



4.0 Transportation Conditions

The GA 400 study area, like much of the Atlanta region, is burdened by congested roadways. The operating conditions on the roadway network in the design year 2040 are forecast to worsen based upon current and forecast volume to capacity (V/C) ratios ⁷. Of the nineteen arterial roadways in the study area, only seven had a V/C ratio under 1.0 in 2010. In 2040, only three are forecast to have a V/C ratio under 1.0 and two roads, McGinnis Ferry Road and Glenridge Connector, are forecast to have a V/C ratio of 2.0. In 2010, GA 400 had a V/C ratio of 1.4, which is forecast to remain the same in 2040.

Except for the southern portion of the study area, which is served by MARTA heavy rail in Sandy Springs and Dunwoody near the Medical Center and Perimeter Center, transit travel times are not competitive with roadway travel.

These projected conditions should be viewed against a background of increased travel demand, especially during peak periods. Between 2010 and 2040, Home Based Work Trip (HBW) attractions, are projected to increase by 51.8 percent. These figures represent total person trips regardless of mode. Although transit HBW attractions are projected to increase 48.1 percent and productions are projected at 38.0 percent, transit mode share would remain below 10 percent based on current land-use assumptions and programmed transportation investments. These projections explain the forecasts of increased congestion on roadways. Mobility in the study area would continue to be less than desirable.

The following discussions include tables that describe the existing and planned transit and roadway facilities and the existing and projected operating conditions.

⁷ V/C ratios are measures of congestion in which a ratio of 1.0 indicates that the volume is identical to the capacity.

4.1 Transit Services

Transit service to and within the study area is provided primarily by MARTA heavy rail and bus. GRTA also operates two lines that connect the southern portion of the study area with express bus service at peak hours from the north and southeast from outside the study area. Rail service extends from Downtown Atlanta to the major retail and employment centers, including the Medical Center and Perimeter Center in Dunwoody and Sandy Springs in the southern portion of the study area. MARTA Bus service primarily functions as feeder service to MARTA heavy rail from areas to the north, including Roswell, Alpharetta and Milton. A number of the bus routes and the MARTA heavy rail stations service park and ride facilities.

4.1.1 MARTA Rail Service

The MARTA heavy rail Red Line serves the study area at the four northernmost stations: Medical Center, Dunwoody, Sandy Springs, and North Springs. The Red Line operates on 15-minute headways during peak and mid-day periods on weekdays and 20-minute headways during off-peak periods and on weekends. The Red Line connects the southern portion of the study area to Buckhead, Midtown, Downtown Atlanta, and Hartsfield-Jackson Atlanta International Airport. Red Line rail service turns back at the Lindbergh Center Station after 7:00 PM daily.

- The Medical Center Station has 200 parking spaces and serves Northside Hospital, Scottish Rite Hospital, and St. Joseph's Hospital. MARTA Bus Lines 25 Peachtree Industrial Boulevard and 148 Medical Center/Riveredge Parkway provide connecting service to the station.

- The Dunwoody Station has 1,048 parking spaces and serves the Perimeter Mall. Connections to the MARTA bus network are provided by 5 Piedmont Road/Sandy Springs, 87 Roswell Road/Morgan Falls, and 150 Perimeter Center/Dunwoody Village.
- The Sandy Springs Station has 1,170 parking spaces and serves numerous retail establishments in the Perimeter Center vicinity.
- The North Springs Station has 2,325 parking spaces directly accessible by a ramp from southbound GA 400. The immediate area includes a high-density residential community. Connections to the MARTA bus network are provided by 85 Roswell/Mansell Road, 87 Roswell Road/Morgan Falls, 140 North Point/Mansell Park/Ride, 143 Windward Park / Ride, and 185 Alpharetta/Holcomb Bridge Rd.

4.1.2 MARTA Bus Routes

The following presents more detail on the MARTA bus routes providing connections to the MARTA stations and serving the study area. The headways shown are for weekday peak hours. Off-peak and weekend operations may differ, and, in one case, do not operate. Table 4-1 provides additional bus route detail; Figure 4-1 depicts these routes.

- 5 Piedmont Rd/Sandy Springs connects to Lindbergh Center at 15-minute headways.
- 25 Peachtree Industrial Boulevard connects to Doraville Station and Lenox Station at variable headways of approximately 40 minutes.
- 85 Roswell/Mansell Rd connects the Mansell Rd Park and Ride with North Springs Station at 30-minute headways
- 87 Roswell Rd/Morgan Falls connects North Springs and Dunwoody Stations via Roswell Rd on the west side of GA 400 at 20-minute headways.
- 103 Shallowford Rd/Peeler Rd connects the Chamblee Station with Dunwoody Medical Center and the eastern portion of Dunwoody at 40-minute headways.
- 140 North Point/Mansell P/R connects Windward Parkway Park and Ride, downtown Alpharetta, and Mansell Park and Ride with the North Springs Station. Headways from Windward Parkway Park and Ride to Alpharetta are 20 minutes and from there to North Springs are approximately 15 minutes.
- 143 Windward Park/Ride connects the park and ride facility and the area to the north with North Springs Station at headways of approximately 20 minutes.
- 148 Medical Center/Riveredge Parkway connects the vicinity of the I-285 interchange with Northside Drive to the west of GA 400 with Medical Center Station at variable headways and operates during weekday peak hours only.
- 150 Perimeter Center/Dunwoody Village connects Dunwoody Village Shopping Center with Dunwoody Station via Perimeter Center at 30-minute headways.
- 185 Alpharetta/Holcomb Bridge Rd connects the Windward

Park and Ride with North Springs Station via Alpharetta and Roswell on the western side of GA 400 at 30-minute headways.

4.1.3 GRTA Xpress Bus Service

GRTA operates two Xpress Bus Routes in the GA 400 corridor.

- 400 Cumming Park and Ride operates from Cumming in Forsyth County outside of the study area to the North Springs MARTA Station and Downtown Atlanta.
- 428 Panola Road to Perimeter Center enters the study area from the southeast on I-285, and provides stops at Perimeter Shopping Center, and the Dunwoody and Medical Center MARTA Stations.

4.2 Roadway System

The roadway system in the study area consists of a freeway spine, GA 400, extending north from the regional core inside I-285. It provides connections to a network of arterial roadways that provide east – west travel. Many of the roadways have had capacity additions, and many capacity improvements are programmed, as presented in Table 4-4, but congestion is forecast to increase.

4.2.1 Roadway and Transit Connections

Connections between roadways and transit occur primarily through park and ride lots as shown on Figure 4-1. The North Springs Station provides a southbound ramp directly from GA 400 into the parking decks at the station. While the other park and ride lots at Windward Parkway and Mansell Road function in a similar manner, the transfer is to the bus system, which must then make its way on shared roadways.

4.2.2 Roadway Functional Classification and Capacity

There is one freeway, GA 400, which is a north south roadway. All connecting roadways and other major roadways in the study area are arterials with less capacity and, frequently, lower posted speeds. Figure 4-2 depicts the functional classifications and number of travel lanes of the roadways within the study area. Table 4-2 lists information on functional class and other characteristics of the major roadways in the study area.

4.2.3 Roadway Traffic Volumes and Congestion

As discussed earlier, the roadway network is congested and forecasts indicate that this condition will worsen by 2040. Table 4-3 identifies those roadways that currently have V/C ratios above 1.0 and changes that are forecast for the year 2040 during the PM peak period. No roadway has an improved V/C ratio from one period to the other and only GA 400 shows no worsening of congestion. While traffic volumes are forecast to increase on GA 400, congestion levels are forecast to remain constant, likely a result of planned roadway capacity adding projects. Figure 4-3 and Figure 4-4 depict the years 2010 and 2040 Level of Service (LOS) for the roadways within the study area ⁸.

⁸ Level of Service (LOS) uses the V/C ratio to categorize traffic volumes into different general levels, using the letters A through F, with A signifying relative free flow conditions, while F signifies the worst traffic condition. The Atlanta Regional Travel Demand Model provides each link with a LOS rating, based on a specific V/C

4.3 Planned Transportation System Improvements

The ARC as the Metropolitan Planning Organization (MPO) for the Atlanta region is responsible for maintaining a Regional Transportation Plan (RTP). One element of this planning process is to prepare and maintain a Transportation Improvement Program (TIP), which lists the financially constrained projects from among those identified in the RTP. Figure 4-5 displays the RTP projects within the study area. Table 4-4 present the roadway projects from the RTP that are within the study area. Those indicated as programmed in the Status column are listed in the TIP. Table 4-5 presents the transit projects from the RTP that are within the study area. Those indicated as programmed in the Status column are listed in the TIP. Additional information regarding Plan 2040, the current RTP, is found in Section 6.0.

In addition to the RTP, projects were identified by the Georgia Transportation Investment Act of 2010 (TIA) ⁹. In a number of instances, the intent of these projects is the same as the projects in the RTP. The TIA roadway and transit projects that could have an effect on the study area are found in Table 4-6.

4.4 North Fulton and Jurisdiction Comprehensive Transportation Plans

The Comprehensive Transportation Plans (CTP) prepared for the northern Fulton County sub-region and by the study area cities are summarized below. Most of the cities prepared their CTPs concurrently with their Comprehensive Plans so that both plans reflect their overall vision and policies.

4.4.1 North Fulton Comprehensive Transportation Plan

Recognizing the complex and regional nature of transportation planning, Sandy Springs, Roswell, Alpharetta, Mountain Park, Johns Creek and Milton joined with the ARC to produce a CTP incorporating all of northern Fulton County. A key result of the North Fulton CTP is a list of cross-jurisdictional projects that the cities collectively support.

The North Fulton CTP discusses the potential for fixed-route transit along the GA 400 corridor. Further, it recommends high-capacity transit service to operate along or parallel to GA 400 as far north as Windward Parkway in the long-term, but it concludes that at the time the report was written, current conditions and zoning regulations limit the feasibility of such an investment. The plan recommends land use changes in order to provide the necessary ridership base for high-capacity transit. Short-term transit recommendations include:

- Express bus operations within managed lanes along GA 400, and
- Preserve right-of-way (ROW) within the corridor for future

ratio range.

⁹ TIA provides a legal mechanism in which regions throughout the state have the ability to impose a 1 percent sales tax to fund needed transportation improvements within their region. The GA 400 study area is within the ten county region comprised of Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, and Rockdale Counties. In the summer of 2012, voters will determine the future of this method of funding transportation projects.

potential rail transit and transit stations during plan approval for major developments and redevelopments.

Two express bus recommendations include:

- SR 140/ Rucker Road to GA 400 transit, and
- SR 120/ State Bridge Road.

The report recommends that the cities consider redevelopment potential of key nodes along these corridors to support future bus routes or enhanced transit service.

The CTP continues with recommendations for transportation demand management, bicycle facilities, and roadways. Of these, two roadway projects and four bicycle projects on the Tier 1 project list are within the study area:

- VH109: Widen Hammond Drive to four lanes between SR 9 and Glenridge Drive, and to six lanes from GA 400 to DeKalb County. Bike lanes, sidewalks, and infill sidewalk gaps are included in the project.
- VH106: widen Windward Parkway to 6 lanes from Deerfield Parkway to Union Hill Road
- BP103: Morgan Falls Power Easement multi-use trail connecting existing system in Cobb County with on-road facilities in Dunwoody
- BP104: East-West bicycle/ pedestrian facilities starting at Eves Road to Holcomb Bridge Road, continuing to Gwinnett County
- BP102: Big Creek Greenway Connection to Chattahoochee River Walk
- BP106: Milton connection to Big Creek Greenway via Webb Road, Morris Road and McGinnis Ferry Road.

4.4.2 Sandy Springs

The Sandy Springs Transportation Master Plan (TMP) was prepared in concert with the Comprehensive Plan. Both plans establish the same vision for the community. The TMP establishes six overarching guiding principles to achieve this vision, each with coordinating performance measures:

- Provide efficient use of existing infrastructure
- Improve congestion at bottlenecks and “Hot Spots”
- Park once and circulate in downtown Sandy Springs via transit and pedestrian modes
- Provide for future travel demand
- Promote pedestrian and bicycle travel for access to parks and community facilities
- Serve mobility needs in residential areas while preserving neighborhoods

The projects in the Sandy Springs TMP are summarized in Table 4-7

4.4.3 Dunwoody

The Dunwoody CTP identifies transportation strategies and

projects based on the policy and goal statements set forth in Dunwoody's Comprehensive Land Use Plan. The guiding principles center around three core values: choice, connectivity, and community: The Dunwoody CTP projects are listed in Table 4-8.

- Choice:
 - Provide a transportation system that emphasizes choice by increased mobility for all users, increased connectivity, and increased health enrichment options
 - View the street as a public space with the intent to serve multiple functions
 - Provide for equal access by all users in transportation expenditures
- Connectivity:
 - Create an integrated network of transportation facilities that connects people to where they want to go, both in the community and destinations near city limits
 - Establish a maintenance and safety program that will enhance the existing system
 - Prioritize multi-modal transportation options
- Community:
 - Enhance the Dunwoody community first and the Atlanta region second in transportation investments
 - Provide opportunities for increased interaction within the community, increased recreational opportunities, and increased active living opportunities

4.4.4 Roswell

Roswell completed its transportation master plan in 2006 and updated it in 2011. The four main goals of the plan are to:

- Enhance Safety for all users: private and commercial vehicle operators, pedestrians, bicyclists and transit riders.
- Manage Congestion by providing innovative yet realistic options for local traffic including key intersections, as well as creating new connections.
- Increase Bicycle, Pedestrian and Transit Mobility to assure that all City residents have safe bicycle and pedestrian mobility options and that transit service is as accessible to residents and visitors as possible.
- Support Redevelopment by providing transportation systems that support redevelopment while preserving Roswell's character.

Projects in the study area are described in Table 4-9

4.4.5 Alpharetta

Alpharetta currently does not have a stand-alone comprehensive transportation plan. It relies upon its comprehensive plan and the Northern Fulton CTP to guide its transportation decisions.

4.4.6 Milton

Milton completed its CTP in 2009 concurrently with the development of the Comprehensive Plan. Coordination with the

land use policies is a central element to insure the creation of a "sense of place" so strongly articulated in the Comprehensive Plan. In addition to the list of recommended transportation projects, the Milton CTP also includes three local area plans around Crabtree Crossroads, Birmingham Crossroads and SR 9. The SR 9 projects are summarized below:

- Widen Morris Road from Webb Road to McGinnis Ferry Road. The addition of a wide shoulder could accommodate bicycle traffic,
- Widen State Route 9 to 4 lanes, also in the RTP,
- Signalize the main intersections along Morris Road from the southern city boundary to McGinnis Ferry Road. Roundabouts are not recommended at Morris Road and Webb Road due to projected future connections to GA 400, and
- As rail transit serving all areas of Milton may not be feasible, increase Xpress bus routes between Milton and the Perimeter Center and study the feasibility of dedicated bus lanes along GA 400 should be explored.

4.4.7 Johns Creek

The development of the Johns Creek Transportation Master Plan was coordinated with that of the City's Comprehensive Plan in 2010. As a result, the land use policies and other recommendations proposed through the Comprehensive Plan process are complemented by the strategies and improvements provided in this Transportation Master Plan. The six transportation policies for the City are:

- Facilitate safe and efficient movement of traffic along key corridors to minimize congestion.
- Apply innovative approaches and technologies to improve mobility, safety, and environmental quality.
- Enhance capacity along key corridors while preserving the existing character of the two-lane residential roads in Johns Creek.
- Connect the sidewalk and multi-use trail network to allow safe pedestrian and bicycle travel throughout Johns Creek.
- Explore public transportation options for Johns Creek commuter travel to the Atlanta core, Hartsfield-Jackson Atlanta International Airport, and surrounding communities.
- Whenever possible, interconnectivity should be encouraged.
- As Johns Creek does not fall within the study area, the Johns Creek CTP does not identify any projects within the study area

4.4.8 Forsyth

The Forsyth County Transportation Master Plan (CTP) was finalized in May 2011. The vision statement and goals of the plan are listed below.

Vision Statement – To offer an integrated transportation system designed to complement the county's character and enhance livability while providing connectivity, mobility, and access

appropriate to attract and retain development anticipated in the Comprehensive Plan.

Goals:

- Develop project and policy strategies to complement and implement the county's Comprehensive Plan vision
- Preserve and enhance the existing and future transportation system through appropriate strategies including transportation demand and access management techniques
- Enhance safety and security for motorized and non motorized travel
- Ensure financial viability of transportation system
- Manage congestion
- Conserve natural and built resources
- Promote appropriate economic development relevant to desired land use
- Provide alternative solutions for transportation consistent with local, regional, and statewide jurisdictions
- Develop mobility and connectivity within and between transportation modes
- Encourage sustainable development
- Accommodate growth within and immediately adjacent to county
- Facilitate the movement of goods
- Promote complete street concept by ensuring balance for all users
- Support reduction of greenhouse gases consistent with pending federal policies
- Position infrastructure recommendations to take advantage of multiple funding sources, including the priority funding provisions proposed as part of the Surface Transportation Authorization Act of 2009.
- Highlights of the recommendations resulting from the Forsyth County CTP affecting the study area include:
 - Short Range:
 - Encourage enhancing the use of the existing GRTA Xpress route 400.
 - Widen Union Hill Road from two to four lanes and McFarland Parkway (Segment 1) from four to six lanes
 - Mid-Range:
 - GRTA Park and Ride Facility
 - Long Range
 - Widen McFarland Parkway (Segment 2) from four to six lanes,

McGinnis Ferry Road from four to six lanes, and SR 400 from six to eight lanes

- SR 400 HOV lanes
- MARTA Station (dedicated lanes or rail)
- McGinnis Ferry / SR 400 Interchange

4.5 Travel Trends

The ARC develops and maintains a Regional Travel Demand Model to forecast travel patterns in the Atlanta region to support the development of long-range transportation plans. The data summarized in this section results from the model using the most recent RTP update, Plan 2040. Analysis was conducted for the base year 2010 model results and for the forecast year of 2040, which includes all transportation projects in the RTP.

For analysis purposes, the region is divided into geographic travel districts. The study area is largely comprised of three travel districts: Perimeter in the south, North Point/Holcomb Bridge in the center, and Windward in the north as shown in Figure 4-6. All data required to run the model was obtained from the ARC.

4.5.1 Study Area Trips

The number of 2010 trips and 2040 forecasted trips, for all trip types, was calculated for the study area. Table 4-10 presents the trip volumes from, to, and within the study area.

The volume of trips between the study area and the various travel districts of the region is shown in Figure 4-7 and Figure 4-8. The figures indicate the productions and attractions for 2010 and 2040. Table 4-11 and Table 4-12 list the volumes.

Table 4-13 presents the percent of the total trips by trip purpose for 2010 and 2040. The trip purposes are Home Based Work (HBW), Home Based Other (HBO), and Not Home Based (NHB).

4.5.2 Home Based Work Trips

An analysis of Home Based Work (HBW) trips indicates that in 2010 the study area experienced 332,000 HBW trips of which 14.7 percent were productions and 23.6 percent were attractions. Of these trips, 17 percent began and ended within the study area. Table 4-14 presents the ten most frequently occurring origins of HBW trips in 2010.

In 2040, the number of HBW trips is forecast to increase from 332,000 in 2010 by 42.2 percent to 472,100. The HBW trips generated in the study area would increase slightly from 17.0 percent to 17.9 percent.

The 2040 forecast origins of study area HBW trips are found in Table 4-15. As in 2010, the trips are either internal or have origins outside the study area. It is interesting to note that the origins of these top ten pairs are the same as in 2010. Together, the top ten trip pairs account for 85.9 percent of the HBW trips forecast in 2040 compared with 86.3 percent in 2010.

4.5.2.1 Major Origins and Destinations for HBW Trips

Table 4-16 presents the volume of trips to the study area from various districts, as defined by the Regional Travel Demand Model. Table 4-17 presents the volume of trips from the study area to the various districts. Each table includes the changes in trip volumes from year 2010 to 2040.

4.5.3 Travel Time

The Regional Travel Demand Model also provides data pertaining to the time required to travel between various origins and destinations. It provides these data specific to travel modes. Table 4-18 presents automobile travel and transit trip times between Downtown Atlanta and the three study area districts. With the exception of Perimeter, which is served by MARTA heavy rail, automobile travel times are shorter than transit. The transit travel times include out of vehicle time such as time spent walking, waiting, or transferring. From the Windward and North Point districts, there is no direct heavy rail transit service to Downtown and trips require a transfer and use of a bus to access the MARTA North Springs station before continuing to Downtown. Buses operate in mixed roadway traffic and are generally slower than passenger cars due to time spent at bus stops. All travel times presented are based on AM peak period conditions.

4.5.4 Travel Mode Share

The Atlanta Regional Travel Demand forecasts the percentages of trips made by travel modes including driving alone, shared ride, transit, and walking/bicycling. Table 4-19 indicates that the predominant travel mode in the year 2010 for all trips is driving alone. In both 2010 and 2040, approximately 40 percent of trips originating in the study area (productions) are made by means of either shared ride (39 and 38 percent) or transit (2 percent). Trips destined to the study area (attractions) in both 2010 and 2040 exhibit the same proportion of shared ride and transit trips.

Table 4-20 indicates that the predominant travel mode in the 2010 for HBW trips is driving alone. In both 2010 and 2040, approximately 17 percent of trips originating in the study area (productions) are made by means of either shared ride (11 percent) or transit (6 percent). Trips destined (attractions) to the study area in both 2010 and 2040 have a slightly lower proportion of shared ride or transit trips at approximately 14 percent. Forecasts indicate no change in this pattern for the year 2040.

4.5.5 Transit Travel Trends

Table 4-21 presents volumes of transit trips originating in the study area to various destinations. Table 4-22 presents volumes of transit trips from various origins to the study area.