Effingham County, GA

# SR 26/US 80 Scoping Study
# Phase II
# Existing Conditions Memorandum

*Prepared for:*

mpc — Chatham County - Savannah Metropolitan Planning Commission, Georgia 1955

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## *List of Abbreviations*

| | |
|---|---|
| AADT | Annual Average Daily Traffic |
| ADT | Average Daily Traffic |
| ATS | Average Travel Speed |
| BFFS | Base Free Flow Speed |
| CORE MPO | Coastal Region Metropolitan Planning Organization |
| DDHV | Directional Design Hourly Volume |
| FC | Functional Classification |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| GCT | Garden City Terminal |
| GDOT | Georgia Department of Transportation |
| GPA | Georgia Ports Authority |
| HCM | Highway Capacity Manual |
| HMGMA | Hyundai Motor Group Megaplant America |
| HMVMT | Hundred Million Vehicle Miles Traveled |
| LOS | Level of Service |
| MOE | Measure of Effectiveness |
| MPC | Metropolitan Planning Commission |
| MPH | Miles Per Hour |
| MTP | Metropolitan Transportation Plan |
| MUTCD | Manual on Uniform Traffic Control Devices |
| NMTP | Non-Motorized Transportation Plan |
| PDO | Property Damage Only |
| RCUT | Reduced Conflict U-Turn |
| TADA | Traffic Analysis and Data Application |
| TIP | Transportation Improvement Program |
| TMC | Turning Movement Count |
| TWLTL | Two-Way Left-Turn Lane |
| TWSC | Two-Way Stop Control |
| VPD | Vehicles Per Day |
| VPH | Vehicles Per Hour |

# 1.0 Introduction

Once nicknamed the "Broadway of America," US 80 has long been one of the most important east-west routes in the country and was the first major highway to connect Georgia to California. Locally, the SR 26/US 80 corridor—from the Bryan County line to the Chatham County line in Effingham County—serves as a critical link in Georgia's freight and commuter network. It is one of the most heavily utilized access routes serving the Georgia Ports Authority's (GPA's) Garden City Terminal (GCT) and connects to major freight and commuter corridors in Effingham County such as Sand Hill Road, Old River Road, and SR 17/30. Further, SR 26/US 80 is a key east-west alternate to I-16 that serves freight traffic from the Hyundai Motor Group Metaplant America (HMGMA) in Bryan County and the Port of Savannah in Chatham County. However, SR 26/US 80 is more than just a critical freight and commuter corridor. It serves as a hurricane evacuation route, and the entire corridor is utilized by Georgia State Bike Routes 35 and 40. The 6.4-mile-long study corridor within Effingham County is functionally classified as minor arterial and includes a diverse mix of industrial, commercial, residential, religious, and recreational facilities. Additionally, the community of Eden relies on SR 26/US 80 as its main street which indicates that the corridor is both a place and a thoroughfare. This study, PI No. 0020786, will evaluate existing and future capacity, operations, and safety conditions and will consider traffic counts, crash data, land use, community data, and future traffic projections throughout the corridor. This data will be used to evaluate access management strategies with a primary focus of developing operational and safety improvements along the corridor. The study will consider freight, commuter, and pedestrian/bicycle traffic, and future traffic projections will account for anticipated growth based on historical data, populations projections, the Coastal Region Metropolitan Planning Organization's (CORE MPO's) Travel Demand Model (TDM), the HMGMA, and potential development adjacent to and near the corridor.

The primary goals and objectives of the *SR 26/US 80 Scoping Study Phase II* are:

- Identify and prioritize short-term (0-5 years), mid-term (5-10 years), and long-term (10+ years) improvement projects needed for the SR 26/US 80 corridor to operate at an acceptable level of service;
- Prioritize recommended improvements to facilitate the planning and programming of projects through the CORE MPO Metropolitan Transportation Plan (MTP) process; and
- Justify the future programming of projects in the CORE MPO Transportation Improvement Program (TIP).

As a supporting document to the CORE MPO MTP process, this study's goals, objectives, and outcomes are intended to align closely with those highlighted in the CORE MPO *Moving Forward Together 2050* MTP. The goals and objectives of the MTP focus on several key performance measures used to inform transportation investment decisions. Some of the measures most relevant to this study include:

- ***Safety and Security***. A total of 496 crashes occurred along the SR 26/US 80 study corridor over the five-year period between 2020 and 2024, including 4 fatal crashes and 173 non-fatal injury crashes. While the overall five-year average crash rate for the corridor was calculated lower than the statewide average for minor arterials, specific intersections and segments show a high number of crashes. Applying GDOT's unit crash cost values from the *Crash Injury Severity (KABCO) Costs* guidance (GDOT, 2025), these crashes result in an estimated comprehensive cost of approximately $43.8 million per year. A key objective of this corridor study is to identify improvements that address existing crash trends and provide safe access for all road users.

- ***Performance and Reliability.*** Long peak hour delays are experienced near the intersections of SR 26/US 80 with Sand Hill Road, Old River Road, and SR 17/30. Notably, southbound queues on SR 17/30 exceed 0.2 miles in length at the intersection with SR 26/US 80 during the AM peak period. Similarly, westbound queues on SR 26/US 80 exceed 0.5 miles in length at this same location during the PM peak period. To address existing performance deficiencies, GDOT is installing a temporary traffic signal at the intersection with Sand Hill Road until a roundabout is installed as part of PI 0019658. Additionally, the *Effingham County Transportation Master Plan Update* (Pond, 2025) ("the TMP") recommended geometric and capacity improvements at the intersections of SR 26/US 80 with Sand Hill Road, Old River Road, and SR 17/30. GDOT's *Coastal Empire Transportation Study* recommended widening SR 26/US 80 to a four-lane divided section from Amanda Road in Bulloch County to SR 17/30 in Effingham County. Recommended improvements from recent studies, including the TMP and GDOT's *Coastal Empire Transportation Study*, will be evaluated as part of the Alternatives Development and Analysis phase. Reducing congestion and improving system performance are key objectives of the SR 26/US 80 Scoping Study Phase II.
- ***Access and Connectivity.*** Based on 2022 data from the US Census Bureau, approximately 400 jobs are located within a one-mile radius of the SR 26/US 80 centerline, while approximately 1,600 workers live within this same boundary. Outside of this planning area, the SR 26/US 80 corridor serves as a vital connection to and from the Interstate system, HMGMA, and GPA's operations at the Port of Savannah. SR 26/US 80 plays a significant role in supporting the region's economic vitality and is one of two primary east-west arterials within the southern portion of Effingham County. The existing operations, safety, and access management deficiencies along SR 26/US 80 threaten the vitality of these economic centers and the surrounding population.

Concurrent with this study, GDOT is conducting an adjacent corridor study for SR 26/US 80 within Bryan County from the Effingham County/Bryan County line to SR 119. Traffic forecasting efforts and recommendations will be coordinated between both studies in subsequent study phases to provide a holistic view of each corridor.

This Existing Conditions Memorandum summarizes a comprehensive data collection effort and land use, community, capacity, and safety analyses which were conducted to assess existing conditions along the SR 26/US 80 corridor and to identify transportation challenges, needs, and opportunities. The outcomes of this initial task will be used to inform corridor improvements which will be documented in the Alternatives Analysis Memorandum and the *SR 26/US 80 Scoping Study Phase II Final Report*.

# 2.0 Existing Conditions Assessment

## 2.1 Study Area, Corridor Characteristics, and Field Observations

The planning area for this study is illustrated in **Figure 1** and includes the SR 26/US 80 corridor from the Effingham County/Bryan County line to the Effingham County/Chatham County line. Across this 6.4-mile-long stretch, a total of 18 intersections were included in traffic analyses, two of which are currently signalized. Surrounding land uses predominately include residential and agricultural areas which are dispersed throughout the corridor. Additionally, four distinct context areas were identified and independently assessed as part of this existing conditions assessment. Key characteristics of each segment identified through data collection and field observations are noted in the following subsections and in **Figure 2** through **Figure 9**.

### *2.1.1 Segment 1 – Western Gateway*

Segment 1 constitutes a 1.2-mile-long section of the SR 26/US 80 corridor between the Effingham County/Bryan County line (Ogeechee River) and Sand Hill Road. This Segment is primarily comprised of residential and agricultural land uses and provides access to the Ogeechee River Camping Club, the Wildwood Estates subdivision, and multiple single-family detached residencies. Key characteristics of this Segment are summarized in **Table 1**, and existing geometry, traffic volumes, and field-collected photographs are provided in **Figure 2**. Environmental features along this Segment are summarized in **Figure 3**.

*Traffic Operations*

Daily traffic volumes on this Segment of SR 26/US 80 are approximately 80% of the theoretical capacity of a two-lane undivided facility with similar peak-hour and directional distributions. Annual average daily traffic (AADT) volumes average approximately 13,375 vehicles per day (VPD), and truck percentages range between 11% and 23.5% during the peak periods of travel. Modest peak-period congestion was observed, with directional imbalances characterized by higher eastbound volumes during the AM peak hour and higher westbound volumes during the PM peak hour. Additionally, there was a relatively high proportion of multi-unit (MU) trucks within this Segment which contributed to a maximum daily truck percentage of 23.5%. Historically, traffic volumes in this Segment have grown at an average annual rate of approximately 1.2% per year and 1.3% per year over the last five-year and 10-year periods, respectively.

Field travel time runs through Segment 1 corresponded with an average travel speed of approximately 43 miles per hour (MPH) and 52 MPH during the AM and PM peak periods, respectively. These speeds average approximately eight MPH below the posted speed limit of 55 MPH through this Segment.

*Roadway Geometry/Access Management*

Segment 1 includes 13 driveways which equates to a spacing of 11 driveways per mile. This Segment consists of a two-lane, undivided roadway with no auxiliary turn lanes other than at the intersection with Sand Hill Road. The typical section includes 12-foot-wide travel lanes and variable-width (between two-foot-wide and 12-foot-wide) paved shoulders. Acceptable traffic operations along this Segment are attributable to adequate intersection spacing and low-volume side roads. Nevertheless, ongoing and future development in Bryan County, including the HMGMA, may necessitate additional geometric and intersection control improvements over the short-, mid-, and long-term horizons.

*Non-Motorist Facilities*

Bicycle accommodations are provided along Segment 1 via a variable-width (6.5-foot-wide to 12-foot-wide) paved shoulder from the Ogeechee River to 375 feet west of the Rose Road/Elm Street intersection. However, pedestrian and transit accommodations are not provided in this Segment.

*Environmental Features*

The Ogeechee River is located at the western end of the study corridor. Freshwater forested/shrub wetlands and a Federal Emergency Management Agency (FEMA) Flood Zone AE (i.e., 1% annual risk for flooding) surround the Ogeechee River and extend to the intersection with Rose Road/Elm Street. These environmental features may constrain opportunities for future improvements along Segment 1.

**Table 1: Segment 1 – Western Gateway Corridor Characteristics**

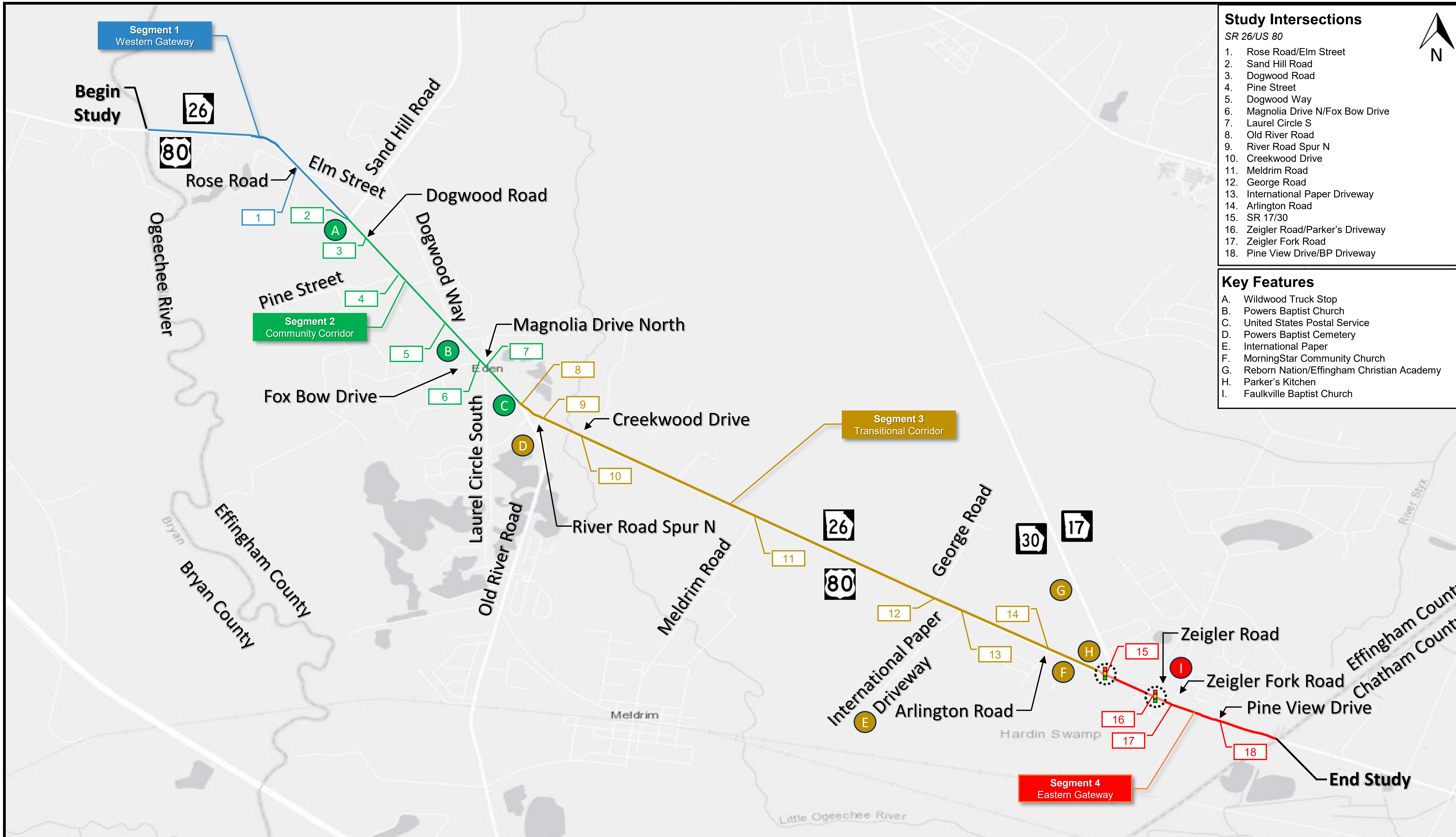
| Geometric and Functional Characteristics | |
|---|---|
| *Extents* | Ogeechee River to Sand Hill Road (1.2 Miles) |
| *Typical Cross-Section* | **Typical Section:** 2-Lane Undivided<br>**Typical Lane Widths:** 12’ Travel Lanes, 2’-12’ Outside Shoulder |
| *Speed Limit* | 55 MPH |
| *Number of Driveways* | 13 (11 Driveways/Mile) |
| *Number of Signalized Intersections* | 0 |
| **Major Intersecting Roadways: None** | |
| **Traffic Characteristics** | |
| *Existing Traffic Volume Data*[1] | **2025 AADT:** 13,375 VPD<br>**2025 DHV:** 1,170 VPH<br>**K Factor[3]:** 9.0%<br>**D Factor[4]:** 66.7%<br>**Daily Truck Percentage:** 23.5% |
| *Historic Traffic Volume Data*[2] | **5-Year Historic Growth Rate:** 1.23%<br>**10-Year Historic Growth Rate:** 1.27% |

[1] Existing traffic volume data represents an average of the factored AADT volumes calculated from field-collected data on Segment 1

[2] Historic Traffic Growth based on AADT counts from GDOT TADA

[3] K Factor is the percent of the daily volume occurring during the peak hour

[4] D Factor is the percent of traffic traveling in the peak direction during the peak hour




**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 1 – Corridor Context Areas and Study Intersections

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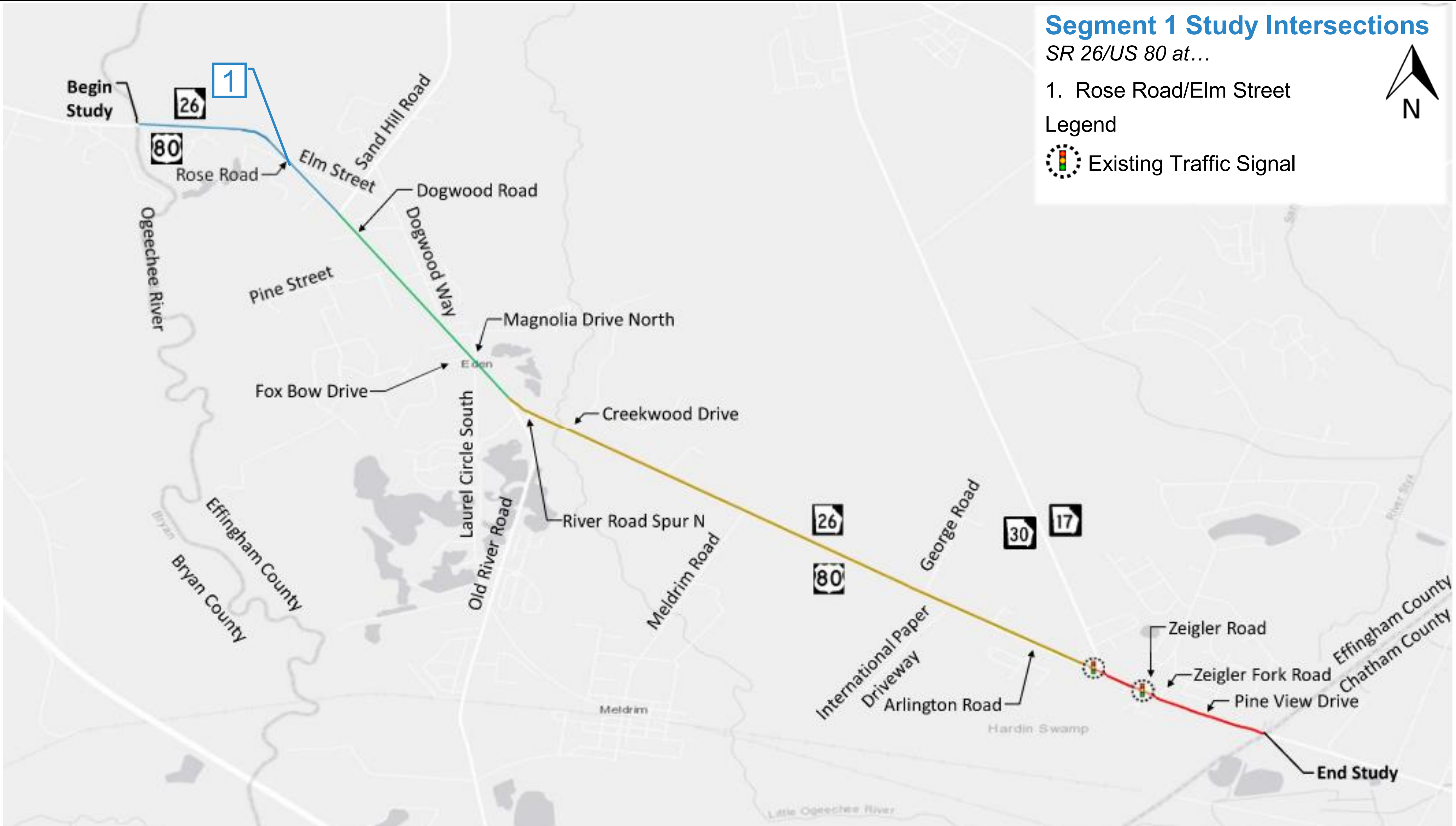
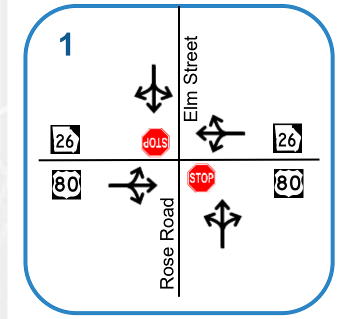



## Existing Geometry & Intersection Control



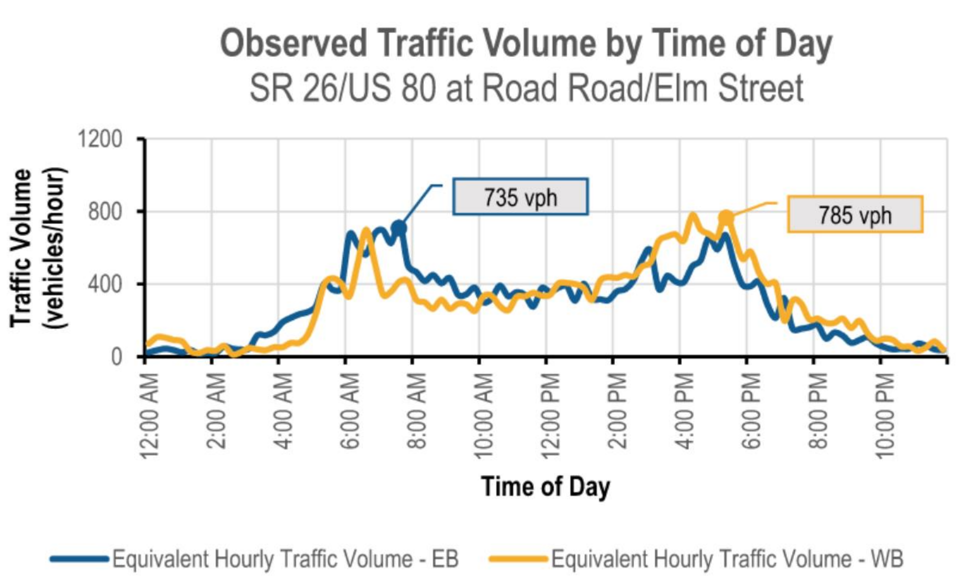




**Photo:** SR 26/US 80 at Rose Road/Elm Street (Looking East)

**Photo:** SR 26/US 80 at Rose Road/Elm Street (Looking West)

**Photo:** SR 26/US 80 at Rose Road/Elm Street (Looking South)

**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 2 – Study Intersections and Key Characteristics

Segment 1 – Western Gateway

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**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 3 – Environmental Feature Map

Segment 1 – Western Gateway

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### 2.1.2 Segment 2 – Community Corridor

Segment 2 is approximately 1.3 miles in length and extends from Sand Hill Road to Old River Road. This Segment is comprised of primarily residential, commercial, and agricultural land uses which provide access to residential neighborhoods, single-family detached residences, Powers Baptist Church, and Edward's Commercial Park. Key characteristics of this Segment are summarized in **Table 2**, and existing geometry, traffic volumes, and field-collected photographs are provided in **Figure 4**. Environmental features along this Segment are summarized in **Figure 5**.

*Traffic Operations*

Daily traffic volumes on Segment 2 are approximately 83% of the theoretical capacity of a two-lane undivided facility with similar peak-hour and directional distributions. AADT volumes average 13,975 VPD, and truck percentages range between 10% and 27% during the peak periods of travel. Similarly to Segment 1, modest peak-period congestion was observed, with directional imbalances characterized by higher eastbound volumes during the AM peak hour and higher westbound volumes during the PM peak hour. Southbound queuing along Sand Hill Road was present during the AM peak hour and extended approximately 500 feet. Additionally, there was a high number of MU trucks within this Segment which contributed to a maximum daily truck percentage of 25%. Historically, traffic volumes in this Segment have grown at an average annual rate of approximately 3% per year and 3.3% per year over the last five- and 10-year periods, respectively, the highest of any segment along the study corridor.

Field travel time runs for Segment 2 corresponded with an average travel speed of approximately 43 MPH and 46 MPH during the AM and PM peak periods, respectively. These speeds average approximately 11 MPH below the 55 MPH posted speed limit through the majority of this Segment.

*Roadway Geometry/Access Management*

As shown in **Table 2**, 39 driveways are present along the Segment 2 corridor which equates to a spacing of 30 driveways per mile. Segment 2 is a two-lane, undivided roadway with 12-foot-wide travel lanes and two-foot-wide shoulders, and turn lanes are provided at the intersections with Sand Hill Road, Dogwood Way, and Magnolia Drive North. Within this Segment, intersection spacing is minimal and well below spacing recommendations provided in GDOT's *Regulations for Driveway and Encroachment Control Manual* (DECM). There are 12 full-movement intersections within this 1.3-mile-long Segment, some of which are as close as 100 feet apart; these include the intersections of Fox Bow Drive, Magnolia Drive North, and Laurel Circle South. Inadequate intersection spacing may contribute to the concentration of crashes at these locations as shown in Section 2.5.3.

As stated previously, GDOT is installing an interim traffic signal at the intersection of SR 26/US 80 and Sand Hill Road to help alleviate congestion and delay. This signal will precede a single-lane roundabout which is programmed for construction in FY 2027 as part of PI 0019658. Given the relatively high travel speeds along with the close intersection spacing, access management strategies along this Segment may be needed to improve safety and traffic operations.

*Non-Motorist Facilities*

Pedestrian, bicycle, and transit accommodations are not currently provided in Segment 2. As part of the Georgia Hi-Lo Trail Effingham County Model Project, a proposed 12-foot-wide shared-use path will begin at the intersection of SR 26/US 80 and Magnolia Drive North and extend north to the Effingham County/Screven County line. The *Georgia Hi-Lo Trail Plan* (Path Foundation, 2024) indicates that the Georgia Hi-Lo Trail will continue east towards Chatham County; accordingly, this study will help determine feasible alignment alternatives as part of the Alternatives Analysis and Development phase.

*Environmental Features*

The western end of Segment 2 from Sand Hill Road to 850 feet west of Dogwood Way is in a FEMA Flood Zone AE. Freshwater forested/shrub wetlands associated with the Little Ogeechee River are present on the south side of SR 26/US 80 near Laurel Circle South and Old River Road. Additionally, a freshwater pond on the south side of SR 26/US 80 west of Pine Street may restrict future alternatives.

**Table 2: Segment 2 – Community Corridor Characteristics**

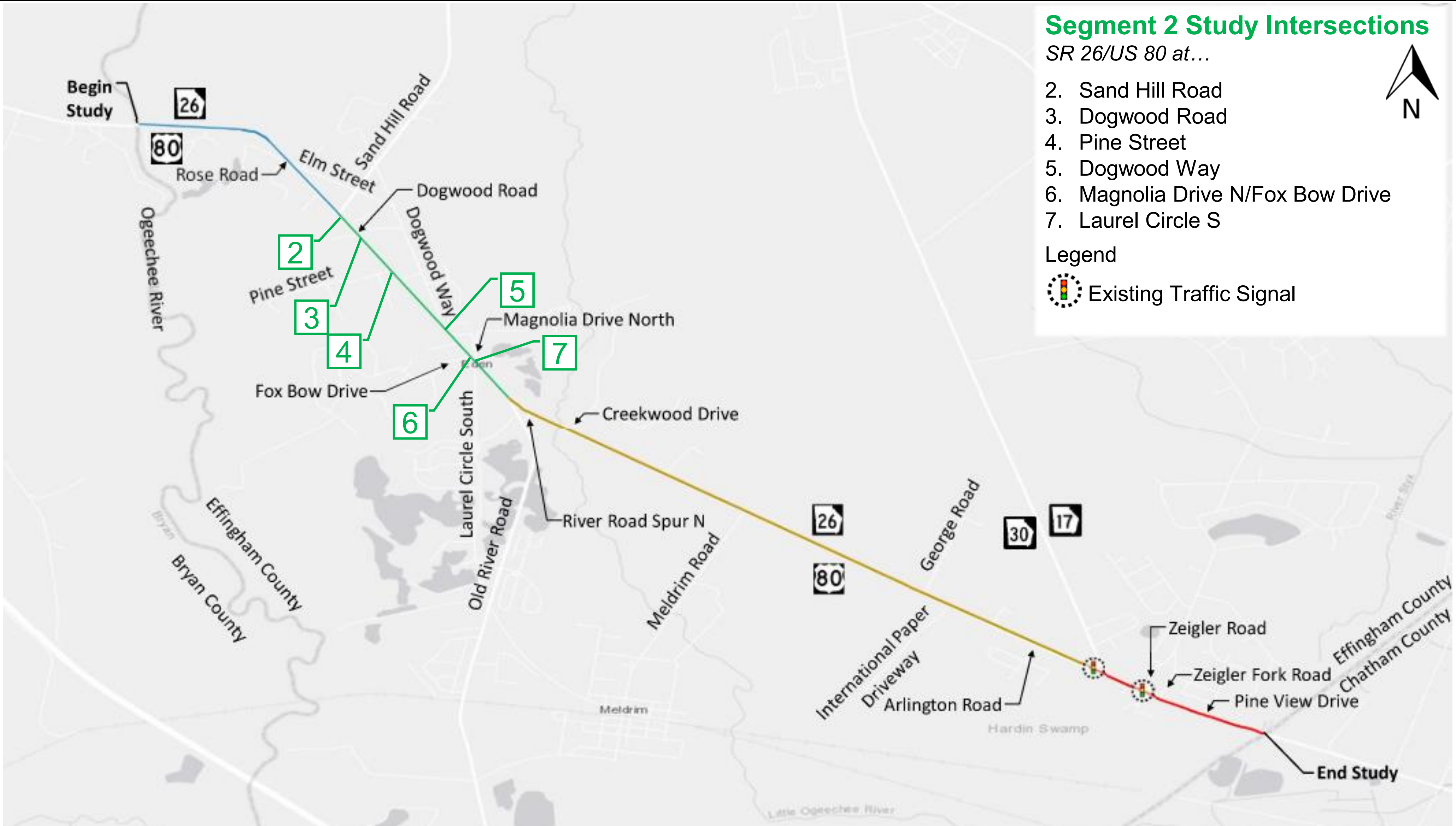
| Geometric and Functional Characteristics | |
|---|---|
| *Extents* | Sand Hill Road to Old River Road (1.3 Miles) |
| *Typical Cross-Section* | **Typical Section:** 2-Lane Undivided<br>**Typical Lane Widths:** 12’ Travel Lanes, 2’ Outside Shoulder |
| *Speed Limit* | 55 MPH from Sand Hill Road to 850 feet east of Laurel Circle South<br>45 MPH from 850 feet east of Laurel Circle South to Old River Road |
| *Number of Driveways* | 39 (30 Driveways/Mile) |
| *Number of Signalized Intersections* | 0 |
| **Major Intersecting Roadways** | |
| *Sand Hill Road* | **Cross-Section:** Two-Lane Undivided<br>**Speed Limit:** 50 MPH<br>**2025 AADT**: 5,975 VPD |
| **Traffic Characteristics** | |
| *Existing Traffic Volume Data*[1] | **2025 AADT:** 13,975 VPD<br>**2025 DHV:** 1,295 VPH<br>**K Factor[3]:** 9.6%<br>**D Factor[4]:** 68.0%<br>**Daily Truck Percentage:** 25% |
| *Historic Traffic Volume Data*[2] | **5-Year Historic Growth Rate:** 2.99%<br>**10-Year Historic Growth Rate:** 3.25% |

[1] Existing traffic volume data represents an average of the factored AADT volumes calculated from field-collected data on Segment 2

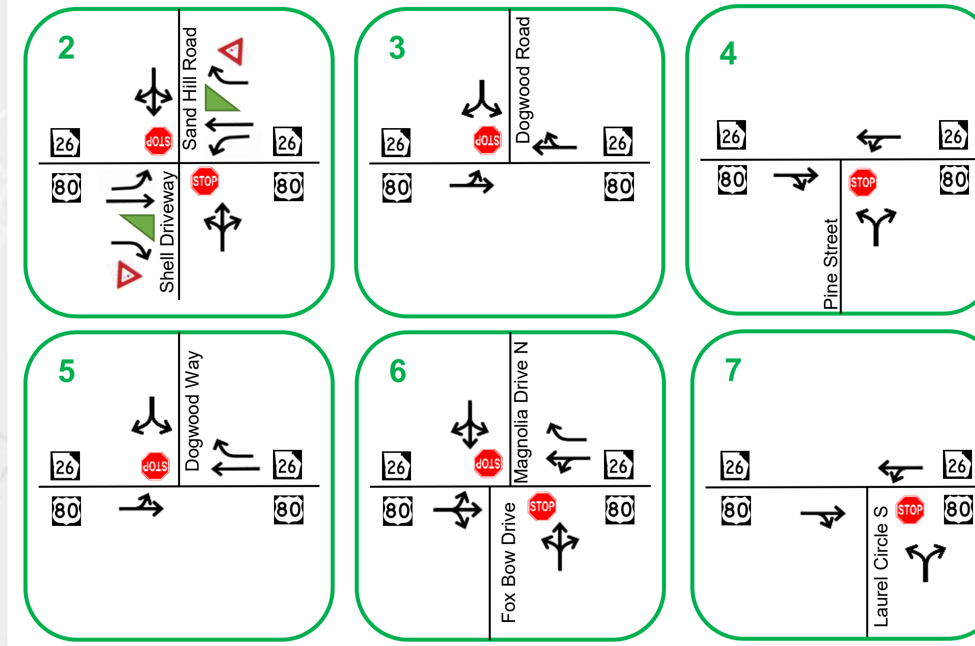
[2] Historic Traffic Growth based on AADT counts from GDOT TADA

[3] K Factor is the percent of the daily volume occurring during the peak hour

[4] D Factor is the percent of traffic traveling in the peak direction during the peak hour




## Existing Geometry & Intersection Control




### Observed Traffic Volume by Time of Day

SR 26/US 80 at Magnolia Drive

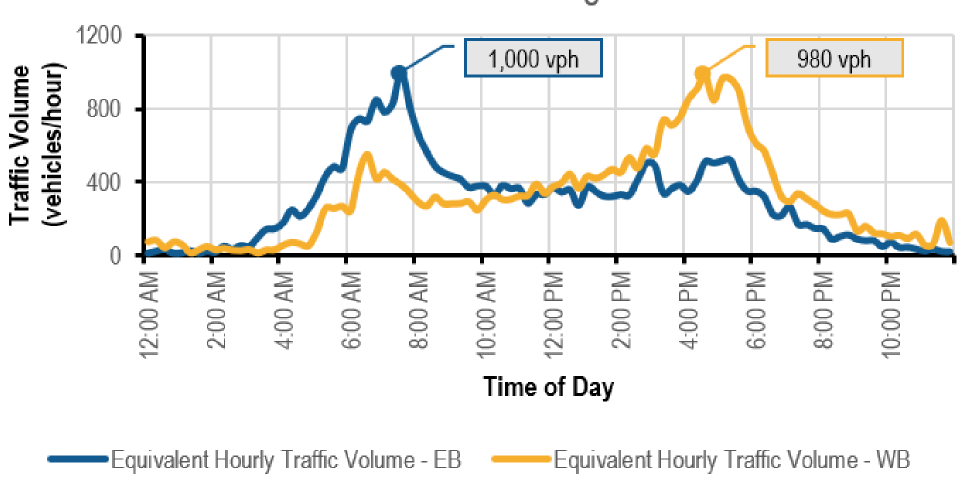



**Photo:** SR 26/US 80 at Sand Hill Road (Looking West)

**Photo:** SR 26/US 80 at Dogwood Road (Looking East)

**Photo:** SR 26/US 80 at Magnolia Drive N/ Fox Bow Drive (Looking East)

**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 4 – Study Intersections and Key Characteristics

Segment 2 – Community Corridor

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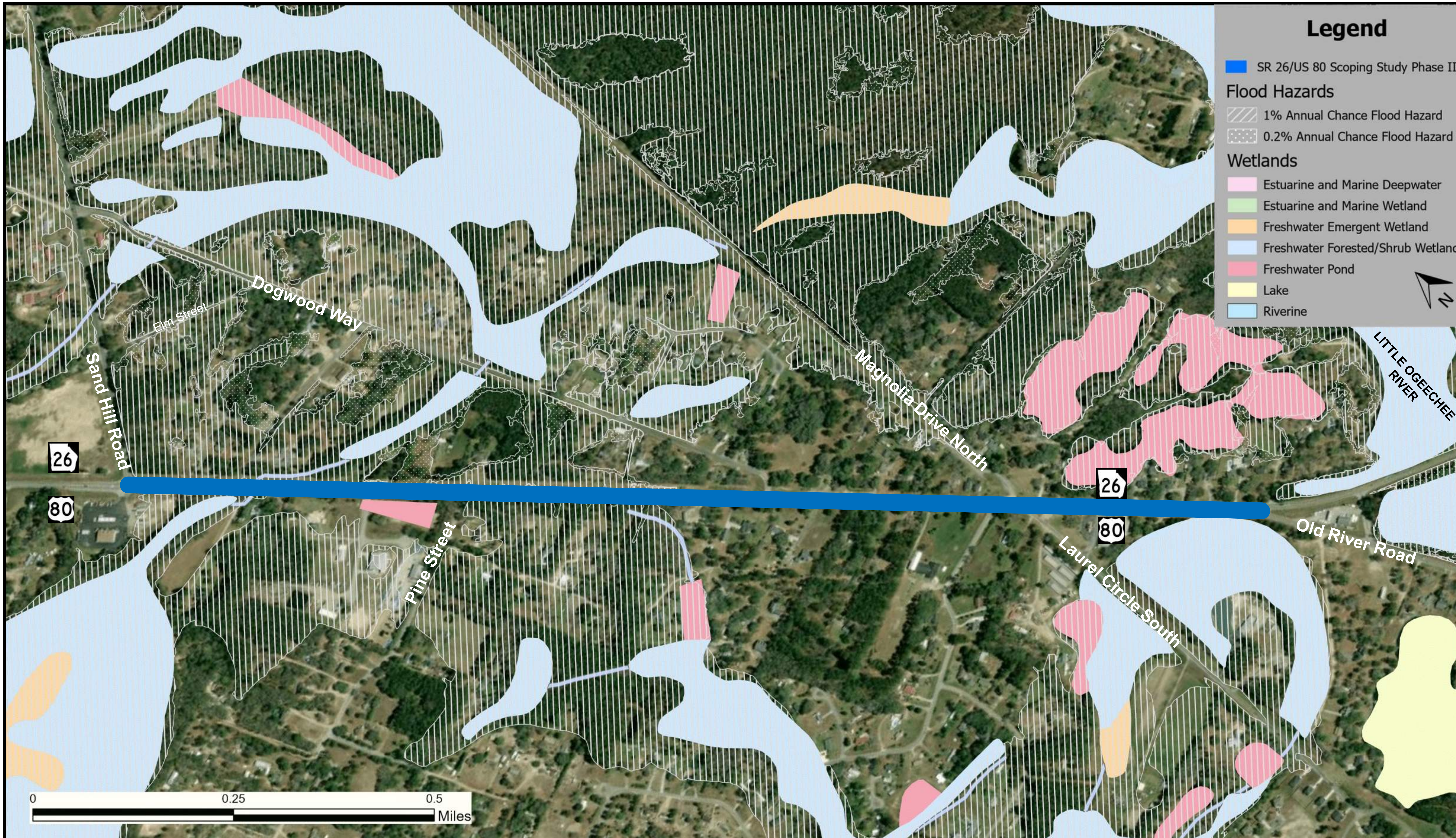


**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 5 – Environmental Feature Map

Segment 2 – Community Corridor

SR 26/US 80 SCOPING STUDY PHASE II

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### 2.1.3 Segment 3 – Transitional Corridor

Segment 3 is a 3.1-mile-long section of the SR 26/US 80 corridor from Old River Road to SR 17/30. This Segment is comprised of residential and agricultural uses on the western end, commercial uses on the eastern end near SR 17/30, and various industrial uses including International Paper. Segment 3 also provides access to the residential neighborhoods of Creekwood Farms and Monterey Park as well as single-family detached residences. Key characteristics of this Segment are summarized in **Table 3**, and existing geometry, traffic volumes, and field-collected photographs are provided in **Figure 6**. Environmental features for Segment 3 are shown in **Figure 7**.

*Traffic Operations*

Along Segment 3, daily traffic volumes are greater than 85% of the theoretical capacity of a two-lane undivided facility with similar peak-hour and directional distributions. AADT volumes average 11,725 VPD and truck percentages range from 10.5% to 23% during the peak periods of travel. Modest peak-period congestion was observed in this Segment and is likely attributable to directional imbalances characterized by higher eastbound volumes during the AM peak hour and higher westbound volumes during the PM peak hour. Although Segment 3 has the lowest AADT along the corridor, truck percentages are highest along the study corridor with a maximum daily truck percentage of 22% due to freight travel patterns coupled with diversions in commuter traffic at Old River Road and SR 17/30. Historically, traffic volumes in this Segment show negative growth at an average annual rate of approximately -0.4% per year and -1.9% per year over the last five- and 10-year periods, respectively. Segment 3 is one of two segments with declining traffic growth.

Field travel time runs through Segment 3 corresponded with an average travel speed of approximately 42 MPH and 48 MPH during the AM and PM peak periods, respectively. These lower travel speeds compared to other contextual segments is attributable to a reduced speed limit of 45 MPH throughout portions of this Segment.

*Roadway Geometry/Access Management*

Segment 3 includes 76 driveways which equates to a spacing of 25 driveways per mile. Further, Segment 3 is a two-lane, undivided roadway, and turn lanes are provided at Creekwood Drive and International Paper Driveway. The typical section includes 12-foot-wide travel lanes and two-foot-wide paved shoulders that widen to 6.5-feet-wide approximately 0.2 miles west of SR 17/30. Some of the intersections along Segment 3 experience LOS E or F conditions which indicate the need for geometric, capacity, or intersection control improvements over short-, mid-, and long-term horizons.

The TMP recommended the following which will be considered during both the Traffic Forecasting and Alternatives Analysis and Development phases:

- Realigning the Old River Road intersection with SR 26/US 80 and constructing a multilane roundabout to mitigate unacceptable operations
- Redesignating Old River Road as a freight route
- Widening Old River Road from North of I-16 to SR 26/US 80
- Extending Jabez Jones Road from SR 17/30 to SR 26/US 80

*Non-Motorist Facilities*

Bicycle accommodations are provided along Segment 3 via a 6.5-foot-wide paved shoulder which begins 0.2 miles west of SR 17/30 as noted above. However, pedestrian and transit accommodations are not provided in this Segment.

*Environmental Features*

Freshwater forested/shrub wetlands and a FEMA Flood Zone AE are located along Segment 3 adjacent to the Little Ogeechee River near Old River Road, Meldrim Road, and the Hardin Swamp. Additionally, freshwater emergent wetlands are located near the Little Ogeechee River. These environmental features may constrain opportunities for future improvements along Segment 3.

**Table 3: Segment 3 – Transitional Corridor Characteristics**

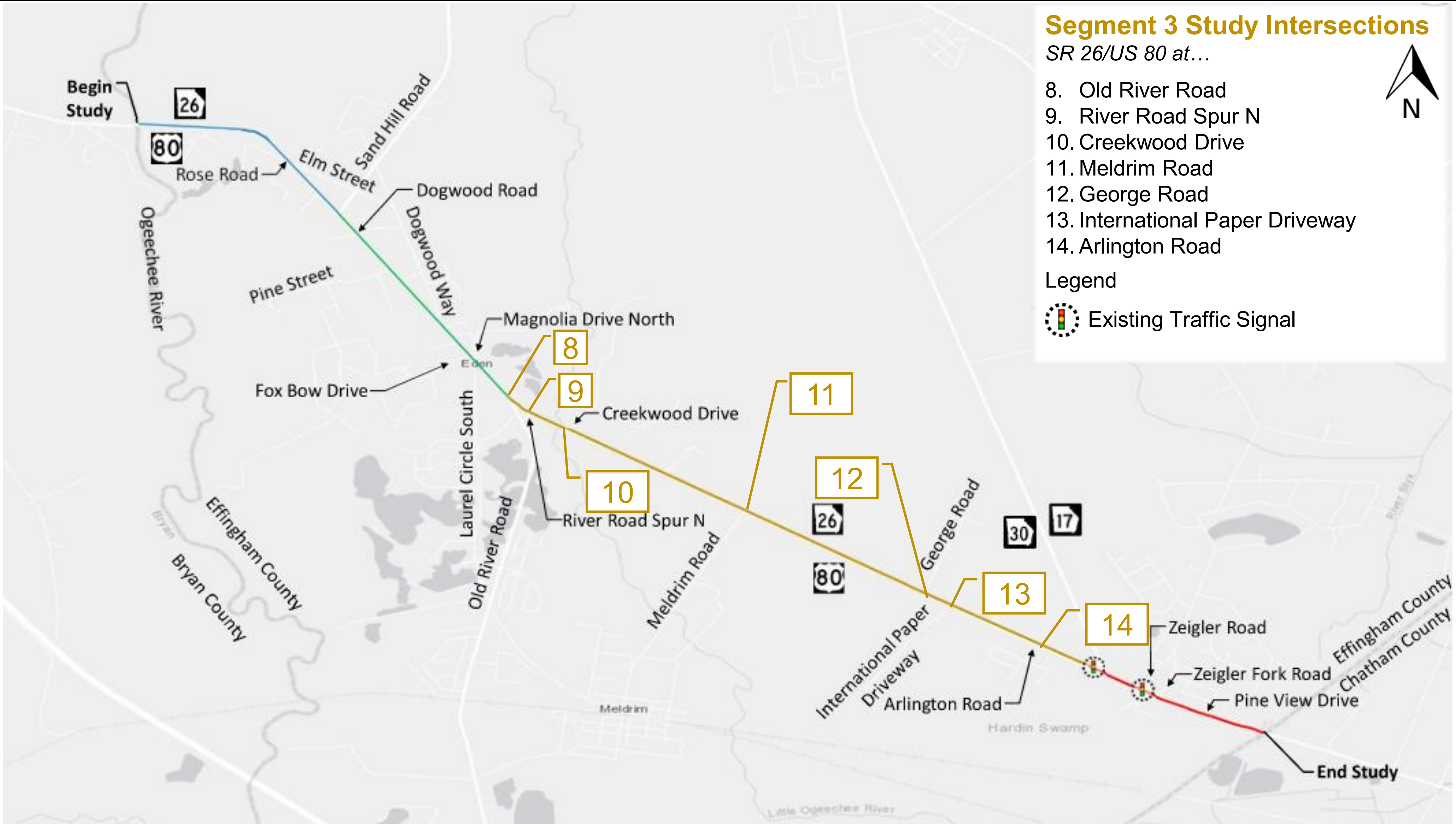
| Geometric and Functional Characteristics | |
|---|---|
| *Extents* | Old River Road to SR 17/30 (3.1 Miles) |
| *Typical Cross-Section* | **Typical Section:** 2-Lane Undivided<br>**Typical Lane Widths:** 12’ Travel Lanes, 2’-6.5’ Outside Shoulder |
| *Speed Limit* | 55 MPH from 0.5 miles east of Old River Road to 200 feet east of International Paper Driveway<br>45 MPH from Old River Road to 0.5 miles east of Old River Road and from 200 feet east of International Paper Driveway to SR 17/30 |
| *Number of Driveways* | 76 (25 Driveways/Mile) |
| *Number of Signalized Intersections* | 0 |
| **Major Intersecting Roadways** | |
| *Old River Road* | **Cross-Section:** Two-Lane Undivided<br>**Speed Limit:** 50 MPH<br>**2025 AADT:** 4,250 VPD |
| **Traffic Characteristics** | |
| *Existing Traffic Volume Data*[1] | **2025 AADT:** 11,725 VPD<br>**2025 DHV:** 1,165 VPH<br>**K Factor**[3]**:** 11.0%<br>**D Factor**[4]**:** 66.4%<br>**Daily Truck Percentage:** 22% |
| *Historic Traffic Volume Data*[2] | **5-Year Historic Growth Rate:** -0.44%<br>**10-Year Historic Growth Rate:** -1.89% |

[1] Existing traffic volume data represents an average of the factored AADT volumes calculated from field-collected data on Segment 3

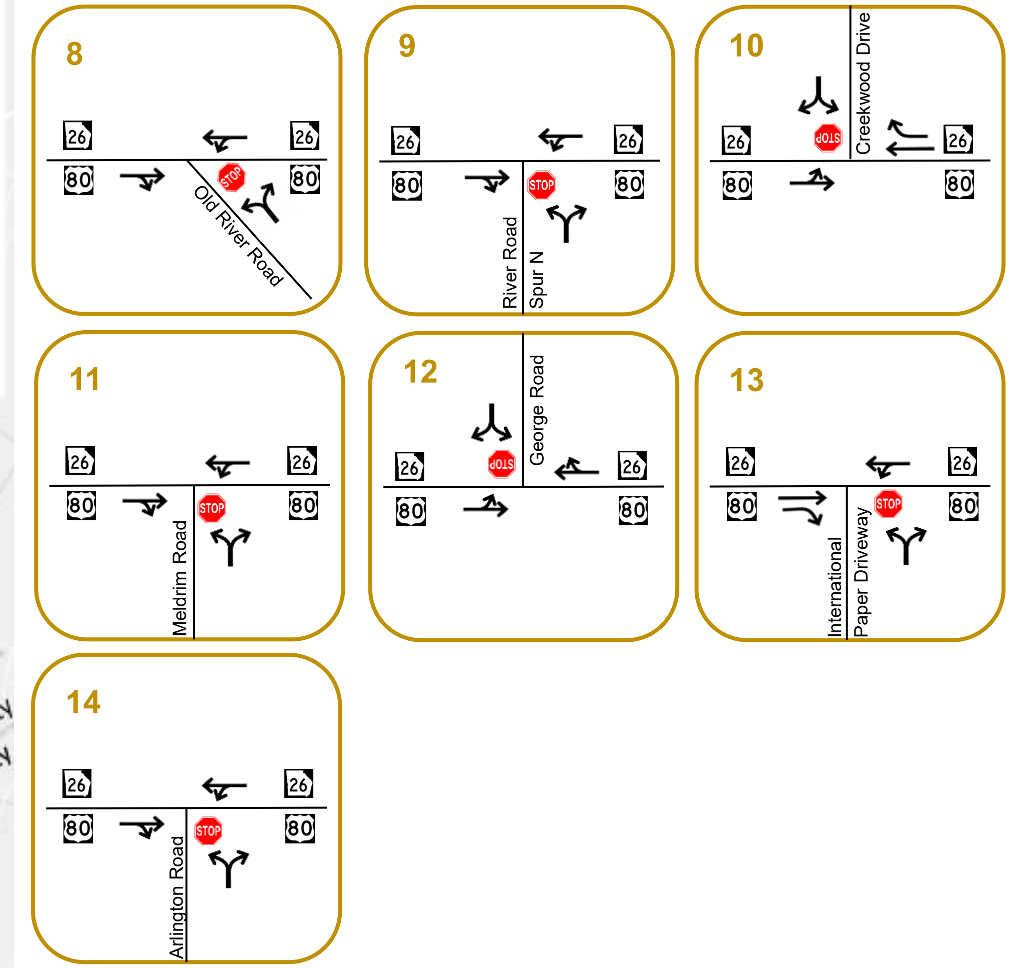
[2] Historic Traffic Growth based on AADT counts from GDOT TADA

[3] K Factor is the percent of the daily volume occurring during the peak hour

[4] D Factor is the percent of traffic traveling in the peak direction during the peak hour




## Existing Geometry & Intersection Control




**Observed Traffic Volume by Time of Day**
SR 26/US 80 at Arlington Drive

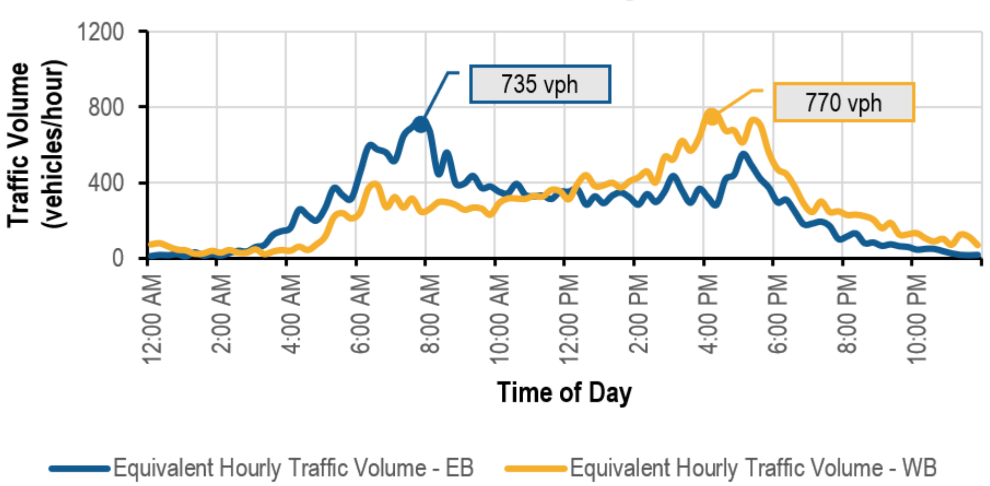



**Photo:** SR 26/US 80 at Old River Road (Looking West)

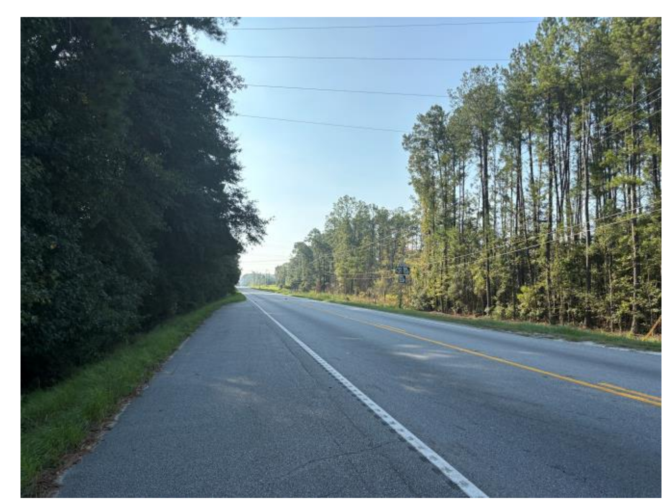


**Photo:** SR 26/US 80 at Meldrim Road (Looking East)

**Photo:** SR 26/US 80 at Arlington Road (Looking West)

**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 6 – Study Intersections and Key Characteristics

Segment 3 – Transitional Corridor

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**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 7 – Environmental Feature Map

Segment 3 – Transitional Corridor

SR 26/US 80 SCOPING STUDY PHASE II

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### 2.1.4 Segment 4 – Eastern Gateway

Segment 4 extends approximately 0.8 miles between SR 17/30 and the Effingham County/ Chatham County line. This Segment is predominantly comprised of commercial and residential land uses and provides access to residential neighborhoods, single-family detached residences, and commercial developments. Key characteristics of this Segment are summarized in **Table 4**, and existing geometry, traffic volumes, and field-collected photographs are provided in **Figure 8**. Environmental features along this Segment are summarized in **Figure 9**.

*Traffic Operations*

Daily traffic volumes along Segment 4 average 24,250 VPD, approximately 65% of the theoretical capacity of a five-lane facility with similar peak-hour and directional distributions. Truck percentages range from 7% to 12% during the peak periods of travel. During both the AM and PM peak periods, westbound queueing at the SR 17/30 intersection extended along SR 26/US 80 over 0.3 miles and 0.5 miles, respectively, which is likely attributable to the change in roadway typical section along SR 26/US 80 described in the next subsection. Southbound queueing on SR 17/30 was observed during the AM peak hour from SR 26/US 80 to the Parker's Kitchen truck driveway, approximately 0.2 miles in length. This Segment has a maximum daily truck percentage of 13% — the lowest daily truck percentage along the study corridor. Historically, traffic volumes in this Segment show negative growth at an average annual rate of approximately -1.5% per year and -1.4% per year over the last five-year and 10-year periods, respectively.

Field travel time runs yielded an average travel speed of 24 MPH and 26 MPH during the AM and PM peak period, respectively. These speeds average approximately 20 MPH below the posted speed limit of 45 MPH within this Segment.

*Roadway Geometry/Access Management*

Segment 4 includes 39 driveways which equates to a spacing of 31 driveways per mile. This Segment primarily consists of a five-lane roadway, including a two-way left-turn lane (TWLTL). The typical section includes 12-foot-wide travel lanes, a 20-foot-wide TWLTL, and 6.5-foot-wide paved shoulders. Long westbound queues at SR 17/30 indicate the need for additional geometric, capacity, and intersection control improvements over the short-, mid-, and long-term horizons. Further, access management strategies, including a raised median, could be considered to alleviate existing operational and safety deficiencies.

A multilane roundabout was recommended at the intersection with SR 17/30 as part of GDOT's *Coastal Empire Transportation Study*. Alternatively, the TMP recommended installing dual southbound left-turn lanes with overlap signal phasing for the westbound right-turn movement onto SR 17/30. Both studies' recommendations will be further evaluated as potential intersection control alternatives to mitigate existing operational constraints and observed delays in this Segment.

*Non-Motorist Facilities*

Bicycle accommodations are provided along Segment 4 via 6.5-foot-wide paved shoulders. Limited pedestrian facilities including signalized crosswalks are present at the intersections of SR 26/US 80 with SR 17/30 and Zeigler Road. However, neither sidewalks nor transit accommodations are located along this Segment.

*Environmental Features*

The Hardin Swamp is located south of Segment 4 and is comprised of estuarine and marine deep water and freshwater/forested shrub wetlands. However, no environmental features are immediately adjacent to this Segment which may provide more flexibility for future improvements.

**Table 4: Segment 4 – Eastern Gateway Characteristics**

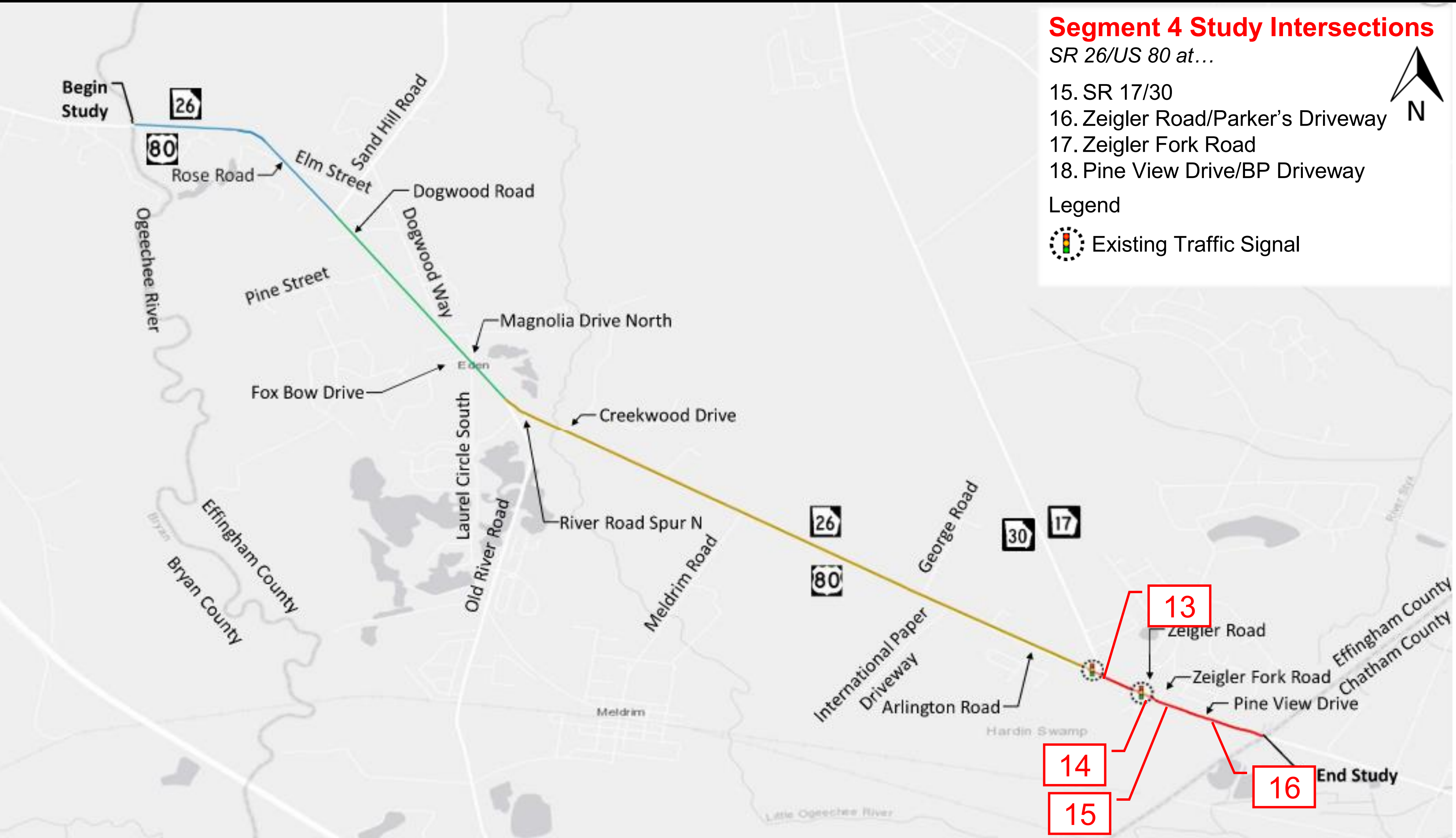
| Geometric and Functional Characteristics | |
|---|---|
| *Extents* | SR 17/30 to the Effingham County/Chatham County line (0.8 Miles) |
| *Typical Cross-Section* | **Typical Section:** Five-Lane with Two-Way Left-Turn Lane (TWLTL)<br>**Typical Lane Widths:** 12' Travel Lanes, 20' TWLTL, 6.5' Outside Shoulder |
| *Speed Limit* | 45 MPH |
| *Number of Driveways* | 39 (31 Driveways/Mile) |
| *Number of Signalized Intersections* | 2 |
| **Major Intersecting Roadways** | |
| *SR 17/30* | **Cross-Section:** Two-Lane Undivided<br>**Speed Limit:** 45 MPH<br>**2025 AADT:** 12,475 VPD |
| *Zeigler Road* | **Cross-Section:** Two-Lane Undivided<br>**Speed Limit:** 35 MPH<br>**2025 AADT:** 2,525 VPD |
| **Traffic Characteristics** | |
| *Existing Traffic Volume Data*[1] | **2025 AADT:** 24,250 VPD<br>**2025 DHV:** 2,465 VPH<br>**K Factor**[3]**:** 9.9%<br>**D Factor**[4]**:** 73.5%<br>**Daily Truck Percentage:** 13% |
| *Historic Traffic Volume Data*[2] | **5-Year Historic Growth Rate:** -1.47%<br>**10-Year Historic Growth Rate:** -1.42% |

[1] Existing traffic volume data represents an average of the factored AADT volumes calculated from field-collected data on Segment 4

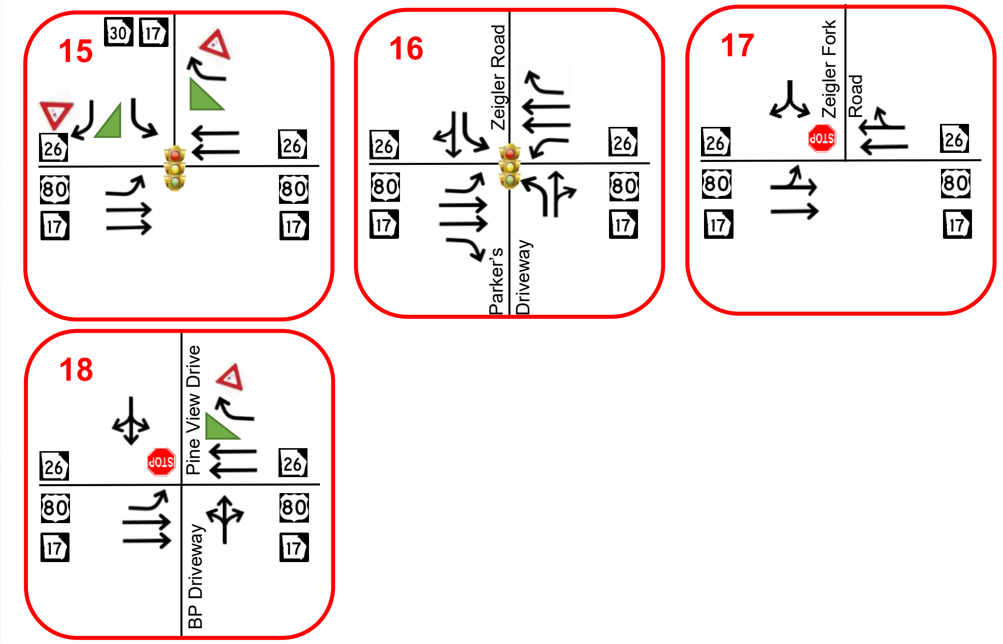
[2] Historic Traffic Growth based on AADT counts from GDOT TADA

[3] K Factor is the percent of the daily volume occurring during the peak hour

[4] D Factor is the percent of traffic traveling in the peak direction during the peak hour




## Existing Geometry & Intersection Control



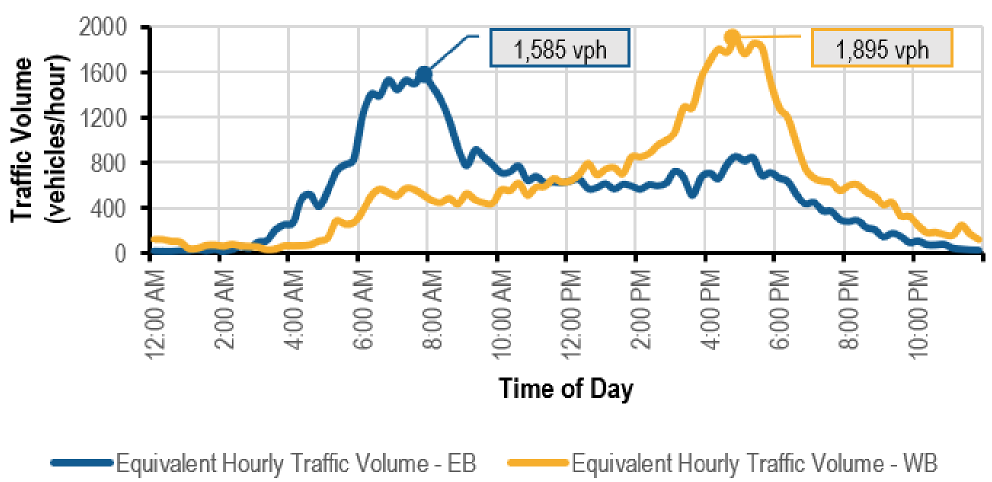




**Photo:** SR 26/US 80 at SR 17/30 (Looking West)

**Photo:** SR 26/US 80 at Zeigler Fork Road (Looking West)

**Photo:** SR 26/US 80 at Pine View Drive (Looking West)

**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 8 – Study Intersections and Key Characteristics

Segment 4 – Eastern Gateway

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**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 9 – Environmental Feature Map

Segment 4 – Eastern Gateway

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### 2.2 Land Use Analysis Summary

The SR 26/US 80 study corridor is a major east–west route which traverses Effingham County from the Ogeechee River at the Bryan County line to the City of Bloomingdale at the Chatham County line. In addition to its role as a critical commuter route, this portion of SR 26/US 80 serves as a key freight corridor that links growing industrial demand in Effingham County to the Port of Savannah and the HMGMA in Bryan County. Therefore, understanding land use trends along the study corridor is critical for understanding travel patterns and development trends. This assessment, driven by anticipated growth from HMGMA and the Port of Savannah, provides a foundation to anticipate future changes in needs, opportunities, and constraints along the corridor. Existing land use reflects how a parcel is currently utilized, and future land use is an indication of how the property is anticipated to be used in the future. The zoning map may or may not be consistent with the actual use of the property, but the zoning provides an indication of how a property could be used either now or in the future.

In accordance with methodology utilized on prior corridor studies and previously reviewed by CORE MPO/MPC staff, the existing land use map in **Figure 10** was created through an assessment of data sourced from Geographic Information Systems (GIS), current zoning, and other parcel information. The existing land use map depicts eight land use categories with corresponding percentages within the study corridor, and these categories and percentages are also shown in **Table 5**. Within the study corridor, Residential makes up the largest percentage of land uses at 36.2%, closely followed by Agriculture at 30.3%. Most residential land uses are located on the north side of SR 26/US 80, as well as the western and eastern limits of the study area. Limited commercial land uses are dispersed throughout the corridor.

A review of planned unit developments (PUD) and residential development information provided by Effingham County and CORE MPO did not yield significant planned developments adjacent to the study corridor. However, one planned small commercial development near the intersection of SR 26/ US 80 and SR 17/30 was identified through coordination with GDOT, and several planned residential developments were identified near or along SR 17/30 and SR 30/Noel C Conaway Road over one mile north of the study corridor. Developments outside of the study area, including those in Bryan County, will be detailed further in the Traffic Forecasting Memorandum as traffic forecasts and associated development traffic is developed for future-year traffic analysis. In addition, several transportation initiatives are outlined in **Section 2.1**, including the Georgia Hi-Lo Trail. The Trail's future alignment within the study corridor should consider its potential as an active transportation network, and land uses that support a strong active transportation network include mixed-use and higher density development patterns than the existing patterns. These land uses reduce travel distances by placing destinations closer together, making walking and cycling more convenient, and are supported by infrastructure like continuous sidewalks and shared-use paths. Additionally, the proposed alignment of the Trail will prioritize providing a safe and comfortable experience for pedestrians and cyclists.

Future land use from the 2040 Effingham County Comprehensive Plan and zoning, shown in **Figure 11** and **Figure 12,** respectively, were also reviewed for a comparative analysis with the existing land uses of the study corridor. The most significant changes from existing land uses to future land uses include the distribution of Agriculture and Industrial land uses. Specifically, future land use shows the existing Agriculture land use category (30.3%) and Residential category (36.2%) merged to create the Residential future land use category (57.5%) with Agriculture/Forestry uses sub-categorized under the Residential classification. This change, along with the introduction of Transitional land use (9.5%), indicates the growth and development potential for the study area to support mixed-uses and adaptive uses that are compatible with residential uses. Consistent with regional land use changes, future land use shows an increase of industrial land use from 0.7% to 14.8% within the study area. This is primarily attributable to the redesignation of a large parcel from Commercial to Industrial land use. Notably, Future Land Use and Zoning maps support increased Commercial land uses directly along the corridor and the potential for Transitional land uses to support mixed-use PUD including higher density neighborhoods.

These land use recommendations are further supported by the regional land use strategies included in the CORE MPO *Regional Freight Transportation Plan (RFTP)*. Two applicable strategies recommended in the RFTP are as follows:

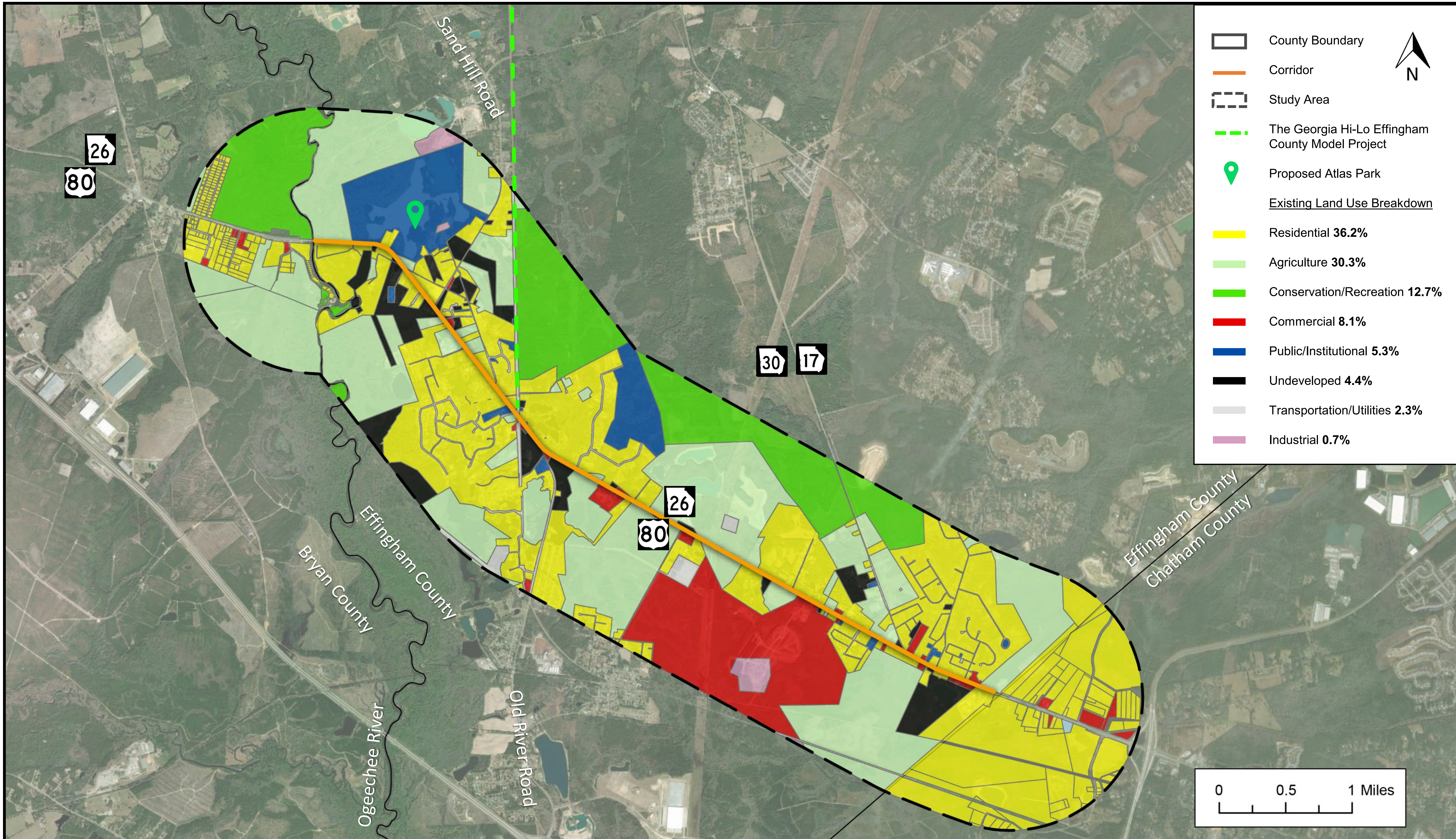
1. **Support Freight-Intensive Use Clustering, Infilling, and Land Banking**: Prioritize the reuse or redevelopment of existing freight facilities and infill development at current freight clusters over developing new greenfield sites. Adjacent undeveloped land should be reserved for future freight use where possible, especially where significant transportation infrastructure exists.
2. **Discourage Greenfield Freight Development Except for Specific Strategic Sites**: Limit greenfield development to locations with direct rail and interstate access, ensuring co-location of interdependent uses to reduce regional truck miles and support future trucking technologies, avoiding isolated freight developments without strategic value.

As the study area develops further, continued consideration of the transportation and land use connection will be important for improving the functionality and safety of SR 26/US 80. Shared driveways, increased intersection spacing, and other access management strategies will be explored during the Alternatives Analysis and Development phase to balance the evolving demands of the corridor.

**Table 5: Existing and Future Land Use**

| Land Use Category | Percentage of Study Area |
|---|---|
| **Existing Land Use** | |
| Residential | 36.2% |
| Agriculture | 30.3% |
| Conservation/Recreation | 12.7% |
| Commercial | 8.1% |
| Public/Institutional | 5.3% |
| Undeveloped | 4.4% |
| Transportation/Utilities | 2.3% |
| Industrial | 0.7% |
| **Future Land Use** | |
| Residential (including Agriculture/Forestry) | 57.5% |
| Industrial | 14.8% |
| Conservation/Recreation | 11.2% |
| Transitional | 9.5% |
| Public/Institutional | 5.0% |
| Commercial | 1.3% |
| Utilities | 0.5% |
| Church/Cemetery | 0.2% |

Existing and future land use information will be utilized during the Alternatives Analysis and Development phase of the study as improvement alternatives, including motorized and non-motorized improvements, are evaluated. Recommendations for the shared-use path alignment of the Georgia Hi-Lo Trail, for example, will consider land uses, such as existing and proposed neighborhoods, parks and commercial centers. The Trail alignment will also prioritize safe crossings at major intersections and establish access points along the corridor to facilitate integration with existing and proposed developments. Providing connection between the Trail and appropriate developments will improve accessibility and usability, while promoting active lifestyles and enhancing community connectivity and safety.




**SR 26/US 80 Scoping Study Phase II** – Existing Conditions/Needs Assessment

Figure 10 – Existing Land Use Analysis

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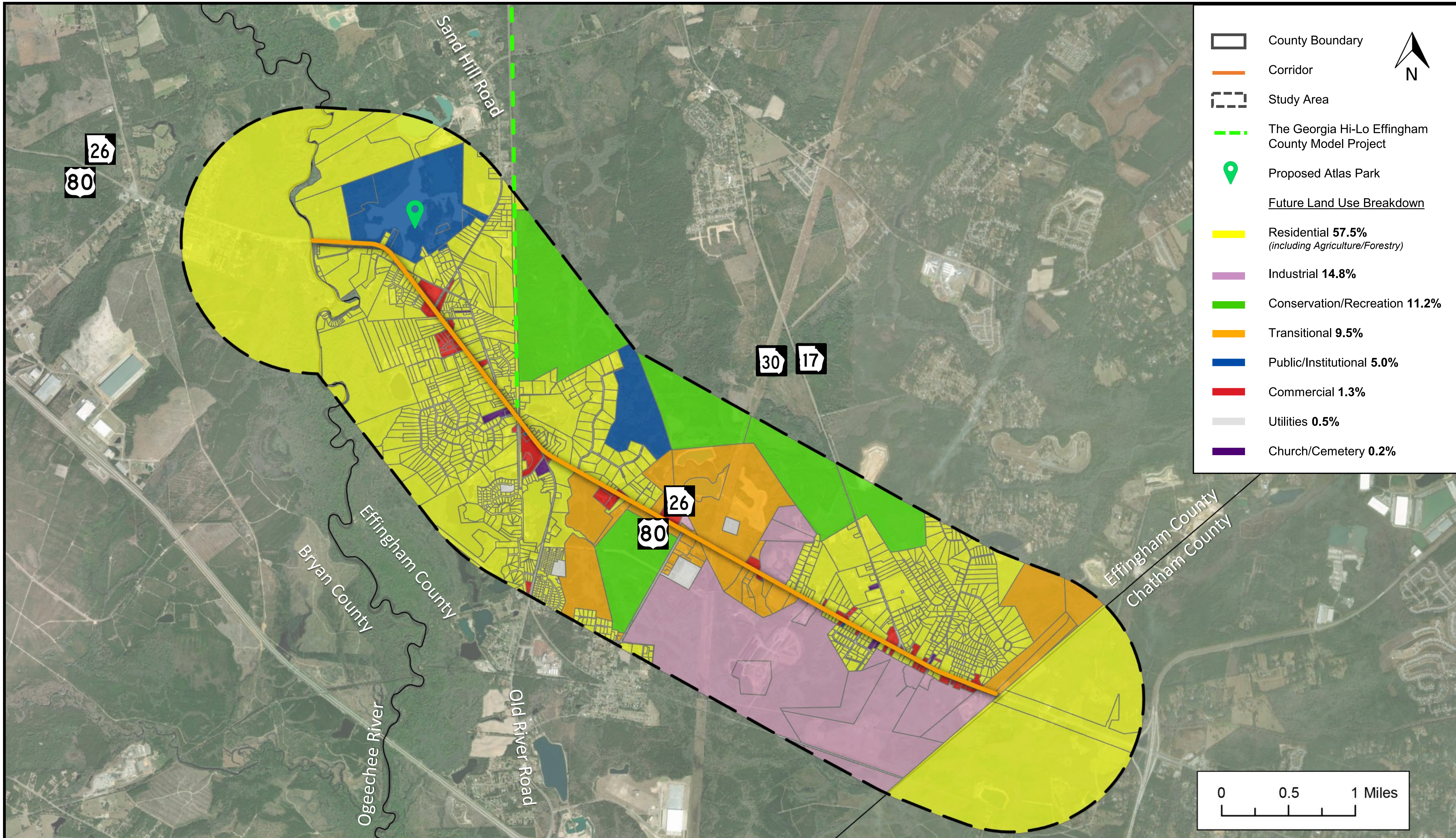


**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 11 – Future Land Use Analysis

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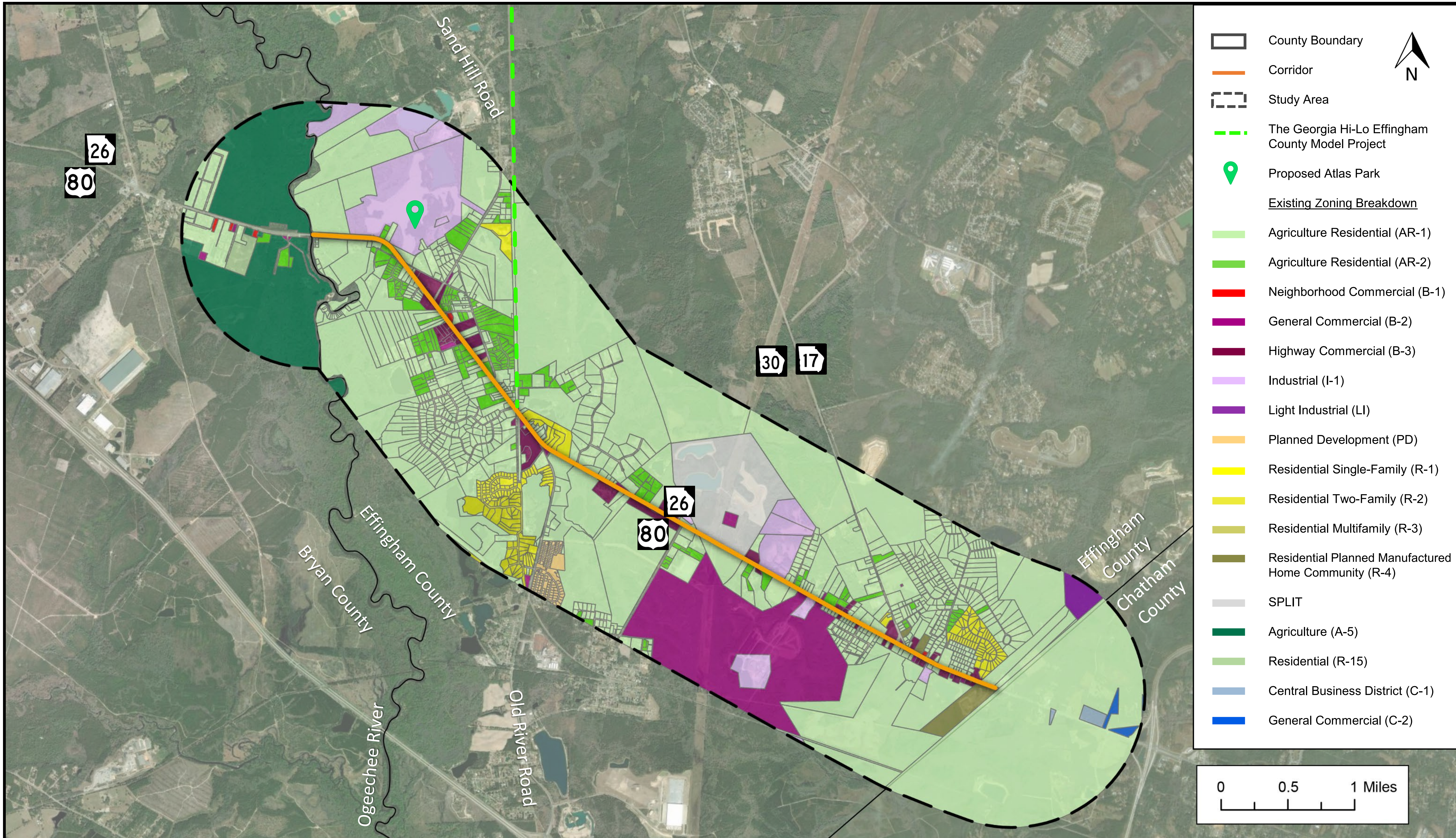


**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 12 – Zoning Analysis

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### 2.3 Community Analysis Summary

A comprehensive community analysis of the study area was conducted to understand the existing demographic and socioeconomic conditions that influence motorized and non-motorized transportation along the corridor. The primary goal of this analysis was to identify vulnerable populations within the study area who face mobility challenges due to limited or unequal access, barriers to safe and affordable transportation, a lack of affordable means of transportation, physical mobility challenges, and a higher reliance on public transit. This analysis will be utilized and built upon during this study's Alternatives Development and Analysis phase by evaluating how improvement alternatives positively or negatively impact vulnerable populations who rely on the corridor for their motorized and non-motorized transportation needs.

The analysis was tailored to emphasize the transportation network's potential to improve mobility and connectivity for communities that currently face barriers to access, such as limited transportation options or inadequate infrastructure. Demographic and household criteria were selected that demonstrate access and mobility, existing transportation options, and reliance on alternative transportation modes. The results of this assessment indicated potential underlying needs and highlighted areas where mobility and connectivity interventions would be most beneficial for vulnerable communities.

To assess levels of need and vulnerability, selected criteria such as vehicle access, poverty threshold, and travel-shed accessibility were applied to the eight block groups in the study area. Data sources included the American Community Survey (2022, 5-year estimates) and Center for Applied Research and Engagement Systems (CARES HQ, University of Missouri). Planned developments including the County's planned 138-acre Atlas Park, and existing and future planned active transportation systems, such as the planned Georgia Hi-Lo Trail, were considered for the potential for these developments to influence future community needs. Each criterion was scored on a scale from 0 to 3, with 3 indicating the greatest need for prioritization due to being underserved. Scoring was based on either comparative values within the dataset or designated ranges for each criterion. This structured approach allowed the analysis to capture both quantitative indicators and contextual factors that influence inclusive transportation. The available block group data does not allow for granular evaluation of each neighborhood or community sub-area within the study area. As such, block group scoring indicates trends and sub-area features where investments in alternative transportation may serve the greatest need.

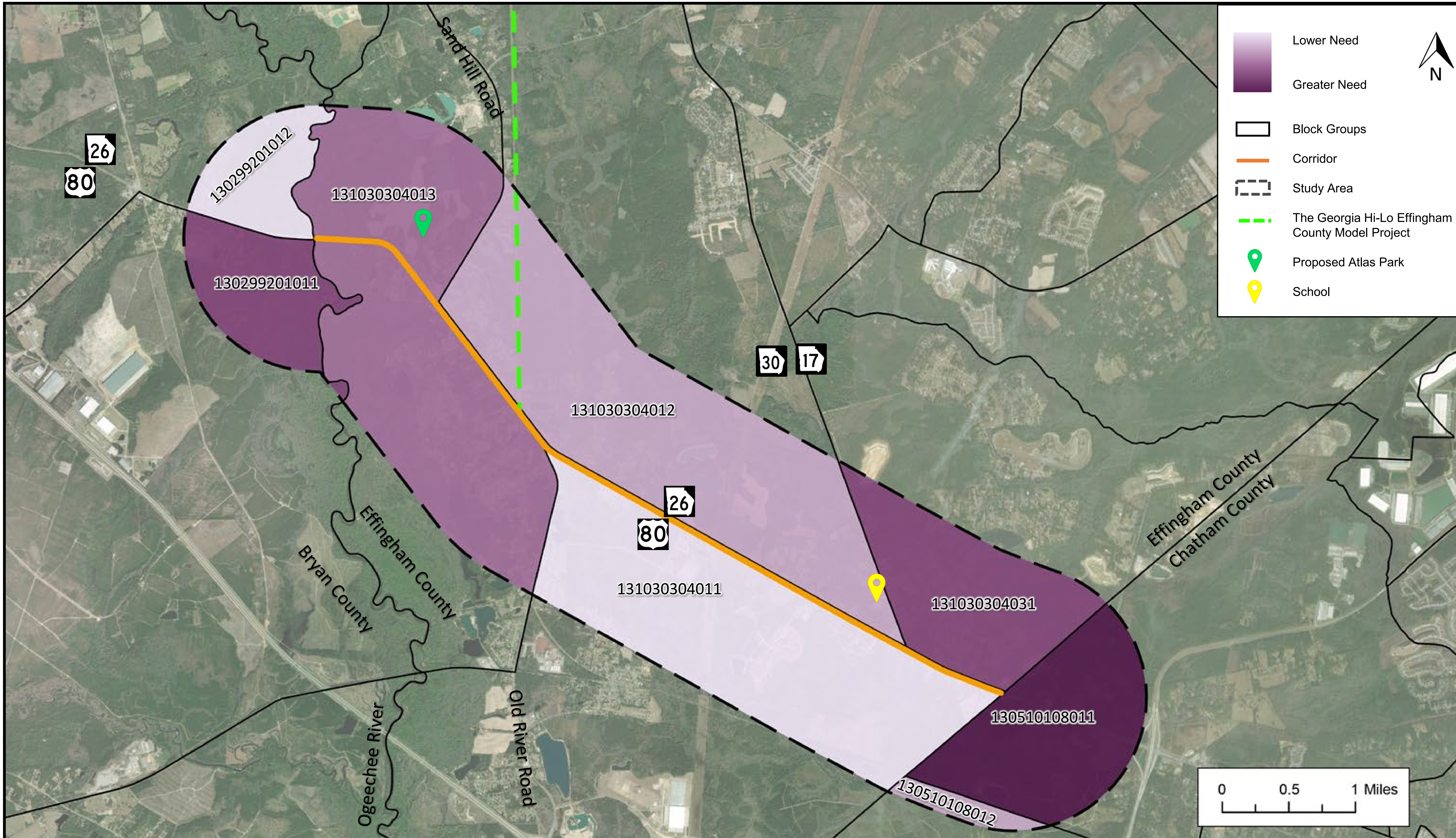
Based on this scoring system, most block groups emerged as mid- to high-need areas for target improvements. The areas of greatest need were found to be located on the north side of SR 26/US 80 as well as near both limits of the study corridor. A visual representation of the community analysis findings and block group scoring is shown in **Figure 13**. As shown, the combined criteria created varying levels of need across the corridor.

The results highlight a significant need for targeted interventions and additional consideration during the development of corridor recommendations. Strategies for these block group will focus on:

- Enhancing non-motorized connectivity (walking, biking, and transit)
- Improving safe and direct access to key destinations along the corridor
- Addressing socioeconomic barriers to mobility through inclusive transportation investments

These findings will guide the motorized and non-motorized recommendations in later phases of this study, with a focus on enhancing efficiency while strengthening community connections and expanding access for underserved populations. By integrating these considerations into the planning process, the study ensures that transportation investments deliver meaningful benefits to those who need them most.

In addition to the identified need for non-motorized transportation alternatives outlined previously, the inclusion of non-motorized facilities can have a demonstrated benefit in meeting the diverse needs of the community. For example, while some users of non-motorized facilities may have limited mobility options, others may choose to walk, bike, or use other modes of active transportation for health or enjoyment.




**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment
Figure 13 – Community Analysis Findings by Block Group

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## 2.4 Capacity Analysis

The segment characteristics and field observations summarized in **Section 2.1** were supplemented with existing traffic data to develop a capacity analysis model of the 6.4-mile-long SR 26/US 80 corridor in Synchro Version 12 software. This model was used to assess existing traffic operations at the intersection- and segment-level throughout the study area based on measures of effectiveness (MOEs) such as speed, travel time, control delay, volume-to-capacity (V/C) ratios, and queue length. The existing capacity analyses described in this section are critical for establishing a baseline for the evaluation of short-, mid-, and long-term improvements. Combined with field observations, these analyses provide an estimate of typical traffic conditions throughout the study corridor. The following subsections detail the analysis methodology, existing traffic volume development, intersection- and segment-level capacity analysis results, and key findings from these efforts.

### *2.4.1 Analysis Methodology*

The evaluations presented throughout the remainder of this section are based on methodologies contained within the *Highway Capacity Manual, 6th Edition* (HCM6) which evaluates the operating characteristics of intersections and segments under given geometric, intersection control, and traffic demand scenarios. Although the *Highway Capacity Manual*, *7th Edition* (HCM7), was released in 2022, GDOT has not formally adopted HCM7 methodologies for statewide use as of this report. Therefore, consistent with current GDOT practice, all capacity analyses presented herein were performed using HCM6 methodologies as implemented in Synchro Version 12.

Traffic operations are defined by HCM6 in terms of level of service (LOS) grades that range from LOS A to LOS F and are directly related to the average traveler's perception of the operating efficiency of a facility as defined by delay at intersections or travel speed on segments. HCM6 defines six letter grades, LOS A through LOS F, where LOS A represents the best operating conditions from the traveler's perspective and LOS F represents the worst. However, the underlying complexity of traffic flow cannot be fully distilled to a letter grade, nor is achieving LOS A an objective in designing roadways. Rather, roadways are designed such that some decline in LOS is to be expected during the peak periods of travel, and MOEs related to a variety of factors including operations, safety, environment, and cost are considered in right-sizing transportation infrastructure.

<u>Intersection Capacity Analysis</u>

As noted above, intersection-level traffic analyses were performed in Synchro Version 12 software which applies methodologies prescribed by HCM6. The LOS thresholds published in HCM6 for signalized and unsignalized intersections are listed in **Table 6**.

**Table 6: HCM6 LOS Thresholds for Signalized and Unsignalized Intersections**

| Level of Service | Control Delay (Seconds/Vehicle) | |
|---|---|---|
| | Signalized Intersections | Unsignalized Intersections |
| A | ≤ 10 | ≤ 10 |
| B | > 10 – 20 | > 10 – 15 |
| C | > 20 – 35 | > 15 – 25 |
| D | > 35 – 55 | > 25 – 35 |
| E | > 55 – 80 | > 35 – 50 |
| F | > 80 | > 50 |

*Segment-Level Analysis*

Segment-level capacity analysis was performed by applying the Urban Street Facilities methodology provided in Chapter 16 of HCM6 to SimTraffic simulation outputs and field travel time data. The LOS of an urban street facility is defined based on a comparison of Average Travel Speed (ATS) to the Base Free Flow Speed (BFFS) of each segment, where segments are typically delineated by major boundary intersections and changes in corridor context. The ATS is calculated from the segment length, running time (i.e., time to traverse the distance between boundary intersections without considering control delay), and control delay experienced at each intersection. The BFFS of a given segment is estimated based on Equation 18-3 and Exhibit 18-11 in HCM6, each of which are calibrated to nationwide data that relates free flow speed to median type, cross-section, access point density, presence of on-street parking, and traffic signal spacing.

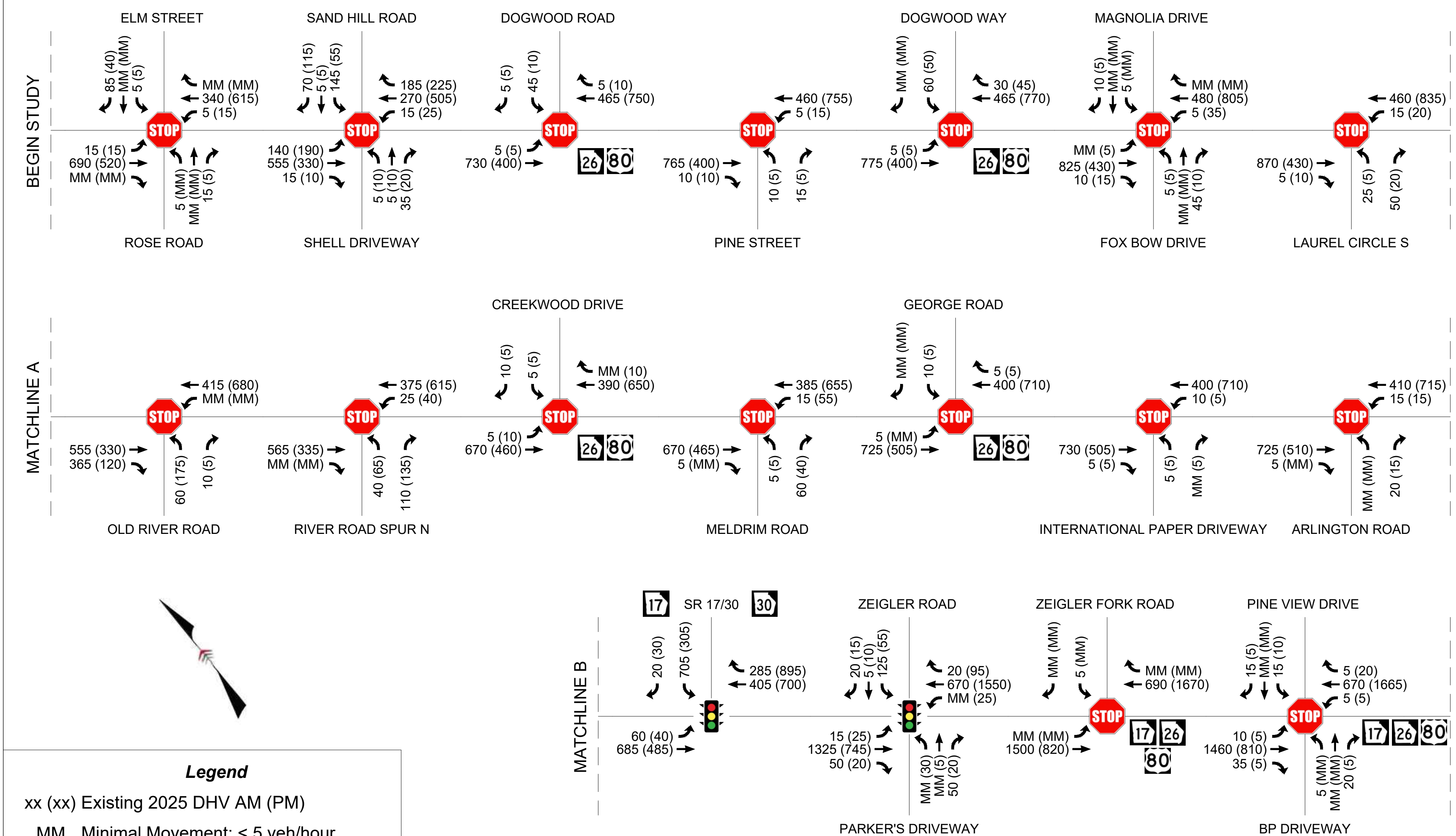
The LOS thresholds published in HCM6 for urban street segments are provided in **Table 7**. The LOS for an urban street facility comprised of multiple segments is estimated based on a length-weighted average of the ATS and BFFS of each segment. As noted in **Table 7**, unlike the conditions described for unsignalized intersections, urban street segments operating at LOS C or better generally experience short intersection delays and maintain stable overall traffic conditions. At LOS D or LOS E, an urban street segment operates with less stability and may be susceptible to large increases in delay under even slight fluctuations in traffic demand. At LOS F, an urban street segment is operating over capacity which is likely due to bottleneck conditions and long delays experienced at one of its boundary intersections.

**Table 7: HCM6 LOS Thresholds for Urban Street Segments**

| Level of Service | Average Travel Speed (% of Base Free Flow Speed) | |
|---|---|---|
| A | ≥ 80% | Stable Flow |
| B | 67% - 80% | |
| C | 50% - 67% | |
| D | 40% - 50% | Unstable Flow |
| E | 30% - 40% | |
| F | < 30% | Congested Flow |

### *2.4.2 Traffic Volume Development*

Existing turning movement counts (TMCs) were collected at 15 of the 18 intersections listed in **Section 2.1** during the AM (6:00 AM to 9:00 AM) and PM (3:30 PM to 6:30 PM) peak periods of travel on Tuesday, August 19, 2025. In accordance with guidelines set forth in the GDOT *Design Traffic Forecasting Manual*, *Version 1.4* (DTFM), 48-hour classification counts were also collected at 32 locations on Tuesday, August 19, 2025, and Wednesday, August 20, 2025. These counts were used to facilitate the development of 2025 Existing Year AADT volumes and establish an understanding of the distribution of traffic volumes and vehicle classes over the course of a typical day. For the remaining three intersections where TMCs were not collected, volumes were developed using data from recent traffic studies along the corridor, which were supplemented with 48-hour bidirectional tube count data and adjacent intersection turning-movement proportions. Further details regarding the development of 2025 Existing Year Directional Design Hourly Volumes (DDHV) and AADT volumes will be provided as part of traffic forecasting documentation included in the Traffic Forecasting Memorandum. The 2025 Existing Year peak hour traffic volumes used as part of the capacity analyses are summarized in **Figure 14**, and the Existing Year AADT volumes are summarized in **Figure 15**.




***Legend***

xx (xx) Existing 2025 DHV AM (PM)

MM Minimal Movement: < 5 veh/hour

Existing Minor Street Stop Control

Existing Signal Control

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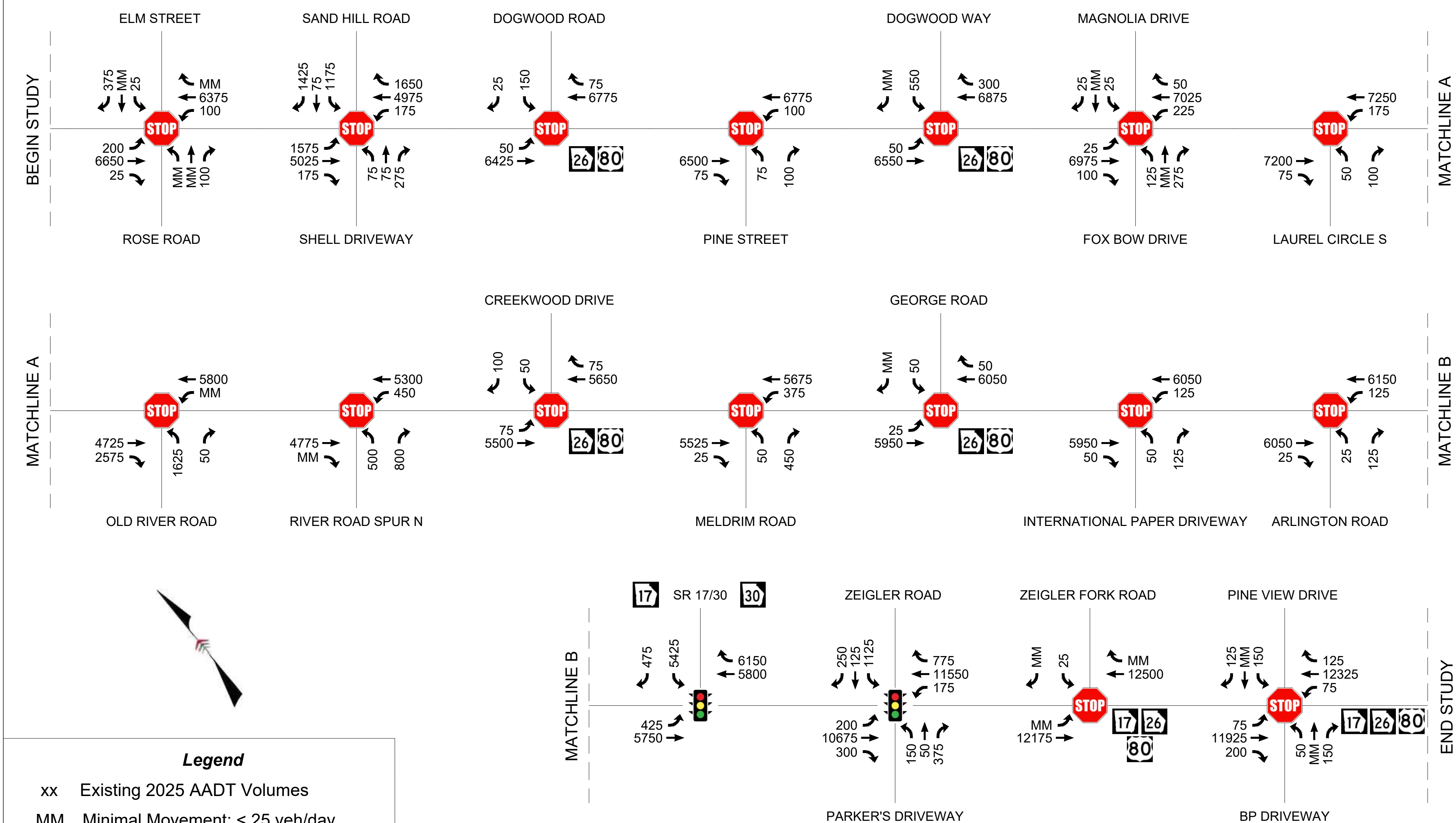
***Figure 14***

***2025 Existing Year Peak Hour Volumes***




***Legend***

| | |
|---|---|
| xx | Existing 2025 AADT Volumes |
| MM | Minimal Movement: < 25 veh/day |
| STOP | Existing Minor Street Stop Control |
| (signal) | Existing Signal Control |

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***Figure 15***

***2025 Existing Year AADT Volumes***

### *2.4.3 Intersection Analysis Results*

Capacity analysis results for each of the 18 study intersections during both peak periods of travel are summarized by contextual segment in **Table 8**. The methodologies prescribed by HCM6 consider each intersection in isolation and do not account for the potential for queues to persist and propagate between intersections across multiple periods under oversaturated conditions. As such, corridor operations were also simulated in SimTraffic Version 12 software to identify existing deficiencies at the network level. Key findings are discussed below with a focus on intersections exhibiting significant delay during one or both peak periods. All references to delay and LOS refer to calculated, not observed, values.

***Segment 1 – Western Gateway***

As detailed in **Section 2.1.1**, Segment 1 extends from the Bryan County/Effingham County line to Sand Hill Road. Segment 1 includes one unsignalized intersection with Rose Road/Elm Street which operates under minor-street stop control (MSSC). Both the Rose Road and Elm Street approaches operate at LOS C during the AM and PM peak hours, respectively. The maximum V/C ratio during both peak periods is less than 0.20, which reflects the low turning movement volumes to and from the minor streets. Field observations confirm these low minor-street turning volumes as well as negligible control delay and queueing during the peak periods. These observations align with the MOEs obtained through the capacity analysis presented in **Table 8**. Traffic volumes at this intersection are not expected to meet signal warrants prescribed by the *Manual on Uniform Traffic Control Devices* (MUTCD).

***Segment 2 – Community Corridor***

As described in **Section 2.1.2**, Segment 2 extends from Sand Hill Road to Old River Road and is approximately 1.2 miles long. The Segment includes six unsignalized MSSC intersections and serves a mix of agricultural, commercial, and institutional land uses along SR 26/US 80. Two of the six study intersections within Segment 2 operate unacceptably under existing conditions. The intersection of SR 26/US 80 at Sand Hill Road operates at LOS F during both peak periods, with the southbound approach experiencing oversaturated conditions during the AM peak hour as exhibited by a V/C ratio of 1.53. The poor operations are primarily driven by continuous major street through volumes, limited gap availability, and a large proportion of heavy vehicles on Sand Hill Road. Further, the intersection of SR 26/US 80 at Dogwood Way operates at LOS E during the AM peak hour. Although V/C ratios remain below 0.5, the southbound approach experiences long delays due to limited available gaps along SR 26/US 80.

The remaining four MSSC intersections within Segment 2 operate at LOS D or better during both peak periods. Minor-street approaches at these locations generally serve fewer than 50 vehicles per hour (VPH) and are not expected to meet signal warrants prescribed by the MUTCD. While these intersections operate within acceptable thresholds, field observations indicate that minor-street approaches still experience noticeable control delays. These delays are attributed to similar limited gap availability observed at Sand Hill Road and Dogwood Way. Continuous through volumes along SR 26/US 80 and the absence of mainline intersection control results in few natural breaks in traffic.

To address the operational deficiencies at the intersection of SR 26/US 80 and Sand Hill Road, including excessive delays, oversaturated conditions, and queuing caused by limited gap availability, PI No. 0019658 is planned to construct a single-lane roundabout. The roundabout's effectiveness will be further evaluated as part of the future-year analysis. Additionally, improvements associated with PI No. 0019658 will be reflected in the 2035 and 2050 No-Build scenarios.

**Table 8: 2025 Existing Intersection Capacity Analysis Results**

| ID | Intersection Name | Intersection Control Type | Approach LOS (Delay, sec/veh)[A] [V/C] AM Peak Hour | | | | Overall Intersection[B] LOS (Delay, sec/veh) [V/C] AM Peak Hour | Approach LOS (Delay, sec/veh)[A] [V/C] PM Peak Hour | | | | Overall Intersection[B] LOS (Delay, sec/veh) [V/C] PM Peak Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | EB | WB | NB | SB | | EB | WB | NB | SB | |
| **Segment 1 — Western Gateway** | | | | | | | | | | | | |
| 1 | SR 26/US 80 at Rose Road/Elm Street | MSSC | A (9.6) [0.02] | A (9.2) [0.01] | C (20.3) [0.09] | B (12.8) [0.18] | — | A (9.0) [0.02] | A (8.6) [0.02] | B (11.9) [0.01] | C (16.7) [0.14] | — |
| **Segment 2 — Community Corridor** | | | | | | | | | | | | |
| 2 | SR 26/US 80 at Sand Hill Road | MSSC | A (8.6) [0.13] | A (9.2) [0.02] | C (19.3) [0.16] | **F (322.0) [1.53]** | — | A (9.7) [0.21] | A (8.2) [0.02] | **E (40.5) [0.30]** | **F (103.4) [0.96]** | — |
| 3 | SR 26/US 80 at Dogwood Road | MSSC | A (8.4) [0.01] | — | — | D (31.6) [0.29] | — | A (9.5) [0.01] | — | — | C (22.3) [0.07] | — |
| 4 | SR 26/US 80 at Pine Street | MSSC | — | A (9.5) [0.01] | C (22.0) [0.11] | — | — | — | A (8.2) [0.01] | C (18.2) [0.01] | — | — |
| 5 | SR 26/US 80 at Dogwood Way | MSSC | A (8.5) [0.01] | — | — | **E (44.7) [0.43]** | — | A (9.5) [0.01] | — | — | D (29.9) [0.27] | — |
| 6 | SR 26/US 80 at Magnolia Drive N/Fox Bow Drive | MSSC | A (0.0) [0.00] | A (9.7) [0.01] | C (20.6) [0.19] | C (23.3) [0.08] | — | A (9.6) [0.01] | A (8.4) [0.04] | C (22.0) [0.07] | C (16.6) [0.02] | — |
| 7 | SR 26/US 80 at Laurel Circle S | MSSC | — | A (10.0) [0.02] | C (24.9) [0.31] | — | — | — | A (8.4) [0.02] | B (13.1) [0.06] | — | — |
| **Segment 3 — Transitional Corridor** | | | | | | | | | | | | |
| 8 | SR 26/US 80 at Old River Road | MSSC | — | A (0.0) [0.00] | D (31.7) [0.36] | — | — | — | A (0.0) [0.00] | **F (78.2) [0.88]** | — | — |
| 9 | SR 26/US 80 at River Road Spur N | MSSC | — | A (9.2) [0.03] | C (22.2) [0.44] | — | — | — | A (8.2) [0.04] | D (25.0) [0.55] | — | — |
| 10 | SR 26/US 80 at Creekwood Drive | MSSC | A (8.2) [0.01] | — | — | C (15.1) [0.04] | — | A (9.1) [0.01] | — | — | C (19.7) [0.04] | — |
| 11 | SR 26/US 80 at Meldrim Road | MSSC | — | A (9.4) [0.02] | C (18.4) [0.22] | — | — | — | A (8.6) [0.06] | B (14.5) [0.12] | — | — |
| 12 | SR 26/US 80 at George Road | MSSC | A (9.1) [0.01] | — | — | D (30.8) [0.08] | — | A (0.0) [0.00] | — | — | D (28.1) [0.03] | — |
| 13 | SR 26/US 80 at International Paper Driveway | MSSC | — | A (9.6) [0.02] | **E (41.7) [0.06]** | — | — | — | A (8.4) [0.01] | C (19.8) [0.04] | — | — |
| 14 | SR 26/US 80 at Arlington Road | MSSC | — | A (9.4) [0.02] | C (15.1) [0.06] | — | — | — | A (8.5) [0.02] | B (11.8) [0.03] | — | — |
| **Segment 4 — Eastern Gateway** | | | | | | | | | | | | |
| 15 | SR 26/US 80 at SR 17/30 | Signal | C (34.4) [0.64] | D (37.5) [0.78] | — | D (47.6) [0.89] | D (39.8) [0.89] | A (9.5) [0.26] | D (35.6) [0.94] | — | D (45.5) [0.78] | C (31.4) [0.94] |
| 16 | SR 26/US 80 at Zeigler Road/Parker's Driveway | Signal | A (9.7) [0.68] | B (11.0) [0.36] | D (35.1) [0.22] | D (40.3) [0.54] | B (12.6) [0.68] | A (4.0) [0.30] | B (13.5) [0.21] | D (45.6) [0.37] | D (46.9) [0.37] | B (12.3) [0.37] |
| 17 | SR 26/US 80 at Zeigler Fork Road | MSSC | A (0.0) [0.00] | — | — | C (19.7) [0.02] | — | A (0.0) [0.00] | — | — | A (0.0) [0.00] | — |
| 18 | SR 26/US 80 at Pine View Drive/BP Driveway | MSSC | A (9.0) [0.01] | B (14.6) [0.01] | C (23.5) [0.12] | C (18.6) [0.11] | — | C (15.1) [0.02] | A (9.6) [0.01] | B (11.3) [0.01] | **E (48.1) [0.16]** | — |

Synchro outputs were used for applicable intersections in lieu of those from HCM6 based on Existing Conditions

[A] Approach delay reported for the left/U-turn movement only on the major street at minor street stop-controlled (MSSC) intersections

[B] HCM6 does not support overall intersection LOS for MSSC intersections

### *Segment 3 – Transitional Corridor*

As described in **Section 2.1.3**, Segment 3 extends from Old River Road to SR 17/SR 30 and is approximately 3.1 miles long. The Segment includes seven unsignalized MSSC intersections and serves a mix of residential, industrial and transitional land uses along SR 26/US 80. Under existing conditions, the intersection of SR 26/US 80 and Old River Road operates at LOS F during the PM peak hour. Old River Road is a major collector which provides north-south connectivity between SR 26/US 80 and I-16; accordingly, this connectivity contributes to higher traffic volumes and operational deficiencies at this intersection. Synchro outputs indicate that the northbound approach frequently experiences control delays exceeding one minute per vehicle. Field observations support these findings as northbound queues along Old River Road frequently extend more than 300 feet during the PM peak hour. The poor operations at this intersection are also driven by continuous mainline through volumes on SR 26/US 80, which limit available gaps for minor-street vehicles and the absence of upstream intersection control to meter corridor flow. Field observations also indicate that turning vehicles from SR 26/US 80 occasionally block through traffic due to the lack of turn lanes throughout most of the corridor.

The intersection of SR 26/US 80 and International Paper Driveway operates at LOS E during the AM peak hour. The northbound approach experiences long delays primarily due to the high proportion of heavy vehicles entering SR 26/US 80 from the driveway, combined with limited gaps in mainline traffic. While modeled LOS results for the remaining intersections within Segment 3 generally indicate acceptable operations, minor-street approaches experience modest control delay attributable to similar gap constraints caused by continuous through volumes along SR 26/US 80. Most of these minor-street approaches serve fewer than 50 VPH and are not expected to meet signal warrants prescribed by the MUTCD.

### *Segment 4 – Eastern Gateway*

As described in **Section 2.1.4**, Segment 4 extends from SR 17/30 to Pine View Drive and is approximately 0.8 miles long. The Segment includes four study intersections, two of which are signalized. Out of all study segments, Segment 4 experiences the highest overall delay and most pronounced queuing. Traffic volumes along SR 26/US 80 within this Segment are approximately double those observed in Segments 1 through 3, primarily due to a large number of vehicles accessing SR 26/US 80 to and from the north via SR 17/30. This Segment also marks the transition of SR 26/US 80 into a five-lane facility with a TWLTL. Existing intersection capacity analysis results indicate that both signalized intersections at SR 17/30 and Zeigler Road/Parker’s Driveway operate at an acceptable LOS. However, field observations and SimTraffic simulations indicate that actual operational performance is worse than suggested by the intersection-level results as significant delay and queuing was observed during both peak hours in the model and the field. As noted in **Section 2.4.1**, HCM6-based intersection analyses evaluate each node independently and therefore do not fully capture the queue spillback and progression effects observed in the field and in micro-simulations. During both the AM and PM peak hours, westbound queues at the SR 17/30 intersection frequently extend over 0.3 and 0.5 miles, respectively, spilling back through the adjacent signalized intersection at Zeigler Road. These two signalized intersections operate independently without coordination, which results in poor platoon progression and inefficient green utilization along the corridor. Additionally, the westbound queues on SR 26/US 80 often block minor-street movements at unsignalized intersections within this Segment. These long queues are partly attributable to the westbound right-turn drop lane at SR 17/30, and these conditions indicate operational inefficiencies caused by unbalanced lane utilization and unclear lane assignment approaching SR 17/30.

Lastly, the unsignalized intersection of SR 26/US 80 at Pine View Drive operates at LOS E during the PM peak hour; however, field observations indicate shorter control delays than those calculated from Synchro. This discrepancy is likely due to drivers utilizing the TWLTL to perform two-stage crossing maneuvers, which reduces control delay compared to model assumptions. Both of the unsignalized intersections within this Segment serve fewer than 50 VPH on the minor-street approaches and are not expected to meet signal warrants prescribed by the MUTCD.

### *2.4.4 Segment Analysis Results*

The existing traffic volumes and capacity analysis results presented in this report are intended to capture typical conditions along the SR 26/US 80 corridor during an average weekday while school is in session. However, “typical” conditions are difficult to capture with a single set of model inputs, and intersection capacity analysis results alone are not adequate for describing corridor operations holistically. Accordingly, this section describes segment-level capacity analysis conducted using both SimTraffic Version 12 simulation software and field-collected travel time data.

Corridor travel time outputs from SimTraffic are aggregated by contextual segment and are shown in **Table 9** and **Table 10** for the AM and PM peak hours, respectively. These travel time outputs were converted to ATS and compared to the theoretical BFFS to calculate the vehicular LOS as defined by the HCM6 Urban Street Facilities methodology. The results of the analysis generally reflect those presented in **Section 2.4.3** for the major crossings along the study corridor, whereas known bottlenecks throughout the corridor do not produce as much delay in Synchro and SimTraffic software as that observed in the field. On the contrary, there are also cases where the simulation calculated more delay than what was observed in the field. This may be attributable to the model inputs not being fully capable of replicating the complexity of real-world traffic flow. Modeled traffic volumes are also intended to represent an average day, whereas what was observed in the field was one specific set of volumes and conditions. The field travel time runs were conducted on Tuesday, August 19, 2025, and were compiled and post-processed to determine the HCM-based vehicular LOS. Raw travel time data and 2025 Existing LOS estimates are presented in **Table 11** and **Table 12** for the AM and PM peak periods, respectively. SimTraffic and field travel time data provided the following overall study corridor LOS:

- AM Peak Hour Eastbound:
    - SimTraffic: LOS A
    - Field Travel Time: LOS A
- AM Peak Hour Westbound:
    - SimTraffic: LOS C
    - Field Travel Time: LOS B
- PM Peak Hour Eastbound:
    - SimTraffic: LOS A
    - Field Travel Time: LOS A
- PM Peak Hour Westbound:
    - SimTraffic: LOS B
    - Field Travel Time: LOS B

**Table 9: SimTraffic Corridor Travel Time and LOS by Segment – AM Peak Hour**

| Segment | Length (mi) | Minimum Travel Time (mm:ss) | Maximum Travel Time (mm:ss) | Average Travel Time (mm:ss) | BFFS (MPH) | Average Travel Speed (MPH) | LOS |
|---|---|---|---|---|---|---|---|
| Eastbound | | | | | | | |
| 1 | 1.2 | 01:23 | 01:24 | 01:23 | 50.8 | 49.4 | A |
| 2 | 1.3 | 01:37 | 01:40 | 01:38 | 50.3 | 47.9 | A |
| 3 | 3.1 | 04:29 | 04:39 | 04:31 | 48.8 | 40.9 | A |
| 4 | 0.8 | 01:38 | 01:50 | 01:42 | 45.8 | 29.6 | C |
| **Total** | ***6.4*** | ***09:07*** | ***09:32*** | ***09:15*** | ***49.1*** | ***41.3*** | ***A*** |
| Westbound | | | | | | | |
| 1 | 1.2 | 01:18 | 01:20 | 01:19 | 51.1 | 51.9 | A |
| 2 | 1.3 | 01:31 | 01:37 | 01:34 | 50.0 | 50.3 | A |
| 3 | 3.1 | 04:14 | 04:21 | 04:17 | 48.9 | 43.1 | A |
| 4 | 0.8 | 02:59 | 08:21 | 06:30 | 46.1 | 7.7 | **F** |
| **Total** | ***6.4*** | ***10:02*** | ***15:39*** | ***13:40*** | ***49.2*** | ***28.0*** | ***C*** |

**Table 10: SimTraffic Corridor Travel Time and LOS by Segment – PM Peak Hour**

| Segment | Length (mi) | Minimum Travel Time (mm:ss) | Maximum Travel Time (mm:ss) | Average Travel Time (mm:ss) | BFFS (MPH) | Average Travel Speed (MPH) | LOS |
|---|---|---|---|---|---|---|---|
| Eastbound | | | | | | | |
| 1 | 1.2 | 01:20 | 01:23 | 01:22 | 50.8 | 50.3 | A |
| 2 | 1.3 | 01:37 | 01:39 | 01:38 | 50.3 | 48.2 | A |
| 3 | 3.1 | 04:02 | 04:08 | 04:05 | 48.8 | 45.3 | A |
| 4 | 0.8 | 01:20 | 01:22 | 01:21 | 45.8 | 37.2 | A |
| **Total** | ***6.4*** | ***08:20*** | ***08:32*** | ***08:26*** | ***49.1*** | ***45.4*** | ***A*** |
| Westbound | | | | | | | |
| 1 | 1.2 | 01:21 | 01:22 | 01:22 | 51.1 | 50.1 | A |
| 2 | 1.3 | 01:40 | 01:44 | 01:41 | 50.0 | 46.5 | A |
| 3 | 3.1 | 04:17 | 04:23 | 04:20 | 48.9 | 42.6 | A |
| 4 | 0.8 | 02:45 | 05:10 | 03:35 | 46.1 | 14.1 | **E** |
| Total | ***6.4*** | ***10:04*** | ***12:39*** | ***10:59*** | ***49.2*** | ***34.8*** | ***B*** |

**Table 11: Average Field Travel Time and LOS – August 19, 2025 – AM Peak Hour**

| Segment | Length (mi) | Run 1 Travel Time (mm:ss) | Run 2 Travel Time (mm:ss) | Run 3 Travel Time (mm:ss) | BFFS (mph) | Average Travel Speed (MPH) | LOS |
|---|---|---|---|---|---|---|---|
| Eastbound | | | | | | | |
| 1 | 1.2 | 01:14 | 01:37 | 02:10 | 50.8 | 40.9 | A |
| 2 | 1.3 | 01:24 | 02:20 | 01:41 | 50.3 | 43.5 | A |
| 3 | 3.1 | 04:24 | 04:00 | 04:13 | 48.8 | 43.9 | A |
| 4 | 0.8 | 01:34 | 01:58 | 01:13 | 45.8 | 31.8 | B |
| **Total** | ***6.4*** | ***08:36*** | ***09:55*** | ***09:17*** | ***49.1*** | ***41.2*** | ***A*** |
| Westbound | | | | | | | |
| 1 | 1.2 | 01:32 | 01:25 | 01:36 | 51.1 | 45.1 | A |
| 2 | 1.3 | 01:28 | 02:20 | 01:53 | 50.0 | 41.5 | A |
| 3 | 3.1 | 03:38 | 05:40 | 04:33 | 48.9 | 40.0 | A |
| 4 | 0.8 | 01:42 | 02:30 | 03:19* | 46.1 | 15.2 | E |
| **Total** | ***6.4*** | ***08:20*** | ***11:55*** | ***11:21*** | ***49.2*** | ***34.9*** | ***B*** |

**Only one run used to compute ATS due to non-representative operating conditions*

**Table 12: Average Field Travel Time and LOS – August 19, 2025 – PM Peak Hour**

| Segment | Length (mi) | Run 1 Travel Time (mm:ss) | Run 2 Travel Time (mm:ss) | Run 3 Travel Time (mm:ss) | BFFS (mph) | Average Travel Speed (MPH) | LOS |
|---|---|---|---|---|---|---|---|
| Eastbound | | | | | | | |
| 1 | 1.2 | 01:16 | 01:10 | 01:15 | 50.8 | 55.7 | A |
| 2 | 1.3 | 01:30 | 01:33 | 01:52 | 50.3 | 48.0 | A |
| 3 | 3.1 | 03:46 | 03:49 | 03:33 | 48.8 | 49.8 | A |
| 4 | 0.8 | 01:06 | 01:27 | 01:33 | 45.8 | 36.9 | A |
| **Total** | ***6.4*** | ***07:38*** | ***08:50*** | ***09:06*** | ***49.1*** | ***48.1*** | ***A*** |
| Westbound | | | | | | | |
| 1 | 1.2 | 01:28 | 01:23 | 01:23 | 51.1 | 48.5 | A |
| 2 | 1.3 | 01:48 | 01:46 | 01:47 | 50.0 | 44.1 | A |
| 3 | 3.1 | 04:25 | 03:59 | 03:40 | 48.9 | 45.9 | A |
| 4 | 0.8 | 02:41 | 03:53 | 03:58 | 46.1 | 14.4 | E |
| **Total** | ***6.4*** | ***10:22*** | ***11:01*** | ***10:48*** | ***49.2*** | ***35.6*** | ***B*** |

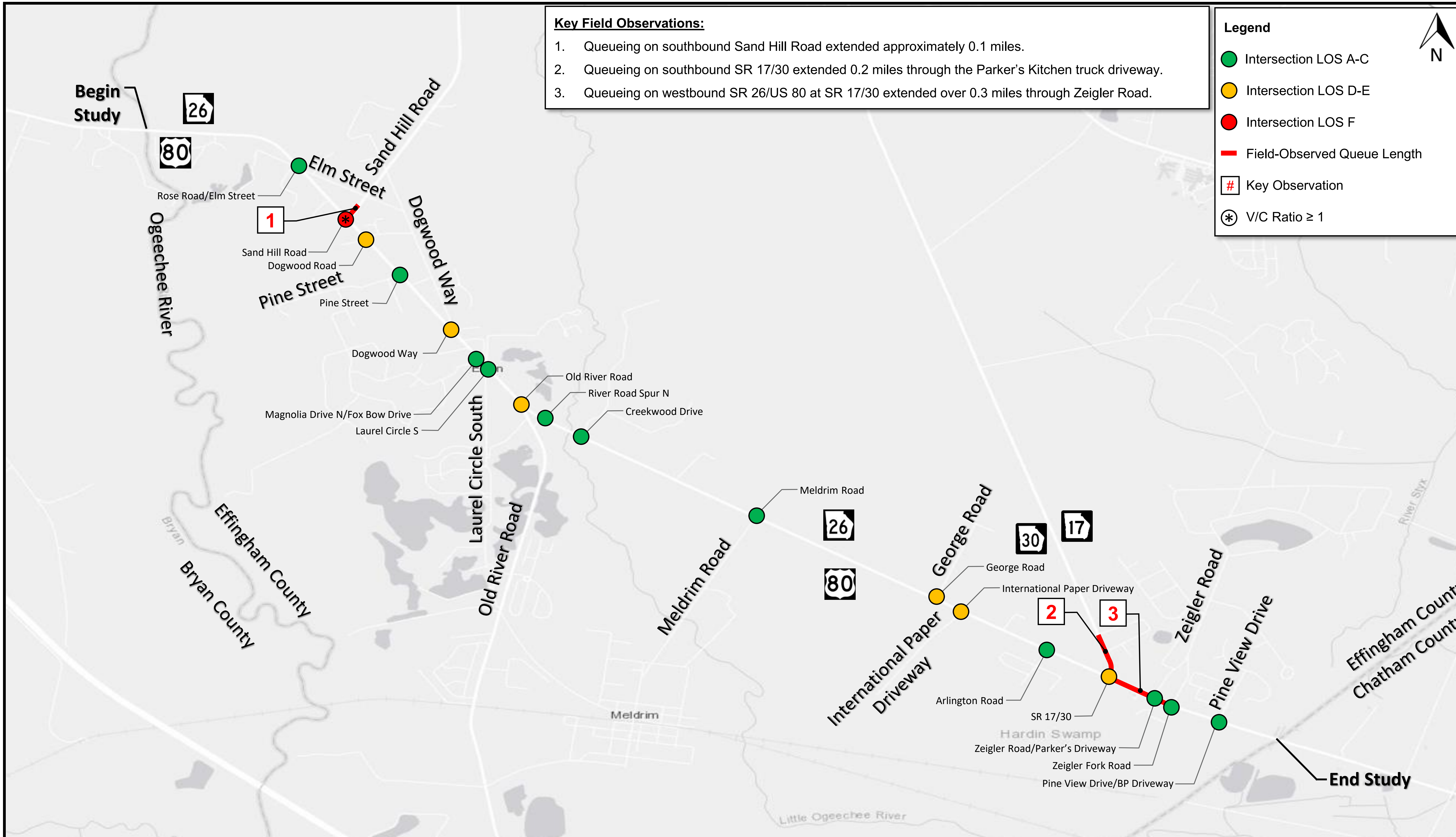
As shown in **Table 9**, **Table 10**, **Table 11**, and **Table 12,** field travel time runs and associated LOS estimates were generally comparable to the data obtained from SimTraffic analysis. During the AM peak hour in Segment 4, differences were most pronounced on westbound SR 26/US 80 where an ATS of approximately 15 MPH (i.e., representative of LOS E conditions) was observed through field travel time runs as compared to the LOS F conditions predicted by SimTraffic. Modeled ATS values were also slightly higher than field observations for Segments 1 through 3 during the AM peak hour. This difference is likely attributable to frequent school bus activity along SR 26/US 80, as buses periodically stop within SR 26/US 80 travel lanes to pick up or drop off students. These intermittent stops temporarily reduce mainline travel speeds and create short-duration queues that are not captured in the simulation.

Both modeled and field-collected data indicate that Segments 1 through 3 operate at LOS A in both directions during both peak periods. This reflects the absence of mainline intersection control, as all study intersections within these segments operate under MSSC with no mechanisms to meter or regulate flow along the corridor. As a result, through traffic generally maintains free-flow conditions with minimal control delay. However, field observations showed intermittent slowdowns caused by turning vehicles waiting for a gap in opposing through volumes to turn off of SR 26/US 80, which temporarily block through lanes due to the absence of dedicated turn lanes. While these events are short in duration and do not significantly degrade average travel speeds, they illustrate how lack of auxiliary turn lanes can disrupt mainline flow and contribute to localized queuing. Further, the HCM6 segment analysis methodology evaluates only the major street, excluding minor-street delay; therefore, the reported LOS may overstate perceived corridor performance, particularly at unsignalized intersections where side-street drivers experience extended delay.

Westbound SR 26/US 80 along Segment 4 operates at LOS E or worse during both peak hours, as indicated by both modeled and field-collected data. As discussed in **Section 2.4.3**, the GDOT-maintained signals within this Segment operate independently (i.e., signals are not in coordination), resulting in poor platoon progression, increased start-up delay, and recurring queues that extend through adjacent intersections. Field observations indicate that queue spillback frequently affects downstream minor-street approaches, creating intermittent blockages. Segment-level analysis supports that Segment 4 operates within the LOS E to LOS F range, consistent with HCM6 definitions of congested flow, where mainline travel is substantially impeded and delay accumulates due to queue propagation and limited effective green time.

### *2.4.5 Capacity Analysis Summary*

The capacity analyses for the 6.4-mile-long SR 26/US 80 corridor show distinct differences in traffic operations by segment and travel direction. Segments 1 through 3 operate at LOS A in both eastbound and westbound directions during AM and PM peak hours with stable mainline travel and minimal control delay at most minor-street stop-controlled intersections. A few intersections, such as SR 26/US 80 at Sand Hill Road and Old River Road, operate unacceptably due to relatively high minor street volumes and limited gaps for minor-street movements. Minor disruptions in traffic flow along SR 26/US 80 occur at various locations due to vehicles turning without dedicated turn lanes, school bus stops, and limited gaps for side-street movements, but these events do not materially reduce average travel speeds along the study corridor. Segment 4 exhibits substantially lower operational performance compared to the rest of the corridor, particularly in the westbound direction, as model results show average travel speeds below eight MPH due to recurring queues, relatively high volume compared to other segments, and uncoordinated signalized intersections. These existing conditions contribute to prolonged delays and congested flow. As development continues along the corridor and within the region such as the HMGMA, and as traffic volumes consequently increase, operational performance may degrade rapidly. Overall, the analyses show that the corridor maintains generally stable operations and highlights localized operational deficiencies. These results provide a baseline for evaluating future traffic operations. The maps shown in **Figure 16** and **Figure 17** graphically summarize the existing operations along the study corridor as defined by capacity analysis, SimTraffic outputs, and field observations.




**Key Field Observations:**

1. Queueing on southbound Sand Hill Road extended approximately 0.1 miles.
2. Queueing on southbound SR 17/30 extended 0.2 miles through the Parker's Kitchen truck driveway.
3. Queueing on westbound SR 26/US 80 at SR 17/30 extended over 0.3 miles through Zeigler Road.

**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 16 – Existing Corridor Operations Summary – AM Peak Hour

SR 26/US 80 SCOPING STUDY PHASE II

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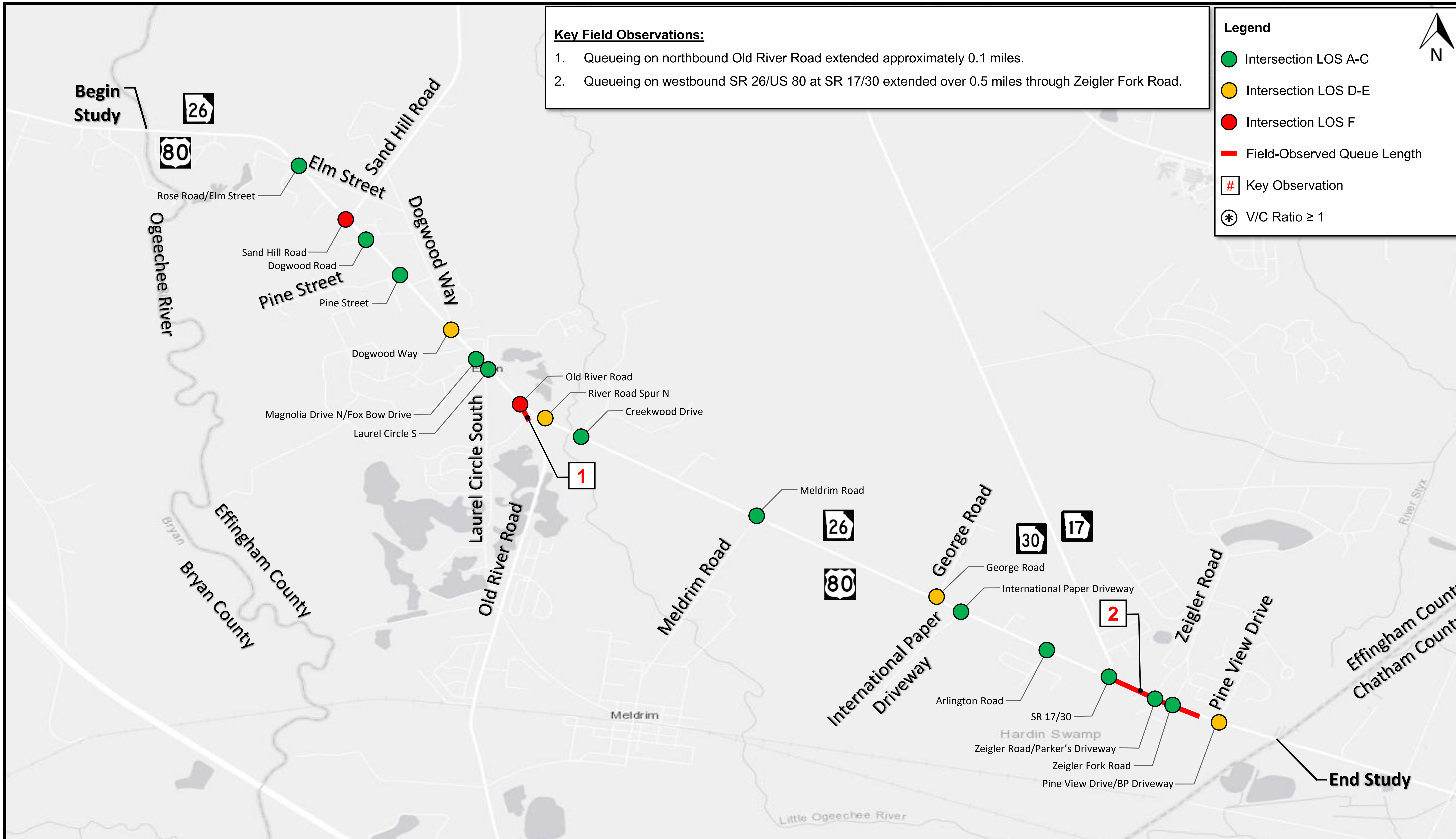


**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 17 – Existing Corridor Operations Summary – PM Peak Hour

SR 26/US 80 SCOPING STUDY PHASE II

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## 2.5 Safety Analysis

### *2.5.1 Introduction and Corridor Descriptive Statistics*

The primary objective of this study is to identify and prioritize short-, mid-, and long-term improvement projects needed for the SR 26/US 80 corridor to operate at an acceptable LOS; however, both operations and safety are critical to achieving this goal. This section is focused on evaluating trends in crash history along each contextual segment of the study corridor based on the most recent five years of data (2020-2024) from GDOT's Numetric dashboard. Based on these trends, potential mitigation measures and their associated benefits are identified for consideration as part of future corridor improvements.

As shown in **Table 13**, 473 total crashes occurred on the SR 26/US 80 corridor during the five-year period between 2020 and 2024 including 4 fatal crashes and 165 non-fatal injury crashes, none of which involved pedestrians or bicyclists. The 6.4-mile-long study corridor exhibited just under 74 crashes per mile over this period at a comprehensive crash cost of $167.2 million, or $33.4 million per year (GDOT, 2025). The segment of SR 26/US 80 from SR 17/30 to the Effingham County/Chatham County line (Segment 4) exhibited a five-year average crash rate approximately two percent above the statewide average for minor arterials per hundred million vehicle miles traveled (HMVMT) over the study period. The remaining segments exhibited crash rates below the statewide average. Holistically, the study corridor exhibited a five-year average crash rate approximately 34 percent below the statewide average.

The five-year crash history for each segment is annualized in **Table 13** along with comparing crash rates against the statewide average for minor arterials. The average crash rate over the entire study period is graphically summarized in **Figure 18**.

**Table 13: Corridor Crash Data Summary – 2020 to 2024**

| Segment | Crash Frequency by Severity | | | | | Crash Rate Per HMVMT (Comparison to Statewide Average, "SA") | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Serious Injury | Visible Injury | PDO | Total | 2020 (SA: 409) | 2021 (SA: 470) | 2022 (SA: 508) | 2023 (SA: 443) | 2024 (SA: 493) |
| 1 | 0 | 4 | 11 | 9 | 24 | 104.7 (-74.39%) | 117.1 (-75.09%) | 77.4 (-84.77%) | 91.3 (-79.39%) | 71.9 (-85.41%) |
| 2 | 0 | 4 | 44 | 79 | 127 | 396.3 (-3.11%) | 481.7 (2.49%) | 418.5 (-17.62%) | 307.3 (-30.62%) | 356.2 (-27.75%) |
| 3 | 3 | 7 | 38 | 108 | 156 | 199.1 (-51.33%) | 310.5 (-33.93%) | 270.7 (-46.71%) | 205.9 (-53.51%) | 283.5 (-42.50%) |
| 4 | 1 | 3 | 54 | 108 | 166 | 417.8 (15.39%) | 438.7 (-6.66%) | 561.4 (10.52%) | 422.8 (-4.56%) | 475.3 (-3.60%) |
| **Total** | **4** | **18** | **147** | **304** | **473** | **281.8 (-31.10%)** | **344.0 (-26.80%)** | **336.0 (-33.85%)** | **257.6 (-41.85%)** | **305.3 (-38.08%)** |

**2024 crash rate estimated via linear regression due to unavailability of GDOT statewide crash data for 2024.*

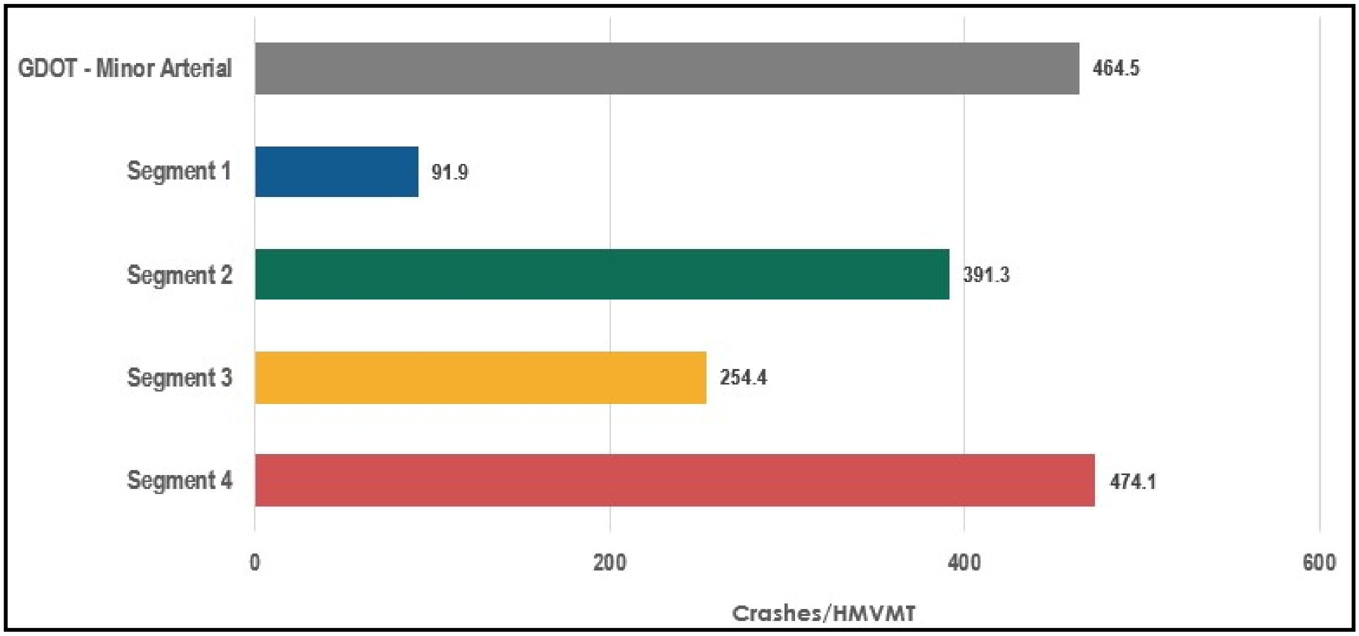
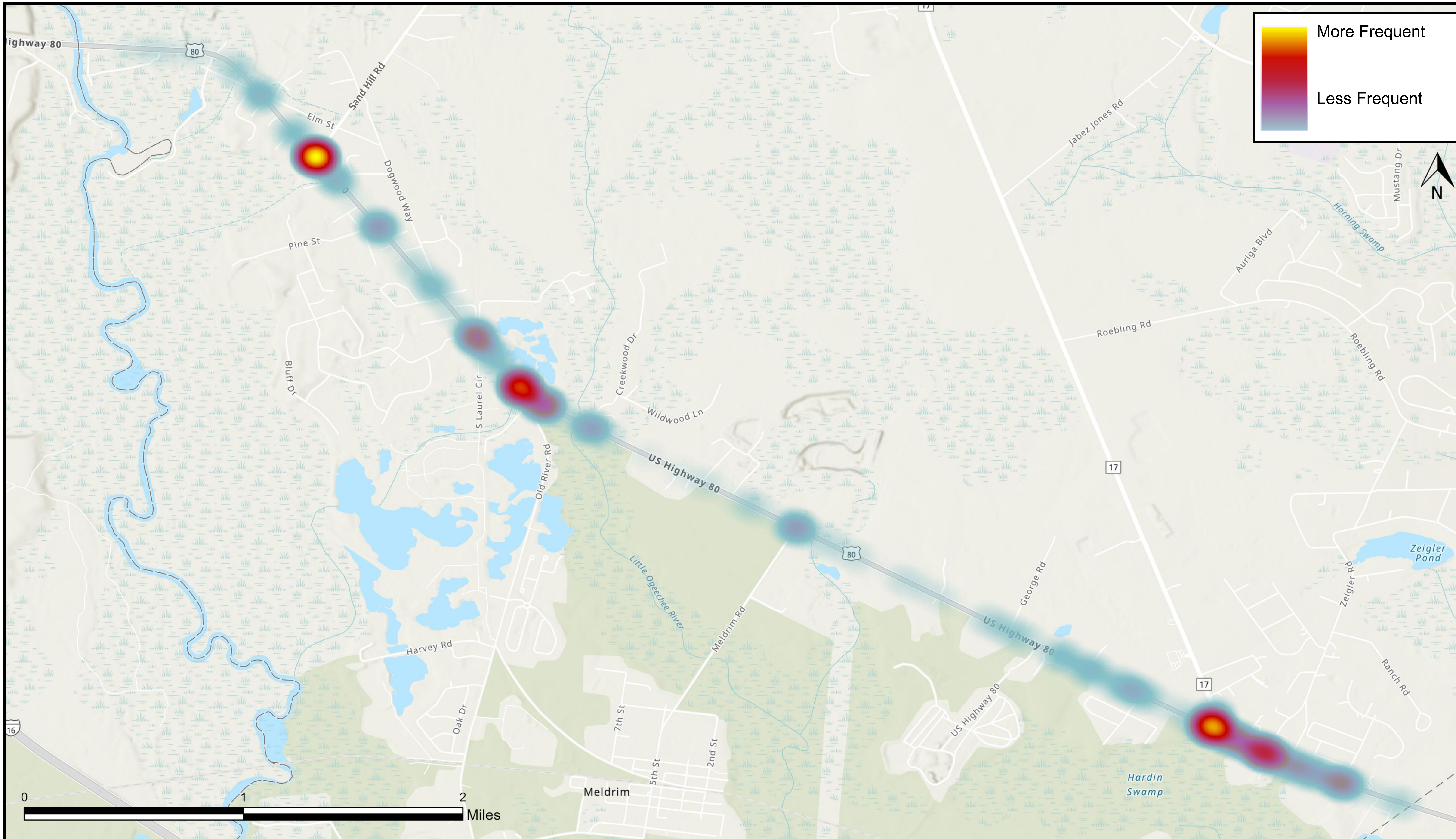



**Figure 18: 5-Year Average Crash Rate Comparison by Segment**

As illustrated in **Figure 18**, Segments 1, 2 and 3 exhibited a five-year average crash rate lower than the statewide average for minor arterials, while Segment 4 exhibited a higher rate. Segment 4 experienced the highest crash frequency on the corridor, and 35% of all reported crashes occurred within this Segment. Segment 3 included the largest number of fatalities (3/4, or 75%) and serious injuries (7/18 or 38.9%).

The following figure graphically displays all crashes occurring between 2020 and 2024 on the SR 26/US 80 corridor. **Figure 19** presents all crashes in a "heat map" that highlights locations with the highest frequency of crashes.




**SR 26/US 80 Scoping Study Phase II –** Existing Conditions/Needs Assessment

Figure 19 – Crash Frequency Heat Map: 2020 – 2024

SR 26/US 80 SCOPING STUDY PHASE II

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### 2.5.2 Segment 1 Crash History

Segment 1 extends approximately 1.2 miles between the Ogeechee River and Sand Hill Road. **Figure 20** shows the crash frequency by severity and manner of collision over the five-year period between 2020 and 2024 for Segment 1.

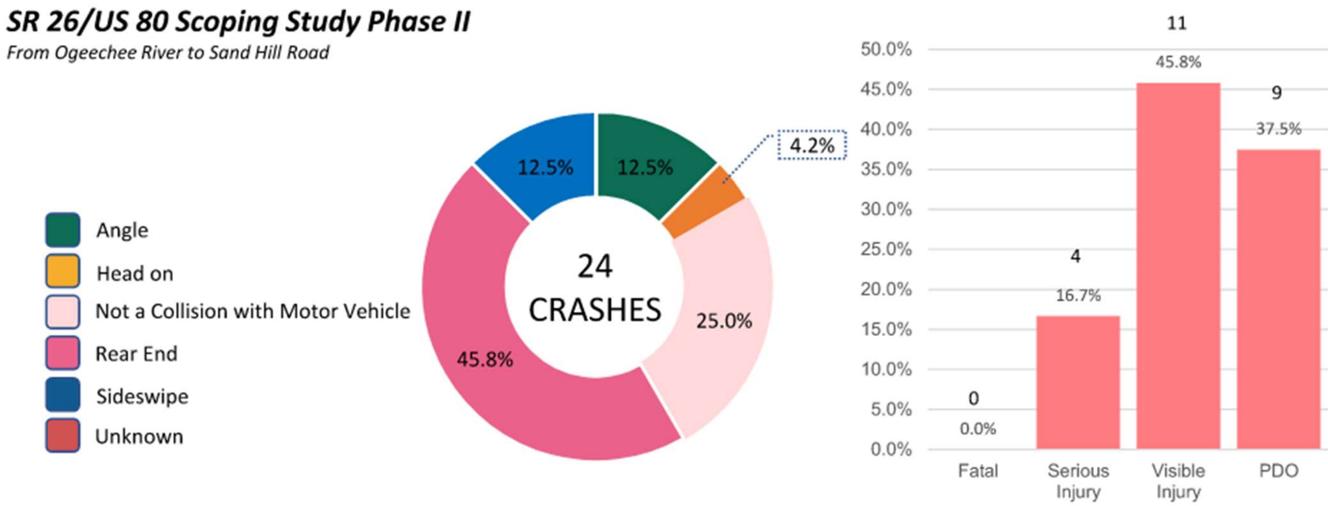


**Figure 20: Segment 1 Crash Profile**

As shown in **Figure 20**, rear-end crashes (45.8%) were the predominant crash type observed in Segment 1 over the study period followed by single-vehicle crashes (25.0%) and sideswipe crashes and angle crashes (each 12.5%). Most crashes that occurred were visible or serious injury crashes (62.5%), which may be attributable to high speeds given the consistent 55 MPH posted speed along this Segment. This Segment exhibited four serious injury crashes and eleven visible injury crashes. Of the 24 crashes, eight (33.3%) occurred at night in non-lit areas, which may indicate a need for lighting along the corridor. Crashes occurring along Segment 1 over the five-year study period are displayed in **Figure 21**.


**Figure 21: Segment 1 Crash Severity Map**

### *2.5.3 Segment 2 Crash History*

Segment 2 extends approximately 1.3 miles between Sand Hill Road and Old River Road. **Figure 22** shows the crash frequency by severity and manner of collision over the five-year period between 2020 and 2024 for Segment 2.

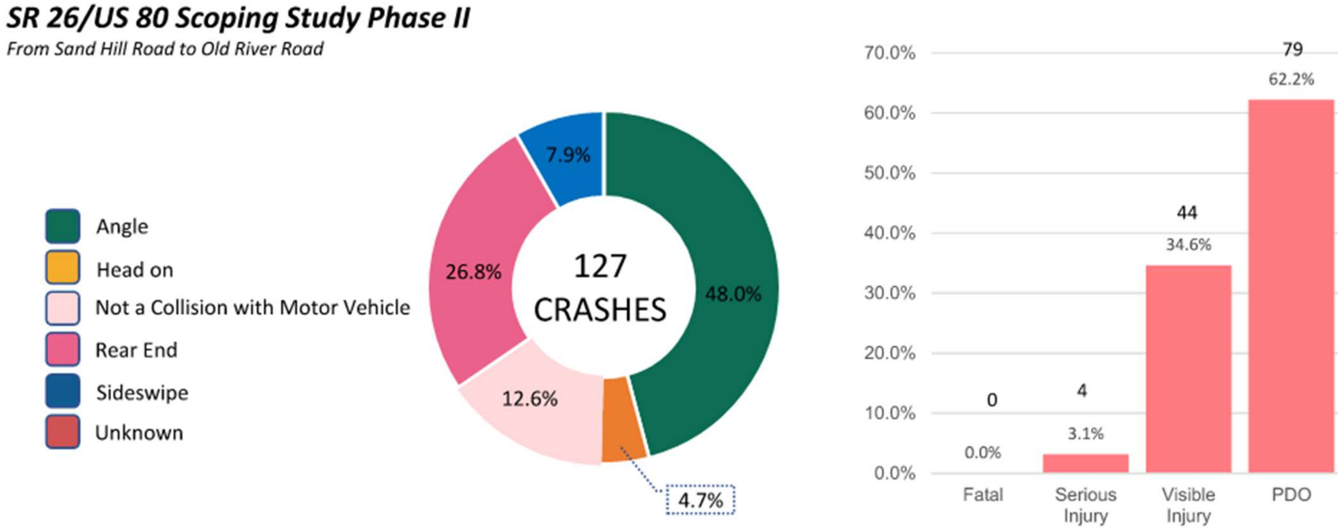


**Figure 22: Segment 2 Crash Profile**

As shown in **Figure 22**, angle crashes (48.0%) were the predominant manner of collision observed in Segment 2 followed by rear-end crashes (26.8%) and single-vehicle crashes (12.6%). This Segment exhibited the highest proportion of angle crashes and intersection related crashes (89) which is likely attributable to the high density of unsignalized driveways and intersecting streets along this Segment.

As displayed in **Figure 23**, clusters of crashes are present throughout Segment 2 but are concentrated near the intersections of Sand Hill Road, Magnolia Drive N/Fox Bow Drive, and Laurel Circle S. Although most crashes (62.2%) observed along Segment 2 were Property Damage Only (PDO), there were four serious injury crashes. Of the 127 crashes, 25 (19.7%) occurred at night in non-lit areas, which may indicate a need for lighting along the corridor.

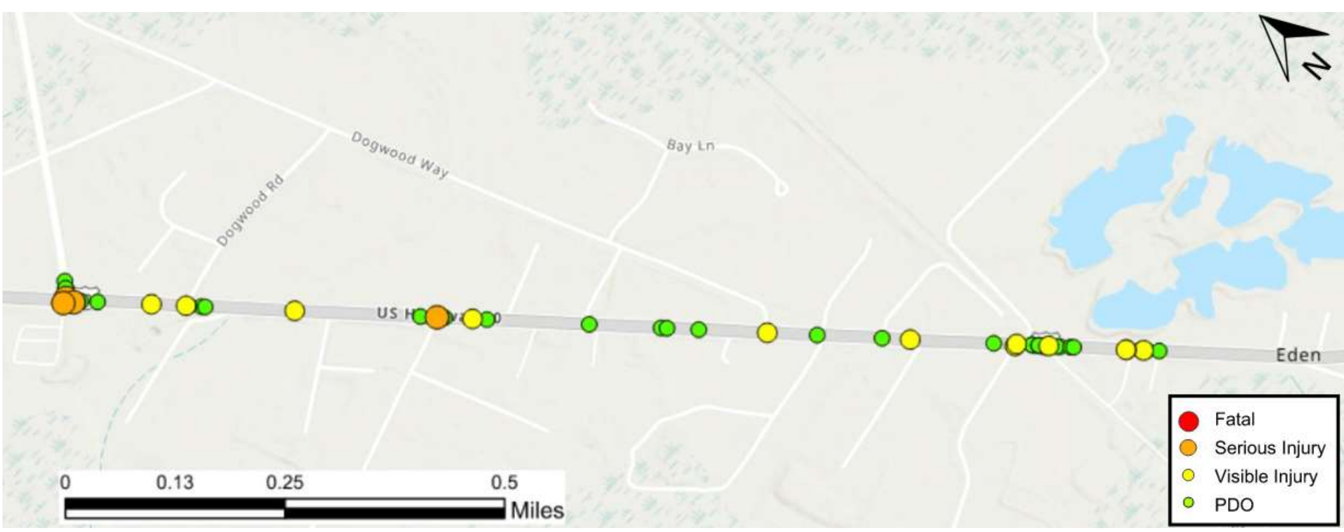


**Figure 23: Segment 2 Crash Severity Map**

### 2.5.4 Segment 3 Crash History

Segment 3 extends approximately 3.1 miles between the Old River Road and SR 17/30. **Figure 24** shows the crash frequency by severity and manner of collision over the five-year period between 2020 and 2024 for Segment 3.

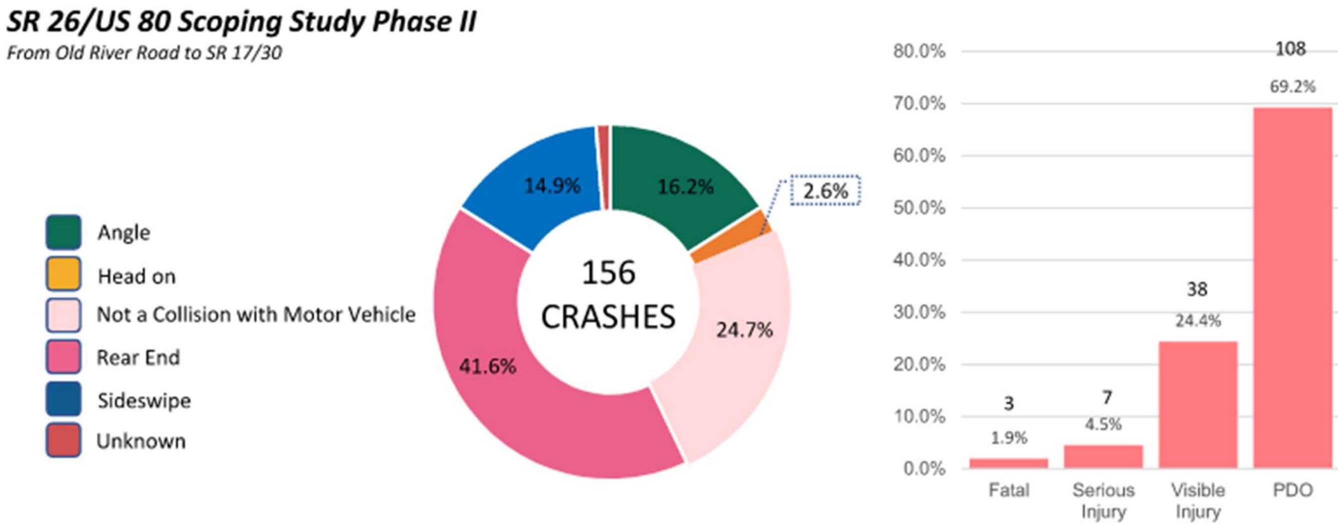


**Figure 24: Segment 3 Crash Profile**

As shown in **Figure 24**, rear-end crashes (41.6%) were the predominant manner of collision in Segment 3 followed by single-vehicle (24.7%) and angle crashes (16.2%). Segment 3 included the largest number of fatalities (3/4, or 75%), two of which occurred at the skewed intersection of Old River Road which further justifies the need for improvements. This Segment also had the highest number of crashes compared to the other contextual segments.

As displayed in **Figure 25**, crashes are generally spread out along the corridor with clusters at Old River Road and Meldrim Road. Most crashes occurring in Segment 3 were PDO (69.2%), and 60 crashes were intersection related crashes (38.5%). This is likely attributable to the high density of unsignalized driveways and intersecting streets along this Segment. Of the 156 crashes, 36 (23.1%) occurred at night in non-lit areas, which may indicate a need for lighting along the corridor.

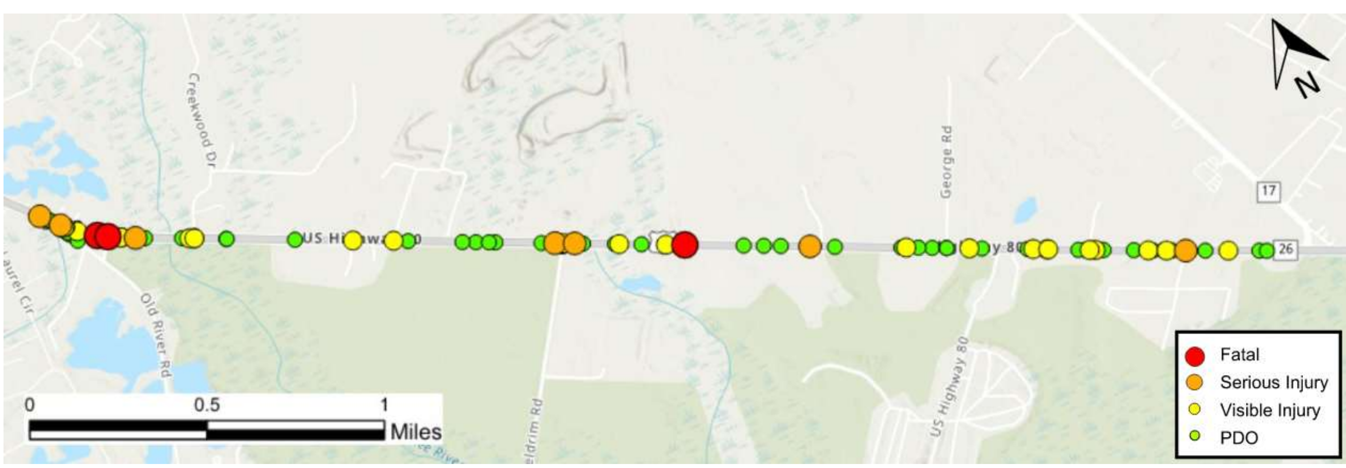


**Figure 25: Segment 3 Crash Severity Map**

### *2.5.5 Segment 4 Crash History*

Segment 4 extends approximately 0.8 miles between SR 17/30 and the Effingham County/ Chatham County line. **Figure 26** shows the crash frequency by severity and manner of collision over the five-year period between 2020 and 2024 for Segment 4.

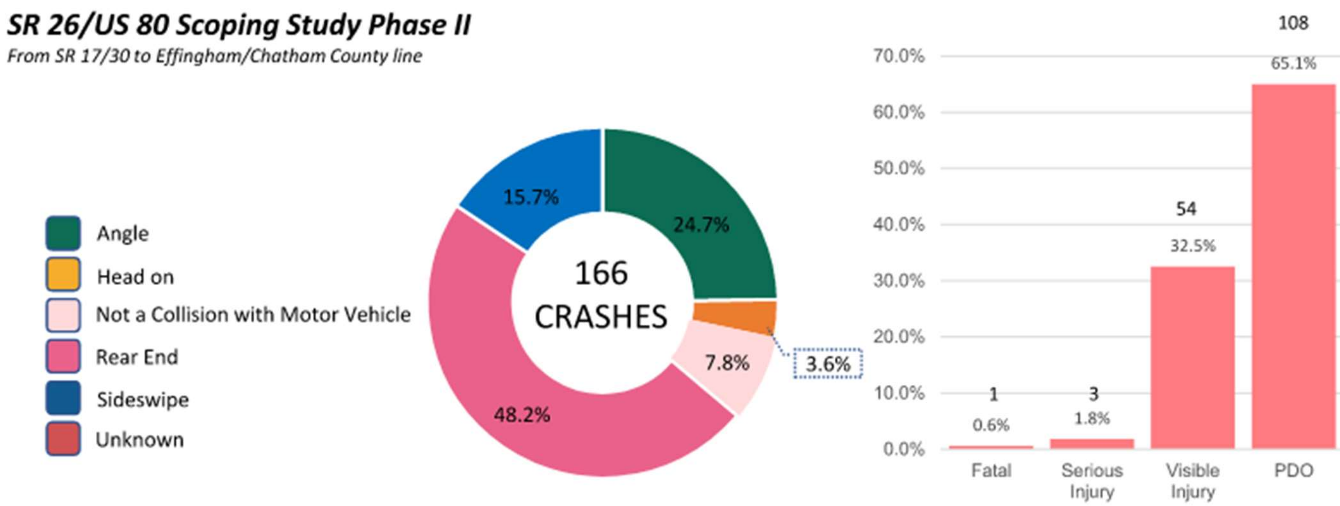


**Figure 26: Segment 4 Crash Profile**

As shown in **Figure 26**, rear-end crashes (48.2%) were the predominant manner of collision in Segment 4 followed by angle crashes (24.7%) and sideswipe crashes (15.7%). Of the 166 crashes, 21 (12.7%) occurred at night in non-lit areas, which may indicate a need for lighting along the corridor. The majority of the crashes along Segment 4 occurred at or near intersections as illustrated in **Figure 27.**

Segment 4 exhibited the lowest percentage of intersection related crashes (36.1%) along the corridor and over the study period which is likely attributable to the presence of signalized intersections along this Segment. Most crashes were PDO (65.1%); however, one fatal crash and three serious injury crashes occurred along this Segment over the five-year study period, all three of which occurred at the signalized intersections of SR 17/30 or Zeigler Road.


**Figure 27: Segment 4 Crash Severity Map**

### 2.5.6 Safety Analysis Summary

The corridor and segment safety analyses presented in the previous subsections illustrate that trends in existing crash history are a product of the SR 26/US 80 corridor characteristics, specifically:

- ***The SR 26/US 80 corridor exhibited crashes in concentration at key intersections, including Sand Hill Road, Old River Road, and SR 17/30.*** While crashes occurred consistently along the study corridor, approximately 40% of all reported crashes occurred at these three intersections. Notably, two fatal crashes were reported near the Old River Road intersection, and this data further supports the need for intersection-focused improvements at these locations.
- ***This study corridor includes approximately 167 unsignalized driveways, which equates to an average spacing of 26 driveways per mile.*** Approximately half of the 473 total crashes occurred at intersections. Full-movement, unsignalized driveways are most heavily concentrated from Sand Hill Road to Old River Road and from SR 17/30 to the Effingham County/ Chatham County line (Segment 2 and Segment 4). Consequently, approximately 80% of all angle crashes occurred in these two segments despite their length comprising just 33% of the entire corridor.
- ***Congested conditions along the study corridor likely contribute to an increased frequency of rear-end crashes.*** Approximately 40% of all crashes in the study database were rear-end crashes, and more than one-third of these occurred in Segment 4 where congestion is common near the signalized intersections between SR 17/30 and the Effingham County/ Chatham County line.

In addition to improvements at intersections such as Old River Road and SR 17/30, these findings suggest that access management improvements are needed across the corridor, particularly on Segment 2 and Segment 4, which include approximately 31 unsignalized driveways per mile. Implementation of raised median sections and reduced conflict intersection designs have the potential to mitigate these trends and reduce disruptions to traffic operations during the peak hours of travel. Studies have shown that a positive correlation exists between congestion and crash rates, and the need for geometric and intersection control upgrades along the corridor is evident based on these crash trends. Finally, approximately 20% of all crashes along the corridor occurred at night in non-lit areas, which may indicate a need for lighting along the corridor.

# 3.0 Conclusions and Next Steps

This Existing Conditions Memorandum summarizes a comprehensive data collection effort and land use, community, capacity, and safety analyses which were conducted to assess existing conditions along the SR 26/US 80 corridor and to identify transportation challenges, needs, and opportunities to be considered throughout the remainder of the study. The SR 26/US 80 corridor—from the Bryan County line to the Chatham County line in Effingham County—serves as a critical link in Georgia's freight and commuter network. It is one of the most heavily utilized access routes serving the GPA's Garden City Terminal (GCT) and connects to major freight and commuter corridors in Effingham County such as Sand Hill Road, Old River Road, and SR 17/30. Further, SR 26/US 80 is a key east-west alternate to I-16 that serves freight traffic from the Hyundai Motor Group Metaplant America (HMGMA) in Bryan County and the Port of Savannah in Chatham County. Prioritizing the safe and efficient movement of all modes along this multi-functional route is key to the long-term success of the surrounding area. To satisfy the goals and objectives of the CORE MPO MTP and complementary transportation planning initiatives, the findings summarized in this memorandum support the following conclusions:

- ***Intersection control and safety should be prioritized at the corridor's critical bottlenecks.*** Approximately 40% of all crashes in the study database were rear-end crashes, and 36% of these rear-end crashes occurred between the intersection with SR 17/30 and the Effingham County/ Chatham County line where congestion is prevalent during the peak periods of travel. This five-lane section of the SR 26/US 80 study corridor has the highest traffic volumes and worst level-of-service compared to other segments. More specifically, intersection control improvements have been recommended at the intersection with SR 17/30 as part of the *Effingham County Transportation Master Plan Update* (Pond, 2025) ("the TMP") and GDOT's *Coastal Empire Transportation Study*. The studies' recommended traffic signal upgrades and multilane roundabout at this location will be evaluated as alternatives to mitigate existing operational constraints. Additionally, the forthcoming roundabout at Sand Hill Road as part of PI 0019658 will be considered in future-year no-build analyses, and the recommended multilane roundabout at Old River Road from the TMP will be evaluated as an alternative to mitigate existing safety deficiencies which have led to two fatalities over the last five years at this location. Further improvements may be needed on SR 26/US 80 as growth occurs over the long-term horizon.
- ***Access management strategies should be implemented throughout the SR 26/US 80 corridor to reduce conflict points, address crash trends, and plan for future freight-induced growth.*** The study corridor includes approximately 167 unsignalized driveways, equal to an average spacing of 26 driveways per mile. Proactive access management planning, including identifying locations for raised medians and reduced conflict intersections, will likely provide opportunities to improve safety and mitigate congestion. This planning effort will be critical as HMGMA and corresponding industrial developments expand within the corridor's influence area.
- ***Non-motorist facilities should be considered throughout the SR 26/US 80 corridor.*** Despite serving Georgia State Bike Routes 35 and 40, the corridor does not provide consistent bicycle accommodations as shoulder widths are variable and are frequently less than GDOT's minimum paved shoulder width to be considered a bikeable shoulder. Additionally, no sidewalks or shared-use paths exist along the corridor. Providing new non-motorized facilities and new or upgraded crossings would align with recommendations from the TMP as well as address findings from the Community Analysis described herein. Further, non-motorized facilities would allow for additional

travel modes, mitigate the risk of future pedestrian-involved fatal and serious injury crashes as traffic volumes grow, inform future land use modifications, and support planned projects along the corridor like the County's Atlas Park and the Georgia Hi-Lo Trail.

The outcomes of this initial task will be used to inform recommendations as part of the Alternatives Analysis Memorandum and will form a portion of the *SR 26/US 80 Scoping Study Phase II Final Report*.