Mission Statement:

The Sandy Creek 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 2: Needs Assessment Report

2.1 Introduction - Page 4
This section of the report introduces the needs assessment report and discusses the structure of the document.

2.2 Vision & Goals - Page 5
The visions and goals for the study corridor are defined in this section.

2.3 Methodology & Analysis - Page 6
This segment discusses the methodology, qualitative and quantitative tools used in identifying the needs assessment.

2.4 Next Steps - Page 12
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 Sandy Creek Road 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.

Sandy Creek Road is a 4.6-mile major road expecting continued growth in traffic volumes. The corridor connects Veterans Parkway in Fayetteville to State Route 74 in Tyrone and is critical to transportation and economic growth.

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.

The sections of this report 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 report 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 Sandy Creek Road 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.

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. Detailed comments and charts are attached in the appendix.
2.3 Methodology -

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 do have a margin of error value associated with it. Detailed quantitative analysis can be found in the Existing Conditions Report.

- Demographic Character -

Graphic 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 Sandy Creek Road 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. The Sandy Creek Road corridor lies in Fayette County’s census tract 1402.04. The tract has an average cumulative score of 17 for the Protected Classes Model and an equity score of 7 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 5 represents the ARC equity analysis. This analysis is crucial to bring equity and inclusivity to the corridor study.

¹ - For more in-depth understanding of the equity analysis, refer to Chapter 1 - Existing Conditions Report. Percentage values reflect percentage of population in the census tracts.
• 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.

Developments of Regional Impact (DRIs) currently under review or construction were reviewed, three of which, Pinewood Atlanta Studios (DRI 2480), and Founders Studio/Founders Square (DRI 2830), and Folia Crossroads (DRI 2788), directly impacts the intersection of Sandy Creek Road and Veterans Parkway. Additionally, it is important to note the development potential of undeveloped land between Tyrone Road, Sandy Creek Road and north of SR 54 that can become a mix of land uses in the future.

It is evident that roadway improvements are needed along Sandy Creek Road to accommodate the impacts of the planned developments. The mixed-use character of the developments indicates the need for bicycle and pedestrian improvements to promote active transportation in the area so that the benefits of mixed-use developments can be fully realized by the community.

Although Sandy Creek Road is primarily rural with single family lots, there are bike/pedestrian improvements at the Pinewoods Studios activity node, which is of particular value to promoting walkable communities. The Master Path Plan currently under review will ultimately identify additional opportunities for path connections that will tie in to the county’s overall a bicycle and pedestrian network. Graphic 6 represents the future growth projections.

• Roadway Infrastructure, Facilities and Existing Traffic Conditions -

Per the Georgia Department of Transportation (GDOT) road classifications, Sandy Creek Road is classified as a minor arterial. The Sandy Creek Road corridor generally consists of residential properties along both sides with the exception of the southernmost end, which provides access to Pinewood Studios.

Observed 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. Graphic 7 represents the roadway infrastructure and facilities along the corridor and Graphic 8 represent existing traffic conditions.

Note - For details on the modelling and growth projections, refer to Chapter 1 - Existing Conditions Report.
Additionally, crash data analysis helps identify where some safety concerns may exist and is valuable in assessing where the most immediate improvements are required.

Roadway Infrastructure and Facilities:
- One 11-foot wide travel lane in each direction
- Separate turn lanes in some locations
- 17 intersections: none signalized
- 1 Restricted Crossing U-turn (R-CUT) at SR 74/Joel Cowan Parkway
- 1 Roundabout at Veterans Parkway

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 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.

By the 2040 design year, significant delays will be experienced by the side streets at SR 74/Joel Cowan Parkway and Ellison Road. Deficiencies begin to emerge at Lake Road during the morning peak hour and at Trustin Lake Drive/Sams Drive during the afternoon peak hour.

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 Sandy Creek Road was evaluated for three 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, which indicate the capacity of Sandy Creek Road if no improvements were made to the corridor.

### Table 2 - 2040 Horizon Peak Hour Roadway Capacity Level of Service (LOS)

<table>
<thead>
<tr>
<th>SANDY CREEK ROAD</th>
<th>AM PEAK</th>
<th>PM PEAK</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS</td>
<td>V/C1</td>
<td>LOS</td>
</tr>
<tr>
<td>FROM SR 74 TO ADAMS ROAD</td>
<td>C</td>
<td>0.27</td>
</tr>
<tr>
<td>FROM ADAMS ROAD TO EASTIN ROAD</td>
<td>C</td>
<td>0.33</td>
</tr>
<tr>
<td>FROM EASTIN ROAD TO VETERANS PARKWAY</td>
<td>C</td>
<td>0.31</td>
</tr>
</tbody>
</table>

In terms of road capacity, the Sandy Creek Road corridor will continue to operate at an acceptable LOS.

- **Safety**
  
  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 April 8, 2019 for the Sandy Creek Road, from SR 74/Joel Cowan Parkway to Veterans Parkway.

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 9 represents key takeaways from the RSA. For detailed assessment, refer to the Road Safety Audit document attached in the appendix.

### 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 3 shows the roadway crash rate along Sandy Creek Road relative to the statewide average for minor arterials.

<table>
<thead>
<tr>
<th>Sandy Creek Road Crash Rate for Corridor</th>
<th>SANDY CREEK ROAD CRASH (5 YEARS)</th>
<th>CORRIDOR CRASH RATE</th>
<th>STATEWIDE AVG CRASH RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL CRASHES</td>
<td>114</td>
<td>239.9</td>
<td>506</td>
</tr>
<tr>
<td>TOTAL NON-FATAL INJURY CRASHES</td>
<td>30</td>
<td>63.1</td>
<td>124</td>
</tr>
<tr>
<td>TOTAL FATAL CRASHES</td>
<td>1</td>
<td>2.1</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Sandy Creek Road’s crash rates indicate that its rate of total crashes and crashes involving injuries falls below the statewide average; however, Sandy Creek Road’s crash rates for fatal accidents is higher than the statewide average for minor arterials.

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, Sandy Creek Road, Banks Road, Tyrone Road – Palmetto Road and State Route 279 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 Sandy Creek Road, the following intersection fell above the 75th percentile:

- Sandy Creek Road and Eastin Road.

This finding indicates that Eastin Road’s crash rate shows a trend that safety improvements are needed at the intersection. Moreover, Sandy Creek Road and Eastin Road was identified as one of the top crash rate location in Fayette County’s CTP Needs Assessment.

- 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 identify the impact of regional traffic orientation on Sandy Creek Road operations.

One of the link analyzed was SR 92/Veterans Parkway which is north of the eastern termini of Sandy Creek Road at Veterans Parkway. Based on the origin-destination results, the majority of trips on Veterans Parkway are traveling north to SR 92 to access Interstate 85 and Fulton County and traveling south to Peachtree City and beyond. For SR 54 through downtown Fayetteville, many trips continue on SR 54 into Coweta County, while some split off to the northwest on Sandy Creek Road.

SR 74 from Atlanta was also analyzed in the Select Link Analysis. Based on the results SR 74, which is Sandy Creek Road’s western termini, operates a primary commuter route for Fayette County residents commuting to and from Atlanta. The origin-destination findings show that trips destined from Fulton County distribute to the Town of Tyrone, Peachtree City, Sandy Creek Road, Tyrone Road, and North Peachtree Parkway.

- Truck Route Candidate -

One of the needs identified in the Comprehensive Transportation Plan was to designate new east-west and north-south truck routes throughout the county to mitigate future congestion. Sandy Creek Road, along with Bernhard-Goza corridor, Crabapple Lane, Tyrone Road, and Veterans Parkway, were identified as potential candidates east-west truck routes.

Truck count data indicates that trucks travel heavily along SR 74, which provides access to I-85, the Fairburn intermodal yard, and warehousing/distribution centers along Oakley Industrial Blvd. Community feedback indicates that trucks utilize both Sandy Creek Road and Tyrone Road as an east-west connection between SR 74 and Fayetteville, and these movements are expected to continue as direct routes into the city centers.

In tandem with the need for new truck routes, the design of these roads must be evaluated, keeping in mind the overall character of the area and the needs of the communities these thoroughfares serve. In the event that Sandy Creek Road is recommended as a truck route, it is imperative that all improvements be designed to accommodate truck 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.

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 10 and Graphic 11 represents comments from these meetings.

Image 3 - Photos from Stakeholder Committee Meetings 1 & 2

Graphic 10 - Perceptions of the Existing Conditions of the Sandy Creek Road Corridor

Graphic 11 - SWOT Analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>IN WHAT AREAS DOES THE CORRIDOR DO WELL?</td>
<td>WHERE DO WE NEED TO IMPROVE?</td>
</tr>
<tr>
<td>Efficiency (from SR 74 to SR 54)</td>
<td>Cost</td>
</tr>
<tr>
<td>Efficient for traffic and emergency response</td>
<td>Safety, Capacity, Traffic, Trucks</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>No bike/ped infrastructure</td>
</tr>
<tr>
<td>Open to Considering improvements</td>
<td>No turn lanes, difficult to maneuver</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Trepidations</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHAT ARE OUR GOALS?</td>
<td>WHAT CHALLENGES WILL WE FACE?</td>
</tr>
<tr>
<td>Aesthetic and Efficiency</td>
<td>Property and Mindsets</td>
</tr>
<tr>
<td>Smart Growth</td>
<td>Property acquisition and Right of Way</td>
</tr>
<tr>
<td>Impact project [new development]</td>
<td>Maintain traffic during infrastructure development</td>
</tr>
<tr>
<td>Pre-plan storm water</td>
<td></td>
</tr>
</tbody>
</table>
• Public Information Open House -

The first Public Information Open House for the Sandy Creek Road 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 12 represents highlights from the PIOH.

**Graphic 12 - PIOH Comments**

- **200** CITIZENS ATTENDED
- **350** INDIVIDUAL COMMENTS

**MOST IDENTIFIED CONCERN CATEGORIES**

<table>
<thead>
<tr>
<th>Category</th>
<th>200</th>
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</thead>
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<tr>
<td>ROADWAY IMPROVEMENTS</td>
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<tr>
<td>TRAFFIC CALMING</td>
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<tr>
<td>SPEEDING &amp; CONGESTION</td>
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<td>350</td>
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<tr>
<td>SIGHT DISTANCE</td>
<td>200</td>
<td>350</td>
</tr>
<tr>
<td>18 - WHEELERS</td>
<td>200</td>
<td>350</td>
</tr>
<tr>
<td>BIKE - PED INFRASTRUCTURE</td>
<td>200</td>
<td>350</td>
</tr>
</tbody>
</table>

**6. TRUSTIN LAKE DRIVE, SAMS DRIVE, EASTIN ROAD & SANDY CREEK ROAD INTERSECTION**

**5. VETERANS PARKWAY & HIGHWAY 92**

**4. ELLISON ROAD & SANDY CREEK ROAD INTERSECTION**

**1. SANDY CREEK ROAD CORRIDOR**

**2. HIGHWAY 74 & SANDY CREEK ROAD INTERSECTION**

**3. ADAMS ROAD & SANDY CREEK ROAD INTERSECTION**

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 Sandy Creek 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.