



2.0 STUDY OVERVIEW

2.1 Description of the I-20 East Transit Initiative

MARTA, in close coordination with DeKalb County, the City of Atlanta, GDOT, ARC, and in cooperation with the FTA, is undertaking the I-20 East Transit Initiative. This initiative will identify and summarize the potential transportation and environmental impacts associated with the implementation of new east-west transit service from Downtown Atlanta to the Mall at Stonecrest, in eastern DeKalb County. The I-20 East Corridor, shown in **Figure 2-1** on page 2-2, extends more than 20 miles from downtown Atlanta through southern DeKalb County and into the central portion of Rockdale County.

This project seeks to identify transit investments that would improve east-west mobility and accessibility to jobs and housing within the corridor, provide convenient and efficient transit service to accommodate the increasing transit demands within the corridor, and support corridor economic development and revitalization. The initiative is organized in two study phases. The first phase, a DCA, or update of the previously completed AA, will be followed by the environmental review process in accordance with NEPA.

2.2 Project Background and History

Previous studies of transportation needs in the I-20 East Corridor over the past decade (**Figure 2-2** below) have clearly established the need for high capacity transit service to accommodate the increasing transit demands of this corridor:

- Studies starting with the *South DeKalb/Lindbergh Study* have consistently shown transit demand for a fixed guideway investment in the I-20 East Corridor between South DeKalb and Central Atlanta.
- *Plan 2040* (2011), the transportation plan for the Atlanta region, establishes frameworks for future transit operations, infrastructure and development as well as regional goals for mobility, safety and the environment. This plan includes improved transit service in the I-20 East Corridor.
- There are land use and redevelopment plans and zoning ordinances in the City of Atlanta and DeKalb County, as well as Livable Centers Initiative (LCI) studies that support and encourage transit oriented development, a goal of the I-20 East Transit Initiative.

Figure 2-2: Timeline of Previous Studies

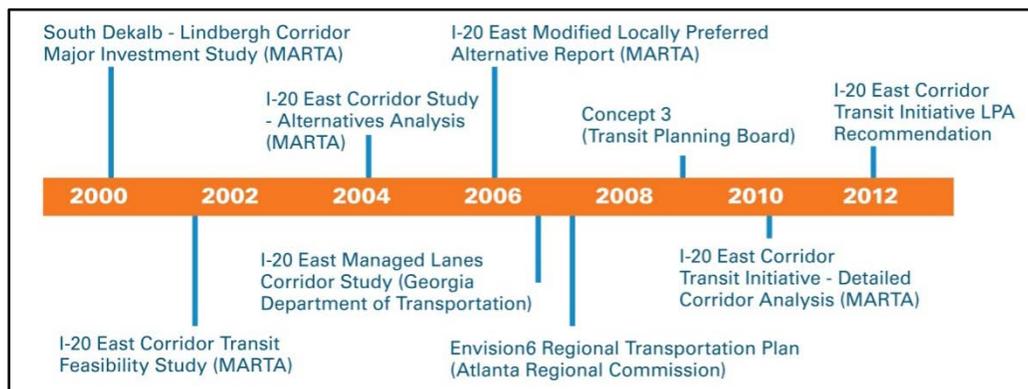
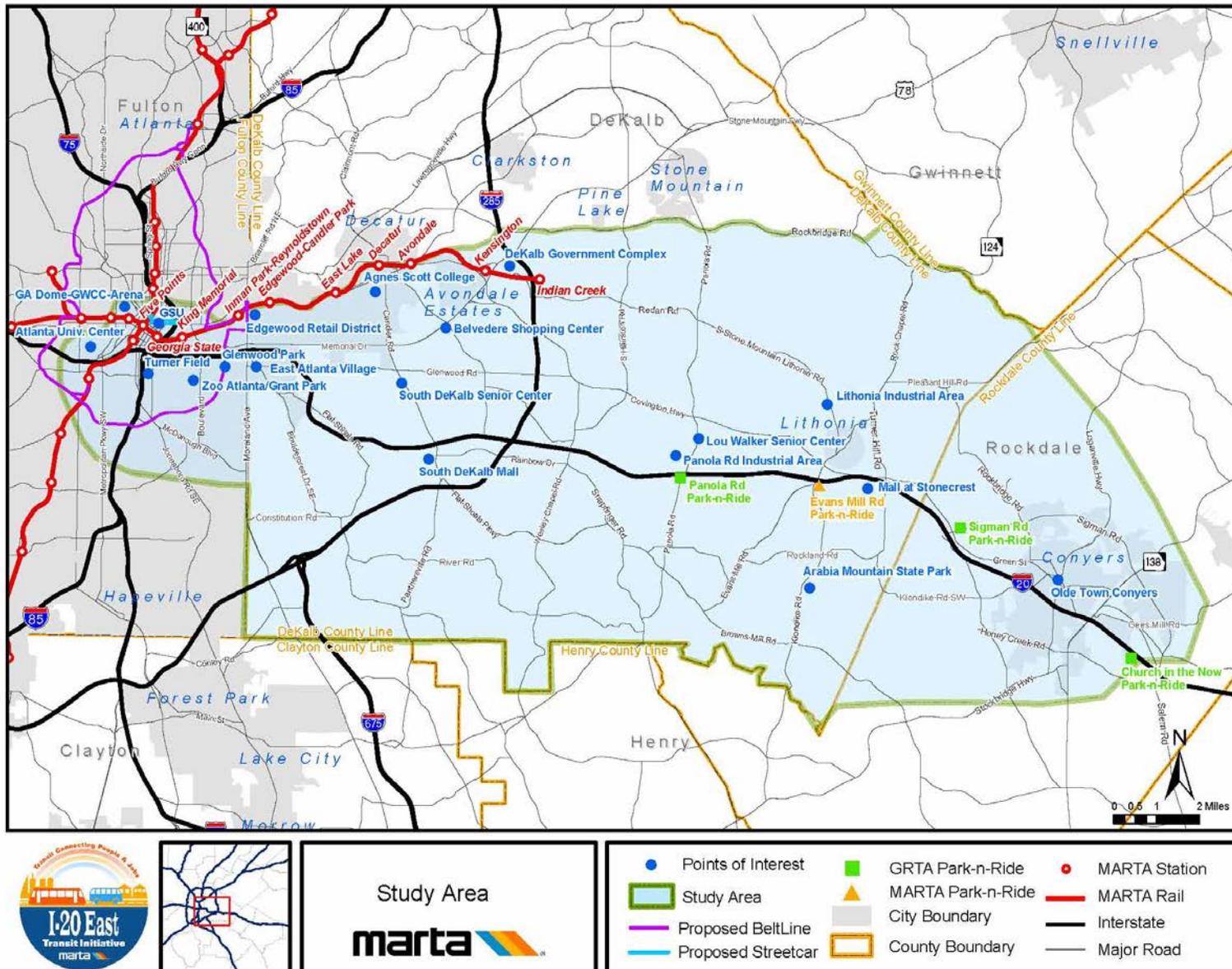




Figure 2-1: Study Area



2.3 Project Purpose and Need

2.3.1 Transportation Challenges

The I-20 East Corridor faces several major challenges. The study area's unique existing and planned transportation system, travel markets, demographics, land uses, and development trends all contribute to the challenges facing this corridor both today and in the future. The data presented in the *I-20 East Transit Initiative Purpose and Need Report* illustrate the need for transit investments that address these challenges. These challenges are summarized below.

Traffic congestion causes delay and slow travel times

- The ARC model estimated a total of 2.6 million daily person trips that originated and terminated within the I-20 East Corridor in 2005. By 2030, the number of trips associated with the I-20 East Corridor is expected to increase to 3.5 million trips, an increase of 36 percent. These levels of growth within the corridor will continue to drive a steady increase in traffic volumes and congestion, further increasing delay and reducing travel times.



- Traffic volumes on study area roadways are projected to increase significantly by 2030 as development in the area continues to increase. Volumes on I-20 in 2005 ranged from 76,800 Annual Average Daily Traffic (AADT)¹ in the rural, eastern end of the study area to 195,000 AADT in Downtown Atlanta. By 2030, AADT on I-20 is projected to increase by up to 64 percent to volumes of up to 269,100 vehicles per day. Similar or greater increases in volume are projected for many of the area major roadways.
- Degradation in Level of Service (LOS) is projected for most major roadways in the study area. The LOS on I-20 in 2005 ranged from D to F among study area roadway segments. By 2030, LOS is projected to worsen on more than half of these roadway segments, and only one segment is projected to operate at D or better, the level considered acceptable for urban areas. This projection for 2030 roadway conditions is typical in the study area for major east-west roadway segments, most of which are projected to operate at LOS E or F.

Inadequate access to downtown and other employment centers

- Downtown and Midtown Atlanta represent the largest concentrated destination for travel within the corridor. This is especially true for transit trips, with 49 percent of

¹ AADT is the total volume of vehicle traffic on a segment of road for a year divided by 365 days, to estimate the average daily traffic on that roadway segment.



transit trips originating in the corridor destined for Downtown and Midtown Atlanta. As automobile and transit travel times to central Atlanta continue to lengthen, access to this important employment center will become increasingly difficult.

- The projected 46 percent increase in study area employment establishes the basis for an increasing need for additional capacity in the transportation system. Furthermore, through discussions with area stakeholders, the I-20 East Transit Initiative has identified inadequate access to existing employment centers as a corridor issue.

Limited east-west roadways; I-20 is the only real choice

- With the exception of I-20, there are limited roadway options for drivers traveling east-west in the study area, and of these, few extend across a significant portion of the study area or offer multiple lanes. Since the existing transportation network does not provide a viable parallel route to I-20 for traversing the study area, the need exists to increase travel choices for east-west mobility in the corridor.
- East-west travel along I-20 is the predominant travel pattern within the corridor. Results of a select link analysis illustrate that the majority of peak hour automobile trips traveling eastbound and westbound on I-20 continue their trips along I-20 rather than diverting on I-285 to the north or south.
- By 2030, the largest source of trips coming into the study area will be from Rockdale and Newton Counties to the east of the study area. Approximately 10 percent of all trips destined for the study corridor will come from these areas. This represents a 113 percent increase in trips from Rockdale and Newton Counties from 2005 to 2030. With I-20 the main option for travel into the study area from these counties, congestion will continue to increase, causing mobility and access to decrease.

Limited planned transportation projects in corridor to accommodate growth

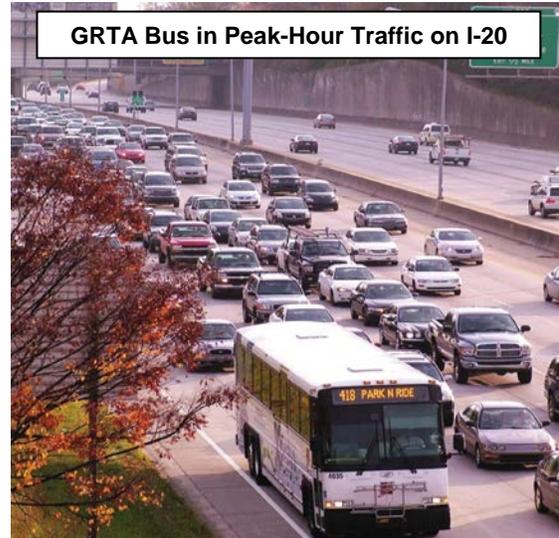
- While there are planned and programmed roadway capacity projects in the study area, the lack of east-west movement is projected to remain an issue due to the projects' emphasis on north-south roadways. There are no projects planned to add general use lanes or HOV/managed lanes to I-20 by 2030. With limited planned improvements to I-20 or parallel facilities, east-west mobility in this growing study area will continue to degrade.

Insufficient transit service for a growing demand

- Transit travel is expected to increase significantly in the corridor. In 2005 there were 143,700 daily transit trips in the I-20 East Corridor. By 2030, it is projected that there will be 253,000 daily transit trips in the study area each day, a 77 percent increase from 2005. Transit travel growth will far outpace the 36 percent growth for trips of all modes, which includes automobile trips. Over the past five to ten years, significant increases in ridership have been seen on express bus services offered by Georgia Regional Transit Authority (GRTA) and MARTA that travel on I-20 East, despite the fact that these buses operate on congested roadways. This demonstrates the strong demand for transit service within the corridor even when existing transit service is not travel time competitive.
- Automobile and transit travel times limit mobility and access within much of the corridor. By 2030, most of the corridor west of I-285 is expected to experience automobile and transit travel times to downtown of greater than 50 minutes with much of this area experiencing travel times of 60 - 80+ minutes.

Express buses operate in normal traffic

- Overall, existing and future transit travel times are considerably longer than automobile travel times, illustrating that current transit service is not travel time competitive.
- Transit travel times surrounding the existing MARTA heavy rail line are not expected to lengthen by 2030. However, by 2030 local and express bus service in much of the eastern portion of the corridor is expected to experience considerably longer travel times, primarily due to the fact that these services operate on congested roadways and there are few capacity-adding roadway improvements planned for the study area by 2030. Furthermore, no managed lanes or HOV lanes are planned along I-20 east of I-285 by 2030. This further highlights the need for travel time competitive transit service to address the mobility and access needs of the study area.



GRTA Bus in Peak-Hour Traffic on I-20

Areas of the corridor are in need of revitalization

- There are land use plans, redevelopment plans, and zoning ordinances in the City of Atlanta and DeKalb County, as well as from LCI Studies, that support and encourage transit oriented development, a goal of the I-20 East Transit Initiative.
- The analysis of projected land use changes demonstrates that there is sufficient land area to accommodate projected growth and redevelopment. Much of the projected 117,000 new residents to the study area between 2005 and 2030 will be accommodated in the 56 percent growth in the eastern portion of the study area.
- A series of planning studies within the study area have recommended redevelopment activities along the I-20 East corridor, an example of which is the Candler Road/Flat Shoals Parkway LCI Study, completed in 2007. This study, like many of the others, envisioned and is supportive of, transit supportive land uses comprised of high-density mixed-use centers.
- Redevelopment and reinvestment is a major identified need in the corridor. Major redevelopment areas include the South DeKalb Mall area and other commercial centers adjacent to I-20. Additional premium transit service in corridor would represent a major new investment in the area and would have the potential to catalyze new development in these areas.



Rainbow Village Shopping Center on Candler Road



- The previously identified transit alignment and stations along I-20 are supported by the land use policy framework of DeKalb County, which calls for the redevelopment of commercial areas adjacent to I-20 as a series of mixed-use higher-density areas. The I-20 Overlay District lays the framework for ensuring Transit-Oriented Development (TOD) at proposed station areas along the alignment.

Limited transportation options for traditionally underserved populations

- There are neighborhoods of minority and low-income populations located throughout the study area. It will be important through the planning process to ensure these neighborhoods are not impacted disproportionately and that any transit improvements serve these neighborhoods where the population has been traditionally underserved.
- The study area has a higher percentage of zero-vehicle households (15.4 percent) than the Atlanta metropolitan area (7.3 percent) or the State of Georgia (8.3 percent). Although many of these zero-vehicle household neighborhoods are located along existing MARTA rail lines, there are numerous zero-car households in neighborhoods throughout the study area particularly along or near I-20.
- There are neighborhoods within the study area where the elderly and disabled populations make up between 15 to 25 percent of the population. While in the western end of the study area these populations reside near existing MARTA rail lines, in the eastern end of the study area, large areas with significant elderly and disabled populations do not have access to premium transit. Increasing the accessibility of service to these populations would address a major need for the I-20 East Transit Initiative.

2.3.2 Need for the I-20 East Transit Initiative

Given the challenges facing the study area, improved transit service in the I-20 East Corridor is being investigated to address the following needs.

- **Improved Mobility and Accessibility in the Corridor**
 - Traffic congestion causes delay and slow travel times
 - Inadequate access to downtown and other employment centers
- **Additional Travel Options in the Corridor**
 - Limited east-west roadways; I-20 is the only real choice
 - Limited planned transportation projects in corridor to accommodate growth
- **Improved Transit Service in the Corridor**
 - Insufficient transit service for a growing demand
 - Express buses operate in normal traffic
 - Limited transportation options for transit dependent and elderly populations
- **Support Land Use and Development Goals within the Corridor**
 - Areas of the corridor are in need of revitalization

2.3.3 Purpose and Need Statement

The following Purpose and Need Statement was developed to clearly and concisely address the primary transportation challenges faced by the I-20 East Corridor.



The purpose of the I-20 East Transit Initiative is to provide transit investments that enhance east-west mobility and improve accessibility to residential areas and employment centers within the corridor. The existing and future roadway congestion in the I-20 East corridor will have an increasingly detrimental effect on automobile and bus transit travel in the corridor. The proposed transit investments are intended to improve travel times and travel reliability by providing a rapid transit service for commuters traveling to and from central Atlanta.

2.3.4 Goals and Objectives of the I-20 East Transit Initiative

Based on the identified challenges and needs within the corridor and stakeholder input, goals and objectives were identified to guide the development and evaluation of transit alternatives for the I-20 East DCA. They are presented in **Table 2-1** below.

Table 2-1: Goals and Objective

Goals	Objectives
Goal 1: Increase mobility and accessibility	<ul style="list-style-type: none"> • <u>Objective 1.1:</u> Improve travel times for east-west travel • <u>Objective 1.2:</u> Improve transit accessibility within the corridor • <u>Objective 1.3:</u> Improve connectivity with existing and planned transit investments • <u>Objective 1.4:</u> Improve travel options within the corridor
Goal 2: Provide improved transit service within the corridor	<ul style="list-style-type: none"> • <u>Objective 2.1:</u> Provide transit service with sufficient capacity to accommodate growing demand • <u>Objective 2.2:</u> Provide travel time competitive transit service in the corridor • <u>Objective 2.3:</u> Provide transit service for traditionally underserved populations
Goal 3: Support regional and local land use and development goals	<ul style="list-style-type: none"> • <u>Objective 3.1:</u> Promote economic development/revitalization • <u>Objective 3.2:</u> Support adopted local land use plans • <u>Objective 3.3:</u> Encourage transit supportive land use and development patterns
Goal 4: Promote cost effective transit investments	<ul style="list-style-type: none"> • <u>Objective 4.1:</u> Provide transit service that can be implemented, operated, and maintained with available resources
Goal 5: Preserve natural and built environment	<ul style="list-style-type: none"> • <u>Objective 5.1:</u> Minimize impacts on environmental resources
Goal 6: Achieve a high level of community support	<ul style="list-style-type: none"> • <u>Objective 6.1:</u> Maintain compliance with stakeholder guidance • <u>Objective 6.2:</u> Achieve a high level of public support

2.4 FTA Project Development Process

A DCA/AA is a required element within the FTA’s project development process (**Figure 2-3** on page 2-8). The DCA/AA examined a range of feasible alternatives and compared the potential costs, impacts, and benefits of each alternative relative to the demonstrated purpose and need for the improvement. The result of this analysis was an LPA to be advanced into environmental studies and preliminary engineering.

The second phase of the I-20 East Transit Initiative will be the preparation of environmental documents to satisfy NEPA, which requires the full consideration of environmental effects for any project that receives federal funding. The I-20 East Transit Initiative is preparing an EA for the BRT component and an EIS for the HRT component. Both the EA and the EIS are studies focused on the social, cultural, and physical impacts of potential federal investments,



with the EIS documenting these issues in greater depth than the EA. The EIS is completed in two steps, a Draft EIS and a Final EIS that follows the review of the Draft EIS. The EA, if it is determined from the EA that no significant impacts will result from the project, results in a Finding of No Significant Impact (FONSI).

Figure 2-3: FTA Project Development Process

