

REGIONAL FREIGHT TRANSPORTATION PLAN

LAND USE RECOMMENDATIONS



OCTOBER 30, 2023

Regional Freight Transportation Plan

Land Use Recommendations

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1 INTRODUCTION

A strong relationship exists between freight transportation and the current and future land use and development patterns in the CORE MPO region. The continued growth in freight traffic and logistics operations in the region, along with the relocation and expansion of manufacturing, will put additional pressure on the three-county area to further accommodate freight-related impacts in the years to come. Collectively, Bryan, Chatham, and Effingham Counties are likely to continue to be the recipients of a significant portion of the future freight-intensive development in Georgia, driven largely by the presence of the Port of Savannah. This growth is exemplified by the forthcoming Hyundai Metaplant at the Bryan County Mega-Site (see Figure 1.1) and the follow-on economic development wins in the surrounding area, which includes at least eight additional automotive parts suppliers that will support vehicle production at this site.¹ Together, these sites will generate more than 10,000 new jobs in the region, necessitating further land development in the form of housing, retail, services, and other public and private land uses that support a growing region.

The increasing conversion of land in the region into freight-intensive (e.g., manufacturing and warehousing) and freight-generating (e.g., retail and food services) uses will continue to create pressure on the region's transportation system. Greater volumes of freight vehicles will result in more conflicts between different types of roadway users (e.g., pedestrians, cyclists, passenger vehicles, etc.) and contribute to congestion, safety, and other quality of life challenges. The continued development of freight-intensive and freight-generating land uses across the region require a proactive, collaborative, and data-driven approach to land use policies and practices if these emerging conflicts are to be meaningfully mitigated. This memorandum details specific, actionable next steps for the CORE MPO region to take in order to align the region's goals for safety, quality of life, and economic development with the realities of a freight-intensive economy and its associated land uses.

FIGURE 1.1 HYUNDAI MEGASITE: APRIL 2023 PROGRESS AND FUTURE RENDERING



Source: Savannah Morning News and Hyundai Motor Group.

¹ Atlanta Journal-Constitution. Hyundai-LG Battery Pact Answers Big Question for Georgia EV Plant. May 26, 2023. https://www.ajc.com/news/hyundai-lg-pact-for-georgia-ev-batteries-bolsters-us-supply-chain/2XOQICWL3ZBYZDV5GIH4PMLERE/?utm_source=iterable&utm_medium=email&utm_campaign=campaign_6925070

2 FREIGHT-INTENSIVE LAND USE RECOMMENDATIONS

The rapid pace of land development in the CORE MPO region and the significant extent to which much of current and anticipated development is freight-intensive requires that the region take a different approach to land use policymaking. To successfully accommodate continued economic development while supporting the region's quality of life, this approach must holistically consider the ways in which freight transportation impacts the region while bringing all stakeholders to the table to advance strategies to mitigate these impacts. To this end, this section outlines a range of policy and programmatic solutions that aim to guide freight-intensive land uses in ways that realize their economic benefits while mitigating negative externalities.

This section begins with a review of the land use recommendations outlined in the 2015 CORE MPO Regional Freight Transportation Plan (RFTP). These recommendations were organized into two categories: land use strategies by county and regional land use policies. Building upon these past recommendations, the latter portion of this section proposes additional policy solutions that are aligned with the principles of Freight-Efficient Land Uses (FELU). These principles center on reducing conflicts between freight and non-freight land uses while supporting freight-intensive land uses as an important avenue for economic growth and development.

2.1 Review of 2016 Regional Freight Transportation Plan Land Use Recommendations

The 2016 CORE MPO RFTP makes a total of seven land use recommendations, which are categorized as either strategies or policies. Given the significant changes in the region over the last several years, from substantial growth at the Port of Savannah to the emergence of new freight activity centers throughout the region, it is important to reexamine these past recommendations and determine if they should be revised, carried forward, or iterated on in the coming years. These recommendations are briefly summarized in Table 2.1 and discussed in greater detail in the remainder of this section of the report.

TABLE 2.1 2016 CORE MPO RFTP LAND USE RECOMMENDATIONS

2016 RFTP Land Use Recommendation Type	Recommendation
Strategy #1	Target freight investments to encourage infill developments or sites that are located within existing freight clusters.
Strategy #2	Target and preserve greenfield developments that are located adjacent to the freight transportation network, including rail corridors.
Policy #1	Prioritize clustering of existing designated industrial developments.
Policy #2	Make county and municipal zoning and land use data consistent and ensure the data reflect future land use plans.
Policy #3	Develop a Savannah Regional Economic Development Task Force to coordinate among counties and municipalities on land use and economic development information sharing and communication in the region.
Policy #4	Increase transportation system safety by expanding the use of compatible land use practices in regard to transportation issues. Adopt access management ordinances by counties and municipalities. Locate freight development on properties with access to rail, truck, air, and port facilities.
Policy #5	Promote efficient transportation system management and operations by increasing the use of land use practices that protect transportation system capacity. Encourage new development projects that will leverage the existing freight transportation network while discouraging development which would result in additional infrastructure needs.

Source: CORE MPO; AECOM.

Strategy #1: Target Infill Developments and Existing Freight Clusters

This strategy focuses on encouraging the development of new freight-generating uses near existing major freight hubs, such as the Port of Savannah and the Savannah/Hilton Head International Airport, as well as along major freight corridors like the Interstate highway network. This recommendation calls for preserving land for future industrial development near freight hubs and prioritizing freight-intensive development at reuse (including brownfield) or infill sites at existing industrial parks and other freight clusters. As of the writing of the 2015 plan, most of these clusters were located along the Savannah River and near the port and airport, as well as along I-16 throughout the region and I-95 in Bryan County.

Strategy #2: Target and Preserve Greenfield Developments Near Existing Freight Corridors

As a follow-on to Strategy #1, this strategy centers around preserving land for future freight-intensive growth at undeveloped or vacant sites along major transportation corridors. This analysis led to the identification of large clusters of potential future freight-intensive development throughout the region, with the most prominent clusters of greenfield land located in Chatham County north of the port and airport, at the I-16/I-95 interchange, and at the I-16/US 280 interchange in Bryan County (i.e., the current Hyundai Megasite). Additional large clusters were identified in the southern portion of the region along I-95 and the CSX rail line.

Policy #1: Prioritize Clustering of Existing Designated Industrial Developments

This policy reinforces Strategies #1 and #2, noting that infill development at existing industrial parks and near the Port of Savannah and Savannah/Hilton Head International Airport should take priority over the use of greenfield sites for new freight-intensive development. This policy emphasizes the importance of identifying any needed priority sites in the near term, given the difficulty of converting these strategic sites to industrial uses after they have already been developed for other non-freight-intensive uses.

Policy #2: Make County and Municipal Zoning and Land Use Data Consistent

This policy encourages creating standardized zoning and land use data classifications across the region, including within local municipalities. Not only should these data be standardized, but the policy advocates that they align with each jurisdiction's future land use plans to make it easier to plan for growth across the CORE MPO region.

Policy #3: Develop a Savannah Regional Economic Development Task Force

This recommendation focuses on the importance of ongoing communication and collaboration among key regional stakeholders at the intersection of economic development and freight. It calls for public and private economic development stakeholders to be integrated into the CORE MPO Freight Advisory Committee. The goal of recommendation was to provide a more robust forum for peer exchange around these issues, given their importance for the region as a whole.

Policy #4: Increase Transportation System Safety by Expanding the Use of Compatible Land Use Practices in Regard to Transportation Issues

This policy recommendation advocates for placing a greater focus on how the transportation system and freight land uses intersect, with the goal of increasing safety by more thoughtfully integrating these two considerations. This recommendation encouraged the adoption of access management ordinances at the county and municipal level to better control how freight vehicles enter and leave major freight corridors thereby reducing the safety risks posed at these locations. Like other land use recommendations, this policy also stated the importance of locating future freight development along existing freight corridors or near existing freight hubs to reduce the need for transportation access points in other less freight-intensive areas.

Policy #5: Promote Efficient Transportation System Management and Operations

This recommendation encouraged the siting of new freight-intensive development along the existing freight transportation network with the goal of minimizing the impact of freight traffic on the non-freight transportation network. This policy also notes that focusing new freight-intensive development near existing freight corridors

can limit the extent to which new investment is needed in transportation infrastructure to support new freight clusters in locations further from the existing freight transportation network.

Analysis of Prior Recommendations

Generally, the seven recommendations from the 2015 RFTP have varying degrees of applicability to current conditions. Since 2015, Policy #3 has been implemented, as the CORE MPO has evolved its former Freight Advisory Committee into its current Economic Development and Freight Advisory Committee (EDFAC), which includes participation from key economic development stakeholders like the Savannah Economic Development Authority and the Effingham Industrial Development Authority. Additionally, Strategies #1 and #2 and Policies #1, #4, and #5 are somewhat overlapping in their recommendations, which may complicate the implementation of these strategies and policies. Because of this, it is useful to reframe the seven recommendations as a set of key ideas rather than distinct action items, as they converge around two major themes:

1. Concentrate new freight-intensive development in existing freight clusters or along established freight transportation corridors, with a focus on sites that support infilling and redeveloping existing freight clusters over the creation of new greenfield sites or clusters.
2. Promote greater regional coordination to enhance the planning process governing freight-intensive land uses, including through the establishment of ongoing venues for stakeholder coordination and through the standardization of land use and zoning data regionwide.

The CORE MPO region has experienced significant changes over the last several years and the region is on the precipice of even greater changes to come with respect to freight-intensive land uses. In lieu of directly carrying forward the previous recommendations, the RFTP Update advises the reconsideration of the two key themes from these recommendations through the lens of current best practices in freight land-use planning. This topic will be explored further in the following section.

2.2 New Strategies within the Freight-Efficient Land Use Policy Framework

The Transportation Research Board's (TRB) National Cooperative Highway Research Program (NCHRP) published NCHRP Research Report 998: Planning Freight-Efficient Land Uses: Methodology, Strategies, and Tools – a guide to help planners and local governments develop land use policies that lead to decisions that improve the efficiency of freight transportation network and the supply chains they support. Known as Freight-Efficient Land Use (FELU) policies, the recommendations outlined in this guide seek to minimize the externalities that freight-intensive land uses have on the surrounding community. Freight externalities include any impacts generated by freight operations that affect non-freight stakeholders. Examples of such externalities include noise generated by a warehouse or manufacturing facility impacting a nearby residential community and safety risks generated by heavy truck traffic on certain roadways for non-freight road users. The driving goal of FELU policies are to reduce conflicts between freight and non-freight land uses while supporting freight-intensive industries as an important avenue for economic growth and development.

FELUs are governed by five principles:

1. Minimize the private and external costs of supply chains and their stages. This includes considering not just the impacts on the region of large-scale freight operations, such as the Port of Savannah, but also smaller freight operations that support these larger users further down the supply chain.
2. Reduce the distance traveled at supply chain stages, upstream and downstream. This principle emphasizes the importance of limiting truck vehicle miles traveled between various freight traffic generators, such as warehouses and the manufacturing facilities they supply, to avoid adding unnecessary truck traffic to local and regional roadways.
3. Mitigate or eliminate the externalities at supply chain nodes and Large Traffic Generators (LTGs). This recognizes the specific impacts that the largest freight facilities, such as the Port of Savannah and the forthcoming Hyundai Metaplant, have on the surrounding communities and calls for addressing these impacts through thoughtful mitigation measures.
4. Recognize and account for local conditions. Mitigation measures for freight impacts should be tailored to the communities in which they are implemented, responding to the needs of each community.
5. Engage all stakeholders. Freight planning efforts should proceed in partnership with all key parties, including both freight users and local community members, to ensure policies and plans reflect the goals of all stakeholders.

In order to promote freight-efficient land uses, the NCHRP Research Report 998 identified 43 land-use initiatives to foster well-organized and planned freight activity. Table 2.2 outlines the initiatives that are relevant for the region and gives examples of what each initiative could look like if implemented. Many of the strategies outlined in Table 2.2 align closely with the two key themes that emerged from the seven land-use recommendations in the 2016 RFPT. Taken together, these strategies and themes will provide the foundation for the land-use recommendations outlined in this report, which are grouped into three categories:

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

These recommendations are discussed in further detail in the following sections.

TABLE 2.2 INITIATIVES TO SUPPORT FREIGHT-EFFICIENT LAND USES

No.	Freight-Efficient Land Use Initiatives	Example Tactics for the CORE MPO Region
1	Develop a FELU Plan	Develop a regional land use plan for the CORE MPO area utilizing the FELU principles.
2	Implement a FELU Program	Implement specific recommendations from the regional FELU plan, emphasizing the importance of creating consistency in approaches to zoning and planning for freight land uses across the three-county region.
3	Densify Logistics Activities toward the Urban Core	Locate gateways, auxiliary facilities, and urban distribution centers near/in the cities of Savannah, Richmond Hill, Pooler, and Rincon, which could generate efficiency through reductions in freight vehicle-miles traveled (VMT).
4	Preserve Existing Logistics Land Uses	Preserve existing freight-intensive areas west of Downtown Savannah, Garden City, and Port Wentworth to ensure these existing users retain easy access to the Port of Savannah.
5	Logistics Land Reserves	Reserve land near existing logistics facilities to accommodate future expansion and limit logistics sprawl.
6	Co-Location of Auxiliary Facilities near Major Gateways	Continue to strategically locate auxiliary facilities, such as truck parking and intermodal yards, as close as possible to major gateways such as the Port of Savannah and Savannah/Hilton Head International Airport.
7	Foster Logistics Mixed Use	As appropriate, foster the mixture of light logistics land uses (e.g., parcel pickup hubs, small-scale delivery warehouses) with residential and commercial land uses in population centers to reduce truck VMT and resulting emissions.
8	Relocate Large Traffic Generators, If Warranted	Consider whether large traffic generators, such as major commercial or industrial centers, create undue burdens on the surrounding community and whether these uses warrant relocation, diversification, or other interventions to reduce the intensity of freight uses.
9	Create Logistics-Focused Land Banking	Preserve vacant, abandoned, or tax-delinquent properties in the more heavily urbanized areas within the region to strategically deploy for future freight-intensive uses as regional needs evolve. The region's various economic development authorities have started to purchase and hold vacant land for strategic development of industrial land.
10	Use Overlay Zoning	Create zoning overlays adjacent to existing or planned industrial development hubs to limit the development of conflicting land uses (e.g., residential) on those surrounding parcels.
11	Use of Form-Based Zoning	Develop a form-based zoning code that regulates the appearance of freight-intensive uses – including structural massing, building design, driveway access, parking, and other elements – to ensure that they are congruent with the character of the surrounding neighborhood.
12	Use Hybrid Zoning	Create a zoning code that uses both traditional and form-based elements, with form-based regulations on warehouse and light industrial uses within broader mixed-use zoning districts.
13	Create Special Purpose Districts	Foster special purpose districts designed for freight-intensive uses, such as districts surrounding industrial development hubs in the CORE MPO region, that mandate minimum road widths, required vertical clearances, and necessary stormwater interventions specifically geared towards supporting concentrations of large-scale manufacturing and industrial uses.
14	Use Planned Unit Developments (PUD)	Establish planned unit developments to ease regulatory and zoning hurdles for freight-intensive uses in exchange for certain conditions that limit the impact of freight-intensive development on surrounding communities such as setbacks, improved landscaping, etc.

No.	Freight-Efficient Land Use Initiatives	Example Tactics for the CORE MPO Region
15	Enhance Subdivision Regulations	Consider freight when designing subdivision regulations for new residential areas in Bryan and Effingham Counties. This includes considerations for e-commerce deliveries, such as ensuring that subdivision street designs allow delivery vans to safely navigate and park in residential neighborhoods to effectively serve these emerging customer bases.
16	Foster Context-Sensitive Planning and Design	Engage community stakeholders early in the planning process for making updates to municipal and county zoning codes to ensure buy-in from residents and reduce potential future conflicts between freight-intensive uses and other important community assets.
17	Use Conditional Use Requirements	When granting conditional use exceptions to the existing zoning code, require freight-intensive uses to implement FELU principles such as requiring the creation of a freight traffic management plan or by mandating site designs that limit the impact of freight on nearby uses.
18	Require Provision of Buffers	Mandate that new freight-intensive developments or redevelopments implement buffers in their site designs to limit the impact of freight operations on surrounding properties. Examples include the designation of setbacks, tree planting, or other similar requirements.
19	Redevelop Underutilized Facilities	Encourage redevelopment of existing properties for freight-intensive uses, such as underutilized properties within existing Enterprise Zones, Opportunity Zones, or abandoned retail centers before encouraging greenfield development of new sites.
20	Require Provision of Logistics Areas	Update requirements for the development of new or redevelopment/refurbishment of existing freight-generating buildings (e.g., office buildings and multifamily properties that receive a significant amount of e-commerce and similar deliveries) to include space for freight unloading, sorting, and storage.
21	Require Provision of Off-Street Loading and Parking Areas	Require that new freight-intensive and freight-generating developments (e.g., hotels, restaurants, and large multifamily properties) include off-street parking and loading areas for freight vehicles.
22	Enhance Building Codes and Design Guidelines	Review city and county building codes to ensure that freight needs are accommodated for all freight-intensive uses, such as requiring driveways with appropriate turning radii in new commercial and residential developments.
23	Multimodal Logistics Developments	Co-locate future industrial hubs with intermodal facilities that allow for the on-site transfer of goods between truck and rail.
24	Freight Cluster Development	Cluster freight users together that may have frequent deliveries between facilities, such as clustering auto parts suppliers near the forthcoming Hyundai development at the Bryan County Megasite.
25	Multistory Logistics Developments	Support the development of multistory facilities for warehousing and storage in more densely populated or high-demand areas, such as in Garden City near the Port of Savannah, to limit the sprawl of these facilities away from major freight gateways.
26	Urban Consolidation Centers	For high-demand routes and areas, incentivize the creation of terminals that allow for the consolidation of freight deliveries into fewer vehicles to limit VMT generated by partially full trucks.
27	Urban Distribution Centers	Allow for the development of small-scale delivery warehouses on underutilized parcels in or near urban centers to limit VMT resulting from last-mile delivery stemming from e-commerce activity and other similar uses.

No.	Freight-Efficient Land Use Initiatives	Example Tactics for the CORE MPO Region
28	Upgrade Off-Street Parking Areas and Loading Docks	Require improvements to loading docks for larger businesses in high-traffic areas, such as major retail stores in denser neighborhoods, to limit the impact of truck deliveries on other non-freight users
29	Truck Stops and Long-Term Parking	Expand truck parking and staging areas near the Port of Savannah to limit queuing on public roads and provide plug-in capability to reduce emissions.
30	Staging Areas	Incentivize clusters of freight-intensive businesses to create shared off-street truck delivery staging areas or loading zones to limit the impacts of concentrated freight activity on surrounding areas.
31	Use Impact Fees or Proffers	Charge new development of freight-intensive businesses a one-time fee to create a municipal or county fund to mitigate the impacts of this development, such as through investments in road safety improvements.
32	Use Tax Incentives	Leverage existing tax incentive programs, such as those currently provided by the region's counties and the Savannah Economic Development Authority, to encourage economic development aligned with FELU principles.
33	Provide Land Subsidies or Grants	Offer city- and county-owned land to freight-intensive users at a discounted price in return for the creation of new or expanded businesses that align with FELU principles.
34	Provide Performance-Based Incentives	Align existing fee reduction programs, such as those offered by the City of Savannah for new water connections or business tax certificates, with changes to business practices that reduce externalities from freight. Examples include the provision of off-street loading zones and the consolidation of deliveries to reduce trips and freight VMT.
35	Enhance Existing Certification Programs	Create an FELU certification program and offer public recognition or awards to businesses that comply with FELU principles.
36	Educate Elected Officials on the Importance of FELUs	Build relationships with city councilmembers and area state and federal representatives to communicate the importance of FELU planning and identify resources for future infrastructure investments to support FELU goals.
37	Educate Practitioners on FELU Principles	Disseminate resources to local and regional planners and policymakers to help these practitioners advance FELU initiatives through their daily work.
38	Foster Public-Private Collaboration	Expand upon existing public-private initiatives such as the Savannah Area Chamber of Commerce, Savannah Economic Development Authority, and World Trade Center Savannah to identify and advance shared priorities at the intersection of freight and land use.
39	Create and Engage Joint Freight Land Use and Transportation Committees	Utilize the CORE MPO's Economic Development and Freight Advisory Committee (EDFAC) as a forum for advancing FELU planning efforts.
40	Create and Engage Regional Land-Use and Freight Forums	Through the CORE MPO's EDFAC, organize working groups of key stakeholders, including neighborhood leaders, chambers of commerce, and others, to advise FELU planning efforts.
41	Implement Community Engagement Programs	Leverage the guidelines established in the CORE MPO's Participation Plan, including bodies like the Citizens Advisory Committee, to create an ongoing public dialogue on the intersection of freight and land use and to solicit feedback on future policy and planning efforts.
42	Foster Community Improvement Districts	Support the creation of community improvement districts in parts of the region with particularly intensive freight land uses, such as the President Street corridor or along the Savannah River near the Port, to identify and carry

No.	Freight-Efficient Land Use Initiatives	Example Tactics for the CORE MPO Region
		out small-scale infrastructure improvements that improve freight vehicle access while supporting safety for other users.

Source: NCHRP Research Report 998: Planning Freight-Efficient Land Uses: Methodology, Strategies, and Tools; AECOM.

Recommendation Group #1: Updated Land Use Strategies Using FELU Principles

The first group of recommendations aims to reconsider the land use strategies recommended in the 2016 RFTP by viewing them through the lens of FELU 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. In this context, infill development means locating new freight-intensive uses on sites that are adjacent to or near existing freight users. This strategy should take priority over greenfield development of major freight-generating facilities – development of freight-intensive uses on previously undeveloped sites far from existing freight users – and should emphasize the need to retain existing land for freight-intensive uses given their anticipated future demand. Where possible, undeveloped land adjacent to existing freight clusters should be banked for future freight-intensive uses. 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.

Limit Greenfield Freight Development to Specific Strategic Sites

Strategically locate greenfield freight development at sites that have rail and Interstate highway 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 (VMT) across the region while positioning these sites to take advantage of future developments in truck technology, such as connected and autonomous trucks which may be deployed most successfully along short, direct routes. 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.

Recommendation Group #2: New Regional Approaches to Planning

The second group of recommendations focuses on the collaborative elements of FELU planning. They encourage the CORE MPO region to evolve 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 Regional Freight-Efficient Land Use Plan

Developing a regional FELU plan is in many ways a foundational step for advancing other land use recommendations. A FELU plan should outline a long-run vision and set of goals for the region that guides land use policies and decision-making in a way that improves freight efficiency. The vision and goals should be accompanied by a set of programs, policies and projects that help to achieve the vision and goals. Furthermore, the plan should provide a framework for the region to navigate freight-related land-use issues

in a way that is adaptable to changing future conditions.² The strategies outlined in Table 2.2 could each represent topics addressed through a FELU plan.

Standardize 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. 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.

Locally and nationally, land use planning has typically happened at the local or county level, with varying degrees of coordination between these jurisdictions and their larger regions. One national example of regional land use planning is Metro Council, the metropolitan planning organization (MPO) for the Portland, Oregon metropolitan region. While Metro Council's unique institutional charter gives it purview over issues that are not standard for MPOs, such as the management of land use and growth within Portland region's regional growth boundary, lessons can still be learned from Metro Council's approach. Metro Council leads efforts to unite the region's three counties and 24 cities behind a set of common land use goals, including goals for freight-intensive uses. For example, Metro Council supports the region in designating Regionally Significant Industrial Areas for future large-scale industrial development and requires that local and county governments protect these areas from incompatible development and conversion to non-industrial uses. Metro Council also works with municipalities to identify and facilitate industrial investment in brownfield and other similar sites that are good candidates for infill and redevelopment.³ Metro Council has also created regional land use categories to identify industrial areas along major roadways, rail lines, and waterways. These are designated as Employment Land in Metro Council's 2040 Growth Concept Map.⁴ Again, while Metro Council's charter grants it with authorities that are distinct from that of most MPOs, the CORE MPO region can draw from Metro Council's experience as a convener for the cities and counties in the region to think across jurisdictional boundaries and better coordinate land use categorization and regulation.

Recommendation Group #3: Proactive Policymaking to Anticipate Emerging Needs

The third group of recommendations focuses on anticipating the future demands that freight-intensive land uses will place on the region's transportation system and developing proactive solutions to mitigate these demands.

² NCHRP Research Report 998: Planning Freight-Efficient Land Uses: Methodology, Strategies, and Tools.

³ Metro Council. Regional Framework Plan Chapter 1: Land Use. March 18, 2015. Pg. 5.
<https://www.oregonmetro.gov/sites/default/files/2015/06/19/Regional-Framework-Plan-Chapter1-LandUse-20150318-final%20%28MD-15-8552%29.pdf>

⁴ Metro Council. 2040 Growth Concept Map. December 2018.
https://www.oregonmetro.gov/sites/default/files/2021/04/21/Concept2040_09042020.pdf

Develop Land-Use Policies that Accommodate Freight Vehicles

Work with key stakeholders, including the Georgia Ports Authority and major industrial developers and users, to estimate future truck parking and fueling needs in the region. This process should anticipate forthcoming changes in truck technology, including the transition of trucks to alternative fuels like battery-electric and hydrogen fuel cell technologies. With future parking demand and technology changes in mind, support the co-location of truck parking and fueling or charging facilities with other freight-intensive uses (e.g., major manufacturing or distribution centers) to limit truck trips between these origin-destination pairs. This strategy may require the creation of new policy or regulatory frameworks that mandate that freight-intensive developments of a certain scale to incorporate truck parking and fueling facilities into their broader site plans.

While requirements for on-site truck parking at freight-intensive sites remain uncommon nationally, the Federal Highway Administration's 2022 Truck Parking Development Handbook stated that the provision of these facilities is an industry best practice. FHWA highlighted a 2017 zoning update passed by the Township of Upper Macungie, Pennsylvania – a small municipality with significant industrial development – that requires at least one off-street parking space per loading dock at new warehouses or distribution facility and at least one truck staging space per two loading docks at these facilities. Furthermore, the Township has requirements for truck parking at other freight-generating uses like retail, manufacturing, wholesaling, and accommodations, recognizing the role these types of uses play in the freight ecosystem. The FHWA handbook notes that parking and staging requirements can be scaled based on building variables like square footage and number of employees, and that regulatory bodies may want to create an avenue for exceptions to these rules if users can document that fewer spaces are needed due to the nature of the use, the sharing of parking and staging areas with adjacent users, or other similar reasons.⁵

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 the I-95 and US 17 corridors. 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. For example, a new freight cluster in Jasper County would likely increase freight demand on I-95, SR 25, and US 17. Furthermore, due to navigational needs on the Savannah River and the presence of the Savannah National Wildlife Refuge and other environmentally sensitive areas, there are limited opportunities for any new corridors to serve future demand should development occur. The region should take steps to anticipate and understand future potential challenges if the region's freight-intensive development begins to shift into South Carolina.

Pursue Land-Based Funding Mechanisms that Support Freight Users

Foster the creation community improvement districts (CID) 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. 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

⁵ Federal Highway Administration. Truck Parking Development Handbook. September 2022. Pgs. 58-60.
https://ops.fhwa.dot.gov/Freight/infrastructure/truck_parking/docs/Truck_Parking_Development_Handbook.pdf

infrastructure, beautification, public safety, etc.).⁶ 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. CIDs could be formed in areas with existing or emerging freight clusters that have a critical mass of users large enough to meaningfully contribute to their success.

There are a number of precedents across the state for the development of freight-focused CIDs. In the Atlanta region, examples include the Metro South CID⁷, the Aerotropolis Atlanta Community Improvement Districts⁸, and Fulton Industrial Boulevard Community Improvement District (Boulevard CID)⁹. Using the Boulevard CID as an example, it was founded in 2010 to support infrastructure improvements, beautification efforts, safety enhancements, and economic development initiatives in the largest industrial corridor in the eastern United States – Fulton Industrial Blvd.¹⁰ The Boulevard CID has led efforts to conduct planning for the industrial district, including through the development of a district master plan and a freight cluster plan. The organization has also partnered with state and local governments on infrastructure improvements, including intersection safety and operational upgrades and a major bridge replacement project. The Boulevard CID, and other freight-focused CIDs throughout Metro Atlanta, demonstrate how the CID model can create for the CORE MPO region a forum to bring together the interests of freight-intensive industries and the surrounding community.

⁶ https://www.fhwa.dot.gov/ipd/pdfs/value_capture/strategies_in_practice/ga_community_improvement_districts.pdf

⁷ <https://www.metroouthcid.org/>

⁸ <https://aacids.com/>

⁹ <https://boulevardcid.org/>

¹⁰ Fulton Industrial Boulevard Improvement District. About Us: Boulevard Community Improvement District (CID). <https://boulevardcid.org/about/>

3 SUMMARY AND NEXT STEPS

As noted throughout this report, the rapid pace of land development and the impacts resulting from the subsequent increase in freight traffic throughout the CORE MPO region will continue to have a profound impact on safety, access, and quality of life. Given the broad nature of these impacts and the nearly ubiquitous nature of freight-intensive development across much of the region, the solutions to these challenges will inherently be ones that are holistic, proactive, and collaborative. This report offers a set of recommendations that consider past land-use planning in the region and incorporate emerging best practices in order to position the CORE MPO region for success in the coming years.

As a critical next step, the region should develop a Freight-Efficient Land Use plan. This plan would build upon the momentum of the RFTP Update and provide a framework for the region to navigate freight challenges that stem from freight-related land uses. Critical outcomes of a FELU plan would include: a list of strategic sites for freight infill, redevelopment, or land banking; a specific set of standards to harmonize land-use classifications in the region; and an action plan for the creation of freight CIDs that identifies clusters of interested businesses and develops a framework for implementing infrastructure projects through any new funding generated. While all of these efforts will undoubtedly present challenges, the development of a FELU plan provides a forum through which to engage stakeholders and promote consensus on a path forward for tackling some of the region's most pressing challenges.