

CORE MPO Freight Transportation Plan

Project Advisory Committee
December 3, 2014



Agenda

9:30 - 9:40

Welcome-Introductions

9:40 - 10:10

Recap of Previous FAC Meetings

10:10 – 10:50

Land Use Analysis Update

- Review outcomes of regional freight-related land use analysis
- Committee comment and discussion on future freight land use analysis

10:50 – 11:00

BREAK

11:00 – 11:40

Preliminary Infrastructure
Improvement Recommendations

- Review freight-related recommendations
- How are these projects funded

11:40 – 11:50

What's Next?

11:50 – 12:00

Conclusion and Adjournment





Recap of the CORE MPO Freight Study

2.1 Existing and Future Freight Assessment

1. Introduction

- 1.1 Study Purpose
- 1.2 Data Reference List

2. Data sources

- 2.1 National Level
 - 2.1.1 FAF
 - 2.1.2 LEHD
- 2.2 State Level
 - 2.2.1 Rail
 - 2.2.2 Georgia Statewide Freight and Logistics Plan (December 2011)
 - 2.2.3 Crash Data
 - 2.2.4 Traffic Data
 - 2.2.5 Bottlenecks
- 2.3 MPO Level
 - 2.3.1 CORE MPO Travel Demand Model
 - 2.3.2 Airport Data
 - 2.3.3 Port Assessment
 - 2.3.4 SEDA
 - 2.3.5 Other

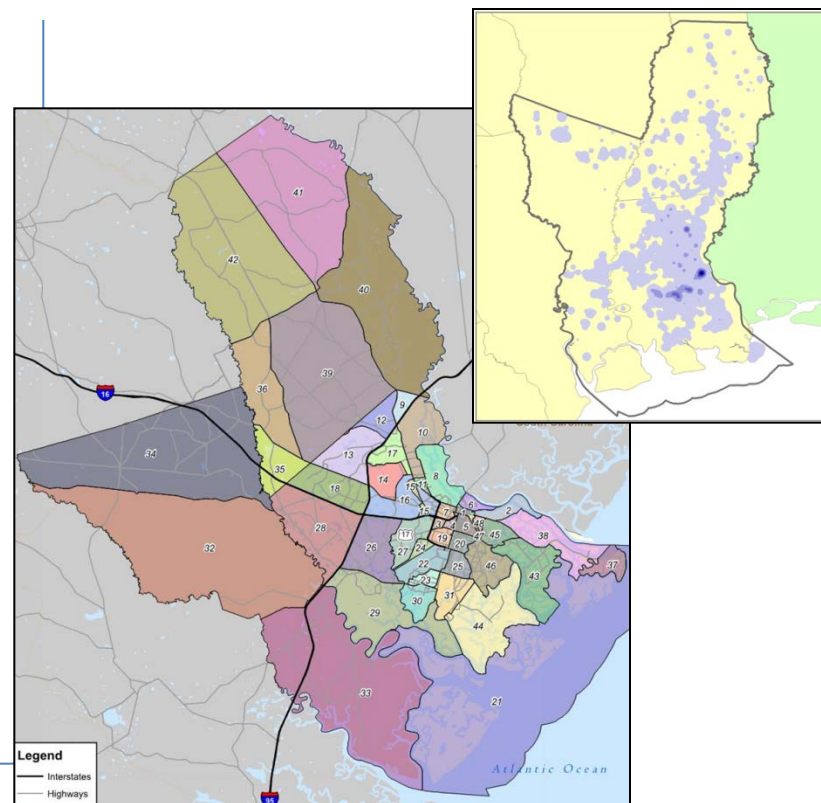
3. FAF DISAGGREGATION

- 3.1 Purpose of Disaggregation
- 3.2 Disaggregation Inputs
 - 3.2.1 Zonal Data
 - 3.2.2 FAF Version 3 Data
 - 3.2.3 Additional Data
- 3.3 Disaggregation Outputs

4. Next Steps

2011	Into		Out Of		Internal	
	Ktons	\$M	Ktons	\$M	Ktons	\$M
Truck	37,663.7	38,794.5	42,243.3	64,684.1	16,691.6	15,878.6
Rail	7,731.6	3,110.3	2,926.4	2,025.4	646.2	289.4
Water	3,008.8	2,396.5	7.0	4.0	5.2	0.7
Air	2.2	489.9	3.8	1,090.7	-	2.0
Multiple modes & other	15,504.8	15,313.3	11,421.9	12,883.4	9,016.3	4,478.1

Source: Freight Analysis Framework, <http://faf.ornl.gov/fafweb/Default.aspx>



2.2 Performance Measures

Consistent with:

- Moving Ahead for Progress in the 21st Century Act (MAP-21)
- CORE MPO 2035 LRTP Framework Mobility Plan
- FY2013-2016 Transportation Improvement Program
- Chatham County-Savannah Tricentennial Comprehensive Plan
- 2013 Georgia Statewide Strategic Transportation Plan
- Georgia Statewide Freight and Logistics Plan, 2010-2050

1. Introduction

- 1.1 Performance Measures and the Public Sector
- 1.2 National Focus: MAP-21
- 1.3 Performance Measures and the CORE MPO

2. Goals and Objectives

- 2.1 National Freight Policy Goals
- 2.2 State Goals
- 2.3 CORE MPO Goals

3. Development of Freight Performance Measures

- 3.1 National Performance Measures and Requirements
- 3.2 Existing State Measures
- 3.3 Existing CORE MPO Measures
- 3.4 Examples from Other States

4. Recommended Freight Performance Measures

- 4.1 Application and Implementation

5. Next Steps

Program	Measure Category	States to Establish Targets:
National Highway Performance Program	Interstate Pavement Condition on the NHS	Within 1 year of final rule on national performance measures
	Non-Interstate Pavement Condition on the NHS	
	Bridge Condition on NHS	
	Performance of Interstate System	
	Performance of Non-Interstate NHS	
Highway Safety Improvement Program	Serious Injuries per VMT	Within 1 year of final rule on national performance measures
	Fatalities per VMT	
	Number of Serious Injuries	
	Number of Fatalities	
Congestion Mitigation and Air Quality	Traffic Congestion	Within 1 year of final rule on national performance measures
	On-road mobile source emissions	
Freight Policy	Freight Movement on the Interstate	Periodically

Source: Federal Highway Administration, Office of Policy and Governmental Affairs, 2012

2.3 Forecasting Future Freight Growth

1. PURPOSE AND DATA SOURCES

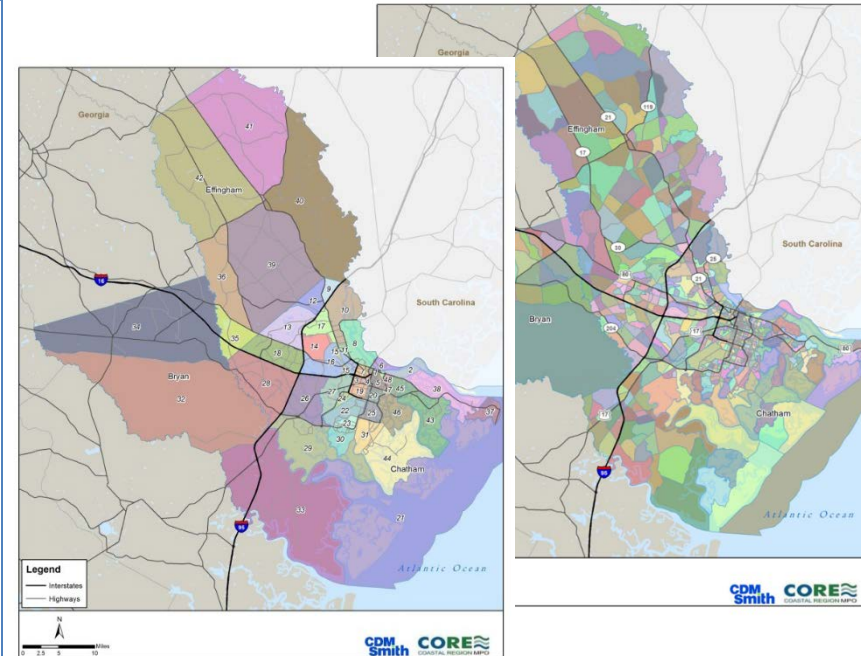
- 1.1 Purpose
- 1.2 Data Sources
 - 1.2.1 FAF
 - 1.2.2 LEHD

2. DISAGGREGATION METHODOLOGY

- 2.1 Disaggregation Inputs
 - 2.1.1 Zonal Data
 - 2.1.2 FAF Version 3 Data
 - 2.1.3 LEHD and CBP Data
 - 2.1.4 Other Data Sources
- 2.2 Disaggregation Procedure
 - 2.2.1 Development of Regression Equations
 - 2.2.2 Development of Expansion Factors

3. DISAGGREGATION OUTPUTS

- 3.1 Truck Imports/Exports
- 3.2 Rail Imports/Exports
- 3.3 Water Imports/Exports
- 3.4 Air Imports/Exports



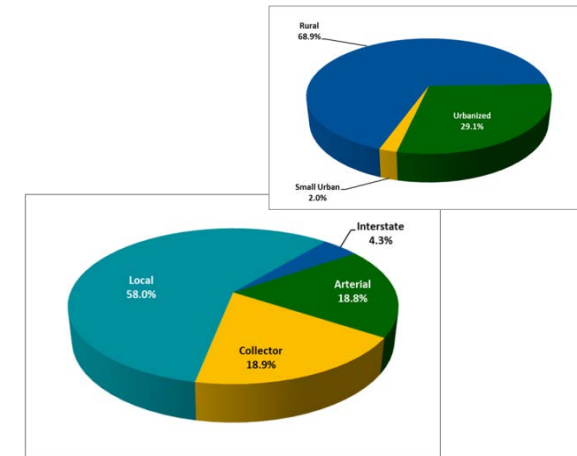
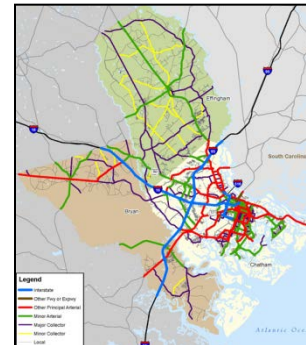
2011	Into Savannah FAF Region		Out Of Savannah FAF Region		Internal		2040	Into Savannah FAF Region		Out Of Savannah FAF Region		Internal	
	KTons	\$M	KTons	\$M	KTons	\$M		KTons	\$M	KTons	\$M	KTons	\$M
Truck	37,663.7	38,794.5	42,243.3	64,684.1	16,691.6	15,878.6	Truck	85,123.1	103,822.2	89,371.6	170,871.0	31,256.2	36,468.0
Rail	7,731.6	3,110.3	2,926.4	2,025.4	646.2	289.4	Rail	11,516.8	6,042.2	5,866.8	5,866.5	1,426.5	613.3
Water	3,008.8	2,396.5	7.0	4.0	5.2	0.7	Water	2,354.5	1,868.1	20.8	4.5	15.4	2.2
Air	2.2	489.9	3.8	1,090.7	-	2.0	Air	6.5	1,335.3	11.8	3,416.7	5,054.8	5,305.0
Multiple modes & other	15,504.8	15,313.3	11,421.9	12,883.4	9,016.3	4,478.1	Multiple modes & other	35,883.6	46,514.0	26,936.9	38,534.2	15,679.2	6,132.0

Source: Freight Analysis Framework, <http://faf.ornl.gov/fafweb/Default.aspx>

Source: Freight Analysis Framework, <http://faf.ornl.gov/fafweb/Default.aspx>

2.4 Regional Network Profiles

1. Introduction
2. Highway System Freight Profile
 - 2.1 Functional Class Descriptions
 - 2.1.1 Interstate and Freeway
 - 2.1.2 Arterial
 - 2.1.3 Collector
 - 2.1.4 Local
 - 2.2 Study Area Summary
 - 2.3 Pavement Condition
 - 2.4 Railroad Crossings
 - 2.5 Bridges



3. Rail System Profile
 - 3.1 Existing Needs and Issues
4. Air Cargo Profile
 - 4.1 Savannah-Hilton Head International Airport (SAV)
 - 4.2 Hunter AAF (SVN)
 - 4.3 Hodges Air Park (GA39)
 - 4.4 Swaids Field (2GA2)
 - 4.5 Briggs Field (GA43)
 - 4.6 Briar Patch (9GA1)
 - 4.7 Existing Needs and Issues
5. Intermodal System Profile
6. Port System Profile
 - 6.1 Port of Savannah
 - 6.1.1 Garden City Terminal
 - 6.1.2 Ocean Terminal
 - 6.2 Existing Needs & Issues

Port	Number of Vessel Calls	Capacity of Calls
Savannah	2,219	112,557

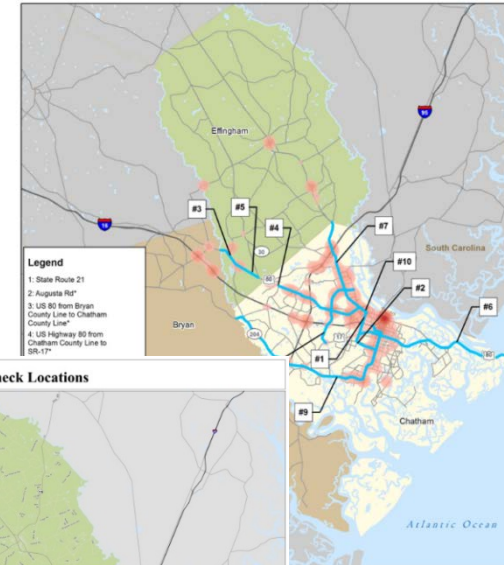
Source: <http://www.navigationdatacenter.us/>

Commodity	Georgia Central	Golden Isles	Savannah Port
Automobiles		X	
Coal	X		
Chemicals	X	X	X
Farm & Food Products	X	X	
Forest	X		
Stone	X		
Plastics	X		
Paper	X		X
Intermodal			X
Machinery			X

Source: Genesee & Wyoming, INC., <http://www.gwrr.com>

2.5 Freight Network Bottleneck, Safety Security Issues

1. Introduction
2. Safety and Security
 - 2.1 Data
 - 2.1.1 Georgia Department of Transportation (GDOT)
 - 2.1.2 Federal Railroad Administration
 - 2.2 Methodology
 - 2.2.1 Crash Density Mapping
 - 2.2.2 Hot Spot Segment Identification
 - 2.3 Results
 - 2.3.1 Top Ten Hot Spot Locations
 - 2.3.2 Overlay with Crash Densities
3. Bottlenecks
 - 3.1 Data
 - 3.1.1 Georgia Department of Transportation
 - 3.2 Methodology
 - 3.2.1 Data Processing
 - 3.2.2 Selection Methodology
 - 3.3 Results
 - 3.3.1 Additional Locations from Freight Advisory Committee Meeting #2
4. Next Steps



4 Economic Assessment

1. Introduction
 - 1.1 Purpose
 - 1.2 Economy and Population
2. Economic Role of Freight
 - 2.1 Major Freight Industries and Commodities
 - 2.1.1 Manufacturing
 - 2.1.2 Transportation and Warehousing
 - 2.2 Labor Force and Employment
 - 2.3 Relationships with Other Regions
3. Supply Chain and Transportation
 - 3.1 Supply Chain Overview
 - 3.2 Roadway
 - 3.3 Rail
 - 3.4 Water
 - 3.5 Air
 - 3.6 Other Freight Facilities
4. Areas of Future Growth
 - 4.1 Industry Growth Forecast
 - 4.2 Impacts on Freight Transportation
5. Next Steps

Top Ten Exports and Imports (in 2012)

Rank	Exports		Imports	
	Commodity	Amount (in TEUs)	Commodity	Amount (in TEUs)
1	Wood pulp	178,654	Furniture	143,412
2	Food	157,531	Retail and consumer goods	132,244
3	Paper and paperboard	144,710	Machinery, appliances, and electronics	121,482
4	Clay	97,054	Hardware and housewares	98,877
5	Automotive	87,778	Automotive	96,576
6	Machinery, appliances, and electronics	80,760	Food	80,078
7	Fabrics/raw cotton	74,877	Apparel	55,800
8	Chemicals	73,871	Toys	49,666
9	Retail and consumer goods	63,299	Minerals	49,373
10	Resins and rubber	61,021	Chemicals	36,436
	Other	214,324	Other	220,900
	Total	1,233,877	Total	1,084,844

Source: Georgia Center of Innovation and Logistics. 2013 Georgia Logistics Report

Top Fifteen Manufacturing Companies and Commodities

Company	Commodity/Service
Gulfstream Aerospace Corporation	Jet aircraft, Aerospace equipment
International Paper	Paper products, Chemicals, Corrugated containers and packaging
JCB Americas, Inc.	Agricultural equipment, Construction equipment
Imperial Sugar	Refined sugar
Brasseler USA, Inc.	Dental instruments
Mitsubishi Power Systems Americas, Inc.	Power plant gas and steam turbines
Weyerhaeuser	Bleached pulp
Derst Baking Company	Bread, rolls, cakes
Diamond Crystal Brand	Salt, Pepper, Sugar packaging
Roger Wood Foods	Smoked sausages, Smoked meats
Kerry Ingredients and Flavours	Formulation, manufacture, and containerization of technological-based flavors, ingredients, and integrated solutions
Savannah Morning News	Information company
Arizona Chemical	Specialty resins, Pine-based chemicals
EMD Chemical	Industrial pigments
Orafol	Adhesive film

Source: Savannah Economic Development Authority, April 2014

Comments on Tech Memo 2.3

- Who determines the rules for trains blocking roadway crossings
 - *Georgia state law states a train cannot block an crossing for more than 10 minutes, unless the train is stopped for reasons beyond the control of the railroad.*
- What routes are trucks using to pick up and drop off the freight at the Port?
 - *Incorporated GDOT traffic counts into Tech Memos*
- In the presentation, the intermodal category seems generalized.
 - *Will add footnote defining what the category contains.*



Comments on Tech Memo 2.3 (cont.)

- Include the number of trains per day and week.
 - *We will pull train frequency data from the GA State Rail Plan*



Comments on Tech Memo 2.5

- Possibly expand the footprint of the MSA to identify the population and employment of the region. Possibly follow the 7-county region that the Park & Ride Study uses. Maybe include a map of the larger area. Show growth within the municipalities within the County.
 - *We have included a comparison table for the 7-county region for employment and population.*
- Some of the routes bottlenecks and hotspots identified were not truck heavy routes.
 - *Hotspots and bottlenecks identified in this freight study will focus on freight routes. We have incorporated the congested segments that were identified in the last FAC meeting.*



Comments on Tech Memo 4

- It may be better to identify the spot locations instead of segments for safety. Also, maybe define the cause of the hotspot.
 - *We are in the process of converting from segment based to point based analysis.*
- Please identify the threshold for the list of top companies in the region.
 - *Sectors were inserted into the classifications*
- Define a sub-component for the commuting patterns of the Chatham County population which includes cities.
 - *We are working to include this request into the documentation*



Comments on Tech Memo 4

- Please identify the direct impacts from the Port of Savannah, including the following: How many trucks a day support the port business; Is it possible to identify the “indirect labor” the port generates; and, What is the employment footprint of the Port of Savannah in the region?
 - *We have some documentation from the Port that we have gathered, but we may need additional coordination.*





Freight Related Land Use Analysis

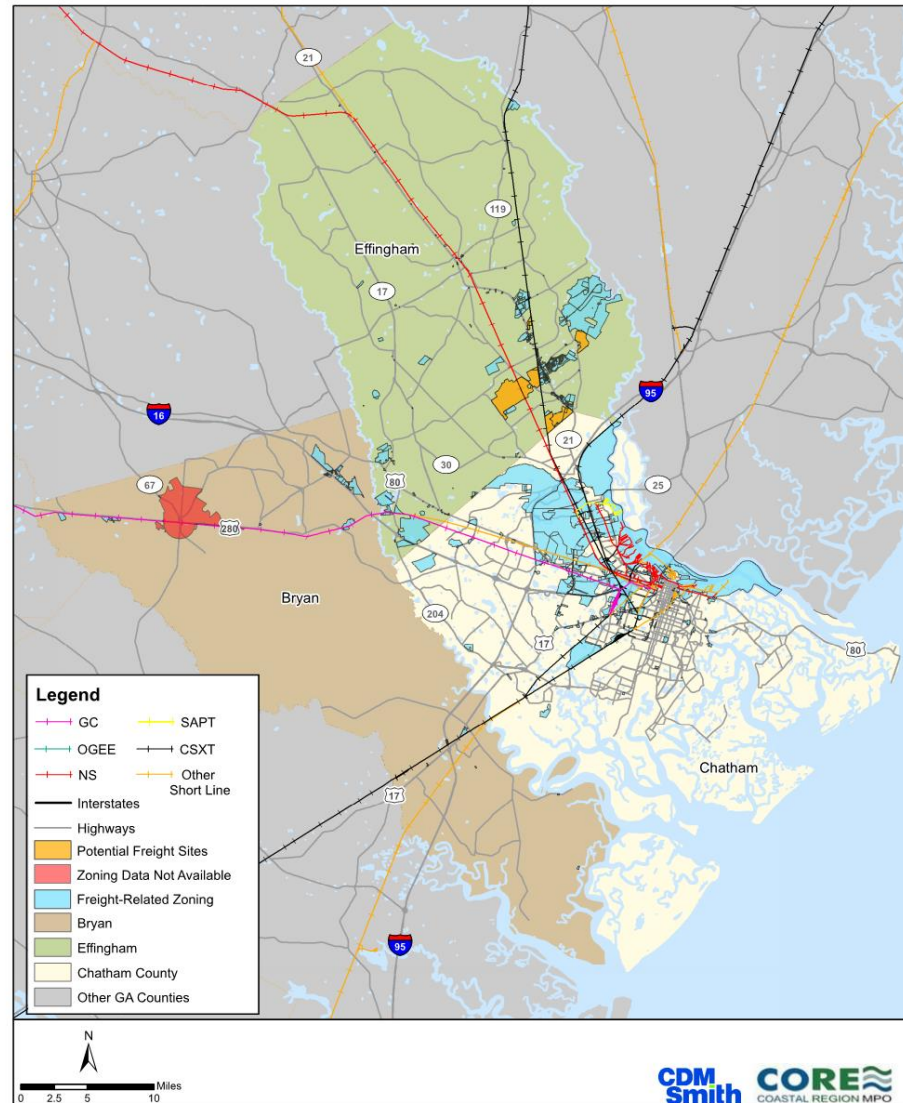
Freight Related Land Use Analysis

- Existing Zoning – Where are the current Freight-Related Zoning areas in the study area?
- Existing Land Use – Where are the current Freight-Related Land Use areas in the study area?
- Freight Possibilities – Where could Freight-Related Land Use occur in the study area?
- Existing & Possibilities – How do the existing Freight-Related areas and Freight Possibilities match up with one another in the study area?



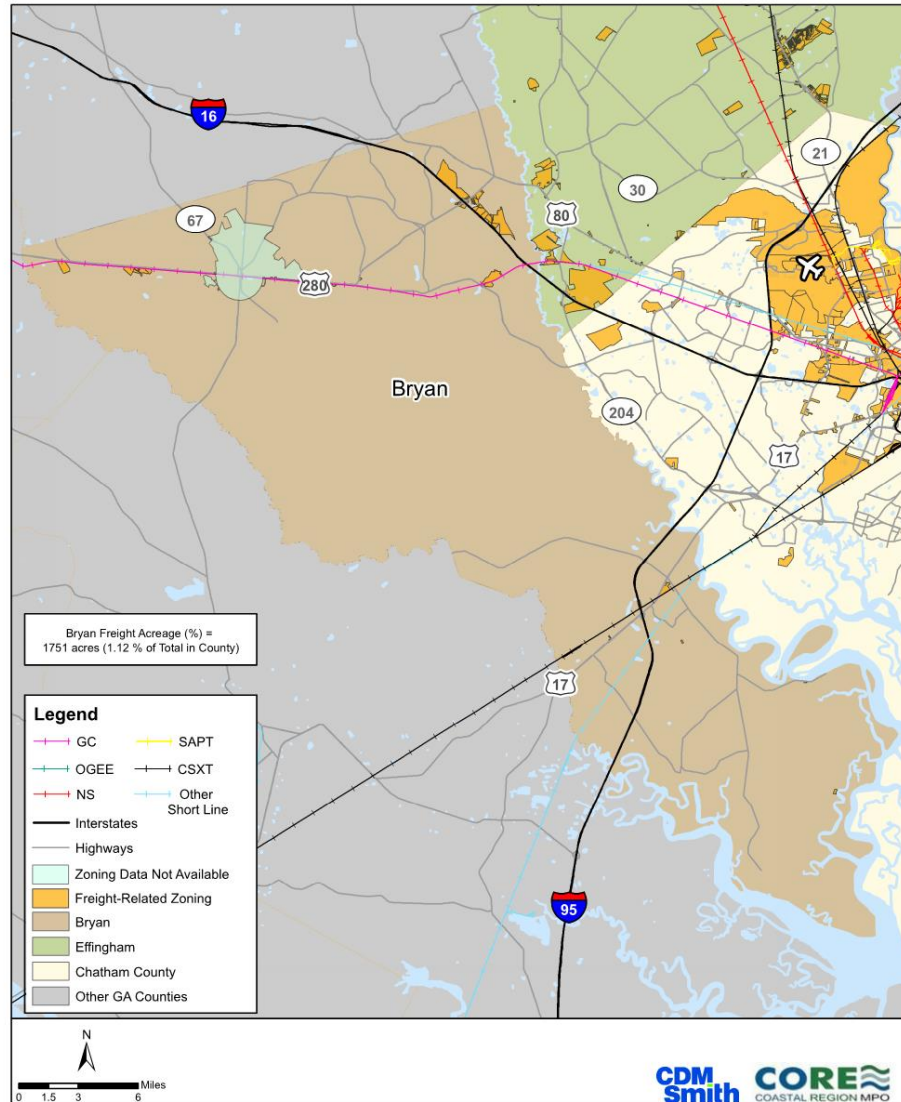
Existing Zoning – Study Area

Freight-Related Zoning COREMPO Region



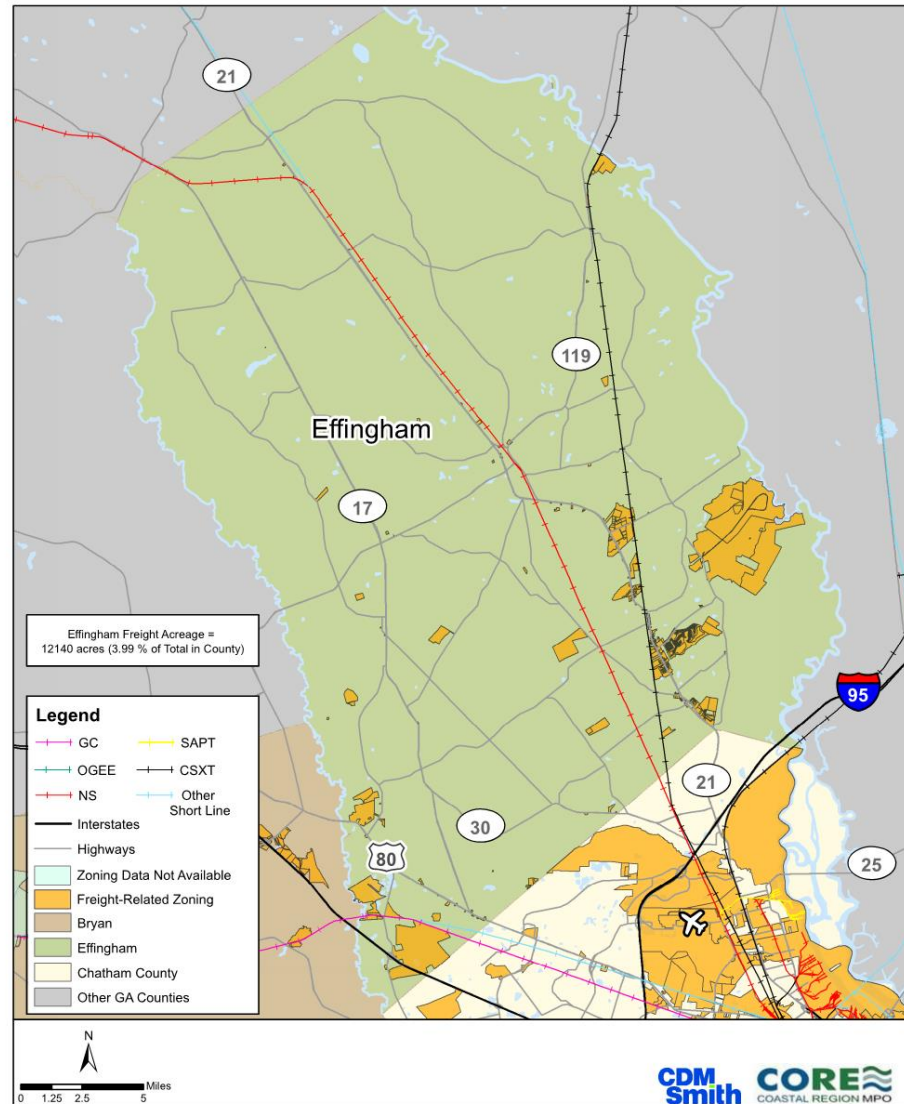
Existing Zoning - Bryan

Freight-Related Zoning Bryan County



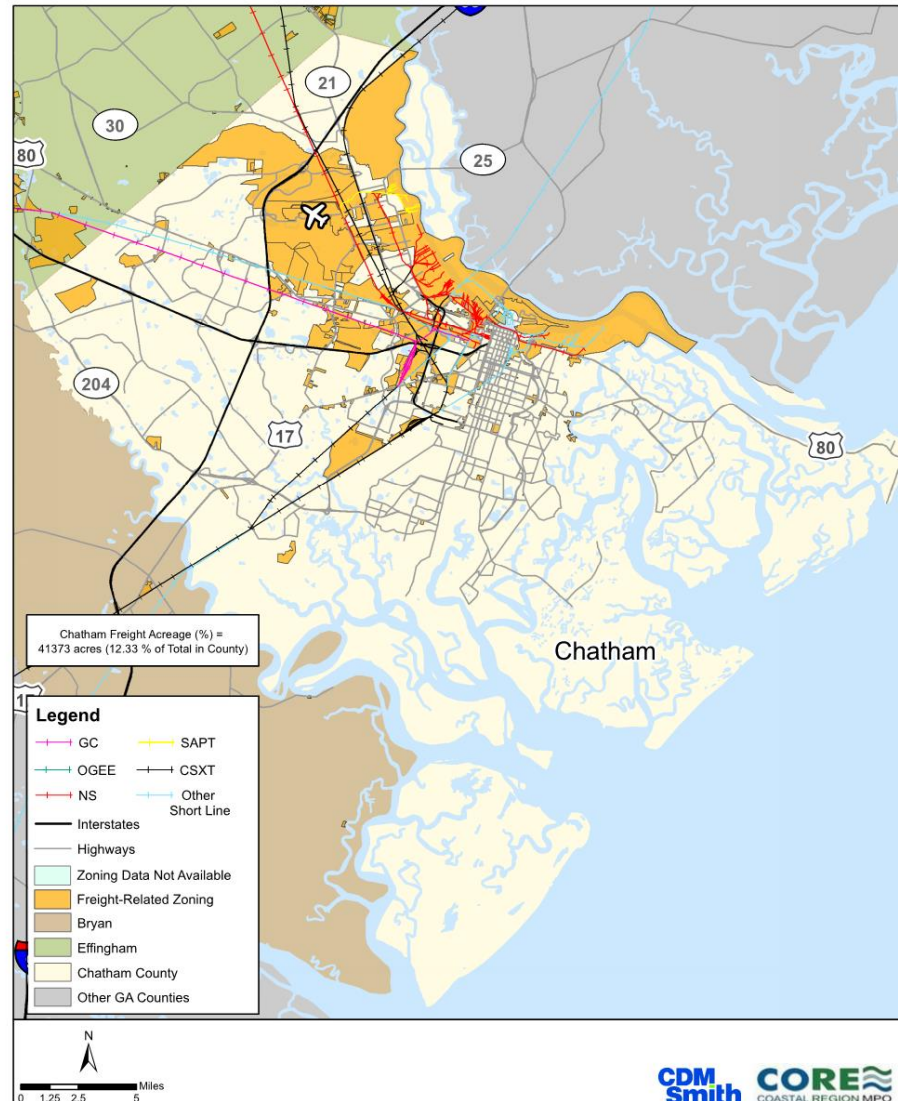
Existing Zoning - Effingham

Freight-Related Zoning Effingham County



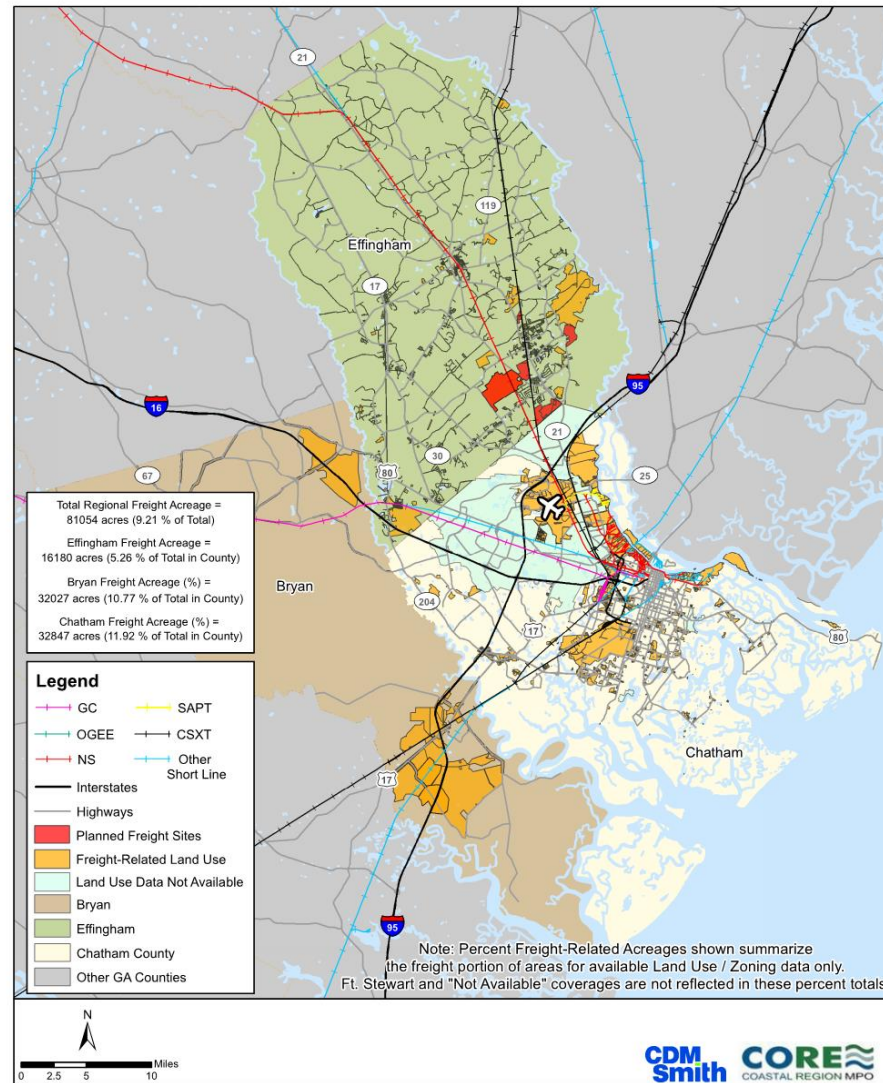
Existing Zoning – Chatham

Freight-Related Zoning Chatham County



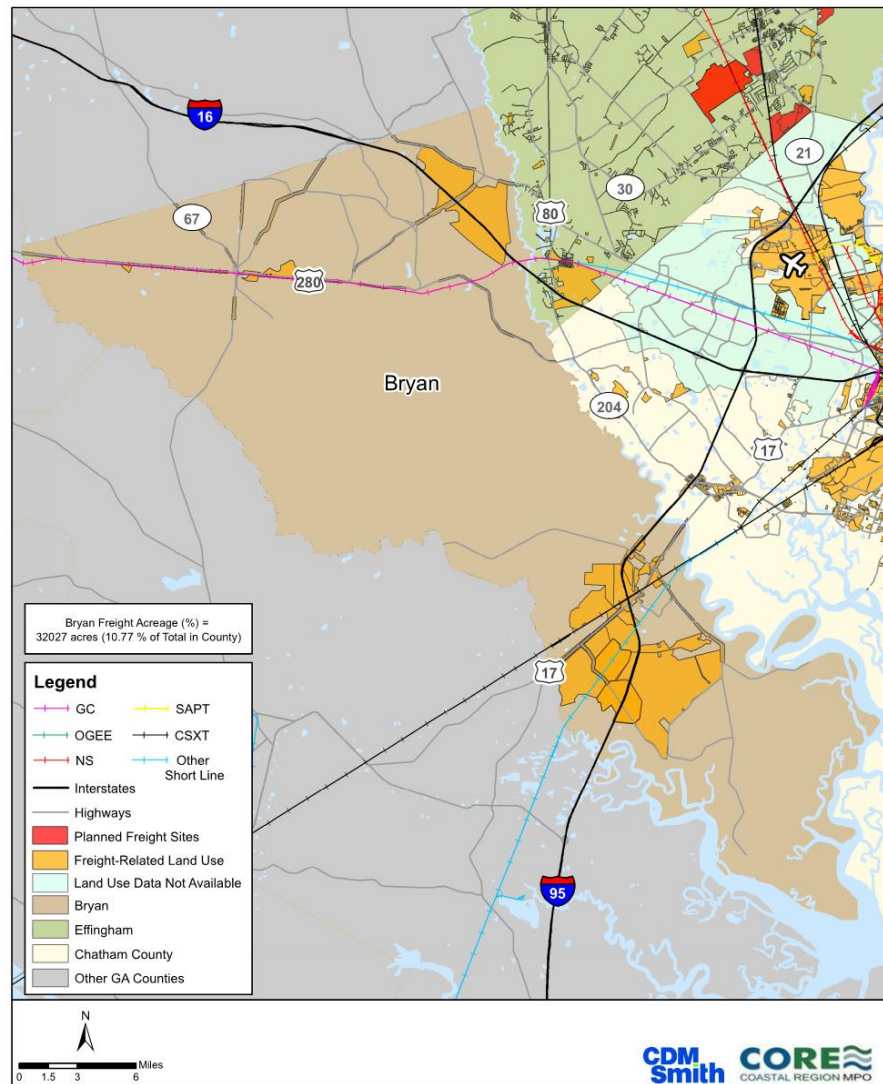
Existing Land Use – Study Area

Freight-Related Land Uses COREMPO Region



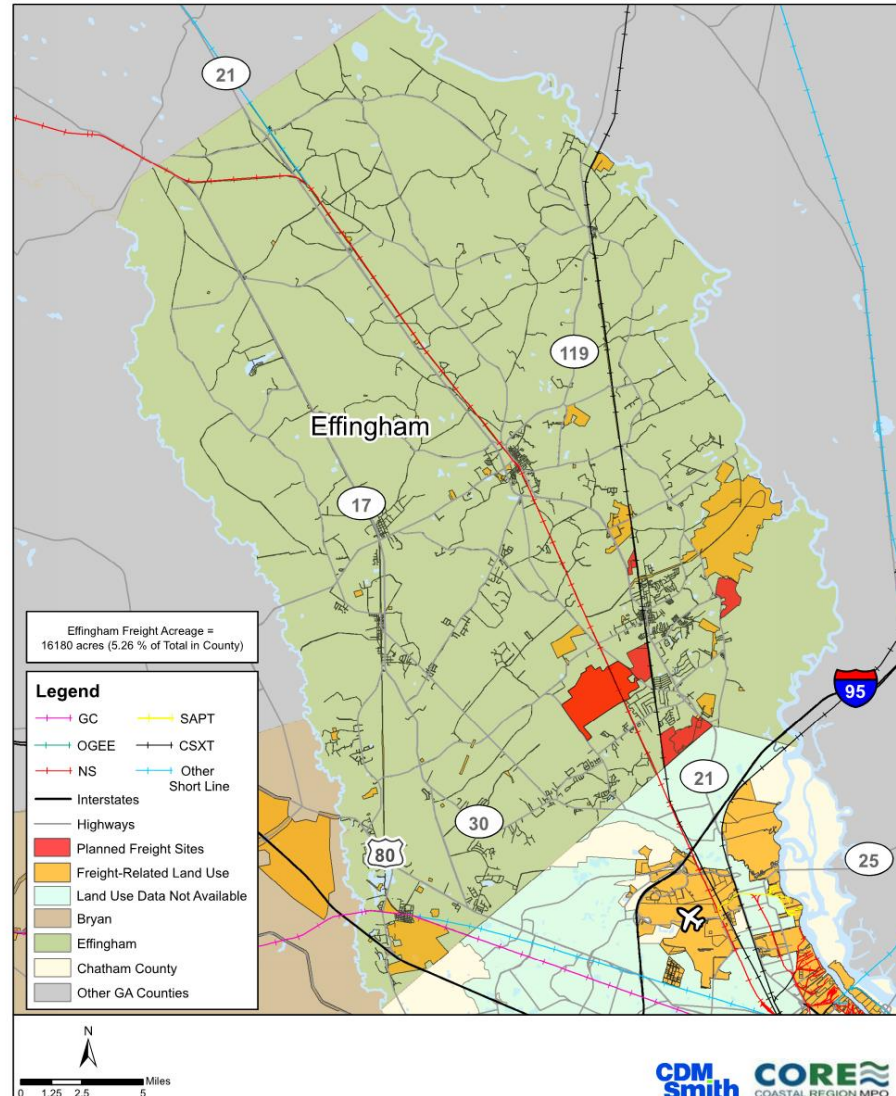
Existing Land Use - Bryan

Freight-Related Land Uses Bryan County



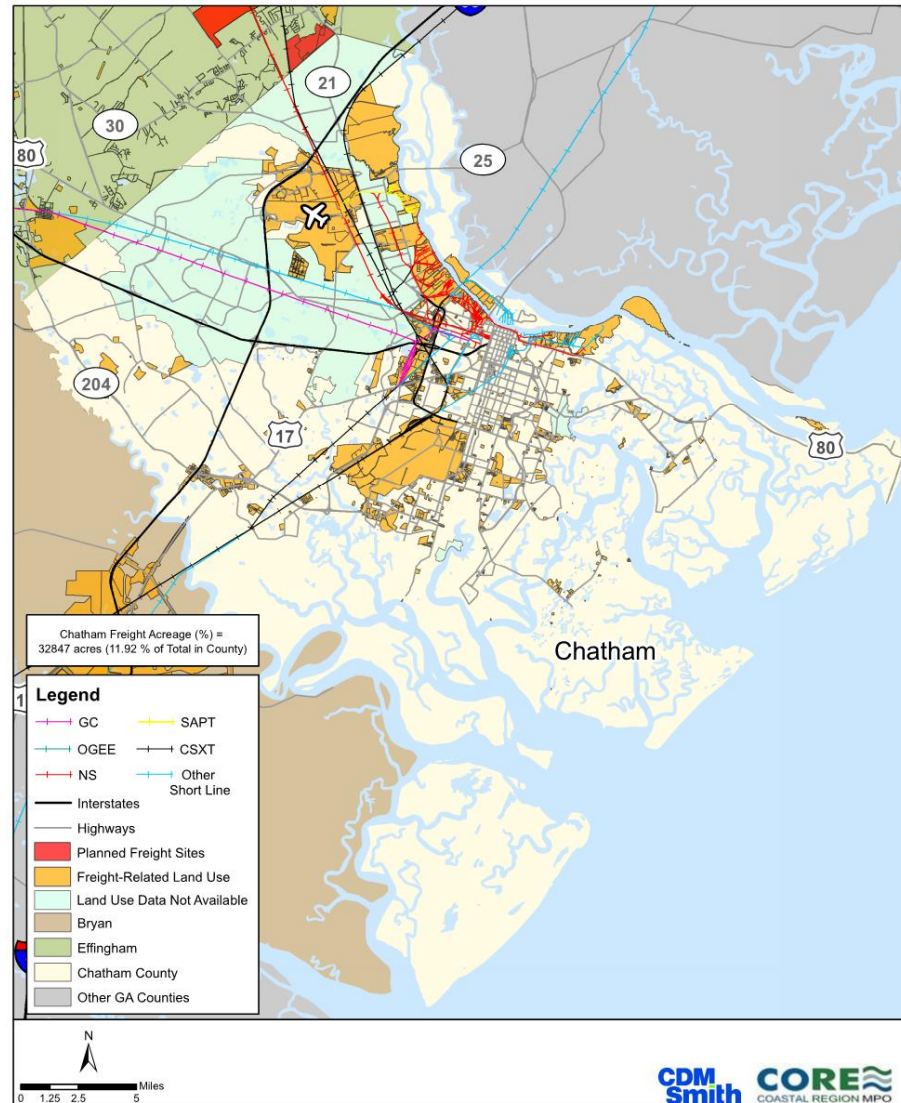
Existing Land Use - Effingham

Freight-Related Land Uses Effingham County



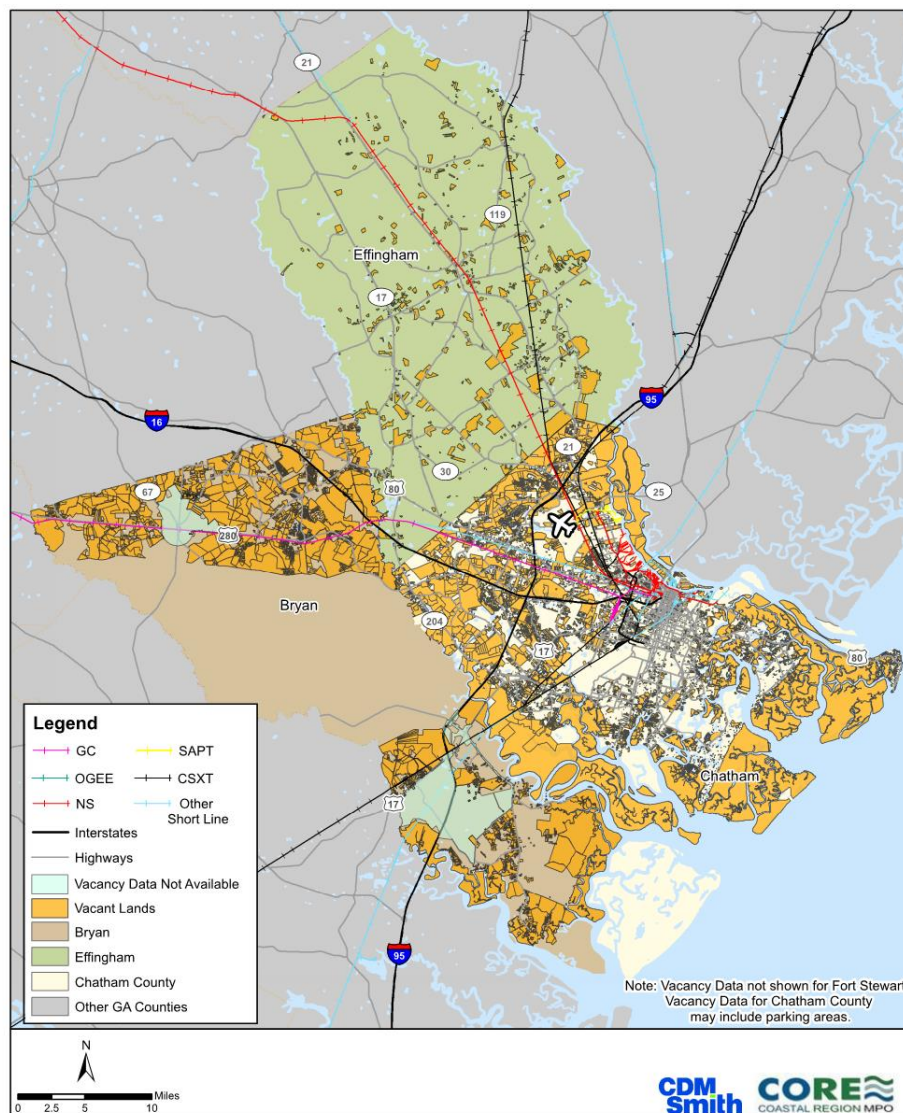
Existing Land Use - Chatham

Freight-Related Land Uses Chatham County



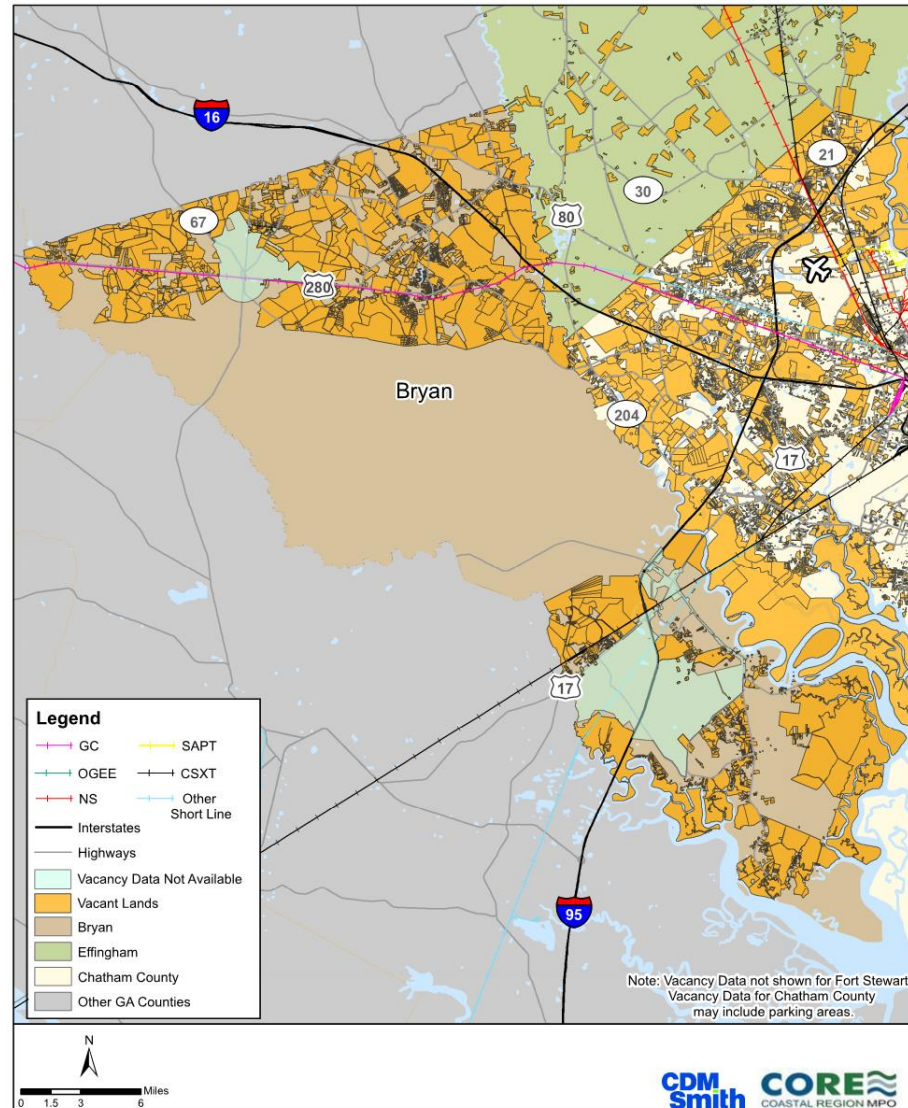
Freight Possibilities – Study Area

Vacant Lands COREMPO Region



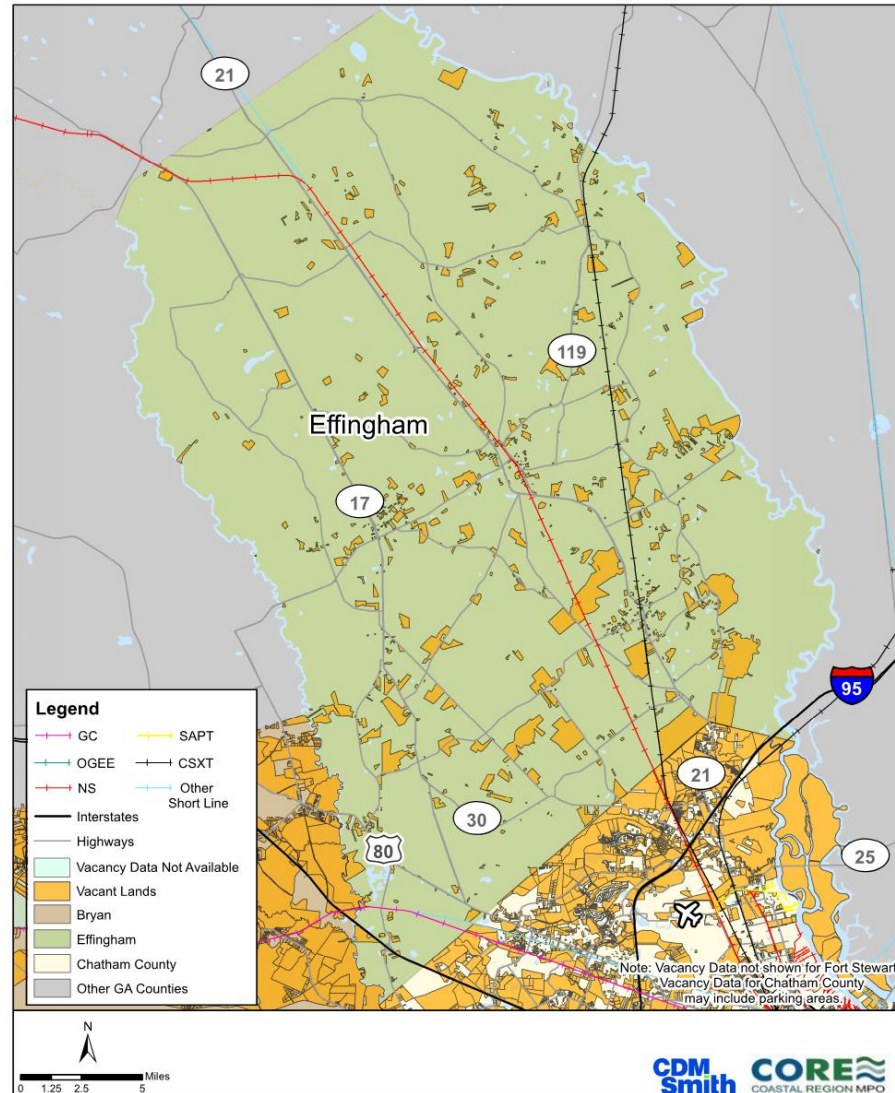
Freight Possibilities – Bryan

Vacant Lands Bryan County



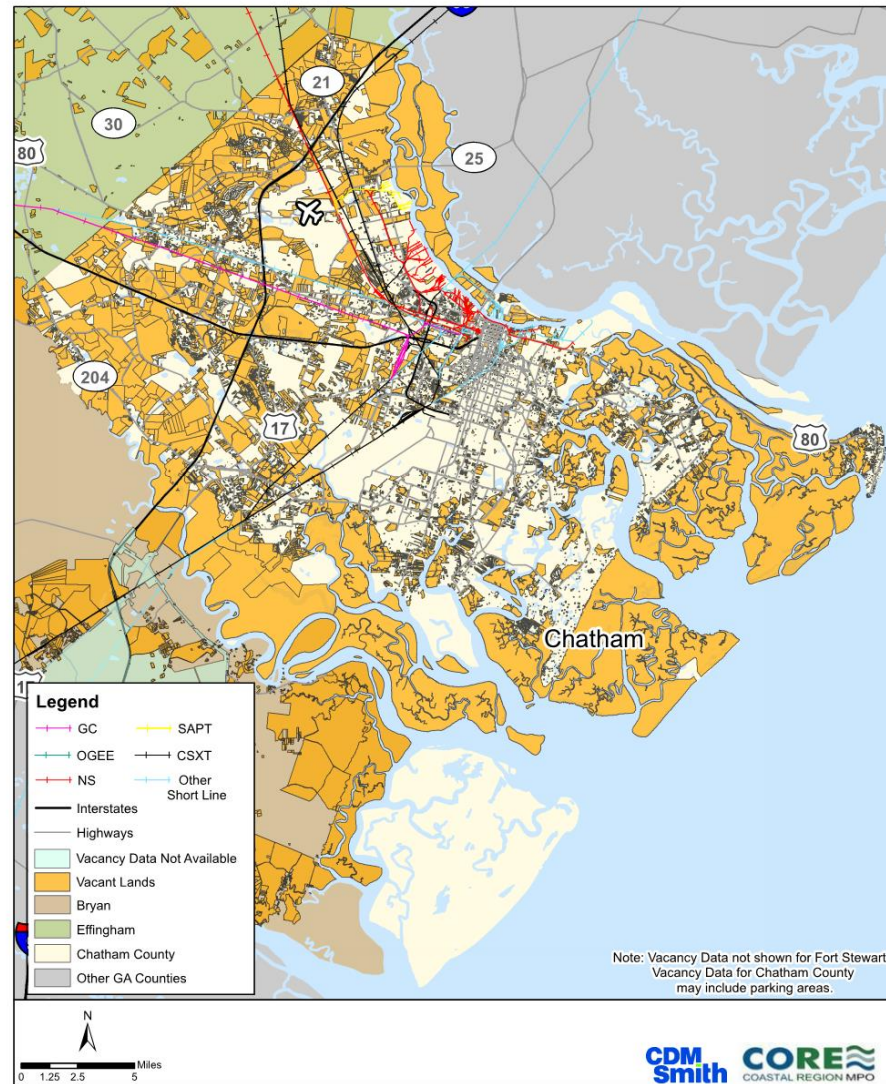
Freight Possibilities – Effingham

Vacant Lands Effingham County



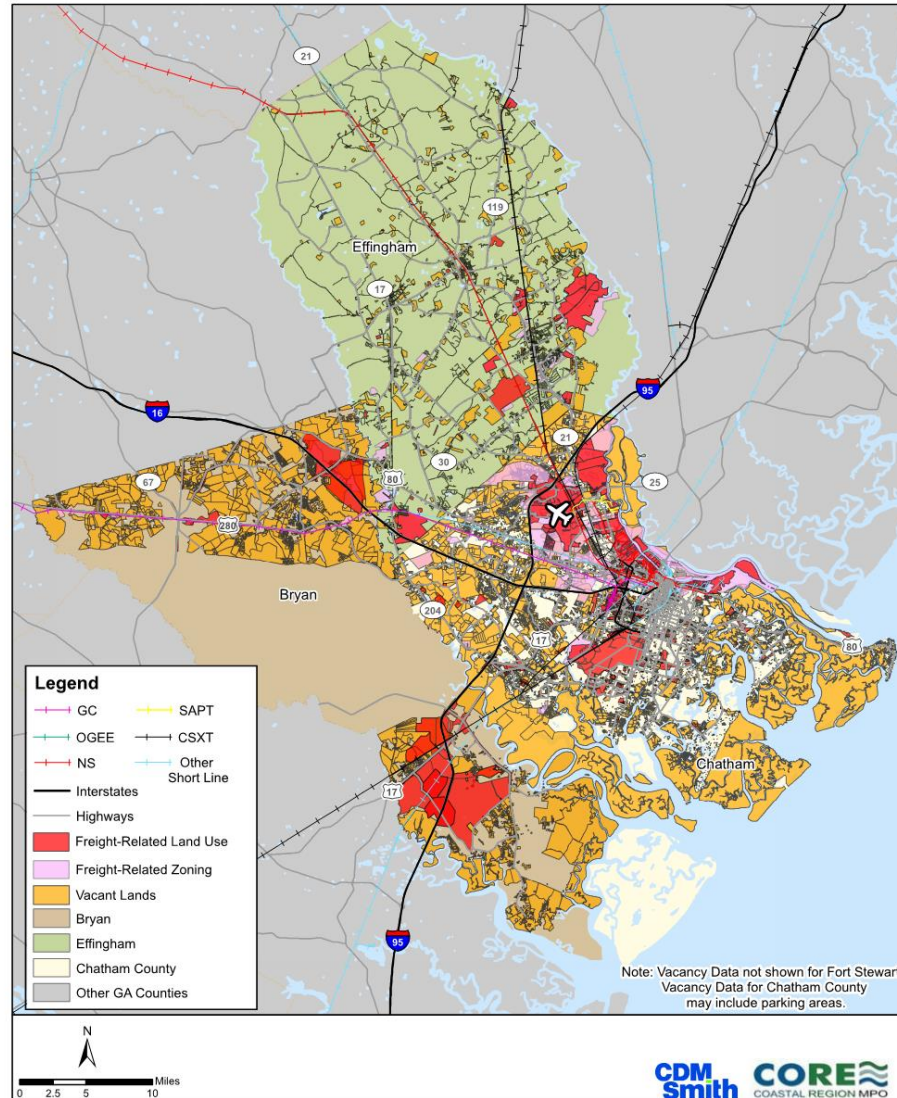
Freight Possibilities – Chatham

Vacant Lands Chatham County



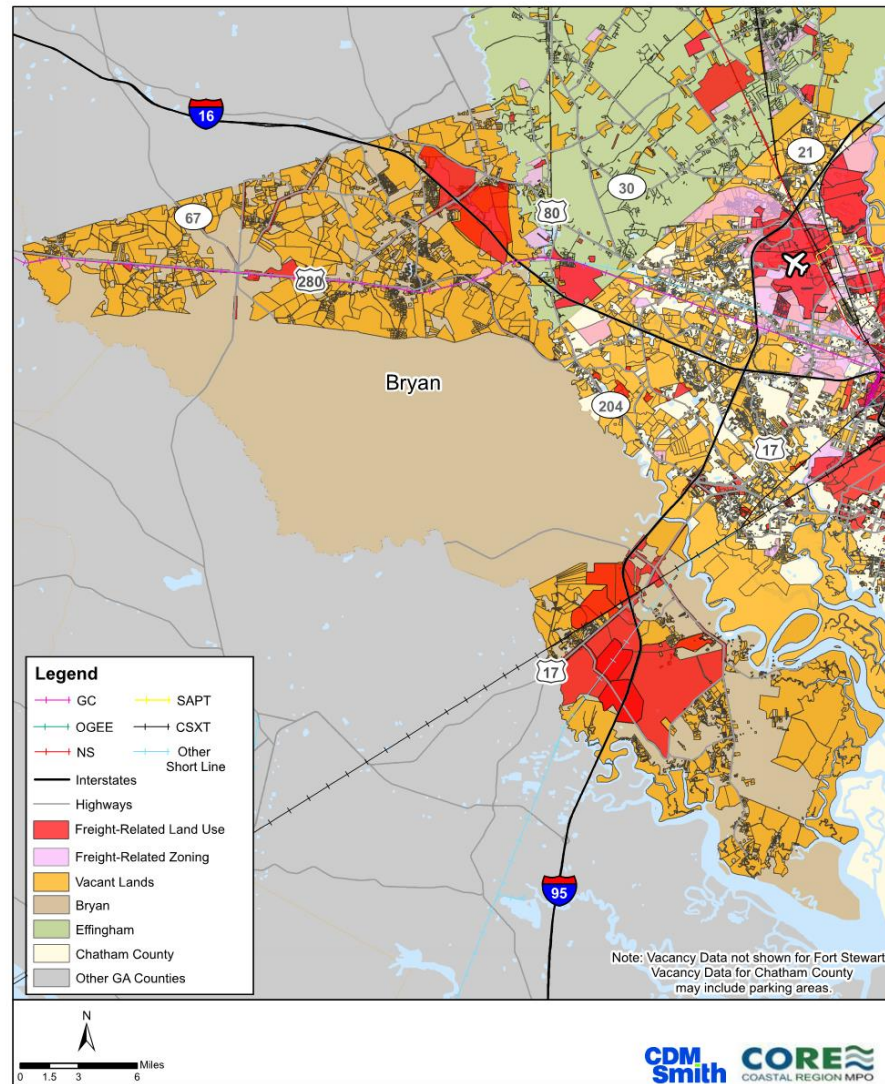
Existing & Possibilities – Study Area

Vacant Lands COREMPO Region



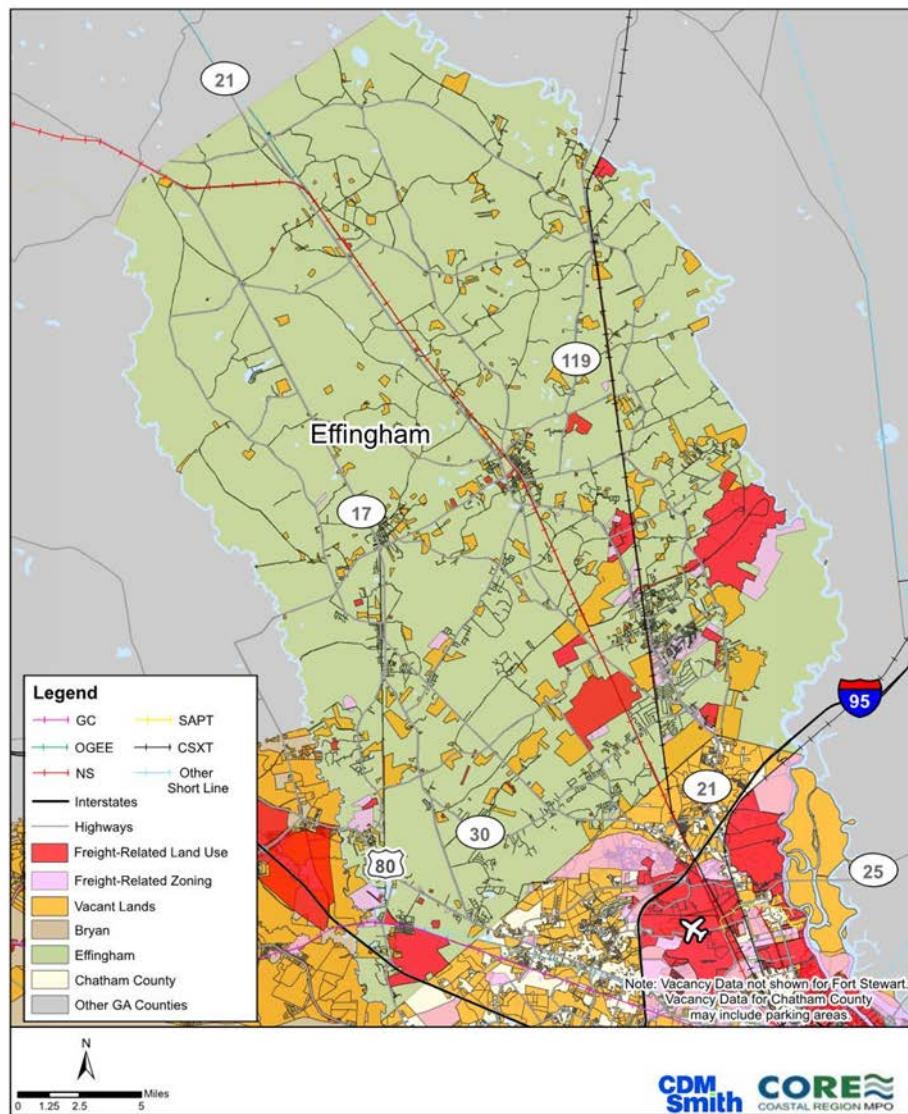
Existing & Possibilities – Bryan

Vacant Lands Bryan County



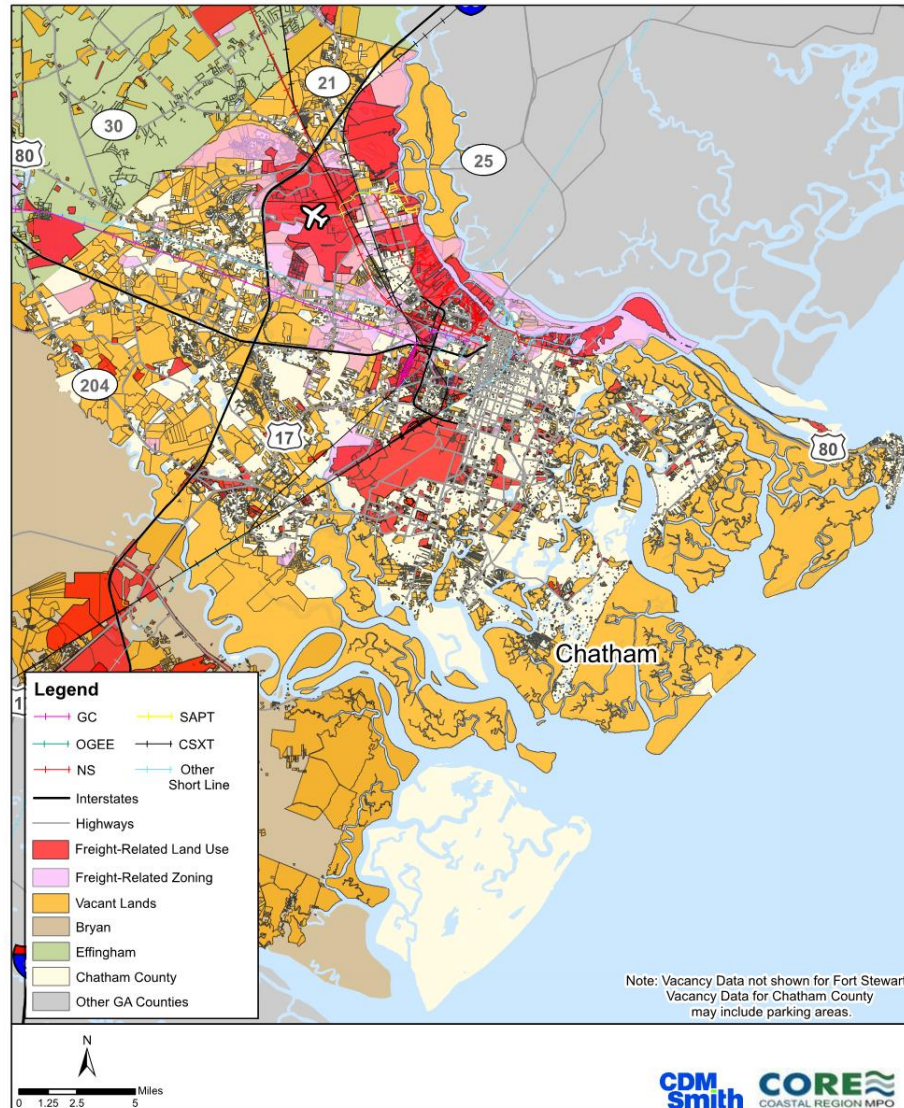
Existing & Possibilities – Effingham

Vacant Lands Effingham County



Existing & Possibilities – Chatham

Vacant Lands Chatham County





BREAK

Preliminary Recommendations for Infrastructure Improvements



Preliminary Short-term (2015-2020)

Project	Highway	Seaport	Airport	Rail
SR 21 from SR 30 to I-95; Including Interchange (Diverging Diamond Interchange) ²	X			
CR 787/Islands Expressway at Wilmington River/Bascule Bridge ²	X			
SR 21 Culvert Replacement at Pipemakers Canal ²	X			
SR 25 Culvert Replacement at Pipemakers Canal ²	X			
SR 25 Conn / Bay Street from I-516 to the Bay Street Viaduct (West Bay Street Widening) ²	X			
SR 26 from I-516 to CS 188/Victory Drive (US 80 / Ogeechee Rd Widening) ²	X			
I-516 / Lynes Parkway Widening from I-16 to Veterans Parkway ²	X			
CR 984/Jimmy DeLoach Pkwy @ SR 17 - Interchange (New Interchange at US 80) ²	X			
Jimmy DeLoach Parkway Extension from US 80 to I-16, including new interchange at US 80 ²	X			
Savannah Harbor Expansion Project (Deepening) ⁴		X		
SR 307/Dean Forest Road from Telfair to I-16 interchange – improved traffic signalization and signage ¹	X			
Bay Street (Downtown Savannah) – Safety enhancements ¹	X			
Ogeechee Road (SR 25) at Chatham Parkway – intersection improvements ¹	X			
Dean Forest Road/ Bourne Road (SR 307) from Port Authority to I-16 – operations and safety enhancements ¹	X			

¹ List of Preliminary Recommendations from the CORE MPO Regional Freight Plan

² Projects from the CORE MPO 2040 Total Mobility Plan

³ Draft Recommendations from the Georgia State Rail Plan that is currently being updated

⁴ Recommendations from the Georgia Statewide Freight and Logistics Plan, 2010-2050

Preliminary Short-term (2015-2020)

Project	Highway	Seaport	Airport	Rail
Grange Road Reconstruction from SR 21 to SR 25 ²	X			
Traffic Control Center ¹	X			

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Preliminary Mid-term (2021-2030)

Project	Highway	Seaport	Airport	Rail
I-516 @ CS/1503/DeRenne Avenue (DeRenne Blvd. Option) ²	X			
East DeRenne from SR 204 to Harry S Truman Parkway (East DeRenne Avenue Improvements) ²	X			
SR 21 from CS 346/Mildred Street to SR 204 (West DeRenne Avenue Improvements) ²	X			
SR 26/US 80 @ Bull River and @ Lazaretto Creek ²	X			
Brampton Road Connector from Foundation Drive to SR 21/SR 25/US 80 ²	X			
I-16 @ Montgomery Street and @ MLK Jr BLVD - Ramp and Overpass (I-16 Exit Ramp Removal) ²	X			
Build additional tracks for storage, double-tracking or re-configuring storage leads at Garden City Terminal ³				X
Increase Garden City Terminal Yard capacity, track lengths, or double tracking ³				X
I-16 at SR 307 – ramp improvements ¹	X			
SR 21 Corridor – Operations and Safety enhancements ¹	X			
US 80 Corridor – Operations and Safety enhancements ¹	X			
Ogeechee Road (US 17/SR 25) at Chatham Parkway – intersection improvements ¹	X			

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Preliminary Long-term (2031-2040)



Project	Highway	Seaport	Airport	Rail
I-95 at SR 21 / Augusta Rd Interchange Reconstruction ^{2,4}	X			
US 80 / Victory Drive Improvements / Congestion Mitigation ²	X			
President Street / Truman Parkway Interchange Bridge and Ramp Reconstruction ²	X			
I-516 / Lynes Parkway Widening from Veterans Parkway to Mildred Street ²	X			
I-516 / Lynes Parkway at I-16 Interchange Reconstruction ²	X			
I-16 at I-95 Interchange Reconstruction ²	X			
Grade separated rail crossings along SR 21 ¹	X			X
Construct more grade-separated crossings ³	X			X
I-16 at Chatham Parkway – Interchange improvements ¹	X			
I-95 at Airways Avenue – interchange improvements ²	X			

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⁴ Recommendations from the Georgia Statewide Freight and Logistics Plan, 2010-2050



How can Freight Projects be Funded?

Next Steps

- Complete maps, analysis, tech memos and reports
- Post Plan Completion Presentation
 - Date?
 - Location?
- Establish EDFAC to continue CORE MPO's freight planning efforts
 - Membership
 - Bylaws



Thank You!

Freight Study Website

<http://www.thempc.org/Transportation/FreightTransportationPlans.html>