PROJECT NEED AND PURPOSE
PROJECT CSSTP-0006-00(889), DEKALB COUNTY, P.I. NO. 0006889

The primary purpose of the Lithonia Industrial Boulevard Extension—Phase III [CSSTP-0006-00(889), DeKalb County, P.I. No. 0006889] is to provide a north-south access route through this portion of DeKalb County. The project would also provide a more direct and shorter route from I-20 to Evans Mill Road, thereby reducing travel times for motorists; reduce cut-through traffic and congestion along a residential section of Evans Mill Road, subsequently improving safety along this portion of Evans Mill Road; and provide roadway capacity for current and future planned developments in the area.

A. Planning Basis for the Action

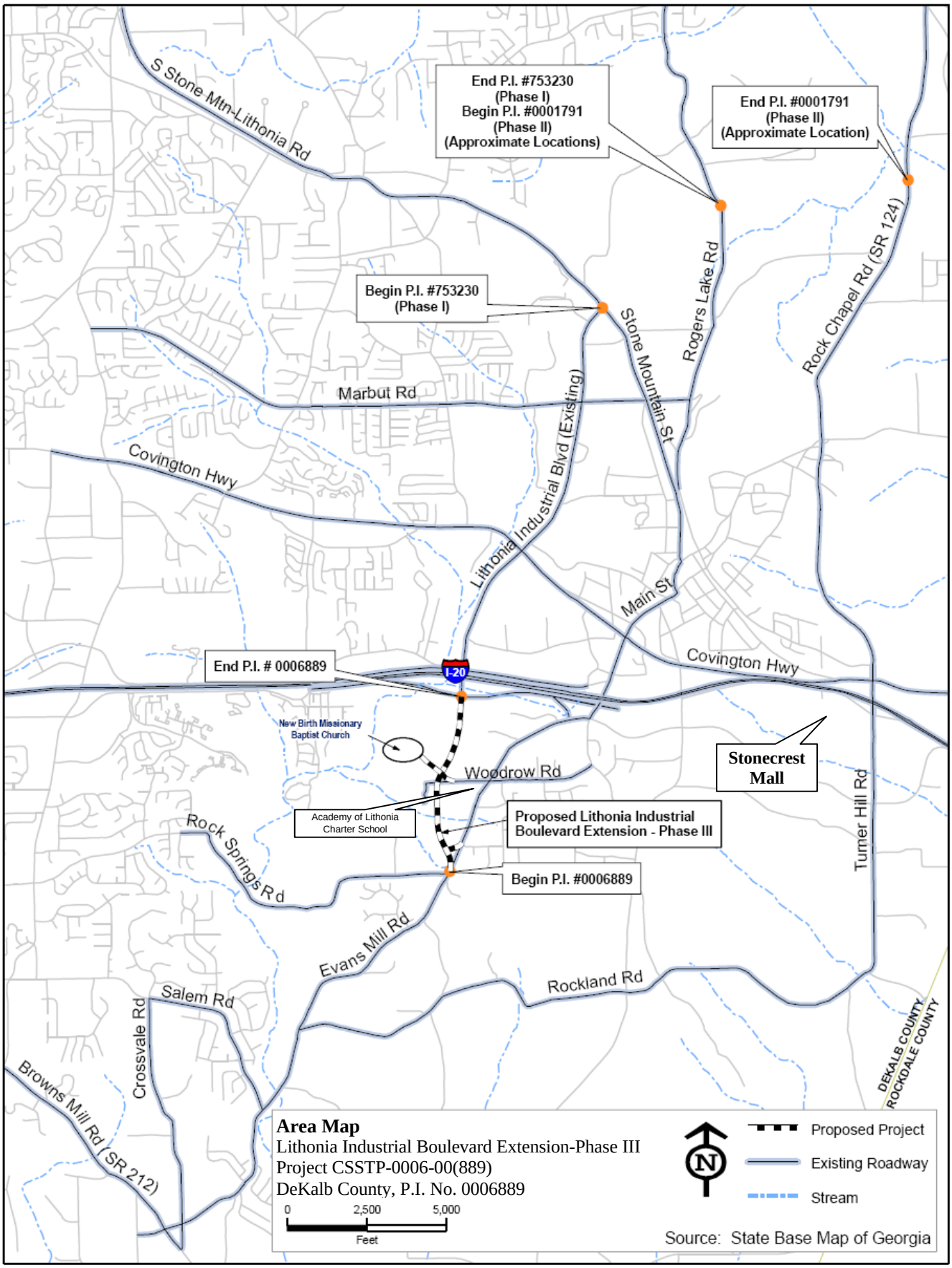
The Atlanta Regional Commission (ARC) adopted the Mobility 2030 Regional Transportation Plan (RTP) for the 18-county Atlanta metropolitan area in December 2004. The plan addresses current and expected travel demands on the region's transportation system through the year 2030. The RTP is the direct result of a comprehensive, cooperative, and continuous process conducted by ARC, local governments, and Georgia DOT in cooperation with the Federal Highway and Federal Transit Administrations. The Mobility 2030 RTP recommends extending Lithonia Industrial Boulevard from I-20 to Evans Mill Road in DeKalb County, and the project is programmed in the Fiscal Year (FY) 2006–2011 Transportation Improvement Program.

Currently, Lithonia Industrial Boulevard extends to the north from a newly reconstructed interchange/frontage road at I-20 to South Stone Mountain-Lithonia Road (see Area Map). The proposed project (Lithonia Industrial Boulevard Extension—Phase III) is one segment of a series of projects to extend Lithonia Industrial Boulevard from Browns Mill Road (SR 212) north to Rock Chapel Road (SR 124), providing a north-south connector road from Rockdale County through DeKalb County to Gwinnett County, as shown in Table 1 and on the Area Map.

Table 1. Georgia DOT Projects to Extend Lithonia Industrial Boulevard in DeKalb County

Project	Termini	Approx. Distance	Right-of-Way Scheduled	Let Scheduled
Phase I: Project HPP-9347(1), P.I. No. 753230	From South Stone Mountain-Lithonia Rd. to Rogers Lake Rd.	1.1 miles	Underway	FY 2009
Phase II: Project STP-0001-00(791), P.I. No. 0001791	From Rogers Lake Rd. to Rock Chapel Rd. (SR 124)	1.2 miles	Completed	May 2008
Phase III: Project CSSTP-0006-00(889), P.I. No. 0006889 (Proposed Project)	From the Evans Mill Rd./Rock Springs Rd. intersection to the existing I-20 eastbound Evans Mill Rd. off-ramp/frontage road	1.1 miles	FY 2009	FY 2010

These three projects would provide north-south connectivity through the county, providing improved access, circulation, and capacity for residents and businesses to the north and south of I-20. However, the Lithonia Industrial Boulevard Extension—Phase III would operate with independent utility by servicing commuters on the south side of I-20 within DeKalb County and along the residential section of Evans Mill Road, and would provide a more direct route to I-20 for commuters traveling to or from Evans Mill Road and Browns Mill Road south of I-20. Currently, approximately 95 percent of the average daily traffic (ADT) originating from I-20 and other points north of the project area uses Evans Mill Road as a through-route to points south of the Rock Springs Road intersection. This percentage is anticipated to increase by the build year (2010; 96 percent) and the design year (2030; 98 percent). In addition, about 95 percent of the ADT originating from Rock Springs Road and points south currently uses Evans Mill Road as a through-route to I-20 and other points north of the project area. This percentage is anticipated to remain the same for the build year, but slightly increase to about 96 percent by the design year. Traffic volumes and travel distances are discussed in greater detail below.


S Stone Mtn-Lithonia Rd
End P.I. #753230
(Phase I)
Begin P.I. #0001791
(Phase II)
(Approximate Locations)
End P.I. #0001791
(Phase II)
(Approximate Location)
Begin P.I. #753230
(Phase I)
Rogers Lake Rd
Rock Chapel Rd (SR 124)
Stone Mountain St
Marbut Rd
Covington Hwy
Lithonia Industrial Blvd (Existing)
Main St
Covington Hwy
End P.I. # 0006889
I-20
New Birth Missionary Baptist Church
Woodrow Rd
Stonecrest Mall
Academy of Lithonia Charter School
Proposed Lithonia Industrial Boulevard Extension - Phase III
Begin P.I. #0006889
Rock Springs Rd
Turner Hill Rd
Evans Mill Rd
Rockland Rd
Salem Rd
Crossvale Rd
Browns Mill Rd (SR 212)
DEKALB COUNTY
ROCKDALE COUNTY
Area Map
Lithonia Industrial Boulevard Extension-Phase III
Project CSSTP-0006-00(889)
DeKalb County, P.I. No. 0006889
0
2,500
5,000
Feet
N
Proposed Project
Existing Roadway
Stream
Source: State Base Map of Georgia

B. Deficiencies in the System

Travel Distances, Access to and from I-20, and Travel Time Savings

The proposed project would provide a more direct and shorter route between I-20 and existing Evans Mill Road. Currently, access from I-20 eastbound to Evans Mill Road is provided by a recently constructed I-20 eastbound off-ramp/frontage road, which crosses a T-intersection with existing Lithonia Industrial Boulevard before intersecting Evans Mill Road. The existing total travel distance from I-20 eastbound to Evans Mill Road south of Rock Springs Road is approximately 2.2 miles. Access to I-20 westbound from Evans Mill Road currently requires the motorist to cross under I-20, turn left onto Hillandale Drive, and follow a new westbound I-20 frontage road to I-20. The existing total travel distance from Evans Mill Road south of Rock Springs Road to westbound I-20 is approximately 2.8 miles. The extension of Lithonia Industrial Boulevard as proposed (Phase III) would provide more direct access to I-20, reducing the travel distance from I-20 eastbound to Evans Mill Road to approximately 1.4 miles and reducing the travel distance from Evans Mill Road to I-20 westbound to approximately 1.5 miles. Additionally, for vehicles that have destinations north of I-20 (towards Covington Highway), the proposed Lithonia Industrial Boulevard extension would provide direct access and would reduce traffic volumes at the existing intersections of Evans Mill Road with the I-20 eastbound and westbound (Hillandale Drive) frontage roads.

As a result of the reduction in travel distances between Evans Mill Road and I-20, provided by the proposed Lithonia Industrial Boulevard extension, travel times would also be reduced. A general arterial level of service analysis was performed to estimate travel times along the study corridor. Table 2 summarizes the estimated travel time between the I-20 eastbound Evans Mill Road off-ramp/frontage road and Rock Springs Road under the No Build and Build conditions. [Note: Under the No Build condition, travel times were estimated for the distance between the Evans Mill Road/Rock Springs Road intersection and the I-20 eastbound frontage road/Evans Mill Road intersection. Under the Build condition, travel times were estimated for the distance of the proposed Lithonia Industrial Boulevard extension (from Rock Springs Road to the I-20 eastbound frontage road). No travel times or distances on the I-20 eastbound or westbound frontage roads were taken into account in these estimations.]

Table 2. Travel Time Comparison Summary

Scenario	Travel Time in Minutes			
	No Build Condition		Build Condition	
	Northbound	Southbound	Northbound	Southbound
Existing AM	3.75	2.90	N/A	N/A
Existing PM	3.55	2.75	N/A	N/A
2010 AM	4.00	2.95	1.90	1.85
2010 PM	3.65	2.85	2.10	1.90
2030 AM	13.84	4.00	2.10	2.02
2030 PM	9.18	6.40	2.30	1.93

As shown in Table 2, the proposed project would reduce travel times within the project area by approximately 1.1 (southbound) to 2.1 (northbound) minutes during the 2010 (build year) morning peak traffic period and by approximately 1.0 (southbound) to 1.6 (northbound) minutes during the 2010 evening peak traffic period. By the design year (2030), the proposed project is anticipated to reduce travel times within this area by approximately 2.0 (southbound) to 11.7 (northbound) minutes during the morning peak traffic period, and by approximately 4.5 (southbound) to 6.9 (northbound) minutes during the evening peak traffic period.

Traffic Volumes

The proposed project would also serve to reduce cut-through traffic, congestion, and accidents in residential neighborhoods and in front of the Academy of Lithonia Charter School along Evans Mill Road north of Rock Springs Road, returning a portion of Evans Mill Road to a residential street. Existing and projected future No-Build and Build ADT volumes along segments of Evans Mill Road within the project area are shown in Table 3. Peak morning and evening volumes for both the No-Build and Build scenarios are provided in the Traffic Concept

Report, which is available in the project file. [Note: Projected future traffic volumes for the for the build year (2010) and design year (2030) are based on a 3.5 percent annual regional growth rate, which includes localized developments as well as regional growth. This 3.5 percent annual regional growth rate is derived from averaged data from traffic count stations around the project area over the past several years (2.4 percent), as well as ARC's growth model (4.5 percent).]

Table 3. Existing and Projected Future Average Daily Traffic on Evans Mill Road and the Proposed Lithonia Industrial Boulevard Extension Under the Build and No Build Conditions

Road/Segment	Existing ADT Volumes (SB/NB)	No Build ADT Volumes (SB/NB)		Build ADT Volumes (SB/NB)	
	2006	2010	2030	2010	2030
Evans Mill Road					
North of Woodrow Road	4,760/5,190	5,510/ 5,890	10,780/ 11,170	2,265/ 2,265	4,525/ 4,525
Between Woodrow Road and Rockview Way	4,080/4,590	4,730/ 5,200	9,230/ 10,390	1,390/ 2,075	2,775/ 4,170
Between Rockview Way and Rock Springs Road (Existing and No Build only)	3,990/4,550	4,580/ 5,120	9,140/ 10,310	N/A	N/A
Between Rockview Way and the new Lithonia Industrial Boulevard intersection (Build only)	N/A	N/A	N/A	1,340/ 2,045	2,670/ 4,065
Between the new Lithonia Industrial Boulevard intersection and Rock Springs Road (Build only)*	N/A	N/A	N/A	5,020/ 5,020	9,930/ 9,930
South of Rock Springs Road	2,790/3,220	3,430/ 3,770	6,960/ 7,610	3,890/ 3,890	7,670/ 7,670
Proposed Lithonia Industrial Boulevard Extension					
North of Woodrow Road	N/A	N/A	N/A	3,785/ 3,785	7,525/ 7,525
Between Woodrow Road and Evans Mill Road intersection	N/A	N/A	N/A	3,790/ 3,105	7,470/ 6,075

SB = Southbound; NB = Northbound
*While this is part of the proposed Lithonia Industrial Boulevard extension, the name of the roadway would continue to be Evans Mill Road south of this new intersection.

As shown in Table 3, the proposed extension of Lithonia Industrial Boulevard within the project limits would reduce traffic along the portion of Evans Mill Road north of Woodrow Road by approximately 6,870 vehicles per day (vpd), or, by 60 percent, in the build year (2010) and by approximately 12,900 vpd (59 percent) in the design year (2030). South of Woodrow Road, traffic reductions along Evans Mill Road would range from approximately 6,315 vpd to 6,465 vpd in the build year (a reduction of 65 percent compared to No-Build conditions), and from approximately 12,675 vpd to 12,715 vpd in the design year (also a reduction of 65 percent) with implementation of the proposed project. Overall, the proposed project would shift the majority of the projected future through-traffic from a residential portion of Evans Mill Road onto the proposed Lithonia Industrial Boulevard extension.

Level of Service (LOS)

Level of service (LOS) is a qualitative measure used to describe the operating conditions of a roadway. The *Highway Capacity Manual* (Transportation Research Board, 2000) generally describes LOS in terms of factors such as speed, travel time, freedom to maneuver, traffic interruptions, driver comfort and convenience, and safety. LOS is represented by a ranking letter from "A" to "F," with "A" representing free-flow conditions and "F" representing traffic breakdown conditions.

A roadway segment LOS analysis was performed along segments of Evans Mill Road within the project area for the existing, No-Build, and Build conditions, and for segments of the proposed Lithonia Industrial Boulevard extension under the Build condition. The results of this analysis are shown in Table 4.

Table 4. Existing and Projected Future Level of Service (LOS) on Evans Mill Road and the Proposed Lithonia Industrial Boulevard Extension Under the Build and No Build Conditions (Roadway Segments Only)					
Road/Segment	**Existing LOS**	**No Build LOS**		**Build LOS**	
	2006	**2010**	**2030**	**2010**	**2030**
Evans Mill Road					
North of Woodrow Road	D	D	F	C	C
Between Woodrow Road and Rockview Way	C	D	F	C	C
Between Rockview Way and Rock Springs Road (Existing and No Build only)	C	D	F	N/A	N/A
Between Rockview Way and the new Lithonia Industrial Boulevard intersection (Build only)	N/A	N/A	N/A	C	C
Between the new Lithonia Industrial Boulevard intersection and Rock Springs Road (Build only)*	N/A	N/A	N/A	C	C
South of Rock Springs Road	C	C	D	C	D
Proposed Lithonia Industrial Boulevard Extension					
North of Woodrow Road	N/A	N/A	N/A	C	C
Between Woodrow Road and Evans Mill Road intersection	N/A	N/A	N/A	C	C
*While this is part of the proposed Lithonia Industrial Boulevard extension, the name of the roadway would continue to be Evans Mill Road south of this new intersection.					

As shown in Table 4, under the No-Build condition, Evans Mill Road north of Rock Springs Road operates at an unacceptable LOS by the design year (2030). With construction of the proposed Lithonia Industrial Boulevard extension, it is anticipated that traffic volumes on this portion of Evans Mill Road would be substantially reduced, improving the LOS for Evans Mill Road north of Rock Springs Road to LOS C in both the build year (2010) and design year (2030).

LOS for Project Intersections

The southern terminus of the proposed project, the Evans Mill Road/Rock Springs Road intersection, was recently improved under a DeKalb County Bond Program project. As a result of this improvement project, Evans Mill Road at this interchange consists of a three-lane urban section (two travel lanes, one in each direction, and turn lanes onto Rock Springs Road), with 12-foot travel lanes, 30-inch curb and gutter, and urban shoulders. South of the improved intersection with Rock Springs Road, Evans Mill Road consists of two 10-foot travel lanes, one in each direction, with open ditch shoulders. The typical section along Rock Springs Road within the vicinity of Evans Mill Road consists of two 12-foot travel lanes (one in each direction) with 12-foot urban shoulders, including 30-inch curb and gutter. The proposed project would not necessitate improvements to either of these facilities. A roadway segment analysis was conducted for both Evans Mill Road south of the proposed project's southern terminus, as well as for Rock Springs Road in the vicinity of its intersection with Evans Mill Road. The results of this analysis indicate that Evans Mill Road south of the proposed project would operate at LOS C or better in the build year (2010) under both the No-Build and Build conditions, and at LOS D in the design year (2030) under both the No-Build and Build conditions, both of which are acceptable LOS. Rock Springs Road would also operate at acceptable LOS in the open and design years (LOS C) under both the No-Build and Build conditions.

An LOS analysis was also performed for signalized and unsignalized intersections along the proposed project corridor under both the Build and No-Build conditions. Operations at the existing intersections along the Evans Mill Road corridor currently range from LOS A to LOS C, and in coordination with a DeKalb County intersection project at the Rock Springs Road/Evans Mill Road intersection currently under construction, intersection operations along this corridor are projected to remain relatively the same to the year 2030 under the No Build condition. With construction of the proposed project and in coordination with the DeKalb County intersection project at the Rock Springs Road/Evans Mill Road intersection, intersection operations along both the Evans Mill Road and the proposed Lithonia Industrial Boulevard corridors are projected to range from LOS A to LOS C to the year 2030 under the Build condition. The exception to this would be for the side street approach of the unsignalized Evans Mill Road/proposed Lithonia Industrial Boulevard intersection (westbound on Evans Mill Road approaching the intersection). This approach is projected to operate at LOS B for both the a.m. and p.m. peak periods in the build

year, and at LOS D for both peak periods in the design year. The details of this intersection capacity analysis are presented in this project's Traffic Concept Report, which is available in the project file.

Roadway Safety

The proposed project would reduce cut-through traffic and congestion along a residential section of Evans Mill Road, subsequently improving safety along this portion of Evans Mill Road. Safety analysis parameters, such as total accident rates, fatality rates, and injury rates, were developed for the study corridor. A comparison was made of the rates along the existing Evans Mill Road project corridor with the corresponding statewide averages. The historical accident data along this corridor was obtained from Georgia DOT. The results are summarized in Table 5.

Table 5. Comparison of Accident Rates on Evans Mill Road with Statewide Averages

Year	Annual Vehicle Miles Traveled (million)	Total Accidents	Total Fatalities	Total Injuries	Accident Rate*		Fatality Rate*		Injury Rate*	
					Actual	State-wide Average	Actual	State-wide Average	Actual	State-wide Average
2002	7,364	23	0	10	625	577	0.00	1.12	272	145
2003	7,621	28	0	13	735	585	0.00	1.51	341	146
2004	7,888	39	0	18	989	509	0.00	1.44	456	127
2005	8,164	77	0	14	1,886	534	0.00	1.56	343	206
2006	8,450	67	1	31	1,586	531	23.67	1.51	734	201

*Rate per 100 million vehicle miles (100 MVM)

As shown in Table 5, the accident rate and injury rate for Evans Mill Road for years 2002 through 2006 are much higher than statewide averages. However, the fatality rate for Evans Mill Road for these years, with the exception of 2006, is lower than statewide averages. The construction of the proposed Lithonia Industrial Boulevard extension is anticipated to substantially reduce traffic volumes, and therefore, congestion, along this portion of Evans Mill Road due to the directness of the proposed extension to I-20 and the north-south connectivity provided by the new extension. Future projected traffic volumes on Evans Mill Road are anticipated to be reduced up to 65 percent from shifting this traffic onto the proposed Lithonia Industrial Boulevard extension. With this reduction in traffic volumes and congestion, the number of accidents is expected to decrease along this portion of Evans Mill Road.

Roadway Capacity for Existing and Future Planned Developments

The proposed extension of Lithonia Industrial Boulevard within the project area would also provide roadway capacity for current and future planned developments in the area, reducing traffic congestion associated with such development in the vicinity of residential neighborhoods along Evans Mill Road. One existing major traffic generator in the project area is New Birth Missionary Baptist Church (congregation size of approximately 30,000 people and approximately 3,720 available parking spaces), located at the western end of Woodrow Road (see Location Map). When the church was constructed, only one entrance (the eastern entrance located on Woodrow Road) to the church was provided. Therefore, all vehicles accessing the church had to use Evans Mill Road to enter and exit the church, resulting in major traffic backups along Evans Mill Road. Residents in neighborhoods along Evans Mill Road registered many complaints with the county about traffic associated with operations at the church, and met with the DeKalb County Commission in July 2000 to express these concerns. In response to these complaints, New Birth Missionary Baptist Church opened a half-mile western exit through church property onto Chupp Way, which empties onto Fairington Road. However, according to the Traffic Concept Report for the proposed project, approximately 70 percent of church traffic still uses the eastern (Woodrow Road) entrance to the church. This is likely because Evans Mill Road provides the only north-south access to the church, as well as the nearest access to I-20. Major traffic backups in residential areas along Evans Mill Road are still resulting from vehicles accessing the church, and surrounding residents continue to register complaints with DeKalb County about this traffic. Numerous complaints about this traffic were also expressed at the public information open house held for the proposed project on September 19, 2006. These backups are most evident during primary church service

hours on Sundays and Wednesday evenings.[1] The proposed project would move the majority of the traffic associated with church services out of the residential areas on Evans Mill Road and onto the proposed Lithonia Industrial Boulevard extension.

Because New Birth Missionary Baptist Church would generate peak Sunday traffic in the vicinity of the proposed new intersection of Lithonia Industrial Boulevard and Woodrow Road, an intersection capacity analysis for Sunday peak-period volumes was conducted. Sunday peak-period volumes were calculated based on weekday peak-period volumes since Sunday traffic counts were not performed.[1] Georgia DOT weekend factors were applied to the weekday volumes to calculate the estimated Sunday volumes, which were approximately 60 percent of the weekday traffic. A trip generation estimate was performed based on the church capacity (i.e., square footage of the church, number of available parking spaces, and number of seats), church attendance, and the estimated traffic generated from the church. The 7th Edition Institute of Transportation Engineers Generation Manual guidelines for a church (Code: 560) were used to calculate the volume generated from the church. The results of the analysis indicate that the proposed new Lithonia Industrial Boulevard/Woodrow Road intersection would operate at a LOS C during peak Sunday periods, with no extraordinary delays from church traffic entering and exiting the church during the peak period. While the northbound left-turn lane on the proposed Lithonia Industrial Boulevard extension would be queued due to vehicles entering the church during the inbound peak hour, which would cause some delays in the left through-lane, through-traffic traveling toward I-20 and right-turning vehicles traveling to Evans Mill Road would not be delayed. In addition, while the southbound right-turn movement would have delays due to the volume of vehicles using that movement to enter the church, and some delays would be expected for the westbound through movement on Woodrow Road, all other movements passing through the intersection during the inbound peak hour would operate with little or no delay. For the outbound analysis at the church, the signal conditions were assumed to be operating the same as if a police officer was directing traffic. This assumption was made because ingress and egress is only critical at this location two times a week and is highly directional with traffic entering and exiting the church during the beginning and end of service periods, respectively. Additionally, traffic on the adjacent street is typically less critical compared to the church traffic, since church events usually occur outside the peak traffic hours. In these situations, the most common traffic control plan is by an enforcement official directing traffic; permanent traffic control devices to handle the high traffic volumes associated with church events are not reasonable. While the eastbound movements leaving the church would incur lengthy delays, the other movements at the proposed new Lithonia Industrial Boulevard/Woodrow Road intersection would only experience the typical delays of stopping at a red light. However, additional delays for the other movements are possible depending on how long the police officer allows each approach to go through the intersection.

The proposed project would also provide access to, and capacity for, potential future developments on undeveloped lots in the vicinity of Woodrow Road and East Glen Road (see Location Map) along the proposed Lithonia Industrial Boulevard extension corridor. These potential future developments are described later in this document. [Note: As described under "Traffic Volumes" above, projected future traffic volumes for the build year (2010) and design year (2030) discussed above for the proposed project are based on a 3.5 percent annual regional growth rate, which includes localized developments as well as regional growth. This annual growth rate is the average of the historic growth rate for the area (2.4 percent) and the annual growth rate in ARC's model (4.5 percent). The 3.5 percent annual growth rate used for the proposed project is higher than the average annual population and employment growth rates for DeKalb County (approximately 1.15 percent and 1.19 percent, respectively) projected in the DeKalb County 2005–2025 Comprehensive Plan (May 2007), which reflects a higher localized development potential for this area.]

[1]Since state transportation projects are designed to accommodate weekday peak traffic, traffic counts for the proposed project were conducted during weekday peak traffic periods. This is consistent with state transportation planning protocol. As such, traffic accessing New Birth Missionary Baptist Church during primary church service hours, which are primarily outside of the weekday peak traffic periods, is not included in the traffic data presented in Tables 1 through 3 above.