FAYETTE County
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State Route 279 Transportation Corridor Study

Fayette County Public Works

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CROY

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Mission Statement:

The Banks Road corridor study recognizes the regional and local importance of the corridor. The primary goal of the study is to address, in cooperation with our state, regional and local stakeholders, issues and concerns related to safety, connectivity and capacity; and formulate multi-modal mobility concepts, proposals, recommendations and projects. Additionally, the study will develop proposals and recommendations to protect the human and natural environment as Fayette County and its cities continue to grow. The projects will formulate a complementary infrastructure improvement plan that will improve the corridor aesthetics and enhance the quality of life of the adjoining neighborhoods.

Chapter 1:
Existing Conditions

1.1 Introduction - Page 6
This section of the report introduces the transportation corridor in focus and discusses the location and extents of the corridor.

1.2 Demographics - Page 8
The socio-economic demographics of the corridor are described in this section of the report.

1.3 Land Use & Zoning - Page 12
This segment discusses the land use character within a 1-mile buffer of the corridor and highlights the zoning classes within this limit.

1.4 Roadway Infrastructure & Facilities - Page 13
Existing roadway infrastructure is identified which includes intersections, medians and sidewalks, as well as existing multi-modal facilities along the corridor are presented in this section.

1.5 Existing Traffic Conditions - Page 15
This report component analyses traffic conditions and operations and presents safety considerations along the corridor.

1.6 Environmental Due Diligence - Page 22
This segment of the report identifies sensitive environmental conditions that may provide corridor improvement opportunities and/or constraints.

1.7 Utilities - Page 23
This part of the report presents an inventory of existing utilities along the corridor.

1.8 Summary - Page 25
Highlights of the exisitng conditions and a summary of the chapter is presented in this section.

1.1 Introduction

The Fayette County Transportation Corridor Study is a collaborative project between Fayette County, Atlanta Regional Commission - the metropolitan planning organization, and Croy Engineering, LLC - the consultant firm.

The aim of the study is to identify traffic and transportation solutions from a holistic perspective to:

- Ensure safety
- Provide solutions for congestion & delay
- Identify prospects for multi-modal uses
- Create sustainable infrastructure improvements
- Promote economic development

The four corridors identified for the study are:

- Tyrone Road - Palmetto Road
- Sandy Creek Road
- Banks Road
- State Route 279

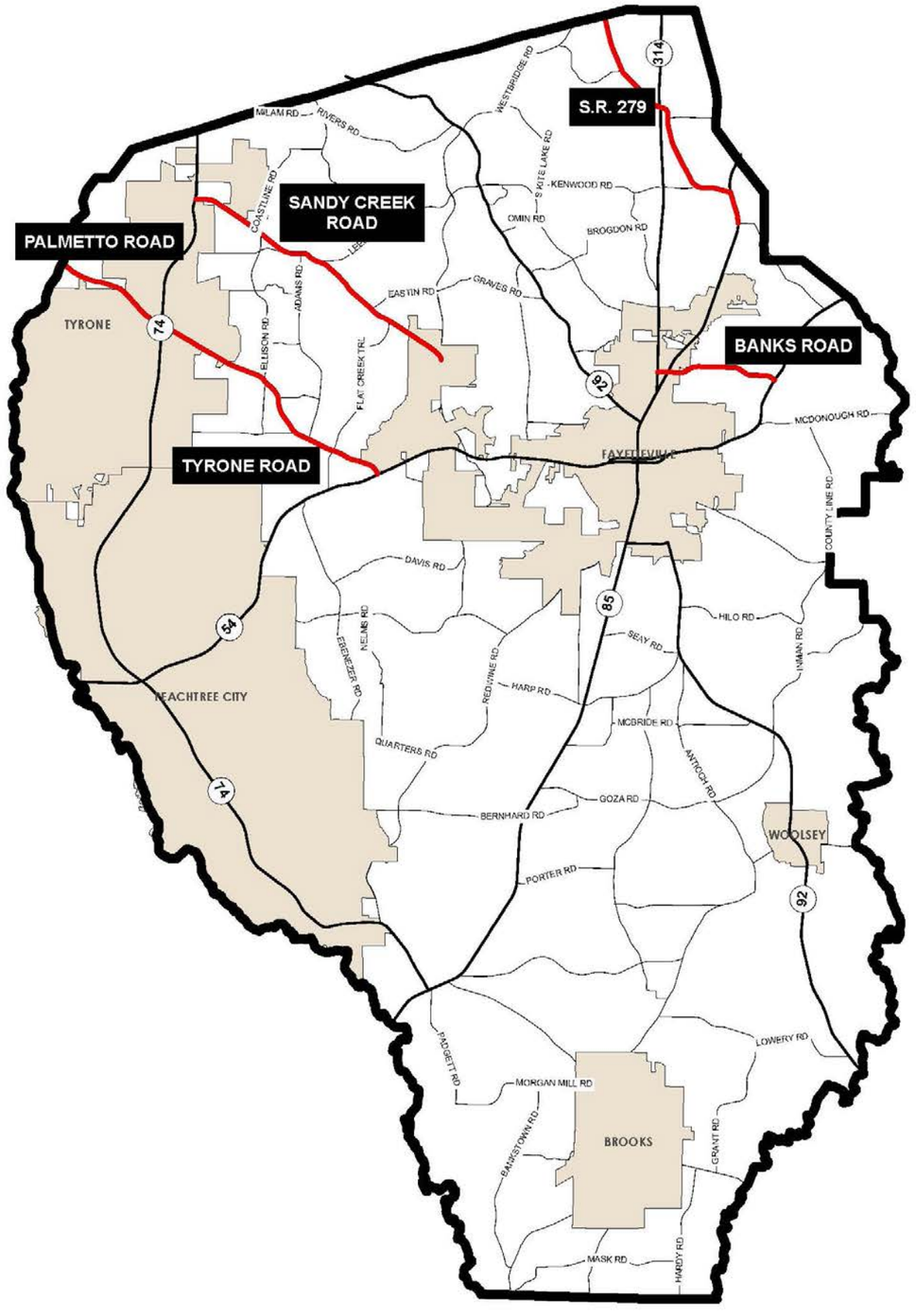
The Timeline for this study is divided into 4 tasks and is spread over a period of 12 months.

Table 1.1 - Project Timeline

TASK	TIMELINE OVER 12 MONTHS											
	1	2	3	4	5	6	7	8	9	10	11	12
Review Of Existing Conditions & Technical Analysis												
Public Involvement												
Conceptual Plan & Draft Concept Plan												
Preparation Of Project Deliverables												

Map 1.1 on the right is a vicinity map of Fayette County, representing the 4 study corridors. This document will look at the State Route 279 corridor and describe the existing conditions of the roadway.

Map 1.1 - Vicinity Map



This study focuses on State Route 279 (SR 279), extending from State Route 85 to the Fulton/Fayette County Border and includes the possibilty of bringing SR 279 and Corinth Road together in a single intersection. The total length of the study corridor is approximately 4.25 miles. SR 279 and SR 85 intersect approximately 0.5 miles north of the Corinth Road intersection; both intersections are controlled by signals.

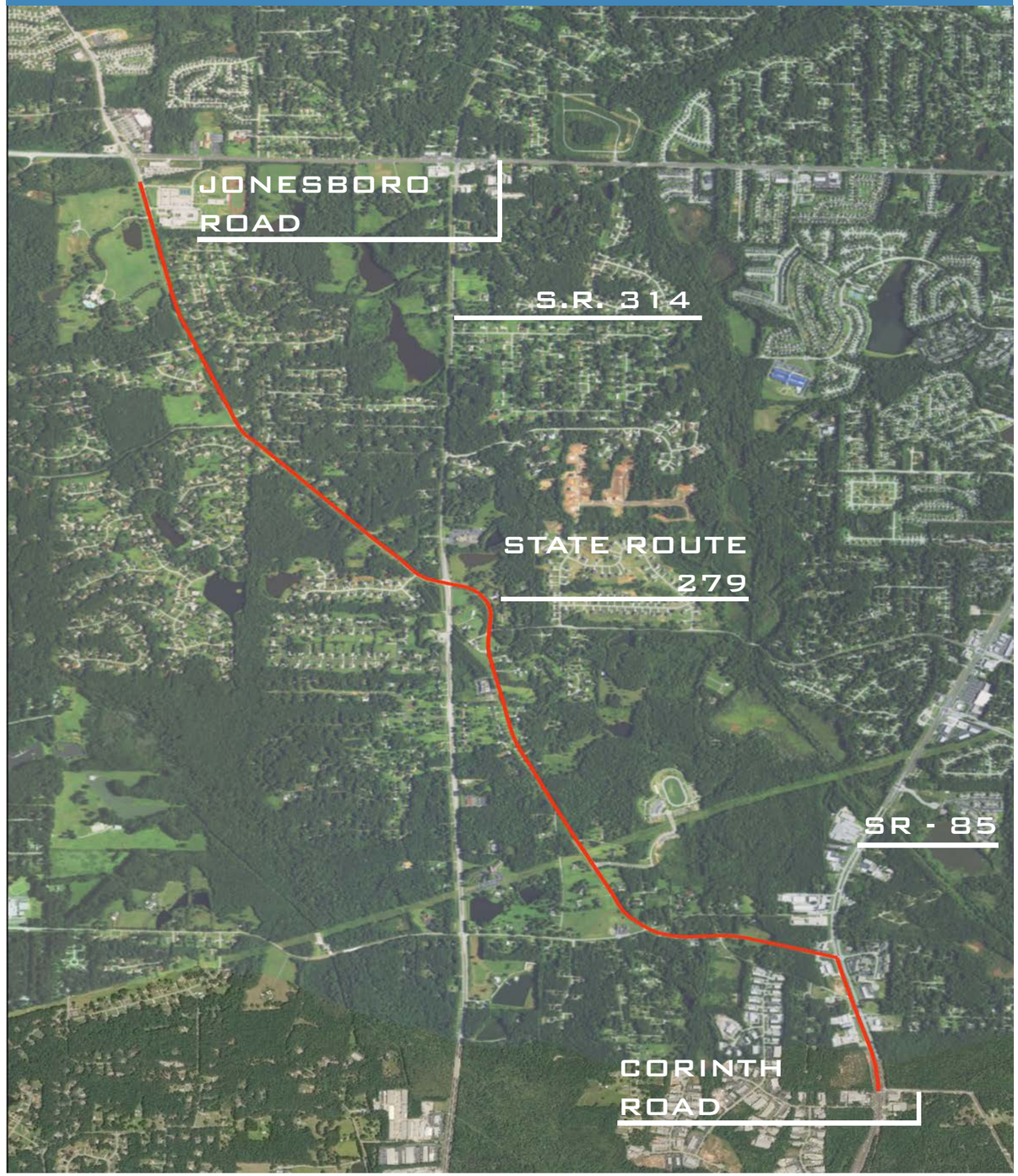
The study is an investigative foundation to implementing improvements that will enable SR 279 to be a well-functioning roadway that accommodates the transportation needs, adds value to the communities, and enhances mobility and safety in the area. Additionally, this project proposes to align Corinth Road and SR 279, considering all options for safety and operational improvements.

The purpose of the study is to to develop short and long-range projects that improve safety, mobility and access to all roadway users, while also preparing them for full design and implementation, possibly with federal aid.

Figure 1.1 is an image of the SR 279 approach towards SR 85. Map 1.2 depicts the location and extent of the SR 279 corridor study.

Figure 1.1 - State Route 279 & State Route 85 Intersection

Map 1.2 - State Route 279 - Location and Extent



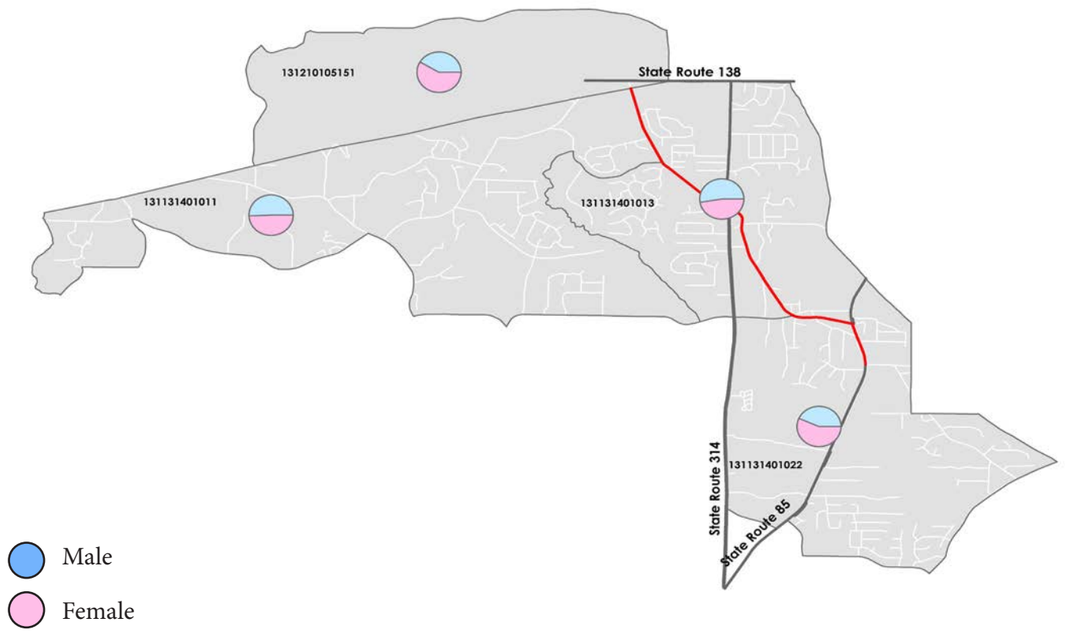
1.2 Demographics

Understanding the demographic character of the corridor is an important factor in identifying the key stakeholders and the influence on their travel demands. This information along with other components will be used when developing alternative transportation improvements.

For this analysis, the 2016 American Community Survey (ACS) – 5 year data were used at the block group level, which is the smallest scale of data availability. ACS[1] is conducted every year and provides the most current information about the social and economic needs of the community. The census is conducted once every 10 years to provide an official population count. All data presented are estimates and have an associated margin of error value.

Block groups that abut the corridor were analyzed. The population encompassing the buffer around the SR 279 corridor is approximately 13,455, with 6,251 [46.5%] being male and 7,204 [53.5 %] being female. Map 1.3 represents a male to female distribution in the block groups along the corridor.

Map 1.3 - SR 279 - Gender Distribution



Analyzing the racial composition along the corridor, it is seen that approximately 3,142 citizens [23.3%] are white and 9244 [68.7%] are African American. The study area has very small Hispanic or Latino population [5.4%] with the remaining population identifying as other.

Table 1.2 and Map 1.4 represent racial distribution in the four block groups along the corridor.

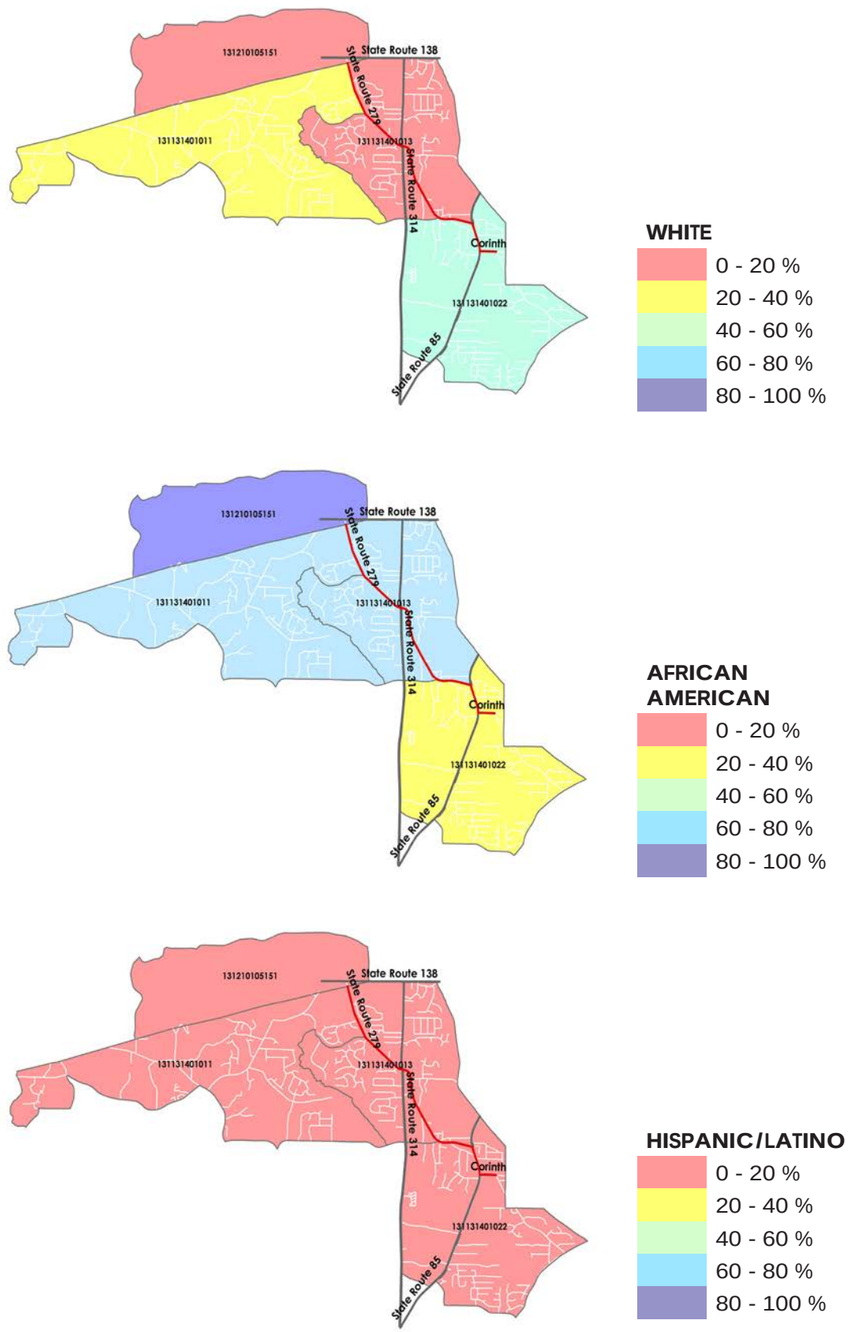
Table 1.2- Racial Distribution

ID	131131401013	131210105151	131131401011	131131401022	TOTAL
Block Group Population	3,667	5,294	2,448	2,046	13,455
White	711	718	718	995	3,142
% White	19.3%	13.56%	29.3%	48.6%	23.3%
African American	2,590	4,411	1,583	660	9,244
% African American	70.6%	83.3%	64.6%	32.2%	68.7%
Hispanic/ Latino	351	186	155	45	737
% Hispanic/ Latino	9.5%	3.5%	6.3%	2.1%	5.4%
NOTE - All values are estimates and have associated margins of error.					

[1] - ACS is based on the decennial U.S.Census, however, its updates occur annually. 5-year estimates includes 60 months of collected data and is the most reliable when analyzing very small populations

Note - Percentage values in Table 1.2 are not intended to total 100 percent since not all categories such as 'More Than One Race' or 'More Than Two Races' are listed.

Map 1.4 - SR 279 - Racial Distribution



Education attainment for population aged 25 years and over was analyzed for the block groups along the corridor. Four categories were used –

- No schooling completed
- Regular high school diploma
- Some college, less than a year
- Bachelor's degree

Map 1.5 represents educational attainment for the population in the block groups along the corridor. The scatter plot is a random distribution and does not indicate specific locations of the population.

Map 1.5 - SR 279 - Educational Attainment

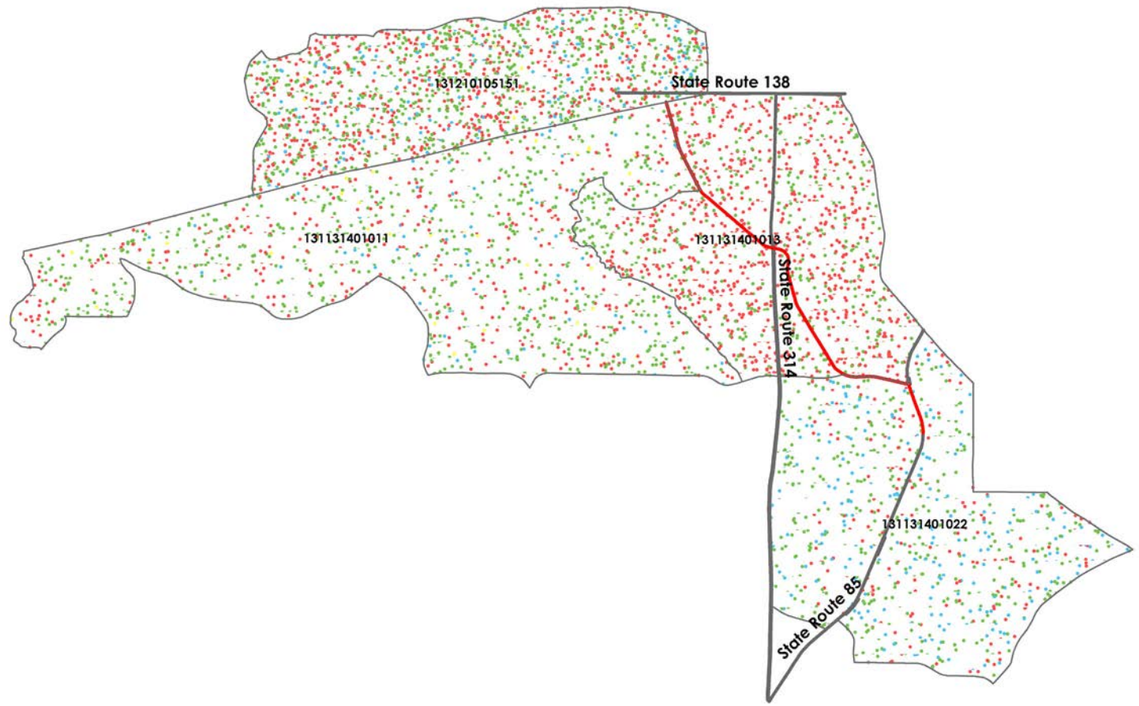


Table 1.3- Educational Attainment Distribution					
ID	131131401013	131210105151	131131401011	131131401022	TOTAL
Block Group Population (25 Years & Older)	2,534	3,463	1,740	1,636	9,373
No School Completed	0	11	36	0	47
% Not Completed School	0%	0.3%	2.0%	0%	0.5%
Regular High School Diploma	388	659	617	371	2,035
% With Regular High School Diploma	15.3%	19.0%	35.4%	22.6%	21.7%
Some College, Less Than A Year	0	162	63	184	409
% With Some College, Less Than A Year	0%	4.6%	3.6%	11.2%	4.3%
Bachelor's Degree	668	631	312	179	1,790
% With Bachelor's Degree	26.3%	18.2%	17.9%	10.9%	19.0%
NOTE - All values are estimates and have associated margins of error.					

Table 1.3 represents the counts and percentages of the population in the block group with a certain level of education. The analyses depicts that about 99.5% of the population of the block groups age 25 years and older has completed schooling. While 21.7% has a regular high school diploma, 4.3% has attended some college for less than a year and 19.0% has a bachelor's degree.

Note - Percentage values in Table 1.3 are not intended to total 100 percent since not all categories such as 'Some College More Than A Year' or 'Masters Degree' are listed.

Household income is a measure of the combined incomes of all people sharing a particular household or place of residence. It includes every form of income. Median Household income for all the block groups abutting SR 279 was analyzed.

The minimum median household income in the area is approximately $43,819, while the maximum median household income is approximately $75,750; the mean median household income in the area is $64,836.

Map 1.6 represents the median household income in the block groups along the corridor.

Map 1.6 - SR 279 - Median Household Income

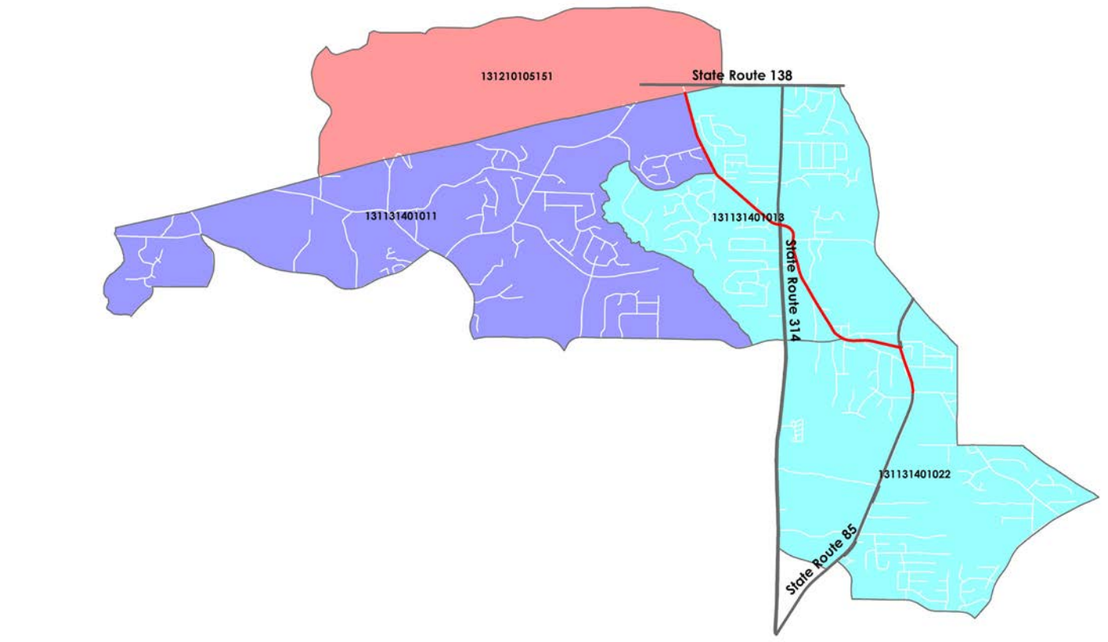
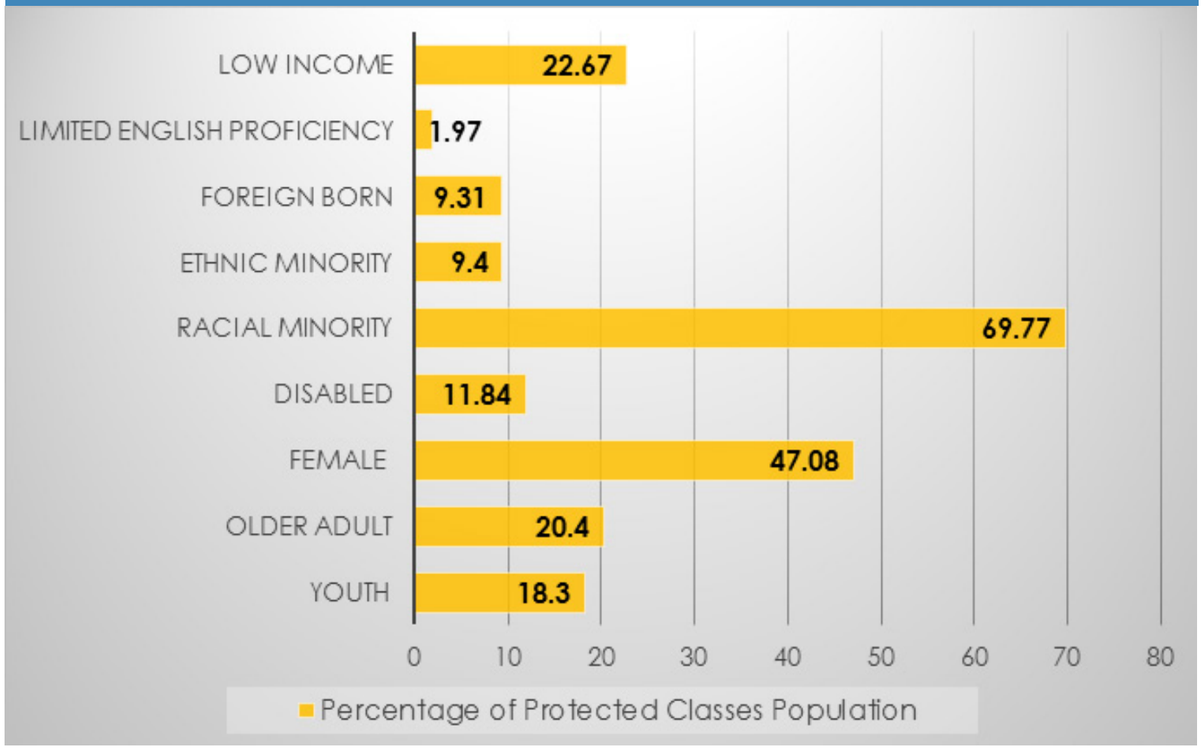


Figure 1.2 - SR 279 - Equity Analysis



The Protected Classes Model

Title VI of the Civil Rights Act identifies 9 population categories that must be protected. These include Ethnic Minority: Hispanic or Latino Origin by Race, Females, Foreign Born individuals, persons with Limited English Proficiency, Low-Income populations, Older Adults, People with Disabilities, Racial Minority and Youth.

The Protected Classes Model is an analysis index created by Atlanta Regional Commission (ARC), to help counties, governments and private organizations ensure inclusion and equity for these 9 population groups.

The model uses American Community Survey 5-Year population estimates for 2012-2016. Percentage of each of the protected population groups is calculated at the census tract level. A cumulative numeric score of 0 to 36 is calculated based on the concentration of a population identified across all nine criteria, 0 being a low score and 36 being a high score.

Racial Minority, Ethnic Minority, and Low-Income Model

The Racial Minority, Ethnic Minority, and Low-Income Model is an adaptation of the Equitable Target Areas (ETA) model, with an index methodology similar to the Protected Classes Model. ARC considers these three inputs to be indicators of the greatest potential inequality in the Atlanta region.

This updated model is used by the ARC Transportation Improvement Program (TIP) Project Evaluation Framework to conduct equity analysis and rank proposed projects. The model also uses American Community Survey 5-Year population estimates for 2012-2016. Percentage of each of the protected population groups is calculated at the census tract level. The cumulative numeric score ranges from 0 to 12, and is calculated based on the three input criterion. The low score is 0 and a high score is 12.

Corridor Analysis

SR 279 corridor lies in Fayette County's census tract 1401.01. The tract has an average cumulative score of 18 for the Protected Classes Model and an equity score of 6 for the Racial Minority, Ethnic Minority, and Low-Income Model. This means that according to the index, the corridor study area has a moderate rank, and is placed not too high or too low in the index.

Of the residents in the tract, 18.3% are under 18 years of age, 20.4 % of residents are 65 years or older. 47.08 % of residents are female; residents with disabilities account for 11.84 % of the population in the tract. While 69.77 % of residents identify as one or more racial minority, only 9.4 % of residents identified themselves as being of Hispanic or Spanish origin.

The tract has a small population of foreign born nationals, with 9.31 % of residents being born outside of the United States and only 1.97 % of residents report having English proficiency below "very well." Also within the tract,22.67 % live in households with an income below 200% of the national poverty level. The Census defines a household to be composed of one or more people who occupy a housing unit. The 2019 Federal Poverty Level for a household of 2 individuals is $16,460.

1.3 Land Use & Zoning

A 1-mile buffer of the SR 279 corridor encompasses a total of 4,953.56 acres. Approximately 1,700 parcels, both residential and nonresidential, comprise the study area. Map 1.7 shows the zoning pattern along the corridor.

Residential Usage

Approximately 1,518 parcels or 89.2 % of the study area are residential. The two major types of residential uses seen along the corridor are:

Table 1.4 - Residential Zoning

CATEGORY	ZONING ENTITY	NO. OF PARCELS
• SINGLE FAMILY RESIDENTIAL	FAYETTE COUNTY	1,434
• AGRICULTURAL RESIDENTIAL	FAYETTE COUNTY	184

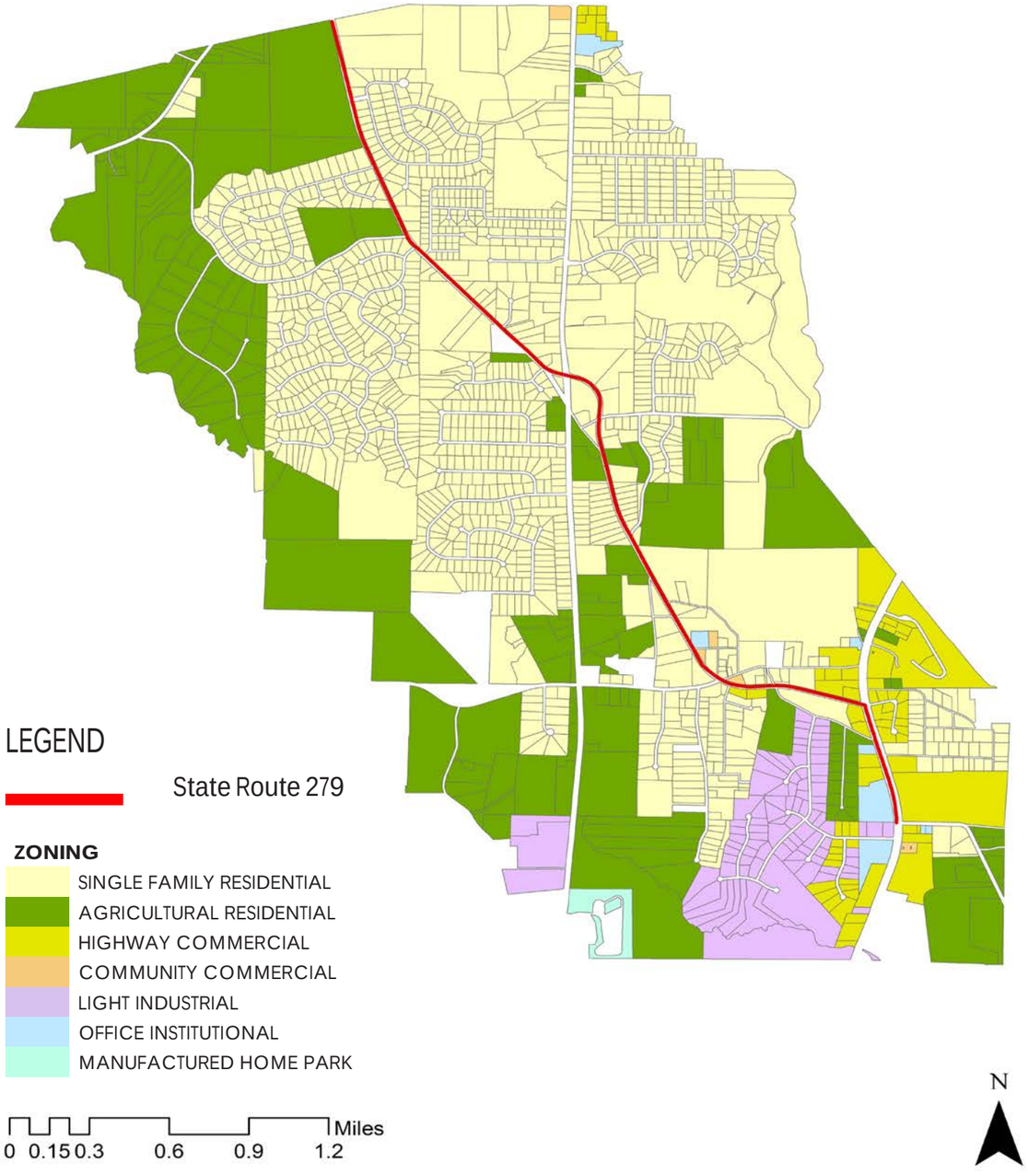
Commercial Usage

Commercial zoning is clustered in the south east section of the study corridor with 182 parcels zoned commercial or industrial. The zoning designations for the area are:

Table 1.5 - Commercial Zoning

CATEGORY	ZONING ENTITY	NO. OF PARCELS
• HIGHWAY COMMERCIAL	FAYETTE COUNTY	71
• COMMUNITY COMMERCIAL	FAYETTE COUNTY	7
• HEAVY INDUSTRIAL	TOWN OF TYRONE	4
• LIGHT INDUSTRIAL	FAYETTE COUNTY	92
• OFFICE INSTITUTIONAL	FAYETTE COUNTY	8

Map 1.7 - SR 279 - Zoning



1.4 Roadway Infrastructure and Facilities

Per the Georgia Department of Transportation (GDOT) road classifications, SR 279 is classified as a minor arterial. The SR 279 corridor from its Fayette-Fulton County Line to SR 85, approximately 3.9 miles, generally consists of standalone residential properties and subdivision along both sides of the road. Moreover, SR 279 is the sole access to Kenwood Park. There is one travel lane in each direction, which is generally 11 feet wide, but varies depending on the precise location. In some locations, a turn lane or deceleration lane is provided.

Future right-of-way requirements for the corridor as land is subdivided and or developed are set by GDOT since it is a State Route. For all intents and purposes for this study, SR 279 will be referenced as eastbound and westbound directions of travel, and all intersecting routes will be referenced as northbound and southbound directions of travel.

Intersections

Table 1.6 - SR 279 Intersections

INT. NO	SR 279	TRAFFIC CONTROL
1	AT DIXIE LEE ON DRIVE	T-INTERSECTION (SB)[1]
2	AT NORTH DRIVE	T-INTERSECTION (NB)[1]
3	AT OLD FORD ROAD	T-INTERSECTION (NB)[1]
4	AT MORNING SPRINGS WALK	T-INTERSECTION (SB)[1]
5	AT LAFAYETTE DRIVE	T-INTERSECTION (SB)[1]
6	AT MAYFAIR LANE	T-INTERSECTION (SB)[1]
7	AT IMPERIAL WAY	T-INTERSECTION (NB)[1]
8	AT SR 314/W FAYETTEVILLE ROAD	TRAFFIC SIGNAL
9	AT HELMER ROAD	T-INTERSECTION (SB)[1]
10	AT RAY ROAD	T-INTERSECTION (NB)[1]
11	AT MITCHELL ROAD	T-INTERSECTION (SB)[1]
12	AT MORNING ROAD	T-INTERSECTION (NB)[1]
13	AT TWIGGS WAY	T-INTERSECTION (SB)[1]
14	AT SCHOOL STREET	T-INTERSECTION (SB)[1]
15	AT KENWOOD ROAD	TWSC (NB/SB)[1]
16	AT AUSTIN DRIVE	T-INTERSECTION (NB)[1]
17	AT OLD ROAD	T-INTERSECTION (NB)[1]
18	AT SR 85	TRAFFIC SIGNAL

[1]DENOTES WHICH MANEUVERS ARE STOP CONTROLLED.

There are a total of 18 intersections along SR 279 within the limits of this corridor study. There are two signalized intersection along the corridor, at SR 314/W Fayetteville Road and at SR 85. All other unsignalized intersections are with SR 279 being the major road and the side streets being the minor (stop controlled) roads. The intersections are listed in Table 1.6 and are shown in Map 1.8.

Map 1.8 - SR 279 - Intersections

Bike/Pedestrian Facilities

There are no sidewalks along this corridor. There are no bicycle facilities along the corridor. Fayette County is currently in the process of completing the Master Path Plan, which will identify bike/pedestrian needs for SR 279 and the adjacent areas.

Transit Facilities

There are no fixed routes that serve Fayette County. The closest GRTA Park & Ride lots (using driving distance and measured from the center of the corridor) are :
Newnan Park & Ride – approximately 25.4 miles*
Union City Park & Ride – approximately 11.1 miles*
Jonesboro Park & Ride – approximately 7.1 miles*
[* - Measured from the midpoint of the corridor (SR 279 at SR 314)]

Fairburn and the South Fulton Community Improvement District (CID) are in the process of constructing a Park-n-Ride lot along the east side of SR 74 between Harris Road and Milam Road.

Fayette Senior Services, Inc. provides inexpensive, flexible transportation for Fayette County's disabled (18 - 59 years) and older citizens (60 years & above). The organization provides two types of transportation options: Voucher Transportation and Non-emergency Medical Transportation. Services are available Monday through Friday, 6.00 AM to 6.00 PM.

Field Observations

The following observations were made by the project team during a field visit in Spring 2019:

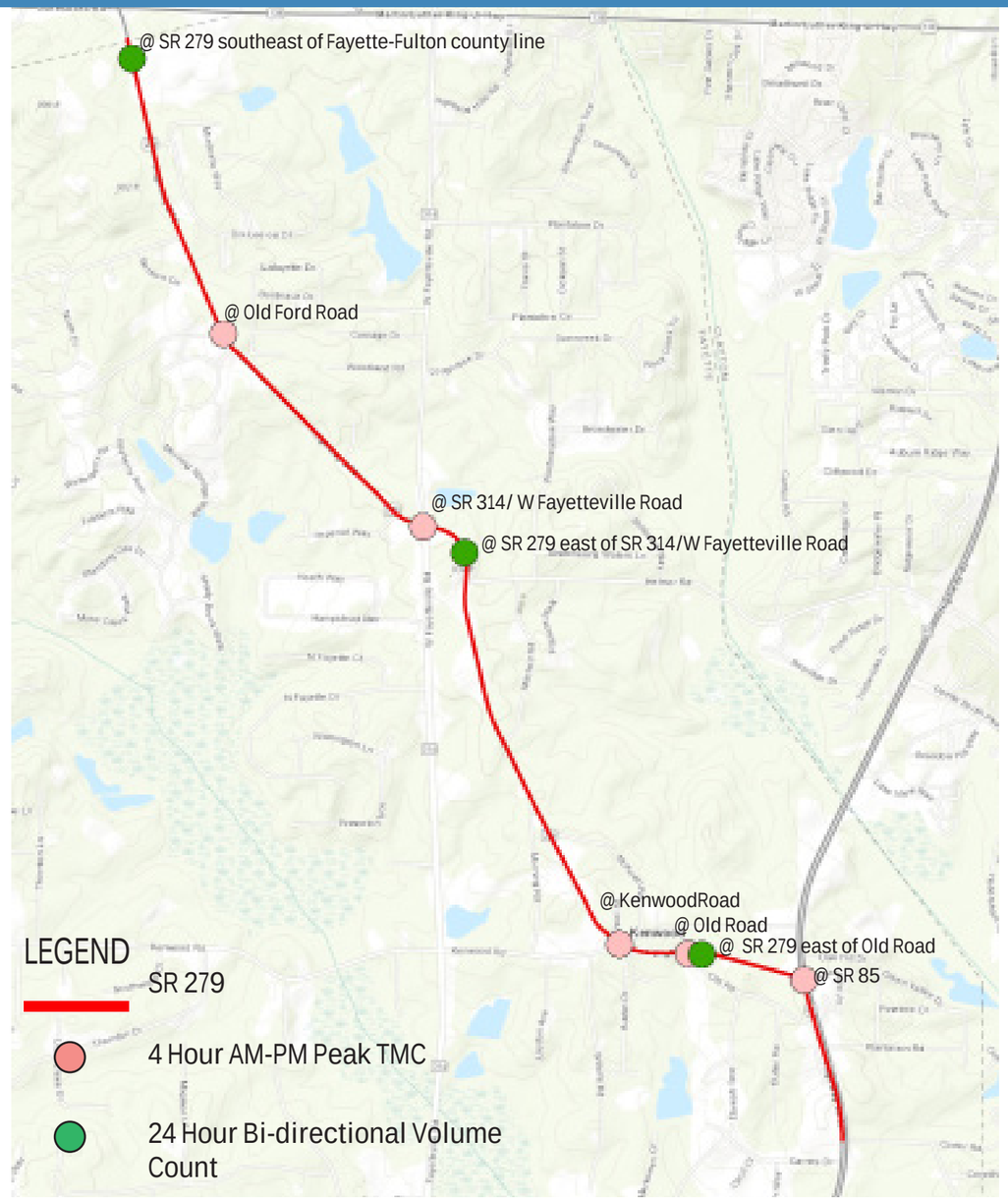
- During morning field observations, traffic was heavy and constant along the western end of the corridor, particularly around SR 314/W Fayetteville Road.
- Field observations also confirmed the difficulty vehicles had exiting sub-divisions (multiple locations) and entering the flow of traffic on SR 279.
- East of SR 314/W Fayetteville Road, Fayette County Fire Station #1 is in a horizontal curve, and is subject to sight distance issues.
- Pavement along the road is generally in good condition. The road has 2 feet grass shoulders except around the SR 314 intersection where the shoulders are paved and have rumble strips.

Images 1.1 to 1.3 - SR 279 - Field Observations

1.5 Existing Traffic Conditions

Traffic counts were conducted in April 2018 at the locations described below. The count locations are shown in Map 1.9.

Map 1.9 - SR 279 - Traffic Count Locations



Weekday 24-hour Bidirectional Volume Count with Vehicle Classification and Speed were collected at:

- SR 279 southeast of Fayette-Fulton county line
- SR 279 east of SR 314/W Fayetteville Road
- SR 279 east of Old Road

Weekday 4-hour AM and PM Peak Period (7-9 AM and 4-6 PM) Turning Movement Count (TMC) were collected at:

- SR 279 at Old Ford Road
- SR 279 at SR 314/W Fayetteville Road
- SR 279 at Kenwood Road
- SR 279 at Old Road
- SR 279 at SR 85

The daily traffic counts collected indicate that the Average Daily Traffic (ADT) varies substantially between major intersections along the corridor. Between SR 138 and SR 314, the average ADT is 19,175 vehicles. Between SR 314 and Kenwood Road, the average ADT is 7,050 vehicles. Between Kenwood Road and SR 85, the average ADT is 8,800 vehicles.

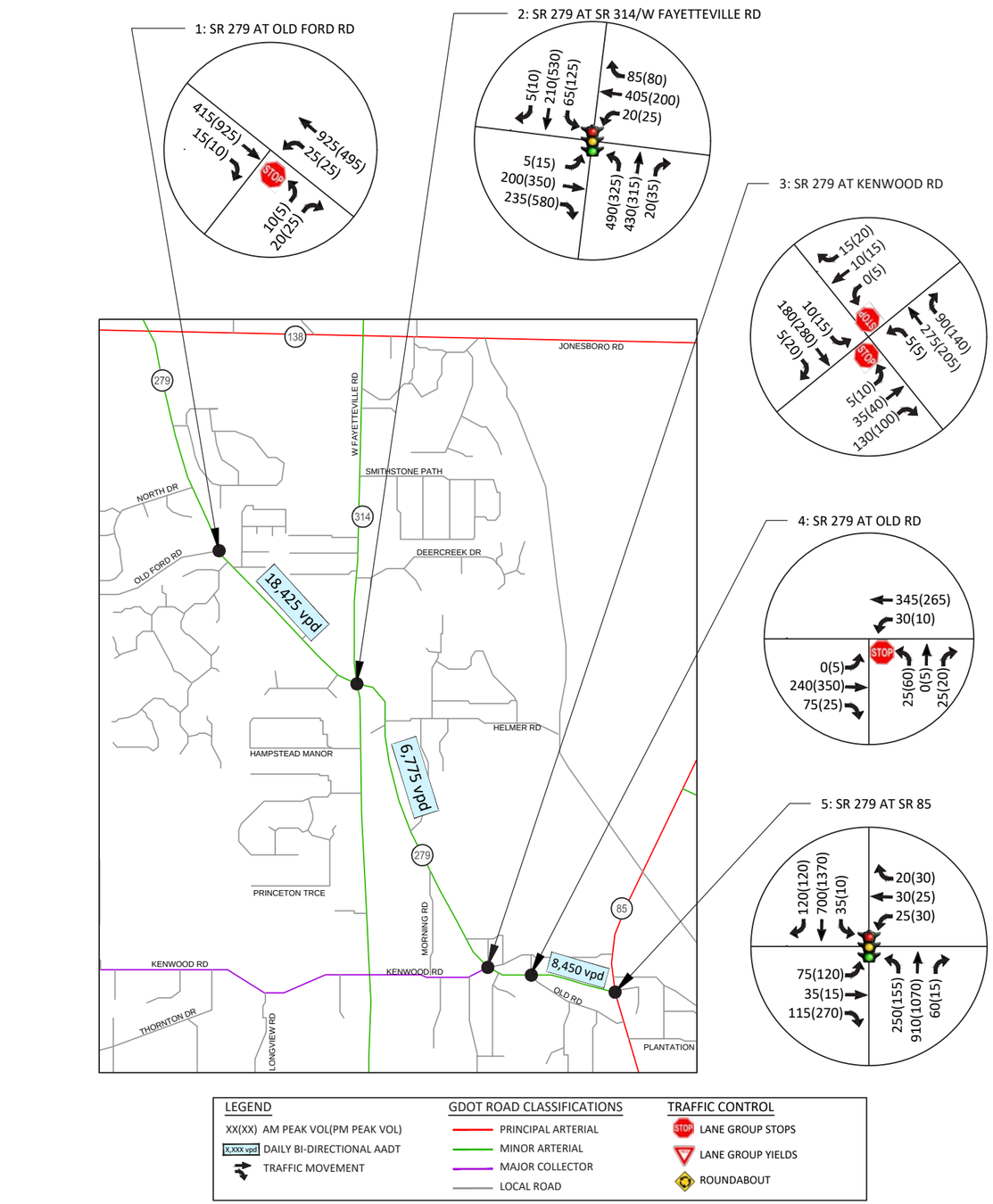
Adjusting the April counts for daily and seasonal factors per GDOT standards, the Average Annual Daily Traffic (AADT) for the three aforementioned segments, are 18,425 vehicles, 6,775 vehicles, and 8,450 vehicles, respectively. The AADT for the westernmost section of SR 279 from SR 138 to SR 314 is significantly higher the sections east of SR 314.

The morning and afternoon peak period counts collected indicate that the average AM peak hour is 7:00 am to 8:00 am and the average PM peak hour is 5:00 pm to 6:00 pm. For continuity between the study intersections, a uniform average peak hour was used for each time period. Table 1.7 describes daily truck percentages along the corridor.

Table 1.7 - SR 279 Daily Truck Percentages

SR 279	SINGLE UNIT	COMBO	TOTAL
BETWEEN FAYETTE - FULTON LINE AND SR 314	2.2 %	1.3 %	3.5 %
BETWEEN SR 314 AND KENWOOD ROAD	5.3 %	1.2 %	6.5 %
BETWEEN KENWOOD ROAD AND SR 85	4.4 %	1.4 %	5.8 %

Figure 1.3 - SR 279 - 2018 Existing Traffic Volumes



Traffic Volumes Projection Sources

- GDOT Historic Traffic Volumes

GDOT's count program, Traffic Analysis and Data Application (TADA), provides a source of data for assessing traffic volume trends over a sustained period of time. Three count stations were identified on SR 279 -

1. SR 279 west of North Drive
2. SR 279 east of SR 314/W Fayetteville Road
3. SR 279 east of Kenwood Road

Historical counts were also collected for the following corridors, which have the same road classification -

1. SR 314 north of SR 279
2. SR 314 north of Kenwood Road

Historical traffic data were used to establish historical traffic trends in the region and predict future traffic growth to project existing traffic volumes along the SR 279 corridor.

- Regional Travel Demand Model

The Atlanta Regional Commission travel demand model (ARC TDM) was reviewed and traffic projections at pertinent locations were selected and analyzed to determine future growth rates of traffic along the corridor and the surrounding roadway network.

Traffic Growth Methodology

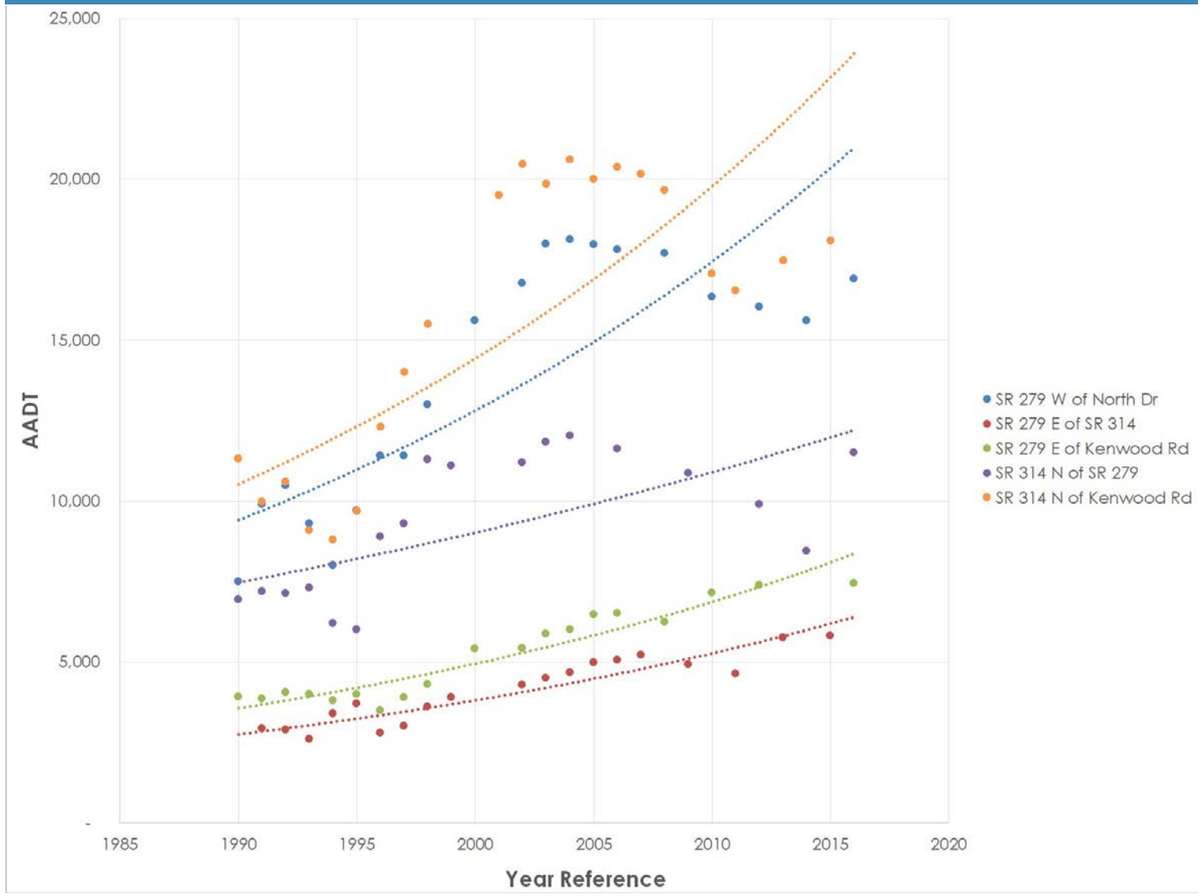
- Historical Growth Regression

An exponential regression analysis was performed using historical traffic count data collected from GDOT's TADA online mapping to determine annual growth factors. Roadways deemed key in determining the overall traffic trends in the region were selected and segments with corresponding traffic counters were plotted for each year.

Per GDOT's Design Traffic Forecasting Manual, traffic counts that were deemed irregular were omitted to "eliminate erroneous counts and reflect general trend." Using the exponential regression line's R^2 value as a measurement of accuracy, the design equation for the data was used to calculate ADT for 2015, 2020, and 2040.

These volumes were then used to calculate annual growth rates (AGR) based on the historical 5, 10, and 15 year periods. The average annual growth rate over the past 15 years was 1.9%. Figure 1.4 below shows the historical growth trends for SR 279 and other minor arterial in the area.

Figure 1.4 - Historical Growth Trends for SR 279 & Other Minor Arterials



- ARC Travel Demand Model

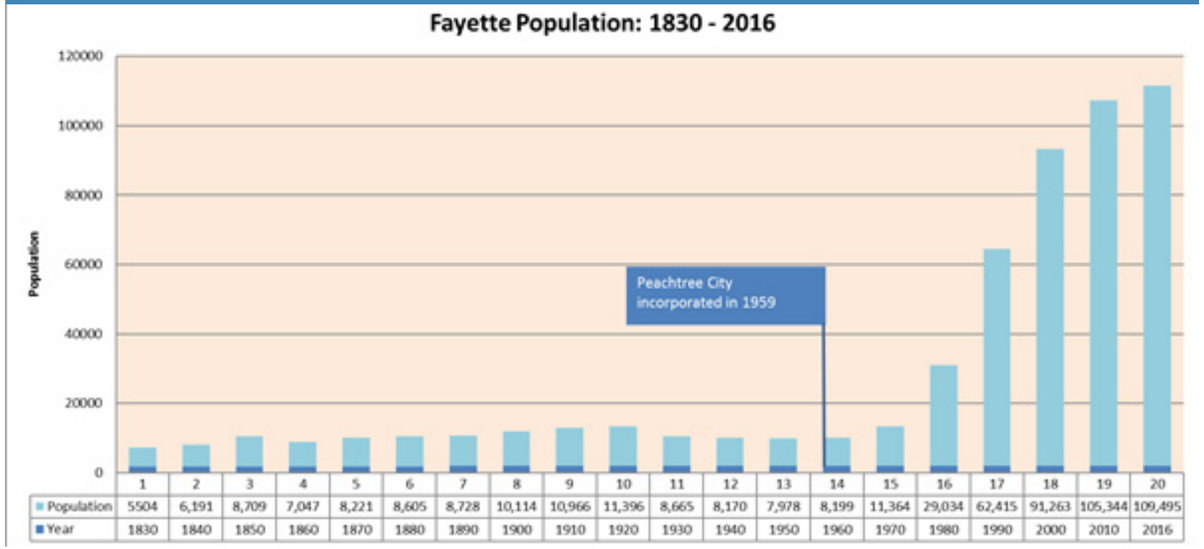
Since roadway improvements and socio-economic factors, such as population and employment change are incorporated into regional TDM, they provide realistic projections of future traffic volumes for a region. The ARC TDM forecasts data for 2015, 2020, 2030, and 2040 was used in the growth rate analysis. Roadway segments with corresponding traffic data were selected for each year and the AGR from 2015 – 2020 and 2020 – 2040 were calculated. The average annual growth rate for the 2020 - 2040 projection was 1.57%.

- County Population and Growth Rates

In step with the rest of the metropolitan Atlanta area, Fayette County has experienced significant growth in population over the past few decades. Figure 1.5 shows the total population from 1830 to 2016 based on the latest estimates from the American Community Survey (ACS).

In 2017, Fayette County adopted a new Comprehensive Plan, which included a population project based on the ARC's population projections. The data extracted from ARC's models showed that Fayette County's population will increase from 110,975 to 143,255 between 2015 and 2040. This projection represents a 29 percent increase (32,280 people) and an annual growth rate of 1.16 percent.

Figure 1.5 - Fayette County Historic Population



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Population	5504	6,191	8,709	7,047	8,221	8,605	8,728	10,114	10,966	11,396	8,665	8,170	7,978	8,199	11,364	29,034	62,415	91,263	105,344	109,495
Year	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2016

- Proposed Future Annual Growth Rates

During the development of concepts for the SR 279 corridor, an AGR will be used to project the existing traffic volumes to a future base year and design year to determine the viability of recommendations. Based on the review of GDOT historic data and the ARC 2015, 2020, 2030, and 2040 models, the proposed AGR for the 2020 and 2040 traffic projections were rounded to 1.5% in order to conduct a conservative future analysis and account for any additional traffic factors that may arise.

Traffic Operations Analysis

Capacity analyses for SR 279 were conducted based on the procedures defined by the Transportation Research Board's Highway Capacity Manual, 2010 edition (HCM 2010) methodology using Synchro™ (Version 9) and HCS 2010™ software. The HCM 2010 was used to define the overall Level of Service of the corridor and the individual study intersections. Level of Service (LOS) is defined as a qualitative measure that describes operational conditions and motorists perceptions within a traffic stream. Level A represents the best quality of traffic where the drive has the freedom to drive with free flow speed and level F represents the worst quality of traffic when the traffic flow breaks down.

Level of service is defined based on the measure of effectiveness (MOE). Typically three parameters are used under this and they are speed and travel time, density, and delay. One of the important measures of service quality is the amount of time spent in travel. Therefore, speed and travel time are considered to be more effective in defining LOS of a facility. Density gives the proximity of other vehicles in the stream. Since it affects the ability of drivers to maneuver in the traffic stream, it is also used to describe LOS. Delay is a term that describes excess or unexpected time spent in travel. For metropolitan areas, an acceptable Level of Service during peak hours is LOS D, which indicates a tolerable delay for the average road user.

For highway capacity, the LOS is defined by density. In the case of two-lane highways, the roadway LOS is defined based on its classification, average travel speed, time-spend-following, and free-flow speed. For intersections, the LOS is defined by controlled delay. LOS for unsignalized intersections, with stop control on the minor street only, are reported for the side street approaches. The LOS criteria for signalized, unsignalized, and roundabout intersections are based on average controlled delay and are given in Table 1.8.

Table 1.8 - Level of Service Criteria for Intersections

	SIGNALIZED	UNSIGNALIZED	ROUNDABOUT
LEVEL OF SERVICE	CONTROL DELAY (SEC)	CONTROL DELAY (SEC)	CONTROL DELAY (SEC)
A	≤ 10	≤ 10	≤ 10
B	> 10 AND ≤ 20	> 10 AND ≤ 15	> 10 AND ≤ 15
C	> 20 AND ≤ 35	> 15 AND ≤ 25	> 15 AND ≤ 25
D	> 35 AND ≤ 55	> 25 AND ≤ 35	> 25 AND ≤ 35
E	> 55 AND ≤ 80	> 35 AND ≤ 50	> 35 AND ≤ 50
F	> 80	> 50	> 50

Operational conditions were evaluated for the 2018 Existing conditions during the morning and afternoon peak hours. The Levels of Service (LOS) and delay per intersection are shown in Table 1.9, and the roadway LOS and volume-to-capacity ratio (V/C) are shown in Table 1.10.

Table 1.9 - 2018 Existing Intersection Level of Service (LOS)

	SR 279[1]	TRAFFIC CONTROL	AM PEAK		PM PEAK	
1	AT OLD FORD ROAD	SSSC (NB)[1]	C (21.5 s)		C (22.3 s)	
2	AT SR 314/W FAYETTEVILLE ROAD	TRAFFIC SIGNAL	C (30.6 s)		C (30.1s)	
3	AT KENWOOD ROAD	SSSC (NB/SB)[1]	B (13.6 S)	B (12.8 s)	C (18.7 s	C (17.3 s)
4	AT OLD ROAD	SSSC (NB)[1]	C (16.1 S)		C (16.6s)	
5	AT SR 85	TRAFFIC SIGNAL	C (21.9 S)		C (21.5 s)	

1. FOR ENTIRE CORRIDOR SR 279 ORIENTATION IS EB/WB AND SIDE STREETS ARE NB/SB.
2. FOR SIDE STREET STOP CONTROLLED (SSSC) INTERSECTIONS, LOS ARE REPORTED FOR THE SIDE STREET APPROACHES ONLY.

As shown below, under the 2018 existing traffic conditions, all of the study intersections are operating at an acceptable LOS during the morning and afternoon peak hours. In terms of roadway capacity, SR 279 is operating at an acceptable LOS for all segments during morning and afternoon peak hours with the exception of SR 279 between SR 138/Jonesboro Road and SR 314/W Fayetteville Road during the afternoon peak hour.

Table 1.10 - 2018 Existing Peak Hour Roadway Capacity Level of Service (LOS)

SR 279	AM PEAK		PM PEAK	
	LOS	V/C	LOS	V/C
FROM FAYETTE-FULTON COUNTY LINE TO SR 314	C	0.30	E	0.64
FROM SR 314 TO KENWOOD ROAD	B	0.12	C	0.23
FROM KENWOOD ROAD TO SR 85	B	0.17	C	0.27

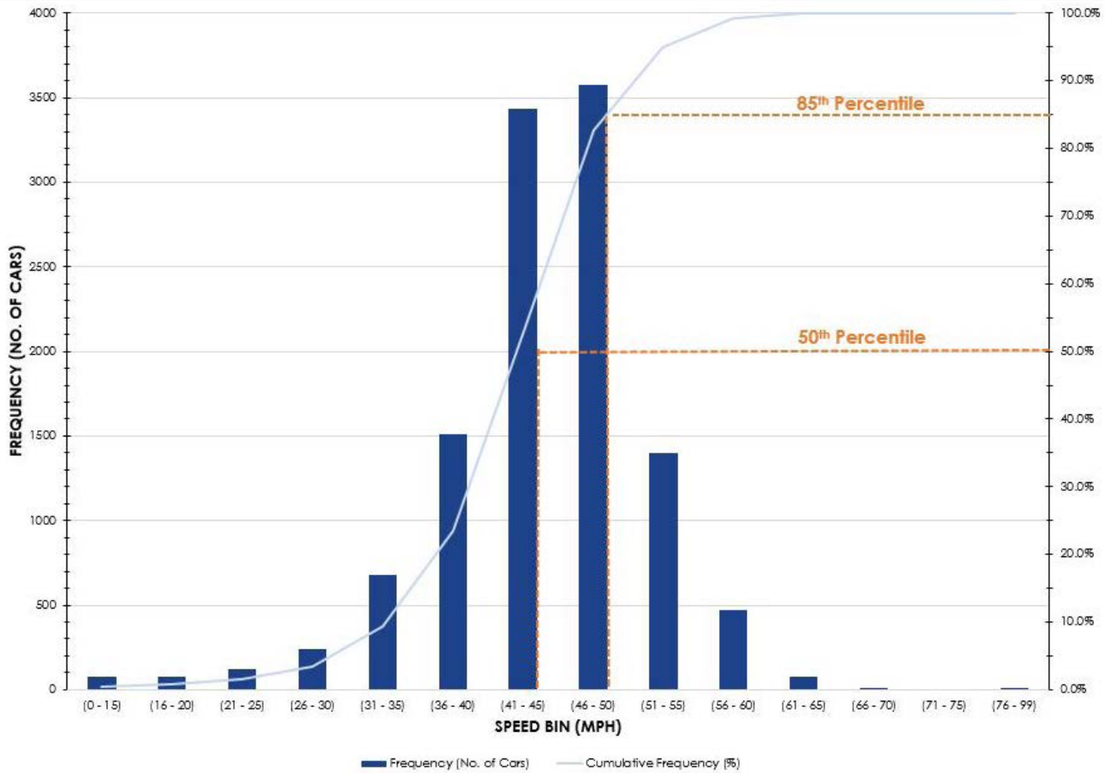
V/C - VOLUME TO CAPACITY RATIO

Safety Analysis

- Speed Study -

Vehicle speeds were obtained for SR 279 eastbound and westbound travel directions in April 2018 at three points along the corridor. Figure 1.6 shows the average cumulative speed distribution along SR 279. As shown, the 85th percentile speed along SR 279 is approximately 50 mph. The 10 mph pace along the corridor was 41 mph to 51 mph. Given the posted speed limit along SR 279 is 55 mph, these results indicate that vehicles along the corridor are not typically exceeding the posted speed limit.

Figure 1.6 - SR 279 - Cumulative Speed Distribution (Average)



- Crash Data -

In order to identify crash trends and safety characteristics for the corridor, crash data was obtained from the Georgia Electronic Accident Reporting System (GEARS) database.

Crash records were collected along SR 279 between November 2013 and October 2018. Crash Data by Type, 5-Year Crash History, and Time-of-Day are shown in Figure 1.7, Figure 1.8 and Figure 1.9, respectively. Crashes relative to State average are provided in Table 1.11.

Figure 1.7 - SR 279- 5 Year Crash Data by Type

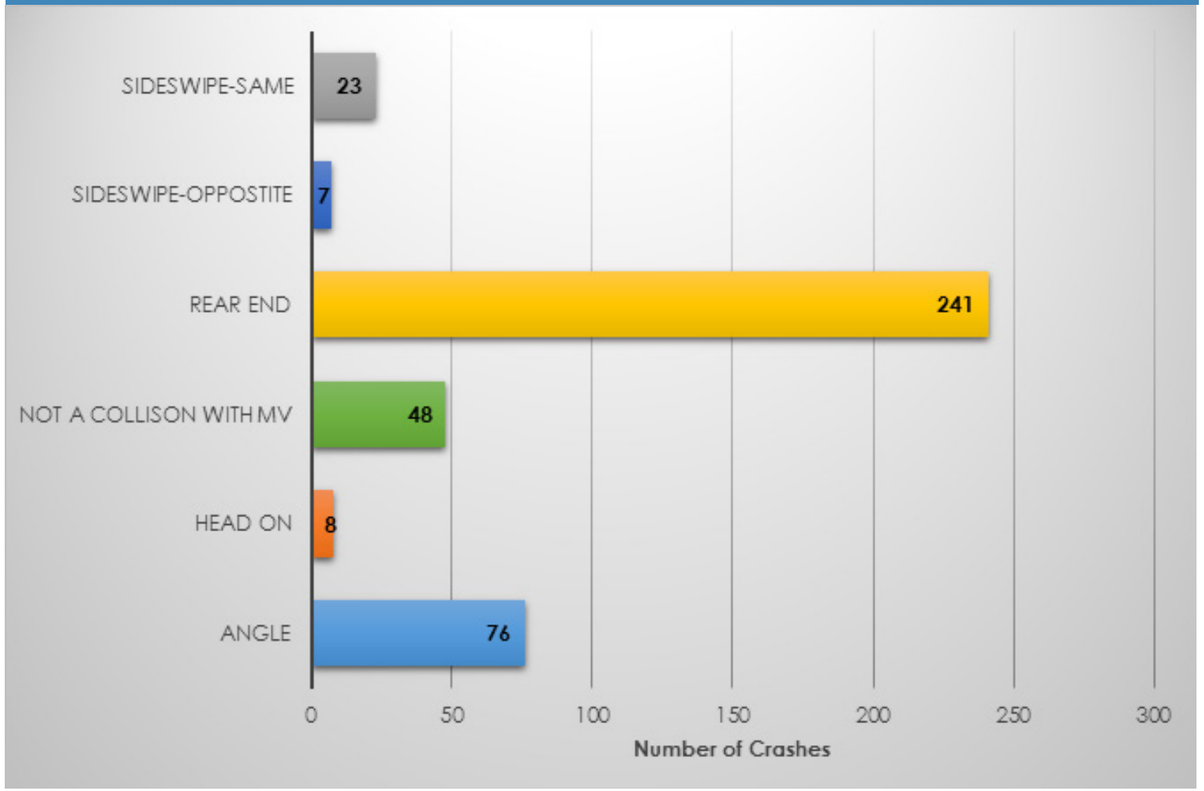


Figure 1.8 - SR 279 - 5 Year Crash History by Type

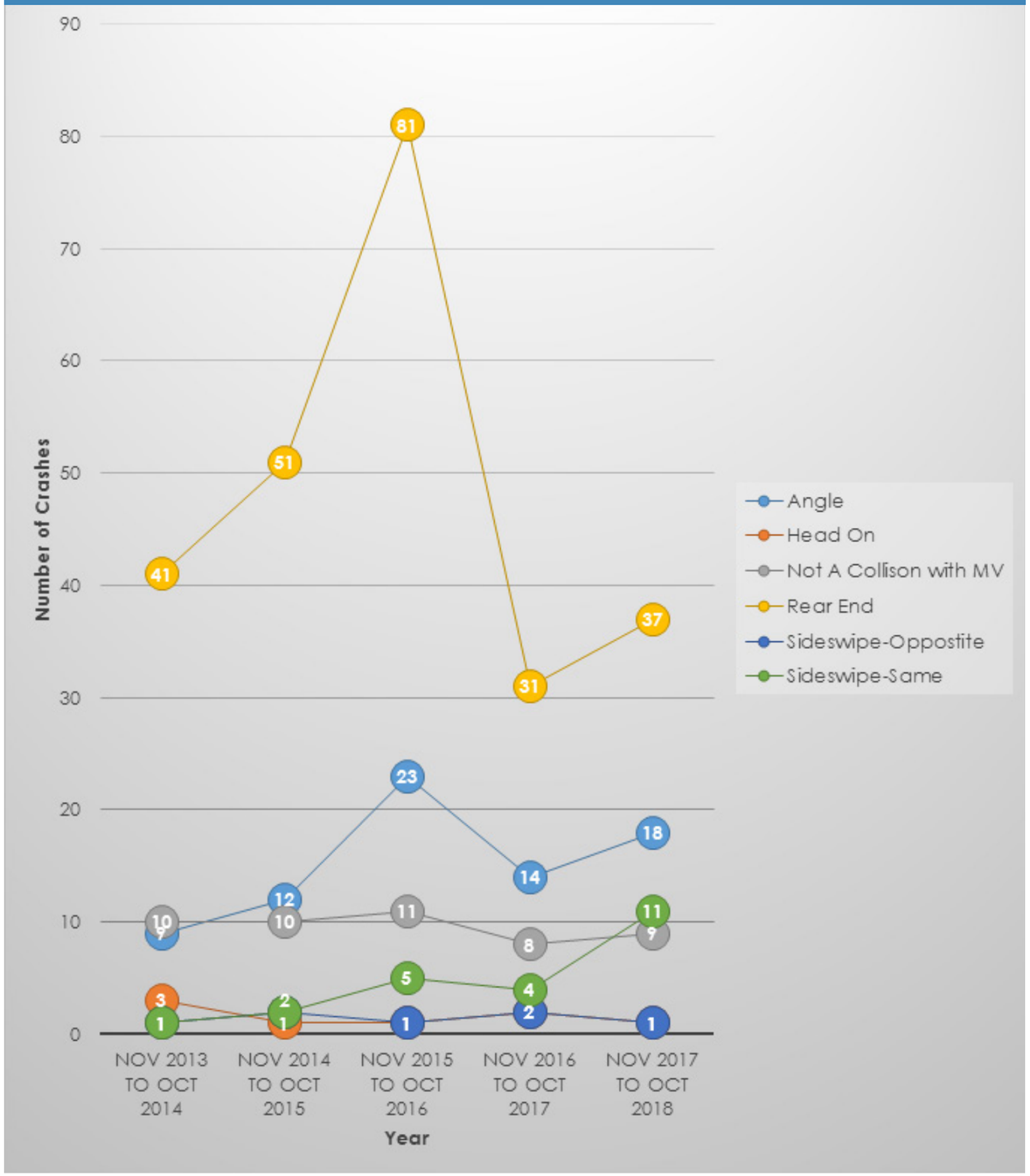
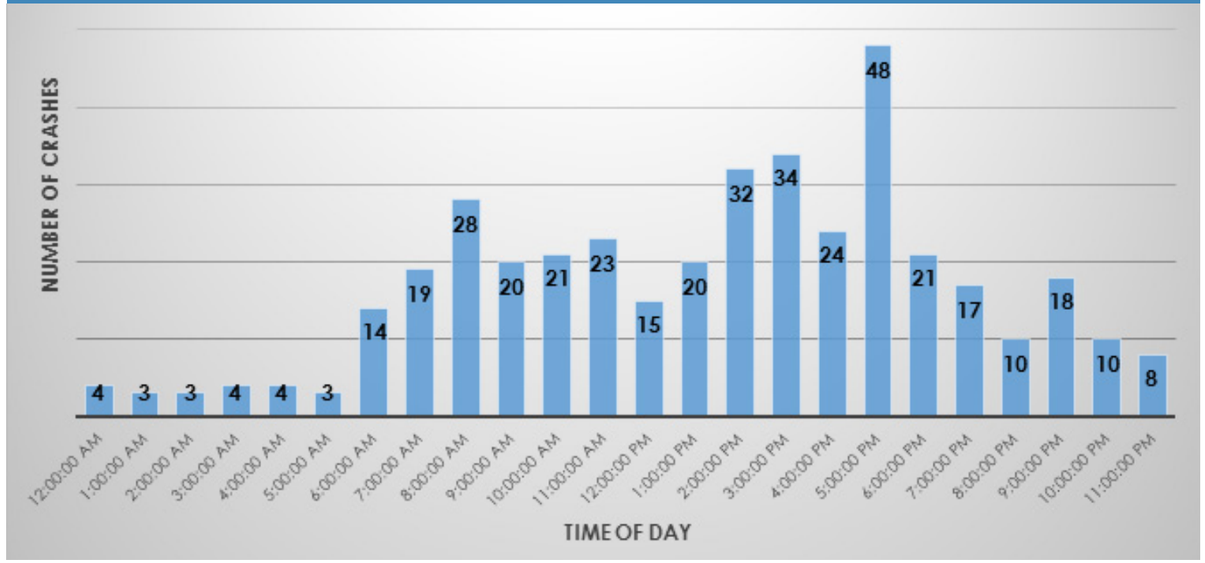


Figure 1.9 - SR 279 - Total Crashes by Time-of-Day



This data demonstrates that there has been a substantial number of crashes along this corridor, with the majority of the crashes being contributed to rear end and angle crashes. The average number of crashes occurring on SR 279 is 80 crashes per year. Approximately 32% of the crashes during this time period resulted in one or more injuries, and there was one fatality which occurred south of SR 314 as a result of a head on crash that involved three vehicles.

There was one crash involving a bicyclist on SR 279 at its intersection with Morning Springs Walk. SR 279's crash rates indicate that its rate of total crashes and crashes involving injuries and number of injuries is higher than the statewide average for minor arterials. These findings indicate that there is a recognizable need to implement techniques to reduce the frequency and severity of crashes along the corridor.

As expected, the signalized intersections along the corridor have the higher number of crashes for the five-year period. Controlling for signalized intersection, the five unsignalized intersection with the highest number of crashes are Dixie Lee On Drive, Helmer Road, Lafayette Drive, Kenwood Road, and Morning Springs Walk.

Rural-two lane typical sections, such as SR 279, typically results have higher frequency of rear end and angle crashes, with contributing factors being the number of access points along the corridor, high turning volumes from a single shared lane, and restricted sight distance.

Figure 1.10 - SR 279 - Total Crashes per Intersection

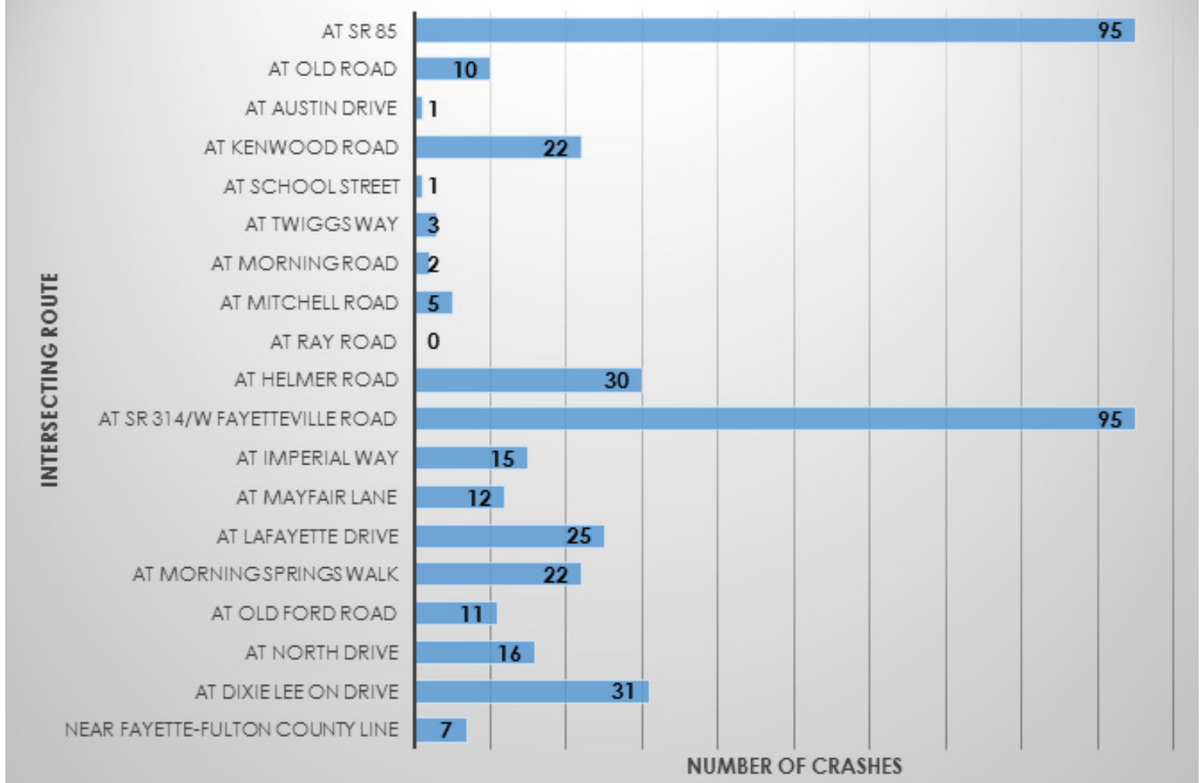


Table 1.11 - SR 279 Crash Rates Relative To State Averages

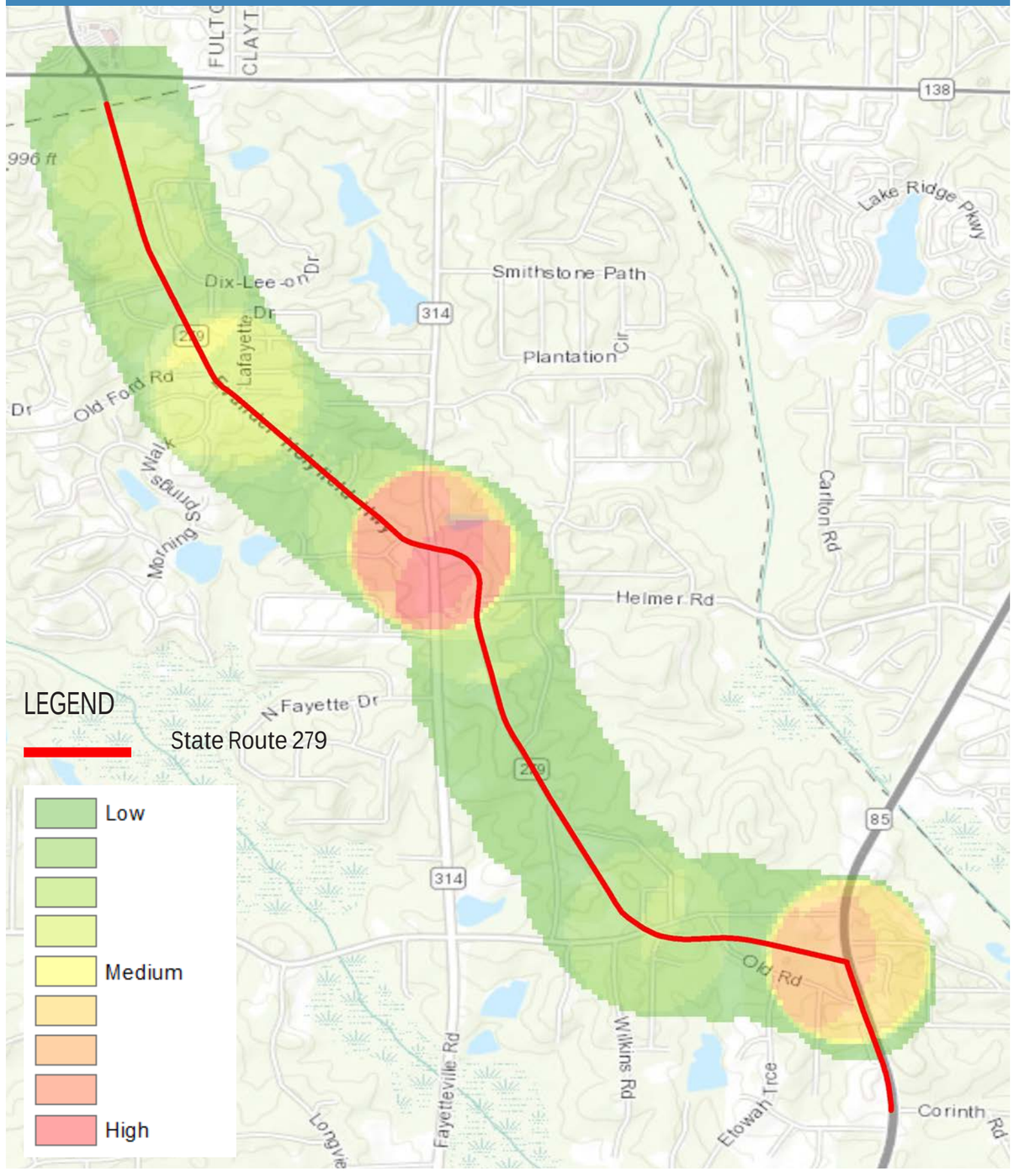
	TOTAL CRASHES (5 YEARS)	CRASH RATE [1]	STATEWIDE AVG. (2016) [1]
TOTAL CRASHES	403	525	506
TOTAL INJURY ACCIDENTS	130	169	124
TOTAL INJURIES	198	258	186
TOTAL FATAL ACCIDENTS	1	1	1.72
TOTAL FATALITIES	1	1	1.86

1. Crashes per 100 million vehicle-miles of travel.

Map 1.10 represents a heat map of crashes along State Route 279. The intersections are considered hot-spots for crashes with higher number of accidents in the red zones.

Note - The study did not pull crash data for the intersection of SR 279 and SR 138.

Map 1.10 - State Route 279 - Crashes Heat Map



1.6 Environmental Due Diligence

The purpose of the survey was to identify sensitive environmental land uses that may provide corridor improvement opportunities and/or constraints. The survey included agency database research as well as on site reconnaissance of the corridor conducted on December 11, 2018. Sensitive environmental land uses that were surveyed for include natural, cultural, community, and physical resources in the general vicinity of the SR 279 corridor.

The SR 279 study corridor coincides with State Route 85 (SR 85) from its southern terminus at Corinth Road to approximately 2,640 feet (0.5 mile) north where SR 279 terminates at the intersection at SR 85. In this 0.5 mile section of the study corridor, the existing roadway consists of four travel lanes, two in each direction, with an approximate 30-foot depressed, grassed median, with rural shoulders and right and left turn lanes as needed. Land use along this portion of the study corridor is primarily commercial with some forested use.

From the point where SR 279 terminates at the intersection at SR 85 northeasterly to the study corridor's northern terminus at the Fayette/Fulton County Line, the SR 279 study corridor consists of two travel lanes, one in each direction, undivided with right and left turn lanes throughout the study corridor. Land use along this portion of the study corridor is primarily residential with some institutional, agricultural, and forested use.

Prior to design and construction in the area, coordination with appropriate approval agencies would be needed to determine type of environmental and historic resources that need to be protected in the jurisdiction. The State Route 279 Study Corridor Due Diligence report along with the Environmental Resources Location map are attached in the appendix.

Image 1.4 - Unnamed Tributary to Morning Creek

Image 1.5 - Redemption Fellowship Church

Image 1.6 - Example of Potential Historic Resource Along Study Corridor

1.7 Utilities

This section of the report presents an inventory of existing utilities along the corridor. Fayette County must conduct a detailed analysis prior to any construction. The location of the lettered photographs are shown on Map 1.11.

A
Project Corridor Starts - Looking South

B
Water Vault

C
Solar Powered Pipeline AGL Monitoring Station

D
Gas Pipeline AGL Marker

E
Signalized Intersection With Pedestal Concrete Poles - Looking South

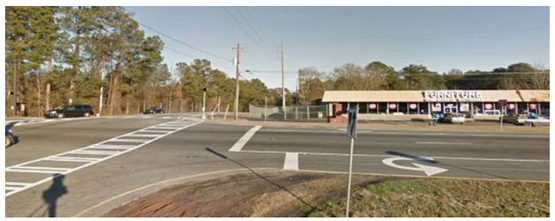
F
Gas Pipeline Looking NW

G
Transmission Line Looking SE

H
Hope Funeral Home & Cemetery

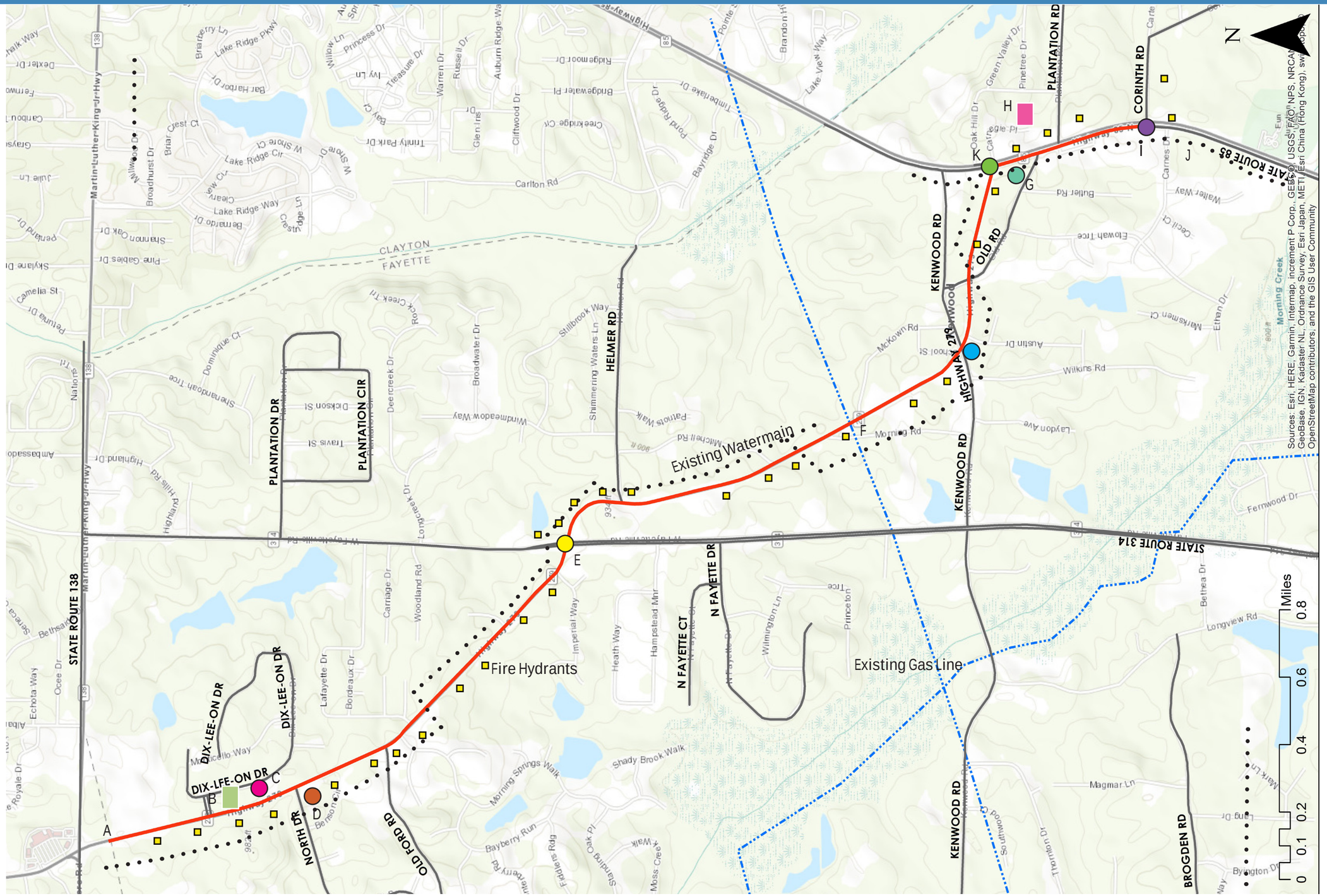
I
Signalized Intersection Of SR 279 and SR 85 - Looking North

K
Fiber Optic Marker NEside



L
Looking East Into Intersection

Map 1.11 - SR 279 - Utilities



1.8 Summary

SR 279 is an important roadway in the northeastern quadrant of Fayette County providing mobility to Fulton County. It also provides connectivity for the abutting property owners and intersecting local streets. SR 279 has one through lane, typically 11 feet wide for each direction of travel (turn lanes are provided at a few side streets) and is posted with a 55 mph speed limit. There are two signalized intersections along the corridor, at SR 314/W Fayetteville Road and at SR 85. The only transit service is demand responsive provided by Senior Services and different private carriers.

There are no sidewalks or bicycle facilities along the corridor. The abutting land use is primarily residential with commercial zoning being clustered in the south east section of the study corridor. An investigation of the demographic make-up of the citizens within 1-mile of SR 279 (data source was the 2016 American Community Survey at the block grant level) reveals that the male to female ratio is 53.5 to 46.5 percent; approximately 23.3% of the citizens are white and 68.7% are African American; approximately 0.5% have not completed high school; and the mean median household income is $64,836.

The average annual daily traffic along SR 279 ranges from approximately 6,775 vehicles to 19,175 vehicles with the highest volume of traffic occurring between SR 138 and SR 314. The daily truck percentage along the corridor ranges from 3.5% to 6.5%. The morning and afternoon peak hours begin at 7:00 AM and 5:00 PM, respectively. Under the existing traffic conditions, all study intersections are operating at an acceptable LOS during the morning and afternoon peak hours. In terms of roadway capacity, the corridor itself is operating at an acceptable LOS except between SR 138 and SR 314, which is currently a LOS E. From collected speed data, the 85th percentile speed is 50 mph.

For the recent 5-year period ending October 2018, an analysis of crash records from GEARS revealed an average of 80 crashes per year with one fatality south of SR 314 as a result of a head on crash involving 3 vehicles. The most crash occurrences were rear-ends and the second most being angle collisions. The majority of the crashes are clustered along the signalized intersections. Highest number of crashes at unsignalized intersections are at Dixie Lee On Drive, Helmer Road, Lafayette Drive, Kenwood Road, and Morning Springs Walk. Approximately 32% of the crashes resulted in an injury. The crash rates for SR 279 (total and injury) is higher than the statewide average for minor arterials.

An environmental survey revealed that SR 279 is within the Flint River Upper 6 Watershed and that one stream (an unnamed tributary to Morning Creek) crosses the corridor. No regulatory wetlands or floodplains were identified. Preferred habitats of federal and state protected species were identified. In addition to three churches, one cemetery and one school, six potential historic resources were recognized. Investigation of the corridor has identified one significantly publicly owned park (Kenwood Park) and no recreation area or wildlife and waterfowl refuge. Three community resources, two underground storage tanks (USTs) and three potential contamination sites were identified along the project corridor. No other potential contamination sites such as landfills or dry cleaners have been identified along the SR 279 study corridor. Ultimately, prior to any construction activities detailed studies would need to be conducted and coordination completed with the appropriate environmental reviewing agencies.

Chapter 2:
Needs Assessment

2.1 Introduction - Page 27
This section of the report introduces the needs assessment report and discusses the structure of the document.

2.2 Vision & Goals - Page 28
The visions and goals for the study corridor are defined in this section.

2.3 Methodology & Analysis - Page 29
This segment discusses the methodology, qualitative and quantitative tools used in identifying the needs assessment.

2.4 Next Steps - Page 35
This section identifies the next steps and action items for the planning process.

2.1 Introduction

The Needs Assessment report is the second chapter of the State Route 279 Transportation Corridor Study. The precedent to this document is the Existing Conditions Report which detailed the current conditions of the area around the corridor, including demographic character, land use, transportation infrastructure, operations and safety, utilities and environmental due diligence.

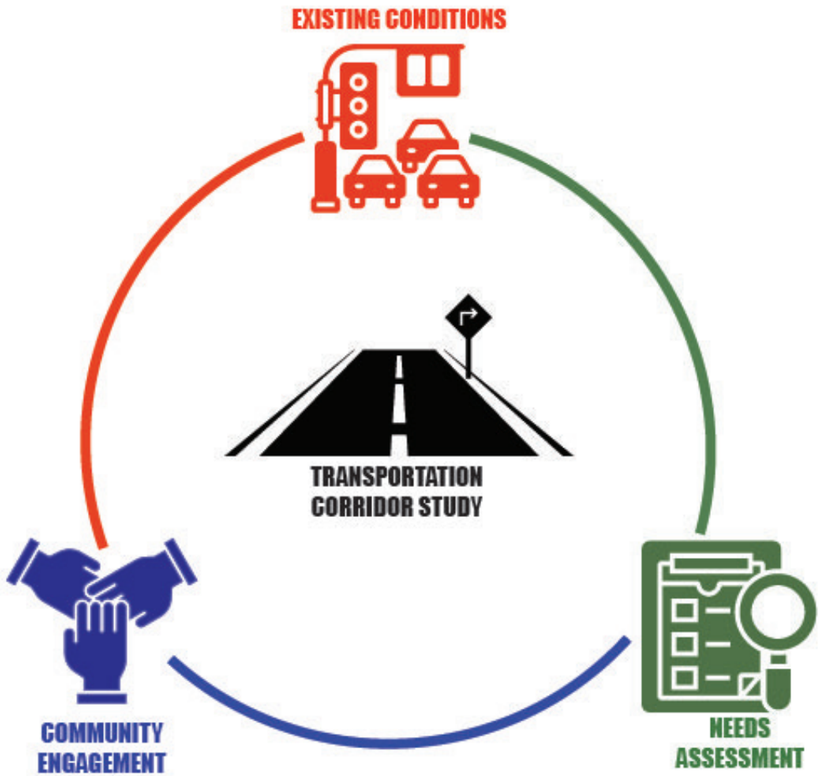
With the Existing Conditions Report in place, the Needs Assessment Report is useful in identifying insights into the current and future needs of the corridor. The intent of the Needs Assessment Report is to take a comprehensive look at the existing conditions, future demographic and population projections, and other forecasts including public engagement to help understand the needs along the corridor.

SR 279 is an approximately 4.25-mile state route, extending from State Route 85 tothe Fulton/Fayette County Border and includes the possibilty of bringing SR 279 and Corinth Road together in a single intersection.However, the road lacks adequate design and capacity for current and future traffic volumes and pedestrian demands.

Image 2.1 - SR 279 Public Involvement Open House

This report helps recognize accessibility and mobility issues by identifying the existing as well as future needs. Needs assessment can be determined by qualitative as well as quantitative tools and resources. This includes not only the use of data and models to understand future development, population projections, and travel demand in the area, but also using community participation and stakeholder engagement to identify needs of the citizens.

Graphic 2.1 - Three Pillars of the Corridor Study



The sections of this chapter provide introductory information about the plan, identifies the visions and goals for the study corridor and discusses the methodology, qualitative and quantitative tools used in identifying the needs assessment. The chapter further outlines detailed public comments and SWOT (Strengths, Weaknesses, Opportunities and Trepidations*) analysis and identifies the next steps and action items for the planning process.

**The word 'trepidation' was used in place of 'threat'*

2.2 Vision & Goals

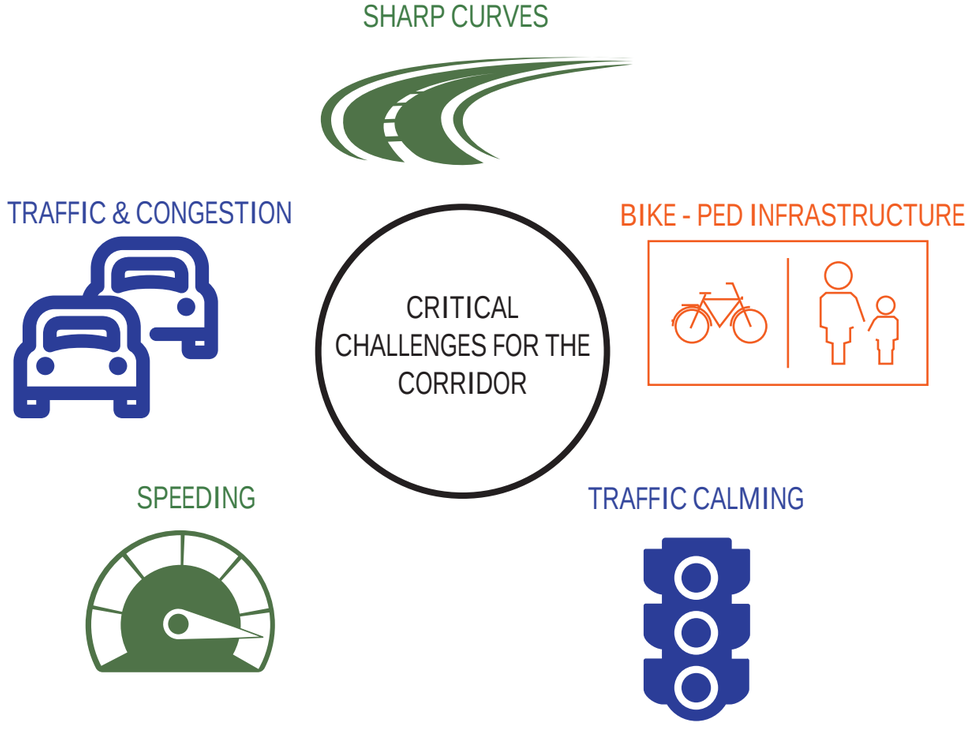
The aim of the corridor study is to identify traffic and transportation solutions from a holistic perspective to:

- Ensure safety
- Provide solutions for congestion and delay
- Identify prospects for multi-modal uses
- Create sustainable infrastructure improvements
- Promote economic development

To further the development of the corridor study, the planning team, County staff and stakeholder committees worked to draft a vision statement for the plan as well identify a set of goals. The vision and goals were corroborated through public involvement effort, where total of 195 citizens participated and over 300 comments were received at the first Public Information Open House (PIOH).

The challenges identified for the corridor are displayed in Graphic 2.2. Detailed comments and charts are attached in the appendix.

Graphic 2.2 - Priority Challenges for the Corridor



The SR 279 Corridor Study envisions to provide a framework to improve quality of life for citizens living not only around the corridor but also for County residents and visitors using the corridor. The aim of the study is to facilitate mobility, ensure safety and improve efficiency across all modes of transportation in cooperation with local, regional, state, and federal partners. This framework will be established through the preliminary concepts and preferred alternatives.

Graphic 2.3 - Vision and Goals for the Corridor

VISION	GOALS
ENSURE SAFETY	• Prioritize projects that improve safety, acknowledging all user groups
PROVIDES SOLUTION FOR CONGESTION & DELAY	• Build corridor capacity to anticipate future needs • Improve connectivity and reliability regardless of mode or purpose
IDENTIFY PROSPECTS FOR MULTI-MODAL USES	• Consider mobility needs of all population groups when investing in transportation projects
CREATE SUSTAINABLE INFRASTRUCTURE IMPROVEMENTS	• Invest in rehabilitation and maintenance of existing transportation infrastructure • Prioritize projects to maximize benefits
PROMOTE ECONOMIC DEVELOPMENT	• Use transportation investments to encourage development/ redevlopment in strategic locations throughout the County

2.3 Methodology & Analysis

The transportation corridor study requires an aggregate of information from a variety of sources, especially since transportation is not only about infrastructure and engineering, but more about the community using the corridor. Therefore, the process of developing the needs assessment is a balance between quantitative tools and qualitative information acquired through community outreach and engagement. This section describes tools and methodologies used to identify needs for the corridor.

Quantitative Analysis

Various data sources and tools were used throughout the analysis. Data sources such as existing transportation, land use and demographic data were used in combination with travel demand modeling and crash data to develop the basis for existing and future needs. Some of the data sources are spatial and mapped through Geographic Information Systems (GIS) for analysis. All data presented are estimates and have a margin of error value associated with it. Detailed quantitative analysis can be found in the Existing Conditions Report.

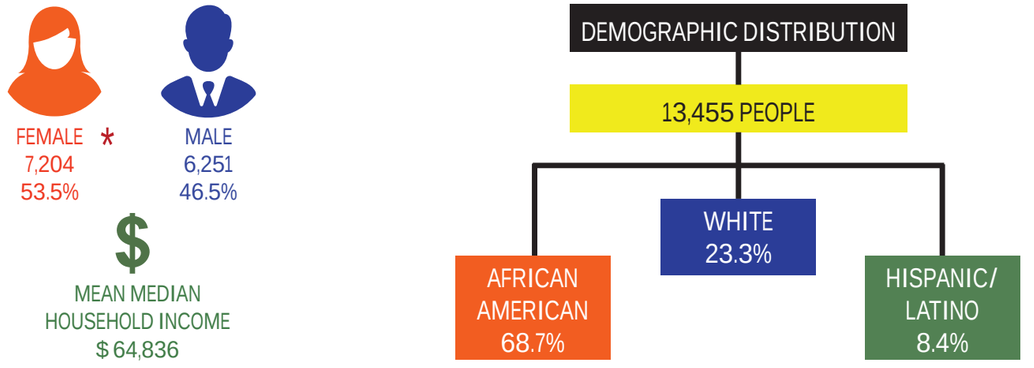
- **Demographic Character -**

Graphic 2.4 represents the demographic character of the corridor. For this analysis, the 2016 American Community Survey (ACS) – 5 Year estimates data was used at the block group level (the smallest scale of data availability) for block groups that included the SR 279 corridor.

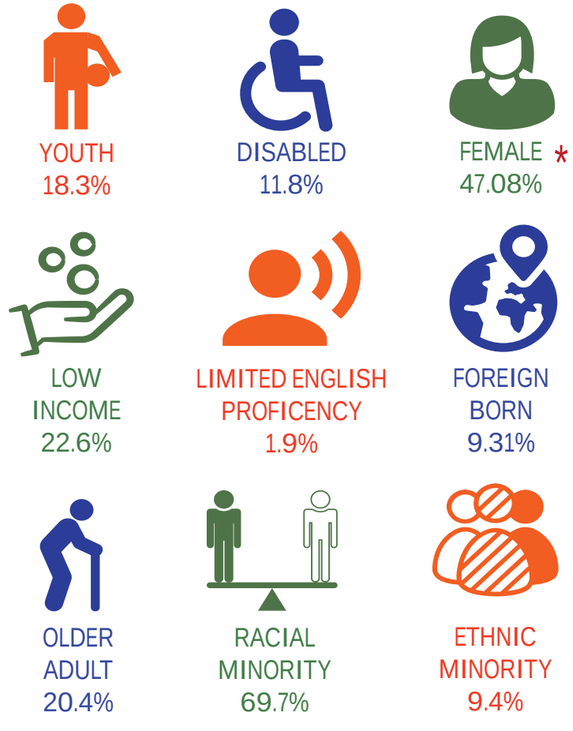
Title VI of the Civil Rights Act identifies 9 population categories that must be protected. The Atlanta Regional Commission (ARC) has two models to help counties, governments and private organizations to ensure inclusion and equity for these 9 population groups.

The model uses American Community Survey 5-Year population estimates for 2012-2016. SR 279 corridor lies in Fayette County's census tract 1401.01. The tract has an average cumulative score of 18 for the Protected Classes Model and an equity score of 6 for the Racial Minority, Ethnic Minority, and Low-Income Model. This means that according to the index, the corridor study area has a moderate rank, and is placed not too high or too low in the index.[1] Graphic 2.5 represents the ARC equity analysis. This analysis is crucial to bring equity and inclusivity to the corridor study.

Graphic 2.4 - Demographic Character



Graphic 2.5 - ARC Equity Analysis



[1] - For more in-depth understanding of the equity analysis, refer to Chapter 1 - Existing Conditions. Percentage values reflect percentage of population in the census tracts. Since Banks Road has two census tracts in concern, average values were estimated for the corridor.

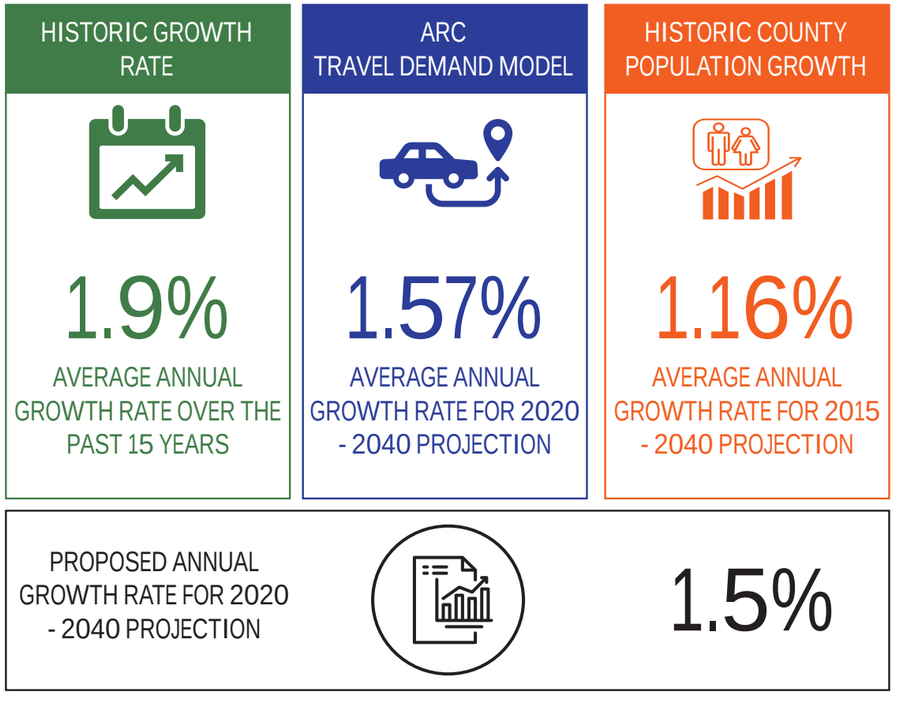
** - Values differ since ARC analysis was done at the census tract level while the analysis for this report was done at the block group level.*

- **Future Growth and Planned Developments -**

Reported traffic data from GDOT's Traffic Analysis and Data Application (TADA) and the ARC's Travel Demand model was used to establish historical traffic trends in the region and project future traffic growth along Sandy Creek Road. The historic population growth in Fayette County was also reviewed to establish projected traffic growth in the area. Graphic 2.6 represents the future growth projections.

Fayette County's SPLOST Project R-8, the East Fayetteville Bypass, is a programmed transportation improvement that will have a substantial impact of capacity and traffic condition in the area. The East Fayetteville Bypass is a proposed thoroughfare designed to reduce traffic congestion within the City of Fayetteville by providing an alternative north/south route across the east side of the County. The proposed project begins at the intersection of South Jeff Davis Road/North Bridge Road and County Line Road, runs in a northerly direction and terminates at the intersection of Corinth Road and Highway 85. The project is fully funded through 2004 SPLOST (special purpose local option sales tax) revenues.

Graphic 2.6 - Future Growth Projections



Note - For details on the modelling and growth projections, refer to Chapter 1 - Existing Conditions Report.

The addition of the bypass to Fayette County's road network will undoubtedly have an impact of traffic orientation in the area, and Banks Road will experience some change in traffic flow given its proximity to the new roadway. A benefit of the bypass to Banks Road will be that traffic from McDonough Road and Clayton County oriented to SR 314 and SR 85 will now have to option to use the bypass to connect to Corinth Road to Highway 85 and beyond versus using Banks Road as a cut through.

- **Roadway Infrastructure, Facilities and Existing Traffic Conditions -**

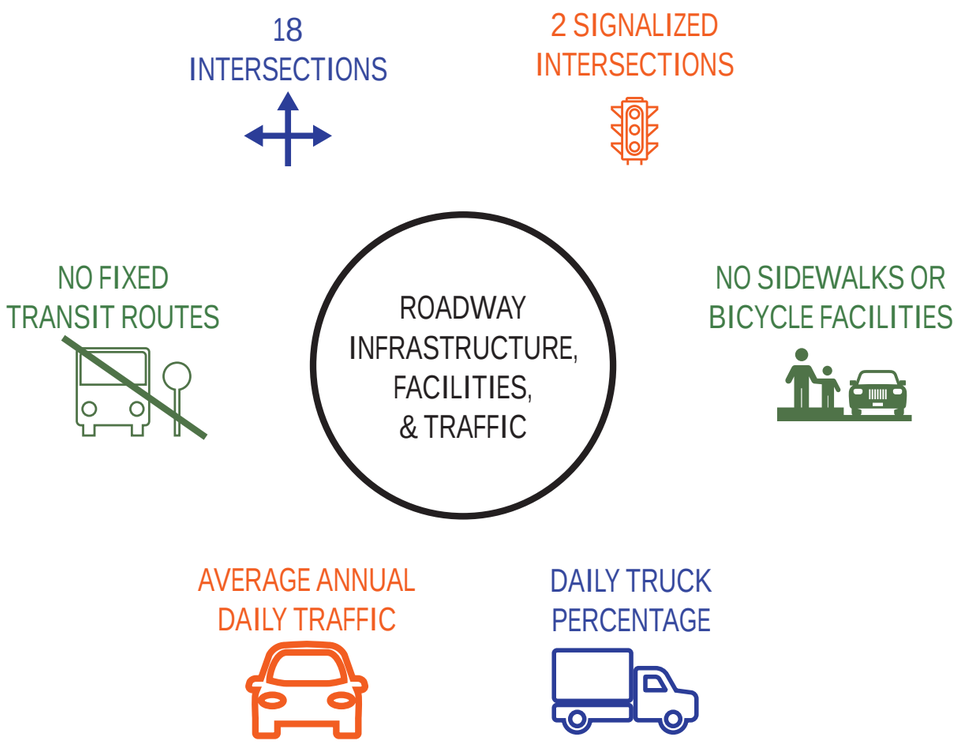
Per the Georgia Department of Transportation (GDOT) road classifications, State Route 279 is classified as a minor arterial.

Transportation data sources provide a real-time snapshot of existing conditions. The analysis is valuable for understanding current volumes, historic growth in traffic, and percent of the overall traffic that is made up of truck freight. Additionally, crash data analysis helps identify where some safety concerns may exist and is valuable in assessing where the most immediate improvements are required. Graphic 2.7 represents the roadway infrastructure and facilities along the corridor.

Roadway Infrastructure and Facilities Summary:
- One 11-foot wide travel lane in each direction
- Separate turn lanes at major intersections
- 18 intersections -two signalized

The are no sidewalk or bike facilities along State Route 279. State Route 279 primarily abuts residential parcels, and provides access to Kenwood Park. There is a pedestrian presence along State Route 279, and providing bike and pedestrian accommodations for residents to travel to and from Kenwood Park can be of great value to the area. The Master Path Plan identifies additional opportunities for path connections that will tie in to the county's overall a bicycle and pedestrian network.

Graphic 2.7 - Roadway Infrastructure and Facilities



Traffic Operations Analysis

Level of Service (LOS) is defined as a qualitative measure that describes operational conditions and motorists' perceptions within a traffic stream. Level A represents the best quality of traffic where the driver has the freedom to operate with free flow speed and level F represents the worst quality of traffic when the traffic flow breaks down. For metropolitan areas, an acceptable Level of Service during peak hours is LOS D, which indicates a tolerable delay for the average road user.

Operational conditions were evaluated for the 2040 "No Build" traffic conditions during the morning and afternoon peak hours. The "No Build" Levels of Service (LOS) and delay per intersection are shown in Table 2.1, which indicate how the study intersections would operate if no improvements were made to the corridor. To project traffic volumes for 2040, the aforementioned 1.5 % Annual Growth Rate was used.

Table 2.1 - 2040 "No Build" Peak Hour Intersection Level of Service (LOS)

	SR 279[1]	TRAFFIC CONTROL	AM PEAK		PM PEAK	
1	AT OLD FORD ROAD	TWSC (NB)[1]	F (67.7 S)		F (60.8 S)	
2	AT SR 314/W FAYETTEVILLE ROAD	TRAFFIC SIGNAL	E (66.8 S)		F (87.6 S)	
3	AT KENWOOD ROAD	TWSC (NB/SB)[1]	C (24.8 S)	C (16.7 S)	F (85.0 S)	F (51.4 S)
4	AT OLD ROAD	TWSC (NB)[1]	D (26.5 S)		D (31.5 S)	
5	AT SR 85	TRAFFIC SIGNAL	C (28.6 S)		E (67.6 S)	

1. FOR ENTIRE CORRIDOR STATE ROUTE 279 ORIENTATION IS EB/WB AND SIDE STREETS ARE NB/SB.
2. FOR TWO-WAY STOP CONTROLLED (TWSC) INTERSECTIONS, LOS ARE REPORTED FOR THE SIDE STREET APPROACHES ONLY.

By the 2040 design year, significant delays will be experienced by the side streets at Old Ford Road and Kenwood Road. Deficiencies begin to emerge at SR 314/W Fayetteville Road during both peak hours as well.

Road Capacity

Road capacity is defined as the maximum rate at which vehicles can pass through a given point in an hour under prevailing conditions; it is often estimated based on assumed values for saturation flow. The volume-to-capacity (v/c) ratio, also referred to as degree of saturation, represents the sufficiency of an intersection or roadway to accommodate the vehicular demand. A v/c ratio less than 0.50 generally indicates that adequate capacity is available and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and queuing conditions may occur. Once the demand exceeds the capacity (a v/c ratio greater than 1.0), traffic flow is unstable and excessive delay and queuing is expected.

The roadway capacity of State Route 279 was evaluated for two segments for the 2040 "No Build" traffic conditions during the morning and afternoon peak hours. The "No Build" Levels of Service (LOS) and v/c ratio are shown in Table 2.2, which indicate the roadway capacity of State Route 279 if no improvements were made to the corridor.

Table 2.2 - 2040 Horizon Peak Hour Roadway Capacity Level of Service (LOS)				
SR 279	AM PEAK		PM PEAK	
	LOS	V/C[1]	LOS	V/C[1]
FROM FAYETTE-FULTON COUNTY LINE TO SR 314	D	0.40	F	1.33
FROM SR 314 TO KENWOOD ROAD	B	0.19	D	0.35
FROM KENWOOD ROAD TO SR 85	C	0.25	D	1.33
1. V/C - VOLUME TO CAPACITY RATIO				

In terms of road capacity, State Route 279 from the Fayette-Fulton county line to SR 314 will significantly exceed its capacity during the afternoon peak hour by 2040. From SR 314 to SR 85 the road capacity will be adequate, which is in line with the significant dip in traffic volumes east of SR 314 on State Route 279.

- **Safety**

Road Safety Audits

Road Safety Audits (RSA) are required by Georgia Department of Transportation to locate any potential road safety issues and identify opportunities for improvements in safety for all road users. The RSA was conducted on State Route 279 from the Fayette-Fulton county line to SR 85 in April 2019.

The RSA was conducted over a half-day period by having the RSA Team observe the corridor and intersections on foot and a windshield survey. In addition, the team also examined crash data and public input responses for the corridor to help identify safety issues or concerns. Graphic 2.8 represents key takeaways from the RSA.

Image 2.2 - Team Conducting Road Safety Audits

Graphic 2.8 - Road Safety Audit Findings

ROAD CAPACITY COUPLED WITH NEED TO IMPLEMENT ACCESS MANAGEMENT MAKES SR 279 FROM SR 138 TO SR 314 A GOOD CANDIDATE TO BE 4 LANES

OVERGROWN VEGETATION ALONG THE CORRIDOR LIMITS SIGHT DISTANCE AT A NUMBER OF INTERSECTIONS

STEADY FLOW OF TRAFFIC ALONG SR 279 FROM SR 138 TO SR 314, KENWOOD ROAD INTERSECTION NEEDS TO BE IMPROVED

BASED ON THE CRASH SEVERITY ALONG SR 279 BEING HIGHER THE STATE AVERAGE, CONSIDERATION SHOULD BE GIVEN TO REDUCING THE 55 MPH SPEED LIMIT

For detailed assessment, refer to the Road Safety Audit document attached in the appendix. RSA Takeaways -

- There was a steady flow of traffic along SR 279 from SR 138 to SR 314.
- The road capacity coupled with need to implement access management makes SR 279 from SR 138 to SR 314 a good candidate to be 4 lanes median divided.
- Kenwood Road intersection needs to be improved.
- Overgrown vegetation along the corridor limits sight distance at certain intersections.
- Based on the crash severity along SR 279 being higher the state average, consideration should be given to reducing the 55 mph speed limit.

Crash Rate Analysis

Crash rates describe the number of crashes in a given period as compared to the traffic volume (or exposure) to crashes. Crash rates are calculated by dividing the total number of crashes at a given roadway section or intersection over a specified time period by a measure of exposure. Crash rate analysis typically uses exposure data in the form of traffic volumes or roadway mileage. The crash rate is calculated to determine relative safety compared to other similar roadways, segments, or intersections.

The benefit of crash rate analysis is that it provides a more effective comparison of similar locations with safety issues. This allows for prioritization of these locations when considering safety improvements with limited resources. Table 2.3 shows the roadway crash rate along State Route 279.

Table 2.3 - State Route 279's Crash Rate

	SR 279 5-YEAR CRASHES	SR 279 CRASH RATE[1]	STATEWIDE AVG CRASH RATE (2017)[1]
ALL CRASHES	232	308	506
TOTAL NON-FATAL INJURY CRASHES	74	98	124
TOTAL FATAL CRASHES	1	1.33	1.7
1. CRASHES PER 100 MILLION VEHICLE-MILES TRAVELED.			

State Route 279's crash rates indicate that its rate of total crashes and crashes involving injuries falls below the statewide average; however, the overall number of crashes supports the development of strategies to reduce crashes. Moreover, there were two bike-pedestrian crashes on State Route 279 between SR 138 and SR 314, which calls for the need for bike/ped accommodations.

For the intersection crash rates, statewide crash rate data was not available for a comparative analysis; consequently, the intersection crash rates for all four Fayette County Corridor Studies (State Route 279, Sandy Creek Road, Tyrone Road – Palmetto Road and Banks Road) were used to normalize the crash rate data. When combined, the crash rate for the 3rd quartile, or 75th percentile was 1.39 per 100 million entering vehicles.

For State Route 279, the following intersections fell above the 75th percentile:

- State Route 279 and SR 314/W Fayetteville Road
- State Route 279 and Helmer Road
- State Route 279 and SR 85

Select Link Analysis

The Fayette County Comprehensive Transportation Plan used the ARC Travel Demand Model to analyze 12 key road segments consisting of primary local or regional connectors using the 2017 base year during the afternoon peak period. The select link analysis was used to provide an understanding of origins and destinations. The preliminary results of the select link analysis were reviewed to identity the impact of regional traffic orientation on State Route 279 operations.

One of the links analyzed was SR 54 north of McElroy Road and the impact of the East Fayetteville Bypass. The analysis indicated that the destinations of trips on SR 54 include Jonesboro and beyond to Interstate 75 as well as Corinth Road to State Route 279 into Fulton County. The CTP Needs Assessment noted that it would be beneficial to make roadway improvements to Corinth Road and State Route 279 corridors to accommodate the rerouting of trips after the East Fayetteville Bypass is open to traffic.

Qualitative Analysis

The core of any transportation study are the citizens who use the corridor. Residents and stakeholders form an important voice for the existing and anticipated future challenges with the transportation system. Citizens were provided multiple platforms and avenues to engage in the development of the study, including traditional public meetings; stakeholder meetings; online surveys and an interactive project website. These efforts formed the basis of the qualitative analysis, which used a combination of tools to capture citizen views.

- **Stakeholder Committee Meetings -**

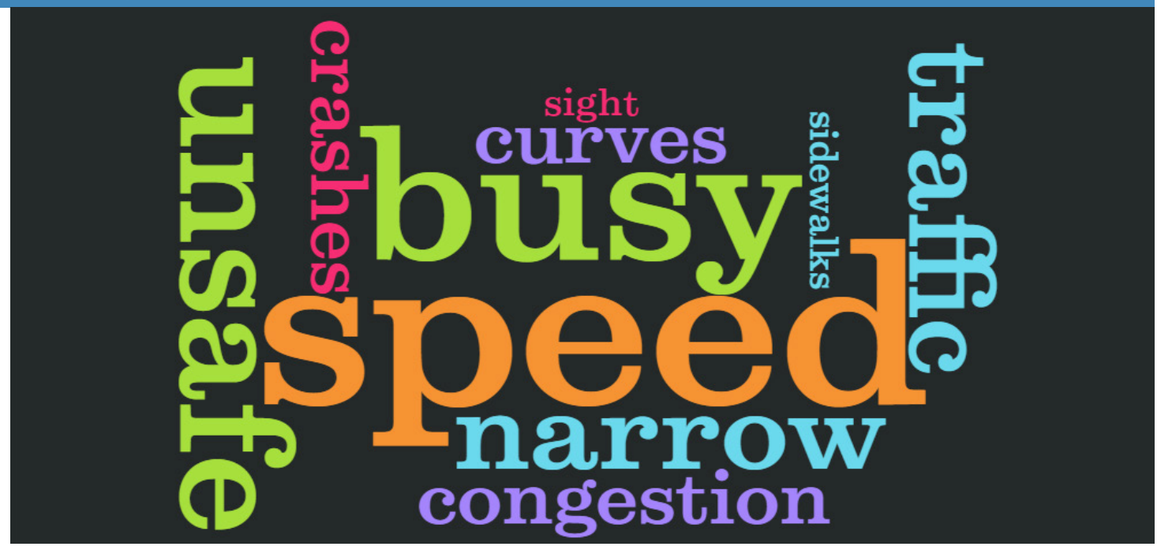
Two stakeholder committee meetings were organized - first at the onset of the project to help identify high level challenges and concerns for the corridor, and the second after the first Public Information Open House, to conduct an in-depth SWOT (Strengths, Weakness, Opportunities, Trepidation) analysis of the corridor and discuss potential projects and prioritization.

Image 2.3 - Photos from Stakeholder Committee Meetings 1 & 2

The first stakeholder committee meeting provided members the opportunity to identify specific transportation challenges within the corridor at the mapping station. Stakeholders were asked for input via an interactive Word Cloud and Kahoot questionnaire.

The second stakeholder meeting was workshop style where committee members and County staff worked on three activities and focused on the draft concepts and their priority. The activities included a SWOT Analysis, discussing the draft concepts and prioritizing them. The third activity was called "Show me the Money" where each stakeholder was given 1 million dollars in funds to invest in projects. Graphic 2.10 represents comments from these meetings.

Graphic 2.10 - Perceptions of the Existing Conditions of the Banks Road Corridor



- **Public Information Open House -**

The first Public Information Open House for the SR 279 corridor study was held on March 18, 2019 from 4 pm to 7 pm at the Fayette County Public Library in conjunction with the other three corridors also being studied by Fayette County.

Citizens were given various opportunities to provide feedback on the current conditions of the corridor, including sticker stations, comment cards and detailed comment forms. Graphic 2.11 represents highlights from the PIOH.

Graphic 2.11 - PIOH Comments

ALMOST
200
CITIZENS ATTENDED

CLOSE TO
350
INDIVIDUAL COMMENTS

CONGESTION

SPEEDING

SHARP CURVES

OTHER

**Other Includes Additional Lanes, Wider Shoulders, Traffic Signals, Street Lighing*

MOST IDENTIFIED CONCERN LOCATIONS IN RANK ORDER BASED ON THE COMMENTS RECIEVED

1. SR 279 & SR 85 INTERSECTION
2. SR 279 & MCKOWN STREET INTERSECTION
3. HELMER ROAD & SR 279 INTERSECTION
4. SR 279 FROM SR 314 TO SR 138
5. SR 314 & SR 279 INTERSECTION

Image 2.4 - Photos from PIOH

Review of Existing Documents

The Fayette County Transportation Corridor Studies builds on the momentum of previous plans and studies. To understand the County's vision and goals, the Fayette County Transportation Plan and the Fayette County Comprehensive Plan were reviewed.

2.4 Next Steps

After the County's current and projected future transportation needs along the Banks Road corridor were analyzed, the focus of the study was directed towards identifying solutions and projects that will meet these needs. These preliminary project concepts were presented to the citizens at the second Public Information Open House. More information of the outreach is outlined in Chapter 3 - Community Engagement.

The set of draft recommendations, will undergo a robust project evaluation and prioritization process. To evaluate and prioritize the projects, the team will develop criteria that align with the project's vision and goals, keeping these objectives as the driving force of the plan. Details of this section are in Chapter 4 - Concept Development.

Chapter 3:
Community Engagement

3.1 Introduction - Page 37
This section of the report introduces the community engagement report and discusses the structure of the document.

3.2 Stakeholder Committee - Page 37
The details of the stakeholder committee meetings are defined in this section.

3.3 Public Information Open House - Page 39
This segment discusses the proceedings and feedback recieved during the PIOH.

3.4 Target Group Outreach - Page 41
Targeted community outreach efforts are highlighted in this section.

3.5 Outreach and Tools - Page 42
Media and advertising outreach efforts are highlighted in this section.

3.6 Transportation Committee - Page 44
This section presents the highlights from the Transportation Committee meetings.

3.7 Formal Presentation - Page 44
Board of Commissioners and City Council formal presentations are described in this section.

3.8 Next Steps - Page 45
This section identifies the next steps and action items for the planning process.

3.1 Introduction

The core of any transportation study are the citizens who use the corridor. Residents and stakeholders form an important voice for the existing and anticipated future challenges with the transportation system.

Citizens were provided multiple platforms and avenues to engage in the development of the study, including traditional public meetings, stakeholder meetings, online surveys and an interactive project website. These efforts formed the basis of the qualitative analysis, which used a combination of tools to capture citizen views.

"Successful public participation is a continuous process, consisting of a series of activities and actions to both inform the public and stakeholders and to obtain input from **them which influence decisions that affect their lives."**

- Federal Highway Administration

Graphic 3.1 - Three Pillars of Community Engagement

3.2 Stakeholder Committee

The Stakeholder Committee is a critical element in the corridor studies process, ensuring that the plan and process encompasses the full range of community values and desires. The group was selected from six categories represented in Graphic 3.2.

Graphic 3.2 - Stakeholder Committee Group

Two stakeholder committee meetings were organized. The first, at the onset of the project to help identify high level challenges and concerns for the corridor. The second, after the first Public Information Open House, detailed out an in-depth SWOT (Strengths, Weaknesses, Opportunities and Threats) Analysis of the corridor and discuss potential projects and prioritization.

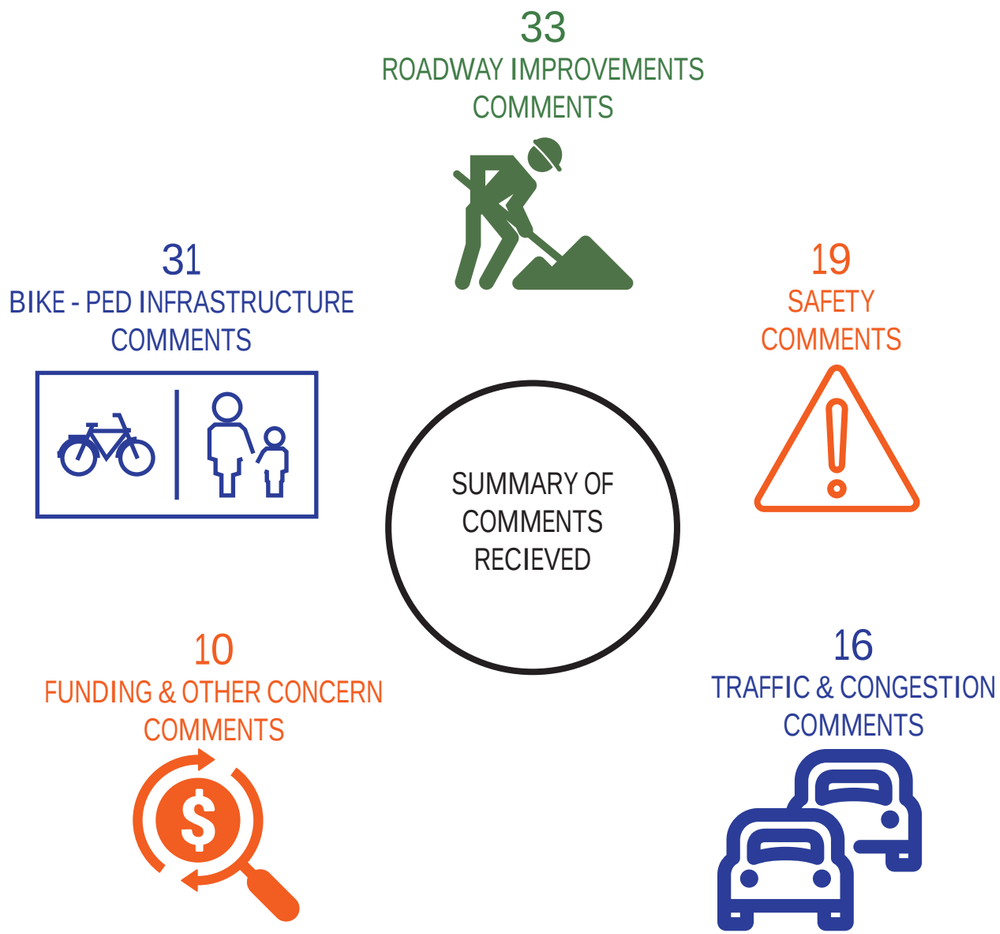
- **Meeting 1 -**

The first meeting was held on February 4, 2019 at the Kenwood First Baptist Church. Of the 19 members invited to participate, 12 attended. Represented in attendance were Fayette County, Georgia Department of Transportation, Non – Profits, Media, Institutions, Homeowners' Associations and Faith Groups were represented. Image 1 shows photographs from the meeting.

Image 3.1 - Stakeholder Committee Meeting 1

Prior to the meeting, stakeholders had the opportunity to identify specific transportation challenges within the corridor at the mapping station. Stakeholders were asked for input via an interactive Word Cloud and Kahoot questionnaire. Graphic 3.3 represents results from the activities and the overall meeting. Detailed comments and Word Cloud results are attached in the appendix.

Graphic 3.3 - Stakeholder Committee Meeting Comments & Feedback

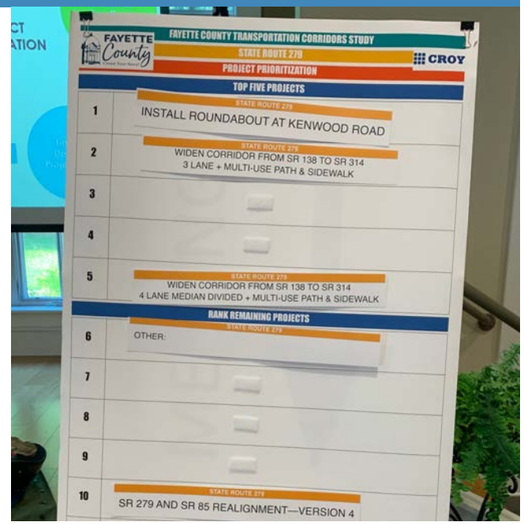


- **Meeting 2 -**

The second stakeholder committee meeting for the SR 279 corridor study was held on May 22, 2019 from 5 pm to 7 pm at the Fayette County Public Library. The stakeholder committee meeting was in conjunction with the other three corridors also being studied by Fayette County.

The meeting was workshop style where committee members and county staff worked on three activities, focused on the draft concepts and their priorities. The first activity was the SWOT Analysis (Strengths, Weakness, Opportunities, Threats). The second workshop activity was discussing the draft concepts and prioritizing them. The third activity was called “Show me the Money”. To aid further prioritization, each stakeholder was given 1 million dollars in funds to invest in projects. Image 3.2 shows photographs from the meeting. Detailed comments and Word Cloud results are attached in the appendix.

Image 3.2 - Stakeholder Committee Meeting 2



3.3 Public Information Open House

- **PIOH 1 -**

The first Public Information Open House for the SR 279 corridor study was held on March 18, 2019 from 4 pm to 7 pm at the Fayette County Public Library, in conjunction with the other three corridors also being studied by Fayette County.

Citizens were given various opportunities to provide feedback on the current conditions of the corridor, including sticker stations, comment cards and detailed comment forms. Graphic 3.4 represents highlights from the PIOH. Detailed comments and results are attached in the appendix.

Graphic 3.4 - PIOH 1 Highlights

ALMOST
200
CITIZENS ATTENDED

CLOSE TO
350
INDIVIDUAL COMMENTS

MOST IDENTIFIED CONCERN CATEGORIES

CONGESTION
SPEEDING
SHARP CURVES
OTHER

**Other Includes Additional Lanes, Wider Shoulders, Traffic Signals, Street Lighing*

- **PIOH 2 -**

The second Public Information Open House for the SR 279 corridor study was held on July 15, 2019 from 4 pm to 7 pm at the Fayette County Public Library in conjunction with the other three corridors also being studied by Fayette County.

Preliminary project concepts were presented to the citizens. Citizens were given various opportunities to provide feedback on the draft concepts, including sticker stations, online survey stations and detailed comment forms.

Graphic 3.5 represents highlights from the PIOH. Detailed comments and results are attached in the appendix.

Graphic 3.5 - PIOH 2 Highlights

250
CITIZENS ATTENDED

175
INDIVIDUAL COMMENT FORMS

515
ONLINE SURVEY COMMENTS

Image 3.3 - PIOH 2 Highlights

3.4 Target Group Outreach

- **The WestBridge HOA -**

The WestBridge HOA public outreach meeting was held on February 10, 2019 at the Home of Shirley Hall in Fayetteville. This focus group meeting was attended by approximately 12-16 subdivision residents. The meeting highlights are enlisted below –

- A brief description of all the corridor studies was presented.
- The first stakeholder meeting organized on February 4, 2019 was discussed, the purpose of the stakeholders and a brief overview of the meeting was presented.
- Staff explained to residents that this is a community driven study and invited citizens to visit the Fayette County Homepage and keep up with what is going on. Additionally, the citizens were invited to the Public Information Open Houses to share their ideas of the corridor.
- The relocation of the SR 279/SR 85 intersection to align with Corinth Road was also discussed.

- **North Fayette Community Association -**

The first North Fayette Community Association public outreach meeting was held on February 16, 2019 at the Liberty Baptist Church. This focus group meeting was attended by approximately 50 subdivision residents. The meeting highlights are listed below –

- A general overview of all the corridor studies was presented.
- The first stakeholder meeting organized on February 4, 2019 was discussed, the purpose of the stakeholders and a brief overview of the meeting was presented.
- Staff explained to residents that this is a community driven study and invited citizens to visit the Fayette County Homepage and keep up with what is going on. Additionally, the citizens were invited to the Public Information Open Houses to share their ideas of the corridor.
- Expressed the appreciation for the newly elected President of the Association, Jeff Granier for taking time and serving on the stakeholder committee.
- Staff explained to residents the need to seek some funding source (i.e. GDOT) for implementation of projects that may come out of the study.
- Described the relocation of the intersection of SR 279 and SR 85 to tie into Corinth Road and how this would benefit travel in the area

The second North Fayette Community Association public outreach meeting was held on August 17, 2019 at the Liberty Baptist Church. This focus group meeting was attended by approximately 30 subdivision residents.

The meeting highlights are listed below –

- An update was given to the progress of all corridor studies.
- An in-depth discussion of the SR 279 corridor was given to date, discussion of the Existing Conditions Report, traffic/truck and crash data.
- Questions were asked how to slow traffic on SR 279 and what options were being discussed that would allow residences to get out onto SR 279 during peak hours of the day.
- References were given to the Fayette County Web Page to track progress of the study and to participate in the surveys found there.
- Citizens were invited to attend the upcoming Public Information Open House

Image 3.4 - North Fayette Community Association

- **Northridge Subdivision HOA -**

The Northridge Subdivision HOA public outreach meeting was held on June 30, 2019 at the Kenwood Park Pavilion. This focus group meeting was attended by approximately 20 subdivision residents. The meeting highlights are listed below –

- An update was given to the progress of all corridor studies.
- An in-depth discussion of the SR 279 corridor was given to date, discussion of the Existing Conditions Report, traffic/truck and crash data.
- Questions were asked how to slow traffic on SR 279 and what options were being discussed that would allow residences to get out onto SR 279 during peak hours of the day.
- References were given to the Fayette County Web Page to track progress of the study and to participate in the surveys found there.
- Citizens were invited to attend the upcoming Public Information Open House

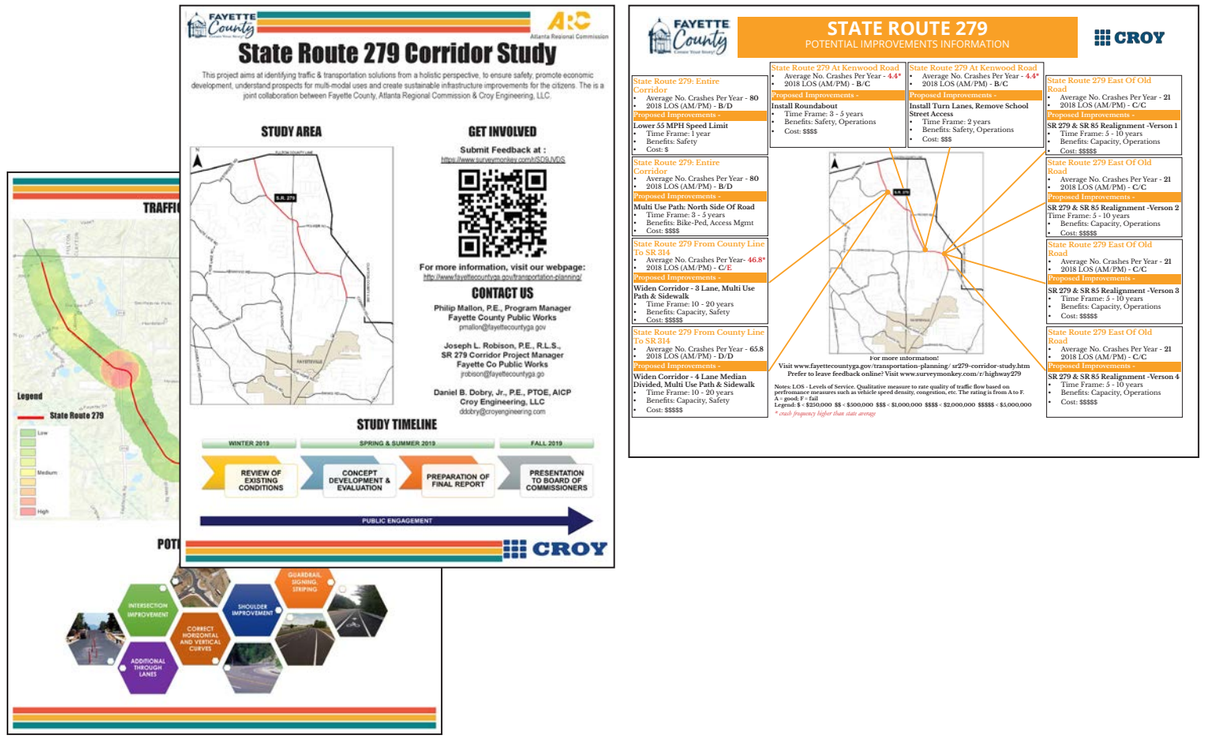
3.5 Outreach Methods and Tools

Outreach efforts relied on a variety of methods and tools to engage diverse audiences and a strong cross-section of the community.

- **Project Fact Sheets -**

A project fact sheet was created for outreach efforts to provide high-level information to educate the public about the plan. The fact sheet included details on the plan's purpose and goals, overall process and schedule, traffic volumes and crash data and QR coded links to the survey. The second phase fact sheets provided information on potential improvements, time frame, benefits and cost estimates to help citizens better understand proposed concepts.

Image 3.5 - Project Fact Sheets



- **Project Flyers -**

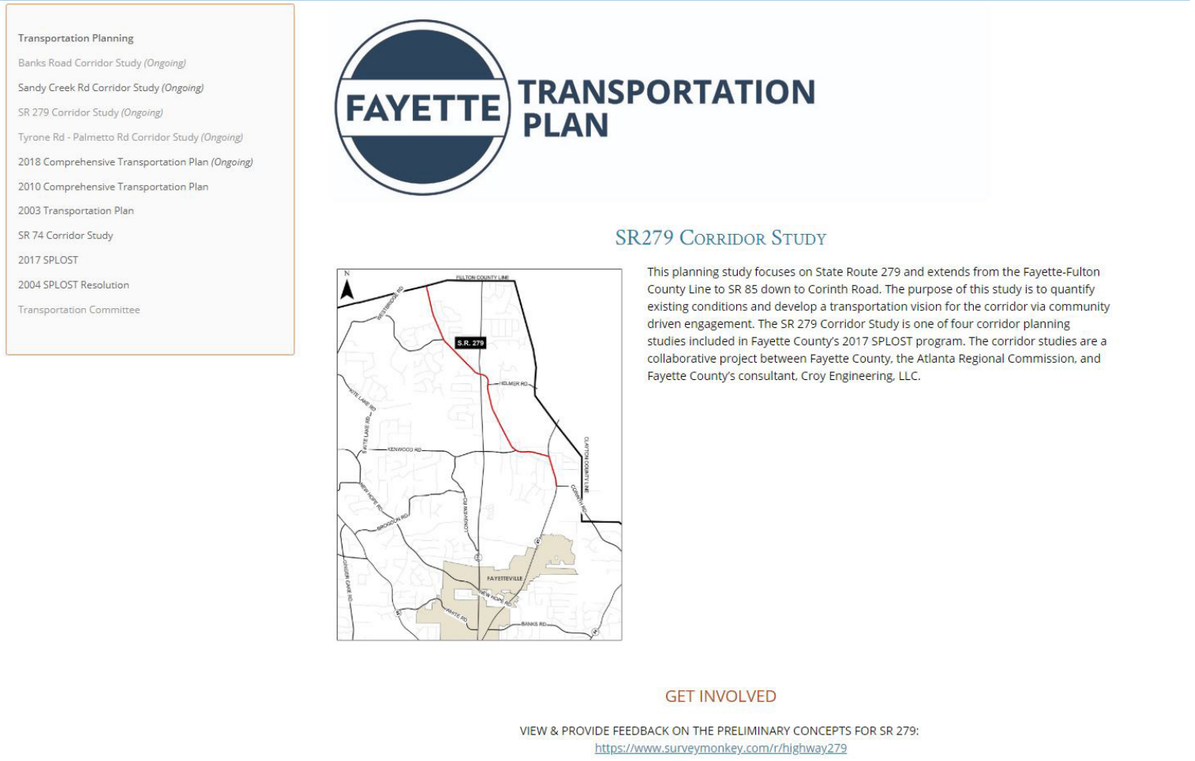
Post-card size flyers were created to send to citizens via email, newspaper distribution, and dispensed at major locations like the library and County offices.

- **Project-specific Web Page -**

The Fayette County Transportation Planning webpage was used to host corridor study information (www.fayettecountyga.gov/transportation-planning/). Information on the project was provided to the County Communications staff for posting on the site.

The aim of the website was to provide stakeholders and County residents a forum to allow continuous feedback on the corridor study, learn about public meetings, and keep up to the date on the progress of development of the project. The web page was updated with presentations, findings, results, ideas, surveys, and meeting information to foster an ongoing project conversation. Both rounds of online survey were also embedded on the project-specific webpage. All documents uploaded to the website are attached in the appendix.

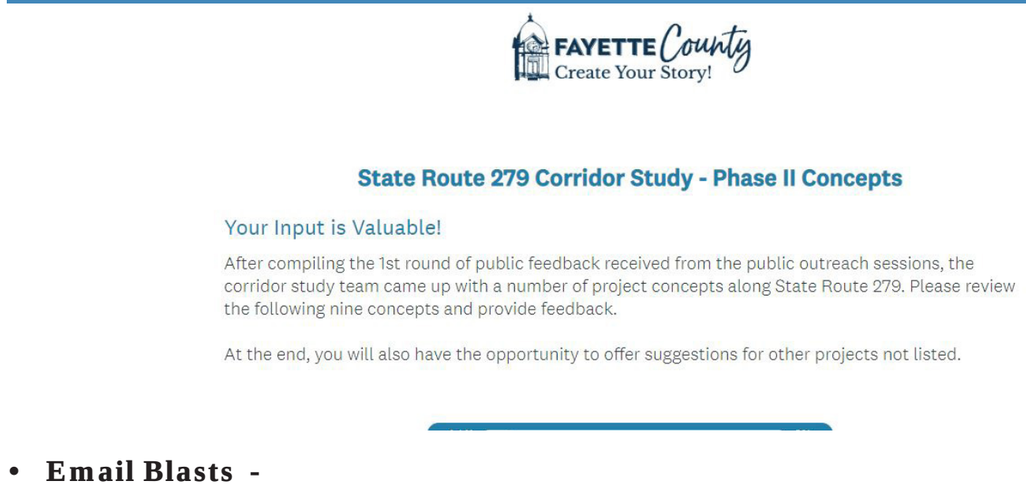
Image 3.6 - Website Page



- **Surveys -**

Two rounds of surveys were used during the public outreach, one in each phase. The surveys were available in both an online format and in hard copy (for the PIOH). The first round of survey focused on understanding the overall vision for the corridor. The second round of survey focused on determining preference and priorities for recommending projects.

Image 3.7 - Survey Page



- **Email Blasts -**

Email blasts were pushed out during the plan's development to inform citizens of the public information open house and provide information to the survey links. Email blast updates included information on the plan status, dates and information on upcoming public open houses or community events and alerts to take the online surveys.

- **Variable Message Boards -**

Variable Message Boards were used at strategic locations to advertise the two Public Information Open Houses.

- **Social Media: Facebook -**

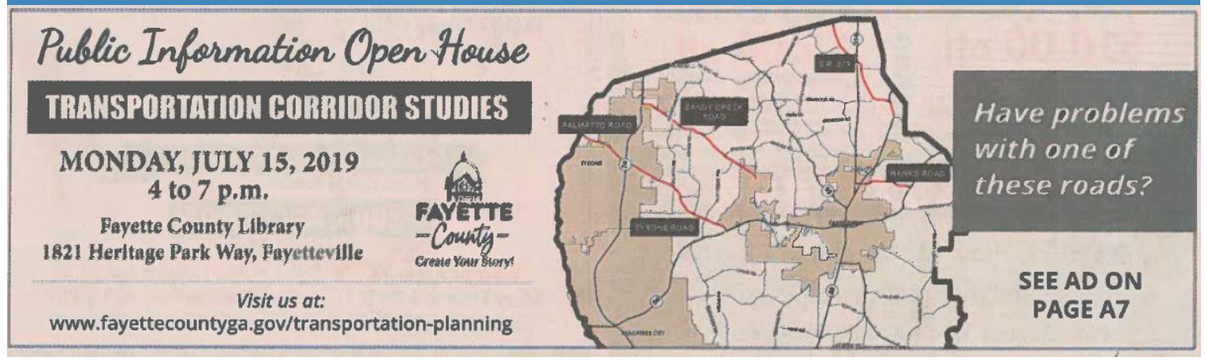
City and community Facebook pages were used to inform the community of upcoming events, access to the online survey, and plan updates during the planning process. Image 3.8 represents an example of an announcement on the City of Fayetteville Facebook page.

Image 3.8 - Facebook Page

- **Newspaper Advertisement -**

Newspaper advertisements were printed in The Citizen to in-form citizens on upcoming public open houses or community events and are displayed in Image 3.9.

Image 3.9 - Newspaper Advertisement



3.6 Transportation Committee

The Fayette County Transportation Committee is tasked with overseeing transportation planning, safety, operations and project delivery issues. The Committee meets monthly and makes recommendations for consideration by the Board of Commissioners. The group provided feedback and support to the county and consultant in defining the project and identifying potential project outcomes for the study.

Details from the meetings are described below -

- December 4, 2018 -

Presentation was made to introduce the study and teams and to outline the process and outcomes. Handouts were also distributed to gain feedback on the study goals, current perspectives, challenges and desired outcomes for the corridors.

- May 7, 2019 -

Presentation was made to provide a recap of the outreach events and the Road Safety Audit, introduce the website page, and discuss the next steps and action items.

Image 3.10 - Transportation Committee In Action

- June 4, 2019 -

This meeting introduced, discussed and debated the potential improvements for the Sandy Creek Road Corridor and the Tyrone Road - Palmetto Road Corridor.

- July 9, 2019 -

This meeting discussed potential improvements to the Banks Road Corridor and SR 279 Corridor were made. Also included in the discussions were the relocation of the intersection of SR 279 at SR 85 to form a common intersection with Corinth Road.

- September 10, 2019 -

County staff reviewed draft project recommendations, including alignment of SR 279 with Corinth Road.

- October 1, 2019 -

This meeting presented for discussion the preferred improvement projects for the 4 corridors. Presentation included concept diagrams, benefits and estimated construction cost of the projects. Edits from the Committee were incorporated into the version of the report subsequently posted for public comment.

3.7 Formal Presentations

- **City of Fayetteville City Council -**

The City of Fayetteville City Council presentation was made on November 7, 2019. The presentation included the three 2017 SPLOST Corridor Studies on: Banks Road, Sandy Creek Road, and Tyrone & Palmetto Roads. The presentation aimed to provide the public and the City Council a summary of the report recommendations and encourage input on the draft documents.

- **Fayette County Board of Commissioners -**

The Fayette county Board of Commissioners (BOC) presentation was made on November 14, 2019. The presentation included the four 2017 SPLOST Corridor Studies on: Banks Road, Sandy Creek Road, Tyrone & Palmetto Roads, and SR 279.
The presentation aimed to provide the public and the BOC a summary of the report recommendations and encourage input on the draft documents. The public comment period was open through the month of November. Final reports will be presented to the BOC for adoption in December 2019 or January 2020, depending on the amount of comments received.

Image 3.11 - Snapshot of the Formal Presentations

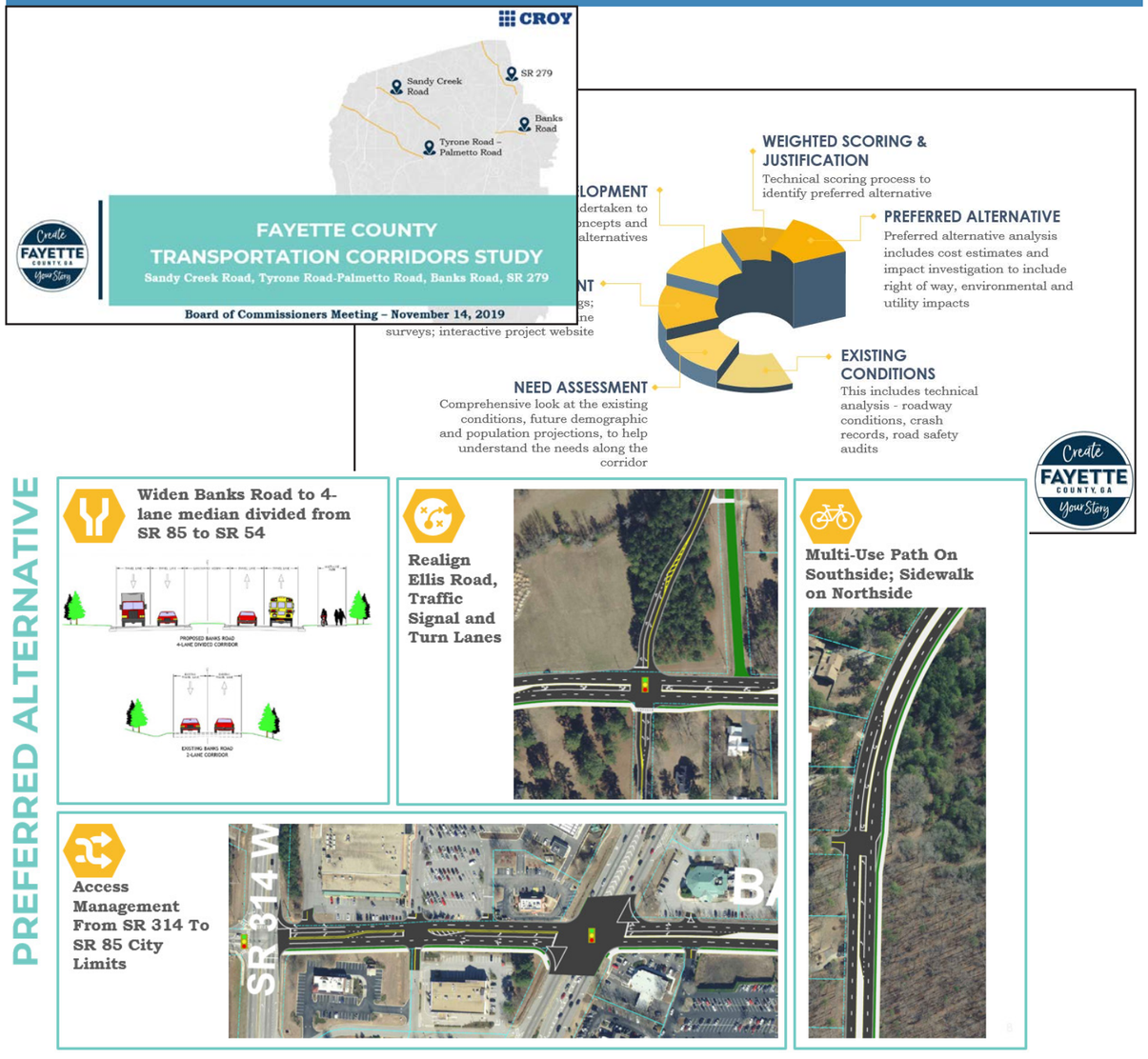
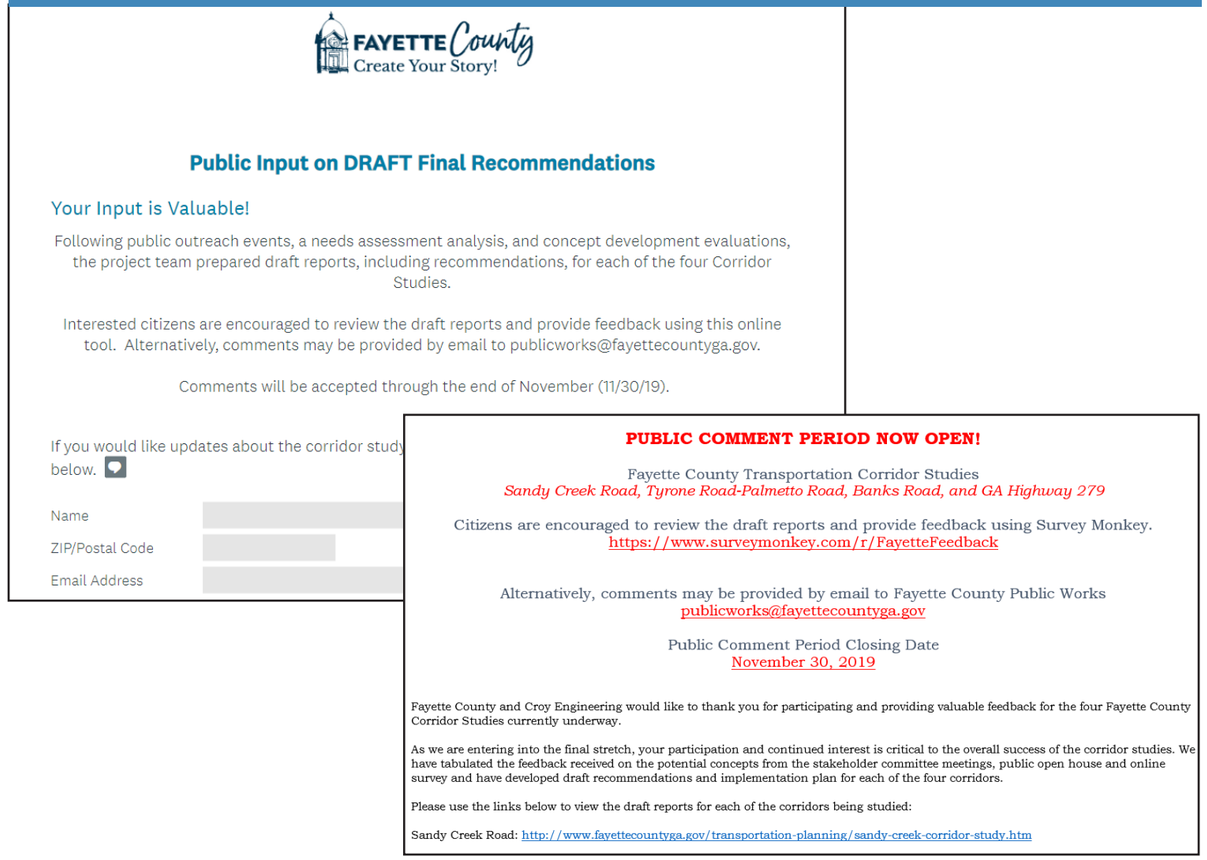


Image 3.12 - Snapshot of the Public Comment Survey and Blast Email


FAYETTE County
Create Your Story!

Public Input on DRAFT Final Recommendations

Your Input is Valuable!

Following public outreach events, a needs assessment analysis, and concept development evaluations, the project team prepared draft reports, including recommendations, for each of the four Corridor Studies.

Interested citizens are encouraged to review the draft reports and provide feedback using this online tool. Alternatively, comments may be provided by email to publicworks@fayettecountyga.gov.

Comments will be accepted through the end of November (11/30/19).

If you would like updates about the corridor study below.

Name

ZIP/Postal Code

Email Address

PUBLIC COMMENT PERIOD NOW OPEN!

Fayette County Transportation Corridor Studies
Sandy Creek Road, Tyrone Road-Palmetto Road, Banks Road, and GA Highway 279

Citizens are encouraged to review the draft reports and provide feedback using Survey Monkey.
https://www.surveymonkey.com/r/FayetteFeedback

Alternatively, comments may be provided by email to Fayette County Public Works
publicworks@fayettecountyga.gov

Public Comment Period Closing Date
November 30, 2019

Fayette County and Croy Engineering would like to thank you for participating and providing valuable feedback for the four Fayette County Corridor Studies currently underway.

As we are entering into the final stretch, your participation and continued interest is critical to the overall success of the corridor studies. We have tabulated the feedback received on the potential concepts from the stakeholder committee meetings, public open house and online survey and have developed draft recommendations and implementation plan for each of the four corridors.

Please use the links below to view the draft reports for each of the corridors being studied:

Sandy Creek Road: http://www.fayettecountyga.gov/transportation-planning/sandy-creek-corridor-study.htm

3.8 Next Steps

As aforementioned, once the analysis of the County's current and projected future transportation needs was completed, the focus of the study was directed towards identifying project concepts including solutions to minimize impacts.

A robust project evaluation and prioritization process was used to evaluate the set of draft recommendations to develop a criteria that aligns with the project's vision and goals. Additional criterion included right of way impacts, cost estimates, and funding mechanisms.

The Existing Conditions, Needs Assessment and the Road Safety Audit lay the foundation for the draft GDOT Concept Report, which is included in the appendix of the report.

Chapter 4:
Concept Development

4.1 Introduction

The Concept Development chapter is the fourth section of the SR 279 Corridor Study. The precedents to this report are the Existing Conditions which detailed the current conditions of the area around the corridor; the Needs Assessment which identifies insights into the current and future needs of the corridor; and the Community Engagement which describes the outreach efforts and feedback.

This chapter highlights the concept development approach utilized as part of the SR 279 corridor planning process and discusses the approach and process undertaken to develop the preliminary concepts and arrive at the preferred alternatives. This includes the draft concepts, feedback from citizens, formal weighted scoring process used to streamline the draft concepts, project justification and the preferred concept.

Preferred alternative analyses include cost impacts to right of way, the environmental, and utilities. Concepts developed represent potential combinations of safety improvements, operational improvements, and multi-modal accommodations per the corridor's Needs Assessment Evaluation and public feedback from the first Public Information Open House (PIOH).

4.2 Concept Development Process

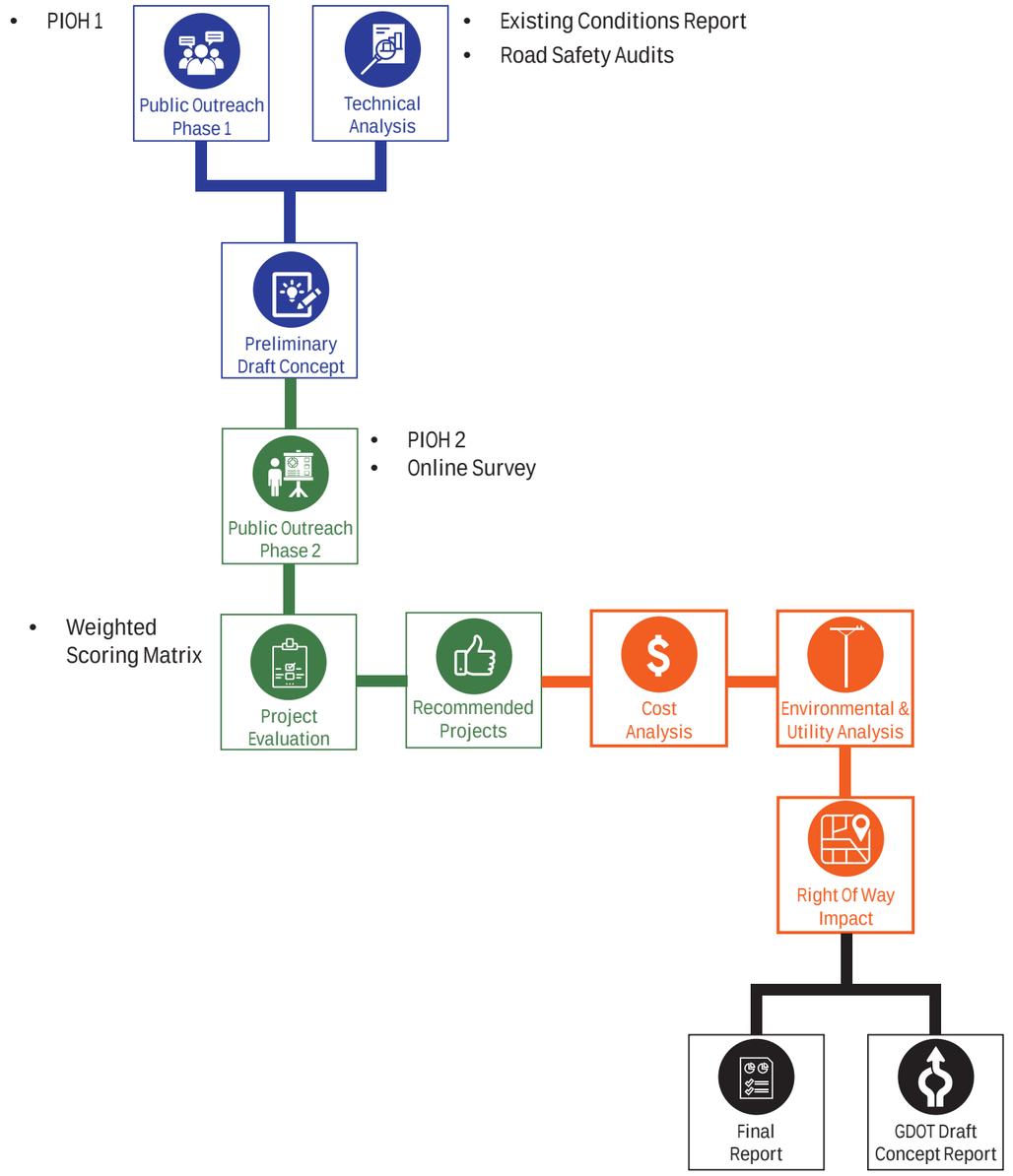
After the County's current and projected future transportation needs along the SR 279 corridor were analyzed, feedback was compiled from the first round of public outreach – the Public Information Open House (PIOH) and online submissions. This analysis was directed to identify concepts and solutions to address citizen concerns in alignment with the goals and vision for the corridor.

Preliminary draft concepts were presented to the citizens. Concept boards included descriptions, image renderings, and listing of benefits and impacts. Citizens were given various opportunities to provide feedback on the draft concepts, including sticker stations, online survey stations and detailed comment forms.

After compiling the second round of public feedback through the outreach sessions and online surveys, the set of draft recommendations were assessed using robust project evaluation and prioritization processes. A scoring matrix was created to evaluate and prioritize the projects keeping the objectives as the driving force of the process.

Project justification including traffic operations modeling and safety benefits were provided to identify the preferred alternative. The cost analysis, right of way, environmental and utility impacts for this alternative were also assessed. The concept development process is detailed in Graphic 4.1.

Graphic 4.1 - Concept Development Process



4.3 Weighted Scoring

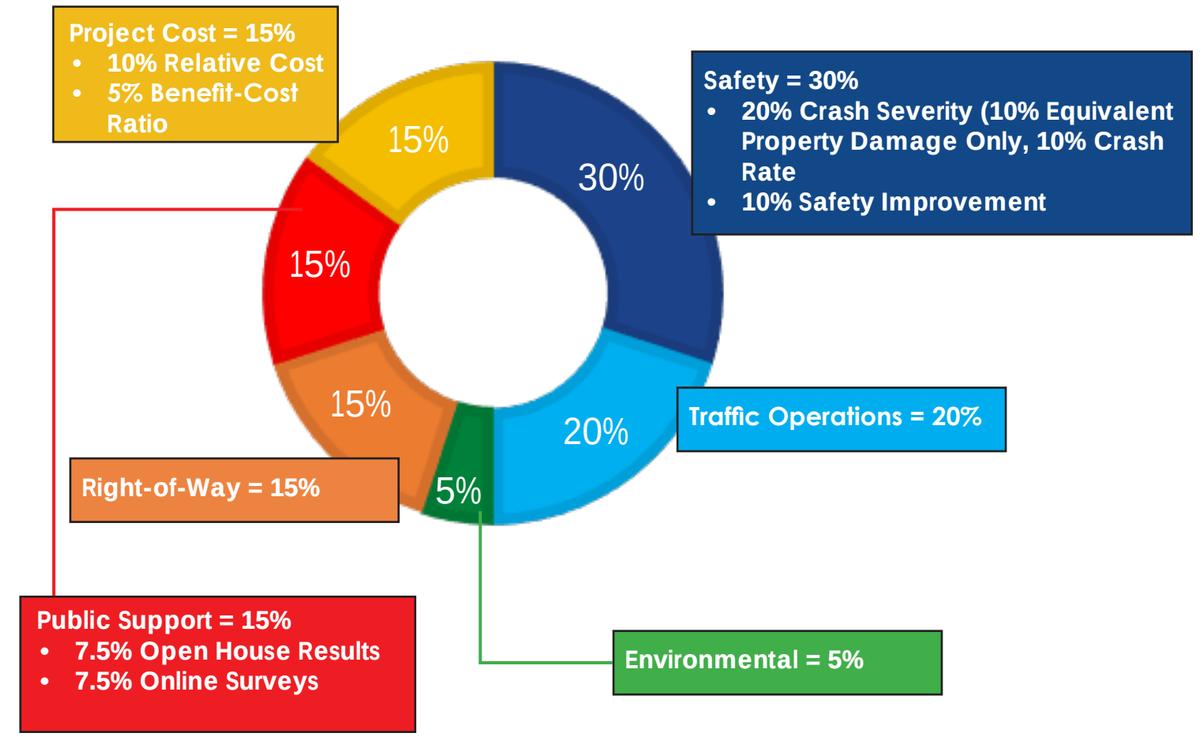
To assess the performance of each alternate improvement with regard to the study's vision, a quantitative and qualitative approach was developed. An evaluation matrix was prepared to quantitatively compare and "score" the performance of each concept. The qualitative approach included comparing the concepts to Fayette County's policies included in the pending Comprehensive Transportation Plan (CTP) to ascertain how well each concept supports the CTP. This section details the tools and methodology used to evaluate the transportation concepts developed for SR 279 as detailed in the previous section.

Quantitative Approach – Evaluation Matrix

The categories evaluated in the evaluation matrix for each concept were safety, traffic operations, environmental impact, right-of-way acquisition, project cost, and public support. For each category, performance measures were selected and/or developed as a means of evaluating the relative performance of each concept in terms of each specific scoring category.

Within the evaluation matrix, a weighted system was used to assign each category points totaling to 100 points. Graphic 4.2 and 4.3 summarize the performance measures, descriptions, data sources, and methodology by category. The concept evaluation worksheets for each category are included in the appendix.

Graphic 4.3 - Weighted Scoring Percentages



Graphic 4.2 - Weighted Scoring Categories

- **Safety (30 Points)**

To score safety, each concept was analyzed based on the current crash severity at the location and the potential improvement to safety that can be realized by the proposed concept design. To calculate the crash severity, crash data was obtained from the Georgia Electronic Accident Reporting System (GEARS) database. Crash records were collected along Sandy Creek Road between 2014 and 2018.

The crash data was sorted by crash severity based on the KABCO scale per intersection and road segment. Table 4.1 represents the KABCO Injury Classification scale for crash severity defines levels of injury severity. If several people are injured in a crash, the most severe injury level is used to set crash severity.

Table 4.1 - Injury Severity	
INJURY SEVERITY LEVEL	**DESCRIPTION**
K (Fatality)	FATAL INJURIES INCLUDE DEATHS WHICH OCCUR WITHIN THIRTY DAYS FOLLOWING INJURY IN A MOTOR VEHICLE CRASH.
A (Incapacitating Injury)	INCAPACITATING INJURIES INCLUDE SKULL FRACTURES, INTERNAL INJURIES, BROKEN OR DISTORTED LIMBS, UNCONSCIOUSNESS, SEVERE LACERATIONS, SEVERE BURNS, AND UNABLE TO LEAVE THE SCENE WITHOUT ASSISTANCE.
B (Non-Incapacitating Injury)	NON-INCAPACITATING INJURIES INCLUDE VISIBLE INJURIES SUCH AS A "LUMP" ON THE HEAD, ABRASIONS, AND MINOR LACERATIONS.
C (Complaint Injury)	MINOR INJURIES INCLUDE HYSTERIA, NAUSEA, MOMENTARY UNCONSCIOUSNESS, AND COMPLAINT OF PAIN WITHOUT VISIBLE SIGNS OF INJURY.
O (Property Damage Only)	NO FATALITY OR INJURY; PROPERTY DAMAGE ONLY

Crash Severity (20 points)

The first component of the Safety Score for each concept is the crash severity currently experienced at the project location. The crash severity at each proposed project's location was scored based on its EPDO (Equivalent Property Damage Only) value and the intersection or road segment crash rate at the location. The equivalent property damage only (EPDO) value for a crash location weighs factors related to the societal costs of fatal, injury, and property damage-only crashes. The relative costs are assigned to crashes by severity to develop an equivalent property damage-only score that considers frequency and severity of crashes. Each concept's EPDO Score was normalized relative to the EPDOs for the four Fayette Corridor Studies with the maximum value being 10 points.

A road segment or intersection's crash rate is calculated to determine relative safety compared to other similar roadways, segments, or intersections. Crash rate analysis typically takes into account data such as traffic volumes or roadway mileage to provide a more effective means of comparing crash frequency at locations and prioritizing safety issues at similar locations. Each concept's Crash Rate Score was normalized relative to 2016 statewide average crash rate with the maximum value being 10 points.

Crash Reduction Factor (10 points)

The second component of the Safety Score for each concept is the project's potential to reduce the number of crashes at the project's location. To determine this value, the FHWA's Highway Safety Manual was used to identify the crash reduction factor(s) (CRFs) for each concept. A crash reduction factor (CRF) is the percentage crash reduction that might be expected after implementing a given countermeasure at a specific site. Each concept's Safety Improvement Score was normalized to 100% with the maximum value being 10 points.

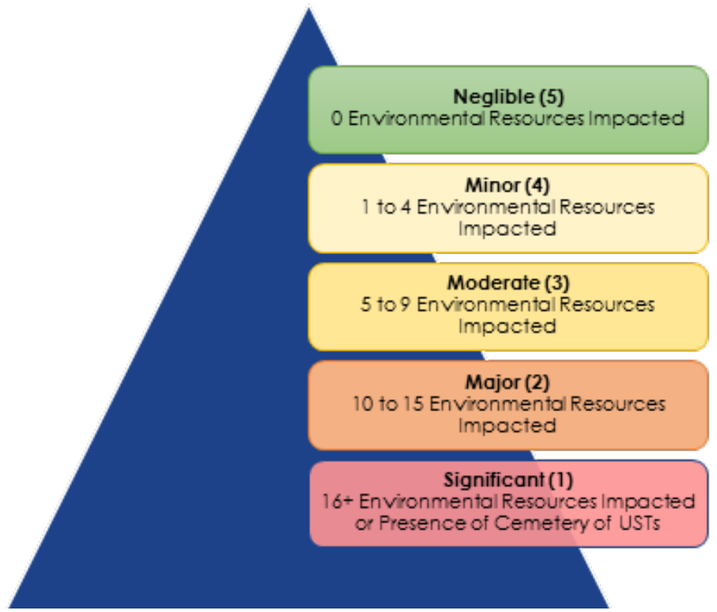
- **Traffic Operations (20 points)**

To score traffic operations, each concept was analyzed based on the net difference in delay or road capacity between a 2040 Build scenario and the 2040 No Build scenario. The net difference in delay or capacity between the 2040 Build and No Build scenarios was calculated for the AM and PM peak hours. The peak hour with the greatest reduction in delay or increase in capacity was selected and used to rank the concept's potential improvement to traffic operations based on a ranking from 1 to 10. The ranking was then converted to the overall Traffic Operations score for the concept, with the maximum score being 20 points.

- **Environmental (5 points)**

To score environmental impacts, each concept was analyzed based on the number of environmental resources potentially impacted by the construction of the project. The potential environmental impact was ranked on a scale from Negligible (5 ranking) to Significant (1 ranking). The total number of environmental resources impacted by a project was determined based on the number of resources present within a quarter mile radius of the project. Moreover, if there is a presence of a cemetery or underground storage tank (UST), the concept automatically received an impact score of Significant. The ranking was then converted to the overall Environmental Impact score for the concept, with the maximum score being 5 points.

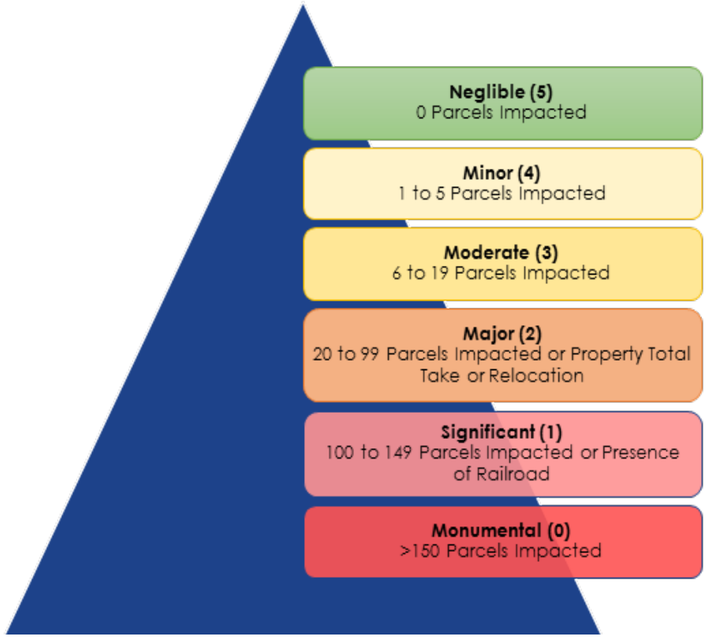
Graphic 4.4 - Environmental Categories



- **Right-of-Way (15 points)**

To score right-of-way impacts, each concept was analyzed based on the number and type of parcels potentially impacted by the construction of the project. To account for the current zoning of the parcels impacted, an undeveloped parcel is equal to 1 impact, a developed residential parcel is equal to 2 impacts, and a developed commercial parcel is equal to 5 impacts. The potential right-of-way impact was ranked on a scale from Negligible (5 ranking) to Monumental (0 ranking). Moreover, if a project requires a total take or relocation of a property, the concept automatically received an impact score of "Major". If there is a presence of a railroad within the project limits, the concept automatically received an impact score of "Significant". The ranking was then converted to the overall Right-of-Way score for the concept, with the maximum score being 15 points.

Graphic 4.5 - Right-of-Way Categories



- **Project Costs (15 points)**

To score project costs, each concept was analyzed based on its overall construction costs and the project's benefit-cost ratio. To calculate the Project Cost score, a planning-level construction cost estimate was prepared for each concept. Each project's construction cost estimate was used to calculate a Relative Project Cost score and a Benefit-Cost score. For project scoring purposes, design and right-of-way costs were not considered.

Relative Project Cost (10 points)

The first component of the Project Costs Score for each concept is its projected construction cost ranked on a scale from 0 to 5. For each concept, its Relative Project Cost is based on the price range and was ranked accordingly. The ranking was then converted to the Relative Project Cost score for the concept, with the maximum score being 10 points.

Benefit - Cost Ratio (5 points)

The second component of the Project Costs Score for each concepts is its benefit-cost ratio. The benefit-cost ratio was calculated by dividing the total monetary value of the potential benefits of the project by the projected construction cost for the project.

The monetary value of the potential benefits was the sum of the potential crash cost savings over a 20-Year horizon and the travel time savings over a 20-Year horizon. Crash Costs savings were calculated per Property Damage Only (PDO) Crash Costs in GDOT's Highway Safety Improvement Program Report (2016).

Travel Time savings were calculated by assigning monetary values to the reduction in automobile delay and truck delay and by accounting for fuel cost savings. The ranking was then converted to the Benefit-Cost Ratio score for the concept, with the maximum score being 5 points.

- **Public Support (15 points)**

To score public support, each concept was analyzed based on documented comments received at the second Public Open House and the results from the Phase II Online Survey. The information was then converted to an overall Public Support score for each concept, with the maximum score being 7.5 points for the comment forms and 7.5 points for the online surveys.

4.4 Preliminary Draft Concepts

Preliminary project were identified to address current and projected future transportation needs. These concepts were presented to the citizens at the second PIOH. Citizens were given various opportunities to provide feedback on the draft concepts, including sticker stations, online survey stations and detailed comment forms. As aforementioned, around 250 citizens attend, 176 comments received via comment forms, and 515 comments received via the online survey.

Following a review of the results from the first Public Open House and completion of the Phase 1 online survey. The project management team discussed and developed a series of projects that addressed the concerns identified by the public. With the completion of the Needs Assessment Report, concept ideas were refined and additional concepts were added to address the current facility needs.

Below is the final list of concepts evaluated for inclusion in the final recommendation:

- Intersection Improvement at Kenwood Road
- SR 279 and Corinth Road Realignment
- Widen Corridor from SR 138 To SR 314 (4 Lane Median Divided)
- Widen Corridor from SR 138 To SR 314 (3 Lane with Center Turn Lane)

Each concept's project description and potential benefits are listed in the following sections.

LOS - Levels of Service. Qualitative measure to rate quality of traffic flow based on perfromance measures such as vehicle speed density, congestion, etc. The rating is from A to F. A = good; F = fail
Legend: $ < $250,000 $$ < $500,000 $$$ < $1,000,000 $$$$ < $2,000,000 $$$$$ < $5,000,000

1. Concept: Intersection Improvement at Kenwood Road

Based on the Needs Assessment and public comments, an intersection improvement at Kenwood Road was warranted for additional consideration. Two concepts were proposed: the first adding turn lanes at the intersection and the second installing a roundabout. Either concept would improve safety and traffic operations at the intersection.

Average No. Crashes Per Year	2018 LOS (AM/PM)	Time Frame	Benefits	Cost
4.4*	B/C	2 - 5 years	Safety, Access Management, Operations	$$$$

** crash frequency higher than state average*

Graphic 4.6 - Concept: Turn Lanes and Access Management at Kenwood Road

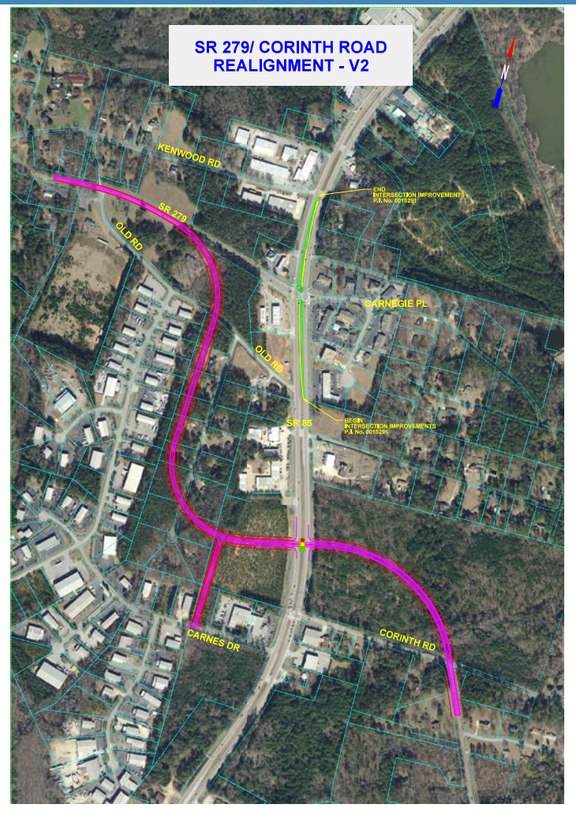
Graphic 4.3 - Concept: Roundabout at Kenwood Road

2. Concept: SR 279 and Corinth Road Realignment

SR 279 and SR 85 intersect approximately one-half mile north of the SR 85 and Corinth Road intersection. Both intersections are controlled with traffic signals, and experience queuing traffic for vehicles trying to make left turns from SR 85 onto SR 279 in the morning and from SR 85 to Corinth Road in the afternoon. This project entails aligning Corinth Road and SR 279, thereby eliminating a traffic signal and the associated turning movements. The project will also correct some geometric deficiencies along the corridors.

Average No. Crashes Per Year	2018 LOS (AM/PM)	Time Frame	Benefits	Cost
21	C/C	5 - 10 years	Capacity, Operations	$$$$$

Graphic 4.7 - Concept: SR 279 and Corinth Road Realignment Version 1 & 2



Graphic 4.8 - Concept: SR 279 and Corinth Road Realignment Version 3 & 4

3. Concept: Widen Corridor from SR 138 to SR 314

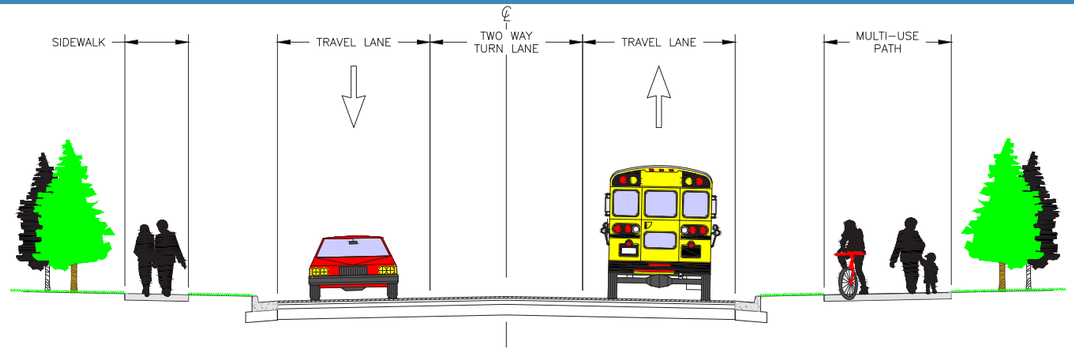
Based on the Needs Assessment and public comments, capacity and safety improvements along SR 279 warranted additional consideration. Following a traffic operations analysis, SR 279 from SR 138 to SR 314 benefited the most from capacity and safety improvements given the significant volumes traveling that section each day. The proposed project involves widening the SR 279 corridor from SR 138 to SR 314.

Two concepts were proposed, widen to 3 lanes with a center two-way-left-turn lane or widen to 4 lanes with a raised landscaped median. The corridor is envisioned to have multi-use path on one side of the road and a sidewalk on the other. This project aims to address capacity, safety and access management challenges and allows for multi-modal use.

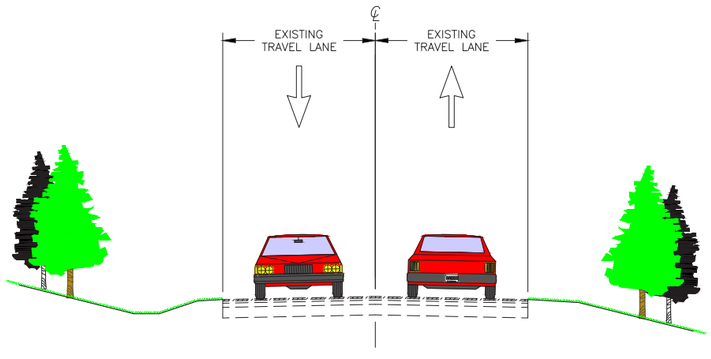
Average No. Crashes Per Year	2018 LOS (AM/PM)	Time Frame	Benefits	Cost
46.8*	C/E	10 - 20 years	Safety, Capacity	$$$$$

** crash frequency higher than state average*

Graphic 4.9 - Concept: Widen to 3 Lanes with Multi-Use Path

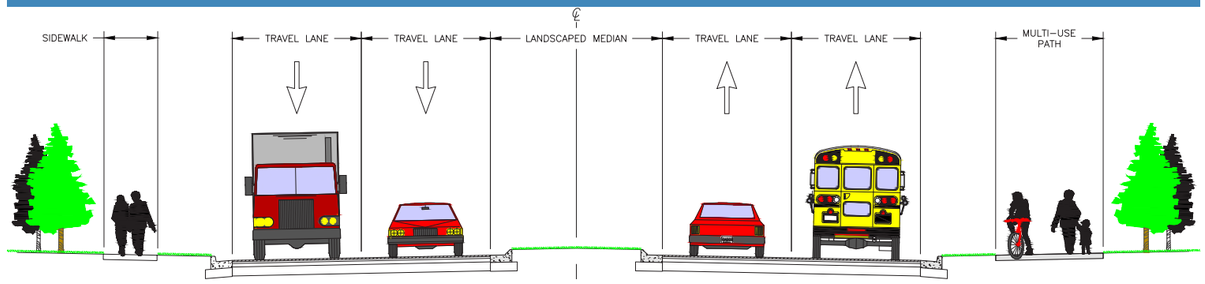


PROPOSED SR 279
3-LANE CORRIDOR

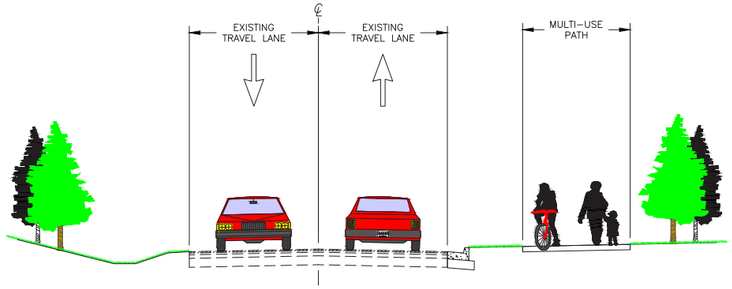


EXISTING SR 279
2-LANE CORRIDOR

Graphic 4.10 - Concept: Widen to 4 Lanes with Multi-Use Path



PROPOSED SR 279
4-LANE DIVIDED CORRIDOR



SR 279
2-LANE CORRIDOR

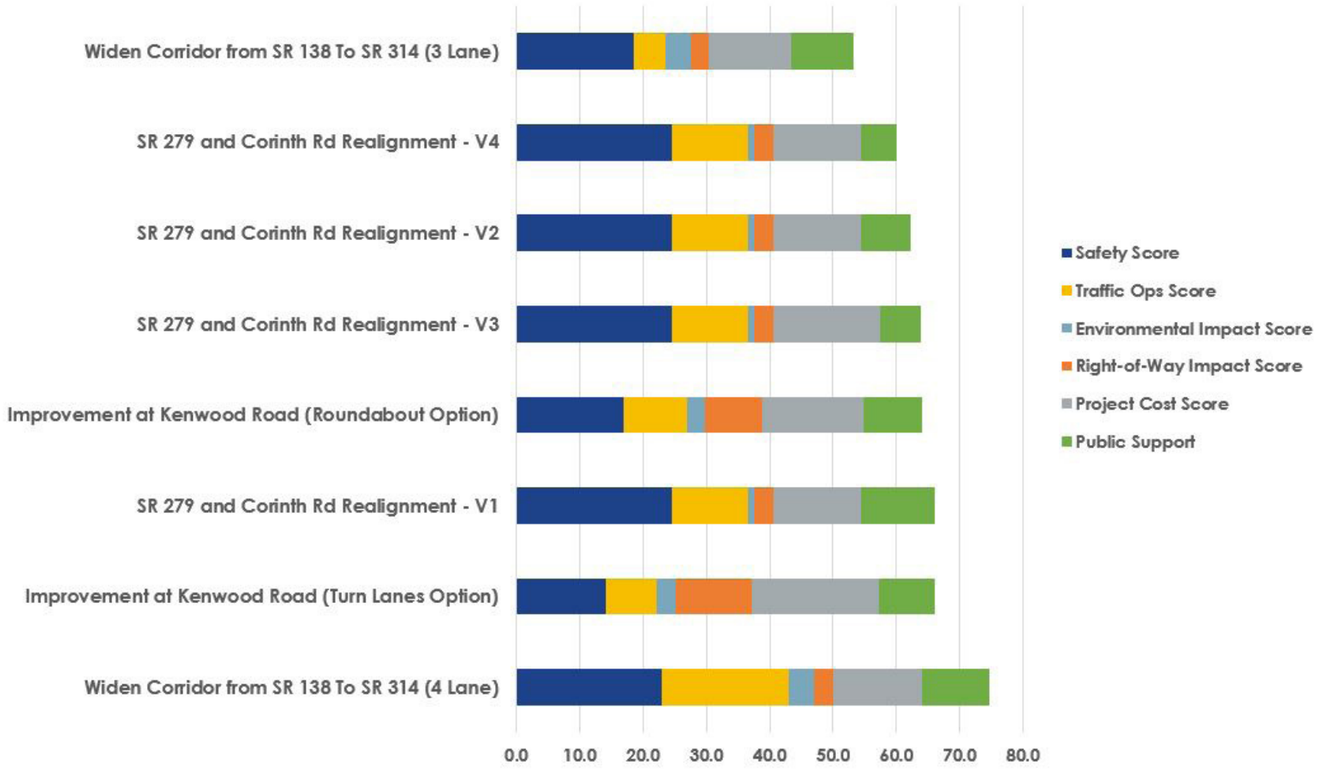
4.5 Evaluation Results

Using the methodology detailed in the previous sections, each concept was evaluated in the Evaluation Matrix for SR 279. The results of the scoring matrix are detailed per category in the table below. The overall project score is shown in a stacked bar.

Table 4.1 - Evaluation Results

Project Name	Safety (Max 30 pts)	Traffic Operations (Max 20 pts)	Project Cost (Max 15 pts)	Environmental Impact	R/W Impact	Public Support (Max 15 Pts)
• Improvement at Kenwood Road (Roundabout Option)	16.9	10.0	16.0	Moderate	Moderate	9.1
• Improvement at Kenwood Road (Turn Lanes Option)	14.2	8.0	20.0	Moderate	Minor	8.9
• SR 279 and Corinth Rd Realignment - V1	24.5	12.0	14.0	Significant	Significant	11.5
• SR 279 and Corinth Rd Realignment - V2	24.5	12.0	14.0	Significant	Significant	7.8
• SR 279 and Corinth Rd Realignment - V3	24.5	12.0	17.0	Significant	Significant	6.3
• SR 279 and Corinth Rd Realignment - V4	24.5	12.0	14.0	Significant	Significant	5.6
• Widen Corridor from SR 138 To SR 314 (4 Lane)	23.0	20.0	14.0	Minor	Significant	10.6
• Widen Corridor from SR 138 To SR 314 (3 Lane)	18.5	5.0	13.0	Minor	Significant	9.8

Graphic 4.11 - Overall Concept Score



The results of the evaluation matrix for the SR 279 concepts provide the opportunity to objectively judge each concept idea using a quantifiable methodology. The overall project score for each project is a tool to be used when selecting the preferred alternatives for each corridor in conjunction with a qualitative approach including each project's support of goals outlined in Fayette County's Comprehensive Plan, available funding sources, and implementation plan.

Chapter 5:
Recommendations & Implementation

5.1 Introduction - Page 56
This section of the report details the recommendations for the State Route 279 corridor and the implementation plan for the preferred alternative.

5.2 Final Recommendations - Page 56
The section details the final recommendations which are divided into recommendations for the corridor's typical section, specific intersection improvements and bicycle and pedestrian improvements.

5.3 Quick Response Recommendations - Page 62
This segment discusses the proposed list of quick response improvements for State Route 279.

5.4 Implementation Plan - Page 63
The implementation plan for State Route 279 corridor identifies the projects in terms of project costs, project scheduling, responsible parties for project completion, and funding opportunities.

5.5 Phased Recommended Projects - Page 64
This section lists the recommended projects for State Route 279.

5.1 Introduction

The section details the recommendations for the State Route 279 corridor and the implementation plan for the preferred alternative. As detailed in previous sections, these recommendations were developed through several analyses, including:

- Review of existing conditions
- Need Assessment analysis for corridor
- Input from citizens, stakeholders, and agencies
- A comprehensive evaluation of potential impacts including safety, traffic operations, environmental, and right-of-way
- Consideration of land use policies and development goals in Fayette County

The needs of the corridor were outlined in the Needs Assessment. The final recommendations for Banks Road meet those needs while adhering to the goals of Fayette County outline in the 2010 Comprehensive Transportation Plan summarized in Graphic 5.1. The final recommendations and implementation plan are detailed in the following sections.

Graphic 5.1 - 2010 Comprehensive Transportation Plan Goals

5.2 Final Recommendations : Preferred Alternative

The recommendations for SR 279 are divided into recommendations for the corridor's typical section, specific intersection improvements, bicycle and pedestrian improvements and quick-response improvements. A corridor transportation system comprised of multiple elements including safety enhancements, roadway capacity, and streetscapes, was developed as part of the final recommendations.

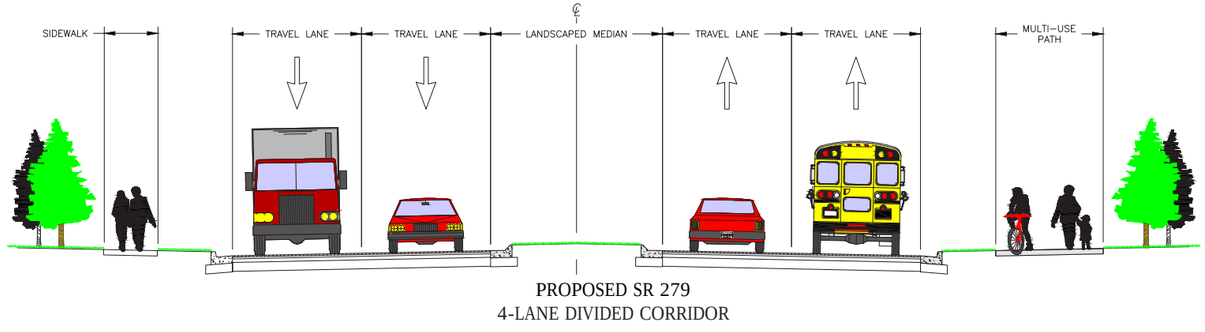
These improvements were developed in tandem with Fayette County and local municipalities Future Land Use plans to maximize the effectiveness of the final recommendations with regard to both land use and transportation.

Summary of Corridor Recommendations

The recommended typical section for SR 279 is divided into two segments. From SR 138 to SR 314, the recommended typical section is to widen the road to 4-lanes with a center median, install a shared-use path on one side of the north side of the road, and install a sidewalk on the south side of the road. From SR 314 to SR 85, the recommended typical section is to maintain the two general purpose travel lanes and add a shared-use path on the north side of the road.

In addition to the roadway improvements recommended for SR 279, the SR 279 and Corinth Road realignment is recommended for implementation as well. The roadway recommendations for SR 279 include correcting horizontal and vertical curves where needed based on an evaluation of sight distance availability along the corridor and upgrading and adding warning signage to guide drivers along the corridor. The proposed typical sections are shown in Graphic 5.2.

Graphic 5.2 - SR 279 Proposed Improvements Typical Section

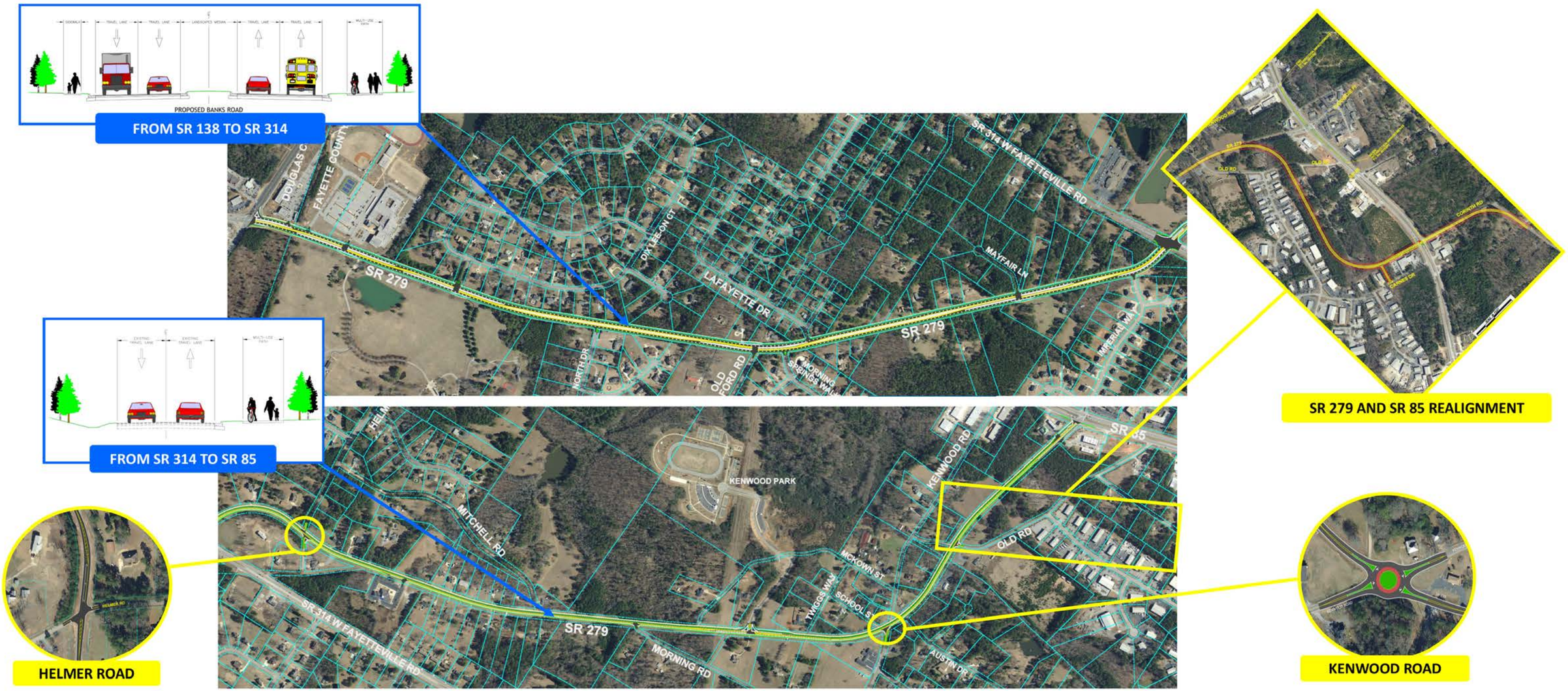


In addition to the proposed typical section and correcting horizontal/ vertical curves, the following intersection improvements are recommended along SR 279 as well:

- Install Roundabout at Kenwood Road
- Southbound Left Turn Lane at Helmer Road (2010 CTP Project)

A graphic depicting the recommended roadway and intersection improvements is Graphic 5.3.

Graphic 5.3 - SR 279 Corridor Recommendations



- **Roadway Recommendations**

SR 279 is a vital arterial in Fayette County, which provides access to abutting neighborhoods, connects multiple state routes, and serves as a direct route between Fayette County and Fulton County to the northwest. As a minor arterial, SR 279 serves an important mobility function for longer trips between destinations in Fayette County and beyond, and it also plays an essential role in accessing adjacent land uses. Meeting the, sometimes conflicting, needs of these two uses must be at the center of roadway design decisions in this corridor to reach an equilibrium between mobility and access.

SR 279's road capacity was also analyzed using the Atlanta Regional Commission's (ARC) Travel Demand Model (Year 2040) to project future traffic conditions. An analysis of traffic projections indicates that by 2040, the road capacity observed for the PM peak hour between SR 138 to SR 314 would operate at a LOS of F, with the volume to capacity (v/c) ratio being substantially over 1.0.

From SR 314 to SR 85, the road capacity analysis indicated that road capacity would continue to operate at acceptable Level of Service (LOS) through the 2040 design year. With that, widening SR 279 is only recommended from SR 314 to SR 85. The added travel lane in each direction will improve traffic flow and capacity along SR 279. The 2040 No Build versus Build road capacity along SR 279 between SR 138 and SR 314 is showed in the table below with corridor LOS values.

Intersection	2040 No Build		2040 Build	
	AM Peak	PM Peak	AM Peak	PM Peak
SR 279 from SR 138 to SR 314	D (v/c - 0.40)	F (v/c - 1.33)	B (v/c - 0.28)	B (v/c - 0.30)

Widening the corridor to 4-lanes with a raised median provides additional capacity along the corridor and improves safety. An analysis of crash data over the past 5-years along SR 279 shows that the overall frequency of crashes between SR 138 and SR 314 is substantial, particularly rear ends and angle crashes. Moreover, there were two bike-pedestrian crashes along the same segment, which indicates the need for bike/ped accommodations.

The addition of a raised median along the corridor reduces conflicts at intersection while preserving reasonable convenience with median opening and U-turn locations. A raised median also provides pedestrian refuge for crossing pedestrians and bicyclists. According to FHWA analyses, over 75% of fatalities occur at non-intersection locations. Studies have shown that installing raised medians or pedestrian refuge areas at marked crosswalks has demonstrated a 46 percent reduction in pedestrian crashes and a 36 percent reduction at unmarked crosswalk locations.

Correcting horizontal and vertical curvature along SR 279 is a safety measure that can address the corridor's frequency of off-road crashes. For horizontal curves, providing superelevation at the curve helps keep vehicles on the road and reduces off-road crashes. According to the Federal Highway Administration's (FHWA) Highway Safety Manual, crash prediction models indicate that inadequate superelevation increase crashes inside horizontal curves. It should be noted, however, that the increase in driver comfort associated with increasing superelevation may increase driver speeds.

A comprehensive analysis of the road's profile to identify locations along SR 279 where the horizontal or vertical curvatures of the road creates inadequate sight distance is recommended.

When restoring superelevation, a sufficient grade must be maintained along the superelevation transition to provide proper drainage as the cross slope levels. Ensuring reverse curves have appropriate transition distance must be taken into consideration as well.

Additional low cost treatments that can improve road safety and reduce speeding along SR 279 include adding advance warning signs, such as intersection warning or chevron alignment signs, and enhancing signing countermeasures via use of highly retroreflective and fluorescent sheeting.

Curve warning signage can also be enhance using supplemental beacons and/or messages that activate when a motorist approaches the curve at a high speed. Dynamic curve warning systems typically involve a combination of a speed monitoring device and a variable message sign. The advantage of dynamic curve warning systems is that they have a much greater effect on high-speed vehicles than a static curve warning sign. Given that these systems are costlier that status signs, their implementation should be limited to locations with high crash rates.

For the purposes of this scoping study, the widening of SR 279 is proposed to occur symmetrically from the existing roadway centerline. Detailed survey and design work during the preliminary engineering phase of the project will determine whether that is the preferred solution or if the new centerline will shift to one side or the other. Adjustments to the proposed alignment of the widening could shift based on conditions at specific locations, such as environmental hazards or sensitive areas; minimizing ROW impacts, construction costs; or improving roadway alignment to enhance visibility and safety.

The width of the raised median is the distance between the inside edges of the travel lanes. Given the suburban context along the majority of SR 279, it is recommended that the median width not to exceed 60 feet except where necessary to accommodate turning and crossing maneuvers by larger vehicles. For median openings along SR 279 between SR 138 and SR 314, spacing often is selected to provide openings at all public roads and at major traffic generators.

Additional openings should be provided so as not to reduce safety benefits of the access management provided by a median. Left-turn lanes should be provided at all median openings and right-turn lanes should be provided at intersections with highways or other major public roads.

- **SR 279 and Corinth Road Realignment**

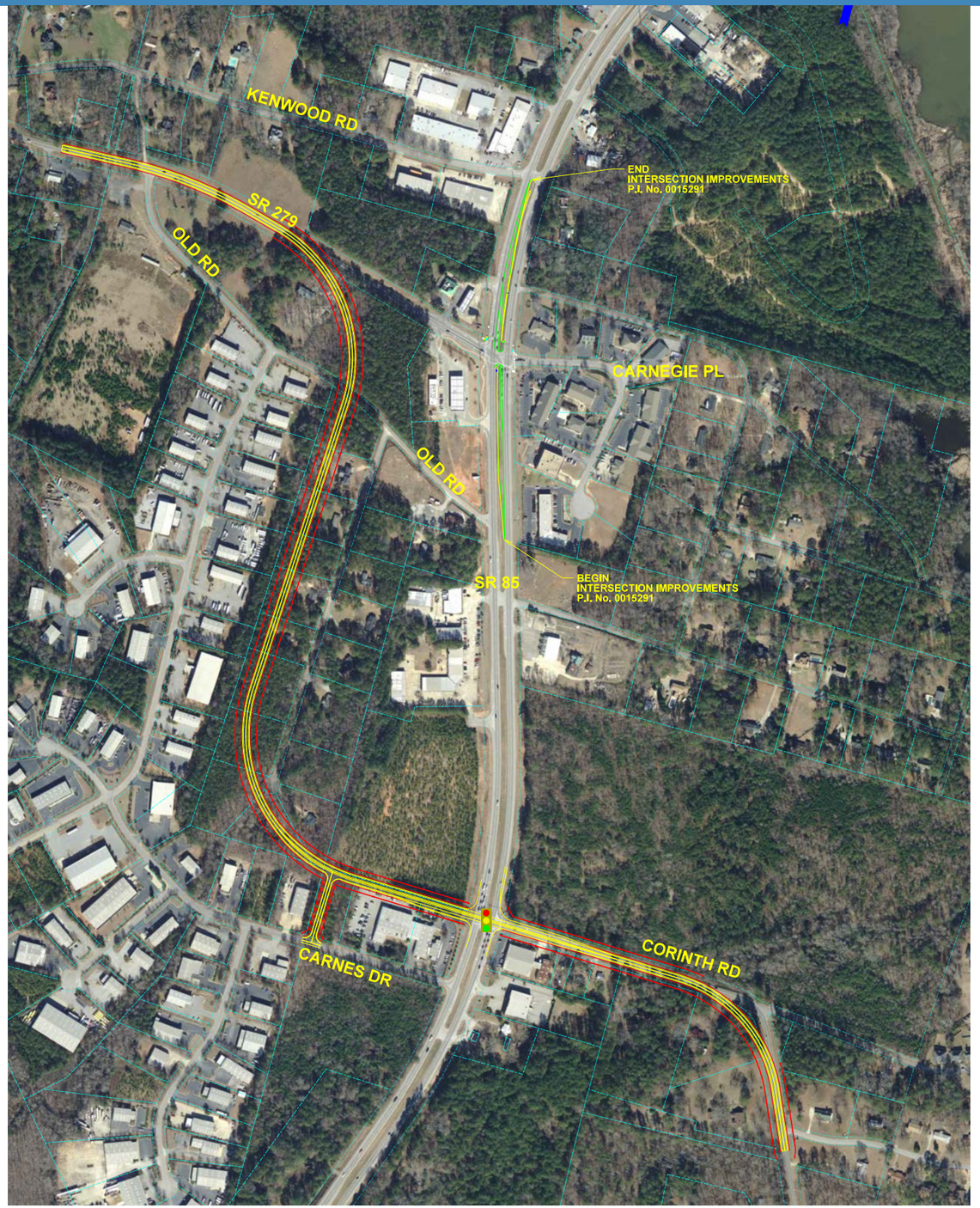
The SR 279 Realignment project from the Carter Road/Corinth Road intersection to the SR 279/Kenwood Road intersection was recommended in the Fayette County's Comprehensive Transportation Plan Update. SR 279 and SR 85 intersect approximately one-half mile north of the SR 85 and Corinth Road intersection. Both intersections are controlled with traffic signals, and experience queuing traffic for vehicles trying to make left turns from SR 85 onto SR 279 in the morning and from SR 85 to Corinth Road in the afternoon. The recommended realignment of SR 279 and Corinth Road entails connecting the two roadways via a new roadway parallel to Butler Road east of SR 85. The new alignment at Corinth Road eliminates the traffic signal at SR 85 and converts it to a RCUT. The project will also correct some geometric deficiencies along the corridors.

Fayette County's SPLOST Project R-8, the East Fayetteville Bypass, is a programmed transportation improvement that will have a substantial impact on capacity and traffic conditions in the area. The East Fayetteville Bypass is a proposed thoroughfare designed to reduce traffic congestion within the City of Fayetteville by providing an alternative north/south route across the east side of the County. The addition of the bypass to Fayette County's road network will undoubtedly have an impact on the amount of traffic on Corinth Road headed north on SR 85 and northwest of State Route 279, which is already a major maneuver in the area.

The 2040 intersection analysis shows significant delays at the SR 279 and SR 85 intersection for the PM peak period, deficiencies begin to emerge at the SR 279 and Corinth Road intersection for both the peak hour periods. The 5-year crash data analysis also showed that the SR 85 roadway segment from Corinth Road to SR 279 has a crash rate significantly higher than the statewide crash rate for similar corridors.

Aimed at eliminating excessive left turns, the SR 279 and Corinth Road Realignment will improve safety and operational efficiency in this area of Fayette County. The project will require Federal-aid and support from the Georgia Department of Transportation (GDOT) since it involves two state routes. The recommended alignment for the project is shown in graphic 4.

Graphic 5.4 - SR 279 & Corinth Road Realignment Version 1



- **Intersection Improvement Recommendations**

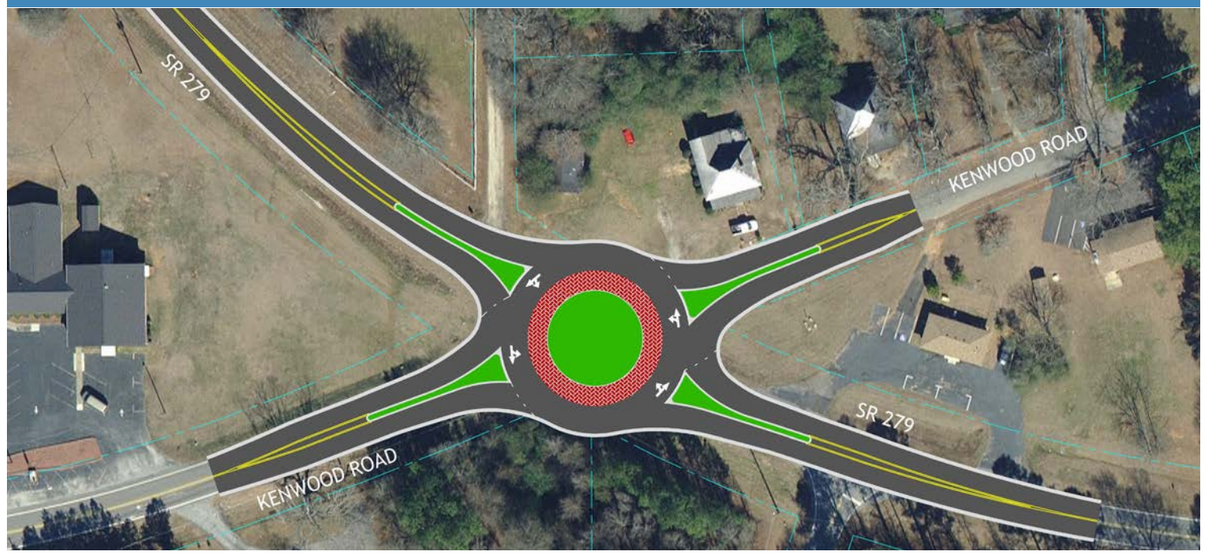
Recommended intersection improvements along SR 279 are discussed in detailed below. All such improvements are associated with the recommended overall corridor improvements, although some may be implemented in advance of the proposed widening project.

1. Kenwood Road

Safety concerns at SR 279 and Kenwood Road were enumerated by several public comments at the first public open house. Citizens expressed concerns of speeding along this stretch of SR 279 and dangerous turning movements at Kenwood Road. The combination of horizontal and vertical curvature at the intersection present sight distance challenges at the intersection. By 2040, the traffic operations at the intersection approach LOS F during the afternoon peak hour.

Several alternate intersection designs were evaluated with respect to managing traffic delay and queue lengths, minimizing cost and ROW impacts, and promoting safe and accessible pedestrian and bicycle accommodations. The final recommendation for the intersection of Kenwood Road and SR 279 is a single-lane roundabout. This intersection improvement is suitable to accommodate the traffic volumes forecasted for the intersection through the 2040 design year. Graphic 5.5 shows the proposed concept for the roundabout at SR 279 and Kenwood Road and the table shows the 2040 traffic operations for the No Build for Build conditions.

Graphic 5.5 - SR 279 & Kenwood Road Roundabout



Intersection	2040 No Build		2040 Build	
	AM Peak	PM Peak	AM Peak	PM Peak
SR 279 and Kenwood Road	C (24.8 s) C (16.7 s)	F (85.0 s) F (51.4 s)	A (8.8 s)	B (10.5 s)

2. Helmer Road

An intersection improvement at SR 279 and Helmer Road was recommended as a project in Fayette County's 2010 Comprehensive Transportation Plan. Safety concerns at SR 279 and Helmer Road were expressed by the public at the first public information open house as well. In line with the previous CTP, an intersection improvement is recommended at Helmer Road. The recommended project is the addition of a south(east) bound left turn lane on SR 279 and correct vertical curvature to Helmer Road to reduce the number of rear end crash at the intersection. Additionally, it includes correction of the vertical curvature approaching Helmer Road to improve sight distance challenges.

Graphic 5.6 - SR 279 & Helmer Road Improvement

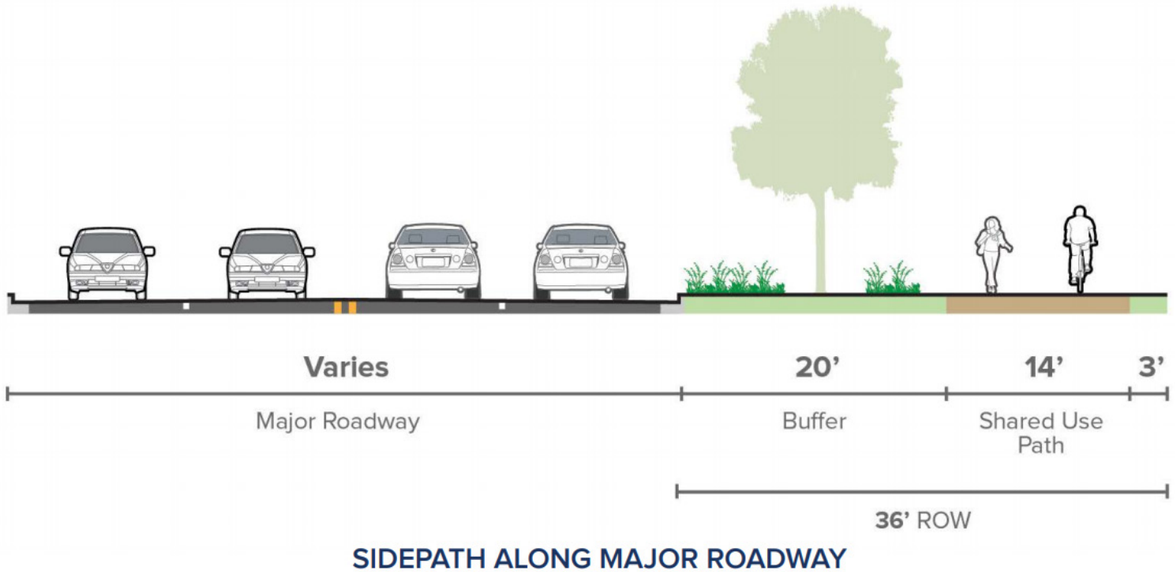
- **Pedestrian and Bicycle Accommodations**

There is a pedestrian presence along SR 279, and providing bike and pedestrian accommodations for residents to travel along SR 279 and to Kenwood Park can be of great value.

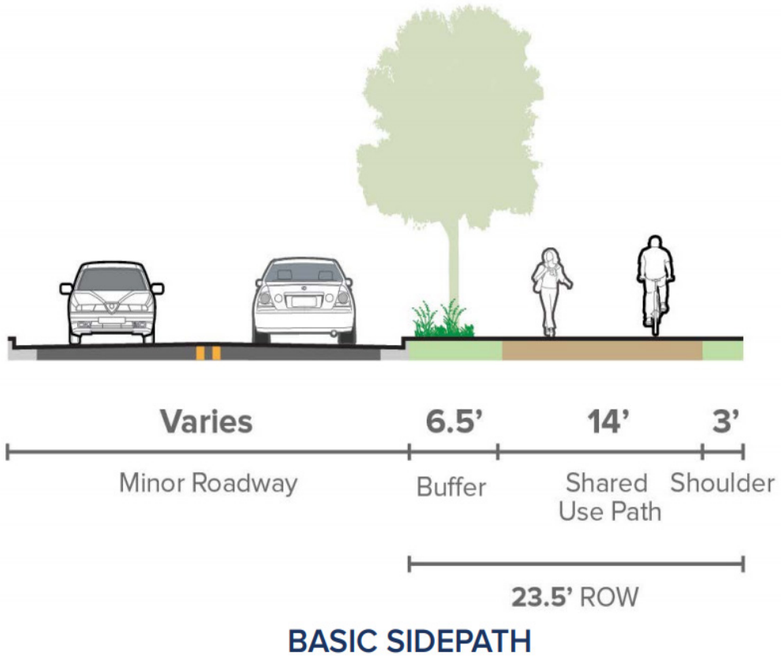
As part of Fayette County's recent Comprehensive Transportation Plan Update, a Master Path Plan for the county was developed, including a set of Path System Design Guidelines. The guidelines took into account local and national best practices for pedestrian and bicycle facilities and were tailored to the specific shared use needs of Fayette County, i.e. pedestrians, bicyclists and golf carts. Fayette County's Master Path Plan identified recommendations divided into sidewalk, sidepaths, and greenway projects. The Master Path Plan specifically recommends the addition of a sidepath along the extent of SR 279 from SR 138 to SR 85. Sidepaths, similar to multi-use paths, are trails that can accommodate pedestrians, bicyclists, and golf carts adjacent and parallel to the alignment of an existing roadway. Fayette County's Path System Design Guidelines should be reference when determine the geometrics of the sidepath for SR 279.

In line with recommendations outlined in Fayette County's CTP, a multi-use path is recommended along SR 279 within the study limits from SR 138 to SR 85 along the north side of the road. In addition to the path, sidewalk along south side of the road is recommended from SR 138 to SR 314 as well. An initial determination of the preferred side of the path was made based on adjacent land uses, terrain, and desirable opportunities for crossing SR 279. Future development and information obtained from more detailed design should ultimately influence the final decision for the alignment. Graphic 5.7 and 5.8 shows the preferred conditions for a sidepath along a major and minor roadway respectively as outlined in Fayette County's Path Design Guidelines.

Graphic 5.7 - Side Path Recommendations (CTP Appendix D: Path Design Guidelines)



Graphic 5.8 - Side Path Recommendations (CTP Appendix D: Path Design Guidelines)



5.3 Quick Response Recommendations

The proposed list of short-term improvements for SR 279 was developed via significant input received through coordination with Fayette County, stakeholders, and public input. The specific recommendations contained in this list are based on the results of the Needs Assessment, baseline travel data, deficiencies identified along the corridor during the Road Safety Audit, and opportunities to implement cost-effective improvement projects over a short period of time. Short-term recommendations along SR 279:

1. Clear overgrown vegetation along SR 279

An immediate measure for improving sight distance along a corridor is cutting back foliage reducing the line of sight for drivers, especially in horizontal curves. Overgrown vegetation also obstructs various traffic signs, reducing guidance for drivers along the corridor.

2. Speed Limit Reduction Consideration

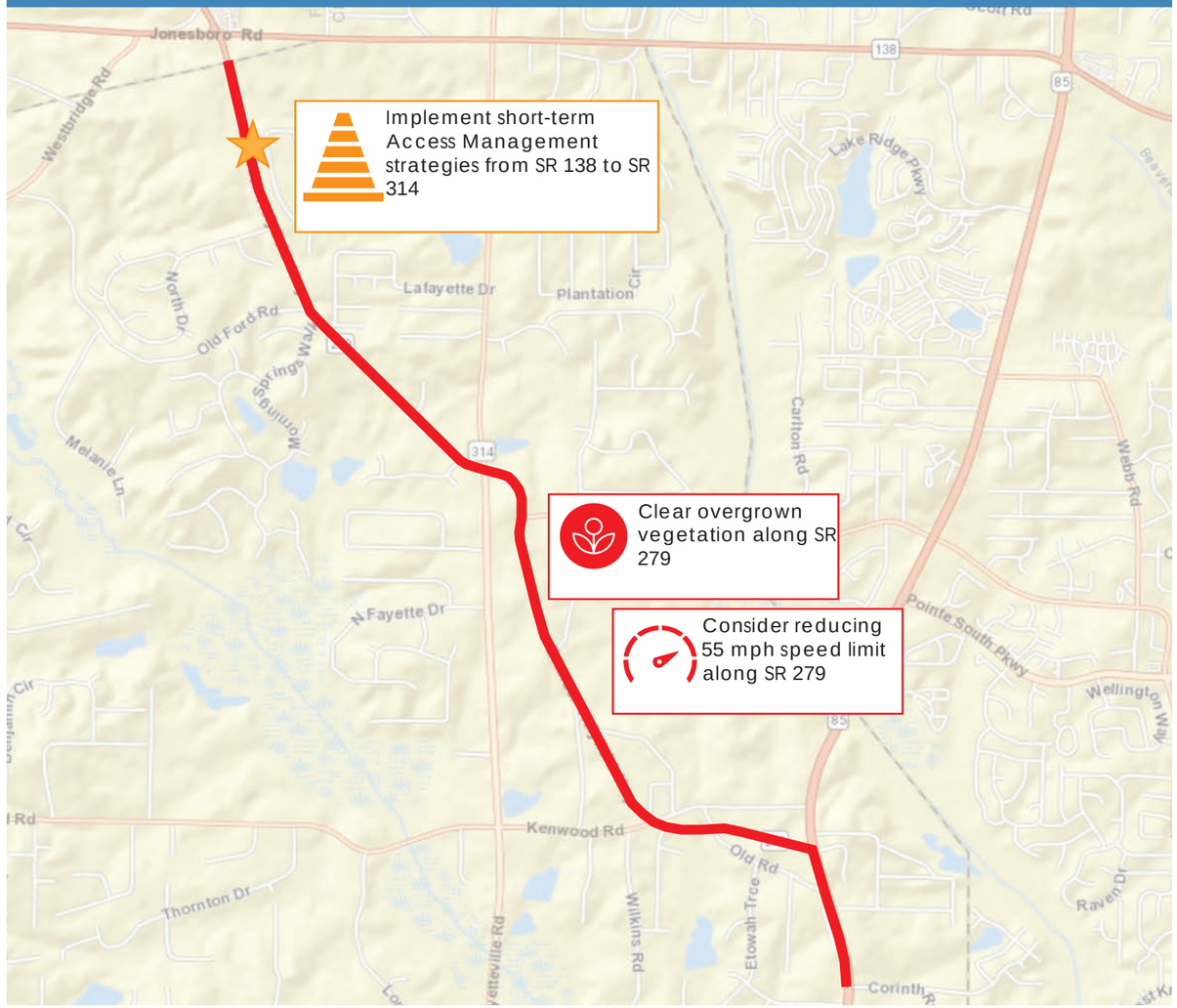
Public feedback from drivers along SR 279 indicate that speeds along SR 279 create dangerous driving conditions for all users. The posted speed limit along SR 279 is currently 55 miles per hour. Coordination with GDOT is recommended to determine if reducing the speed limit along the corridor is feasible to alleviate speeding concerns and reduce crashes.

3. Access Management within Commercial Node

Given the crash frequency along SR 279 between SR 138 and SR 314, immediate treatments for access management are recommended. Potential improvements include converting driveways to right-in/right-out and installing median treatments. Another countermeasure for access management includes paving the shoulders near driveways to provide additional entry and exit width to help minimize speed differentials between through vehicles and vehicles turning onto or off of the roadway in the intersection. Per FHWA studies, effective access management have been found to reduce crashes by 5% to 23% on two-lane highways.

Graphic 5.9 shows the locations of the proposed quick response projects along SR 279.

Graphic 5.9 - Quick Response Recommendations On SR 279



5.4 Implementation Plan

The implementation plan for SR 279 corridor identifies the projects in terms of project costs, project scheduling, responsible parties for project completion, and funding opportunities. The development of the implementation plan considered the functionality of each project to make sure that projects had logical termini. Dependencies between projects were also a point of consideration in the development of the implementation plan. Overall, for the plan to succeed, several agencies must coordinate their efforts, such as Fayette County, ARC, and GDOT.

- **Construction Cost Estimates**

For recommended roadway improvements, construction cost estimates were generated by estimating the quantities of materials and/or equipment required for each improvement. Aerial photography and field surveys of existing conditions along the corridor were used to develop quantities to complete the construction of each project. The quantities were put into a cost estimate tool and then multiplied by a typical unit cost for to determine the construction cost.

Construction cost estimates for the roadway projects are included in a separate "Concept Reports" document provided as part of the corridor study process. Aside from projects identified as qualifying projects for the Atlanta Regional Commission's Transportation Improvement Program (ARC TIP), the construction cost estimates do not include the cost of right-of-way or utilities.

- **Project Scheduling**

The proposed scheduling for the recommended projects was based on three generalized timeframes within a 20-year planning horizon. These timeframes are as follows:

- Short-Term, 2020-2022;
- Intermediate-Term, 2022-2027; and
- Long-Term, 2027-2040

The proposed short-term projects are lower cost improvements for the corridor that would provide immediate benefits. Potential funding opportunities for these projects through Fayette County's maintenance and SPLOST programs. For the intermediate and long-term projects listed in the implementation plan, higher costs and additional analyses are required to fully develop the project scopes for implementation.

The planning-level cost estimates are appropriate for corridor-wide planning, but more detailed analyses are needed to set the projects' scope. The securing of local funding for the intermediate and long-term projects will be an important step in project development.

5.5 Phased Recommended Projects

The following table lists the recommended projects for SR 279, including the projects' description, benefits, construction cost estimate, and time frame. The implementation of projects may take place across multiple segments of the corridor or efforts may focus in one segment as resources allow. Implementation is prioritized by safety, traffic operations benefits, and potential to serve as a catalyst for continued corridor improvement.

Table 1 - Phased Recommended Projects

PROJECT ID	PROJECT NAME	PROJECT DESCRIPTION	BENEFITS	CONSTRUCTION COST ESTIMATE	TIME FRAME
SR-1	ROUTINE MAINTENANCE ALONG SR 279	CLEAR OVERGROWN VEGETATION ALONG SR 279	SAFETY	TBD	SHORT - TERM
SR-2	SPEED STUDY ON SR 279	CONSIDER REDUCING 55 MPH SPEED LIMIT ALONG SR 279	SAFETY	TBD	SHORT - TERM
SR-3	ACCESS MANAGEMENT FROM SR 138 TO SR 314	IMPLEMENT SHORT-TERM ACCESS MANAGEMENT STRATEGIES FROM SR 138 TO SR 314	SAFETY, ACCESS MANAGEMENT	TBD	SHORT - TERM
SR-4	INTERSECTION IMPROVEMENT AT KENWOOD ROAD	INTERSECTION IMPROVEMENT AT KENWOOD ROAD TO INCLUDE THE INSTALLATION OF A SINGLE-LANE ROUNDABOUT. THIS PROJECT WOULD IMPROVE SAFETY AND TRAFFIC OPERATIONS AT THE INTERSECTION.	SAFETY, OPERATIONS	$1,650,000	INTERMEDIATE - TERM
SR-5	INTERSECTION IMPROVEMENT AT HELMER ROAD	INTERSECTION IMPROVEMENT AT HELMER ROAD TO INCLUDE A SOUTH(EAST)BOUND LEFT TURN LANE ON SR 279. THIS PROJECT WOULD IMPROVE SAFETY AND TRAFFIC OPERATIONS AT THE INTERSECTION.	SAFETY, OPERATIONS	$250,000	INTERMEDIATE - TERM
SR-6	MULTI-USE PATH FROM SR 314 TO SR 85	MULTI-USE PATH ON NORTH SIDE OF SR 279 FROM SR 314 TO SR 85	BIKE-PEDESTRIAN IMPROVEMENTS, SAFETY	$260,000 PER LINEAR MILE	INTERMEDIATE - TERM
SR-7	WIDEN SR 279 TO 4-LANES FROM SR 138 TO SR 314	GDOT ROUTINE MAINTENANCE AT SR 279 AND SR 74; ADD "KEEP MOVING" SIGN FOR WB RIGHT; ADD PAVEMENT TO ACCOMMODATE TRUCKS.	SAFETY, OPERATIONS, CAPACITY	$4,600,000	LONG - TERM
SR-8	SR 279 AND CORINTH ROAD REALIGNMENT	THIS PROJECT ENTAILS ALIGNING CORINTH ROAD AND SR 279, THEREBY ELIMINATING A TRAFFIC SIGNAL AND THE ASSOCIATED TURNING MOVEMENTS. THE PROJECT WILL ALSO CORRECT SOME GEOMETRIC DEFICIENCIES ALONG THE CORRIDORS.	CAPACITY, OPERATIONS	$7,535,000*	LONG - TERM

* COST ESTIMATE INCLUDE DESIGN AND RIGHT-OF-WAY COSTS.