City of Smyrna Transit Analysis and Feasibility Study

1616

Technical Memorandum #1
Existing and Future Conditions

SMYRNA

Draft

November 2019



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Draft

November 2019

Prepared for



Prepared by









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Section 1: Introduction

The City of Smyrna, Georgia, is conducting a Transit Analysis and Feasibility Study (TAFS), dubbed *Smyrna Connects*, to develop an "overarching, consensus-driven transit vision" for the city and adjacent areas. This transit vision will take into account the City's larger objectives, including economic development, growth management, traffic mitigation, livable communities and corridors, and connected and walkable communities.

Development of this transit vision for the City is taking place at a critical time. Cobb County has just begun an update to the countywide transportation plan (which will include a countywide transit plan), the newly-created Atlanta-Region Transit Link (ATL) Authority will update the Atlanta Regional Commission's (ARC) Concept 3 regional transit plan in late 2019/early 2020, and the Georgia Department of Transportation (GDOT) is advancing a managed lane project on I-285.

Each of these regional initiatives provides an opportunity for the City to provide input and have influence. In addition, these regional initiatives create the opportunity to examine both local and regional transit needs and opportunities, including the South Cobb Drive corridor, the Spring Road corridor, Cumberland Transit Center opportunities, and new transit funding opportunities.

Study Area

Smyrna is located in southeast Cobb County, approximately 10 miles northwest of Atlanta and considered part of the Metro Atlanta area. The city is intersected by major corridors, such as, US-41, I-285, and the East-West Connector, with I-75 running adjacent. According to the 2010 Census, Smyrna is approximately 15 square miles in size.

Map 1-1 shows the study area for *Smyrna Connects*, which primarily includes the city but has been expanded to capture key activity centers/areas adjacent to the city.





Map 1-1: Smyrna Connects Study Area





Overview of Report

Transit functions best in an environment when it responds appropriately to the regulatory, geographic, environmental, land use, developmental, political, and socioeconomic factors present within its operating service area. As all of these factors impact the provision of transit, it is critical to understand them when planning for new or enhanced services.

The focus of this report is on assessing the demographic, socioeconomic, and regulatory contexts of the service area within Smyrna and its surrounding environs both today and in the future, as data allow.

This report is organized into four major sections, including this Introduction.

Section 2 presents the **Existing Services Evaluation** for the CobbLinc system. It documents the assessment of fixed-route services using National Transit Database (NTD) data and other data sources from Cobb County and the City of Smyrna and includes a summary of paratransit services provided in the study area.

Section 3 summarizes the **Demographics and Travel Patterns Analysis** for the study area. This includes a population profile and demographic and socioeconomic characteristics for Smyrna. Travel behavior also is reviewed, including commuting trends, modes of commuting, regional commute flows, and journey-to-work characteristics.

Section 4 provides a **Plans Review** of current planning and policy environment within the city and county to better understand transit needs. It assesses local plans and documents, includes an overview of what each plan or policy aims to address, and highlights key implications for transit within Smyrna.

Section 2: Existing Transit Services Analysis

This section includes a compilation of available information on existing transit services in Smyrna and its immediate region, concentrating on those operating within and connecting to Smyrna and Cobb County. It includes an analysis of CobbLinc, the public transportation service and facilities to which Smyrna residents mostly have access, and information on other current transportation services in Smyrna.

Overview of Transit in Smyrna

CobbLinc

Fixed-route service has been provided in Cobb County since 1989 and has been expanded multiple times, currently serving the majority of the county (see Map 2-1). With the CobbLinc service revisions and expansions implemented in September 2019, all local CobbLinc routes now operate seven days per week, and express routes operate Monday to Friday. Route frequencies vary based on the route and day of service but typically are 30 minutes during the day and 60 minutes during late/evening hours.

Current CobbLinc services in Smyrna include five local routes (Rapid10, 10, 15, 20, and 25), and the Green and Blue Circulators. Weekday bus operation in Smyrna begins at 5:00 AM with routes 10, 15, 20, and 25 and the Rapid10 and ends with the Green Circulator at 2:30 AM.





The Blue and Green circulators also serve Smyrna but begin operation at 12:00 PM. CobbLinc currently operates it services with a total of 705 bus stops; within the Smyrna city limits are 75 bus stops, just over 10 percent of its total bus stops. CobbLinc also operates Georgia Regional Transportation Authority (GRTA) routes (Xpress) 476 and 480 that connect Cobb County to the region. Xpress routes do not have any stops within or adjacent to the Smyrna City limits.

Figure 2-1 is a snapshot of the services provided by CobbLinc and some performance details. Map 2-1 shows the existing fixed-route service provided in Cobb County, and Map 2-2 shows the existing fixed-route service provided in Smyrna.



Figure 2-1: CobbLinc Service Summary

MARTA

Metro Atlanta Rapid Transit Authority (MARTA) fixed-route service is the largest fixed-route service in the region, providing service since 1971. Currently, MARTA operates 110 bus routes, 4 rail lines, and 1 streetcar route. It connects with Cobb County with two routes, 12 and 201, one serving the Cumberland area adjacent to Smyrna. Route 12 serves the Midtown Station in Atlanta, connecting to the Cumberland Transfer Center in Cobb County, just outside the Smyrna city limits.

Route 12 operates seven days per week, with a service span of 5:10–12:46 AM on weekdays and 5:37– 12:46 AM on weekends at 30-minute intervals. Route 201, which does not operate in or near Smyrna, serves the Hamilton Holmes Station, connecting to Six Flags in Cobb County and operating seven days per week from 8:00–2:00 AM every 30 minutes.

GRTA Xpress

GRTA, a transit agency operated by the State Road and Tollway Authority (SRTA), also provides transit service known as Xpress, connecting Cobb County to the Atlanta region. The park-and-ride-based commuter express service currently does not have any stops in Smyrna.



Map 2-1: Existing Transit Services, Cobb County



Data Source: CobbLinc



Map 2-2: Existing Transit Services, Smyrna



Data Source: CobbLinc



GRTA operates its services in 12 counties in Georgia, including Cobb County, surrounding the metro-Atlanta area with 27 routes and 27 park-and-ride lots scattered throughout the region. As previously noted, CobbLinc operates GRTA Xpress routes 476 and 480, and no Xpress routes serve Smyrna or the Cumberland Transfer Center at this time, but the service operates on I-75 adjacent to Smyrna. The closest connection to Smyrna is in Kennesaw at the Town Center.

Transit Service Characteristics and Trends

A review of CobbLinc's current fixed-route services, ridership trends, and transit providers was conducted to learn more about the only public transit provider in Smyrna, as it directly helps to identify any transit needs in the city.

Table 2-1 provides operating details of CobbLinc's 16 routes and 3 flex service zones as well as the routes that serve Smyrna. As shown, the frequencies vary by the route and with service span.

Service Characteristics

Operating characteristics were examined to understand the level of service currently available for the study area. As shown in Figure 2-2, CobbLinc service spans 4:30–2:30 AM, starting with Route 30 and ending with the Green Circulator. Before peak morning service begins at 6:00 AM, eight routes start service between 4:30 and 5:45 AM. During peak morning hours (6:00 AM–9:00 AM), all routes are operating with exception to the Blue and Green circulators.

Two local routes and two express routes operate with headways (time between transit vehicles) of 15 minutes or better, and only one (Rapid10) intersects within the Smyrna city limits. The remaining routes that serve Smyrna operate on 30–60 minute headways during peak hours, leaving residents with limited options and no higher-frequency services to connect to job/economic opportunities.

During midday on a weekday, the majority of routes maintain their headways to 30 minutes or more, with the exception of the Rapid10 and Route 30. Rapid10 serves riders with 15-minute headways from 3:28–7:47 PM and Route 30 operates at 15-minute intervals from 1:00–5:30 PM in preparation for peak afternoon service. During this time period, the Blue and Green circulators start service at 12:00 PM with 30-minute headways. The Blue and Green circulators supply service within Smyrna to the SunTrust Park, many business parks and centers, hotels, and restaurants adjacent to the city limits in the Windy Hill corridor. During this time period, all routes that serve Smyrna, except for the Rapid10, operate on 30–60 minute headways.

Table 2-1: CobbLinc Service Characteristics						
Route	Key Locations/Corridors Served	Weekday Service Frequency	Weekday Span	Weekend Service Frequency	Weekend Span	Operates in Smyrna?
10	Marietta Transfer Center, Marietta Park and Ride Lot, KSU- Marietta Campus, Dobbins Air Reserve Base, Cumberland Mall, Cumberland Transfer Center, Atlantic Station, MARTA Arts Center Station	30 min	5:00-12:42 AM	30 min (day); 60 min (night)	6:00–12:45 ам Saturday; 7:00 ам– 11:45 рм Sunday	
15	Marietta Transfer Center, Marietta Park-and-Ride Lot, Marietta Square, County Services Parkway, The Battery, Cumberland Mall, Cumberland Transfer Center	30 min (day); 60 min (nights)	5:00 ам-10:52 рм	60 min	7:00 ам-8:52 рм Saturday; 7:00 ам– 7:52 рм Sunday	
20	Marietta Transfer Center, Marietta Park-and-Ride Lot, South Cobb Drive, Cumberland Mall, Cumberland Transfer Center	30 min (day); 60 min (nights)	5:00-12:41 ам	60 min	7:00 ам–10:50 рм Saturday; 7:00 ам– 8:50 рм Sunday	
25	Cumberland Mall, Cumberland Transfer Center, Hurt Road, Cobb Hospital, MARTA H.E. Holmes Station	60 min	5:00-12:50 AM	60 min	7:00–12:50 AM Saturday; 7:00 AM– 8:50 РМ Sunday	
30	Marietta Transfer Center, Marietta Park-and-Ride Lot, Austell Road, WellStar Cobb Hospital, East-West Connector corridor, Floyd Road Park-and-Ride Lot, Mableton Park-and- Ride Lot, Six Flags, MARTA H.E. Holmes Station	15 min (midday); 30 min (peak/off- peak)	4:30-12:50 AM	30 min (day); 60 min (night)	5:30–12:45 ам Saturday; 6:00 ам– 8:45 рм Sunday	
40	Marietta Transfer Center, Marietta Park-and-Ride Lot, Marietta Square, Kennestone Hospital, Town Center Mall, Busbee Park and Ride Lot, KSU-Kennesaw Campus	60 min	6:00 am-11:46 pm	60 min	6:00 ам–9:46 рм Saturday; 7:00 ам– 7:46 рм Sunday	
45	Marietta Transfer Center, Marietta Park-and-Ride Lot, Cobb Place, Barrett Parkway, Town Center Mall, Busbee Park-and- Ride Lot, KSU-Kennesaw Campus	60 min	6:30 am-10:16 pm	60 min	7:30 ам–10:16 рм Saturday; 8:30 ам– 8:16 рм Sunday	
50	Marietta Transfer Center, Marietta Park-and-Ride Lot, Cobb Parkway/US-41, Powers Ferry Road, Wildwood, Cobb Galleria, Cumberland Mall, Cumberland Transfer Center	30 min (day); 60 min (nights)	6:00-12:43 ам	60 min	7:00 ам–10:46 Рм Saturday; 7:00 ам– 7:46 Рм Sundav	

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Table 2-1: CobbLinc Service Characteristics (cont'd)						
Route	Key Locations/Corridors Served	Weekday Service Frequency	Weekday Span	Weekend Service Frequency	Weekend Span	Operates in Smyrna?
Rapid 10	KSU-Kennesaw Campus, Busbee Park-and-Ride Lot, Marietta Transfer Center, Marietta Park-and-Ride Lot, KSU-Marietta Campus, Cumberland Mall, Cumberland Transfer Center, Atlantic Station, MARTA Arts Center Station	15 min (peak*); 30 min (off peak)	5:45 ам-7:47 рм	30 min Sat; 60 min Sun	6:23 ам–7:55 рм Sat; 7:08 ам–7:17 рм Sun	
100	Busbee Park and Ride Lot, Town Center Park-and-Ride Lot, MARTA Civic Center Station, MARTA Five Points Station, Downtown Atlanta	15 min	5:25 ам –8:45 ам/ 3:15 ам –7:32 рм	-	-	
101	Marietta Transfer Center, Marietta Park-and-Ride Lot, MARTA Civic Center Station, MARTA Five Points Station, Downtown Atlanta	25 min	6:10 ам –8:52 ам/ 3:53 рм –7:33 рм	-	-	
102	Acworth Park and Ride Lot, MARTA Arts Center Station	30 min	5:30 am -8:45 am/ 3:00 pm -6:50 pm	-	-	
Blue Circulator	Akers Mill Square, Cumberland Mall, Cobb Galleria Centre, SunTrust Park	30 min	12:00 pm-2:20 am	60 min Sat; 60 min Sun	12:00 рм–2:20 ам Sat; 11:30 ам–6:50 рм Sun	
Green Circulator	SunTrust Park, Parkwood Circle, Windy Hill area	30 min	12:00 pm-2:30 am	60 min Sat; 60 min Sun	12:00 рм–2:30 ам Sat; 11:30 ам–7:00 рм Sun	
Flex Zone 1	Collection Point: Publix Super Market; service between Macedonia Road, Powder Springs Road, and Florence Road	-	7:00 ам-7:00 рм	-	-	
Flex Zone 2	Collection Point: Horseshoe Bend Plaza; service between Ernest Barrett Parkway and East-West Connector	-	7:00 ам-7:00 рм	-	-	
Flex Zone 3	Collection Point: Downtown Austell; service between Austell Road, Humphries Hill Road, and I-278	-	7:00 ам-7:00 рм	-	-	

*6:00–9:00 AM and 3:30–6:30 PM Source: CobbLinc SM



During peak afternoon service, routes begin to operate at higher frequencies, mirroring morning peak characteristics. Route 30 resumes 30-minute frequency after 5:30 PM and express routes operate until approximately 7:30 PM with headways of 15–30 minutes. In the evening, none of the local routes operate with frequencies better than 30 minutes and express routes do not offer any service after 7:30 PM. The circulators offer the latest service, and most routes terminate service around 12:45–1:00 AM. Routes 15 and 20, operating in Smyrna, operate at 30-minute headways until 6:00 PM, and Route 10 operates at 30-minute frequency until 10:00 PM. Route 25 operates on a 60-minute headway until it terminates at 1:00 AM, and the Rapid10 terminates high-frequency service at 8:00 PM and operates on a 60-minute headway until 9:00 PM. Although the majority of routes that serve Smyrna operate later, the frequency is low.

Figure 2-3 illustrates the spans for operation on Saturdays. Express routes do not operate on the weekends, and all frequencies are 30 minutes or greater on local routes. Route 30 begins service at 5:30 AM, whereas most routes begin at 7:00 AM with exception to routes 10, 40, and the Rapid10, which begin operating at 6:00 AM. Similarly to weekday service, the circulators do not begin until 12:00 PM, but with 60-minute headways.

The only routes serving Smyrna with 30-minute headways are Route 10 and the Rapid10. Route 10 begins service at 6:00 AM and terminates operation at 1:00 AM, and Rapid10 begins service 6:00 AM ends at 8:00 PM. Routes 15, 20, 25, and the Blue and Green circulators have 60-minute headways throughout their Saturday service span, with Route 15 terminating at 8:00 PM, Route 20 operating until 11:00 PM, Route 25 service ending at 1:00 AM, and the Blue and Green circulators running until 2:20 AM and 2:30 AM, respectively.

Service on Sunday is limited to all local routes and circulators at 60-minute headways. Express routes do not operate on Saturdays or Sundays (Figure 2-3). Route 30 begins service at 6:00 AM and all other routes begin operation at 7:00 AM, with the exception of Route 45, which begins service at 8:00 AM and both circulators begin service at 11:30 AM. Although all service is at lower frequencies, routes that serve Smyrna terminate service as early as 7:00 PM on the Rapid10 and as late as midnight on Route 10. Route 15 terminates service at 8:00 PM, and routes 20 and 25 operate until 9:00 PM. Overall, the majority of the local routes terminate by 9:00 PM.

Map 2-3 illustrates the frequency of the CobbLinc network during its most used time periods (peak hours). The map shows the headways for each CobbLinc route during peak service on weekdays throughout the region. As shown, only four routes provide higher-frequency service (15-minute headways or better) during peak times during the weekdays; most routes operate at headways of 30 minutes. The only route providing high-frequency service in Smyrna is the Rapid 10.

As shown in Map 2-4, five CobbLinc routes serve Smyrna, with only one route, the Rapid10, operating at high frequency during weekday peak service times. The rest of the routes operate on 30-minute intervals, except for Route 25 operating at 60-minute headways during peak service times on weekdays.

Figure 2-2: Weekday Span of Service, CobbLinc



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Figure 2-3: Saturday Span of Service, CobbLinc



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Figure 2-4: Sunday Span of Service, CobbLinc



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Map 2-3: Peak Service Frequency, Cobb County



Data Source: CobbLinc



Map 2-4: Peak Service Frequency, Smyrna



Data Source: CobbLinc



Annual Ridership Trend

CobbLinc ridership trend from 2008 to 2018 is provided in Figure 2-5. Based on the data shown, the ridership for the system fluctuated from 2008 to 2010, with a steady decline since 2011, somewhat consistent with the regional and national trend of declining transit ridership. Overall, passenger trips have decreased by 49 percent in the 10-year period. However, CobbLinc recently conducted an operations efficiency analysis and has since eliminated some unproductive routes and reconfigured the network to help attract more riders and grow ridership again.



Figure 2-5: CobbLinc Ridership, 2008–2018

Source: CobbLinc

CobbLinc Paratransit Service

In addition to fixed-route bus, paratransit services for persons qualifying under the Americans with Disabilities Act (ADA) are provided in Cobb County, including Smyrna. Paratransit service is a door-todoor service that complements existing fixed-route service for residents who live within ³/₄-mile on either side of the fixed-route system but are unable to access it due to an eligible disability. CobbLinc provides this service and schedules appointments by phone for ADA service Monday–Sunday 8:00 AM– 5:00 PM, with scheduled trips limited to within a ³/₄-mile buffer of fixed-route service and limited areas of Fulton County.

As shown in Map 2-5, the service area for CobbLinc's paratransit service includes almost the entire city of Smyrna. In addition to covering all areas that are ³/₄-mile from fixed-route service in Cobb County, the service area includes the area ³/₄-mile around the Hamilton Holmes Station and MARTA Arts Center Station in Fulton County.



Map 2-5: CobbLinc Paratransit Service Area



Source: CobbLinc

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Cobb County Department of Transportation, in partnership with Cobb County Senior Services, provides a voucher program for those who meet ADA service eligibility requirements but are outside the ³/₄-mile buffer and may qualify for the CobbLinc Transportation Voucher Program (VTP). This program coordinates with



private transportation services for services at a reduced cost for clients. Once enrolled, older adults and persons with disabilities who reside in Cobb County and live outside the paratransit service area can choose a service provider from a pre-approved list of transportation providers and contact them directly to make travel arrangements. Participants use the vouchers to pay the provider fee, and the service provider is reimbursed by Cobb County.

Transit Facilities in and Around Smyrna

Over time, CobbLinc has established a number of capital facilities to accommodate the transit services it provides in Smyrna and the adjacent Cumberland area, as summarized below.

Major Transfer Center for Smyrna

One of the two major transfer centers for CobbLinc in Cobb County, the Cumberland Transfer Center next to Cumberland Mall, is the main and only transfer hub for Smyrna and is located just outside the City limits. The transfer center currently has a series of large bus shelters with bus pull-outs and is currently served by CobbLinc Routes 10, 15, 20, 25, 50, Rapid10, the Blue Circulator, and MARTA's Route 12.



Figure 2-6: Cumberland Transfer Center



Bus Stop Infrastructure

Bus stops play an important role with any transit system, providing the rider with a safe and designated spot to catch a bus and a way for the transit agency to promote its services with visibility. Enhanced bus stops, such as those with a shelter or bench, provide a place to sit, protection from weather, and a feeling of safety and security. Most CobbLinc stops also provide bus route schedule information, which is especially important for people who are unfamiliar with the service.

There are 75 bus stops in Smyrna, over 10 percent of the total for the whole CobbLinc service. As the scale and extent of the capital facilities currently included in the city are important to understand for this study, GIS data from CobbLinc was analyzed to identify the facilities currently located within the City limits.

Table 2-2 shows the type of bus stops that serve the CobbLinc routes available and those that contain certain infrastructure/amenities. As shown, 45 percent of the stops currently have bus shelters, indicating that nearly half of the stops in the city may have good ridership activity, as transit agencies generally add shelters only at high-activity bus stops. Access to bus stops using sidewalks also is reasonable at 89 percent.

Bus Stop Infrastructure	% of Stops in Smyrna
Bus shelter	45%
Trash receptacle	63%
Bench	51%
Concrete pad	52%
Sidewalk access	89%
Streetlight	57%

Table 2-2: Bus Stop Amenities for Bus Stops in Smyrna

Source: CobbLinc

Map 2-6 shows current bus stops and transfer facilities in Smyrna. Bus stops with shelters are identified to show the geographic distribution and location of such facilities.

Transit Service Area (Walk Access to Transit)

The service area for transit is generally considered as the area within ¼-mile of a bus route for local bus service. Map 2-7 shows the ¼-mile walk access areas for CobbLinc routes serving Smyrna. Currently, approximately 35 percent (20,000) of the city's 56,000 population live within this ¼-mile walk access area.



Map 2-6: Transit Facilities, Smyrna



Data Source: CobbLinc



Map 2-7: Transit Service Area (Walk Access), Smyrna



Data Source: CobbLinc



Regional Coordination

Regional coordination between Smyrna and the region's transit agencies is a necessary element for a city that is better connected within and to its surrounding areas. Smyrna's existing CobbLinc service and proximity to MARTA and Xpress routes, along with the city's geographic location within minutes from Atlanta and next to major interstates, lends itself to many opportunities for regional coordination efforts.



As noted, only one MARTA route connects to Smyrna and, although two Xpress routes run adjacent to Smyrna, the city does not currently receive Xpress service. These GRTA routes (476 and 480) run on I-75 from Atlanta to Acworth, with the closest connection to Smyrna in Kennesaw at the Town Center.

Regional coordination may be key to assuring meaningful transit in the City of Smyrna. Cobb County, which recently initiated an update to its countywide transit plan, and the ATL, which will soon update ARC's regional transit plan, provide valuable opportunities to coordinate regionally.

In addition, the I-285 Top End Study is being conducted by the GDOT to improve mobility on I-285. This project includes adding new, optional express lanes to a section of the interstate corridor. The study area runs from Paces Ferry Road to Henderson Road in Cobb, Fulton, and DeKalb counties, providing an opportunity to connect Smyrna to any potential transit services on these new express lanes.

Each of these regional initiatives provides an opportunity for the City of Smyrna to provide input and have influence and create the opportunity to examine both local and regional transit needs and opportunities.

Section 3: Demographics and Travel Patterns Analysis

An understanding of recent and forecasted demographic trends and travel patterns in Smyrna is an important first step in identifying transit needs and developing potential projects to address those needs.

Study Area Description

The study area for the demographic and travel pattern analysis encompasses Smyrna and extends slightly past its borders due to limitations of the Census and travel demand model data sets. The specific geographic areas used for the analysis of demographics and travel patterns are further detailed in their respective sections.

Demographic Characteristics and Trends

An overview of population characteristics in the study area is important to gain an understanding of the potential market for transit services. For the demographic characteristics and trends analysis, data from the U.S. Census Bureau were used. Every 10 years, a decennial census is conducted that counts 100 percent of the U.S. population. For this analysis, the most recent decennial census, conducted in 2010, was used as a baseline to establish trends in the study area and compare them to the Atlanta region. During the interim years, the American Community Survey (ACS) samples a portion of the population to estimate socioeconomic characteristics. For this analysis, ACS five-year data were used, because they generally have the lowest number of sampling errors. The most recent ACS five-year data set available at this time is for 2017.

For this analysis, decennial census and ACS data at the block group level, the smallest area of geography available, were used. In specific cases, data were available only at the tract level this is noted as appropriate.





Existing Population and Households

An overview of the city, study area, and regional population and household trends is important to understand the potential market for transit services. According to decennial census and ACS, population in the study area increased by 8.6 percent between 2010 and 2017. City population also increased at the same time by more than 10 percent, slightly more than the study area. In comparison, the Atlanta-Sandy Springs-Marietta Metropolitan Statistical Area (Atlanta MSA) also grew, but at a slightly slower rate. This trend of population growth at the study area and regional levels indicates that the potential market for transit riders is increasing. Population density, which supports transit, is also increasing. Table 3-1 provides population figures for Smyrna, the study area and the Atlanta MSA.

Table 3-1: City, Study Area, and Regional Change in Population, 2010–2017

Geography	2010	2017	% Change
Smyrna	50,242	55,467	10.4%
Study Area	77,468	84,158	8.6%
Atlanta MSA	5,268,860	5,700,990	8.2%

Source: U.S. Census Bureau, 2010 & 2019

Higher population densities correlate with increased use of transit services. Using population data at the census block group level for 2017, study area population densities were calculated and mapped, as shown in Map 3-1.

In 2017, the population density of the study area was 4.7 persons per acre, a slight increase in population density from 4.3 persons per acre in 2010. The portions of the study area with the highest densities are in the northern part, with lower densities in the central and southern parts. Specifically, high population densities of 8 or more persons per acre are located:

- NW of intersection of SR-280 (South Cobb Drive) and Church Road
- SW of Village Parkway and Windy Hill Road
- NW of Spring Road and Cumberland Boulevard
- E of Atlanta Road and Campbell Road



Map 3-1: Study Area Population Density, 2017



Data Source: 2017 ACS 5-Year Estimates

Consistent with the population trend, households in Smyrna and the study area grew at a faster rate than the Atlanta MSA between 2010 and 2017, with both adding households during this period. Similar to population density, household density in the city and study area increased from 2010 to 2017. The Atlanta MSA also added households from 2010 to 2017, but at a slower rate than the study area. Like the population trend, household growth at the city, study area, and regional levels indicates an increasing market for potential transit riders. Table 3-2: City, Study Area, and Regional Change in Households, 2010–2017 shows household figures for the study area, Smyrna, and Atlanta MSA.

Geography	2010	2017	Percent Change
Smyrna	22,914	24,253	5.8%
Study Area	33,756	35,746	5.9%
Atlanta MSA	1,937,225	2,029,045	4.7%

Table 3-2: City, Study Area	, and Regional Change	in Households, 2010-2017
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Source: U.S. Census Bureau, 2010 & 2019

The number of occupants per household is an indicator of transit market potential, as larger households may have more travelers than available vehicles. Recent trends indicate a decline in the number of 1-person and 6-person households in Smyrna between 2010 and 2017. In 2017, the city had 649 fewer 1-person households and 24 fewer 6-person households than in 2010. However, this was offset by growth in 2–5-person households, with the study area adding 1,920 households in this category. Households in the city with 7 or more people increased by 92 between 2010 and 2017. Figure 3-1 shows the percentage change of households in the city from 2010 to 2017.



Figure 3-1: Smyrna Change in Households by Size, 2010-2017

Source: U.S. Census Bureau, 2010 & 2019

One- and two-person households made up most of the city in 2017. However, households with three or more persons accounted for 31 percent of the study area. Table 3-3 provides a detailed breakdown of households by size.



Household Size	Households	Percent of Total
1 Person	8,027	33.1%
2 Persons	8,755	36.1%
3 Persons	3,503	14.4%
4 Persons	2,722	11.2%
5 Persons	816	3.4%
6 Persons	238	1.0%
7 Persons or More	192	0.8%

Table 3-3: Smyrna Household Size Distribution, 2017

Source: U.S. Census Bureau, 2019

As discussed, household density is an indicator of transit propensity and is useful for identifying the types of transit service that can be supported in an area. The *Transit Capacity and Quality of Service Manual* specifies general household density thresholds that are supportive of various service frequencies and types; however, this is a broad indicator, and other demographic factors such as age, vehicle availability, and income are also important. In keeping with the suburban character of the study area, household densities are generally low, with an average of two households per acre.

Study area household densities are shown in Map 3-2 and roughly correspond to population density, with the highest household densities between Atlanta Road and US-41 (Cobb Parkway). Areas with household densities over four units per acre include:

- Both sides of Village Parkway between Spring Road and Windy Hill Road
- N of Atlanta Road from Jane Lyle Road to Spring Road



Map 3-2: Study Area Household Density, 2017



Data Source: 2017 ACS 5-Year Estimates


Age Distribution

Persons under age 18 and age 65 and over tend to drive less than the overall population, albeit for different reasons. Younger persons under age 16 are not licensed to drive, and those between ages 16 and 18 are likely to have less access to a vehicle than other age cohorts. Persons age 65 and over tend to drive less as they exit the work force and potentially face age-related health issues.

Smyrna has a lower share of residents under age 18 compared to the Atlanta MSA, with 23 percent of the study area population under age 18 compared to 27 percent of the region. In contrast, persons age 65 and over make up 9 percent of the city and regional population. Figure 3-2 compares the Smyrna and Atlanta MSA age cohorts.





Smyrna is currently slightly younger than the region, with a median age of 35.3, as compared to 36.4 for the region. The city is anticipated to remain younger than the region, as trends from 2010 to 2017 indicate that the population under age 18 years is increasing at a faster rate in the city. Additionally, during the same time period, persons in the age 65 and over group increased 35 percent in the Atlanta MSA, compared to a 33 percent increase in the city. Table 3-4 presents trends in the age-based traditional transit markets in the city, study area, and Atlanta MSA. Traditional transit markets include persons under age 18 or age 65 and over.

	Under 18			65 and Over		
Area	2010	2017	Percent Change	2010	2017	Percent Change
City of Smyrna	10,537	12,491	18.5%	3,689	4,888	32.5%
Study Area	17,857	19,442	8.9%	6,218	7,721	24.2%
Atlanta MSA	1,396,352	1,436,505	2.9%	471,753	635,508	34.7%

Table 3-4: Persons in Traditional Transit Markets by Age Group, 2010-2017

Source: U.S. Census Bureau, 2010 & 2019

Although the city skews slightly younger, it is growing older as current residents age and new residents over age 40 move in. Recent trends based on census data from 2010 and 2017 show that the fastest-growing age groups in percentage terms in the city are as follows:

Source: U.S. Census Bureau, 2019



- Ages 65 and over grew by 33 percent
- Ages 50–64 grew by 29 percent
- Ages 40–49 grew by 21 percent

Only one age group in Smyrna declined between 2010 and 2017—the population ages 18–29 decreased 18 percent. Figure 3-5 provides more detail about trends in Smyrna age groups.



Figure 3-3: City of Smyrna Change in Population by Age Group, 2010–2017

As shown in Table 3-5, approximately 28 percent of the study area population, or 14,500 persons, are in age groups that are considered traditional transit markets. These age groups include under 18 and age 65 and over.

Age Group	Persons	Percent of Total
Under 18	12,491	23.8%
18-29	8,812	16.8%
30–39	11,522	21.9%
40–49	9,000	17.1%
50-64	8,754	16.6%
65 and Over	2,010	3.8%

Table 3-5: Smyrna Population by Age Group, 2017

Source: U.S. Census Bureau, 2019

Map 3-3 shows the population density of persons under age 18. Within the study area, higher densities of persons under age 18 include areas:

- W of intersection of US-41 (Cobb Parkway) and Spring Road to Carolyn Drive
- NW of Church Road and SR-280 (South Cobb Drive)

Map 3-4 shows the population density of persons age 65 and older. Higher densities of persons age 65 and older in the study area are located:

- Along both Sides of Windy Hill Road from Olive Springs Road to Benson Poole Road
- NW of Spring Road and Cumberland Boulevard
- Along Atlanta Road from Ridge Road to Spring Road

Source: U.S. Census Bureau, 2010 & 2019



Map 3-3: Study Area under Age 18 Population Density, 2017



Data Source: 2017 ACS 5-Year Estimates



Map 3-4: Study Area Age 65 and Over Population Density, 2017



Data Source: 2017 ACS 5-Year Estimates



Educational Attainment

Educational attainment in Smyrna for the population age 25 and older is higher than the Atlanta MSA as a whole. In the city, 53 percent of residents over age 25 have achieved a bachelor's degree or higher, compared to 37 percent of the Atlanta MSA. In contrast, eight percent of city residents did not obtain a high school diploma, which is slightly less than the 11 percent of the Atlanta MSA population that did not graduate from high school. Figure 3-4 graphically compares education levels in the city and the region.



Figure 3-4: Educational Attainment for Population Age 25 and Over, 2017

Historically, lower levels of education indicated a higher propensity for transit. More recently, highlyeducated Millennials have expressed a preference for transit and tend to locate in more denselypopulated areas that are well-served by public transit. As shown in Table 3-6: Smyrna Educational Attainment for Population Age 25 and Over, 2017, a significant portion of the Smyrna population (approximately 23,200, 59%), of city residents have a college degree.

Table 3-6: Smyrna	Educational Attain	ment for Populat	ion Age 25 and	Over, 2017
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Educational Attainment	Persons	Percent of Total
Less than high school	3,298	8%
High school graduate	5,628	14%
Some college, no degree	7,094	18%
Associate's degree	2,533	6%
Bachelor's degree	12,142	31%
Graduate or professional degree	8,475	22%

Source: U.S. Census Bureau, 2019

Source: U.S. Census Bureau, 2019



Population with Disabilities

Offering or improving transit service to groups that need it is important to the identification of viable transit alternatives because of higher rates of dependency on mobility service and alternative transportation modes within this demographic. Persons with disabilities tend to use transit at a higher rate than the population in general. Some persons with disabilities may be unable to drive themselves and depend on transit services to meet their mobility needs. Factors that may prevent persons with disabilities from using transit services include longer distances to access stations, lower service frequency, high number of transfers, limited hours of service, and barriers in the pedestrian environment. These items should be considered when identifying potential transit alternatives.

In 2017, more than 9 percent of the study area population had a disability, compared to almost 11 percent of the Atlanta MSA population. A total of 8,833 persons with disabilities resided in the study area in 2017.

Data for persons with disabilities is available only at the census tract level. Map 3-5 shows the percentage of population with disabilities for each census tract in the study area. High concentrations of persons with disabilities in the study area are located:

- Along both sides of SR-280 (South Cobb Drive) from Concord Road to Pat Mell Road
- N of Spring Road from Atlanta Road to US-41 (Cobb Parkway)

Zero Vehicle Households

Households without access to an automobile are a traditional transit market that benefits significantly from new or improved transit service; persons in these households are far more likely to use transit than those with access to automobiles. The percentage of zero vehicle households in Smyrna is lower than in the Atlanta MSA. In the city, approximately four percent of households lack access to a vehicle; six percent of households in the Atlanta MSA have no automobile available. Table 3-7 shows the number of households in the city, study area, and Atlanta MSA that lack access to a vehicle. Zero vehicle households increased in both the study area and the Atlanta MSA from 2010 to 2017; however, the rate of increase in Smyrna and the study area was significantly higher.

Geography	2010	2017	Percent Change
City of Smyrna	735	896	21.9%
Study Area	1,140	1,361	19.4%
Atlanta MSA	115,190	121,997	5.9%

Table 3-7: Zero Vehicle Households, 2010-2017

Source: U.S. Census Bureau, 2010 & 2019

Zero vehicle households are not distributed evenly throughout the study area. Households without vehicles are concentrated along the Spring Road corridor north of the study area. In contrast, the percentage of zero vehicle households in the southern half of the study area south of Spring Road is generally low. Map 3-6 illustrates the percentage of zero vehicle households by census block group within the study area.



Map 3-5: Population with Disabilities, 2017



Data Source: 2017 ACS 5-Year Estimates



Map 3-6: Zero Vehicle Households, 2017



Data Source: 2017 ACS 5-Year Estimates



Household Income and Poverty

Income characteristics and the location of low-income households in the study area are important to define transit markets and understand where populations are located that would most likely to benefit from new or increased transit service. As with zero vehicle households, low-income households provide a good indicator of propensity to use transit; persons with annual incomes below \$25,000 are the most likely to ride transit.

Median household income in Smyrna is higher than the Atlanta MSA. Additionally, between 2009 and 2016 (no 2010 or 2017 data available), the median household income in Smyrna increased 29 percent, a much higher rate than the increase of 7 percent for the Atlanta MSA. Table 3-8 compares median household income in Smyrna and the Atlanta MSA.

Geography	2009	2016	Percent Change		
City of Smyrna	\$54,603	\$70,547	29.2%		
Atlanta MSA	\$57,550	\$61,733	7.3%		
Source: U.S. Census Bureau	ource: ILS Census Bureau 2010 & 2019				

Table 3-8: Mediar	n Household	Income,	2009-2016
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Whereas median household income is important for a broad understanding of conditions, a more detailed picture of potential transit markets emerges by comparing households by income brackets. Income distribution in Smyrna changed between 2009 and 2016, in line with the increase in median income. At the lower end of the income range, city households making less than \$25,000 annually declined by 466 (11%). The largest decline of 1,400 households (23%) was in the \$25,000-\$49,999 income bracket. Households making \$100,000-\$149,999 had the largest increase in total numbers, increasing 1,256 households (38%). In percentage terms, households making \$150,000 or more increased the most, by 41 percent (1,077 households). Figure 3-5 illustrates the change in household income.



Figure 3-5: Smyrna Change in Household Income, 2009–2016

Source: U.S. Census Bureau, 2010 & 2019



Almost two-thirds of households in Smyrna earn more than \$50,000 annually; only 35 percent earn less than that. Table 3-9 presents the number of households in the city by income bracket and their share of the total.

Annual Household Income	Households	Percent of Total
Less than \$25,000	3,675	15%
\$25,0000-\$49,999	4,765	20%
\$50,000-\$74,999	4,515	19%
\$75,000-more	3,048	47%

Table 3-9: Smyrna Household Income Distribution, 2016

Source: U.S. Census Bureau, 2019

Trends in poverty levels are important to identify potential transit markets, as persons in poverty have a high need for transit service. For this report, persons in poverty are defined as those living in a household with a median income below the U.S. Department of Health and Human Services poverty line. The poverty line varies based on household size, from \$11,880 for a household of 1 to \$40,809 for an 8-person household in 2016. The Census tabulates the number of persons in poverty at the MSA, place, and block group levels.

Persons in poverty in Smyrna increased 2 percent between 2009 and 2016, in contrast to the Atlanta MSA, where they increased 23 percent. As a percentage of city population, persons in poverty declined from about 13 percent in 2009 to approximately 12 percent in 2016. In contrast, persons in poverty increased from roughly 12 percent of the Atlanta MSA population in 2009 to almost 14 percent in 2016. Table 3-10 shows the total number of persons in poverty in the city, study area, and the Atlanta MSA.

Geography	2009	2016	Percent Change
City of Smyrna	6,414	6,542	2.0%
Study Area	11,164	9,849	-11.8%
Atlanta MSA	635,003	780,843	23.0%
<u> </u>			

Table 3-10: Persons in Poverty, 2009–2016

Source: U.S. Census Bureau, 2010 & 2019

The distribution of persons in poverty in the study area roughly corresponds to zero vehicle households. The highest concentrations of persons in poverty are concentrated north of Spring Road. In contrast, the percentage of persons in poverty in the southern half of the study area is generally low. Map 3-7 shows the percentage of persons in poverty in the study area at the census block group level.



Map 3-7: Population in Poverty, 2017



Data Source: 2017 ACS 5-Year Estimates



Minority Population

An understanding of minority populations in terms of race and ethnicity is critical to transit planning efforts. Environmental justice (EJ) considerations are important to federally-funded transportation improvements. Disproportionately high negative effects of transportation projects on minority populations must be avoided, minimized or mitigated. Conversely, benefits to minority populations from improvements cannot be prevented, reduced, or significantly delayed. Identifying locations with a high concentration of minority populations is key to targeting outreach to those communities and identifying potential transit markets.

Smyrna is similar the Atlanta MSA in terms of racial and ethnic composition. Caucasians made up approximately half of the study area in 2017, accounting for 50 percent of the population. In comparison, they made up 53 percent of the Atlanta MSA population. African Americans are the second largest group in the city, accounting for 31 percent of the population, similar to their share of the Atlanta MSA, at 33 percent. Hispanics comprise 14 percent of the city and 11 percent of the Atlanta MSA populations. Figure 3-6: Racial and Ethnic Composition, 2017 graphically compares racial and ethnic and racial compositions of Smyrna and the Atlanta MSA.



Figure 3-6: Racial and Ethnic Composition, 2017



Between 2010 and 2017, the racial and ethnic composition of Smyrna changed; the African American population increased 16 percent (2,396 persons) and Caucasians increased only 3 percent (778 persons). Persons identifying as multi-racial also increased substantially, adding 2,148 persons. With an increase of 1,094 persons, the Asian population in the city grew more than Caucasians but less than African Americans or multi-racial persons. The Hispanic population in Smyrna increased by 1,340



(20%) from 2010 to 2017, and the Other¹ group decreased at by 3 percent (117 persons). Figure 3-7 illustrates the change in the population groups. Table 3-11 shows the breakdown by race and ethnicity in the study area.



Figure 3-7: Smyrna Area Change in Race and Ethnicity, 2010–2017

Source: U.S. Census Bureau, 2010 & 2019

Race/Ethnicity	Persons	Percent of Total
Caucasian	28,649	50%
African American	17,574	31%
Asian	4,024	7%
Other	3,507	6%
Multi-Racial	3,426	6%
Hispanic	7,988	14%

Table 3-11: Smyrna Population by Race and Ethnicity, 2017

Source: U.S. Census Bureau, 2019

For this analysis, minority populations are defined as any race except Caucasian and do not include Hispanics, which are an ethnicity and discussed separately. Minority populations are not evenly distributed throughout the study area. The highest densities of minority populations are in the northern section of the study area. The following areas have a high concentration of minority populations:

- N of Spring Road from Jonquil Drive to US-41 (Cobb Parkway)
- S of Spring Road from Atlanta Road to Highland Drive
- N of Windy Hill Road
- NW of SR-280 (South Cobb Parkway) and Church Street

¹ Other is defined as American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, or another race not specified.



Map 3-8 displays study area minority populations at the census block group level. Map 3-9 is a map of Hispanic populations in the study area at the census block group level.

In contrast to minority populations, Hispanic populations are concentrated in a few distinct parts of the study area. The highest densities of Hispanic populations are in the following areas:

- NW of US-41 (Cobb Parkway) and Spring Road, extending west to Carolyn Drive
- W side of SR-280 (South Cobb Drive) from King Springs Road to Concord Road
- Both sides of SR-280 (South Cobb Drive) from Church Street to Pat Mell Road

Future Population and Households (2040)

Population and household forecasts for the study horizon year of 2040 are analyzed in this section. Future year data presented in this section are from the ARC Series 15 population and employment forecasts. Within the travel demand model, these forecasts are disaggregated to the individual traffic analysis zone (TAZ) level, and the data were used to determine forecasts for the study area and for mapping purposes.

Forecasted Population (2040)

Consistent with existing trends, the ARC forecasts population growth through 2040 in the Atlanta Region and the study area. In contrast to current trends, the study area population is anticipated to grow at a much slower rate than the Atlanta Region. Table 3-12 shows existing and forecasted population for the study area and Atlanta region. (No data could be extracted exclusively for Smyrna as the model data are developed at the TAZ level.)

aphy 2015 2040 Percent Ch	ange
Area 58,907 63,638 8.0%	
Region 5,509,877 7,935,581 44.0%)
Region 5,509,877 7,935,581	44.0%

Source: Atlanta Regional Commission Travel Demand Model

In 2040, the population density of the study is forecasted to be 5.3 persons per acre, an increase of 13 percent from 2015. The portions of the study area with the highest densities are anticipated to be similar to 2017. Specifically, high population densities of eight or more persons per acre are located in the following areas:

- NW of the intersection of SR-280 (South Cobb Drive) and Church Road
- N of Spring Road from Matthews Street to US-41 (Cobb Parkway)
- W of SR-280 (South Cobb Drive) between the East-West Connector and the CSX railroad tracks

Map 3-10 shows the anticipated future population by TAZ for the study area.



Map 3-8: Minority Population Density, 2017



Data Source: 2017 ACS 5-Year Estimates



Map 3-9: Hispanic Population Density, 2017



Data Source: 2017 ACS 5-Year Estimates



Map 3-10: Study Area Forecasted Population Density, 2040



Data Source: Atlanta Regional Commission Travel Demand Model



Forecasted Households (2040)

The ARC forecasts household growth through 2040 in the Atlanta Region and the study area, which is consistent with current trends and the forecasted population growth. The number of households in the study area is forecasted to grow at a significantly slower rate than the Atlanta Region, which is also similar to existing trends. Table 3-13 shows the anticipated change in study area and regional households through 2040.

Geography	2015	2040	Percent Change
Study Area	27,143	30,322	11.7%
Atlanta Region	2 115 033	3 130 823	48.0%

Table 3-13: Study Area and Regional Forecasted Households, 2015–2040

Source: Atlanta Regional Commission Travel Demand Model

In keeping with the suburban character of the study area, household densities are generally low, but are anticipated to be 2.5 households per acre in 2040, a 27 percent increase over 2015.

Anticipated study area household densities are shown in Map 3-11. Household densities roughly correspond to population density, with the highest household densities between Atlanta Road and US-41 (Cobb Parkway). Areas with forecasted household densities over four units per acre include:

- Both sides of Village Parkway between Spring Road and Windy Hill Road
- N of Atlanta Road from Jane Lyle Road to Spring Road
- W of SR-280 (South Cobb Drive) between the East-West Connector and the CSX railroad tracks

Employment

The journey to work is a key driver of the need for transportation services. Knowledge of key employment locations in the study area is important to understand the potential transit market. This section includes an analysis of current and projected employment in the study area.

Existing Employment Density (2015)

Data for existing population densities were analyzed using the regional ARC model data. Based on the analysis, the existing employment density within the study area low on average, at 2.4 jobs per acre. However, parts of the study area has pockets of high density employment, with more than six jobs per acre include the following:

- W of the I-285 and SR-280 (South Cobb Drive Interchange
- US-41 (Cobb Parkway) at Spring Road
- US-41 (Cobb Parkway) at Windy Hill Road

Map 3-12 shows existing jobs per acre in the study area by TAZ.



Map 3-11: Study Area Forecasted Household Density, 2040



Data Source: Atlanta Regional Commission Travel Demand Model



Map 3-12: Study Area Employment Density, 2015



Data Source: Atlanta Regional Commission Travel Demand Model



Future Employment Density (2040)

According to ARC, employment is forecasted to increase through 2040 in the Atlanta Region and the study area. Study area employment is anticipated to grow at a similar rate to the Atlanta Region. The total forecasted increase in study area employment by 2040 is 9,926 jobs.

Table 3-14: Study Area an	d Regional Fore	casted Employment,	2015-2040
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Geography	2015	2040	Percent Change
Study Area	29,012	38,938	34.2%
Atlanta Region	2,923,940	3,965,194	35.6%

Source: Atlanta Regional Commission Travel Demand Model

Employment density in the study area is forecasted to increase by 34 percent by 2040, to 3.2 jobs per acre. Map 3-13 shows the anticipated jobs per acre in 2040 by TAZ. The distribution of jobs throughout the study area is anticipated to remain essentially the same between 2015 and 2040, with existing job centers increasing slightly in employment density.

Demographics Analysis Key Findings

Key findings regarding population characteristics in the study area include the following:

- Study area population is growing, which means the market for transit is increasing.
- Household density is increasing gradually in the study area, which is supportive of transit.
- Population and household densities are highest in the northern half of the study area.
- The populations of persons under age 18 and over age 65 have been increasing in the study area, indicating increased transit propensity.
- Educational attainment in the study area is higher than the Atlanta region, which is neutral indicator for transit propensity.
- More than 9 percent of study area residents were persons with disabilities in 2017.
- The study area has a lower percentage of households without access to a vehicle than the Atlanta region, which is negative for transit propensity; however, the number of zero vehicle households increased from 2010 to 2017.
- Median annual household income in the study area increased between 2009 and 2016 and was higher than the median for the Atlanta Region, which is negative for transit propensity.
- The number of persons in poverty decreased in the study area between 2009 and 2016.
- The study area became more diverse between 2010 and 2017, with African American and multi-racial groups increasing by more than 4,000 persons each.
- Population and households in the study area are forecasted to increase by 8 and 12 percent, respectively, between 2010 and 2040, which is supportive of transit.
- Study area employment is forecasted to increase by just over 34 percent between 2010 and 2040, which is positive for transit.



Map 3-13: Study Area Forecasted Employment Density, 2040



Data Source: Atlanta Regional Commission Travel Demand Model



Land Use

Land use and development patterns are affected by and interact with travel demand and transportation improvements in an ongoing cycle. Generally, new development or increased land use intensities lead to higher travel demand, which spurs transportation improvements, which increases adjacent land values and leads to higher intensities—and the cycle repeats. This section documents existing and future land uses in the study area and current and anticipated development patterns.

Current Land Use

Most of Smyrna is currently developed, with a significant portion set aside as park land. According to ARC Landpro data, 90 percent of the study area currently is developed and nine percent is reserved as park land. Within the study area, low-, medium-, and high-density single-family residential categories make up approximately 52 percent of existing land uses; multi-family residential is 13 percent. This is consistent with the relatively low household densities throughout the study area discussed previously.

Another key land use in the study area is commercial uses, accounting for 14 percent of the total area. Table 3-15: Study Area Existing Land Use, 2012 3-15 shows the total acres and percent of the study area by land use category. Map 3-14 shows the location of land use by categories.

Land Use	Acres	Percent of Total
Residential – Medium	4,225	42.8%
Commercial	1,383	14.0%
Residential – Multi-Family	1,329	13.5%
Parks and Recreation	868	8.8%
Residential – High	751	7.6%
Institutional	445	4.5%
Industrial	430	4.4%
Residential – Low	165	1.7%
Other	209	2.1%
Agriculture or Mining	36	0.4%
Reservoirs and Wetlands	31	0.3%
Residential – Mobile Homes	5	0.1%
TCU	1	0.0%

Table 3-15: Study Area Existing Land Use, 2012

Source: ARC

Future Land Use

As discussed in the sections on Future Populations and Households and Future Employment Density, study area densities are anticipated to increase through 2040. However, the future land use and development pattern in the study area is anticipated to remain suburban, with a mix of single- and multi-family and commercial developments.



Map 3-14: Smyrna Existing Land Use, 2012



Data Source: City of Smyrna



The Guide Smyrna 2040 Comprehensive Plan (October 2017) includes a policy map that describes the character and function of activity hubs, major transportation routes, and residential neighborhoods. The area near The Battery was identified as a major hub and appropriate for higher-density development. Additional policy map features likely to be transit-supportive include the following:

Minor Hubs (medium density):

- Riverview Hub in southern part of the city between Oakdale Road and Chattahoochee River
- West Village Hub at I-285 and Atlanta Road
- Vinings Gateway at I-285 and Paces Ferry Road
- Smyrna Center west of Atlanta Road between Spring Road and Windy Hill Road

Local Hubs (lower density) were identified along SR-280 (S Cobb Drive) at the following cross streets:

- Highlands Parkway
- East West Connector
- King Springs Road
- Concord Road
- Windy Hill Road

Atlanta Road from Spring Road to Windy Hill Road and Spring Road from Atlanta Road to US-41 (Cobb Parkway) were identified as signature corridors. Additionally, Highlands Parkway was identified as an employment corridor.

The 2040 Future Land Use Map builds on these general definitions and provides the following character areas with transit-supportive densities:

- Medium-High-Density Residential (6–10 dwelling units [du] per acre) is primarily in the northeast of the city along Atlanta Road and Spring Road.
- High-Density Residential (10 or more du/acre) is concentrated in the northeast of the city near US-41 (Cobb Parkway) and Windy Hill Road, with smaller pockets along Atlanta Road and SR-280 (South Cobb Drive).
- Community Activity Centers are located along SR-280 (S Cobb Drive) at Highlands Parkway, East West Connector, Kings Springs Road, and Concord Road.
- Mixed Use is located in the southern part of the city, SR-280 (S Cobb Drive) at Concord Road and Windy Hill Road, and at Atlanta Road and Spring Road.
- The Battery is defined as a Regional Activity Center.
- Employment Center Character Areas are located in the southern part of the city along Highlands Parkway (Industrial), in the central part of the study area near Atlanta Road and Spring Road (Industrial Mixed Use), and at US-41 (Cobb Parkway) and Windy Hill Road (Office/Professional).

Map 3-15 shows the anticipated future land uses.



Map 3-15: Smyrna Future Land Use



Source: City of Smyrna

City of Smyrna | Technical Memorandum 1



Key Activity Centers and Travel Patterns

An understanding of key activity centers and travel patterns is important for identifying origins and destinations and travel desires that potentially can be served by transit. Information in this section was derived using several tools and data sources to identify where Smyrna residents are traveling to now as well as forecasted future travel patterns. Additionally, the study area is segmented into transit market segments to gain insight as to potential transit markets in Smyrna to identify potential transit alternatives to serve them and meet their travel needs.

Methodology and Data

Data and discussions in this section are based on information derived from output of the ARC's activity-based model (ABM) platform ("the model"). The ARC's new model outputs divide information on activity and travel behavior by market segments (e.g., income group, number of workers per household, vehicles available per household, etc.). By looking at each market segment individually, new insights can be developed into the mode, trip lengths, and trip frequency for the various market segments to, from, and within the study area.

The model is based on the principle that travel demand is derived from people's daily activities and travel patterns. This model predicts which activities are conducted, when, where, for how long, for and with whom, and the travel mode choices they will make to complete them. Model runs for existing conditions are for 2015 and were run on the network as it existed in 2015. Model runs for future conditions are for 2040 and include the existing transportation network plus the improvements included in the ARC's Regional Transportation Plan (RTP), for which funding has been identified.

The model offers much greater detail in demographic information, resulting in enhanced analysis of different travel markets. At the core of the model is a technique that enables the model to predict the characteristics of each individual household in the region, including family structure, ages, income, number of vehicles, and type of employment/school for each person. This demographic detail allows the analysis to include a much more targeted groups of travelers and provides a better understanding of how different market segments of the population move within the study area.

Trip Desire

Determining existing and future trip desires for Smyrna travelers is an important step in identifying needed transit connections. To develop an understanding of major trip desires to, from, and within Smyrna, a technical process to identify origins and destinations, analyze key travel pairs, and review existing regional commute patterns was undertaken. Additionally, detailed information on transit market segments from the model was analyzed to provide further insight to potential transit needs.

Origins and Destinations

The travel demand model used for analyzing trip desire divides Smyrna into approximately 37 TAZs. Within the model, the Atlanta region includes more than 5,000 TAZs.



Definition of Travelsheds

To better understand the model outputs that track trips between each TAZ in Smyrna, TAZs are aggregated into larger units, referred to as travelsheds. For this analysis, it was determined that the City ward designation would be a convenient and easily identifiable method to accumulate tripmaking characteristics for each travelshed within the city. There are seven distinct travelsheds in Smyrna, as defined by the City ward boundaries for this process and shown on Map 3-16.

Regional Destinations

After defining the travelsheds in the city, the next step was to identify significant destinations across the whole region. Regional activity centers are defined as traditional downtown areas and major employment centers such as the Cumberland/Galleria area or the Central Perimeter. For this analysis, a total of 16 regional destinations were identified. Table 3-16 shows the major activity centers that were defined for the purpose of this analysis. Although Smyrna commuters are likely travel to a wide variety of destinations across the region, the following were found to have the highest travel flows to and from Smyrna:

- Downtown/Midtown Atlanta
- Buckhead
- Cumberland/Galleria
- The Battery/Circle 75
- Northwest Atlanta

Major Activity Centers
The Battery/Interstate North
Cumberland/Galleria
Town Center/Barrett Parkway
Central Marietta
KSU-Marietta/Life University
KSU-Kennesaw
Cobb County Government (South Marietta Pkwy)
Dobbins Airforce Base
Downtown/Midtown Atlanta
Northwest Atlanta
Buckhead
Perimeter Center/Medical Center
Hartsfield-Jackson Atlanta International Airport
Kennestone Hospital
WellStar Cobb (Austell)
Emory/CDC

Table 3-16: Key Regional Destinations



Map 3-16: Smyrna Travelsheds





Analysis of Existing and Future Key Travel Pairs

Using the travelsheds previously defined for Smyrna and the regional destinations, an analysis of key travel pairs was undertaken to identify origins and destinations with the highest trip demand between them. To accomplish this, the regional trip tables from the model, including all origin and destination vehicle trips, were consolidated into the travelsheds and regional destinations. The model was then used to identify the top travel pairs between the travelsheds and regional destinations in 2015, representing existing conditions, and the horizon year, 2040. Because commute trips place the highest demand on the transportation system, morning peak period trips were used for this analysis.

Existing Travel Pairs (2015)

Table 3-17 shows the top 10 existing travel pairs. Key findings regarding existing trip pairs include the following:

- Within Smyrna, the highest number of trips are within Ward 6, which includes significant residential areas and commercial land around the South Cobb Drive/East-West Connector intersection.
- The second highest number of trips within Smyrna to and from Ward 1 includes the dense commercial districts around The Battery development and Cobb Parkway.
- The highest trip pair from Smyrna to an activity center outside of the City is between Ward 1 and the adjacent Cumberland/Galleria district.
- There are significant travel demands seen between Smyrna and Downtown/Midtown Atlanta as well as Buckhead and Northwest Atlanta.

Origin Travelshed	Destination Travelshed	Number of Trips (AM Peak, 2015)
Ward 6	Ward 6	1,300
Ward 1	Ward 1	800
Ward 1	Cumberland/Galleria	750
Ward 6	Downtown/Midtown	700
Ward 3	Ward 3	650
Ward 6	NW Atlanta	650
Ward 1	Ward 2	650
Ward 1	Downtown/Midtown	600
Ward 3	Ward 5	600
Ward 6	Buckhead	550

Table 3-17: Existing Top Travel Pairs, Morning Peak, 2015

Source: ARC Activity-Based Travel Demand Model, VHB

Future Travel Pairs (2040)

Table 3-18 shows the top 10 forecasted future travel pairs. Key findings regarding existing trip pairs include the following:



- Generally, the model suggests little change in trip patterns between 2015 and 2040.
- Within Smyrna, the highest number of trips continue to be within Ward 6, which accounts for increased commercial development around the South Cobb Drive/East-West Connector intersection.
- The highest number of trips from Smyrna to an activity center outside the city is forecasted to be between Ward 1 and The Battery/Circle 75 development area, indicating increased trip attractions associated with The Battery and Cobb Parkway development growth.
- There continue to be high forecasted trips between Smyrna and the Cumberland/Galleria area, as seen in existing conditions.
- There continue to be significant forecasted travel demands seen between Smyrna and Downtown/Midtown Atlanta as well as Buckhead and Northwest Atlanta.

Origin Travelshed	Destination Travelshed	Number of Trips (AM Peak, 2040)
Ward 6	Ward 6	1,400
Ward 1	Battery/Circle 75	800
Ward 6	NW Atlanta	700
Ward 1	Cumberland/Galleria	700
Ward 6	Downtown/Midtown	650
Ward 3	Ward 3	650
Ward 1	Ward 1	650
Ward 1	Ward 2	600
Ward 1	Downtown/Midtown	600
Ward 3	Ward 5	600

Table 3-18: Forecasted Top Travel Pairs, Morning Peak, 2040

Existing Commute Patterns

An understanding of where people are currently commuting to and from is important for developing transit alternatives to meet existing home to work travel needs. Census OnTheMap software is a powerful tool that provides dynamic information on workers, employers, and jobs through an online user interface. The U.S. Census Bureau aggregates Unemployment Insurance data and Quarterly Census of Employment and Wages data shared by the states and combines them with additional administrative data from censuses and surveys to provide statistics on employment, earnings, and job flows. OnTheMap data were used for analysis of existing commute patterns.

Commuter flows into the study area are slightly higher than the number of residents leaving the study area for work. Of all work trips originating or ending in the study area, 49 percent are residents from elsewhere in the Atlanta region, 48 percent are study area residents commuting to jobs throughout the Atlanta region, and 3 percent live and work within the study area. Figure 3-8 shows the number of commuters entering, leaving, and staying within the study area. More than 55,500 daily commute trips occurred in 2017, indicating a strong demand for transportation to and from work.





Figure 3-8: Study Area Existing Daily Commuter Flows, 2017

Source: Census on the Map, 2017

Home Locations of Workers Commuting into Smyrna

The home locations of workers commuting into Smyrna are generally disbursed throughout the Atlanta region; however, some patterns emerge from the data. Map 3-17 shows where commuters traveling to employment in the city live. Darker colors show a higher number of commuters originating from that area.

For all workers in Smyrna, the highest concentrations of home locations are in Cobb County near Smyrna. A substantial number of homes are in east and south Cobb County, with a slightly lower concentration in west Cobb County. Additional areas where high concentrations of study area workers live are to the southeast in Downtown and Midtown Atlanta and to the northeast in Sandy Springs and Dunwoody near Perimeter Center.



Map 3-17: Home Locations of Workers Commuting into Smyrna, 2017



Data Source: Census on the Map, 2017



Work Locations of Smyrna Residents

Data analysis showed that Smyrna residents are commuting to jobs throughout the Atlanta region, with several key regional employment centers attracting a high proportion of Smyrna residents. Areas where high concentrations of Smyrna residents are employed include:

- Cumberland Galleria
- Perimeter Center
- Buckhead
- Emory/CDC
- Midtown and Downtown Atlanta
- Hartsfield Jackson Atlanta International Airport

Smyrna residents also commute to jobs along the I-75 corridor in Cobb County and to Marietta and the Town Center Area. Map 3-18 shows where Smyrna residents commute to in the Atlanta region.

Roadway and Traffic Conditions

This section summarizes information on existing and forecasted travel conditions on study area transportation facilities. This is accomplished by using the ARC activity-based model to analyze travel times between key origins and destinations on existing and future roadway facilities.

Travel Time Reliability

Travel time reliability is a key measure of how well the transportation network is functioning. To identify existing conditions and forecast future conditions, ARC's activity-based regional model was used. Travel time analyses were conducted for automobiles and transit separately.

Travel times for the top 10 existing and future travel pairs previously identified in the Trip Desire summary were calculated. Due to forecasted changes in travel patterns, 9 of the top 10 travel patterns were consistent between 2015 and 2040; Lithonia to Downtown Atlanta was no longer in the top 10, and Dunwoody to Sandy Springs entered the top 10. Therefore, comparisons between existing and future travel times exclude Lithonia to Downtown Atlanta and Dunwoody to Sandy Springs.

Automobile Travel Times

Existing and future automobile travel times were analyzed to identify both existing and forecasted future issues with travel time reliability. In the future, total travel times between the top five trip pairs are forecasted to increase seven percent. However, some variation between trip pairs exists, with some trip pairs having higher-than-average forecasted increases in travel times and some predicting a lower than average increase. Forecasted automobile travel times did not decrease for any of the top five trip pairs. The following sections provide a detailed analysis of existing and future travel times by trip pair.



Map 3-18: Work Locations of Smyrna Residents, 2017



Data Source: Census on the Map, 2017



Existing Automobile Travel Times (2015)

The ARC model was used to estimate automobile travel times among the top five travel pairs in 2015 during the AM peak period. Table 3-19 shows the existing travel times for the top five trip pairs. Forecasted travel times range from 20 to 35 minutes for the top five travel pairs.

From	То	Travel Time (min)
Smyrna	Downtown/Midtown Atlanta	35
Smyrna	Buckhead	31
Smyrna	Cumberland/Galleria	20
Smyrna	The Battery/Circle 75	23
Smyrna	Northwest Atlanta	21

Table 3-19: Existing Automobile Travel Times Between Top Five Trip Pairs (2015, AM Peak)

Source: ARC Activity-Based Travel Demand Model, VHB

Future Automobile Travel Times (2040)

The ARC model was used to forecast automobile travel times between the top five travel pairs in 2040 during the AM peak period. Table 3-20 shows the future travel times for the top five trip pairs for 2040. As expected, automobile travel times will increase by 2040, but only moderately, with trip times ranging from 21 to 38 minutes for the top five travel pairs.

 Table 3-20: Future Automobile Travel Times Between Top Five Trip Pairs, (2040, AM Peak)

From	То	Travel Time (min)
Smyrna	Downtown/Midtown Atlanta	38
Smyrna	Buckhead	33
Smyrna	Cumberland/Galleria	21
Smyrna	The Battery/Circle 75	25
Smyrna	Northwest Atlanta	22
6 406		

Source: ARC

Consistent with forecasted growth in population and employment in the study area and the Atlanta Region, automobile trip times are forecasted to increase between 2015 and 2040. The highest increases in percentage terms were identified on the following trip pairs:

- Travel time is projected to increase 9 percent from Smyrna to The Battery/Circle 75 between 2015 and 2040.
- Travel time is forecasted to increase 9 percent from Smyrna to Downtown/Midtown Atlanta between 2015 and 2040.
- Travel time is forecasted to increase 7 percent from Smyrna to Buckhead is forecasted between 2015 and 2040

Travel pairs with higher increases in travel times have the most potential to be served by transit investments that provide reliable travel times. However, forecasted travel time increases from 2015 to 2040 for the top five trip pairs ranged from only one to three minutes, which means new transit services will need to be well-designed to serve the needs of transit markets to be competitive with automobile travel times.


Transit Travel Times

The ARC model was used to calculate existing (2015) and future (2040) transit travel times between the top five travel pairs. The activity-based regional model reports travel times for different modes of access to transit, which include riders getting dropped off at the station or stop (kiss-and-ride), riders driving to stations and parking in associated park-and-ride lots (drive to transit), and riders walking to stations or stops (walk to transit).

Existing Transit Travel Times (2015)

Table 3-21 shows current transit travel times during the AM peak period on the three methods previously mentioned. Overall, accessing transit by kiss-and-ride has the shortest transit travel times, followed by drive to transit. Walk to transit has the longest travel times.

From	То	Kiss-and-Ride (min)	Drive to Transit (min)	Walk to Transit (min)
Smyrna	Downtown/Midtown Atlanta	40	40	76
Smyrna	Buckhead	44	54	65
Smyrna	Cumberland/Galleria	21	n/a	45
Smyrna	The Battery/Circle 75	30	n/a	50
Smyrna	Northwest Atlanta	43	n/a	107

Table 3-21: Existing Transit Travel Time between Top Five Trip Pairs (2015, AM Peak)

N/a indicates not applicable, no drive to transit trips for these trip pairs. Source: ARC

Kiss-and-ride access to transit travel times are quicker than walk to transit and drive to transit and may suggest a need for improved first/last-mile connectivity. For trip pairs with a large discrepancy between driving and walking to transit times, potential needs are additional feeder bus service, additional station locations, and/or line extensions. Also, the lack of drive to transit trips between Smyrna and nearby destinations indicates a need for new park-and-ride facilities in the city.

Future Transit Travel Times (2040)

To forecast future transit travel times and mode splits, the 2040 Long Range Transportation Plan network was used, which includes all transit projects currently in the ARC's fiscally constrained plan (i.e. all projects with funding sources). Table 3-22 shows future transit travel times for AM peak, similar to the three modes of transit access previously identified. In comparison to automobile trip times, future transit travel times show significant variation between 2015 and 2040. Key differences between 2015 and 2040 transit trip times are as follows:

- Smyrna to Downtown/Midtown Atlanta had an increase of 10 percent for kiss-and-ride and drive to transit trips between 2015 and 2040, likely caused by increasing travel times on the roadway network.
- The largest increase in transit travel times was from Smyrna to The Battery/Circle 75, with 27 percent for kiss-and-ride and 70 percent for walk to transit
- The second largest increase in transit travel times between 2015 and 2040 was 9 percent from Smyrna to Buckhead for walk to transit.



• The Smyrna to Northwest Atlanta trip pair showed a 33 percent decrease in kiss-and-ride trip time and a 54 percent decrease in walk to transit trip time, likely due to planned future transit lines in the area

Similar to existing conditions, these future data also indicate a need for more first/last-mile connections to transit.

From	То	Kiss-and-Ride (min)	Drive to Transit (min)	Walk to Transit (min)
Smyrna	Downtown/Midtown Atlanta	44	44	72
Smyrna	Buckhead	45	54	71
Smyrna	Cumberland/Galleria	22	30	41
Smyrna	The Battery/Circle 75	38	49	85
Smyrna	Northwest Atlanta	29	n/a	49

Table 3-22: Future Transit Travel Times Between Top Five Trip Pairs, (2040, AM Peak)

N/a indicates not applicable, no drive to transit trips for these trip pairs. Source: ARC

Mode Split

Modal split or mode share reflects the percentage of travelers using a particular type of travel mode. Figure 3-9 shows the existing and projected mode split for all trips to, from, or within the study area. These data were extracted from ARC's activity-based regional model. Trips are categorized by major mode type, which include driving alone (single-occupancy vehicle or SOV), automobiles with two or more people (high-occupancy vehicle or HOV), and transit.

A comparison of the existing and projected mode split shows very little change between travel modes over time in the study area. Driving alone is forecasted to remain essentially the same between 2015 and 2040. A small decline of just less than one percent is forecasted for HOVs, and a slight increase of 0.7 percent is anticipated for transit trips. The lack of substantial changes in mode split between 2015 and 2040 suggests significant investments in transit service and infrastructure may be needed to promote higher levels of transit use and achieve a more balanced mode split. A more detailed discussion of mode split by transit market segments is provided later.



Figure 3-9: Mode Split for Study Area Trips, 2015 and 2040



Transit Market Segments

In addition to examining the origins and destinations of travelers, an understanding of their demographic characteristics is important to identify potential needs. The regional model allows for the segmentation of various demographic groups, which permits study of their unique travel patterns. Three key transit market segments were analyzed to determine how these populations travel to, from, and within the study area:

- Low-Income Populations For the purpose of this analysis, includes individuals with limited mobility options, such as people living in zero-car households, lower-income households (those earning less than \$25,000), and households with fewer cars than workers. Traditionally, individuals in these population segments have a higher propensity to use transit and are often dependent on transit for traveling, so it is important to understand their needs in the planning process.
- *Commuters* –includes full-time and part-time workers. A thorough understanding of this market segment's travel patterns is critical to planning transit services that effectively connect workers to employment centers. Due to the consistency with which they use transit, this group is very important to the transit planning process.
- *Students and Retirees* includes university students and retirees. These market segments have unique transit needs that could be served through a variety of transit technologies and modes. The day-to-day travel patterns for members of this group typically vary more than the individuals in the commuter category.

The analysis of transit markets shows how these groups travel within the county and throughout the region.

Low-Income populations

Figure 3-10 illustrates the number of trips made by persons in this market to, from, or within the study area and the mode of travel currently or predicted to be used as calculated by the regional model. For low-income households, projections show modest increases in trips between 2015 and 2040 for SOVs (14%), HOVs (3%), and walking/biking (12%). More significant increases are projected for transit trips (74%) for this demographic group. This increase shifts the mode split for transit trips in this market segment from 1.5 to 2.3 percent between 2015 and 2040.

In zero-car households, between 2015 and 2040, HOV trips are projected to increase by 49 percent, walking/biking by 93 percent, and transit trips by 134 percent. The mode split also shifts to a higher percentage of transit trips from 12.1 to 16.3 percent in this time period.

In households in which the number of cars is fewer than the number of workers, trips via SOV are projected to increase by 23 percent, HOV trips by 45 percent, and walking/biking by 68 percent. Transit trips are expected to increase at a much higher rate, 101 percent. Mode split for transit is expected to increase modestly, from 5.6 percent to 7.9 percent of all trips.



Figure 3-10: Mode Split for Low Income Populations, 2015 and 2040





Commuters

Figure 3-11 details existing and projected trips to, from, and within the study area for the commuter transit market segment. Full-time worker trips via SOV are anticipated to increase by 15 percent between 2015 and 2040. Trips via HOV are projected to increase by 13 percent, walking/biking by 26 percent, and transit trips by 60 percent. The transit mode share is expected to stay relatively the same, with a slight uptick in transit from 0.7 to 1.0 percent for commuters employed full-time.

Between 2015 and 2040, part-time worker SOV trips are forecasted to increase by 24 percent, HOV trips by 15 percent, and walking/biking by 32 percent. The largest rise is seen in transit trips, anticipated to increase 84 percent. The mode share change between 2015 and 2040 projects a small uptick in transit trips, from 1.0 percent to 1.4 percent.



Figure 3-11: Mode Split for Commuters, 2015 and 2040

Source: ARC Activity-Based Travel Demand Model, VHB



Students and Retirees

Figure 3-12 illustrates the number of existing and projected university students and retirees traveling to, from, or within the study area. University student SOV trips are forecasted to decline 2 percent between 2015 and 2040, trips via HOV are projected to remain flat, walking and biking trips are forecasted to decrease slightly (1%), and transit ridership is anticipated to increase 76 percent. The transit mode split is forecasted to increase from 4.8 to 8.3 percent for university students.

For retirees, trips via SOV are projected to increase by 94 percent, HOV trips by 119 percent, walking/biking by 114 percent, and transit trips by 292 percent. However, mode split for transit is expected to increase modestly, from 0.3 percent to 0.6 percent, for all trips for retirees.



Figure 3-12: Mode Split for Students and Retirees, 2015 and 2040

Source: ARC

Key Activity Centers and Travel Patterns Findings

The following key travel needs were identified:

- Existing commute patterns show a need for regional connectivity to and from the study area.
- Connectivity to the rest of Cobb County, Midtown and Downtown Atlanta, and Sandy Springs and Dunwoody is important, based on the home locations of commuters traveling to jobs in the study area.
- The longest travel times are currently from Smyrna to Downtown/Midtown Atlanta and Buckhead, travel pairs that also are forecasted to have the longest travel times in 2040, indicating potential for long-haul transit service operating in its own guideway.
- Current and forecasted transit travel times between Smyrna and regional activity centers are significantly longer than automobile travel times, indicating an opportunity for improved services to meet travel needs.



- Transit mode split for the city is lower than the regional average; however, this was expected, as Atlanta has a robust and attractive transit network. This means that attractive transit options may be needed to grow the local transit market share,
- Although the traditional transit market in Smyrna is limited, based on the demographic analysis, the transit market segment analysis shows a strong market for traditional transit users.
- The commute patterns for Smyrna show very low internal circulation and overwhelming needs to connect to and from the region. This shows that commuter transit market has substantial room for growth, and travel patterns between Smyrna and key regional employment centers indicate that a well-designed transit service could increase the share of commuters using transit.

Section 4: Plans Review

Numerous transportation, land use, and economic development studies have been completed, with recommendations potentially impacting transit services in Smyrna. These plans and studies include city comprehensive plans, strategic plans, Livable Centers Initiative (LCI) studies, blueprints, transit service plans, countywide comprehensive transportation plans (CTPs), and state and regional plans. Studies with findings likely to be applicable to the Smyrna were obtained and reviewed.

The following local, regional, state plans and studies were reviewed as part of this effort:

City of Smyrna

- Smyrna Comprehensive Plan Update/Guide Smyrna 2040
- Smyrna Strategic Vision Plan
- Spring Road Corridor LCI Master Plan
- South Cobb Drive Corridor Improvement Study

Cumberland Community Improvement District

• Blueprint Cumberland 3.0

Cobb County

- CobbLinc Forward Transit Service Plan
- 2040 Cobb County Comprehensive Plan
- Cobb County Comprehensive Transportation Plan Update 2040

MARTA

• Comprehensive Operations Analysis

ARC

- Regional Transportation Plan
- Transportation Improvement Program
- Regional Transportation Demand Management Plan
- Regional On-Board Transit Survey



ATL Authority

• Regional Transit Plan

GDOT

• I-285 Westside and Top End Express Lanes

Findings from each study that can inform or might potentially impact the development of transit solutions for Smyrna are summarized as follows.

City of Smyrna

The City of Smyrna recently adopted several plans with findings and recommendations applicable to the Smyrna Transit Feasibility Study. These plans are summarized below, with key findings and recommendations noted.

Guide Smyrna 2040 Comprehensive Plan

Guide Smyrna is a comprehensive plan and was adopted by the City of Smyrna in October 2017. The purpose of Guide Smyrna 2040 is to serve as a reference for City officials and staff when making capital investment decisions. Key recommendations from Guide Smyrna applicable to this study include the following:

- Coordinate transit planning and services with CobbLinc and GRTA.
- Undertake a Transit Feasibility Study including an evaluation of shuttle service between commercial districts in Smyrna and the Atlanta Braves Stadium using the circulator system envisioned for the Cumberland Galleria Area.
- Advocate for alternative transportation options that can alleviate congestion.

Smyrna Connects is the Transit Feasibility Study recommended in Guide Smyrna and will fit within the framework established by Guide Smyrna by evaluating the existing CobbLinc circulator in the Cumberland Galleria area to identify opportunities to connect with commercial districts in Smyrna, identifying transit options that can mitigate congestion, and coordinating with key partners such as CobbLinc, SRTA/GRTA, and the ATL throughout the process.

Smyrna Strategic Vision Plan

The Smyrna Strategic Vision Plan is a strategic plan that was adopted by the City Council in November 2014. The purpose of the Strategic Vision Plan is to outline the community's goals for the future of the city. The Guide Smyrna 2040 Comprehensive Plan, discussed in the previous section, incorporates the goals of the Strategic Vision Plan. Key findings from the Strategic Vision Plan include the following:

- Advocate for alternative transportation options that can alleviate congestion for Smyrna residents.
- Explore opportunities to provide shuttle service to Hartsfield Jackson International Airport.
- Become the first community outside of I-285 to connect with the BeltLine.

• Evaluate the feasibility of shuttle service between commercial districts in Smyrna and the Atlanta Braves Stadium using the using the circulator system being envisioned for the Cumberland Galleria area.

Two of these recommendations were included in Guide Smyrna—advocating for alternative transportation options and evaluating the feasibility of shuttle service connecting Smyrna commercial districts with the stadium. Potential shuttle services to Hartsfield Jackson International Airport should be studied as part of the Smyrna Transit Feasibility Study.

Spring Road Corridor Livable Centers Initiative Master Plan

The Spring Road Corridor LCI Master Plan was completed in April 2017. The purpose of the plan is to guide redevelopment along Spring Road and identify appropriate public investment projects to enhance aesthetics and functionality of the corridor to create a true gateway into the city. Key findings and recommendations from the Spring Road Corridor LCI Master Plan include the following:

- Provide alternative transportation options to help reduce vehicular congestion.
- Improve traffic flow during peak periods.
- Develop street networks to improve local and regional connectivity new roads parallel to Spring Road to improve connections and provide alternative options.
- Implement a parallel street connection on the south side of Spring Road from Cumberland Boulevard to Argyle Elementary School that can accommodate local buses currently destined for the CobbLinc transfer center.
- Connect Cumberland and Smyrna Market Village with improved local transit on Spring Road.
- Continue coordinating with CobbLinc on the planning and development of a new transfer center location.

South Cobb Drive Corridor Improvement Study

The South Cobb Drive Corridor Improvement Study was completed in May 2017. The purpose of the study is to provide a foundation for implementing improvements to enable SR 280 (South Cobb Drive) to accommodate needs of residents in the area, provide safety and efficiency for all users, add value to surrounding neighborhoods, and enhance the economic vitality of the region. The study area included SR 280 (South Cobb Drive) from Concord Road to Windy Hill Road. Recommendations of the study include the following:

- Construct a multi-use path along both sides of SR 280 (South Cobb Drive).
- Provide sidewalk connectivity to adjacent neighborhoods.
- Intersection improvements at Powder Springs Street.
- Pull-offs to accommodate CobbLinc buses.



Cumberland Community Improvement District

The Cumberland Community Improvement District (CID) is adjacent to Smyrna, and several key transportation corridors connect city residents to employment opportunities within the CID. However, no parts of the Cumberland CID fall within the Smyrna city limits.

Blueprint Cumberland 3.0

Blueprint Cumberland 3.0 was completed in September 2017 and is the second update of the original Blueprint Cumberland initially published in 2001. Blueprint Cumberland 3.0 is a comprehensive vision and plan to transform the Cumberland CID into a more walkable, dynamic, live-work-shop-play urban center. Key findings and recommendations from Blueprint Cumberland 3.0 include the following:

- Work closely with Cobb County DOT and CobbLinc to relocate the Cumberland Transfer Center, ideally close to the existing interstate with a connection to Cumberland's greatest concentration of destinations.
- Work with nearby transit advocates including the City of Smyrna and Atlanta Braves management to connect to the region with high capacity transit, potentially along I-285 to Perimeter Center or I-75 to Midtown Atlanta.

Cobb County

At the county level, Cobb County DOT and CobbLinc are responsible for transit planning. The County and CobbLinc have adopted and are undertaking plans that potentially impact transit service in Smyrna. These plans are summarized below.

CobbLinc Forward Transit Service Plan

The CobbLinc Forward Transit Service Plan (CobbLinc Forward) is a short-term plan to meet public transportation needs for Cobb County residents, workers, and businesses. Phase I recommendations from the CobbLinc Forward Transit Service Plan were implemented September 8, 2019. Key recommendations from CobbLinc Forward are:

- New Rapid10 service along Cobb Parkway and I-75 connecting the Kennesaw State University (KSU) Kennesaw and Marietta campuses with a stop at the Cumberland transfer center
- New Sunday service
- Elimination of routes 10A, 10B, and 10C riders can now use the new Rapid10

Cobb Forward Comprehensive Transportation Plan

The Cobb Forward Comprehensive Transportation Plan (CTP) is an update to Cobb In Motion, the County's previous CTP completed in 2015. Cobb Forward is currently underway and is anticipated to be completed and adopted by the Cobb County Board of Commissioners by 2021. The purpose of the CTP is to identify a community vision for transportation, align projects with funding sources, and use taxpayer dollars responsibly. As Cobb Forward was recently initiated, findings and recommendations have not been developed yet.



2040 Cobb County Comprehensive Plan

The 2040 Cobb County Comprehensive Plan was adopted in November 2017. The purpose of the Comprehensive Plan is to bring together all stakeholders in the county, including citizens, businesses, and non-profit organizations to develop a growth strategy that aims to make Cobb County an attractive place to invest, conduct business, and raise families. Key findings and recommendations of the Comprehensive Plan are:

- Provide alternate transportation for those who can no longer drive safely.
- Invest in a multi-modal transportation system to serve all users.

MARTA

MARTA currently operates one bus route (Route 12) that terminates in Cobb County at the Cumberland Transfer Center and provides service to the Midtown MARTA station. The route follows Akers Mill Road and US-41 (Cobb Parkway) in Cobb County.

Comprehensive Operations Analysis

MARTA's Comprehensive Operations Analysis (COA) was completed in May 2016. The purpose of the COA is to increase the efficiency and effectiveness of the MARTA system by responding to changes in demographics and population growth by introducing new service or realigning existing services. Key findings and recommendations from the COA include the following:

- Route 12 is in the frequent local service tier, intended to serve as the backbone of the bus network with weekday daytime frequencies of 15 minutes, stop spacing of 1/4 mile, and next trip displays at selected higher volume stops.
- Nine buses are proposed to operate in peak service on Route 12.

ARC

ARC is responsible for transportation planning in the 10-county region, including Cobb. The Regional Transportation Plan and Transportation Improvement Program include federally-funded transportation projects for the region. Additionally, ARC is undertaking an on-board transit survey to gather data about transit ridership throughout the region.

Regional Transportation Plan/Transportation Improvement Program

The following projects relevant to the Smyrna Transit Feasibility Study are included in the Regional Transportation Plan (RTP) and/or Transportation Improvement Program (TIP):

• Project CO-464: Windy Hill Boulevard Widening and Complete Streets – widening from 4 to 6 lanes currently programmed for 2021; project limits are SR-280 (South Cobb Drive) and US-41 (Cobb Parkway); multi-use paths and bike lanes will be provided on both sides of the roadway.



• Project AR-475: Connect Cobb/Northwest Atlanta Transit Corridor Bus Rapid Transit from Midtown Atlanta to Kennesaw – currently included in the RTP as a long-range project; funding has not been identified.

Regional On-Board Transit Survey

ARC is currently conducting an on-board survey of all transit agencies in the region, including CobbLinc. It is anticipated that administration of these surveys will take place in the Fall 2019, so data may not be available prior to the completion of the Smyrna Transit Feasibility Study.

ATL Authority

The Atlanta-Region Transit Link Authority (ATL) is a new agency tasked with overseeing the transit plan for the 13-county Atlanta region, promoting collaboration among transit partners and partnering with regional stakeholders to think about long-term mobility.

Regional Transit Plan

Per the state legislation, the ATL is required to develop and regularly update a regional transit plan, incorporating existing and future transit services, facilities, and projects to provide a coordinated region-wide approach and enhance connectivity for riders. The ATL Board adopted a framework in 2019 for development of this plan, which will be used to measure transit projects by a set of specific, objective criteria. These criteria reflect the ATL's commitment to the six governing principles previously adopted by the Board, including:

- Economic Development and Land Use
- Environmental Sustainability
- Equity
- Innovation
- Mobility and Access
- Return on Investment

The RTP is currently being developed to comprehensively address the region's transit needs. ATL requested local governments such as Smyrna, transit operators, CIDs, and other project sponsors to submit information about their transit projects to ATL prior to July 31, 2019, and has begun the evaluation process. The plan is anticipated to be completed in December 2019; currently, no recommendations are available. The ATL will issue a new call for projects in 2020, with exact timing to be determined.

GDOT

GDOT is currently planning two express lane projects with potential impacts to Smyrna. In both cases, the planning process was recently initiated and recommendations have not been determined. The projects generally consist of managed lanes along I-285 from I-20 W to I-85 N. The lanes will allow transit use, such as express bus. At this time, access points to the proposed managed lanes have not been determined.



Key Findings/Considerations

From the review of previous plans, several common themes emerged, including the following:

- Coordination between the City of Smyrna and agency partners such as CobbLinc, ARC, SRTA, and the ATL is important for transit implementation.
- High-capacity transit connecting Smyrna and the Cumberland Galleria activity center to regional destinations is desired.
- A shuttle from Smyrna to Hartsfield Jackson Atlanta International Airport has been identified as a need.
- A transit connection between Smyrna, particularly commercial areas, and The Battery is desired.
- A Smyrna Market Village to Cumberland Galleria transit connection along Spring Road has been identified.
- Relocation of the Cumberland transfer center to better connect with existing development patterns and improve transit service is a need.
- Transportation options such as transit are desired to mitigate congestion and provide transportation alternatives for non-drivers.
- Quality of life, complete streets, and walkability improvements are recommended in several of the plans reviewed; these projects can provide vital first/last-mile connections to transit services.

This study provides an opportunity to further develop the ideas and projects identified in previous studies to improve transit in Smyrna in a comprehensive manner.