoring site that transmits traffic data to the Transportation Data & Analytics Office via telephone or wireless communications.

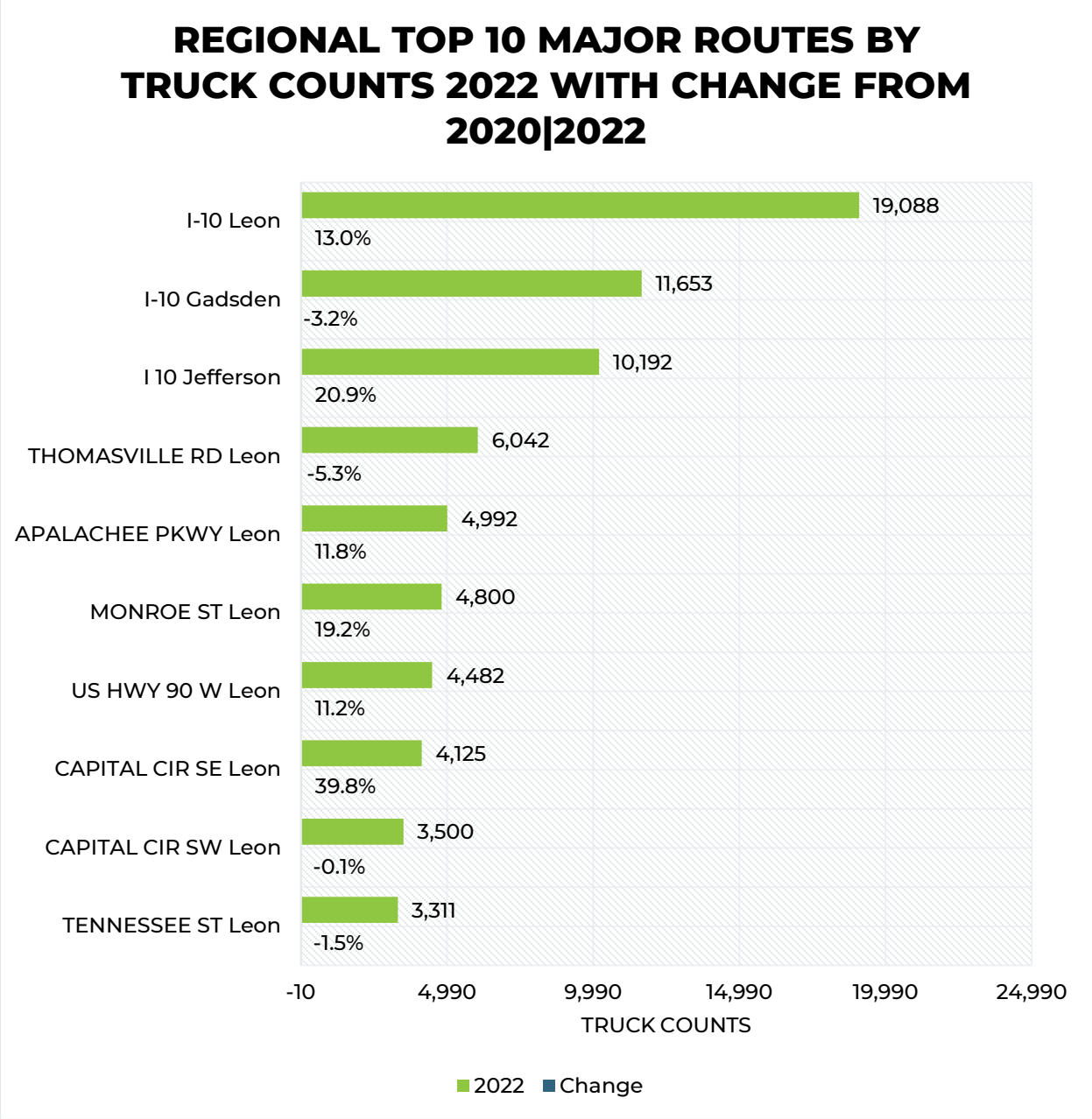
[6] Office of Highway Policy Information - Policy | Federal Highway Administration (dot.gov)

Figure 14: Regional Top 10 Major Routes – Truck Counts



Source: Florida Department of Transportation - Transportation Data and Analytics Office

Figure 15: Regional Major Routes - Truck Percentage Changes 2020|2022



Source: Florida Department of Transportation - Transportation Data and Analytics Office

Highway Level of Service

Building upon CRTPA's Congestion Management Plan (CMP) ongoing update, Level of Service (LOS) data has been included within this analysis. LOS is a generalized review of typical roadway congestion, ranging from A (no traffic) to F (gridlock traffic). As part of the CMP, corridors within the region which failed to meet LOS Standards were identified and have been included within Figure 16.

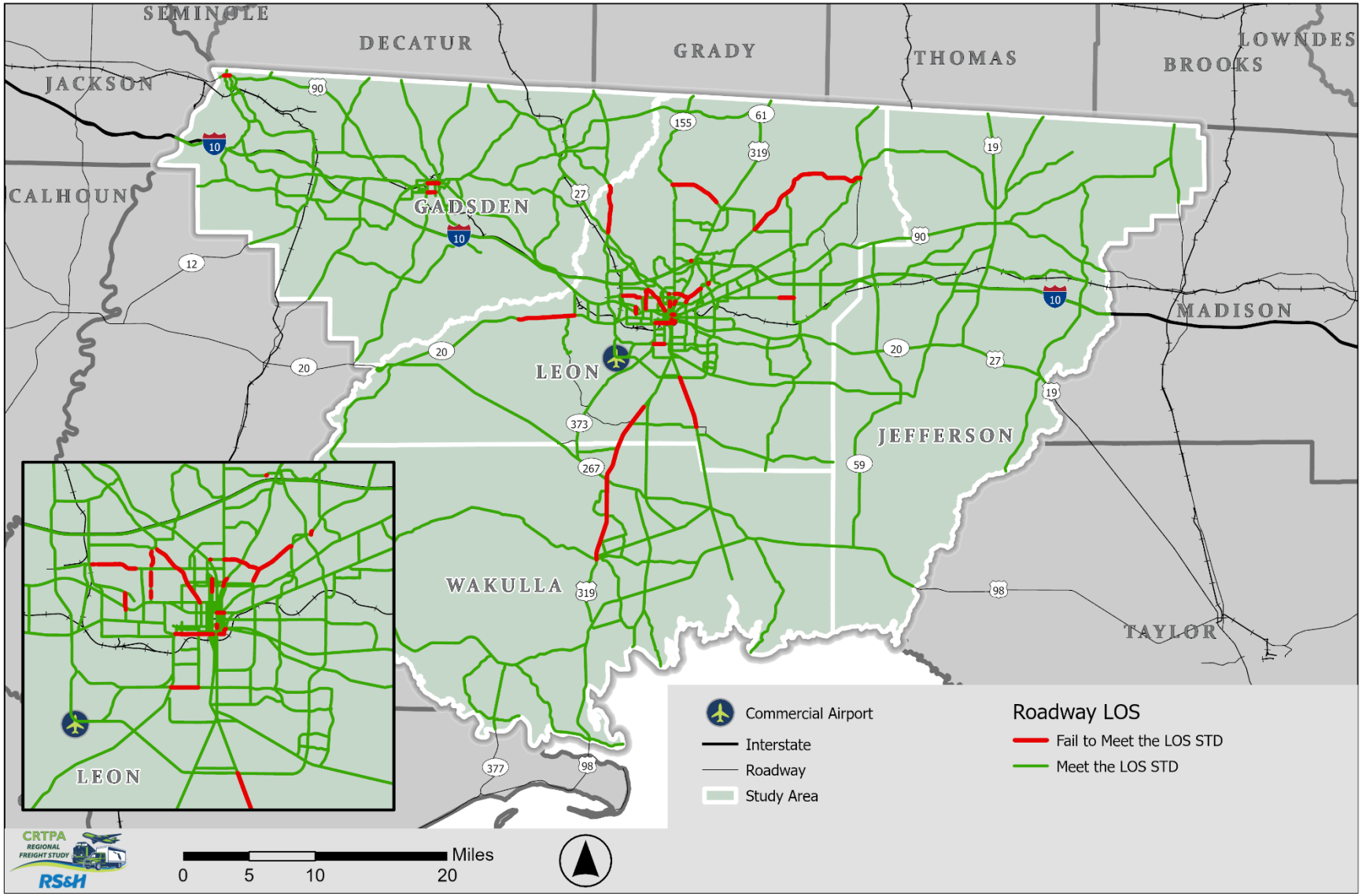
The majority of the failing corridors are located within Leon County, closest to the urbanized areas where higher congestion is anticipated. However, significant corridors outside of this area have also been identified.

Benefits to the region: The identification of failing LOS has a direct correlation to the movement of roadway freight movement. It is anticipated that local freight delivery will be impacted within the urban areas of Tallahassee and Quincey; however, several corridors are likely to impact regional freight movement.

Needs and Issues for the region: The failing LOS corridors represent areas for improvement across the region. Though all of the identified corridors represent opportunities for improvement, the following corridors should be prioritized for freight related movements:

- US 319 – Wakulla and Leon Counties
- SR 363 – Wakulla County
- SR 20 – Leon County

Figure 16: Corridors Failing to Meet LOS



Source: CRTPA CMP

Rail Mobility

In conjunction with the highway network, the rail network also serves as a primary link for the freight network which includes the first and last mile and the connection with other modal nodes. Reliable and connected rail operations indicate fluid intermodal freight mobility and can be measured through volume-to-capacity ratios, and standard rail operational practices.

Rail Volume-To-Capacity

Rail volume-to-capacity (V/C) measures reliability of freight rail mobility and is calculated using factors from standard operational practices including average train length, train speeds, trains per day per segment, and segment lengths. The region has two railroad operators: Florida Gulf and Atlantic Railroad (FG&A) and Apalachicola Northern Railroad (AN) with a total of 128.84 track miles across fifty-nine segments. FG&A lines travel 108 miles from Jefferson County's east boundary through Gadsden County to a connection with AN in Chattahoochee and has a short branch from Tallahassee through Havana. AN line travels from southeast Gadsden County boundary through Greensboro and connects with FG&A in Chattahoochee.

Rail Volume-To-Capacity

The combined network train speeds range from 12 to 41 miles-per-hour and has an average of seven trains (volume) moving through the network per day. The combined network also can service (capacity) an average of 190 trains per day; both volume and capacity are based on an average train length of 5,400 feet. Under these existing conditions, CRTPA rail V/C ratios range from .01 to .03 which means there is 74% to 99% available existing capacity on average if there are no changes to operations (speed) or infrastructure (sections and miles) occur. See Table 9, Figure 17, and Figure 18. For a depiction of the V/C and their locations. Figure 19 and further expand upon the data by rail provider.

Table 9: CRTPA Rail Network Volume-to-Capacity

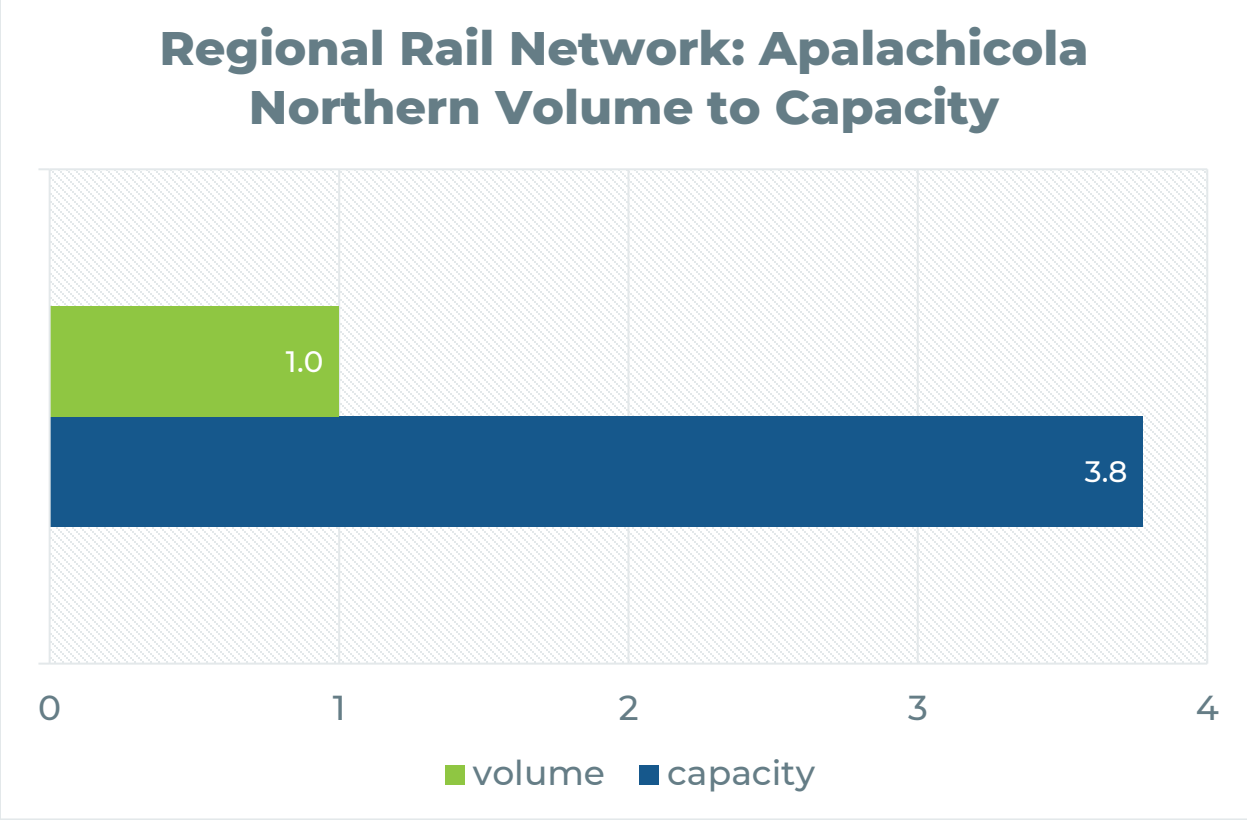
Railroad	County	Miles	Maximum Speed	Capacity	Existing Volume	Existing V/C
AN	Gadsden	20.40	12	4	1	0.26
FGA	Gadsden	51.75	26	64	0.36	0.01
FGA	Jefferson	21.92	40	52	3	0.06
FGA	Leon	34.77	41	70	2	0.03

Source: FDOT; RS&H Analysis

Apalachicola Northern Railroad Volume-To-Capacity

The AN rail network only runs through Gadsden County (in the region), connects with FG&A in Chattahoochee, and has an existing V/C of .26. The network has available capacity to service 74% more train volume if there are no changes to operations (speed) or infrastructure (sections and miles) occur. See Figure 17.

Figure 17: CRTPA Rail Network: Apalachicola Northern Volume-to-Capacity



Source: RS&H Analysis

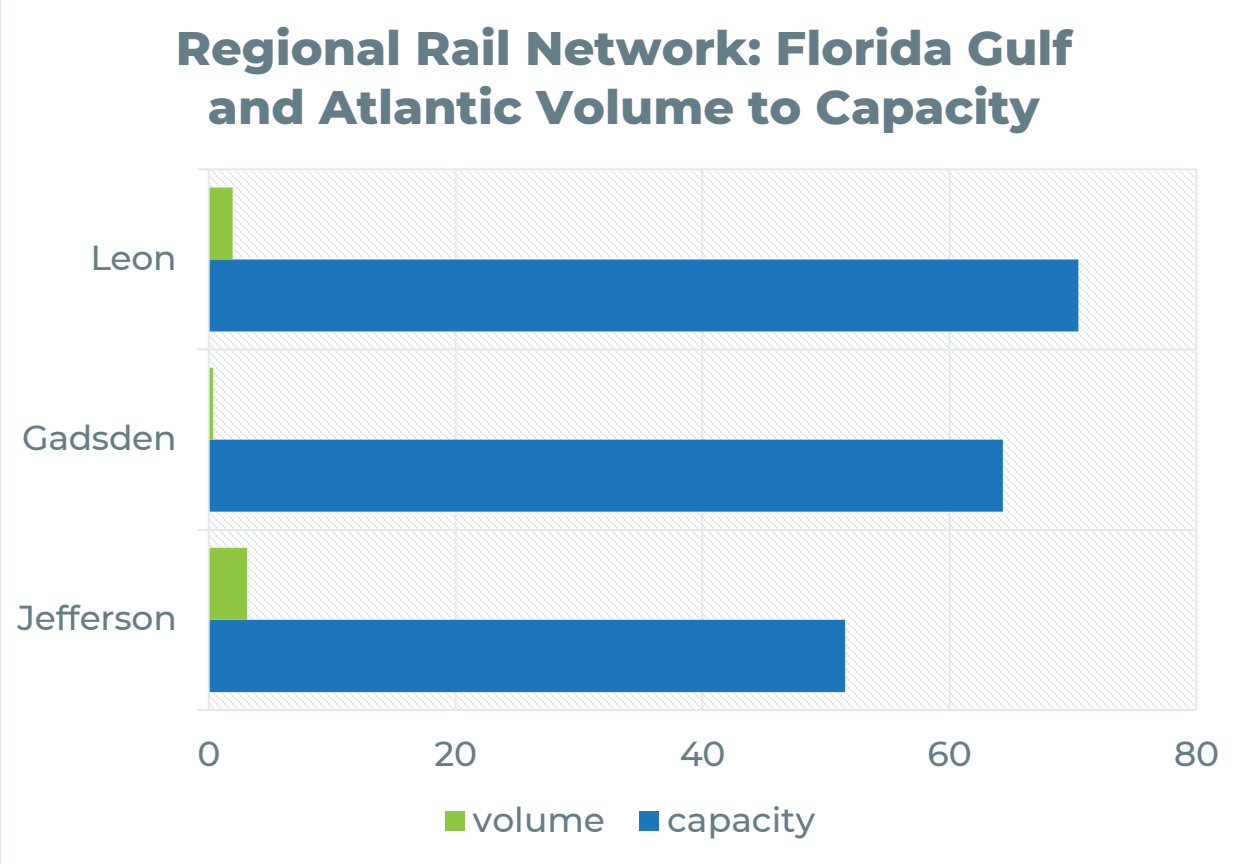
Florida Gulf and Atlantic Volume-To-Capacity

FG&A rail network runs through Leon, Gadsden, and Jefferson Counties, and connects with AN in Chattahoochee with short branch running from Tallahassee through Havana. Figure 18 depicts the existing FG&A V/C.

- Leon County has an existing V/C of .03. The network has available capacity to service 97% more train volume if there are no changes to operations (speed) or infrastructure (sections and miles) occur.

- Gadsden County has an existing V/C of .01. Similar to Leon, the Gadsden rail network has available capacity to service 99% more train volume if there are no changes to operations (speed) or infrastructure (sections and miles) occur.
- Jefferson County has an existing V/C of .06. The network has available capacity to service 93% more train volume if there are no changes to operations (speed) or infrastructure (sections and miles) occur.

Figure 18: CRTPA Rail Network: Florida Gulf and Atlantic Volume-to-Capacity

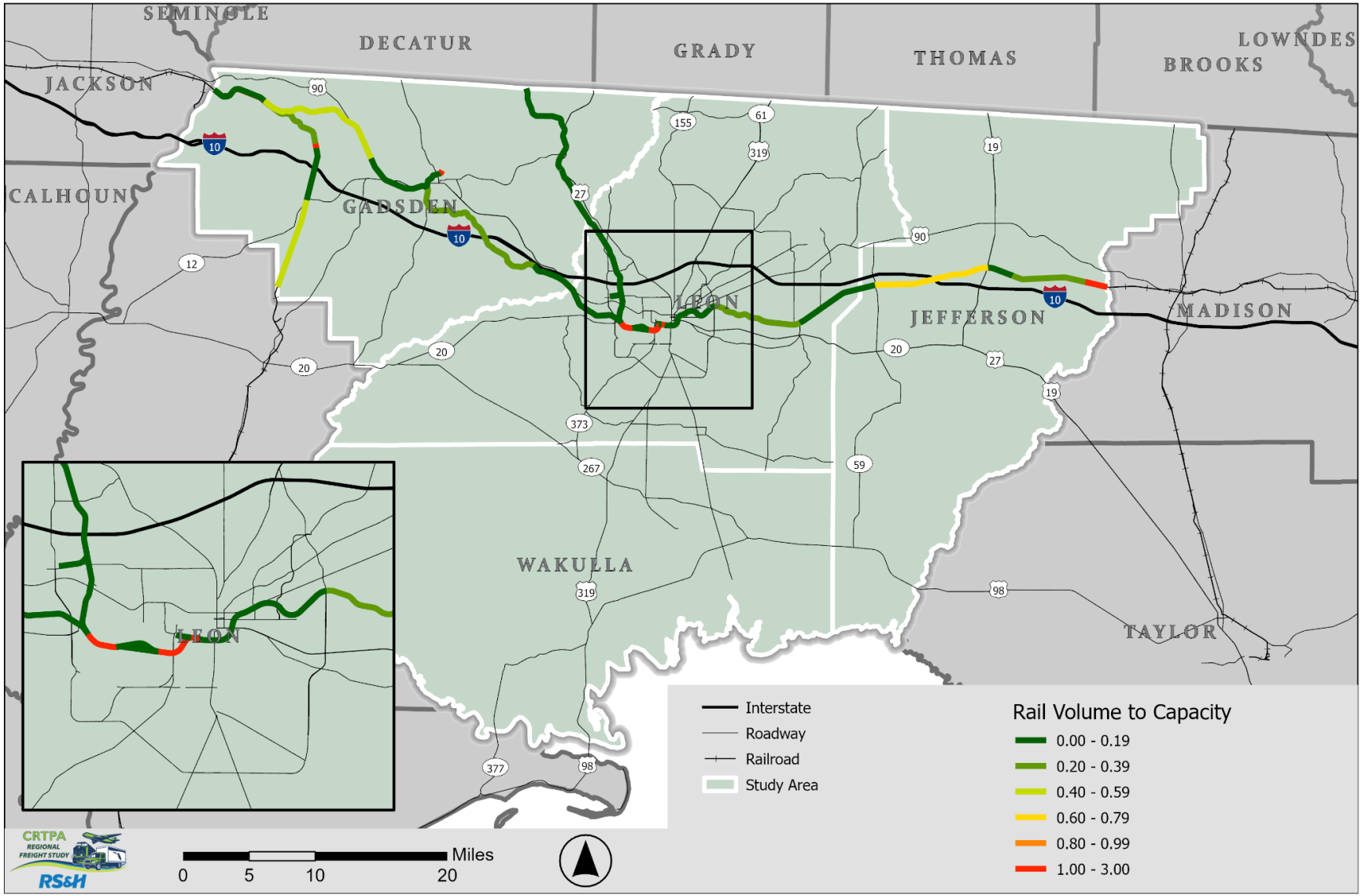


Source: RS&H Analysis

Regional Rail Network V/C Maps

The following maps show the impact of the V/C intensity across the rail network. The map shows the expected rate of volume to capacity consumption when speed, miles, and capacity are held constant over time.

Figure 19: Regional Rail Network Existing Volume-to-Capacity



Source: FDOT; RS&H Analysis

Rail Connectivity

Rail network connectivity is an indication of fluid intermodal freight mobility that also serves as a primary link for the freight network in conjunction with rail operations reliability. Rail network connectivity analysis focuses on the amount of infrastructure used in operations, along with the infrastructure locations, functions, and conditions. These factors can be measured through the number of crossings, number of hubs and their functions, rail traffic signal locations and functions, and infrastructure conditions.

Rail Crossings

Rail at-grade crossings (crossings) simultaneously inhibit and add value to rail-highway connectivity and reliability. Crossings that are maintained and safe promote fluidity and interoperability between the two modes, and thus reduce the chances of traffic flow disruption. Additionally, crossings are synonymous with intermodal highway connectors which must also remain maintained and safe to promote fluidity and interoperability. Safety can be a challenge as the number of crossings increases; it is important to balance the operational requirements with an effective number of crossings.

CRTPA rail network has 134 open-active crossings, and two that are open-inactive; this is a density of approximately one crossing per mile across the CRTPA rail network which can increase the chances of incidents and reduce connectivity and reliability.

Rail Hubs and Operational Facilities

Similar to crossings, rail hubs can simultaneously inhibit and add value to rail-highway connectivity and reliability. Rail hubs generally are located with intermodal highway connectors and function as a first and last mile node for a commodity supply-chain. These locations and functions produce additional traffic for the location and the regional network as well as increasing chances for safety incidents. Effective transportation design of the intermodal infrastructure balanced with effective operational functions offset the impact of the hub's location and functions. The following maps show CRTPA rail network hub locations and functions for Leon, Gadsden, and Jefferson counties. Figure 20 depicts the location of these hubs on the rail network.

Rail Yards: the CRTPA rail network has two FG&A identified hub locations that function as yards or interchanges; these locations support rail logistics operations for train building, repair, and safety, and provide interoperability between rail lines.

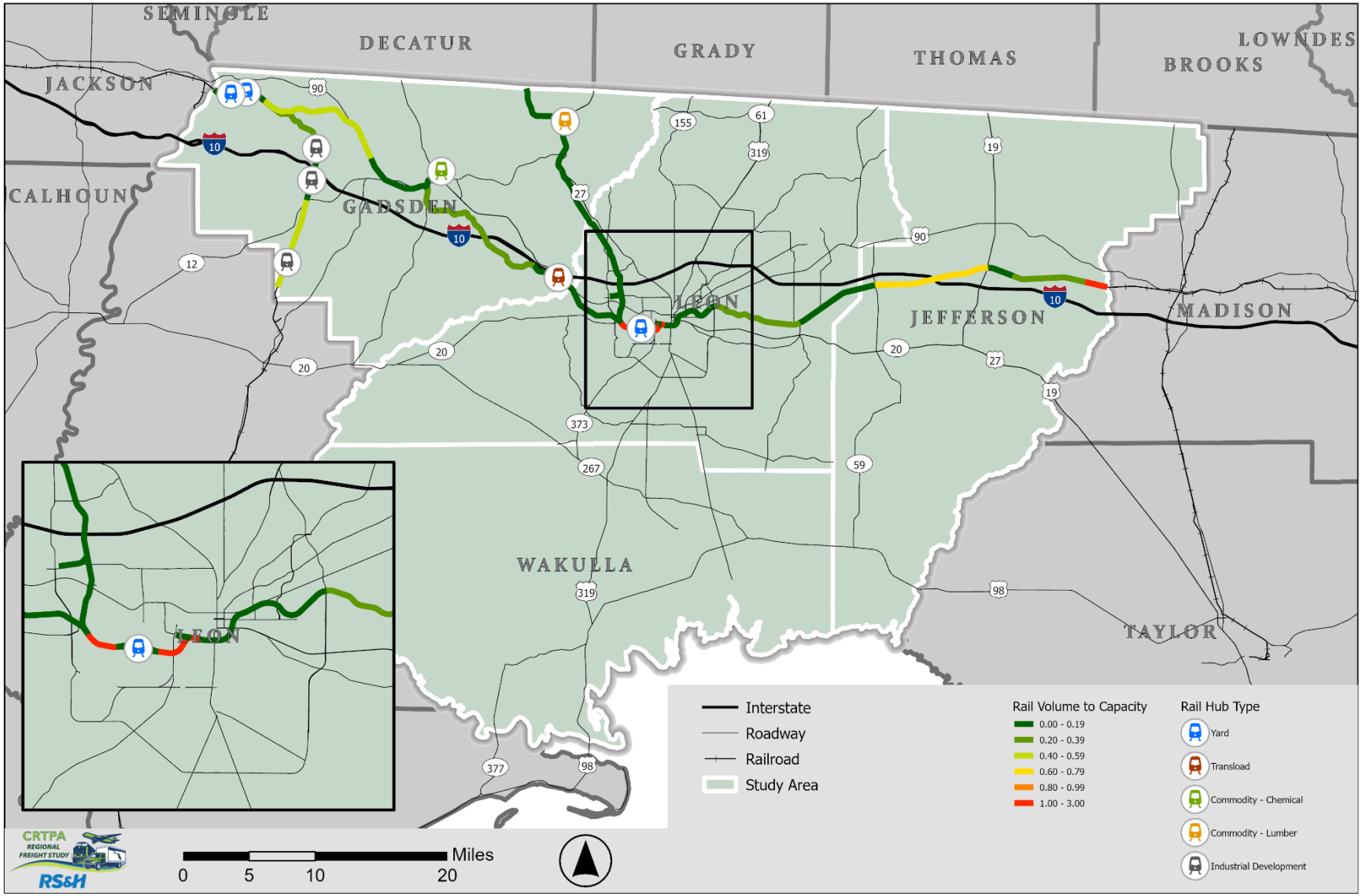
Transload: the network has one FG&A identified transload facility that supports rail-truck logistics operations.

Commodity: the network has two FG&A identified commodity hubs that serve as a first/last mile for chemical and lumber commodity supply-chains.

Industrial Development: the network has three AN identified industrial development sites that are ready to serve as a hub location for a commodity supply-chain first/last mile.

These locations and functions are expected to continue supporting connectivity and reliability for the network and commodity supply-chain when analyzed with V/C impact.

Figure 20: Regional Rail Network Hub Locations and Functions



Source: FDOT; RS&H Analysis

Rail Traffic Control

Rail traffic signal control operations along with crossings and hub operations work as a system to ensure fluidity and safety across the network, and thus increase connectivity and reliability by reducing the chances of traffic flow disruption. The CRTPA rail network has a combination of both automation and manual traffic signal control operations.

The FG&A network has centralized traffic control (CTC) from Tallahassee through Jefferson County; CTC allows dispatchers to remotely control the signals and switches for crossovers and sightings for this territory. In contrast, FG&A network has no rail traffic control signals from Tallahassee through Gadsden County; trains generally operate using track warrant controls (TWC) in this territory. TWC operations consist of the train crew stopping the train short of the siding, and getting off to manually align the switch while the other train approaching must call dispatch to request a track warrant for continuing moving. Likewise, AN network also uses the TWC operations throughout the Gadsden County territory.

Regional Rail Trade

The region is served by the Florida Gulf and Atlantic (FG&A) and the Apalachicola Northern (AN) rail companies and it is anticipated that future efforts will be geared toward the improvement of infrastructure conditions rather than major system expansion. Due to the limited number of providers and competitive nature of the industry, tonnage and value of commodities or their growth were not specifically identified. However, stakeholder coordination with the rail providers offered insight into the future conditions of rail within the region.

Through stakeholder coordination, the providers indicated a desire to increase their operations in the area; however, significant stretches of new rail lines were unlikely. This coordination highlighted the following information regarding the rail systems in the area:

- Maintenance of existing infrastructure are shared concerns
    - Track conditions can lead to weight and speed reduction
- Increase in freight local/regional businesses is desired
    - Rail stakeholders indicated that direct to rail operations would be beneficial but require specific businesses and infrastructure improvements to make a possibility
    - Some county stakeholders have expressed interest in pursuing this type of industry growth
- Access to the Port of Port St. Joe is desired but currently cost prohibitive
    - The number of bridges requiring repair will require significant investment
        - 2022 Cost estimates indicate that $3.5 million in track repair and over $22 million in bridge repair

- This is representative of a "chicken or the egg" (which came first?) scenario in which industry growth toward the coast may encourage rail expansion, while improved rail access may encourage that industry growth.

Specific improvements within the region were not provided by the rail service providers; however, the following improvements have been identified and are anticipated.

- Bridge rehabilitation and improvements
  - Maintenance of bridge conditions is vital to the continued (or expanded) service in the region
- Rail capacity expansions and speed improvements
  - Freight rail can be limited to 10mph in some parts of the region, instead of the possible 40mph
    - Reducing the overall speed of goods movement and presents logistics issues
      - Can also increase vehicular delay at crossing locations due to longer clearing times
- Switch and rail yard expansion and improvements
  - Potential to improve movement of trains, offer repair space, and transload opportunities

Federal funds have recently been approved for use by the FG&A in the Panhandle area. These funds totaling over $23 million represent a significant opportunity to improve the freight rail infrastructure in the panhandle area. The funds were awarded through the Consolidated Rail Infrastructure and Safety Improvements (CRISI) Program for track, bridge, safety, and expansion improvements.[7]

Benefits to the region: An increase in freight related and freight connected businesses in the region will improve economic conditions while also reducing stress on the roadway network. Direct rail connections and improved rail through the region will help reduce the reliance on freight trucks, potentially improving congestion conditions.

Needs and Issues for the region: Improvements and maintenance of the rail network are vital to the continued flow of freight through the region. Rail and bridge condition improvements will increase the safety of rail operations while supporting economic growth.

Passenger Rail Considerations

Passenger Rail service was discontinued through the panhandle due to damage caused during the 2005 Hurricane Katrina. Though it is possible that passenger rail

[7] https://railroads.dot.gov/grants-loans/competitive-discretionary-grant-programs/consolidated-rail-infrastructure-and-safety-2

service will be restored in the future, the infrastructure and logistics limitations of the area will hinder this development. Similar to the issues related to freight rail, the infrastructure of the rail network in the region will be a limiting factor and the cohabitation of passenger and freight rail will also require improved logistical support and infrastructure due to the differing needs of each use. The rail providers in the region have indicated that they are not unsupportive of passenger rail; however, significant improvements to the network and studies would be necessary to make that a reality.

The FDOT Rail System Plan indicates that the expansion of the Sunset Limited Route east of New Orleans was considered and referenced as an "Other Potential Improvement" (beyond its Long-Range Improvements) three options that Amtrak Identified which were then studied again in 2015. This new analysis identified 5 alternatives that would enhance connections along the Sunset Limited route. Through this analysis a combination of preferred alternatives was identified that would connect Los Angeles with Orlando; however, a funding source was not developed.

Generally, the infrastructure improvements to the rail corridors for passenger rail would simultaneously benefit freight movements through the corridors; however, passenger rail movements would require increased coordination between the providers and may negatively impact the flow of freight trains.

Freight Intensive Areas

Future Land Use and Anticipated Growth

Each of the four member counties maintain a comprehensive plan that outlines the projected growth patterns and desires of the community. As part of the comprehensive plan development, the future land use element is created to outline where growth is anticipated and desired within the community. Future Land Use Maps (FLUMs) are generated with descriptions highlighting the appropriate development within the areas and what should be considered. These FLUMs are typically updated on a regular basis as the needs of the community or development patterns change.

As each County maintains their own FLUM, the land uses described within each County can have very specific descriptions; however, assumptions have been made to group them into 10 specific land uses for this analysis as outlined below:

Most Freight Related Land Uses:

- Commercial
    - These sites typically receive regular freight deliveries while serving the general public
- Industrial

    - These sites typically have more significant freight movements and may represent freight generators such as manufacturing or warehouse locations
- Mining
    - These sites are freight generators, and users of heavy freight vehicles
- Agriculture
    - These sites are freight generators, and users of heavy freight vehicles
- Mixed Use
    - Commercial sites will be developed along with residential, highlighting potential areas with freight deliveries

Other Typical Land Uses:

- Rural
    - Typically, these sites are light residential uses with some agricultural and commercial
- Residential
    - These sites are mostly serviced by medium to light freight vehicles through e-commerce
- Park/Conservation
    - These sites are not freight generators
- Institutional/Public
    - These are governmental uses and institutional sites
- Incorporated
    - Incorporated areas that do not share the same land use planning as the County Level.

Figure 21 depicts the 10 land uses described above.

Focusing on Commercial, Industrial, Mining, Agricultural and Mixed-Use Land Uses allows a more pointed view of where freight-related use is planned for the future. Notably, Jefferson and Gadsden counties have significant areas of freight related land uses with 288,545 and 245,542 acres respectively. However, these numbers are heavily skewed by the agricultural lands within these counties. Table 10 below depicts the overall acreage identified for these land use types. Gadsden and Wakulla Counties have dedicated larger land areas to Industrial and Mining uses. Gadsden County has allocated over 11,000 acres to mining land use, indicating a significant future for mining in the area. Figure 22 depicts the freight related land uses.

Table 10: Freight Related Future Land Use Acreages

County	Agriculture	Commercial	Industrial	Mining	Mixed Use
Gadsden	229,161	1,595	1,695	11,664	1,427
Jefferson	280,981	803	432	181	6,148
Leon	29,575	-	498	12	65,580
Wakulla	73,239	108	1,921	-	9,658
Total	612,956	2,506	4,546	11,857	82,813

Source: Leon County; ARPC; Gadsden County; Wakulla County

Building upon this review, existing employment locations have been compared to the Future Land Uses (Figure 23). This analysis highlights that the majority of existing employment locations are consistent with planned development patterns. The majority of employment clusters are within the Tallahassee urban area; but other clusters are closely aligned with the identified freight land uses.

FDOT Freight Intensive Areas

Through statewide analysis, FDOT has identified two freight intensive areas within the CRTPA area (Figure 24). These sites are located in Northwest Tallahassee near the I-10 corridor and within the Quincy area of Gadsden County.[8] FDOT Identified the following attributes of these sites:[9]

- Tallahassee Area
  - This Freight Intensive Area is in District 3 and includes 0.92 square miles of total freight parcel floor area (Ranked 41 in the state) and 1,140 employees (Ranked 56 in the state) in the freight industry.
- Quincy Area
  - This Freight Intensive Area is in District 3 and includes 8.16 square miles of total freight parcel floor area (Ranked 2 in the state) and 889 employees (Ranked 64 in the state) in the freight industry.

These two areas identified by FDOT are representative of freight clustering and correlate to the existing development and future land uses of the region. Notably, both of these areas are adjacent to the I-10 corridor, likely reducing the impact of freight on other roadway networks.

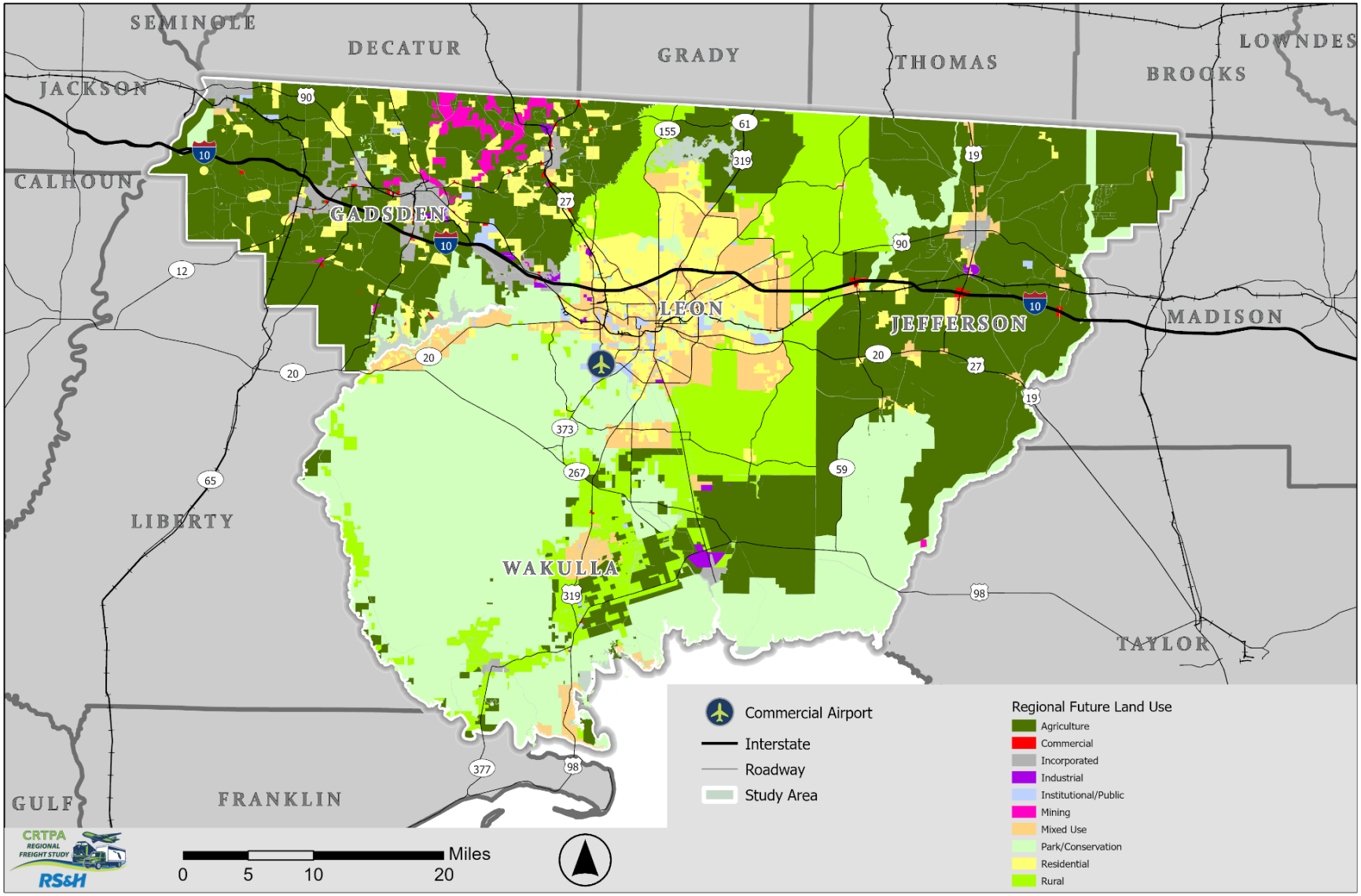
Benefits to the region: The identification of freight supportive and related land uses indicate areas in which the community prioritizes this type of growth. Agricultural land uses are the most significant within the region. Both Gadsden and Jefferson counties have dedicated significant areas of land to freight related land uses, indicating favorable conditions for continued use. Leon and Wakulla Counties have significant clusters of Mixed-Use development patterns which are consistent with a more urban and suburban style of development.

[8] Freight Intensive Areas (arcgis.com)

[9] Freight Intensive Areas (Points) - Overview (arcgis.com)

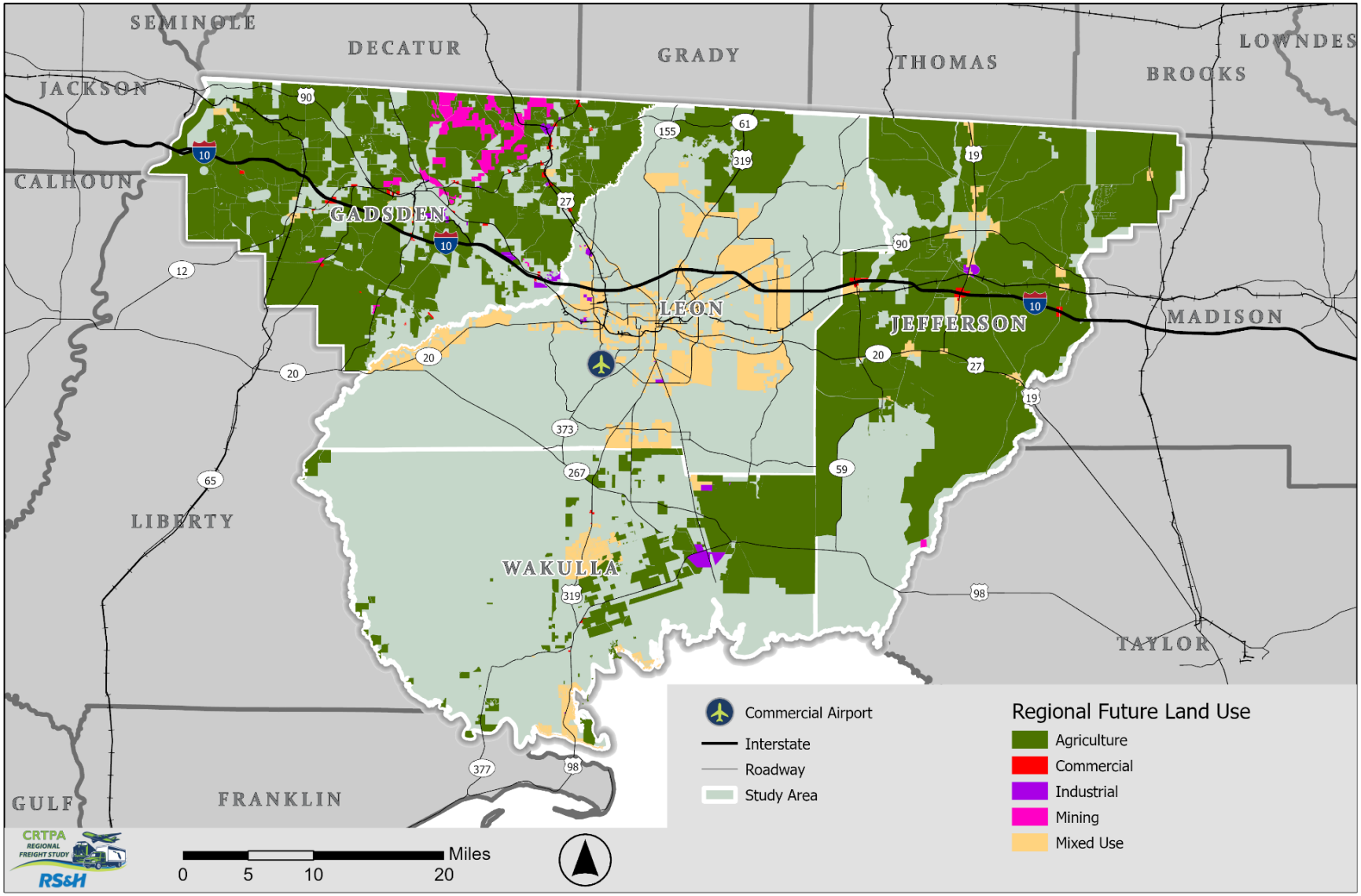
Needs and Issues for the region: It is anticipated that major freight generators will remain within Gadsden, Jefferson, and Wakulla Counties, while the development of major freight areas appears to be less denoted within Leon County. Significant portions of Leon, Wakulla and Jefferson counties are also undevelopable due to state and federal conservation lands.

Figure 21: Regional Future Land Uses



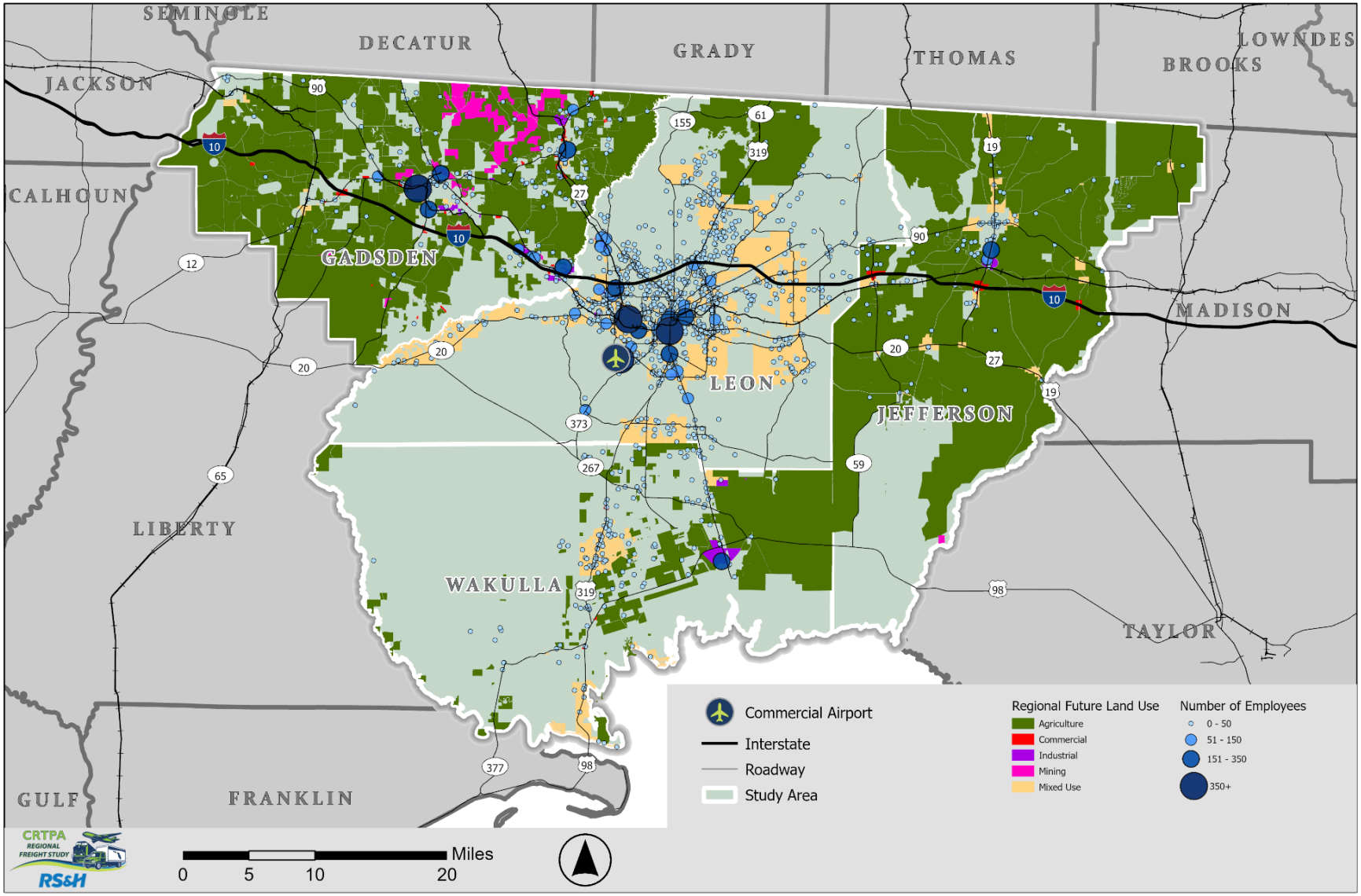
Source: Counties and ARPC

Figure 22: Freight Related Future Land Uses



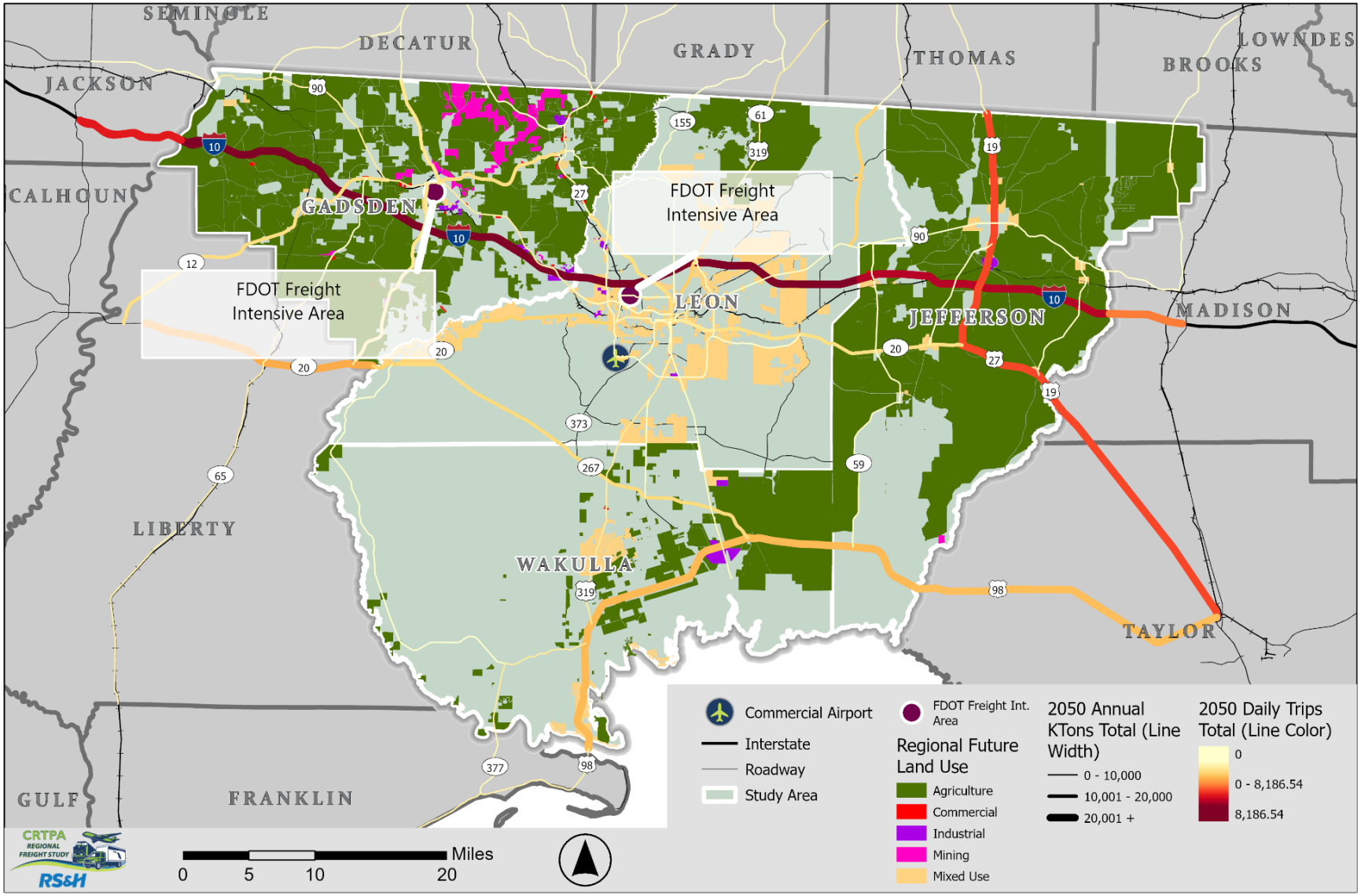
Source: Counties and ARPC

Figure 23: Freight Related Future Land Use and Existing Number of Employees



Source: Counties, ARPC, ESRI/Data Axel

Figure 24: FDOT Freight Intensive Areas and FAF5 2050 Commodity Flow Data.



Source: Counties, ARPC, FDOT, FAF5

Transportation Projects

The Connections 2045 Regional Mobility Plan (RMP)[10] has identified and prioritized several transportation projects throughout the region. These projects represent those of high enough importance to be included within the cost feasible plan, many of which are anticipated to impact future freight movements in the region. The cost feasible plan is developed to prioritize limited transportation funds on the projects with the most benefit to the region's mobility and safety. Table 11 provides an overview of the roadway projects expected to positively benefit freight, including roadway widenings, access management, and intersection reconfigurations. Figure 25 depicts the location of these projects throughout the region. Three of these projects are on roadways designated as official freight routes, including I-10 and US 90 (Mahan Drive).

Excluded from this list are the planned multi-modal improvements along the Thomasville Road corridor. This project is intended to represent the development of a multi-modal trail along Thomasville Road, which may benefit freight through the reduction of vehicular traffic due to increased pedestrian and cyclist use; however, this benefit is likely minor.

Benefits to the region: These projects are intended to improve transportation and will inherently benefit the movement of freight. An improved transportation network will mitigate future congestion and improve safety throughout the region.

Needs and Issues for the region: The projects within the cost feasible plan highlight those which are of the highest priorities for limited transportation funding.

[10] https://crtpa.org/documents/connections-2045-regional-mobility-plan/

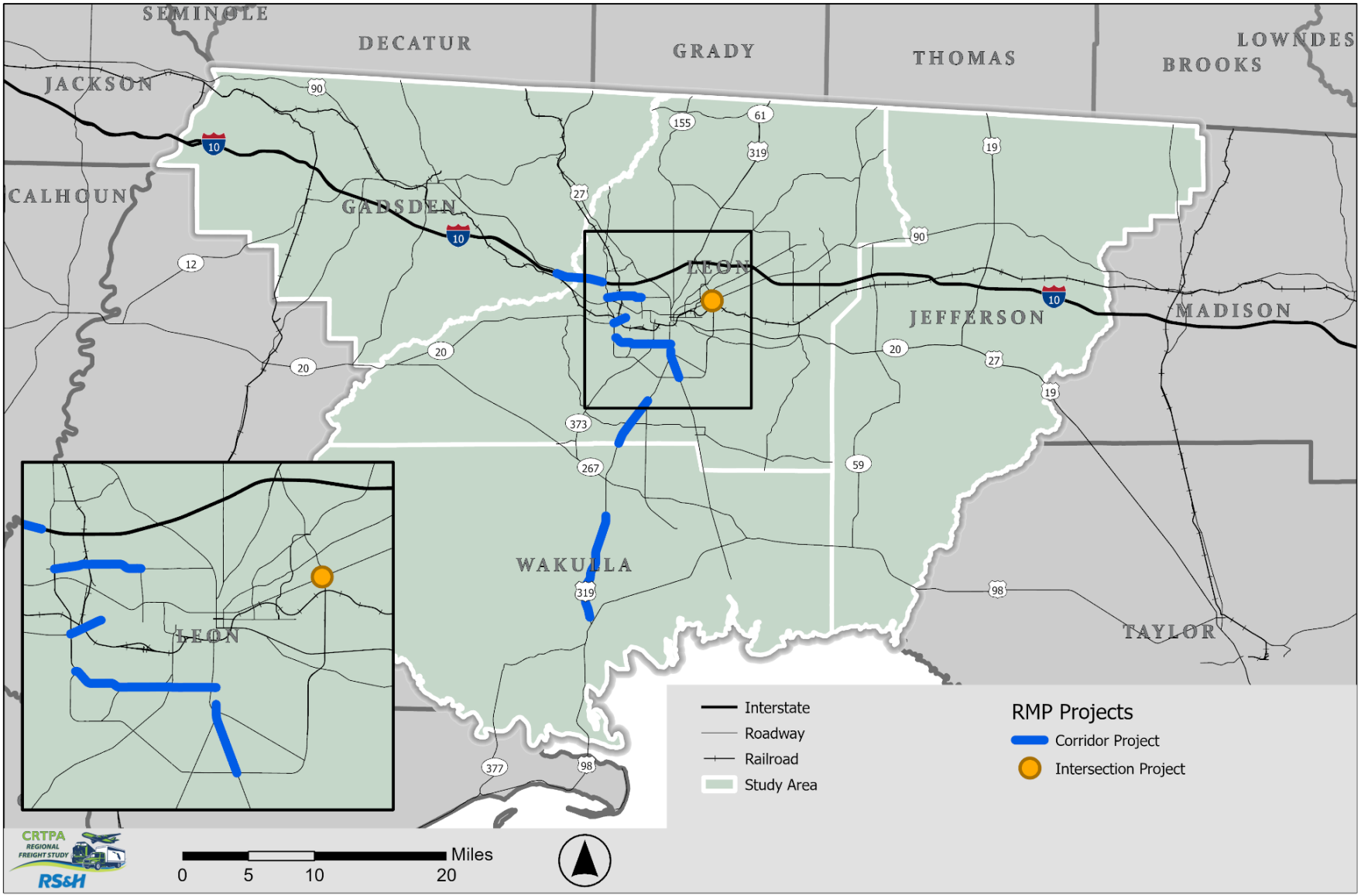
Table 11: Roadway Improvement Projects – Anticipated Freight Benefit

Roadway	From	To	Project Priority List No. (1 – 15)	Strategy	County	Horizon Year
Woodville Highway	*Capital Circle SE*	*Paul Russell Rd*	1	2 to 4 Lanes	Leon	2026-2030
Crawfordville Road	*East Ivan Rd*	*Wakulla Arran Rd*	3	2 to 4 Lanes	Wakulla	2031-2035
Orange Avenue	*Capital Circle SW*	*South Lake Bradford Rd*	4	Access Mgmt. and Multimodal Improvements	Leon	2031-2035
Orange Avenue	*South Lake Bradford Rd*	*Lake Bradford Rd*	4	2 to 4 Lanes	Leon	2031-2035
Orange Avenue	*Lake Bradford Rd*	*Monroe St*	4	2 to 4 Lanes	Leon	2031-2035
Crawfordville Road	*Wakulla County Line*	*LL Wallace Rd*	5	2 to 4 Lanes	Leon	2036-2045
Crawfordville Road	*LL Wallace Rd*	*Wakulla Springs Rd*	5	2 to 4 Lanes	Leon	2026-2030
US 90 (Mahan Drive) at Capital Cir NE*	---	---	6	Major Intersection Reconfiguration	Leon	2026-2030
Pensacola Street	*Capital Circle SW*	*Appleyard Dr*	7	2 to 4 Lanes	Leon	2031-2035
Crawfordville Road	*Wakulla Arran Rd*	*Lost Creek Bridge*	9	2 to 4 Lanes	Wakulla	2036-2045
Crawfordville Road	*Lost Creek Bridge*	*North of Alaska Way*	10	2 to 4 Lanes	Wakulla	2036-2045
Tharpe Street	*Capital Circle NW*	*Ocala Rd*	11	2 to 4 Lanes	Leon	2031-2035
Interstate 10*	*(Midway) US 90 Interchange*	*Gadsden/Leon County Line*	15	4 to 6 Lanes	Gadsden	2036-2045
Interstate 10*	*Gadsden/Leon County Line*	*West of Capital Circle NW*	15	4 to 6 Lanes	Leon	2036-2045

Source: CRTPA Connections 2045 RMP; Project Priority List 2025-2029

* Roadway is designated as a Freight Route.

Figure 25: RMP Projects Anticipated to Benefit Freight Movement



Source: CRTPA Connections 2045 RMP

Regional Truck Trade and Commodity Flows

The road network within the region supports freight movements for a variety of commodities and enables connections to other regions across the national freight network. The FHWA Freight Analysis Framework (FAF5) was used to analyze the existing and projected movement of goods on roadway corridors throughout the region. Since data is provided at the network link scale and not aggregated by corridor, the maximum values for each corridor were utilized in this analysis. Overall, data from FAF5 indicates that the region will see a substantial increase in freight movement between 2022 and 2050.

Florida Shipping Trends

Review of the FAF5 data indicates that Florida is anticipated to maintain over 40% of freight shipments within the state.[11] The 2045 projections for shipments within, outbound, and inbound Florida show a significant increase in freight tonnage. The percentage share of within, outbound, and inbound show a slight increase in outbound shipments, from 26.75% to 27.45%. Of note is the increase in raw tons of outbound shipments, which shows a 103% increase between 2022-2045 whereas shipments within show a 42% increase and inbound a 37% increase (Table 12).

Table 12: Shipments Within, Outbound, and Inbound the state of Florida.

*Tonnage measured in thousands	*Tonnage moved within the state	Percent total within State	Tonnage Outbound	Percent total Outbound	Tonnage Inbound	Percent Total Outbound
2022	617,613	43.41%	58,684	26.75%	162,615	29.85%
2045 Projection	876,670	42.97%	1119,386	27.45%	223,575	29.58%

Source: FAF5

When considering freight movements within the region, it is important to consider external factors as well as internal. The region does not currently nor is it anticipated to be a significant freight generator; however, it does provide throughway for other major generators.

Benefits to the region: Though the overall tonnage moving throughout the state will be increasing, the division of intrastate, inbound and outbound movements are anticipated to remain very similar. This is indicative of an increasing freight need and presence, consistent with the current development patterns.

[11] Freight Analysis Framework (FAF) (ornl.gov)

Needs and Issues for the region: The region benefits from the I-10 corridor which serves as a significant east-west corridor throughout the state. As freight tonnages increase, maintenance needs of this and other major corridors will also be increased. Continued coordination with FDOT and local roadway management officials will continue to be a concern as future funds are required for maintenance activities.

Shipping Trends by Mode

The Florida shipping trends by freight mode highlight how the majority of freight is moved within, inbound to the state or exported leaving the state. As depicted in Table 13, trucking moves the most significant amount of freight in 2022 at 78.35% of the total movement with pipeline as the second highest with 8.11%.[12] In 2045 these modal choices are anticipated to remain similar, with trucking still representing the vast majority of movement throughout the state at 78.51%.

Table 13: Freight Tonnage by Mode

Freight Mode	2022 Tonnage 000s	2022 Percent of Total	2045 Tonnage 000s	2045 Percent of Total
Air (include truck-air)	703.7	0.08%	1,090.9	0.09%
Multiple modes & mail	39,368.4	4.69%	72,511.0	5.95%
Pipeline	68,048.2	8.11%	92,873.1	7.61%
Rail	52,247.8	6.23%	74,994.7	6.15%
Truck	657,256.7	78.35%	957,532.1	78.51%
Water	21,137.9	2.52%	20,218.0	1.66%
Other & Unknown	149.6	0.02%	412.6	0.03%

Source: FAF5

Note: Multiple modes & mail represents the movement of goods that utilized multiple freight modes such as the movement of cargo from ship to truck or rail. This mode also includes cargo moved via courier (under 150 pounds).

Benefits to the region: The region services the three modes anticipated to increase between 2022 and 2050 (air, multiple modes, and truck). Planned roadway, and Tallahassee International Airport (TLH) improvements will increase the region's ability to serve these modes into the future.

Needs and Issues for the region: Though the other modes are decreasing, they remain important features of the freight transportation system. Notably, rail movements through the region will remain significant, highlighting the need for infrastructure improvements.

Florida Trading Partners

Florida's top trading partners for the tonnage of goods originating (or having been imported into the state) in the state are Florida (91.3%) Georgia (2.1%) and Alabama

[12] Freight Analysis Framework (FAF) (ornl.gov)

(0.8%) is 2022. The tonnage trade partner projections for 2045 show that North Carolina is likely to overtake Alabama as one of the state's top trading partners.[13] In addition, the data shows a slight rise in the export of goods as intra-state trade is accounting for 88% of the projected total tonnage in 2045 compared to 91.3% in 2022. Notably, the majority of trade is anticipated to remain within Florida as depicted by 88% or more of the total tonnage (Table 14).

Table 14: Top 5 Trading Partners

Top 5 Trading Partners (2022)	Tonnage 000s (2022)	Percentage of total tonnage (2022)	Top 5 Trading Partners (2045)	Tonnage 000s (2045)	Percentage of total tonnage (2045)
Florida	617,613.1	91.3%	Florida	876,670.6	88.0%
Georgia	14,178.8	2.1%	Georgia	24,707.1	2.5%
Alabama	5,167	0.8%	North Carolina	13,163.7	1.3%
Texas	5,078	0.8%	Alabama	10,429.3	1.0%
South Carolina	3,280	0.5%	Texas	8,333.7	0.8%

Source: FAF5

Note: This table represents the movement of goods domestically from the State, but also includes the cargo that has been imported then shipped domestically.

Benefits to the region: The presence of Alabama as a top 5 trading partner for the state both in 2022 and 2045 and the addition of Texas in 2045 indicate that the region and the I-10 corridor will remain a significant gateway for freight movement.

Needs and Issues for the region: A reduction in internal consumption of freight indicates increased export movements. This increase in freight movements is likely to increase maintenance needs of the roadway network.

Key Corridors – All Commodities

Table 15 presents a summary of the top ten roadway corridors for all freight commodities in 2022, by volume (maximum annual thousand tons) and trips (maximum daily trips) and presents the same information for 2050. As shown in Table 15, I-10 is the top freight corridor in the region, carrying a maximum of 67.5 million tons in 2022, and increasing to a maximum of 107.3 million tons by 2050 (Table 16). I-10 also has the highest maximum level of daily freight trips, with 7,744 trips in 2022 and 12,569 projected trips in 2050. Additional key freight corridors in the region include US 19, SR 20, and US 98.

[13] Freight Analysis Framework (FAF) (ornl.gov)

Figure 26 and Figure 27 emphasize the key freight corridors and show where volume (line color) and trips are highest across the region.

Table 15: Top 10 Freight Corridors in the Region (2022)

Corridor	Maximum Annual Thousand Tons (2022)	Maximum Daily Trips (2022)
I-10	67,482	7,744
US 19	28,065	3,245
SR 20	18,372	2,130
US 98	16,223	1,850
Thomasville Rd	12,424	1,480
SR 267	11,149	1,245
SR 12	10,020	1,136
US 27	9,273	1,088
Apalachee Pkwy	6,850	769
Mahan Dr	6,376	715

Source: FHWA Freight Analysis Framework Version 5.5

Table 16: Top 10 Freight Corridors in the Region (2050)

Corridor	Maximum Annual Thousand Tons (2050)	Maximum Daily Trips (2050)
I-10	107,312	12,569
US 19	44,957	5,272
SR 20	27,538	3,238
US 98	24,849	2,858
Thomasville Rd	18,500	2,269
SR 267	16,881	1,904
SR 12	15,178	1,729
US 27	14,155	1,670
Apalachee Pkwy	10,473	1,194
Mahan Dr	9,835	1,127

Source: FHWA Freight Analysis Framework Version 5.5

Table 17 presents a summary of the top five roadway corridors for all freight commodities, by projected growth between 2022 and 2050. As shown in Table 17, SR 309 (SR 309 in Decatur County; Salem Rd in Gadsden County) is projected to see an 85.9% increase in freight volume and an 86.9% increase in daily trips. Though SR 309 is just north in Decatur County, it's adjacency to the region highlights its relevance. Importantly, many of the corridors projected to see the most significant growth are state and local roads.

Table 17: Top 5 Corridors for Freight Growth in the Region (2022-2050)

Corridor	Tons		Trips	
	% Change 2022-2050	Annual Growth Rate	% Change 2022-2050	Annual Growth Rate
SR 309 (GA)	85.9%	2.2%	86.1%	2.2%
N Meridian Rd	80.6%	2.1%	83.9%	2.2%
NW Capital Cir	78.9%	2.1%	79.5%	2.1%
C 157	77.5%	2.1%	80.3%	2.1%
Orchard Pond Pkwy	76.1%	2.0%	79.0%	2.1%

Source: FHWA Freight Analysis Framework Version 5.5

Key Corridors – By County

In addition to the analysis of the region as a whole, the top five corridors by maximum tonnage moved by county were also reviewed. For the 2050 year. This analysis

identifies key freight truck corridors within each of the counties based on the projected freight tonnage (Table 18). Overall, I-10 is the most significant freight route through the region (and counties where it is located); however, the secondary corridors highlight other priorities. Wakulla County's major freight corridor is US 98 (east/west) followed by SR 267 and US 319 which make north/south connections with the Tallahassee Urban area and subsequently I-10.

Table 18: Top Freight Corridors by Maximum Tonnage (2050)

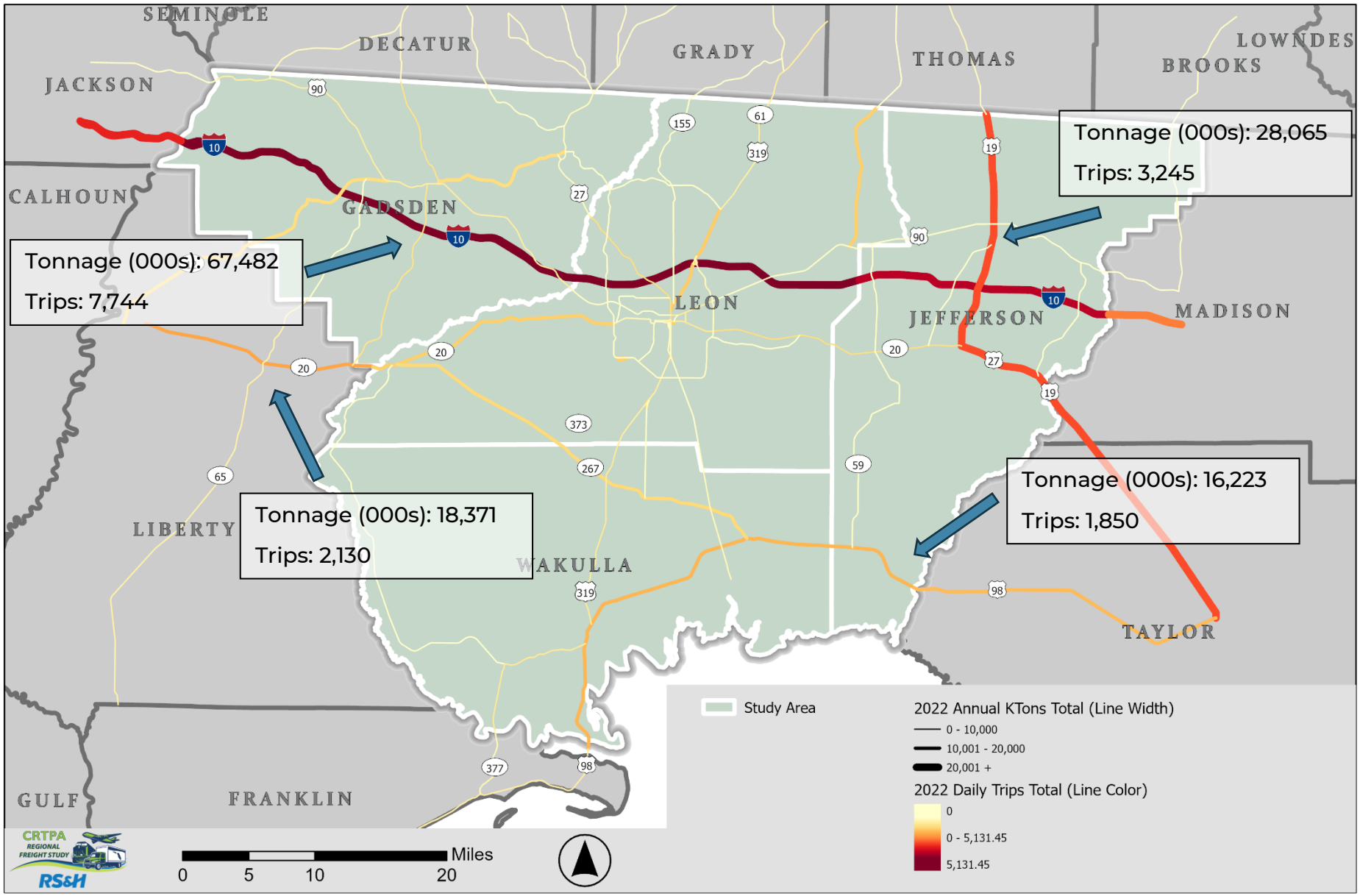
County	Corridor 1	Corridor 2	Corridor 3	Corridor 4	Corridor 5
Gadsden	I-10	SR 12	SR 267	US 90	US 27
Jefferson	I-10	US 19	US 98	US 27	SR 59
Leon	I-10	SR 20	THOMASVILLE RD (SR 61)	SR 267	US 27
Wakulla	US 98	SR 267	US 319	SR 363	C61

Source: FAF5

Benefits to the region: These corridors represent some of the most significant freight movements throughout the region and their identification highlights the need for freight considerations if/when improvements and development are planned.

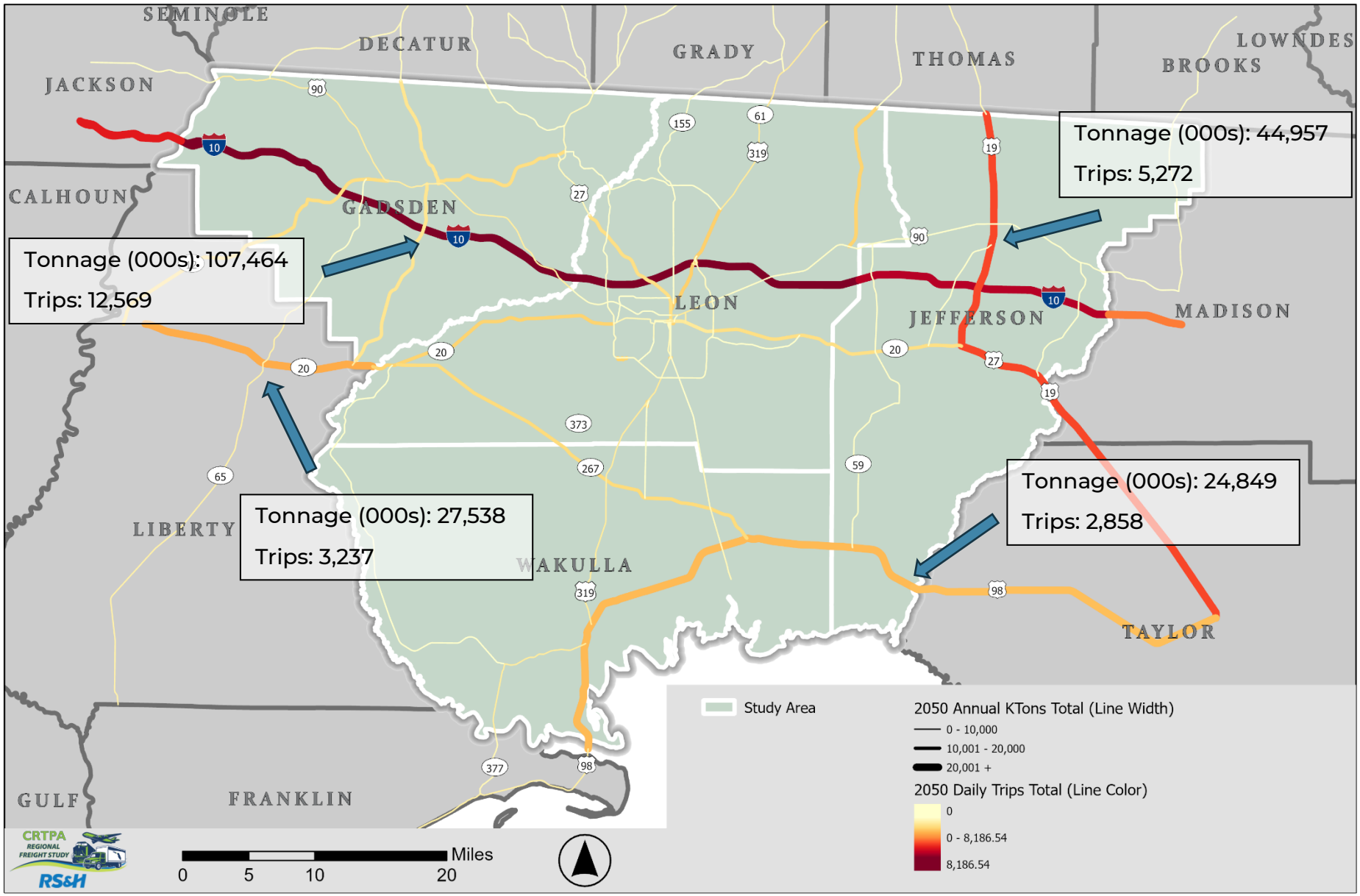
Needs and Issues for the region: This information does not identify issues; however, the identification of these corridors provides the region with the opportunity to prioritize freight along these corridors. Operational, and infrastructure related improvements along these corridors are likely to have direct freight benefits.

Figure 26: Annual Freight Volume (thousand tons) and Daily Trips by Corridor (2022)



Source: FHWA Freight Analysis Framework Version 5.5 (Note I-10 data is divided into 2 lines within the source FAF5 dataset, as such the line with the largest tonnage and trips was utilized for symbolization.)

Figure 27: Annual Freight Volume (thousand tons) and Daily Trips by Corridor (2050)



Source: FHWA Freight Analysis Framework Version 5.5; (Note I-10 data is divided into 2 lines within the source FAF5 dataset, as such the line with the largest tonnage and trips was utilized for symbolization.)

Key Corridors – By Commodity

Table 19 identifies the top three corridors in 2050 for transporting each commodity group included in FAF5. I-10 is the top corridor for all commodities; however, SR 20 is one of the top three corridors for farm products, chemicals, waste and scraps, and other motor vehicles. Thomasville Road, connecting downtown Tallahassee to the northeastern part of the region, is one of the top three corridors for several commodity groups, including food, beverage, & tobacco products, liquid & gases, durable manufactured goods, and mixed freight.

All commodities other than liquid and gases are projected to see growth in roadway freight in the region between 2022 and 2050. While overall freight movement for liquids and gases is projected to increase in the coming years as domestic power generation shifts toward natural gas, this commodity group is primarily moved by pipeline and rail, as opposed to truck. Chemicals and mixed freight are projected to experience the highest growth in the region, with the top corridors seeing over 100% increases in tonnage over the next 30 years. This growth in chemical freight is in-line with national trends, which reflect the growing investments in chemical manufacturing.

Benefits to the region: This data identifies the types of commodities and the projected growth of their movements throughout the region. Though similar to the overall freight movements, this data can be used to understand the types of industries utilizing the roadway network. This data shows that I-10 is the primary route for all commodities with the exception of Logs and other wood which is anticipated to utilize SR 20 and US 19 more than I-10.

Needs and Issues for the region: The increase in freight movements along these corridors indicate areas of focus for potential improvements. Increased freight volumes are correlated with increased need for maintenance and potential congestion concerns into the future.

Table 19: Top Corridors (Tonnage) by Commodity (2050)

Commodity	#1 Corridor		#2 Corridor		#3 Corridor	
	Name	% Change 2022-2050	Name	% Change 2022-2050	Name	% Change 2022-2050
Farm Products	I-10	34.8%	SR 20	17.5%	US 98	25.5%
Food, Bev., Tobacco	I-10	60.7%	US 19	62.2%	Thomasville Rd	69.0%
Stone, Sand, Gravel, Ores	I-10	54.5%	US 19	55.6%	US 98	77.0%
Liquid and Gases	I-10	(10.1%)	US 319	(8.6%)	Thomasville Rd	(17.1%)
Chemicals	I-10	157.3%	US 19	160.1%	SR 20	152.0%
Logs and Other Wood	SR 20	55.4%	US 19	57.2%	I-10	56.0%
Waste and Scraps	I-10	24.3%	SR 20	24.5%	US 19	24.2%
Consumer Manuf. Goods	I-10	91.5%	US 19	90.3%	US 98	79.2%
Durable Goods (High-Tech)	I-10	56.4%	US 19	54.6%	Thomasville Rd	57.6%
Durable Goods (Low-Tech)	I-10	82.7%	US 19	73.7%	Thomasville Rd	98.8%
Motor and Other Vehicles	I-10	64.7%	US 19	60.3%	SR 20	65.1%
Mixed Freight	I-10	104.0%	US 19	104.3%	Thomasville Rd	88.5%

Source: FAF5

Regional Air Trade

Tallahassee International Airport (TLH)

The Tallahassee International Airport (TLH) is poised for significant growth and development in the near future. These efforts aim to elevate TLH as a vital transportation hub, foster economic growth in the region, and respond to the increasing demand for air cargo services.

Development Projects

Several development projects are underway at TLH, enhancing the airport's capabilities in serving the intermodal, global freight system and contributing to the region's economic growth (Table 20).

Table 20: Combined Impacts of Development Projects at TLH

	Aero Center Tallahassee	Burrell Aviation	International Processing Facility/ Foreign Trade Zone	Total Impacts
Airport Property Under Development (acres)	8	19	1	28
Capital Investment	$10M	$20M	$30M	$60M
Revenue 30-Year Term	$9M	$8M	TBD	$17M
Permanent Jobs	29	291	1,600	1,920
Total Annual Economic Impact	$19M	$60M	$300M *(at maturity)*	$379M

Source: Tallahassee International Airport

The most relevant takeaway to the regional Freight Study may be the discussion of current and forecast cargo. The cargo apron area contains cargo facilities for Delta, DHL, FedEx, and USPS. Most cargo activity at TLH is conducted by FedEx on regularly scheduled flights between TLH and FedEx's hub at Memphis International Airport (MEM) using Boeing 757- 200 freighter jets. FedEx also conducts feeder routes using Cessna 208 Caravan turboprops through airports like Orlando International, Jacksonville International, and Mobile Downtown. Delta carries some belly cargo on its scheduled flights.

In addition to the planned expansions, the 2019 Airport Master Plan indicated the that the airport would continue to manage increased cargo. Between 2025 and 2035 TLH is expected to move approximately 10.5% more cargo operations over the same period. The anticipated cargo and operations at the airport are included within Table 21.

Table 21: TLH Cargo Forecasts

Year	Total Cargo (lbs.)	Total Operations (Aircraft)
2025	22,891,341	1,513
2035	25,286,281	1,672

Source: Tallahassee International Airport Master Plan Update (2019)

TLH has also indicated that it is exploring the improvement of its airport approaches from CAT II to CAT III in order to increase its operational capacity. These improvements would benefit freight movement and passenger operations at the airport.

In addition to the support of existing and future growth, TLH has been engaged and remained informed of emerging trends such as urban air mobility[14] and drone

[14] https://www.faa.gov/sites/faa.gov/files/Urban-Air-Mobility-Concept-of-Operations-2.0.pdf

delivery services. These modes are not active in the region at this time, though they may become more common as technology continues to improve.

Benefits to the region: The anticipated growth of the airport facilities and services will lead to both employment and economic benefits within the region. As the most significant airport in the area, improvements to TLH directly benefit the region. The continued growth of TLH is complementary to roadway and corridor projects being developed within the region such as the Airport Gateway and widening of SR 263/Capital Circle.

Needs and Issues for the region: Growth at the airport is consistent with regional planning and nearby roadway corridors; therefore, its growth is anticipated to benefit the region.

Foreign Trade Zone

TLH is taking steps to establish a fully operational Foreign Trade Zone (FTZ) in support of Florida's Freight Mobility and Trade Plan (FMTP). Serving up to nine surrounding counties from I-75 to Port St. Joe, the FTZ aims to address the growing freight logistics demands of the state. The main benefit of this designation is that manufacturers involved in importing and exporting goods will enjoy substantial cost reductions concerning customs, duties, taxes, and tariffs within the FTZ. Consequently, the implementation of the FTZ will lead to streamlined supply chains and optimized movement of goods. As a significant catalyst for economic growth, the FTZ is expected to create 1,664 jobs over the next decade and generate an impressive $304.7 million in annual economic impact once it reaches full maturity in 2034.[15]

Benefits to the region: The creation of the FTZ would be the first within the region and has the potential to promote significant employment and economic growth for the airport and the region as a whole.

Needs and Issues for the region: The development and designation of FTZ is reliant on an application process which TLH is actively pursuing. The continued efforts of TLH staff and diligence in the process will be required to achieve designation.

Expansion of FedEx Air Cargo Activity

In response to the growing demand for air cargo movement and increased delivery needs, FedEx plans to expand air cargo facilities at TLH. This expansion aims to bolster the facility's ability to handle larger volumes of freight efficiently, especially with the increases in demand for overnight delivery. The primary focus of the expansion includes additional apron capacity, allowing for more aircraft to be

[15] https://www.talgov.com/airport/tlh-ipf

accommodated. By investing in these critical improvements, TLH and FedEx are working together to meet the evolving needs of the global freight landscape.

Benefits to the region: The expansion of this facility has the potential for increased employment opportunities and economic growth for the region.

Needs and Issues for the region: The increase in freight movements will increase the reliance of freight trucks on the nearby roadway network; however, ongoing widening of SR 263/Capital Circle should mitigate potential congestion concerns.

Port Trade

The Port of Port St. Joe (the Port) has expressed an interest in the continued coordination with rail and freight providers throughout the Panhandle. Stakeholders have gone through a series of coordination efforts with the goals and anticipation of additional development coming to the Port St. Joe area. These developments are expected to increase the effectiveness of rail expansion back into the area.

The road network offers efficient access to I-10 via SR 71 and the parallel SR 73. This provides a multimodal connection to the rail access and expands the potential for effective seaport cargo transload movements through the region.

Benefits to the region: Though outside of the region, expansion and development of industry near the Port may act as a regional generator for economic activity.

Needs and Issues for the region: Regional representatives should continue coordination with Port officials on development(s) which may be regionally beneficial.

Conclusion

The future and existing conditions assessments define the freight mobility framework for the region. Over the planning horizon, it is anticipated that business development will continue to increase in the region; however, the number of freight related businesses within the area has been declining. Regional comprehensive planning efforts highlight a limited emphasis on the development of industrial and freight related businesses which may limit this growth. These limitations provide communities with the tools to guide this development into desired areas while maintaining the character of the overall region. It is anticipated that future freight related growth will largely be clustered adjacent to major corridors (especially I-10).

The movement of cargo through the region is expected to increase along the major freight corridors and major freight modes in the area. The presence of I-10, other major roadways, rail lines, and TLH will continue to move cargo through the region and beyond. The TLH infrastructure and policy improvements are anticipated to improve cargo modal options while having a significant and positive economic

impact on the region. Likewise, the rail providers in the region have identified improvements to the corridors and are pursuing business partnerships across the state.