REGIONAL FREIGHT TRANSPORTATION PLAN UPDATE

RECOMMENDATIONS – IDENTIFICATION OF IMPROVEMENTS, STRATEGIES, AND SOLUTIONS

OCTOBER 30, 2023

CORE
COASTAL REGION MPO

Regional Freight Transportation Plan Update

Recommendations – Identification of Improvements, Strategies, and Solutions

Prepared for

CORE
COASTAL REGION MPO

Prepared by

Cambridge Systematics

With

AECOM

Symbioscity

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1 INTRODUCTION

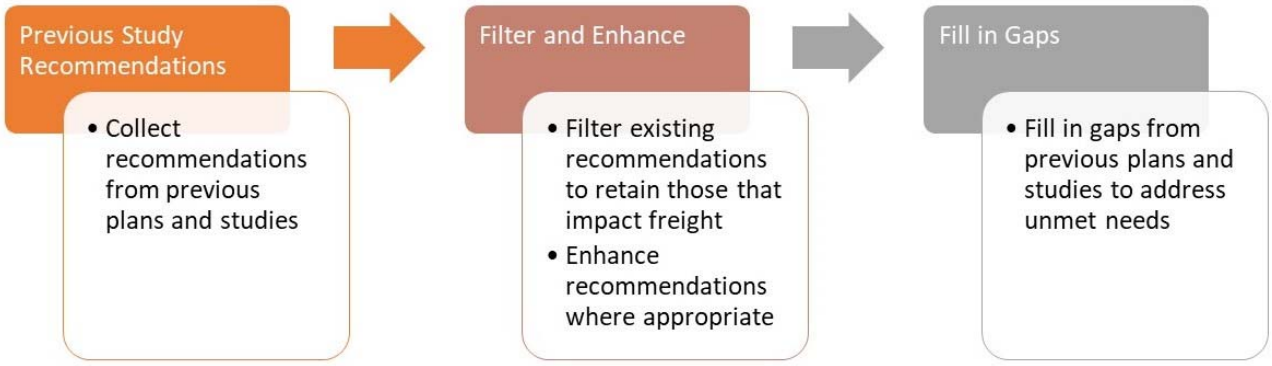
The Coastal Region Metropolitan Planning Organization (CORE MPO) region serves a gateway for global trade and for freight movement in the Southeast, due in large part to the Port of Savannah – the nation's 4th largest container port. In addition to the Port of Savannah, the region contains a comprehensive multimodal network of freight railroads and rail yards, major highways, cargo-serving airports, as well as a substantial warehousing/distribution/logistics industry to manage freight movements over that network. In addition, the region is an emerging manufacturing hub for businesses looking to create and ship a diverse portfolio of finished products to clients around the globe. Overall, goods movement in the Savannah region has a major impact on the regional and state economy.

In support of the region's multimodal freight network and the people and businesses that rely on it, the CORE MPO is conducting an update of its Regional Freight Transportation Plan. The purpose of this memorandum is to define a comprehensive set of strategies for improving the performance and reducing the negative impacts of the regional goods movement system while capitalizing on development opportunities. This memorandum develops short-, mid-, and long-term strategies for addressing critical freight needs and deficiencies while mitigating potential negative impacts. These strategies are presented as "solution packages" that combine infrastructure, operational, and policy-level recommendations to address critical freight needs. Additionally, the memorandum develops an implementation plan that outlines the action steps, potential funding sources, and planning level cost estimates needed to execute the recommendations.

2 PROJECT IDENTIFICATION, EVALUATION, AND PRIORITIZATION

The recommendations and strategies presented in this memorandum were initially identified through stakeholder interviews, public meetings, discussions with the Steering Committee, feedback from the Economic Development and Freight Advisory Committee (EDFAC), the findings of the needs assessment conducted as part of the Regional Freight Transportation Plan Update, and through a review of previous projects and studies. The project identification process is shown in Figure 2.1.

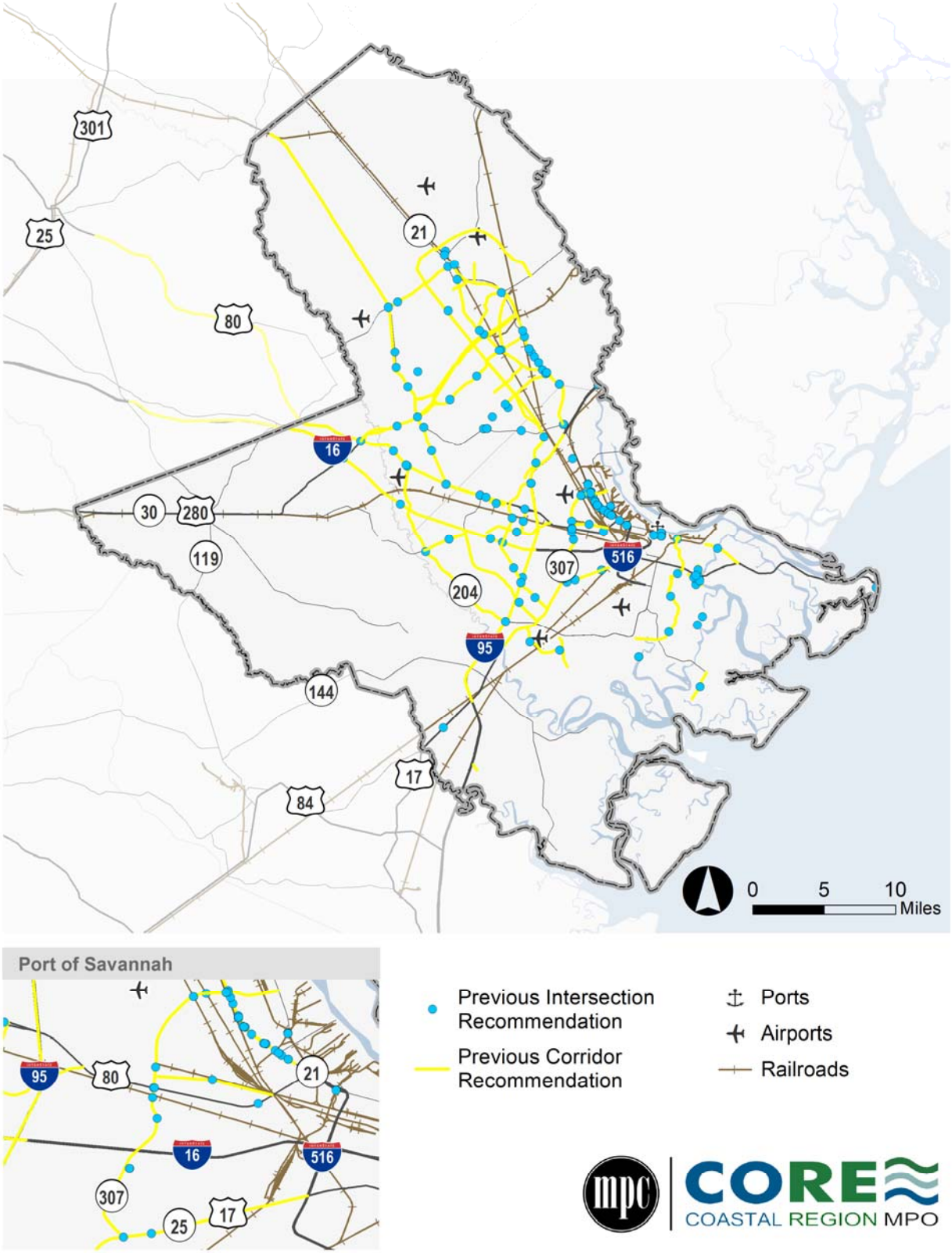
FIGURE 2.1 PROJECT IDENTIFICATION PROCESS



Source: Cambridge Systematics.

The first step in the project identification process was a review of recommendations made by previous studies. Several studies have been recently completed that have made project recommendations that could impact freight mobility and reliability in the CORE MPO region. Specifically, the SR 21 Access Management Study, SR 307 Corridor Study, Effingham County Transportation Master Plan, 2023 Chatham County Transportation Special-Purpose Local-Option Sales Tax (TSPLOST) list, the North and South Bryan County Transportation Studies, and the Georgia Department of Transportation (GDOT) Coastal Empire Study were all completed in 2021 or later and identified investments aimed at improving performance on major freight corridors. Project recommendations collected from those initiatives are shown in Figure 2.2. Notably, the Coastal Empire Study project recommendations were incorporated into the 2023 Georgia Statewide Freight and Logistics Plan. Project recommendations from those studies have been incorporated into the Regional Freight Transportation Plan Update. A broad, overarching recommendation of the Regional Freight Transportation Update is that the CORE MPO and its partners work to advance these projects by building support and identifying potential funding sources including for local match requirements. Furthermore, given that much of the region's freight demand is generated by the Port of Savannah, the State and the Georgia Ports Authority should continue existing and increase future investment in the region's infrastructure.

FIGURE 2.2 PREVIOUS PROJECT RECOMMENDATIONS



Source: Cambridge Systematics.

The next step in the project identification process was to filter and enhance previous recommendations. Previous project recommendations were screened and filtered based on their potential to positively impact the freight network. Recommendations that were not located on or proximate to freight corridors were screened out. Also, projects that did not address capacity, operational, or other freight-focused needs as indicated by the needs assessment (e.g., active transportation, transit, etc.) were also screened out. Furthermore, previous recommendations were refined or enhanced (where appropriate) based on the region's needs. It should be noted that although active transportation and transit projects were generally screened out, these types of projects can benefit freight mobility by reducing demand from non-freight users on the highway network, improving safety for other roadway users, and addressing some equity concerns.

The last step in the project identification process was to fill in gaps. If there were no previous recommendations that addressed an identified need, a new recommendation was developed to address the unmet need. For example, there were few previous recommendations that addressed needs related to land use and truck parking.

After project identification, the Regional Freight Transportation Plan moved on to scoring the recommendations for the purpose of prioritizing projects. Projects were scored according to their ability to positively impact the transportation network and advance the region's freight transportation goals. As shown in Figure 2.3, projects were eligible to receive a maximum of 100 points. The Safety and Security as well as the Accessibility, Mobility, and Connectivity goal areas accounted for the most points a project may receive. This is reflective of feedback from the EDFAC as well as public outreach.

FIGURE 2.3 PROJECT SCORING

Source: Cambridge Systematics.

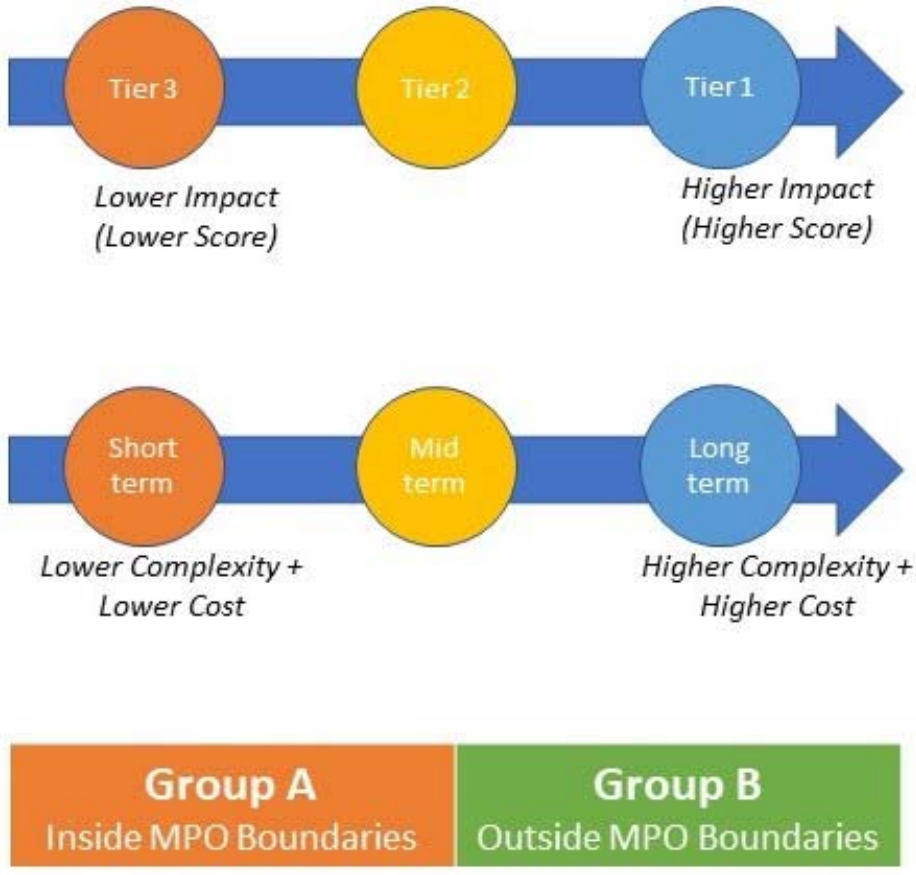
After the recommended projects were scored, they were then prioritized according to three factors which are illustrated in Figure 2.4:

- Tier – Projects with a potentially higher impact to the freight network (as indicated by the project score) were designated as Tier 1 while those with lower potential impacts were designated as Tier 3.

- Time Frame – Projects were separated into implementation time frames based on their potential complexity and cost. Short-term projects (0 – 5 years) are less complex and costly. Thus, they can be implemented on a shorter time frame. Mid-term projects (5-10 years) have moderate complexity and cost while long-term projects (10 years or more) are potentially very complex and costly. For projects sourced from previous initiatives, planning-level cost estimates from those efforts are reported in the Regional Freight Transportation Plan. For newly recommended projects, planning-level cost estimates were developed as part of this effort.

- Location – Group A projects are those that are within or intersect the CORE MPO boundaries. As such, they are eligible to be included in the Transportation Improvement Program (TIP). Group B projects are those that fall outside of MPO boundaries but are still important to regional freight mobility.

FIGURE 2.4 PROJECT PRIORITIZATION PROCESS



Source: Cambridge Systematics.

3 RECOMMENDATIONS AND IMPLEMENTATION PLAN

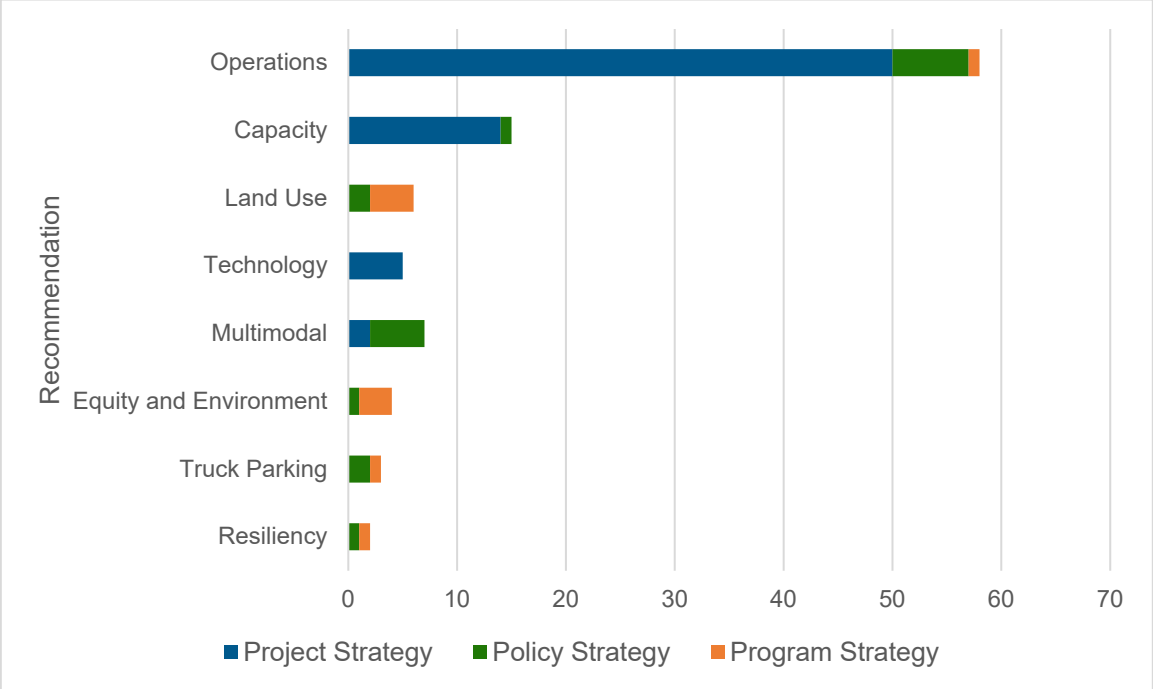
From the quantitative and qualitative analysis, the project identification process resulted in eight broad, overarching recommendations. Those eight recommendations are shown in Figure 3.1. Each overarching recommendation is comprised of a set of specific project, policy, and program recommendations. Project recommendations are those that make capital, operational, or technology investments on the multimodal freight network. Policy recommendations are those that provide guidelines or principles that shape the way the region approaches its freight needs. Programmatic recommendations are those that feature ongoing actions, initiatives, or activities. Figure 3.2 and Table 3.1 summarize the recommendations by category and by type. In total, 100 specific recommendations were made as part of the Regional Freight Transportation Plan Update.

FIGURE 3.1 REGIONAL FREIGHT TRANSPORTATION PLAN RECOMMENDATIONS

Advance Strategic Capacity Expansions, Proactively Increase Network Connectivity	• Provide relief to existing bottlenecks and get ahead of new demand by expanding the physical footprint of the network.
Implement Operational Strategies to Enhance Freight Mobility and Safety	• Improve the ease, efficiency, and safety of freight operations with minimal impacts to the footprint of the network.
Support Increased Capacity, Enhanced Operations, and Safety on the Freight Rail Network	• Ensure that shippers have an alternative to trucking and support economic competitiveness.
Implement Technology Strategies to Enhance Freight Operations and Safety	• Use technology and information to ease freight-related congestion and improve the mobility and efficiency of freight operations.
Increase Access to Safe Truck Parking	• Improve safety for truck drivers and provide relief for areas that experience unauthorized truck parking.
Improve Freight Network Resiliency	• Improve the freight network's ability to withstand and recover from disruptions.
Mitigate Freight Impacts on Communities and the Environment	• Avoid where possible and limit the negative impacts of freight to communities and the environment.
Integrate Freight Considerations into Land Use Planning	• Guide where and how freight-generating land uses are developed to limit negative environmental impacts, community impacts, and freight-related congestion.

Source: Cambridge Systematics.

FIGURE 3.2 SUMMARY OF RECOMMENDATIONS BY CATERGORY



Source: Cambridge Systematics.

TABLE 3.1 SUMMARY OF RECOMMENDATIONS BY TYPE

Type	No. of Recommendations	Percent of Total
Project	71	71%
Policy	19	19%
Program	10	10%
Total	**100**	**100%**

Source: CORE MPO; Cambridge Systematics; AECOM; Symbioscity.

The overarching recommendations, as well as the specific recommendations that comprise them, are discussed in detail in the sections that follow. In addition to the recommendations, the following subsections also specify critical implementation items for bringing the proposed solutions to fruition. These include the recommended lead and supporting agencies, a planning level cost estimate, a timeline for implementation, as well as potential funding sources. Potential funding sources are discussed in detail in section 3.9, but a brief description of potential funding sources and acronyms is provided in Table 3.2 to support the information presented in sections 3.1 to 3.8.

TABLE 3.2 DESCRIPTION AND ACRONYMS OF POTENTIAL FUNDING SOURCES

Acronym	Description
State MFT	State Motor Fuel Tax, only road and bridge projects eligible.
LMIG	Local Maintenance and Improvement Grant, various projects on state and local roads such as repaving, turn lanes, sidewalks, etc.
Quick Response	Quick Response, operational projects on state routes such as restriping, intersection improvements, turn lane additions and extensions that can be implemented in a short period of time and for under $200,000.
FHWA Discretionary PL Funds	Metropolitan Planning Program, discretionary federal funds for strategic and long-range studies
NHPP	National Highway Performance Program, projects that improve the condition or performance of the National Highway System.
STBG	Surface Transportation Block Grant, projects to improve the condition or performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects
HSIP	Highway Safety Improvement Program, projects that improve safety on any public road consistent with State Highway Safety Plan.
CMAQ	Congestion Mitigation and Air Quality funds, projects to support improvements to congestion mitigation and air quality on Federal-aid network
NHFP	National Highway Freight Program, projects to improve the efficient movement of freight on the National Highway Freight Network (NHFN)
TA	Transportation Alternatives, projects that expand travel choices and enhance the transportation experience on Federal-aid network
PROTECT	Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation – a federal formula and competitive grant program for projects that address the climate crisis by improving the resilience of the surface transportation system
RSTP	Rural Surface Transportation Grant Program, projects to improve and expand the surface transportation infrastructure in rural areas
RAISE	Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program, a federal competitive grant program that can be used for a wide variety of projects
INFRA	Nationally Significant Multimodal Freight and Highway Projects (INFRA) Grants Program, a federal competitive grant program for multimodal freight and highway projects of national or regional significance
MEGA	National Infrastructure Project Assistance Program, a federal competitive grant program for large, complex projects that are difficult to fund by other means and likely to generate national or regional economic, mobility, or safety benefits
RCE	Railroad Crossing Elimination Grant Program, a federal competitive grant program for highway-rail or pathway-rail grade crossing improvement projects
ITD	Innovative Technology Deployment Program, a federal competitive grant program for truck parking and commercial vehicle enforcement projects

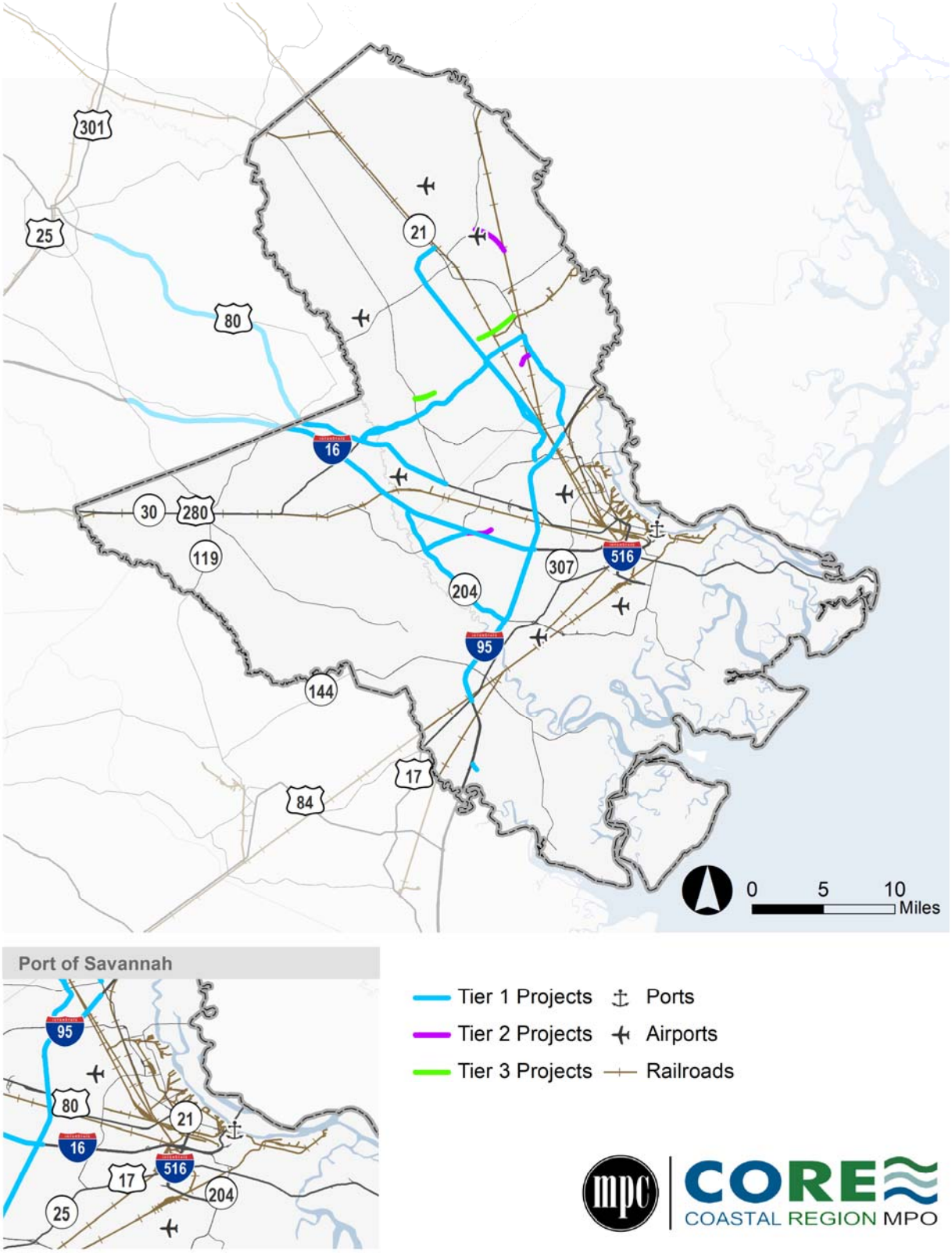
Source: Cambridge Systematics.

3.1 Advance Strategic Expansions to Capacity and Proactively Increase Network Connectivity in Emerging Freight Clusters

The improvements included as part of this recommendation are intended to provide relief to existing bottlenecks and to proactively address emerging demand by expanding the physical footprint of the network. As indicated by performance measures such as truck delay per mile and the truck travel time index, major freight routes including I-16, I-516, I-95, and SR 21 experience recurring and often severe freight-related congestion. These conditions are expected to persist over the long term due to greater volumes of freight and commuter traffic. In some cases, operational strategies will be unable to address long-term performance challenges and it may be necessary to expand capacity to meet current and future demand.

The region has already identified multiple potential capacity expansions to address current and anticipated freight volumes. For example, both the CORE MPO FY2021-2024 TIP and the GDOT Coastal Empire Study identified I-16 and Old River Road as corridors for capacity expansions due to freight volumes. The Effingham County Transportation Master Plan and the Coastal Empire Study also recommended capacity expansions SR 21, an expansion and extension of Effingham Parkway, and an extension of Blue Jay Road. Based on the technical findings as well as outreach to stakeholders, the Regional Freight Transportation Plan (RFTP) supports these and other recommendations as shown in Figure 3.3 and Table 3.3.

FIGURE 3.3 STRATEGIC EXPANSIONS TO CAPACITY AND PROACTIVELY INCREASE NETWORK CONNECTIVITY



Source: Cambridge Systematics, Inc.

TABLE 3.3 STRATEGIC EXPANSIONS TO CAPACITY AND PROACTIVELY INCREASE NETWORK CONNECTIVITY

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
I-16 Widening	Project Strategy	Widen I-16 from 4 to 6 lanes between I-95 and SR 67 in Bulloch County border.	**GDOT**, CORE MPO, Chatham County, Bryan County, Bulloch County	$481,000,000	CORE MPO FY2021-2024 TIP, Coastal Empire Study	Tier 1A	Long-term	State MFT, INFRA, MEGA, NHFP, NHPP
I-95 Auxiliary Lanes	Project Strategy	Add an auxiliary lane to in each direction between SR 21 and US 17.	**GDOT**, CORE MPO, Chatham County, Bryan County, Effingham County, Savannah, Pooler, Port Wentworth	$121,000,000	Coastal Empire Study	Tier 1A	Long-term	State MFT, INFRA, MEGA, NHFP, NHPP
Belfast Keller Road Widening	Project Strategy	Widen Belfast Keller Road to a six-lane divided section between I-95 and Great Ogeechee Parkway.	**GDOT**, Bryan County, Richmond Hill	$3,500,000	Belfast Keller Road Transportation Assessment, Coastal Empire Study	Tier 1B	Mid-term	State MFT, PROTECT (Discretionary and Formula), RSTP, STBG
John Carter Road Widening	Project Strategy	Widen John Carter Road to 4 lanes from Little Neck Road to Old River Road. Identify and implement operational improvements as suggested in the Chatham County 2023 TSPLOST.	**Chatham County**, CORE MPO	$15,000,000	Chatham County 2023 TSPLOST, Coastal Empire Study	Tier 1A	Mid-term	State MFT, RSTP, STBG
Old River Road Widening	Project Strategy	Widen Old River Road to 4 lanes between SR 204 and I-16.	**Chatham County, Effingham County**, CORE MPO	$16,000,000	CORE MPO FY2021-2024 TIP, Coastal Empire Study	Tier 1A	Mid-term	State MFT, RSTP, STBG
State Route 204 Widening	Project Strategy	Widen SR 204 to 4 lanes between Old River Road and I-95.	**GDOT**, CORE MPO, Savannah, Chatham County	$16,000,000	Coastal Empire Study	Tier 1A	Long-term	State MFT, INFRA, RAISE, RSTP
State Route 21 Widening	Project Strategy	Widen SR 21 to 6 lanes between SR 30 and 9th St. in Rincon; provide raised median and median opening at every 1,000 ft.; provide sidewalk	**GDOT, Chatham County, Effingham**	$68,000,000	Effingham County Transportation Master Plan	Tier 1A	Long-term	State MFT, PROTECT (Formula), STBG

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
		where not present (for urban section).	**County**, CORE MPO		(N-20), Coastal Empire Study			
Effingham Parkway Widening and Extension	Project Strategy	This project consists of three parts: (a) widen Effingham Parkway to 4 lanes; (b) extend the corridor north to SR 21 in Springfield; (c) extend the corridor south to Jimmy Deloach Parkway in Savannah. For the southern extension, consider connecting to Jimmy Deloach Pkwy. via Expansion Blvd. and existing utility easements.**	**GDOT, Effingham County, Chatham County**, CORE MPO	(a) $61,000,000 (b) $59,000,000 (c) $33,000,000	Effingham County Transportation Master Plan (N-22), Coastal Empire Study	(a) Tier 1B (b) Tier 1B (c) Tier 1A	(a) Long-term (b) Long-term (c) Mid-term	State MFT, RAISE, RSTP, STBG
Blue Jay Road Extension and Freight Upgrades	Project Strategy	Extend Blue Jay Road from SR 21 to US 80/US 280; widen travel lanes and improve roadway structures to support truck movements.	**Effingham County, Bryan County**, GDOT	$45,000,000	Coastal Empire Study, Effingham County Transportation Master Plan (ID N-19 and N-21)	Tier 1B	Mid-term	State MFT, PROTECT (Discretionary and Grant), RSTP, STBG
Low Ground Road Extension East	Project Strategy	Extend Low Ground Road east from McCall Road to SR 21.	**Effingham County**, GDOT	$14,333,000	Coastal Empire Study, Effingham County Transportation Master Plan (ID N-8)	Tier 3B	Long-term	State MFT, RSTP, STBG
Low Ground Road Extension West	Project Strategy	Extend Low Ground Road West from bend towards Blue Jay Road to SR 17.	**Effingham County**, GDOT	$7,060,000	Coastal Empire Study, Effingham County Transportation Master Plan (ID N-16)	Tier 3B	Long-term	State MFT, RSTP, STBG
US 80 Widening	Project Strategy	Widen SR 26/US 80 to 4 lanes between the Bryan County border and SR 17 in Effingham County	**GDOT**, Bulloch County, Bryan County, Effingham County	$176,000,000	Coastal Empire Study, North Bryan Transportation Study	Tier 1B	Long-term	State MFT, PROTECT (Discretionary and Grant), RSTP, STBG
Long Bridge Road Extension and Freight Upgrades	Project Strategy	This project consists of two parts: (a) Extend Long Bridge Road northwest to SR 119 and construct the roadway accommodate freight movements; (b) Widen travel lanes and improve structure of the existing	**Effingham County**, GDOT	(a) $12,751,000 (b) $6,926,000	Effingham County Transportation Master Plan (ID-N-12)	(a) Tier 2B (b) Tier 2B	Medium-term	State MFT, RSTP, STBG

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
		roadway to support truck movement. Add the improved and extended roadway to the Effingham County truck ordinance as an extension of the Old Augusta Road truck route.						
Proactively Increase Network Redundancy in Emerging Freight Clusters	Policy Strategy	Conduct a study to evaluate the need and alternatives for increased network redundancy in the emerging Belfast-Keller Road and Rockingham Farms freight clusters.	**CORE MPO**, Bryan County, Chatham County	$300,000	Regional Freight Transportation Plan	Tier 2A	Short-term	FHWA Discretionary PL Funds
Gateway Parkway Extension	Project Strategy	Extend Gateway Parkway east to connect to SR 21 and west to connect to the planned Effingham Parkway. This would increase network redundancy in an emerging freight center by providing a new east-west connection. This recommendation requires coordination with Norfolk Southern as it would cross the rail line.	**Effingham County**, GDOT, Norfolk Southern	$14,800,000	Stakeholder Outreach, Regional Freight Transportation Plan	Tier 2B	Mid-term	State MFT, RSTP, STBG

Source: CORE MPO Regional Freight Transportation Plan Update, 2023.

*Note: The recommended lead sponsor agency is indicated with **bold** type.

**Note: The Regional Freight Transportation Plan Update proposes an alternative alignment to those recommended in the Coastal Empire Study and the Effingham County Transportation Master Plan.

Figure 3.4 depicts the Regional Freight Transportation Plan's recommendation for the Effingham Parkway project. This project was first identified as part of Effingham County's long-range planning initiatives and added to GDOT's work program in 2005. Both the 2021 Effingham County Transportation Master Plan and the 2023 GDOT Coastal Empire Study recommended that the project move forward in support of growing north-south freight and commuter traffic through Effingham County. Furthermore, Effingham Parkway would provide greater network redundancy and provide relief for SR 21 in an emerging freight cluster. The Regional Freight Transportation Plan also recommends that this project move forward but suggests that an alternative alignment into Chatham County be considered given the development of freight-intensive land uses along the corridor's future route. Currently, the proposed route connects to Jimmy Deloach Pkwy. via Benton Blvd. whose adjacent land uses are primarily residential. To provide greater separation (and avoid potential conflicts) between trucks and other roadway users, the RFTP recommends that an alternative alignment via a utility easement and Expansion Blvd. be considered. This alternative alignment would allow truck traffic to avoid the residential area that has developed along Benton Blvd.

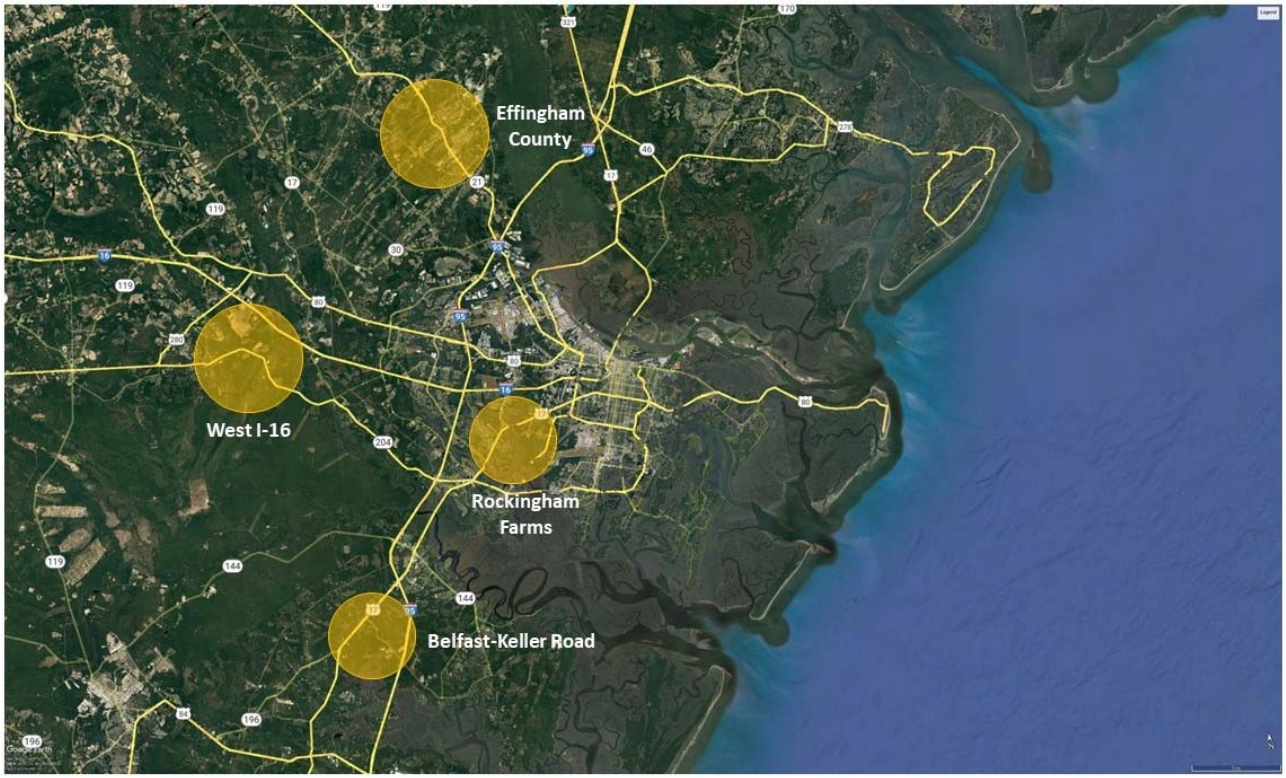
FIGURE 3.4 EFFINGHAM PARKWAY ALTERNATIVE ALIGNMENT

Source: Cambridge Systematics.

A lack of network redundancy has been a key challenge for the region, especially in Effingham County where much of the recent warehouse development has occurred. As additional emerging freight centers are developed, they will likely experience the same challenge as they are being constructed further away from the region's core and its dense network of roads. The region should work to proactively increase network redundancy in emerging freight centers (see Figure 3.5). Opportunities for increasing redundancy have already been identified via new connections and upgraded roadways for the North Effingham County (i.e., Blue Jay Road Extension) and I-16 West (i.e., upgrades to Old River Rd., SR 119, and John Carter Rd) freight clusters. Opportunities should also be identified for the emerging Belfast-Keller Road freight cluster

(i.e., north-south connector between Belfast-Keller Rd. and US 17). Though the Rockingham Farms area is also an emerging freight cluster, there are few opportunities in that area for increasing network redundancy without significant environmental and community impacts. Therefore, the region should focus on monitoring performance and implementing operational improvements to existing corridors in that area when needed. Importantly, avoiding and mitigating impacts to wetlands is critical for the successful implementation of this recommendation. Additionally, it is also important to proactively reserve right-of-way for potential new corridors as residential, commercial, and industrial development is prevalent throughout the region.

FIGURE 3.5 EMERGING FREIGHT CLUSTERS



Source: Cambridge Systematics.

3.2 Implement Operational Strategies to Enhance Freight Mobility and Safety

Operational strategies are those improvements that can be implemented without expanding the physical footprint of the multimodal freight network. They include intersection/interchange redesigns, signal timing adjustments on freight corridors, signage, and other projects. Relative to capacity and network expansions, operational strategies generally have lower costs and fewer environmental and community impacts. As a result, they can often be completed faster and at lower costs. The proposed operational strategies for the CORE MPO region are shown in Figure 3.6 and Table 3.4.

In addition to the infrastructure projects included in this recommendation category, there are also policy recommendations. Some of the notable policy recommendations are briefly discussed below:

- **US 80 at Skidaway Road and SR 204/Truman Parkway Area Safety Improvements.** The area around US 80 at Skidaway Road and SR 204/Truman Parkway experiences a relatively high rate of truck-involved crashes – primarily sideswipe same direction and rear end crashes. The area is characterized by a substantial number of commercial developments with multiple, closely spaced driveways. Perform a safety audit at this location to identify potential solutions for improving truck safety.

- **US 17 Corridor Study Phase II.** Perform a corridor study focused on safety, operations, and access management for US 17 between SR 196 and I-516. Both the South Bryan Transportation Study and the Regional Freight Transportation Plan observed performance challenges along this corridor. Note that the 2023 Chatham County TSPLOST recommended a corridor study for US 17 as a Tier 1 project and Chatham County is currently in the process of beginning this study. However, the Regional Freight Transportation Plan recommends adding a second phase as part of a future study that extends the project limits south to SR 196.

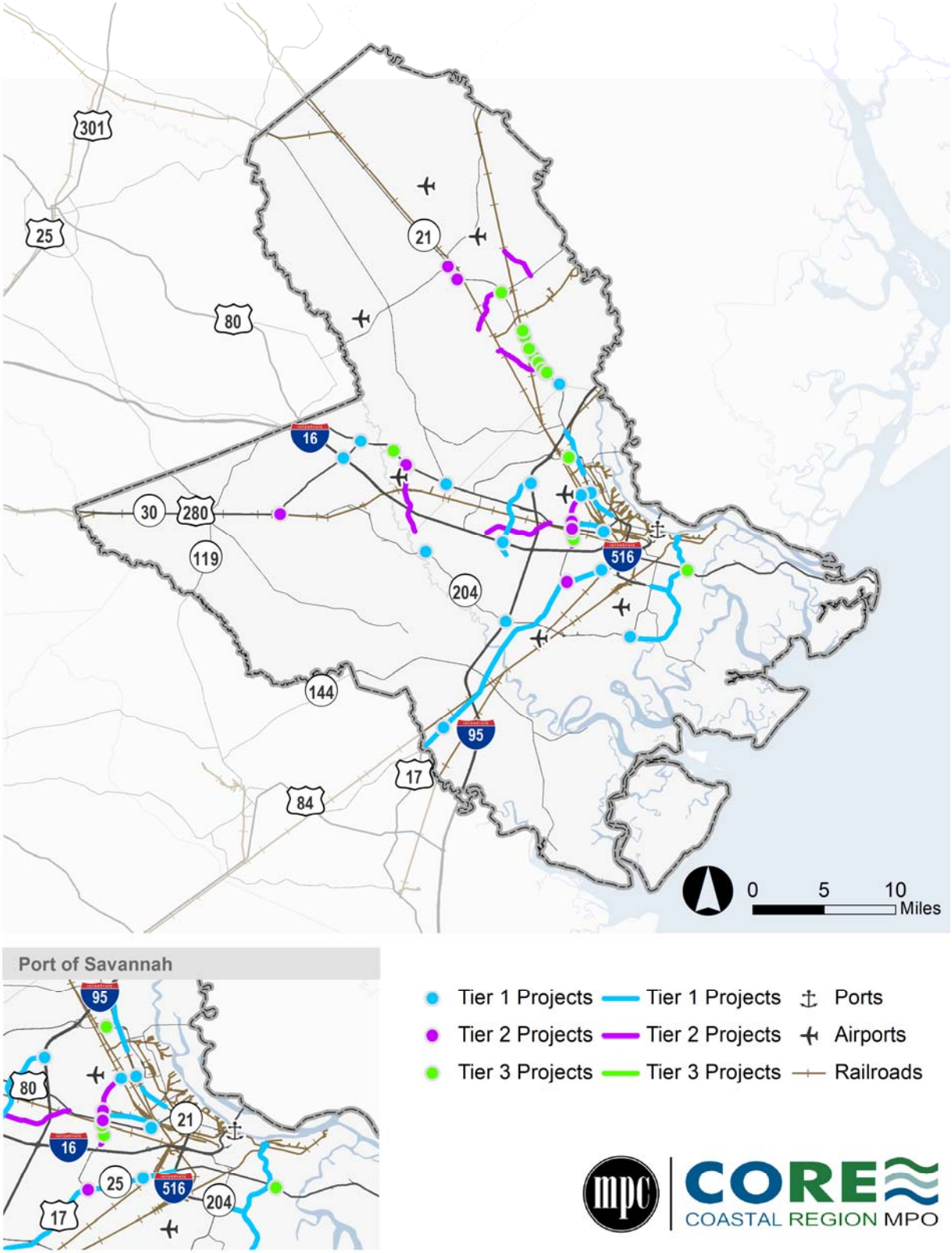
- **Port Area Pavement Conditions.** Roadways in the immediate vicinity of the Port tend to have poor pavement conditions due to the prevalence of heavy truck traffic. In addition, trucks that travel directly between terminals in this area are allowed to exceed gross vehicle weight limits. This project recommends upgrading in pavement conditions throughout the constitutionally exempted sub-area bounded by the Savannah River and the municipal limits of Garden City, Savannah, and Port Wentworth in unincorporated Chatham County (see Figure 3.7). Furthermore, this recommendation provides an opportunity for a public-private partnership. Another recommendation made by the RFTP (discussed in detail in the land use section of the report) is for the region to support community improvement districts (CID) centered on the region's freight activity centers. This is the type of project that a CID would be well-positioned to contribute funding towards and to lead on behalf of the region.

- **East-West Connectivity: DeRenne Ave. Access Control, SR 204/Truman Pkwy. at White Bluff Rd. and Abercorn St. Interchange, and I-95 at SR 204 Interchange.** The lack of east-west connectivity for freight movements across the City of Savannah is an issue that came up often as part of stakeholder outreach. The RFTP proposes a series of recommendations focused on existing critical east-west routes – DeRenne Ave. and SR 204/Truman Pkwy. – to address this challenge.

  For DeRenne Ave., the ongoing Project DeRenne will address several safety and operational issues over the most challenged portion of the corridor - i.e., west of White Bluff Road. Additionally, GDOT has a current project (PI 0008359) to improve the safety and operations of the eastern portion of the corridor. However, DeRenne Ave. is the primary east-west route for the President St. industrial hub which has plans for expansion. To improve east-west connectivity, as redevelopment occurs along the north side of the corridor the region should work to close existing driveways and increase access control via a combination of new frontage roads and existing parallel roads (i.e., E. 72nd St.).

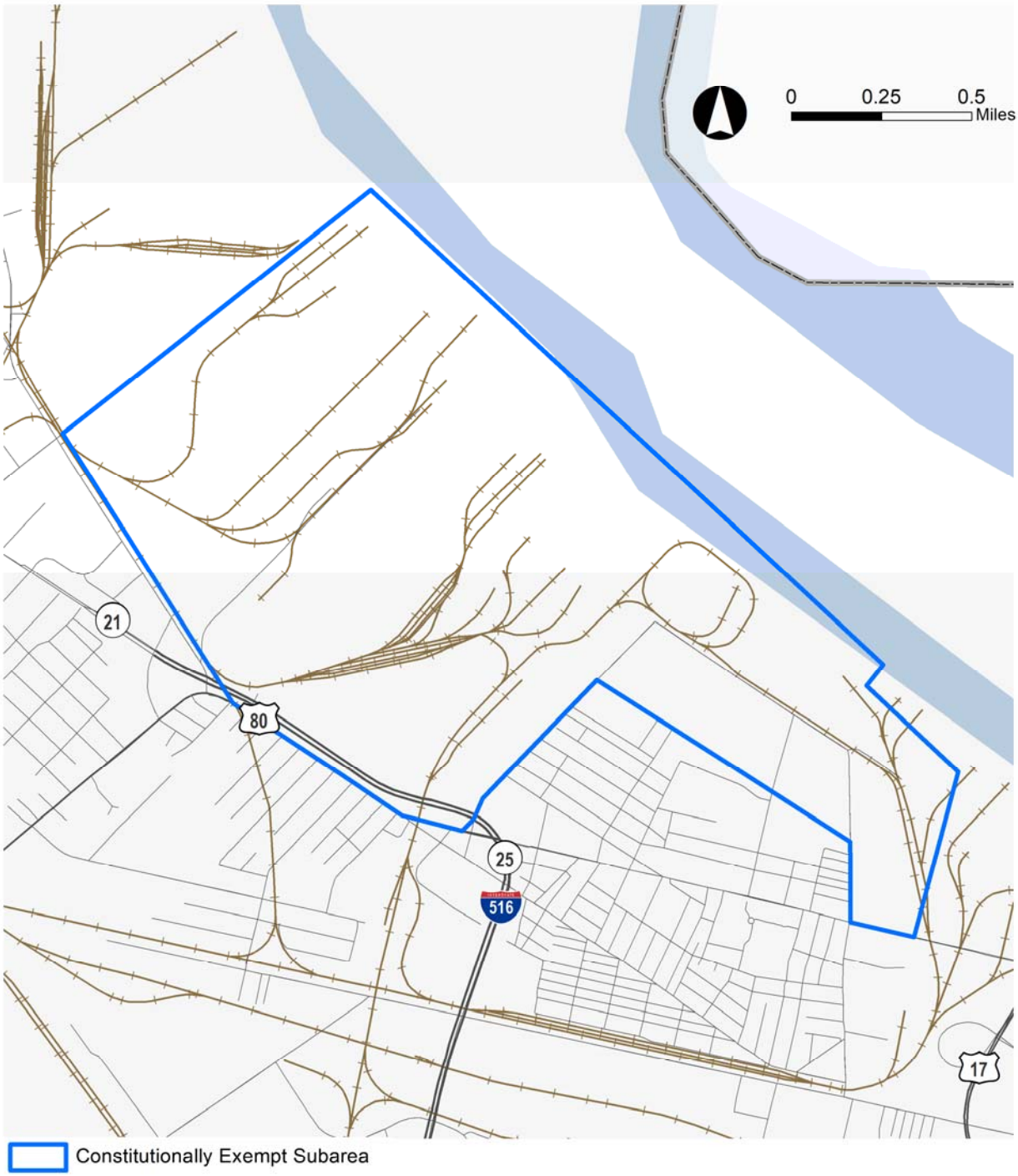
  The intersection of SR 204/Truman Pkwy. with White Bluff Rd. and Abercorn St. is a significant source of truck delay per mile, especially for westbound Truman Pkwy. To improve east-west connectivity for freight traffic, perform an interchange modification report to identify solutions for easing congestion and making the route is more viable for freight activity, including converting to an interchange. Similarly, the RFTP recommends conducting an interchange study for I-95 at SR 204 to improve and upgrade the existing interchange to better facilitate east-west freight movements.

FIGURE 3.6 OPERATIONAL STRATEGIES TO ENHANCE FREIGHT MOBILITY AND SAFETY



Source: Cambridge Systematics.

FIGURE 3.7 CONSTITUTIONALLY EXEMPT AREA NEAR THE PORT OF SAVANNAH



Source: Cambridge Systematics.

TABLE 3.4 OPERATIONAL STRATEGIES TO ENHANCE FREIGHT MOBILITY AND SAFETY

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
Transportation Improvements in the Vicinity of the Bryan County Megasite	Project Strategy	Construct multilane roundabout at US 280 at I-16 interchange and implement other improvements such as widening of adjacent roadways and the construction of a new access point to I-16.	**GDOT**, Bryan County	$175,000,000	North Bryan Transportation Study, GDOT PI No. 0016618, Coastal Empire Study	Tier 1B	Mid-term	Funded
US 17 at Belfast Keller Rd Intersection Improvement	Project Strategy	Convert the unsignalized intersection to a signalized intersection.	**GDOT**, Bryan County	$500,000	Richmond Hill-South Bryan County Transportation Study, Coastal Empire Study	Tier 1B	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)
US 17 at Chatham Pkwy Intersection Improvement	Project Strategy	Provide dual eastbound left-turn lanes, a westbound right-turn lane, and a southbound right-turn lane.	**GDOT**, Chatham County, CORE MPO	$5,300,000	Coastal Empire Study	Tier 1A	Mid-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
SR 21 at Old Augusta Rd Intersection Improvement	Project Strategy	Widen SR 21 to provide additional through lanes and dual northbound right-turn lanes.	**GDOT**, Effingham County	$2,100,000	Effingham County Transportation Master Plan (ID I-30), Coastal Empire Study	Tier 1B	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
US 80 at US 280 Intersection Improvement	Project Strategy	Convert the signalized intersection to a multilane roundabout.	**GDOT**, Effingham County	$5,900,000	Coastal Empire Study, GDOT PI 0018386	Tier 1B	Mid-term	Funded
US 80 at Chatham Parkway Intersection Improvement	Project Strategy	Remove Heidt Avenue access to the intersection; converting the four-legged intersection to a T-intersection to eliminate the existing split phasing and allow more green time for US 80.	**GDOT**, CORE MPO, Garden City	$900,000	Coastal Empire Study	Tier 1A	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
I-16 at Pooler Parkway Interchange Improvement	Project Strategy	Provide dual southbound left-turn lanes from Pooler Parkway onto the I-16 eastbound ramp; provide an additional shared lane on the I-16 westbound exit ramp and configure the lanes as dual westbound left-	**GDOT**, Chatham County, CORE MPO	$4,700,000	Coastal Empire Study	Tier 1A	Short-term	STBG, NHFP, State MFT (incl. LMIG and Other GDOT Funding Opportunities)

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
		turn lanes and a westbound right-turn lane.						
I-95 at Airways Avenue/Pooler Parkway	Project Strategy	Coordinate signal timing, remove the median opening and signal at Mill Creek Circle, widen Pooler Parkway approaching the I-95 interchange, and reconfigure the Benton Boulevard intersection.	**Chatham County**, GDOT, CORE MPO, Savannah-Hilton Head Intl. Airport	$3,100,000	Chatham County 2023 TSPLOST, Coastal Empire Study	Tier 1A	Short-term	STBG, NHFP, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
SR 204 at Old River Road Intersection Improvement	Project Strategy	Convert the unsignalized intersection to a single-lane roundabout.	**GDOT**, CORE MPO, Chatham County	$4,000,000	Coastal Empire Study	Tier 1A	Short-term	STBG, RSTP, HSIP, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
US 80 at SR 17/SR30 Intersection Improvement	Project Strategy	Convert the signalized intersection to a multilane roundabout with an eastbound bypass right-turn lane from US 80.	**GDOT**, Effingham County	$6,000,000	Effingham County Transportation Master Plan (ID I-19), Coastal Empire Study	Tier 1B	Mid-term	STBG, RSTP, HSIP, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Truman Parkway at East President Street	Project Strategy	Elevate East Bay Street and reconstruct the interchange to eliminate the railroad and vehicular traffic conflict.	**Chatham County, Savannah and Old Fort Railroad**, GDOT, CORE MPO	$98,000,000	CORE MPO 2045 Metropolitan Transportation Plan, Coastal Empire Study	Tier 1A	Long-term	INFRA, MEGA, NHFP, NHPP, RCE, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Old River Road Freight and Safety Improvements	Project Strategy	A relatively high density of truck-involved crashes was observed in the area around Old River Road between US 80 and I-16. Widen travel lanes and improve roadway structure to support truck movements. Add safety upgrades including re-striping, paved shoulders, and rumble strips. Consider adding turning lanes at the truck entrances for major freight generators along this route.	**Effingham County**, GDOT	$12,508,000	Effingham County Transportation Master Plan (ID N-15), Regional Freight Transportation Plan Update	Tier 2B	Short-term	STBG, RSTP, HSIP, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
SR 21 South Safety and Operational Improvements	Project Strategy	Make the following improvements along SR 21 from Minus Avenue to Smith Avenue: install a raised median, upgrade signalized intersections, implement school	**Chatham County**, CORE MPO, GDOT	$4,250,000	SR 21 Access Management Study	Tier 1A	Short-term	STBG, HSIP, TA, State MFT (incl. LMIG and Other GDOT Funding Opportunities)

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
		zone enhancements, consolidate driveways, upgrade crosswalks so that they are compliant with the Americans with Disabilities Act, and install a multi-use path along both sides of SR 21.						
SR 21 North Safety and Operational Improvements	Policy Strategy	SR 21 between I-95 and Gulfstream Road experiences significant truck delay. Further study this segment of SR 21 and develop solutions focusing on access management, safety, and operations. Specific focus should be given to the intersection of SR 21 and Gulfstream Rd. and also on access management near the I-95 interchange.	**CORE MPO, Chatham, County**, GDOT	$200,000	Regional Freight Transportation Plan	Tier 1A	Short-term	FHWA Discretionary PL Funds
SR 307 and SR 21 At-Grade Rail Separation and Operational Improvements	Project Strategy	Construct a grade-separated crossing of SR 307/Bourne Avenue over CSX Railroad crossing #632473Y and SR 21/ Augusta Road and make necessary adjustments to the street network to make the separation feasible.	**GDOT, CSX Transportation, Chatham County**, CORE MPO	$36,410,000	SR 307 Corridor Study (ID GS-01)	Tier 1A	Long-term	INFRA, NHFP, NHPP, RCE, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
SR 307/Dean Forest Road Grade Separation at Norfolk Southern Crossing #855067U	Project Strategy	Construct a grade-separated crossing of SR 307/Dean Forest Road over Norfolk Southern crossing #885067U and make necessary adjustments to the street network to make the separation feasible.	**GDOT, Norfolk Southern, Chatham County**, CORE MPO	$17,600,000	SR 307 Corridor Study (GS-02)	Tier 1A	Long-term	INFRA, NHFP, NHPP, RCE, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Chatham Multimodal Community Improvement Project (CMCIP)	Project Strategy	The CMCIP makes numerous rail improvements near the Port of Savannah that will eliminate 11 at-grade crossings, allow for more efficient rail operations at the Port, and lessen impacts to the surrounding community. The CMCIP was awarded a Railroad Crossing Elimination (RCE) Grant in fiscal year 2022.	**GDOT, CSX Transportation, Chatham County**, CORE MPO	$2,805,000 *(non-federal contribution, remainder of total project cost)*	Chatham County RCE Grant Award	Tier 1A	Mid-Term	STBG, HSIP, State MFT (incl. Quick Response, LMIG, and Other GDOT Funding Opportunities)
SR 307 Access Management from Pine Meadow Drive	Project Strategy	Construct raised median along SR 307 beginning south of Pine Meadow Drive to Morgan Industrial Boulevard; construct restricted	**Chatham County**, GDOT, CORE MPO	$19,300,000	SR 307 Corridor Study (AC-01)	Tier 2A	Mid-term	STBG, HSIP, TA, State MFT (incl. LMIG and Other

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
to SR 26/US 80/Louisville Road		crossing U-turn (RCUT) intersection at Old Dean Forest Road; construct southbound U-turn eyebrow at Prosperity Drive and Morgan Industrial Boulevard intersections; construct northbound U-turn eyebrow at Jamaica Run Road.						GDOT Funding Opportunities)
SR 307 Access Management from SR 26/US 80/Louisville Road to Robert B. Miller Road	Project Strategy	Construct raised median along SR 307 from SR 26/US 80/Louisville Road to Robert B. Miller Road; construct northbound U-turn eyebrows at Old Louisville Road, Distribution Drive, and Davidson Road; construct southbound U-turn eyebrows at Sonny Perdue Drive and Product Support Road; construct restricted crossing U-turn (RCUT) intersection at Hangar Road/Darque Road and Billy B. Hair Drive.	**Chatham County**, GDOT, CORE MPO	$28,560,000	SR 307 Corridor Study (AC-02)	Tier 2A	Mid-term	STBG, HSIP, TA, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
SR 307 at Distribution Drive	Project Strategy	Convert the unsignalized intersection to a signalized intersection.	**Chatham County**, GDOT, CORE MPO	$695,000	SR 307 Corridor Study (IN-01)	Tier 2A	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)
SR 307 at SR 26/US 80/Louisville Road Auxiliary Lanes	Project Strategy	Install dual left-turn lanes and extend right-turn lane storage for each approach; install pedestrian signals, crosswalks, and ramps.	**Chatham County**, GDOT, CORE MPO	$3,190,000	SR 307 Corridor Study (IN-02)	Tier 2A	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
SR 307 Corridor Signal Retiming	Project Strategy	Conduct a signal timing review to improve vehicular flow through time-of-day coordinated operations and optimize signal cycle length, splits, and offsets; replace existing three-section permissive signal heads on SR 307 at Old Louisville Road intersection with four-section flashing yellow arrow signal heads; replace existing five-section protected/permissive signal heads on SR 307 at Robert B. Miller Road with four-section flashing yellow arrow signal heads.	**Chatham County**, GDOT, CORE MPO	$425,000	SR 307 Corridor Study (IN-03)	Tier 2A	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
SR 307 at SR 25/US 17/Ogeechee Road Intersection Improvements	Project Strategy	Install dual eastbound left-turn lanes; remove free-flow channelization for the westbound right-turn lane to accommodate eastbound dual left-turn receiving lanes; shift westbound through lanes north to accommodate additional eastbound left-turn lane; modify signal phasing to provide protected-only operation for eastbound left-turn movement and permitted-overlap phasing for westbound right-turn movement.	**Chatham County**, GDOT, CORE MPO	$1,060,000	SR 307 Corridor Study (IN-04)	Tier 2A	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
SR 307 at Jamaica Run Road	Project Strategy	Convert the unsignalized intersection to a signalized intersection; install a westbound left-turn lane and a westbound right-turn lane.	**Chatham County**, GDOT, CORE MPO	$580,000	SR 307 Corridor Study (IN-05)	Tier 2A	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)
SR 307 at Morgan Industrial Boulevard	Project Strategy	Convert the unsignalized intersection to a signalized intersection.	**Chatham County**, GDOT, CORE MPO	$760,000	SR 307 Corridor Study (IN-06)	Tier 2A	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)
SR 307 at SR 26/US 80/Louisville Road Interchange	Policy Strategy	Monitor the intersection of US 80 and SR 307 for future growth and performance. If performance continues to deteriorate, convert the intersection to an interchange.	**GDOT**, Chatham County, CORE MPO	TBD	SR 307 Corridor Study (GS-03)	Tier 2A	Long-term	TBD
Lane Improvements at SR 17 and US 80/SR 26	Project Strategy	Install southbound dual left turn lanes and provide an overlap phase for the westbound right turn movement	**Effingham County,** GDOT	$670,000	Effingham County Transportation Master Plan (ID I-19)	Tier 3B	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Lane Improvements at SR 21 and SR 119	Project Strategy	Install additional northbound dual left turn lane and provide overlap phase for eastbound right turn movement	**Effingham County,** GDOT	$838,000	Effingham County Transportation Master Plan (ID I-20)	Tier 3B	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Traffic Signal at SR 21 and McCall Road (North)	Project Strategy	Signalize intersection, install northbound left turn lane, provide permissive-protected signal phase for westbound and northbound left turn movements, provide overlap phase for eastbound right turn movement	**Effingham County,** GDOT	$1,321,000	Effingham County Transportation Master Plan (ID I-39)	Tier 3B	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
Lane Improvements at SR 21 and 9th Street	Project Strategy	Install eastbound right turn lane, provide permissive-protected signal phase for side street left turning movements, provide overlap phase for eastbound right turn movement	**Effingham County,** GDOT	$187,000	Effingham County Transportation Master Plan (ID I-12)	Tier 3B	Short-term	State MFT (incl. Quick Response, LMIG, and Other GDOT Funding Opportunities)
Lane Improvements at SR 21 and Fort Howard Road	Project Strategy	Remove channelized islands at Rincon Commercial Park Dr. and Fort Howard Rd.; convert existing northbound right-turn lane to a through lane; install northbound right-turn lane; convert westbound left-turn lane to dual left-turn; provide overlap phases for northbound and westbound right-turn movements	**Effingham County,** GDOT	$905,000	Effingham County Transportation Master Plan (ID I-23)	Tier 3B	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Lane Improvements at SR 21 and Walmart Access Driveway	Project Strategy	Install northbound right turn lane	**Effingham County,** GDOT	$244,000	Effingham County Transportation Master Plan (ID I-24)	Tier 3B	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Median U-turn (MUT) Intersection at SR 21 and Towne Park Dr	Project Strategy	Prohibit left turns along SR 21; convert intersection to partial MUT configuration; provide U-turn locations north and south of the intersection.	**Effingham County,** GDOT	$1,748,000	Effingham County Transportation Master Plan (ID I-25)	Tier 3B	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Median U-turn (MUT) Intersection at SR 21 and Westwood Dr	Project Strategy	Prohibit left turns Along SR 21, converting intersection to partial MUT configuration, Provide U-turn locations north and south of the intersection	**Effingham County,** GDOT	$1,748,000	Effingham County Transportation Master Plan (ID I-26)	Tier 3B	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Lane Improvements at SR 21 and McCall Road (South)	Project Strategy	Install additional northbound left turn lane, install additional eastbound left turn lane, convert eastbound right turn lane to a channelized free-flowing movement	**Effingham County,** GDOT	$1,088,000	Effingham County Transportation Master Plan (ID I-27)	Tier 3B	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Lane Improvements at SR 21 SB and Goshen Road	Project Strategy	Install westbound left turn lane along Goshen Road	**Effingham County,** GDOT	$670,000	Effingham County Transportation Master Plan (ID I-28)	Tier 3B	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Lane Improvements at SR 21 NB	Project Strategy	Install eastbound left turn and westbound right turn lanes on Goshen road, widen SR 21 southbound to three through lanes,	**Effingham County,** GDOT	$2,044,000	Effingham County Transportation	Tier 3B	Short-term	STBG, State MFT (incl. LMIG and Other GDOT

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
and Goshen Road		provide permissive-protected signal phasing for eastbound left turn movement			Master Plan (ID I-29)			Funding Opportunities)
Median U-turn (MUT) Intersection at SR 21 and Old Augusta Road	Project Strategy	Prohibit left turns along SR 21, converting intersection to partial MUT configuration, provide U-turn locations north and south of the intersection, Convert eastbound right turn lane to channelized free-flow conditions with downstream merge	**Effingham County,** GDOT	$1,922,000	Effingham County Transportation Master Plan (ID I-30)	Tier 3B	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Traffic Signal at US 80 and Sand Hill Road	Project Strategy	Install traffic signal with southbound left and right turn lanes	**Effingham County,** GDOT	$1,696,000	Effingham County Transportation Master Plan (ID I-32)	Tier 3B	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Traffic Signal at US 80 and Old River Road Connector	Project Strategy	Conduct signal warrant study and install signal.	**Effingham County,** GDOT	$652,000	Effingham County Transportation Master Plan (ID I-41)	Tier 3B	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Traffic Signal at SR 21 and 4th St	Project Strategy	Signalize intersection and install westbound left turn lane	**Effingham County,** GDOT	$1,108,000	Effingham County Transportation Master Plan (ID I-43)	Tier 3B	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
SR 21 at Fort Howard Road Safety Improvements	Project Strategy	Convert driveways along Fort Howard Road and SR 21 within 500 ft of their intersection to right in/right out or RCUT configuration	**Effingham County,** GDOT	$335,000	Effingham County Transportation Master Plan (ID I-21)	Tier 3B	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)
SR 21 at Ebenezer Road Truck Safety Improvements	Project Strategy	Move back stop bar for the eastbound through/left lane, modify northbound right turn lane to provide wider curb radius	**Effingham County,** GDOT	$109,000	Effingham County Transportation Master Plan (ID I-35)	Tier 3B	Short-term	State MFT (incl. Quick Response, LMIG, and Other GDOT Funding Opportunities)
Old River Road at US 80 Lane Improvements	Project Strategy	Construct Old River Road Connector and convert existing segment of Old River Road to one-way; install westbound left-turn lane at the new intersection of US 80 at the Old River Rd Connector (future traffic signal in project I-41)	**Effingham County,** GDOT	$752,000	Effingham County Transportation Master Plan (ID I-1)	Tier 3B	Short-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
Long Bridge Road Freight Upgrades	Project Strategy	Widen travel lanes and improve roadway structure to support truck movement. Upon completion, addition of this roadway to the County truck ordinance (as an extension of the Old Augusta Road truck route) should be considered.	**Effingham County,** GDOT	$6,926,000	Effingham County Transportation Master Plan (ID N-11)	Tier 3B	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Rahn Station Road Freight Upgrades	Project Strategy	Widen travel lanes and improve roadway structure to support truck movement. Upon completion, addition of this segment to the County truck ordinance as truck routes should be considered.	**Effingham County,** GDOT	$9,112,000	Effingham County Transportation Master Plan (ID N-10)	Tier 3B	Mid-term	State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Blue Jay Road/McCall Road Freight Upgrades	Project Strategy	Widen travel lanes and improve roadway structure to support truck movement. Upon completion, addition of these segments to the County truck ordinance as truck routes should be considered.	**Effingham County,** GDOT	$18,478,000	Effingham County Transportation Master Plan (ID N-9)	Tier 3B	Long-term	STBG, RSTP, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Pine Barren Road Freight Upgrades	Project Strategy	Widen and reconstruct roadway structure to support truck traffic. Upon completion (or simultaneously), connect to John Carter Road via the John Carter-Pine Barren Road Connector project.	**Chatham County**, GDOT, CORE MPO	$7,000,000	Chatham County 2023 TSPLOST, Regional Freight Plan Update	Tier 2A	Mid-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
McCall Road (south) Freight Improvements	Project Strategy	Widen travel lanes and improve roadway structure to support truck movement. Upon completion this roadway should be considered for addition to the County truck ordinance.	**Effingham County**, GDOT	$9,485,000	Effingham County Transportation Master Plan (ID N-18)	Tier 2B	Medium-term	STBG, RSTP, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
US 80 at Skidaway Road and SR 204/Truman Parkway Area Safety Improvements	Policy Strategy	The area around US 80 at Skidaway Road and SR 204/Truman Parkway experiences a relatively high rate of truck-involved crashes. Perform a safety audit at this location to identify potential solutions for improving truck safety.	**Savannah, CORE MPO**, GDOT	TBD	Regional Freight Transportation Plan	Tier 1B	Short-term	FHWA Discretionary PL Funds
US 280 at SR 204 Multilane Roundabout	Project Strategy	Convert the stop-controlled intersection of US 280 and SR 204 to a multilane roundabout. Remove the US 280 East-to-SR 204 East connector roadway.	**Bryan County**, GDOT	$1,580,000	Regional Freight Transportation Plan	Tier 2A	Mid-term	STBG, RSTP, HSIP, State MFT (incl. LMIG and Other GDOT

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
								Funding Opportunities)
US 17 Corridor Study Phase II	Policy Strategy	As a second phase to the pending US 17 Corridor Study, extend the analysis south to SR 196 in Liberty County.	**Bryan County**, GDOT	$300,000	South Bryan Transportation Study, Chatham County 2023 TSPLOST, Regional Freight Transportation Plan	Tier 1A	Short-term	FHWA Discretionary PL Funds
US 80 East Operational Improvements	Policy Strategy	Coordinate with the ongoing US 80 Corridor Study to revisit signal timing and other operational challenges along US 80 between Pooler Parkway and I-516.	**Chatham County, CORE MPO**, GDOT	TBD	Regional Freight Transportation Plan	Tier 1B	Short-term	FHWA Discretionary PL Funds
East-West Connectivity: DeRenne Avenue Access Control	Policy Strategy	As redevelopment occurs along the north side of DeRenne Ave. between White Bluff Rd. and Truman Pkwy., the region should work to close existing driveways and increase access control via a combination of new frontage roads and existing parallel roads.	**Savannah, CORE MPO**, GDOT	$0	Regional Freight Transportation Plan	Tier 1B	Short-term	Not Applicable
East-West Connectivity: Truman Pkwy. at SR 204/Abercorn St. Interchange Modification Report	Policy Strategy	Perform an interchange modification report to identify solutions for easing congestion and making the route is more viable for freight activity, including converting to an interchange.	**Chatham County, Savannah**, CORE MPO, GDOT	$300,000	Regional Freight Transportation Plan	Tier 1A	Mid-term	FHWA Discretionary PL Funds
Port Area Pavement Condition Improvements	Project Strategy	Upgrade pavements throughout the constitutionally exempt sub-area bounded by the Savannah River and the municipal limits of Garden City, Savannah, and Port Wentworth in unincorporated Chatham County.	**Chatham County**, Georgia Ports Authority, GDOT	$50,100,000	Stakeholder Outreach, Regional Freight Transportation Plan	Tier 2B	Mid-term	State MFT (incl. Quick Response, LMIG, and Other GDOT Funding Opportunities)
Jimmy DeLoach Pkwy. at Expansion Blvd.	Project Strategy	Increase intersection turning radii, or install a mountable curb, to accommodate truck traffic. Measure the sight distance at this intersection and increase if determined to be insufficient.	**Chatham County**, GDOT, CORE MPO	$32,000	Stakeholder Outreach, Regional Freight Transportation Plan	Tier 2B	Short-term	State MFT (incl. Quick Response, LMIG, and Other GDOT Funding Opportunities)

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
Freight Corridor Lighting Study	Policy Strategy	Stakeholders noted that a significant amount of trucking activity occurs in the early morning and dusk hours before sunrise. Consider performing a lighting study for key freight corridors such as SR 307, SR 21, and others.	**CORE MPO, Chatham County**, Effingham County, Bryan County, GDOT	$200,000	Stakeholder Outreach, Regional Freight Transportation Plan	Tier 2B	Mid-term	FHWA Discretionary PL Funds
Old Louisville Road Improvements	Project Strategy	Design and construct road improvements on Old Louisville Road between State Route 307 to Heidt Road.	**Chatham County**, GDOT, CORE MPO	$8,500,000	Chatham County 2023 TSPLOST	Tier 1A	Mid-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
East-West Connectivity: I-95 at SR 204/Gateway Interchange	Policy Strategy	Perform an interchange study to improve and upgrade the existing interchange.	**Chatham County**, GDOT, CORE MPO	$9,000,000**	Chatham County 2023 TSPLOST	Tier 1A	Mid-term	FHWA Discretionary PL Funds
Truman Parkway Improvement Project	Project Strategy	Upgrade Truman Pkwy. between President Street and SR 204 to include resurfacing, shoulder and median improvements, guardrail upgrades, drainage improvements and other maintenance work.	**Chatham County,** CORE MPO, GDOT	$10,000,000	Chatham County 2023 TSPLOST	Tier 1A	Mid-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)
Pooler Parkway Operational Improvements	Project Strategy	Implement capacity, operational and safety improvements on Pooler Parkway in the City of Pooler.	**Chatham County**, CORE MPO, GDOT	$5,835,692	Chatham County 2023 TSPLOST	Tier 1A	Short-term	STBG, State MFT (incl. LMIG and Other GDOT Funding Opportunities)

Source: CORE MPO Regional Freight Transportation Plan Update, 2023.

*Note: The recommended lead sponsor agency is indicated with **bold** type.

**Note: The project cost includes the local match for federal funds to improve and upgrade the existing interchange.

3.3 Support Increased Capacity, Enhanced Operations, and Safety on the Multimodal Freight Network

The region's air cargo, port, and freight rail assets are essential elements of the multimodal freight network. Air cargo has a significant role in the multimodal freight network as it provides the fastest service for long-distance shipments of goods, especially high-value and low-weight products such as medical supplies, flowers, and electronics. The Port of Savannah is critically important to the regional and state economy and generates much of the freight traffic through the region. Freight rail transportation can provide a safe, cost-effective way to move goods into and out of the CORE MPO region. Furthermore, moving goods by rail positively impacts roadway congestion, safety, and emissions as it reduces the number of truck trips.

For the Savannah-Hilton Head International Airport and the Port of Savannah, the region should focus on addressing landside access issues to those freight terminals as on-terminal challenges are under the purview of their operating authorities. Though included under the strategic capacity and operations recommendations, several recommended projects would improve congestion, reliability, and safety challenges on corridors serving those facilities. Regarding the rail recommendations it should be noted that the region's freight rail infrastructure is largely privately owned and, though the MPO's bylaws designate seats on the EDFAC for the region's Class I railroads, historically railroad companies have not participated in MPO activities. To some extent, this is likely due to the challenge of differing public and private sector planning timelines for identifying and implementing freight system investments. However, participation from the railroads is essential for implementing the recommendations put forth in the Regional Freight Transportation Plan Update. As a result, the region (along with its state and federal partners) should continue to foster relationships with railroads and identify opportunities for them to participate in the long-range planning process with a focus on increasing the region's rail takeaway capacity, enhancing operations, and improving safety. Specific strategies supporting this recommendation are presented in Table 3.5 and discussed below.

TABLE 3.5 INCREASED CAPACITY, ENHANCED OPERATIONS, AND SAFETY ON THE MULTIMODAL FREIGHT NETWORK

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
Support Expansion of Local Freight Rail Capacity	Policy Strategy	Partner with railroads to perform a feasibility study that identifies potential locations for shared rail yards including engaging with rail operators to determine the potential of leasing space at nearby rail yards.	**CSX, Norfolk Southern, CORE MPO**, GDOT	Not Applicable	Stakeholder Outreach, Regional Freight Transportation Plan	Tier 2A	Short-term	MPO Staff Time
Support Expansion of Regional Freight Rail Capacity	Policy Strategy	Partner with rail operators and the State to identify existing sidings that could be extended or potential development sites for new sidings as a strategy for increasing the region's rail capacity.	**CSX, Norfolk Southern, CORE MPO**, GDOT	Not Applicable	Stakeholder Outreach, Regional Freight Transportation Plan	Tier 2B	Short-term	MPO Staff Time
Support Capacity and Operational Improvements at SAV	Policy Strategy	Coordinate with SAV to identify and prioritize landside access improvements to air cargo facilities.	**Savannah-Hilton Head Intl. Airport, CORE MPO**, GDOT	Not Applicable	Stakeholder Outreach, Regional Freight Transportation Plan	Tier 2A	Short-term	MPO Staff Time
Support Capacity and Operational Improvements at the Port of Savannah	Policy Strategy	Coordinate with the Georgia Ports Authority to identify and prioritize landside access improvements to port facilities.	**Georgia Ports Authority, CORE MPO**, GDOT	Not Applicable	Stakeholder Outreach, Regional Freight Transportation Plan	Tier 2A	Short-term	MPO Staff Time
Implement Rail Quiet Zones	Policy Strategy	Identify candidate crossings for quiet zones and work with the region's rail operators and the State to meet the requirements for quiet zones for the selected crossings.	**CSX, Norfolk Southern, CORE MPO**, GDOT	Not Applicable	Stakeholder Outreach, Regional Freight Transportation Plan	Tier 2B	Short-term	MPO Staff Time
Rail Crossing Safety Improvements	Project Strategy	The region has nearly 200 at-grade rail crossings, but highway-rail incidents were concentrated at 34 crossings. The region should upgrade the safety equipment at these crossings.	**CSX, Norfolk Southern, Chatham County, Bryan County, Effingham County, CORE MPO**, GDOT	$6,900,000	Regional Freight Transportation Plan	Tier 2B	Mid-term	HSIP
Rough Rail Crossings Improvements	Project Strategy	Rough rail crossings impact the safety and operations of the region's freight corridors. Partner with the region's railroads to prioritize and	**CSX, Norfolk Southern, Chatham County, Bryan**	$17,700,000	Stakeholder Outreach, Regional Freight	Tier 2B	Mid-term	HSIP, State MFT (incl. Quick Response, LMIG, and Other GDOT

	upgrade pavement conditions at the 30 worst crossings. Consider installing full-depth rubber crossings for improved operations and maintenance.	**County, Effingham County, CORE MPO**, GDOT	Transportation Plan	Funding Opportunities)

Source: CORE MPO Regional Freight Transportation Plan Update, 2023.

*Note: The recommended lead sponsor agency is indicated with **bold** type.

3.4 Implement Technology Strategies to Enhance Freight Operations and Safety

Transportation technology is evolving rapidly and has the potential to improve the mobility, reliability, and safety of freight travel. Furthermore, technology solutions are able to yield system improvements with fewer environmental and community impacts. The region has been growing its ability to leverage transportation technologies as GDOT has invested in connected vehicle technologies for corridors connecting to the Port of Savannah and the City of Savannah is developing a Traffic Control Center (TCC) to better manage traffic. The strategies presented below in Figure 3.8 and

Table 3.6 are opportunities for the region to leverage technology solutions to address its freight challenges.

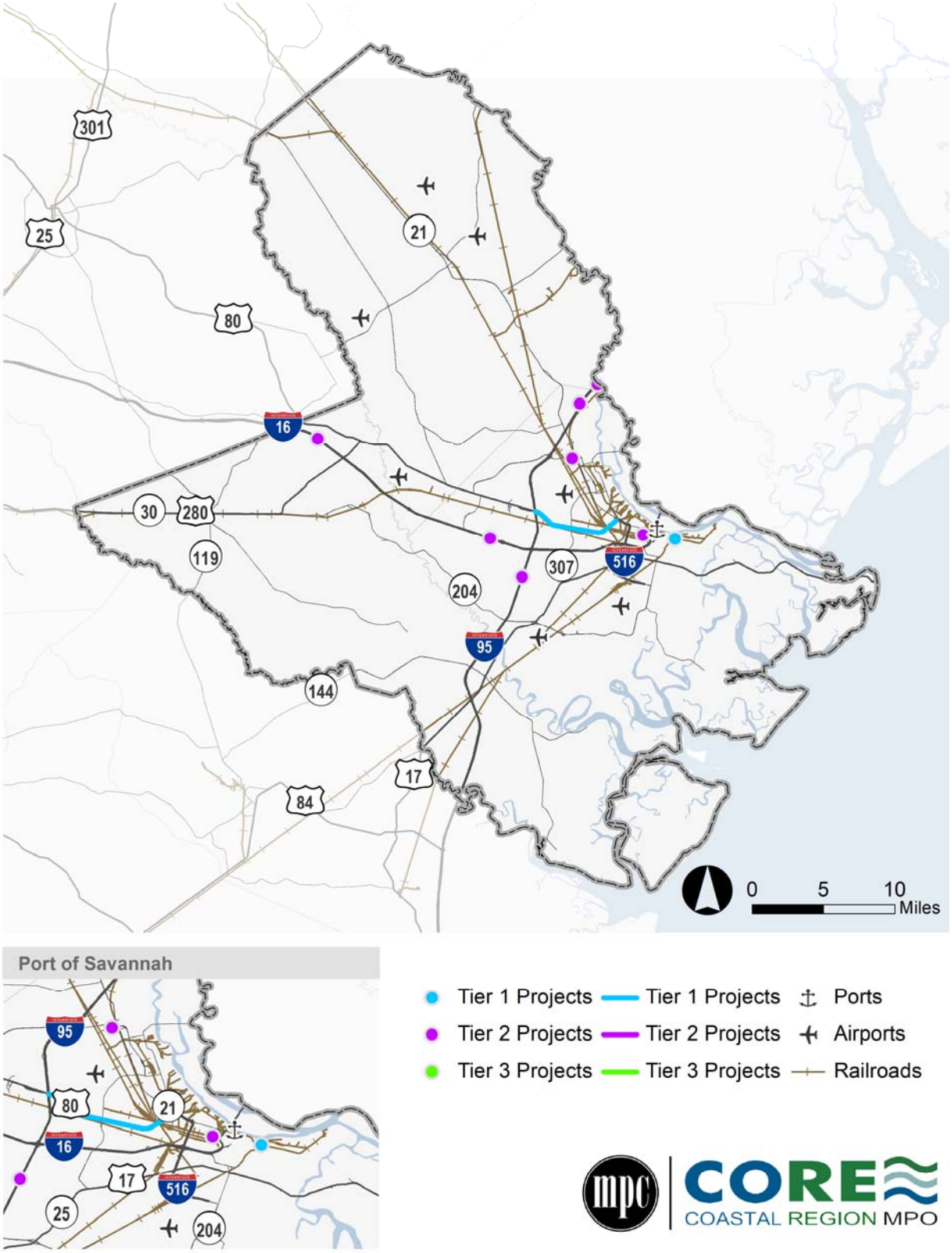
Some of the notable technology recommendations are briefly discussed below:

- **Lathrop Ave. Over-Height Warning System.** In some instances, a truck may be operating without awareness of an upcoming potential hazard, such as a low overpass. Lack of awareness can result in crashes, damaged infrastructure, and can be a source of nonrecurring congestion if lanes or sections of roadway must be closed due to the errant vehicle. The CORE MPO and its local and state partners should install advanced warning systems at locations along the highway network with over-height or overweight hazards. A specific location to deploy an advanced warning system to alert over-height trucks is at the intersection E. Lathrop Ave. and the Norfolk Southern rail line north of Louisville Rd. There is a low vertical clearance at this location and stakeholders indicated that trucks often get stuck and cause congestion on the surrounding roadway network. Additionally, this intersection is in an area targeted for freight equity improvements.

- **President Street At-Grade Crossing Dynamic Message Sign.** Just as lack of awareness of over-height and overweight hazards negatively impact the safety and efficiency of truck travel, so too does the lack of awareness of blocked crossings. In recent years, GDOT has deployed freight ITS solutions along Jimmy DeLoach Pkwy. and SR 21 that warn trucks to the presence of blocked rail crossings near the Port of Savannah. Having been documented as a challenge in the 2016 Regional Freight Transportation and included in the 2023 Chatham County T-SPLOST, the intersection of President Street and the Savannah & Old Fort Railroad (SVHO) is a well-known source of non-recurring congestion as the at-grade rail crossing is often blocked for extended periods of time. As a temporary solution, in partnership with GDOT and the City of Savannah Traffic Control Center the region should deploy a freight ITS solution including a dynamic message sign at this crossing to alert motorists and motor carriers that the crossing blocked. Over the long term, the region should continue with ongoing efforts for identifying feasible options for separating this crossing.

- **Truck Parking Availability System Pilot.** Partner with GDOT to conduct a truck parking availability system pilot project at the I-95 Southbound Georgia Welcome Center. Based on the outcomes of the pilot project, consider making the system permanent and expanding it to other facilities in the region.

FIGURE 3.8 TECHNOLOGY STRATEGIES TO ENHANCE FREIGHT OPERATIONS AND SAFETY



Source: Cambridge Systematics.

TABLE 3.6 TECHNOLOGY STRATEGIES TO ENHANCE FREIGHT OPERATIONS AND SAFETY

Name	Type	Description	Key Stakeholders*	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
Deploy Freight Signal Priority along US 80	Project Strategy	Deploy freight signal priority along US 80 between I-95 and SR 21 to connect to the Brampton Road Connector project.	**GDOT**, Chatham County, CORE MPO	$900,000	Regional Freight Transportation Plan	Tier 1A	Mid-term	STBG, CMAQ, State MFT (incl. Quick Response, LMIG, and Other GDOT Funding Opportunities)
Truck Parking Availability System Pilot	Project Strategy	Partner with GDOT to conduct a truck parking availability system pilot project at the I-95 Southbound Georgia Welcome Center.	**GDOT, Savannah**, Chatham County, CORE MPO	TBD	Regional Freight Transportation Plan	Tier 2A	Mid-term	STBG, ITD, AID
Lathrop Avenue Over-Height Warning System	Project Strategy	Deploy an advanced warning system to alert over-height trucks at the intersection E. Lathrop Ave. and the Norfolk Southern rail line north of Louisville Rd.	**Savannah**, CORE MPO, GDOT	$58,000	Stakeholder Outreach, Regional Freight Transportation Plan	Tier 1A	Short-term	STBG, State MFT (incl. Quick Response, LMIG, and Other GDOT Funding Opportunities)
President Street At-Grade Crossing Dynamic Message Sign	Project Strategy	Deploy a freight ITS solution including a dynamic message sign at this crossing to alert motorists and motor carriers that the crossing blocked.	**Chatham County, Savannah**, GDOT, CORE MPO	$104,000	Stakeholder Outreach, Regional Freight Transportation Plan	Tier 1A	Short-term	STBG, State MFT (incl. Quick Response, LMIG, and Other GDOT Funding Opportunities)
Real-Time Information Signage for Port Traffic	Project Strategy	Provide drivers with real-time travel times to the terminal gates via dynamic message signs (DMS). DMS should be provided at the following locations: I-95 southbound at the Georgia/South Carolina state line, Jimmy Deloach Parkway east of I-95, I-16 eastbound west of I-95, I-16 eastbound west of US 280**, and I-95 south of I-16.	**GDOT, Georgia Ports Authority**, CORE MPO, Chatham County	$293,000	Coastal Empire Study, Regional Freight Transportation Plan	Tier 2A	Mid-term	STBG, CMAQ, State MFT (incl. Quick Response, LMIG, and Other GDOT Funding Opportunities)

Source: CORE MPO Regional Freight Transportation Plan Update, 2023.

*Note: The recommended lead sponsor agency is indicated with **bold** type.

**Note: The Regional Freight Transportation Plan proposes a different location for this dynamic message sign than what was proposed in the Coastal Empire Study. The analysis of truck GPS data indicated that some trucks access the port via the I-16-to-US 280-to-US 80 where they then connect to either Jimmy Deloach Pkwy. or SR 307.

3.5 Increase Access to Safe Truck Parking

Truck drivers need to park for different reasons and there are unique challenges for various types of parking needs. Drivers must adhere to Federal hours of service (HOS) regulations that place specific time limits on driving and rest intervals. Drivers almost always need to park and wait for delivery windows at shippers and receivers, and sometimes are impacted by unexpected road closures or congestion. Finally, truck drivers are essential workers, who need to take personal breaks for rest and safety.

Lack of authorized or designated truck parking results in drivers parked on shoulders, on-off ramps, and in the lots of neighboring businesses. Improving these conditions improves safety and operations not only for motor carriers, but also for the traveling public as they benefit from better visibility and roadway shoulders that are clear for emergency use. The strategies included in this recommendation category, discussed below and summarized in

Table 3.7, offer potential solutions for increasing access to truck parking throughout the region.

- **Regional Truck Parking Demand Estimation Study.** Conduct a study to estimate the truck parking demand generated by new commercial and industrial developments. The FHWA Truck Parking Demand Estimation Tool may serve as the starting point.

- **Incorporate Truck Parking into Traffic Impact Assessments.** Local governments within the CORE MPO region generally require traffic impact assessments for new developments. However, these processes do not always consider the specific transportation and truck parking needs generated by freight activity. Traffic impact assessment processes should be revised to include anticipated truck volumes at a site, the impacts of staging near the site, and the potential for truck parking demand generated farther from the site. The truck parking demand estimates generated from the revised traffic impact assessments can then be used to evaluate parking requirements for new freight-generating developments.

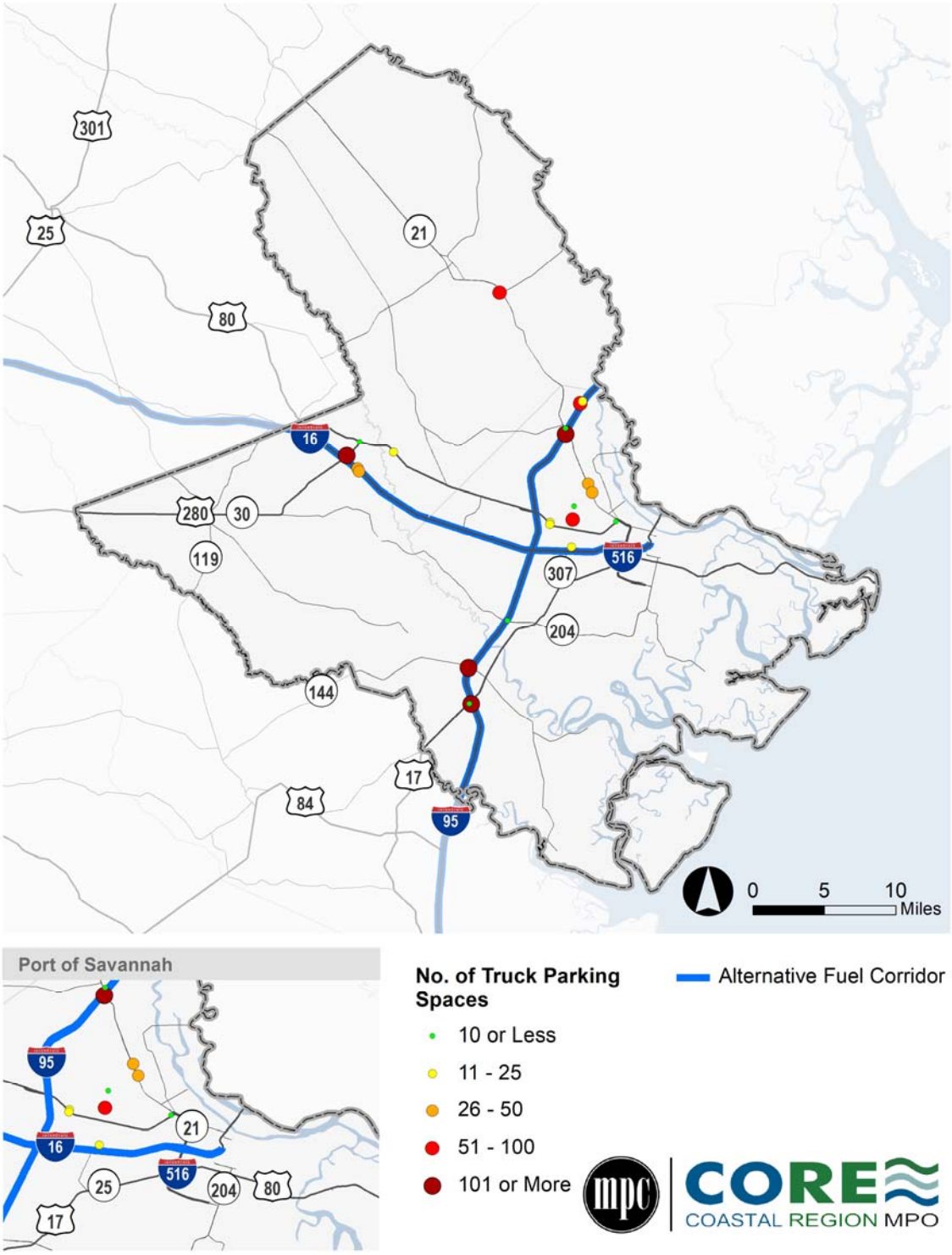
- **Revise Planning Ordinances and Policies to include Truck Parking.** Several local governments in the region have regulations that generally prohibit truck parking in right-of-way and in certain areas (e.g., residential zones). Additionally, local ordinances routinely set employee and customer parking requirements for developments but do not include requirements for on-site truck parking and staging areas. Local governments throughout the region should revise planning ordinances to include on-site truck parking minimums. Notably, the City of Richmond Hill already has in its Unified Development Ordinance truck parking minimums for freight-generating developments.

Furthermore, the region should work to align future investments in the region's truck parking capacity with the state's alternative fuel corridors (AFCs). AFCs, shown in Figure 3.9 for the CORE MPO region along with existing truck parking facilities, comprise a national network of plug-in electric vehicle (EV) charging and hydrogen, propane, and natural gas fueling infrastructure along national highway system corridors.[1] While the electrification of freight vehicles is generally less advanced than other transportation sectors, charging station networks are an essential element of their continued development and adoption. Given that electric trucks offer significant greenhouse gas emissions reductions per mile compared to diesel vehicles, aligning

[1] https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/index.cfm

long-term truck parking investments with alternative fuel infrastructure is an opportunity to meet the region's truck parking needs while also improving resiliency and limiting the environmental impacts of freight.

FIGURE 3.9 TRUCK PARKING FACILITIES AND ALTERNATIVE FUEL CORRIDORS



Source: GDOT, Georgia Electric Vehicle Infrastructure Deployment Plan, August 2022; Cambridge Systematics, Inc.

TABLE 3.7 INCREASE ACCESS TO SAFE TRUCK PARKING

Name	Type	Description	Key Stakeholders	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
Regional Truck Parking Demand Estimation Study	Policy Strategy	Conduct a study to estimate the truck parking demand generated by new commercial and industrial developments.	**Chatham County, Bryan County, Effingham County, CORE MPO**, GDOT, FHWA	$300,000	Regional Freight Transportation Plan	Tier 2A	Short-term	FHWA Discretionary PL Funds
Incorporate Truck Parking into Traffic Impact Assessments	Policy Strategy	Revise local traffic impact assessment processes to include anticipated truck volumes at a site, the impacts of staging near the site, and the potential for truck parking demand generated farther from the site. The truck parking demand estimates generated from the revised traffic impact assessments can then be used to evaluate parking requirements for new freight-generating developments.	**Chatham County, Bryan County, Effingham County, CORE MPO**, GDOT	$100,000	Regional Freight Transportation Plan	Tier 2A	Short-term	FHWA Discretionary PL Funds
Revise Planning Ordinances and Policies to Include Truck Parking	Policy Strategy	Local governments throughout the region should revise planning ordinances to include on-site truck parking minimums.	**Chatham County, Bryan County, Effingham County, CORE MPO**	Not Applicable	Regional Freight Transportation Plan	Tier 2A	Mid-term	MPO and County Staff Time

Source: CORE MPO Regional Freight Transportation Plan Update, 2023.

*Note: The recommended lead sponsor agency is indicated with **bold** type.

3.6 Improve Freight Network Resiliency

Much of the region, and its multimodal freight network, is at risk to disruption from multiple hazards – namely sea level rise/coastal flooding, riverine flooding, and hurricanes. These hazards place several of the region's major freight terminals at risk to disruption. For example, the Port of Savannah is the most significant freight asset in the region and the State. Its composite risk ranges from "low" to "very high" given the significant amount of land occupied by the port. The three major rail yards in the region are all in risk areas of at least "moderate" combined risk. Out of the 22 truck parking facilities in the region, half are under "very high" risk.

The strategies developed as part of this recommendation, shown in

Table 3.8, aim to help the region improve the resiliency of its multimodal freight network. Strategies include conducting a freight supply chain resilience study and implementing an action plan for handling freight disruptions. Furthermore, both the American Association of State Highway and Transportation Officials (AASHTO) Center for Environmental Excellence[2] and the FHWA Office of Planning[3] offer resources that could help the CORE MPO to improve the region's resiliency.

- **Implement the Natural Resources Strategies Recommended in Plan 2040 – Chatham County-Savannah Comprehensive Plan.** The 2020 Update of the Plan 2040 – Chatham County-Savannah Comprehensive Plan put forth several recommendations to improve the resiliency of the CORE MPO region. For example, Plan 2040 recommended that funding be restored for the Chatham County Resource Protection Commission which acted as a land acquisition program for the protection of high priority habitats. Such a program could be used to acquire and protect natural barriers to flooding, sea level rise, and other negative impacts of climate change. Plan 2040 also recommended that the CORE MPO develop a long-range regional plan for sea level rise that evaluates multiple adaptation and mitigation methods with short, medium, and long-term goals for implementation. These and other recommendations made as part of Plan 2040 should be the first step towards improving the region's resiliency to climate change and extreme weather events.

Source: Google Earth.

- **Conduct an Engineering Informed Vulnerability Assessment for a Selection of Critical Freight Assets.** While the Regional Freight Transportation Plan Update performed a high-level, indicator-based review of resiliency for the multimodal freight network, the next step should be a detailed engineering vulnerability assessment for a selection of critical freight assets. As articulated in the FHWA Vulnerability Assessment and Adaptation Framework, engineering-informed adaptation studies are characterized by a greater level of asset specific data and analysis than a geographically broad assessment that considers

[2] https://environment.transportation.org/

[3] https://www.fhwa.dot.gov/environment/sustainability/

multiple assets.[4] A detailed engineering vulnerability assessment evaluates risks to particular transportation assets in response to climate stressors. The resiliency analysis conducted as part of the Regional Freight Transportation Plan Update may be used as the basis for choosing the selection of freight assets for the more detailed engineering study. These assessments would help the CORE MPO anticipate the effectiveness of specific adaptation measures and their respective return on investment if adopted. Furthermore, this recommendation is consistent with Plan 2040 as it recommended that the region identify and prioritize critical transportation infrastructure according to projected sea level rise impacts for elevation and/or relocation.

- **Supply Chain Resilience Study.** The region should conduct a freight supply chain resilience study to learn more about supply chains that are critical to bringing necessary products and services to the CORE MPO region and how these flows could be slowed or stopped in different situations. The study will analyze the elements of the freight supply chain in the region to identify: (1) the supply chains for critical goods or services; (2) potential effects on these supply chains from different disaster scenarios and disaster scenario combinations; and (3) levels of resiliency in critical freight supply chains. A key outcome of the study will be recommended actions to mitigate impacts and strengthen supply chain resilience.

- I**mplement Action Plan for Handling Disruptions to Freight Assets.** As a next step to the supply chain resilience study, the region should implement the action plan for handling supply chain disruptions as a set of policies for the region's freight system stakeholders and operators. The action plan would identify the entities as well as their roles and responsibilities for managing a supply chain disruption.

Though not presented explicitly as a resiliency strategy, it should be noted that the green infrastructure solutions proposed to mitigate community and environmental impacts would also benefit resiliency. For example, bioswales, planter boxes, street trees and other green infrastructure would improve the region’s resiliency to flooding and climate change.

[4] Federal Highway Administration, Vulnerability Assessment and Adaptation Framework, 3rd ed., December 2017, https://www.fhwa.dot.gov/environment/sustainability/resilience/adaptation_framework/climate_adaptation.pdf.

TABLE 3.8 IMPROVE FREIGHT NETWORK RESILIENCY

Name	Type	Description	Key Stakeholders	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
Implement the Natural Resources Strategies Recommended in Plan 2040 – Chatham County-Savannah Comprehensive Plan	Policy Strategy	The 2020 Update of the Plan 2040 – Chatham County-Savannah Comprehensive Plan put forth several recommendations to improve the resiliency of the CORE MPO region. Recommendations made as part of Plan 2040 should be the first step towards improving the region's resiliency to climate change and extreme weather events.	**CORE MPO, GDOT, Georgia Ports Authority, Chatham County**, Bryan County, Effingham County	Not Applicable	Plan 2040 – Chatham County-Savannah Comprehensive Plan	Tier 2A	Mid-term	MPO, County, GDOT, and GPA Staff Time
Engineering Informed Vulnerability Assessment for a Selection of Critical Freight Assets	Policy Strategy	Conduct a detailed engineering vulnerability assessment for a selection of critical freight assets. A detailed engineering vulnerability assessment evaluates risks to particular transportation assets in response to climate stressors. These assessments would help the CORE MPO anticipate the effectiveness of specific adaptation measures and their respective return on investment if adopted.	**CORE MPO, GDOT, Georgia Ports Authority, Chatham County**, Bryan County, Effingham County	$500,000	Plan 2040 – Chatham County-Savannah Comprehensive Plan	Tier 2A	Mid-term	PROTECT (Discretionary and Formula), FHWA Discretionary PL Funds
Freight Supply Chain Resilience Study	Policy Strategy	Conduct a Freight Supply Chain Resilience Study that analyzes the elements of the freight supply chain in the region and identifies: (1) the supply chains for critical goods or services; (2) potential effects on these supply chains from different disaster scenarios and disaster scenario combinations; and (3) levels of resiliency in critical freight supply chains.	**CORE MPO, GDOT, Georgia Ports Authority, Chatham County**, Bryan County, Effingham County	$500,000	Regional Freight Transportation Plan	Tier 2A	Mid-term	PROTECT (Discretionary and Formula), FHWA Discretionary PL Funds
Implement Action Plan for Handling Disruptions to Freight Assets	Program Strategy	Implement the action plan for handling supply chain disruptions as a set of policies for the region's freight system stakeholders and operators.	**CORE MPO, GDOT, Georgia Ports Authority**, Chatham County, Bryan County, Effingham	Not Applicable	Regional Freight Transportation Plan	Tier 2A	Long-term	MPO, GDOT, and GPA Staff Time

		County, Savannah	

Source: CORE MPO Regional Freight Transportation Plan Update, 2023.

*Note: The recommended lead sponsor agency is indicated with **bold** type.

3.7 Mitigate Freight Impacts on Communities and the Environment

Compared to passenger travel, freight transportation has a higher marginal impact on surrounding communities. This is because of freight transportation's contribution to increased noise, higher emissions, reduced safety (as crash outcomes are typically more severe), infrastructure degradation, and often reduced mobility and accessibility (as freight corridors can act as physical barriers) for the communities adjacent to freight assets. Advancing transportation equity within a freight context is challenging. The benefits of freight are diffuse as they are broadly distributed across geography and stakeholders. Meanwhile, the burdens of freight tend to be localized and disproportionately borne by communities adjacent to freight assets. The strategies presented in Table 3.9 and discussed below focus on providing freight-related benefits to burdened communities while mitigating or avoiding negative impacts.

- **Adopt and Track Freight Equity Indicators.** This strategy defines a set of freight equity indicators that may be tracked over time. Indicators developed in this report include those related to congestion and reliability, freight activity, and safety. By tracking how indicators of freight equity change over time, the region can better identify where its efforts need to be focused and proactively address freight transportation equity concerns. It will also allow the region to gauge how well current efforts are performing.

- **Develop a Freight Equity Analysis and Screening Tool.** This strategy focuses on developing tools for addressing freight equity. For example, the North Jersey Transportation Planning Authority (NJTPA) and the Delaware Valley Regional Planning Commission (DVRPC) employ tools for identifying traditionally underserved populations to aid agency staff and partner agencies in considering equity in their planning and project development processes. LA Metro developed a Rapid Equity Assessment Tool to assist agency staff in identifying and prioritizing equity opportunities. The screening tool consists of a set of questions to be asked and answered before a transportation decision is made. The development and deployment of equity analysis and evaluation screening tools can help the region proactively address freight transportation equity concerns.

- **Partner with Chatham Area Transit (CAT) to Incorporate Industrial Hubs into the Transit Strategy.** Under this strategy, the CORE MPO would partner with CAT to include industrial employment centers in the region's transit strategy. Options may include fixed route service, vanpools, and on-demand transit services. The inclusion of industrial employment hubs advances freight equity in the region by connecting residents of Historically Disadvantaged communities to employment opportunities.

GDOT GREEN INFRASTRUCTURE ON I-20

Source: GDOT; City of Atlanta Department of Watershed Management.

- **Install Green Infrastructure along Freight Routes and in Industrial Hubs.** This strategy would incorporate green infrastructure such as

bioswales, planter boxes, and street trees into freight corridors to help filter roadway surface pollutants from stormwater runoff before they enter water bodies. They also generally serve as another layer of flooding control for freight corridors. Green infrastructure can also help to preserve existing, aging gray infrastructure (e.g., curbs, gutters, pipes) as green infrastructure would divert some stormwater before it enters those systems. While this recommendation is shown as a policy strategy, if the region identifies a corridor for deploying green infrastructure and moves forward with implementation, the project would be eligible for federal funding under the PROTECT Program.

- **Estimate and Monitor Transportation Emissions to Support Mobility 2045 Environmental Goals.** Two key environmental objectives from Mobility 2045 were to reduce emissions and energy consumption. To support these objectives, the CORE MPO should consider estimating and monitoring transportation emissions on a periodic basis. This would allow the CORE MPO to periodically assess and (as necessary) adjust its initiatives to reduce vehicle-miles traveled, thereby reducing transportation emissions. The Drawdown Georgia Project is a statewide initiative consisting of partners from the philanthropic/non-profit sector, public sector, education, and the private sector whose goal is to accelerate progress toward net zero greenhouse gas emissions.[5] As part of this initiative, the Drawdown Georgia Project created the Georgia GHG Emissions Tracker[6] which estimates and monitors GHG emissions at the county level. This tool could serve as the basis for the CORE MPO to develop its own tool for monitoring transportation emissions in the region.

[5] https://www.drawdownga.org/about-us/

[6] https://drawdownga.gatech.edu/docs/

TABLE 3.9 MITIGATE FREIGHT IMPACTS ON COMMUNITIES AND THE ENVIRONMENT

Name	Type	Description	Key Stakeholders	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
Adopt and Track Freight Equity Indicators	Program Strategy	Define and track over time a set of freight equity indicators so that the region may assess freight equity impacts, identify areas of need, and proactively address freight transportation equity issues.	**CORE MPO**, Chatham County, Bryan County, Effingham County, Savannah	Not Applicable	Regional Freight Transportation Plan	Tier 2A	Mid-term	MPO Staff Time
Develop a Freight Equity Analysis Screening Tool	Policy Strategy	Develop and deploy a freight equity analysis and evaluation screening tool to help the region proactively address freight transportation equity concerns.	**CORE MPO**, Chatham County, Bryan County, Effingham County, Savannah	Not Applicable	Regional Freight Transportation Plan	Tier 2A	Mid-term	MPO Staff Time
Partner with Chatham Area Transit (CAT) to Incorporate Industrial Hubs into Transit Routes	Program Strategy	Partner with CAT to include industrial employment centers in the region's transit strategy.	**Chatham Area Transit, CORE MPO**, Chatham County, Bryan County, Effingham County, Savannah	Not Applicable	Regional Freight Transportation Plan	Tier 2A	Mid-term	MPO and CAT Staff Time
Estimate and Monitor Transportation Emissions to Support Mobility 2045 Environmental Goals	Policy Strategy	The CORE MPO should consider estimating and monitoring transportation emissions on a periodic basis. This would allow the CORE MPO to periodically assess and (as necessary) adjust its initiatives to reduce vehicle-miles traveled, thereby reducing transportation emissions. The Drawdown Georgia Project's Georgia GHG Emissions Tracker tool could serve as the basis for the CORE MPO to develop its own tool for monitoring transportation emissions in the region.	**CORE MPO**, Chatham County, Bryan County, Effingham County, Savannah	Not Applicable	Regional Freight Transportation Plan	Tier 2A	Mid-term	MPO Staff Time
Install Green Infrastructure along Freight Routes and in Industrial Hubs	Policy Strategy	Incorporate green infrastructure such as bioswales, planter boxes, and street trees into the design of freight corridors.	**CORE MPO, GDOT**, Chatham County, Bryan County,	Not Applicable	Regional Freight Transportation Plan	Tier 2A	Mid-term	MPO and GDOT Staff Time

	Effingham County, Savannah

Source: CORE MPO Regional Freight Transportation Plan Update, 2023.

*Note: The recommended lead sponsor agency is indicated with **bold** type.

3.8 Integrate Freight Considerations into Land Use Planning

The rapid pace of land development in the CORE MPO region and the significant extent to which much of this ongoing and future development is likely to be freight-intensive in nature requires an evolving approach to land-use policymaking. To be successful in accommodating continued economic development while supporting the quality of life of its residents, this approach must holistically consider the ways in which freight transportation impacts the region while bringing stakeholders to the table to advance strategies to mitigate these impacts. To meet this need, the RFTP recommends that the region adopt a Freight-Efficient Land Use (FELU) approach to land use policies and practices. The driving goal of FELU policies are to reduce conflicts between freight and non-freight uses in a region while supporting freight-intensive uses as an important avenue for future regional economic growth and development.

FELUs are governed by five principles:

1. Minimize the private and external costs of supply chains and their stages.
2. Reduce the distance traveled at supply chain stages, upstream and downstream.
3. Mitigate or eliminate the externalities at supply chain nodes and Large Traffic Generators (LTGs).
4. Recognize and account for local conditions.
5. Engage all stakeholders.

The remainder of this section proposes a range of policy and programmatic solutions to guide freight-intensive land uses such that the region continues to reap the economic benefits from freight-intensive industries while mitigating their impacts. There are three major themes under which the land use recommendations are organized:

1. Update Land Use Strategies Utilizing FELU Principles
2. New Regional Approaches to Planning
3. Proactive Policymaking to Anticipate Emerging Needs

These recommendations are listed in

Table 3.10 discussed in further detail below.

- **Update Land Use Strategies Using FELU Principles.** The first group of recommendations aims to reconsider the land-use strategies recommended in the prior RFTP by viewing them through the lens of Freight Efficient Land Use principles while updating them to reflect changing regional conditions.
  - **Support Freight-Intensive Use Clustering, Infilling, and Right-of-Way Reservation.** Support infill development at existing freight clusters and promote the reuse or redevelopment of legacy freight facilities to meet emerging needs. This strategy should take priority over greenfield development of major freight-generating facilities and should emphasize the need to retain existing land for freight-intensive uses given the projected future demand for these uses. Regulations make it difficult to

proactively bank land (i.e., purchase land and prohibit condemnations) unless there is a programmed project that is underway. Alternatively, as part of new developments the region should require reserved right of way that developers must not build on, that state and local partners can purchase at a later date for purposes of making transportation network improvements. The creation or expansion of freight clusters should happen only where significant freight transportation capacity already exists, such as along major highways, interstates, and rail lines. Where direct rail access does not exist, the feasibility of creating dedicated rail spurs to serve especially freight-intensive clusters should be explored.

– **Discourage Greenfield Freight Development Except for Specific Strategic Sites.** Strategically locate greenfield development at sites that have both direct rail and interstate access. Where greenfield development occurs, uses that directly support each other (e.g., the Hyundai Metaplant and its regional parts suppliers) should be co-located, rather than spread across greenfield development sites throughout the region. Such a strategy has the potential to limit truck vehicle-miles traveled (thereby reducing emissions and congestion). Several recommendations in Plan 2040 are consistent with, and mutually supportive of, this recommendation. For example, Plan 2040 recommended the implementation more stringent development standards to conserve undeveloped land and preserve open space areas to improve the region's resiliency and guard it against the impacts of climate change.

Greenfield development without significant strategic value should be avoided, especially for isolated freight-intensive users that have the potential to be sited at infill, redevelopment, or brownfield sites within existing freight clusters. Generally, cities and counties use growth management policies to discourage greenfield development and direct development to more appropriate sites. Growth management policies are implemented through regulatory tools such as design standards, comprehensive plans, zoning ordinances (that are ideally aligned with comprehensive plans), and development exactions, among others. For example, revised subdivision regulations are a useful tool as they strengthen existing regulations to require governments to adopt a structured process for considering impacts on the natural environment and wildlife habitats before land is allowed to be subdivided. Often, the subdivision of a large tract of land is one of the first steps in the development of a greenfield site.

Source: Georgia Ports Authority.

Another tool to discourage greenfield development is a transfer of development rights (TDR) program. Transfer of Development Rights (TDR) programs use zoning to allow owners of land in areas to be preserved (i.e., "sending districts") to sever the development rights from their property and transfer those rights to owners of property located in areas where higher intensity development is encouraged (i.e., "receiving districts"). Essential components of a TDR program include a designated preservation area (sending zone), a designated growth area (receiving zone),

development rights that can be severed from the land, and a procedure for transferring development rights between properties. The Cities of Milton[7] and Madison[8], GA are examples of areas that have implemented TDR programs to discourage greenfield development of valuable farmland, habitat, and environmentally sensitive land while encouraging growth in the areas suitable for denser development.

- **New Regional Approaches to Planning.** The second group of recommendations encourages the region to move beyond existing processes and methods to create a toolbox that positions the region to address the pressing needs resulting more fully from increasing freight-intensive development.

  - **Develop a Freight-Efficient Land Use (FELU) Plan.** The development of a FELU plan is foundational for advancing planning in the region at the intersection of land use and freight transportation. A FELU plan should outline a long-run vision and set of goals for the region that guide land use in a way that improves freight efficiency. It should provide a framework for the region to navigate freight-related land use challenges in a way that is adaptable to changing future conditions. Also, it should provide a set of solutions that advance freight-efficient land uses in the region. Furthermore, the FELU Plan should also investigate the appropriateness of housing near freight clusters and accessibility for the workers on which freight-dependent industries rely.

  - **Encourage Consistent Land Use Categories.** Consistent land use categories at the county and municipal level would allow for more effective and coordinated land use planning across the region. Importantly, new land use categories should account for traditional freight-generating land use categories, such as industrial, and also non-traditional categories such as retail, accommodations, and food services uses. Future land use planning in the region should more fully recognize these non-traditional freight-generating land uses as important parts of the freight ecosystem and ensure that zoning codes reflect the impacts of these uses by appropriately siting and regulating them. Without a standardized approach to categorizing and regulating freight-intensive land uses in the region, planning for these uses across the three-county area will continue to be burdened by a patchwork of approaches that do not adequately communicate with or complement each other.

- **Proactive Policymaking to Anticipate Emerging Needs.** The third and final group of recommendations seeks to anticipate the future demands that freight-intensive land uses will place on the region's transportation system and consider ways in which these stressors might be mitigated through proactive land-use policymaking.

  - **Study the Impacts of Potential Industrial Expansion into South Carolina.** With increased freight-related development in the study area as well as the planned Georgia Ports Authority development of new facilities on Hutchinson Island, there is potential for freight-oriented growth to begin to shift into Jasper County, South Carolina - particularly along I-95 and US 17. The region should be proactive and perform a study of the potential land use and traffic impacts of increased industrial growth in this area on the CORE MPO region.

  - **Encourage Community Improvement Districts to Support Freight Operations and Address Challenges in Freight Clusters.** Foster the creation community improvement districts (CID)

[7] https://www.miltonga.gov/government/community-development/land-conservation/transfer-of-development-rights-program#:~:text=Transfer%20of%20Development%20Rights%20(TDR)&text=The%20program%20allows%20landowners%20the,a%20different%20parcel%20of%20land.

[8] https://www.madisonga.com/626/Transfer-of-Development-Rights-TDR-Progr

centered on freight clusters to create a mechanism for freight-intensive users to fund improvements to regional infrastructure and to mitigate impacts to surrounding communities. In addition to providing a new funding stream, CIDs provide a path for implementing freight system improvements faster while giving freight users a more prominent seat at the table in prioritizing such projects. Example uses of these funds could be to improve buffers between freight-intensive and other land uses, maintain roadways, and invest in safety-related infrastructure at locations with high numbers of truck-involved crashes.

TABLE 3.10 INTEGRATE FREIGHT CONSIDERATIONS INTO LAND USE PLANNING

Name	Type	Description	Key Stakeholders	Cost	Source(s)	Tier	Implementation Time Frame	Funding Source(s)
Support Freight-Intensive Use Clustering, Infilling, and Right-of-Way Reservation	Program Strategy	Support infill development at existing freight clusters, promote the reuse or redevelopment of legacy freight facilities to meet emerging needs, and where possible reserve right-of-way adjacent to existing freight clusters for future freight network improvements.	**CORE MPO**, Chatham County, Bryan County, Effingham County	Not Applicable	Regional Freight Transportation Plan	Tier 2A	Mid-term	MPO Staff Time
Discourage Greenfield Freight Development Except for Specific Strategic Sites	Policy Strategy	Discourage greenfield freight-related development except for sites that currently have (or will have as part of the development) direct rail and/or interstate access.	**CORE MPO**, Chatham County, Bryan County, Effingham County	Not Applicable	Regional Freight Transportation Plan	Tier 2A	Mid-term	MPO Staff Time
Develop a Regional Freight Efficient Land Use Plan	Policy Strategy	Develop a FELU plan that provides a framework for improving freight efficiency and helping the region to navigate current and future freight-related land use challenges.	**CORE MPO, Chatham County, Bryan County, Effingham County**, GDOT, FHWA	$350,000	Regional Freight Transportation Plan	Tier 2A	Short-term	FHWA Discretionary PL Funds
Encourage Consistent Land Use Categories	Policy Strategy	Encourage consistent land use categories at the county and municipal level to allow for more effective and coordinated land use planning across the region.	**CORE MPO**, Chatham County, Bryan County, Effingham County	Not Applicable	Regional Freight Transportation Plan	Tier 2A	Mid-term	MPO Staff Time
Study the Impacts of Potential Industrial Expansion into South Carolina	Policy Strategy	There is potential for freight-oriented growth to begin to shift into Jasper County, South Carolina. Study the potential land use and traffic impacts to the region of industrial expansion into Jasper County, South Carolina.	**CORE MPO, Chatham County, Bryan County, Effingham County**, GDOT, FHWA	$350,000	Regional Freight Transportation Plan	Tier 2A	Mid-term	FHWA Discretionary PL Funds
Encourage Community Improvement Districts to Support Freight Operations and Address	Program Strategy	Foster the creation of community improvement districts (CID) centered on freight clusters to create a new mechanism for funding and implementing freight system improvements.	**Savannah Economic Development Authority, Effingham County Industrial Development**	Not Applicable	Regional Freight Transportation Plan	Tier 2A	Short-term	MPO Staff Time

Challenges in Freight Clusters	**Authority, Development Authority of Bryan County, Savannah Harbor-Interstate 16 Corridor Joint Development Authority**, Chatham County, Bryan County, Effingham County, CORE MPO

Source: CORE MPO Regional Freight Transportation Plan Update, 2023.

*Note: The recommended lead sponsor agency is indicated with **bold** type.

3.9 Potential Funding Sources

Transportation funding for projects in the region can come from a number of sources including federal programs, state programs, and funds raised locally within the region. Importantly, in November 2022 the Infrastructure Investment and Jobs (IIJA) Act was passed which authorized multiple new formula and discretionary transportation funding programs for fiscal years 2022 through 2026. This section of the report discusses the funding opportunities available to the region for implementing the recommendations discussed earlier.

Federal Funding Sources

Federal Formula Funding

Federal formula funding programs allocate funding to recipients based on formulas set by Congress. USDOT distributes these funds states, federally recognized tribal entities, and transit agencies. Those funds are then further allocated to counties, cities, and other localities. Federal formula programs that are relevant to the Regional Freight Transportation Plan include the National Highway Freight Program (NHFP), National Highway Performance Program (NHPP), and the Surface Transportation Block Grant Program (STBG).

Formula funds are distributed across Georgia by Congressional District and are allocated proportional to population.[9] Funding is divided between MPO and non-MPO areas. For projects to be eligible for federal formula funding, they must be included in the Transportation Improvement Program (TIP). Additionally, most federal formula funding requires matching funds (typically at least 20 percent of the project cost) from state, local, or private sources.

Furthermore, Georgia sets aside a portion of federal formula funding for eleven groups of projects that do not substantially increase roadway capacity – Lump Sum funding. The Lump Sum projects program is intended to allow the State and MPOs to address projects of immediate concern while fulfilling the requirements of the Statewide Transportation Improvement Program (STIP). Funds are set up in lump sum banks to undertake improvements that emerge and are developed after the STIP is approved. Projects must be included in the STIP to be eligible for Lump Sum funding. Table 3.11 summarizes the lump sum funding programs. Several of these programs are relevant for the recommendations proposed in Chapter 3.

[9] Georgia Department of Transportation, Statewide Transportation Improvement Program: FY 2021-2024, https://www.dot.ga.gov/InvestSmart/STIP/FY21-24/DRAFTSTIP-FY21-24_v2.pdf

TABLE 3.11 LUMP SUM FUNDING PROGRAMS

Lump Sum Program	Description
Transportation Enhance Program	Non-traditional projects that strengthen the cultural, aesthetic, and environmental aspects of the intermodal transportation system
Transportation Alternatives Program	Non-motorized transportation improvements including pedestrian and bicycle facilities, environmental mitigation, and safe routes to school among others
Maintenance	Roadway and bridge resurfacing, preservation, and rehabilitation
Lighting	Projects that install new or upgraded lighting systems
Rights-of-Way – Protective Buying and Hardship Acquisitions	Acquisition of ROW for future projects that are in jeopardy of development
Safety	Projects that improve rail crossing or roadway safety
Operations	Projects that provide traffic signal upgrades or operational improvements at intersections and interchanges
Wetland Mitigation	Wetland enhancement, restoration, or preservation
Low Impact Bridges	Projects that minimize the impact of bridges and streamline their delivery
Freight Operations	Projects that improve roads and bridges heavily traversed by trucks, address safety issues, and enhance the efficiency of freight movements
Rural Development	Safety and broadband improvements in rural areas

Source: Cambridge Systematics.

National Highway Performance Program (NHPP)

The Infrastructure Investment and Jobs (IIJA) Act continues the NHPP which was initially established under MAP-21 and continued under the FAST Act. The NHPP provides support for the condition and performance of the National Highway System (NHS) – which includes the interstate system, principal arterials, intermodal connectors for motor vehicles, and highways important to U.S. defense (STRAHNET) – and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan. As such, funds from this source can be put towards either new facilities or maintenance of existing facilities, with an emphasis on ensuring that performance measures on NHS roadways are met (pavement quality, bridge, quality, etc.). The NHPP is also intended to provide support for activities to increase the resiliency of the NHS to sea level rise, extreme weather events, flooding, wildfires, or other natural disasters. For fiscal years 2022 – 2026, NHPP funds are projected to be over $4.8 billion for Georgia.[10]

Surface Transportation Block Grant (STBG)

The Surface Transportation Block Grant (STBG) program has the most flexible eligibilities among all Federal-aid highway programs. In fiscal years 2022-2026, there is projected to be over $2.3 billion for Georgia. [11] There are fewer limitations on these funds as they can be applied to any project that satisfies any number of categories such as bridge and tunnel, pedestrian and bicycle, transit capital, and federal-aid highways. In general, funds from the STBG program may not be applied to local roads or rural minor collectors.

[10] Federal Highway Administration, Bipartisan Infrastructure Law – Funding, https://www.fhwa.dot.gov/bipartisan-infrastructure-law/funding.cfm, Accessed 8/20/2023.

[11] Ibid.

Exceptions to that rule that may impact the region include projects that include, among others, infrastructure-based ITS capital improvements, truck parking facilities, and electric vehicle charging infrastructure.[12]

Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) is another of the Federal-aid highway programs. It focuses on projects that improve safety on all public roads. This program is projected to have nearly $507million for Georgia for fiscal years 2022-2026.[13] Alongside this program, each state must create performance measures for the upcoming year that relate to:

- The number of fatalities;
- The number of serious injuries;
- Fatality rate per hundred million vehicle miles traveled;
- Serious injury rate per hundred million vehicle miles traveled; and
- The number of non-motorized fatalities and serious injuries.

Funds from the HSIP must be directed to projects that help the state meet these performance measures. In addition, projects must be consistent with each state's Strategic Highway Safety Plan (SHSP).[14] HSIP funds represent an opportunity for implementing safety improvements in the region, especially for freight corridors with relatively high crash rates and severe outcomes.

Congestion Mitigation and Air Quality (CMAQ) Improvement Program

The Congestion Mitigation and Air Quality (CMAQ) Program is a Federal-aid program that may be used for projects that improve congestion and air quality within a state. Within each state, extra money is apportioned to non-attainment areas which are defined as those areas that do not meet Federal standards for air quality due to levels of particulate matter, ozone, or other pollutants. Potential projects eligible for CMAQ funds include intelligent transportation systems, bicycle and pedestrian facilities, transit improvements, travel demand management programs, idle reduction/advanced truck technology programs, among others. In fiscal years 2022-2026, Georgia is projected to receive over $385 million in CMAQ dollars. [15] The IIJA continued all prior CMAQ eligibilities and added four new eligibilities, two of which are potentially relevant to the Regional Freight Transportation Plan.[16] It added the purchase of diesel replacements, or medium-duty or heavy-duty zero emission vehicles and related charging equipment, as an eligible project. Also, IIJA added vehicle refueling infrastructure projects that would reduce emissions from nonroad vehicles and nonroad engines used in construction projects or port-related freight operations.

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[12] Federal Highway Administration, Surface Transportation Block Grant Program Implementation Guidance, June 1, 2022, https://www.fhwa.dot.gov/specialfunding/stp/bil_stbg_implementation_guidance-05_25_22.pdf

[13] Federal Highway Administration, Bipartisan Infrastructure Law – Funding, https://www.fhwa.dot.gov/bipartisan-infrastructure-law/funding.cfm, Accessed 8/20/2023.

[14] Federal Highway Administration, Highway Safety Improvement Program Fact Sheet, February 8, 2022, https://www.fhwa.dot.gov/bipartisan-infrastructure-law/hsip.cfm

[15] Federal Highway Administration, Bipartisan Infrastructure Law – Funding, https://www.fhwa.dot.gov/bipartisan-infrastructure-law/funding.cfm, Accessed 8/20/2023.

[16] Federal Highway Administration, Congestion Mitigation and Air Quality Improvement Program Fact Sheet, February 8, 2022, https://www.fhwa.dot.gov/bipartisan-infrastructure-law/cmaq.cfm

Transportation Alternatives (TA)

The Transportation Alternatives Set-Aside is a subset of the Surface Transportation Block Grant Program that provides money for transportation alternatives, such as pedestrian/bicycle facilities, streetscapes, safe routes to school, vulnerable road user safety assessments, and other smaller-scale transportation projects. Though this federal funding program is generally less relevant for freight-oriented projects, it can be an important source of funding for safety and active transportation improvements on corridors that are shared by freight and other roadway users. For fiscal years 2022-2026, approximately $135 million will be allocated to Georgia from this program.[17] Federal regulations require state DOTs or MPOs to administer Transportation Alternatives funds through a competitive process.[18]

National Highway Freight Program (NHFP)

The IIJA Act continues the National Highway Freight Program, which was established under the FAST Act. The purpose of the National Highway Freight Program is to improve the efficient movement of freight on the National Highway Freight Network (NHFN) and support several goals, including:

- Investing in infrastructure and operational improvements that strengthen economic competitiveness, reduce congestion, reduce the cost of freight transportation, improve reliability, and increase productivity;
- Improving the safety, security, efficiency, and resiliency of freight transportation in rural and urban areas.
- Improving the state of good repair of the NHFN.
- Using innovation and advanced technology to improve NHFN safety, efficiency, and reliability.
- Improving the efficiency and productivity of the NHFN.
- Improving State flexibility to support multi-State corridor planning and address highway freight connectivity.
- Reducing the environmental impacts of freight movement on the NHFN.

Generally, NHFP funds must contribute to the efficient movement of freight on the NHFN and be identified in a freight investment plan included in the State's freight plan. For fiscal years 2022 – 2026, NHFP funds are projected to be over $233 million for Georgia.[19]

Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Formula Funding and Discretionary Grant Program

The PROTECT Program provides both formula funds and discretionary funds via a competitive grant program. It funds projects that address the climate crisis by improving the resilience of the surface transportation system, including highways, public transportation, ports, and intercity passenger rail.[20] Projects selected under this program should support the continued operation or rapid recovery of crucial

[17] Georgia Department of Transportation, Statewide Transportation Improvement Program: FY 2021-2024, Hwy Table 2, https://www.dot.ga.gov/InvestSmart/STIP/FY21-24/DRAFTSTIP-FY21-24_v2.pdf

[18] Federal Highway Administration, Transportation Alternatives Program Fact Sheet, February 8, 2022, https://www.fhwa.dot.gov/bipartisan-infrastructure-law/ta.cfm

[19] Federal Highway Administration, Bipartisan Infrastructure Law – Funding, https://www.fhwa.dot.gov/bipartisan-infrastructure-law/funding.cfm, Accessed 8/20/2023.

[20] https://www.fhwa.dot.gov/environment/protect/discretionary/

local, regional, or national surface transportation facilities. Furthermore, projects funded under this program should utilize innovative and collaborative approaches to risk reduction, including the use of natural infrastructure strategies. Natural infrastructure strategies are those that use conservation, restoration, or construction of marshes, wetlands, native vegetation, stormwater bioswales, and other riparian and streambed treatments to reduce flood risks, erosion, and heat impacts among other benefits. For fiscal years 2022 – 2025, PROTECT formula funds are projected to be nearly $240 million for Georgia.[21]

Other Federal Formula Funding Programs

Other federal formula funding programs that are potentially relevant to the Regional Freight Transportation Plan are summarized in Table 3.12. These programs are tend to be less relevant for freight projects, or generally provide far fewer funds than those discussed in the previous section. However, they are potential sources of funding for the Regional Freight Transportation Plan recommendations.

TABLE 3.12 SUMMARY OF OTHER FEDERAL FORMULA FUNDING PROGRAMS

Federal Formula Funding Program	Description
Carbon Reduction Program	Aimed to reduce transportation emissions, eligible projects establish or operate traffic monitoring, management, and control facility or program.
National Electric Vehicle Infrastructure Program	This program makes available funding to deploy charging facilities and establish an interconnected network to facilitate data collection.
Railway-Highway Crossings Program (RHCP)	This is a set aside from HSIP and provides funds for safety improvements to reduce the number of fatalities, injuries, and crashes at public railway-highway grade crossings.

Source: Cambridge Systematics.

Federal Discretionary Grant Funding

Discretionary grant funding is federal funding that is provided on a competitive basis upon a call for projects (i.e., a Notice of Funding Opportunity or NOFO). Projects must compete for funds with discretionary grant programs, requiring applicants to use all the data, tools, and resources available to make their most compelling cases for selecting their project. As such, pursuing a federal discretionary grant can be resource-intensive with states and MPOs typically reserving such pursuits for the highest priority projects with broad support. Federal discretionary grant programs that are potential funding sources for projects are discussed in the remainder of this section. Note that this discussion does not provide an exhaustive list of all federal discretionary grant programs, but instead focuses on those that are most relevant for the Regional Freight Transportation Plan.

Nationally Significant Multimodal Freight and Highway Projects Program (INFRA)

The Nationally Significant Multimodal Freight and Highway Projects (INFRA) Grants Program is a federally funded competitive grant program for multimodal freight and highway projects of national or regional significance to improve the safety, efficiency, and reliability of the movement of freight and people in and across rural and urban areas. The minimum grant size is $5 million. Key competitiveness factors for a project include its economic vitality, its leverage (with special attention given to public-private partnerships), its

[21] Federal Highway Administration, Bipartisan Infrastructure Law – Funding, https://www.fhwa.dot.gov/bipartisan-infrastructure-law/funding.cfm, Accessed 8/20/2023.

innovation, and its performance. Relevant to the Regional Freight Transportation Plan, eligible projects include those on the National Highway Freight Network or National Multimodal Freight Network, projects at railway-highway grade crossings, or freight intermodal projects.[22]

National Infrastructure Project Assistance (MEGA) Grant Program

The MEGA Program (the National Infrastructure Project Assistance program) supports large, complex projects that are difficult to fund by other means and likely to generate national or regional economic, mobility, or safety benefits.[23] Eligible projects include:

- A highway or bridge project on the National Multimodal Freight Network.
- A highway or bridge project on the National Highway Freight Network.
- A highway or bridge project on the National Highway System.
- A freight intermodal (including public ports) or freight rail project that provides public benefit.
- A railway highway grade separation or elimination project.
- An intercity passenger rail project.
- A public transportation project that is eligible under assistance under Chapter 53 of title 49 and is a part of any of the project types described above.

Rural Surface Transportation Grant Program (RSTP)

The Rural Surface Transportation Grant Program supports projects that improve and expand the surface transportation infrastructure in rural areas to increase connectivity, improve the safety and reliability of the movement of people and freight, and generate regional economic growth and improve quality of life.[24] Eligible projects include:

- A highway, bridge, or tunnel project eligible under National Highway Performance Program.
- A highway, bridge, or tunnel project eligible under Surface Transportation Block Grant.
- A highway, bridge, or tunnel project eligible under Tribal Transportation Program.
- A highway freight project eligible under National Highway Freight Program.
- A highway safety improvement project, including a project to improve a high-risk rural road as defined by the Highway Safety Improvement Program.
- A project on a publicly owned highway or bridge that provides or increases access to an agricultural, commercial, energy, or intermodal facility that supports the economy of a rural area.

[22] https://www.transportation.gov/grants/infra-grant-program

[23] https://www.transportation.gov/grants/mega-grant-program

[24] https://www.transportation.gov/grants/rural-surface-transportation-grant-program

- A project to develop, establish, or maintain an integrated mobility management system, a transportation demand management system, or on-demand mobility services.

Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program

The RAISE Program, previously known as Better Utilizing Investments to Leverage Development (BUILD) Program, is a federally funded competitive grant program.[25] In 2023, the program gave out more than $2.2 billion worth of grants to 162 different transportation infrastructure projects. In comparison to the INFRA program, RAISE program grants can generally be used to fund a wider variety of projects. Criteria that are used to evaluate projects include safety, economic competitiveness, environmental sustainability, quality of life, and innovation.

Railroad Crossing Elimination (RCE) Grant Program

This program is administered through the Federal Railroad Administration and provides funding for highway-rail or pathway-rail grade crossing improvement projects that focus on improving the safety and mobility of people and goods. Specifically, eligible projects include:

- Grade separation or closure, including through the use of a bridge, embankment, tunnel, or combination thereof;
- Track relocation;
- Improvement or installation of protective devices, signals, signs, or other;
- Measures to improve safety related to a separation, closure, or track relocation project;
- Other means to improve the safety if related to the mobility of people and goods at highway-rail grade crossings (including technological solutions);
- The planning, environmental review, and design of an eligible project type.

Chatham County received funding from the RCE Program in fiscal year 2022 for planning and project development for a track relocation and one grade separation near the Port of Savannah. Given the prevalence of at-grade crossings throughout the region, this discretionary funding program is especially relevant for the region.

Innovative Technology Deployment (ITD) Program

The ITD Program (formerly known as CVISN) provides an additional funding source for truck parking projects through the Federal Motor Carrier Safety Administration High-Priority—ITD Grant. Historically, the ITD Program has focused on commercial vehicle enforcement with funds supporting three deployment areas: electronic credentialing, safety information exchange, and electronic screening. The FY2018, 2019, and 2020 grant cycles highlight truck parking as a priority project area for States that have achieved Core Compliance in the Program.20 Projects should demonstrate real-time truck parking availability information dissemination to drivers using dynamic message signs, interactive voice recognition, smartphone applications, or other proven technology. Projects are funded at an 85 percent Federal/15 percent State match level. Washington DOT's Traffic Operations Division, in collaboration with the University of

[25] https://www.transportation.gov/RAISEgrants

Washington STAR Lab, received a $2.3M ITD grant in 2021 to deploy TPIMS at existing weigh stations and rest areas along I-5 and I-90 (470 stalls at 28 locations).

State Funding Sources

State Motor Fuel Tax and State Bonds

The largest state source of funding for transportation improvement projects in Georgia is from taxes on fuel and state-issued bonds. For fiscal years 2021-2024, the State is projected to have approximately $2.91 billion available from these sources.[26] This money is only eligible to be spent on road and bridge projects, per the constitution of Georgia. GDOT programs such as the Local Maintenance and Improvement Grant (LMIG) Program and the Quick Response Project Program are examples of funding sources for the maintenance of local and state roads. Additionally, a large portion of state motor fuel taxes are used to provide matching funds required for accessing federal funding sources.

Georgia Transportation Infrastructure Bank (GTIB)

The Georgia Transportation Infrastructure Bank is a program that provides grants and low-interest loans for transportation projects.[27] It is run by the State Road & Tollway Authority (SRTA) and the funds generally come from the state motor fuel tax, so projects submitted must be related to roads and bridges. Up to $14.5 million in funds will be awarded in 2023. Applications are evaluated based on the following criteria:

- Transportation Merit: Projects that advance a clear transportation need, produce a strong public benefit, and improve mobility, congestion, connectivity, system efficiency and/or safety.
- Project Specifics: Projects that provide a higher degree of non-state matching funds and projects that are close to and/or at the construction phase of the project.
- Economic Merit: Projects that provide direct economic benefits to the local community, region and/or state and may include a reduction in unemployment, attraction of new business to the state, growth in private-sector employment, and/or improved access to jobs.

Local and County Funding Sources

Special-Purpose Local-Option Sales Tax

Special-Purpose Local-Option Sales Taxes (SPLOST) have been utilized in the region since 1985. A SPLOST is an optional one percent county sales tax used to fund capital outlay projects proposed by the county government and participating qualified municipal governments.[28] In general, county and municipal governments may not use SPLOST proceeds for operating expenses or maintenance of a SPLOST project or any other county or municipal facility or service. Furthermore, SPLOST referendums require a pre-

[26] Georgia Department of Transportation, Statewide Transportation Improvement Program: FY 2021-2024, Hwy Table 2, https://www.dot.ga.gov/InvestSmart/STIP/FY21-24/DRAFTSTIP-FY21-24_v2.pdf

[27] https://srta.ga.gov/gtib/

[28] Association of County Commissioners of Georgia, *Special Purpose Local Option Sales Tax: A Guide for County Officials*, 6th ed., https://www.accg.org/library/legal/SPLOST%202016.pdf

approved project list on which to vote. Bryan, Chatham, and Effingham Counties have passed SPLOST referendums over the years.

County and local governments may choose to dedicate a SPLOST to a particular type of capital outlay project such as education or transportation. When a SPLOST is dedicated to transportation, a so-called T-SPLOST, revenue generated from the sales tax goes toward transportation-related projects including bridges, resurfacings, intersections, road widenings, sidewalks, and more. The most recent T-SPLOST referendum in Chatham County did not pass, but both Bryan and Effingham Counties have recently passed T-SPLOST referendums that are still ongoing. A SPLOST or T-SPLOST can be a critical funding source for the local match required of federally funded projects.

Community Improvement Districts

Community Improvement Districts (CIDs) represent a new transportation funding opportunity for the region. CIDs are special purpose, autonomous, nonprofit, public-private partnerships with the power to self-tax industrial and commercial property owners within their districts and pool those funds for public improvement projects (e.g., roadway capacity or operations, active transportation infrastructure, beautification, public safety, etc.).[29] CIDs are created under the authority of the Constitution of Georgia. To create a CID, there must be an enabling act by the city or county where it is located. A petition must be signed by a majority of property owners representing at least 75 percent of the property value and a map must be drawn up of the proposed district. Next, the city or county must pass a resolution approving the creation of the CID. Once a CID is formed, it sets the fees for commercial properties in the district which are usually between three and five mills ($3 to $5 per $1,000 of appraised property value). Fees are collected with regular property tax payments by the tax commissioner who then sends them to the CID. Single-family and multifamily residential properties, as well as tax-exempt properties, are exempt from CID fees.

The CID model provides significant resources for advancing transportation priorities as they are often more flexible and nimbler than local governments working alone. CIDs allow private commercial property owners to self-invest in transportation and other projects that are most important to the local community.[30] Additionally, CIDs are often successful in attracting outside investment. It was estimated that that on average, for every dollar spent by CIDs, five more dollars are leveraged in outside funding.[31] CIDs also provide mechanisms to receive grants and matching funding from state and federal agencies to support development initiatives as well as provide local matching funds for federally funded projects.

3.10 Other Action Steps

Identifying essential stakeholders, determining project lead/sponsor agencies, and identifying potential funding sources are critical items for implementing the recommendations presented in sections 3.1 to 3.8. However, there are other action steps that the region should take to begin advancing these recommendations. Those action items for each recommendation category are discussed below.

Advance Strategic Expansions to Capacity and Proactively Increase Network Connectivity in Emerging Freight Clusters

[29] https://www.fhwa.dot.gov/ipd/pdfs/value_capture/strategies_in_practice/ga_community_improvement_districts.pdf

[30] https://www.raineyandvaughan.com/community-improvement-districts.html

[31] Center for Quality Growth & Regional Development, Georgia Institute of Technology; Lexicon Strategies. *Ready for the Smart(er) City: How Community Improvement Districts (CIDs) are Building the Future*. February 2021.

1. Add high-ranking projects within the MPO's boundaries to the transportation improvement program (TIP). For all high-ranking projects, inside or outside MPO boundaries, coordinate with the region's counties to add those projects to the next SPLOST.

2. Begin positioning high-priority projects for competitive grant and other funding. This includes gathering support from local and state officials, using travel demand or other modeling tools (as appropriate) to develop detailed estimates of projects' transportation impacts, and conducting benefit-cost analyses.

3. For new developments, require developers to include reserved right-of-way for capacity and network expansions, especially in areas with substantial development activity. Reserved right-of-way cannot be built upon and local governments preserve the option to purchase the land at a later date for purposes of network expansion.

Implement Operational Strategies to Enhance Freight Mobility and Safety

1. Add high-ranking projects within the MPO's boundaries to the TIP. For all high-ranking projects, inside or outside MPO boundaries, coordinate with the region's counties to add those projects to the next SPLOST.

2. Begin positioning for competitive grant and other funding. This includes gathering support from local and state officials, using travel demand or other modeling tools (as appropriate) to develop detailed estimates of projects' transportation impacts, and conducting benefit-cost analyses.

3. For intersections and corridors requiring further study to address their safety and operational challenges, begin drafting scopes of work detailing the study areas and specific tasks that should be performed. Additionally, prioritize locations for intersection studies, corridor studies, and road safety audits.

Support Increased Capacity, Enhanced Operations, and Safety on the Multimodal Freight Network

1. Reach out to the railroads, Savannah-Hilton Head International Airport, and the Port of Savannah to discuss how the region can support landside access issues and help advance multimodal initiatives that alleviate freight-related challenges (e.g., safety, congestion, etc.) and improve economic competitiveness.

2. As part of this recommendation category, the RFTP made specific recommendations for upgrading pavement conditions at rough rail crossings, upgrading safety equipment at crossings that have experienced crashes, and implementing quiet zones to lessen impacts on residential areas. As a first step, the region should prioritize at-grade crossings for these upgrades. Factors such as traffic volumes, proximity to an equity focus area, and crash rate and severity among others should be considered in the prioritization. After that, reach out to the railroads to coordinate on implementing these improvements. For pavement condition upgrades at rail crossings, typically the public pays for materials while railroad pays for design and installation. Consider installing full-depth rubber crossings for improved operations and maintenance.

Implement Technology Strategies to Enhance Freight Operations and Safety

1. Reach out to the GDOT Office of Traffic Operations and the City of Savannah to discuss opportunities to advance and coordinate on the technology recommendations included in the Regional Freight Transportation Plan. Also discuss opportunities for the continued deployment of ITS to address general freight challenges and needs, such as truck parking locations, safety hotspots, blocked rail crossings, and real-time travel times.

2. Develop a deployment and assessment strategy for the proposed truck parking availability system pilot project at the I-95 Southbound Welcome Center. The strategy will outline the tools and steps needed to conduct the pilot project. It will also specify the data and methods used to determine the effectiveness of the pilot. This information will enable the State and the region to determine if the pilot project should be expanded into a permanent project.

Increase Access to Safe Truck Parking

1. Develop a scope of work and pursue funding for the Regional Truck Parking Demand Study.

2. Reach out to the region's counties and municipalities to discuss opportunities for integrating truck parking needs into local zoning ordinances. Upon completion of the Regional Truck Parking Demand Study, reconvene with local governments to discuss options for incorporating those findings into traffic impact assessments.

Improve Freight Network Resiliency

1. Reach out to the railroads, Savannah-Hilton Head International Airport, and the Port of Savannah to discuss opportunities for improving the resiliency of those freight assets including strategies for managing through disruptions.

2. Begin discussions with GDOT to identify and prioritize freight corridors to "harden" against extreme events. Shorter-term opportunities include strengthening roadway slopes and shoulders and maintaining culverts to remove debris. Longer-term opportunities include elevating roadways, bridges, rail lines, runways, and other critical transportation facilities so they are less prone to flooding.

3. Develop a scope of work and pursue funding for the Freight Supply Chain Resilience Study.

Mitigate Freight Impacts on Communities and the Environment

1. Using the freight equity analysis performed as part of the Regional Freight Transportation Plan as a foundation, develop a draft set of freight equity indicators. Seek approval and adoption from the EDFAC, TCC, and MPO Board.

2. Identify and prioritize segments along freight corridors on which to install green infrastructure. Corridors that experience flooding and are proximate to equity focus areas should be among the factors considered in prioritization. Additionally, coordinate with GDOT to identify design standards and best practices for green infrastructure on freight corridors.

Integrate Freight Considerations into Land Use Planning

1. Draft scopes of work and pursue funding to conduct a Freight Efficient Land Use plan for the region as well as conduct the study of potential impacts from industrial expansion into Jasper County, South Carolina.

2. Convene the region's counties and municipalities to begin developing strategies for bringing consistency to defining land use categories as well as coordinating land use across the region.

3. Request that the region's economic development agencies lead outreach to freight-intensive businesses for developing a community improvement districts (CIDs) centered on freight clusters. Coordinate with the TCC and EDFAC on the development of an MPO program that supports CIDs in conducting transportation studies and implementing improvement projects. For example, a portion of funds could be set aside for the planning and implementation of projects in CIDs.

4 SUMMARY

This report presents recommendations for addressing the CORE MPO region's key investment needs. It leveraged multiple outreach activities to gain varied perspectives from the region's stakeholders and combined that input with a technical assessment of needs. In total, eight broad, overarching recommendations were made with each recommendation being comprised of a set of specific project, policy, and program recommendations. Project recommendations are those make capital, operational, or technology investments on the multimodal freight network. Policy recommendations are those that provide guidelines or principles that shape the way the region approaches its freight needs. Programmatic recommendations are those that feature ongoing actions, initiatives, or activities. The result is a set of robust and comprehensive strategies for addressing freight transportation needs and challenges:

- Projects. Project recommendations are those that make capital, operational, or technology investments on the multimodal freight network.
- Policies. Policy recommendations provide guidelines or principles that shape the way the region approaches its freight needs.
- Programs. Program recommendations represent ongoing sets of related actions, initiatives, or activities that the region, the State, and private sector stakeholders may engage in with the long-term aim of improving safety and mobility for people and goods in the CORE MPO region.

The strategies were further supported with an action plan for their implementation. Each category of recommendation included information on timing, supporting agencies, and funding. Additional action steps for the region to take towards implementation of the developed strategies were also outlined. The strategies and action plan developed in this report are incorporated into the Regional Freight Transportation Plan Update Final Report.