



# ROLESVILLE MOVES

Community Transportation Plan Update



May 2021



## ACKNOWLEDGMENTS

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Thank you to the local residents, community leaders, and government staff that participated in the development of this plan through meetings, workshops, comment forms, and plan review. Special thanks to those who participated as Steering Committee members, listed below.

## STEERING COMMITTEE

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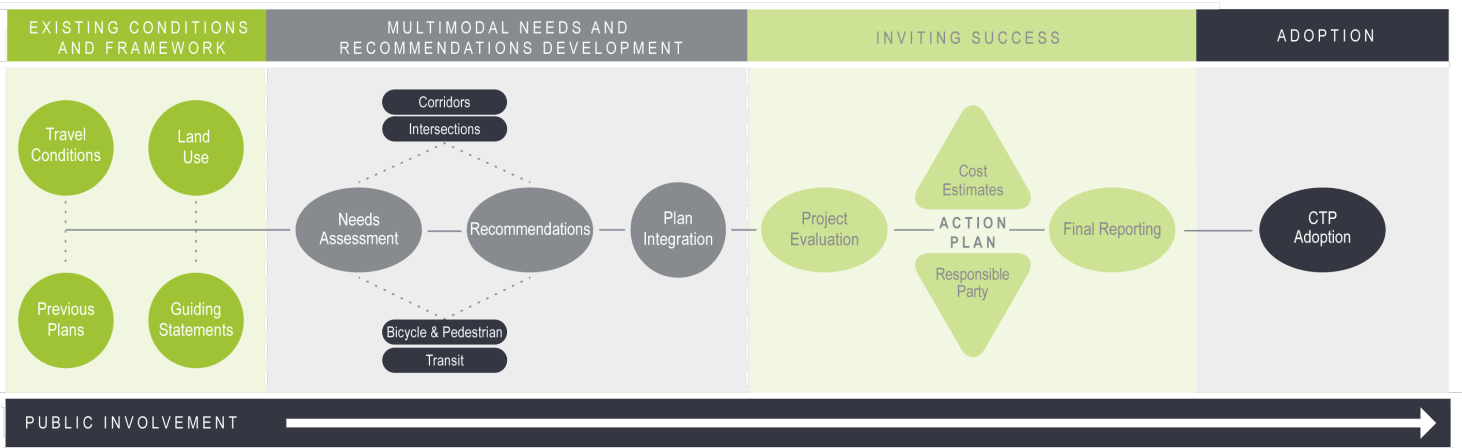
## **EXECUTIVE SUMMARY**

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# Overview

The Rolesville Moves Community Transportation Plan (CTP) is a community driven effort that identifies transportation needs and recommendations for multimodal facilities. The plan provides the framework for creating a holistic transportation network and accessible community for the Town of Rolesville.

The development of the Rolesville Moves CTP began in the winter of 2020. The analysis of the existing conditions and development of the project framework were initiated by understanding the existing and future travel conditions, identifying the current and future land uses, creating guiding statements, and reviewing previously completed plans and studies. Following the completion of the existing conditions analysis, multimodal recommendations were developed. High-level cost estimates were generated and projects were prioritized using a methodology that leveraged qualitative and quantitative data. There were two major community outreach touch points during the planning process. The first survey was open from May to June 2020 and focused on the Rolesville Moves vision and goals. The second survey was open from January to February 2021 and focused on the draft recommendations.



The findings and analysis are documented in the body of this plan.

## Existing Conditions

The existing conditions aim to provide a glimpse of the current system related to safety and mobility within the Town of Rolesville. The analysis provides the framework for Town Staff to identify and prioritize mobility recommendations as priorities evolve or shift overtime. The existing conditions section provides an overview of the current demographics, summarizes the current mobility network, and reviews the previous plans that helped to inform the development of Rolesville Moves CTP.

### At a Glance

The Town of Rolesville is one of the fastest growing towns in North Carolina. Between 2017 and 2018, the growth rate of the population was approximately 10.3%. The Town’s fast-growing population needs a reliable transportation network to travel to work, school, and recreation opportunities.

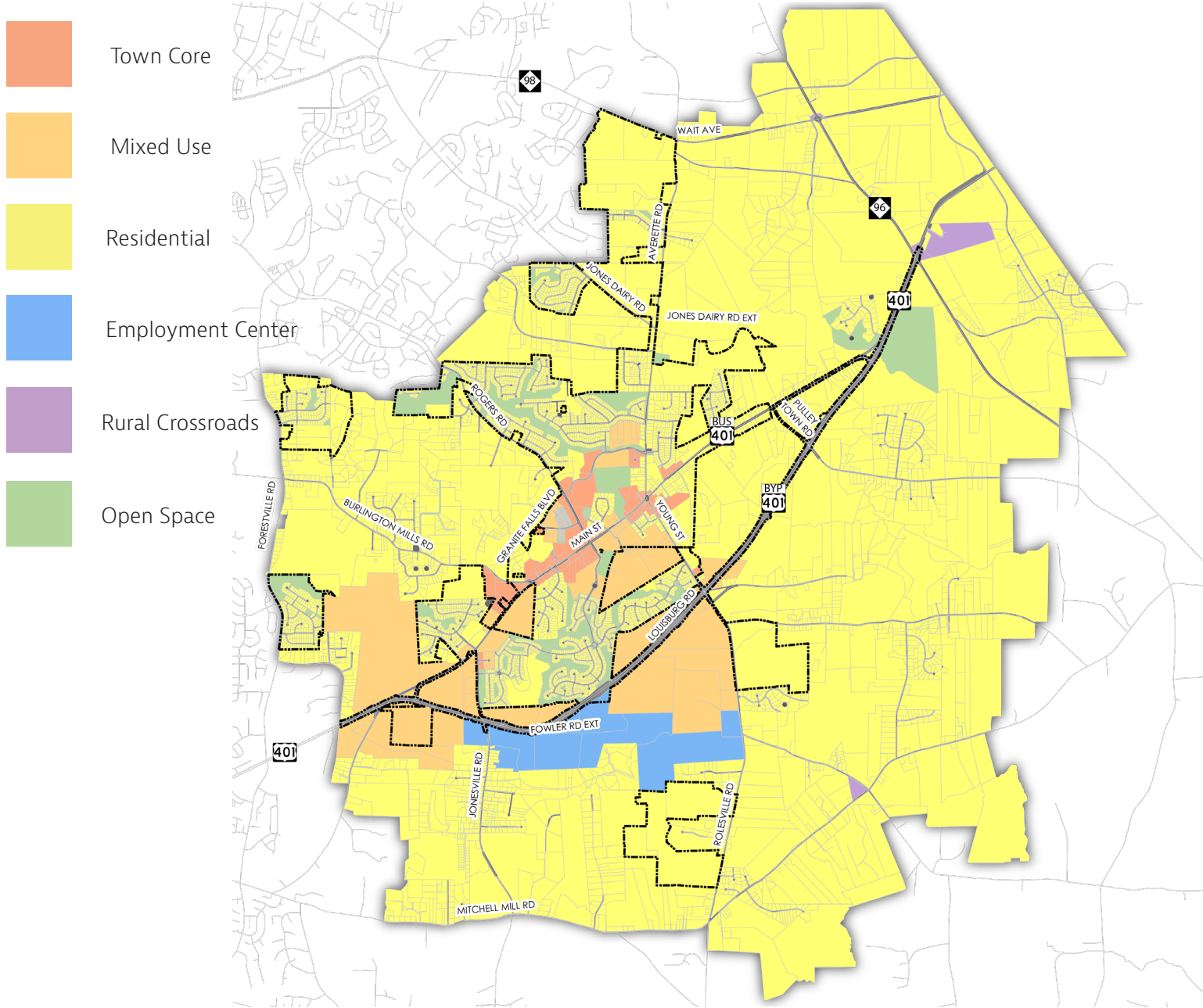
**32.6** minutes is the average commute time of residents in Rolesville

**2,752** people commute out of Rolesville to go to work

**80.4%** of commuters drive alone to work

# Context Sensitive Street Design

One crucial step towards ensuring context sensitive street design is by emphasizing the importance of complete streets. Rolesville Moves CTP includes a strategy that links land use and transportation recommendations. The strategy includes two parts: a set of mobility principles based on consolidated land use context areas and a land use and transportation map that overlays transportation recommendations and context areas.



The land use characteristics categories shown are based—in part—on the Future Land Use Map. The Town recently participated in a regional land use planning exercise designed to streamline land use inputs into the region’s travel demand model for the 2050 CAMPO Metropolitan Transportation Plan. The land use characteristic categories combine and consolidate CommunityViz and the Town of Rolesville’s Future Land Use Map to provide consistent terminology for land uses that occur throughout the region. A set of mobility principles compliment each of the six land use context areas. Upon adoption of the Rolesville Moves CTP, the Town will further explore options for a commercial and/or employment corridor along the southern side of the US 401 BYP (Lousiburg Road). The study should also consider other potential industrial growth areas beyond the proposed Fowler Road corridor.

# Recommendations

The on-street roadway recommendations for Rolesville Moves CTP were developed from a process that considered previous planning efforts, environmental considerations, safety and congestion data, existing and planned land uses, projected travel demand, existing and committed projects, and feedback from the public. The proposed recommendations leverage existing connections and create strategic links throughout the Town of Rolesville.

The Rolesville Moves CTP recommendations are divided into three basic categories:

## Thoroughfare Recommendations

The thoroughfare recommendations are intended to alleviate and address future congestion by adding capacity, access management enhancements, or providing alternative routes. Recommendations are intended to address the congestion and safety concerns across the transportation network. Thoroughfare recommendations were intentionally developed to include multimodal features such as bicycle and pedestrian facilities. The development of active, sustainable mobility was a key theme during public outreach and plan development. A successful transportation system aims to identify creative means of expanding vehicular capacity while incorporating opportunities for alternative modes of transportation.

Where appropriate, a narrow median could be substituted for a two-way left turn lane based on discussion between the Town of Rolesville and other affected parties which could include developers or NCDOT.

## Collector Recommendations

Connecting and enhancing the Town's network of collector streets will improve the distribution of traffic throughout the local network. A disconnected roadway system exacerbates traffic issues and increases travel times. A key goal of this collector street network includes improving accessibility for residents while minimizing impacts to the natural environment. A properly implemented plan will provide sustainable accessibility to activity and recreation centers. Both local and through-traffic will benefit from the reduced reliance on thoroughfares and enhanced multimodal transportation options.

While the connection points of proposed collector streets are important to facilitate overall network connectivity, the alignments of these proposed collectors are flexible and can be modified to accommodate development.

## Intersection Recommendations

The recommendations for the future system include improvements to critical or new intersections and interchanges. These locations were identified to alleviate operational deficiencies and safety concerns. To preserve mobility and enhance the overall efficiency of the transportation network, it is crucial to develop a collection of best practices to allow the Town to respond to changing development pressures. Rather than specific project recommendations, these best practices provide the ability to remain flexible while incorporating evidence-based planning procedures to make the best planning decisions for the Town's future. These best practices include intersection improvements and access management and connectivity best practices.



# The Future Network Visualized

Two corridors were identified for further study. These projects included the new Jones Dairy Road Extension and Young Street/Rolesville Road/Averette Road between NC 98 (Wait Avenue) and Mitchell Mill Road.

## Jones Dairy Road Extension

As part of Rolesville Moves CTP, two alternatives for the Jones Dairy Road extension were considered. As a high priority connection between Main Street and Averette Road, understanding the surrounding environmental constraints as well as traffic needs are crucial to identifying a preferred alignment. The challenges associated with the two alternatives do not differ significantly. After several conversations between the site developer and Town staff in addition to a desktop review of site conditions, the Town's preferred alternative is the eastern most alignment. Key next steps should include a full wetland delineation, which will aid the Town in making a more informed decision about the preferred alignment.

## Young Street/Rolesville Road/Averette Road

Young Street is a critical link in helping the Town of Rolesville create a true town center and maintaining a sense of place. While traffic volumes on Young Street are growing, the Town's efforts will focus on promoting a bikeable and walkable Town Center, rather than widening to accommodate more vehicular traffic. The current two-lane corridor includes fragmented sidewalk connections and lacks safe accommodations for bicyclists. General improvements including repaving and restriping could enhance the north-south travel and provide safer conditions for multimodal traffic. In addition, access management enhancements would improve safety, better sidewalk connections would encourage walkability, and streetscaping would enhance this corridor through downtown Rolesville.

# Project Implementation Plan

The success of the Rolesville Moves CTP will hinge on the ability of local, regional, and state officials to effectively and efficiently collaborate on the implementation of both projects and policies. The completion of this plan will be the preliminary step in implementing a multimodal network that affects mobility, safety, development patterns, and the aesthetic character of the Town of Rolesville. The majority of the recommendations in this CTP will need to undergo additional evaluation prior to implementation. There are typically four steps in the general project development process.

**Transportation Planning (Identify need)**

STEP 1

**Planning Studies, Preliminary Engineering, and Environmental Review (Identify specific solution)**

STEP 2

**Final Design (Develop design plan and specifications)**

STEP 3

**Construction (Deliver project)**

STEP 4

# Project Prioritization

The Rolesville Moves CTP included a prioritization assessment for roadway projects to assist Town staff with identifying how to best allocate future funding. The prioritization includes a blend of quantitative and qualitative metrics. The metrics used were developed using feedback received from Town staff, the plan’s Steering Committee, public input, CAMPO, and NCDOT. The prioritization methodology can be found in the table below. Intersection recommendations were not prioritized and should be implemented on an as-needed basis. Once prioritization metrics were identified, weighting values were determined for each of the metrics. These weighting values were based on input from the public, Town staff, and the Steering Committee. This prioritization process helped identify near-, mid-, and long-term priority projects.

Evaluation Criteria	Score	Weight
Previous Plan	Project received a score of 1 if they are included in a previous or adopted plan. Projects that have not been included in a previous or adopted plan will receive a score of 0.	5%
Crash History	NCDOT Planning Level Section Safety Scoring Data was utilized to identify project areas with high scores, which are considered to have poor safety performance.	15%
Existing V/C Ratio	The existing volume-to-capacity(V/C) ratio for each project was scaled using the Triangle Regional Model. Projects that were highly congested received the highest scores.	15%
V/C Reduction	Each project was scored based on the V/C reduction from the model's base year (2013) to the horizon year (2045). Future year V/C was obtained from a future year build-out model. Projects with the highest reduction were scored highly.	10%
Bicycle & Pedestrian	Projects receive a high score if they accommodate both bicyclists and pedestrians. Projects receive a moderate score if they accommodate only one mode of active transportation.	15%
Transit	Projects receive points if the roadway has been identified in the Joint Rolesville-Wake Forest Transit Study as a potential transit corridor. In addition, existing transit connections also receive points.	10%
Critical Connections	Critical connections serve or provide new linkages for schools, emergency services, community facilities, and potential activity centers. Projects classified as a critical connection receive a higher score.	20%
Value/Cost	The prioritization criteria outlined in this methodology are structured to reflect values of the project's implementation. The total value score was obtained through the process and was divided by the estimated project cost. The project with the top value/cost received the highest score with other projects receiving a relative score.	10%

The intent of the prioritization process is to provide the Rolesville Board of Commissioners, the Rolesville Planning Board, and Town staff with a tool to use in decision making. The findings from this prioritization exercise can be used to guide communication with agency partners or members of the general public. The prioritization findings should also adapt to the circumstances of a growing community such as Rolesville. As new development is being considered within the study area, the prioritization order may need to be revisited to best accommodate emerging areas of growth.

# Roadway Prioritization Results

The table below reflects the near-, mid-, and long-term priorities for roadway recommendations in the Rolesville Moves CTP. Plan corridor prioritization results can be used as a tool by the Town when establishing the annual Capital Improvement Plan (CIP) list. Since this plan is not financially constrained, there are no specific time periods associated with each prioritization grouping. The Town should pursue these improvements opportunistically to help keep pace with the emerging or shifting needs of Rolesville. Within each grouping, projects are not listed in a specific order.

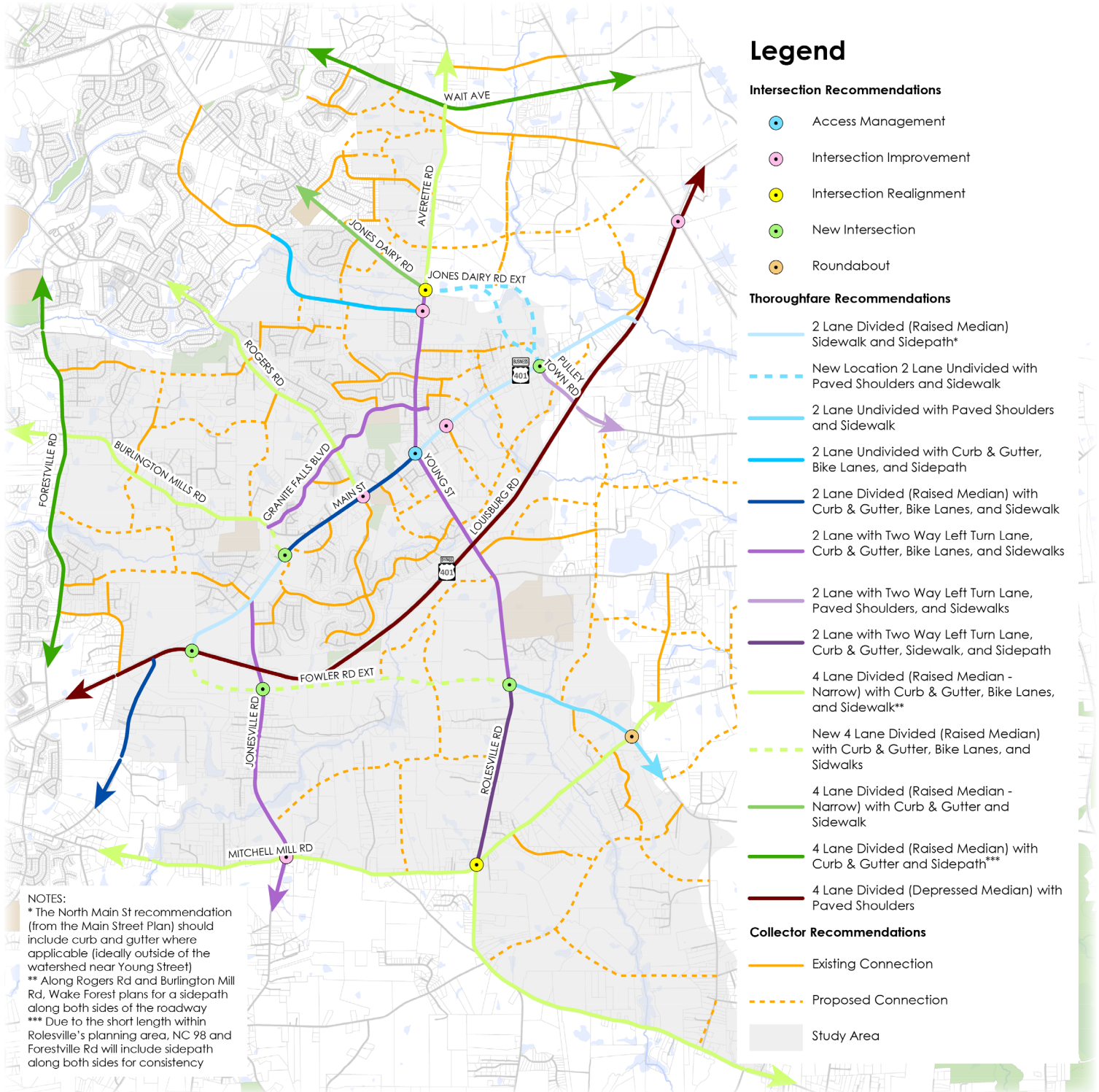
Term	Project
Near-term (0-10 years)	*S Main St ( <i>Burlington Mill Rd Realignment to Young St</i> )
	Rogers Rd ( <i>US 401 BUS (Main St) to Granite Falls Blvd</i> )
	S Main St ( <i>US 401 BUS</i> ) <i>US 401 BYP (Louisburg Rd) to Burlington Mill Rd Realignment</i>
	Rogers Rd ( <i>Granite Falls Blvd to Western Study Area Limits</i> )
	Granite Falls Blvd Ext ( <i>Grand Rock Way to Burlington Mill Rd Realignment</i> )
	Averette Rd/Young St/Rolesville Rd ( <i>Jones Dairy Rd to Fowler Rd</i> )
	Burlington Mills Rd ( <i>Burlington Mill Rd Realignment to Forestville Rd</i> )
	*Burlington Mills Rd Realignment ( <i>Burlington Mill Rd to US 401 BUS (S Main St)</i> )
Mid-term (10-20 years)	Granite Falls Blvd ( <i>Terrell Dr to Grand Rock Way</i> )
	Forestville Rd ( <i>Foxwild Ln to Lillies Liles Rd</i> )
	Averette Rd to ( <i>Jones Dairy Rd to NC 98 (Wait Ave)</i> )
	Rolesville Rd ( <i>Fowler Rd to Mitchell Mill Rd</i> )
	Jones Dairy Rd ( <i>Averette Rd to Northwestern Study Area Limits</i> )
	Jones Dairy Rd Ext ( <i>Jones Dairy Rd/Averette Rd to US 401 BUS (Main St)/Pulley Town Rd</i> )
	Fowler Rd ( <i>Rolesville Rd to Mitchell Mills Rd</i> )
	**US 401 (Louisburg Rd) ( <i>NC 96 (Zebulon Rd) to Northern Study Area Limits</i> )
	Folwer Rd Ext ( <i>US 401 BYP (Louisburg Rd)/US 401 BUS (Main St) to Rolesville Rd</i> )
	Louisbury Rd ( <i>US 401 BYP (Louisburg Rd) to Southern Study Area Limits</i> )
Long-term (+20 years)	Jonesville Rd ( <i>US 401 BUS (Main St) to Mitchell Mill Rd</i> )
	Pulley Town Rd ( <i>US 401 BYP (Louisburg Rd) to US 401 BUS (N Main St)</i> )
	Rolesville Rd/Riley Hill Rd ( <i>Mitchell Mill Rd to Riley Hill School Rd</i> )
	Mitchell Mill Rd ( <i>Rolesville Rd to Eastern Study Area Limits</i> )
	NC 98 (Wait Ave) ( <i>NC 96 (Zebulon Rd) to Western Study Area Limits</i> )
	Mitchell Mill Rd ( <i>Fowler Rd to Rolesville Rd</i> )
	Chalk Rd ( <i>Averette Rd to Western Study Area Limits</i> )

\*LAPP 2021 Project

\*\*The existing cross section aligns with the recommended cross section

## Proposed Network

The proposed network combines thoroughfare, collector street, and intersection recommendations to provide a glimpse at the future of mobility in and around the Town of Rolesville. With a variety of multimodal facilities, the proposed network is friendly for all users. The multimodal provisions provide options for active modes of transportation throughout and around the Town of Rolesville. The future of transportation will leverage surrounding land uses and build off of new development or shifting land uses.



## Conclusion

Implementing Rolesville Moves CTP will be an ongoing and iterative process that should be reevaluated on a regular basis. Moving forward, key steps at the Town-wide level that will help advance the recommendations include the following:

- Update the CTP every five years to ensure the plan's recommendations and objectives remain relevant.
- Finish the update of the Land Development Ordinance.
- Amend the CTP once the new Open Space and Greenways Plan has been completed, as well as the Rolesville Bicycle Plan Update.
- Update the CTP annually to include new transportation network enhancements as they are identified in the development review process.
- Revisit the Comprehensive Plan after the adoption of the CTP to review and adjust the Comprehensive Plan if needed.

The Rolesville Moves Community Transportation Plan provides a vision for transportation recommendations that considers existing and future needs for all travel modes. The creation of this Action Plan helps staff and elected officials advocate for projects that will have the greatest impact to the Town. The Town has many identified transportation needs, and fully funding and implementing the recommendations will take a number of years. As projects move forward into funding and implementation, the Town will need to work with the Capital Area MPO and NCDOT to determine how best to advance recommended projects. The Town will also continue to monitor emerging needs and changes in the way projects can be funded and implemented. Project priorities will be reassessed through subsequent updates to this plan. This dynamic process will help the Town of Rolesville continue to effectively address its transportation needs both now and into the future.



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## **INTRODUCTION**

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# Overview and Purpose

The Rolesville Moves Community Transportation Plan, or CTP, is a community driven effort that identifies transportation needs and recommendations for motorists, bicyclists, pedestrians, transit, and freight. The plan establishes a vision for the transportation network in Rolesville and identifies a set of projects, policies, and actions that will allow for incremental progress toward that vision. This CTP provides the model for creating an accessible, multimodal community for everyone in Rolesville.

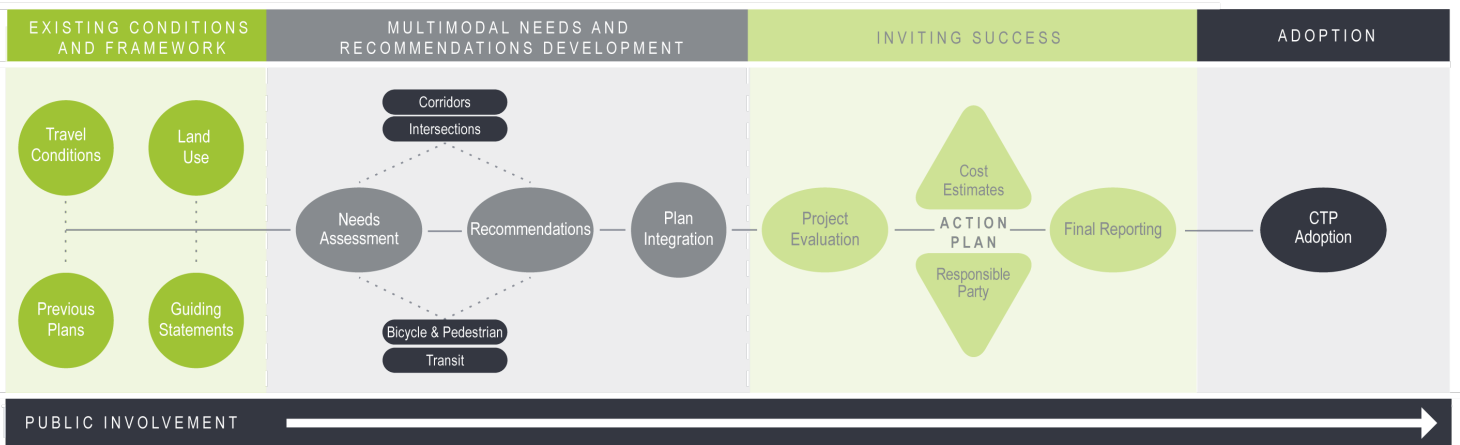
Transportation is an important part of our daily life in Rolesville. It affects how we move through the area and how we experience our Town. A lot has changed since the adoption of the 2002 Thoroughfare Plan. The Town of Rolesville is a growing North Carolina community that has the benefit of having both small town charm and the access to amenities that city life offers by being just a short drive away from Raleigh. With an increasing population and a desire for an accessible and connected transportation network, this plan establishes Rolesville’s local vision for the community today and plans for the community in the future.

This document is a powerful advocacy tool as Town staff seek to communicate local priorities to regional partners, including staff and elected officials, private developers, the Capital Area Metropolitan Planning Organization (CAMPO), the North Carolina Department of Transportation (NCDOT), and the public.

# Planning Process

This planning process included four key phases: Existing Conditions and Framework, Multimodal Needs and Recommendations Development, Inviting Success, and Adoption. The Plan used existing data and public input to help build the foundation for coordinated recommendations. The process for this plan followed four pillars of planning philosophy:

- Make better places by creating more transportation options
- Value the voices of strategic stakeholders and local residents
- Use current plans as a starting point for future strategies
- Create solutions customized to fit the needs of our community





## Vision and Goals

To make the Rolesville Moves CTP successful for the community, it was imperative to develop a vision and set of guiding statements that are consistent with the needs of the residents of Rolesville. The vision and goals were established through public input and guidance from the Steering Committee, and inspired by the transportation element of the Rolesville Comprehensive Plan. The established vision and goals permeate throughout the document to ensure that all analysis and recommendations relate back to these critical elements.

### *Vision*

**“To enhance and improve Rolesville’s transportation network by identifying needs and creating accessible mobility options for all users.”**

### *Goals*



#### Safe & Secure

Improve the safety of the transportation system by providing secure facilities for all mode users



#### Accessible & Connected

Provide a well connected transportation network that enhances access to key destinations within the Town of Rolesville and throughout the region



#### Active & Multimodal

Provide mode choices by expanding the transportation network to include more opportunities for bicyclists, pedestrians, transit users, and vehicular users



#### Efficient & Enhanced

Preserve the existing transportation network through targeted recommendations that maximize benefits while minimizing costs

# Public Engagement

Public input was vital to this planning process in order to create a plan that is designed to provide the residents of Rolesville with the transportation improvements that fit their needs. The approach to gathering community input included the guidance of a community-based Steering Committee, two public surveys, and an online presence that was vital to keeping Rolesville residents informed about the plan as it progressed and developed.

## Steering Committee

A Steering Committee was formed to guide the planning process and was consulted regularly throughout plan development. The members of the Steering Committee included Rolesville Town staff, NCDOT, CAMPO, Wake County, City of Raleigh, and a Town resident. The committee guided the direction of the plan through direct feedback on plan recommendations and assisted in guiding community outreach efforts.

## Online Presence and Social Media Campaign

The project webpage housed on the Town of Rolesville’s website was crucial to keeping the public up-to-date on the development of Rolesville Moves CTP. The webpage included a project presentation to introduce people to the CTP, an ongoing schedule that informed people about the timeline, and links to vital documents for review. The webpage also included a project newsletter which was released every two months and updated the public on announcements and upcoming events, behind the scenes information on the project, and key takeaways from the analysis and recommendations development process. This online presence was especially vital to keep the community involved. Since the plan development took place during COVID-19 pandemic when in-person gathering was not possible.



## Public Survey #1: Needs Identification and Visioning

During the initial stages of the project, an online survey was used to gather public input. The purpose of the survey was to establish a vision for the transportation system and to identify needs and deficiencies. The survey was open for over a month from May to June, 2020. Vital feedback from the survey is summarized here and the full survey results are included in the Appendix.

Participants were asked to provide input on changes to the transportation system over the last five years.

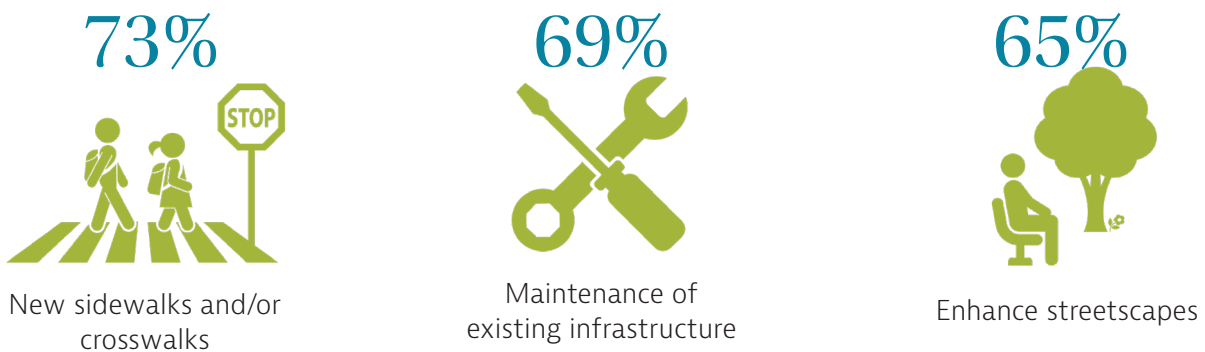
**50%** of participants believe the transportation system has *improved*

**30%** of participants believe the transportation system has stayed the *same*

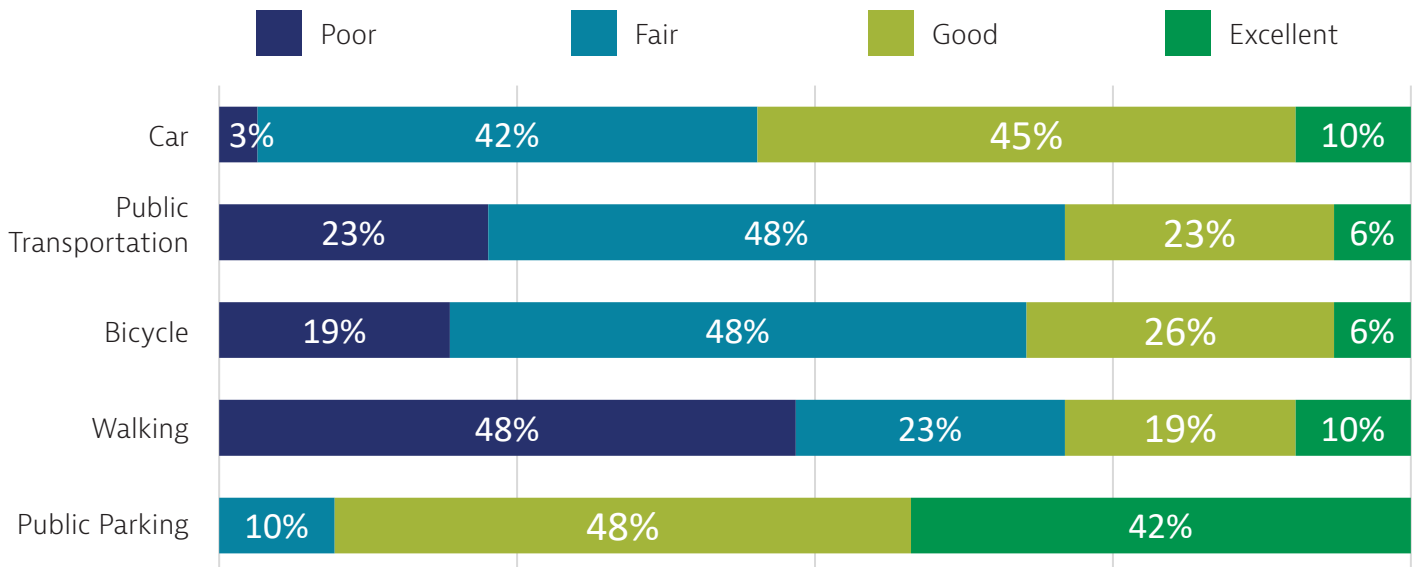
**20%** of participants believe the transportation system has *worsened*

The question results reflect the considerable work the Town of Rolesville has already conducted on the transportation system over the past several years by securing grant funding and partnering with NCDOT.

When asked how tax dollars should be spent on transportation in Rolesville, survey participants identified the following transportation investments as "essential" or "very important"



When asked to rate each of the following transportation modes, survey participants noted that ease of single-vehicle access is overall better than active modes of transportation (bicycling or walking) and public transportation.



## Public Survey #2: Recommendations Review

Following the development of recommendations, a feedback opportunity was made available to the public between January and February of 2021. A narrated presentation providing an update on plan progress and a packet of maps and tables showing recommended projects was made available on the project webpage. In addition to a public survey that focused on thoroughfare, collector, and intersection recommendations, public "office hours" times were advertised on the Town's website. Interested participants were welcomed to discuss the plan's recommendations with Town staff and the consultant team. Vital feedback from the survey is summarized here and the full survey results are included in the Appendix.

The screenshot shows a web browser window with the URL [rolesvillenc.gov/planning/whats-new-plans-progress](https://rolesvillenc.gov/planning/whats-new-plans-progress). The page has a navigation menu on the left with items like 'Planning', 'Adopted Plans', 'Building Permits', etc. The main content area is titled 'What's New? Plans in Progress' and features a sub-header 'Weigh in on Rolesville's Community Transportation Plan!'. The text describes virtual engagement sessions on January 26th and 28th, and provides Zoom links for both sessions. It also mentions an online survey available at <https://www.surveymonkey.com/r/RolesvilleMovesCTP>.

**80%** of participants believe that the proposed intersection recommendations *definitely* or *probably* would address the future needs of Rolesville.

**76%** of participants believe that the proposed thoroughfare recommendations *definitely* or *probably* would address the future needs of Rolesville.

**72%** of participants believe that the proposed collector street recommendations *definitely* or *probably* would address the future needs of Rolesville.

## Open-Ended Responses

- "The Mitchell Mill [Road and] Rolesville Rd intersection has always been a nightmare so a realignment would be great."
- "I don't think there are any intersection problems in Rolesville right now."
- "[Rogers Road] needs traffic calming, with turn lanes into neighborhoods..."
- "Love the 4-lane planning for Burlington Mills [Road], Rogers Road, and Mitchell Mill [Road] in particular."
- "Excited that [collector street recommendation] might help alleviate some pressure from our main roads."



**ROLESVILLE  
TOWN HALL**

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Rolesville

Town Hall

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## **EXISTING CONDITIONS**

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## Introduction

The Rolesville Moves Community Transportation Plan serves as an update of its 2002 Community Transportation Plan. Since 2002, the Town has experienced significant population growth. The initial steps of the planning process serve a framework for the planning process by exploring the current context of the transportation network, environmental factors, demographic shifts, and operational factors of the Town in order to plan for long-term growth and development over the next twenty-five years.

## Purpose

The Existing Conditions section is intended to provide a snapshot of the current conditions related to mobility and safety within the Town of Rolesville. This section is a preliminary step in the creation of the Community Transportation Plan, which will act as the framework for identifying and prioritizing current and future planning decisions. The geographic information systems (GIS) data within this document was provided by or obtained from the Town of Rolesville, Wake County, the North Carolina Department of Transportation (NCDOT), and the Capital Area Metropolitan Planning Organization (CAMPO) unless otherwise stated.

The Existing Conditions section contains the following subjects as they relate to mobility, accessibility, and safety in the Town of Rolesville:

- Demographics
- Mobility
- Previous Plan Review

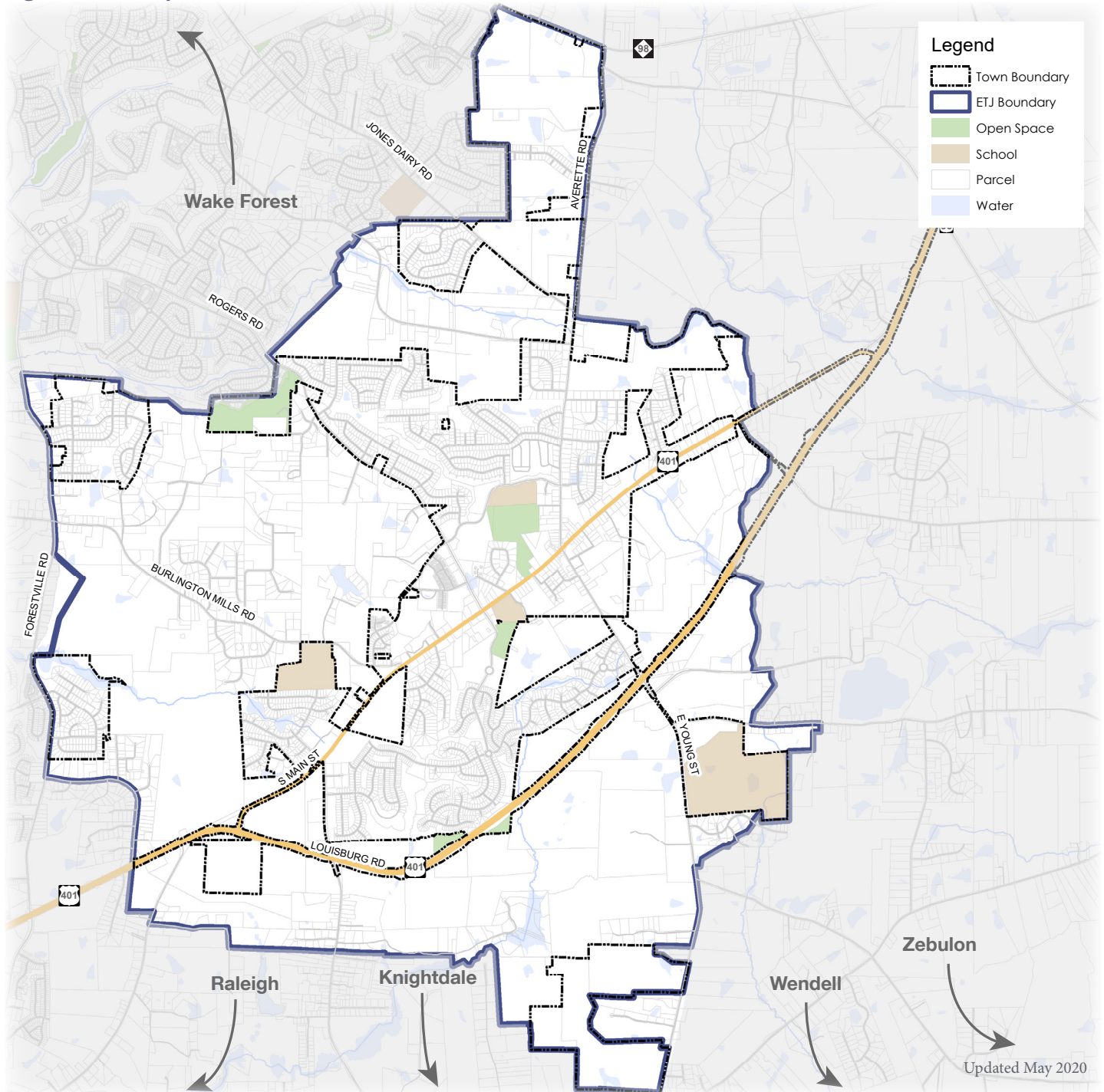


## Study Area

The Town of Rolesville is located in the northeastern portion of Wake County off of US 401. The Town is near the City of Raleigh and the Towns of Wake Forest, Zebulon, Knightdale, and Wendell. Despite being close to several large municipalities, Rolesville is also near several scenic recreation areas including the Heritage East Greenway, the Sanford Creek Greenway, and the Mill Bridge Nature Park. The Town of Rolesville retains an intimate, rural community feel while enjoying the proximity benefits of more densely populated areas.

Since the Town of Rolesville is one of the fastest growing towns in North Carolina, planning for the next twenty-five years will be a crucial step towards guiding the direction of land development and the transportation network.

**Figure 1 - Study Area**





## Demographics and Travel Patterns

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Understanding the demographic profile and traffic patterns of the community are essential when considering multimodal transportation in the Town of Rolesville. This section utilizes the 2018 American Community Survey (ACS) 5-year estimates from the U.S. Census Bureau to analyze relevant data for the community. This data helps to identify the needs of the community to appropriately recommend projects for the Community Transportation Plan.

## At a Glance

The Town of Rolesville is one of the oldest and fastest growing towns in North Carolina. The population of Rolesville has risen significantly since 2000. The Town’s fast growing population is well-educated and less than 5% of its population lives below the poverty line. As the table below indicates, the Town of Rolesville has a slightly higher minority population than the state of North Carolina. The Town’s minority population is consistent with of Wake County’s minority population. The Town of Rolesville has a higher median income and longer average commute time than both the county and state. Understanding the shifting demographics and economic profile will help establish the baseline for future planning decisions.

Demographics	Town of Rolesville	Wake County	North Carolina
Population (2018)	8,111	1,046,558	10,383,620
Percent Below Poverty Level	3.0%	8.4%	14.0%
Percent Minority	35.6%	35.9%	31.6%
Percent Over 65	9.9%	11.6%	16.3%
Median Household Income	\$114,107	\$79,970	\$53,855
Average Commute Time (minutes)	32.6	25.5	24.8

### Commute to Work



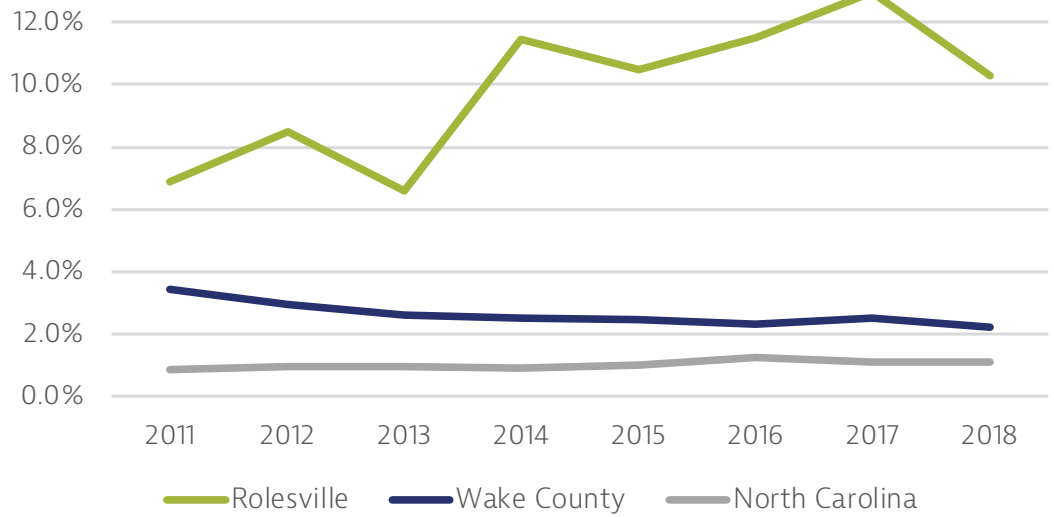
### Mode Split to Work





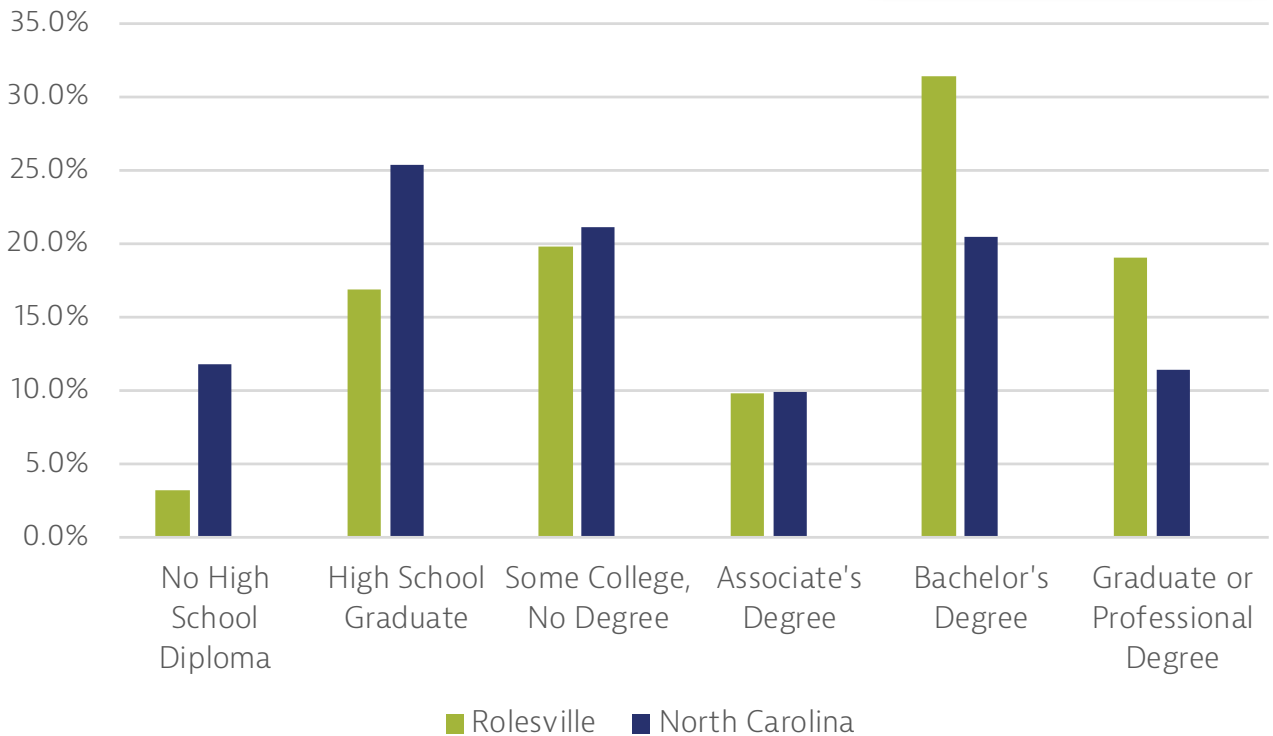
The Town of Rolesville is one of the fastest growing towns in the state of North Carolina. The Town grew 8% faster than Wake County and North Carolina combined in 2018 alone.

**Between 2017 and 2018, the growth rate was 10.3%.**



The percentage of Rolesville residents who received a High School diploma or higher degree is around 97%, which is 5% higher than Wake County and almost 10% higher than North Carolina. Approximately one third of Rolesville's population has a bachelor's degree.

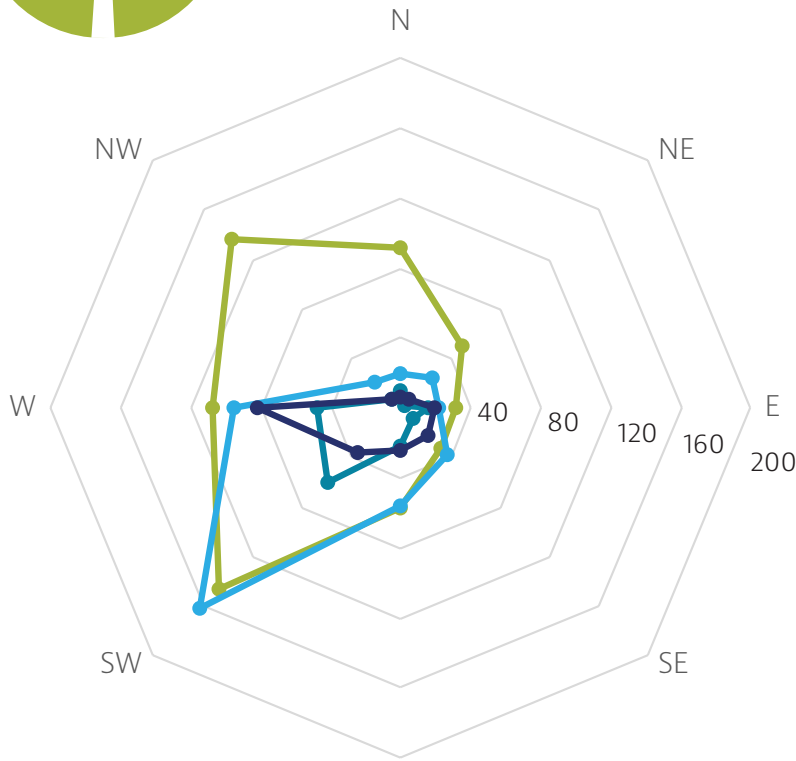
**The Town of Rolesville has a highly educated population.**





The radar graphs below show the direction of travel from work to home and from home to work. From work to home shows where Rolesville residents go to for work. From home to work shows where people who work in Rolesville live.

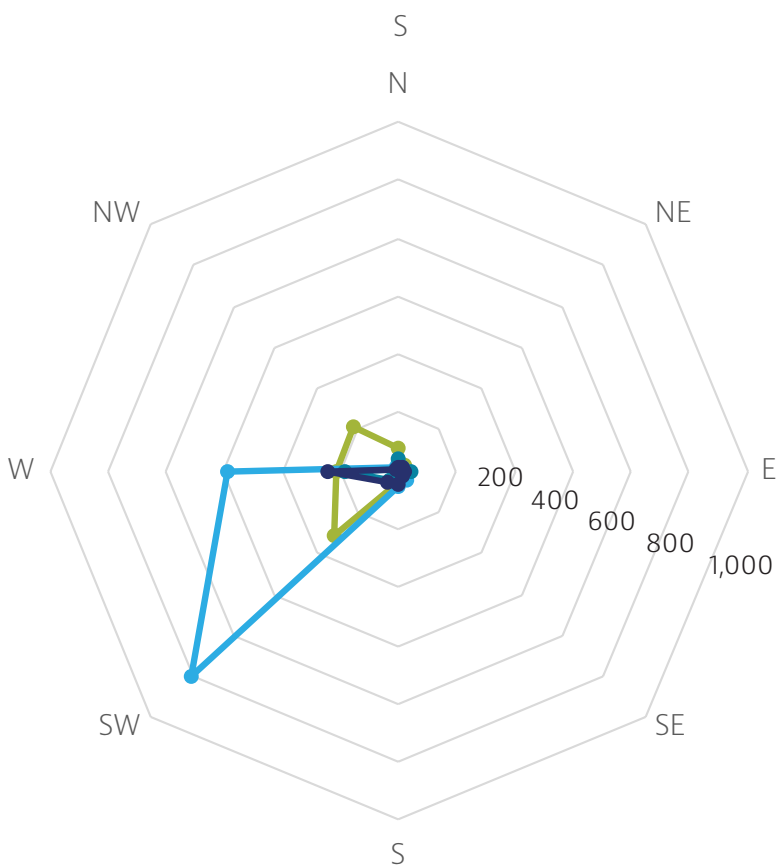
**Work to Home.**  
Rolesville residents predominantly travel southwest and west for work.



- Less than 10 miles
- 10 to 24 miles
- 25 to 50 miles
- Greater than 50 miles

Source: OntheMap 2017

**Home to Work.**  
Workers of Rolesville travel primarily from the southwest.



- Less than 10 miles
- 10 to 24 miles
- 25 to 50 miles
- Greater than 50 miles

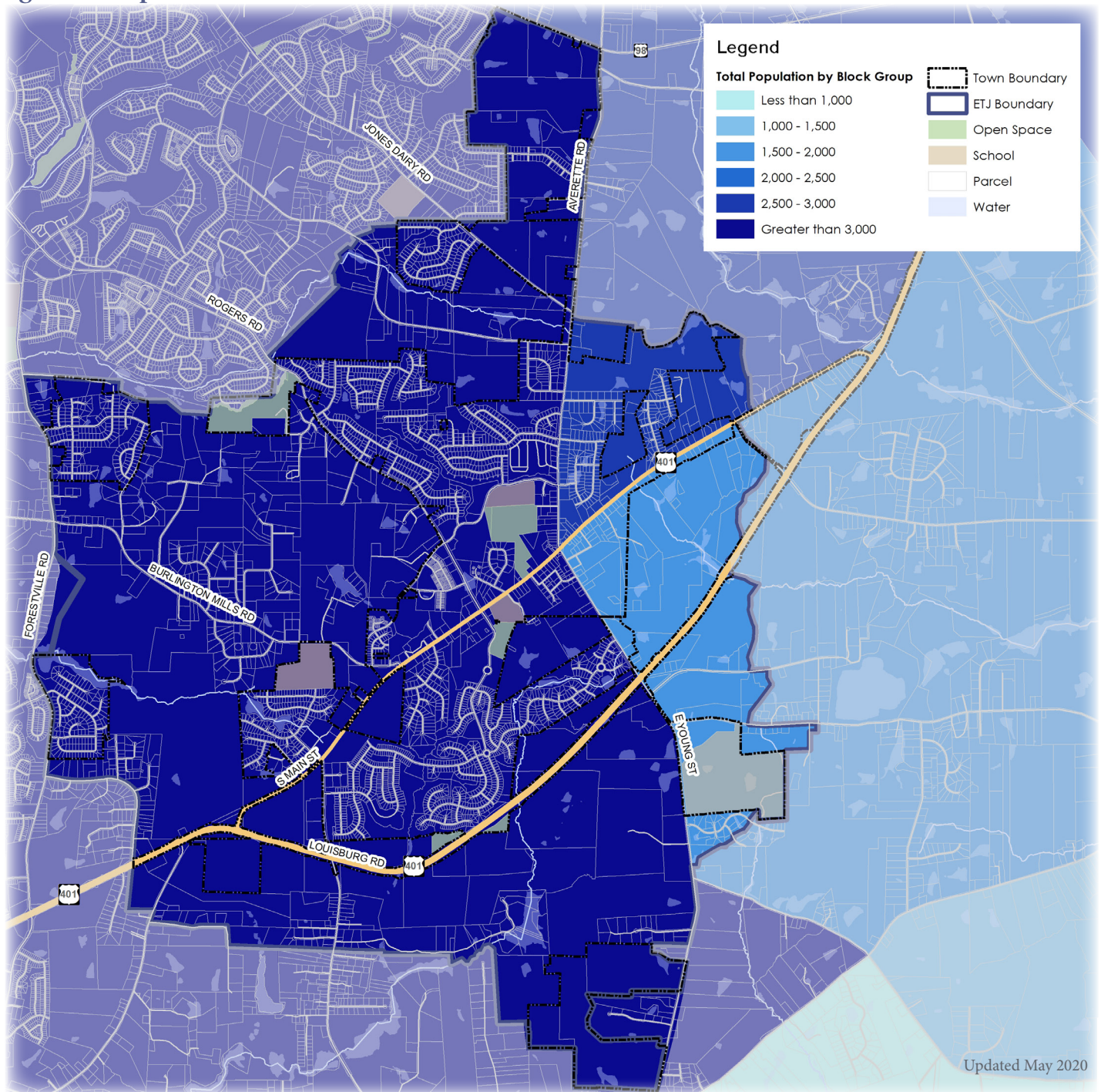
Source: OntheMap 2017

## Total Population

The figure below shows the population of Rolesville by census block group. The Town of Rolesville has seen dramatic increases of population since 2010. The population increased from 3,289 people to 8,111 people between 2010 and 2018. The population in the Town is more concentrated on the west side where there are several large neighborhoods including Villages of Rolesville, Granite Falls, Hampton Pointe, and Terrell Plantation.

In the surrounding area to the northeast, larger populations can be found living in between the Town of Rolesville and the Town of Wake Forest.

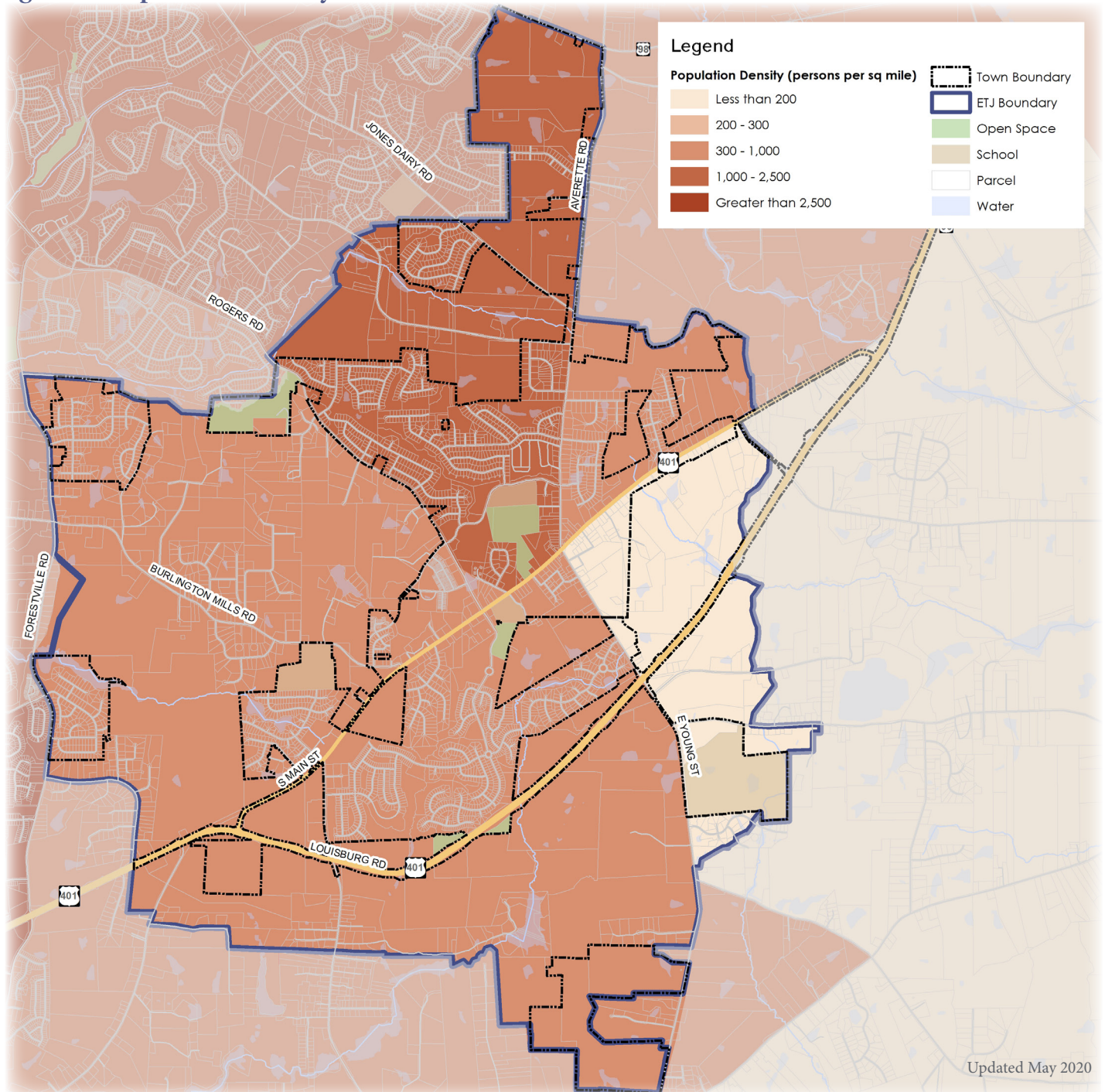
Figure 2 - Population



## Population Density

The figure below shows the population density by census block group. The figure indicates that the population is more heavily concentrated north of US 401. Similar to the distribution of population, the density is more concentrated on the western portion of the Town. Even though the population may increase, the density will not necessarily do so as most of the housing in Rolesville is single-family residential housing units. The Town may choose to consider multi-family housing options as the population increases, which could increase the population density and allow for more people to live in Rolesville.

Figure 3 - Population Density

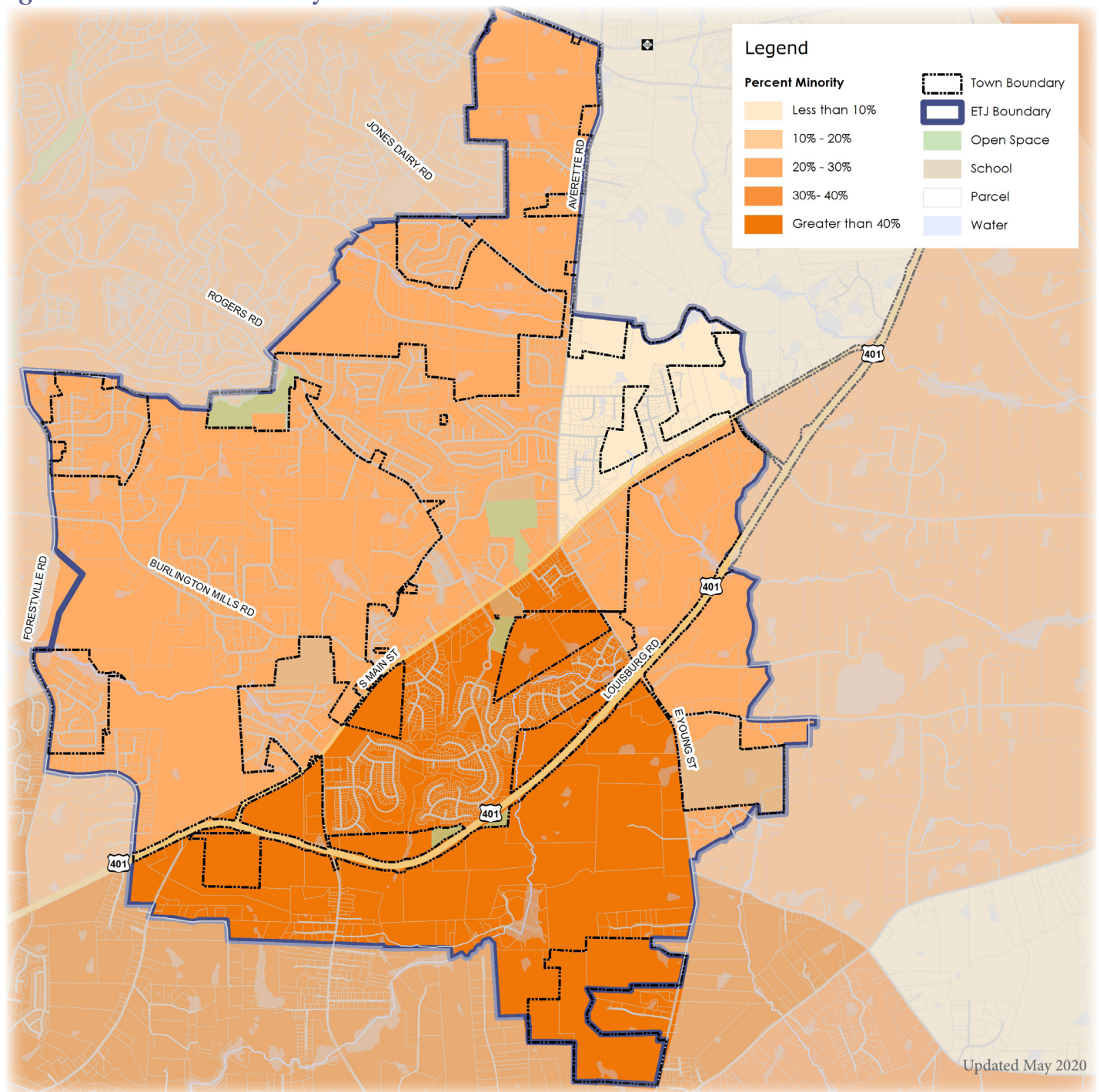


## Race & Ethnicity

The minority population in the Town of Rolesville is approximately 35.6%. The largest minority group are African Americans, who make up approximately 22.9% of the population. Asians make up 3.1% of the total population and 5.5% of the population identifies as two or more races. The total Hispanic population of any race in the Town is 5.2%, 4.1% of which identify as Mexican. Since 2010, the minority population has hovered around 30%, which is relatively similar to both Wake County and the state of North Carolina.

The figure below shows the distribution of racial and ethnic minorities by census block groups below according to the American Community Survey (ACS) 2018 estimations.

**Figure 4 - Race and Ethnicity**

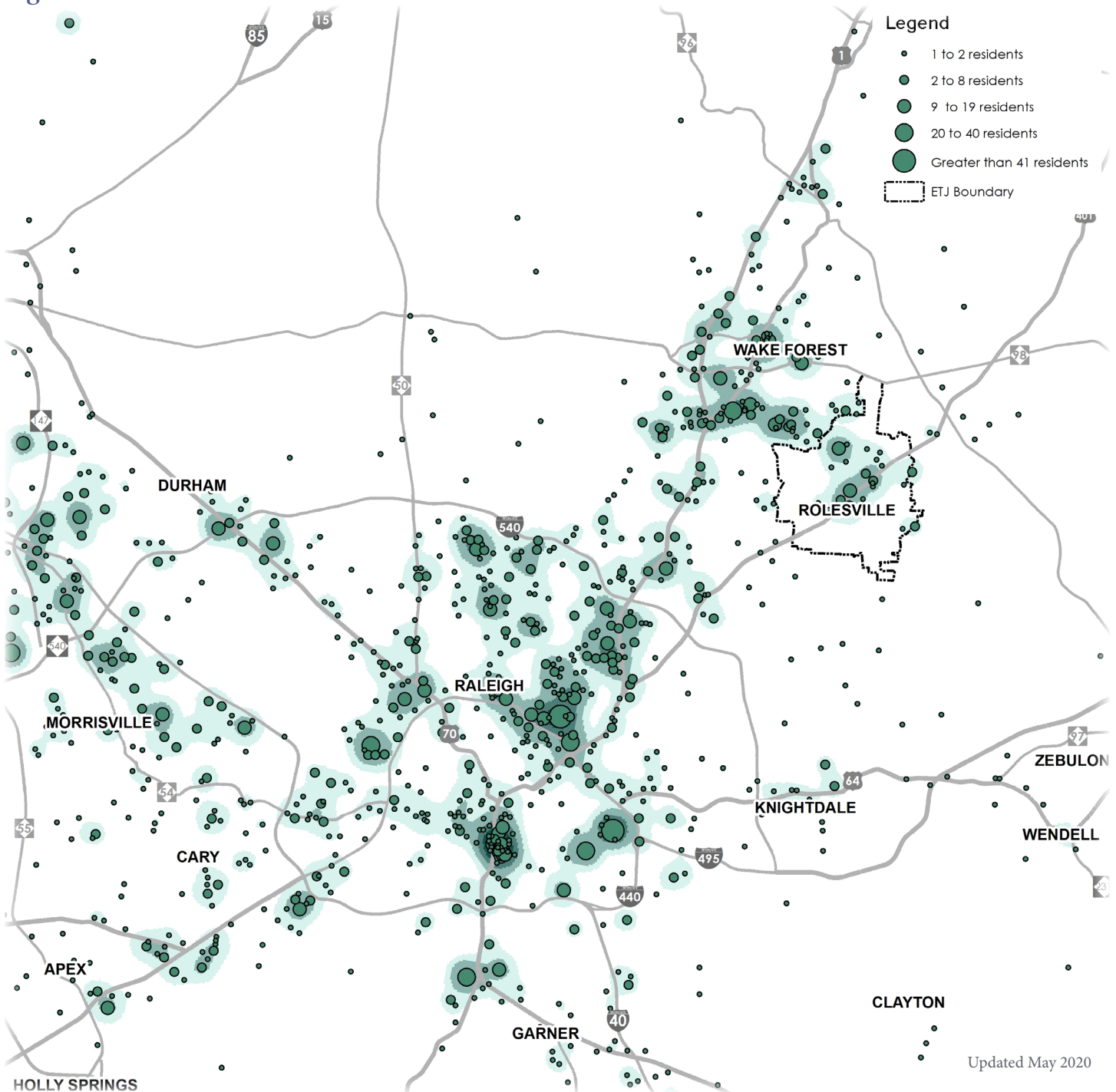




## Commutes from Home to Work

Like the radar graph on page 29, the figure below shows the direction of travel from work to home. The majority of Rolesville residents work between 10 to 24 miles away. The majority of these commuters travel west and southwest for work. This indicates that most Rolesville residents work somewhere in Wake County, most likely Wake Forest or Raleigh. There are approximately 4,000 commuters leaving Rolesville and the study area boundary to go to work.

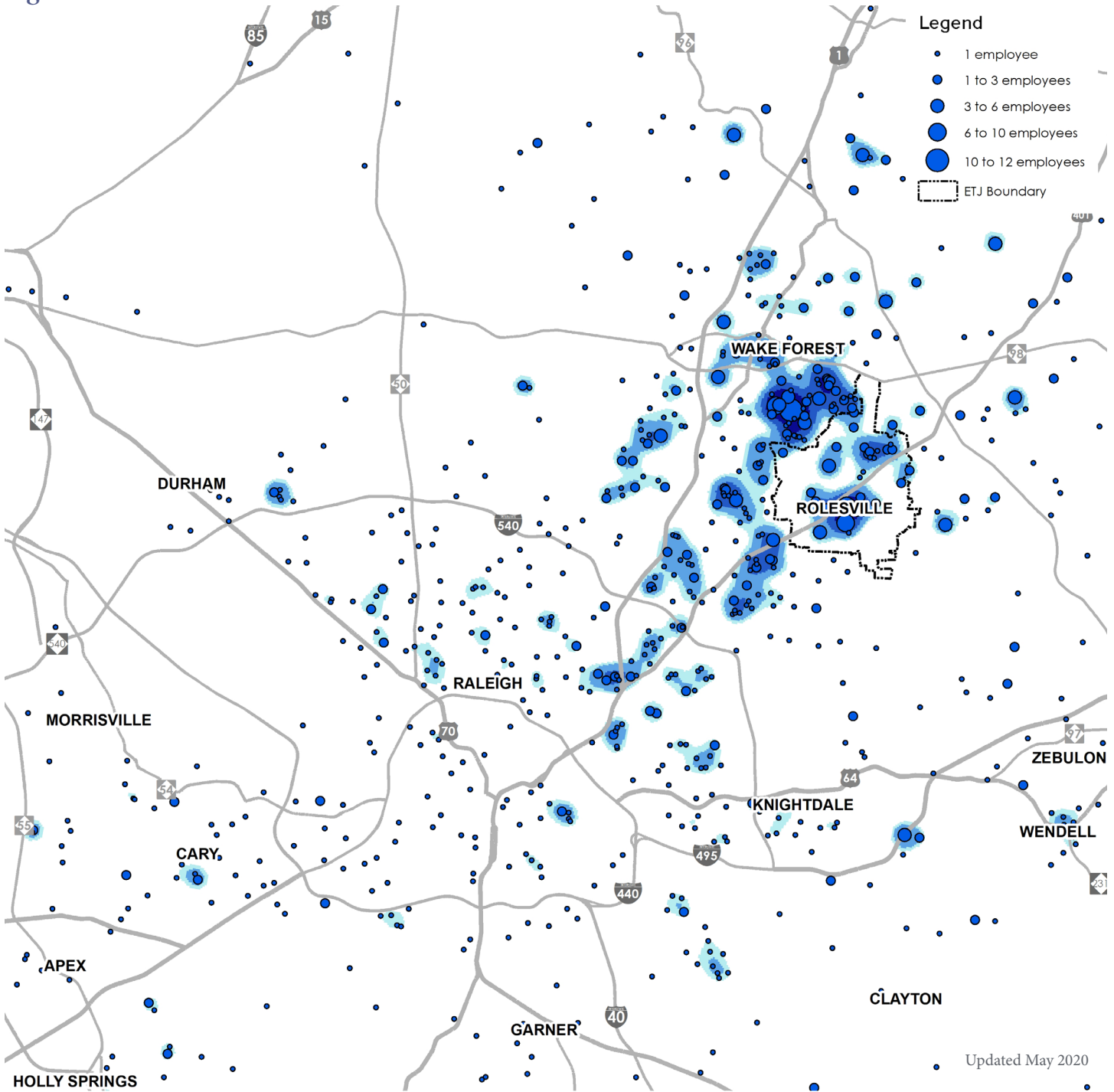
Figure 5 - Home to Work



# Commutes from Work to Home

The figure below shows where the people who work in Rolesville live. The largest number of people who work in Rolesville live less than 10 miles away. Like the commuters from home to work, these commuters travel from the southwest and west. Less than 1,500 commuters come into the Rolesville area to work.

Figure 6 - Work to Home



Updated May 2020



## Mobility

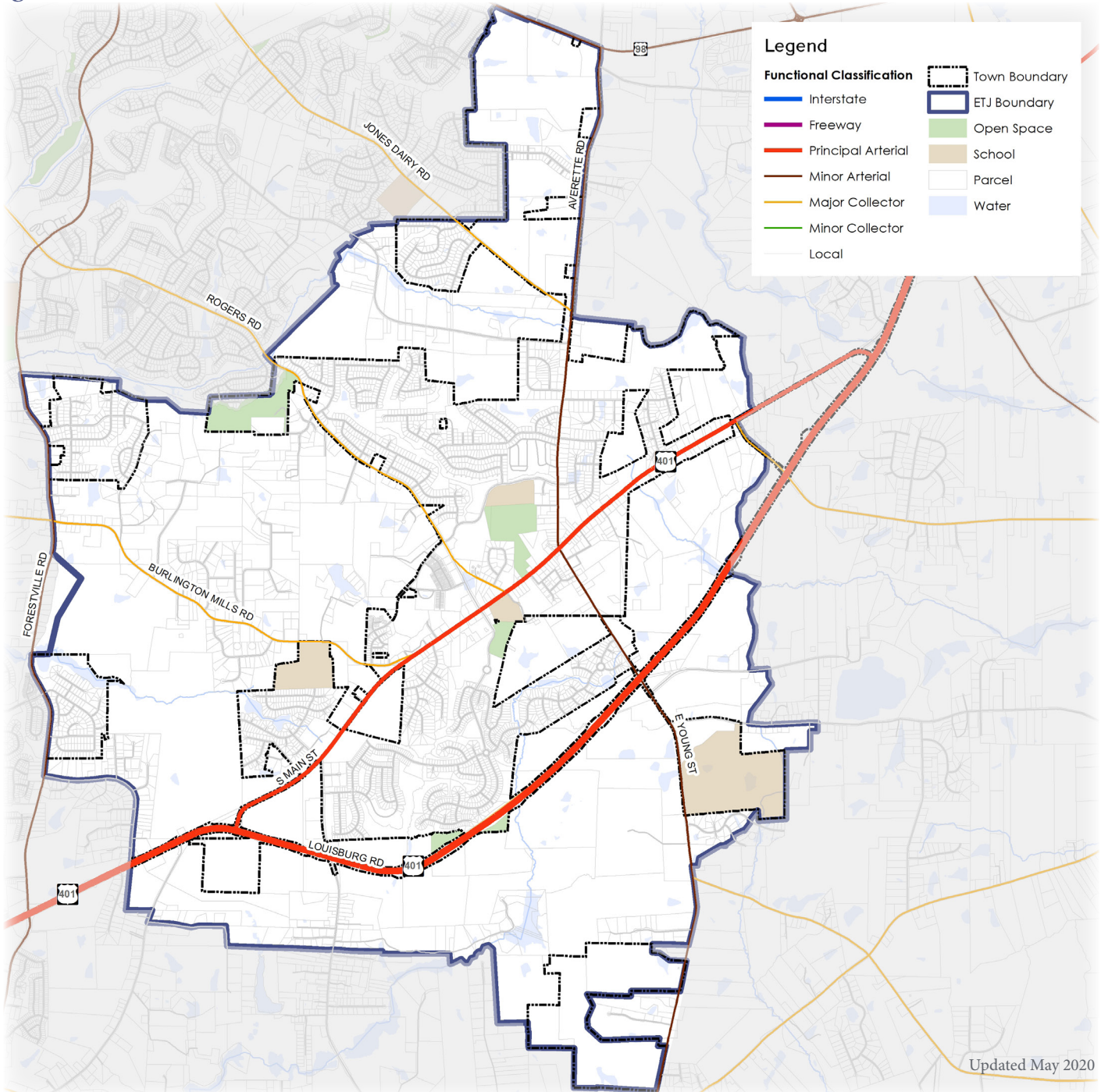
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The mobility section analyzes the current conditions of the transportation network. This section aims to provide the context that will shape and inform future recommendations for the Community Transportation Plan. The mobility section considers roadway, bicycle, and pedestrian facilities in and around the Town of Rolesville.

## Functional Classification

The functional classification system is defined by the Federal Highway Administration (FHWA). The classification system is used to designate characteristics of the roadways into general hierarchies that describe the relationship between mobility and accessibility. Understanding the various roles that roadways play is crucial when considering transportation recommendations as they should enhance land use designations and mobility throughout the study area. There are two principal arterials that run through the Town of Rolesville. Those principal arterials are US 401 BUS (Main Street) and US 401 BYP (Louisburg Road). Both are supported by a network of minor arterials and major collectors like Young Street, Jones Dairy Road, and Averette Road. The roadway functional classifications for NCDOT-maintained roadways within the study area are shown below.

**Figure 7 - Functional Classification**



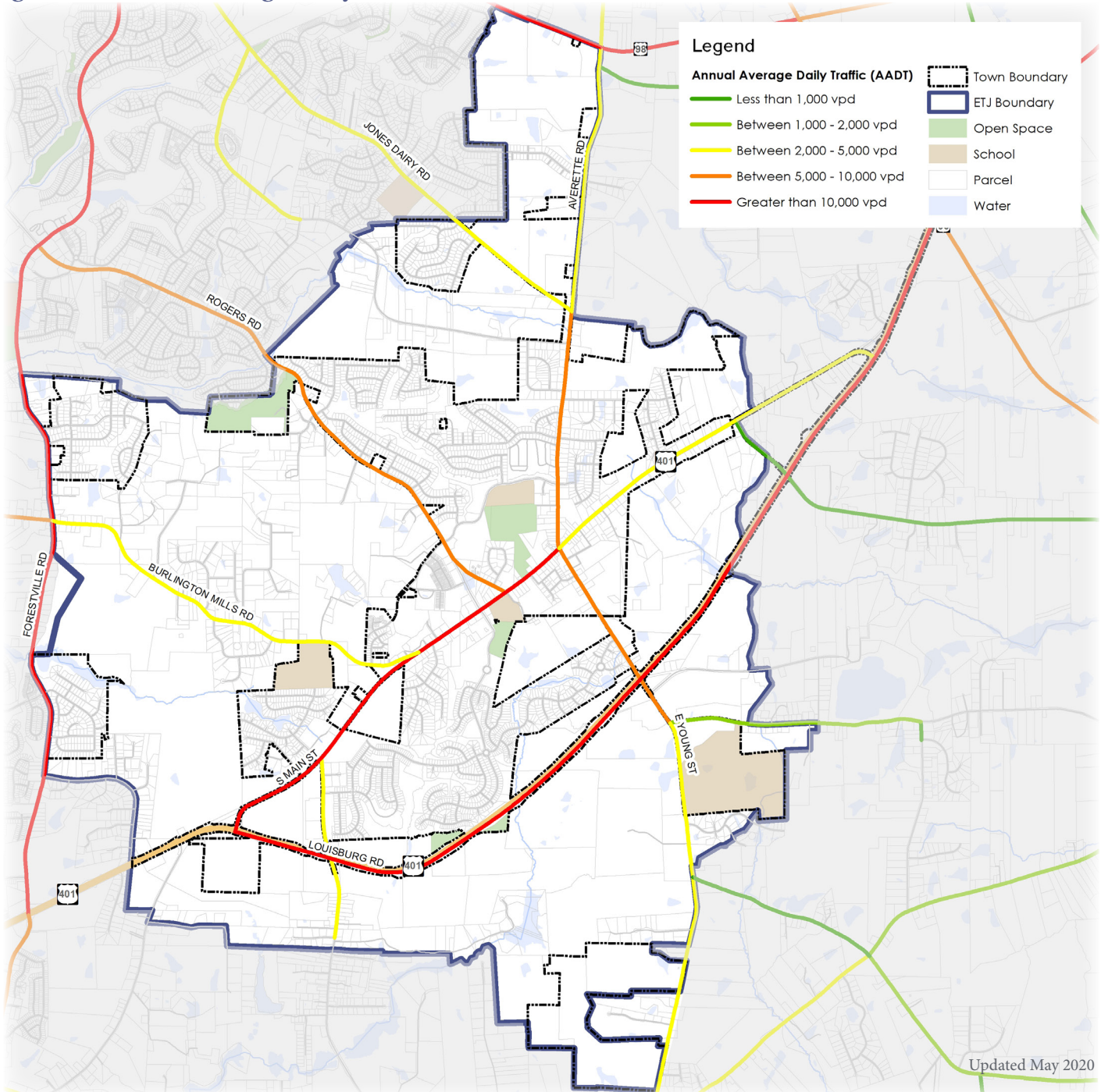
Updated May 2020

## Annual Average Daily Traffic (AADT) 2019

The two main corridors that run through the Town of Rolesville are US 401 BUS (Main Street) and US 401 BYP (Louisburg Road), which have between 11,000 to 16,500 vehicles daily. Other major corridors with large volumes of vehicular traffic include Young Street, Averette Road, and Jones Dairy Road. In 2018, Young Street had approximately 7,900 vehicles daily, Averette Road had 3,300 vehicles per day, and Jones Dairy Road had 5,000 vehicles per day. Other highly traveled roads just outside of the study area boundary include Rogers Road with 9,800 vehicles per day and NC 98 (Wait Avenue) with 15,000 vehicles per day.

Notably, AADT is available only for NCDOT-maintained roadways.

**Figure 8 - Annual Average Daily Traffic 2019**

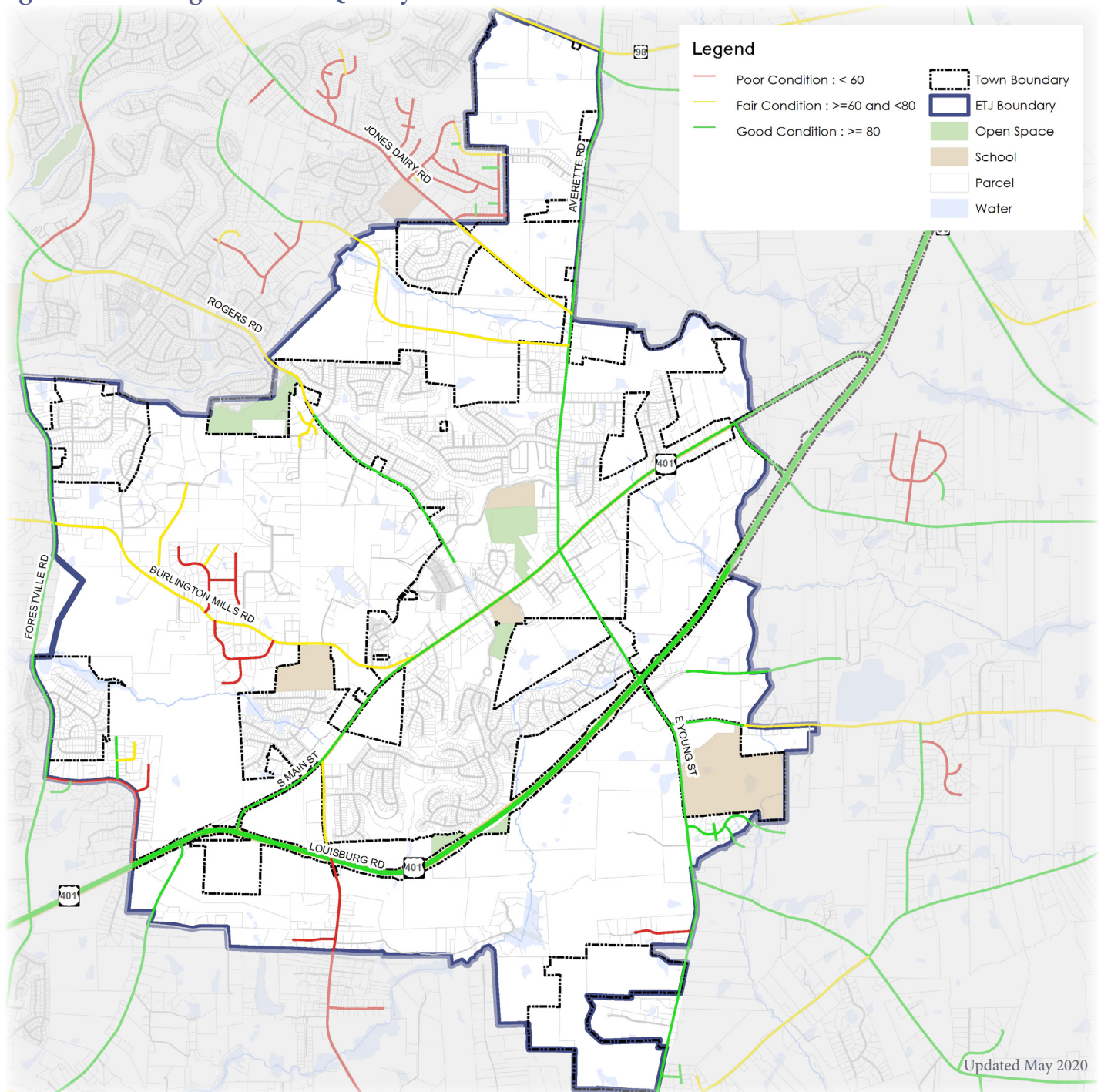


## Existing Pavement Quality

The North Carolina Department of Transportation rates roadways on eight characteristics. These characteristics include alligator cracking, traverse, rutting, raveling, oxidation and weathering, bleeding, ride quality, and patching. While the principal arterials which carry the majority of traffic are in good condition, there are several roads in the study area that are in poor condition. The roads with poor condition ratings are primarily in residential areas with the one exception being Jonesville Road. Several roads are in fair condition including Jones Dairy Road, Burlington Mills Road, and Chalk Road.

Notably, data for pavement quality is available only for NCDOT-maintained roadways.

**Figure 9 - Existing Pavement Quality**

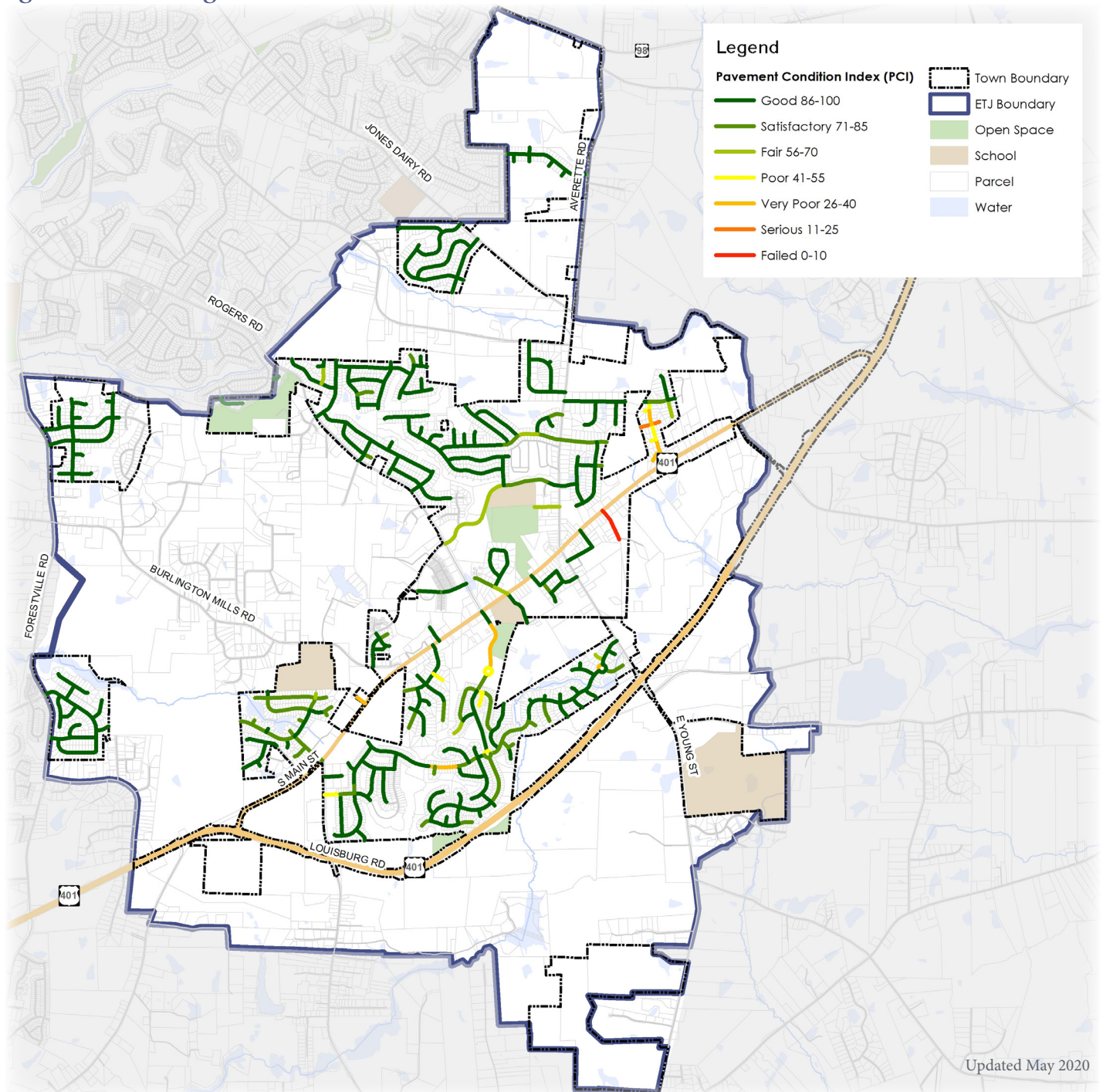


## Existing Pavement Condition

In 2019, the Town of Rolesville completed a Pavement Condition Assessment. The report rated each street on properties including pavement type, curb and gutter type as well as street width, asphalt distresses, alligator cracking, and other distressed conditions. Pavement Condition Index (PCI) scores were generated and categorized into seven categories. The assessment found that the average PCI rating in the Town of Rolesville was 89.78 out of 100, which is categorized as "Good."

The figure below shows approximately 32 miles of the street network within the Town boundary.

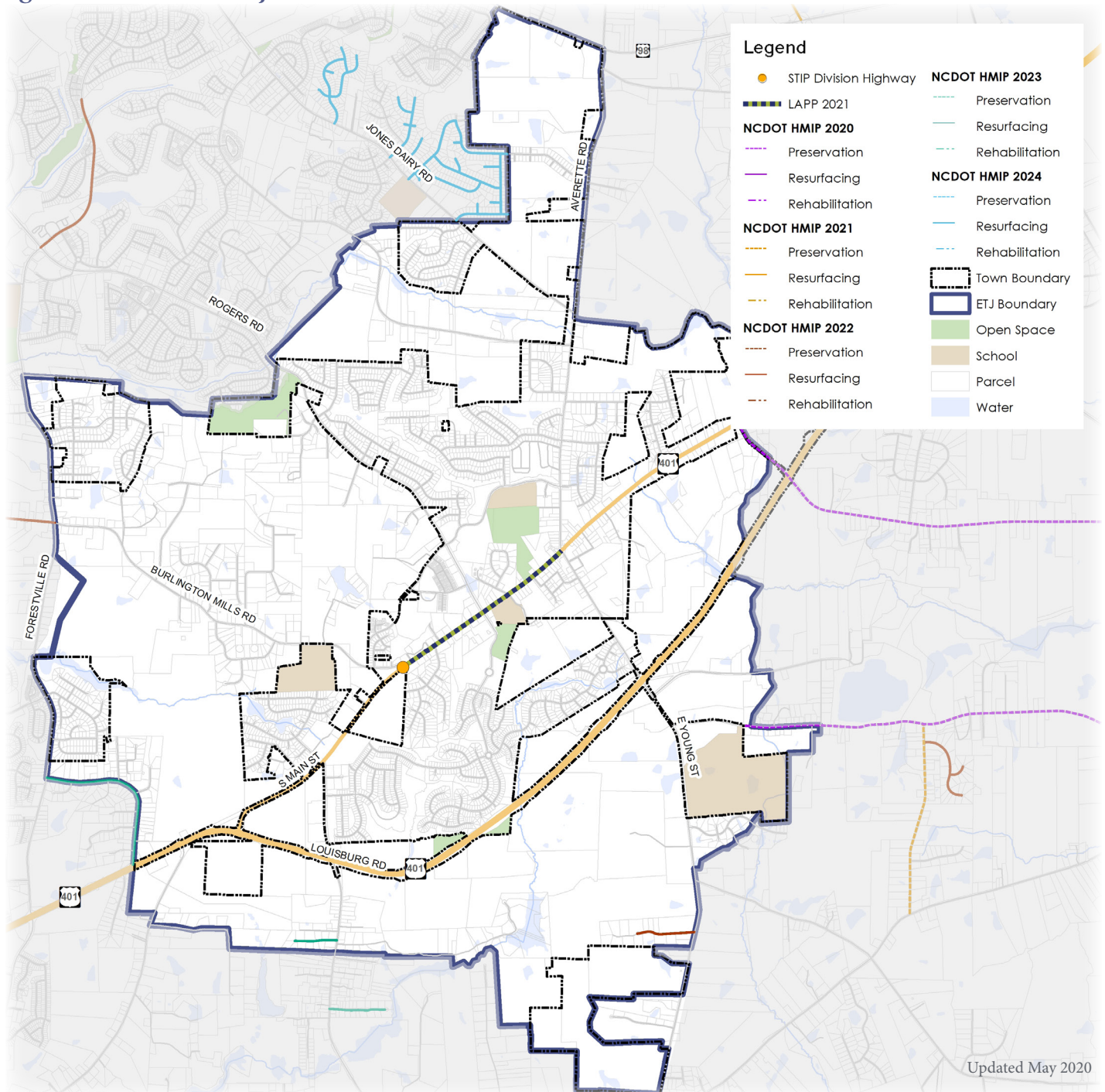
Figure 10 - Existing Pavement Condition



## Funded Projects

The figure below shows committed or funded projects that are currently planned in and around the Town of Rolesville. The Highway Maintenance Improvement Program (HMIP) is a five-year maintenance plan that identifies projects that include resurfacing, rehabilitation, and preservation. The largest projects in the surrounding area of Rolesville are microsurfacing treatments on Pulley Town Road and Quarry Road for plan year 2020. The Town of Rolesville will benefit from the HMIP projects in surrounding areas. Rolesville also has the Main Street Corridor project funded through the Locally Administered Projects Program (LAPP). The project connects existing sidewalks and greenways. There is one State Improvement Transportation Program (STIP) project for 2020-2029 in the study area boundary at US 401 BUS (Main Street) and Burlington Mills Road.

Figure 11 - Funded Projects



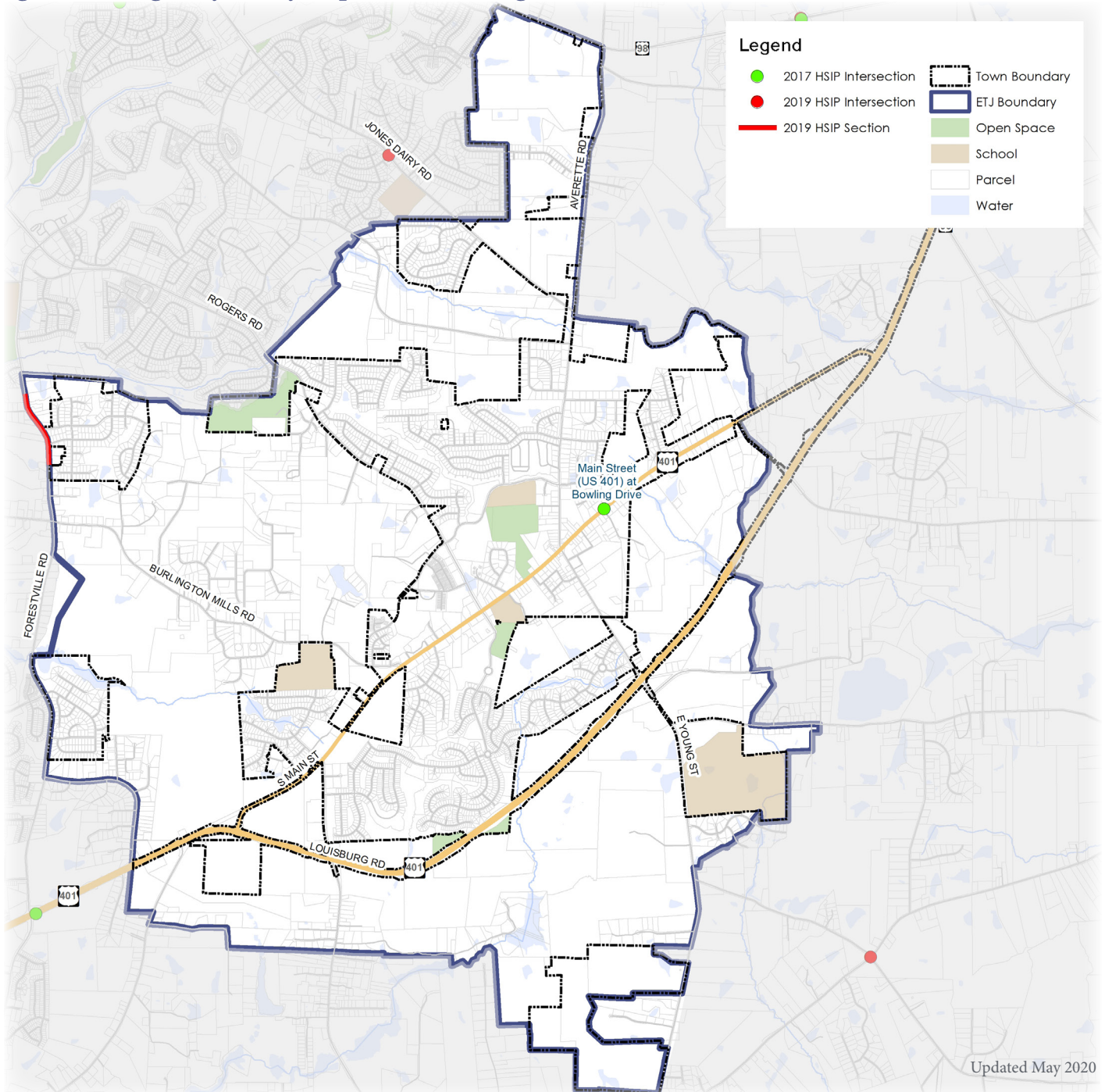


## HSIP

The Highway Safety Improvement Program (HSIP) identifies safety concerns throughout the state. The program is structured to identify locations that can be categorized as potentially hazardous (PH) locations. These locations are then analyzed to see how effective treatment may reduce the number of traffic accidents, injuries, and fatalities on certain roads and/or intersections. These projects are prioritized according to a benefit to cost ratio reduction analysis. Once approved, these project become a part of the STIP.

The HSIP data is available from 2015 to 2019; however, the HSIP projects near or in the Town of Rolesville are from 2017 and 2019.

**Figure 12 - Highway Safety Improvement Program**

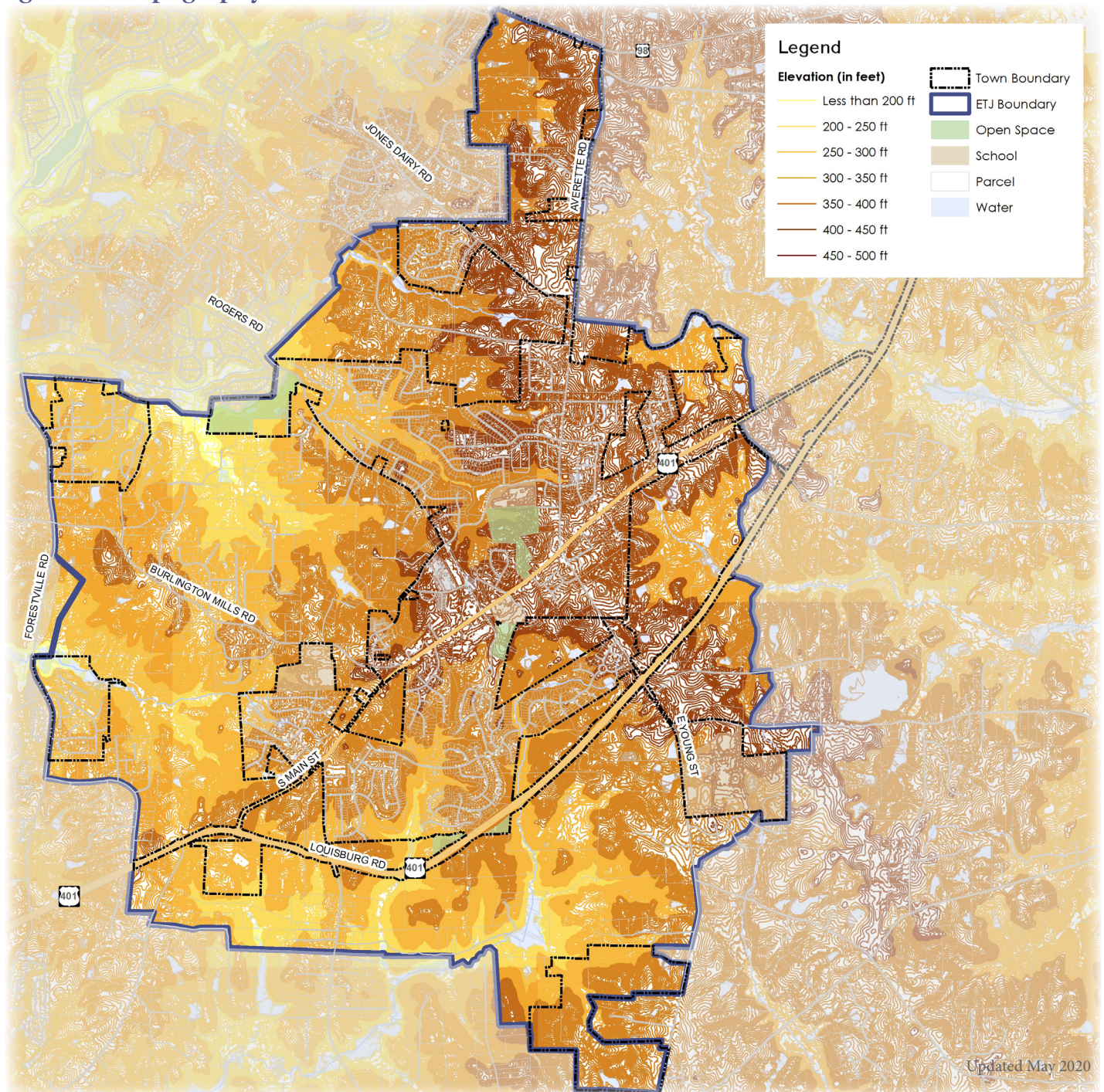


## Topography

Topography is an important feature in the Town of Rolesville. The elevation contours are crucial when considering both land development and transportation planning and engineering. The figure below shows the 50-foot increments throughout the Town. Topography, in tandem with other environmental features, can present certain developmental challenges. The figure shows higher elevations in the north; however, there are areas in the study area where the elevation changes more rapidly to the east.

This topographic information was provided by Wake County.

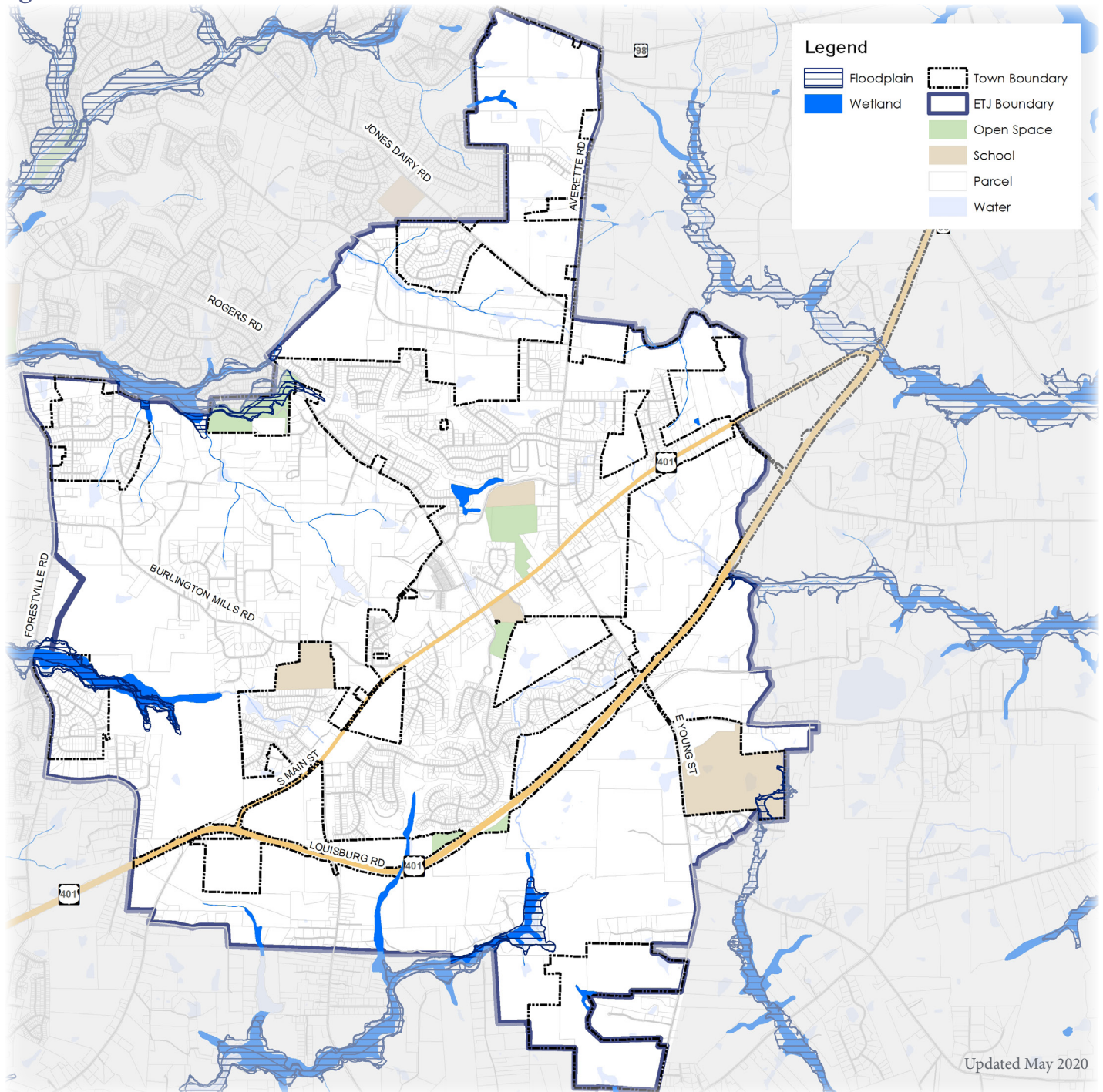
Figure 13 - Topography



## Environmental Conditions

There are several environmental considerations that may impact growth and development around the Town of Rolesville including floodplains and wetlands. Floodplains are the most prominent environmental feature and the impact of 100-year flooding could have notable damage on property and infrastructure. Understanding how environmental features impact the development and maintenance of facilities is crucial for transportation planning. While the 100-year floodplain will have long-term impacts, the current footprint of wetlands has an immediate impact on development and construction. Considering these features is an opportunity to balance environmental stewardship and private-public development.

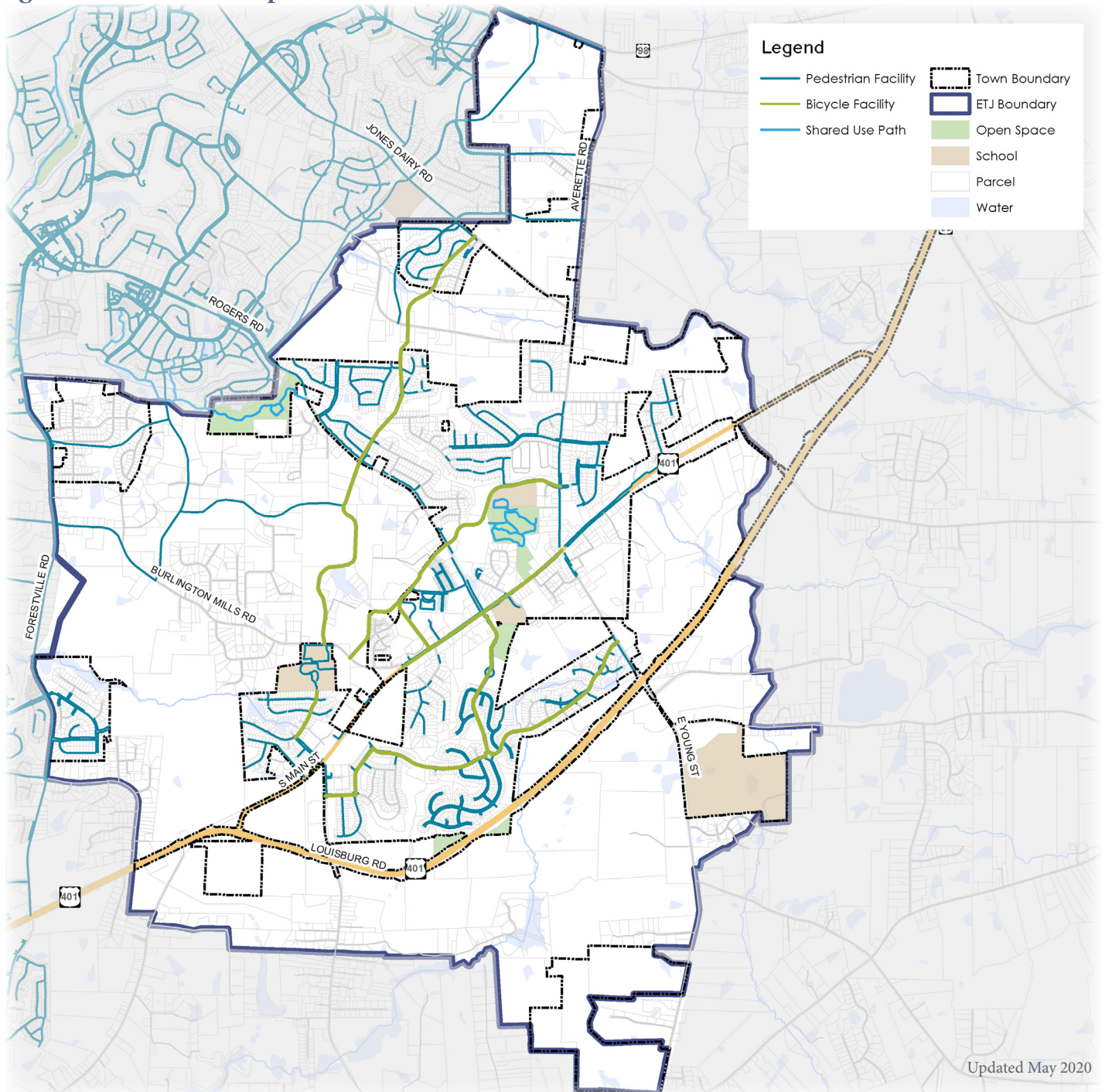
Figure 14 - Environmental Considerations



## Active Transportation

Since the Comprehensive Bicycle Plan was completed in 2013, the bicycle and pedestrian networks have significantly expanded throughout and around the Town of Rolesville. The pedestrian facilities are well-connected and concentrated primarily around residential areas. In addition to the expansive pedestrian network, there are approximately 12 miles of bicycle facilities throughout the study area that include sharrows and bicycle lanes. However, the most expansive network for non-vehicular transportation around the Town of Rolesville are the shared-use pathways. The figure below shows the active transportation network for bicycles and pedestrians.

Figure 15 - Active Transportation Facilities



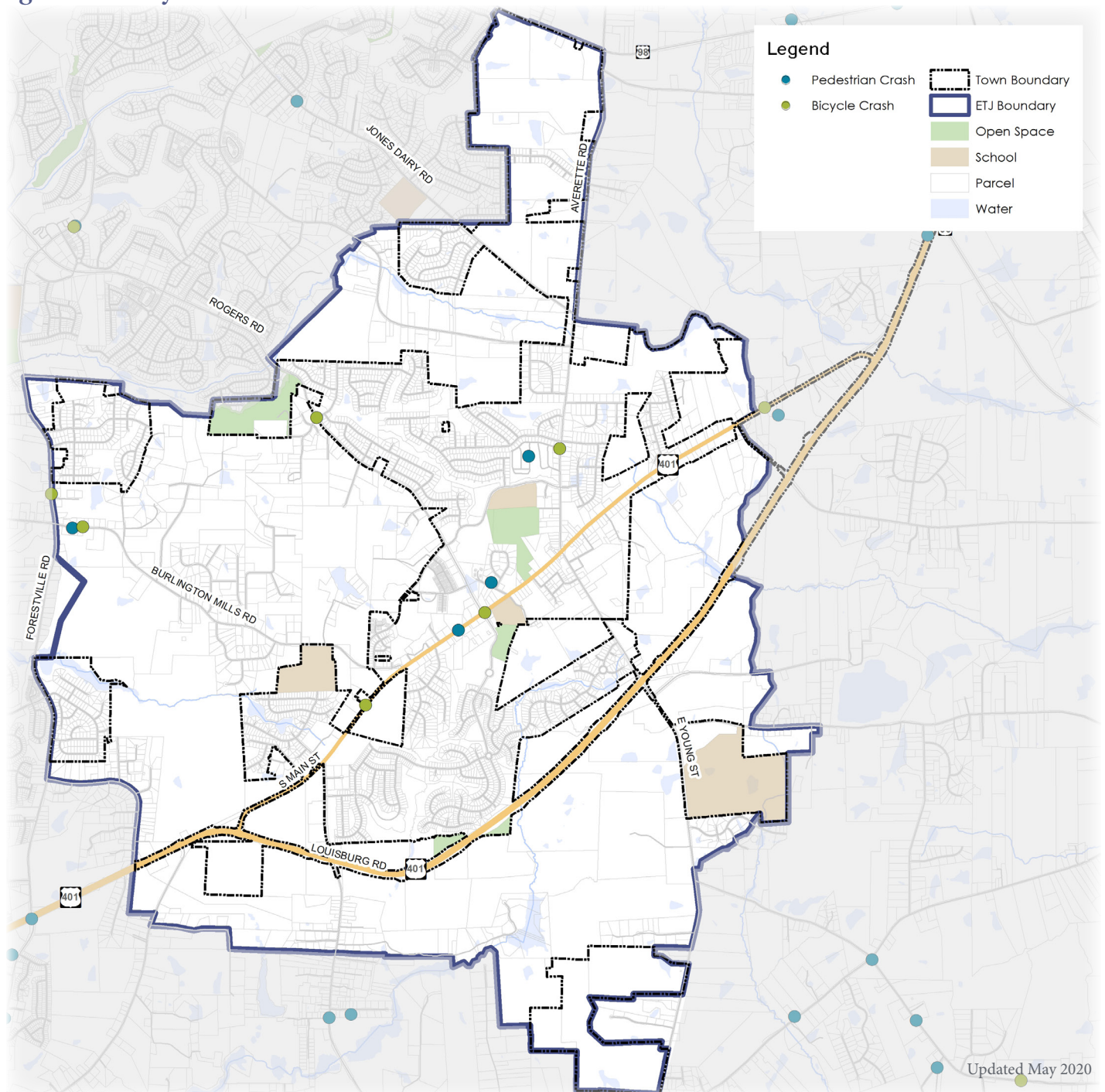
Updated May 2020

## Bicycle and Pedestrian Crashes

The Town of Rolesville has not had many bicycle and or pedestrian crashes. Over a 12 year period, there were four pedestrian crashes within the study area boundary. One pedestrian crash off South Main Street resulted in death. During this time period, there were five bicycle crashes within the study area boundary. None of the bicycle crashes recorded resulted in serious injury or death. Three of the five bicycle crashes were at sign-controlled intersections. All crashes were distributed throughout residential and commercial areas of the Town.

The bicycle and pedestrian crash data was recorded by NCDOT between 2007 and 2018.

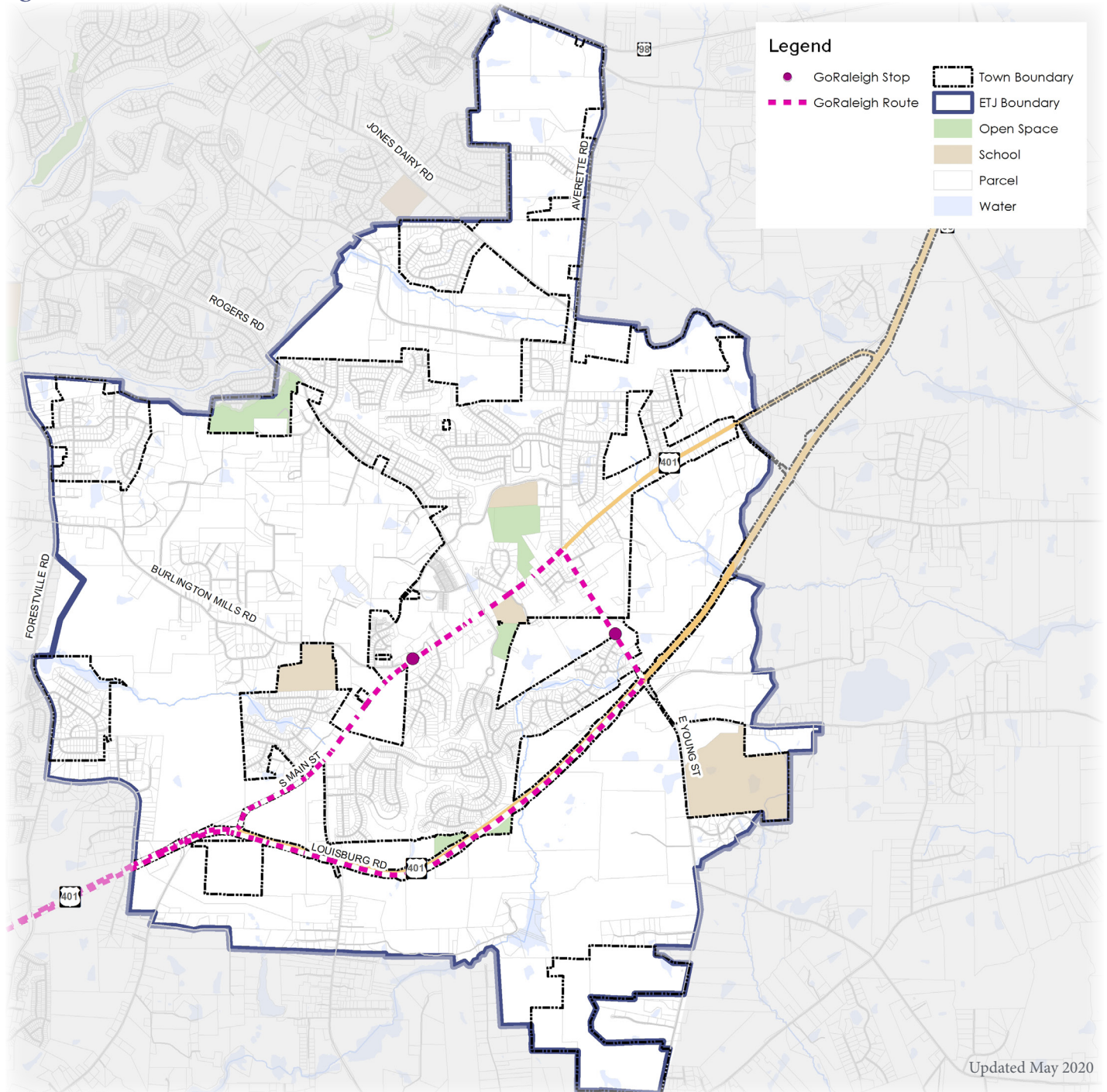
Figure 16 - Bicycle and Pedestrian Crashes



## Transit

The Town of Rolesville is serviced by GoRaleigh. The Rolesville Express (Route 401X) travels from US 401 BUS (Main Street) in Rolesville to the Triangle Town Center in Raleigh. Route 401X runs from 5:42 am to 8:10 am and 5:30 pm to 7:54 pm Monday through Friday. The transit service aims to serve commuters coming to and from the Town of Rolesville. By connecting the Town of Rolesville to the GoRaleigh network, it provides another mode of transportation to and from the Town. Future considerations for expanding the network have recently been explored through the Wake Transit Plan's Community Funding Area Program.

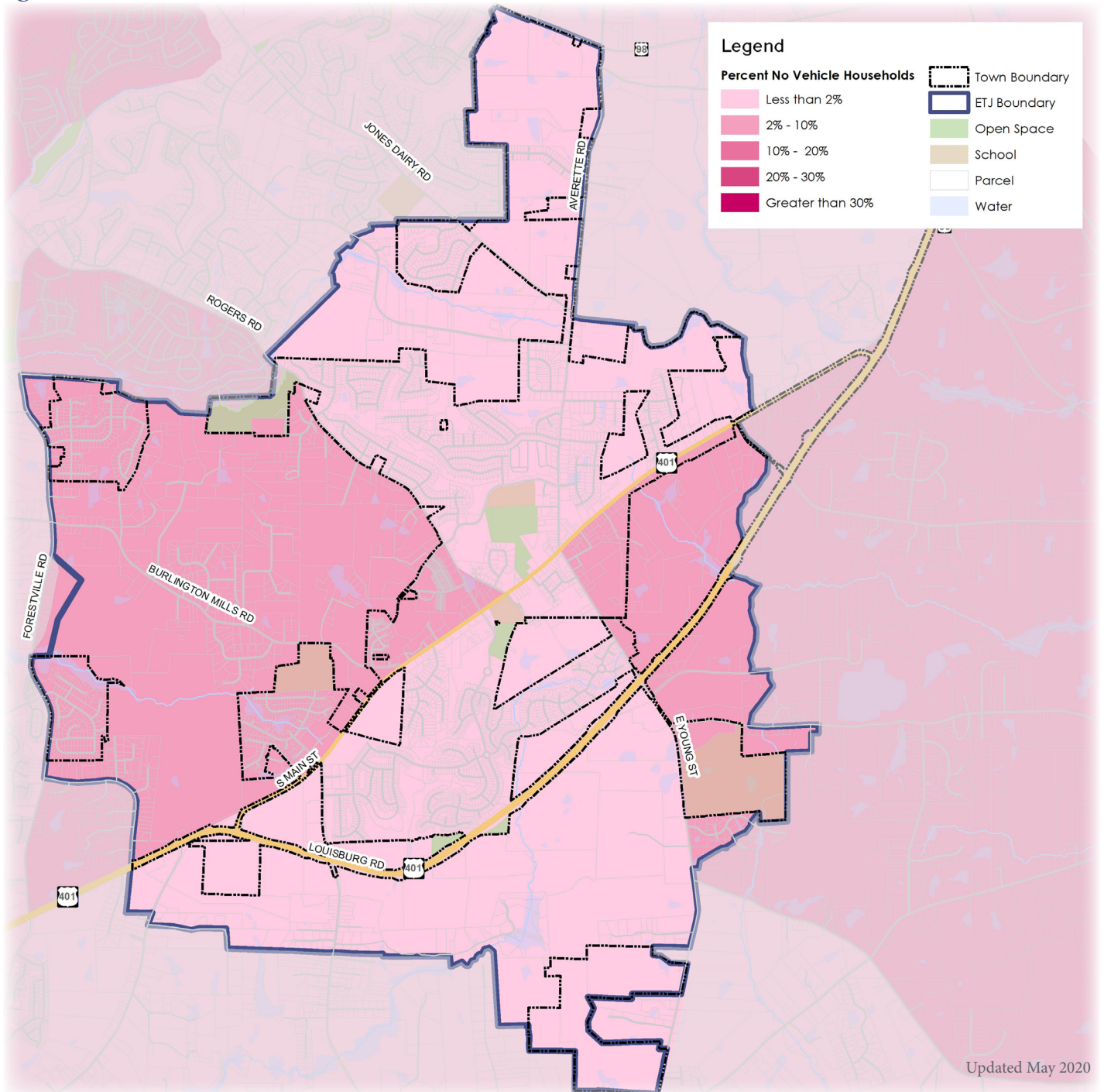
Figure 17 - Transit



## No Vehicle Households

The figure below shows the percentages of households that do not have access to a vehicle by census block group. The area with a higher percentage of households that do not have access to a vehicle are just outside of the Town of Rolesville boundary on the west side. Approximately 5% of households in this block group do not have access to a vehicle. The total number of households in the block group that do not have access to a vehicle is 70 households. The majority of households in the study area have access to one or more vehicles.

Figure 18 - No Vehicle Households



Updated May 2020

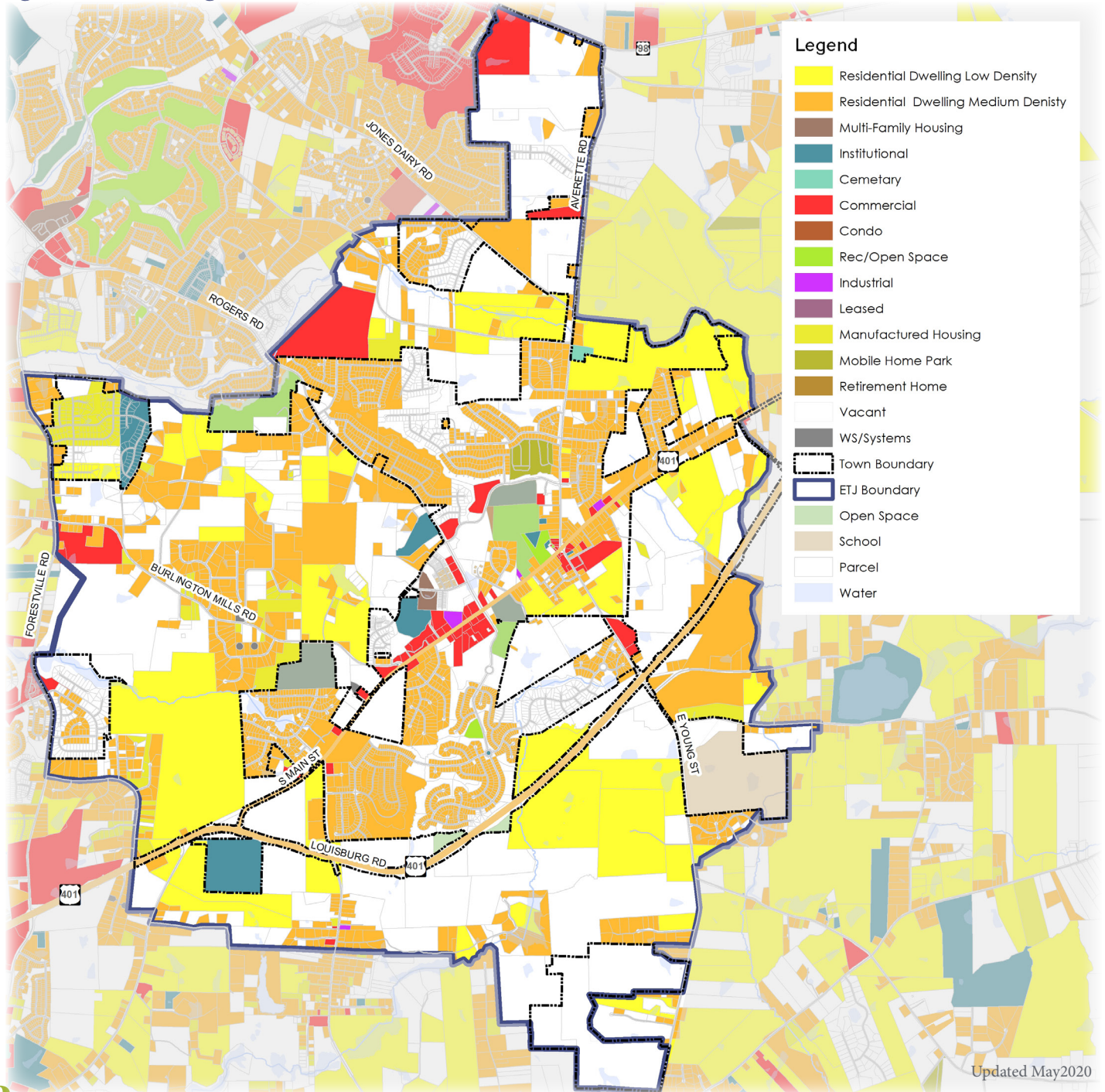
## Existing Land Use

The existing land uses in the Town of Rolesville can be seen below. The majority of the Town of Rolesville's land is classified as residential or vacant. The combined residential land use including manufactured housing, low-density residential, and medium-density residential consists of approximately 46%. The vacant land use is appropriately 47% of the existing land use.

Rolesville is currently updating its Land Development Ordinance (LDO). The Town's land uses will need to be consistent with the updated LDO once completed.

Classification	Acreage	Percent
Commercial	169	2.79%
Industrial	7.5	0.10%
Institutional	17.1	0.30%
Manufactured Housing	113.3	1.87%
Multi-Family	147	2.40%
Other	57.9	1.0%
Public/Private Open Space	71.5	1.2%
Residential Low-Density	1146	18.9%
Residential Medium-Density	1514	25.0%
Vacant	2806	46.4%
<b>Total</b>	<b>6052</b>	<b>100%</b>

**Figure 19 - Existing Land Use**



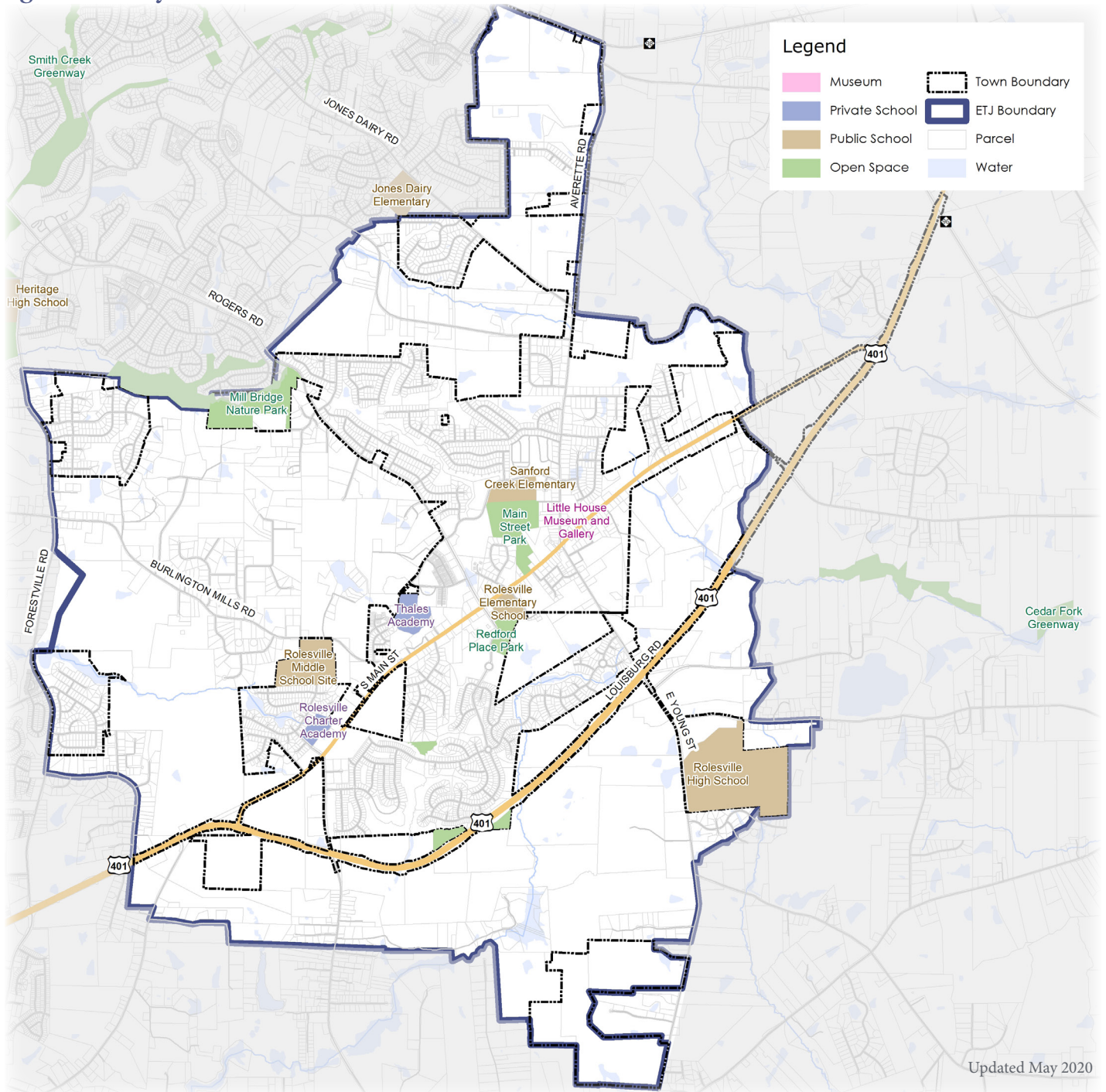
Updated May2020



## Key Destinations

The key destinations around the Town of Rolesville include schools, parks, and open space. The Town of Rolesville has four public schools and two private schools within the Town’s boundary. There are two parks—the Redford Place Park and the Main Street Park—in the heart of downtown. Other local attractions include the Little House Museum and Gallery, the Granite Falls Swim & Athletic Club, and places of worship. Noting the connections between the key destinations will help inform the transportation recommendations. Providing accessibility and multimodal options will enhance the ability of pedestrians, drivers, and cyclists alike reach their desired destination.

**Figure 20 - Key Destinations**





## Previous Plan Review

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It is crucial to leverage the existing work that has been previously conducted. This section analyzes planning efforts at the town, county, and regional level that all contain relevant recommendations for the development of the Rolesville Moves Community Transportation Plan. All of the recommendations listed are summarized from their respective documents.

## 2002 Rolesville Community Transportation Plan

The 2002 Rolesville Community Transportation Plan outlined the vision and goals, existing conditions, policy directives, and issues facing the Town of Rolesville. The 2002 CTP discusses the relationship between transportation planning and land use development. Despite being over fifteen years old, the relationship between zoning and land used to support transportation is relevant but needs to be updated. The CTP discusses the desire to limit the number of dead-ended streets and require sidewalks on one side of all collector streets in its Thoroughfare Plan map. The Community Transportation Plan sought to recommend improvements to contribute to the convenience and safety of all pedestrians in the Town of Rolesville.

The Community Transportation Plan focused on recommendations along two major corridors, Young Street and Main Street. Traffic analysis was used to determine the level of service (LOS) and peak hour traffic for commute times in the morning and afternoon. The plan showed renderings of proposed cross sections with four-lane undivided roads, dedicated turning lanes for left turns, and two-lane undivided roads. All renderings had proposed sidewalks on both sides. Although outdated, there are relevant recommendations that support the Town's vision of maintaining a safe and community-oriented place to live and work.

### Relevant Recommendations

- Young Street. Restriping pavement on Young Street to provide one-lane travel in each direction with one left-turn lane, and on-street parking as necessary.
- Young Street. Replacing traffic signals with roundabouts at intersections where roundabouts may be warranted.
- Main Street. Reconstructing Main Street to a pedestrian-friendly corridor. Recommends creating 12-foot-wide travel lane with 8-foot planted buffers. The cross section would include standard 6-foot sidewalks along both sides of Main Street.
- Main Street. Consider streetscaping that includes enhanced pedestrian lighting and resilient vegetation within planted buffers.



# Comprehensive Bicycle Plan (2013)

The Comprehensive Bicycle Plan analyzed the current bicycle network in the Town of Rolesville in 2013. The plan aimed to encourage biking around town by considering a variety of facility types including dedicated bicycle lanes, sharrows, and multiuse pathways. The recommendations focused on integrating bicycle infrastructure while also maintaining the rural charm of the Town. A major consideration was how new development will be a key driver in how and where bicycle and pedestrian infrastructure is created in the coming years. The Town’s policies and ordinances help to guide this new development.

## Relevant Recommendations

- Connect streets and other bicycle facilities together to create a holistic network that includes schools, parks, shopping centers, and residencies.
- Widen the Main Street/Louisburg Road/US 401 corridor cross-section to accommodate sharrows and sidewalks.
- Create better off-road facilities like greenways and soft trails.
- Create better on-road facilities such as bicycle lanes, wide outside lanes, and paved shoulders.
- Enhance safety by educating all mode-users on how to share the road.

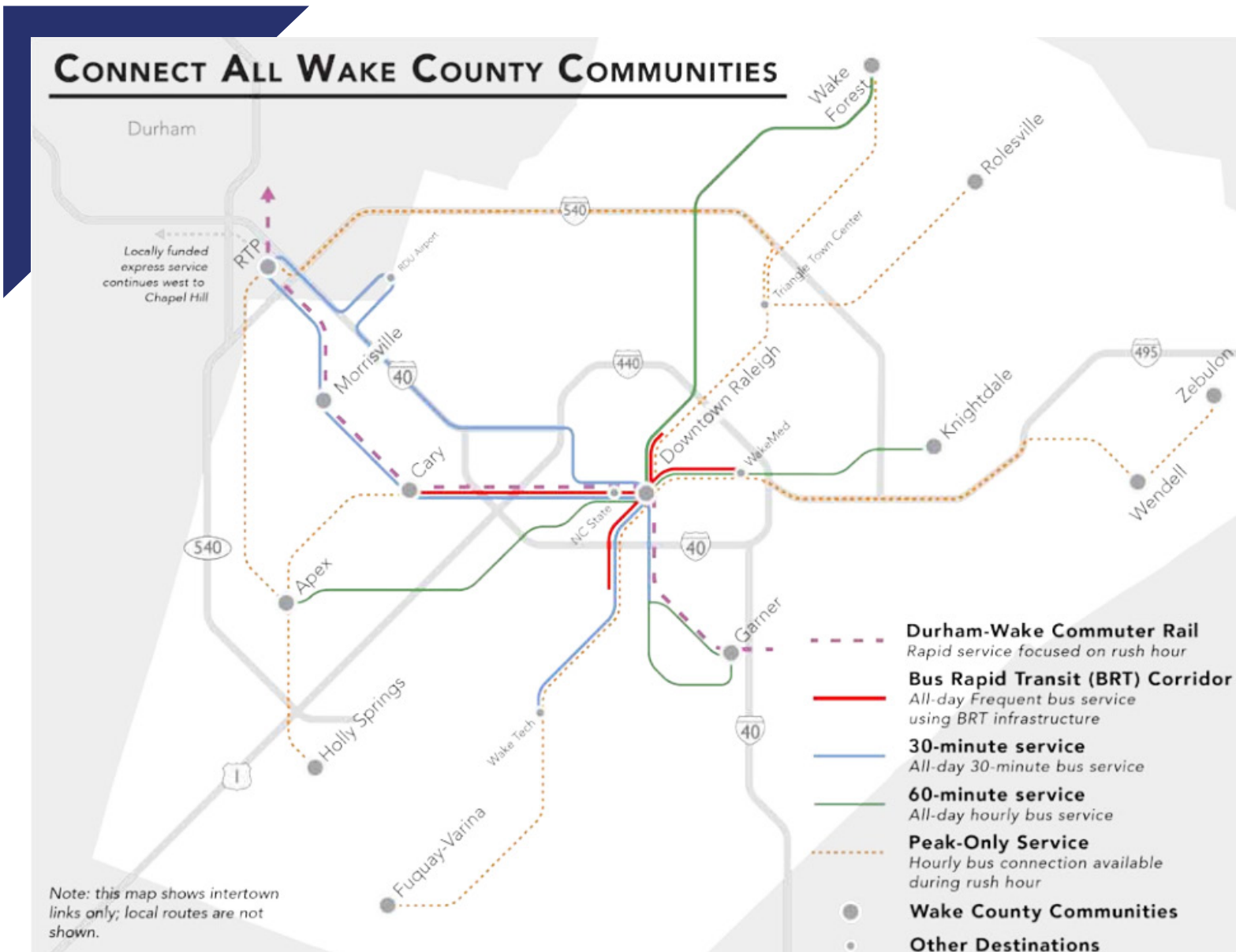


## Wake County Transit Plan (2016)

The Wake County Transit Plan identified the need to enhance transit services as congestion worsens and populations continue to grow throughout the county. The Transit Plan aimed to connect communities by providing frequent and reliable services while also enhancing the accessibility across all of Wake County. The plan connects all twelve Wake County municipalities with services to Raleigh-Durham International Airport (RDU), the Research Triangle Park (RTP), and Durham, North Carolina.

### Relevant Recommendations

- Route Improvements and Expansions. GoRaleigh will include a new bus route (Route 401) that will connect Rolesville with Triangle Town Center during the weekday peak hours between 6 am - 9 am and 4 pm - 7 pm. This went into operation in 2020.
- Connecting the County. Expanding the county network will allow Rolesville residents to more freely move around the county as a whole via public transit.

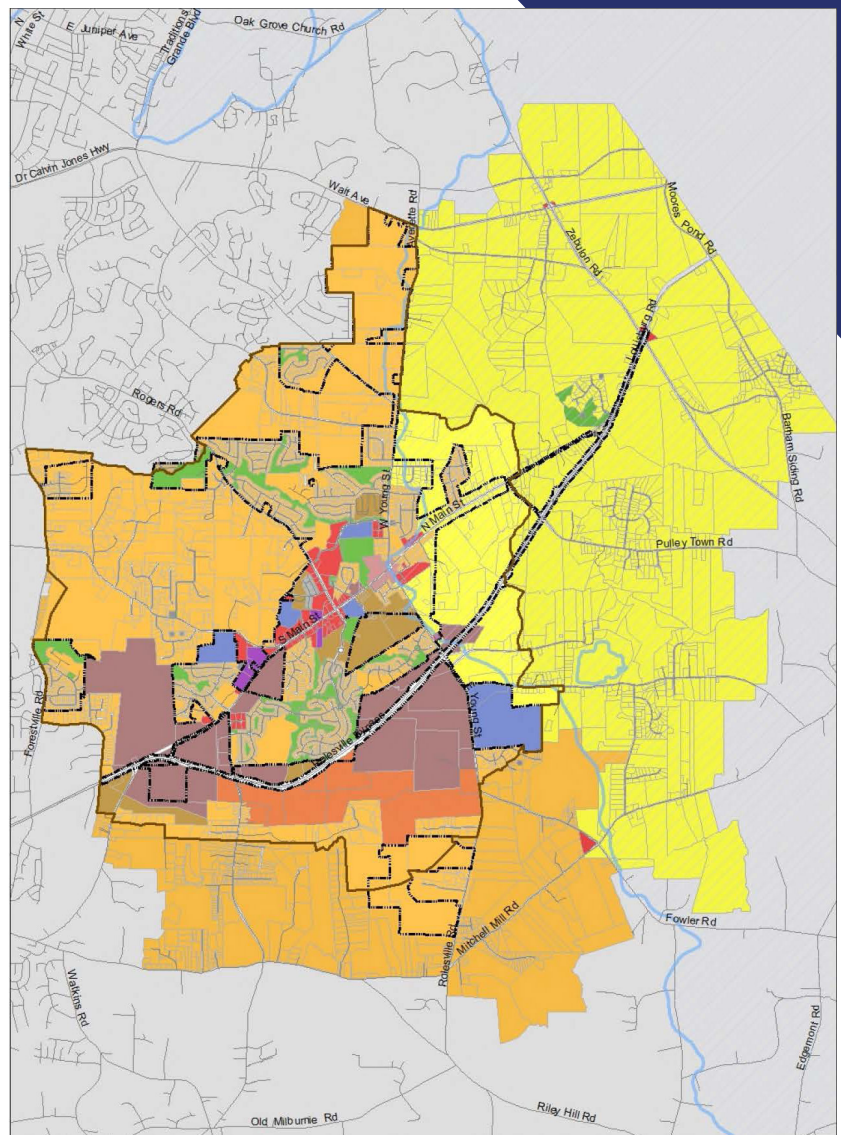


# 2017 Rolesville Comprehensive Plan & Future Land Use Map

The Rolesville Comprehensive Plan outlines the framework to direct growth and development in order to create a well-connected, community-oriented Town. The Comprehensive Plan recommends enhancing and establishing a multimodal network that can improve safety and mobility for all transportation users including pedestrians, cyclists, transit users, and drivers. The Comprehensive Plan identifies Main Street as a prime corridor for commercial, office, and light industrial development. Additional strategies and recommendations aim to preserve the sense of rural community while capitalizing on the assets the Town of Rolesville can offer developers.

## Relevant Recommendations

- Create a close-knit system of secondary streets. By maintaining secondary streets, greenspace is preserved while also creating street patterns that facilitate walkable environments for visitors and residents alike.
- Celebrate Downtown. The plan states that redevelopment will be guided by mixed-use development codes that will be able to draw retail and a diverse variety of housing options. In tandem, multimodal options will be provided to help facilitate growth along the Main Street corridor.
- Adopt a resolution and policy that supports the idea of Complete Streets town wide. Updating portions of the Comprehensive Plan to reflect NCDOT's Complete Streets Policy (2019) will only enhance the Community Transportation Plan's efforts to incorporate pedestrians, cyclists, and transit riders.



**Rolesville: Future Land Use Map**

ETJ Boundary	High Density Residential	Industrial
Town Boundary	Town Center	School
Water Supply Watershed	Mixed Use Neighborhood	Preserved Open Space
Low Density Residential	Commercial	Water Sewer Services
Medium Density Residential	Business Park	



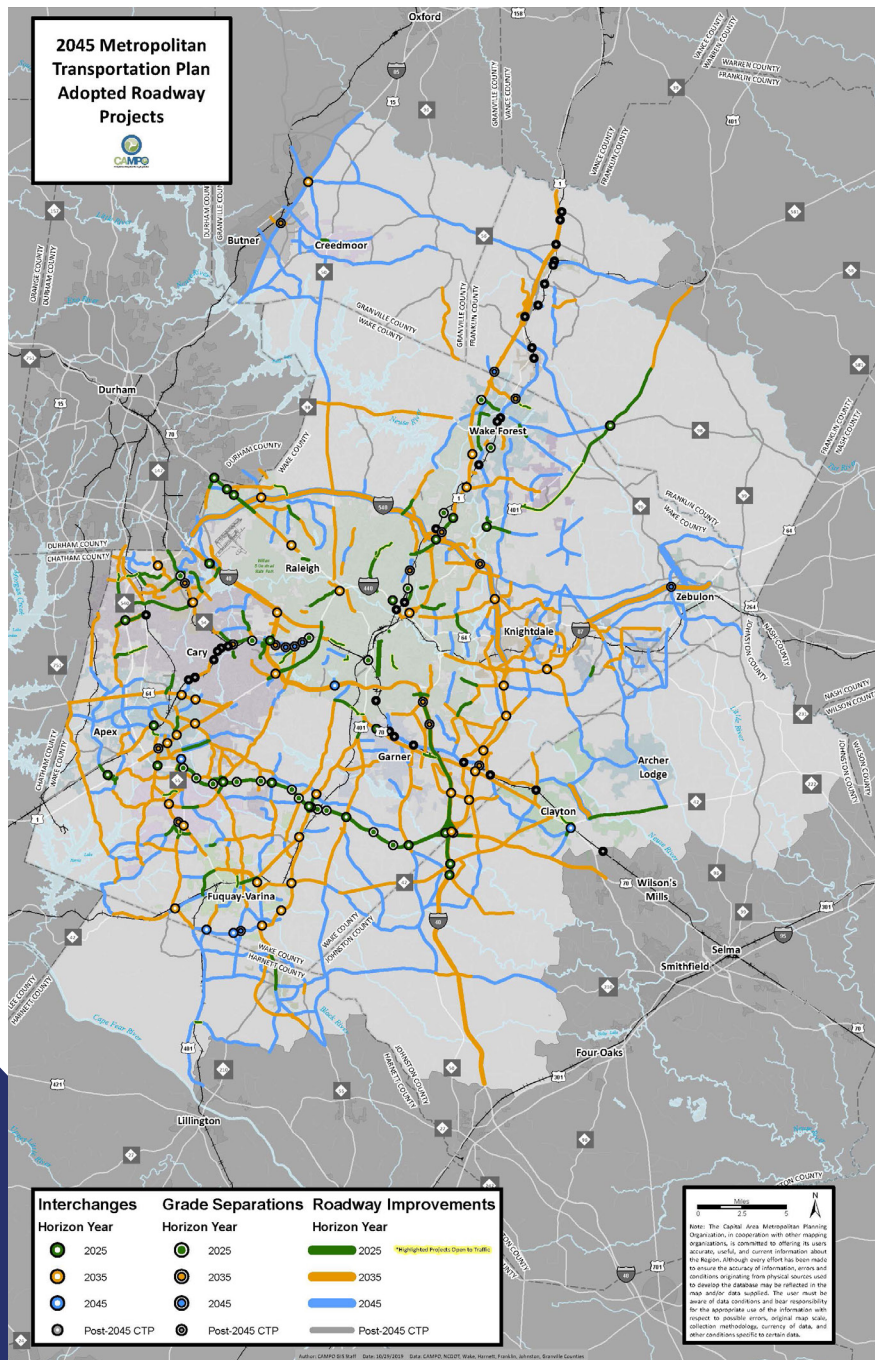
## CAMPO Connect 2045

The Research Triangle Region’s Metropolitan Transportation Plan—Connect 2045—acts as the guiding document for future planning decisions and investments related to roadways, bicycle facilities, transit services, and pedestrian facilities for both the Capital Area Metropolitan Planning Organization (CAMPO) and the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO). Connect 2045 considers the work conducted by both CAMPO and DCHC MPO in order to address the shifting needs and growing demographics across the region. Using forecast modeling, Connect 2045 identifies the trends, needs, and deficiencies across the region to determine how to plan and fund projects until planning horizon 2045.

The 2050 Metropolitan Transportation Plan is currently under development by CAMPO and DCHC.

### Relevant Recommendations

- The Northeast Area Study. CAMPO initiated the Northeast Area Study to identify sustainable transportation strategies for growing communities. These recommendations include roadway, bicycle, pedestrian, and transit projects.
- US 401. The proposed recommendation on US 401 bypass (Lousiburg Road) will be widened from two to four lanes to accommodate large volumes of traffic. Through LAPP, US 401 (Main Street) will include bicycle and pedestrian corridor improvements.
- Jones Dairy Road Extension. The project would widen the existing two lanes to four lanes from Chalk Road to US 401.
- NC 98. The plan proposes widening NC 98 to a four-lane major thoroughfare between Jones Dairy Road and US 401.
- Burlington Mills Road. The MTP proposes a widening of Burlington Mills Road to four-lane major thoroughfare from US 1 to US 401.
- Peebles Road Extension. The new location project is a proposed two-lane minor thoroughfare from Jonesville Road to Main Street (US 401) north of Bowling Drive.



# CAMPO NC 98 Corridor Study (2018)

The NC 98 Corridor Study was commissioned to study the segment of NC 98 from US 70 in Durham County to US 401 in Franklin County. The study analyzed the impacts of a rapidly growing population on the transportation network by considering mobility and safety for all users. In addition to transportation considerations, the corridor study sought to capture how the shifting demographics would impact surrounding development and market conditions. The NC 98 Corridor Study identified priorities to suggest the appropriate phased implementation strategy that would guide development along the corridor.

## Relevant Recommendations

- Long Term Improvements. The recommendations included widening NC 98 (Wait Avenue) from Jones Dairy Road to US 401 to four lanes.
- Proposed Intersection Treatment. At the intersection of NC 98 (Wait Avenue) and Jones Dairy Road, the proposed improvement included adding a signalized traffic measure. A road diet was also considered, but ultimately dismissed after public input.

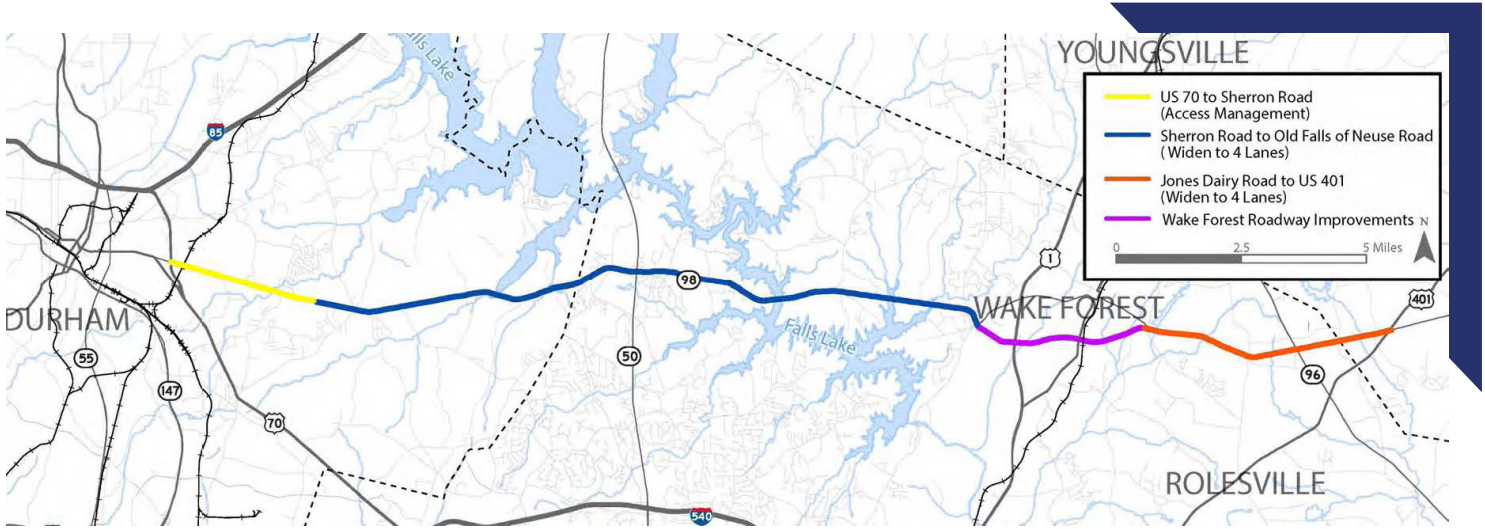
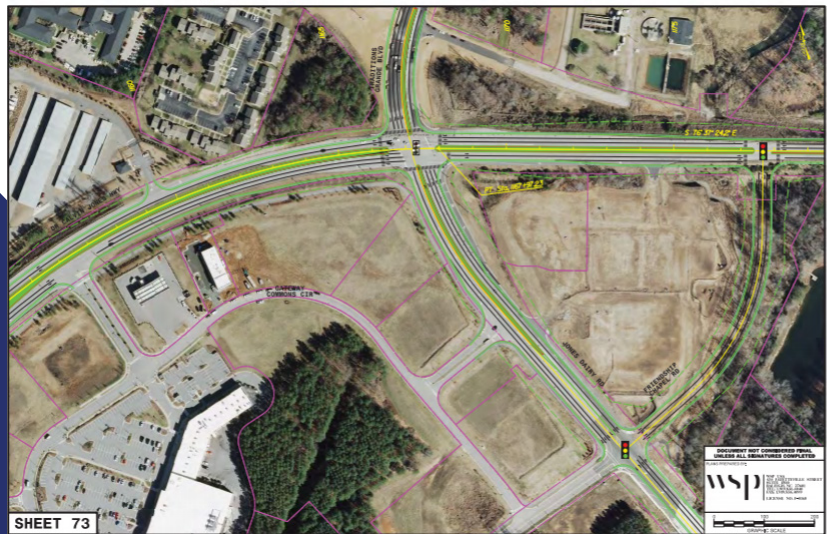


Figure 38: Proposed intersection treatment at Jones Dairy Road.



NC CAMPO • DCHC MPO • NCDOT

North Carolina Capital Area Metropolitan Planning Organization,  
 Durham Chapel Hill Metropolitan Planning Organization  
 & North Carolina Department of Transportation

### NC 98 CORRIDOR STUDY



SHEET 73





# Main Street Vision Plan (2018)

The Main Street Vision Plan establishes a set of objectives that are specific and quantifiable to work towards the community's goals. The plan identifies three zones along Main Street (US 401 BUS): the suburban fringe, village core, and rural transition. The zones identify the potential growth strategies appropriate for each type as shifting demographics impact the Town of Rolesville and Wake County. The plan identified numerous mobility recommendations including proposed typical sections, intersection improvements, and active transportation recommendations. The recommendations included an implementation plan with associated cost estimates. The Vision Plan considers the future growth with existing needs to create a holistic action plan to address land use and transportation issues.

## Relevant Recommendations

- **Modal Choices.** New sidewalk connections, multi-use pathways, and dedicated bicycle lanes should be added where possible to ensure active transportation along the corridor.
- **Safety for All Users.** Identify key locations along the corridor to recommend pedestrian crossing flashers, refuge islands, or mid-blocks.
- **Access Management and Enhance Connectivity.** Consolidate driveways and parking lots to preserve access to existing development and retail while also protecting pedestrians and bicyclists.
- **Supportive Surrounding Land Uses.** Consider the beautification of paved or planted medians and create consistent signage around the corridor.
- **Support Quality Redevelopment.** Leverage new sidewalks, bicycle lanes, and multi-use pathway connections to create a means of active transportation along the corridor.

### ripe & firm analysis

A ripe and firm analysis was conducted on all parcels in the study area. To complete this analysis, a subjective windshield survey looked at each parcel and the development that currently occupies it. Individual parcels are classified into one of three categories: firm, opportunity, or ripe. This analysis is used to identify areas both likely and unlikely to change. Often, there are areas that are not clearly one or the other, and those are identified simply as opportunities.

#### FIRM

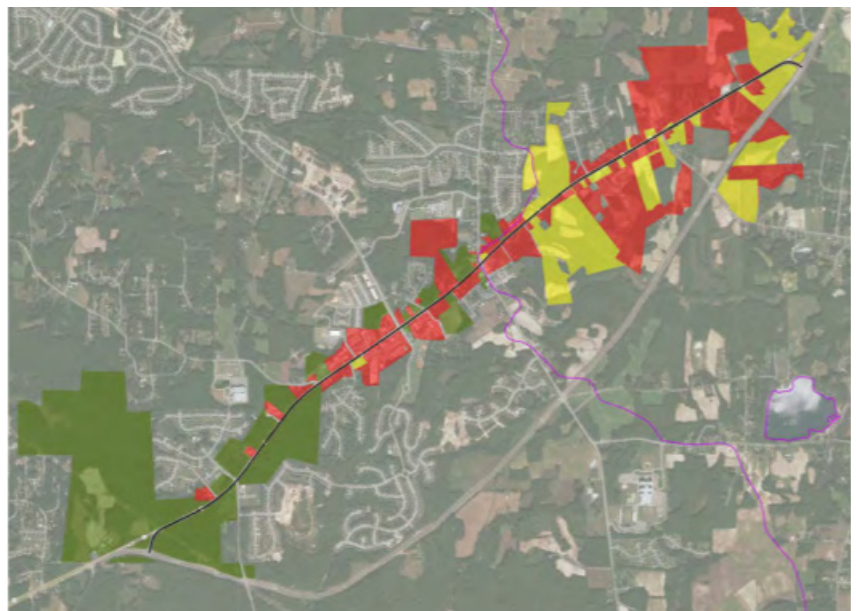
- Existing buildings with historic character and architectural significance
- Churches, schools, government buildings
- Residential properties currently occupied with structures in decent condition

#### OPPORTUNITY

- Underutilized property, but currently occupied
  - Current use may work but the building and/or site needs a face-lift
  - Current building/site is of value but the use needs to change to become additive to a vibrant, walkable community
- Oversized parking lot

#### RIPE

- Vacant parcel
- Property currently for sale
- Building is dilapidated to the point of no repair



#### LEGEND

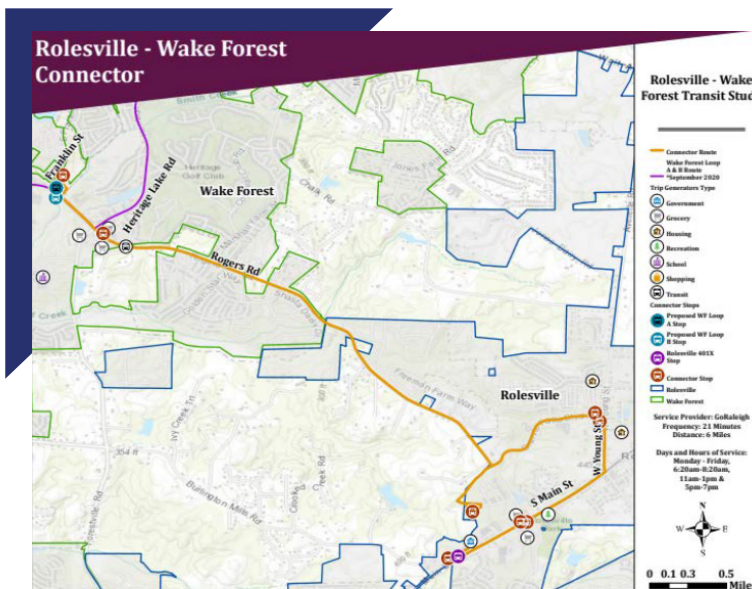
- Ripe
- Opportunity
- Firm

# Rolesville and Wake Forest Transit Study (2020)

Three transit service alternatives were developed and shared with the public in May 2020. The residents from Rolesville and Wake Forest were given the opportunity to comment and provide feedback on the alternatives in order to select a preferred one. In addition to public involvement, both the advantages and disadvantages of the alternatives were considered in the selection of the preferred alternative. Ultimately, the final alternative selected was service alternative one, which service alternative includes a Rolesville-Wake Forest connector bus. The Towns of Wake Forest and Rolesville will consider the recommended service alternative, as well as other potential options for transit services in the next fiscal year, continuing to discuss ways the Towns can partner together to provide enhanced transit service for residents.

## Relevant Recommendations

- Alternative 1: Peak-hour and mid-day fixed route connector service between Rolesville and Wake Forest.
- Alternative 2: Microtransit Option 1 - GoWake Access. Dedicated demand response service or same day service.
- Alternative 3: Microtransit Option 2 - Demand response ridesharing service (Uber) and GoWake access with ADA supplemental service.



Alternative 1: Route Design Characteristics	
Days and Hours of Service	Monday - Friday, 6:20 am - 8:20 am, 11:00 am - 1:00 pm & 5:00 am - 7:00 pm
Annual Revenue Hours (one bus)	1,470
Frequency	21
Distance (miles)	5.5

### Rolesville and Wake Forest Transit Study

July 23, 2020

### Technical Memorandum #3



## Service Alternative 1: Rolesville-Wake Forest Connector

This connector bus service would provide a key connection between Wake Forest and Rolesville. The connection would facilitate transfers to other transit services in the GoRaleigh network. This bus service would be lift-equipped and include a bicycle rack on the front of the bus.



Prepared by: RLS & Associates, Inc.



3



## **CONTEXT SENSITIVE STREET DESIGN**

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# Introduction

There is no single solution for improving all streets in Rolesville. Each road is unique and its solution should relate to the surrounding context. Streets are typically designed for the car, which can make active transportation choices difficult, inconvenient, and often dangerous. Context sensitive street design supports the vision that, based on the function of a particular facility and its surrounding area, streets should be designed with an emphasis for pedestrians, bicyclists, motorists, and transit riders. By integrating land use and transportation planning, the context sensitive design process can be applied to determine the most appropriate street cross-section to better serve the variety of community priorities, land use contexts, and activity centers along a specific corridor.

## Complete Streets

One step towards ensuring context sensitive design is by emphasizing the importance of complete streets. The Rolesville Comprehensive Plan supported the movement to adopt a Complete Streets Policy to support every type of person traveling along or across a road regardless of age, physical capacity, or mode of transportation. Rolesville Moves CTP integrates complete street design into the recommendations in order to ensure street network of the future is safe and convenient and provides mode choices based on surrounding context for users of all ages and abilities.

## Land Use and Transportation Integration Strategy

The Rolesville Comprehensive Plan—as well as other previous planning documents—established a precedent for emphasizing ways to improve network mobility by connecting the transportation system with surrounding land uses. To strengthen this alignment between land use context and the Town’s stated vision for mobility, the Rolesville Moves Community Transportation Plan includes a strategy that links land use and transportation decisions. The strategy includes two parts: a set of mobility principles based on consolidated land use context areas and a land use and transportation overlay map that vets transportation recommendations against the context areas.

## Consolidated Land Use Context Areas

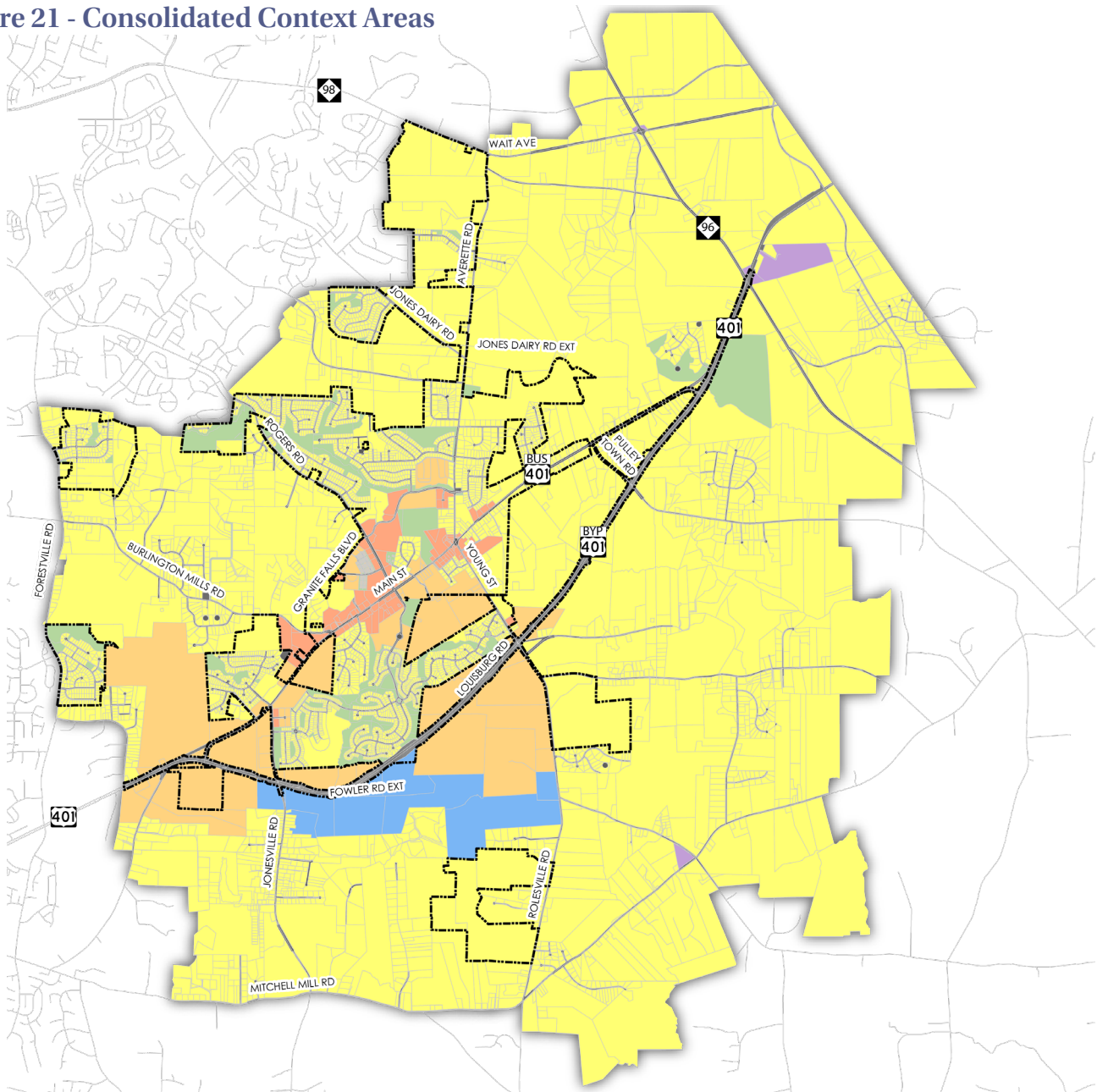
As a guiding document for transportation decisions, the Rolesville Moves Community Transportation Plan lays the groundwork for more detailed policies and programs related to Rolesville’s multimodal transportation network. The Future Land Use Map included in the Comprehensive Plan expresses the Town’s intent for how it will use land resources in the future. The consolidated land use character categories shown here are based on the Future Land Use Map. The ten character areas have been consolidated into six categories to recognize similarities of form and function and to more simply reflect the linkage between land use and street design. Likewise, the Town participated in a regional land use planning exercise designed to streamline land use inputs into the region’s travel demand model for the CAMPO 2050 Metropolitan Transportation Plan. This exercise used CommunityViz, a digital model for land use and development, to provide consistent terminology for land uses that occur throughout the region that touches eight counties.

CTP Consolidated Context Areas	Land Use Designation (Town Future Land Use Map)	CommunityVIZ Place Types (2050 Metropolitan Transportation Plan)
<b>Town Core</b>	Town Center Commercial (along Main Street) Industrial (along Main Street)	Town Center (TC) Community Commercial (CC)
<b>Mixed Use</b>	Mixed Use Neighborhood High Density Neighborhood	Mid-rise Residential (MRR) Mixed Density Residential Neighborhood (MRN)
<b>Employment Center</b>	Business Park	Regional Employment Center (REC)

CTP Consolidated Context Areas	Land Use Designation (Town Future Land Use Map)	CommunityVIZ Place Types (2050 Metropolitan Transportation Plan)
Residential	Low Density Residential	Small Lot Residential Neighborhood (SLRN)
	Medium Density Residential	Larger Lot Residential Neighborhood (LLRN)
Rural Crossroads	Commercial (rural locations)	Neighborhood Commercial Center (HCC)
Open Space	Preserved Open Space	Protected Green Space (POS)

Areas designated as Schools in the Town's Future Land Use Map are blended in with the prevailing Consolidated Context Area for that school. For example, Rolesville High School is shown as "Residential" given the schools proximity to the Residential designation. The School designation from the Town's Future Land Use Map coincides with the Civic and Institutional place type from the 2050 MTP exercise.

**Figure 21 - Consolidated Context Areas**



## Mobility Principles

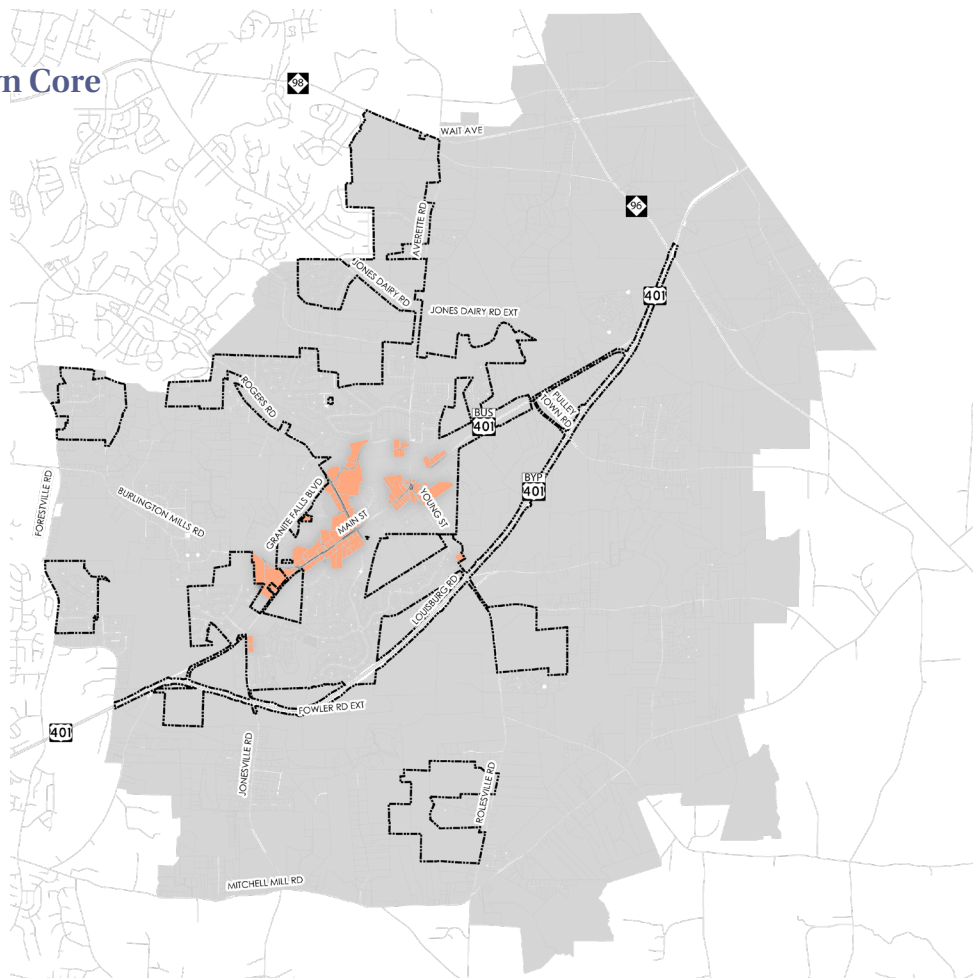
### Town Core

The Town Core area is the best opportunity to encourage multimodal facilities that enhance community activities and commercial or industrial development. In the future, Rolesville will continue to promote walking and biking by implementing a mixture of land uses, higher development densities, and a design that encourages active transportation. The experience of the pedestrian, bicyclist, and transit user should be a consideration in the design of all street types, including collector streets branching off of Main Street.

#### Mobility Principles

- 1. More urban street design patterns are needed to encourage walkability.** Streets in the Town Core area should support more urban land use and design. Street patterns should maximize connectivity, minimize block lengths, and tighten block radii to slow cars at intersections. The pedestrian realm should include wide sidewalks and street trees that provide shade and a buffer from travel lanes. On-street parking should be encouraged.
- 2. The safety of bicyclists and pedestrians in Town Core area is a priority.** Streets in the Town Core area should be designed for bicyclists and pedestrians to safely travel along and across corridors. This design emphasis should promote reduced observed travel speeds, create narrower travel lanes, and avoid free flow right turn lanes. The distance between marked pedestrian crossings should be minimized, and multi-lane streets should include landscape medians that serve as a pedestrian refuge at intersections and marked mid-block crossings.

Figure 22 - Town Core





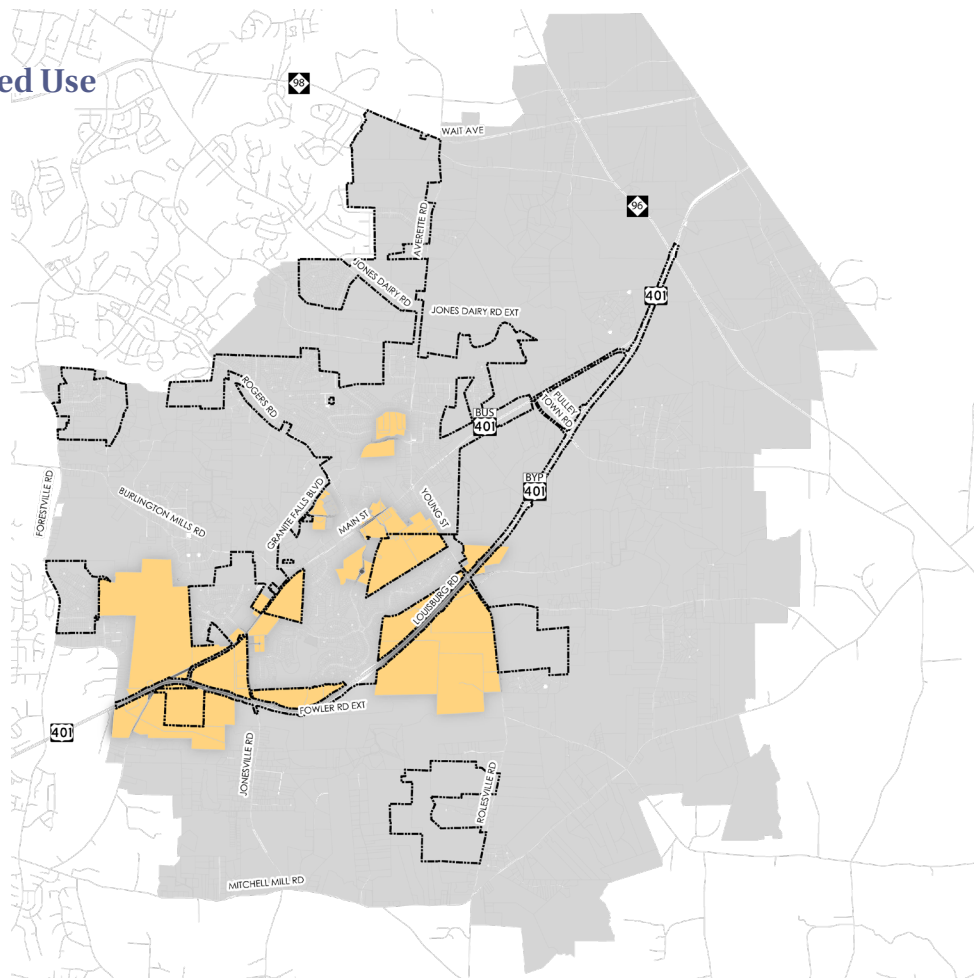
## Mixed Use

The Mixed Use areas are the Town’s best opportunity to promote active transportation outside of the Town Core. Key characteristics of neighborhood mixed use activity centers include an interconnected street system that provides linkages to shops, services, housing, and amenities in an addition to a well-connected pedestrian and bicycle network. By encouraging a mixture of higher density uses and reducing the distances between key destinations, the Mixed Use areas will connect the Town Core and Employment Center areas to lower-density residential uses. The experience of the pedestrian, bicyclist, and transit user should be the center in the design of all street types to encourage non-vehicular modes of transportation.

### Mobility Principles

- 1. People need convenient choices in how they choose to travel to destinations such as schools, shopping areas, and employment centers from their neighborhood.** Given the proximity to schools, retail opportunities, and future employment centers, particular attention is needed consider how people in nearby neighborhoods safely and conveniently access these destinations without having to take personal vehicles. This is particularly true for the shortest trips.
- 2. Multimodal connectivity is needed to link the Town Core with Mixed Use areas.** The Town Core’s proximity to and relationship with the Mixed Use area requires a more deliberate approach to how people move on foot, by bike, and with transit. The Rolesville Comprehensive Bicycle Plan (2013) and the Main Street Vision Plan (2018) focus attention on opportunities to increase connectivity challenges within the Mixed Use and Town Core areas, respectively.

Figure 23 - Mixed Use



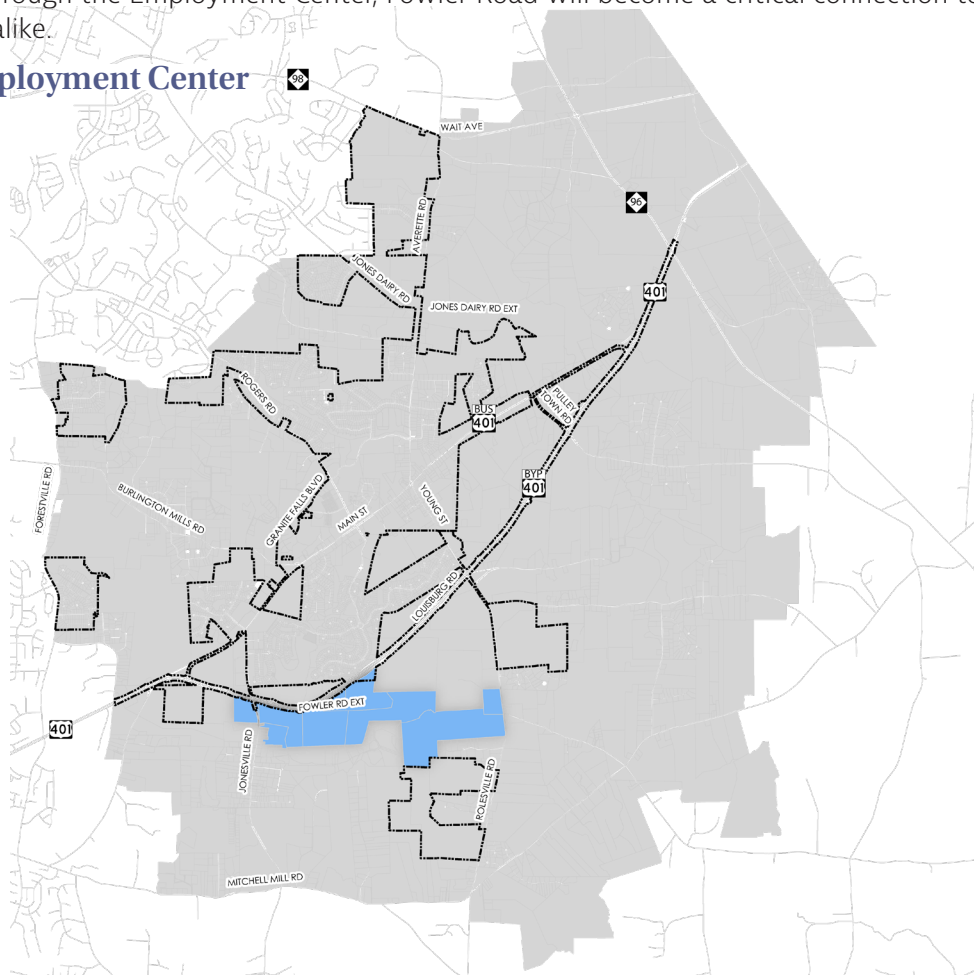
## Employment Center

The Employment Center includes Future Land Use Business Park land use designation. The Employment Center would support a greater diversity of land uses in Rolesville and promote job growth. An internal network of sidewalks and pedestrian features would encourage employees to walk between destinations, promoting a healthier workforce. There should be a limited amount of supporting commercial uses such as restaurants and retailers to serve employees. Due to the proximity of the Employment Center to Mixed Use and Residential land uses, creating a well-connected transportation network that provides choices in how people can travel will help create a place for all people to live, work, and play. Upon adoption of the CTP, the Town should explore options for a commercial and/or employment corridor south of the US 401 BYP (Louisburg Road) as well as industrial growth areas beyond the Fowler Road corridor.

### Mobility Principles

- 1. More opportunities to live, work, and play within close proximity.** The Employment Center should emphasize active transportation amenities to encourage walking or biking to work. Providing these kinds of opportunities will help promote local businesses and retail in the Employment Center or in the surrounding Mixed Use area. An emphasis on safety and accessibility in street and urban design should also be considered.
- 2. Encourage multi-use considerations on all proposed roadways through the Employment Center.** The Employment Center should allow for pedestrians and bicyclists to safely and seamlessly integrate with vehicles through the corridor. The Fowler Road extension should provide amenities to encourage active transportation by considering a four-lane divided section with bicycle lanes and sidewalks. As the future corridor through the Employment Center, Fowler Road will become a critical connection to serve workers and residents alike.

Figure 24 - Employment Center



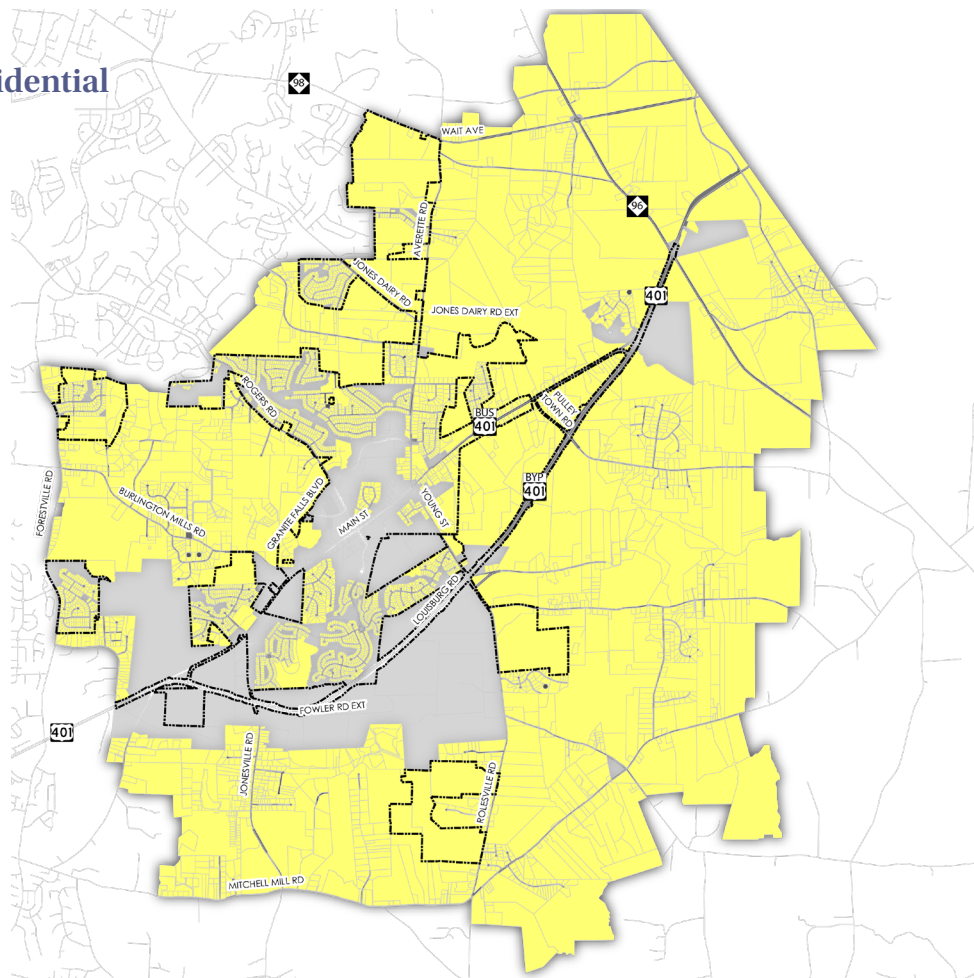
## Residential

Much of the Residential area includes residential neighborhoods that transition from the higher densities marked by the Town Core and Mixed Use areas to medium and lower densities found in the rural and open space areas. The Residential consolidated land use area also is served by two activity centers at key intersections referred to on the map as Rural Crossroads. These centers are slated for smaller scale non-residential places. The intent of the Transitional area is to maintain a consistency of multimodal travel options with particular to connections to key destinations, activity and employment centers, and the Town Core.

### Mobility Principles

- 1. Intersections in Residential areas need to safely accommodate multimodal travel patterns.** Many of the Town’s newly built roadways over the next several decades likely will be constructed in the Residential area. Regardless of the timing of those improvements, the Town should continue to improve the existing roadway network with added focus on key intersections in the Residential area.
- 2. Multimodal connectivity supports the vision for Activity Centers in the Residential area.** The Residential area includes many of the Town’s edge neighborhoods. These residential areas are coupled with Activity Centers at key intersections that include focused areas of non-residential activity. The Town should promote multimodal connectivity to the Activity Centers through on-street improvements, strategic sidewalk projects, and the continued construction of its greenway network.

Figure 25 - Residential



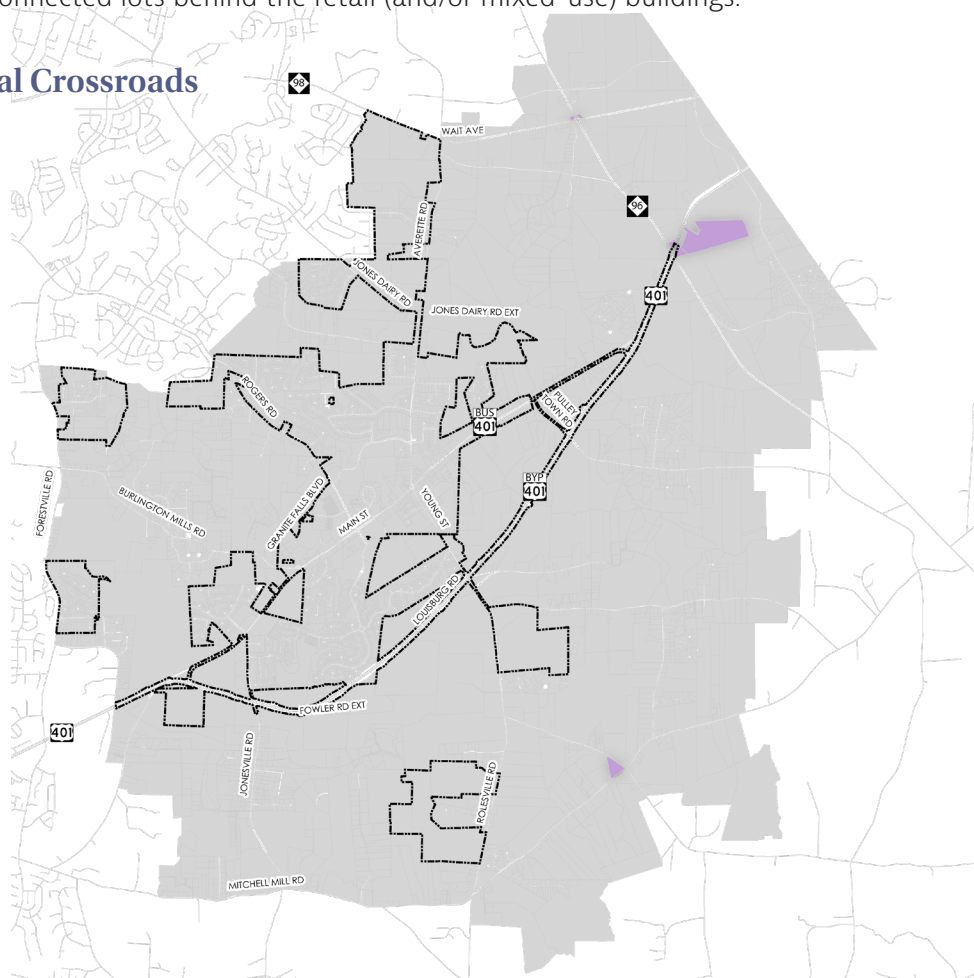
## Rural Crossroads

As described in the 2050 Metropolitan Transportation Plan place type summary, Rural Crossroads represent small nodes of commercial activity along the study areas rural roadways. In Rolesville, Rural Crossroads have been identified at three intersections: NC 98 (Wait Avenue) at NC 96 (Zebulon Road), US 401 BYP (Louisburg Road) at NC 96 (Zebulon Road), and Mitchell Mill Road at Fowler Road. These locations, while residential in use and rural by context, are appropriate for small-scale businesses, such as gas stations, convenience stores, or restaurants, that serve a portion of the daily needs of nearby residents. Rural Crossroads are places that have the potential to grow into a new center but typically at lower densities.

### Mobility Principles

- 1. Street design approaching and at Rural Crossroad intersections should ease the transition in context and be pedestrian-friendly.** Intersection design, including sight distance, approach angles, and access control is critical given the likely abrupt transition from rural context to developed node. Over time, it should be expected that development at Rural Crossroads will reach each quadrant of the intersection. Therefore, street patterns near these locations should create a grid pattern where possible that maximizes connectivity and relieves traffic pressure at the main intersection. Pedestrian crosswalks and signals are critical to encourage walkability between intersection quadrants.
- 2. Site design for Rural Crossroads should be planned and designed according to best practice principles for walkable nodes.** As a rural walkable node, development should promote compact development patterns, a street network with a high connectivity, a diversity of housing types, a mixture of uses where possible, and the protection of natural systems. At the intersection, parking should be organized into interconnected lots behind the retail (and/or mixed-use) buildings.

Figure 26 - Rural Crossroads



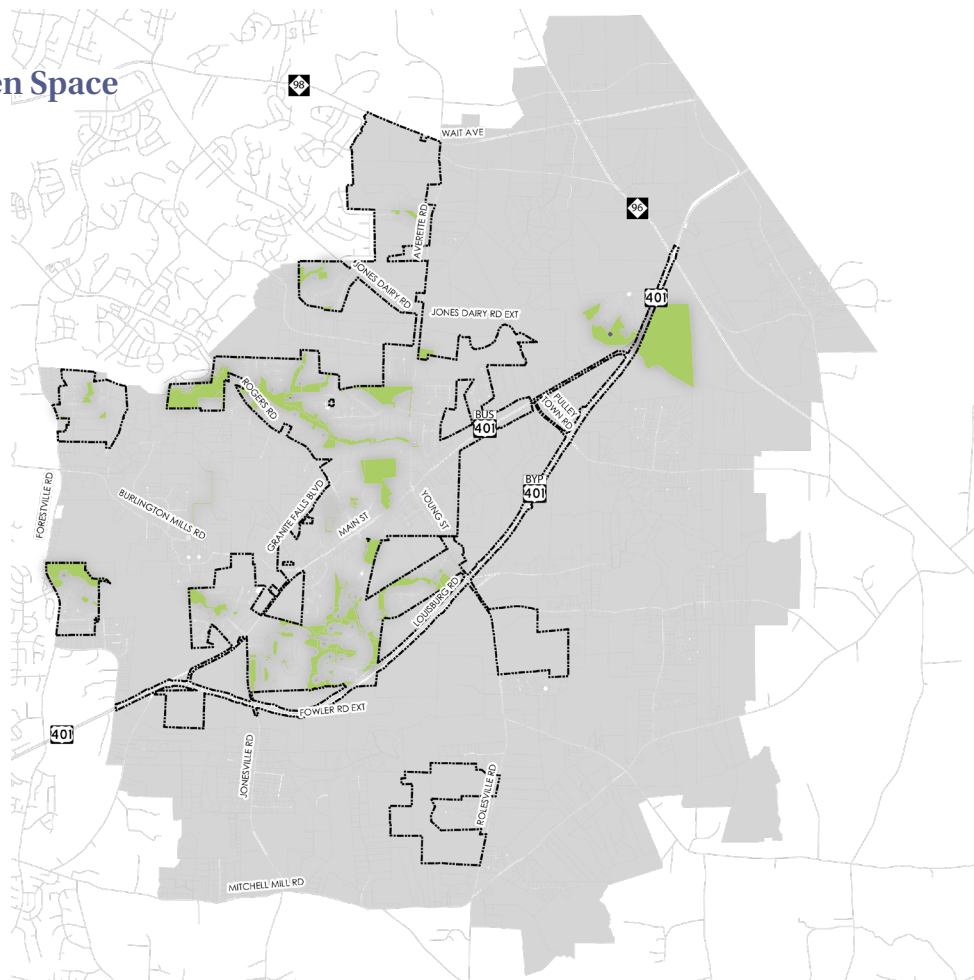
## Open Space

The land use intent of the Open Space consolidated land use area is to preserve elements of rural character, conserve open spaces, protect critical watersheds, and maintain limited opportunities for residential development (in a conservation design where utilities exist). The transportation system should focus on the safe movement of people while promoting active use of natural spaces where appropriate.

### Mobility Principles

- 1. The Town's natural places are ideal for trails and greenways.** Most of the Town's designated natural spaces are in the Open Space area. These spaces include critical watersheds and open space. Based on the recommendations from Rolesville's Comprehensive Bicycle Plan and Main Street Vision Plan, the Town should continue to advocate for appropriate greenways and trails to provide recreational opportunities and critical multimodal connectivity.
- 2. A continued focus on the safety design and operation of roads near the Town's Open Space areas is needed.** The roads near the Town's rural areas carry less traffic on average than collector streets and thoroughfares in the heart of Rolesville. However, the design of these roads often is marked by unsafe curves, limited shoulders, and other unsafe conditions typical of farm-to-market roads. The Town continues to improve safety through targeted widening projects, modernization, and intersection improvements. Safety through design and enforcement needs to be a priority as traffic continues to increase on these roads.

Figure 27 - Open Space



## Land Use and Transportation Overlay Map

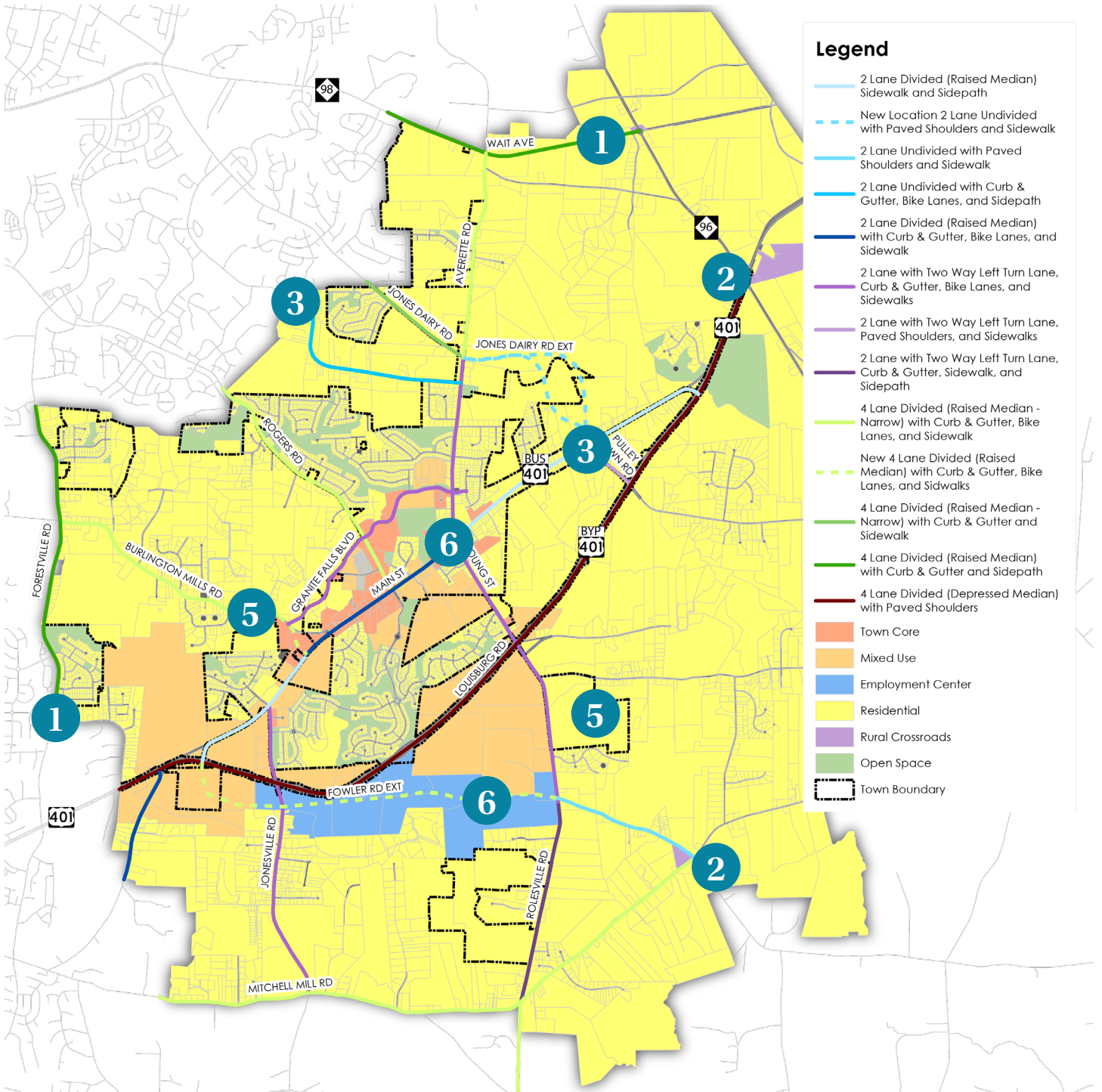
The Town's emphasis on a multimodal transportation network starts with a design approach based on land use designations from the Rolesville Comprehensive Plan's Future Land Use Map. This context-focused approach to transportation design accounts for tradeoffs associated with limited right-of-way. Travel mode considerations should be based on two inputs: the CTP Consolidated Context Areas (future land use designations from the Future Land Use Map) and CTP Facility Recommendations (recommendations by street type). The overlay of transportation recommendations on the land use context map provides a quality check to ensure the vision for land use and transportation align in way that supports broader goals related to mobility, urban design, and quality of life. The following notes are highlighted in the map shown in Figure 28. Transportation recommendations are discussed in more detail in Chapter 4: Recommendations.

1. As sidepaths are constructed, connections should be made to existing and future developments.
2. Key crossroads in rural residential areas require thoughtful site design and intersection configurations.
3. As roadways are improved and developments are built, the Town should continue to close gaps in the pedestrian network.
4. Larger roadway projects that travel through the walkable, mixed-use context areas will require significant bicycle and pedestrian amenities.
5. For schools located beyond the Town Core, particular attention is needed for how people in nearby neighborhoods can safely and conveniently travel to school on foot or by bike.
6. Urban and street designs should be coordinated in the Town Core to include wide sidewalks and street trees that provide shade and a buffer from travel lanes.

In order to understand the feasibility of a potential future employment center, the Town has plans to pursue a feasibility study or small area plan for the area south of the US 401 BYP (Louisburg Road) along the proposed Fowler Road extension from Rolesville Road to South Main Street (US 401 BUS). The study area may also consider other potential industrial growth beyond the proposed Fowler Road corridor. Key elements of a small area plan may include public engagement; a marketing analysis to determine the market for industrial, commercial, or a mix of uses; review of existing site conditions and restraints, zoning regulations; land assemblage; utilities; and environmental impact assessment.

The land use context areas are intentionally designed to be informational but not prescriptive. As conditions change in the area, new information is made available, and plans continue to be updated, the context areas designations may be revisited. If necessary, the Town of Rolesville should revisit the Town's Comprehensive Plan after the adoption of the CTP to review and adjust the Comprehensive Plan to align with proposed transportation recommendations.

Figure 28 - Context Areas and Thoroughfare Recommendations



4





## **RECOMMENDATIONS**

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## Introduction

As growth and demand continue to increase, roadway improvements are essential to manage congestion and improve safety. Residents and visitors alike rely on key transportation corridors to provide critical links between employment locations, schools, shopping, and recreational destinations. In order to support the community and retain the essence of Rolesville's charm, roadway improvements should be planned to strengthen and leverage connections by providing alternative routing options and supporting sustainable modes of transportation. The following chapter provides insight into the identification of roadway needs that were used to generate thoroughfare, collector street, and intersection recommendations.

## Recommendation Development

The recommended on-street roadway improvements for the study area were developed from a process that considered previous planning efforts, environmental considerations, safety and congestion data, existing and planned land uses, projected future travel demand, existing and committed projects, and public feedback. In addition, each recommendation was considered through the framework of each of the plan's goals. The plan's goals ensure consistency with the Town's long-term goals to support growth and development in Rolesville. Finally, the recommendations were aligned with the land use contexts introduced in the previous chapter to appropriately balance vehicular capacity needs with multimodal accommodations.

## Public Input

The first public survey focused on the types of facilities survey participants were interested in. The priorities of the first survey included more active transportation connections and enhancing the existing roadway facilities. The second public survey asked participants for direct feedback on draft on-street recommendations. Both rounds of public engagement were folded into the draft and revised recommendations. For more information on the survey, refer to the Appendix.

## Safety

Crash data provides valuable insight about where improvements may be needed to due safety concerns along certain roadways or at particular intersections.

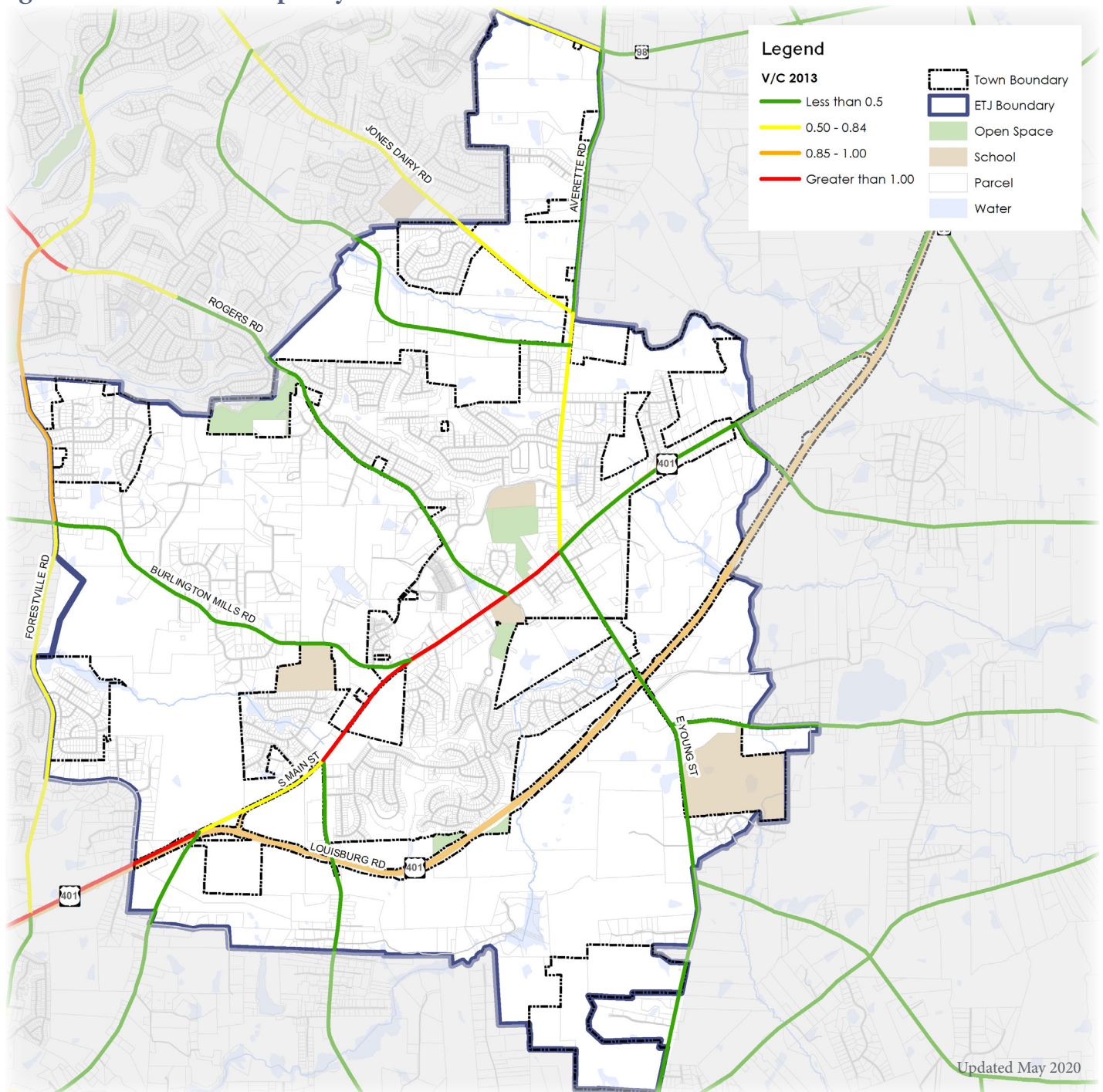
North Carolina's Highway Safety Improvement Program (HSIP) identifies potentially hazardous locations that should be considered as priority safety improvements. These are the identified locations with the plan's study area:

- US 401 BUS (N Main Street) at Bowling Drive (2017)
- Michell Mill Road at Fowler Road (2019)
- Jones Dairy Road at Jones Farm Road (2019)
- US 401 BYP (Louisburg Road) at NC 96 (Zebulon Road) (2018, 2019 & 2020)
- Rolesville Road at Riley Hill Road (2020)

# Existing Congestion

The volume to capacity ratio is a measure of the quantity of vehicles traveling on a road and the actual amount of vehicles a road can handle. Using the Triangle Regional Model the volume and capacity ratio shows which roads are under, at, or over capacity. A road with a volume capacity ratio greater than 1.00 is over capacity. The range between 0.85 and 1.00 is at capacity and a capacity less than 0.84 is considered under capacity. The only road within the study area boundary that was over capacity in 2013 (the model's base year) was US 401 BUS (Main Street). The figure below shows the volume to capacity ratio for 2013. Please note, the volume to capacity ratio is only available for those roadways contained within the Triangle Regional Model.

**Figure 29 - Volume to Capacity Ratio 2013**

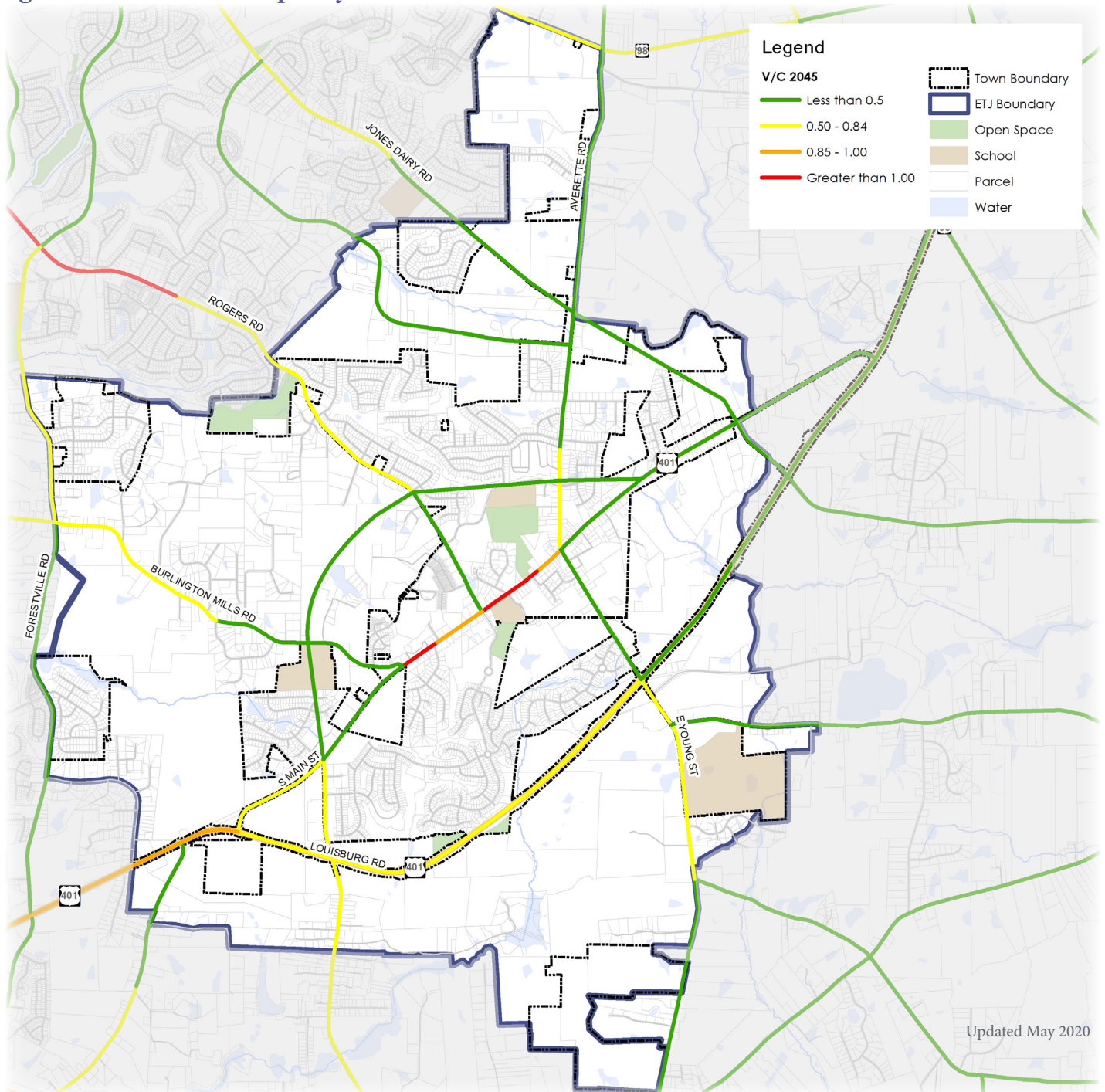


# Future Congestion

Similar to the 2013 V/C ratio map, Figure 30 shows the anticipated capacity for the year 2045. Again, the volume to capacity ratio shows which roads are over capacity. Segments of US 401 BUS (S Main Street) are over capacity between Young Street and Burlington Mills Road with volume to capacity ratios between 1.01 and 1.04. US 401 BYP (Louisburg Road) is not quite at capacity, with a volume capacity ratio of 0.52.

The volume to capacity ratio is only available for those roadways contained within the Triangle Regional Model. Please note, Granite Fall Blvd has been constructed and paths shown in the model does not reflect the final alignment.

Figure 30 - Volume to Capacity Ratio 2045



## Committed Roadway Projects

Committed projects are roadway projects that are fully funded for construction. These projects include locally-led projects as well as projects led by NCDOT. It is essential to consider committed projects as part of the transportation planning process to confirm that these projects are consistent with the goals and themes identified through the Rolesville Moves Community Transportation Plan. Understanding the projects currently underway may address the existing and projected deficiencies throughout the network.

In addition to leveraging federal and state funding, the Town of Rolesville aims to identify additional funding sources. These local funds are used to leverage larger funding amounts by increasing competitiveness for regional grant funding such as the Locally Administered Projects Program (LAPP). The Town successfully secured LAPP funding for Main Street corridor improvements in February 2020. One grant project will improve Burlington Mills Road at Main Street intersection by realigning the Burlington Mills Road intersection. The other project will revitalize sidewalks, streetscape improvements, curb and gutter, and bicycle transportation enhancements along Main Street between Burlington Mills Road and Young Street. Project construction is anticipated to start mid-2021.

The Town’s Capital Improvement Plan (CIP) identifies projects that the Town intends to invest in over a five-year period. The State Transportation Implementation Plan (STIP) is North Carolina’s ten-year state and federally-mandated plan that identifies construction funding for and scheduling of transportation projects throughout the state. The following table lists the projects that are funded in the first five years of the ten-year STIP, which are considered committed. The identification number refers to how a project is referenced in the STIP. The projects included in the list are within Rolesville or immediately surrounding the study area’s limits.

STIP ID	Anticipated start of Construction	Location	Description
U-6241	2021	Burlington Mills Rd at US 401 BUS (S Main St)	Realign roadway and construct new intersection
R-2814C	Under Construction	US 401 from NC 96 to Flat Rock Church Rd/Clifton Pond Rd	Widening

## On-Street Recommendations

The Rolesville Moves Community Transportation Plan on-street roadway recommendations are divided into three basic categories:

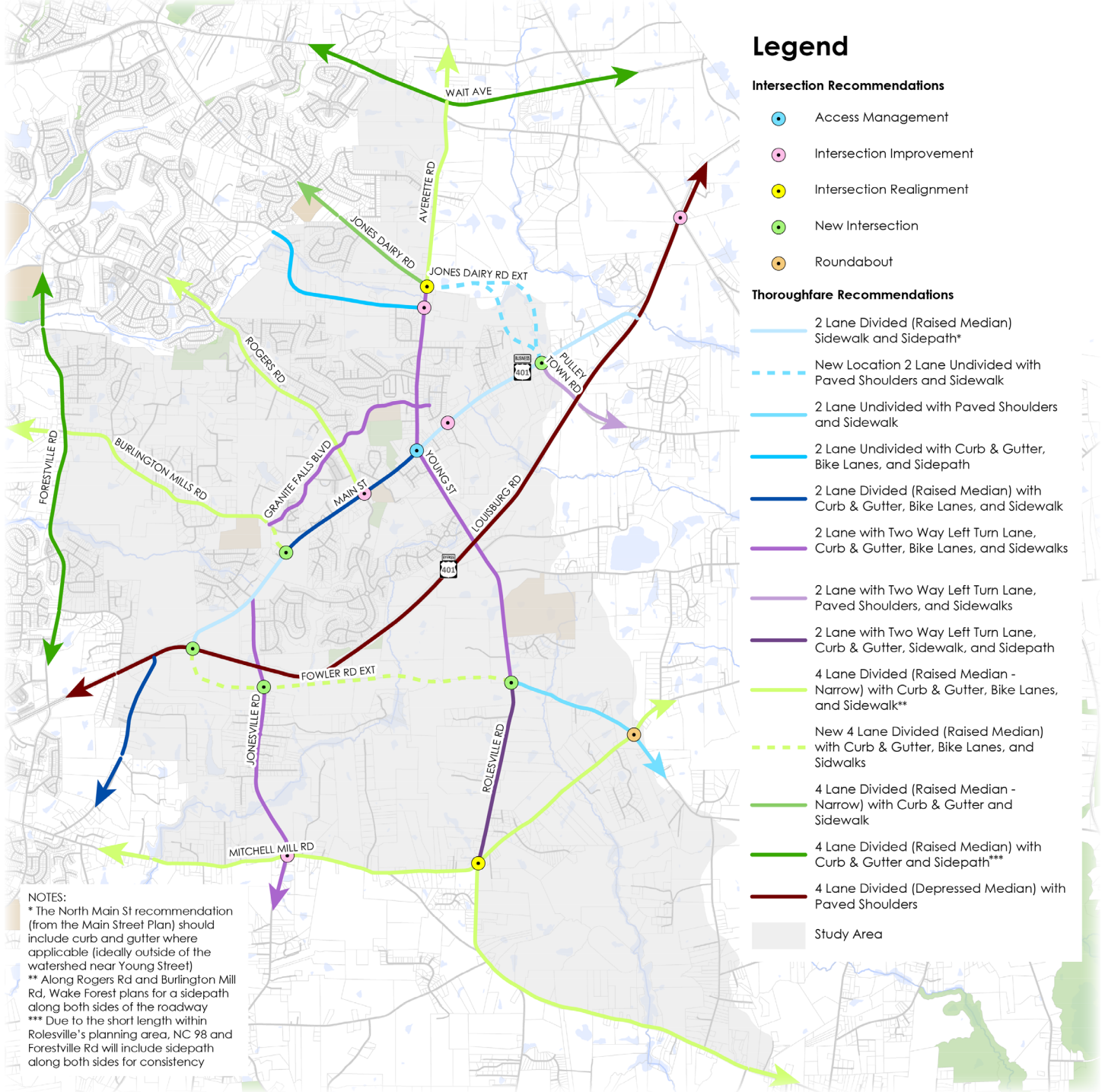
- 1. Thoroughfare recommendations:** Improvements or additions to the arterial roadways in the study area.
- 2. Collector and connector recommendations:** Improvements or additions to the network of secondary roadways supporting thoroughfares, intended to provide enhanced access and connectivity.
- 3. Intersection recommendations:** Intersection improvements based on safety and congestion data, or recommendations for new intersections or interchanges based on the future roadway map.

The proposed recommendations aim to leverage existing connections and create strategic links throughout the Town of Rolesville. The thoroughfare and collector street recommendations are supplemented by identified intersection improvements. The overall mobility of the transportation system aims to accommodate future growth and provide flexibility for shifting needs.

# Thoroughfare Recommendations

The thoroughfare recommendations are intended to alleviate and address future congestion by adding capacity, access management enhancements, or providing alternative routes. These recommendations are also intended to address the safety and congestion concerns across the transportation network. Thoroughfare recommendations were intentionally developed to include multimodal features such as bicycle and pedestrian facilities. The development of active, sustainable mobility was a key theme during public outreach and project development. Successful transportation systems aim to identify creative means of expanding vehicular capacity while incorporating opportunities for alternative modes of transportation. Thoroughfare recommendations are shown in Figure 31 and the table on the next page. Intersection improvements are also shown in this figure and detailed later in the chapter.

Figure 31 - Thoroughfare Recommendations



Facility Name	Extents	Status	Cross-Section Description
Averette Rd	Jones Dairy Rd to NC 98 (Wait Ave)	Existing Facility	4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalks
Burlington Mills Rd	Burlington Mills Rd Realignment to Forestville Rd	Existing Facility	4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalks
Burlington Mills Rd Realignment	Burlington Mills Rd to US 401 BUS (S Main St)	New Location	4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalks
Chalk Rd	Averette Rd to Western Study Area Limits	Existing Facility	2-Lane Undivided with Curb & Gutter, Bike Lanes, and Sidewalks
Fowler Rd Ext	US 401 BYP (Louisburg Rd)/US 401 BUS (Main St) to Rolesville Rd	New Location	4-Lane Divided (Raised Median) with Curb & Gutter, Bike Lanes, and Sidewalks
Fowler Rd	Rolesville Rd to Mitchell Mill Rd	Existing Facility	2-Lane Undivided with Paved Shoulders and Sidewalks
Forestville Rd	Foxwild Ln to Lillies Liles Rd	Existing Facility	4-Lane Divided (Raised Median) with Curb & Gutter and Sidepaths
Granite Falls Blvd Ext	Grand Rock Way to Burlington Mills Rd Realignment	New Location	2-Lane Two Way Left Turn, Curb & Gutter, Bike Lanes, and Sidewalks
Granite Falls Blvd	Terrell Dr to Grand Rock Way	Existing Facility	2-Lane Two Way Left Turn, Curb & Gutter, Bike Lanes, and Sidewalks
Jones Dairy Rd Ext	Jones Dairy Rd/Averette Rd to US 401 BUS (Main St)/Pulley Town Rd	New Location	2-Lane Undivided with Paved Shoulders and Sidewalks
Jones Dairy Rd	Averette Rd to Northwestern Study Area Limits	Existing Facility	4-Lane Divided (Raised Median - Narrow) with Curb & Gutter and Sidepath
Jonesville Rd	US 401 BUS (Main St) to Mitchell Mills Rd	Existing Facility	2-Lane with Two Way Left Turn, Curb & Gutter, Bike Lanes, and Sidewalks
Louisburg Rd	US 401 BYP (Louisburg Rd) to Southern Study Area Limits	Existing Facility	2-Lane Divided with Curb & Gutter, Bike Lanes, and Sidewalk
S Main St (US 401 BUS)	US 401 BYP (Louisburg Rd) to Burlington Mills Rd Realignment	Existing Facility	2-Lane Divided with Curb & Gutter, Sidewalks, and Sidepath
S Main St (US 401 BUS)	Burlington Mills Rd Realignment to Young St	Existing Facility	2-Lane Divided (Raised Median) with Curb & Gutter, Bike Lanes, and Sidewalks
N Main St (US 401 BUS)	Young St to US 401 BYP (Louisburg Rd)	Existing Facility	2-Lane Divided (Raised Median) with Curb & Gutter, Sidewalk, and Sidepath*
Mitchell Mill Rd	Fowler Rd to Rolesville Rd	Existing Facility	4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalks
Mitchell Mill Rd	Rolesville Rd to Eastern Study Area Limits	Existing Facility	4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalks
NC 98 (Wait Ave)	NC 96 (Zebulon Rd) to Western Study Area Limits	Existing Facility	4-Lane Divided (Raised Median) with Curb & Gutter and Sidepath
Pulley Town Rd	US 401 BYP (Louisburg Rd) to US 401 BUS (N Main St)	Existing Facility	4-Lane Divided (Raised Median) with Curb & Gutter and Sidepath

\*Curb & Gutter when applicable

Facility Name	Extents	Status	Cross-Section Description
Rogers Rd	US 401 BUS (Main St) to Granite Falls Blvd	Existing Facility	4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalk
Rogers Rd	Granite Falls Blvd to Western Study Area Limits	Existing Facility	4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalk
Rolesville Rd	Fowler Rd to Mitchell Mill Rd	Existing Facility	2 Lane with Two Way Left Turn, Curb & Gutter, Sidewalk, and Sidepath
Rolesville Rd/Riley Hill Rd	Mitchell Mill Rd to Riley Hill School Rd	Existing Facility	4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalk
US 401 BYP (Louisburg Rd)	NC 96 (Zebulon Rd) to Northern Study Area Study Area Limits	Existing Facility	4-Lane Divided (Depressed Median) with Paved Shoulders
Averette Rd/Young St/ Rolesville Rd	Jones Dairy Rd to Fowler Rd	Existing Facility	2-Lane with Two Way Left Turn, Curb & Gutter, Bike Lanes, and Sidewalks

Where appropriate, a narrow median could be substituted for a two-way left turn lane. The Town of Rolesville should discuss and work with affected parties which could include developers and NCDOT.



## Bicycle and Pedestrian Element

Active modes of transportation like cycling and walking are crucial to a well-rounded transportation system. Having bicycle and pedestrian amenities not only provide opportunities for recreation, but also a means of getting from place to place without the use of a vehicle. The outreach for this plan strongly suggested the desire for a more robust and better connected active transportation network. While the Town of Rolesville already has worked to create multimodal corridors, the CTP aims to help identify appropriate active transportation recommendations in tandem with vehicular considerations.

### Safety

As mentioned in Chapter 2: Existing Conditions, there were nine crashes between 2007 and 2018 within the study area boundary. Three of the nine crashes involved pedestrians while five of the nine crashes involved a cyclist. One of the pedestrian crashes resulted in a fatality. None of the crashes involving cyclists resulted in a fatality or serious injury. Many of these crashes were near or on major thoroughfares like Young Street, Main Street, Burlington Mills Road, and Rogers Road. To address the safety concerns along these major thoroughfares, carefully crafted recommendations include separated and buffered facilities. In addition to physical separation, consideration to roadway markings and signage should also be considered. In addition to on-street considerations, intersection upgrades should also prioritize the safety of bicyclists and pedestrians.

### Project Recommendations

Bicycle and pedestrian mobility can continue to expand through a variety of different facility types, each of which are appropriate in specific contexts and for various users. This plan will be further supplemented with the development of the Open Space & Greenways Plan. These recommendations focus specifically on on-street bicycle and pedestrian amenities. The project recommendations in the CTP consist of the following types of facilities:

#### *Bicycle Lanes*

Bike lanes designate an exclusive space for bicyclists that are directly adjacent to travel lanes for motor vehicles. The preferred minimum width for a bicycle lane is approximately 6.5 feet. This width allow bicyclists to ride side-by-side or pass each other without leaving the bicycle lane. The minimum width under constrained conditions could be 4 to 5 feet. Protected bicycle lanes typically include striped or physical buffer between vehicular traffic and the bicyclists for enhanced protection.



#### *Paved Shoulders*

Paved shoulders are on the edge of roadways and can serve as a functional space for bicyclists and pedestrians in the absence of other types of facilities with greater separation. The presence of a paved shoulder can reduce crashes where bicyclists may be struck from behind, which accounts for a significant portion of rural road crashes.



## *Sidepath*

A sidepath is a bi-directional shared use path that is located immediately adjacent and parallel to a roadway. Sidepaths offer a high-quality experience for users of all ages and abilities compared to on-street facilities in heavy traffic environments. Sidepaths allow for reduced roadway crossing distances and maintain rural or small town community character.



## *Shared Lane Markings*

Shared Lane Markings (SLMs) or "sharrows," are road markings used to indicate a shared bicycle lane and reinforce the legitimacy of bicycle traffic on the street, recommend proper bicyclist positioning, and may be configured to offer directional and wayfinding guidance.



## *Sidewalks*

Like sidepaths, sidewalks are physically separated from the roadway, but are still within the right-of-way. Sidewalks are typically between 5 or 6 feet wide concrete paths.

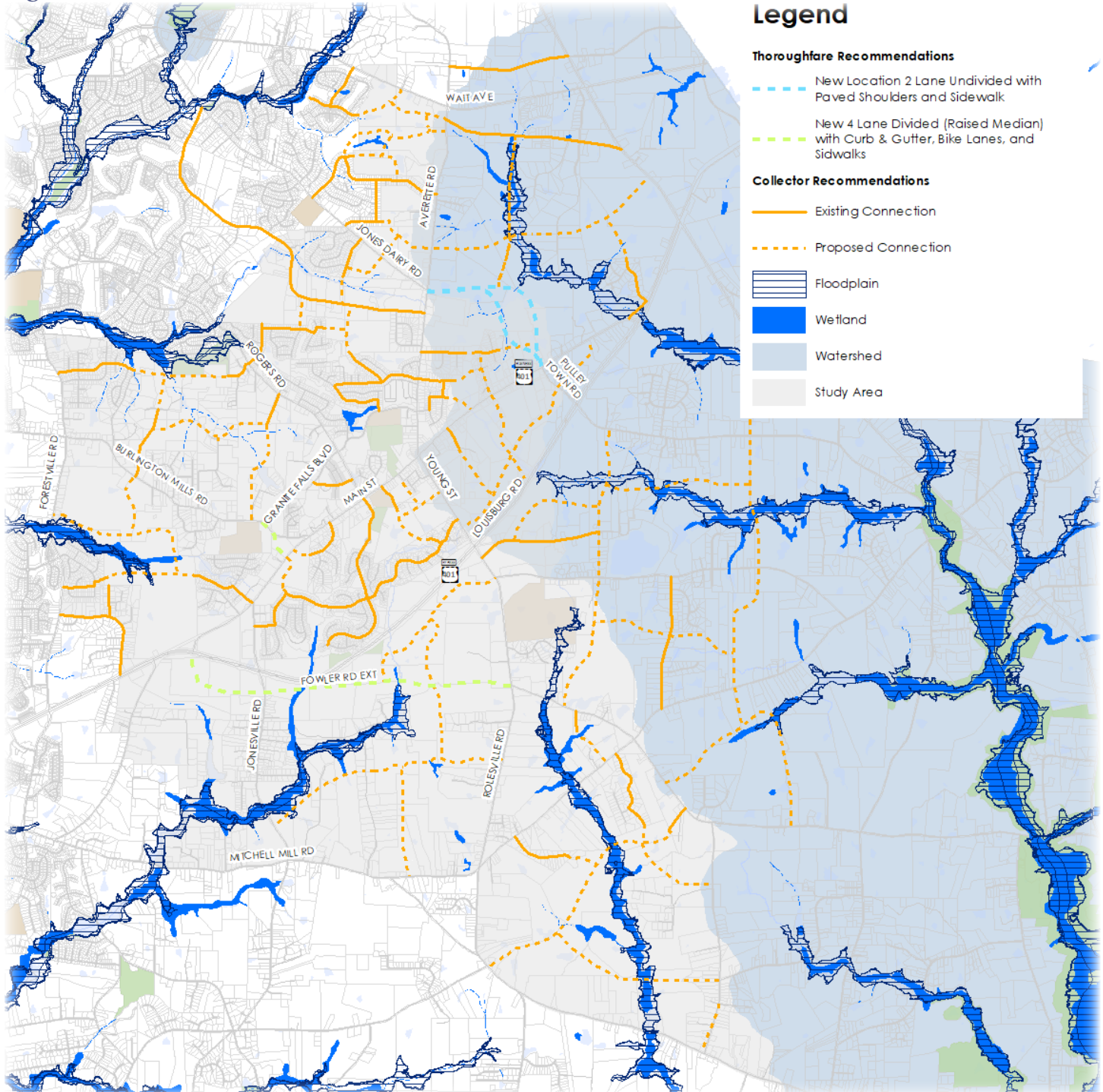


## Collector Recommendations

Connecting and enhancing the Town's network of collector streets will improve the distribution of traffic throughout the local network. A disconnected roadway system exacerbates traffic issues and increases travel times. A key goal of this network includes improve accessibility for residents while minimizing impacts to the natural environment. A properly implemented plan provide sustainable accessibility to activity centers. Both local and through-traffic will benefit from the reduced reliance on thoroughfares and enhanced multimodal transportation options.

Existing and proposed collector street connections are shown below. The connection points of proposed collector streets are important to facilitate overall network connectivity. However, the alignments of these proposed collectors are flexible and can be modified to accommodate development.

**Figure 32 - Collector Recommendations**



## Intersection Recommendations

The recommendations for the future system include improvements to critical or new intersections and interchanges. These locations were identified to alleviate operational deficiencies and safety concerns. To preserve mobility and enhance the overall efficiency of the transportation network, it is crucial to develop a collection of best practices to allow the Town to respond to changing development pressures. Rather than specific project recommendations, these best practices provide the ability to remain flexible while incorporating evidence-based planning procedures to make the best planning decisions for the Town's future. These best practices include intersection improvements and access management and connectivity best practices.

### Intersection Improvements

- **Realignments:** Roadways are realigned to meet at as close to a 90-degree angle as possible. This improves visibility and turning radius.
- **Signalization:** Some unsignalized intersections may be eligible for a traffic signal based on their traffic counts. The NCDOT or the Town must perform a study to determine if an intersection is eligible.
- **Connectivity:** Connectivity can be improved throughout the area providing alternative routing options to destinations and reduce some of the traffic at key intersections.
- **Improved Crossings:** Often the danger to pedestrians and bicycles can be reduced by providing improved crossing facilities such as painted crosswalks, median refuges, or flashing beacons.
- **Roundabouts:** In some locations, replacing a traditional signalized intersection with a roundabout can reduce the number of serious crashes while improving traffic flow.
- **Turn Lanes:** Turn lanes allow space for vehicles waiting to turn and reduces the risk of rear-end crashes.
- **Driveway Consolidation:** Curb cuts that are too close to an intersection are consolidated or relocated to reduce the number of turning movements or potential crashes.
- **Improved or Advance Signage:** Providing advanced warning signs or installing reflective backplates on traffic signals can reduce crashes due to reduced visibility.



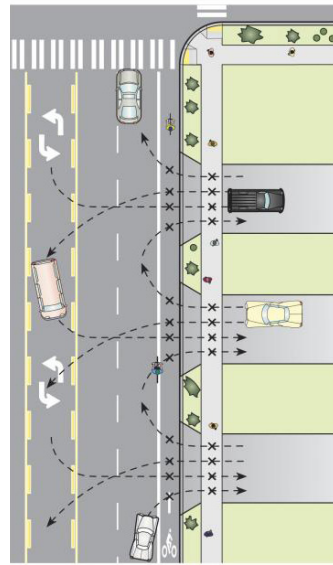
## Access Management Strategies

Access management strategies control the design, location, spacing, and operation of driveways, interchanges, median openings, and street connections to other roadways. Locations with poor access management often have higher crash rates, more cut-through traffic on residential streets, and greater congestion.

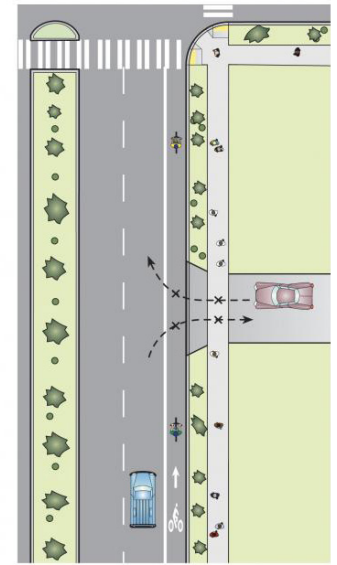
Access management strategies can make turning movements more predictable and minimize congestion or reduce crashes.

- **Dotted Line Markings:** These pavement markings reduce driver confusion and increase safety by guiding drivers through complex intersections.
- **Driveway Length:** Increasing the driveway length to commercial development prevents internal site operations from affecting the adjacent street.
- **Driveway Consolidation or Relocation:** Shared-access driveways minimize curb cuts and reduce traffic conflict while being particularly effective near intersections.
- **Intersection and Driving Curb Radii:** Curb radii sized for area context and vehicular usage limits occurrences of vehicles using opposing travel lanes or mounting the curb when turning. This results in less damage to infrastructure and enhanced pedestrian safety.
- **Left-Turn Storage Lanes:** Left-turn lanes reduce vehicle delay related to waiting for vehicles to turn and may decrease rear end crashes.
- **Minor Street Approach Improvements:** Adding left- and right-turn lanes on minor street approaches allocates more green time to the major street.
- **Non-Traversable Median:** Medians separate opposing vehicle flows and provide refuge for pedestrians. Carefully planned access points and u-turn access are critical considerations.
- **Offset Left-Turns:** Offset turn lanes shift the left-turn lanes to the left to reduce crossing and exposure time and improve sight distance and gap recognition.

Access management should never be considered a one-size-fits-all solution. Successful implementation is responsive to surrounding land use and travel context areas.



Uncontrolled accesses create 8 potential conflict points at every driveway.



A raised median and consolidating driveways reduce conflict points.

[https://live-active.org/basic\\_bike-walk\\_facility\\_design](https://live-active.org/basic_bike-walk_facility_design)



<http://www.mikeontraffic.com/left-turn-lane-design-factors/>

## Recommendations

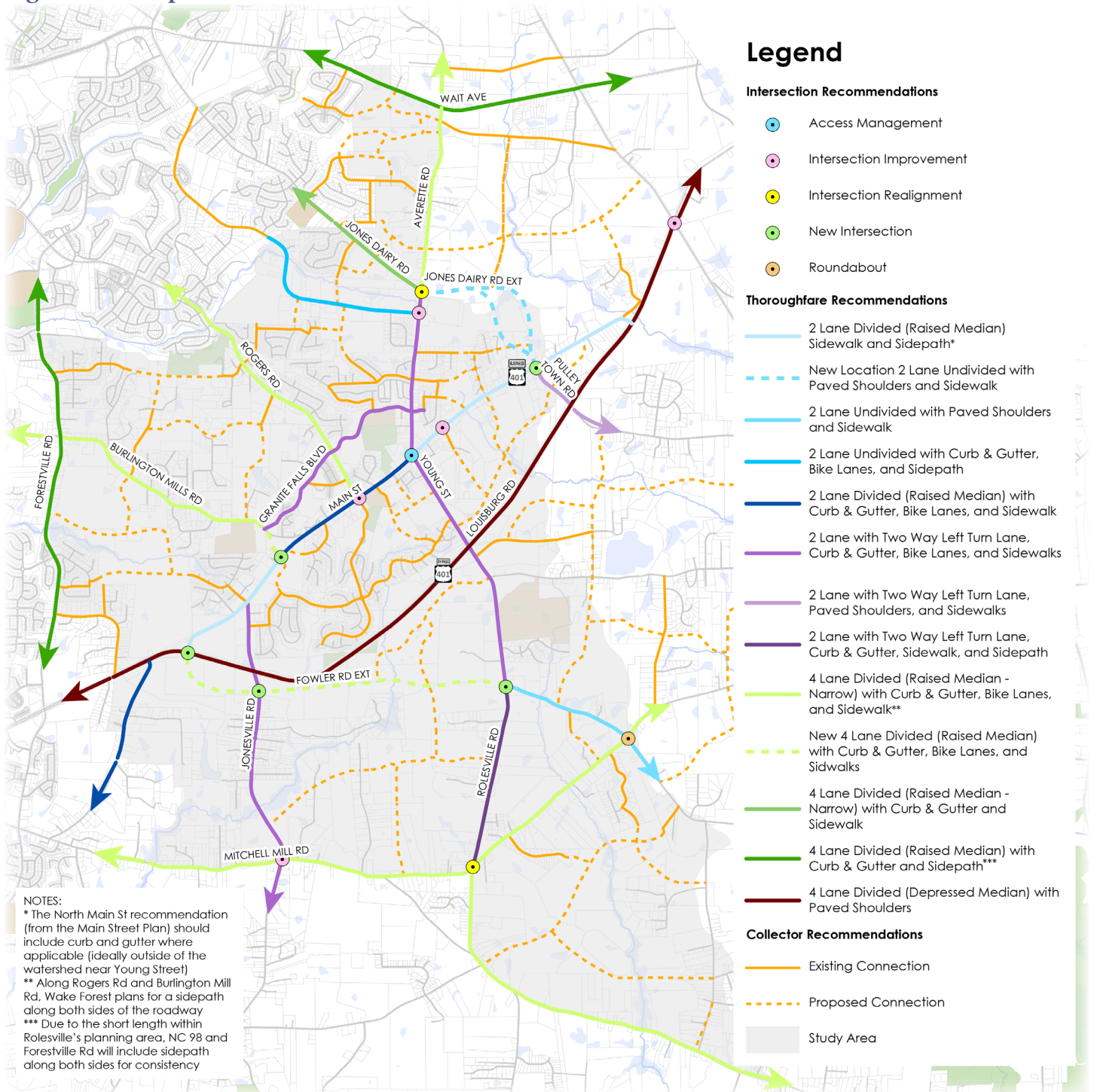
The table below explains the intersection recommendations at each location. While a combination of improvements can be used at each intersection, the identified recommendation address the most pressing issue at each given location. New intersections should be designed using best practices outline in the Town’s LDO and should proactively consider access management during the design phase. Specifics sections of the Town’s LDO are referenced in Chapter 6. While intersections were not noted as a key issue at any stage of public outreach, identifying locations for improvement could reduce pedestrian and bicyclist crashes and further encourage safe, active modes of transportation. The following table summarizes the status of each intersection as well as the recommendation.

Location	Status	Recommendation
US 401 BUS (N Main St) and Bowling Dr	Existing	Intersection improvement
US 401 BYP (Louisburg Rd at NC 96 (Zebulon Rd)	Existing	Intersection improvement
Mitchell Mill Rd at Rolesville Rd	Existing	Intersection realignment
Mitchell Mill Rd at Fowler Rd	Existing	Roundabout
US 401 BYP (Louisburg Rd) at Fowler Rd Ext	New	
Fowler Rd Ext at Rolesville Rd	New	
Fowler Rd at Jonesville Rd	New	
US 401 BUS (S Main St) at Burlington Mills Rd Ext	New	
Jones Dairy Rd/Jones Dairy Rd Ext at Averette Rd	Existing	Intersection realignment
US 401 BUS (N Main St) at Jones Dairy Rd Ext	New	
Averette Rd/Young St at Chalk Rd	Existing	Intersection improvement
Mitchell Mill Rd at Jonesville Rd	Existing	Intersection improvement
US 401 BUS (N/S Main St) at E Young St	Existing	Intersection improvement and access management
US 401 BUS (S Main St) at Rogers Rd	Existing	Intersection improvement

## Proposed Network

The proposed network combines thoroughfare, collector street, and intersection recommendations to provide a glimpse at the future of mobility in and around the Town of Rolesville. With a variety of multimodal facilities, the proposed network is friendly for all users. The future of transportation will leverage surrounding land uses and build off of new development or shifting land uses. The multimodal provisions provide options for active modes of transportation throughout and around the Town of Rolesville.

Figure 33 - Proposed Network



## Off-Street Recommendations

The Town of Rolesville is currently in the process of updating the Open Space and Greenway Plan (OSAG). The updated plan will identify the areas in need of protection and conservation as well as identifying linkages between green space and residential, commercial, and business areas of the community.

In addition to the Open Space and Greenway Plan, the Town is currently re-writing its Land Development Ordinance (LDO). In accordance with the Open Space and Greenway Plan, the LDO will strengthen connectivity by linking land uses to new greenway facilities as well as create new standards for parks and greenways. Where the Community Transportation Plan focuses on the on-street, multimodal connections between land uses, future planning efforts will help refine and supplement the transportation network.

## Future of Transit

In a joint effort to enhance transit across Wake County, the Town of Rolesville and Wake Forest initiated the Rolesville and Wake Forest Transit Study to identify a preferred alternative for transit services. In May 2020, the Rolesville and Wake Forest Board of Commissioners approved three alternatives to be shared with the public for input and feedback. The three service alternatives that were presented included:

- Peak-hour and mid-day fixed route connector between Rolesville and Wake Forest.
- Microtransit Option 1: Dedicated demand response service
- Microtransit Option 2: Demand response ridesharing service and GoWake access ADA supplement service

The public survey respondents indicated a preference for the first service alternative. The Town’s five-year budget plan will include capital costs for at least four future fixed-route bus stop shelters as part of this service. The Town would be able to apply for funding through the Community Funding Area Program (CFAP).

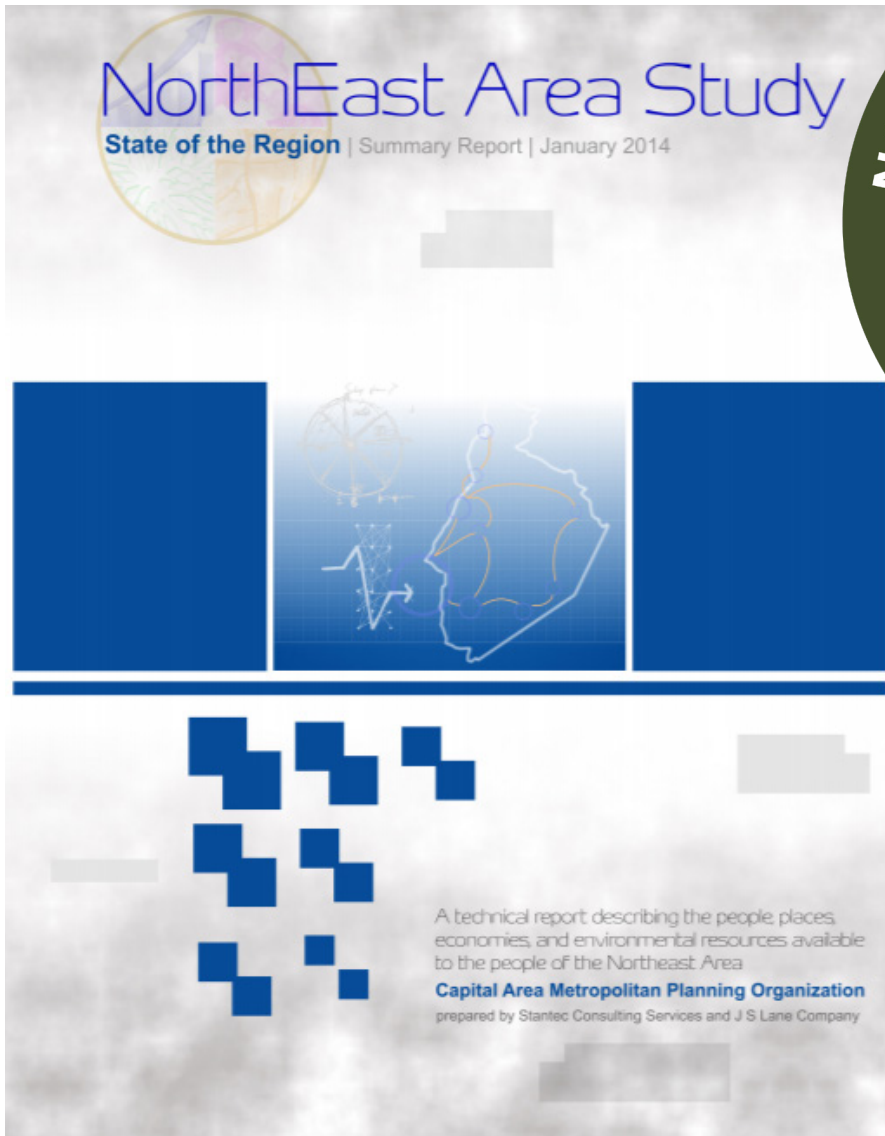
While service options two and three were not identified as the preferred alternative, these service options still provide flexible options for future transit service. Leveraging the previous work conducted in the Rolesville and Wake Forest Transit Study can help identify future opportunities to expand service or collaborate with regional partners.





# Looking Forward

The Northeast Area Study (NEAS) conducted by CAMPO will be an update of the 2014 Northeast Area Study. The NEAS Update will focus on sustainable transportation, as well as evaluate land use, economic development, and multimodal needs in the planning area. The areas of study include parts of Franklin County, Wake County, the City of Raleigh, and the Towns of Bunn, Franklinton, Knightdale, Rolesville, Wake Forest, Wendell, Youngsville, and Zebulon. The NEAS will inform recommendations that will be considered for inclusion in the CAMPO 2050 Metropolitan Transportation Plan. The study is expected to be completed in summer 2021. During the Rolesville Moves Community Transportation Plan development, the project team collaborated with CAMPO by providing the plan's draft recommendations and discussing the implications of those recommendations on land use and to ensure consistency between planning efforts. Town Staff and CAMPO will continue to collaborate in the final phase of plan development and the ultimate implementation of the regional transportation network.



5



## THE FUTURE NETWORK VISUALIZED

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# Introduction

Two corridors were identified for further study. These projects include the new Jones Dairy Road Extension and Young Street/Rolesville/Averette Road between NC 98 (Wait Avenue) and Mitchell Mill Road.

## Jones Dairy Road Extension

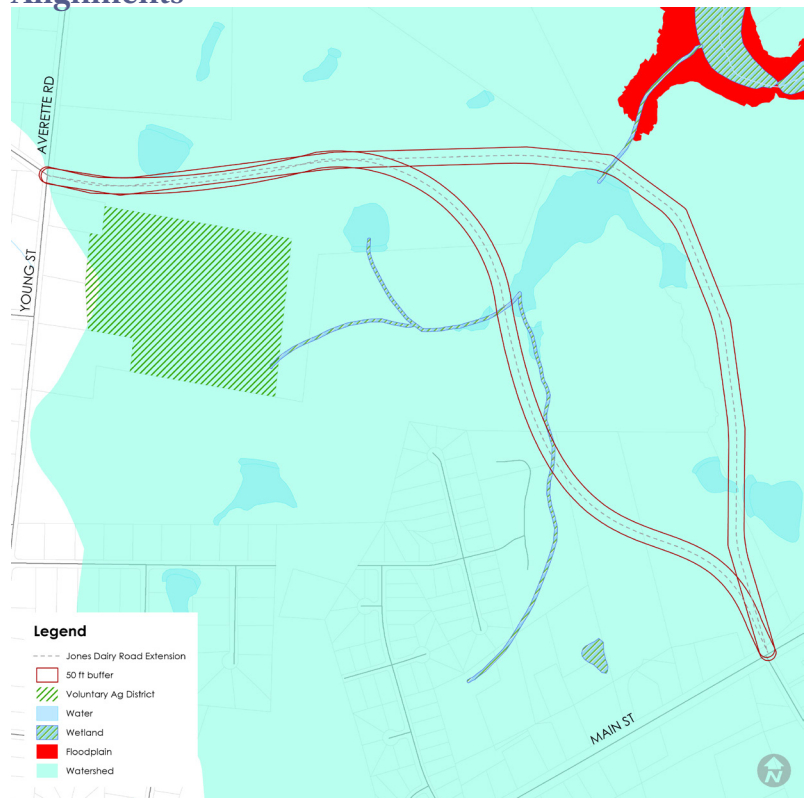
### Averette Road/Young Street to US 401 BUS (Main Street)

As part of the Rolesville Community Transportation Plan, the two alternative alignments for the Jones Dairy Road extension were considered. As a high priority connection between Averette Road and Main Street, understanding the surrounding traffic needs as well as environmental constraints are crucial to identifying the preferred alignment. Through conversations with the Town staff, the site developer, and the Army Corps of Engineers each alternative’s potential impacts were considered. Figure 34 shows the two alternative alignments for the Jones Dairy Road extension. The key considerations outlined in this document are not intended to be a comprehensive preferred route study, but to outline considerations that were considered as the Town prepared to move forward with implementation of the extension.

### Key Takeaways

While there are numerous environmental considerations, the challenges associated with the Jones Dairy Road extension do not differ greatly between the two alternatives. As the cost only minimally differs between the two alternatives, either alignment would likely have to go through the same permitting and mitigation process. While the more western alignment does cross wetland area twice as opposed to the eastern alignment that only crosses once, the western alternative may have more parallel impacts due to the proximity to wetlands and require greater mitigation strategies. After many conversations and desktop reviews of site conditions, the Town’s preferred alternative is the eastern most alignment. However, key next steps will include the full delineation of wetlands — at which time the Town may make a more informed decision on the preferred alignment.

Figure 34 - Jones Dairy Road Extension Alternative Alignments



## Jones Dairy Rd Extension

Jones Dairy Rd/Averette Rd to US 401 BUS (Main St)/Pulley Town

Existing Condition



Future Condition



# Young Street/Rolesville Road/Averette Road

## NC 98 (Wait Avenue) to Mitchell Mill Road

Young Street, particularly as it intersects near Main Street is a critical link in helping Rolesville create a true town center by utilizing urban design practices and building a sense of place. While traffic volumes on Young Street are growing as development increases, the Town’s efforts will focus on promoting walk-ability, bike-ability, and downtown beautification in lieu of further widening to accommodate vehicular travel in the areas proximate to downtown.

This corridor is the north-south gateway into downtown Rolesville, connecting the areas near Wake Forest through Rolesville’s central business district. Rolesville High School and Main Street Park also rely on Young Street for access. The two-lane corridor includes disjointed sidewalks and lacks accommodations for bicyclists. General improvements (e.g., repaving and re-striping) could enhance north-south travel and provide safer conditions for a variety of travel modes. Access management to improve safety, sidewalk connections to improve walkability, and streetscaping to improve appearance would enhance this gateway to downtown Rolesville.

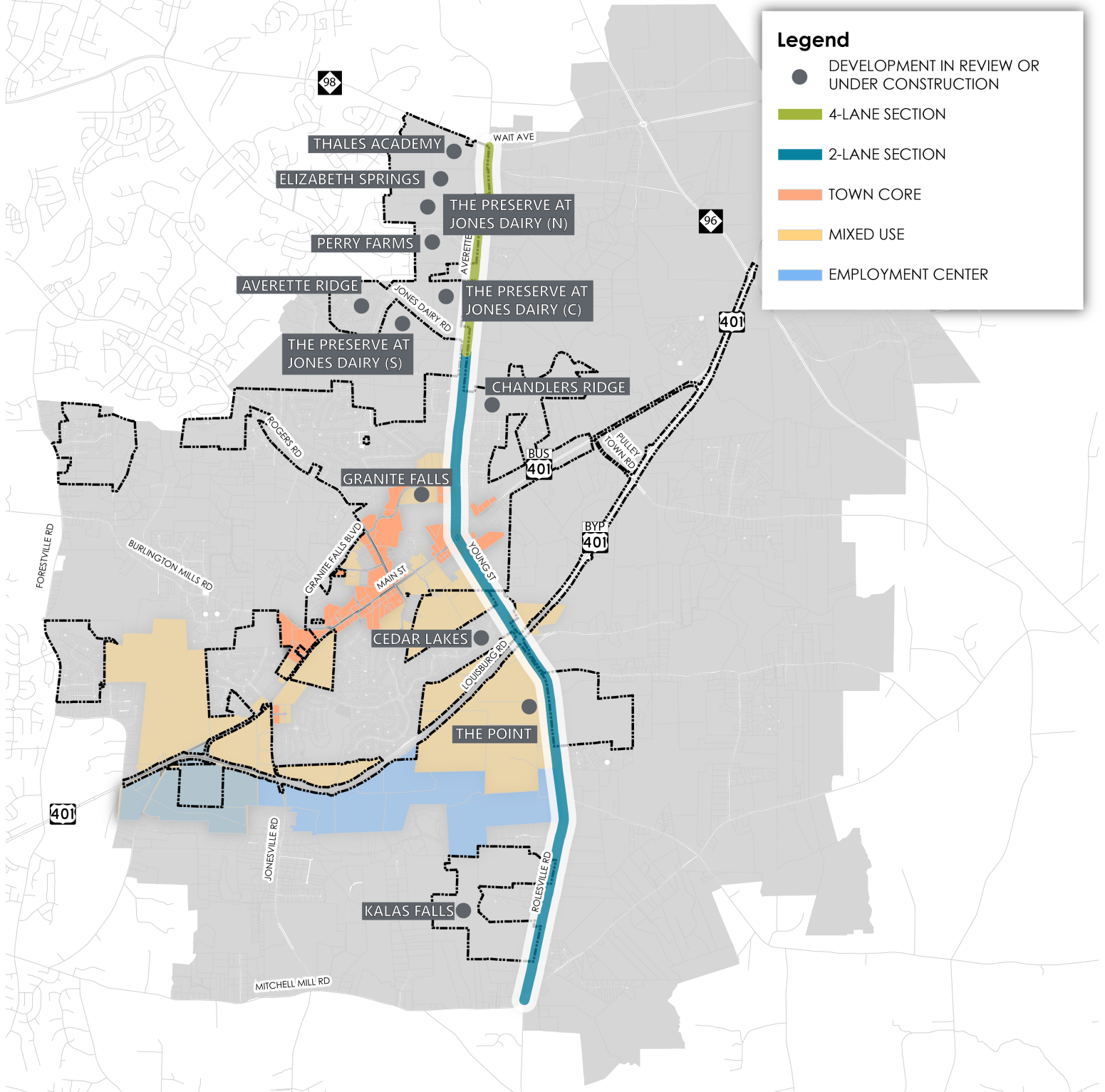
### Existing Condition



### Future Condition



**Figure 35 - Young Street/Rolesville Road/Averette Road Context Map**



6

ROLESVILLE HIGH SCHOOL 1099





# PROJECT IMPLEMENTATION PLAN

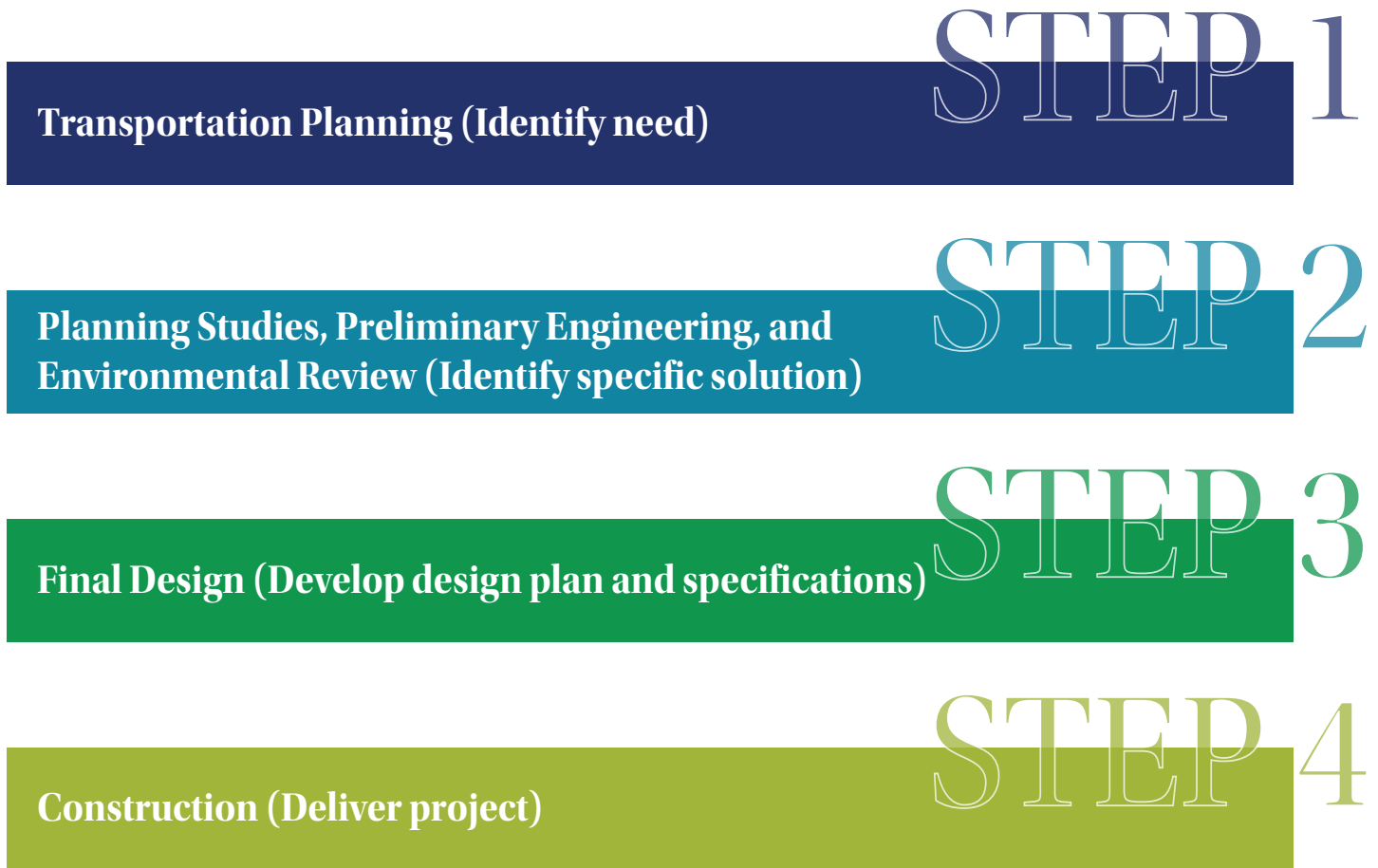
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## Action Plan

The success the CTP will hinge on the ability of local, regional, and state officials to effectively collaborate on the implementation of projects and policies. The recommendations in this plan built on previous plans and ongoing efforts by the Town of Rolesville to improve the transportation network through close coordination with agency partners and the Town’s transportation and land use policies. The completion of this plan will be the preliminary step in implementing a multimodal network that affects mobility, safety, development patterns, and the aesthetic character of Rolesville. This chapter outlines a simple set of recommendations to guide local staff to identify strategic opportunities to implement the on-street recommendations of the CTP.

## The Project Development Process

Most of the recommendations in the CTP will need to undergo additional evaluation and further development prior to implementation. The graphic below outlines the general project development process to see an identified need in the CTP (Step 1) move through design and construction. A good example of a project already advancing through the project development process is Main Street for which the Town completed a detailed corridor study, preliminary engineering, and is in the final design stage now.



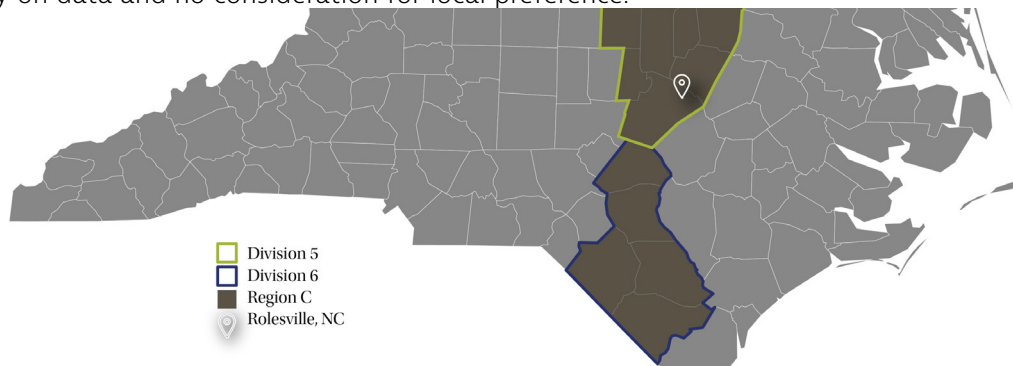
## Funding Process

Funding for most transportation projects is allocated by NCDOT. To ensure effective investments, NCDOT has created a methodology that considers projects separately based on the area of impact. This process considers both quantitative data and local input. Ultimately, NCDOT aims to enhance the state’s infrastructure and in turn support economic development and quality of life. This process is formally known as the Strategic Mobility Formula and was established under the State Transportation Investments law. The three categories used when funding projects within the Strategic Mobility Formula are outlined below.

## Funding Categories

The Strategic Mobility Formula funds projects in three categories: Division Needs, Regional Impact, and Statewide Mobility.

- **Division Needs:** Project in this category receive 30% of available revenue. Rolesville projects compete with all projects in Division 5 which includes the rest of Wake County, as well as Durham, Franklin, Warren, Vance, Granville, and Person Counties. This category is where the bulk of Rolesville’s roads qualify for funding. Projects are scored in the Division Needs category based on both data and local preference – each valued equally.
- **Regional Impact:** Projects in this category also receive 30% of available revenue. Rolesville is in Region C – made up of Division 5 and Division 6. Similar to Division Needs, projects in the Regional Impact category are scored based on both data and local preference; however, the data score makes up 70% of the overall score and local preference makes up 30%.
- **Statewide Mobility:** Projects in this category receive 40% of available revenue. Projects in this category are scored solely on data and no consideration for local preference.



## Development Driven Projects & Other Funding Sources

Developer contributions to the funding, construction, and implementation of transportation infrastructure are a large part of Rolesville’s ability to remain a vibrant and growing community. By applying tools such as the Comprehensive Plan, the Land Development Ordinance, and the Traffic Impact Analysis requirements contained within Section 8: Traffic Impact of the LDO, the Town is able to clearly communicate with developers and identify improvements needed to accommodate new or infill growth while protecting the mobility of current residents and workers. When new developments are proposed in the Town, all efforts should be made to ensure that those new developments are consistent with the transportation recommendations from this plan and other transportation planning efforts. Development should be supportive of transportation and mobility solutions. Additionally, this requires consideration of right-of-way expectations to ensure the site can accommodate future widening or inclusion of bicycle and pedestrian facilities. This requirement is spelled out in Section 9.2: Streets and Sidewalks of the Land Development Ordinance. Collaboration between Town staff, NCDOT, and the development community is key to the success of this approach.

The Town of Rolesville should also consider leveraging other sources of funding like the State Street-Aid (Powell Bill) Program or Rolesville’s dedicated road development fee.

## Project Prioritization

### Roadway Prioritization Process

The Rolesville Moves CTP includes a prioritization assessment for roadway projects to assist the Town with identifying how to best allocate future funding. The prioritization includes a blend of quantitative and qualitative metrics. The metrics used were developed using feedback received from Town staff, the plan’s Steering Committee, public input, CAMPO, and NCDOT. The following section outlines each metric used in the prioritization process. This process helped identify near-, mid-, and long-term priority projects.

The prioritization methodology can be found in the table below. Intersections were not prioritized and should be implemented on an as-needed basis. Once prioritization metrics were identified, weighting values were determined for each of the metrics. These weighting values were based on input from the public, Town staff, and the Steering Committee.

Evaluation Criteria	Score	Weight
Previous Plan	Project received a score of 1 if they are included in a previous or adopted plan. Projects that have not been included in a previous or adopted plan will receive a score of 0.	5%
Crash History	NCDOT Planning Level Section Safety Scoring Data was utilized to identify project areas with high scores, which are considered to have poor safety performance.	15%
Existing V/C Ratio	The existing volume-to-capacity(V/C) ratio for each project was scaled using the Triangle Regional Model. Projects that were highly congested received the highest scores.	15%
V/C Reduction	Each project was scored based on the V/C reduction from the model's base year (2013) to the horizon year (2045). Future year V/C was obtained from a future year build-out model. Projects with the highest reduction were scored highly.	10%
Bicycle & Pedestrian	Projects receive a high score if they accommodate both bicyclists and pedestrians. Projects receive a moderate score if they accommodate only one mode of active transportation.	15%
Transit	Projects receive points if the roadway has been identified in the Joint Rolesville-Wake Forest Transit Study as a potential transit corridor. In addition, existing transit connections also receive points.	10%
Critical Connections	Critical connections serve or provide new linkages for schools, emergency services, community facilities, and potential activity centers. Projects classified as a critical connection receive a higher score.	20%
Value/Cost	The prioritization criteria outlined in this methodology are structured to reflect values of the project’s implementation. The total value score was obtained through the process and was divided by the estimated project cost. The project with the top value/cost received the highest score with other projects receiving a relative score.	10%

The intent of the prioritization process is to provide the Rolesville Board of Commissioners, the Rolesville Planning Board, and Town staff with a tool to use in decision making. The findings from this prioritization exercise can be used to guide communication with agency partners or members of the general public. The prioritization findings should also adapt to the circumstances that present a growing community such as Rolesville. As new development is being considered within the study area, the prioritization order may need to be revisited to best accommodate emerging areas of growth.

## Roadway Prioritization Results

The table below reflects the near-, mid-, and long-term priorities for roadway recommendations in the Rolesville CTP. Within each grouping, projects are not listed in a specific order. Plan corridor prioritization results can be used as a tool by the Town when establishing the annual CIP list. Since this plan is not financially constrained, there are no specific time periods associated with each prioritization grouping. The Town should pursue these improvements opportunistically to help keep pace with the emerging or shifting needs of Rolesville.

Term	Project
Near-term (0-10 years)	*S Main St ( <i>Burlington Mill Rd Realignment to Young St</i> )
	Rogers Rd ( <i>US 401 BUS (Main St) to Granite Falls Blvd</i> )
	S Main St ( <i>US 401 BUS US 401 BYP (Louisburg Rd) to Burlington Mill Rd Realignment</i> )
	Rogers Rd ( <i>Granite Falls Blvd to Western Study Area Limits</i> )
	Granite Falls Blvd Ext ( <i>Grand Rock Way to Burlington Mill Rd Realignment</i> )
	Averette Rd/Young St/Rolesville Rd ( <i>Jones Dairy Rd to Fowler Rd</i> )
	Burlington Mills Rd ( <i>Burlington Mill Rd Realignment to Forestville Rd</i> )
	*Burlington Mills Rd Realignment ( <i>Burlington Mill Rd to US 401 BUS (S Main St)</i> )
N Main St ( <i>Young St to US 401 (Louisburg Rd)</i> )	
Mid-term (10-20 years)	Granite Falls Blvd ( <i>Terrell Dr to Grand Rock Way</i> )
	Forestville Rd ( <i>Foxwild Ln to Lillies Liles Rd</i> )
	Averette Rd to ( <i>Jones Dairy Rd to NC 98 (Wait Ave)</i> )
	Rolesville Rd ( <i>Fowler Rd to Mitchell Mill Rd</i> )
	Jones Dairy Rd ( <i>Averette Rd to Northwestern Study Area Limits</i> )
	Jones Dairy Rd Ext ( <i>Jones Dairy Rd/Averette Rd to US 401 BUS (Main St)/Pulley Town Rd</i> )
	Fowler Rd ( <i>Rolesville Rd to Mitchell Mills Rd</i> )
	**US 401 BYP (Louisburg Rd) ( <i>NC 96 (Zebulon Rd) to Northern Study Area Limits</i> )
	Folwer Rd Ext ( <i>US 401 BYP (Louisburg Rd)/US 401 BUS (Main St) to Rolesville Rd</i> )
Louisbury Rd ( <i>US 401 BYP (Louisburg Rd) to Southern Study Area Limits</i> )	
Long-term (+20 years)	Jonesville Rd ( <i>US 401 BUS (Main St) to Mitchell Mill Rd</i> )
	Pulley Town Rd ( <i>US 401 BYP (Louisburg Rd) to US 401 BUS (N Main St)</i> )
	Rolesville Rd/Riley Hill Rd ( <i>Mitchell Mill Rd to Riley Hill School Rd</i> )
	Mitchell Mill Rd ( <i>Rolesville Rd to Eastern Study Area Limits</i> )
	NC 98 (Wait Ave) ( <i>NC 96 (Zebulon Rd) to Western Study Area Limits</i> )
	Mitchell Mill Rd ( <i>Fowler Rd to Rolesville Rd</i> )
	Chalk Rd ( <i>Averette Rd to Western Study Area Limits</i> )

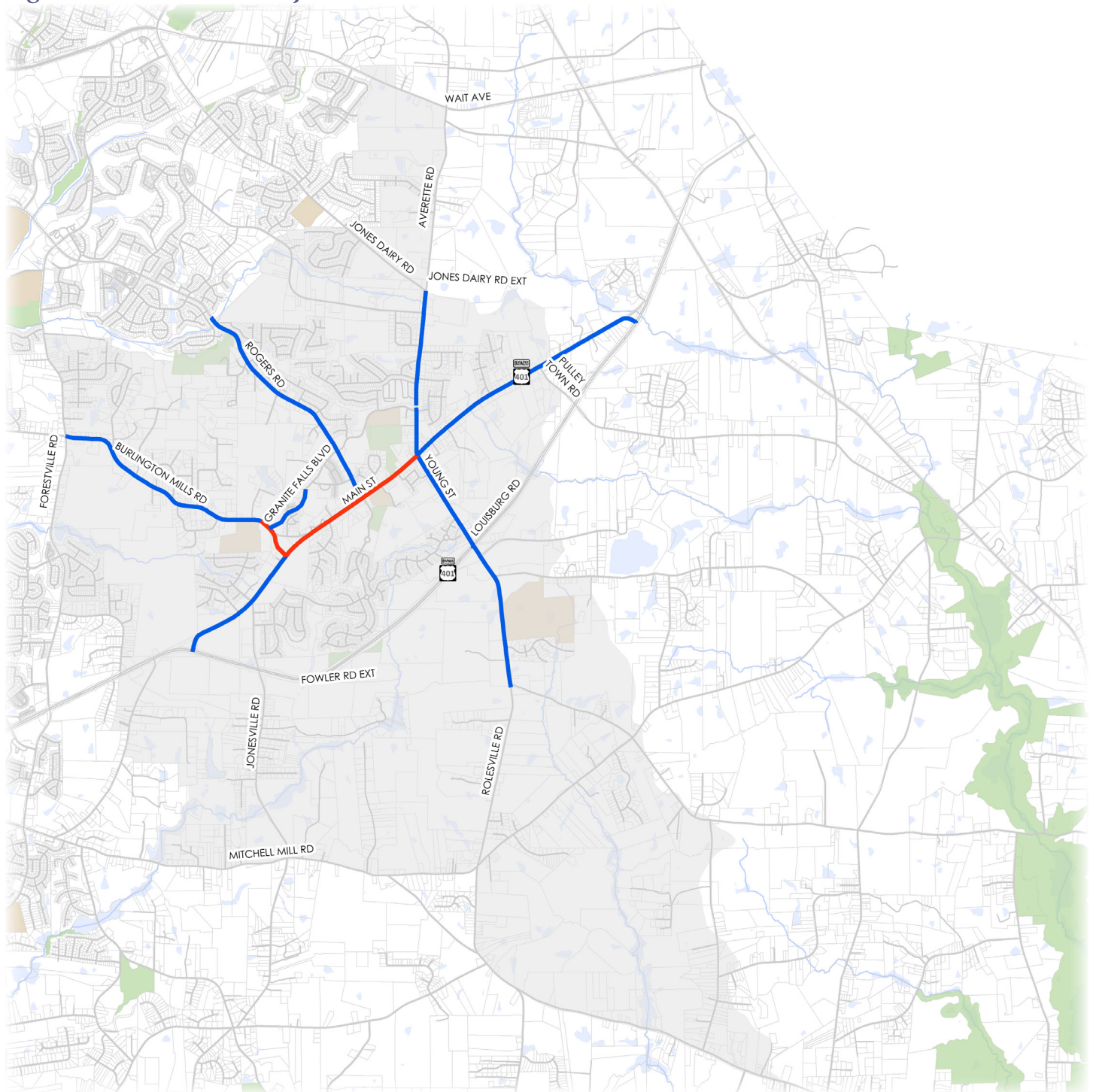
\*LAPP 2021 Project

\*\*The existing cross section aligns with the recommended cross section

# Near-Term

The near-term projects represent the on-street recommendations that are of the highest priority. The implementation of the recommendations should start with the thoroughfares identified in blue like Averette Street/Young Street/Rolesville Road, Burlington Mills Road, Rogers Road, Granite Falls Boulevard Extension, and Main Street. The roadways shown in red are currently committed projects or are in the process of being completed. The Burlington Mills Road realignment and section of South Main Street highlight the Town's commitment to multimodal enhancements and safety. By leveraging resources, the implementation of the near-term projects should allow the Town to create the expansive multimodal network that preserves the Town's charm.

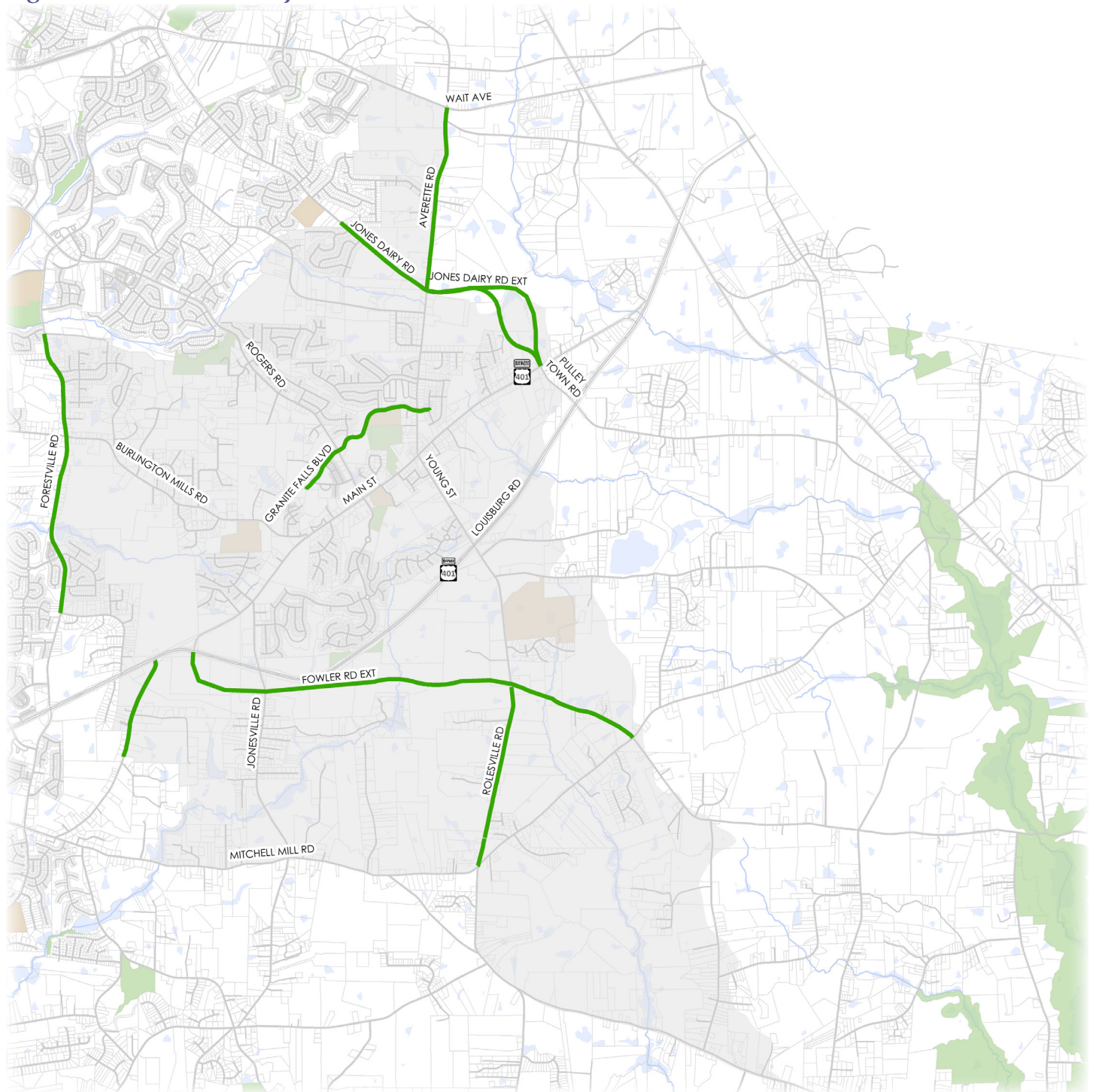
**Figure 36 - Near-Term Projects**



# Mid-Term

The mid-term projects are recommendations that will benefit the Town the most after the completion of the near-term needs. While these project would provide enhanced connectivity, the implementation of these projects would require a strong base transportation network. Similar to the near-term projects, the mid-term projects have identified multimodal facilities and enhanced roadway amenities like curb and gutter. Special consideration should be given to the design of these facilities, particularly in areas to the east of Rolesville in or near the Little River watershed.

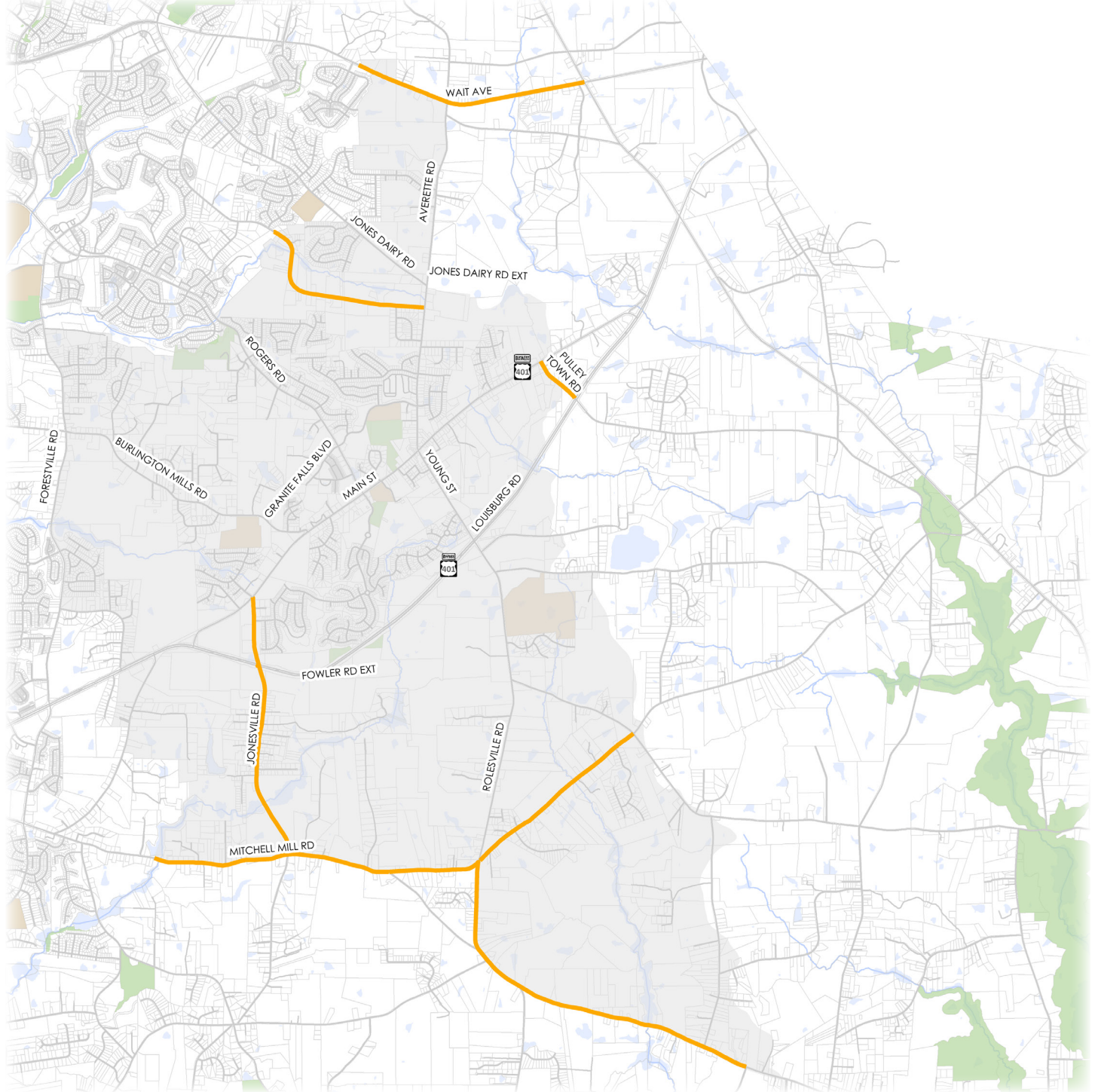
Figure 37 - Mid-Term Projects



# Long-Term

The long-term projects represent the recommendations that are not the Town's highest priority; however, given that the Town's needs could change over time, these projects can be opportunistically implemented. While the majority of these projects are focused on mobility to areas outside of Rolesville rather than in the Town's core, the importance of inter-jurisdictional connectivity cannot be overlooked. The implementation of recommendations on thoroughfares like NC 98 (Wait Avenue) or Mitchell Mill Road should be closely coordinated with agency partners like NCDOT and CAMPO as well as other entities like the City of Raleigh, Wake County, and the Town of Wake Forest.

Figure 38 - Long-Term Projects





## Conclusion

Implementing Rolesville Moves CTP will be an ongoing and iterative process that should be reevaluated on a regular basis. Moving forward, key steps at the Town-wide level that will help advance the recommendations include the following:

- Update the CTP every five years to ensure the plan's recommendations and objectives remain relevant.
- Finish the update of the Land Development Ordinance.
- Amend the CTP once the new Open Space and Greenways Plan has been completed, as well as the Rolesville Bicycle Plan Update.
- Update the CTP annually to include new transportation network enhancements as they are identified in the development review process.
- Revisit the Comprehensive Plan after the adoption of the CTP to review and adjust the Comprehensive Plan if needed.

The Rolesville Moves Community Transportation Plan provides a vision for transportation recommendations that considers existing and future needs for all travel modes. The creation of this Action Plan helps staff and elected officials advocate for projects that will have the greatest impact to the Town. The Town has many identified transportation needs, and fully funding and implementing the recommendations will take a number of years. As projects move forward into funding and implementation, the Town will need to work with the Capital Area MPO and NCDOT to determine how best to advance recommended projects. The Town will also continue to monitor emerging needs and changes in the way projects can be funded and implemented. Project priorities will be reassessed through subsequent updates to this plan. This dynamic process will help the Town of Rolesville continue to effectively address its transportation needs both now and into the future.



## APPENDIX

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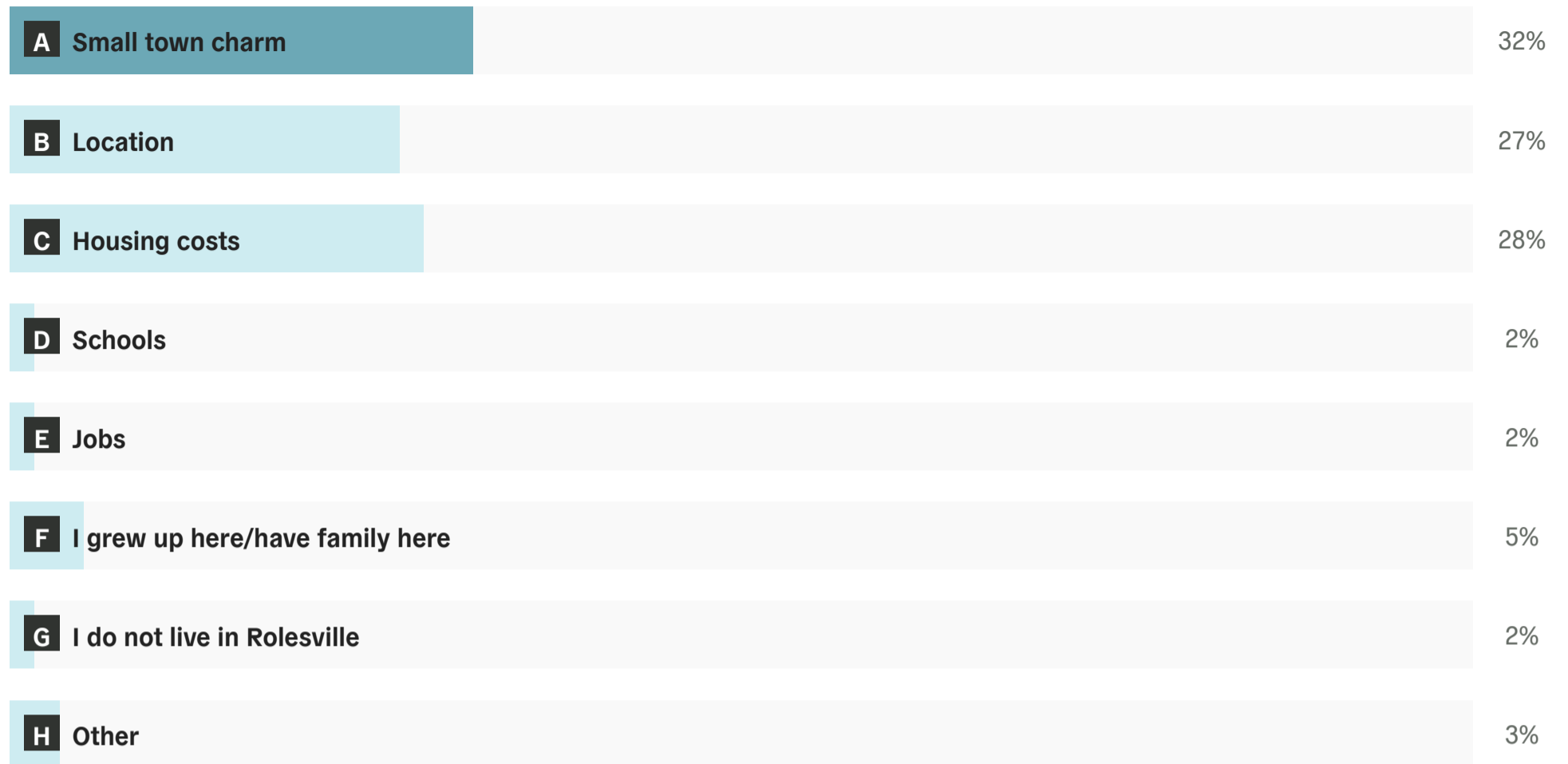


# Rolesville Community Transportation Plan Survey

Survey Results  
FINAL

06/18/2020

The main reason I choose to live in Rolesville is: (select one)



What is ONE WORD that describes your vision for Rolesville in the future?

- Growth
- Outdoors
- Community
- Beautiful
- safe
- Inviting
- Home!
- Growth
- modern town
- I know we are expanding, but I would love to keep the small charm. So...CHARM
- Small
- Family
- Quaint
- Expansion
- Charming
- Close to big city attractions, yet small town convenience.
- Charm
- Charming
- Growing
- Quaint
- Charming
- Growth.....but not just growth in residential housing
- Growing
- Charm
- Country
- Innovation

Restaurants

Expanding

Progressive

community

Hopeful

Private

We need a downtown, without destroying all of the trees.

Growth!

Destination

Prosperous

Quality

Cary

Growth

Connected

progress

Growth

Community

Small, friendly and modern town

Infrastructure

Growng

Potential The survey didn't allow for any short answer responses, but I wanted to clarify that I live in zip code 27587. It is Zoned Wake Forest, but it is adjacent to Rolesville Middle School, so any changes made to Rolesville also impact Wake Forest residents.

Remain a SMALL, caring community.

Progressive

hometown

Modern

Growth

Progressive

Homey

Slow down on the building. The town losing its hometown feel

Sustainable

Quaint

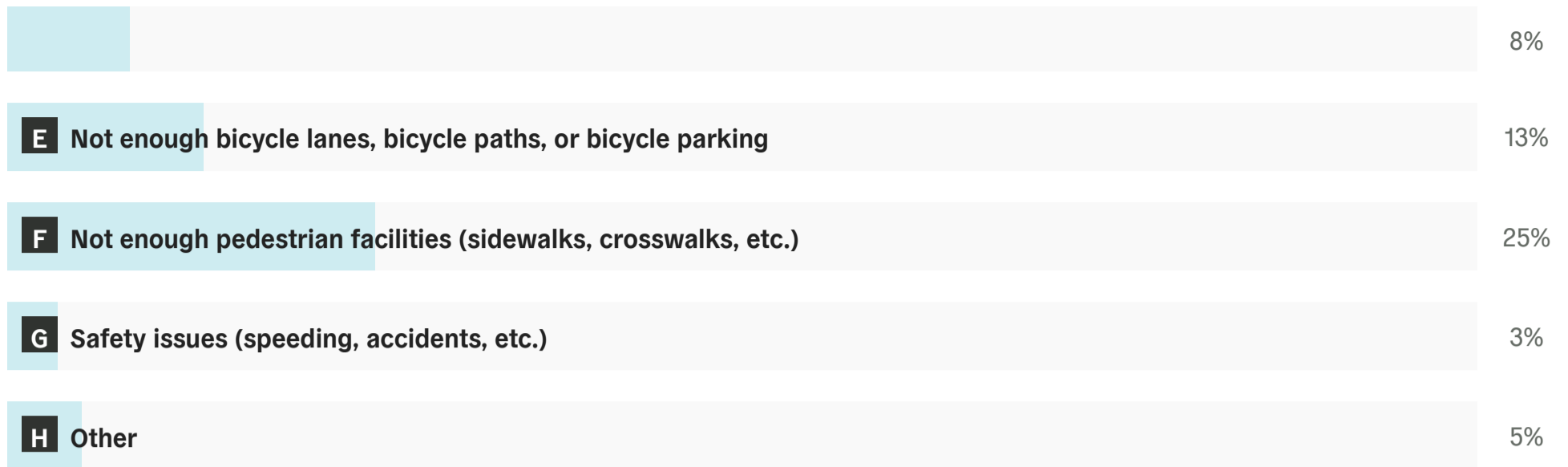
Quaint

Quant

commUNITY

**What is the most important transportation issue facing Rolesville? (check one)**

- A** Traffic congestion and delay 12%
- B** Pavement conditions or maintenance 7%
- C** Disconnect between development patterns and transportation infrastructure 27%
- D** Not enough public transportation service (bus, etc.)



**Please rate each of the following transportation conditions in Rolesville out of these categories: Excellent, Good, Fair, Poor**

Question	Excellent	Good	Fair	Poor
Ease of travel by car in Rolesville	45%	42%	13%	0%
Ease of travel by public transportation in Rolesville	7%	20%	23%	50%
Ease of travel by bicycle in Rolesville	7%	27%	48%	18%
Ease of walking in Rolesville	7%	32%	43%	18%
Ease of public parking	13%	48%	30%	8%
Roadway maintenance	17%	55%	23%	5%
Congestion on local roads	20%	50%	27%	3%
Congestion on major roads	20%	38%	25%	17%
Attractiveness of roads	10%	37%	40%	13%
Traffic signal timing	7%	48%	35%	10%
Traffic safety	18%	62%	18%	2%

**Ease of travel by car in Rolesville**



**Ease of travel by public transportation in Rolesville**



**Ease of travel by bicycle in Rolesville**



**Ease of walking in Rolesville**



**Ease of public parking**



**Roadway maintenance**



**Congestion on local roads**



**Congestion on major roads**



**Attractiveness of roads**



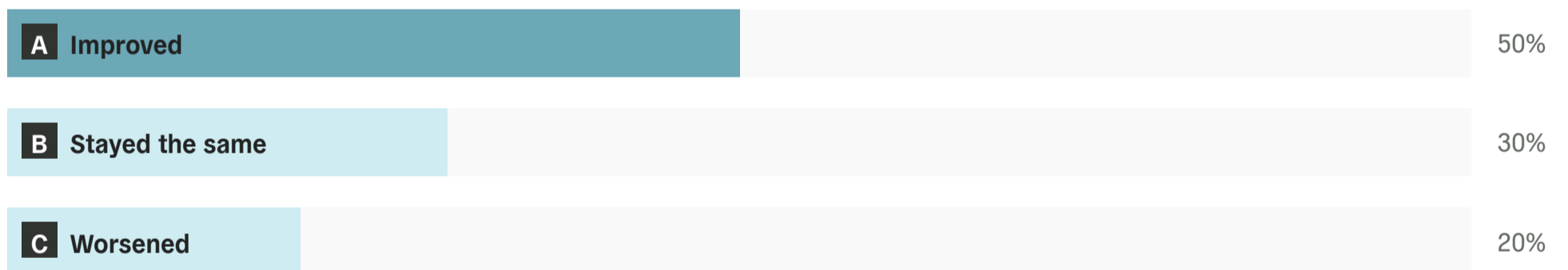
**Traffic signal timing**



**Traffic safety**



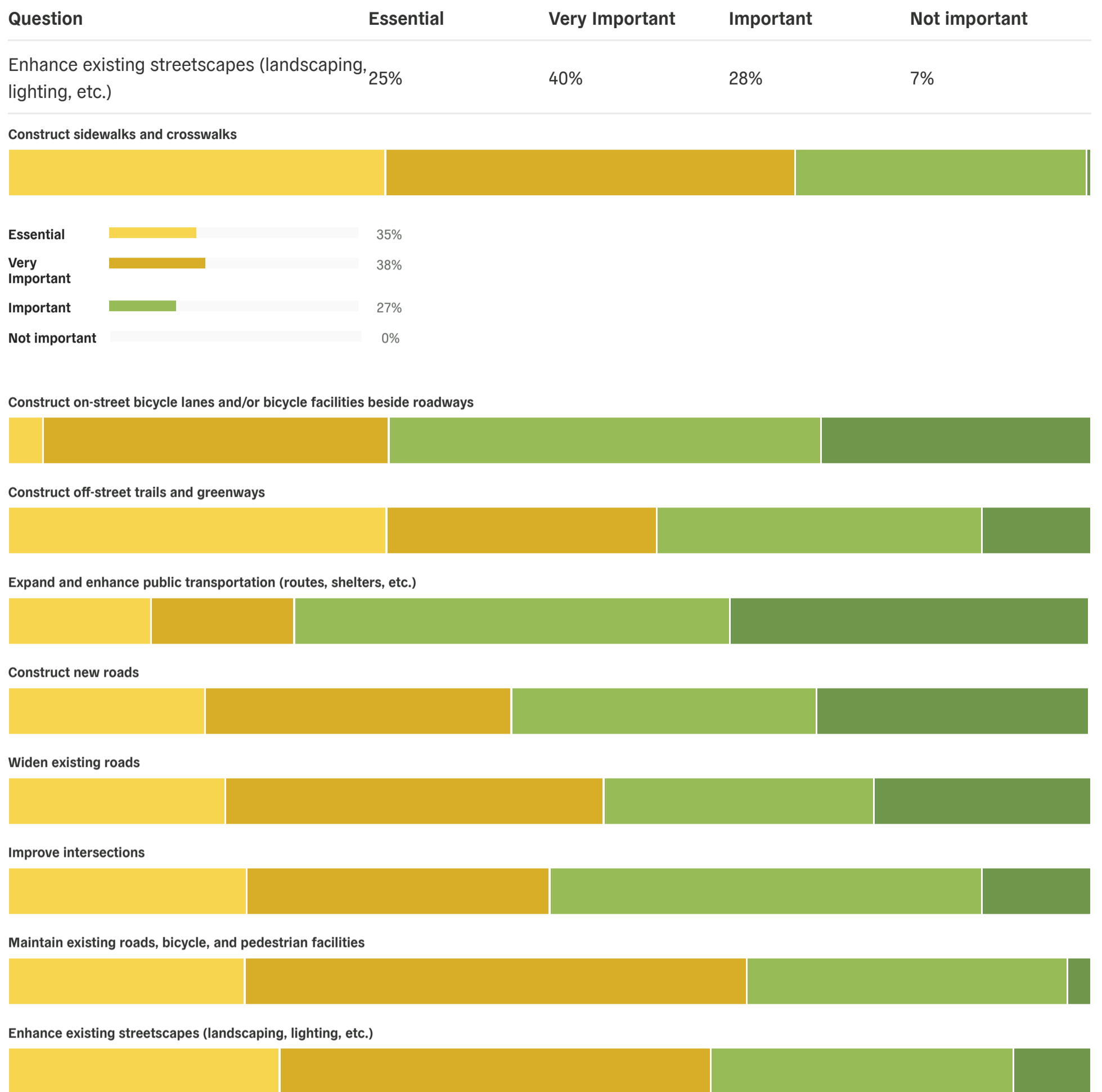
**In the last five years, has the transportation system improved, stayed the same, or worsened? (check one)**



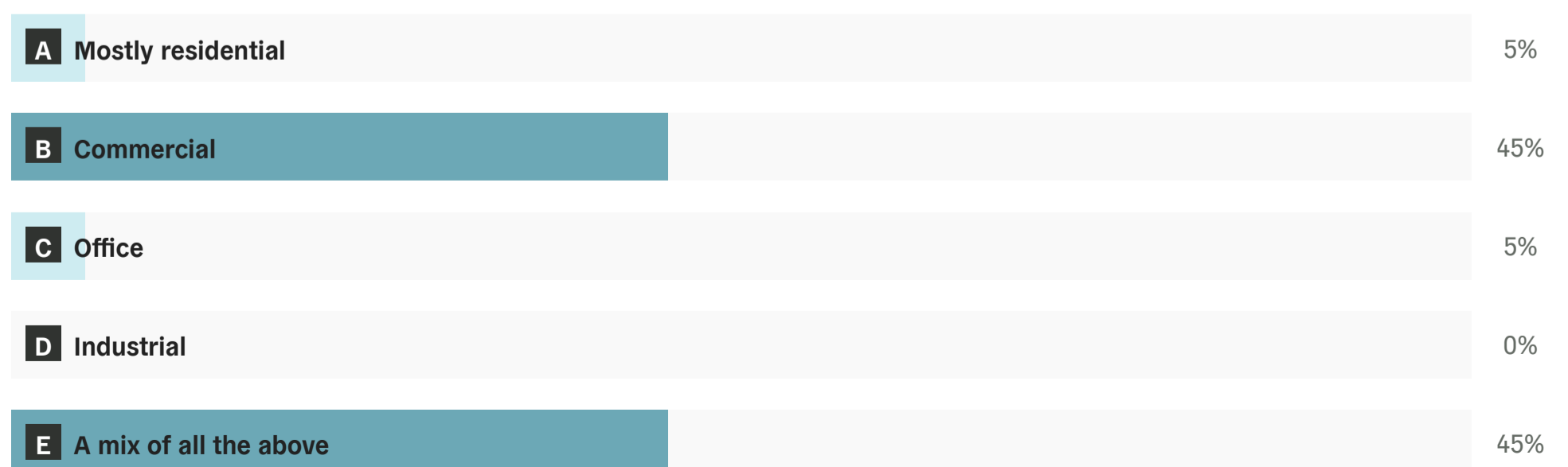
**How should your tax dollars be spent on transportation in Rolesville? Share what you think is the importance of each (essential, very important, important, or not important)**

Question	Essential	Very Important	Important	Not important
Construct sidewalks and crosswalks	35%	38%	27%	0%
Construct on-street bicycle lanes and/or bicycle facilities beside roadways	3%	32%	40%	25%
Construct off-street trails and greenways	35%	25%	30%	10%
Expand and enhance public transportation (routes, shelters, etc.)	13%	13%	40%	33%
Construct new roads	18%	28%	28%	25%
Widen existing roads	20%	35%	25%	20%
Improve intersections	22%	28%	40%	10%
Maintain existing roads, bicycle, and pedestrian facilities	22%	47%	30%	2%

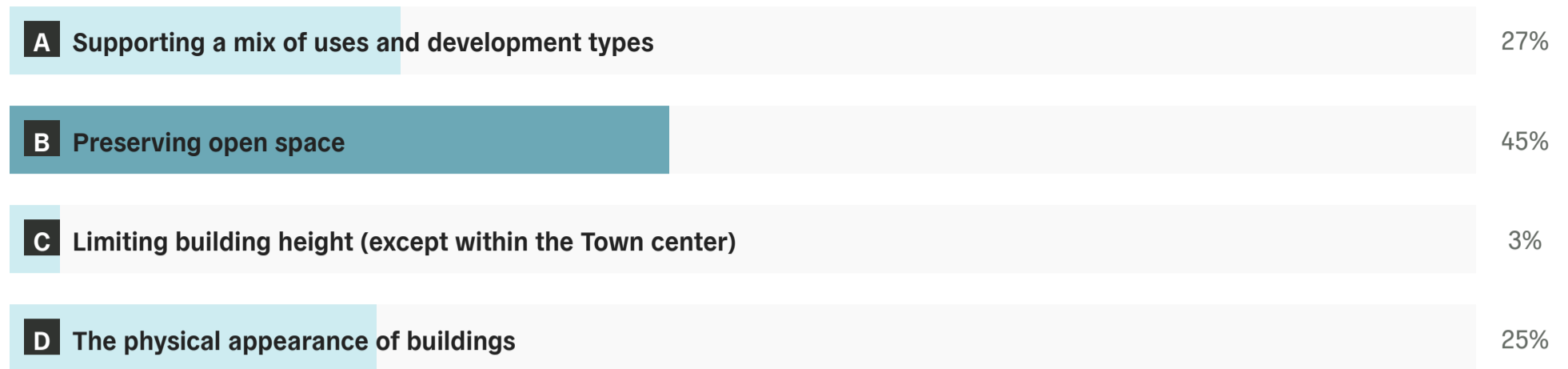




### What types of new development would you like to see in Rolesville?



## What's most important to you?



## What modes of transportation do you use to travel to work or school in a typical week? (check all that apply)



## In the last 12 months, about how many times, if at all, have you or another household member . . .

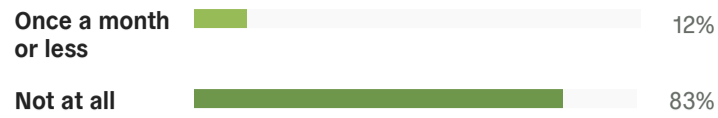
Question	2 times a week or more	2 to 4 times a month	Once a month or less	Not at all
Ridden a bicycle to shop, get meals or run errands	2%	3%	12%	83%
Ridden a bicycle for commuting	0%	2%	2%	97%
Ridden a bicycle for fun or exercise	25%	13%	28%	33%
Walked to shop, get meals or run errands	3%	12%	27%	58%
Walked for commuting	3%	2%	2%	93%
Walked for fun or exercise	77%	15%	8%	0%

### Ridden a bicycle to shop, get meals or run errands



2 times a week or more 2%

2 to 4 times a month 3%



Ridden a bicycle for commuting



Ridden a bicycle for fun or exercise



Walked to shop, get meals or run errands



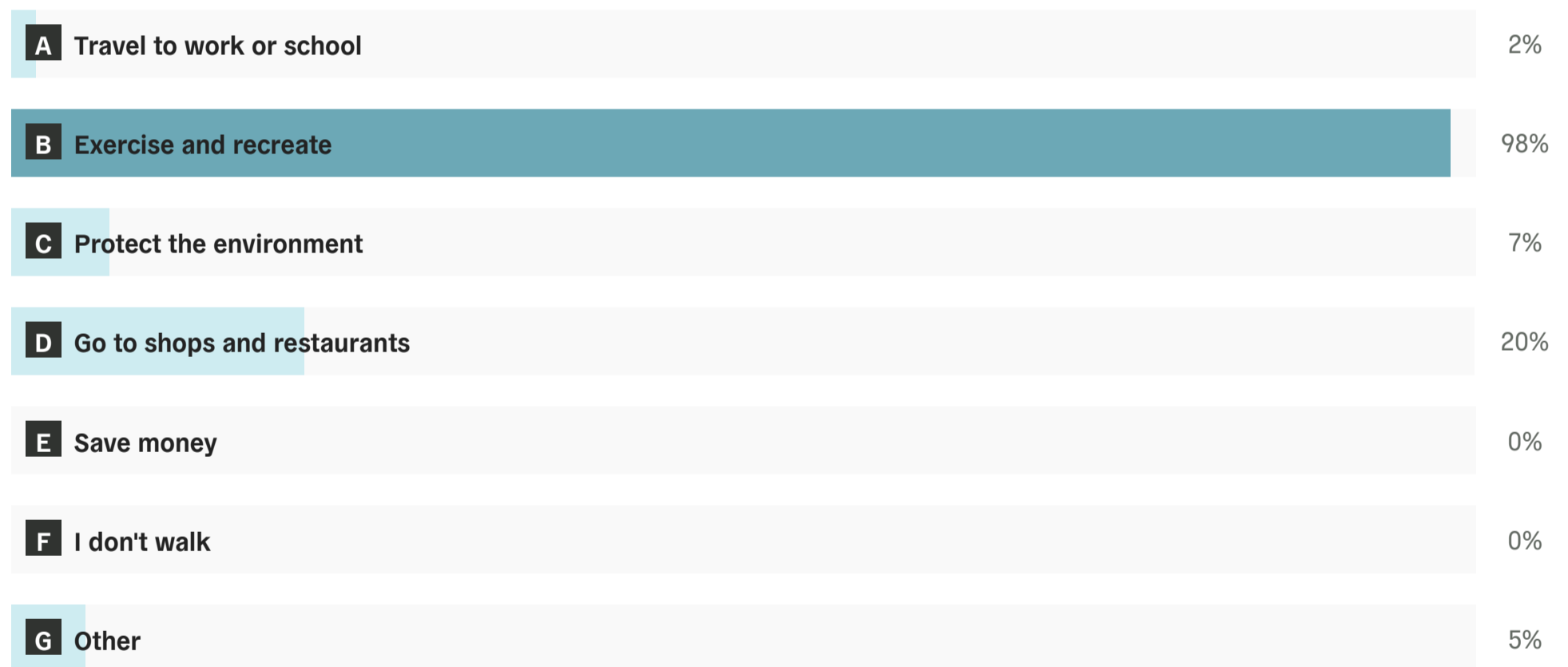
Walked for commuting



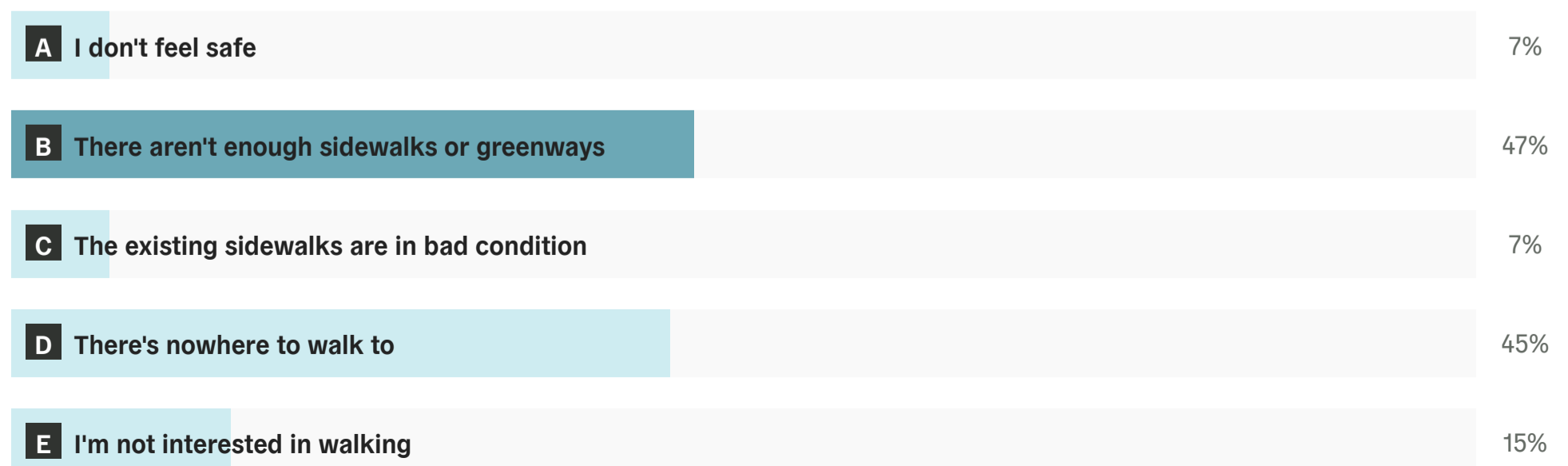
Walked for fun or exercise



When I walk, it's to... (check all that apply)



When I don't walk, it's because... (check all that apply)



**F** Other 23%

### When I ride a bike, it's to... (check all that apply)

**A** Travel to work or school 2%

**B** Exercise and recreate 67%

**C** Protect the environment 2%

**D** Go to shops and restaurants 8%

**E** Save money 0%

**F** I don't bike 33%

**G** Other 2%

### When I don't bike, it's because... (check all that apply)

**A** I don't feel safe 13%

**B** There aren't enough sidewalks or greenways 38%

**C** The existing sidewalks are in bad condition 10%

**D** There's nowhere to bike to 23%

**E** I'm not interested in biking 33%

**F** Other 22%

### What is your employment status?

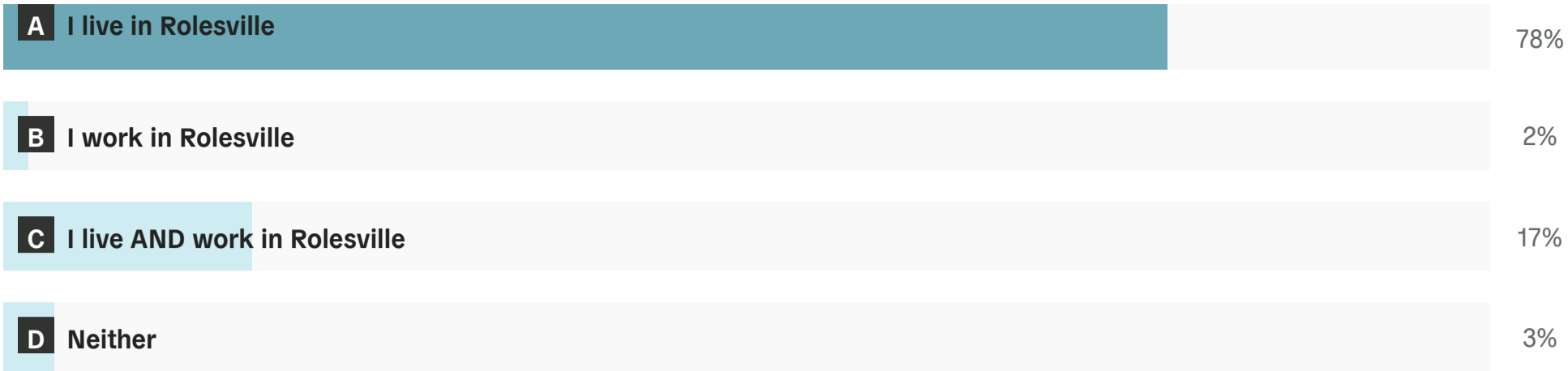
**A** Employed full- or part-time 85%

**B** Currently not employed and looking for work 0%

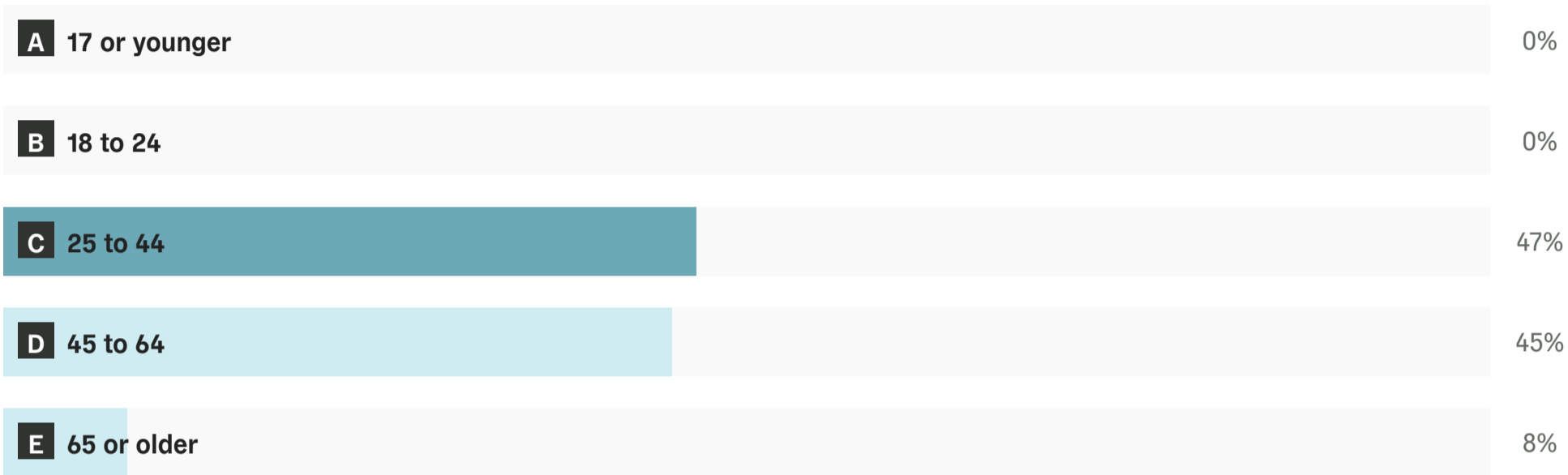
**C** Not employed, not looking for work (retired, stay-at-home parent, etc.) 15%

### Do you live and/or work in Rolesville? (check one)

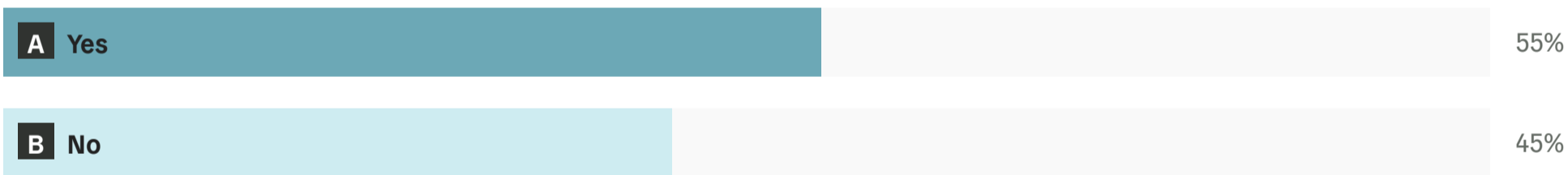




**Please choose your age group**



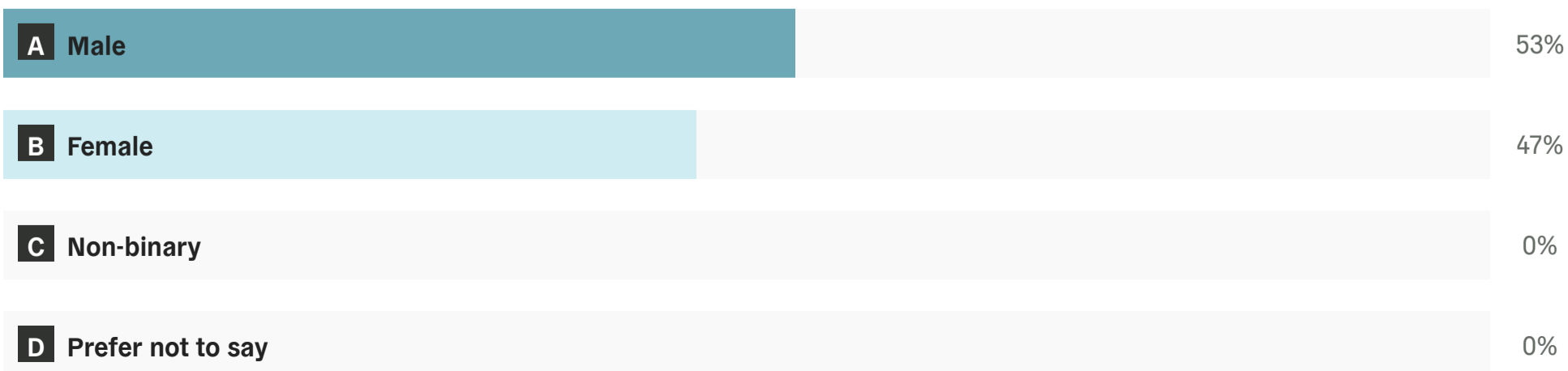
**Do any children under the age of 18 live in your household? (check one)**



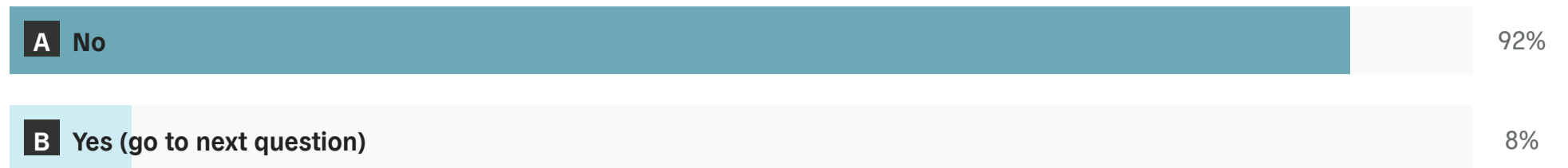
**Are you or any members of your household over the age of 65? (check one)**



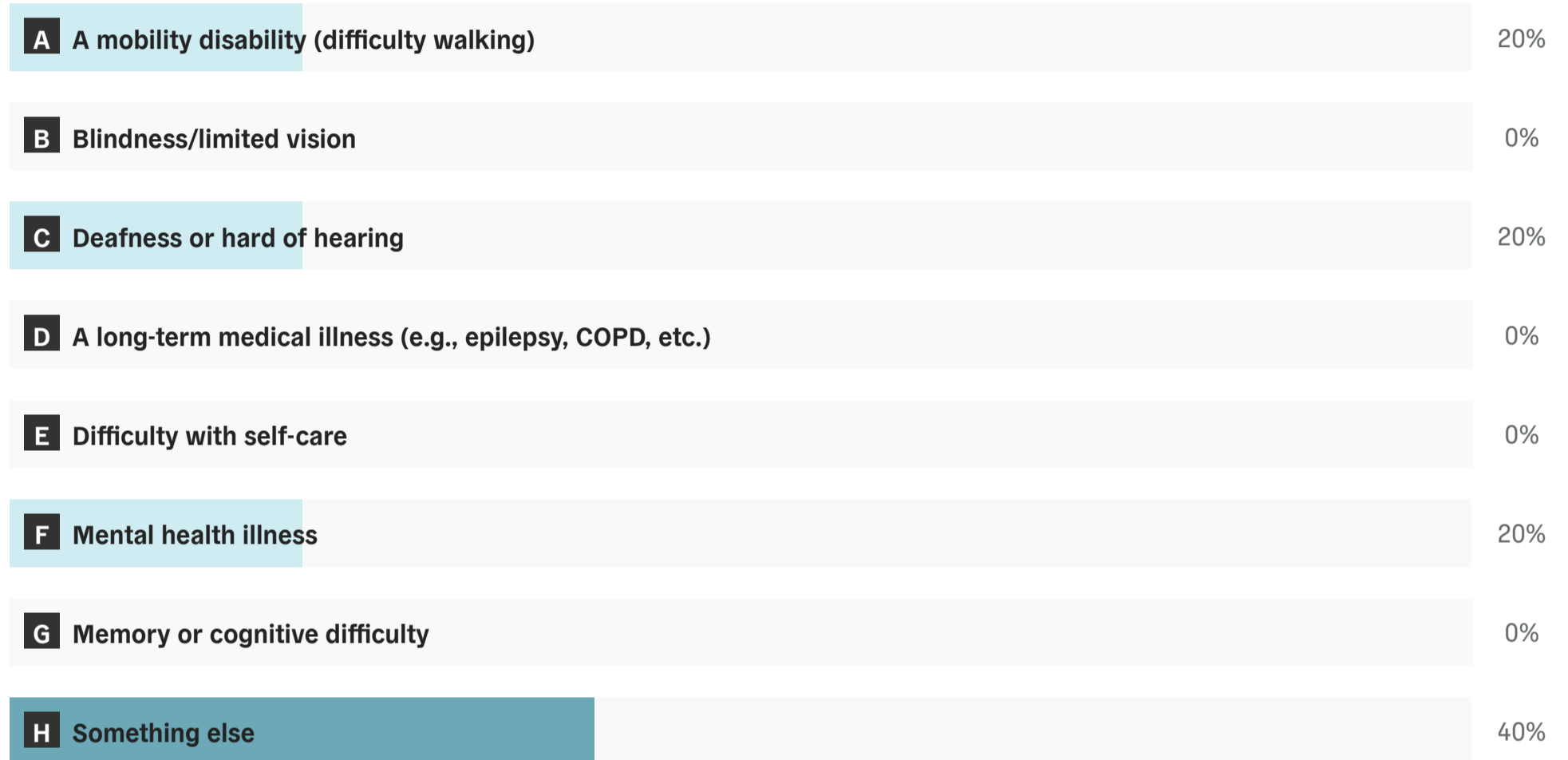
**What is your gender?**



## Do you have a disability

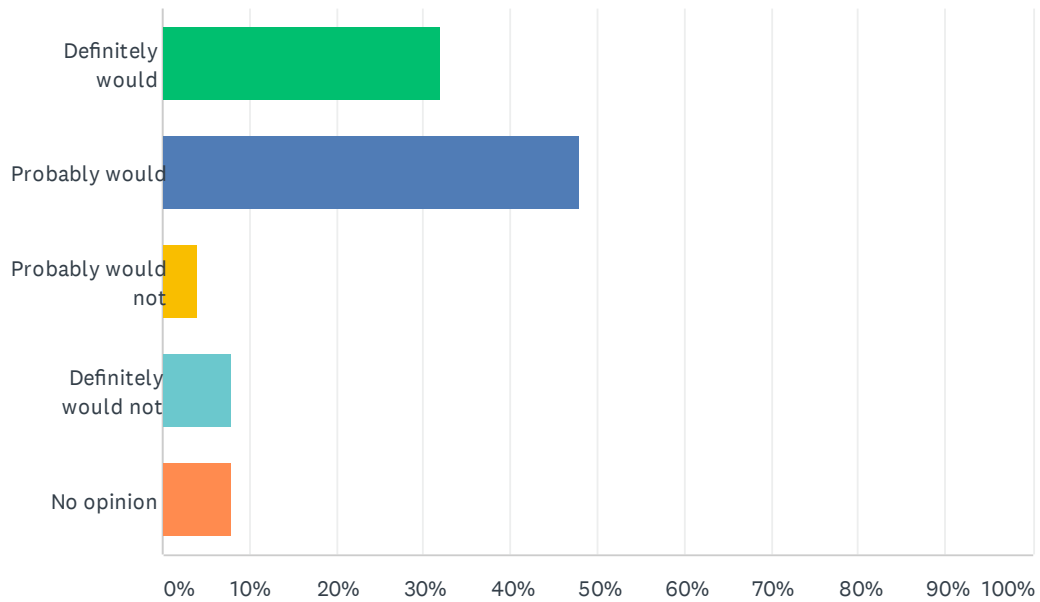


## What type of disability do you have? (Please select all that apply.)



# Q1 How well would the INTERSECTION RECOMMENDATIONS address the future needs of the study area?

Answered: 25 Skipped: 0



ANSWER CHOICES	RESPONSES	
Definitely would	32.00%	8
Probably would	48.00%	12
Probably would not	4.00%	1
Definitely would not	8.00%	2
No opinion	8.00%	2
<b>TOTAL</b>		<b>25</b>

## Q2 Comments (OPTIONAL)

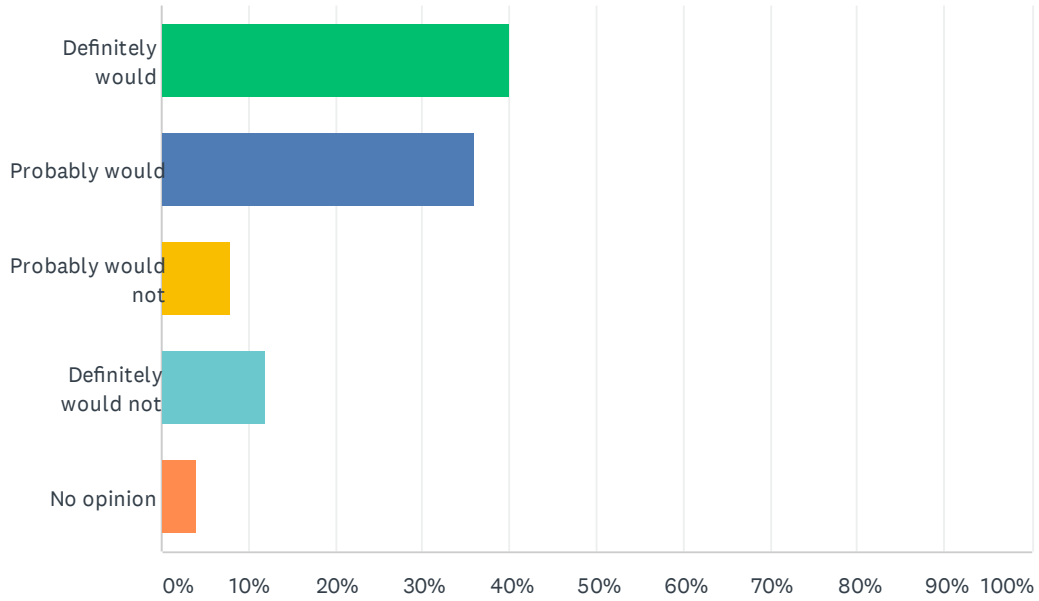
Answered: 2 Skipped: 23

#	RESPONSES	DATE
1	The Mitchell Mill x Rolesville Rd intersection has always been a nightmare so a realignment would be great. PLEASE make sure roundabouts are large enough for big trucks (tractor trailers, dump trucks pulling equipment, large horse trailers, etc) to get around comfortably.	1/26/2021 11:48 AM
2	I don't think there are any intersection problems in Rolesville right now. As the town grows with ALL the new subdivisions that are approved, changes will be needed. Particularly along Averette and Young/Rolesville Rd. Unless the house on the east side of Young at Jones Dairy is coming down, I don't see why that large tree has to be affected. The Main Street intersections seem to be performing well right now.	1/25/2021 8:40 PM



### Q3 How well would the THOROUGHFARE RECOMMENDATIONS address the future needs of the study area?

Answered: 25 Skipped: 0



ANSWER CHOICES	RESPONSES	
Definitely would	40.00%	10
Probably would	36.00%	9
Probably would not	8.00%	2
Definitely would not	12.00%	3
No opinion	4.00%	1
<b>TOTAL</b>		<b>25</b>

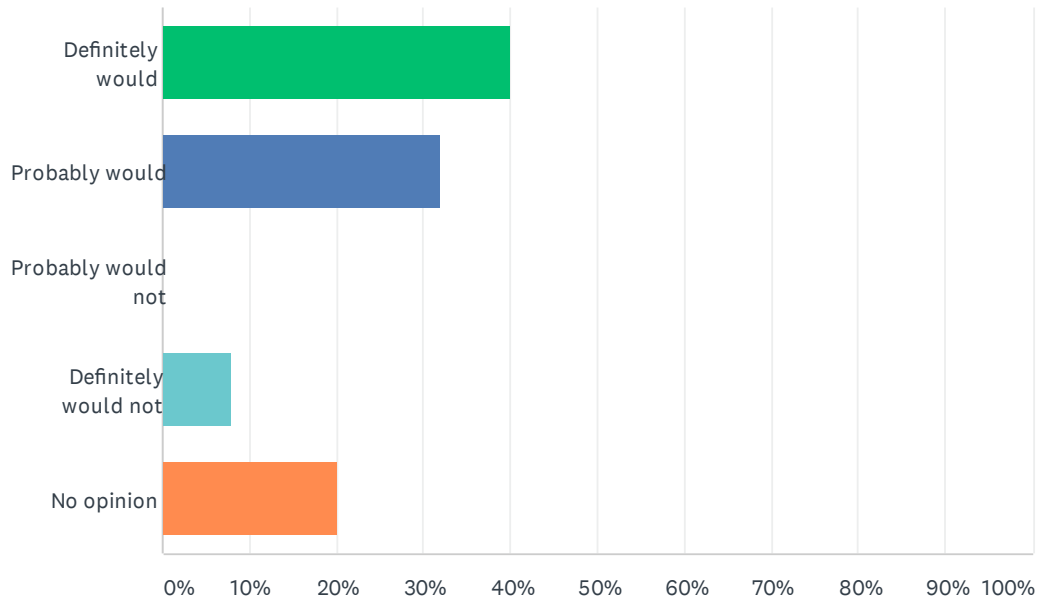
## Q4 Comments (OPTIONAL)

Answered: 6 Skipped: 19

#	RESPONSES	DATE
1	I live in the Willoughby community and just learned Rogers Rd right in front of my house is going to become a FOUR-LANE practically highway. I have never seen that road congested, and it should not be allowed! We are buying expensive homes that will become worthless with a highway in the front yard	1/30/2021 8:18 AM
2	Would be great to include bike lanes on main St and streets leading to it or add greenway.	1/30/2021 12:18 AM
3	Rogers traffic is not heavy enough to warrant 4 lanes	1/27/2021 11:51 AM
4	Rogers Road does NOT need to be a 4-lane divided highway. It needs traffic calming, with turn lanes into neighborhoods, not something that will make traffic move faster.	1/27/2021 11:42 AM
5	Love the 4-lane planning for Burlington Mills, Rogers Road, and Mitchell Mill in particular.	1/26/2021 11:48 AM
6	As Rolesville grows with ALL the new subdivisions and still so FEW choices for shopping, dining and groceries, the residents will need main roads to take out of town to get those services.	1/25/2021 8:40 PM

## Q5 How well would the COLLECTOR STREET RECOMMENDATIONS address the future needs of the study area?

Answered: 25 Skipped: 0



ANSWER CHOICES	RESPONSES	
Definitely would	40.00%	10
Probably would	32.00%	8
Probably would not	0.00%	0
Definitely would not	8.00%	2
No opinion	20.00%	5
<b>TOTAL</b>		<b>25</b>

## Q6 Comments (OPTIONAL)

Answered: 3 Skipped: 22

#	RESPONSES	DATE
1	Creating additional routes will be helpful as the traffic increases because of new construction. We live in Terrell Plantation Subdivision, and we anticipate the already heavy traffic to increase exponentially when the new subdivisions on and around Averette and Jones Dairy Road are completed, so we'll need an alternate route for getting out of our subdivision.	2/6/2021 2:04 PM
2	Excited that this might help alleviate some pressure from our main roads. Nice to see Fowler Rd and Jones Dairy extensions.	1/26/2021 11:48 AM
3	So many of the neighborhoods go in and out of only one main road, connecting these neighborhoods will spread the traffic around more. There need to be alternative ways to get around town when traffic is backed up with events or accidents.	1/25/2021 8:40 PM

## Q7 Do you have any other comments? (OPTIONAL)

Answered: 4 Skipped: 21

#	RESPONSES	DATE
1	1) Thank you for your attention to bike and pedestrian traffic. We hope Rolesville will enforce the bike lanes and discontinue allowing automobiles to park in bike lanes, rendering parts of them useless and unsafe. (Case in point: in front of Granite Falls Athletic Club. There is no need for cars to park in the bike lane there when there is ample parking lot parking.) 2) Creating additional routes will be helpful as the traffic increases because of new construction. We live in Terrell Plantation Subdivision, and we anticipate the already heavy traffic to increase exponentially when the new subdivisions on and around Averette and Jones Dairy Road are completed, so we'll need an alternate route for getting out of our subdivision. Thanks for paying attention to this!	2/6/2021 2:04 PM
2	Seems to be comprehensive. Is there a timetable on specific projects? All would be interested in this.	2/6/2021 8:00 AM
3	We strongly object to the southwest option for the Jones Dairy Rd Ext. It would require displacement of too many homes. The northeast option is the only route to take.	2/5/2021 12:13 PM
4	It is still a huge shame that the Bypass creates such a traffic mess on Young St/Rolesville Rd. When those two huge subdivisions start filling up, combined with the HS traffic, it will only get worse. A great solution would be to build a bridge over the Bypass for straight only traffic (probably the majority of the Young/Rolesville traffic) to avoid the U-turns on the Bypass. You still have 2 of the 4 corners empty at that intersection, something should be done before those two are occupied.	1/25/2021 8:40 PM



## PROJECT SHEETS

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# Rogers Road

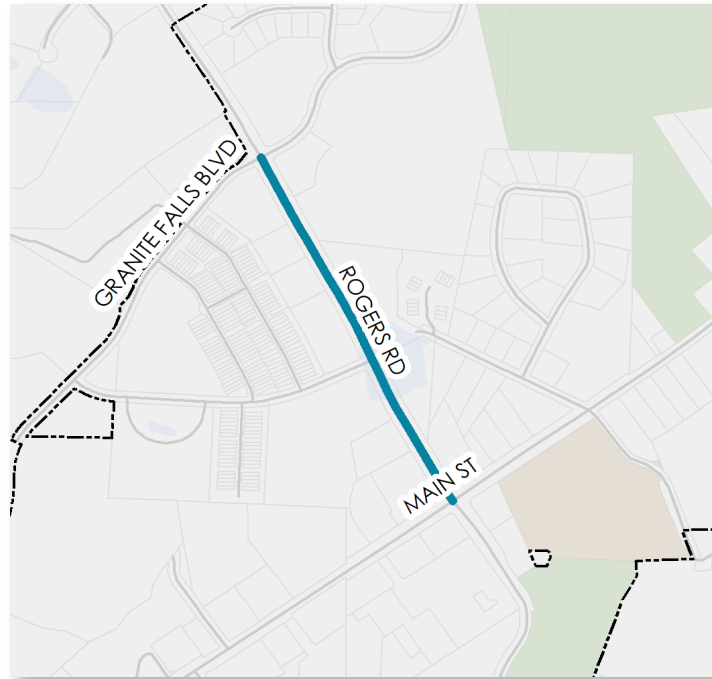
## US 401 BUS (Main St) to Granite Falls Blvd

### Project Description

Rogers Rd is a key connector to US 401 BUS (Main St). This particular segment of Rogers Rd links retail and businesses with surrounding residential areas. As a critical connector to Downtown Rolesville, Rogers Rd should build off the Main Street Vision Plan to expand the active transportation network into residential areas.

### Land Use Considerations

The surrounding future land use context is classified as part of the town core. The recommendation on Rogers Rd allows this corridor to maximize connectivity for pedestrians and allows for higher development densities. While this segment of Rogers has already been considered by the Wake-Rolesville Transit Plan, further analysis should be conducted to further identify linking transit and land use.



### At a Glance

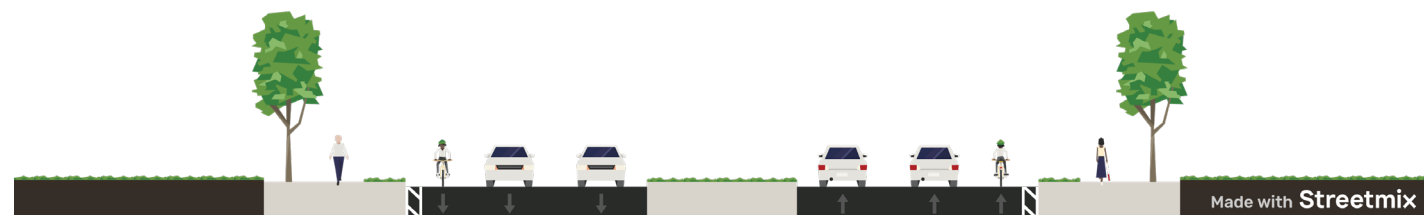
**Existing Number of Lanes:** 4 with two-way turns  
**Proposed Number of Lanes:** 4  
**Length:** 0.40 miles  
**Estimated Total Cost:** \$4,200,000  
**Project Term:** Near-term

### Existing Facilities    Planned Facilities

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Sidewalk | <input checked="" type="checkbox"/> Sidewalk     |
| <input type="checkbox"/> Bike Lane           | <input checked="" type="checkbox"/> Bike Lane    |
| <input type="checkbox"/> Shared-Use Path     | <input type="checkbox"/> Shared-Use Path         |
| <input type="checkbox"/> Transit Stop        | <input checked="" type="checkbox"/> Transit Stop |

### Typical Section

4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalk



Total ROW: 110 feet

# Rogers Rd

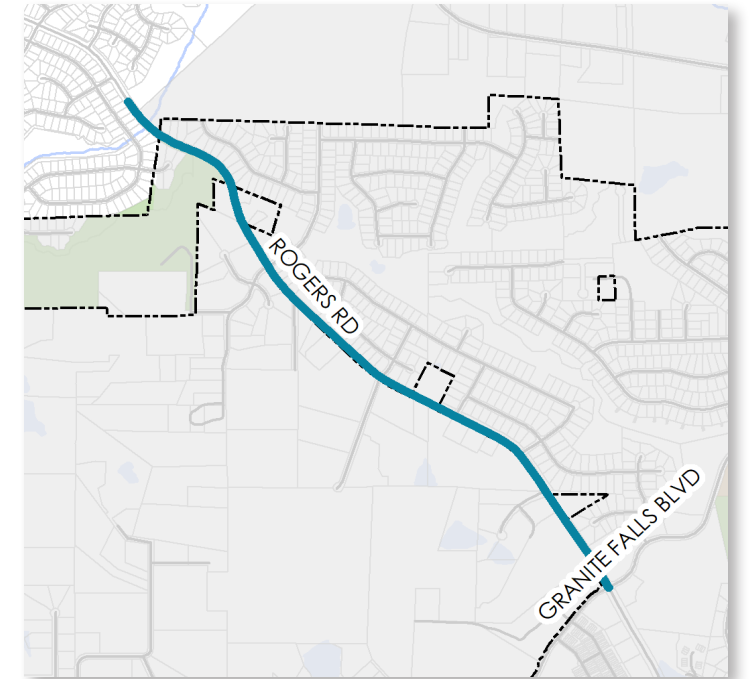
## Granite Falls Blvd to Western Study Area Limits

### Project Description

This segment of Rogers Rd from Granite Falls Blvd to the western study area limits is a key opportunity to connect Downtown Rolesville with residential and open space areas. As a continuation of the corridor between US 401 BUS (Main St) and Granite Falls Blvd, creating an interconnected multimodal network will enhance the mobility experience throughout the Town. Bicycle and pedestrian facilities along Roger Rd would connect Downtown Rolesville with greenways pathways in the northwestern area of the Town and beyond.

### Land Use Considerations

Improvements along Rogers Rd should capitalize on the diversity of land use in surrounding areas. At the edge of higher density areas, connections to other land uses will be more critical as Rolesville continues to develop.



### At a Glance

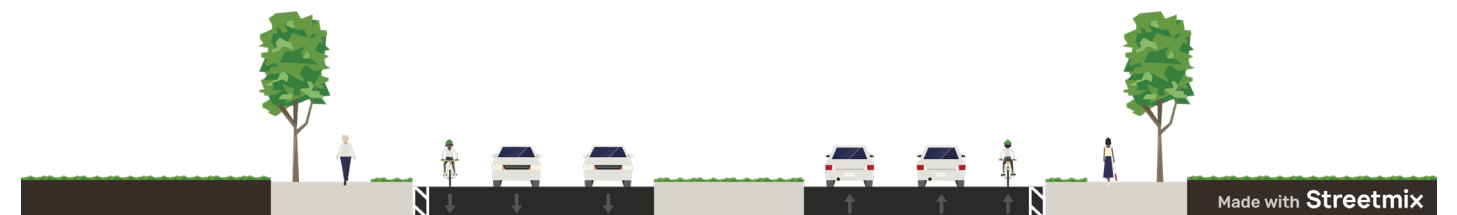
**Existing Number of Lanes:** 2  
**Proposed Number of Lanes:** 4  
**Length:** 1.41 miles  
**Estimated Total Cost:** \$14,600,000  
**Project Term:** Near-term

### Existing Facilities    Planned Facilities

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Sidewalk | <input checked="" type="checkbox"/> Sidewalk     |
| <input type="checkbox"/> Bike Lane           | <input checked="" type="checkbox"/> Bike Lane    |
| <input type="checkbox"/> Shared-Use Path     | <input type="checkbox"/> Shared-Use Path         |
| <input type="checkbox"/> Transit Stop        | <input checked="" type="checkbox"/> Transit Stop |

### Typical Section

4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalk



Total ROW: 110 feet

# Granite Falls Boulevard Extension

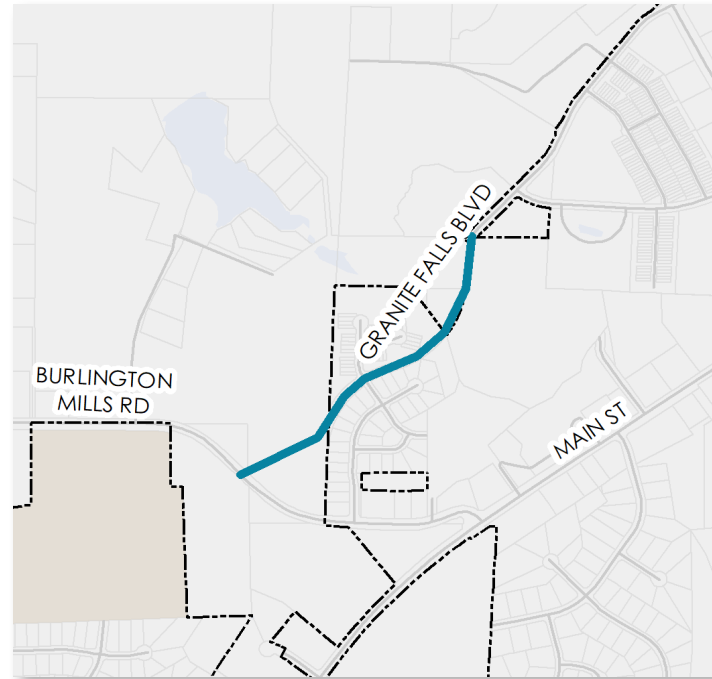
## Grand Rock Way to Burlington Mills Rd Realignment

### Project Description

The extension of Granite Fall Blvd will provide a key connection that parallels US 401 BUS (Main St). The two lane section with a center turn lane and sidewalks will provide pedestrian accommodations similar to the US 401 BUS (Main St) section. As one of the few east-west connectors in Rolesville, the extension will provide enhanced connectivity and alleviate traffic strains on US 401 BUS (Main St).

### Land Use Considerations

The new roadway will primarily travel through residential land uses; however, it will provide connection between the town core and mixed use areas.



### At a Glance

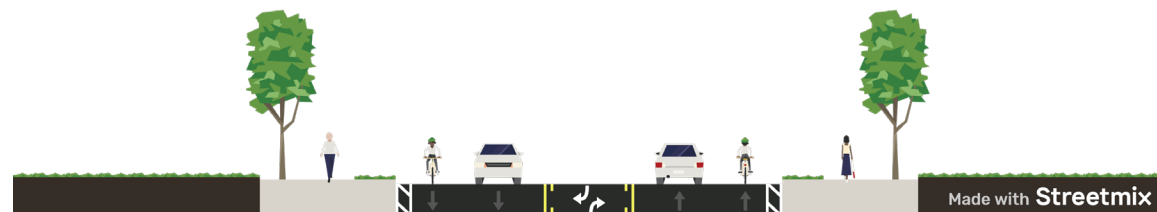
<i>Existing Number of Lanes:</i>	New Road
<i>Proposed Number of Lanes:</i>	3
<i>Length:</i>	0.43 miles
<i>Estimated Total Cost:</i>	\$4,400,000
<i>Project Term:</i>	Near-term

### Existing Facilities    Planned Facilities

<input type="checkbox"/> Sidewalk	<input checked="" type="checkbox"/> Sidewalk
<input type="checkbox"/> Bike Lane	<input checked="" type="checkbox"/> Bike Lane
<input type="checkbox"/> Shared-Use Path	<input type="checkbox"/> Shared-Use Path
<input type="checkbox"/> Transit Stop	<input type="checkbox"/> Transit Stop

### Typical Section

2-Lane Two Way Left Turn, Curb & Gutter, Bike Lanes, and Sidewalks



Total ROW: 80 feet

# Averette Road/Young Street/ Rolesville Road

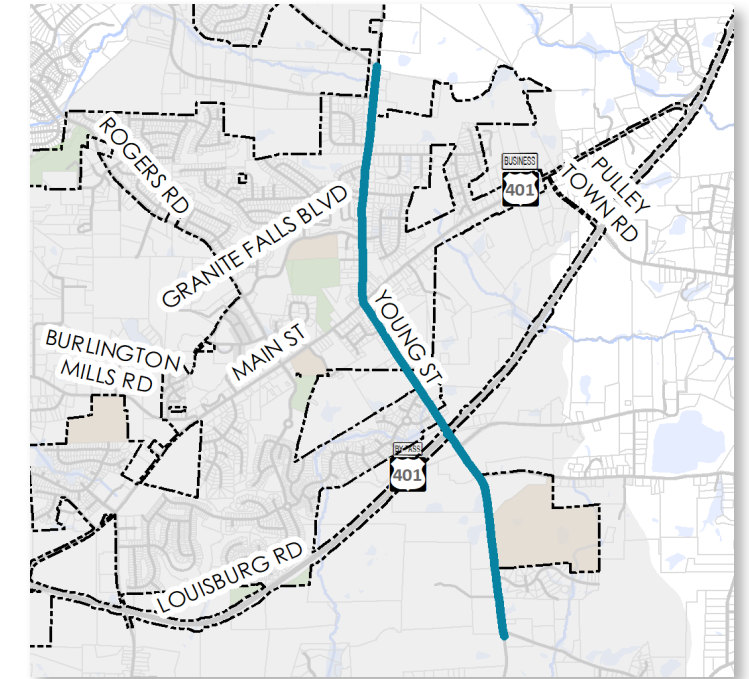
## Jones Dairy Rd to Fowler Rd

### Project Description

The Averette Rd/Young St/Rolesville Rd corridor is an essential north-south connection. With direct access between NC 98 (Wait Ave) to US 401 BYP (Louisburg Rd), this corridor runs through the heart of Rolesville's Downtown. In order to maintain the small-town charm of Rolesville, bicycle and pedestrian connections are proposed instead of roadway widening. With multimodal facilities as well as traffic calming improvements, the Averette Rd/Young St/Rolesville Rd can fulfill the vision of the CTP by enhancing the network while providing alternative modes of transportation.

### Land Use Considerations

This corridor provides connectivity between the town core, mixed land uses, and future employment center.



### At a Glance

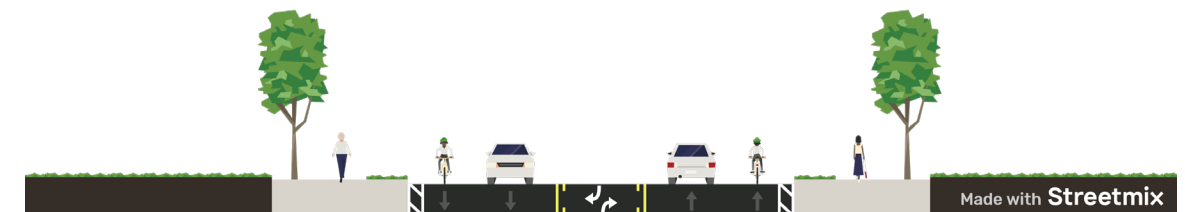
<i>Existing Number of Lanes:</i>	2
<i>Proposed Number of Lanes:</i>	3
<i>Length:</i>	3.14 miles
<i>Estimated Total Cost:</i>	\$12,800,000
<i>Project Term:</i>	Near-term

### Existing Facilities    Planned Facilities

<input checked="" type="checkbox"/> Sidewalk	<input checked="" type="checkbox"/> Sidewalk
<input type="checkbox"/> Bike Lane	<input checked="" type="checkbox"/> Bike Lane
<input type="checkbox"/> Shared-Use Path	<input type="checkbox"/> Shared-Use Path
<input checked="" type="checkbox"/> Transit Stop	<input checked="" type="checkbox"/> Transit Stop

### Typical Section

2-Lane with Two Way Left Turn, Curb & Gutter, Bike Lanes, and Sidewalk



Total ROW: 80 feet



# Burlington Mills Rd

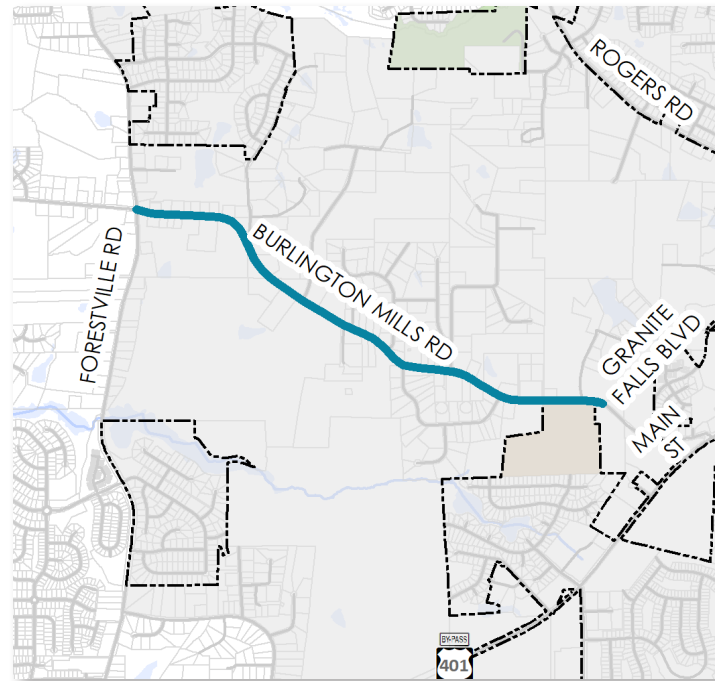
## Burlington Mills Rd Realignment to Forestville Rd

### Project Description

Burlington Mills Rd—similar to Rogers Rd—is an important connection between US 401 BUS (Main St) and residential areas near the Town boundary. With connection to Forestville Rd, this section of Burlington Mills Rd is a heavily traveled corridor. Widening the roadway to four lanes from two lanes will alleviate strains on the surrounding transportation network. Providing dedicated pedestrian and bicycle facilities will also expand the mode choice and encourage active transportation.

### Land Use Considerations

This section of Burlington Mills Rd will connect residential areas to the mixed use at the intersection of Granite Falls Blvd and the Burlington Mills Rd realignment. Rolesville Middle School will benefit from multimodal accommodations.



### At a Glance

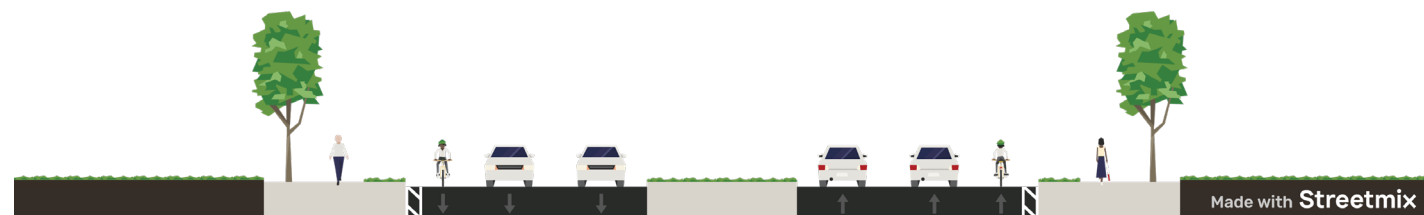
<i>Existing Number of Lanes:</i>	2 with two-way turn lane
<i>Proposed Number of Lanes:</i>	4
<i>Length:</i>	1.69 miles
<i>Estimated Total Cost:</i>	\$24,600,000
<i>Project Term:</i>	Near-term

### Existing Facilities    Planned Facilities

<input checked="" type="checkbox"/> Sidewalk	<input checked="" type="checkbox"/> Sidewalk
<input type="checkbox"/> Bike Lane	<input checked="" type="checkbox"/> Bike Lane
<input type="checkbox"/> Shared-Use Path	<input type="checkbox"/> Shared-Use Path
<input type="checkbox"/> Transit Stop	<input type="checkbox"/> Transit Stop

### Typical Section

4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalk



Total ROW: 110 feet

# Averette Road

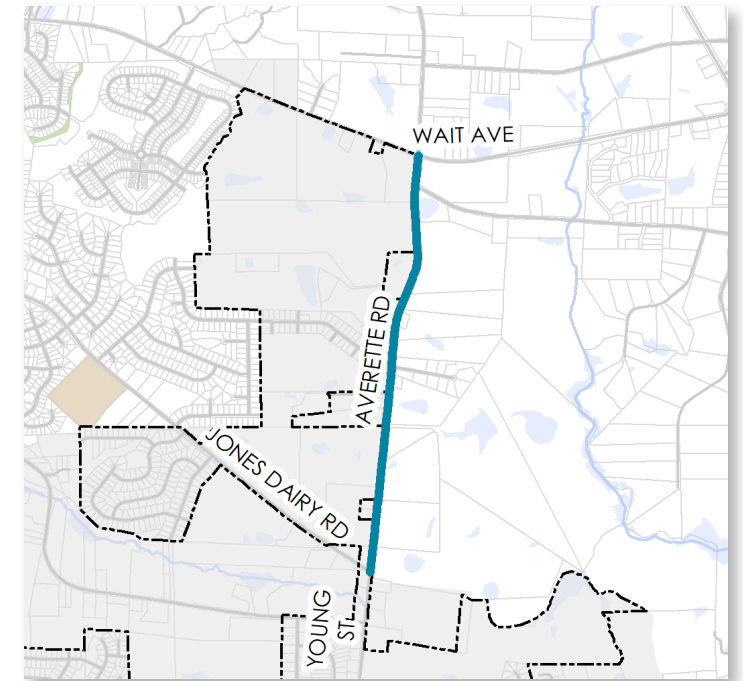
## Jones Dairy Rd to NC 98 (Wait Ave)

### Project Description

Upgrade the existing section of Averette Rd from Jones Dairy Rd to NC 98 (Wait Ave) to include multimodal facilities, curb & gutter, and a four-lane raised median. As a critical north-south connection through the Town of Rolesville, special consideration has been given to the potential constraints of the Little River Watershed. This section of Averette Rd will connect the existing Jones Dairy Rd to the Jones Dairy Rd extension. This new intersection should consider multimodal enhancements as well as intersection improvements to improve safety through the corridor.

### Land Use Considerations

This section of Averette Rd is primarily surrounded by residential neighborhoods making it a critical roadway between housing and Downtown Rolesville.



### At a Glance

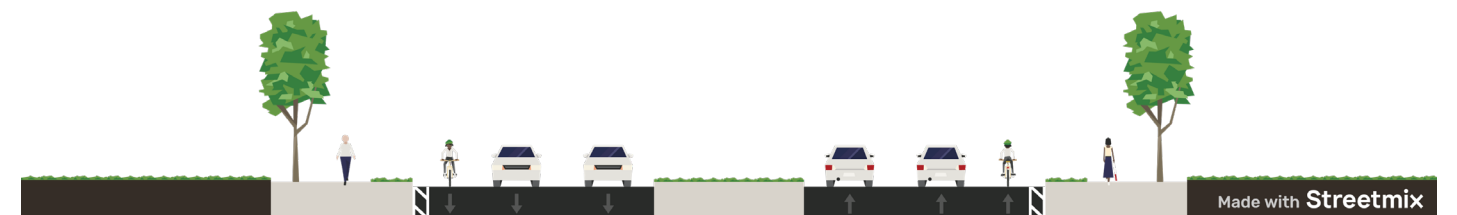
<i>Existing Number of Lanes:</i>	2
<i>Proposed Number of Lanes:</i>	4
<i>Length:</i>	1.38 miles
<i>Estimated Total Cost:</i>	\$20,800,000
<i>Project Term:</i>	Mid-term

### Existing Facilities    Planned Facilities

<input checked="" type="checkbox"/> Sidewalk	<input checked="" type="checkbox"/> Sidewalk
<input type="checkbox"/> Bike Lane	<input checked="" type="checkbox"/> Bike Lane
<input type="checkbox"/> Shared-Use Path	<input type="checkbox"/> Shared-Use Path
<input type="checkbox"/> Transit Stop	<input type="checkbox"/> Transit Stop

### Typical Section

4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalk



Total ROW: 110 feet

# Rolesville Road

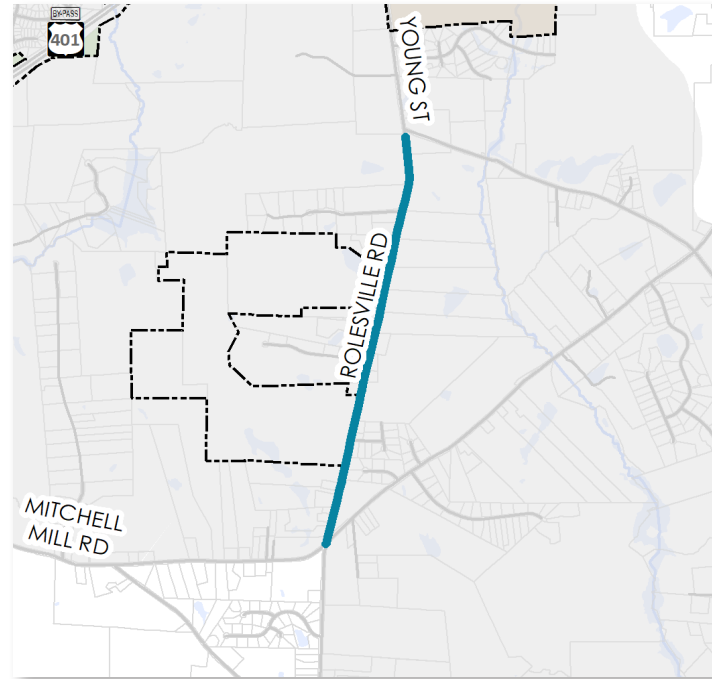
## Fowler Rd to Mitchell Mill Rd

### Project Description

Rolesville Rd is an important connection to the southern part of the study area. As Young St transitions to Rolesville Rd at Fowler Rd, maintaining the multimodal facilities along either side of the roadway is crucial for connectivity. This section of Rolesville Rd provides linkages to Rolesville High School and Downtown Rolesville as well as Mitchell Mill Rd to the west and Zebulon to the east. As an essential north-south corridor, the recommendation along Rolesville Rd compliments the recommendation along Young St to focus on multimodal connectivity and safety improvements.

### Land Use Considerations

This section of Rolesville Rd connects residential land uses to the future employment center. The multimodal recommendations leverage surrounding existing and future land uses.



### At a Glance

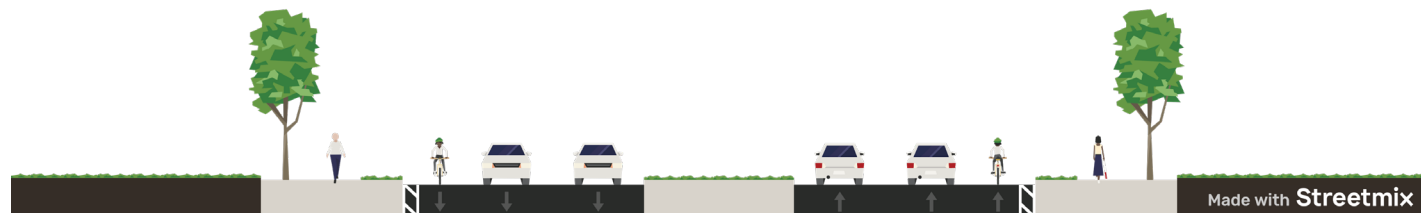
- Existing Number of Lanes: 2
- Proposed Number of Lanes: 2 with two-way turn lane
- Length: 1.36 miles
- Estimated Total Cost: \$20,200,000
- Project Term: Mid-term

### Existing Facilities    Planned Facilities

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Sidewalk | <input checked="" type="checkbox"/> Sidewalk        |
| <input type="checkbox"/> Bike Lane           | <input type="checkbox"/> Bike Lane                  |
| <input type="checkbox"/> Shared-Use Path     | <input checked="" type="checkbox"/> Shared-Use Path |
| <input type="checkbox"/> Transit Stop        | <input type="checkbox"/> Transit Stop               |

### Typical Section

2 Lane with Two Way Left Turn, Curb & Gutter, Sidewalk, and Sidepath



Total ROW: 90 feet

# Jones Dairy Road

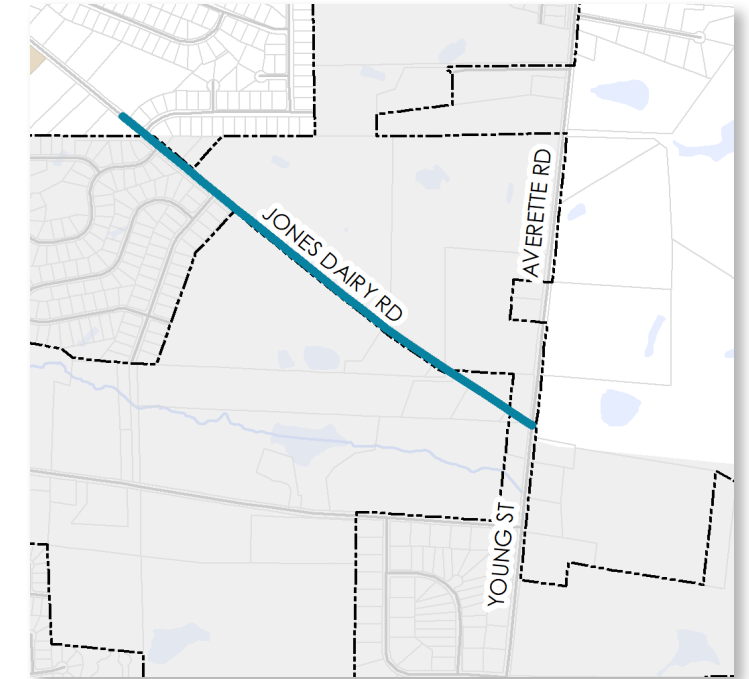
## Averette Rd to Northwestern Study Area Limits

### Project Description

The improvements along Jones Dairy Rd will expand the multimodal network, particularly in northern Rolesville. The roadway recommendations along with the intersection improvements will create a safer transportation experience for pedestrians, cyclists, and drivers alike. As the Jones Dairy Rd extension alignment is finalized, Jones Dairy Rd will provide an important connection to Main St and Pulley Town Rd without traveling through the Averette Rd and Young St.

### Land Use Considerations

Northern Rolesville consists of primarily residential land uses. The Jones Dairy Rd provide connectivity from lower-density residential uses to mixed use and the Town's core through major thoroughfares like Young St.



### At a Glance

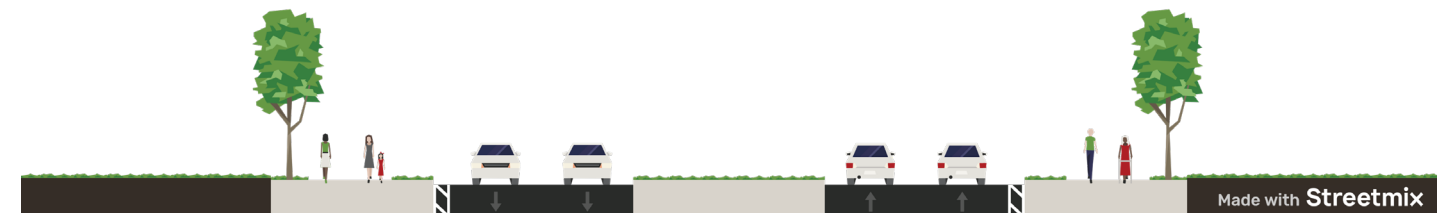
- Existing Number of Lanes: 2
- Proposed Number of Lanes: 4
- Length: 0.82 miles
- Estimated Total Cost: \$12,000,000
- Project Term: Mid-term

### Existing Facilities    Planned Facilities

- |  |   |
|--|---|
| <input type="checkbox"/> Sidewalk        | <input type="checkbox"/> Sidewalk                   |
| <input type="checkbox"/> Bike Lane       | <input type="checkbox"/> Bike Lane                  |
| <input type="checkbox"/> Shared-Use Path | <input checked="" type="checkbox"/> Shared-Use Path |
| <input type="checkbox"/> Transit Stop    | <input type="checkbox"/> Transit Stop               |

### Typical Section

4-Lane Divided (Raised Median - Narrow) with Curb & Gutter and Sidepath



Total ROW: 110 feet

# Jones Dairy Road Extension

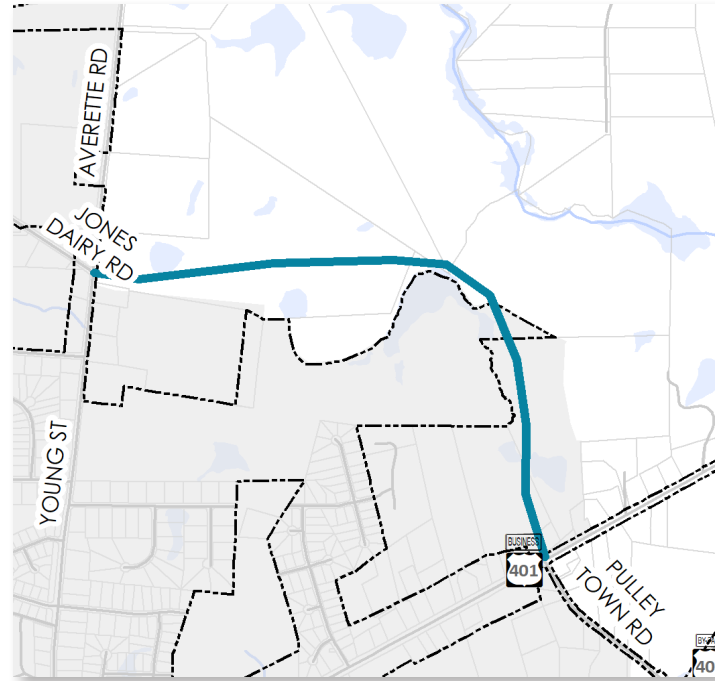
## Jones Dairy Rd/Averette Rd to US 401 BUS (Main St)/Pulley Town Rd

### Project Description

The Jones Dairy Rd extension is a recommendation that fall in the mid-term (10-20 years) time frame based on project prioritization; however, with developer investment, the road can be constructed more opportunistically in the near term. The extension will provide connectivity between Averette Rd/Young St and US 401 BUS (Main St) for pedestrians. The new road will provide enhanced connection between residential areas.

### Land Use Considerations

The environmental considerations of the Jones Dairy Rd extension are considerable. While there are a number of streams and ponds in the area there is also the Little River Watershed. The environmental considerations should be further studied before construction phase.



### At a Glance

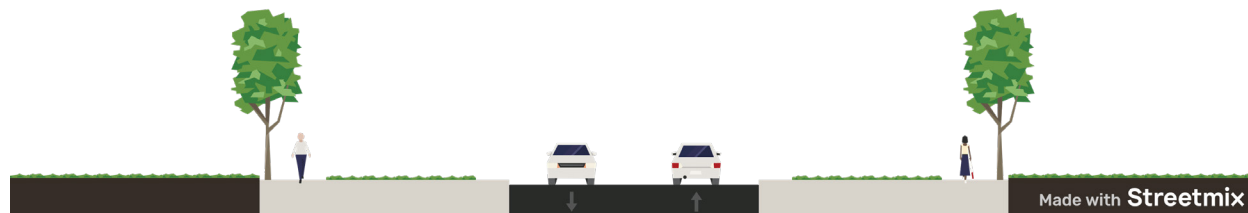
<i>Existing Number of Lanes:</i>	New Road
<i>Proposed Number of Lanes:</i>	2
<i>Length:</i>	1.81 miles
<i>Estimated Total Cost:</i>	\$7,500,000*
<i>Project Term:</i>	Mid-term

### Existing Facilities    Planned Facilities

<input type="checkbox"/> Sidewalk	<input checked="" type="checkbox"/> Sidewalk
<input type="checkbox"/> Bike Lane	<input type="checkbox"/> Bike Lane
<input type="checkbox"/> Shared-Use Path	<input type="checkbox"/> Shared-Use Path
<input type="checkbox"/> Transit Stop	<input type="checkbox"/> Transit Stop

### Typical Section

2-Lane Undivided with Paved Shoulders and Sidewalks



Total ROW: 90 feet

\*portions to be built by development in the near term.

# Fowler Road Extension

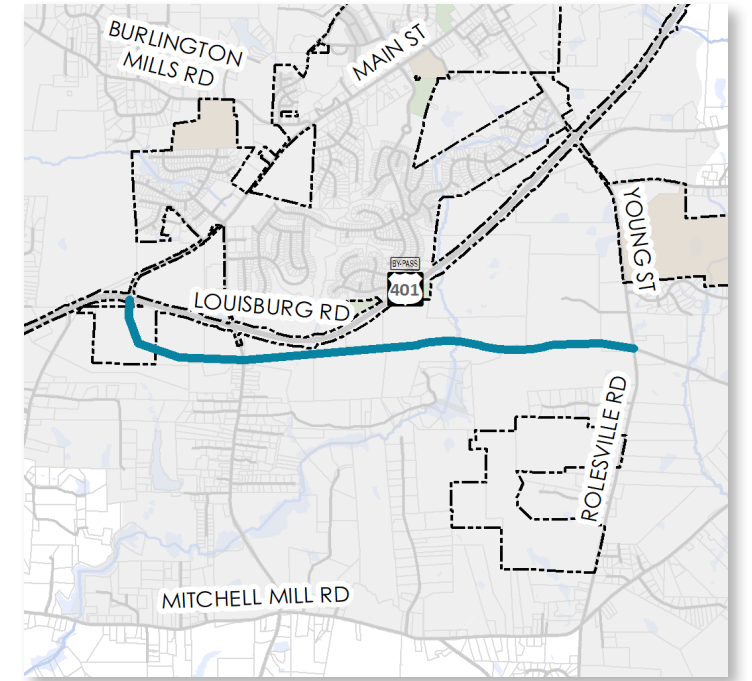
## US 401 BYP/US 401 BUS (Main St) to Rolesville Rd

### Project Description

The Fowler Rd extension project has the potential to streamline transportation and land use. The new connection would provide multimodal facilities in southern Rolesville for pedestrians and cyclists. Upon adoption of the Rolesville Moves CTP, the Town should pursue a feasibility study or small area plan for the area along the potential Fowler Rd extension.

### Land Use Considerations

While the current land use in the area is rural-residential, the future land use entertains the idea of an employment center. The employment center should encourage walkable and bikeable spaces that are supported by restaurants and retail of surrounding mixed use land uses.



### At a Glance

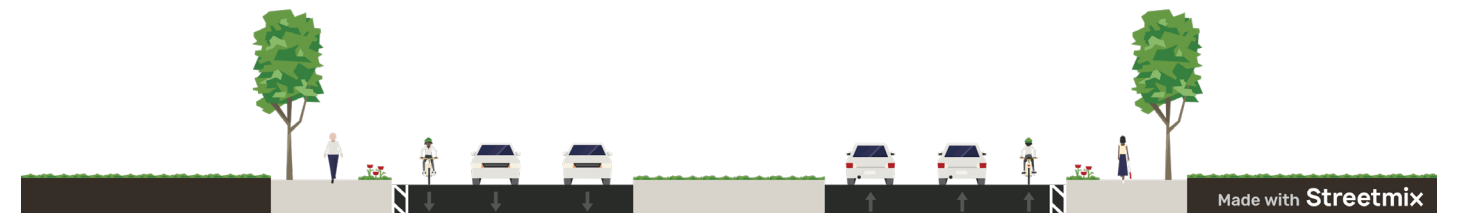
<i>Existing Number of Lanes:</i>	New Road
<i>Proposed Number of Lanes:</i>	4
<i>Length:</i>	2.58 miles
<i>Estimated Total Cost:</i>	\$44,500,000
<i>Project Term:</i>	Mid-term

### Existing Facilities    Planned Facilities

<input type="checkbox"/> Sidewalk	<input checked="" type="checkbox"/> Sidewalk
<input type="checkbox"/> Bike Lane	<input checked="" type="checkbox"/> Bike Lane
<input type="checkbox"/> Shared-Use Path	<input type="checkbox"/> Shared-Use Path
<input type="checkbox"/> Transit Stop	<input type="checkbox"/> Transit Stop

### Typical Section

4-Lane Divided (Raised Median - Narrow) with Curb & Gutter, Bike Lanes, and Sidewalk



Total ROW: 110 feet