3 Baseline Conditions

This section provides a brief overview of the key baseline conditions that were analyzed to provide the proper planning framework to develop the findings and recommendations of the Plan. A more detailed analysis of each of the baseline conditions related to this study can be found in the *Baseline Conditions and Needs Assessment Report*, which was submitted to GDOT in February 2007.

3.1 *Crash Safety and Roadway Geometrics*

Providing an Interstate system that facilitates safe movement of traffic is an important goal of GDOT. Therefore, the crash experience data from 2003-2005 were carefully examined, and conditions that could lead to potential safety problems were identified to ensure that safety concerns were considered in developing improvement recommendations. The latest crash experience data available at the beginning of the study were used.

3.1.1 Interstate/Roadway Segment Crash Experience

The incidence of crashes along a particular stretch of road is most valuable when compared to that of similar roads throughout the state. In order to make this comparison, the accident rates for the study roadways were calculated and then compared with the average rate for similar facilities throughout the state. The accident rate is defined as the number of crashes per million vehicle miles travelled (MVMT) for a given segment of roadway. For this study, crash data and statewide average crash data were compared for 2003 to 2005. The following are the statewide average crash rates for urban and rural Interstates throughout Georgia between 2003 and 2005.

- Urban Interstates = 195 crashes per 100 MVMT
- Rural Interstates = 78 crashes per 100 MVMT

High crash segments were identified along the Interstate system based on the criteria indicated above. For this analysis, the Interstate system was divided into segments comprised of an interchange and the Interstate extending approximately halfway to the adjacent interchange. This resulted in I-95 being divided into six sections, I-16 being divided into eight sections, and I-516 being divided into five sections. **Figure 3.1** (see page 3-2) shows these Chatham County Interstate sections with the incidence of crashes along the Interstate sections and interchanges indicated.

The high crash segments, determined based on the above methodology, are identified in **Figure 3.1**. As this figure shows, the only Interstate segment to surpass the urban threshold is along I-516 east of the southwest bypass to its easternmost terminus at Montgomery Street. Sections surpassing the rural threshold include:

- I-95 from the Bryan County Line to Quacco Road
- I-95 from south of SR 21 to the South Carolina State Line

3.1.2 Interchange and Critical Intersection Crash Experience

Interchanges provide an important interface between the surface street network and the Interstate system. Since these access points are limited, traffic is concentrated along arterials having interchanges, making them more prone to congestion and crash experience. Identification of interchanges with high incidence of crashes is important to identifying where key improvements may be needed.

Similar to the identification of high crash Interstate segments, comparison of interchange crash rates to that experienced at other interchanges allows attention to be focused on those locations with the greatest need. GDOT does not calculate a statewide average interchange crash rate. Therefore, for comparative purposes, the number of crashes occurring at each interchange was compared to the average for all interchanges in Chatham County. 19 crashes per year was the countywide average based on the data from 2003 through 2005. Those interchanges with more crashes than the countywide average were identified. The analysis included crashes along the arterial serving the interchange to a distance of one mile on each side of the interchange and all crashes involving the interchange ramp termini intersections.

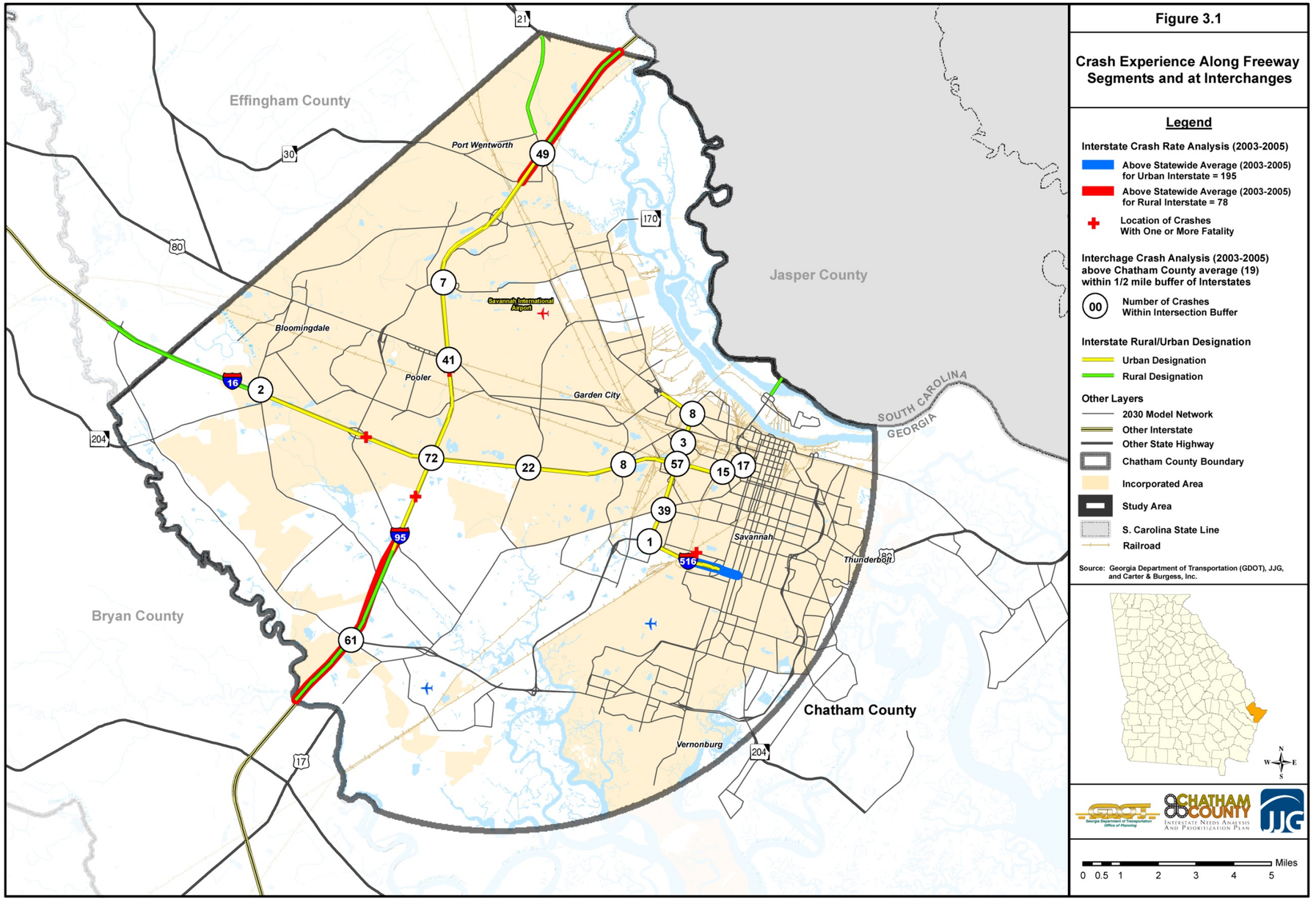
The high crash interchanges, determined based on the above methodology, are identified in **Figure 3.1**. As this figure shows, the following interchanges experienced crashes exceeding the threshold. It is important to note that this is a comparison of the number of crashes at each study interchanges compared to the countywide average, and not a comparison of crash rates. Thus, it is possible for an interchange to experience a high number of crashes yet have a low crash rate because of high traffic volumes.

- I-16 at SR 307 (# of crashes 116% of countywide average)
- I-516 at US 17 (# of crashes 205% of countywide average)
- I-95 at US 80 (# of crashes 216% of countywide average)
- I-95 at SR 21 (# of crashes 258% of countywide average)
- I-16 at I-516 (# of crashes 300% of countywide average)
- I-95 at SR 204 (# of crashes 321% of countywide average)
- I-95 at I-16 (# of crashes 379% of countywide average)

3.1.3 Geometrics not Meeting Current Standards

The geometric constraints along the Interstate system can be comprised of a variety of factors. Since design standards evolve over time, many of the areas that do not meet current standards were likely built according to standards at the time they were built. Current standards are taken from the most recent (2004) available American Association of State Highway and Transportation Officials (AASHTO) “Green Book.”

For example, curvature of the current Interstate could be too sharp to accommodate current motorist speeds, the ramp length or curvature may not satisfy current GDOT standards, or bridge load sufficiency may not match projected traffic characteristics.


Effingham County
Bryan County
Jasper County
Chatham County
Port Wentworth
Bloomingdale
Pooler
Garden City
Savannah International Airport
Savannah
Thunderbolt
Vernonburg
SOUTH CAROLINA
GEORGIA
21
30
80
204
170
16
95
17
516
49
7
41
2
72
22
8
3
57
15
17
39
1
61
Figure 3.1
Crash Experience Along Freeway Segments and at Interchanges
Legend
Interstate Crash Rate Analysis (2003-2005)
Above Statewide Average (2003-2005) for Urban Interstate = 195
Above Statewide Average (2003-2005) for Rural Interstate = 78
Location of Crashes With One or More Fatality
Interchage Crash Analysis (2003-2005) above Chatham County average (19) within 1/2 mile buffer of Interstates
00 Number of Crashes Within Intersection Buffer
Interstate Rural/Urban Designation
Urban Designation
Rural Designation
Other Layers
2030 Model Network
Other Interstate
Other State Highway
Chatham County Boundary
Incorporated Area
Study Area
S. Carolina State Line
Railroad
Source: Georgia Department of Transportation (GDOT), JJG, and Carter & Burgess, Inc.
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The bridge sufficiency rating is an evaluation of a bridges' ability to stay in service. A bridge's sufficiency is rated from 0 to 100, with 100 representing a fully sufficient bridge and 0 representing an entirely deficient bridge. Bridges must have sufficiency ratings of 50 or below to be eligible for federal replacement funds. As **Figure 3.2** (see page 3-3) indicates, none of the Interstate bridges were identified as having a sufficiency rating below 50.

Numerous locations were identified as having potential roadway geometric concerns. The locations evaluated are indicated on **Figure 3.2** and listed below. The investigation focused on the following:

- Curvature of ramps
- Length of ramps
- Length of merge lanes (weaving space)
- Overall roadway alignment and its curves

3.1.3.1 I-16 at I-95 Interchange

The full cloverleaf design results in short weaving areas along both Interstates. These weaving areas currently accommodate peak hour weaving volumes greater than 1,000 vehicles along both Interstates (I-95 southbound and I-16 westbound weaving areas). These volumes are expected to grow significantly by year 2030, further worsening the operational deficiencies created by these weaving segments.

3.1.3.2 I-16 at I-516 Interchange

This partial cloverleaf design uses directional ramps to serve I-516 southbound to I-16 eastbound and I-516 northbound to I-16 westbound movements. This removes the short weaving section created with the full cloverleaf interchange, but requires a left-side entry and merge for traffic traveling from I-516. Additionally, the loop ramps have a 25-mph design speed; the curve radius is 200 feet.

3.1.3.3 I-16 from Chatham Parkway to Downtown

Many of the shoulders and bridge widths do not meet current standards. The eastbound curve turning north at the 37th Street connector has less than a 1,800-foot radius needed for 70 mph design speed. The exit ramp to US 17 northbound is too short. In addition, the last eastbound exit ramp's taper is too short.

3.1.3.4 I-516

I-516 was originally designed as a local freeway facility and not an Interstate. It was designated an Interstate after it was built. All inside shoulders are only 4 feet wide. I-516 northbound to US 80 flyover has a 1,000-foot radius, which is satisfactory for 55 miles per hour (mph) design speed and the 55 mph speed limit, but not for a 70 mph design speed. The exit ramp to Lathrop Avenue northbound does not have the 490-foot minimum storage before the gore area, as required by current standards. All railroad and overpass bridges are not built to current standard widths, they have less than 4 foot shoulders on inside and outside. The Augusta Road entrance to I-516 is a parallel entrance, which is not to GDOT standards. Only tapered ramps are used now. The weaving distance from the Gwinnett Street ramps to the I-16 ramps needs to be 2,000 feet, per current standards; the existing distance is 500 feet.

3.2 *Truck Traffic Characteristics*

The truck traffic analysis estimated the present and future truck traffic volume and routes taken from industrial sites, warehouse and distribution facilities, trucking companies and the seaports to the Interstate system in Chatham County. The analysis was conducted through a series of interviews and surveys, field research, and GIS was employed to identify existing and forecasted truck traffic activity in Chatham County. The analysis was conducted in close coordination with the State Truck Lane Study and the SRTA Northwest Toll Expressway Study.

3.2.1 Truck Generators

A list of industrial sites in Chatham County was obtained from the Georgia Department of Industry, Tourism and Trade (GDITT), now the Georgia Department of Economic Development (GDED). Independent research was completed as well to identify and include warehouse and distribution facilities and trucking companies in the Chatham County area. Altogether, 130 facilities meeting the specified criteria were identified.

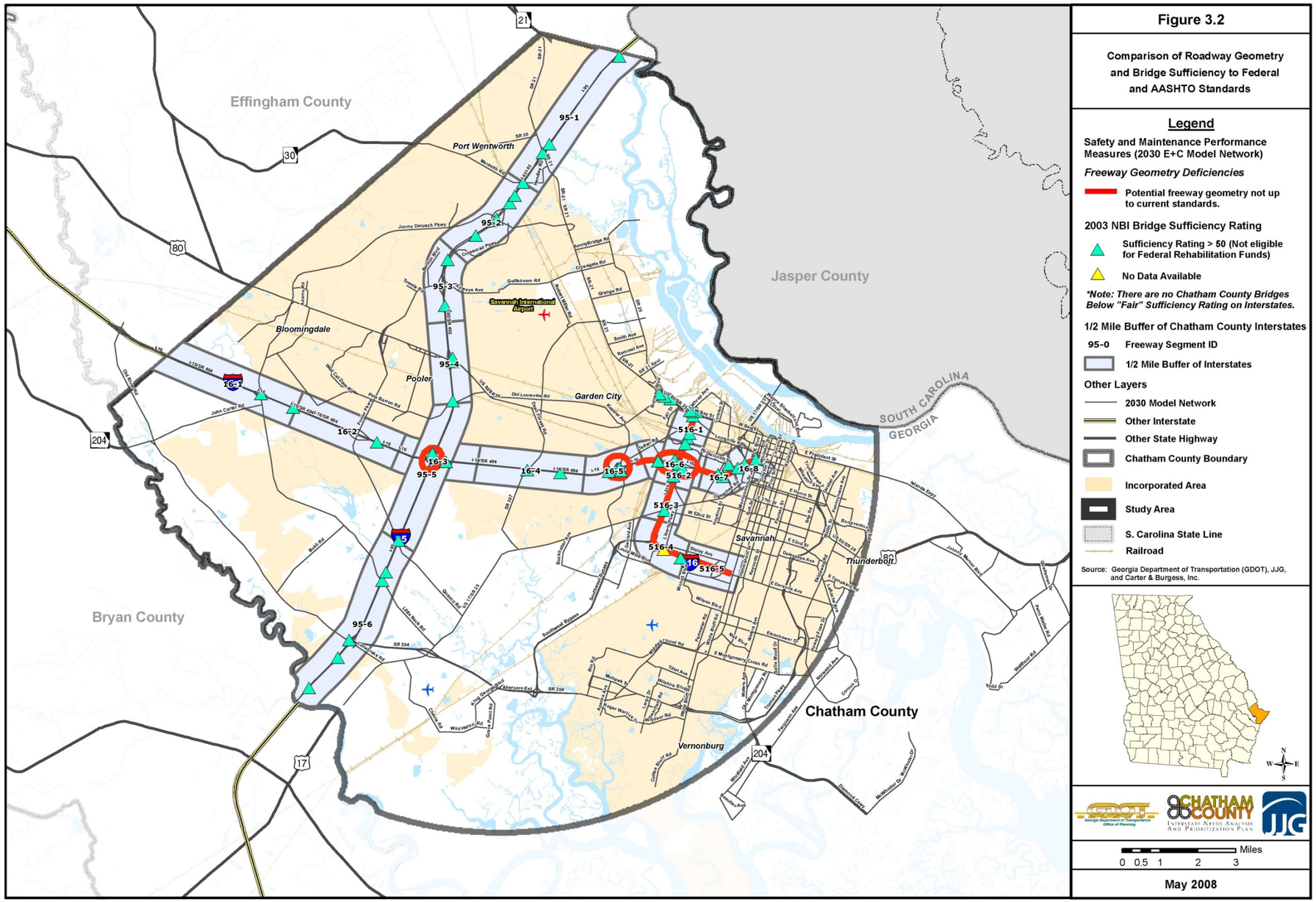
A questionnaire/survey form was developed in an attempt to solicit the necessary information from the identified sites. Questions asked included;

- How many trucks go in and out of your facility per day?
- What roads do the trucks take to reach the Interstate system from your facility?
- What type of trucking is most prevalent at your facility (long-haul, short-haul, local or transfer)?
- What roads do the trucks try to avoid?
- What road or intersection in your area is most in need of attention?

Attempts to contact all 130 facilities were made. Usable information and results were returned by 79 facilities. From their feedback, it was determined that these 79 facilities generate 3,553 trucks per day. According to the responses of the trucking companies and facilities responses, trucks most often use SR 21, Jimmy DeLoach Parkway, SR 307 and US 80 to get to the Interstate system. Although this is not a comprehensive total, this information gives a good basis for assessing the truck traffic and volume on the roadways in Chatham County.

3.2.2 Land Use

Utilizing aerial photography and the truck generating sites, the current land use for Chatham County was approximated. In addition, the *Chatham County-Savannah Comprehensive Plan*, 2006, was obtained, confirmed and slightly adjusted with the most up-to-date information by the Chatham County-Savannah Metropolitan Planning Commission (MPC). Additionally, future expansion information from the Georgia Ports Authority (GPA) was incorporated into the land use map.


Effingham County
Bryan County
Jasper County
Chatham County
SOUTH CAROLINA
GEORGIA
Port Wentworth
Bloomingdale
Pooler
Garden City
Savannah
Thunderbolt
Vernonburg
Savannah International Airport
95-1
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95-6
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16-6
16-7
16-8
516-1
516-2
516-3
516-4
516-5
Figure 3.2
Comparison of Roadway Geometry and Bridge Sufficiency to Federal and AASHTO Standards
Legend
Safety and Maintenance Performance Measures (2030 E+C Model Network)
Freeway Geometry Deficiencies
Potential freeway geometry not up to current standards.
2003 NBI Bridge Sufficiency Rating
Sufficiency Rating > 50 (Not eligible for Federal Rehabilitation Funds)
No Data Available
*Note: There are no Chatham County Bridges Below "Fair" Sufficiency Rating on Interstates.
1/2 Mile Buffer of Chatham County Interstates
95-0 Freeway Segment ID
1/2 Mile Buffer of Interstates
Other Layers
2030 Model Network
Other Interstate
Other State Highway
Chatham County Boundary
Incorporated Area
Study Area
S. Carolina State Line
Railroad
Source: Georgia Department of Transportation (GDOT), JJG, and Carter & Burgess, Inc.
Miles
0 0.5 1 2 3
May 2008

These factors contributed to an understanding of not only the areas of current activity, but also those poised for potential growth. As expected, the highest concentrations of major truck generating facilities were located in areas designated for Heavy Commercial and Industrial sectors.

The highest concentrations of these areas were as follows:

- From the coastline seaports west to the South Coastal Highway/SR 25 between the Eugene Talmadge Memorial Bridge and the North Coastal Highway/SR25.
- Along Jimmy DeLoach Parkway between SR 21 and Interstate 95.
- Along the US 80 corridor from SR 307 to Interstate 95.

Employing a recent land use study prepared by the MPC, a more comprehensive list of truck generating facilities was prepared, which aided in delineating "pods," or local concentrations of truck trip generators.

3.2.3 Pods

Six pods encompass the industrial sites, warehouse and distribution facilities and trucking companies. These pods were delineated based upon (1) the location and expected high-volume truck generators and (2) by defining and isolating paths the trucks would take to the Interstate. The truck generation figures for each pod are based on each pod's survey respondents.

The locations of the pods are as follows:

- The North Pod is located along Jimmy DeLoach Parkway between SR 21 and Interstate 95 and includes the Crossroads Business Center. The main truck route from the North Pod is Jimmy DeLoach Parkway. It includes six of the facilities that responded to the survey which generate 758 trucks per day. Some of the major contributors to the traffic in this pod are:
  - Home Depot Distribution Center – generates 400 trucks per day
  - American Port Services – generates 250 trucks per day
  - Pier 1 Imports Warehouse – generates 60 trucks per day
- The West Pod is to be found along the US 80 corridor from east of SR 307 going westward to Interstate 95. This includes facilities along Louisville Road and the industrial park accessed by Coleman Boulevard. The main truck routes from the West Pod are US 80 and SR 307. It includes 16 of the facilities that responded to the survey which generate 378 trucks per day. Some of the major contributors to the traffic in this pod are:
  - Bomark Transport – generates 100 trucks per day,
  - Carver Inc. (oilseed processing machinery) – generates 50 trucks per day
  - The Savannah Coca-Cola Bottling Company – generates 50 trucks per day
- The Ocean Terminal Pod encompasses facilities from the Savannah River west to SR 21 from north of Foundation Road down to and including facilities on Lathrop Avenue. The main truck routes from the Ocean Terminal Pod are Lathrop Avenue, SR 21 and US 80. It includes 10 of the facilities that responded to the survey which generate 918 trucks per day. Some of the major contributors to the traffic in this pod are:
  - International Paper – generates 500 trucks per day
  - Carroll & Carroll Inc. (asphalt & concrete) – generates 200 trucks per day
  - Owens Corning (laminated shingles) – generates 80 trucks per day
- The Garden City Terminal Pod is situated just north of the Ocean Terminal Pod. It runs from just south of Brampton Road up to Grange Road and from the Savannah River to just West of SR 21 to include the industrial parks accessed by SR 307 just east of the airport and west of SR 21. The main truck routes from the Garden City Terminal Pod are SR 307, SR 21 and US 80. The Garden City Terminal Pod includes 12 of the facilities that responded to the survey which generate 703 trucks per day. Some of the major contributors to the traffic in this pod are:
  - Powers Transportation Systems – generates 250 trucks per day
  - Transus Intermodal – generates 95 trucks per day
  - Howard Sheppard Intermodal – generates 80 trucks per day
- The East Pod is positioned along East President Street from Harry Truman Parkway to Elba Island Road and from the Savannah River running south to Gwinnett Street. It includes eight of the facilities that responded to the survey which generate 357 trucks per day. The main truck route from the East Pod is President Street to Bay Street. Some of the major contributors to the traffic in this pod are:
  - Georgia Pacific Gypsum – generates 200 trucks per day
  - Southern States Phosphate & Fertilizer Company – generates 80 trucks per day
  - Daniel Lumber Company – generates 50 trucks per day
- The Central Pod encompasses a large geographic area spreading outward from the Interstate 16 and Interstate 516 interchange. The northern border of this pod includes Bay Street and its facilities and the pod continues south to US 17. Its eastern border is US 17 while the western border is Chatham Parkway. This pod includes many "downtown" area facilities as well as the CSX intermodal yard. The main truck routes from the Central Pod are SR 21, US 17 and Chatham Parkway. It includes 27 of the facilities that responded to the survey which generate 439 trucks per day. Some of the major contributors to the traffic in this pod are:
  - Gulfstream Aerospace Corporation – generates 100 trucks per day
  - CSX Intermodal Yard – generates 55 trucks per day
  - Chemical South Transport – generates 55 trucks per day

In addition to the current pods it should be noted that there are two areas which have the potential to be major truck traffic generators at the conclusion of this study or in the near future.

- Area 1 includes approximately 1,100 acres and is the site of recently opened warehouse and distribution facilities, including Target and Ikea. This area is located between the Savannah River and SR 21 from Jimmy DeLoach Parkway north to Interstate 95. This new area promises to generate a significant amount of truck traffic.

- Area 2 is the "mega-site" that was originally to be used by DaimlerChrysler for an automotive manufacturing plant. This area encompasses the vast majority of the area between Interstate 95 and SR 307 north of Interstate 16 and south of US 80. It is designed to have access points onto SR 307 just north of Interstate 16 as well as access to Pine Barren Road near its proposed new interchange at Interstate 95. Although DaimlerChrysler is no longer planning to use the site, the Savannah MPC is confident that an automotive manufacturing facility will occupy that space in the near future.

3.2.4 Ports

The Georgia Ports Authority (GPA) is the number one generator of truck traffic in Chatham County. The GPA has four official gates, but virtually all its truck traffic is served by Gates # 3 and #4. As of summer 2007, GPA generates approximately 5,400 truck trips per day. 66 percent of the traffic goes through Gate #4 located at the intersection of SR 307 and SR 25, and 33 percent goes through Gate #3 at SR 25 just north of Brampton Road. It is estimated that 60 percent of the truck traffic leaving the port stays local, headed from the port to a local warehouse or distribution center. From there, the goods are dispersed to other areas.

Most of these trucks use SR 21 and SR 307 when leaving the ports. When using Gate #3 trucks continue straight across SR 25 directly onto SR 307. From there they can access SR 21, US 80 or continue on SR 307 to the I-16 interchange which provides access to the Interstate system.

There are several routes that the trucks can utilize to access SR 21 as they travel north to Interstate 95 or Jimmy DeLoach Parkway, each of which is a concern to the GPA. When trucks take Brampton Road to access SR 21 they are traveling through a residential area on a narrow road that cannot realistically continue to handle that kind of traffic. Grange Road, while recently repaved, is in need of improvements to accommodate growing traffic volumes. Crossgate Drive and Bonnybridge Road both necessitate driving through residential areas and the City of Port Wentworth. Even trucks utilizing SR 307 have to travel across at-grade railroad crossing.

The GPA recently had a bridge constructed on SR 25 to allow unrestricted access between the port facility and their intermodal yard located just west of SR 25. They are partnering with Norfolk Southern to further enhance this intermodal facility and are pursuing a bridge on SR 307 to provide a grade separation between the roadway and railroad line.

In addition to these changes, the GPA, along with GDOT is pursuing a new corridor to allow truck traffic to better access SR 21 from the ports which would include various access points with separated grade intersections. As part of the Statewide Truck Lanes Needs Identification Study prepared by the GDOT Office of Planning, a SR 21 Corridor Needs Analysis was prepared that identified an alignment for a new roadway between SR 21 and SR 25 that runs from SR 307 north toward Interstate 95. GDOT and the GPA are currently conducting concept and environmental studies for this facility that would provide additional routes for tucks to travel to and from the port area.

The expansion of the GPA Garden City Terminal is expected to increase truck trips from the current 5,400 trucks per day to 11,000 trucks trips per day by 2015.

3.2.5 Truck Counts

Utilizing the truck traffic volume from the identified facilities in the pods combined with the information from the Georgia Ports Authority, the likely truck routes to the Interstate system and the current and future amount of trucks on those roads have been identified.

The facilities that responded to our survey reported generating 3,553 trucks per day. The Georgia Ports Authority reported generating an estimated 5,400 per day. This results in 8,953 trucks per day for this study. This total is estimated to grow to 17,002 trucks by 2015 (11,000 from the ports and 6,002 from the other facilities). This does not take into account the facilities that were not able to be contacted and the potential new growth sites listed above. These existing and projected truck estimates were then distributed onto the roadway network surrounding the port. **Table 3.1** (page 3-7) lists the truck routes within Chatham County and the estimated current and projected truck traffic.

3.2.6 Recommendations from Truck Traffic Characteristics

Based on the analysis of truck traffic characteristics, it is recommended that the following areas and possible improvements be studied further:

- Continue concept, environmental and preliminary engineering on the new location roadway that would provide truck and automobile congestion relief to SR 21 and the port area roadways.
- Study the total traffic and volumes on highway 21 from US 80 to Interstate 95.
- Study an alternative to the use of Bay Street to access the Interstate system from East Savannah.

Table 3.1: Current and Projected Truck Traffic on Chatham County's Truck Routes

Road Section	Current Truck Count	Projected Truck Count for 2015
President Street	312	527
Bay Street	338	571
Lathrop Avenue	102	172
US 17 – from I-516 to Chatham Pkwy	250	423
Chatham Parkway – from US 80 to SR 17	40	57
Tremont Road – near CSX intermodal yard	111	188
SR 21 – from Lathrop to Foundation	117	198
SR 21 – from Foundation to Brampton	442	747
SR 21 – from Brampton to SR 307	2,316	4,539
SR 21 – from SR 307 to I-95	4,843	9,590
US 80 – from SR 21 to Chatham Pkwy	361	610
US 80 – from Chatham Pkwy to SR 307	390	659
US 80 – from SR 307 to I-95	1,324	1,878
SR 307 – from SR 21 to SR 80	1,710	3,363
SR 307 – from SR 80 to I-16	1,006	1,847
Jimmy DeLoach Parkway	2,205	4,813

*Truck traffic based on data received from interviews with the Georgia Ports Authority and industrial, warehousing, distribution and trucking companies surrounding the port area.

3.3 *Travel Demand Modeling*

A travel demand model was used to project future traffic volumes along the Interstates and arterial roads in Chatham County for use in identifying Interstate needs and potential improvements. The travel demand model prepared by GDOT using TP+ software for the Chatham Urban Transportation Study (CUTS) 2030 Long Range Transportation Plan (LRTP) in 2004 was modified for use in preparing the Chatham Interstate Plan. The modifications were completed in cooperation with CUTS staff. The model was prepared using a base year of 2001 and included special truck generators to account for the heavy truck usage within Chatham County associated with the Port and surrounding industrial land uses. This section of the report describes the model development and validation. For clarity, the two models will be consistently titled as follows:

- The GDOT CUTS 2030 LRTP Model developed in 2004 will be referred to as the "**LRTP Model (2004)**."
- The revised model prepared for the Chatham Interstate Plan started in 2006 will be referred to as "**Chatham Interstate Plan Model (2006)**."

The LRTP Model (2004) was modified to reflect capacities currently used in GDOT models. This included an examination of the projects coded in the future year existing plus committed (E+C) model network. The existing model network included the existing transportation network as of the base year 2001, plus all projects constructed since 2001. The committed network was comprised of all projects included in the CUTS TIP (2007-2009) with committed right of way or construction funding. The current traffic analysis zone (TAZ) structure was found to be sufficiently detailed to account for travel within the county moving to/from the Interstate system, and was not changed. Some of the model detail within Downtown Savannah showed the greatest volume variability.

Under GDOT's guidance, the capacity table in the LRTP Model (2004) model run script was updated to be consistent with GDOT's 2006 capacity table. The project team also surveyed truck traffic volumes and routes taken from major industrial sites in Chatham County. The results from this survey were integrated into the travel demand model's trip generation module. Because of these two updates, it was necessary to recalibrate and validate the updated model. The resulting model became the Chatham Interstate Plan Model (2006).

The results of both models are presented in this document. They are presented together in order to highlight the difference between the results of the Chatham Interstate Plan Model (2006), updated specifically for this study, and the LRTP Model (2004) which has been used for other plans and studies. Furthermore, as the LRTP Model (2004) has 2001 as its base year, that has been adopted as the base year for the projections in this study.

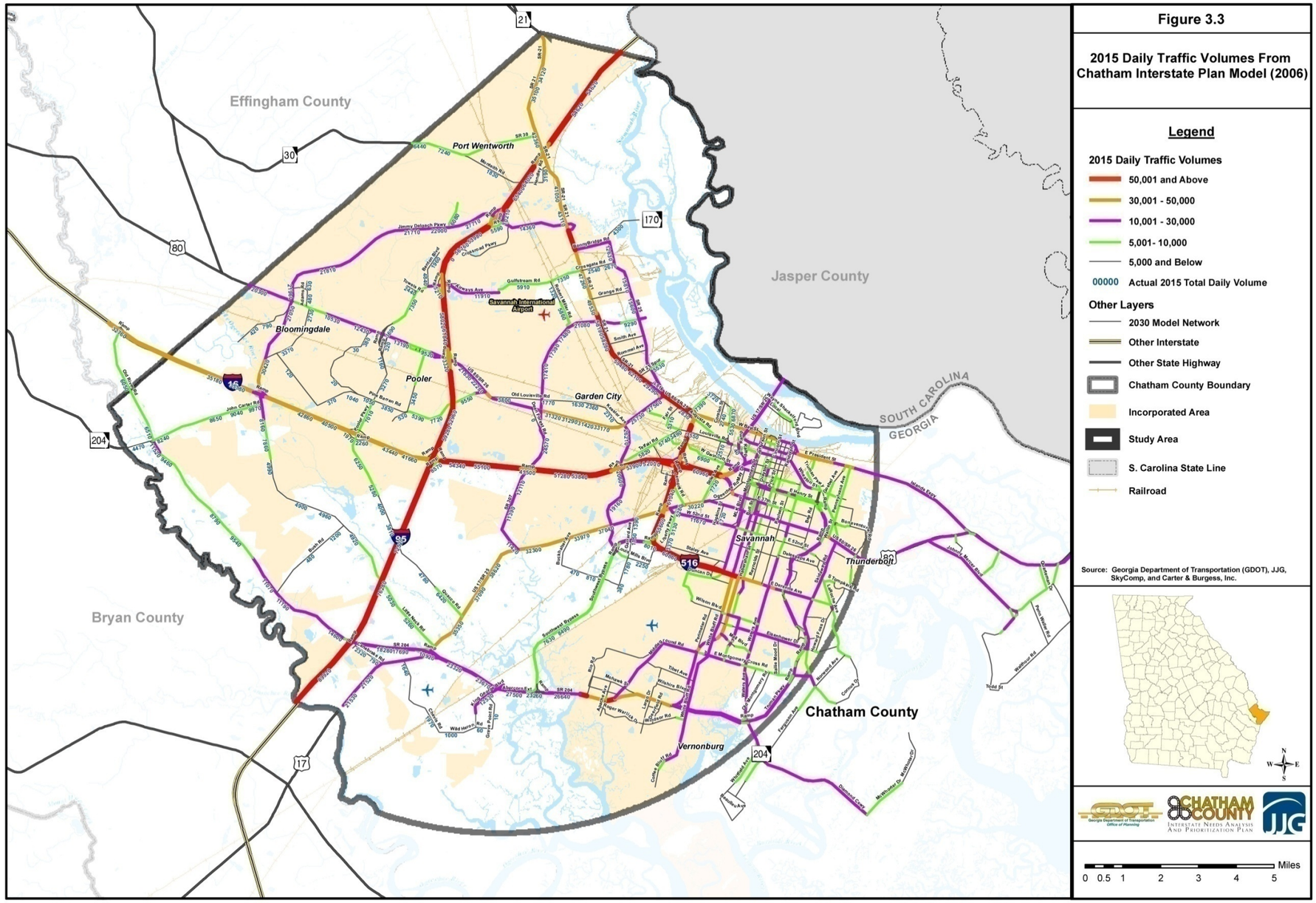
3.3.1 Traffic Volume Projections

The Chatham Interstate Plan Model (2006) was used to forecast future year traffic volumes. **Figures 3.3** and **3.4** (see pages 3-8 and 3-9) show the daily traffic volumes for years 2015 and 2030 based on the travel demand model output. The travel demand model is based on daily traffic volumes, but also provides an estimate of peak hour volumes by direction based on link specific factors. These peak hour volumes will be used in conjunction with field count data when performing traffic operations/simulation analysis to assess potential improvements.

3.4 *Needs and Deficiencies*

The Plan addresses needs along, and at interchanges within, the Interstate system in Chatham County. This section of the report identifies needs and deficiencies along the Interstate system identified through an examination of current Interstate conditions and projected future conditions based on application of the TP+ travel demand model developed for this study, the Chatham Interstate Plan Model (2006). The travel demand model was based on refinement of the TP+ model developed by GDOT for the Chatham Urban Transportation Study (CUTS), the LRTP Model (2004).

The needs identified are based on results of this modeling work, evaluation of crash rates and potential roadway geometric limitations, examination of truck access needs and concentrations of truck generators. This preliminary analysis will be followed by more detailed traffic operations and simulation modeling to further quantify problems and develop alternatives at a corridor and interchange level.


Effingham County
Jasper County
Bryan County
Chatham County
Port Wentworth
Bloomingdale
Pooler
Garden City
Savannah
Thunderbolt
Vernonburg
Savannah International Airport
SOUTH CAROLINA
GEORGIA
21
30
80
204
95
16
17
170
516
Figure 3.3
2015 Daily Traffic Volumes From Chatham Interstate Plan Model (2006)
Legend
2015 Daily Traffic Volumes
50,001 and Above
30,001 - 50,000
10,001 - 30,000
5,001- 10,000
5,000 and Below
00000 Actual 2015 Total Daily Volume
Other Layers
2030 Model Network
Other Interstate
Other State Highway
Chatham County Boundary
Incorporated Area
Study Area
S. Carolina State Line
Railroad
Source: Georgia Department of Transportation (GDOT), JJG, SkyComp, and Carter & Burgess, Inc.
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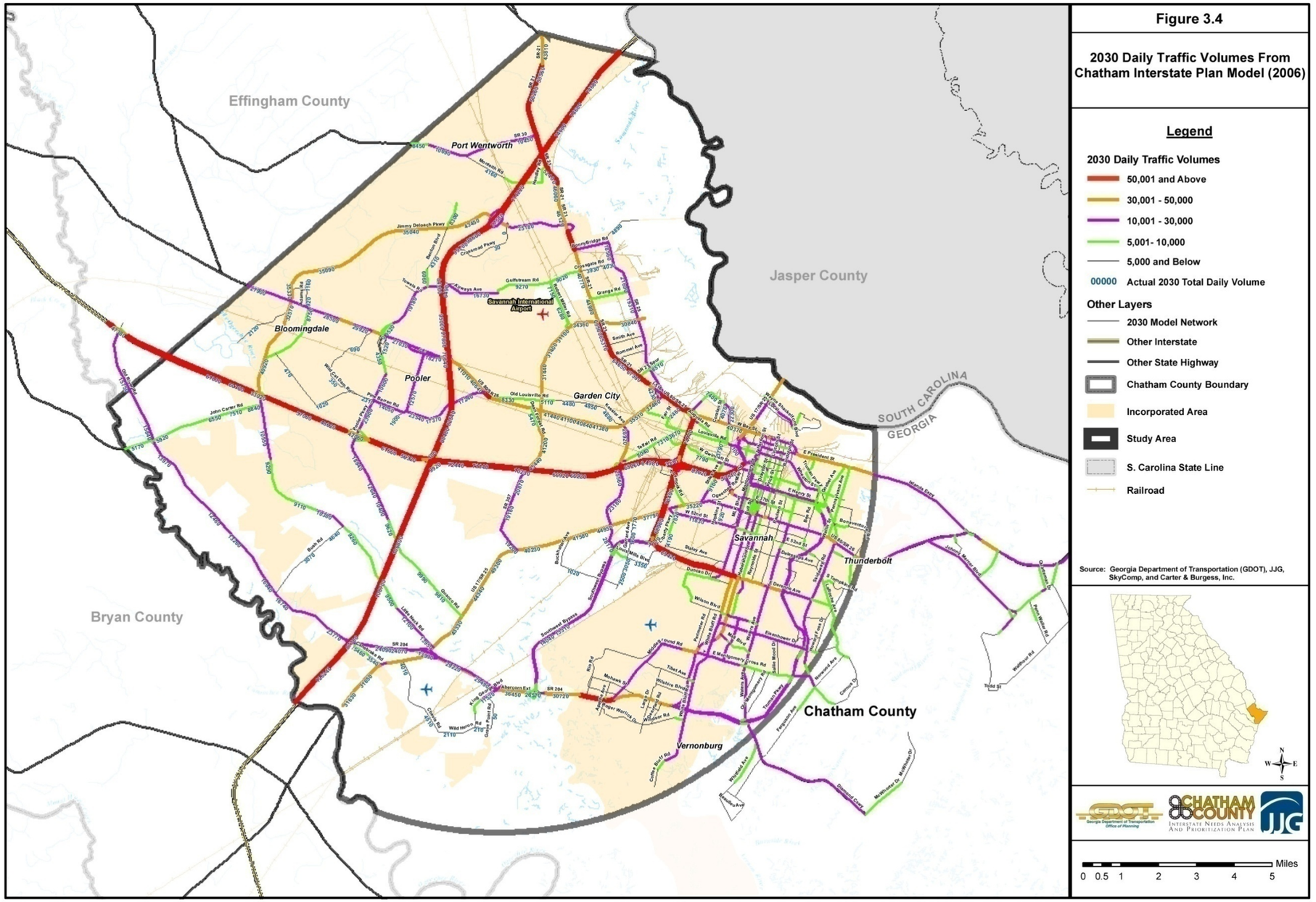

Effingham County
Jasper County
Bryan County
Chatham County
Port Wentworth
Bloomingdale
Pooler
Garden City
Savannah
Thunderbolt
Vernonburg
Savannah International Airport
SOUTH CAROLINA
GEORGIA
Figure 3.4
2030 Daily Traffic Volumes From Chatham Interstate Plan Model (2006)
Legend
2030 Daily Traffic Volumes
50,001 and Above
30,001 - 50,000
10,001 - 30,000
5,001- 10,000
5,000 and Below
00000 Actual 2030 Total Daily Volume
Other Layers
2030 Model Network
Other Interstate
Other State Highway
Chatham County Boundary
Incorporated Area
Study Area
S. Carolina State Line
Railroad
Source: Georgia Department of Transportation (GDOT), JJG, SkyComp, and Carter & Burgess, Inc.
Miles
0 0.5 1 2 3 4 5

3.4.1 Methodology for Identifying Critical Segments

The critical Interstate segments in Chatham County were identified through examination of key performance measures along the Interstate system, as described below.

3.4.1.1 Performance Measures

Physical roadway characteristics, truck and automobile travel patterns, and safety were examined to determine the performance of the Interstate within Chatham County. In order to quantify the results of this evaluation, performance measures were identified and assessed. These performance measures were grouped into three categories:

- Congestion and Mobility - Identifying locations where traffic congestion limits the ability to travel along the Interstate system will define conditions which limit the effectiveness of the Interstate in providing mobility. When Interstate mobility is reduced, commuter and through traffic delay increases and the Interstate is more vulnerable to crashes.

- Truck Movement and Economic Development - Truck mobility is a critical issue in Chatham County. The Port of Savannah is a major regional employer and driver of industrial and warehouse/distribution center activity throughout the northern portion of the county. Understanding truck traffic patterns and desired truck routes is essential to maintaining economic viability in this important industry. With increased emphasis on "just in time" delivery of goods and operation of mobile warehousing in the trucking industry, reliable travel times and roadway access to the ports will be key issues into the future.

- Safety and Maintenance - Providing a safe Interstate system is important to reduce injuries and fatalities and strengthen travel time reliability in Chatham County. Crash experience along the Interstates, as well as at interchanges, is an important evaluation factor. In addition, identification of locations with roadway geometry not up to current AASHTO design standards is important so that these conditions can be considered in conjunction with mobility needs in determining potential improvements.

Volume based performance measures were evaluated for future year 2030 conditions based on travel demand model results with the 2030 existing plus committed (E+C) roadway network. Projects are considered to be "committed" if they are included in TIP (2007-2009) in construction or ROW phase. Other performance measures were evaluated based on current conditions and/or likely future growth trends. **Table 3.2** (see page 3-11) shows the performance measures evaluated.

As **Table 3.2** shows, different performance measures were applied to provide information on three distinct aspects of the Plan. A portion of the performance measures were applied to determine the level of detail for traffic operations/simulation analysis along the Interstates. Additional information was compiled and evaluated to quantify needs, as documented in this report. A third set of performance measures provides information for use in comparing potential improvement alternatives.

3.4.1.2 Application of Criteria to Roadway Network

The performance measures and thresholds identified in **Table 3.2** were used to examine the Chatham County Interstate system in order to identify critical roadway segments. For purposes of evaluation, each Interstate was divided into segments by interchange. Thus, each roadway segment includes an interchange and the Interstate section half way to the adjacent interchange in each direction. An exception to this is along the I-516 corridor, where some sections contained more than one interchange due to their proximity. The corridors identified include a half mile on either side of the Interstate highway. The following is a summary of the interchanges included with each of the Interstate segments used in the evaluation of conditions:

- 95-1: I-95, Exit 110 – SR 21 / Augusta Road
- 95-2: I-95, Exit 106 – Jimmy DeLoach Parkway
- 95-3: I-95, Exit 104 – Airways Avenue
- 95-4: I-95, Exit 102 – SR 26 / US 80 / Louisville SR
- 95-5: I-95, Exit 99 A and B – I-16 / Jim Gillis Memorial SR
- 95-6: I-95, Exit 94 – SR 204 / Bacon SR
- 16-1: I-16 at Exit 152 – US 17
- 16-2: I-16 at Exit 155 – Pooler Parkway
- 16-3: I-16 at Exit 157 A and B – I-95
- 16-4: I-16 at Exit 160 – SR 307 / Dean Forest Road
- 16-5: I-16 at Exit 162 – Chatham Parkway
- 16-6: I-16 at Exit 164 A and B – I-516 / W. F. Lynes Parkway
- 16-7: I-16 at Exit 165 – SR 304 / 37th Street
- 16-8: I-16 at Exit 166 – Gwinnett Street / US 17 Alternate (Talmadge Bridge)
  I-16 at Exit 167 - Martin Luther King Junior Boulevard
- 516-1: I-516 at Exit 8 – SR 25 / Atlantic Coast SR
- I-516 at Exit 7 – Bay Street (south access only)
  I-516 at Exit 7A – SR 25 Connector / Augusta Avenue (north access only)
- 516-2: I-516 at Exit 6 – Gwinnett Street
  I-516 at Exit 5 – I-16
  I-516 at Exit 4 – Tremont Road
- 516-3: I-516 at Exit 3 – SR 25 / US 17 / SR 26 / US 80 / Ogeechee Road
- I-516 at Exit 7B – Lathrop Avenue (northbound exit access only)
- 516-4: I-516 at Exit 1 – Southwest Bypass
- 516-5: I-516 at Exit 0 – DeRenne Avenue (terminus of I-516)

Table 3.2: Performance Measures for Identification of Critical Road Segments

Function	Performance Metric	Source	Threshold	Application of Metric		
				Identify Type of Analysis	Quantify Needs	Compare Alternatives
Congestion and Mobility	Total Vehicle Miles Traveled (VMT)	Travel demand model	N/A - Comparison of VMT		X	X
	Percentage of VMT on Interstate or arterial facilities	Travel demand model	N/A - Comparison of % of VMT		X	X
	Vehicle Hours of Travel (VHT)	Travel demand model	N/A - Comparison of VHT		X	X
	Volume/capacity (v/c)	Travel demand model	V/C = 0.70 - LOS D or below	X	X	X
	Volume minus capacity	Travel demand model	V/C > Capacity per lane	X	X	X
	Average speed	Travel demand model	Speed indicating LOS D or below		X	X
	Existing congestion based on density	SkyComp	Density indicating LOS D or below	X	X	
	Travel Time Index (TTI) (congested travel time/ uncongested travel)	Travel demand model	N/A - Comparison of TTI			X
	Intersection delay	Operations analysis	LOS D or worse			X
	Presence of spillback between intersections/onto Interstate	Operations analysis/SkyComp	Spillback suggests delay/between intersections/onto Interstate	X	X	X
	Corridor travel time	Operations analysis	N/A - Comparison of corridor travel time			X
Truck Movement and Access	Percentage of traffic that is trucks	Travel demand model	Greater than statewide average - 13% Interstates and 5% on arterials and collectors	X	X	X
	Truck volumes	Travel demand model	Volume greater than one half capacity of single lane	X	X	X
	Access to major truck generators	Off-model truck	Provides key access	X	X	X
	Delay along truck routes (hours/mile)	Travel demand model	Compare cost of delay to improvement cost			X
	Truck route designation	Off-model truck	Designated route	X	X	
	Access to future population and employment	GIS database	Provides key access		X	X
Safety and Maintenance	Interstate crash rates (per VMT) vs. State average	GDOT crash database	Crash rates above State	X	X	
	Number of crashes at interchange vs. Chatham average	GDOT crash database	Number above Chatham	X	X	
	Bridge sufficiency ratings	GDOT crash database	Good > 50		X	X
	Roadway geometrics not up to current “Green Book” standards	Visual assessment	Indentified locations	X	X	X
Note: Segments to be considered include all Interstate segments and roadways where interchanges are present and major arterials within 1/2 mile of Interstate system (parallel and intersecting)						

These Interstate sections are shown in the graphics provided in **Figures 3.5** and **3.6** (see pages 3-13 and 3-14), and described below. Please note, the alternating color used on the segment identifiers is for purposes of outlining the adjacent segment boundaries and does not have significance with respect to analysis results.

Results of Interstate Evaluation for Safety and Maintenance
The evaluation of safety and maintenance performance measures is described on page 3-10.

Results of Interstate Evaluation for Congestion and Mobility
An evaluation of congestion and mobility performance measures is provided in **Figure 3.5**. As this evaluation indicates, the entire I-95 corridor south of SR 21 is projected to operate with LOS D or worse conditions in 2030, with most of this section having capacity deficiencies greater than the capacity of one lane (for two directions). This indicates the need to widen I-95 to eight lanes, a project that is planned but has no right of way or constructing funding.

Figure 3.5 indicates that most of the I-16 corridor is expected to experience LOS D or worse conditions in year 2030, with one segment having capacity deficiencies greater than the capacity of one lane (for two directions). Thus, an additional lane of capacity would be needed to allow this segment to operate at acceptable LOS. This indicates the need to widen I-16 to six lanes. A project to six lane I-16 from I-95 to I-516 is a planned but not yet programmed. There is currently no planned or programmed project to widen I-16 from Old River Road in Effingham County to I-95.

I-516 is similar to I-16 in that it is expected to operate at LOS D or worse in 2030, with one segment having capacity deficiencies greater than the capacity of one lane (for two directions). This indicates the need to widen I-516 to six lanes. A project to six lane I-16 from I-95 to I-516 is a planned and programmed.

Another congestion measure that was examined along the Chatham County Interstate system is a data set provided by SkyComp in 2002. The SkyComp data is high resolution aerial photography of the Interstate system in Chatham County taken in the peak hours in order to observe and measure vehicle density and congestion. These data indicated LOS D conditions in 2002 along the section of I-16 from I-95 to I-516 and along I-516 from US 80 through the terminus of I-516 at Montgomery Avenue. In addition, three interchanges—I-95 at SR 21/Augusta Road, I-95 at SR 204/Bacon Road, and I-16 at Chatham Parkway— were identified in the SkyComp 2002 data as having queue spillback that approaches the Interstate system (sections 95-1, 95-6, and 16-5).

Results for Interstate Evaluation for Truck Movement and Access
An evaluation of truck movement and access performance measures is provided in **Figure 3.6** (see page 3-14). As this evaluation indicates, the majority of the I-95 corridor has year 2030 projected truck percentages greater than the projected statewide average of 23 percent for Interstates. It also has truck volumes greater than half the capacity of a single lane (for two directions). Thus, for this segment, truck traffic alone requires a half lane of Interstate capacity. The truck volumes and percentages along I-16 were not as high as those along I-95. The areas of I-16 east of I-516, and I-516 north of I-16 showed similar high truck percentages and volumes. Truck-only lanes were considered in the S*tatewide Truck Lanes Needs Identification Study* completed by the GDOT Office of Planning in April 2008. The results of this study indicate that truck lanes would not be appropriate on the Interstate system in Chatham County.

Figure 3.6 also shows interchanges having access to truck destinations/employment growth areas and those having access to population growth areas. As this figure shows, the primary employment growth areas are located in the Port of Savannah and Savannah International Airport areas, as well as along the SR 21 corridor. The population growth areas are along I-95 north of Jimmy DeLoach Parkway, in the southeast quadrant of the I-16 at 1-95 interchange, and in the area of Chatham County south of I-16 and west of I-95.

Summary of Evaluation Performance Measures
Table 3.3 (see page 3-15) provides a summary of the evaluation of performance measures. This color coded table provides visual confirmation of specific areas of deficiency and allows an examination of combinations of deficiencies.

3.4.1.3 Evaluation of Systemwide Mobility Performance Measures

In addition to evaluation of performance measures related to specific Chatham County Interstate segments, systemwide mobility performance measures were evaluated. These performance measures provide a baseline for comparison of improvement alternatives to be determined through more detailed analysis in the next phase of the study. The systemwide performance measures also provide information on how mobility is expected to change from the base year 2001 to horizon year 2030 due to assumed changes in the population and employment assumptions by TAZ. 2001 is the base study year utilized in the CUTS LRTP (2004) travel demand model, and was thus also the base year for the Chatham Interstate Model (2006).

Tables 3.4 A through **D** (see page 3-16) provide a comparison of vehicle miles traveled (VMT), vehicle hours traveled (VHT), average speed, and vehicle hours of delay based on the Chatham Interstate Plan Model (2006). **Tables 3.5 A** through **D** (see page 3-16) provide similar information based on results from the LRTP Model (2004). The data for the CUTS LRTP (2004) model are presented next to the Chatham Interstates Plan (2006) data to highlight the differences that resulted from the refinement of the CUTS LRTP (2004) model. A comparison of these sets of tables indicates that the Chatham Interstate Plan Model (2006) reflects more growth in VMT and VHT than the LRTP Model (2004). The Chatham Interstate Plan Model (2006) also reflects a greater drop in travel speeds and higher growth in vehicle hours delayed.

This document presents both the Chatham Interstate Plan Model (2006) and the LRTP Model (2004) because the difference in travel statistics reflects the additional population and employment included in the Chatham Interstates Plan Model (2006). The increased travel in Chatham County translates into an increase of 77 percent in Interstate highway VMT from 2001 to 2030 with E+C conditions. This results in a 31 percent drop in average travel speed along the Interstate highways and significant increases in delay time.

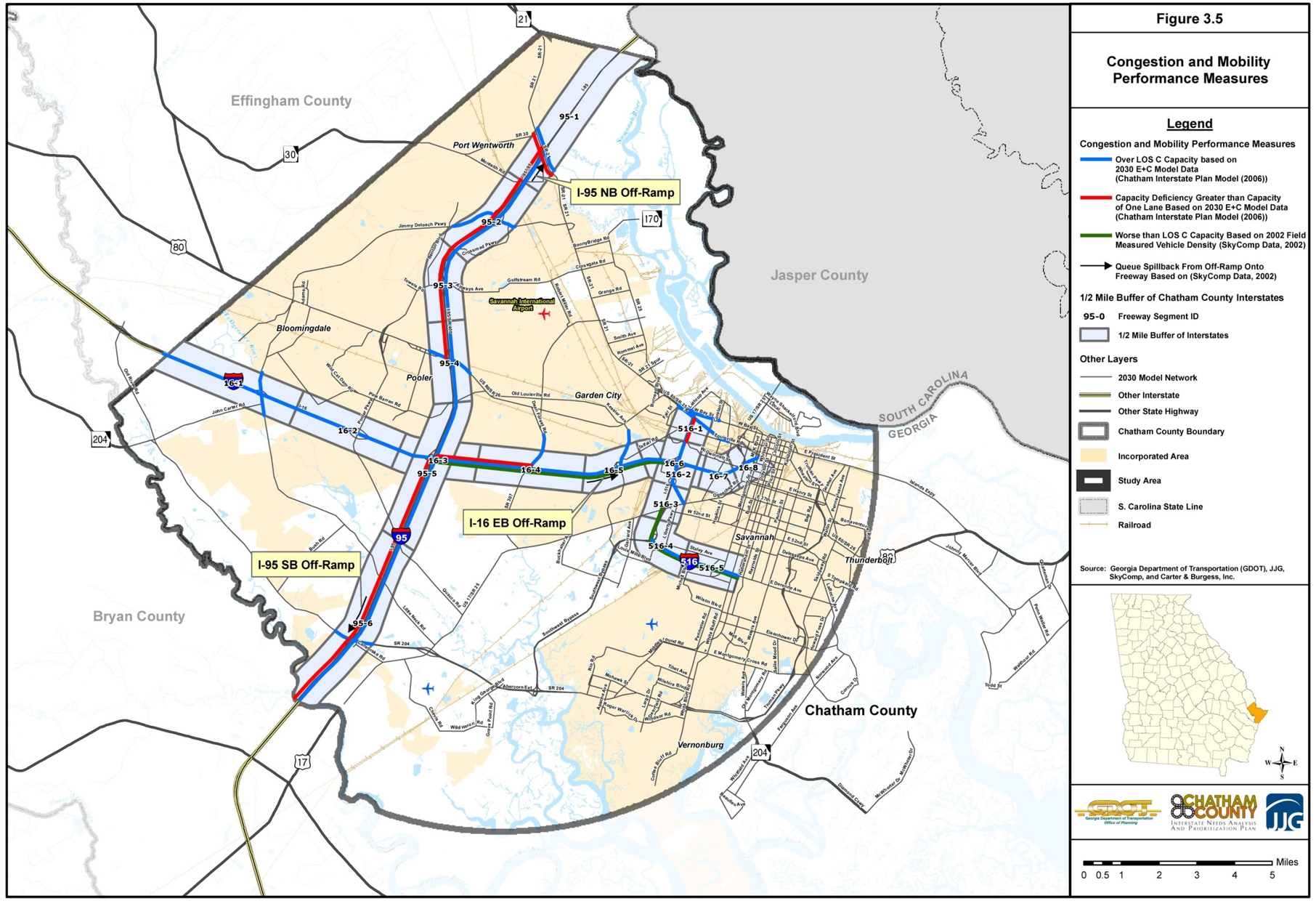

Effingham County
Jasper County
Bryan County
Chatham County
Port Wentworth
Bloomingdale
Pooler
Garden City
Savannah
Vernonburg
Thunderbolt
Savannah International Airport
SOUTH CAROLINA
GEORGIA
I-95 NB Off-Ramp
I-16 EB Off-Ramp
I-95 SB Off-Ramp
95-1
95-2
95-3
95-4
95-5
95-6
16-1
16-2
16-3
16-4
16-5
16-6
16-7
16-8
516-1
516-2
516-3
516-4
516-5
Figure 3.5
Congestion and Mobility Performance Measures
Legend
Congestion and Mobility Performance Measures
Over LOS C Capacity based on 2030 E+C Model Data (Chatham Interstate Plan Model (2006))
Capacity Deficiency Greater than Capacity of One Lane Based on 2030 E+C Model Data (Chatham Interstate Plan Model (2006))
Worse than LOS C Capacity Based on 2002 Field Measured Vehicle Density (SkyComp Data, 2002)
Queue Spillback From Off-Ramp Onto Freeway Based on (SkyComp Data, 2002)
1/2 Mile Buffer of Chatham County Interstates
95-0 Freeway Segment ID
1/2 Mile Buffer of Interstates
Other Layers
2030 Model Network
Other Interstate
Other State Highway
Chatham County Boundary
Incorporated Area
Study Area
S. Carolina State Line
Railroad
Source: Georgia Department of Transportation (GDOT), JJG, SkyComp, and Carter & Burgess, Inc.
Miles
0 0.5 1 2 3 4 5

Figure 3.6

Truck Movement and Access Performance Measures Based on Year 2030 Data

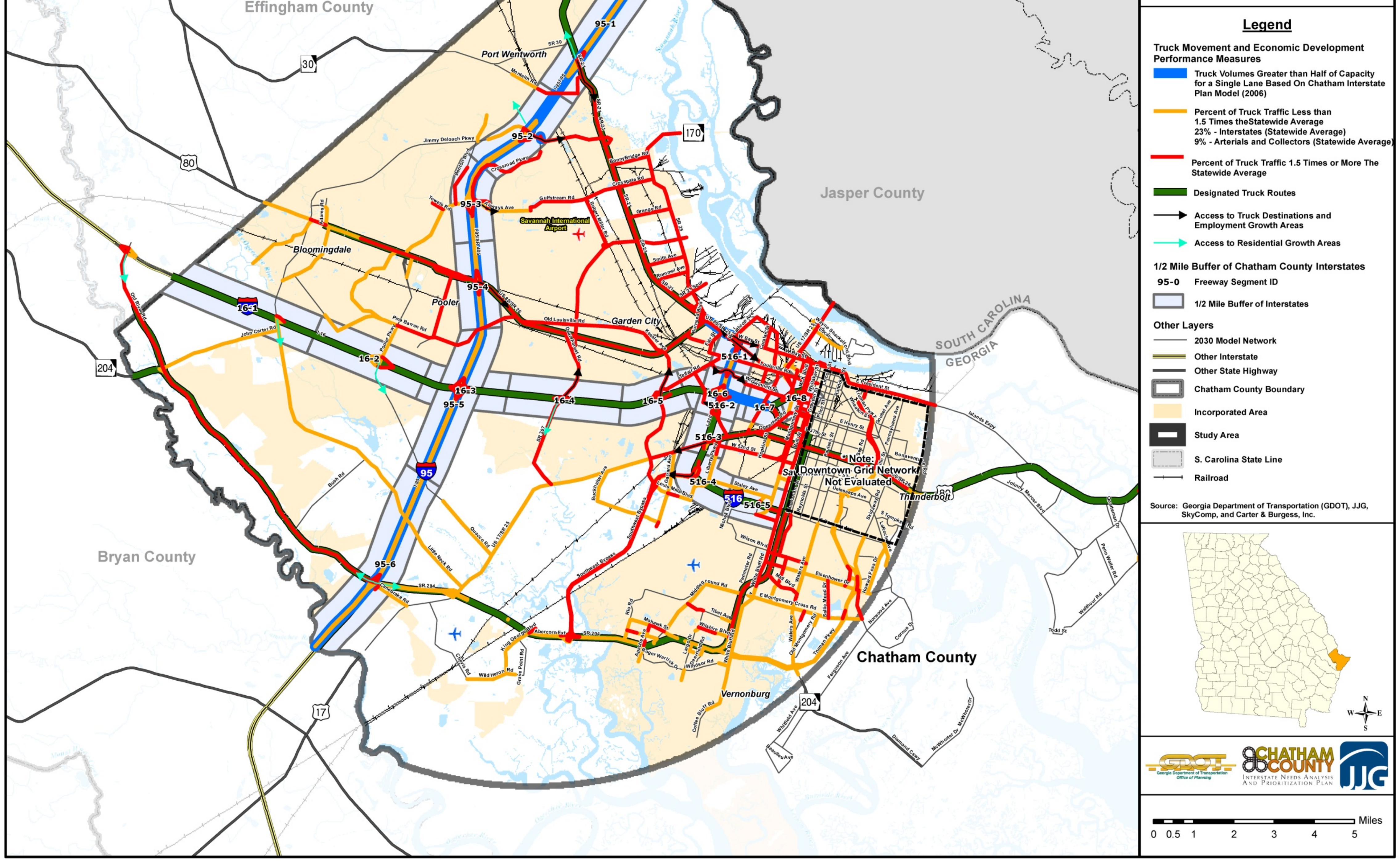


Table 3.3: Evaluation of Performance Measures

	Congestion and Mobility Measures				Truck Movement and Access					Safety and Maintenance			
Freeway Section	Volume-to-capacity Ratio (Chatham Interstate Plan Model, 2030)	Volume & Capacity (Chatham Interstate Plan Model, 2030)	Congestion based on density	Spillback	Trucks as percent of total volume	Truck Volume	Access to major truck generators	Truck Route Designation	Access to future population & employment centers	Freeway crashes per MVMT	Interchange Crashes	Bridge Sufficiency Rating	Potential Roadway Geometric Limitations
Threshold	Volume-to-capacity ratio greater than .70 (LOS D or worse)	Volume greater than capacity by more than one lane (> 1.0)	SkyComp 2002 data shows LOS to be lower than C	Spillback present to freeway	More than 23% of Interstate traffic, 9% of other roads	Truck volume greater than ½- lane	Yes/No	Truck Route	Yes/No	Greater than statewide avg. of 78 rural, 195 urban	Greater than avg. crash rate for Chatham interchanges	Greater than 50	Observed Geometric Features
95-1	✔	✔		✔	✔	✔	✔	✔	✔	✔	✔	✔	
95-2	✔	✔			✔	✔	✔		✔			✔	✔
95-3	✔	✔			✔	✔	✔		✔		✔	✔	✔
95-4	✔	✔			✔	✔	✔	✔	✔			✔	
95-5	✔	✔		✔	✔	✔					✔	✔	✔
95-6	✔	✔			✔	✔			✔	✔	✔	✔	
16-1	✔											✔	
16-2	✔											✔	
16-3	✔	✔	✔									✔	✔
16-4	✔	✔	✔				✔		✔		✔	✔	
16-5	✔		✔	✔			✔		✔			✔	✔
16-6	✔		✔		✔	✔	✔				✔	✔	✔
16-7	✔				✔	✔		✔				✔	✔
16-8	✔						✔	✔				✔	✔
516-1	✔	✔			✔		✔	✔	✔			✔	
516-2	✔				✔		✔		✔			✔	✔
516-3							✔	✔			✔	✔	
516-4	✔			✔			✔		✔			✔	✔
516-5	✔			✔					✔	✔			✔

Table 3.4: Data with Chatham Interstates Plan Model (2006)

Table 3.4 A: Comparison of Vehicle Miles Traveled

Facility Type	VMT				
	2001	2030	Change	% Change	Annual Growth Rate
Interstate/Interstate	1,916,508	3,388,725	1,472,217	77%	1.98%
Principal Arterial	2,581,183	4,489,941	1,908,758	74%	1.93%
Minor Arterial	832,610	1,100,466	267,856	32%	0.97%
Collector	236,960	642,492	405,532	171%	3.50%
Total	5,567,261	9,621,624	4,054,363	73%	1.90%

Table 3.4 B: Comparison of Vehicle Hours Traveled

Facility Type	VHT				
	2001	2030	Change	% Change	Annual Growth Rate
Interstate/Interstate	28,002	71,344	43,342	155%	3.28%
Principal Arterial	71,331	130,694	59,363	83%	2.11%
Minor Arterial	31,093	40,193	9,100	29%	0.89%
Collector	13,501	32,702	19,201	142%	3.10%
Total	143,927	274,933	131,006	91%	2.26%

Table 3.4 C: Comparison of Average Speed

Facility Type	Average Speed				
	2001	2030	Change	% Change	Annual Growth Rate
Interstate/Interstate	68	47	-21	-31%	-1.27%
Principal Arterial	36	34	-2	-6%	-0.20%
Minor Arterial	27	27	0	0%	0.00%
Collector	24	19	-5	-21%	-0.80%

Table 3.4 D: Comparison of Vehicle Hours Delayed

Facility Type	VHD				
	2001	2030	Change	% Change	Annual Growth Rate
Interstate/Interstate	1,397	21,006	19,609	1404%	9.80%
Principal Arterial	9,376	22,133	12,757	136%	3.01%
Minor Arterial	2,952	2,409	-543	-18%	-0.70%
Collector	648	8,949	8,301	1281%	9.48%
Total	14,373	54,497	40,124	279%	4.70%

Table 3.5: Data with CUTS LRTP Model (2004)

Table 3.5 A: Comparison of Vehicle Miles Traveled

Facility Type	VMT				
	2001	2030	Change	% Change	Annual Growth Rate
Interstate/Interstate	1,794,979	2,950,030	1,155,051	64%	1.73%
Principal Arterial	2,655,863	4,114,666	1,458,803	55%	1.52%
Minor Arterial	834,651	945,107	110,456	13%	0.43%
Collector	336,064	514,867	178,803	53%	1.48%
Total	5,621,557	8,524,670	2,903,113	52%	1.45%

Table 3.5 B: Comparison of Vehicle Hours Traveled

Facility Type	VHT				
	2001	2030	Change	% Change	Annual Growth Rate
Interstate/Interstate	25,936	56,132	30,196	116%	2.70%
Principal Arterial	67,502	114,676	47,174	70%	1.84%
Minor Arterial	27,651	34,558	6,907	25%	0.77%
Collector	12,519	19,456	6,937	55%	1.53%
Total	133,608	224,822	91,214	68%	1.81%

Table 3.5 C: Comparison of Average Speed

Facility Type	Average Speed				
	2001	2030	Change	% Change	Annual Growth Rate
Interstate/Interstate	69	52	-17	-25%	-0.97%
Principal Arterial	39	35	-4	-10%	-0.37%
Minor Arterial	30	27	-3	-10%	-0.36%
Collector	26	26	0	0%	0.00%

Table 3.5 D: Comparison of Vehicle Hours Delayed

Facility Type	VHD				
	2001	2030	Change	% Change	Annual Growth Rate
Interstate/Interstate	1,001	14,101	13,100	1309%	9.55%
Principal Arterial	3,449	18,466	15,017	435%	5.96%
Minor Arterial	491	1,711	1,220	248%	4.40%
Collector	180	1,592	1,412	784%	7.81%
Total	5,121	35,870	30,749	600%	6.94%

Additional statistics were derived to directly compare VMT and LOS by facility type for years 2001, 2030 with the Chatham Interstates Plan Model (2006), and 2030 with the CUTS LRTP Model (2004). Both future year models were done with E+C network. These results are shown in **Tables 3.6** and **3.7** (below). As these tables show, a significant increase in VMT with the Chatham Interstates Plan Model results in a significant increase in congestion on all facilities when compared to the Cuts LRTP Model for 2030. However, the Interstate system is the most severely impacted, with LOS D through F conditions projected on 80 percent of the network with the Chatham Interstates Plan Model versus 52 percent with the LRTP Model in 2030.

Table 3.6: Percentage of Vehicle Miles Traveled by Facility Type

Facility Type	2001[1]		2030[2]		2030[3]	
	VMT	%	VMT	%	VMT	%
Interstate/Interstate	1,916,508	34%	3,388,725	35%	2,950,030	35%
Principal Arterial	2,581,183	46%	4,489,941	47%	4,114,666	48%
Minor Arterial	832,610	15%	1,100,466	11%	945,107	11%
Collector	236,960	4%	642,492	7%	514,867	6%
Total	5,567,261	100%	9,621,624	100%	8,524,670	100%

[1] Data from Chatham Interstates Plan 2001 travel demand model
[2] Data from Chatham Interstates Plan 2030 E+C travel demand model
[3] Data from CUTS LRTP 2030 E+C travel demand model

Table 3.7: Level of Service by Facility Type

Facility Type	2001[1]				2030[2]				2030[3]			
	Mile		Percentage		Mile		Percentage		Mile		Percentage	
	A-C	D-F	A-C	D-F	A-C	D-F	A-C	D-F	A-C	D-F	A-C	D-F
Interstate/Interstate	42	2	95%	5%	9	35	20%	80%	21	23	48%	52%
Principal Arterial	92	42	69%	31%	93	51	65%	35%	104	40	72%	28%
Minor Arterial	85	18	83%	17%	91	12	88%	12%	90	9	91%	9%
Collector	89	5	95%	5%	78	17	82%	18%	93	3	97%	3%
Total	308	67	82%	18%	271	115	70%	30%	308	75	80%	20%

[1] Data from Chatham Interstates Plan 2001 travel demand model (2006).
[2] Data from Chatham Interstates Plan 2030 E+C travel demand model (2006).
[3] Data from CUTS LRTP 2030 E+C travel demand model (2004).

Tables 3.8 A through **C** (on this page) show the truck volume and percentage by functional classification for the years 2001, 2030 Chatham Interstates Plan Model, and 2030 CUTS LRTP Model. Both future year models were done with E+C network. As these tables show, the percentage of trucks by facility type is relatively uniform for the various models and time periods.

Table 3.8: Truck Volume and Percentage by Functional Classification

Table 3.8 A: Chatham Interstates Plan Model (2006) – Base Year 2001

Functional Classification	Average Truck Volume	Average Traffic Volume	Truck Percentage	2005 Statewide Truck Percentage
Rural Interstate	10,545	44,140	23.89%	22.75%
Rural Principal Arterial	1,810	15,360	11.78%	9.99%
Rural Minor Arterial	—	—	—	7.31%
Rural Major Collector	323	3,307	9.77%	8.36%
Rural Minor Collector	178	1,587	11.22%	9.93%
Rural Local	255	3,237	7.88%	4.57%
Urban Interstate	8,973	43,385	20.68%	12.78%
Urban Interstate/Expressway	1,795	17,912	10.02%	5.16%
Urban Principal Arterial	1,993	19,850	10.04%	5.11%
Urban Minor Arterial	730	8,056	9.06%	4.27%
Urban Collector	344	3,563	9.65%	4.24%
Urban Local	305	3,621	8.42%	3.37%

Table 3.8 B: Chatham Interstates Plan Model (2006) – Future Year 2030

Functional Classification	Average Truck Volume	Average Traffic Volume	Truck Percentage	2005 Statewide Truck Percentage
Rural Interstate	19,985	84,067	23.77%	22.75%
Rural Principal Arterial	3,151	28,054	11.23%	9.99%
Rural Minor Arterial	—	—	—	7.31%
Rural Major Collector	1,166	12,066	9.66%	8.36%
Rural Minor Collector	384	4,443	8.64%	9.93%
Rural Local	599	8,809	6.80%	4.57%
Urban Interstate	17,731	74,542	23.79%	12.78%
Urban Interstate/Expressway	2,473	27,109	9.12%	5.16%
Urban Principal Arterial	3,555	32,156	11.06%	5.11%
Urban Minor Arterial	970	10,746	9.03%	4.27%
Urban Collector	609	5,152	11.82%	4.24%
Urban Local	543	5,745	9.45%	3.37%

Table 3.8 C: LRTP Model (2004) – Future Year 2030

Functional Classification	Average Truck Volume	Average Traffic Volume	Truck Percentage	2005 Statewide Truck Percentage
Rural Interstate	19,200	80,207	23.94%	22.75%
Rural Principal Arterial	2,852	25,411	11.22%	9.99%
Rural Minor Arterial	—	—	—	7.31%
Rural Major Collector	955	9,684	9.86%	8.36%
Rural Minor Collector	299	3,518	8.50%	9.93%
Rural Local	516	6,995	7.38%	4.57%
Urban Interstate	14,064	62,285	23.58%	12.78%
Urban Interstate/Expressway	2,417	24,233	9.97%	5.16%
Urban Principal Arterial	2,772	29,890	9.27%	5.11%
Urban Minor Arterial	911	9,884	9.22%	4.27%
Urban Collector	385	3,973	9.69%	4.24%
Urban Local	465	5,296	8.78%	3.37%

3.4.2 Systemwide Needs

The evaluation of performance measures for the Chatham County Interstate system has revealed several areas where deficiencies are anticipated with future travel demand. These deficiencies were examined on a systemwide basis to develop transportation needs for various types of travel. The paragraphs below describe the systemwide needs related to long distance Interstate traffic, commuter traffic typically traveling within Chatham County, and truck traffic.

3.4.2.1 Long Distance Interstate Traffic

The primary purpose of the Interstate highway system is to provide for long distance trips, often crossing multiple states. Travelers making these types of trips via truck or automobile are traveling long distances. I-16 west of I-95 and I-95 throughout Chatham County are corridors that are anticipated to have significant growth in through traffic. Research has shown that drivers who are travelling for long distances have decreased perception of needed reaction time and reduced expectation of the need to stop for a hazard. Therefore, providing adequate levels of service, consistent roadway geometry, and a safe roadside are important elements to addressing long distance travel. The following is a summary of needs related to long distance Interstate traffic:

- Facilities for long distance travel along I-16 and I-95 (rest areas, adequate shoulders, signage with advanced warnings).
- Safe and consistent Interstate geometry that meets driver expectancy, as in *AASHTO Green Book - A Policy on the Geometric Design of Highways and Streets*
- Safe and convenient access to Savannah Airport, and Downtown Savannah, and the Port of Savannah.

3.4.2.2 Commuter Traffic

Commuter traffic provides another critical component to Interstate travel in Chatham County. As development intensifies in southwest Chatham County and nearby Effingham County, additional commuter trips are likely to use the Interstate system. This will increase the concentration of traffic during the AM and PM peak hours. Thus, these time periods will experience the majority of congested travel. Commuter travel between residential areas west of I-95 will place additional pressure on the I-95 at I-16 interchange. The following is a summary of general needs, not Chatham County specific, related to commuter traffic:

- Adequate capacity at system to system interchanges to accommodate peak hour demands.
- Through connections across Interstates, where necessary, to relieve congested interchanges.
- Alternative arterial corridors to accommodate shorter work trips within Chatham County.
- Capacity to accommodate peak hour demands at commuter trip oriented interchanges.
- Parallel roads where necessary to spread demand for Interstate access among interchanges.
- Potential use of HOV lanes to improve the capacity of the system.
- Truck-only lanes to minimize truck-auto conflicts and the impact on freight movement.
- Travel Demand Management solutions such as joint land use-transportation planning, improving jobs-housing balance west of I-95, carpooling, teleworking and vanpooling programs, introducing commuter bus service, and park and ride lots.

3.4.2.3 Truck Traffic

Truck traffic is a critical element in Chatham County. The port area and related industrial and warehouse/distribution center activity relies on truck traffic as the primary means for moving freight. The GPA Garden City Terminal is a container port facility, which is highly dependent on truck operations. As a part of the travel demand model development, activity at the port, industrial areas, and other truck generators were quantified and used to expand the predictive capabilities of the travel demand model related to truck travel.

Several issues related to truck travel are essential to the development of an effective Interstate transportation system:

- Trucks have operational characteristics that are different from automobiles. They require additional distance to stop and increased turning radii to maneuver. These differences are magnified when traffic volumes approach capacity. In these congested conditions, it is very difficult for trucks to maintain desirable spacing, as the gaps in front of them are filled by other traffic. Their larger size makes maneuvering them and maneuvering around them more difficult in congested conditions.
- Trucks need to rely on defined routes to access key destinations. Unlike automobiles that can vary their routes to avoid congestion, trucks are frequently required to use designated routes and their operating capabilities limit the routes they can effectively use when providing safety and efficient service.
- Trucks represent value in terms of lost time due to congestion. A truck traveling along the road has a higher operating cost than a motor vehicle and lost time can equate to additional costs for the vehicle and driver. Time spent in congestion means less time available for a driver to travel during his regulated shift. In an area such as Chatham County, where a large portion of the economy relies on the Port and shipping industry, the cumulative effect of inefficient truck operations can have significant results.

The following is a summary of needs related to truck traffic or identified by the freight analysis:

- Interstate access to Port and adjacent areas along SR 21
- Connections between Port and landside warehouse and distribution centers
- Truck access to Downtown Savannah without impacting historic character of Downtown
- Focus east-west truck traffic through Downtown Savannah away from Bay Street
- Accommodate of heavy truck volume along I-95
- Maintain effective truck access to Talmadge Bridge
- Accommodate of truck movement characteristics at system to system interchanges and key truck access points
- Study a new corridor to allow truck traffic to better access SR 21 from the ports.

- Study the total traffic and volumes on SR 21 from US 80 to Interstate 95.
- Extend the 5-lane typical section of SR 307 from west of SR 21 all the way to the intersection with SR 21.

3.4.3 Corridor Based Needs

The systemwide needs indicated above provide an indication of needs to address common deficiencies for three key types of travel along Chatham County's Interstate highways. The performance measures evaluation results and systemwide needs were further examined to determine transportation needs along the specific corridors within Chatham County.

3.4.3.1 I-95 Needs

The I-95 corridor experiences a variety of travelers including long distance users, commuters, and heavy truck traffic. I-95 provides access to the Ports and surrounding industrial areas, Savannah International Airport, and many east/west arterials leading into the Savannah area. In addition, significant future development is planned west of I-95 in Chatham and Effingham County, adding to those who wish to use and/or cross over I-95 to reach employment opportunities. The following is a summary of transportation needs along I-95, as indicated in **Figure 3.7** (see page 3-20):

- Consider parallel and cross-Interstate connection to facilitate flow between interchanges (along entire corridor)
- Provide LOS C capacity along I-95 (along entire corridor)
- Provide consistent geometry and forgiving roadside (along entire corridor)
- Provide effective driver information for travelers (along entire corridor)
- Provide efficient Port access including consideration of truck-only access routes (sections 95-1 and 95-2)
- Provide effective access to emerging residential areas west of I-95 (sections 95-1, 95-2, and 95-3)
- Provide safe and efficient airport access (95-3)
- Provide infrastructure to accommodate heavy system to system interchanges (section 95-5)
- Enhance safety and traffic operations at high crash interchanges (sections 95-1, 95-4, and 95-6)

3.4.3.2 I-16 Needs

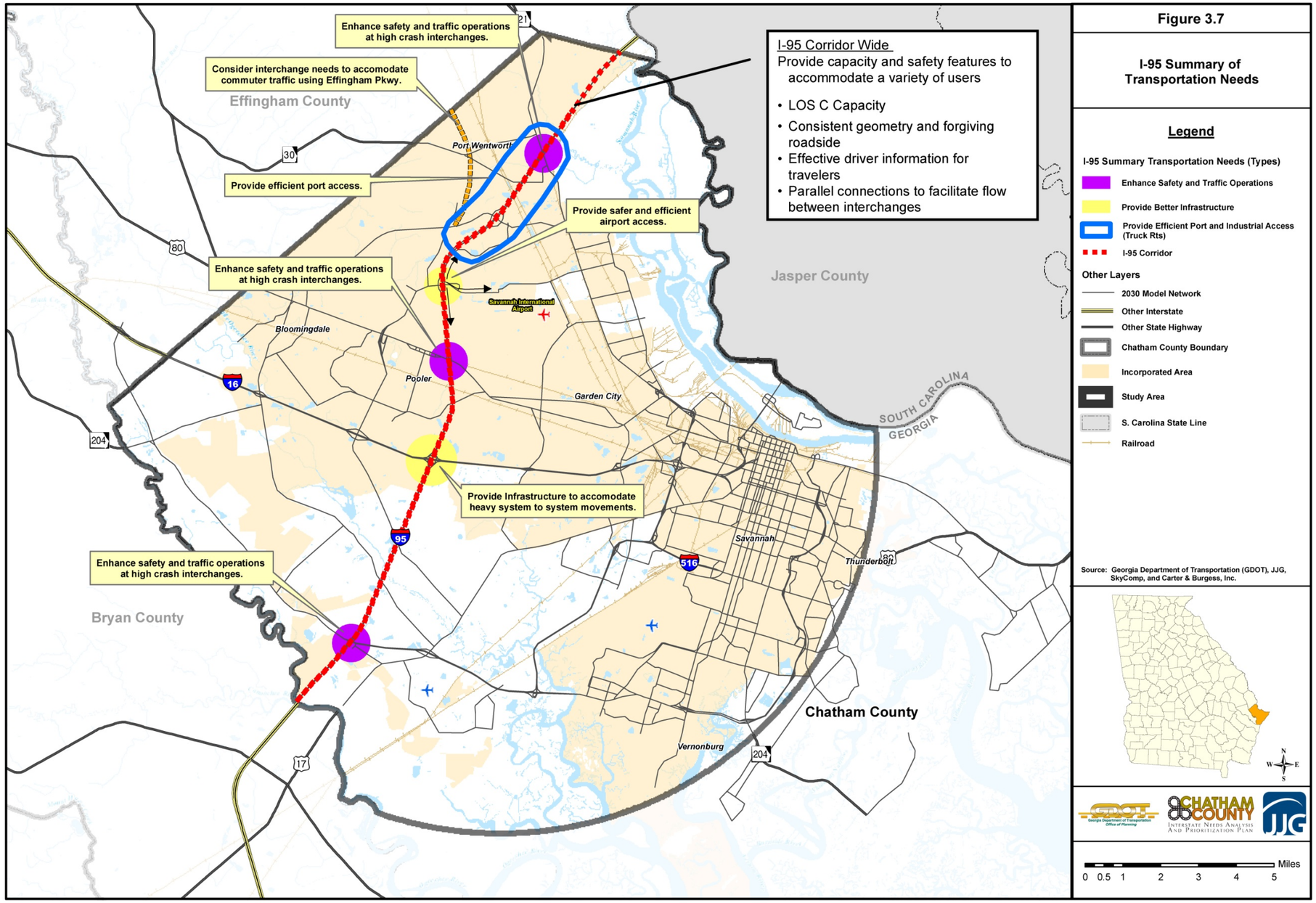
The I-16 corridor west of I-95 provides for a variety of through traffic and Chatham County commuters. Areas east of I-95 have a higher proportion of traffic with an origin or destination or both within Chatham County. This corridor provides a linkage to the Savannah Ports, Downtown Savannah, and coastal communities east of Downtown. The following is a summary of transportation needs along I-16, as indicated in **Figure 3.8** (see page 3-21):

- Consider parallel and cross-Interstate connection to facilitate flow between interchanges (along entire corridor).
- Provide LOS C capacity west of I-95 and LOS D capacity, if unable to feasibly provide LOS C, east of I-95.
- Provide consistent geometry and forgiving roadside (along entire corridor).
- Provide effective driver information for travelers (along entire corridor).
- Provide effective access to emerging residential areas west of I-95 (sections 16-1 and 16-2).
- Provide infrastructure to accommodate heavy system to system interchanges (sections 16-3 and 16-6).
- Enhance safety and traffic operations at high crash interchanges (sections 16-4 and 16-5)
- Provide efficient Port access including consideration of truck-only access routes (sections 16-4 and 16-5).
- Provide safe and efficient access to Talmadge Bridge and Downtown Savannah (sections 16-7 and 16-8).

3.4.3.3 I-516 Needs

The I-516 corridor connects I-16 to areas of Savannah north and south to the I-16 terminus. This roadway has frequent interchanges and tight curvature near its terminus points. These geometric features are associated with a lower speed connecting Interstate section. The southern termination point of this corridor is along DeRenne Avenue, which experiences regular peak hour congestion. The following is a summary of transportation needs along I-516, as indicated in **Figure 3.9** (see page 3-22):

- Provide LOS D capacity, if LOS C is not feasible, along I-516 (along entire corridor).
- Provide adequate warning of sharp curves (sections 516-1 and 516-4).
- Provide infrastructure to accommodate heavy system to system interchanges (section 516-2).
- Provide efficient truck access to Port and industrial areas (sections 516-1, 516-2 and 516-3).
- Enhance safety and traffic operations at high crash interchanges (sections 516-3 and 516-5).


Enhance safety and traffic operations at high crash interchanges.
Consider interchange needs to accomodate commuter traffic using Effingham Pkwy.
Effingham County
Port Wentworth
Provide efficient port access.
Provide safer and efficient airport access.
Enhance safety and traffic operations at high crash interchanges.
Savannah International Airport
Bloomingdale
Pooler
Garden City
Jasper County
SOUTH CAROLINA
GEORGIA
Provide Infrastructure to accomodate heavy system to system movements.
Savannah
Thunderbolt
Enhance safety and traffic operations at high crash interchanges.
Bryan County
Chatham County
Vernonburg
I-95 Corridor Wide
Provide capacity and safety features to accommodate a variety of users
• LOS C Capacity
• Consistent geometry and forgiving roadside
• Effective driver information for travelers
• Parallel connections to facilitate flow between interchanges
21
30
80
16
204
95
516
17
Figure 3.7
I-95 Summary of Transportation Needs
Legend
I-95 Summary Transportation Needs (Types)
Enhance Safety and Traffic Operations
Provide Better Infrastructure
Provide Efficient Port and Industrial Access (Truck Rts)
I-95 Corridor
Other Layers
2030 Model Network
Other Interstate
Other State Highway
Chatham County Boundary
Incorporated Area
Study Area
S. Carolina State Line
Railroad
Source: Georgia Department of Transportation (GDOT), JJG, SkyComp, and Carter & Burgess, Inc.
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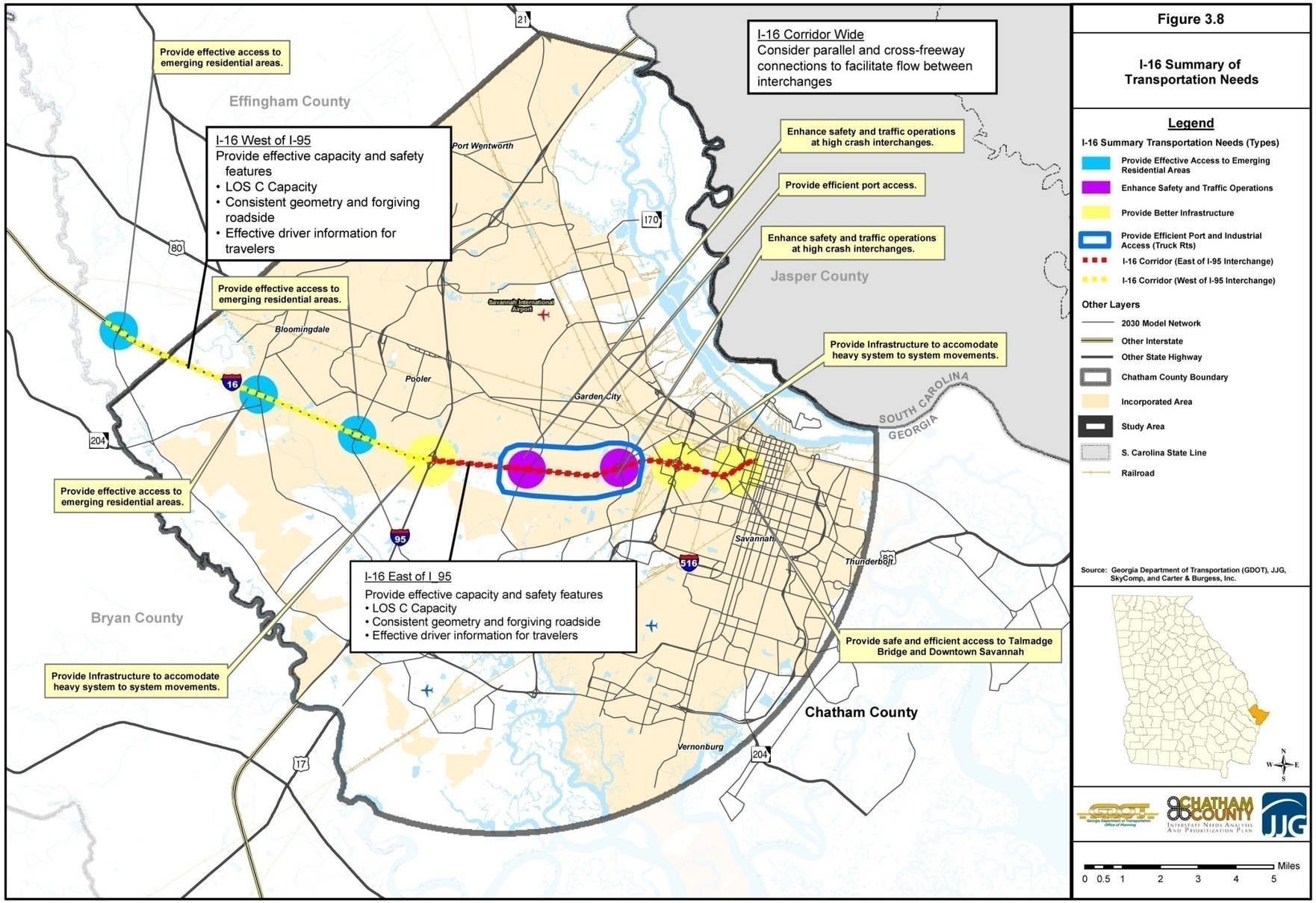
I-16 Corridor Wide
Consider parallel and cross-freeway connections to facilitate flow between interchanges
I-16 West of I-95
Provide effective capacity and safety features
• LOS C Capacity
• Consistent geometry and forgiving roadside
• Effective driver information for travelers
I-16 East of I_95
Provide effective capacity and safety features
• LOS C Capacity
• Consistent geometry and forgiving roadside
• Effective driver information for travelers
Provide effective access to emerging residential areas.
Provide effective access to emerging residential areas.
Provide effective access to emerging residential areas.
Enhance safety and traffic operations at high crash interchanges.
Provide efficient port access.
Enhance safety and traffic operations at high crash interchanges.
Provide Infrastructure to accomodate heavy system to system movements.
Provide safe and efficient access to Talmadge Bridge and Downtown Savannah
Provide Infrastructure to accomodate heavy system to system movements.
Effingham County
Bryan County
Jasper County
Chatham County
Port Wentworth
Bloomingdale
Pooler
Garden City
Savannah
Thunderbolt
Vernonburg
Savannah International Airport
SOUTH CAROLINA
GEORGIA
21
80
16
204
95
516
170
17
Figure 3.8
I-16 Summary of Transportation Needs
Legend
I-16 Summary Transportation Needs (Types)
Provide Effective Access to Emerging Residential Areas
Enhance Safety and Traffic Operations
Provide Better Infrastructure
Provide Efficient Port and Industrial Access (Truck Rts)
I-16 Corridor (East of I-95 Interchange)
I-16 Corridor (West of I-95 Interchange)
Other Layers
2030 Model Network
Other Interstate
Other State Highway
Chatham County Boundary
Incorporated Area
Study Area
S. Carolina State Line
Railroad
Source: Georgia Department of Transportation (GDOT), JJG, SkyComp, and Carter & Burgess, Inc.
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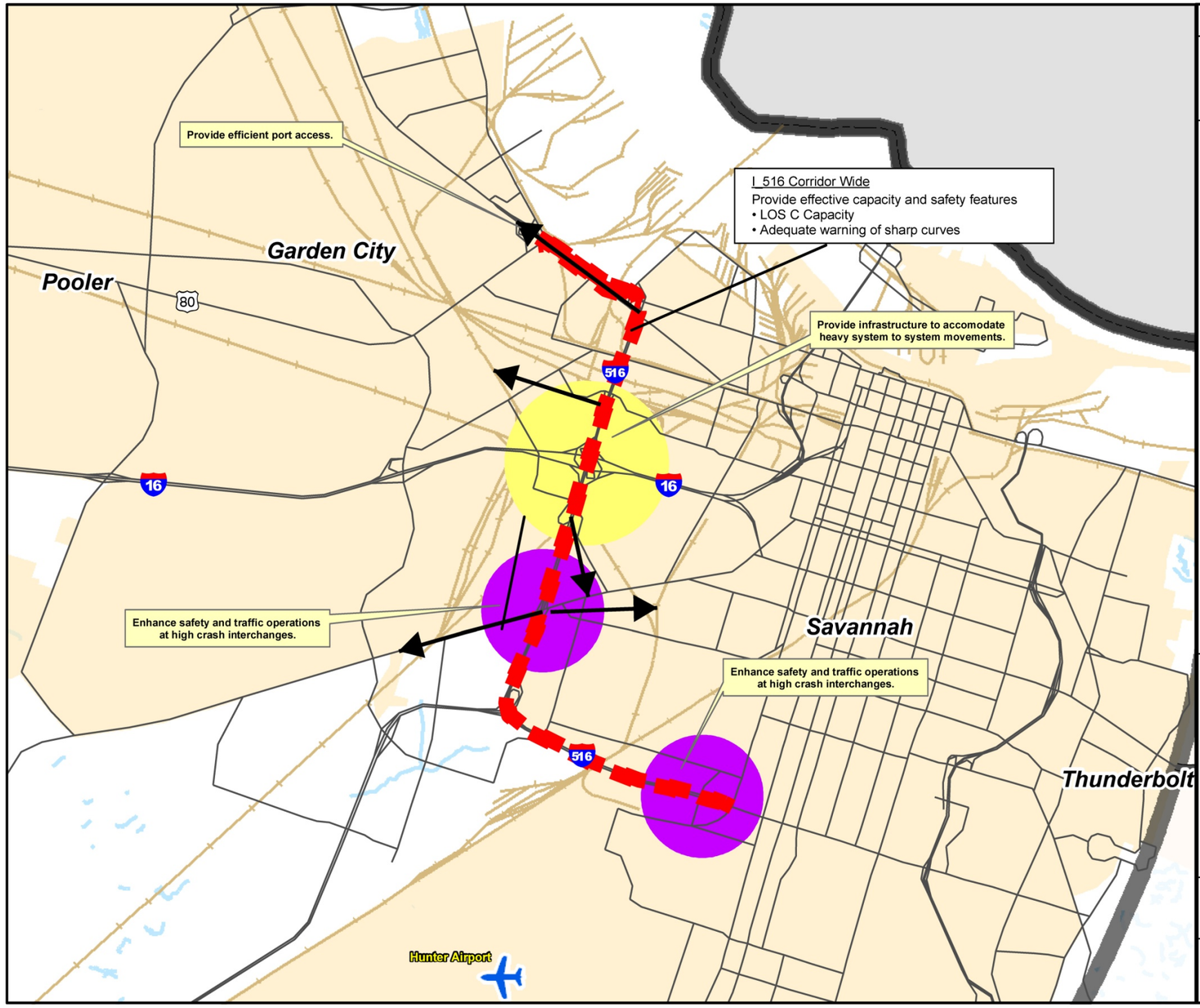

Figure 3.9

I-516 Summary of Transportation Needs

Legend

I-516 Summary Transportation Needs (Types)

- Enhance Safety and Traffic Operations
- Provide Better Infrastructure
- I-516 Corridor
- Provide Effective Truck Access to Port and Industrial Areas

Other Layers

- 2030 Model Network
- Other Interstate
- Other State Highway
- Chatham County Boundary
- Incorporated Area
- Study Area
- S. Carolina State Line
- Railroad

Source: Georgia Department of Transportation (GDOT), JJG, SkyComp, and Carter & Burgess, Inc.

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3.4.4 Common Elements for Developing Potential Improvements

In translating the transportation needs by corridor into alternative improvements for analysis, the following key elements should be considered:

- Maintain LOS Standards - Provide capacity to maintain appropriate LOS standards to provide for mix of trip purposes and vehicles. LOS C is the rural standard to be used in this area. LOS D is acceptable for urban standards, if LOS C is not feasibly attained. As shown previously in **Figure 3.1** (see page 3-2) I-16 has an urban designation east of the SR 17 interchange and a rural designation to the west. I-95 similarly has both urban and rural designations through Chatham County. Although LOS C is desirable in order to accommodate needs of longer distance drivers having lower expectancy for the need to stop or react, the Interstate system within the county has urban characteristics and a higher proportion of regular users. Therefore, LOS D is likely to be acceptable to most drivers on those roads, if providing LOS C is not feasible.

- Provide parallel roadway connections - Provide parallel roadway connections where needed to facilitate movement between arterials crossing the Interstate. Where Interstate access is congested, providing alternative connections can move the demand for Interstate access to less congested interchanges.

- Provide connections across Interstates - Provide connections across Interstates without access (no interchange) to foster local traffic movement without contributing to congestion at existing interchanges. Full utilization of the roadway network involves travel along arterials as well as Interstates for longer trips. Providing key arterial connections across Interstates allows viable travel options without impacting congested interchanges.

- Provide effective truck connections to port and industrial areas - Enhanced connections to Port and Industrial areas for truck traffic is vital for providing time effective travel to and from this important resource. These connections can also reduce truck traffic on other arterials providing Interstate access.

- Consider implementation of high occupancy vehicle (HOV) lanes or other benefits to increase overall user occupancy – HOV lanes can provide a means to recognize and reward high occupancy users of the Interstate system. As congestion grows on the Chatham County Interstate system over time, consideration of HOV lane implementation may be appropriate.

- Design interchanges to prevent queue spillback to Interstate – Designing interchanges to effectively accommodate peak hour demand and providing ramps with sufficient length to prevent queue spillback from reaching the Interstate is a step to providing Interstate safety.

- Design system to system interchanges to accommodate anticipated traffic – The design of system to system interchanges is important to provide seamless flow along the Interstate system. As traffic volumes grow west of I-95, more Interstate traffic will converge on the I-95 at I-16 interchange, making it a critical component in the operation of these Interstates.

- Provide clear signage and driver information – Effective signage is a key element to providing for Interstate travel where a significant proportion of drivers are passing through on the Interstate. Concise signage, with interchanges that are clearly marked and provide full access will enhance travel for those not familiar with the area. These elements are also critical along roads such as east of I-95 to assist drivers traveling to Savannah and the Georgia Coast.

- Provide safe and forgiving roadside – A roadside with adequate shoulders and protection of clear zones provides a forgiving roadside to prevent crashes and injuries due to errant vehicles. This is particularly important where high speed long distance travel is prevalent.

3.5 *Projects Identified in Previous and Ongoing Studies*

3.5.1 Transportation Improvements Program (TIP) Projects

Projects being implemented through the Chatham Urban Transportation Study (CUTS) are included in the Transportation Improvement Program (TIP). The fiscal year 2007 – 2009 TIP document was adopted in June 2006 with amendments in August 2006. This document covers transportation programming for fiscal years 2007 through 2009. **Table 3.9** (see page 3-24) shows projects included in the 2007-2009 TIP. This table indicates the year for construction of the project. If the project does not have construction activities planned as a part of the TIP (such as a planning study or project in initial design phases) the construction year is shown as N/A. Projects included in the TIP are included in the existing plus committed roadway network for the travel demand model.

3.5.2 Other Committed Projects

In addition to projects committed in the TIP, projects reflecting work performed between the model base year and the current year are included in the existing plus committed network. In the case of the Chatham County network, these include projects between 2001 and 2006. **Table 3.10** (see page 3-25) lists the projects included in the 2030 existing plus committed roadway network. The location and project limits for these projects are shown on **Figure 3.10** (see page 3-26).

Table 3.9: Projects in 2007-2009 Transportation Improvement Program

PI#	Project Title	Description	FY CST
0000690	I-95 Welcome Center	Reconstruction of the I-95 southbound Welcome Center	2009
0002921	Truman Parkway	Construct Truman Parkway Phase V from Whitfield Avenue to Abercorn Street	2009
0002922	SR 204/Abercorn Street Extension	Widen SR 204/Abercorn Street from Rio Road to Truman Parkway Phase V	Long Range
0007885	CS 650/Grange Road	Widen Grange Road from SR 21 to SR 25	2010
522850	I-516/Lynes Parkway	Widen I-516/Lynes Parkway from Veterans Parkway to I-16	2009
522855	I-516 Bridge	I-516/Lynes Parkway SBL & NBL @ SR 25/US 17 in Savannah	2009
522880	SR 21	Widen SR 21 from Smith Avenue north to SR 307	2012
522920	SR 204/US 17	Replace SR 204/US 17 bridge over Back River	2012
533160	SR 25/Ocean SR	Replace bridge on SR 25 @ Norfolk Southern Railroad	2008
533200	SR 204/Abercorn Street Extension	Replace the SR 204 bridge over the Harmon Canal	2008
533205	CR 302/Montgomery Crossroad	Replace CR 302/Montgomery Crossroad bridge over Casey Canal	2008
0007400	CMS Update	Update Congestion Management System	n/a
0007401	LRTP 2030 Update	Update the 2030 Long Range Transportation Plan	n/a
0007402	Gwinnett Street Widening	Widen Gwinnett Street from I-16 to Stiles Avenue	2008
550550	SR 204 Spur	Widen SR 204 Spur/Diamond Causeway from Ferguson to McWhorter	2010
550560	Whitefield Avenue	Widen Whitfield Ave from Old Whitfield Rd to Ferguson Ave.	2008
0008316	MPO Study – Sector One	Savannah MPO Transportation Study – Sector One	n/a
0008317	MPO Study – Sector Two	Savannah MPO Transportation Study – Sector Two	n/a
0008318	MPO Study – Sector Three	Savannah MPO Transportation Study – Sector Three	n/a
n/a	DeRenne Avenue	DeRenne Avenue Short-Term Congestion Mitigation Strategies	n/a
n/a	Hampstead Connector	West DeRenne Avenue /Hampstead Avenue Connector Corridor	n/a
n/a	East DeRenne Avenue	East DeRenne Avenue Widening	n/a
n/a	Bay Street	Bay Street Signal and Intersection Improvement	n/a
0000345	SR 307 Overpass	Construct SR 307 overpass over new Ports Authority rail line	2009
0002140	SR 307	Widen SR 307/Dean Forest Road from US 17 to I-16	2009
521855	SR 26/US 80	Widen SR 26/US 80 from I-516 to Victory Dr.	2008
0006700	Effingham Parkway	Effingham Pkwy from SR 119 in Effingham to SR 30 in Chatham	Long Range
562165	SR 307	SR 307/Dean Forest Road from R. B. Miller Road to SR 21	2008
0008241	Planning Study	Study of Savannah Northwest Tollway	n/a
0002923	Bay Street	Widening from I-16 to the Bay Street Viaduct	Long Range

Table 3.10: Projects in 2030 Existing Plus Committed Network

PI #	Project	From	To	Type	Lanes		Length (mi)
					Existing	Planned	
n/a	General McIntosh Boulevard	President Street	Bay Street	Widening	2	4	0.35
521505	Harry S. Truman Parkway, Phase Four	Whitfield Avenue	Montgomery Cross Road	New Road	0	4	1.90
521508	Harry S. Truman Parkway, Phase Three	Montgomery Cross Road	DeRenne Avenue	New Road	0	4	4.81
522803	Jimmy DeLoach Parkway Interchange	Jimmy DeLoach Parkway	SR 21	Interchange	2	4	0.40
550590	Pooler Parkway Extension	Pine Barren Road	South of US 80	New Road	2	4	2.20
550594	Pooler Parkway/US 80 Interchange	US 80	Pooler Parkway	Interchange	0	2	1.10
	Stephenson Avenue	SR 204/Abercorn	Waters Road	Widening	2	4	0.80
521865	US 17/SR 25	Ogeechee River	SR 204/Abercorn	Widening	2	4	2.40
521860	US 17/SR 25	SR 204 /Abercorn Extension	SR 307/Dean Forest Road	Widening	2	4	3.70
0002924	Eisenhower Drive	SR 204/Abercorn Street	Harry S. Truman Parkway	Widening	4	5	1.80
511180	I-16	MP 165.1, 164.0, 163.2 & 162.3	I-516	Widening, bridges	4	4	-
522790	Jimmy DeLoach Parkway	US 80 South	I-16	New Road / Widening	0,2	4	2.70
n/a	LaRoche Avenue	Skidaway Road	S. City Limits	Widening	2 10"	2 12' w/med	1.20
550570	Middleground/Montgomery Cross Road	SR 204/Abercorn Street	Abercorn Extension	Widening	2	4	2.80
571060	Skidaway Road	Rowland Avenue	Ferguson Avenue	Widening	2	3,4	4.00
522170	US 17/US 80	US 17 in Effingham County	Cherry St., Bloomingdale	Widening	2	5	2.80
533160	SR 25/Ocean SR	SR 25/Ocean SR	NS Railroad	Widening, bridge	2	4	0.22
0000345	SR 307	SR 307/Bourne Avenue	NS Railroad	Overpass, RR	4	4	0.30
562165	SR 307/Dean Forest Road	Robert B. Miller	SR 21	Widening	4	5	1.00
522920	US 17/SR 204 Spur	US 17/SR 204 Spur	Back River in SC	Widening, bridge	2	4	0.80
522490	US 80	Bull River	Lazaretto Creek	Widening	2	4	5.40
550580	White/Coffee Bluff Road	Little Ogeechee River	Willow Road	Widening	2	2 , 3	2.70
550560	Whitfield Avenue	Old Whitfield Road	Ferguson Avenue	Widening	2	4	1.90
0002923	SR 25CO/Bay Street	I-516	Bay Street Viaduct	Widening	4	5	1.00
0002921	Harry S. Truman Parkway, Phase Five	Abercorn Street	Whitfield Avenue	New Road	0	4	2.20
522850	I-516/Lynes Parkway	Veterans Parkway	I-16	Widening	4	6	2.00
550550	SR 204/Spur Diamond Causeway	Ferguson Avenue	McWhorter Drive	Widening	2	4	3.00
522880	SR 21	Smith Ave/CS 590 N	SR 307/Dean Forest Road	Widening	4	6	0.70
521855	SR 26/US 80/Ogeechee Road	E. Lynes Pkwy	Victory Drive/CS 188	Widening	2	4	1.20
0002140	SR 307/Dean Forest Road	US 17	I-16	Widening	2	4	2.40
0007402	Gwinnett Street	Stiles Avenue	I-16	Widening	2	4	0.60

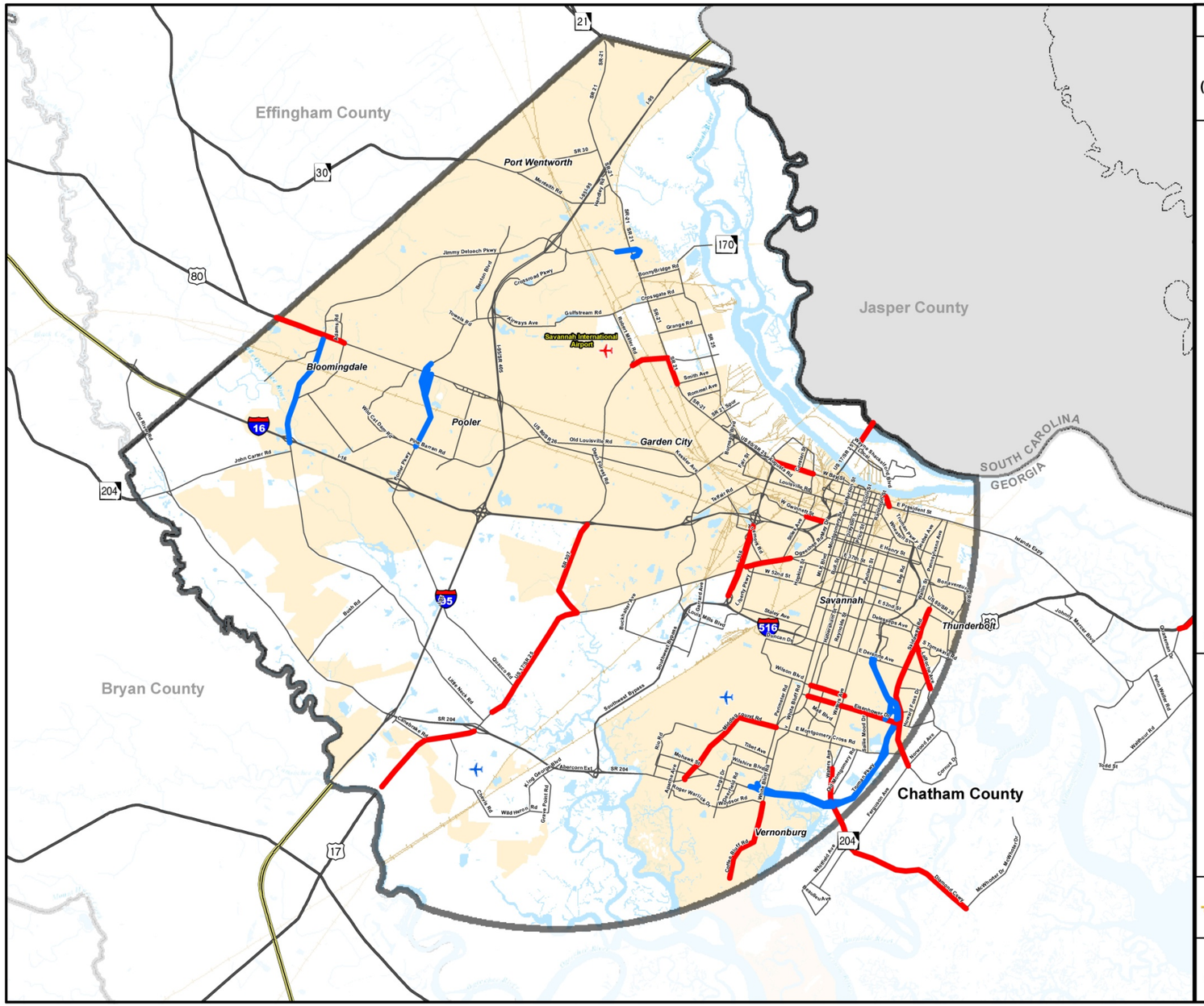

Figure 3.10

Projects Included in the Existing Plus Committed Roadway Network (Chatham Interstate Plan Model (2006))

Legend

Project Types Included in the Existing Plus Committed Network

- Widening
- New Location Roadway

Other Layers

- Other 2030 E+C Model Network
- Other Interstate
- Other State Highway
- Georgia County Boundary
- Incorporated Area
- Study Area
- S. Carolina County Boundary
- Railroad

Source: Georgia Department of Transportation (GDOT), JJG, SkyComp, and Carter & Burgess, Inc.

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3.5.3 Chatham Long Range Transportation Plan

The Chatham County-Savannah Metropolitan Planning Commission (MPC) completed its 2030 Long Range Transportation Plan in 2004. The projects identified in that study related to the county's Interstate system, including the Northwest Tollway, are compiled in **Tables 3.11**, **3.12**, and **3.13** (below).

Table 3.11: Priority 2 SR Projects – Mid-Range

Interstate Projects	From	To	Type	Existing Lanes	Proposed Lanes	Total Cost ($)
I-516	Veterans Pkwy.	Mildred St.	Widen	4	6	17,000,500
I-16	I-95	I-516	Widen	4	6	58,503,500
I-95	Bryan County	I-16	Widen	6	8	23,292,500
Mildred St./ Hampstead Ave.	I-516	Abercorn St.	Widen	2	4	48,125,000
Abercorn St.	At I-95	At I-95	Interchange Reconstruction	N/A	N/A	37,982,000

Table 3.12: Priority 3 SR Projects – Long-Range

Interstate Projects	From	To	Type	Existing Lanes	Proposed Lanes	Total Cost ($)
I-95	I-16	SC State Line	Widening	6	8	39,627,500
SR-21	Northwest Tollway	SR 30 (W of I-95)	Widen	4	6	28,694,600
Northwest Tollway	SR-21 (near I-95)	I-16 @ I-516	New	0	4	195,717,500
Quacco Rd.	Pooler Pkwy	I-95	Widen	2	4	16,364,700
Quacco Rd./Little Neck Rd.	At I-95	At I-95	New Interchange	N/A	N/A	8,662,500

Table 3.13: Priority ATMS Projects (GDOT)

Interstate Projects	From	To	Total Cost ($)
I-95 Communication/Surveillance	SR 204	US 80/SR 226	13,359,110
I-516 Communication/Surveillance	SR 21/SR 25	Mildred Street	15,658,000
I-16 Communication/Surveillance	I-95	I-16 Terminus in Downtown Savannah	12,814,000
Regional Traffic Control Center	NA	N/A	1,213,000
Savannah Slow Scan/CMS Radar	N/A	N/A	3,101,970

3.5.4 Chatham County Intermodal Freight Study

GDOT completed the Chatham County Intermodal Freight Study in 1998. The projects identified in that study related to the county's Interstate system are compiled in **Table 3.14**.

Table 3.14: Interstate-related Projects Identified in the Intermodal Freight Study (1998)

Project Number	Project Name
1.1	Extend I-516 from its current end to I-95
1.2	Interchange at SR 26 (Burnsed Blvd) to Brampton, Allen, Foundation Roads, SR 21, US 80 and SR 25
1.3	Optional interchange at SR 25
1.4	Trumpet interchange with SR 307
1.5	Half-diamond interchange with slip ramps
1.6	Interchange at Crossgate Road
1.7	Interchange at Jimmy DeLoach Parkway
1.8	Interchange at I-95
1.9	Relocate CSX "A" line to CSX "S" line near I-516/I-95
2.2	Build connector road from Louisville Road to the West Portal Widen/improve Louisville Road Build connector road from Bay Street to West Portal

Source: Chatham County Intermodal Freight Study, May 13, 1998.