GO GQ BICYCLE + PEDESTRIAN PLAN

May 2023

Acknowledgments

We extend our sincere appreciation and gratitude to the residents, business owners, elected officials, Town staff, and stakeholders who participated in the planning process and guided the development of the GoGQ Bicycle and Pedestrian Plan. Everyone's time, input, and energy are greatly appreciated.

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**Left the Town prior to plan completion.*

Kimley»Horn

Town of GRANITE QUARRY
Be an original town.

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Glossary

Key Terms

The following terms can be found throughout the document. This page acts as a reference guide for terms and definitions. While this is not a comprehensive list, the GoGQ Bicycle + Pedestrian Plan is intended to be a reader-friendly document for all people to understand and enjoy.

All Ages and Abilities	Designs to meet the needs of a broad set of people regardless of age or ability.
American Community Survey (ACS)	A demographic survey program conducted by the U.S. Census Bureau. It helps local officials, community leaders, and businesses understand the changes in their communities.
Americans with Disabilities Act (ADA)	Prohibits the discrimination against people with disabilities in several areas, including employment, transportation, public accommodations, communication, and access to state and local government programs and services.
Bicycle Network	The collective term for the entirety of bicycle infrastructure, including all bike lanes, multi-use paths, paved shoulders, and shared lane markings.
Cabarrus-Rowan Metropolitan Planning Organization (CRMPO)	The federally-designated organization responsible for long-range transportation planning in Cabarrus and Rowan counties.
Census Block Group	A geographic unit used by the U.S. Census Bureau. It is the smalled geographic unit for which the bureau publishes most data.
Complete Streets	Streets designed and operated to enable safe use and support mobility for all users.
Comprehensive Transportation Plan (CTP)	A long-range vision plan for transportation outlined by North Carolina General Statutes §36-66.
Environmental Stewardship	A variety of actions that protect the natural environment through conservation efforts.
Facility	The means of moving people or things from place to place and the structure necessary to support that movement.
Green Space	An open piece of undeveloped land that is partially or completely covered with grass, trees, shrubs, or other vegetation. It could also include parks or community gardens.
Greenway	A facility that may be used by pedestrians, bicyclists, and other non-motorized users. They are typically located in more natural or forested areas. See **multi-use path**.
Mobility	The equitable availability of transportation options for everyone.
Multi-Use Path	A facility that may be used by pedestrians, bicyclists, and other non-motorized users. They are typically separated from the road by a physical barrier or an open space.
Multimodal	Inclusive of motorists, bicyclists, pedestrians, people with disabilities, transit riders, and freight drivers on our transportation system.
North Carolina Department of Transportation (NCDOT)	The department that oversees all transportation in the state of North Carolina.
Paved Shoulder	A wide area of pavement directly adjacent to the travel lanes, typically in more rural areas. Bicyclists can comfortably ride alongside vehicles in this area.
Pedestrian Network	The collective term for the entirety of pedestrian infrastructure, including all sidewalks, shared-use pathways, and pedestrian crossings.
Right-of-Way	A strip of land which is used as a transportation corridor, typically owned by a municipality, county, or state.
Shared Lane Marking (Sharrow)	A street marking installed to indicate where cyclists may use the entire lane with vehicles.
Traffic Calming	The deliberate slowing of traffic by building speed bumps or other road features that encourage slow driving.
Unified Development Ordinance (UDO)	A document that contains most local regulations concerning the use and development of land and buildings.
Wayfinding	An information system that guides people through a physical environment and enhances their experience of a physical space.
100-Year Floodplain	Areas with a 1% annual chance of flooding.

1 Introduction

Overview

What is GoGQ?

The GoGQ Bicycle and Pedestrian Plan is a community-driven effort that establishes the vision for biking and walking in our town, identifies ongoing needs and challenges, and develops recommendations for a multimodal system that is safer and easier for all users. The GoGQ Bicycle and Pedestrian Plan provides the model for creating an accessible, multimodal community for everyone in our Town.

In short, GoGQ is:

For GQ, by GQ
Supports the identified needs and vision for our community

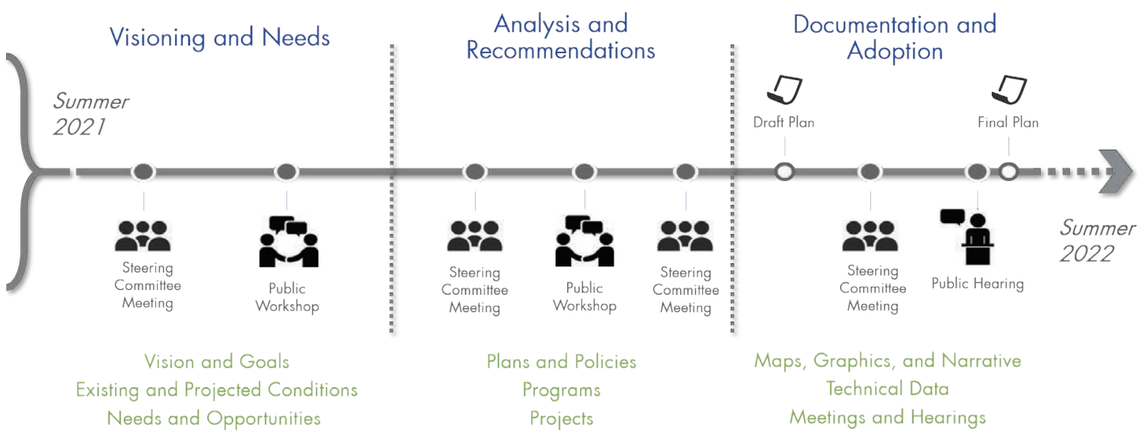
Investment Guidance
Provides guidance on future investment and decision-making for bicycle and pedestrian facilities and programs

Actionable
Presents a realistic and actionable plan that makes Granite Quarry more competitive for funding opportunities

The Process

This planning process included three key phases: (1) Visioning and Needs, (2) Analysis and Recommendations, and (3) Documentation 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 citizens*
- *Use current plans as a starting point for future strategies*
- *Create solutions customized to fit the needs of our community*



Vision and Key Connections

To make the GoGQ Bicycle and Pedestrian Plan successful for the community, it was imperative to develop a vision consistent with the needs of Granite Quarry residents. This vision was supported by key connections to which bicycle and pedestrian access is needed in Town. The established vision and key connections permeate throughout the document to help ensure that all analysis and recommendations relate back to these critical elements.

Granite Quarry's bicycle and pedestrian network will provide safe, convenient, and comfortable travel options for users of all ages, abilities, and backgrounds — whether traveling for transportation or recreation. Through GoGQ, the Town commits to improving biking and walking with a focus on safe connections to our:

Parks and Natural Areas | **Homes and Neighborhoods** | **Downtown and Places We Shop** | **Regional Bike/Pedestrian Network** | **Schools and Civic Sites**

Community Benefits

Providing a quality bicycle and pedestrian network gives residents an alternative to an automobile, and helps to create a healthier, safer, and more vibrant community. GoGQ identifies the following six benefits, which are the natural results of strengthening the bicycle and pedestrian networks. These benefits are based in part on the pillars found in WalkBikeNC, North Carolina's Bicycle and Pedestrian Plan.

Health

Active transportation (walking, biking, and rolling) includes forms of physical activity that can be accomplished by residents and visitors of all abilities. Regular practice of these types of exercise are well-known to help prevent or reduce the risk of heart disease, obesity, high blood pressure, type 2 diabetes, osteoporosis, and mental health problems such as depression. In 2015, the Centers for Disease Control and Prevention (CDC) reported that 30.1% of North Carolina adults were obese. Additionally, in 2012 North Carolina medical costs related to physical inactivity accounted for $3.67 billion. Making biking and walking accessible forms of physical activity has the potential to support health outcomes and reduce strains on the health system. A 2005 study completed by CDC researchers in Atlanta, Georgia, found there was an average $2.94 medical savings return for every $1 spent on pedestrian and bicycle infrastructure.

Safety

Safe travel conditions result from effective design, enforcement, and education. While some residents may feel relatively safe walking and biking in Town—despite the limited infrastructure—there are several opportunities to further improve safety. Each year, between 150-165 pedestrians and 16-20 bicyclists are killed in collisions with vehicles on North Carolina roads, and these numbers have risen in recent years. Bike infrastructure and people bicycling on roadways naturally calms traffic, and fully-separated facilities provide safe travel ways. Currently, the minimal infrastructure presence contributes to safety concerns.

Mobility

Mobility is the equitable availability of transportation options for everyone. By providing the appropriate facilities, communities allow people to choose how they want to travel. For example, many youth and seniors might not have the option to drive. Lack of choice in transportation creates an inconvenient and socially unjust barrier to mobility. Effective walking and biking networks provide an alternative to driving and promote equitable mobility. In 2017, the National Household Travel Survey showed that 40% of all trips taken by Americans—commute and non-commute—are less than 2 miles. That's the equivalent to a 10-minute bike ride or 30-minute walk; however, just 13% of all trips are made by walking or bicycling nationwide. Bicycling can be an attractive travel mode for short trips that would otherwise be made by driving.

Quality of Life

The walkability and bikeability of a community is an indicator of its livability. In cities and towns where people can regularly be seen out walking and biking, there is a sense that these areas are safe and friendly places to live and visit. By providing appropriate pedestrian and bicycle facilities, communities enable the interaction between neighbors and other residents that can strengthen relationships and contribute to a healthy sense of identity and place.

Economy

Walking and cycling are affordable modes of transportation. When safe facilities are provided for pedestrians and cyclists, people can walk more and spend less on transportation, meaning they have more money to spend on other things. Additionally, bicycle tourism growth offers the Town the opportunity to attract bicyclists and, in turn, increase the sales revenue of local businesses. The Political Economy Research Institute at the University of Massachusetts reports that investments in pedestrian and bicycle infrastructure yield higher levels of job creation than improvements to roadway infrastructure alone. As Granite Quarry invests more in infrastructure through this plan, these increases in activity will have important economic gains. Improving bikeability can benefit homeowners and business owners, as bicycle investments can increase property values and retail sales, increase tourism, and lead to new job creation.

Environment

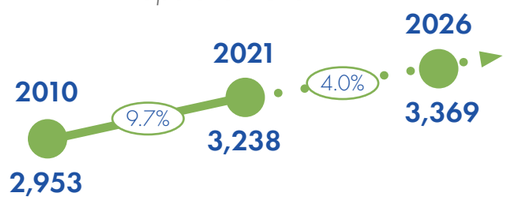
Environmental stewardship holds the community accountable in protecting natural resources. More people walking and riding bikes can result in lower levels of motor vehicle emissions, cleaner air, and stronger preservation of streams and natural spaces. A research article in the Journal of the American Planning Association found a 5% increase in walkability to be associated with a 32.1% increase in active travel (biking or walking), 6.5% fewer vehicle miles traveled, 5.6% fewer grams of oxides of nitrogen emitted, and 5.5% fewer grams of volatile organic compounds emitted per capita. In addition to air pollution, more individuals opting to bike and walk can reduce noise pollution.

2 Existing Conditions

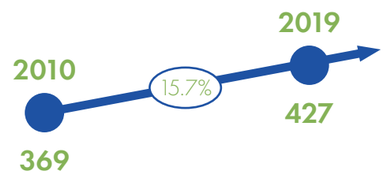
Demographics

This chapter intends to provide a snapshot of the current conditions and characteristics of the people of Granite Quarry and mobility around the Town and region. The data analyzed is foundational to understanding Granite Quarry's community today in order to plan for its future needs. The data in this chapter was provided by the Town of Granite Quarry, Rowan County, the North Carolina Department of Transportation (NCDOT), and the 2019 U.S. Census American Community Survey 5-Year Estimates. Data was collected in January and Feburary 2022.

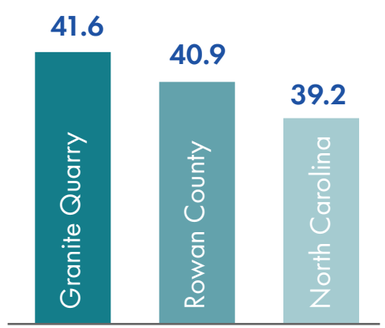
Population Growth



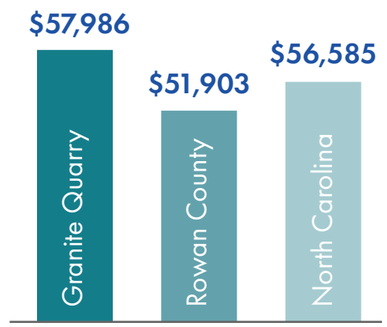
Job Growth



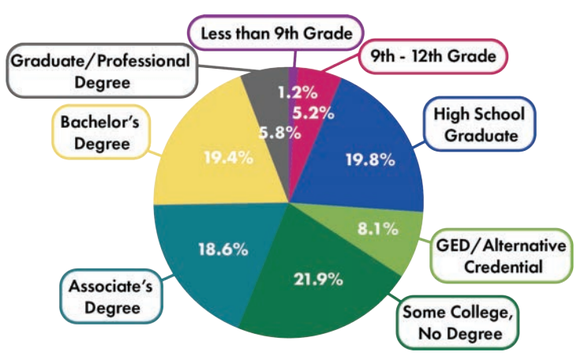
Median Age



Median Household Income



Education



Top 3 Industries in Granite Quarry

19.7% Manufacturing

19.2% Administration & Support, Waste Management and Remediation

18.5% Retail Trade

Top 3 Industries in which Granite Quarry Residents Work

15.3% Manufacturing

13.1% Retail Trade

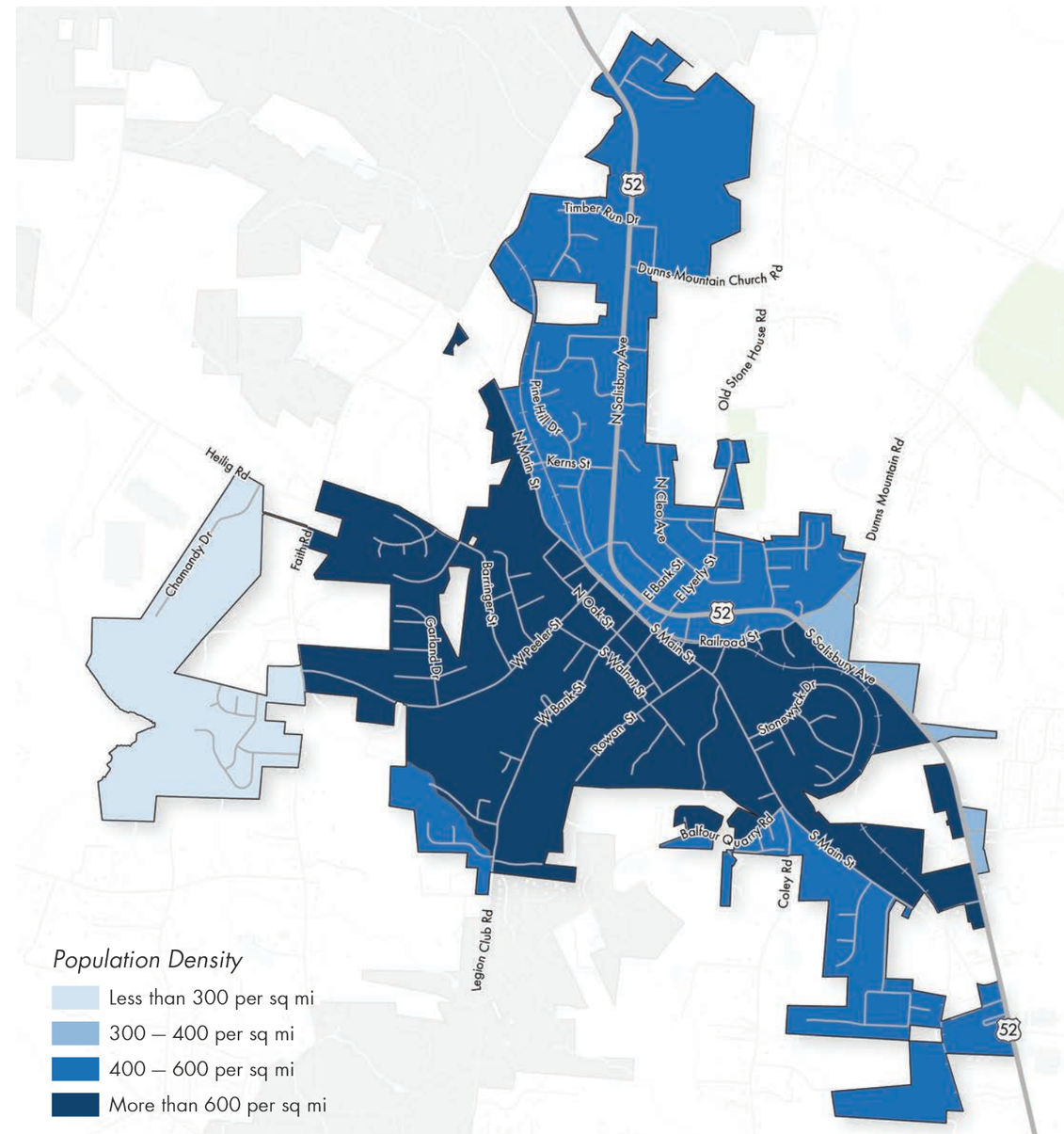
11.6% Health Care and Social Assistance

Source: ESRI Business Analyst Online (2022), U.S. Census ACS 5-Year Estimates (2019), LEHD OnTheMap (2019)

Population Density

This map shows population density by census block group. The map indicates that the population is more heavily concentrated west of Salisbury Avenue/Highway 52 than on the east side. The Granite Quarry block group west of Highway 52 is home to over 2,000 people, or more than 1,000 people per square mile.

Map 1: Population Density

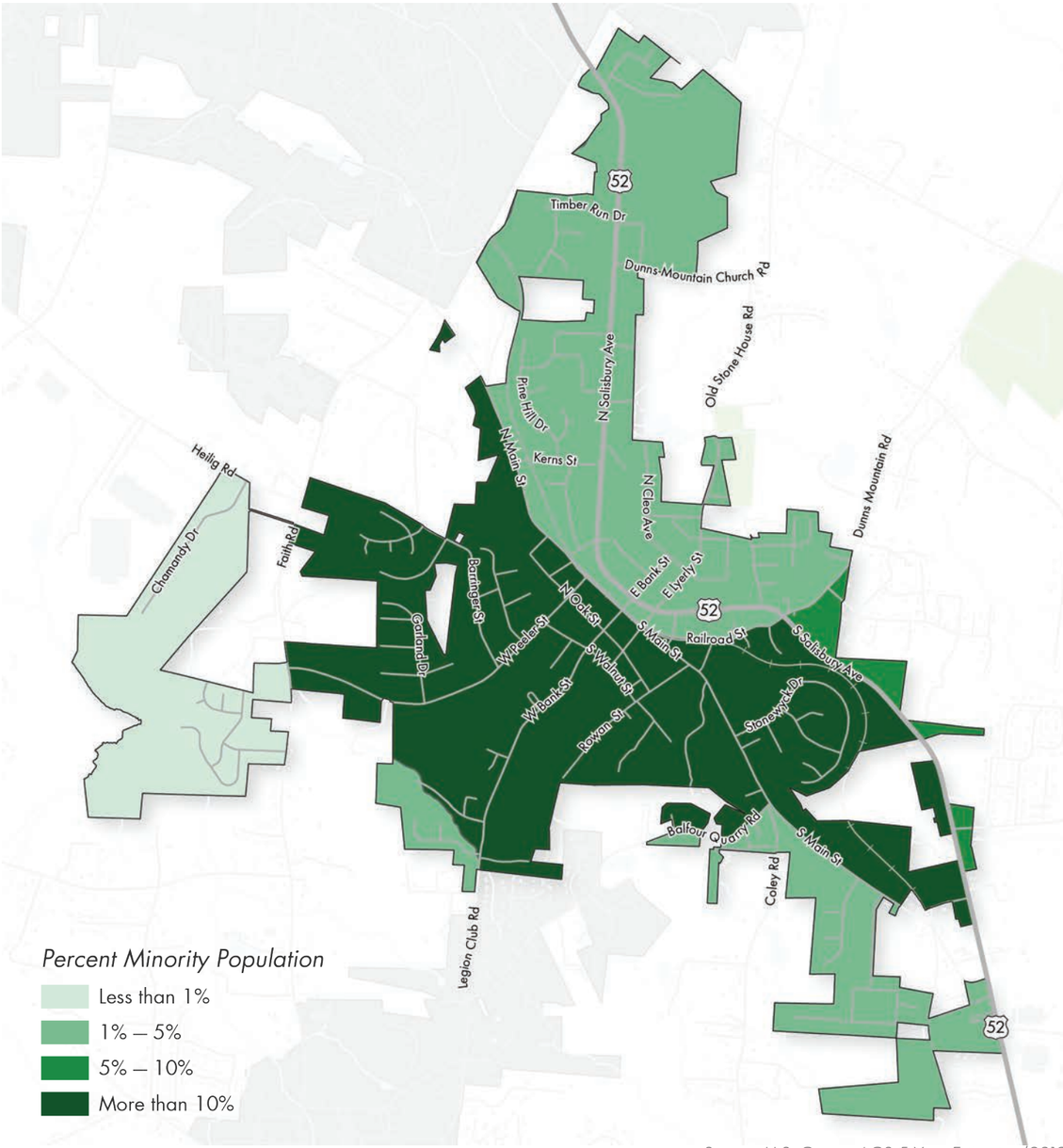


Source: U.S.Census ACS 5-Year Estimates (2019)

Diversity

In addition to being the densest block group in Granite Quarry, the area south of Highway 52 also is home to the most racially diverse population in Granite Quarry. This block group contains a racial minority population of more than 11%. In Granite Quarry, 7% of the population identifies as Black or African American, which is the largest minority group in the Town. 5.3% of the population identifies as Hispanic or Latino.

Map 2: Percent Minority Population

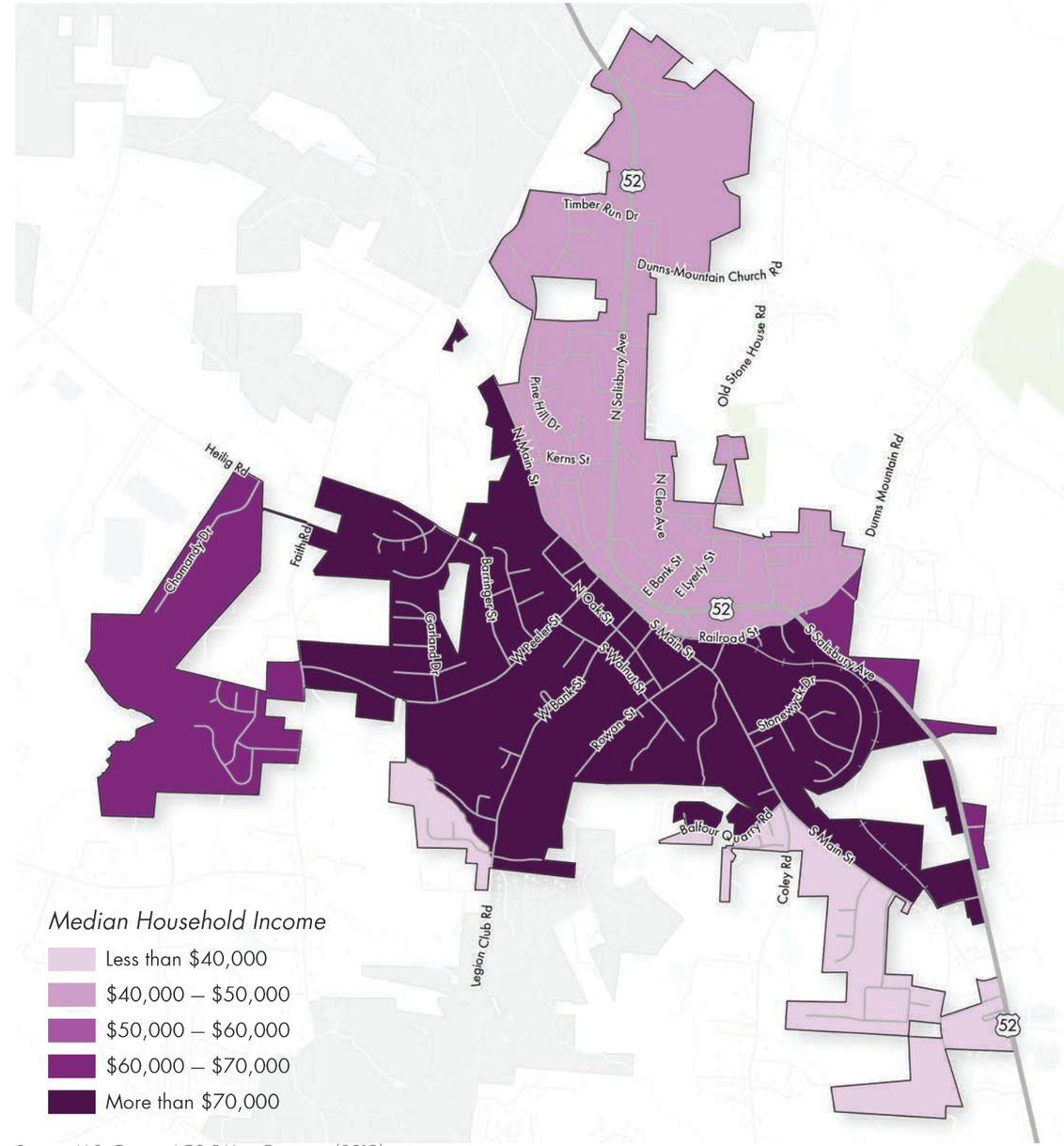


Source: U.S. Census ACS 5-Year Estimates (2019)

Median Income

While the median household income of Granite Quarry is above the county and state, it is important to acknowledge the income differences that exist throughout Town. The median household income in Granite Quarry west of Highway 52 is over $70,000, while the block group east of Highway 52 has a median income of less than $50,000. When planning bicycle and pedestrian infrastructure, we must help ensure that lower-income areas have sufficient access to facilities.

Map 3: Median Household Income



Source: U.S. Census ACS 5-Year Estimates (2019)

Mobility Considerations

The following pages display maps and data that are crucial to understanding current pedestrian and bicycle considerations in Granite Quarry. This data will help create the foundation for future recommendations. The numbers below reflect 2019 data, but COVID-19 has likely had a significant impact on the number of people working from home or otherwise changing their commute patterns.

How people get to work...

Walk	Public Transit	Drive Alone	Carpool	Work at Home	Other Means
0%	0%	91%	6%	1%	2%

Where people work...

405 Commute IN

22 STAY and Work in Granite Quarry

1,167 Commute OUT

16%

Households in Granite Quarry with zero or one vehicle available

By the Numbers

*Up to **15,000** vehicles drive in or through Granite Quarry on Highway 52 every day.*

*Destinations in Town and nearby include **4** parks, **3** schools, and **10+** places of worship.*

*Granite Quarry currently has **6** miles of sidewalk, mostly in and near Downtown.*

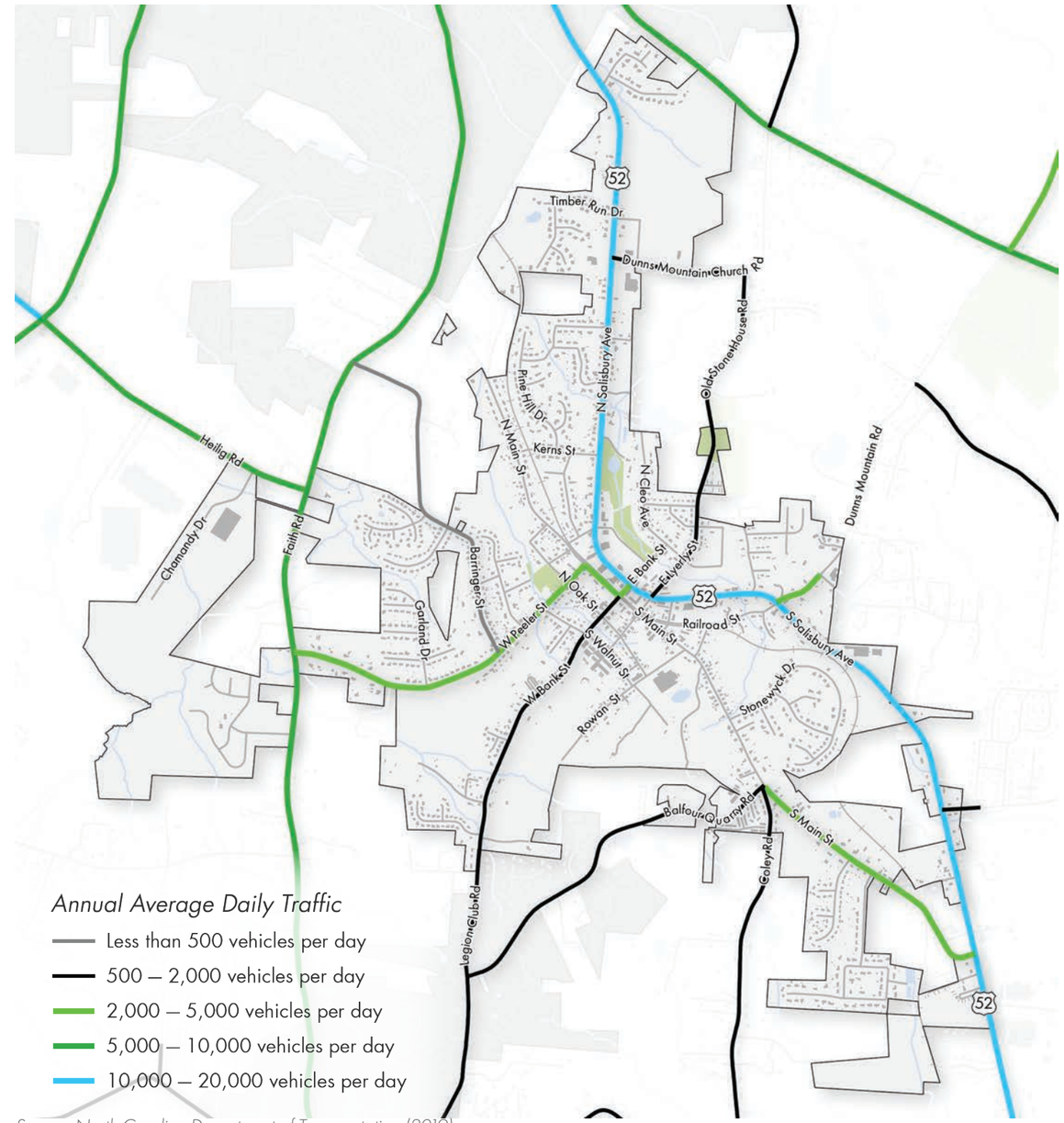
***5** pedestrian or bicycle crashes were reported in Granite Quarry between 2015 and 2019.*

Source: U.S. Census ACS 5-Year Estimates (2019), LEHD OnTheMap (2019)

Average Daily Traffic

Granite Quarry is bisected by the busy Salisbury Avenue/Highway 52, a U.S. Highway that connects Salisbury, Rockwell, and other towns in Rowan County and beyond. Approximately 5,000–11,000 cars per day use the section of Highway 52 that passes through Granite Quarry. Most other roads in Town receive 5,000 vehicles per day or fewer, with busier roads including W Peeler Street and S Main Street.

Map 4: Annual Average Daily Traffic



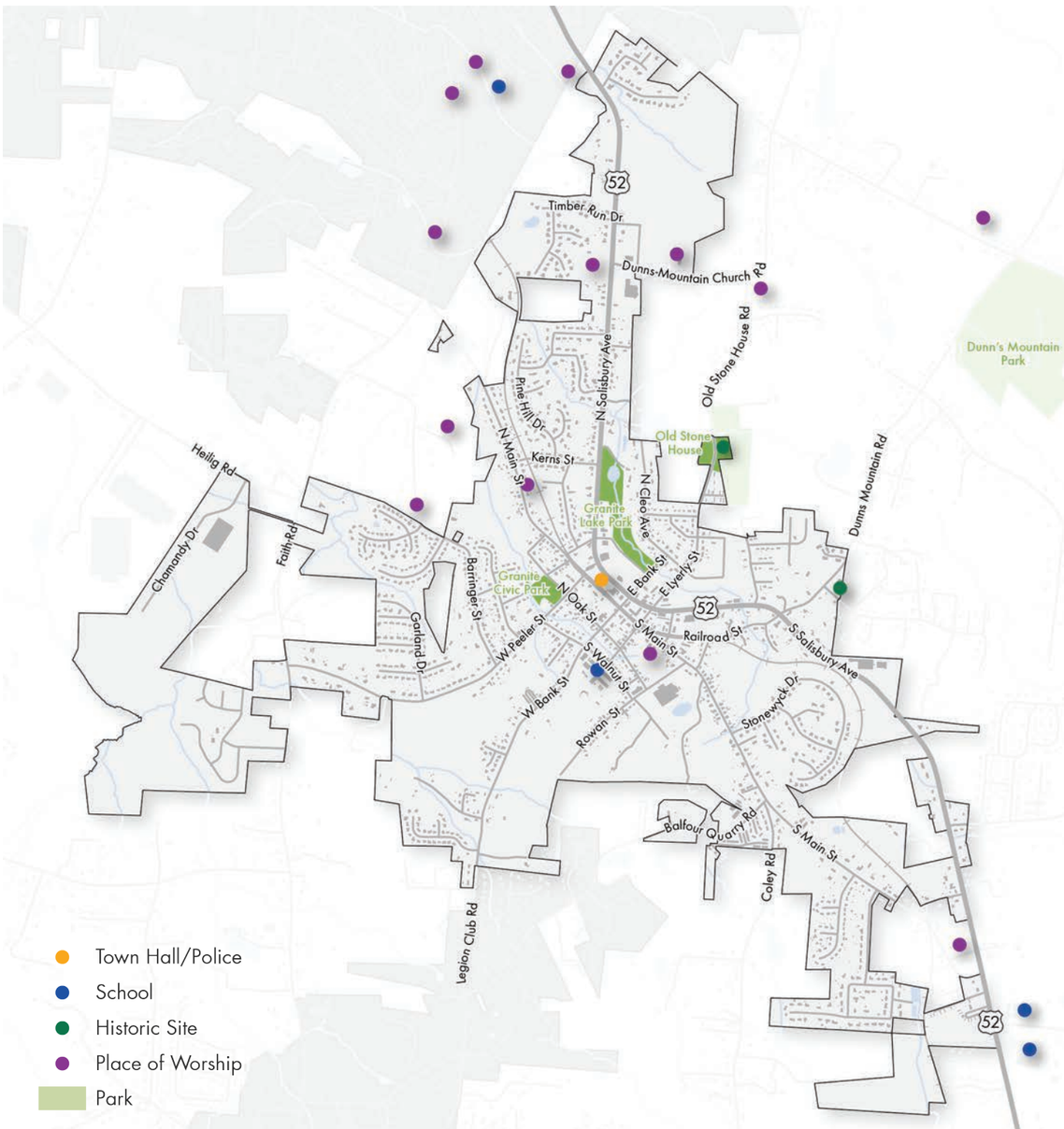
Source: North Carolina Department of Transportation (2019)

Key Destinations

There are several key destinations in Granite Quarry that should be emphasized when planning and prioritizing bicycle and pedestrian facilities. These destinations include Town Hall (in Downtown Granite Quarry), parks, schools, and places of worship.

Some destinations just outside the Town limits—such as East Rowan High School, Erwin Middle School, and Dunn's Mountain Park—should also be considered because of their importance to Granite Quarry residents.

Map 5: Key Destinations

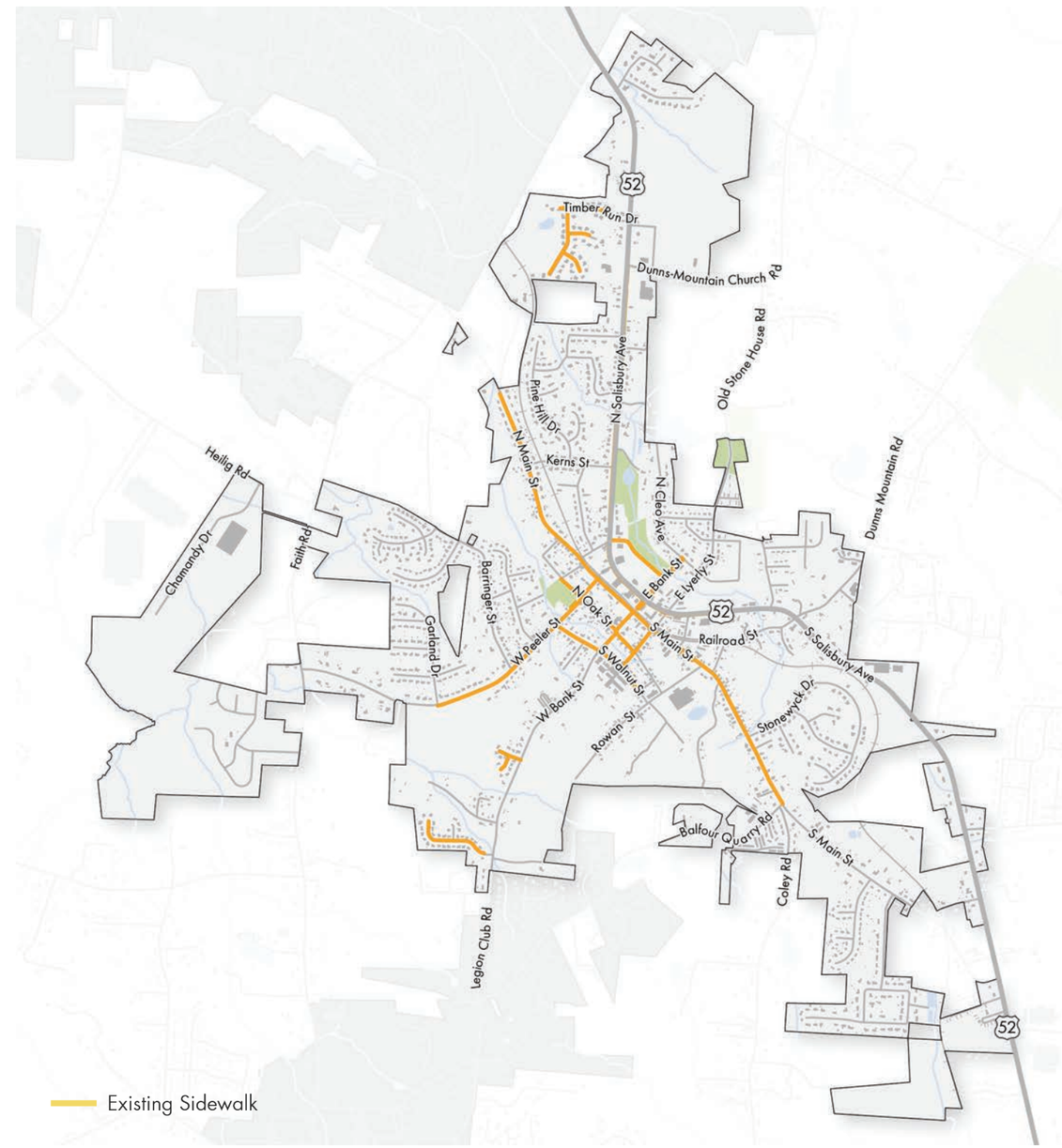


Source: North Carolina Department of Transportation (2019)

Existing Bicycle and Pedestrian Facilities

Granite Quarry currently has approximately 6 miles of sidewalk. Most sidewalks are concentrated in the downtown area, including continuous sidewalks along Main Street and W Peeler Street. Gaps exist in the sidewalk network and few sidewalks are located on the east side of Salisbury Avenue/Highway 52.

Map 6: Existing Bicycle and Pedestrian Facilities

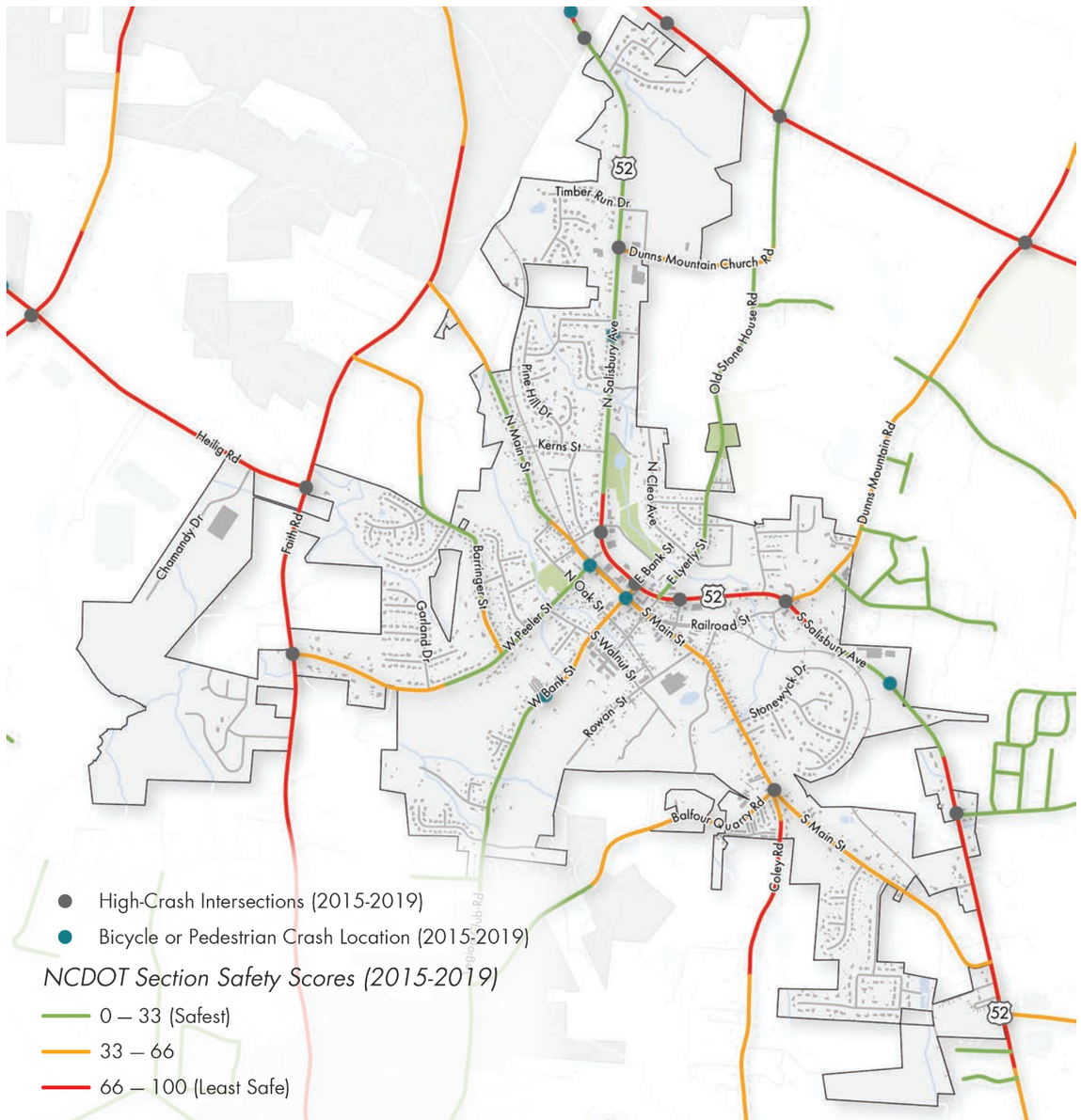


Safety

Pedestrian and bicycle safety is a critical factor for increasing multimodal transportation in Granite Quarry. This map displays points where bicycle and pedestrian crashes occurred between 2015 and 2019, intersections with a high concentration of vehicular crashes between 2015 and 2019, and NCDOT's Section Safety Scores, which measure overall safety and crash frequency of each road segment.

Even crashes that do not directly involve pedestrians and bicyclists contribute to safety issues for biking and walking in Town. Highway 52 has seven high-crash intersections and has had two bicycle/pedestrian crashes. Main Street and Faith Road also are notably unsafe.

Map 7: Crashes and Safety Scores

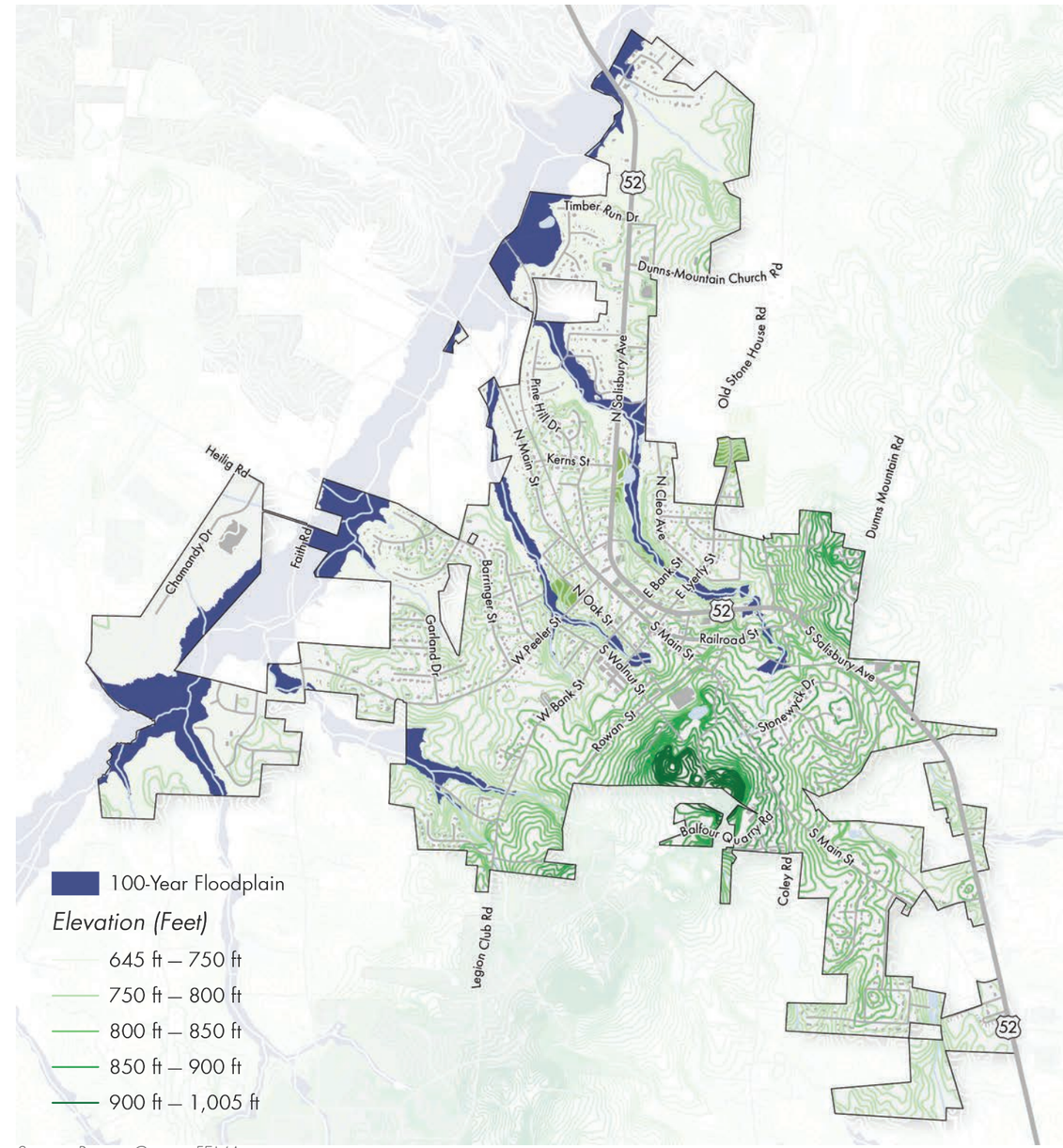


Source: North Carolina Department of Transportation (2019)

Environmental

Several environmental considerations may impact growth and development around the Town of Granite Quarry. Streams and floodplains can provide right-of-way opportunities and barriers to future facilities, and topography can affect the accessibility of neighborhoods. Granite Quarry's most prominent environmental features are the floodplains on the west side of Town near Crane Creek and its tributaries, and topographic features on the east side of Town.

Map 8: Environmental Features



Source: Rowan County, FEMA

Assets and Challenges

A key part of this planning process involves identifying opportunities and assets to be leveraged for ways to improve the pedestrian and bicycle system in Granite Quarry. The inverse of this exercise acknowledges challenges facing the community as it relates to biking and walking. These characteristics were identified through a review of existing conditions, input from the public and the steering committee, and guidance from the Town of Granite Quarry.

Assets

The Town of Granite Quarry boasts a variety of assets that can contribute to maturing the Town's pedestrian and bicycle system. These assets include general characteristics of the community and Granite Quarry's local places.

Community Characteristics

- *Small-town feel*
- *Sense of community*
- *Proximity to neighboring communities (i.e., Salisbury, Rockwell)*

Local Places

- *Downtown Granite Quarry businesses*
- *Old Stone House*
- *Granite Lake Park and Centennial Nature Trail*
- *Granite Quarry Elementary*
- *Neighborhoods and employers*

Challenges

Granite Quarry also faces some challenges to becoming a truly walkable and bikeable community. These constraints include the mobility challenge posed by U.S. Highway 52, other transportation hazards, and the environmental constraints of Granite Quarry's location.

Barriers to Mobility

- *U.S. 52 is an important transportation corridor, but it poses a barrier through the center of Town for bicyclists and pedestrians*
- *Unsafe intersections*
- *Limited sidewalks outside downtown*
- *Railroad is a barrier, and crossings are limited*

Physical Characteristics

- *Hills and rolling terrain*
- *Environmental constraints (i.e., floodplains of Crane Creek and other waterways)*

Plan Review

Reviewing previous plans is important to understanding the planning context of Granite Quarry, and the region, in order to best leverage recommendations that already have been memorialized. This section outlines various planning efforts that contain recommendations relevant to developing this plan. All recommendations listed are summarized from their respective documents.

CRMPO Metropolitan Transportation Plan 2050 (2022)

The Metropolitan Transportation Plan (MTP) builds on the long-term vision laid out in the Comprehensive Transportation Plan (CTP) by setting out goals, plans, fiscally viable projects, and implementation priorities for a 25-year planning horizon. Included projects are intended to reduce congestion, increase safety, provide mobility choices for all users, and support freight and economic vitality. These projects have been evaluated and decided to be cost-effective and recommended for implementation by 2025, 2035, 2045, or 2050.

Relevant Recommendations:

- *Pursue funding for a coordinated and comprehensive network of sidewalks and bicycle routes through the area*
- *Improve transportation system with accommodations for bicyle and pedestrian access*
- *Continue mapping bicycle and pedestrian crash data to find problems and environmental justice issues*
- *Adopt safety performance measures established by NCDOT*
- *Recommend specific bicycle and pedestrian projects, though none are located in Granite Quarry*
- *Identify locations that have had pedestrian crashes between 2016 and 2020, including the following locations in Granite Quarry:*
  - *Main Street and Faith Road*
  - *Faith Road and Byrd Road*
  - *U.S. 52 at Dunns Mountain Church Road*
  - *U.S. 52 near Brown Acres Road*
  - *Coley Road near Church Creek*

Comprehensive Land Use Plan (2019)

The 2019 Town of Granite Quarry Comprehensive Land Use Plan is an update to the 2000 version. The update recognizes new growth trends, brings goals up to date, and adds new goals that will be used to support future land use decisions. This version of the plan looks forward to 2040, but should be revised in 5-year intervals.

Relevant Recommendations:

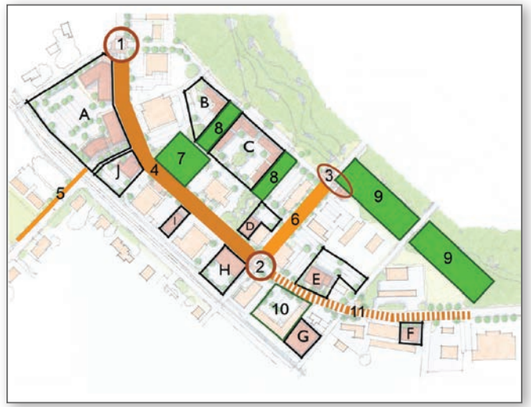
- *Aim to expand and improve current sidewalk and trail systems (including the Carolina Thread Trail) and maintain, expand, and add to parks*
- *Update Unified Development Ordinance (UDO) and Zoning Map to identify important strategic properties and transportation corridors (including N Salisbury Avenue and Faith Road) and define how they will be handled differently in the prescribed development review process*
- *Review existing residential subdivisions for connectivity opportunities to neighboring properties, developments, and roadways via undeveloped lots*
- *Identify potential road connections and extensions to improve ease of transportation corridors from core areas of Granite Quarry to I-85*

Downtown Master Plan (2016)

The Downtown Master Plan is a revitalization plan for Granite Quarry's core along U.S. 52. The project team conducted an extensive community engagement process to align the recommendations with the community's goals. The plan makes recommendations for economic development, planning and design, marketing and branding, and organization and partnerships.

Relevant Recommendations:

- *Economic Development:*
  - *Seek Downtown Associate Community Program designation*
  - *Pursue grants for economic development and community improvement projects*
- *Design and Planning:*
  - *Engage NCDOT to address streetscape improvements*
  - *Plan for infill development to meet existing demand*
  - *Begin improvements to Centennial Park*
  - *Connect and link expanded parks to other existing assets*
  - *Explore catalytic infill and redevelopment opportunities*
  - *Consider Peeler Street extension between U.S. 52 and Civic Park*
  - *Consider an expanded streetscape project along U.S. 52*
  - *Consider a rail-with-trail opportunity along the existing Norfolk Southern rail line that runs parallel to main street*



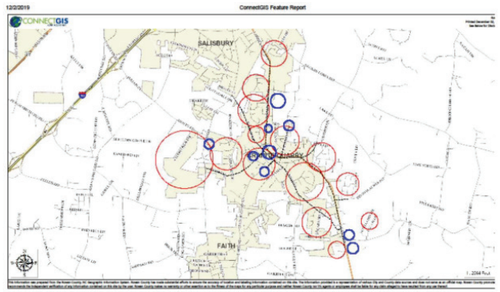
Downtown Streetscape Improvement Map

Sidewalk Master Plan (2019)

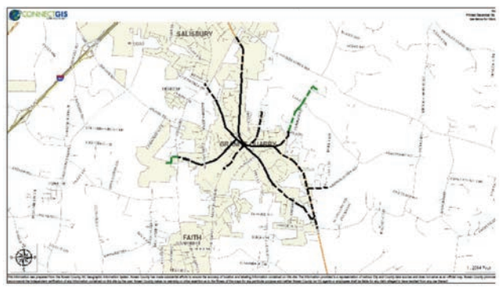
The Sidewalk Master Plan recommended changes to how the city prioritizes sidewalks, encouraging a plan focused on important connections between higher density neighborhoods and major destinations. It also included recommended amendments to the UDO surrounding sidewalks.

Relevant Recommendations:

- *Prioritize connectors between residential neighborhoods (i.e., creators) and attractors like downtown, parks, schools, and shopping centers*
  - *N and S Salisbury Avenue (Hwy 52) from Crane Creek bridge to East Rowan High School*
  - *Main Street from Faith Road to Hwy 52, south of town*
  - *Peeler/Byrd from Main Street to Faith Road*
  - *Some of Lyerly, Dunn's Mountain, and Brown Acres*
- *Require sidewalks:*
  - *On all streets in designated downtown commercial area*
  - *In older neighborhoods adjacent to downtown with existing sidewalk networks that could be expanded*
  - *Along identified sidewalk corridors*
  - *In all new high-density subdivisions and as connections to identified corridors*
  - *All other new development should be required to make payment in lieu of sidewalks*
- *Create a master sidewalk/trail map showing main sidewalk corridors and update annually with existing and proposed internal sidewalk systems and connector sidewalks/trail systems*



Creators Attractors



Map of Main Sidewalk and Trail Corridors, derived from Creators and Attractors

Unified Development Ordinance (2021)

The 2021 UDO regulates the standards for development within Granite Quarry's planning area, including zoning, building design, and lot design requirements. As part of the larger Code of Ordinances, the UDO acts as the city's primary legal mechanism to influence development patterns and requires aspects like sidewalk connections with construction or repair.

Relevant Provisions:

- *Block size shall be determined with due regard to: provision of adequate building sites suitable to the special needs of the type of use contemplated; zoning requirements; needs for vehicular and pedestrian circulation; control and safety of road traffic; limitations and opportunities of topography; and convenient access to water areas*
- *NCDOT Division of Highways Traditional Neighborhood Development Guidelines street standards may be followed for developments that use a more traditional design*
- *New non-residential or multi-family residential developments along existing, publicly-maintained streets within Town limits must construct sidewalks along all street frontages*
- *New residential developments shall construct sidewalks along the existing street frontage from which the development takes access (does not apply to existing single-family and two-family residential lots or for any minor subdivision along an existing street)*
- *Payment in lieu of sidewalk allowed where unreasonable based on conditions (e.g., topography, wetlands), or where a sidewalk would not connect to existing or planned sidewalks; funds shall be used for building or completing pedestrian, bikeway, or path systems*
- *Landscaped medians and entrance markers cannot pose a hazard to vehicular or pedestrian traffic*
- *All proposed streets shall be continuous and connect to existing or platted streets with the exception of cul-de-sacs (as permitted)*
- *As part of new street construction, sidewalks shall be constructed; minimum on one side of the street, preferred placement on both sides (with exception of cul-de-sac streets of less than 200 feet)*
- *In downtown area:*
  - *Continuous sidewalks must be provided on both sides of all major and minor roads in downtown area*
  - *Sidewalks must be provided along all street fronts for new building construction and during major repairs or additions to existing buildings or parking lots as part of construction work*
  - *Other sidewalks provided according to master plan schedule*
  - *Inclusion of bike racks for parking lots with at least 12 spaces and all establishments potentially serving pedestrian customers, triggered for existing lots upon major repair work*

Carolina Thread Trail Greenway Master Plan for Rowan County Communities (2014)

The Carolina Thread Trail is a regional network of more than 300 miles of greenways and trails and 170 miles of blueways. The Carolina Thread Trail Greenway Master Plan for Rowan County Communities outlines steps to preserve natural amenities, conserve historic sites, and provide public recreation facilities to this area. The plan proposes 108 miles of trails and 70 miles of blueways throughout Rowan County.

Relevant Recommendations:

- *Proposed trail along N Salisbury Road through downtown—connecting Centennial Park, Granite Civic Park, and Granite Lake Park—and continuing to the south*
- *Proposed trail to start in Salisbury and follow U.S. 52 to Granite Quarry*

Salisbury Comprehensive Bicycle Plan (2009)

The Salisbury Comprehensive Bicycle Plan acts as a framework for promotion and expansion of bicycle facilities and programs in Salisbury and its surrounding rural areas. Due to Salisbury's proximity to Granite Quarry, some recommendations connect into the town as well.

Relevant Recommendations:

- *Bike thoroughfares on Heilig Road and Faith Road (NW portion of Granite Quarry) as part of a proposed widening of both roads*

3 Engagement

Engagement

The GoGQ Bicycle and Pedestrian Plan was a community-driven effort, reliant on feedback from residents throughout the process. This plan is designed to provide the residents of Granite Quarry with the pedestrian and bicycle infrastructure that fits their needs. The approach to gathering community input included two major outreach events: a public workshop to identify needs and an interactive digital survey to solicit feedback on recommendations and shape the prioritization process.

Public Workshop

In September 2021, the GoGQ planning process was introduced to the public at a workshop-style public meeting. The event featured a variety of information and activity stations designed to educate attendees on the mobility planning process, engage them via interactive activities, and gather meaningful feedback that would guide the Plan's recommendations. Key takeaways from the workshop are discussed here.

Stations included:

- **Introductory Boards:** *Introduce participants to the project*
- **One Word Exercise:** *Describe walking and biking in Granite Quarry, both now and in the future*
- **Visual Preference:** *What makes walking/biking a great experience?*
- **Mapping Exercise:** *Describe strong and weak places for mobility*

What Makes Biking a Great Experience?

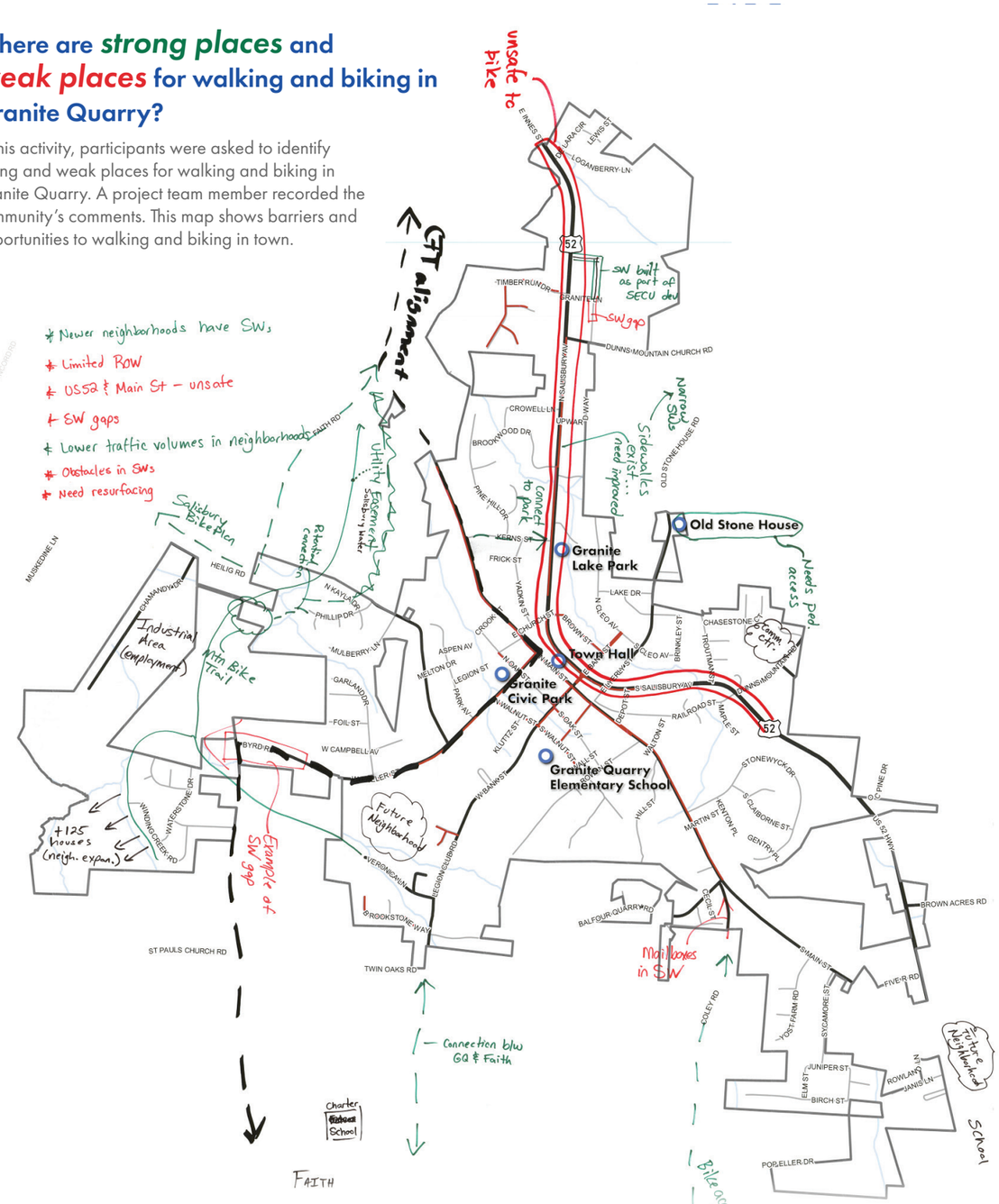
What Makes Walking a Great Experience?

KEY: ● = Most desirable and/or appropriate for Granite Quarry ● = Least desirable and/or appropriate for Granite Quarry

Workshop participants generally preferred biking and walking infrastructure with greater separation from traffic—emphasizing safety, accessibility, and green space.

Where are *strong places* and *weak places* for walking and biking in Granite Quarry?

In this activity, participants were asked to identify strong and weak places for walking and biking in Granite Quarry. A project team member recorded the community's comments. This map shows barriers and opportunities to walking and biking in town.



Participants expressed a desire for greater connectivity between downtown, popular destinations in Granite Quarry, and neighboring municipalities such as Salisbury and Faith. Sidewalk gaps are an issue, especially outside downtown.

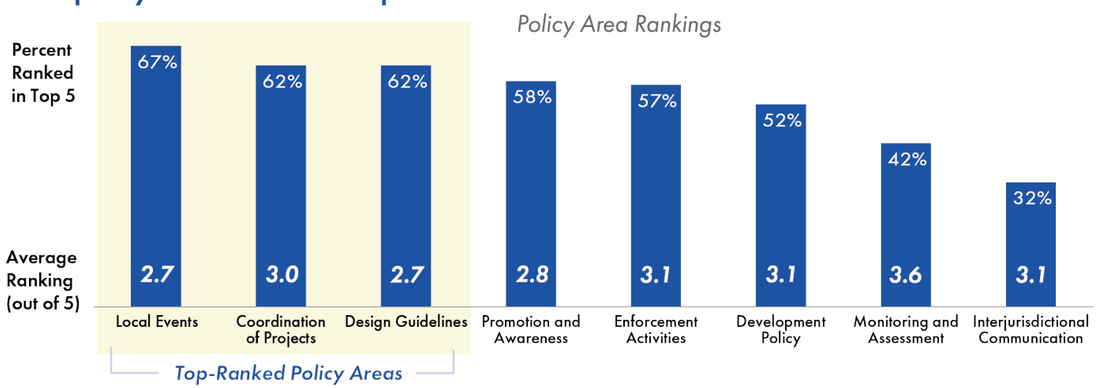
Online Survey

The online GoGQ survey was open during February and March 2022 and was widely distributed by the Town of Granite Quarry to its residents. The survey solicited feedback on which policy areas, geographic areas, and specific bicycle and pedestrian projects were most important to residents. Highlights from the survey results are shown below.

Start Date: February 4, 2022 **End Date:** March 28, 2022

100+ *participants*

Which policy areas are most important?

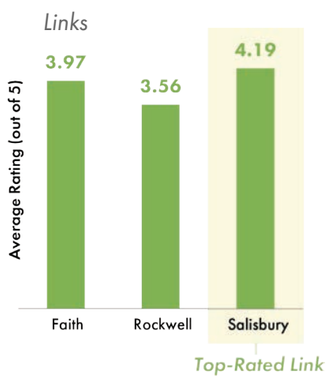


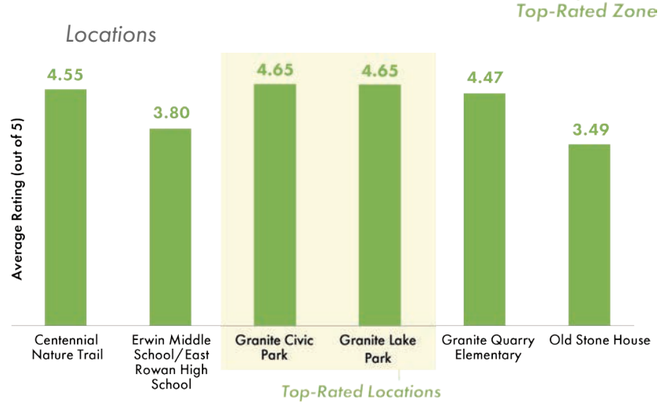
Of the policy area options, the most popular among survey participants were local events, coordination of projects, and design guidelines. These choices signify that Granite Quarry residents want bicycling and walking to be a central part of Granite Quarry's identity.

Where is mobility most important?

The next screen asked participants to choose which mobility zones, links, and locations were most important to them.

Neighborhoods were the top pick for priority zones, closely followed by downtown. Salisbury was voted the most important link to outside Granite Quarry. Among locations, the Town's parks were considered the most important to participants.

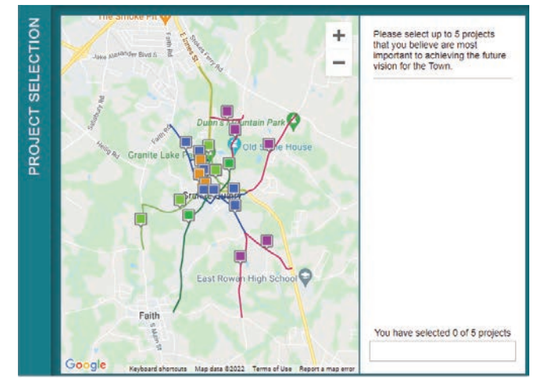




Which projects are most important to you?

Project recommendations will be introduced in **Chapter 4**. The online survey was conducted after draft recommendations had been developed. Participants had the chance to choose the five projects they saw as most important to achieving the future vision for Granite Quarry.

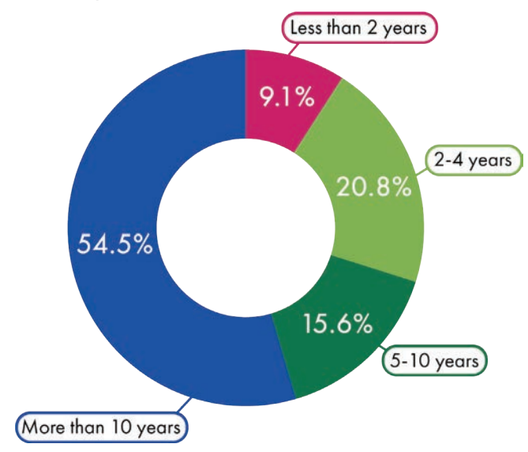
These results were included as a factor in the project prioritization process, outlined in **Chapter 6** (detailed results on).



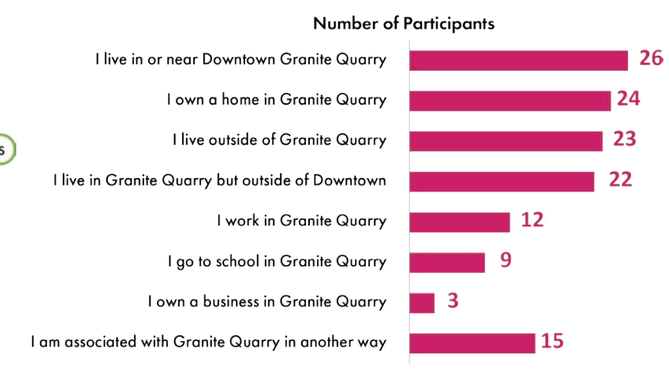
Participant Summary

The final questions on the online survey asked participants about their affiliations with Granite Quarry. Not all participants answered these questions. Many participants were long-time residents of Granite Quarry—over half had been associated with the Town for more than 10 years. Most survey participants indicated that they live or work in Granite Quarry.

How long have you been associated with Granite Quarry?



How are you associated with Granite Quarry?



4 Facility Recommendations

Recommendations

This chapter highlights the recommended corridor improvement projects, including pedestrian and bicycle projects. After draft recommendations were developed, the public survey participants provided feedback. The recommendations discussed in this chapter represent the culmination of these outreach efforts, the findings from the existing conditions analysis, and input from Town staff and the Steering Committee.

Needs Identification Process

The pedestrian and bicycle network recommendations were developed by combining existing conditions data with the needs, input, and feedback provided by residents, the Steering Committee, and Town staff. The recommendations are thus a product of the opportunities and constraints to mobility in Granite Quarry and the feedback collected. This process is outlined in the graphic below. The remainder of this chapter focuses on facility recommendations, but this process also applies to the policy and program recommendations that are discussed in **Chapter 6 (page 60)**.

Facility Types

The recommended pedestrian and bicycle facilities for Granite Quarry consist of five different facility types, outlined below. These facility types respond to the unique purposes and constraints of their surroundings. Each facility type has a role to play in creating a safer and more connected transportation network for bicyclists and pedestrians in Granite Quarry.

Standard Bicycle Lane

Recommended Width: *5 feet*

A bicycle lane is a marked travel lane along a portion of the roadway that has been designated for preferential or exclusive use for bicyclists.

- *Dedicated space for bicyclists delineated by painted lines*
- *May be incorporated in conjunction with road diet projects*
- *Buffered or protected bicycle lanes may be considered during the design phase*

Paved Shoulder

4 feet

Typically used in more rural contexts, a paved shoulder is a wide area of pavement directly adjacent to the travel lanes. Bicyclists can comfortably ride alongside vehicles in this area. Paved shoulders also provide safe places for vehicles to pull off the road.

- *Provide additional space at the edge of the roadway for cyclists*
- *May be completed in conjunction with road improvements*

Shared Lane Marking (Sharrow)

A shared lane marking is a street sign or marking used to indicate where cyclists may use the entire lane with vehicles.

- *These street signs are often accompanied by painted on-street markings*
- *Shared lane markings do not require additional right-of-way acquisition*

Sidewalk

5-6 feet

A sidewalk is a paved pathway for pedestrians, typically on both sides of a road.

- *Filling gaps will provide connectivity to and between neighborhoods and activity centers*
- *Create continuous pathways at both sides of intersections*
- *Recommended connections on one or both sides of existing roadways*

Multi-Use Path

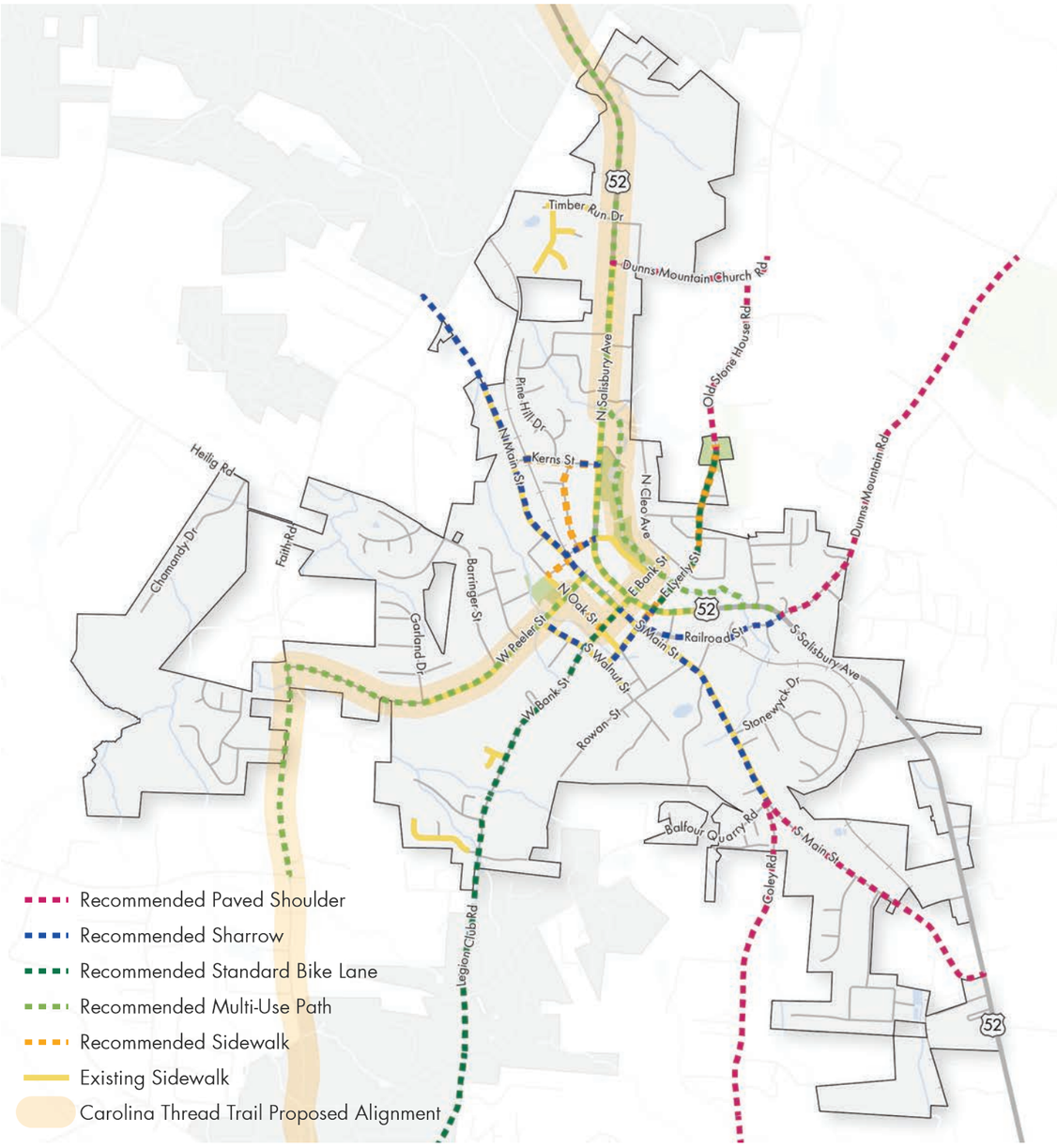
8+ feet

A multi-use path is a facility that may be used by bicyclists, pedestrians, and other non-motorized users. They are separated from the roadway by an open space or physical barrier. A greenway serves the same function but, instead of running along a road, they are located in more natural or forested areas.

- *This facility is separated by a strip of grass from traffic; therefore, it offers the most safety from vehicles*

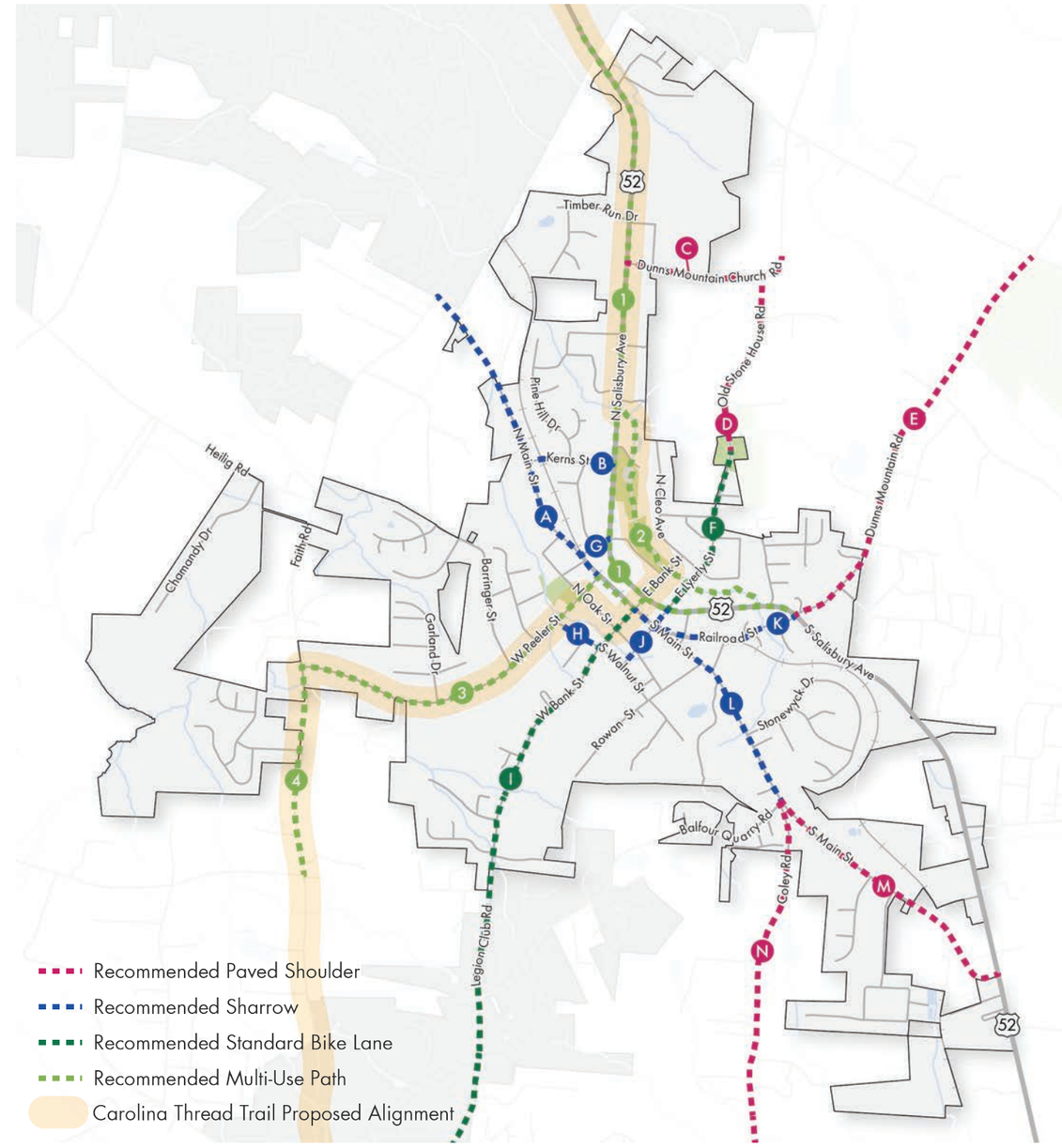
All Recommended Facilities

Map 9: All Recommended Facilities



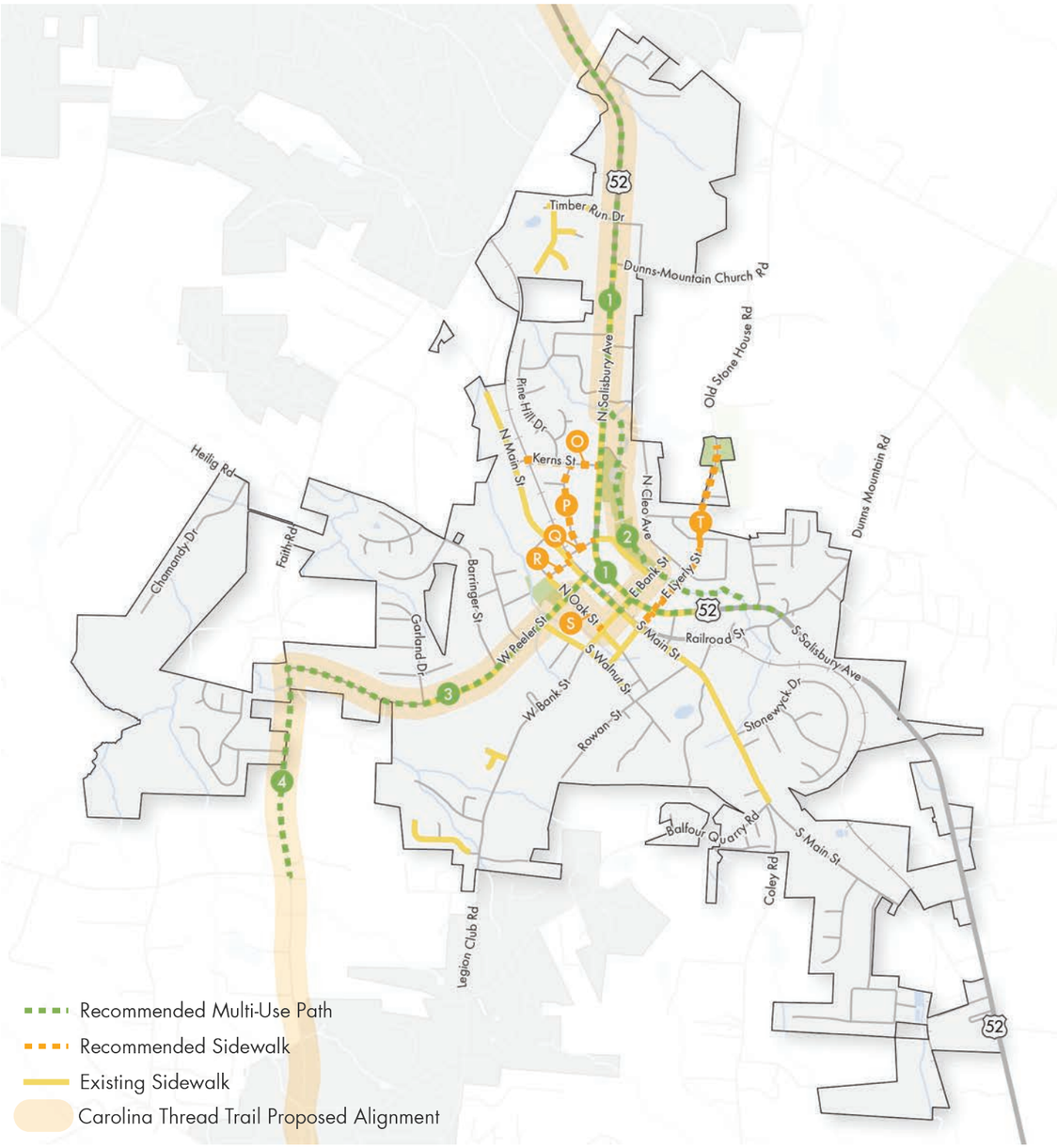
Recommended Bicycle Facilities

Map 10: Recommended Bicycle Facilities



Recommended Pedestrian Facilities

Map 11: Recommended Pedestrian Facilities



Key: All Facility Recommendations

Projects on Demonstration Corridors shown in bold.

Bicycle Facilities

- A **Sharrow along N Main Steet from W Peeler Street to Faith Road**
- B **Sharrow along Kerns Street from N Main Street to N Salisbury Avenue/U.S. 52**
- C Paved shoulder along Dunns Mountain Church Road from N Main Street to N Salisbury Avenue/U.S. 52
- D Paved shoulder along Old Stone House Road from the Old Stone House to Dunns Mountain Church Road
- E Paved shoulder along Dunns Mountain Road from S Salisbury Avenue/U.S. 52 to Stokes Ferry Road
- F **Standard bike lane along E Lyerly Street/Old Stone House Road from S Salisbury Avenue/U.S. 52 to the Old Stone House**
- G Sharrow along E Church Street from N Main Street to N Salisbury Avenue/U.S. 52
- H Sharrow along N Walnut Street from W Peeler Street to W Bank Street
- I **Standard bike lane along W Bank Street from S Main Street to Gantt Street**
- J Sharrow along W Lyerly Street from S Walnut Street to S Salisbury Avenue/U.S. 52
- K Sharrow along Railroad Street from E Lyerly Street to S Salisbury Avenue/U.S. 52
- L **Sharrow along S Main Street from E/W Bank Street to Balfour Quarry Road**
- M **Paved shoulder along S Main Street/Old Route 80 from Balfour Quarry Road to U.S. 52**
- N Paved shoulder along Coley Road from Balfour Quarry Road to Kluttz Road/Stone Road

Sidewalks

- O **Sidewalk along Kerns Street from N Salisbury Avenue/U.S. 52 to N Main Street**
- P Sidewalk along Yadkin Street from E Church Street to N Main Street
- Q Sidewalk along E Church Street from N Salisbury Avenue/U.S. 52 to N Main Street
- R Sidewalk along W Church Street from N Main Street to N Oak Street
- S Sidewalk along N Oak Street from W Bank Street to W Peeler Street
- T **Sidewalk along E Lyerly Street/Old Stone House Road from S Main Street to the Old Stone House**

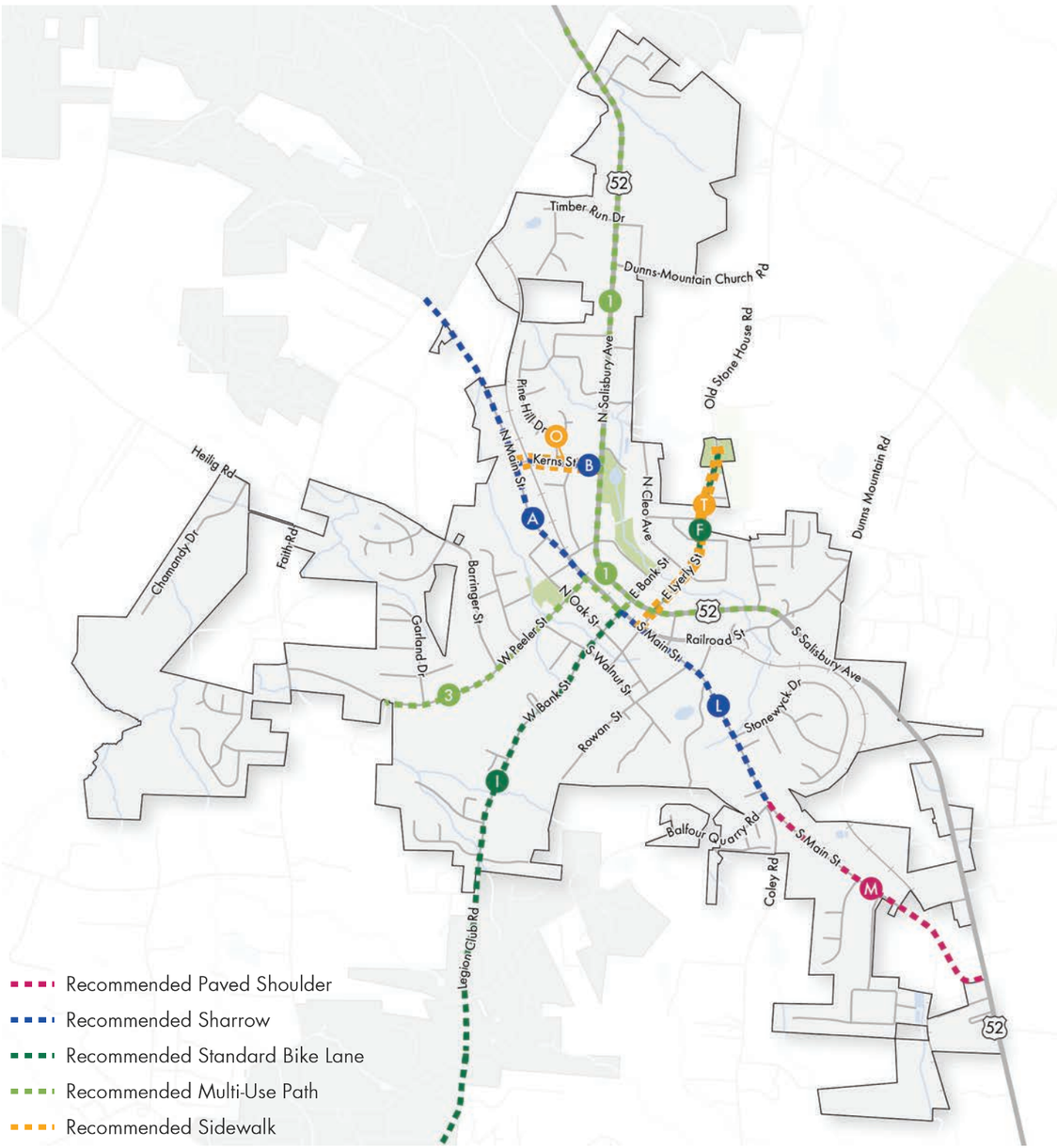
Multi-Use Paths

1. **Multi-use path along Salisbury Avenue/U.S. 52 from Railroad Street/Dunns Mountain Road to Granite Quarry Boundary**
2. Multi-use path along creek from N Salisbury Avenue/U.S. 52 to S Salisbury Avenue/U.S. 52
3. **Multi-use path along E Bank Street/N Main Street/W Peeler Street/Byrd Road from Multi-Use Path 2 to Faith Road**
4. Multi-use path along Faith Road from Byrd Road to St Paul Church Road

Demonstration Corridors

The project team selected six demonstration corridors to be profiled in greater detail. Some corridors include multiple project segments. In part, these corridors were selected based on feedback from the second public survey and the prioritization process results (as explained in **Chapter 5**). Of the overall list of recommended multimodal projects, these demonstration projects are most likely to garner public support, score well for outside funding opportunities, and make a positive change in the future of mobility in Granite Quarry.

Map 12: Demonstration Corridors



Project Characteristics

The demonstration corridors and their planning-level cost estimates are shown on the following pages. Each demonstration corridor page details the project characteristics and highlights the key connections (presented in **Chapter 1**) that the project would serve. A description of these characteristics are highlighted below.

1 *Recommendation*

A brief description of the project and its extents (provided for context).

2 *Length*

The length of each project segment.

3 *Construction Cost Estimate*

High-level cost estimates developed using the 2019 NCDOT Bicycle-Pedestrian Cost Estimation Tool. This tool assesses a wide variety of factors and characteristics of a project to generate a cost estimate that includes design, right-of-way acquisition, utilities work, and construction.

4 *Facility Type*

The type of facility that is recommended. This may vary by project segment.

5 *Key Connections*

Key connections served by the project are shown in full color, while locations not served are dimmed.

6 *Project Constraints and Considerations*

Other constraints and factors that may affect project cost and/or implementation.

7 *Illustrative Street Cross-Section*

An illustrative representation of the potential street cross-section. The cross-section reflects the most prominent facility types on the corridor, but does not necessarily reflect the full corridor.

Main Street

Faith Road to South Salisbury Avenue/U.S. 52

Recommendation

This project would add sharrows (shared lane markings) to much of Main Street from Faith Road to Balfour Quarry Road and add paved shoulders in the southeast between Balfour Quarry Road and U.S. 52. The route would provide a cycling connection through downtown and to the Town's northern and southeasternmost neighborhoods.

Project Segments

Segment A: 1.02 miles
Segment L: 0.77 miles
Segment M: 0.90 miles

Facility Type

Segment A: Sharrow
Segment L: Sharrow
Segment M: Paved Shoulder

Construction Cost Estimate

Segment A: $20,000
Segment L: $20,000
Segment M: $1,575,000

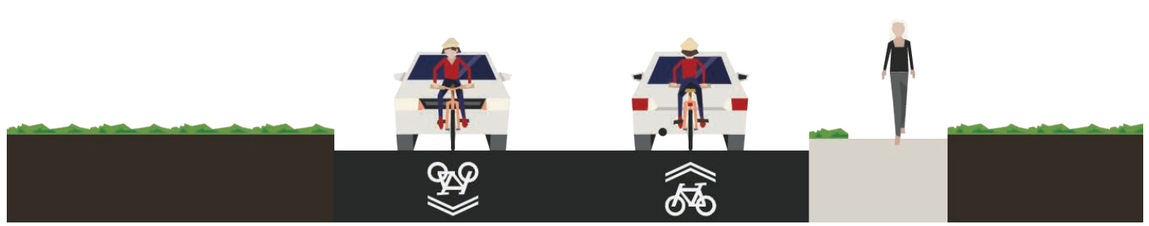
Key Connections

Connections served by this project are shown in full color.

Project Constraints and Considerations

Main Street is a state road (State Road 2300), necessitating close work with NCDOT Division 9. The road also crosses a couple streams, which may have environmental impacts and may necessitate some bridge engineering work.

Illustrative Street Cross-Section



Salisbury Avenue (U.S. 52)

Town Boundary to Railroad Street/Dunns Mountain Road

Recommendation

This project would add a multi-use path along Salisbury Avenue (U.S. 52) from Railroad Street/Dunns Mountain Road to Granite Quarry's northern boundary. The path would also be part of the proposed Carolina Thread Trail, planned to eventually connect further into Salisbury creating a larger network of bicycle and pedestrian links across the town and region.

Project Segments

Segment 1: 2.35 miles

Facility Type

Multi-Use Path

Construction Cost Estimate

$6,605,000

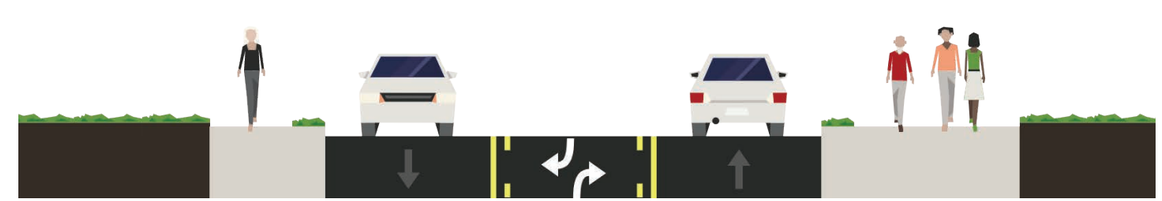
Key Connections

Connections served by this project are shown in full color.

Project Constraints and Considerations

This section of US 52 crosses a stream north of Granite Lake Park, which may create additional challenges of right-of-way acquisition or increased infrastructure cost. In addition, some portions of the path may require acquisition of right of way in space-constrained areas. As a U.S. Highway, the Town would likely have to work closely with NCDOT to construct this facility.

Illustrative Street Cross-Section



West Bank Street

South Main Street to Gantt Street

Recommendation

This project would add bicycle lanes to West Bank Street, creating a critical bicycle link between Downtown and neighborhoods in the southern part of the town and to the neighboring community of Faith.

Project Segments

Segment I: 1.94 miles

Facility Type

Bicycle Lane

Construction Cost Estimate

$3,715,000

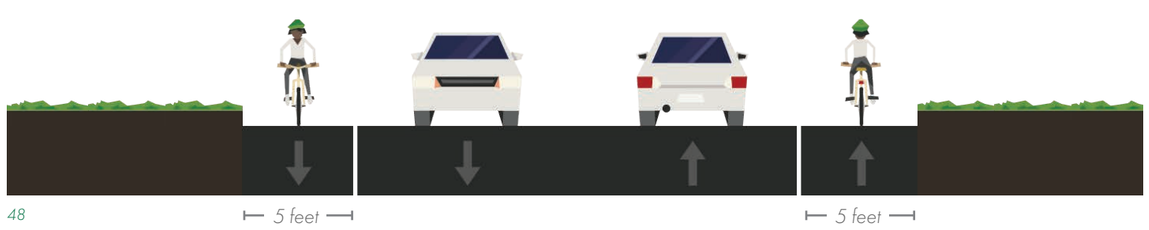
Key Connections

Connections served by this project are shown in full color.

Project Constraints and Considerations

A potential conflict with school buses may arise near Granite Quarry Elementary during construction. The project also would cross several streams, potentially requiring environmental impact assessments. In addition, the project would benefit from collaboration with the Town of Faith to create a connected facility.

Illustrative Street Cross-Section



East Lyerly Street/Old Stone House Road

South Main Street to the Old Stone House

Recommendation

This project would add sidewalks and bicycle lanes along East Lyerly Street from Downtown to the Old Stone House, making the historical landmark more accessible and providing safer access to the neighborhoods around Cleo Avenue and Jack Street in the town's northeast.

Project Segments

Segment F: 0.56 miles
Segment T: 1.27 miles

Facility Type

Segment F: Bicycle Lane
Segment T: Sidewalk

Construction Cost Estimate

Segment F: $1,270,000
Segment T: $3,070,000

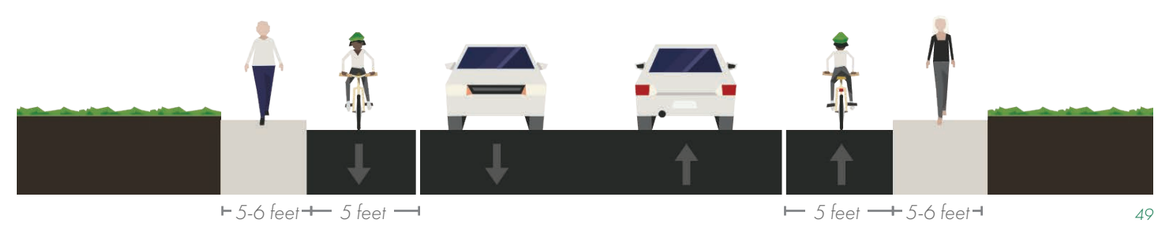
Key Connections

Connections served by this project are shown in full color.

Project Constraints and Considerations

The project would require widening across a stream near Cleo Street, and the required right of way expansion may be costly or have environmental impacts.

Illustrative Street Cross-Section



Kerns Street

North Main Street to North Salisbury Avenue/U.S. 52

Recommendation

This project would add sidewalks and sharrows (shared lane markings) to Kerns Street. This link would connect the recommended Main Street and Salisbury/U.S. 52 cycle facilities while also providing critical walking and biking access to the Forest Ridge neighborhood, which currently lacks a walking or biking connection to the rest of the town.

Project Segments

Segment B: 0.27 miles
Segment O: 0.53 miles

Facility Type

Segment B: Sharrow
Segment O: Sidewalk

Construction Cost Estimate

Segment B: $20,000
Segment O: $1,595,000

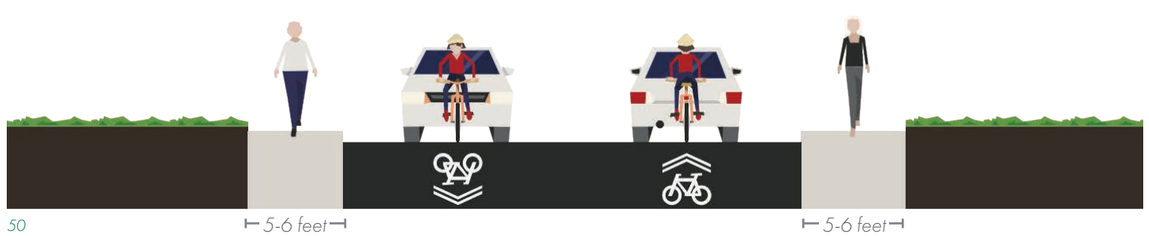
Key Connections

Connections served by this project are shown in full color.

Project Constraints and Considerations

The railway crossing near Main Street may be an obstacle to roadway improvement. In addition, some portions of the path may require acquisition of right of way.

Illustrative Street Cross-Section



West Peeler Street

Main Street to Faith Road

Recommendation

This project would add a multi-use path along West Peeler Street to supplement the existing sidewalk and serve as an important bicycle connection to southwest Granite Quarry. The path would also be part of the proposed Carolina Thread Trail, helping create a larger network of trails that would provide a needed cycling link across the town and region.

Project Segments

Segment 3: 1.41 miles

Facility Type

Multi-Use Path

Construction Cost Estimate

$4,675,000

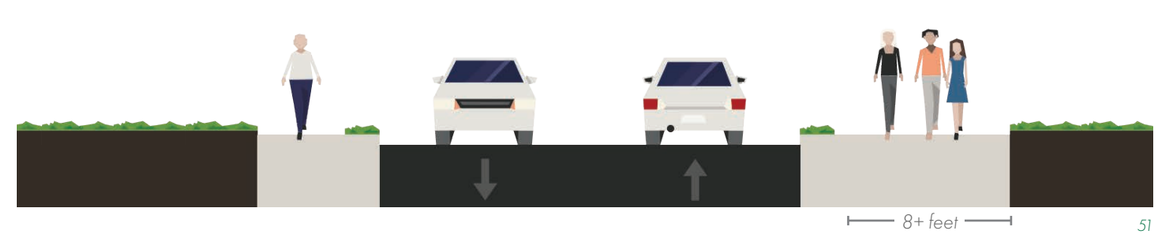
Key Connections

Connections served by this project are shown in full color.

Project Constraints and Considerations

The project would require widening across streams near Granite Civic Park and the required right-of-way expansion may be costly or have environmental impacts.

Illustrative Street Cross-Section



5 Implementation Guide

Prioritization

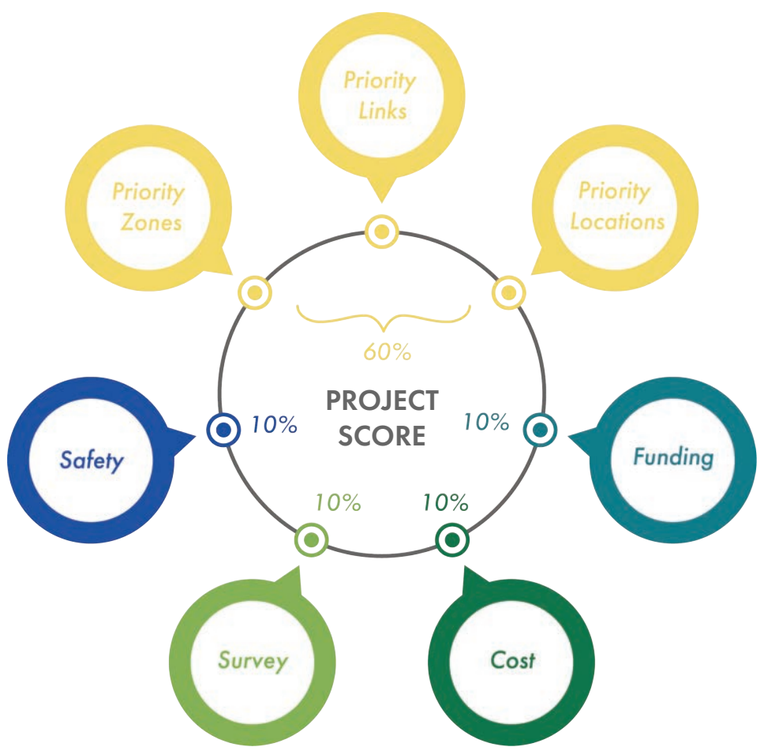
In addition to the foundational analysis (i.e., existing conditions, engagement) that helped to develop the facility recommendations, a quantitative process was created to help prioritize the identified projects. It included a detailed scoring process to assess each project on a wide variety of criteria derived in part by the responses from the interactive digital survey. The goal of this prioritization process was to provide the Town with a guide and timeline for implementing the projects.

Methodology

Using a quantitative methodology, projects were sorted into three prioritization tiers: short-term (within 10 years), mid-term (within 15 years), and long-term (within 20 years). In general, short-term projects are intended to be completed (or initiated) prior to mid-term and long-term projects. However, prioritization should be flexible to changes in available time, resources, and the Town's interests. The prioritization process included analysis in five major categories:

1. *Priority Zones, Links, and Locations*
2. *Safety Concerns*
3. *Online Survey Results*
4. *Estimated Construction Cost*
5. *Possible Funding Availability/Grant Eligibility*

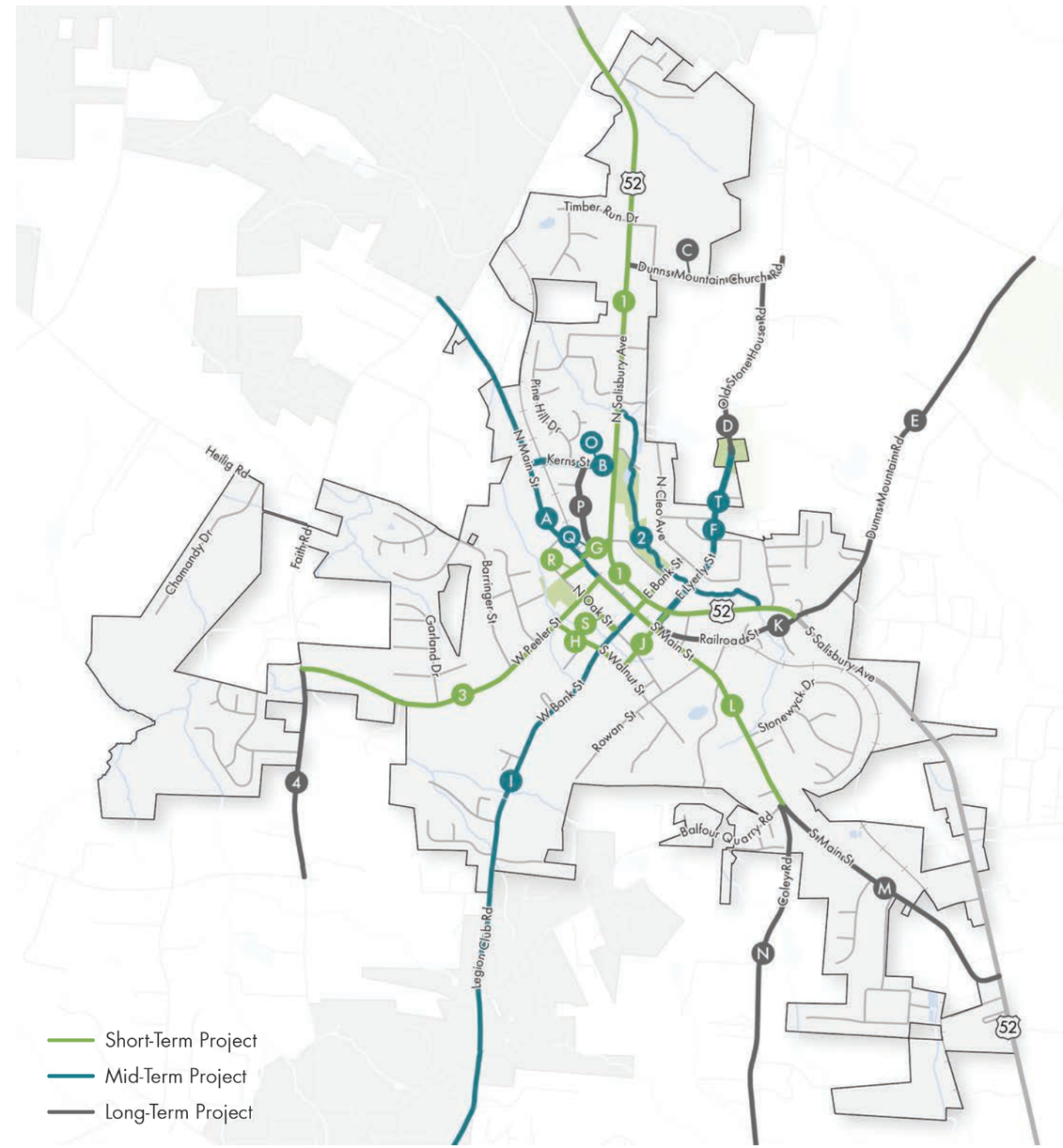
Each category included data points that were assessed for each individual project. Each category was assigned a score based on these variables, which were weighted to result in an overall score.



Projects by Implementation Timeline

This map displays all recommendations as a short-, mid-, or long-term project, as identified by the prioritization process. This map corresponds to the table on **pages 54-55** to guide project implementation, recommendations, and design.

Map 13: Projects by Implementation Timeline



Prioritized Projects

The table below shows the bicycle and pedestrian corridor recommendations in priority order. Projects were prioritized based on proximity to the zones, links, and locations outlined in the survey, as well as the presence of nearby safety concerns, survey results, estimated cost to construct, and possible funding availability. The weights applied to each zone, link, and location were assigned based on feedback from the community collected in the public survey.

Together, the zones, links, and locations determined 60% of each project's score. The remaining 40% was determined by safety, survey, cost, and funding factors, weighted at 10% each. The sum of these scores was used to determine three implementation tiers, shown below. This list is meant to provide guidance for investment and is not a defined project implementation timeline.

Short-Term (Within 10 Years)

Mid-Term (Within 15 Years)

Long-Term (Within 20 Years)

ID	Facility Name	Extents	Length	Facility Type
J	West Lyerly Street	South Walnut Street to South Salisbury Avenue/U.S. 52	0.23	Sharrow
3	East Bank Street/North Main Street/West Peeler Street/Byrd Road	Centennial Nature Trail to Faith Road	1.41	Multi-Use Path
L	South Main Street	East/West Bank Street to Balfour Quarry Road	0.77	Sharrow
1	Salisbury Avenue/Highway 52	Railroad Street/Dunns Mountain Road to Granite Quarry Boundary	2.35	Multi-Use Path
R	West Church Street	North Main Street to North Oak Street	0.16	Sidewalk
S	North Oak Street	West Bank Street to West Peeler Street	0.29	Sidewalk
H	North/South Walnut Street	West Peeler Street to West Lyerly Street	0.25	Sharrow
G	East Church Street	North Main Street to North Salisbury Avenue/U.S. 52	0.11	Sharrow
B	Kerns Street	North Main Street to North Salisbury Avenue/U.S. 52	0.27	Sharrow
Q	East Church Street	North Salisbury Avenue/U.S. 52 to North Main Street	0.20	Sidewalk
2	Centennial Nature Trail	North Salisbury Avenue/U.S. 52 to South Salisbury Avenue/ Highway 52	0.94	Multi-Use Path
I	West Bank Street	South Main Street to Gantt Street	1.94	Standard Bike Lane
A	North Main Street	West Peeler Street to Faith Road	1.02	Sharrow
O	Kerns Street	South Salisbury Avenue/U.S. 52 to North Main Street	0.53	Sidewalk
F	East Lyerly Street/Old Stone House Road	South Salisbury Avenue/U.S. 52 52 to Old Stone House	0.56	Standard Bike Lane
T	East Lyerly Street/Old Stone House Road	South Salisbury Avenue/U.S. 52 to Old Stone House	1.27	Sidewalk
P	Yadkin Street	East Church Street to North Main Street	0.54	Sidewalk
K	Railroad Street	East Lyerly Street to South Salisbury Avenue/U.S. 52	0.46	Sharrow
4	Faith Road	Byrd Road to Street Paul Church Road	0.65	Multi-Use Path
C	Dunns Mountain Church Road	North Main Street to North Salisbury Avenue/U.S. 52	1.00	Paved Shoulder
M	South Main Street/Old Route 80	Balfour Quarry Road to U.S. 52	0.90	Paved Shoulder
E	Dunns Mountain Road	South Salisbury Avenue/U.S. 52 to Stokes Ferry Road	1.38	Paved Shoulder
N	Coley Road	Balfour Quarry Road to Kluttz Road/Stone Road	1.26	Paved Shoulder
D	Old Stone House Road	Old Stone House to Dunns Mountain Church Road	0.58	Paved Shoulder

Prioritization Factors

Safety

- *Bicycle and Pedestrian Crashes, 2015-2019 (NCDOT)*
- *High-Crash Intersections, 2015-2019 (NCDOT)*

Cost

- *2019 NCDOT Bicycle-Pedestrian Cost Estimation Tool estimate (the lower the cost, the higher the score)*

Survey

- *Number of votes by online survey participants (the higher the votes, the higher the score)*

Funding

- *Higher scores given to projects already identified in the CRMPO CTP and/or along Carolina Thread Trail proposed alignment*

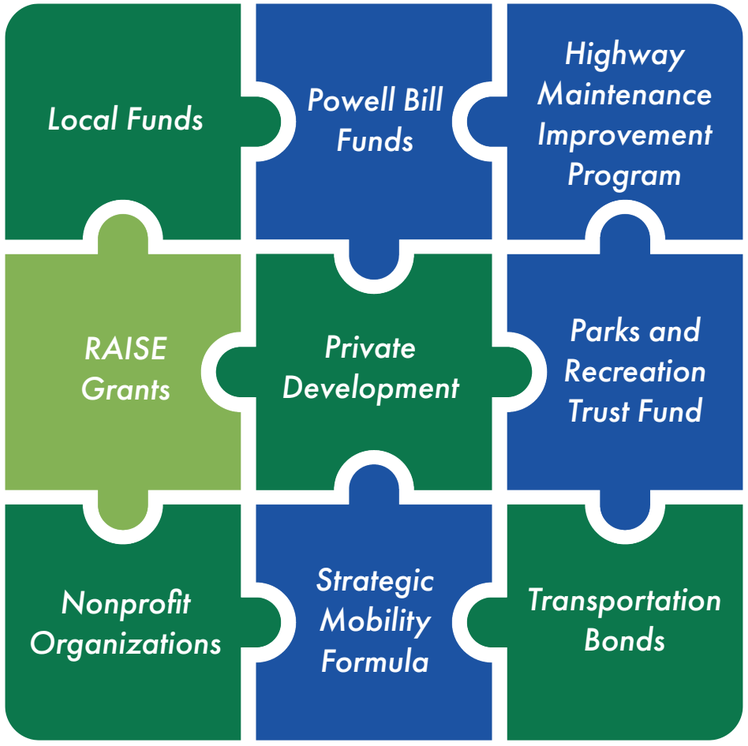
Note: The zones, links, and locations used to prioritize projects are shown in the charts on ***page 32****. Projects were ranked based on direct or indirect connection to these places.*

	Weighted Scores				Weighted Scores				
ID	Zones	Links	Locations	Zones, Links, Locations Total	Safety	Survey	Cost	Funding	Final Weighted Score (out of 10)
J	4.5	0.0	1.8	3.7	0.5	1.0	1.0	0.0	6.25
3	3.8	0.0	1.8	3.3	1.0	1.0	0.0	0.5	5.85
L	3.1	0.3	0.0	2.1	1.0	1.0	1.0	0.0	5.07
1	2.9	0.4	0.9	2.5	1.0	1.0	0.0	0.5	5.03
R	3.1	0.0	0.9	2.4	0.3	1.0	1.0	0.0	4.66
S	3.1	0.0	0.9	2.4	0.3	1.0	1.0	0.0	4.66
H	3.8	0.0	1.3	3.1	0.0	0.5	1.0	0.0	4.58
G	3.8	0.0	0.4	2.5	0.5	0.5	1.0	0.0	4.54
B	2.5	0.0	0.9	2.0	0.0	0.5	1.0	1.0	4.51
Q	3.8	0.0	0.4	2.5	0.3	0.5	1.0	0.0	4.29
2	2.2	0.0	2.0	2.5	0.3	1.0	0.0	0.5	4.29
I	2.5	0.0	0.9	2.0	0.8	1.0	0.0	0.0	3.76
A	2.5	0.0	0.4	1.7	0.5	0.5	1.0	0.0	3.74
O	1.8	0.0	0.9	1.6	0.0	0.5	0.5	1.0	3.61
F	2.5	0.0	1.3	2.3	0.3	0.5	0.5	0.0	3.52
T	2.5	0.0	1.3	2.3	0.5	0.5	0.0	0.0	3.27
P	3.1	0.0	0.4	2.1	0.3	0.0	0.5	0.0	2.89
K	1.6	0.0	0.0	0.9	0.8	0.0	1.0	0.0	2.69
4	0.0	0.3	0.0	0.2	0.5	0.0	0.5	1.0	2.19
C	1.3	0.0	0.0	0.8	0.5	0.0	0.5	0.0	1.80
M	0.0	0.3	0.4	0.5	0.5	0.0	0.5	0.0	1.46
E	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0	1.00
N	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0	1.00
D	0.0	0.0	0.4	0.3	0.0	0.0	0.5	0.0	0.77

**Note: This list is meant to provide guidance for investment. As conditions evolve or new information emerges, the implementation timeline for these projects may shift.*

Funding Options

Implementation requires taking advantage of federal, state, local, and private funding opportunities. As a municipality in a North Carolina MPO, Granite Quarry can use federal and state funding that has been allocated to NCDOT Division 9 or to the Cabarrus-Rowan Metropolitan Planning Organization (CRMPO). The Town's capital improvement program and private entities are other sources that can be used to implement the recommendations of the GoGQ Bicycle and Pedestrian Plan. Granite Quarry could also partner with larger towns and cities in the area such as Salisbury to secure outside funding for projects that benefit both communities. Some of these funding sources are summarized in this section.



Local Funds

LOCAL

The town's annual budget in Fiscal Year (FY) 2021-2022 was approximately $2.7 million. The projects and programs outlined by this plan can be included as a separate allocation in future years to designate funding for multimodal improvements. Although the Town budget is limited, explicitly including a bicycle and pedestrian allocation would create a dependable funding source for years to come.

Powell Bill Funds

STATE

North Carolina's state street-aid program, also known as the Powell Bill program, provides funding for eligible municipalities based on mileage and population of locally-maintained roadways. The primary function of the Powell Bill program is to assist municipalities in funding local street resurfacing; however, those funds may also be used for the planning, construction, or maintenance of sidewalks, multi-use paths, and bikeways. Powell Bill funds may be pursued as a match for future updates of this plan. For FY 2021-2022, Granite Quarry received $90,000 in Powell Bill funding.

Highway Maintenance Improvement Program (HMIP)

STATE

The HMIP describes NCDOT's 5-year maintenance plan designed to cover pavement resurfacing and rehabilitation. The roadways scheduled for improvements under the HMIP are excellent candidates to include bicycle and pedestrian improvements, if not already included. The Town of Granite Quarry should monitor the projects on the HMIP and coordinate with local NCDOT staff to discuss coordination improvements.

Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grants

FEDERAL

The RAISE grant, formerly known as Better Utilizing Investment to Leverage Development (BUILD) and Transportation Investment Generating Economic Recovery (TIGER), will award more than $1.5 billion in grant projects in FY 2022, a 50% increase from 2021. Projects eligible for a RAISE grant include capital and planning projects. The capital projects could include roads or bridges, public transportation, passenger and freight rail, or intermodal projects. Planning projects include the planning, preparation, or design of eligible surface transportation projects. If projects are located in rural areas, up to 100% of project costs may be funded by the RAISE grant. The Town should identify eligible projects and consider submitting a formal application.

Private Development

LOCAL

The Town should consider revising its UDO. The UDO can require private developers to include pedestrian and bicycle infrastructure in the development of site plans. This will allow the Town of Granite Quarry to build out the bicycle and pedestrian recommendations without directly paying for those improvements. The pedestrian and bicycle infrastructure requirements could include on- and off-street facilities, pedestrian benches, parking for bicycles, and lighting. This approach may alleviate some of the burden on the Town's limited funding sources.

Parks and Recreation Trust Fund (PARTF)

STATE

Since 1994, the North Carolina PARTF awards have been matching grants to local governments for parks, public beach access, and state park improvements. A local government can request a maximum of $500,000 with each application and can use awarded funds to build or improve facilities for public use or to acquire land for parks. PARTF funds may be used to improve the accessibility of existing facilities, including to bring them into compliance with current Americans with Disabilities Act (ADA) standards. The grants require a 50% match from the applicant.

Nonprofit Organizations

LOCAL

Nonprofit organizations also could be potential sources of funding for multimodal facilities. Working with nonprofit organizations not only creates lasting local, regional, and national partnerships, but also can help identify new opportunities for funding. These funds have been used in some communities to complete small-scale projects—such as wayfinding, bike-rack installation, or improvements to existing facilities. Examples of nonprofits include the Carolina Thread Trail and the Rails-to-Trails Conservancy. The Carolina Thread Trail offers a grant program for regional trail implementation. Because Granite Quarry contains portions of the planned trail alignment, the Town may apply. Other organizations may include healthcare or community advocacy groups.

Strategic Mobility Formula

STATE

The Strategic Transportation Investment Law (2013) allocates funding using the Strategic Mobility Formula. The formula is a data-driven and performance-based process that prioritizes projects for state and federal funding. This formula is used to inform NCDOT's State Transportation Improvement Plan (STIP), which is updated every two years. The Town can coordinate with NCDOT to submit bicycle and pedestrian projects for prioritization and funding.

Transportation Bonds

LOCAL

Transportation bonds generate revenue from a tax increase on property values. In the state of North Carolina, bond referendums must be approved by the local council and later included on a ballot to be voted on by residents. The funds generated from the transportation bonds can be used toward roadway, bicycle, or sidewalk projects.

6 Policies and Programs

Recommendations

GoGQ includes a variety of facility recommendations that aim to make walking and biking easier in Granite Quarry. Additionally, the Town and its local and regional partners must undertake policy and programmatic efforts to improve conditions for walking and bicycling. These efforts include, creating programs or organizing events to promote and encourage walking and bicycling; educating motorists, pedestrians, and bicyclists about how to safely and legally navigate the Town together; and creating policies that help ensure bicycling and walking are recognized as valid modes of transportation.

Methodology

The policies and programs recommended in this plan fit within six categories. These categories were developed based on feedback from the public collected during the online survey.

Multimodal Policy

Design Guidelines

Local Events

Promotion and Awareness

Coordination of Projects

Monitoring and Evaluation

Characteristics

Different actions require various levels of resource allocation (i.e., cost, time). Some actions also will have a greater impact on walking and bicycling conditions in Granite Quarry than others. Cost, time, and impact are presented for each policy or program on a low-to-high scale as shown below.

Cost

How much will it cost to initiate and maintain this policy or program?

Time

How much time and attention will be required from those tasked with executing this policy or program?

Impact

How likely is the policy or program to make the Town a more walkable and bikeable community?

Multimodal Policy

Adopt Town policies supportive of Granite Quarry's bicycle and pedestrian network. These include the adoption of this plan, new requirements for development and infrastructure projects, and other policies designed to prioritize multimodal needs.

Policy or Program	Cost	Time	Impact
Adopt the GoGQ Bicycle and Pedestrian Plan.	$		
Update the Town UDO to require sidewalks as a part of all new single-family, multi-family, and commercial development.	$		
Make future roadway improvements include suitable bicycle and pedestrian facilities in accordance with this plan.	$		
Schedule regular coordination meetings between the Planning & Zoning and other Town departments to discuss bicycle and pedestrian needs.	$		
Adopt a local Complete Streets and Traffic Calming policy.	$		

Promotion and Awareness

Seek opportunities to identify funding sources and market Granite Quarry as a multimodal-friendly community (i.e., Watch for Me NC, safety campaigns, and wayfinding signage).

Policy or Program	Cost	Time	Impact
Become a Watch for Me NC partner community to receive educational and marketing material to support pedestrian and bicycle safety in Granite Quarry through a collaborative effort with NCDOT.	$		
Establish a page on the Town's website that can be used to publicize GoGQ, and to show where current bicycle and pedestrian facilities are and where future facilities may be.	$		
Establish safety campaigns and enforcement programs to increase driver awareness of pedestrians and bicyclists and compliance with the rules of the road.	$$		
Include wayfinding signs and pavement markings to show destinations accessible on foot and the distances to each location.	$$		

Design Guidelines

Update street design guidelines and traffic calming policies to accommodate a safe and convenient multimodal system.

Policy or Program	Cost	Time	Impact
Establish guidelines for the installation of bicycle parking, sharrows, and signage that create safer spaces for cyclists and pedestrians.	$		
Update UDO requirements and street design guidelines and other policies to accommodate a safe and convenient bicycle and pedestrian system.	$$		
Identify a team dedicated to crafting an ADA Transition Plan for identifying strategies to be consistent with federal requirements.	$$		

Coordination of Projects

Coordinate beyond Granite Quarry's limits to ensure that the Town's bicycle and pedestrian network benefits from proximity to local destinations and that leaders are aware of new funding opportunities.

Policy or Program	Cost	Time	Impact
Establish a stakeholder-based Pedestrian and Bicycle Needs Committee to help ensure agencies prioritize pedestrian and bicycle safety and connectivity in projects.	$		
Apply for regional, state, and federal grants, and explore partnerships with developers and businesses to fund the installation of bicycle and pedestrian facilities.	$		
Coordinate street design beyond the Town's boundary to help ensure consistency in design and facility type for all users.	$		
Continue to monitor changes in project prioritization at the regional and state levels.	$		

Local Events

Infuse bicycling and walking promotion into local events such as festivals, races, open streets, etc. to promote the Town's multimodal network and encourage residents to get outside.

Policy or Program	Cost	Time	Impact
Organize events that encourage biking and walking throughout the Town through education and awareness (e.g., Walk & Bike to School Day, National Trails Day, Walk Friendly Communities, Active Towns) .	$		
Plan and execute Open Streets events.	$$		
Establish a Safe Routes to Schools (SRTS) task force.	$		

Monitoring and Evaluation

Make sure facilities are properly maintained and use performance metrics to monitor the use of the bicycle and pedestrian network over time. Use data-driven methods to identify the most appropriate multimodal improvements as conditions evolve.

Policy or Program	Cost	Time	Impact
Establish a multimodal maintenance program by identifying a sustainable funding source for annual repairs and maintenance to bicycle and pedestrian facilities.	$$		
Use performance metrics, such as counts for biking and walking, crash frequencies, and bicycle parking utilization to monitor system usage over time.	$		
Identify intersections where simple, low-cost improvements would provide major benefits. These low-cost improvements could be enhanced lighting or signage.	$		
Starting with the prioritization process outlined in this plan, establish a data-driven process for determining priority projects each year.	$$		

7 Conclusion

In completing this plan, the Town of Granite Quarry is recognizing the importance of providing safe and comfortable pedestrian and bicycle facilities throughout the community. The recommendations detailed in this plan provide Granite Quarry residents with connections to their local community within Town and access to destinations across the region. Multimodal travel contributes to a community's vibrancy by improving the Town's safety, health, economy, environment, and quality of life. The GoGQ Bicycle and Pedestrian Plan provides the foundation and action plan to achieve this goal. Through the hard work and dedication of Town officials, community advocates, and planners, and with this Plan as a guide and a tool for advocacy, Granite Quarry is well on the way to providing a safe, healthy, and comfortable mobility system for residents of all ages and abilities.