



# CONNECT CONOVER

PEDESTRIAN &  
BICYCLE PLAN

## COMPREHENSIVE PEDESTRIAN & BICYCLE PLAN

*Conover, North Carolina*



2024

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facilitate double-sided printing.*

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## ACKNOWLEDGEMENTS

*Connect Conover* embodies the diverse voices that enrich our city, showcasing the dedication of volunteers, the efforts of staff, the forward-thinking leadership of elected officials, and the active engagement of residents and visitors. Together, their contributions have been instrumental in shaping this initiative.

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# THINGS TO KNOW BEFORE YOU READ THIS PLAN

Before diving into this plan, it's helpful to understand some key terms and acronyms commonly used in transportation discussions. This section provides explanations for important concepts and types of infrastructure referenced throughout the document. By familiarizing ourselves with these terms, we can enhance our understanding of transportation planning and development discussions.



## MULTIMODAL TRANSPORTATION

This term refers to a wide range of transportation modes, including motor vehicles like cars, trucks, and motorcycles, as well as modes of transportation such as walking, bicycling, public transit, and rail. In Conover, multimodal options encompass sidewalks, shared use paths like the Lyle Creek Greenway, and bus services offered by the Western Piedmont Regional Transit Authority.



## NETWORK

When we talk about a network, we're referring to the interconnected system of transportation infrastructure that works to move people and goods. A robust network ensures that individuals can reach their destinations easily using various transportation modes. The aim is to offer convenient access for people to travel within the community to the places they want or need to go.



## CONNECTIVITY

In a connected community, the transportation system efficiently links individuals to their intended destinations through reliable, uninterrupted, and enjoyable networks. For instance, to optimize the functionality of greenways, having parking available at each trailhead and convenient access to adjacent sidewalks is advantageous, while seamless sidewalk extensions to destinations encourage more frequent walking.



## FACILITIES

A facility is a broad term that encompasses enhancements and provisions designed for bicycling or walking. It can include various elements such as walking or biking surfaces like sidewalks, or equipment that allows pedestrians to activate traffic signals. In essence, we are referring to the physical infrastructure that supports different modes of transportation.

*\*Note: When we use the word pedestrian, we mean people who walk, with or without a mobility device, and those who get around by using a wheelchair or similar device.*

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Source: TPD

# Executive Summary

# Executive Summary

*Connect Conover* is a comprehensive plan outlining pathways for pedestrian, bicycle, and greenway improvements throughout Conover. Dedicated local businesspeople, community advocates, and engaged residents, alongside city officials and leaders, continue to show their commitment to supporting Conover's liveliness, advocating for transportation connections for both longtime residents and newer arrivals. The recent investments in City Park and Conover Station have laid the groundwork for new recreational opportunities and exciting cultural events. People are excited to live in Conover and want to be able to walk and bike. As Conover embarks on implementing this plan, it is important to acknowledge the significant effort already invested in shaping the city's success.

## PLAN GOALS



### CONNECT CONOVER

Identify the projects to connect key locations for people walking and biking.



### IDENTIFY THE NETWORK

Determine priority projects, costs, and funding opportunities.



### SUPPORT BICYCLING & WALKING

Identify programs, policies, and funding strategies to promote walking and biking.



## VISION

*Conover is a place where **walkable and bikeable streets** foster **safe and convenient connections** to transit, workplaces, shopping, schools, recreation and services. **These streets help sustain vibrant and inclusive neighborhoods** while supporting the city's overall quality of life, health, and economy.*

*As a key component of the city's balanced and integrated multimodal system, the pedestrian and bicycle network in Conover is **seamlessly interconnected with the regional transportation system**, ensuring **a cohesive and efficient experience for all**.*



Image 1. National Night Out Outreach Event (Source: TPD)  
Extensive public engagement at numerous community events provided valuable input about local needs and aspirations.

## COMMUNITY SUPPORT

The recommendations outlined in this Plan have been crafted through a data-driven analysis of current conditions, a deep understanding of best practices, and extensive public engagement efforts, which included in-person gatherings, drop-in events, and online opportunities. Throughout the planning process, the community was excited about the project and hopeful about expanding Conover's bicycle and pedestrian network and creating new recreational amenities. Public input played an important role in raising awareness about specific challenges and shaping the prioritization of proposed infrastructure projects.

## COMMUNITY ENGAGEMENT BY THE NUMBERS

4 » Steering Committee Meetings

6 » Opportunities for In-Person Engagement

2 » Online Surveys

450 » Survey Participants



*Connect Conover* includes recommendations for new infrastructure, as well as systemic policies, regional partnerships, and local programs that the City can pursue as part of an all-inclusive approach to improving the safety and convenience of walking and biking throughout Conover. Prior to its adoption by the City Council, a draft of this document was made available for public review and feedback, ensuring that the final Plan reflects the collective aspirations and input of the community.

## IMPACT

Incremental steps and early actions can pave the way for larger-scale projects, such as developing new trail connections to support broader greenway initiatives through the Carolina Thread Trail or enhancing downtown crosswalk safety to secure funding for comprehensive streetscape improvements. *Connect Conover* provides the tools to prioritize short- and long-term transportation investments, forge strategic partnerships, and envision a more pedestrian and bicycle-friendly future. While the strategies outlined in the plan are not exhaustive, they provide a roadmap to not only enhance mobility and connectivity but also foster a sense of safety, promote healthy behaviors, and bolster a more vibrant local economy. Each step taken towards implementing *Connect Conover* strengthens the city's transportation framework and enhances residents' quality of life.

Image 2. Steering Committee Meeting #1 (top) (Source: TPD)  
The project's Steering Committee was excited to get to work shaping Conover's transportation future.

Image 3. Farmer's Market Outreach (bottom) (Source: TPD)  
People of all ages connected with the project team and provided valuable input.





Source: City of Conover

# 01 Overview & Context

# 01 Overview & Context

“Would love to see Conover become a more walkable city!”

– Survey Respondent

## PROJECT BACKGROUND

The City of Conover is a community of more than 8,700 people located at the center of Catawba County in the western piedmont area of North Carolina, about fifty miles northwest of Charlotte and sixty miles west of Winston-Salem. The city is beginning to see quite a few large new residential developments and commercial growth in the outskirts of downtown. People are choosing Conover as an attractive place to put down roots, establish new businesses, and start their families – attracted to the offerings of a small town with strong community spirit and a high quality of life.

Conover is in the midst of a renaissance, with the recent development of City Park and Conover Station – with locally-

Image 4. Conover Branch Library  
(Source: Catawba County)

Conover Station (including the library) is a community hub that hosts an array of amenities and services.



owned restaurants and businesses, a business incubator, and services like the NC Works Career Center and Conover Branch Library. This bustling area also boasts a mix of recreational options – a paved trail, playground, splash pad, amphitheater, and more – and hosts community festivals, celebrations, and social gatherings year-round. This new community hub attracts residents and visitors for a variety of purposes. Ensuring safe and convenient access to these amenities is paramount, whether individuals drive, walk, take the bus, or ride their bicycles.

Providing various transportation options to reach work, school, parks, downtown, and neighboring municipalities like Newton and Hickory is important. However, current conditions present challenges due to gaps in the sidewalk network, lack of bicycle infrastructure, and lack of crossings, making it impractical for people to choose walking or bicycling as a viable mode of transportation. The objective of this plan is to propose ideas to create comfortable and inviting pathways for all modes of travel, supporting the well-being of residents and the prosperity of local businesses.

The community has shown a great deal of support for expanding the sidewalk network to improve connectivity between the places people live to recreational areas and downtown shopping. Sidewalk improvements to the local YMCA have been helpful in connecting people to this recreational facility, and ongoing investments in the Lyle Creek Greenway and planned improvements along 1<sup>st</sup> Street are indicative of the work being done to create a more multimodal city, with a focus on sidewalk corridors, crossings, and greenways. A lot has changed since the 2008 Pedestrian Plan. Updating that plan and adding a bicycle component helps reevaluate some of the prior recommendations, add new ideas for infrastructure improvements, and prioritize future investments.

As Conover sees an increase in newcomers, community leaders are actively seeking ways to improve connectivity and convenience for longtime residents, recent arrivals, and visitors. In a continued effort to become a more walkable and bikeable community, in 2022 the City of Conover applied to the North Carolina Department of Transportation (NCDOT) Integrated Mobility Division (IMD) for a planning grant.



Image 5. City Park Splashpad (top) (Source: Dean Blanton)

Image 6. City Park Playground and Greenway (bottom)  
(Source: The Charlotteology)

City Park is a beloved community recreational amenity.

Figure 1. *Connect Conover* Planning Process



The City was awarded funds for the project and in 2023, the *Connect Conover* planning process began. This updated plan builds upon the foundation laid by the City’s 2008 Comprehensive Pedestrian Plan and marks Conover’s inaugural planning effort with a focus on bicycling.

**PLAN PURPOSE**

The City of Conover is dedicated to fostering a vibrant and accessible environment for both bicyclists and pedestrians, underscoring its pledge to enhance community mobility for individuals of every age and ability. *Connect Conover* envisions a seamlessly interconnected transportation system, promoting safe and enjoyable biking and walking experiences throughout the city. This blueprint will help ensure that residents can traverse the city with ease and can enjoy the journey along the way.

*Connect Conover* is designed to be an action plan, striving to answer four key questions throughout a yearlong process:

- 1 **Where are we today?**
- 2 **Where do we want to be tomorrow?**
- 3 **What are ways to help us get there?**
- 4 **How do we measure success?**

**VISION & GOALS**

When developing a long-range planning project such as *Connect Conover*, it can be useful to craft a vision for the future and develop a list of goals that provide focus throughout the yearlong planning process. This overarching outlook reminds the Steering Committee, consultant team, and City staff to concentrate on key elements that are important to the community and helps in the prioritization of recommendations.

The vision and goals reflect the values of the people of Conover and are useful in the ongoing effort to communicate the benefits of improving the walking and bicycling experience. They make this document’s priorities clearer and help convey the long-term benefits of its implementation.

**PLAN GOALS**

**CONNECT CONOVER**  
 Identify the projects to connect key locations for people walking and biking. Establish new pathways that interconnect sidewalks, bike lanes, greenways, and street crossings with important destinations and transit options.

**IDENTIFY THE NETWORK**  
 Determine priority projects, costs, and funding opportunities. Design routes that are comfortable and accessible for all residents and visitors, regardless of age or physical abilities.



## VISION

*Conover is a place where **walkable and bikeable streets foster safe and convenient connections** to transit, workplaces, shopping, schools, recreation and services. **These streets help sustain vibrant and inclusive neighborhoods** while supporting the city's overall quality of life, health, and economy.*

*As a key component of the city's balanced and integrated multimodal system, the pedestrian and bicycle network in Conover is **seamlessly interconnected with the regional transportation system**, ensuring a **cohesive and efficient experience for all**.*

**SUPPORT BICYCLING & WALKING**  
 Align the City’s land development code and other policies with the goal of expanding the pedestrian and bicyclist network. Launch educational and motivational initiatives that celebrate and promote walking and bicycling as a healthy and enjoyable activity.

## LAND USE & TRANSPORTATION

The proximity of goods and services to homes and workplaces significantly shapes individuals' transportation choices, with walkability and bikeability closely linked to the availability of nearby amenities. Encouraging walking and bicycling hinges on cultivating a land use environment characterized by higher density and a diverse mix of residential, commercial, educational, and retail spaces. It is important to create a vibrant community where essential destinations are conveniently located within reasonable distances.

The City's Land Development Plan delineates land use strategies designed to incentivize increasingly walkable and bikeable neighborhoods, characterized by diverse housing options and mixed-use structures. These measures aim to cultivate vibrant communities where social interactions flourish and residents enjoy convenient access to amenities.

### Key Land Use Policies to Build a Network

**Compact, Mixed-Use Developments:** Integrate living spaces with offices, schools, and retail within close proximity to promote convenience and sustainable lifestyles by enabling easier access to necessities on foot or by bike.

**Safe Pedestrian and Bicycle Infrastructure:** Expand and maintain sidewalks, dedicated bike lanes, and pedestrian-friendly crossings to ensure residents feel secure and confident in choosing active modes of transportation.

**Enhanced Mobility Options:** Improve multimodal infrastructure to benefit underserved neighborhoods and individuals without reliable transportation, providing free and accessible travel, recreation, and exercise options for all ages.

“ [A city] works when it creates a journey as desirable as the destination. ”

- Paul Goldberger, author and architecture critic



## 2030 LAND DEVELOPMENT PLAN (2022)

*The City of Conover updated its Land Development Plan in 2022. A central principle of the plan update is to **guide development in a manner that fosters community and interaction rather than isolation and separation**, with the aim to cultivate neighborhoods that reflect the diverse socio-economic and cultural backgrounds of residents.*

*By promoting mixed-use districts where various housing types and commercial establishments coexist, city leaders anticipate numerous advantages. For instance, **reducing the necessity for automobile usage for shopping purposes will enhance the overall environmental quality and physical well-being of Conover's residents.***

*Another objective of the plan update is to **enhance safe mobility and reduce congestion on city streets.** Prioritizing multimodal access to different areas of the city and enhancing the safety of neighborhood streets will be a pivotal goal for the next decade and beyond.*

Figure 2. City Destinations (Source: PressureUA)



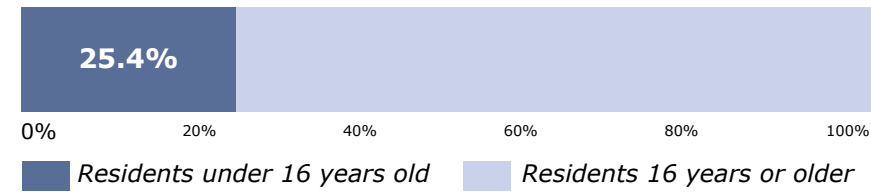
Conover's downtown area is a good size for walking and bicycling to be an option. Many people live a short distance from employment options, schools, grocery stores, parks, and attractions. Having the option to drive, walk, bike, or ride the bus can foster a lively and inclusive community where people can effortlessly access their daily necessities while embracing the advantages of active transportation.

## WHY THIS PLAN IS IMPORTANT TO CONOVER

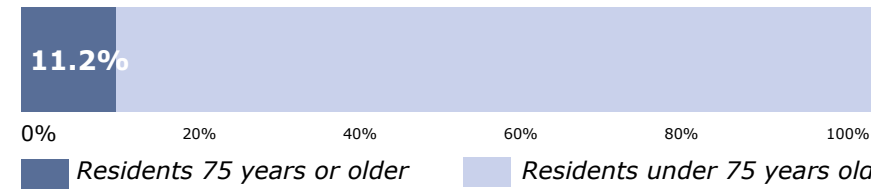
The return on investment from multimodal transportation programs and infrastructure is significant across a range of themes – economic development, health and longevity, accessibility, equity, etc. – and can have direct benefits to residents' overall quality of life. These impacts are especially meaningful for a city like Conover, with a pedestrian-scale downtown, nearby recreational resources, and both newer and legacy neighborhoods. In a close-knit community like Conover, the benefits of installing a sidewalk or extending a greenway trail can be significant.

Figure 3. Barriers to Driving Include Age and Disability (Source: US Census ACS 2018-2022)

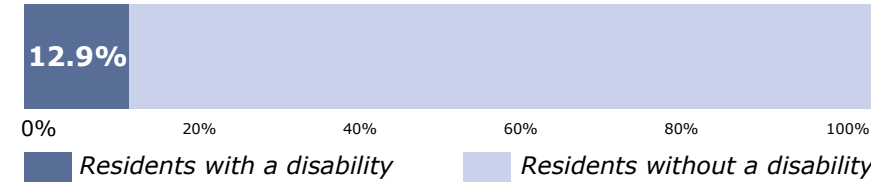
People younger than 16 cannot drive a personal vehicle.



As people age, driving can become more of a challenge.



Some disabilities prevent people from driving a vehicle.



In Conover, not everyone has the ability to drive a car, whether due to age or disability. To address these barriers, it's helpful to improve public transportation systems and promote pedestrian and cycling-friendly infrastructure.

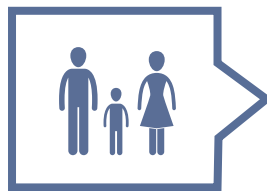
## HUMAN-SCALE TRANSPORTATION

Every car ride or bicycle journey starts and ends with someone walking, so it is important to think about car parking, greenways, and people who use the transit system as they relate to people on foot. Mobility for people walking is the common factor in any community's successful transportation system.

- 1 Designing car parking lots with pedestrians in mind enables safe and convenient access to vehicles and surrounding destinations. Incorporating well-designed sidewalks, crosswalks, adequate lighting, and clear signage enhances the pedestrian experience and ensures their safety when navigating parking areas.
- 2 Integrating pedestrian pathways and connections to greenways and bike infrastructure promotes multimodal transportation and establishes a seamless, interconnected network for people who walk, bike, or use other active transportation modes.
- 3 Bus stops tailored to the needs of pedestrians prioritize factors such as shelter, seating, and accessibility features, offering a comfortable and user-friendly experience for transit users who rely on walking to access and use public transportation. Establishing connections for transit-dependent individuals underscores the importance of a well-developed sidewalk network as critical infrastructure for encouraging transit uptake.

Image 7. Parking Lot Pedestrian Path (Source: Angie Schmitt) (top)  
 Image 8. Joseph Campau Greenway Trailhead (Source: City of Detroit) (middle)  
 Image 9. Accessible Bus Shelter (Source: City of Asheville) (bottom)





**10.8%**  
 Conover residents at or below the poverty level.  
 (Source: U.S. Census, 2022 American Community Survey 5-Year Estimates)



**\$9,300 / YEAR**  
 Average cost to operate a car per year (fuel, fees, and vehicle wear and tear).\*  
 \*Costs are based on the 44 miles/day driven by the average North Carolina driver. (Source: AAA)



**\$308 / YEAR**  
 Average cost to operate a bicycle per year (vehicle maintenance).  
 (Source: Mohn, T. "Pedaling to Prosperity" 2012, Forbes)



**\$13,493 / YEAR**  
 Average healthcare cost per person per year.  
 (Source: The National Health Expenditure Accounts)



**FREE**  
 Cost of walking

Figure 4. Mobility Costs



## EQUITY IN TRANSPORTATION

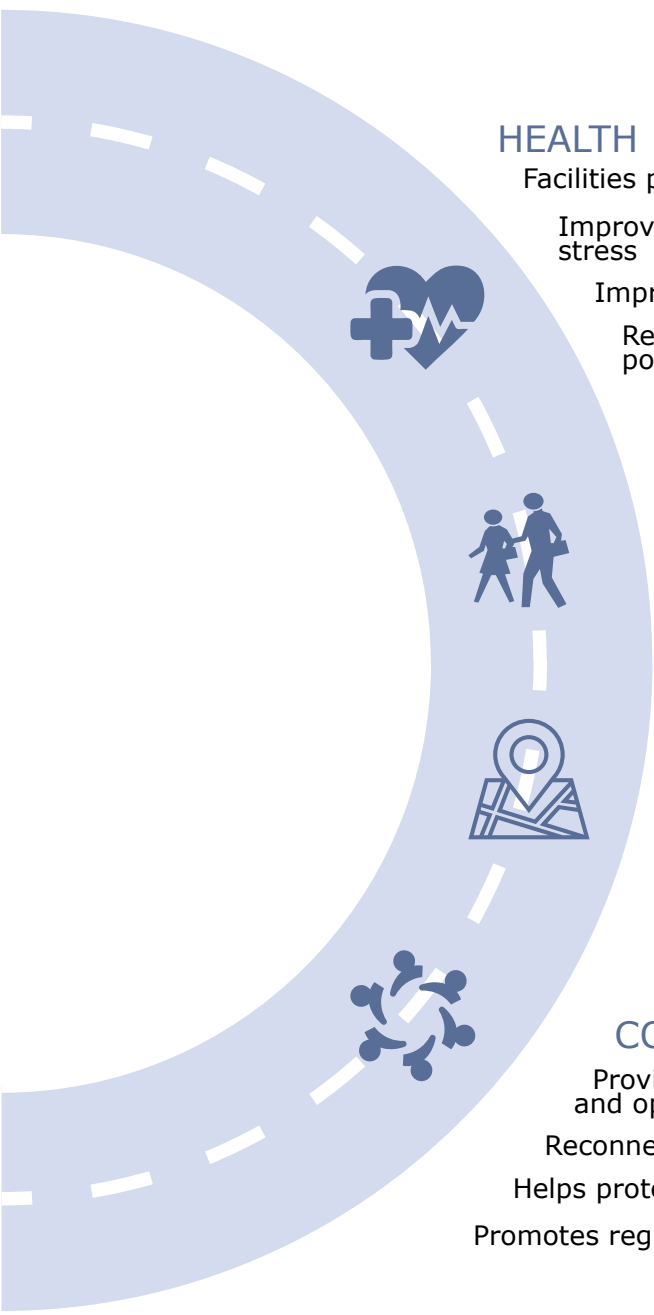
*Transportation equity involves crafting a plan that acknowledges the unique circumstances affecting a community's mobility and connectivity requirements.*

*Projects should strive to distribute both the benefits and burdens of transportation initiatives equitably among all members of a community, regardless of race, income, or ability.*

### Equity: Driving Is Not an Option for Everyone

Transportation planning decisions often have significant impacts, with benefits and burdens distributed unevenly among different populations. Persistent underinvestment in important infrastructure elements such as stop signs, crosswalks, traffic signals, roadway resurfacing, and bike lanes exacerbates the negative consequences of inequitable street design in underserved neighborhoods. Ensuring that everyone has equitable access to affordable and reliable transportation is essential.

An equitable transportation plan must assess the different circumstances influencing a community's mobility and connectivity requirements. This data serves as the foundation for recommending infrastructure investments and supportive measures. Given the diverse concerns and priorities of each community, active public involvement is helpful for supporting equity analyses during the planning process.



### HEALTH

- Facilities physical activity
- Improves psychological health and reduces stress
- Improves social health and connections
- Reduces negative effects of air pollution

### SAFETY

- Helps make sure streets are safe for all
- Moves toward zero roadway
- Promotes equitable access to infrastructure and destinations

### ECONOMY

- Improves personal and household savings
- Promotes tourism
- Attracts and retains business
- Improves property values

### COMMUNITY

- Provides neighborhood connections and opportunities for social interaction
- Reconnects children with nature
- Helps protect the environment
- Promotes regional thinking

### The Benefit

The ability to choose how to navigate one's surroundings is fundamental to quality of life. Mobility options offer alternative means to reach places of work, education, healthcare, government services, recreational activities, and all destinations within the community. Whether opting for walking, bicycling, utilizing the regional transit system, or driving a personal vehicle, residents and visitors gain the freedom to select the most appropriate mode of transportation for each journey. Access to a range of transportation options not only benefits individuals but also enhances the overall well-being of the community.

Figure 5. The Many Benefits of Bicycling and Walking Infrastructure



**Estimated 60,000 pedestrians** were injured nationwide in 2021.<sup>11</sup>



**More than 7,388 people** (an average of nearly 21 per day) nationwide were struck and killed while walking in 2021.<sup>2</sup>



**Approximately 17%** of all traffic fatalities in the U.S. in 2021 were pedestrians, a rate that has been increasing over time (up from 14% in 2012).<sup>12</sup>

**269**

**people killed while walking** in North Carolina in 2022 (a 3% increase from 2021).<sup>13</sup>

**20**

**people killed while bicycling** in North Carolina in 2022.<sup>14</sup>

Although walking and bicycling constitutes a smaller portion of total trips compared to automobiles, pedestrians and cyclists disproportionately bear the burden of traffic fatalities. Often referred to as vulnerable users of streets, people walking or bicycling face an elevated risk of severe injury when struck by vehicles. Lacking dedicated infrastructure, they must navigate challenging conditions, such as rough shoulders or roads shared with faster vehicles. These hazards can deter walking and bicycling and lead to increased reliance on private vehicles for those who can drive, or heightened isolation and unmet needs for those who cannot.

If we design our transportation system for the most vulnerable users, everyone else benefits.<sup>1</sup> Many of the accommodations that support alternative modes of travel have positive safety benefits for all roadway users because they create a separate space for people who walk and bike, which helps avoid speed differentials (between a car going 40mph and a cyclist going 10mph in the same lane, for instance) and minimizes potential conflicts. Studies on bicycling injuries find that dedicated bike facilities (e.g. off-road paths and on-road marked bike lanes) are where bicyclists are safest.<sup>2</sup>

More people will be encouraged to walk or bike if they feel comfortable and see others doing so. As drivers get used to seeing cyclists and walkers regularly, they tend to be more cautious as they navigate roadways with a greater variety of users. This is a concept known as safety in numbers.

**5**

**Reasons to Walk & Bike**

Walking and bicycling for as little as 20 minutes a day has been found to show significant improvements in your overall health, including:



**Improving cardiovascular health**



**Strengthening muscles & bones**



**Increasing focus, mood & memory**



**Boosting immune system function**



**Preventing & managing common health problems**

Regular physical activity is one of the most important things people can do to improve their health. Moving more and sitting less have tremendous benefits for everyone, regardless of age, sex, race, ethnicity, or current fitness level. According to the Centers for Disease Control & Prevention (CDC), adults can gain substantial health benefits from just 20-25 minutes a day of physical activity, the equivalent of walking roughly one mile. According to the CDC's National Health Interview Survey, only about twenty percent of people report sufficient activity to meet aerobic and muscle-strengthening guidelines.<sup>3</sup>

Strong evidence suggests meeting those targets can improve peoples' quality of sleep, cognitive function – especially important for young children and older adults – and perceived quality-of-life. In children, regular physical activity has been shown to improve attention and memory, as well as reducing the risk of depression.<sup>4</sup>

Walking and bicycling are proven to offer numerous health benefits for the brain, heart, and physical health, including a reduction in chronic disease, heart disease and some cancers. This suggests that efforts to encourage even small increases in activity – like walking to school regularly or substituting several short driving trips with a bike ride – may be of tremendous public health benefit. According to the U.S. Department of Health and Human Services, a single session of moderate-to-vigorous physical activity can reduce blood pressure, improve insulin sensitivity, improve sleep, reduce anxiety symptoms, and improve some aspects of cognition on the day that it is performed. Other benefits, such as disease risk reduction and improved physical function, accrue within days to weeks after consistently being more physically active.<sup>5</sup>



Trail users' annual expenditures supported an additional **43 jobs, \$1.3 million in employee compensation, and \$4.9 million** in gross business revenues.<sup>15</sup>



A recent study estimated that **every \$1.00 invested** in trail construction resulted in approximately **\$1.72 in annual benefits**, including local business revenue, sales tax revenue, and health and transportation-related benefits.

**1.5X to 3X MORE**

**economic benefit** generated for a dollar spent at an independent business compared to spending that same dollar at a retail chain.<sup>16</sup>

**13:1**

**13:1 benefits vs costs**  
Recent studies on the economic benefits of walking interventions show an average benefit-to-cost ratio of 13:1.<sup>17</sup>

Recent studies have underscored the significant economic benefits of investing in bicycle and pedestrian facilities, demonstrating that these facilities can provide opportunities for economic renewal and growth – supporting the market at various levels – and resulting in a more sustainable local economy. These studies have shown that robust active transportation networks have the potential to attract tourists seeking outdoor recreational opportunities and walkable downtown areas. Investing in greenways and trails directly contributes to job creation, higher wages, and increased business output for outdoor recreation-related industries and nearby establishments.<sup>6</sup>

There is also evidence that protected bike lanes can increase retail visibility and sales volume; that cyclists shop often and spend as much or more than those arriving by automobile.<sup>7</sup> Businesses with frontage along walkable streets, with comfortable sidewalks, areas to sit and dine, and parking for both cars and bikes will inevitably benefit from additional passersby and people who walk past regularly on a commute. Local shops can reach more customers if they can be reached by car, on foot, *and* by bike.

Similar tourism benefits are seen elsewhere in the state and around the country related to investments in greenways, especially regional facilities. This can include initial construction investments, but also increased property values and heightened spending on recreational activities such as equipment, dining, and accommodations.<sup>8</sup> An economic impact analysis of the 30-mile Ecusta Rail Trail connecting Hendersonville to Brevard anticipates that once the completed trail is up and running, it will generate \$1.2 million per year in tourism revenue and attract 1,600 new exercisers and 20,000 new visitors to the area each year.<sup>9</sup>



Walking and bicycling increases a person's number of social interactions and **positively affects overall social satisfaction**, correlating to a reduction in loneliness.<sup>18</sup>



Residents of highly walkable, mixed use neighborhoods exhibited at least **80% greater levels of four indicators of social capital** (knowing neighbors, sociability, trust and political participation) than those in less walkable neighborhoods.<sup>19</sup>



**If you plan cities for cars and traffic, you get cars and traffic. If you plan for people and places, you get people and places."**

- Fred Kent, Project for Public Spaces

The ability to choose how to travel is indispensable for maintaining a high quality of life, ensuring that everyone, regardless of their circumstances or preferences, can access essential services and opportunities. Prioritizing and supporting a diverse range of transportation options empowers individuals to select the mode of travel that best suits their needs, fostering a vibrant and inclusive community where everyone can thrive. Residing in walkable neighborhoods has been linked to numerous positive social outcomes. Studies indicate that individuals in walkable communities tend to exhibit higher levels of trust in their neighbors, actively engage in community projects, and volunteer more compared to those in non-walkable areas.<sup>10</sup>

Shifting more trips from motor vehicles to walking and biking helps alleviate traffic and parking congestion in our communities. As traffic decreases, conditions for walking and biking also improve. The resulting reduction in parked cars downtown makes it easier for delivery drivers, emergency services, and business owners to navigate, as well as enhancing accessibility for customers. As a free, accessible community asset, multimodal infrastructure offers opportunities for travel, recreation, and exercise to everyone, including children, older adults, and families who might not be able to afford them elsewhere.

Moreover, investing in infrastructure for walking and bicycling can support the health of the natural environment, improving air quality by eliminating harmful pollutants like ozone, sulfur dioxide, carbon monoxide, and airborne heavy metal particles. Greenways also enhance water quality by serving as natural buffer zones, protecting streams, rivers, and lakes from pollutants, and preventing soil erosion. Additionally, they act as a protective barrier against natural disasters like flooding, providing a vital line of defense for communities.

## Connect Conover Facility Types

This plan encompasses a range of recommendations, including policies and programs aimed at fostering and promoting walking and bicycling. At its essence are various types of infrastructure facilities designed to facilitate safe and comfortable walking and biking experiences.



### SIDEWALK

A designated area along a street intended for use by pedestrians or individuals using mobility devices such as wheelchairs.

(Source: TPD)



### SHARED USE PATH (GREENWAY)

A two-way off-street path used for both transportation and recreation, frequently situated alongside a stream or river corridor.

(Source: TPD)



### MULTIUSE SIDEPATH

A two-way shared use path, accommodating bicyclists, pedestrians, roller skaters, and similar users, running parallel to and adjacent to a roadway.

(Source: Montgomery County, MD)



### BIKE LANE

A designated section of the roadway reserved for bicyclists (and sometimes electric scooters), delineated by pavement markings and occasionally buffered with additional space, delineators, or landscaping.

(Source: City of Corvallis, OR)



### PEDESTRIAN SIGNAL HEAD/PUSH BUTTON

Mounted on the traffic signal pole, these are intended to communicate to the person walking whether it is safe to walk with a walk/don't walk signal and sometimes a countdown. People can use the push button to activate the pedestrian signal.

(Source: VTrans)



### CURB RAMPS

Sloped surfaces that link the sidewalk to the street, designed in compliance with ADA regulations to facilitate access for individuals using mobility devices to navigate sidewalk curbs.

(Source: City of San Francisco)



### CROSSWALK

Locations where pedestrians are permitted to cross the street legally and where curb ramps are required. Crossings can be at intersections or mid-block locations and may feature signage, pavement markings, and traffic control devices such as stop signs, traffic lights, or flashing signals.

(Source: TPD)

## Endnotes

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Source: City of Conover

# 02 Current Conditions

# 02 Current Conditions

**“I would walk more if there were sidewalks and safe access.”**

– Survey Respondent

## COMMUNITY OVERVIEW

This chapter provides an overview of Conover’s rich history and diverse population. Drawing from geospatial analysis and on-site visits, it also provides insights into the present-day experience of people navigating through and around Conover. Additionally, it encompasses a review of the City’s existing and past planning endeavors, summarized within the Plan, Policy, and Program Review section. An analysis of Conover’s current multimodal transportation network helps pinpoint gaps, barriers, and needs that require attention in order to improve safety, connectivity, and accessibility.

Image 10. Conover (1886 Yoder Map)  
(Source: Observer News Enterprise)

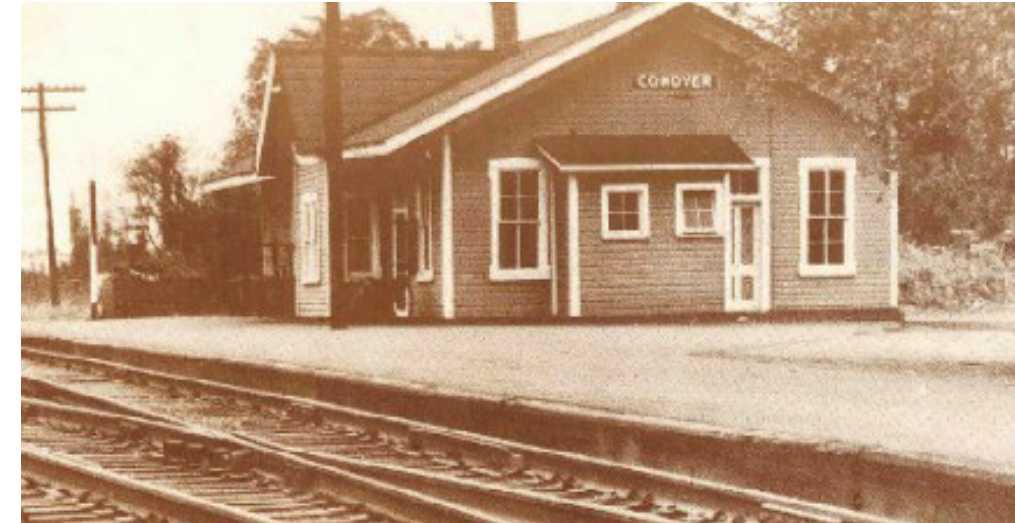
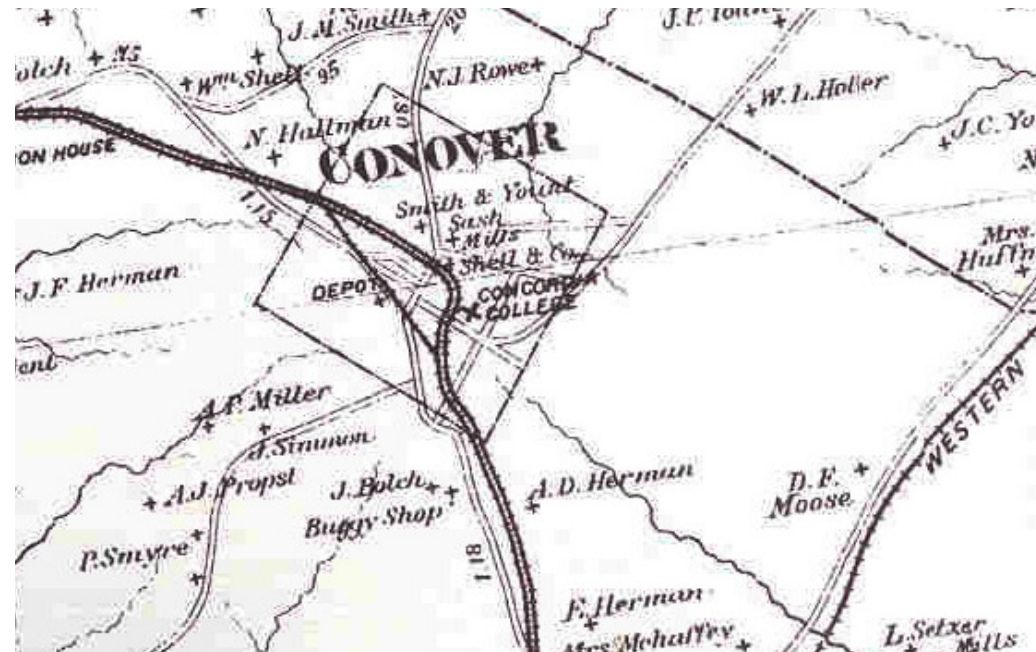


Image 11. Conover Train Station (Source: Elmer McRee)  
Passenger rail may one day return to Western North Carolina, with interest in bringing back service from Asheville to Salisbury.

## History

The area that eventually became the City of Conover was originally inhabited by several indigenous tribes, including the Cheraw, Mánu: Yí ʔsuwá (Catawba), Keyauwee, and Yesan (Tutelo). With the arrival of colonial traders, all the tribes residing along the Catawba River Valley came to be collectively known as Catawba. The naming of Catawba County and the Catawba River reflects the presence of the indigenous people of the region, who referred to themselves as “people of the river.” By the late 17th century, trade played a significant role in shaping Catawba society. The Catawba people engaged in commerce by trading deerskins with European settlers in exchange for various goods such as muskets, knives, kettles, and cloth. This trade activity transformed Catawba villages into essential hubs within the regional trade network.

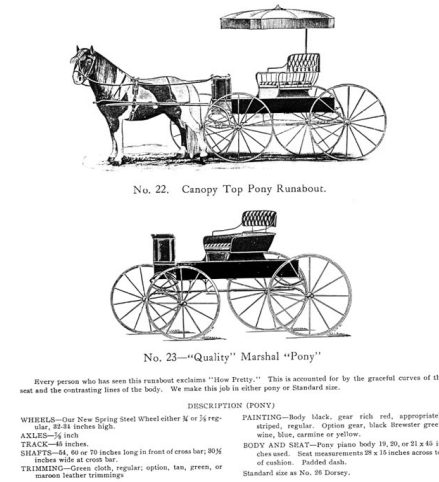


Image 12. Bolick Buggy Catalog (Source: Don Barker)

Transportation needs have evolved from the horses and trains of the 19th and early 20th century.



The City of Conover traces its origins back to the mid-1800s when it emerged as a pivotal “Y” intersection along the railroad network spanning North Carolina.<sup>20</sup> Initially named Wye Town, local lore suggests that the name gradually evolved into “Canova” and finally “Conover” over the course of several years. Officially chartered in 1876 and subsequently incorporated in 1877, Conover has since evolved over the years.

During the late 19th century, Conover was home to one of the South’s foremost buggy manufacturers, a testament to its industrial competency before automobiles supplanted the horse-drawn carriage. At the forefront of this thriving industry was the Bolick family, who played a pivotal role in shaping Conover’s manufacturing landscape. As the transportation needs of the era

evolved, so too did the Bolick family’s enterprise, transitioning into the production of school buses, further solidifying their legacy as leaders in the field of transportation manufacturing.

Though passenger rail evaporated by the 1970s, Conover’s industry has typically been situated along the freight railway corridor. This is still true today, though most depend on trucking for a majority of their distribution needs. The railroad’s legacy, coupled with access to the I-40 corridor, has given Conover a relatively large industrial land use pattern, with a wealth of furniture manufacturing and the fabrics, materials, and freight logistics corporations to serve them.

Today, Conover spans a land area of approximately 11 square miles and is an integral part of the Hickory Metropolitan Statistical Area (MSA), which ranks as the sixth largest MSA in the state. Located approximately 50 miles northwest of Charlotte, 60 miles west of Winston-Salem, and 80 miles east of Asheville, Conover holds strategic significance as the geographic center of Catawba County. The city’s accessibility is further underscored by its proximity to Interstate 40 and other major thoroughfares such as US 70, US 321, US 70A, and NC 16.



Image 13. Conover Station Revitalization

(Top Image Source: Don Barker)

(Bottom Image Source: Tise Kiestler Architects)

*With the rehabilitation of the old Warlong Glove building into a cutting-edge manufacturing technology facility, library, and community center, Conover has demonstrated that foresight, collaboration, and investment can have impressive results.*

## Demographics

The Conover of today is a community of small-town charm and heritage that is bracing for growth and an influx of new residents.

**Table 1 - Conover Demographic Snapshot** provides a summary of Conover residents’ demographics as detailed in the U.S. Census American Community Survey (2018-2022) and the 2020 Decennial Census.<sup>21</sup> This data is compared to the City of Newton, City of Hickory, Catawba County, and the state of North Carolina.

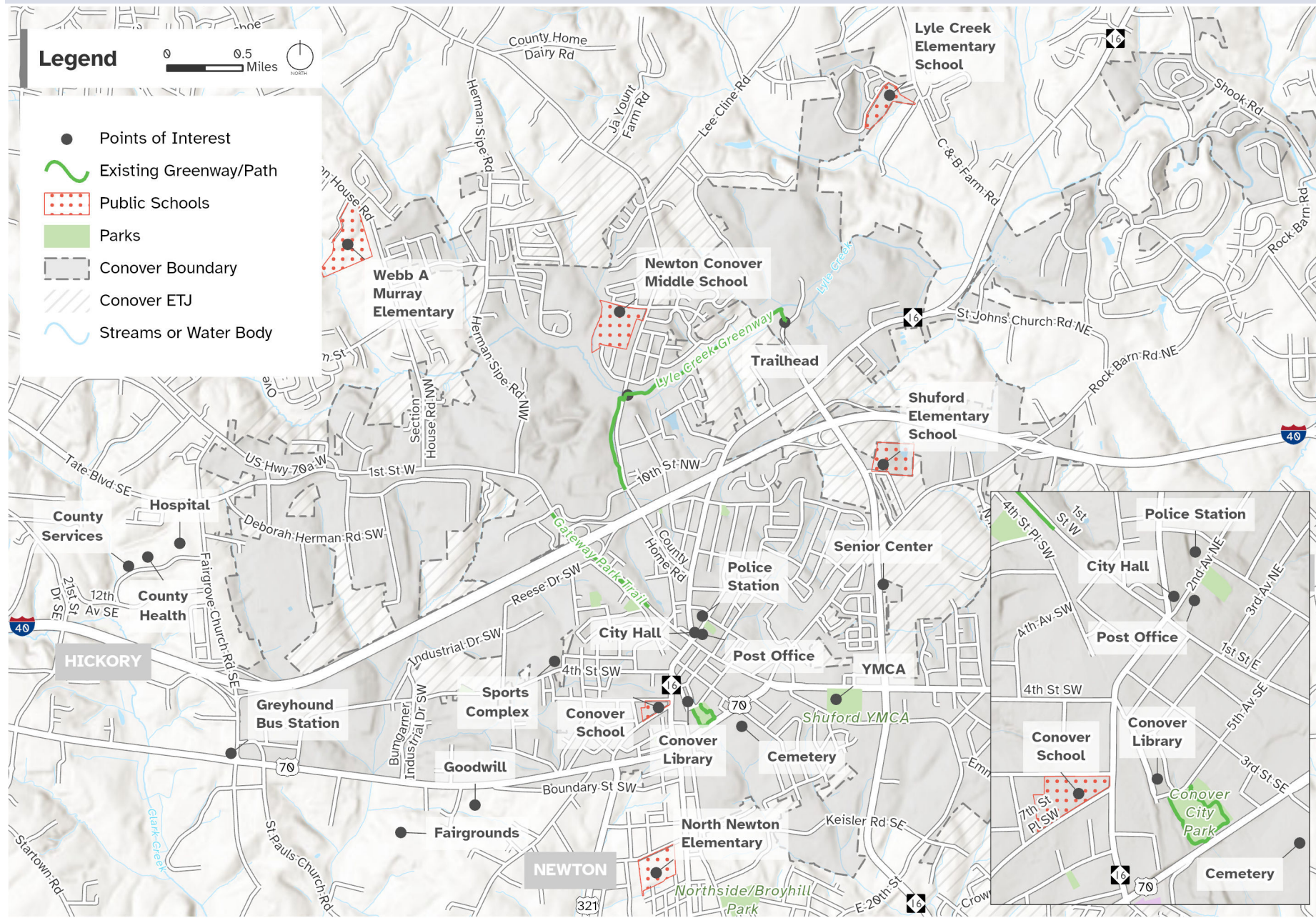
According to the Census data, the median age of Conover was slightly older than the state and younger than the County. The City and County were much less racially and ethnically diverse than the state. Conover’s median household income is significantly lower than both the County and state averages, yet the city maintains a notably lower poverty rate. In Conover, there were fewer people with a bachelor’s degree or higher education living in the community. It should be noted that the ACS data for Conover has a higher margin of error given the small population of the city.

Table 1. Conover Demographic Snapshot

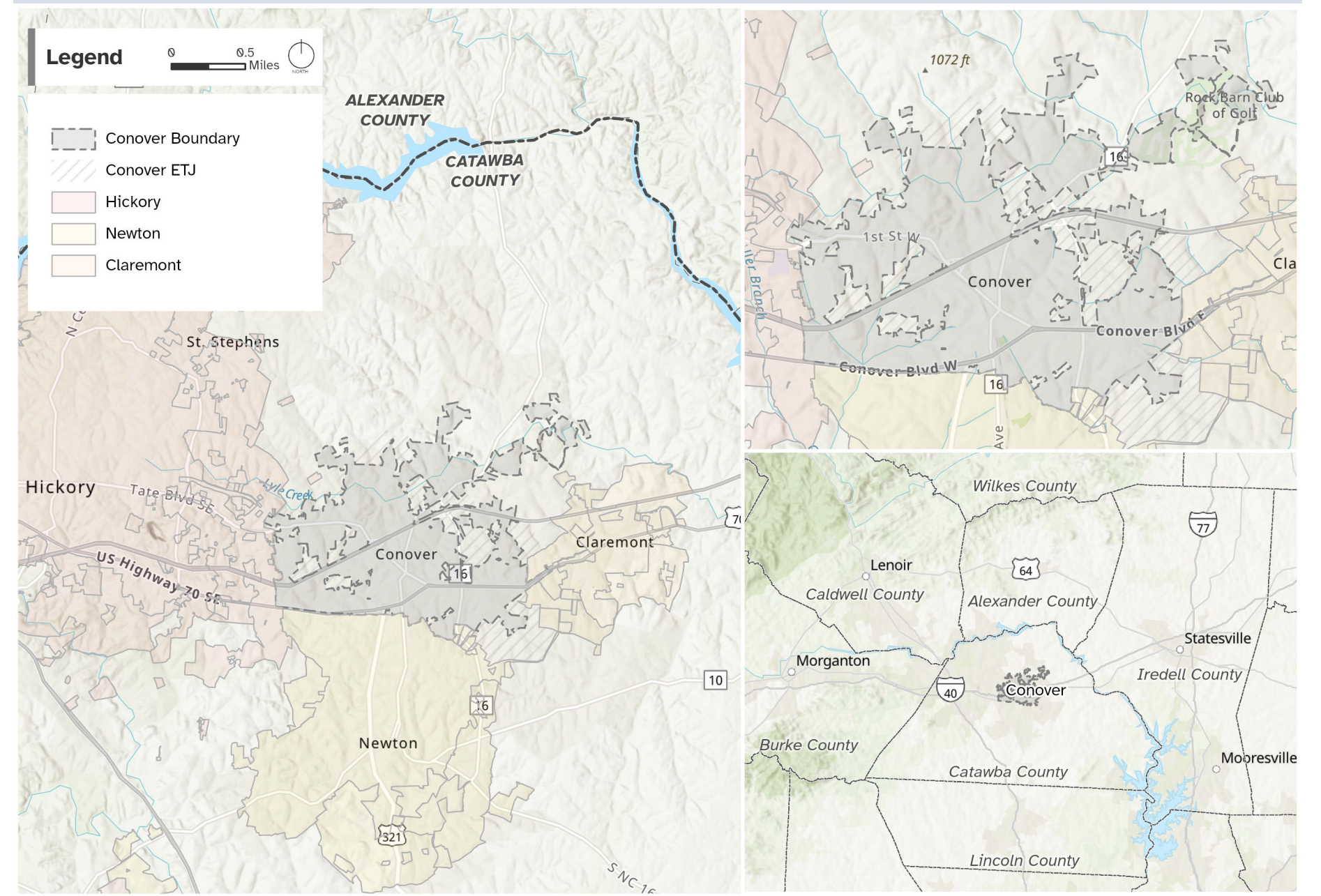
	CONOVER	HICKORY	NEWTON	CATAWBA COUNTY	NORTH CAROLINA
Total Population	8,457	43,352	13,173	161,011	10,470,214
Population Change (2010-2020)	+3%	+9%	+1%	+4%	+10%
Median Age	39.9	37.9	43.7	41.5	39.1
Hispanic or Latino	21.3%	13.2%	11.9%	10.4%	10%
White	72.7%	69.8%	70.3%	77.1%	65%
Asian	3.3%	4%	4.3%	4.1%	3.1%
Black or African American	3%	13.3%	11.2%	8.1%	20.9%
Median Household Income	\$49,978	\$58,251	\$57,918	\$62,070	\$66,186
Poverty	10.8%	16.6%	13.3%	13%	13.3%
Bachelor’s or Higher Education	22.9%	36.5%	20.9%	24.8%	33.9%

Data Source: US Census American Community Survey 5-Year Estimates (2022)

Map 1. Points of Interest



Map 2. Study Area Overview



## Land Use Characteristics

Conover is home to a mix of land uses. The central area is characterized by commercial, restaurant, office, and service land use types, as well as the nearby Conover Station and City Park. Surrounding land use (and the zoning that guides it) is mostly residential, with areas zoned for multifamily developments closer to the city center. This can be beneficial for walkability and bicycling if higher density housing is closer to downtown and people can access key destinations on foot or by bike. Conover is growing and will see numerous new housing developments in the coming years. The pressure to build is everywhere, with plans for subdivisions in all areas of the city.

Many of the city's major employment areas are further out in the periphery – with large manufacturing centers clustered away from housing, in isolated areas that can only be reached safely by car or bus. These are regional employment centers and generate large truck traffic, which can be a challenge to mobility. The highway corridors connecting everything are filled with car-oriented businesses that include parking and drive-through services but very little multimodal connectivity. These areas may or may not have sidewalks and often lack safe crossings. **Map 3 – Conover Zoning Map** shows the existing zoning for the city.

Many of Conover's key destinations (e.g., post office, City Hall, City Park, Conover Station) are within a few downtown blocks. People who live close to downtown are within walking or bicycling distance to these amenities. However, it is hard to cross the railroad tracks, 1st Street, and Conover Boulevard, making walking or bicycling much less of an option. These barriers prevent people from getting where they want to go and limit their choice in how they get around.

Image 14. Manufacturing Land Use (Arhaus) (top)  
(Source: Premier Development Partners)

Image 15. Residential Land Use (Cline Village) (bottom)  
(Source: Brian Jackson Design)

*Manufacturing and residential land uses put pressures on Conover's transportation system. Diversifying peoples' options for getting around can help ease traffic congestion and improve mobility.*



## Map 3. Conover Zoning Map

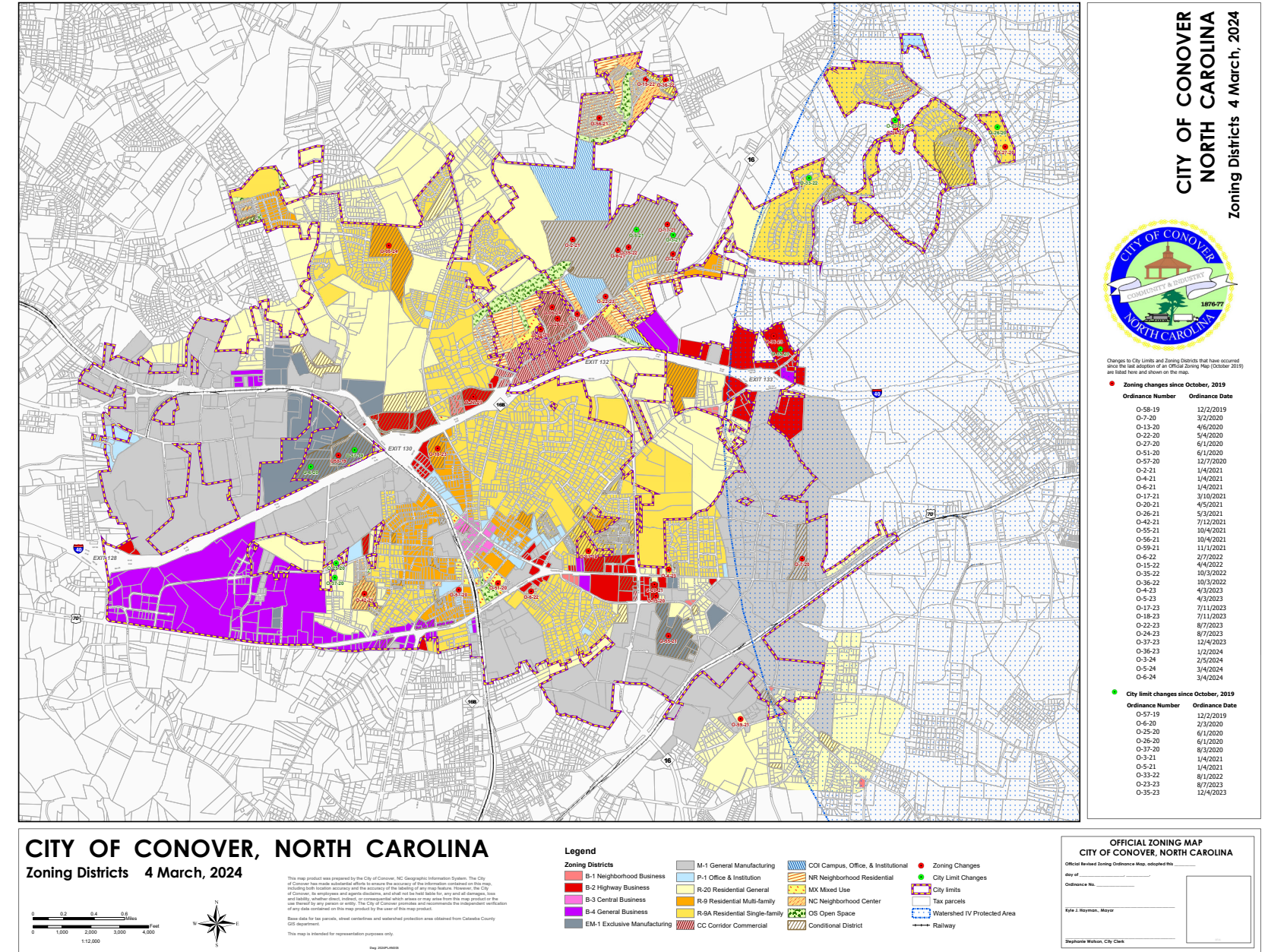


Table 2. Primary Typical Characteristics of Conover's Major NCDOT-Maintained Roadways

ROAD NAME	TYPICAL WIDTH (FT)	NUMBER OF LANES	AVERAGE ANNUAL DAILY TRAFFIC	SPEED LIMIT (MPH)	PRESENCE OF CURB & GUTTER
<b>INTERSTATE</b>					
I 40	110	5	55,500	65	NO
<b>PRIMARY ROADS</b>					
NC 16 (Thornburg Drive)	91	4	16,000	45, 50	Yes
NC 16 BUS (1 <sup>st</sup> Avenue N)	38	2	9,700	35	YES
NC 16 BUS (1 <sup>st</sup> Avenue S)	76	3	16,500	35	YES
US 321 BUS	60	4	20,500	45	YES
US 70 (Conover Boulevard E)	22	2	14,500	45	NO
US 70 (Conover Boulevard W)	72	5	23,000	45-50	NO
<b>SECONDARY ROADS</b>					
1 <sup>st</sup> Street East	73	4	10,500	35	YES
1 <sup>st</sup> Street West	71	4	14,500	20, 35, 45	YES
4 <sup>th</sup> Street Southwest	21	2	2,100	35	NO
7 <sup>th</sup> Street Place Southwest	44	2	9,700	35	YES
County Home Road	20	2	5,600	45	NO
Old Conover Startown Road	21	2	5,100	45	NO
Rock Barn Road	23	2	7,400	45	NO
<b>LOCAL</b>					
3 <sup>rd</sup> Avenue Northwest	28	2	1,500	35	YES
8 <sup>th</sup> Avenue Southwest	18	2	850	35	NO
Boundary Street Southwest	26	2	3,300	35	NO
North College Avenue	28	2	1,500	35	YES

Source: [NCDOT AADT Web Map](#), [NCDOT Speed Limit Map](#), [NCDOT NCRouteCharacteristics Field](#), [Google Map Imagery](#)

## Transportation Network

Transportation networks are typically defined by the volume of traffic they handle. Most people travel on major roads, such as interstates and US routes. In Catawba County, I-40 runs roughly east to west, helping connect communities within the county and those in neighboring counties. Within Conover, I-40 follows the northern edge of town. NC 16 provides a connection between I-40 and US 70, linking Taylorsville, Newton, and Charlotte. Beyond this primary network, Conover is served by a system of state-maintained roads, including NC routes and secondary roads, which facilitate travel within the area and connections to neighboring municipalities and counties. Additionally, Conover maintains 54 miles of local roads, as reported in the 2023 Powell Bill allocations.

**Table 2 - Primary Typical Characteristics** of Conover's Major NCDOT-Maintained Roadways lists several physical characteristics of primary roadways in Conover. This includes the typical paved width of the street (not including curb and gutter), the number of lanes, traffic volume/AADT, posted speed limit, and the presence of curb and gutter. The primary network roads are narrow, many with no shoulder, and have posted speed limits of 35-45 miles per hour (MPH).



Image 16. Conover Boulevard  
(Source: TPD)

Many roadways in Conover lack pedestrian and bicycle infrastructure.

**Map 4 – Conover Average Annual Daily Traffic (AADT)** provides a visual representation of the most up-to-date Average Annual Daily Traffic (AADT) data available for roads in Conover. AADT provides a comprehensive overview of the typical daily traffic flow, helping transportation planners and engineers understand traffic patterns and roadway usage. This volume data is essential for making informed decisions about road design, maintenance, and the implementation of safety features, such as pedestrian facilities, to accommodate and protect all road users effectively. Understanding a road’s AADT is helpful for identifying appropriate bicycle and pedestrian facilities based on traffic volume, ensuring the overall functionality of the system and the safety of people walking and bicycling.

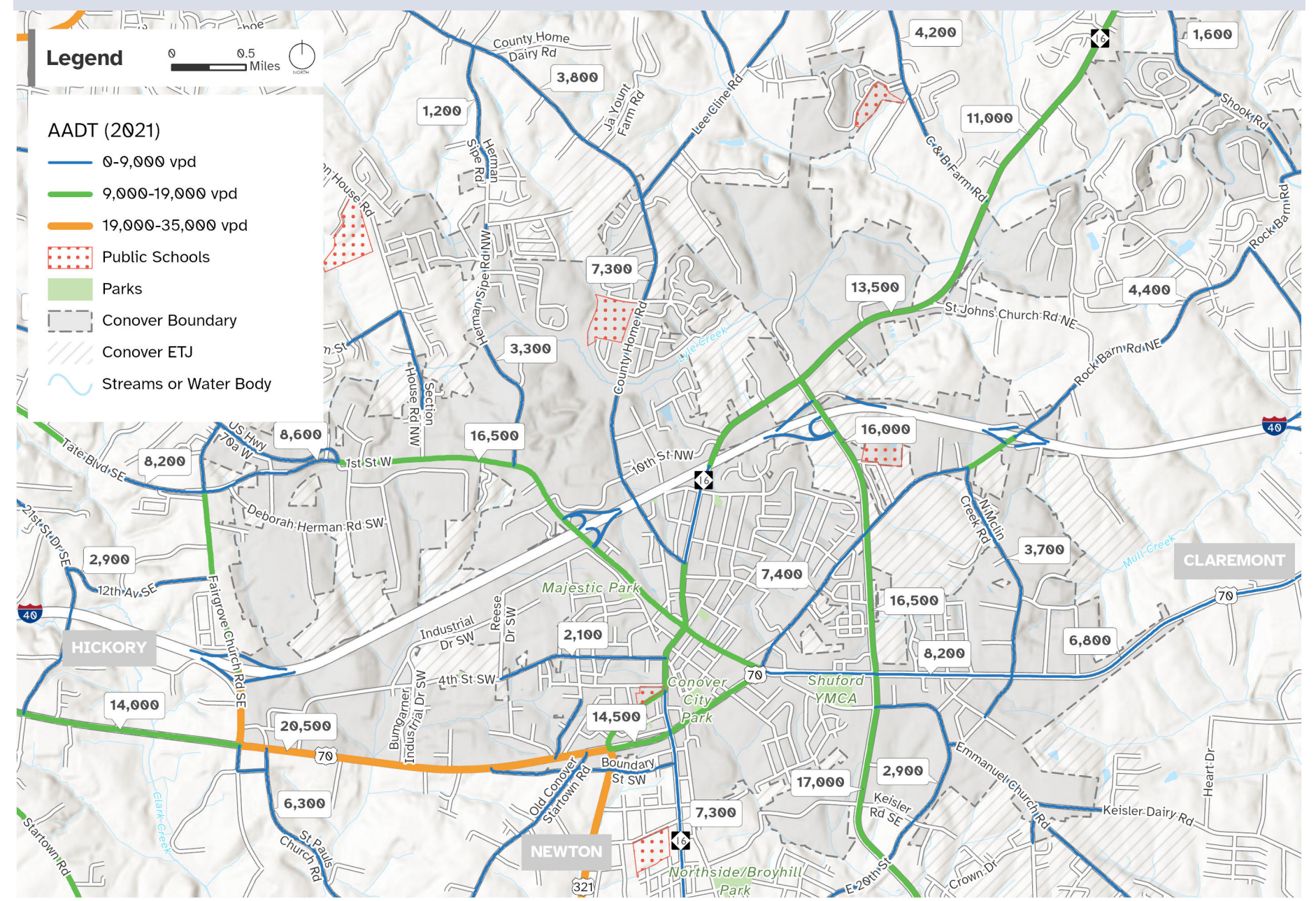
**Map 5 – Conover Speed Limits** provides a summary of posted speed limits throughout the city, which is useful for assessing safety and identifying opportunities for improvements, particularly in the context of our most vulnerable users - bicyclists and pedestrians. Speed limits directly influence the likelihood and severity of accidents; lower speeds generally result in safer conditions for non-motorized users. By analyzing current speed limits, we can pinpoint areas where speeds may be excessively high, posing risks to people walking or bicycling.

Most of Conover’s roadways are posted at 35 miles per hour or less, but some roadway designs are conducive to higher speeds. It is important to consider ways to improve roadway design so that it corresponds to the desired (posted) speed, ensuring that people can navigate safely on foot and by bike even at relatively low speeds. In 2024, Conover implemented a plan to reduce the speed limit on neighborhood streets to 25 miles per hour.



**Image 17. 1st Avenue South (Source: TPD)**  
*Speeds are relatively low on some downtown streets and drivers expect to see people on foot. On-street parking, trees, bulbouts, and pedestrian refuge islands all contribute to a comfortable, walkable environment and speeds are low enough that bicycling is a safe option.*

**Map 4. Conover Average Annual Daily Traffic (AADT)**



Map 5. Conover Speed Limits

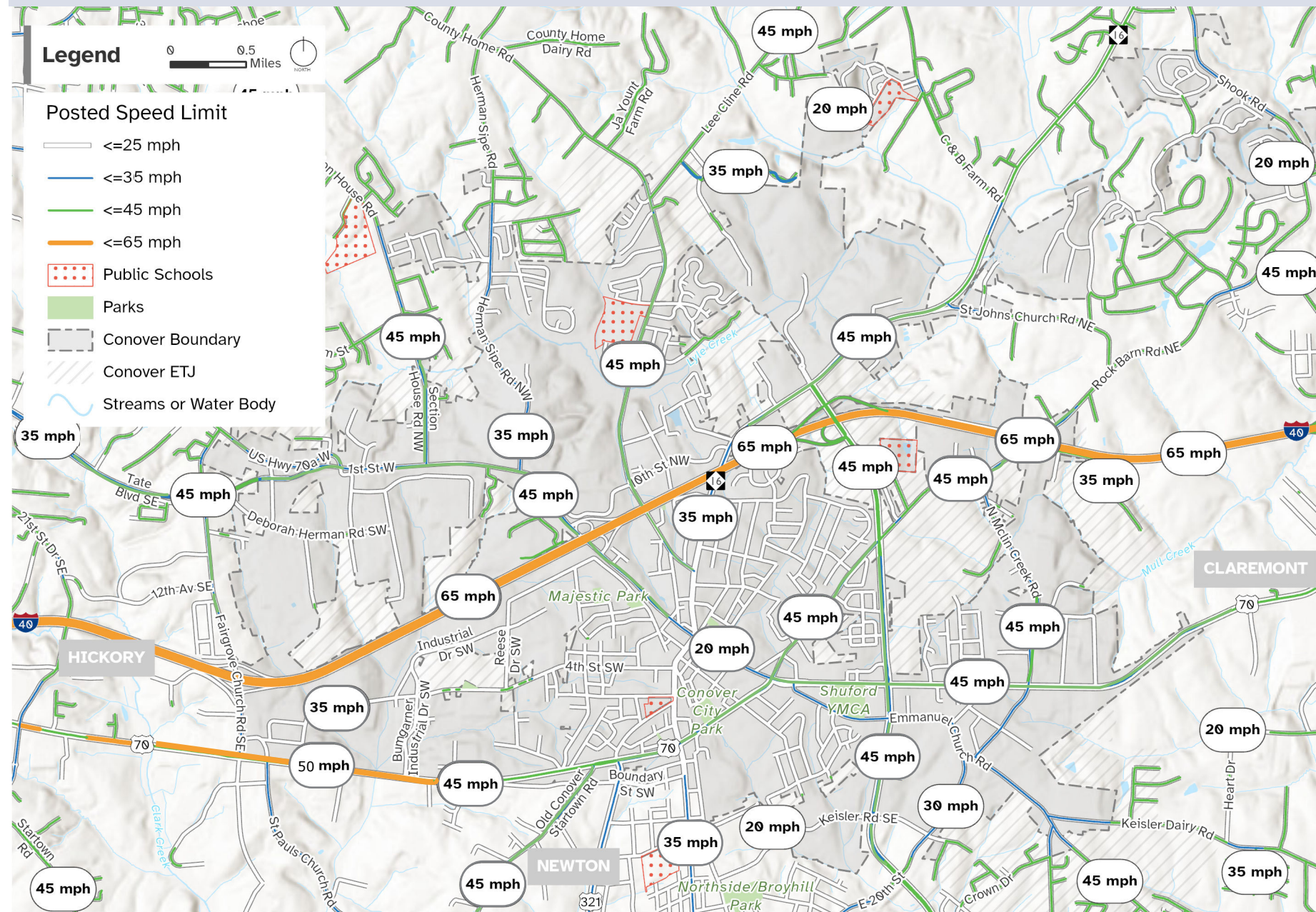


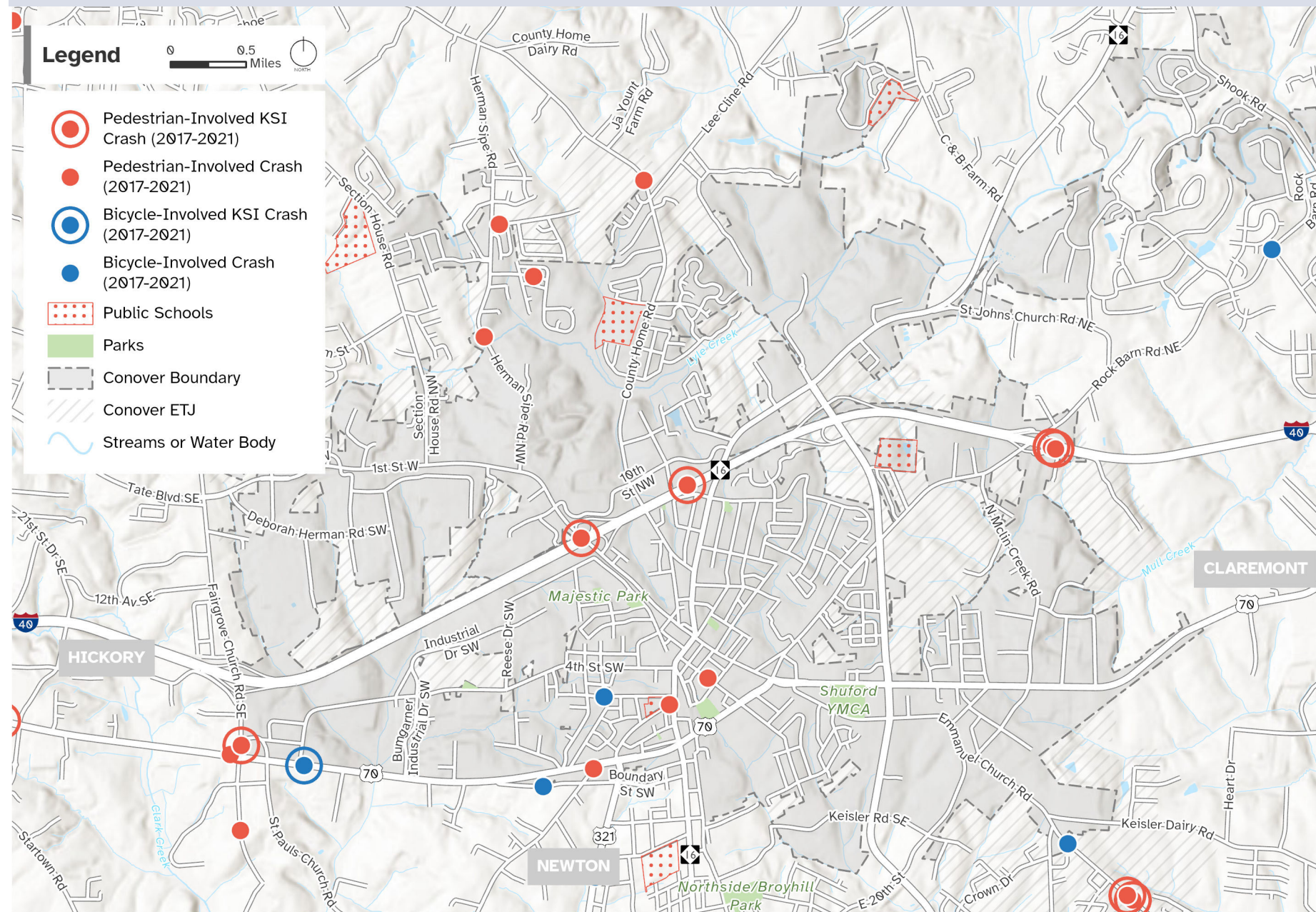
Image 18. Conover Traffic (1st Street) (Source: R Honey)

Even if speeds and traffic volumes are low, the width of a street can make crossings unsafe. The Five Points intersection is notoriously uncomfortable for pedestrians trying to cross, but also confusing and dangerous for drivers making turns.

**Map 6 - Crash History (2017-2021)** illustrates the reported pedestrian- and bicycle-involved crashes from 2017 to 2021, along with the NCDOT Corridor Section Safety Scores within the study area. During this period, there were 21 crashes within or just outside the City limits: 5 involving bicyclists and 16 involving pedestrians. Tragically, eight of these crashes resulted in someone being killed or seriously injured (KSI). Although no crash is acceptable, it is important to recognize that crashes can be unique events. Therefore, beyond understanding crash frequency, it is important to study other indicators of safety.

While this data is informative, it should not be used exclusively to understand pedestrian and bicycle safety. Factors such as the number of travel lanes, AADT, and posted speed limits provide a more comprehensive understanding of crash risk and the perception of safety for pedestrians and cyclists. Later in this Plan document, we use these factors to understand crash risk and to prioritize projects.

Map 6. Crash History (2017 - 2021)



## EXISTING & PROGRAMMED BICYCLE & PEDESTRIAN NETWORK

### Pedestrian Infrastructure

Downtown has a fairly comprehensive network of connected sidewalks, though crosswalks are limited. Efforts have been made to create a more sustainable pedestrian environment in the city center, including the addition of refuge islands, decorative red brick patterns, and signage reminding drivers to watch for pedestrians. However, the city has limited sidewalk access along key corridors, with significant connectors missing and infrequent crosswalks, hindering safe and efficient pedestrian movement.



Image 19. Good Sidewalk on 3rd Street SE (top left) (Source: TPD)

Image 20. Good Sidewalk at Conover Station (top right) (Source: TPD)

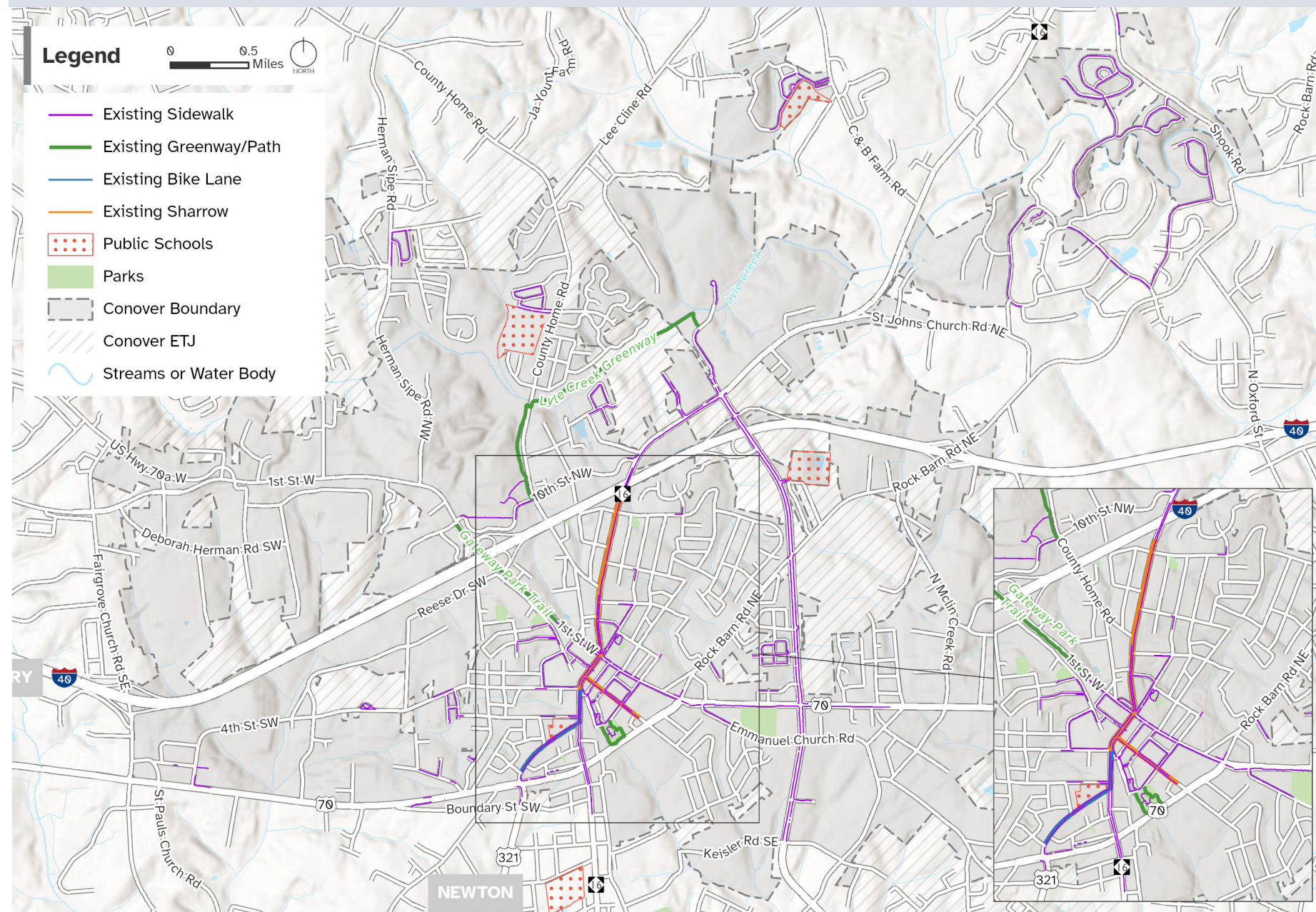
Many of Conover's sidewalks are wide and comfortable, with shade trees and access to parking and businesses.

Image 21. Walking from the Bus Stop on Boundary Street (bottom) (Source: Google)

There are major streets in Conover that lack sidewalk infrastructure completely, forcing people to walk in the grass. Many of these roadways are key connectors, with bus stops, jobs, and services.



Map 7. Existing Sidewalks, Greenways and Trails in Conover



Outside of the city center, sidewalks become less dependable and sometimes abruptly end, forcing pedestrians to make potentially unsafe decisions. Many residential neighborhoods feature shared streets where low traffic volumes make it safe to walk in the street. While newer developments are built with sidewalks in compliance with the City’s code of ordinances, these sidewalks often lack connections to areas outside the development. Newer commercial construction typically includes sidewalks, which can gradually help fill gaps in the network. However, several significant gaps remain that, if addressed, would have a tremendous impact on pedestrian safety and connectivity.

Crossings are essential for creating a walkable and bikeable network. Many of Conover’s roadways have crossings that are few and far between. As a result, pedestrians often feel burdened by the long distances they must walk to reach a safe crossing, and they feel uncomfortable crossing midblock without supportive infrastructure to help them be visible to drivers. A glaring example is the five points intersection in the heart of the city; without pedestrian signals, it is highly unlikely that anyone would risk crossing 1st Street, a five-lane roadway. While there might be sidewalks along both sides of the road, there is nowhere safe to cross. This lack of safe crossing options may not be a problem on low-speed, low-volume roads, but on busy roads, it can be dangerous and discouraging for pedestrians.

Image 22. Railroad Crossing (top) (Source: TPD)

Image 23. The Rail Line Through Conover (bottom) (Source: TPD)

There are not many railroad crossings in Conover. The track simply cuts through the city, creating a barrier for mobility.



### Greenways & Multiuse Paths

Greenways and multiuse sidepaths are dedicated pathways that provide safe, car-free environments that are especially beneficial for children, seniors, and individuals with disabilities, offering accessible routes that connect neighborhoods, parks, and schools. However, there are some constraints, including the high cost of construction and maintenance, potential land acquisition challenges, and the need for careful planning to ensure connectivity and safety. Additionally, these paths may require extensive coordination with local governments and stakeholders to integrate them seamlessly into the existing transportation network. They can be a good alternative to having sidewalks and bike lanes on both sides of a street, especially on rural roadways, and often provide a safer and more comfortable experience than sidewalks or bike lanes.

Gateway Park is a multiuse sidepath and linear park situated along 1st Street West, dedicated in May 2003. It stretches from the intersection of 1st Street West and 10th Street Northwest, near the Canova Shopping Center, all the way into downtown Conover. This park serves as an important pedestrian and bicycle link, connecting the downtown area to the Canova Shopping Center and employment centers like Arhaus Furniture. Located entirely within the rights-of-way of both NCDOT and Norfolk Southern Railroad, its development provided the city with a significant opportunity to enhance a major thoroughfare.

Conover City Park Trail is part of the Conover Station redevelopment site. This paved and accessible trail spans over half a mile, winding around a stormwater wetland, through wooded areas and open fields, and connecting the park's various amenities, such as the playground, gazebo, amphitheater, and splash pad. Residents of Conover visit the trail primarily

Image 24. Gateway Park Trail (top) (Source: Carolina Thread Trail)

Image 25. Gateway Park Trail Bench (bottom) (Source: Carolina Thread Trail)

*The Gateway Park Trail is a safe multimodal transportation facility, but also a recreational amenity, with places to stop and rest, and part of the regional Carolina Thread Trail.*



for exercise and outdoor enjoyment. Currently, the trail only connects to 5th Avenue SE, limiting its use as a transportation facility. However, future connections through downtown to Gateway Park and south across Conover Boulevard to the YMCA could transform this trail into an integral part of the broader transportation network, enhancing its utility and accessibility.

Lyle Creek Greenway is a 1.6-mile trail that follows Lyle Creek, providing an excellent location for relaxation and wildlife viewing, featuring both wooded and open field areas. The trail is eight feet wide and partially constructed from pulverized recycled concrete, with four footbridges, trail markings, signage, and other amenities. It can be accessed from Northern Drive through the roundabout near Tri-City Baptist Church and Walmart, as well as from a trailhead on County Home Road, where it crosses the road and connects to the sidewalk system near 10th Street.

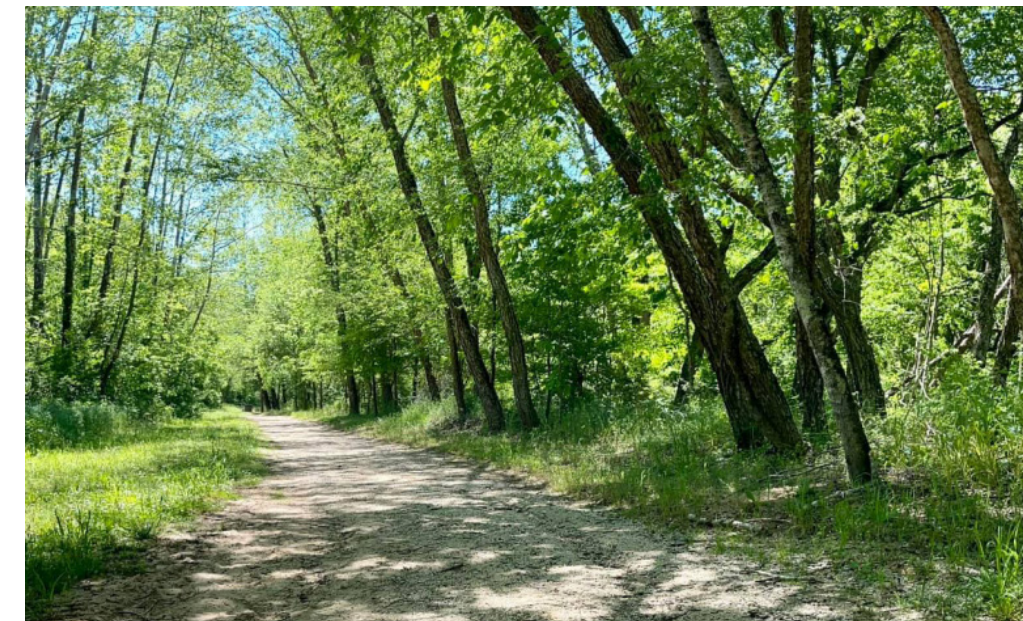
The greenway is part of the Carolina Thread Trail system, a regional network encompassing more than 220 miles of trails and sidewalk connectors open to the public across a 15-county region. The trail's development was made possible through a grant from the Carolina Thread Trail, which the City of Conover matched with additional funds. This program collects fees for sidewalk construction from new developments instead of having them build the sidewalks themselves. These fees are then used to link existing sidewalks, allowing the community to focus sidewalk construction in areas of highest priority and creating a more walkable environment.

Image 26. Conover City Park Trail (top) (Source: Carolina Thread Trail)

*The trail at City Park is beloved by Conover residents, who want to be able to access it by bike and on foot rather than having to drive.*

Image 27. Lyle Creek Greenway (bottom) (Source: City of Conover)

*Lyle Creek Greenway is a community recreational asset. There are opportunities to extend it further along the creek using an existing sewer easement.*



## Bicycle Infrastructure

Conover has limited bicycle infrastructure beyond greenways and multiuse sidepaths. Bike lanes are available on 7th Street Place SW and 1st Avenue South. These bike lanes are standard 5-feet in width, without any buffer from vehicular traffic. This provides only a small amount of comfort for cyclists but does give them a dedicated space on these key roadways. These two streets are important access points for downtown, so bicycle infrastructure is helpful for those who need it. They also provide a direct connection to Conover School. For more people to choose bicycling as a means of transportation, the network needs to be more robust, with few enough gaps that there are ways to reach a destination safely and efficiently. Many streets in Conover are low-volume and low-speed, so bicycling feels relatively safe, but there need to be more multiuse sidepaths, greenways, and bike lanes to make riding a bike a viable option.

Additionally, there are bike shared lane markings (“sharrows”) on NC 16 Business and 3rd Street SE. Sharrows are road symbols used to indicate that a lane is shared by both motor vehicles and bicycles. They help guide bicyclists along safer routes and remind drivers to expect and respect cyclists on the road. Benefits of sharrows include increased awareness of cyclists and encouragement of proper lane positioning in areas where bicycle use is welcome but without space for dedicated bike lanes. However, they are not recommended on high-speed or high-traffic roads, as they do not provide a physical separation between cyclists and vehicles, potentially leading to reduced safety and comfort for cyclists in such environments.

Image 28. Bike Lane on 1st Avenue South (top) (Source: TPD)

Investments have been made on bicycle infrastructure to incorporate bike lanes on several key roadways. The 1st Avenue South bike lanes provide a connection between busy Conover Boulevard and the downtown.

Image 29. Sharrows on 1st Avenue South (bottom) (Source: TPD)

Shared lane markings (“sharrows”) have a mixed track record for safety. While they do demonstrate support for cycling and provide connections between bike lanes, they likely do not contribute to safety improvements and do not separate bicyclists from motor vehicle traffic.



## BENEFITS OF TRANSIT PROVIDED BY Western Piedmont Regional Transit Authority (Greenway Public Transit)



**250,000**

Local bus trips provided in 2018

(Source: OpStats)



**\$10.9 MILLION**

STATEWIDE BUSINESS OUTPUT

Expenditure-related economic contribution refers to statewide economic effects supported by the capital and operational expenditures of North Carolina's transit systems.

(Source: TREDIS)



**\$2.61 MILLION**

ANNUAL BENEFIT OF HAVING A TRANSIT OPTION IN NC COMMUNITIES

Transportation Cost Savings: using transit instead of other modes / Affordable Mobility Options: benefit from having transit services available

(Source: SURTC/CUTR)



**TRANSIT FUNDING**

Every \$1 the state of North Carolina invests in transit generates approximately \$6 of total investment in North Carolina from federal, state and local sources.

(Source: OpStats)



**MORE THAN 96 JOBS**

are supported by transit system operations and capital investments which result in \$5.1M in wages

(Source: TREDIS)

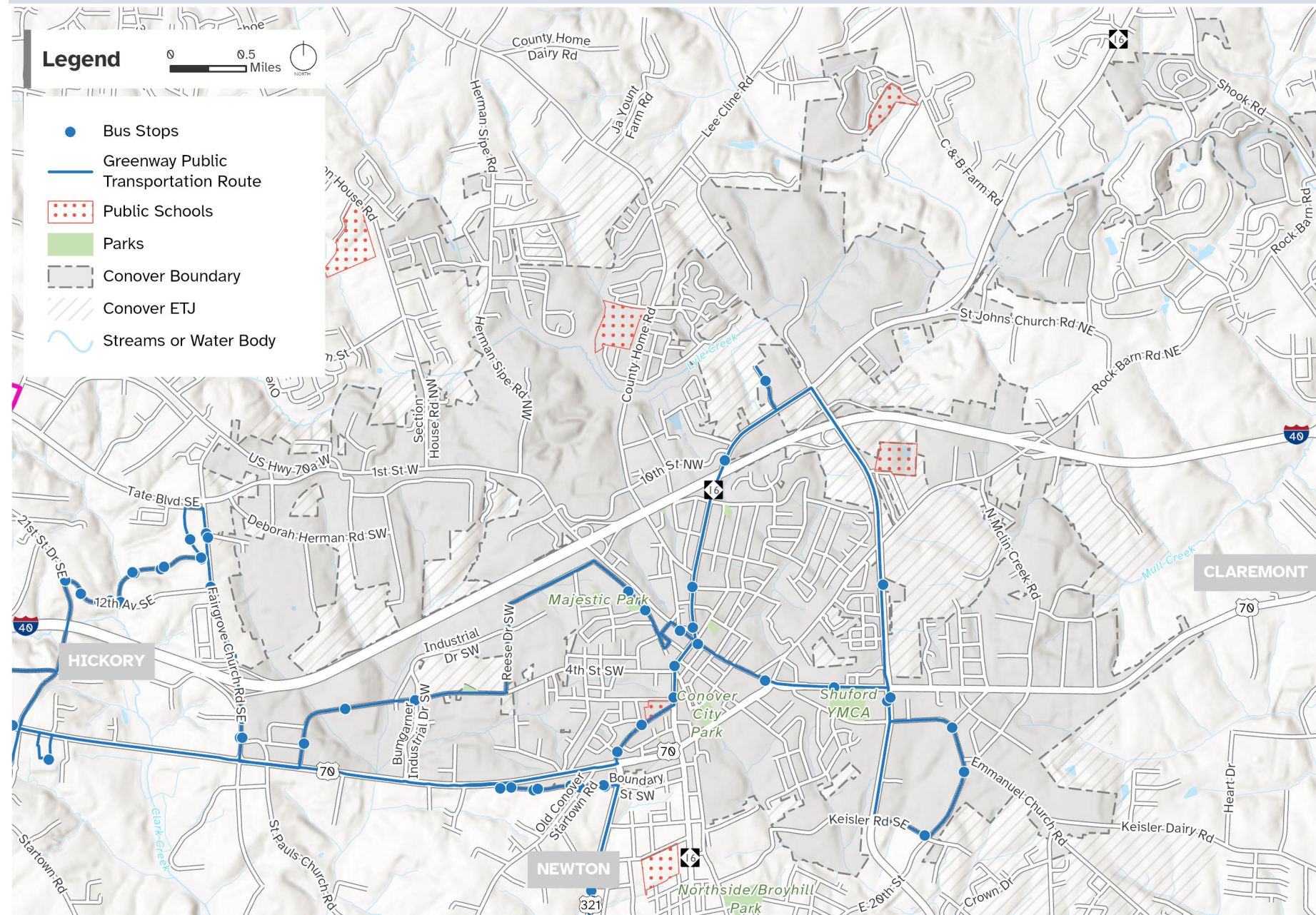
Figure 6. Benefits of Transit (Source: NCDOT)

## Transit

As of the time of this writing, Conover is served by Greenway Public Transportation, offering fixed route bus service that connects Conover, Hickory, and Newton. Passengers can board the bus at designated stops along the route without a reservation. The service operates Monday through Saturday, with bus schedules available on board, at the Greenway Transit Center in downtown Hickory, and online. Greenway Public Transportation provides various fare options, including single rides, all-day passes, and monthly passes, with discounts available for eligible passengers. Children 5 and under ride free.

Transit service significantly impacts walkability and bikeability by providing helpful connections between different parts of the community. Reliable bus routes can encourage more people to opt for walking or biking for part of their journey, reducing dependency on personal vehicles and supporting a more sustainable and active community. It is helpful to have seating and shelters at as many stops as possible and continued improvements to timeliness and reliability can help support walking and bicycling in Conover.

Map 8. Bus Stops



RECENT PROGRESS

Since the original Pedestrian Transportation Plan was created in 2008, the City of Conover has made significant progress on many projects in the Network Corridors category. Key improvements include adding sidewalks along US 70 East (from 6th Avenue East) and NC 16 (near I-40 North), enhancing pedestrian connectivity throughout the Conover Station/City Park redevelopment, and planning and designing upgrades for 3rd Street SE, 1st Street, and the Five Points intersection.

The city has also completed several pedestrian crossing and intersection projects from the 2008 plan, such as crosswalks and curb extensions on 1st Avenue S and 3rd Street SE, additional crosswalks and curb ramps on 1st Avenue S and 7th Street Place SW, and the addition of sidewalks, crosswalks, and a roundabout at the new school location on County Home Road and Northern Drive.

Partial improvements have been made at the Five Points intersection with enhanced crosswalks, but further enhancements are still needed.



Image 30. Red Brick Crosswalks Downtown (top) (Source: TPD)

Image 31. High Visibility Crossing (bottom) (Source: TPD)

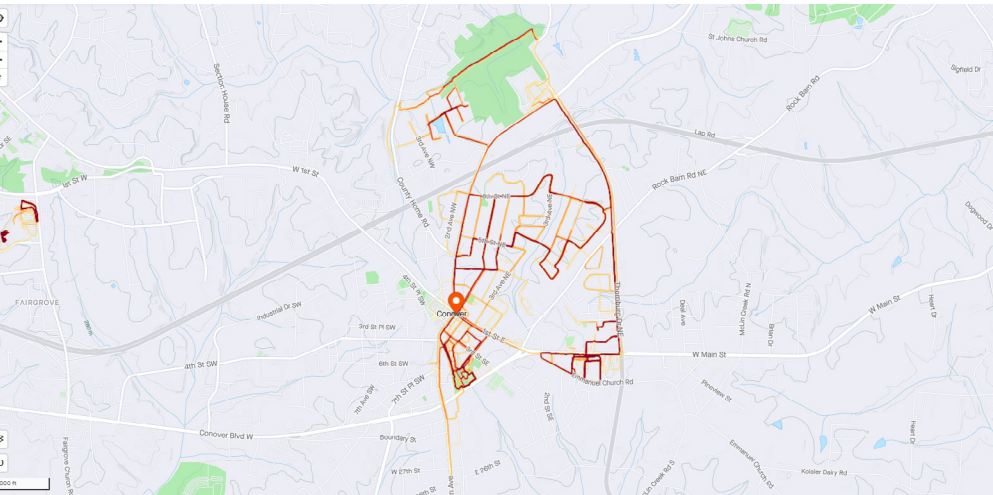
Conover has made improvements over the years, with pedestrian refuge islands and decorative red brick crosswalks. These help with visibility and provide a secure midpoint for pedestrians, allowing them to focus on one direction of traffic at a time, thereby reducing the risk of accidents. Additionally, these islands can slow down vehicular traffic, making streets safer for all users, including bicyclists.

## CURRENT WALKING & BICYCLING RATES

The city does not have any current data on bicycling and walking rates. To further offer an approximation of the trips taken on foot and bicycle, the online fitness website and app, Strava, can provide a broad overview of the networks on which people walk, bike, hike and run<sup>22</sup>. Strava has developed “heat maps” showing aggregated public activities taken by its users over the last two years. In this case, people who travel by foot or bike will use the app or website to record their trip or exercise information. Strava’s activity is derived from users who publicly share their routes. Some users may opt out of updating their journeys, and areas with very little activity may not show up on the heat map. It is important to note that these trips are typically taken for recreation purposes and not transportation. In the absence

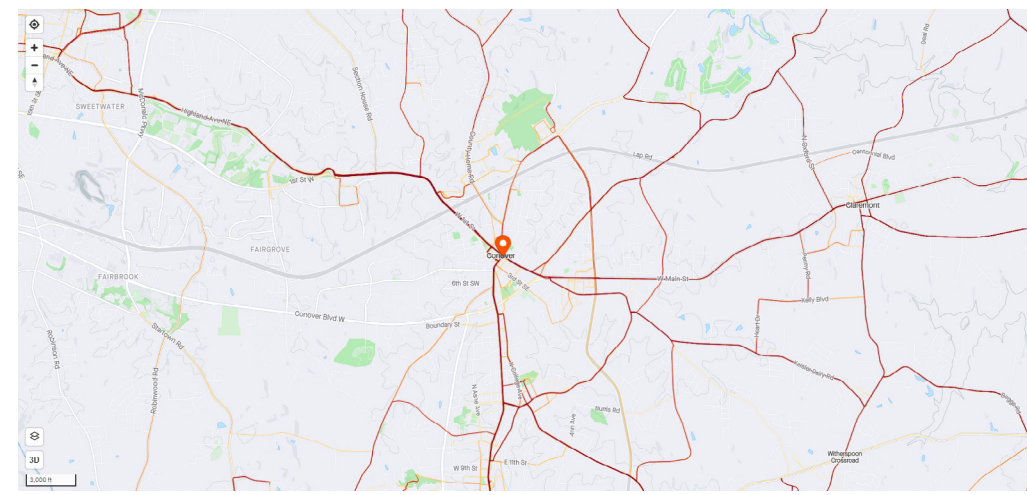
of this data, Conover can use the Strava heat map as a relative approximation of walking and bicycling recreational use.

**Image 32 – Strava Heatmap (Walking in Conover)** and **Image 33 – Strava Heatmap (Bicycling in Conover)** show places in Conover that are favored by people walking and bicycling, indicating current usage. These maps indicate that people are walking on trails – City Park, the YMCA, and Lyle Creek Greenway, as well as in and around downtown and the residential neighborhoods north of downtown. The Thornburg Drive sidewalks are well-used and people are even walking south to Newton. It is clear that not many people are choosing to walk along streets without sidewalks and that Conover Boulevard and Rock Barn Road are barriers preventing people from getting downtown on foot if they live in the southeast part of the city. Bicycling trends point to longer-distance trips, with regional distribution.



**Image 32. Strava Heatmap (Walking in Conover)**  
(Source: Strava Heat Maps)

*These heatmaps highlight popular pathways and can identify high-traffic areas, showing where people prefer to walk and bike. This data helps to understand current usage trends, identify gaps in infrastructure, and prioritize areas for improvement to better support and encourage pedestrian and bicycle activities.*



**Image 33. Strava Heatmap (Bicycling in Conover)**  
(Source: Strava Heat Maps)

## RELEVANT LOCAL, REGIONAL AND STATE PLANS

Reviewing previously adopted community plan documents is essential for understanding the community’s desires and project ideas. **Table 3 - Community Plans Reviewed** shows what plans have been reviewed to gather this information.

Table 3. Community Plans Reviewed

PLAN NAME	YEAR
Southern Conover Small Area Plan	2024
Greater Hickory MPO 2050 Metropolitan Transportation Plan	2023
2003 Land Development Plan (updated through 2030)	2022
NCDOT State Transportation Improvement Program (STIP)	Ongoing
Western Piedmont Local Coordinated Public Transportation Plan	Updated 2021
Conover ADA Transition Plan	2019
Western Piedmont Bicycle Plan	2014
Conover Pedestrian Plan	2008
Conover Parks Master Plan	2008
Catawba County Comprehensive Parks Master Plan	2007



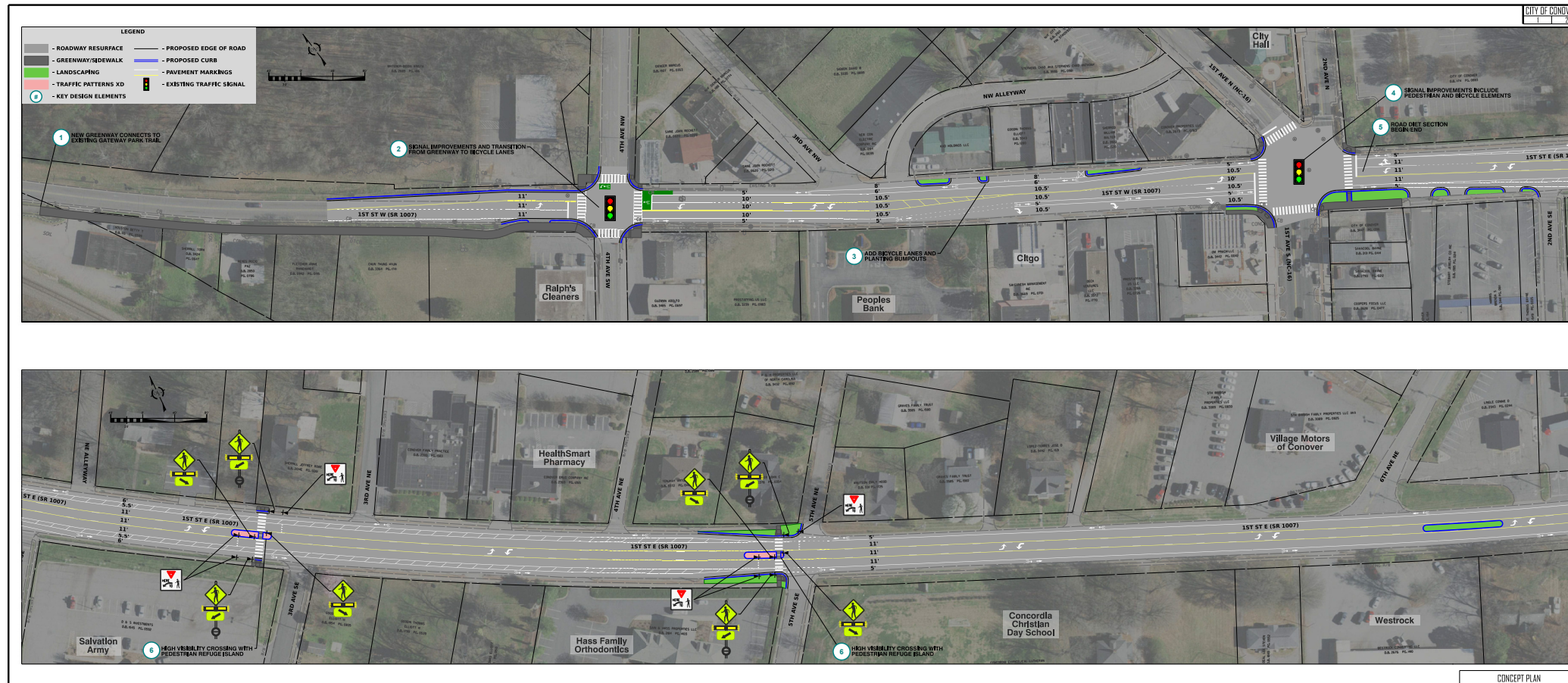
# NCDOT STIP

The NCDOT transportation plan – called the State Transportation Improvement Program (STIP) – identifies the construction funding and schedule for projects over a 10-year period. NCDOT updates the STIP approximately on an ongoing basis.

The current 2024-2033 projects and those planned for the newest cycle are mostly related to bridge replacement and I-40 widening west of Conover. Another key multimodal project is **C-5624 1st Street/US 70 Bike Lane Project**: Roadway redesign (road diet) to include bicycle and pedestrian improvements – new pedestrian crossings, bike lanes, and sidewalks – from approximately 8th Avenue NW (south of I-40 Exit 130) to Thornburg Drive (New Highway 16). 30% design plans for this project have been completed.

The Greater Hickory Metropolitan Planning Organization (GHMPO) submittal list for future prioritization includes **B192088 – 10th St NW Multiuse path**: A protected linear pedestrian facility on 10th Street W (SR 1485) from 1st Street W (SR 1007) to County Home Road (SR 1484). SPOT submittal number B4.

Image 34. 1st Street Design (NCDOT STIP Project C-5624) Gateway Park Trail to Rock Barn Road (Source: City of Conover)



## 1st Street Complete Streets Project

In 2017, the City of Conover and the Greater Hickory Metropolitan Planning Organization (GHMPO) secured \$2.6 million in federal funding through a competitive process for a multimodal improvement project along 1st Street in Conover. The grant, in agreement with NCDOT, will fund the construction of expanded pedestrian facilities and bike lane improvements. The project aims to enhance pedestrian and bicycle connectivity, improve the signal system to optimize corridor operations, and reduce vehicle speeds.

These changes will make the area much safer for drivers and pedestrians.

This may encourage a more vibrant downtown in the future.

Great long range vision by the city, and its project partners, and all other project stakeholders!

We often walk to the farmers market during the summer and need a safe place to cross the street.

I have been asking for ped buttons at the Five Points intersection for 41 years!

To gather public input, the study team distributed postcards with a link to an online survey during the National Night Out event. The team also developed a project website to share information. The public comment period was advertised through a postcard mailer sent to residents and businesses along the study corridor, as well as via social media posts. Printed copies of the postcard mailer were also available at City Hall and the Conover Public Library. Approximately 723 postcards were mailed.

Pedestrian crossings along 1st Street would be nice.

The children at my church used to want to bike to Bowman's for ice cream but their parents wouldn't let them because it wasn't safe.

I want to make sure my children are safe riding their bikes.

Please fix the sidewalk in front of the YMCA. The curving sidewalk is inefficient.

I like the design and I believe it's important the City of Conover is accessible to and for all people.

Image 35. 1st Street Design (NCDOT STIP Project C-5624) Rock Barn Road to Thornburg Drive (Source: City of Conover)

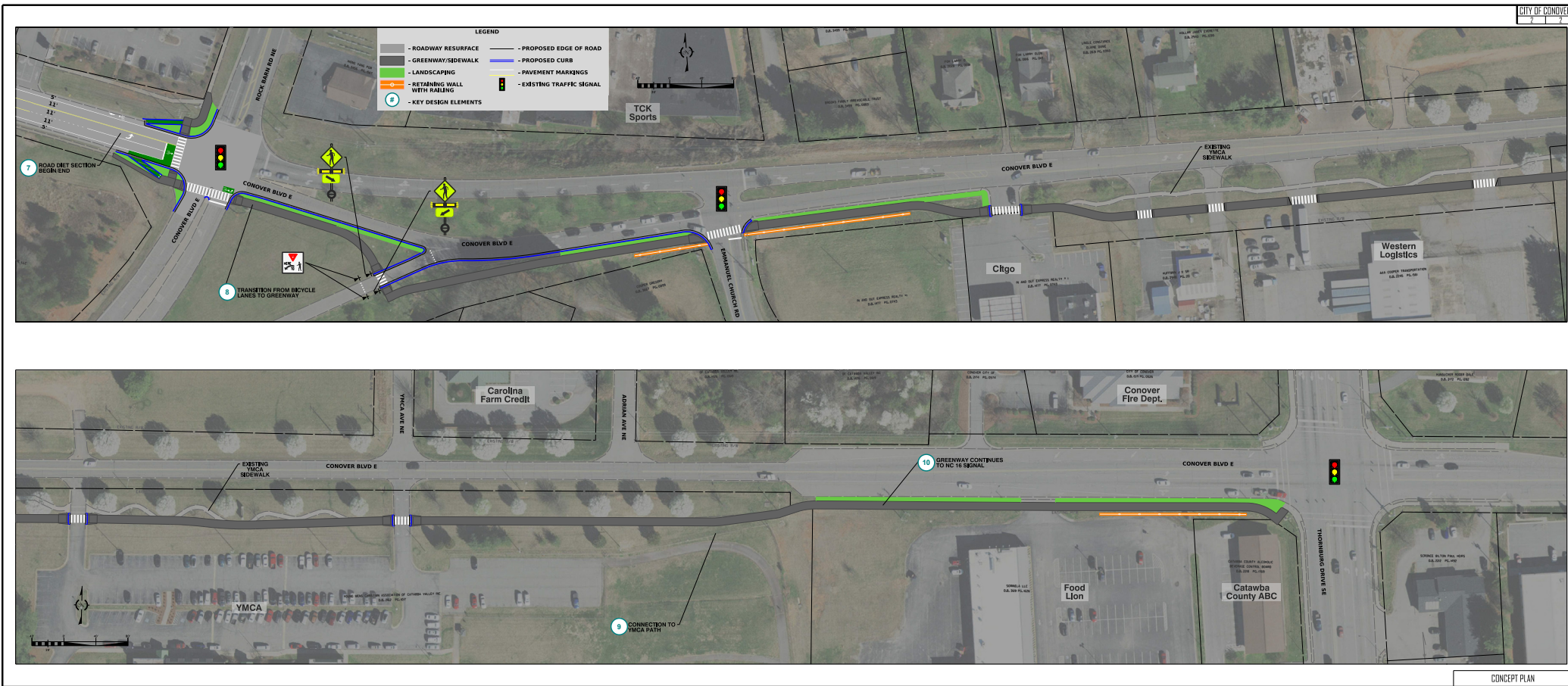
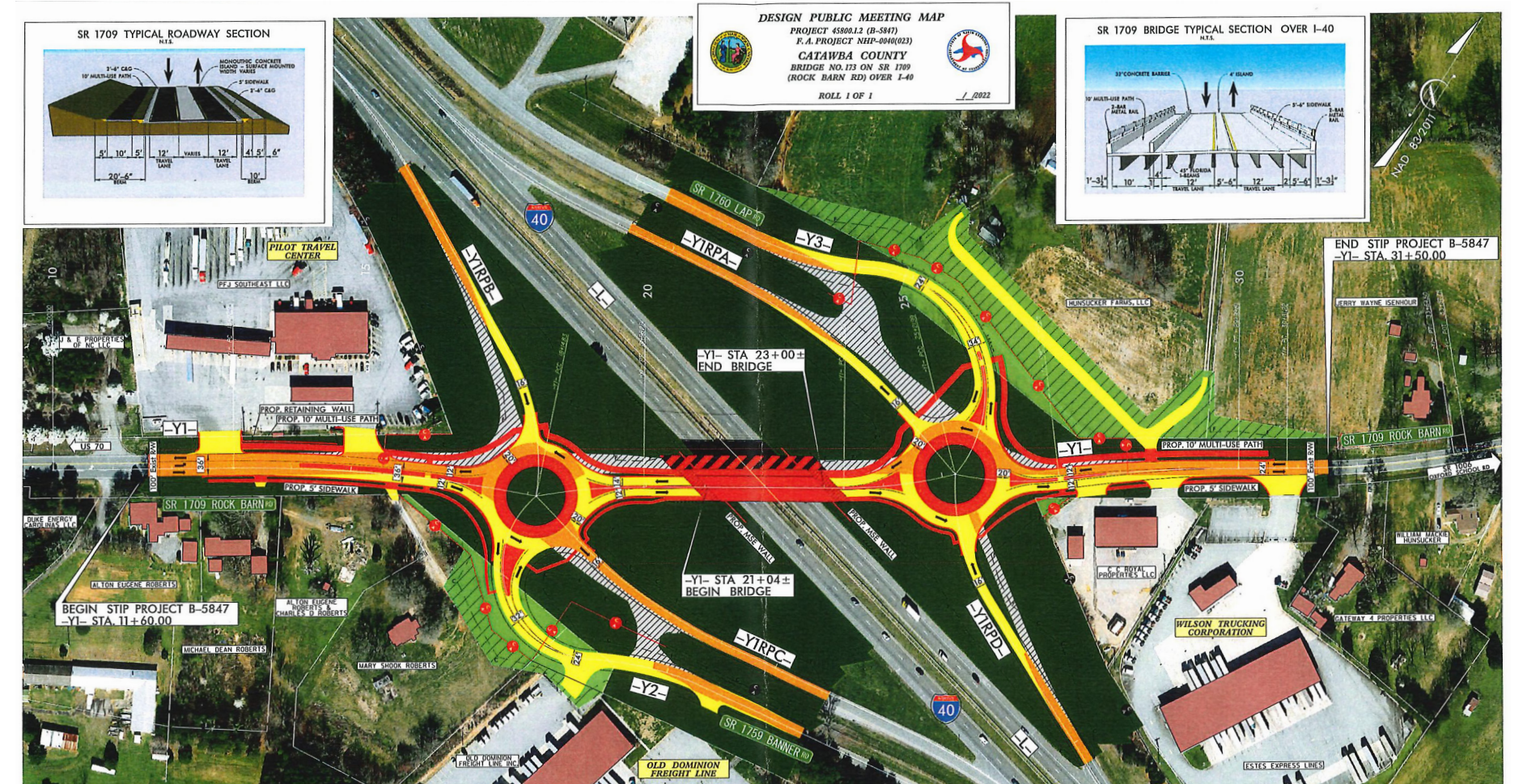


Image 36. I-40 Roundabouts at Rock Barn Road (Source: NCDOT)



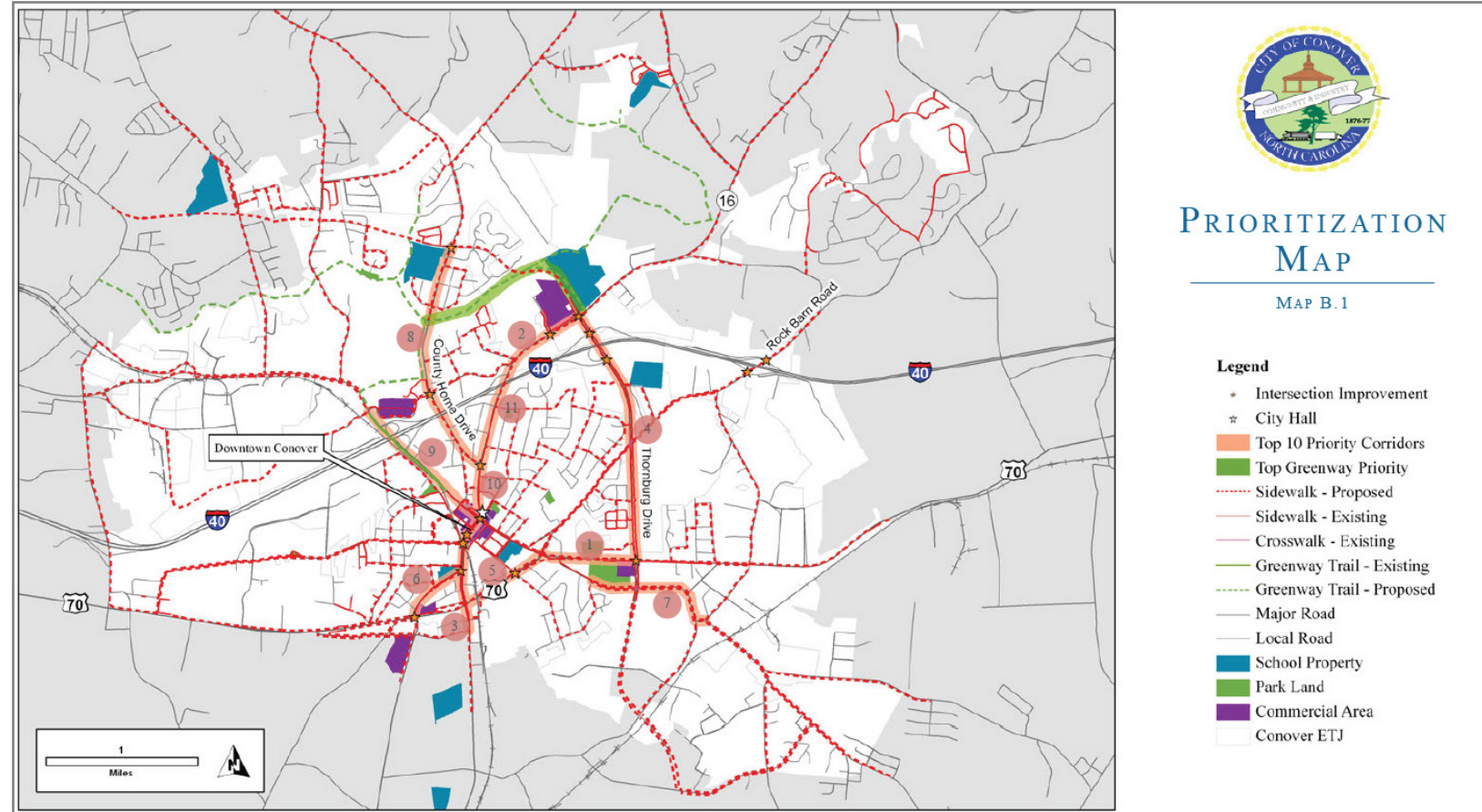
**I-40 Interchange Improvements**

NCDOT plans for this I-40 access points include 5-foot sidewalks, which will help make Rock Barn Road safer and walkable once implemented and linked to other Connect Conover project recommendations. Development pressures continue to mount for this area as attractive for new housing projects.

## City Planning Efforts

One of the primary starting points of *Connect Conover's* project development phase was to look at recommendations from the 2008 Pedestrian Plan and see what has been completed over the years, which projects are still relevant, and what changes can be made to incorporate bicycle users. Several of the priority corridors from the 2008 plan have been improved, and the top greenway project – the first phase of the Lyle Creek Greenway – has come to fruition. However, this plan identified many more opportunities for new sidewalk connections and trails, including additional phases of the Lyle Creek Greenway.

Image 37. Conover Pedestrian Plan Prioritization Map (2008)  
(Source: City of Conover)



“ Our region values bicycle use for its health and recreational benefits. Bicycles represent an alternative transportation option for our community’s residents and visitors as an accessible, safe, healthy and scenic way to reach places people want to go. ”

- Western Piedmont Bicycle Plan Vision (2014)

The 2022 update of the Conover Land Development Plan identified a goal to “improve alternate means of transportation such as sidewalks, bike paths, and enhanced bus service.” This goal includes the objective to “create and develop additional transportation options that reduce reliance solely on vehicular travel.” Another goal in this plan is to ensure access to open space by expanding greenways and trails. This ties into the broader vision for a regional greenway system along Lyle Creek as part of the Carolina Thread Trail.

Conover leaders are building upon a strong legacy of planning to identify opportunities and navigate challenges accordingly. The 2024 Small Area Plan for the southern area of the city provides a blueprint for areas on both sides of the train tracks around Conover Boulevard. The plan is a guide for future development with land use options and infrastructure needs, ensuring growth aligns with the community’s desired changes.

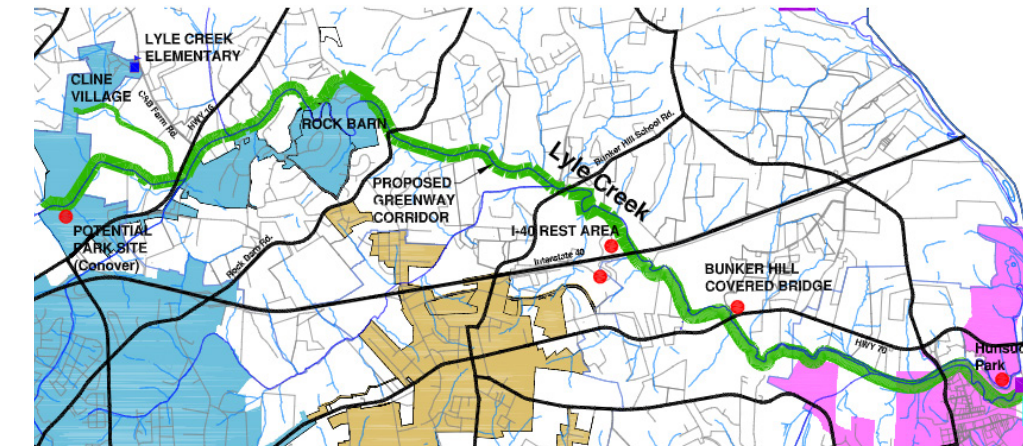


Image 38. Carolina Thread Trail Routing (Source: Catawba County Comprehensive Parks Master Plan)

Lyle Creek Greenway is part of a regional greenway vision, with links west to Hickory and east to Catawba.

The Small Area Plan recommends a stronger mix of land uses, stating that “allowing a mix of residential and commercial spaces fosters a dynamic and livable environment. When businesses are integrated into residential areas, it can lead to increased foot traffic, vibrant streetscapes, and a stronger sense of community.” This plan highlights the desire to see pedestrian and greenway connections throughout the study area, which aligns with *Connect Conover’s* vision of a multimodal Boundary Street, a connection between City Park and Newton’s Northside/ Broyhill Park, and improvements to 9th Street SW and 3rd Street SE, along with better crossings of Conover Boulevard.

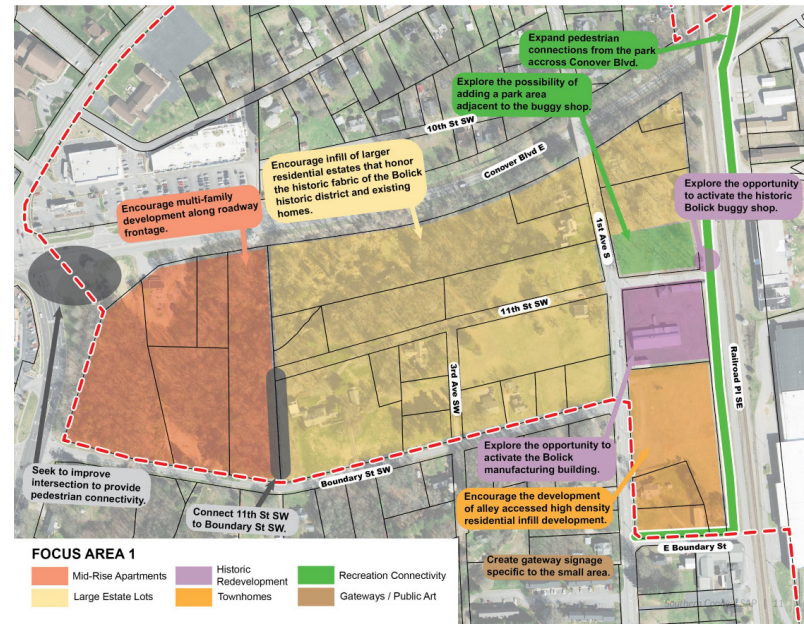
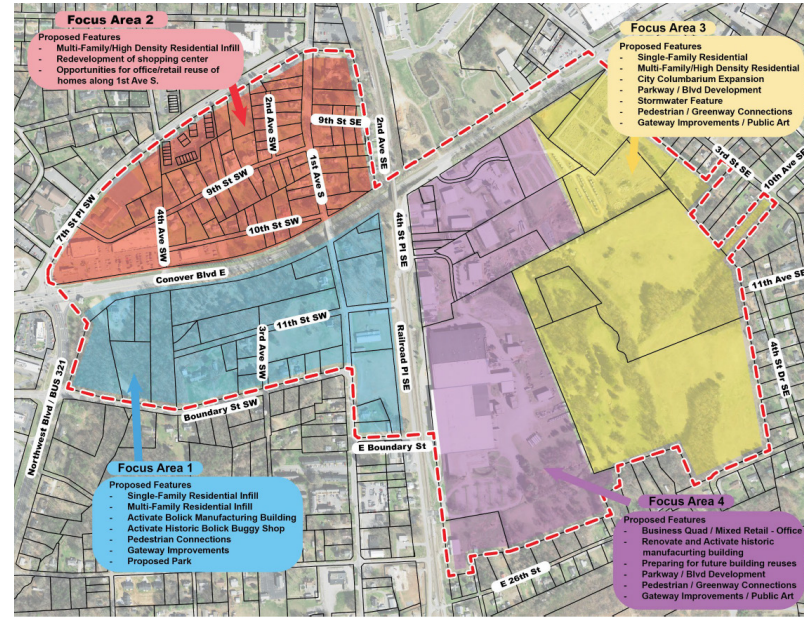


Image 39. Southern Conover Small Area Plan Focus Areas (top)  
(Source: City of Conover)

The City of Conover is concentrating on specific areas to develop a detailed blueprint for development and redevelopment. This plan also considers pedestrian connections, greenways, public art, gateway enhancements, and park spaces.

Image 40. Small Area Plan Southwest Focus Area (bottom)  
(Source: City of Conover)

The Southern Conover Small Area Plan indicates a need for better pedestrian connectivity, recommending better crossings, roadway linkages, and a connection to City Park.

## RECENT DEVELOPMENTS

Conover is experiencing significant growth pressures and is actively collaborating with developers to locate and build new housing throughout the city. This surge in development aims to meet the increasing demand for residential spaces while fostering a well-connected community. Many of these new developments are thoughtfully designed with connectivity in mind, incorporating new roadways that seamlessly link to

existing neighborhoods. These projects often feature sidewalks and street parking to enhance accessibility and convenience for both residents and visitors. By prioritizing connectivity, Conover is working to create a cohesive urban environment that supports mobility, social interaction, and a higher quality of life for its growing population.

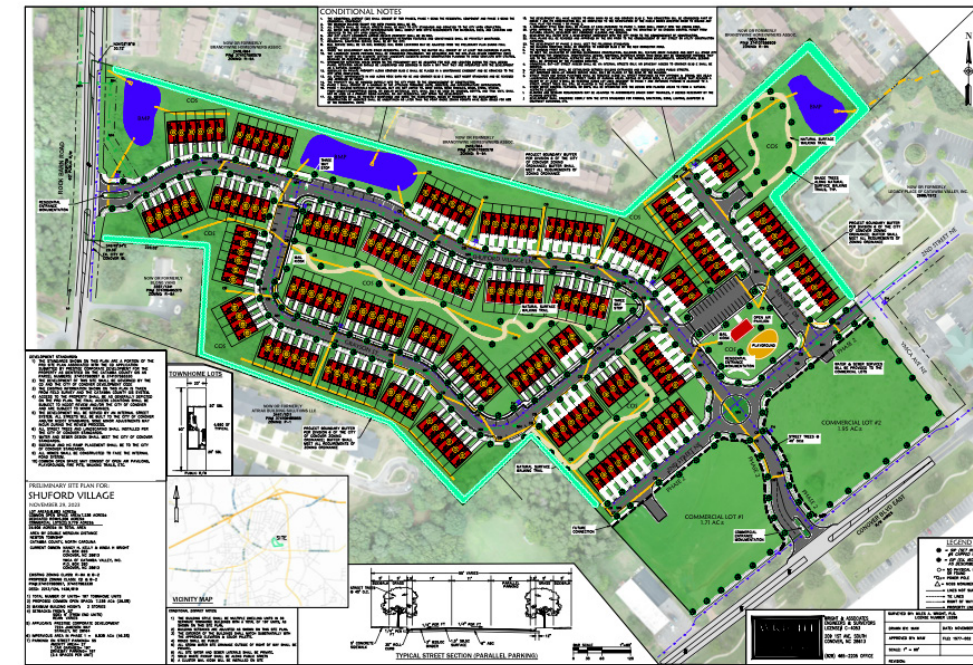


Image 41. New Development with Key Connections (Source: City of Conover)

This new residential development (approved in 2024) creates a key roadway connection between Rock Barn Road and Conover Boulevard East, offering sidewalks and low speed streets. It also makes it all the more important to have safe crossings and bicycle/pedestrian infrastructure on Rock Barn Road and Conover Boulevard.

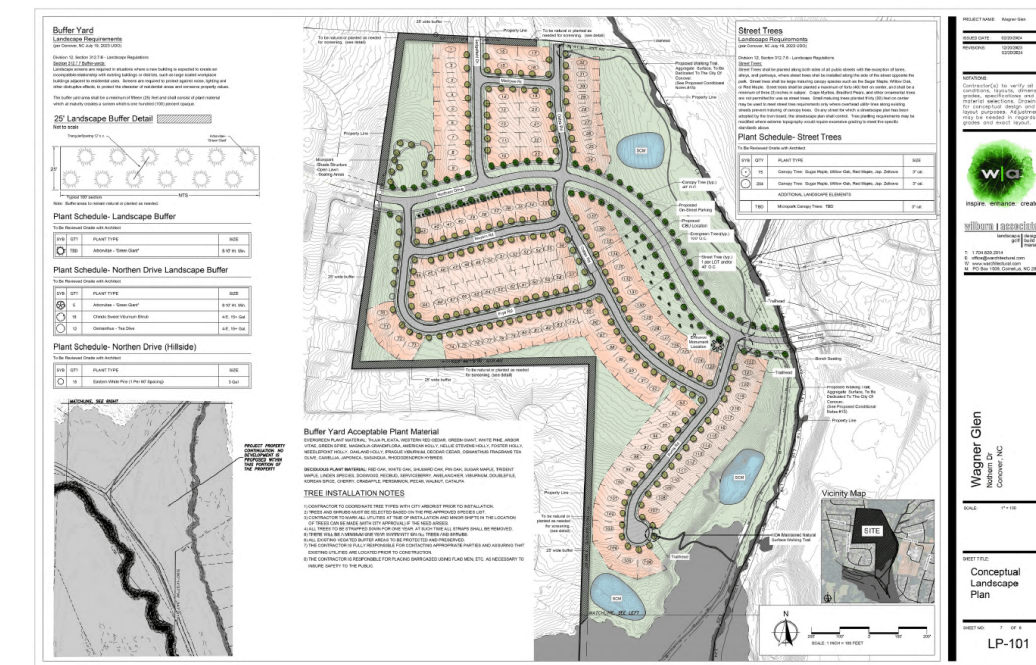


Image 42. New Development on Northern Drive (Source: City of Conover)

This new residential development (approved in 2024) creates a key roadway connection along Northern Drive (between Herman Sipe Road and County Home Road) that will improve mobility in the area and offer new ways to get to the middle school. The site plan includes a natural surface trail section that could link to the Lyle Creek Greenway and provide new access to that facility.



# Is your Child in Need of a Helmet?

Join the City of Conover and Safe Kids Catawba County for a Bicycle Rodeo Day!

**June 3rd at Conover City Park  
4:30-7:30**

Families are invited to bring their bicycles for a family fun day in the park and the chance to win prizes!

Please scan the QR code or visit the website to fill out the form to register your child for a helmet.



## LOCAL PROGRAMS AND INITIATIVES

Conover's education and encouragement programming for walking and biking is primarily focused on schools and volunteer-led activities. These ongoing collaborations highlight the community's commitment to promoting active transportation and outdoor activities among students.

The City of Conover has partnered with NCDOT to secure grant funding for several projects prioritized in the 2008 Pedestrian Plan. During the creation of that plan, the City worked closely with NCDOT to identify initiatives that would be well-suited to the community and its schools. NCDOT provided the city with educational materials to facilitate training opportunities for its employees. The City has since facilitated bicycle rodeos and helmet giveaways and other programs to show support for mobility options.

Moving forward, the City of Conover has continued to work closely with NCDOT during the development of *Connect Conover* and will be key partners in implementation of project recommendations in the coming years. The City aims to build upon its strong relationship with the Greater Hickory MPO and NCDOT, incorporating their recommendations and policies into proposed changes and updates, particularly for areas located on state-maintained roads. NCDOT's initiatives and policies for pedestrian and bicycle safety are a key component of *Connect Conover*.

## BARRIERS TO WALKING & BICYCLING

Although Conover has a network of existing sidewalks, bike lanes, and greenways, they are not fully distributed throughout the community. For those residents who live or work within these areas of the city, they can get around relatively easily. However, gaps in the network might limit how far they can travel. Meanwhile, those who live or work in areas without sidewalks or bike infrastructure likely must get in a car to access key parts of city.

High-speed roads, railroad crossings, and infrastructure gaps pose significant barriers for those walking and bicycling. These barriers, along with a lack of pedestrian and bicycle infrastructure, are a major obstacle for people who need or want to travel without a car.

### Access to Transit

The absence of sidewalks within a quarter mile of some of the bus stops in Conover creates a significant barrier to accessing public transit. Some stops are on roadways that do not have sidewalks, like Boundary Street and Fairgrove Church Road, posing accessibility and safety concerns.

### Remote Roadways & Crossings

Conover does have streets outside of the core that are low volume and low speed. Some of these streets are naturally conducive to people walking or bicycling. However, the remoteness of some of the more rural roadways makes it hard to connect to the downtown core without a personal automobile. When a street network is largely defined by higher volume roads that connect to lower volume, local streets, it becomes inevitable that people walking and biking will encounter problematic street crossings. There are several challenging crossings that community members expressed concerns about, particularly the Five Points intersection and crossing Conover Boulevard.



Image 44. Intersection of Conover Boulevard & 3rd Street (Source: TPD)  
*Roadways with nowhere to cross disincentivize people from walking and bicycling.*



Image 45. People Walking Along Fairgrove Church Road (Source: Google Imagery)  
*Many key roadways do not have sidewalks or bike lanes, but there are jobs, essential services, and bus stops on these corridors.*

Image 43. Bicycle Helmet Giveaway Flyer (Source: City of Conover)  
*This event helped teach kids about bicycle safety and provided helmets to about fifty kids who needed them.*

## Railroad

Another barrier in the City is the railroad, which bisects Conover, separating downtown from nearby neighborhoods and key destinations. The railroad presents a barrier to the overall flow of traffic through downtown and is a major barrier to establishing a comfortable multimodal network. Train tracks and railroads can present significant barriers to walking and bicycling within a community. These barriers disrupt the continuity of pedestrian and bicycle networks, making it challenging for people to navigate the area safely and efficiently. Crossing points are often limited, leading to inconvenient and lengthy detours that discourage walking and biking. Additionally, the lack of safe, designated crossings increases the risk of accidents and injuries. The presence of railroads can also create psychological barriers, deterring individuals from choosing active transportation modes due to perceived danger or inconvenience.



Image 46. Train Tracks as a Barrier (Source: Google Imagery)  
Despite living within a stone's throw of a city park, some residents cannot easily access this destination because of the train track.

## Addressing Barriers

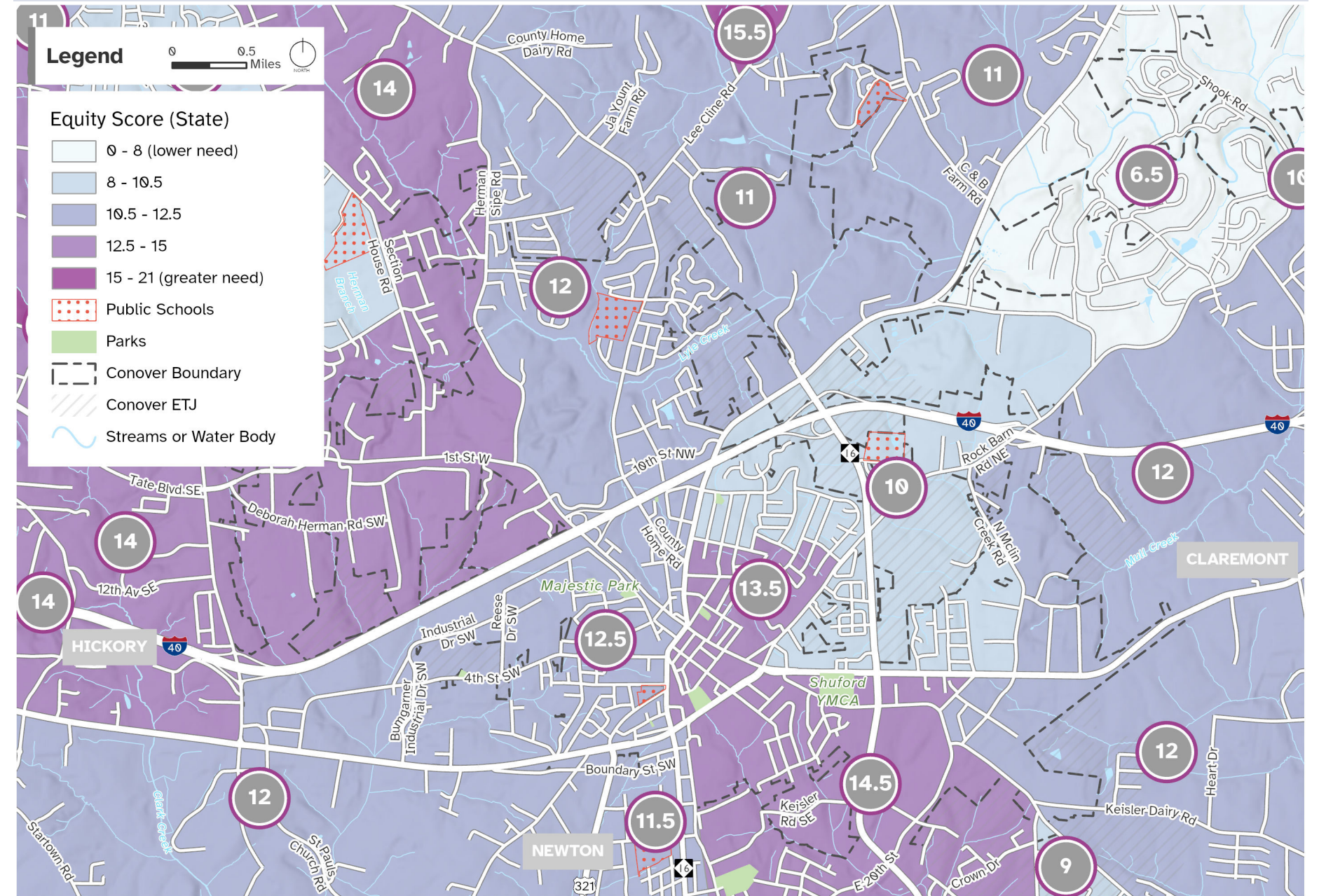
To address these challenges, Conover needs to extend sidewalks, bike lanes, and greenways to ensure continuous coverage throughout the community. Prioritizing sidewalk construction near bus stops will improve public transit accessibility. Infrastructure improvements, such as overpasses, underpasses, or at-grade crossings with safety measures at key railroad crossings, are essential to enhance connectivity. Additionally, improving pedestrian and bicycle infrastructure at critical street crossings will boost safety and accessibility.

## SPECIAL POPULATIONS & USER GROUPS

Census data at a broad geographic scale can be challenging to interpret accurately, potentially leading to inaccuracies and limited insights into equity needs. To overcome these challenges and gain a better understanding of equity in Conover, it is necessary to engage with local stakeholders who have in-depth knowledge of their community. This engagement helps glean insights into neighborhoods or streets that have experienced under-investment or disinvestment in pedestrian and bicycling infrastructure and can identify areas of the community that have historically been home to specific demographic groups.

The Project Team reviewed NCDOT's statewide environmental justice map to pinpoint areas with higher rates of poverty, racial minority, and Hispanic and Latino populations, as well as the overall transportation disadvantage index maps. These maps isolate areas with higher rates of older and younger populations (under 16 and over 64), poverty, BIPOC (Black, Indigenous, People of Color) population, zero-car households, and disability status. These maps, combined with input from local stakeholders and collaboration with the Steering Committee, highlight areas in Conover as having higher equity needs. This recognition of equity considerations played a role in prioritizing projects and ensuring a more equitable approach to transportation planning in the community, as reviewed in Chapter 3.

Map 9. NCDOT Transportation Disadvantage Index (State Level)



## Endnotes

- 20 <https://www.ncgenweb.us/conover/ConoverHistory.htm>
- 21 U.S. Census Bureau (2021). 2017-2021 American Community Survey 5-year estimates. [Data set]. <https://data.census.gov>
- 22 Strava. (2023). Strava Global Heatmap. Retrieved from <https://www.strava.com/heatmap>

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Source: TPD

# 03 Public Involvement

# 03 Public Involvement

“Please help make Conover more pedestrian-friendly by putting in sidewalks on most roads ... I would love to walk to places but I simply cannot.”

– Survey Respondent

## COMMUNITY ENGAGEMENT

Community engagement was the foundation of the *Connect Conover* plan development process. Insights from residents, community members, visitors, and local interest groups were gathered through meetings, surveys, community events, and word of mouth. These interactions generated preferences, recommendations, and specific project ideas. **Figure 7 - Community Engagement by the Numbers** illustrates the engagement activities conducted. Detailed notes, community concerns, needs, priorities, and other relevant information from these activities are documented in the Appendix.



## GOALS

The public involvement process was guided by the following goals:

### Ensure Openness and Transparency

- Regularly and openly share information with the Steering Committee and the public.
- Disseminate updates and new findings through multiple platforms to reach a broader audience.

### Prioritize Listening

- Collect input, engage in meaningful dialogue, and document the community’s ideas, concerns, and visions for Conover’s bicycle and pedestrian network.
- Apply community feedback and collectively established goals to shape the Plan’s development.

### Foster Inclusive Participation

- Organize diverse public involvement opportunities to connect with people in various settings and capture their responses.
- Offer both in-person and virtual engagement options.
- Provide both online and paper surveys for access outside of scheduled events.

### Promote Walking and Biking in Conover

- Include educational elements in engagement events.
- Create opportunities for residents to learn about the personal and community benefits of walking and biking.

### Adapt to Uncertainty

- Ensure timely notifications for scheduled events and activities, giving staff and community members ample time to prepare and attend.
- Maintain flexibility in organizing in-person, virtual, or hybrid events.

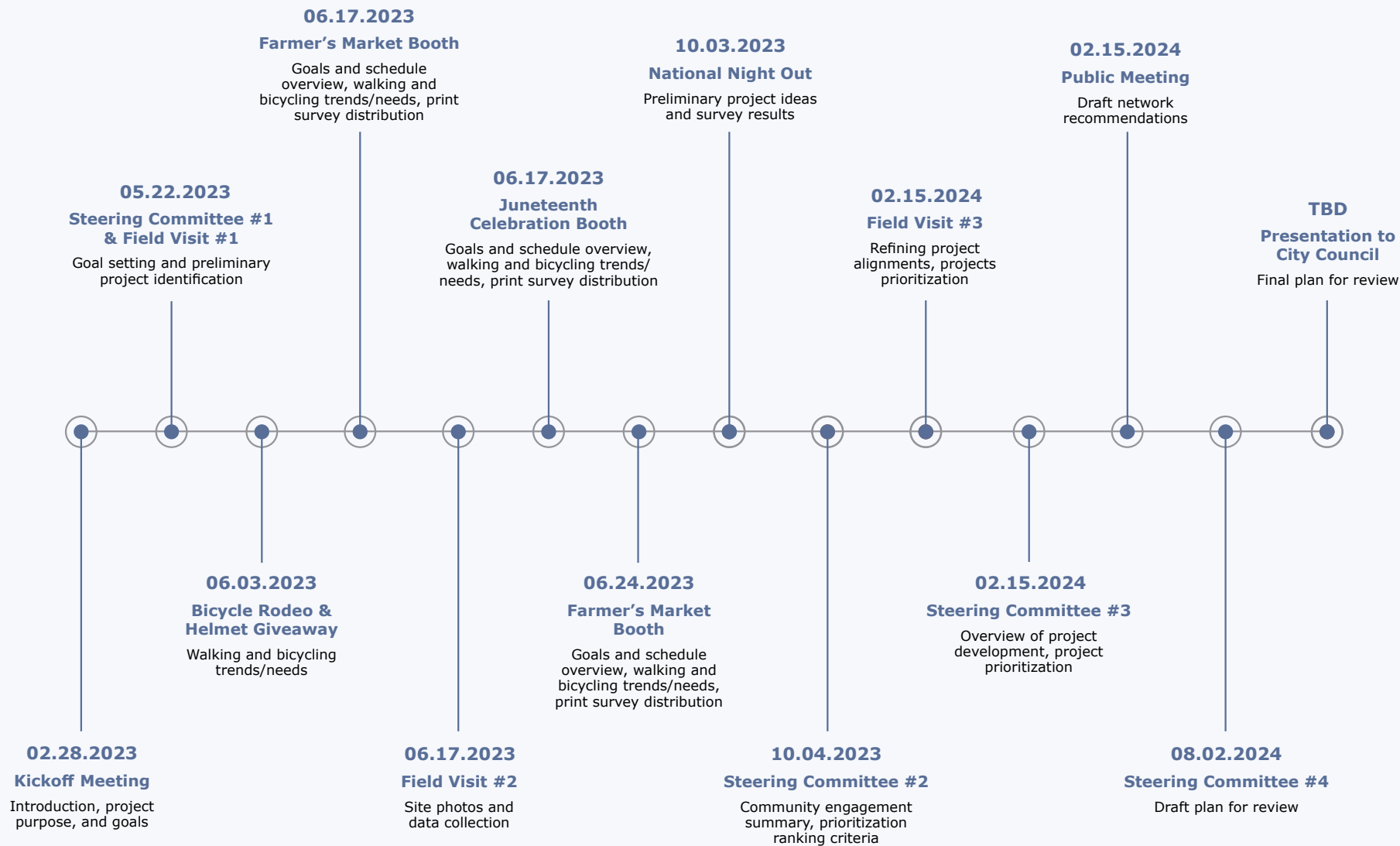
“Would love to see sidewalks/bike paths a priority, especially Rock Barn Road from Thornburg to downtown.”

– Survey Respondent



Image 47. Public Input Responses (Source: TPD)

Figure 8. Meetings & Community Engagement Events



## STEERING COMMITTEE

The project Steering Committee aimed to represent the community on a more focused and targeted scale. The committee included City leadership and staff from the County, NCDOT, local businesses, education, real estate development, economic development, and community organizations. Each member brought the perspectives of their respective organizations to the project. A complete list of members is available in the Acknowledgements, and the meeting minutes and materials reviewed are included in the Appendix.

The Steering Committee met four times during the project timeframe, providing input at key junctures that directly influenced the project recommendations and provided guidance for the recommendations for this plan. This group shaped the Plan's vision and goals, directed public engagement strategies, validated current condition analyses, provided recommendations and feedback on the multimodal network, and reviewed all facets of the Plan. Recordings were provided for members who were unable to attend to stay informed and share comments separately. Members also provided feedback through follow up conversations and emails.



Image 48. Steering Committee Meeting 1 (Source: TPD)  
Steering Committee Meeting #1 was preceded by a preliminary site visit to identify opportunities, understand development patterns, and review new NCDOT roadway projects.

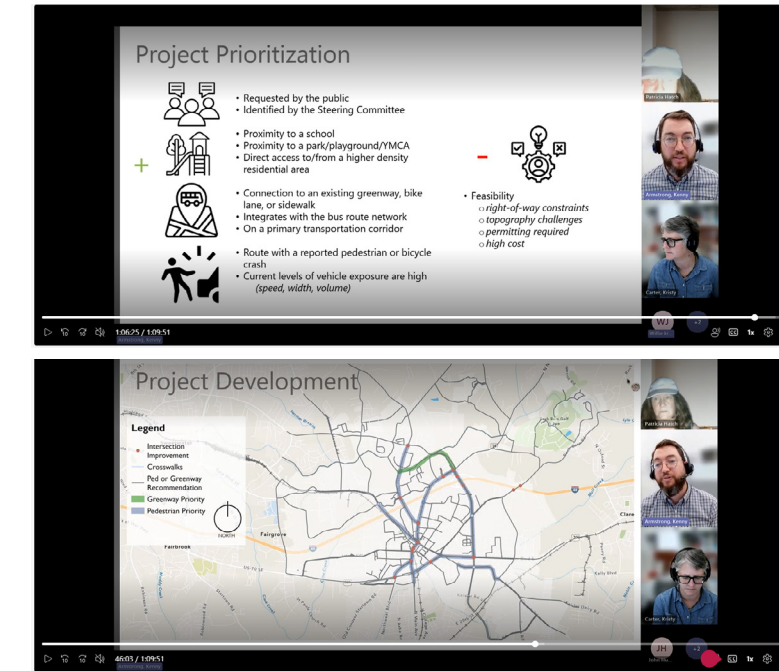


Image 49. Steering Committee Meeting 2 (Source: TPD)  
Steering Committee Meeting #2 focused on a summary of community engagement results and a discussion about project prioritization.

## PUBLIC MEETINGS

In lieu of hosting standalone public meetings during the project schedule, most of the in-person engagement events were booths at existing community gatherings in Conover. During the summer of 2023, the *Connect Conover* team set up stations at two farmer's markets, the Juneteenth celebration, and National Night Out. City staff also promoted the project during a bicycle helmet giveaway and bike rodeo event. The planning team took advantage of these standing events in order to reach more people and hear from a diverse range of ages and backgrounds.

The Team hosted one dedicated *Connect Conover* public meeting in February 2024. This was the only standalone meeting – a drop-in event for the public to learn about draft project recommendations.



“Would love to see Conover become a more walkable city!”

- Survey Respondent



Image 50. Community Engagement (National Night Out)  
(Source: TPD)

The *Connect Conover* team was able to share information at this community event highlighting safety, talking with people in person and promoting the online survey.

## COMMUNITY SURVEYS

During the various summertime community events, City staff and the Project Team invited residents and visitors to complete a survey about the current walking and bicycling conditions in Conover. This survey was also promoted on social media, via printed flyers, and with a large poster board with a QR code at City Hall. Printed paper copies were available for those who did not want to or were unable to access the survey online. More than 400 people took the survey.

Once the draft project recommendations were ready to share, a second survey was developed to showcase the full network and gather feedback on prioritization and sentiment about each recommendation. The complete survey results are available in the Appendix, and the following page highlights some of the gathered community sentiments.

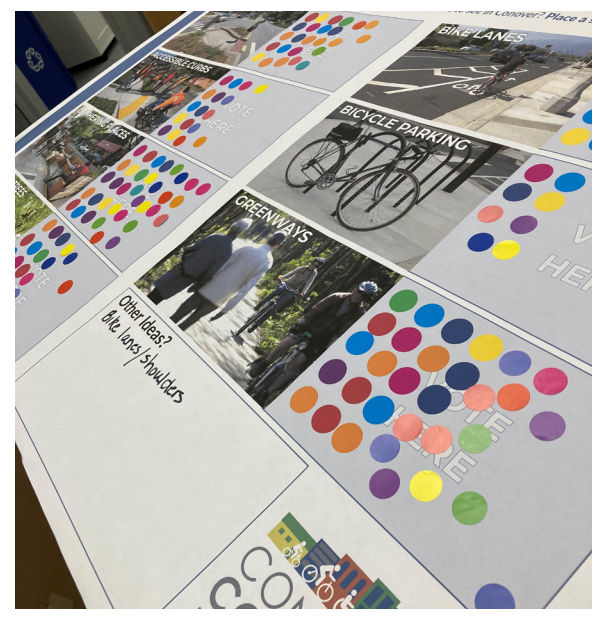
Image 51. Community Engagement (Juneteenth)  
(top) (Source: TPD)

The Project Team prioritized attendance at existing community events rather than standalone project meetings. This approach captures a wider range of perspectives in a more relaxed and interactive environment.

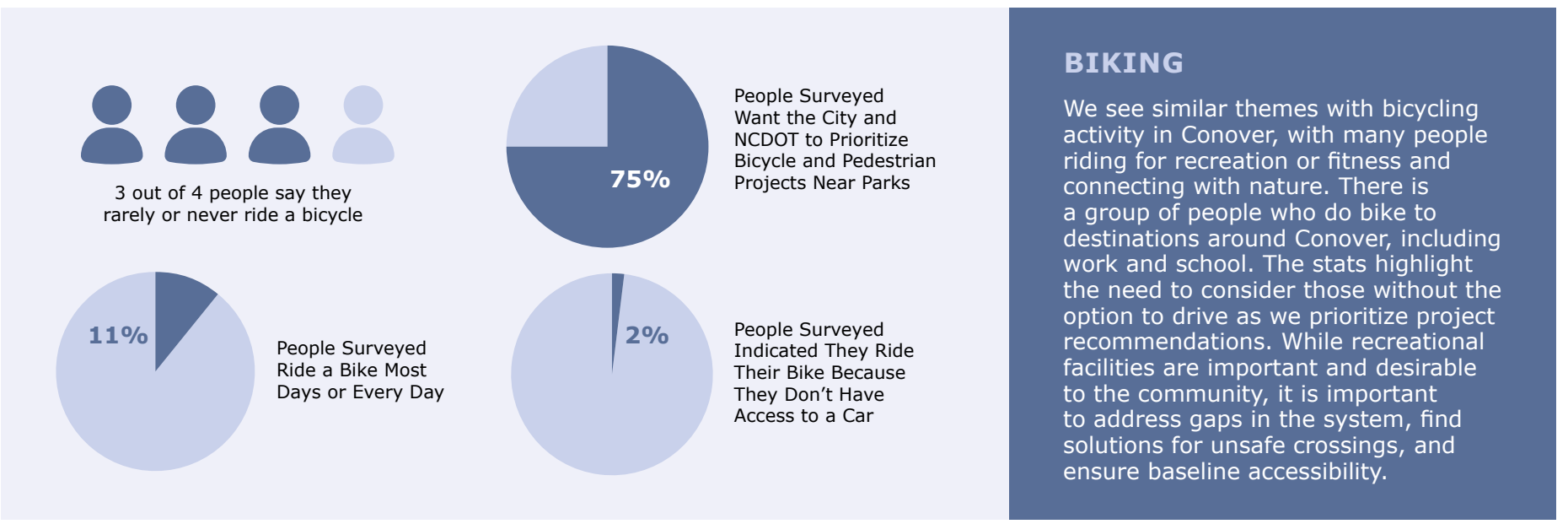
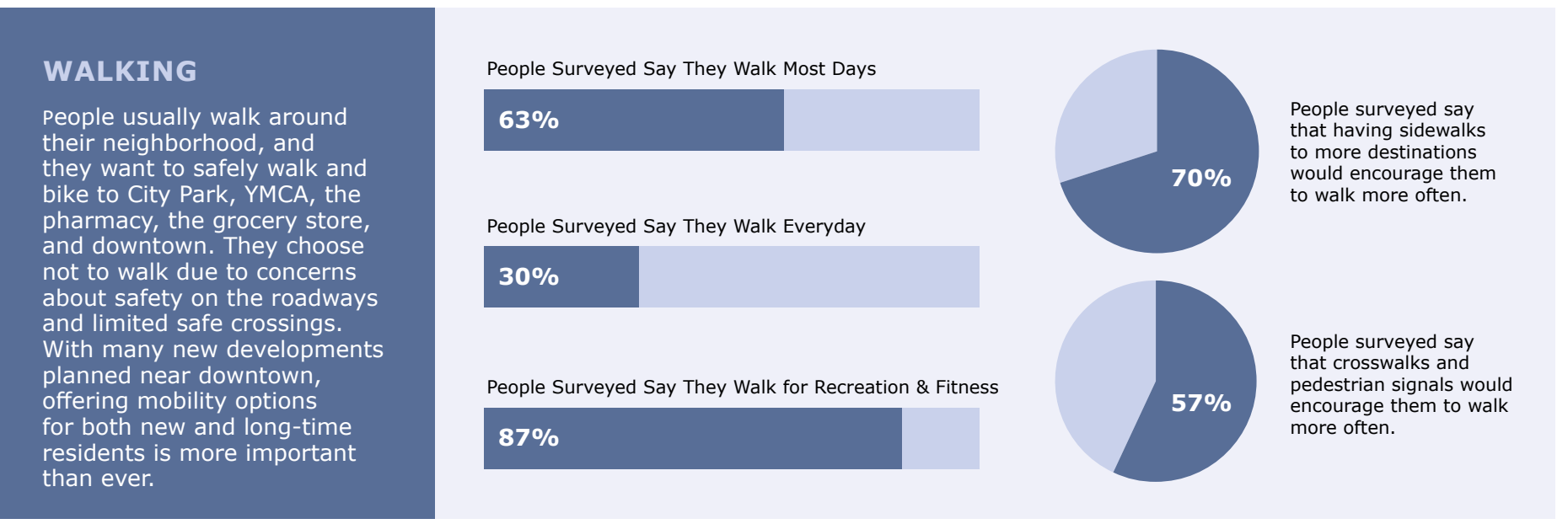
Image 52. Survey Promotion (Social Media)  
(bottom) (Source: TPD)

The online survey was heavily promoted via City of Conover social media channels.

## KEY TAKEAWAYS / People are Excited



## KEY TAKEAWAYS / Many People Walk & Bike



## KEY TAKEAWAYS / Transit & Driving

### TRANSIT

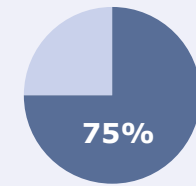
Transit is a different picture. For those without access to a car, the bus system is their way of reaching destinations in nearby municipalities and making those longer distance trips. The list of destinations for bus riders is diverse and the reasons for riding the bus are varied. While bus ridership is low, those who do ride the bus depend on it for commuting and shopping/errands and they need accessible sidewalks at bus stops. It is important to think about those riders who rely on the bus for their daily transportation needs and identify ways to improve access, make sure that bus stops are well integrated with the surrounding sidewalk network, and help create a bicycle and pedestrian system that supports bus ridership.

People Surveyed Say They Never Ride the Bus

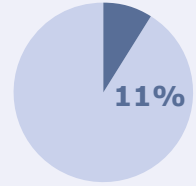
96%

People Surveyed Say They Ride the Bus Every Day

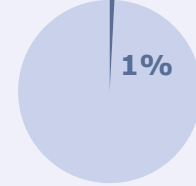
2%



People Surveyed that Drive to School Most Days  
*(People who have School-aged Children in the Household)*



People Surveyed take the School Bus Most Days  
*(People who have School-aged Children in the Household)*



People Surveyed Walk or Bike to School Most Days  
*(People who have School-aged Children in the Household)*

### DRIVING

Most people drive to work and to school. Almost everyone who said they worked outside the home commuted by car. Of the people who have school-aged children in the household, 75% drive to school most days. This reflects previous comments about connecting Lyle Creek Greenway to the schools and having safer crossings in school zones to help give people the option of getting to school in different ways.

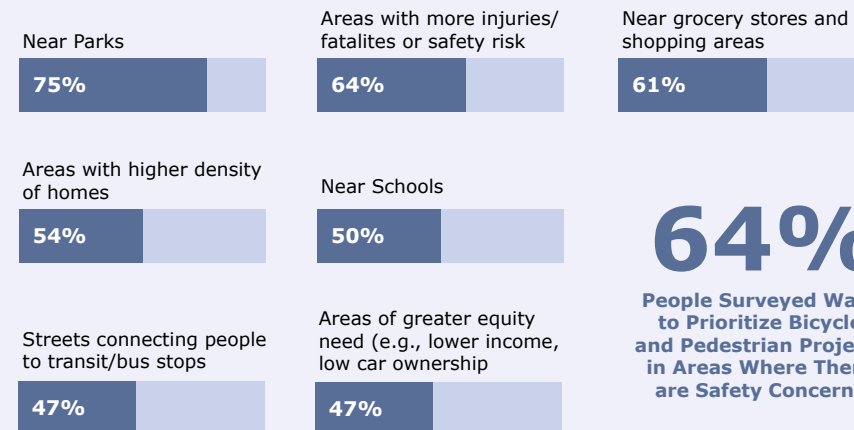
## KEY TAKEAWAYS / Safety and Connectivity Issues

Looking through the hundreds of survey responses, the Five Points intersection came up consistently as a safety and connectivity issue. People felt that the lack of crossings was a barrier to get downtown and a safety concern. Other intersections came up that either lack infrastructure or are still problematic even with existing sidewalks and crosswalks. Some streets were highlighted as in need of bicycle and pedestrian infrastructure, including Rock Barn Road and County Home Road, as well as some other neighborhood connectors like Emmanuel Church Road and 3rd Street SE. It can be helpful to see these comments because it immediately points us to consistent problem areas and guides our prioritization process.

### Which intersections or roadways cause the most concern for people walking or bicycling?

- Five Points
- Thornburg/Rock Barn
- Rock Barn/1<sup>st</sup> Street (at CVS)
- Emmanuel Church Road
- County Home Road

### Where should Conover prioritize projects for people walking and bicycling?



There were a lot of responses that talked about the need for lighting on trails and sidewalks – a personal safety concern and a desire to walk in the early morning or evening. Safety is a recurring theme – visibility on the Lyle Creek Greenway, separation from vehicular traffic, and safe crossings. As one respondent says “If you’re comfortable doing something you tend to do more of it.”

Lack of infrastructure is the fundamental barrier to walking and bicycling. Note that only a quarter of respondents said that destinations are too far to walk; this suggests that people have nearby destinations in mind, but simply can’t reach them safely or comfortably on foot or by bike. People want sidewalks and bike lanes that have enough buffer or separation from traffic that they feel safe and comfortable using them.



Source: TPD

# 04 Proposed Network

# 04 Proposed Network

**“Safe and convenient bike lanes that allowed safety while riding would change so much about how I get around.”**

– Survey Respondent

## PROJECT PRIORITIZATION & RECOMMENDATIONS

### Overview

This plan includes projects, programs, and policies that support and expand opportunities for walking, bicycling, and transit in Conover. This chapter focuses on project recommendations through the framework of a multimodal network. The network emphasizes streets and trails where future investment will have the greatest impact on achieving the City’s goals. While comprehensive, the network intentionally does not include every street, allowing Conover to strategically advance its multimodal vision by focusing on impactful standalone projects. Additionally, *Connect Conover* provides concepts and cost estimates for nine catalyst projects, including two “early action” projects, which

supports the City’s efforts to move them through the process of implementation.

### Developing a Multimodal Network

The proposed multimodal network is designed to provide for safe, comfortable, and convenient transportation options for people in Conover, regardless of age or ability. The network map builds on existing infrastructure with new proposed facilities for walking and bicycling, along with recommendations to support public transit.

Network recommendations were developed by layering data from public engagement and the existing conditions analysis with recommendations from previous planning efforts. These overlapping layers of analysis formed the foundation of the network. These were then prioritized based on important



## WHY A NETWORK?

*The network described in this chapter aims to enhance Conover’s current infrastructure by establishing key connections, addressing gaps, and creating a cohesive bike and pedestrian system. Adopting a network or system approach, as opposed to implementing isolated projects, is more effective for improving mobility and accessibility, and represents a more strategic investment for the city. This proposed network will better connect Conover residents and visitors to the places they need and want to go.*

*A successful bicycle and pedestrian network:*

- *Forms a seamless, connected system for walking and biking.*
- *Ensures people can safely and comfortably reach their destinations.*
- *Selects streets best suited for walking and biking, rather than including every street.*
- *Builds on existing and proposed bicycle infrastructure.*

criteria as outlined later in this chapter. After an initial draft was developed, refinements were made based on feedback from the Steering Committee and the second public open house.

The Planning Team followed these steps to identify and prioritize projects for pedestrian connectivity throughout the City of Conover:

### Step 1: Initial Project Identification and Facility Selection

To identify needed sidewalk and bicycling connections and crossings, the *Connect Conover* team gathered available information about existing conditions (e.g., current sidewalk, bike lane, and greenway locations), planned projects from previous planning efforts, and key destinations. The team then conducted an inventory of the multimodal network throughout the city, filling in gaps with proposed projects.

### Step 2: Public Project Additions

As discussed in Chapter 2, community engagement was central throughout the *Connect Conover* planning process. The team reviewed needed pedestrian and bicycling connections and existing conditions with the project steering committee. The project list was then expanded to include important connections gathered during community outreach efforts.

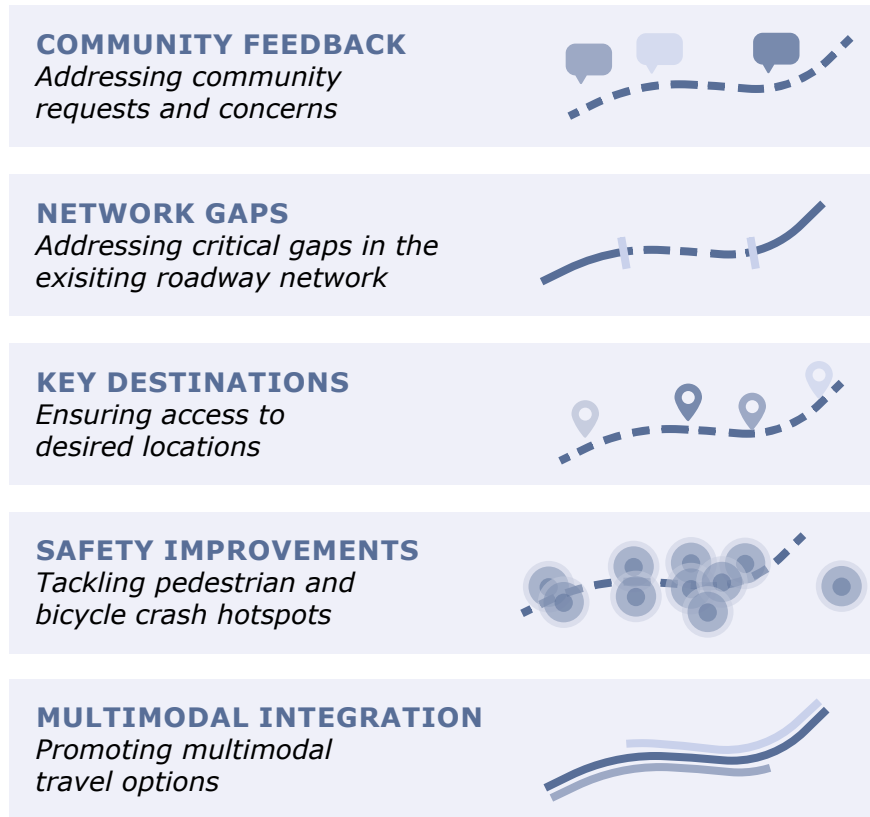
### Step 3: Project Categories and Prioritization

The final list of needed pedestrian and bicyclist connections (projects) was categorized based on:

1. Whether it is part of the bicycle or pedestrian network.
2. The type of facility that is recommended.
3. Roadway maintenance/ownership (e.g. NCDOT or the City of Conover).

This categorization helps identify the responsible parties for implementation, determine funding opportunities, and identify the types of approvals and permits needed.

Figure 9. Multimodal Network Development Layers



## Facility Selection

### Elements of the Network

Conover’s multimodal network envisions connected streets and trails that are safe and comfortable for people of all ages and abilities. Each element of the network serves a specific purpose and fits a particular context, but all components work together to support a cohesive system. The network’s true value lies in the connected sum of its parts. **Table 4 - Elements of**

**the Network** describes general facility types considered for Conover’s network connections: sidewalks, multiuse sidepaths, greenways, bike lanes, Downtown Bikeways, and transit supportive facilities. For more information about designing these facilities, see the list of design resources in the Appendix.

Table 4. Elements of the Network

	<p><b>SIDEWALK</b></p> <p><i>A designated space along the side of a road for pedestrians typically includes a 5-foot concrete sidewalk with a 3-5-foot buffer between the sidewalk and the nearest travel lane.</i></p> <p>Source: TPD</p>		<p><b>BIKE LANES</b></p> <p><i>An on-street travel lane designated for cyclists, typically striped to a minimum width of 5 feet. These bike lanes are exclusively for bicycle use and are identified with signage, striping, and other pavement markings.</i></p> <p>Source: City of Corvallis, OR</p>
	<p><b>GREENWAY</b></p> <p><i>A corridor of land, often following natural features like rivers or old railroad lines, used for recreation or alternative transportation purposes.</i></p> <p>Source: TPD</p>		<p><b>DOWNTOWN BIKEWAYS</b></p> <p><i>Many streets can become great spaces for walking and bicycling, even without dedicated sidewalks or bike lanes. By intentionally slowing down vehicles and adding shared lane markings and signage, an environment can be created where all users comfortably share the road. Sidewalks are important in downtown areas but may not be necessary in lower-volume residential areas.</i></p> <p>Source: City of Bend, OR</p>
	<p><b>MULTIUSE SIDEPATH</b></p> <p><i>A two-way shared-use path, at least 10 feet wide with a 3-5-foot buffer strip between the path and the nearest travel lane, located immediately adjacent and parallel to a roadway.</i></p> <p>Source: Montgomery County MD DOT</p>		<p><b>TRANSIT RECOMMENDATIONS</b></p> <p><i>Transit recommendations in this plan aim to support and enhance the regional bus system by improving connectivity, with sidewalk networks around stops and upgrading amenities and accessibility features. For more transit recommendations, refer to the Action Plan in Chapter 5.</i></p> <p>Source: Warwick Township</p>

### Facility Selection Considerations

Having identified the desired areas for walking and biking in Conover, the next step in the project development process is to assign appropriate facilities to streets within the system. This involves using principles of Complete Street design and NCDOT's Complete Streets Project Evaluation Methodology (PEM), incorporating community engagement feedback, and consulting with stakeholders. This comprehensive approach ensures that the selected facilities effectively serve the community's needs and integrate seamlessly into the existing urban landscape.

Different types of facilities cater to diverse users and surrounding land uses, with factors like space, budget, and existing infrastructure influencing where bicycle and pedestrian projects are recommended. A comprehensive bike and pedestrian network comprises sidewalks, multiuse paths, greenways, and bike lanes, each serving distinct purposes and user groups. These elements must collaborate to establish a seamless and interconnected network. Greenways and multiuse paths are particularly effective as they accommodate various users, including walkers, joggers, and cyclists, thereby enhancing accessibility and connectivity across different areas. Integration of these facilities in a complementary manner ensures the development of a cohesive and efficient network.

### On-Road Bicycle Network Recommendations

Conover has an existing on-road bicycle network that includes standard bicycle lanes and shared streets. In addition, several projects are funded and are in the design phase of implementation. The greenway and multi-use sidepath recommendations in this plan will expand the network beyond the urban core; however, many of the remaining downtown bicycle connection needs are along constrained streets with insufficient space for separated bicycle facilities. Widening streets to provide bicycle facilities would have extensive impacts on adjacent properties.

So, while the urban core in Conover has a transportation and land use base that is suitable for expanding urban bicycle travel, the expansion of the bicycle network with separated bicycle

facilities is challenging. As such, the proposed bicycle network expansion recommendations in this plan are focused on building out a shared street network in the urban core and is referred to as the Downtown Bikeway Network. The bikeway expansion streets were selected based on criteria of having lower traffic volumes and speeds, or the potential to create this condition by incorporate traffic calming.

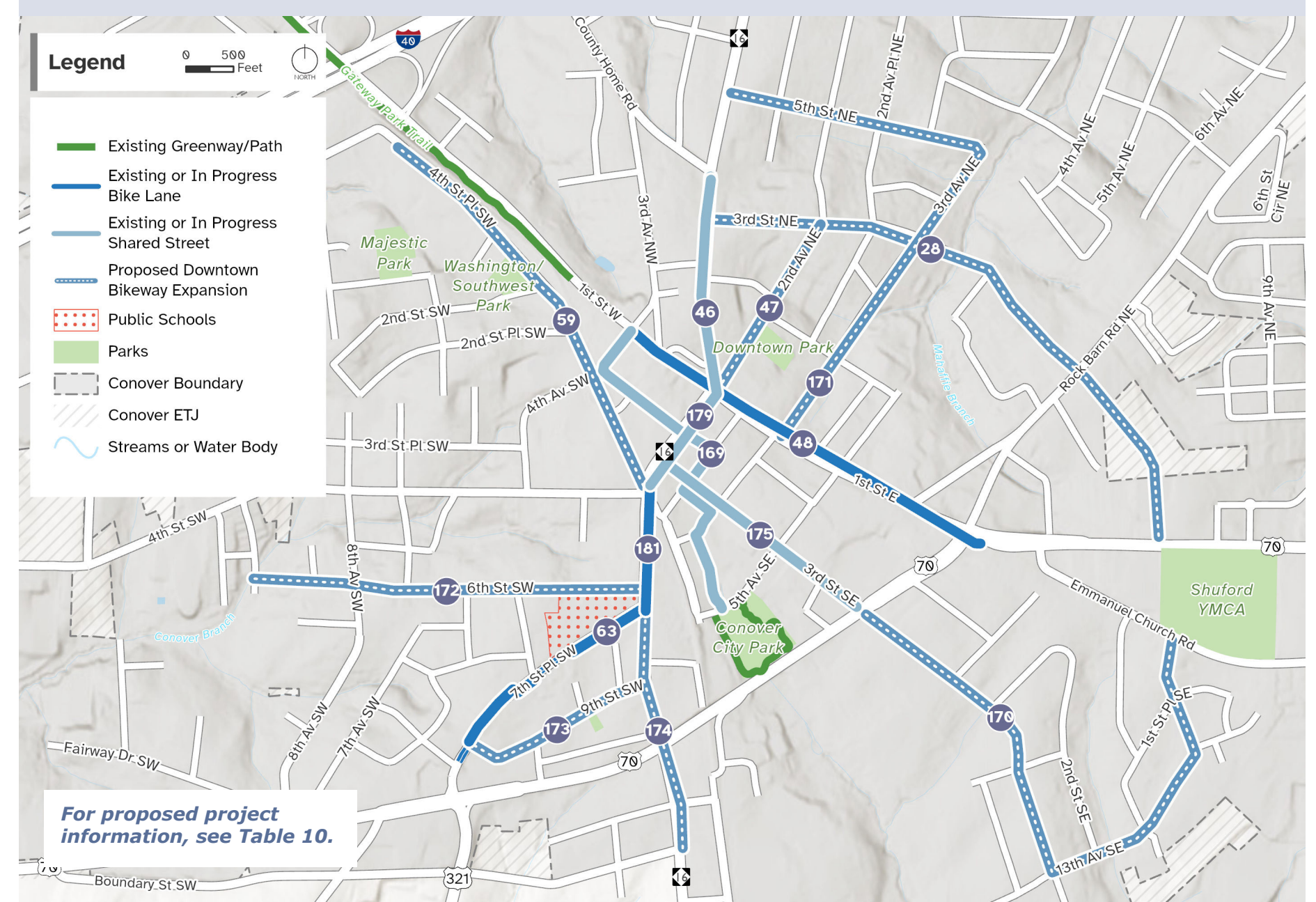
**Map 10- Proposed Downtown Bikeways** illustrates the potential to expand bicycle connectivity through a Downtown Bikeway network. This network would consist of the following:

- Existing or "in progress" bicycle lanes
- Existing or "in progress" shared bicycle facilities
- Proposed bikeway expansion locations

The goal of this recommendation is to identify primary roadways to build out the bicycle network across the City to establish an easily recognizable and user-friendly network while maintaining local access to homes and businesses and provide emergency and delivery access.

The following pages provide more information that may be helpful for initiating further study of a Downtown Bikeway Network.

**Map 10. Proposed Downtown Bikeway Expansion**



## IMPLEMENTATION OF BIKEWAYS

Many low-volume residential streets in the United States operate informally as shared spaces due to their limited access and low traffic volumes. While it might not be feasible to install bike lanes along every street in Conover, there are strategies focused on street design that naturally encourage slower speeds and safer behaviors. Through the project development process, *Connect Conover* has highlighted several key roadways that are important gaps in the multimodal network that could be good candidates for the recommended Downtown Bikeways program.

Bikeways are not a new concept and share many of the same implementation elements of Downtown Bikeways/Greenways, Shared Streets, and Slow Streets. The proposed bikeways will require an evaluation and traffic engineering study to determine appropriate treatments to transform each street to make it more bicycle and pedestrian friendly. Treatments may include general traffic safety countermeasures, traffic calming, bicycle signage and pavement markings, wayfinding signs and crossing/intersection improvements.

The goal of a "Downtown Bikeway" designation is to prioritize traffic calming and multimodal applications to create safer streets for walking and biking and limit cut-through traffic in order to enhance the quality of life in these neighborhoods. These streets should support existing and planned opportunities for walking, bicycling, and access to transit.

When a neighborhood is part of the program, the speed limit should be reduced to 20mph if it is not already. Stop signs are not traffic-calming measures but may be considered as part of the Downtown Bikeways program if an intersection meets engineering standards.



Figure 10. Pedestrian Collision Speed & Survival Percentage (Source: TPD)

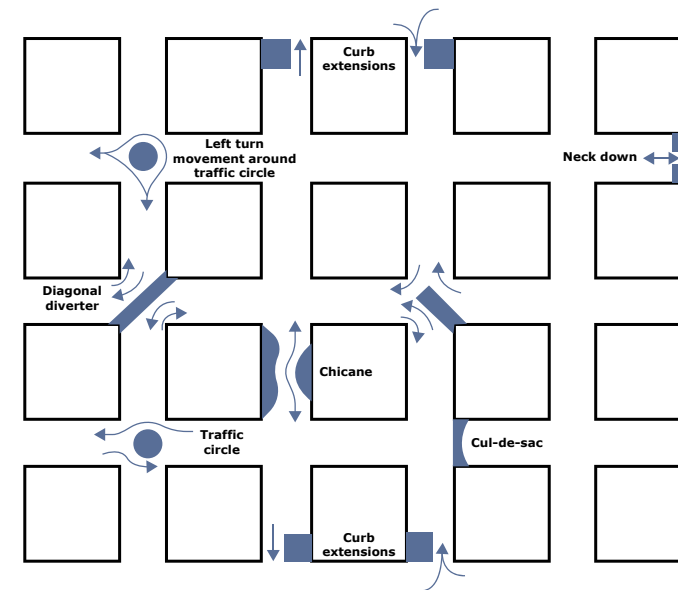


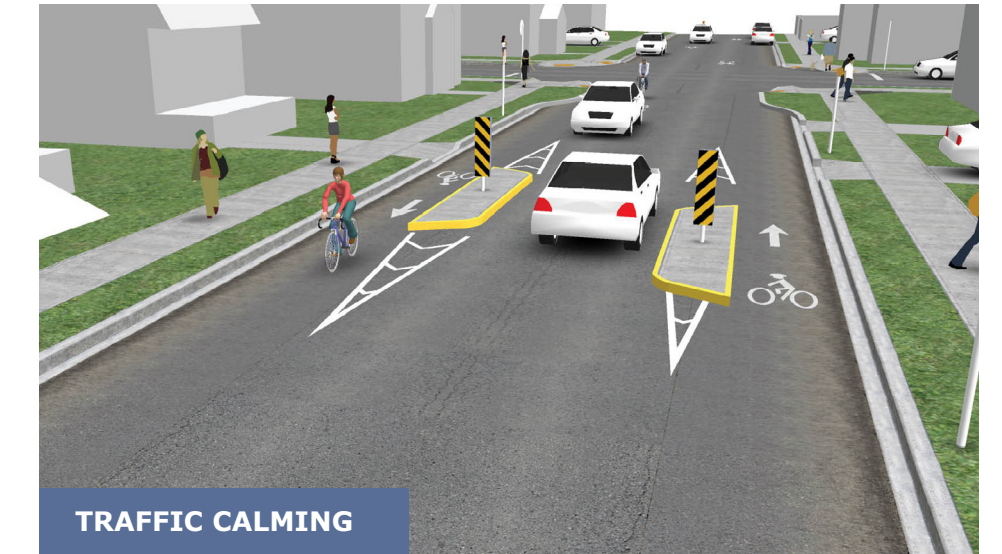
Figure 11. Possible Traffic Calming Measures (Source: TPD)

There are various methods to slow vehicle traffic without hindering bicyclists or EMS vehicles. Each street and intersection will have unique priorities and suitable measures.

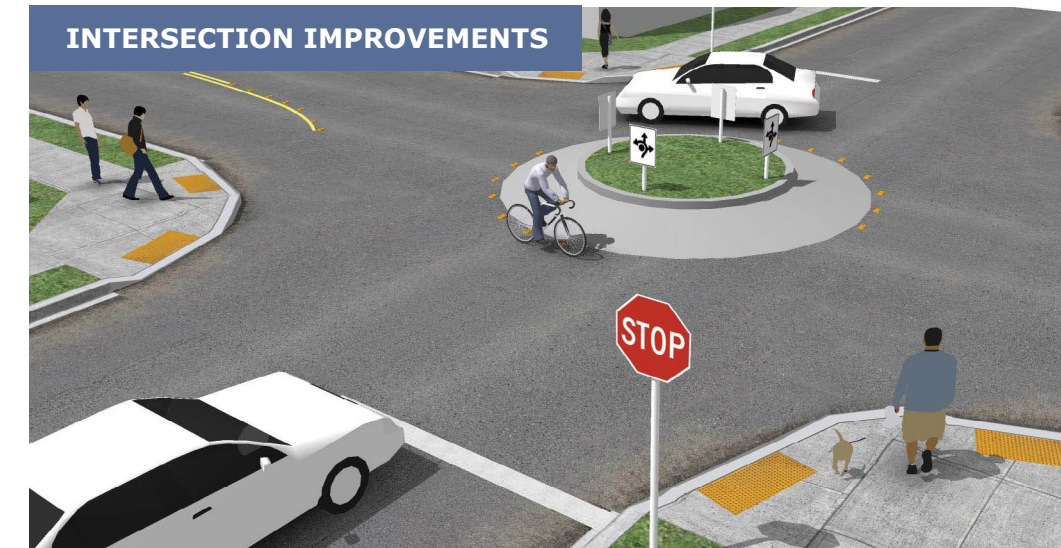
Image 53. Downtown Bikeway Design Solutions



Source: NACTO



Source: NACTO



Source: NACTO



Source: Seattle DOT

## DOWNTOWN BIKEWAYS (CONTINUED)

Downtown Bikeways should not impact the main thoroughfares essential for drivers navigating the city. Instead, they focus on existing low-traffic streets, creating alternate routes that allow pedestrians and cyclists to avoid the major roadways that often pose safety concerns and are uncomfortable. The ultimate goal of this program is to connect Downtown Bikeways across the city to establish a seamless, easily recognizable, and user-friendly network of miles of safe streets. They maintain local access to homes and businesses and provide emergency and delivery access.

In any community facing potential changes, disagreement is inevitable. For Conover's Downtown Bikeways to work well, City staff should proactively engage with people to find common ground and pilot various potential solutions. If a consensus emerges against implementing a Downtown Bikeway, the City can explore alternate routes. This program should be designed to support people who live in these neighborhoods and enable community-led pilot projects. Further study is essential.

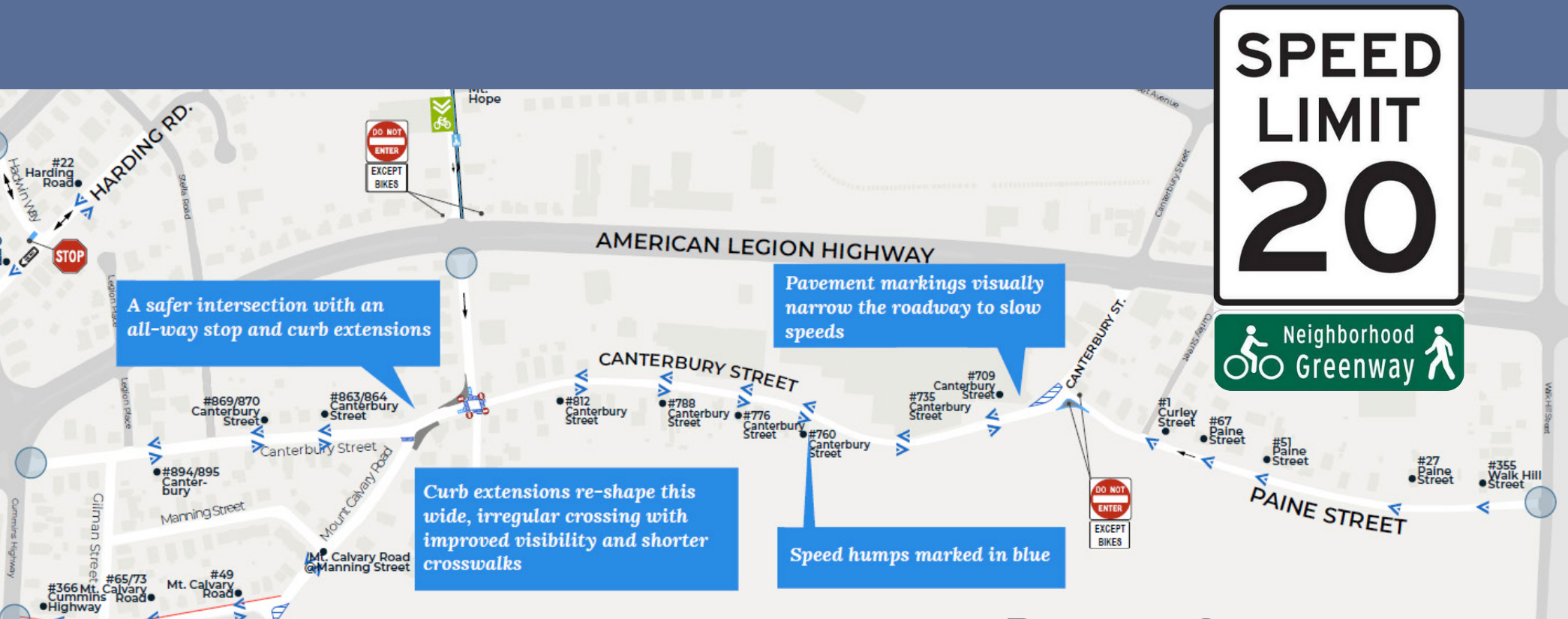


Image 54. Downtown Bikeways Example (Source: City of Boston MA)

### Key Components of a Downtown Bikeway

- A street with low traffic **volumes** and **speeds** that is comfortable for people walking and biking.
- A key part of a **low-stress** network of bicycle routes.
- **Signage and pavement markings** are used to increase awareness that **the road is shared** by bicyclists and drivers.

### Benefits

- Increased road **safety for all users**.
- Expanded bike network for people of **all ages and abilities**.
- May encourage more people to bike on the street rather than a sidewalk.
- Provides **alternatives** to busy arterials to connect to key destinations.

### Pilot Projects

Constructing bikeways with low-cost temporary measures, such as flexible delineators, paint and temporary curbing could serve as an interim measure to determine neighborhood sentiment before a permanent investment is made.

City staff may choose to proactively engage with the community to identify locations to implement pilot projects to help build consensus on routes and treatments. This will also allow for short term observation of outcomes and design/route modifications before permanent installations are made. Each street should be studied in greater depth to determine feasibility of initiating changes and what those changes might look like.



Image 55. Downtown Bikeways Examples (Source: City of Philadelphia)

## Project Categories and Prioritization

The project categories that were evaluated and scored for prioritization are as follows:

### Pedestrian Network

- **Off-Road Greenways** (Multiuse paths away from roadway network) - Map 11 and Table 5
- **NCDOT Corridors** (unknown facility type – needs Corridor Study to assess pedestrian facility type e.g. sidewalk or sidepath) - Map 12 and Table 6
- **NCDOT Multiuse Sidepaths** (greenways paralleling roadways) - Map 13 and Table 7
- **NCDOT Sidewalks** - Map 14 and Table 8
- **City Sidewalks** - Map 15, 16 and Table 9
- **Full Sidewalk Network** (including greenways, multiuse sidepaths, and sidewalks) - Map 18

### Bicycle Network

- **Off-Road Greenways** (multiuse paths away from roadway network) - Map 11 and Table 5
- **NCDOT Corridors** (unknown facility type – needs Corridor Study to assess bicycle facility type e.g. bicycle lanes or sidepath) - Map 12 and Table 6
- **NCDOT Multiuse Sidepaths** (greenways paralleling roadways) - Map 13 and Table 7
- **City and NCDOT Bicycle Lanes and Shared Streets** - Map 17 and Table 10
- **City and NCDOT Downtown Bikeways** (designated for bicycle traffic in the urban core) - Map 17 and Table 10
- **Full Bicycle Network** (including greenways, multiuse sidepaths, bike lanes, and Downtown Bikeways) - Map 19



## WHY CATEGORIZE BASED ON ROADWAY OWNERSHIP AND MAINTENANCE?

This categorization helps identify the responsible parties for implementation, determine funding opportunities, and identify the types of approvals and permits needed.

Conover's primary roadways, managed by NCDOT, are typically wider with higher traffic volumes and speeds compared to the city's locally maintained roads. Consequently, they often have greater safety concerns and require controlled (signalized) crossings. NCDOT must review and approve all roadway modifications on these roads through the NCDOT encroachment agreement process. When state or federal funding is involved, the permitting and design process becomes more time-consuming and costly than for smaller City streets, but these roads often have more funding opportunities.

While City streets generally have lower traffic volumes and fewer safety concerns than NCDOT roads, they are still critical connections within the transportation network, especially to schools and other community resources. These projects can often proceed with a less restrictive permitting process, resulting in lower implementation costs. Separating locally maintained streets provides a prioritized list that can progress independently of state and federal funds and permitting. Some local road projects may still qualify for state and federal funding, but many simpler projects can be completed with local resources on an accelerated schedule.

## Prioritization Methodology

Much of the community's feedback during this project took the form of specific project ideas or recommendations, such as the desire for a sidewalk connection on a particular street. In a comprehensive plan like *Connect Conover*, which addresses a wide range of pedestrian and bicycle needs, this feedback resulted in an extensive list of potential projects.

While all suggested projects are important, the City lacks the resources to implement the entire vision immediately. Therefore, prioritizing projects is essential to focus limited resources on those that best achieve the goals and vision of this plan.

A prioritization methodology was developed in order to identify the top projects based on a set of criteria. The higher the score, the higher the project's priority. The criteria and scoring system were developed based on project goals and the NCDOT Strategic Prioritization methodology for bicycle and pedestrian projects. Full scoring details are provided in the Appendix.

On the following pages, the projects that are featured in more detail as cutsheets later in this chapter are highlighted in this manner:



Some lower-ranked projects were prioritized due to stronger alignment with strategic goals, immediate funding availability, greater community impact, fewer environmental hurdles, and synergy with ongoing initiatives.

Figure 12. Project Ranking Criteria



### SAFETY (+8 POINTS)

*This factor assesses perceived comfort and stress by considering how long people walking or bicycling are exposed to vehicles, as well as adjacent traffic speeds and volumes and number of nearby crashes and their severity.*



### EQUITY (+5 POINTS)

*This factor incorporates NCDOT's Transportation Disadvantage Index (TDI) score, which assesses how the project might address the needs of underserved and disadvantaged communities.*



### CONNECTIVITY (+4 POINTS)

*This factor evaluates whether the project serves as a critical connection for Conover, improving accessibility for the entire community, or if it primarily benefits a limited number of homes or businesses.*



### PUBLIC SUPPORT (+3 POINTS)

*This score reflects feedback from the Steering Committee and community input, capturing the level of public support and concern for the project.*

Map 11. Proposed Off-Road Greenways

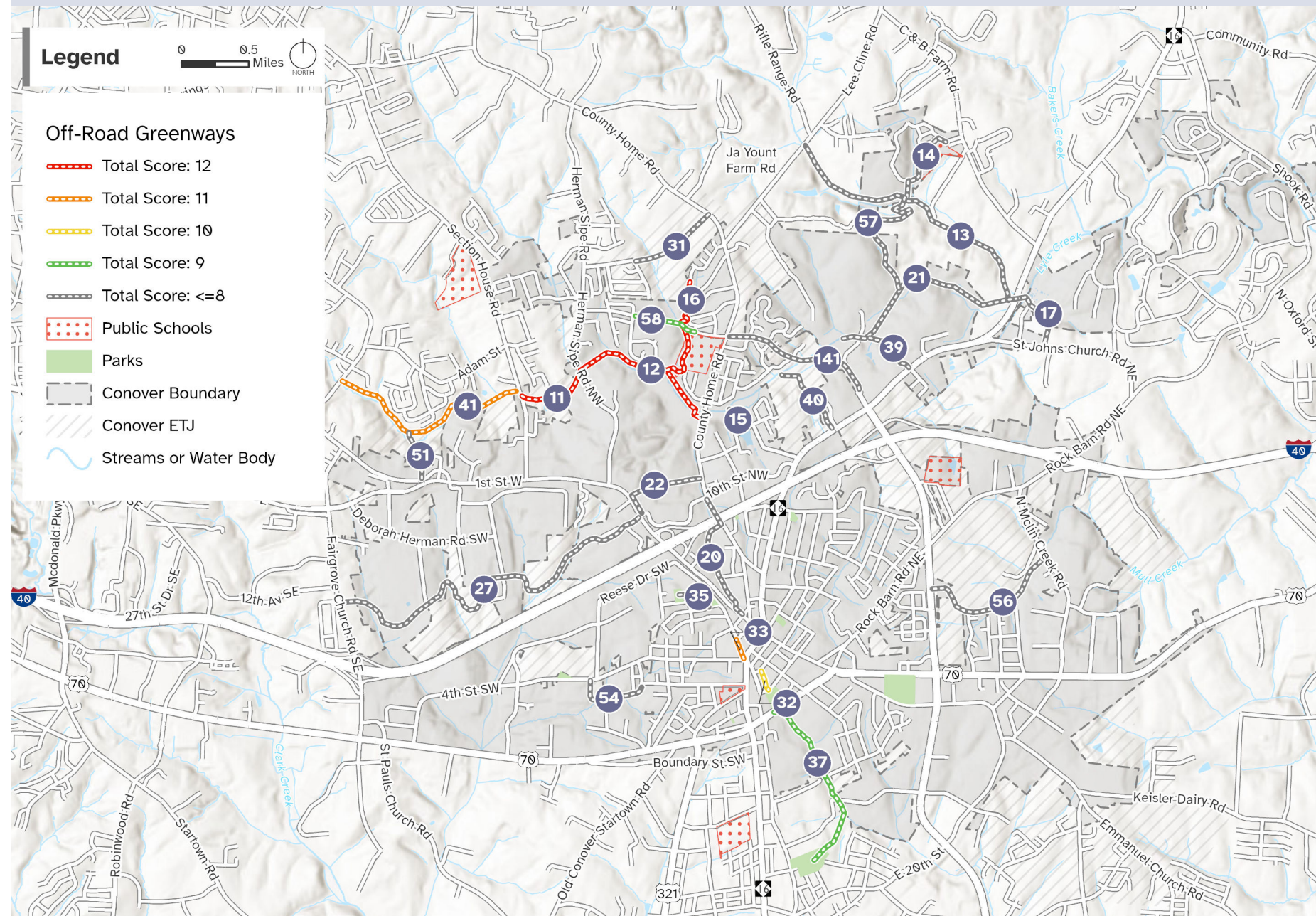


Table 5. Proposed Off-Road Greenways

ID	ROADWAY/ PROJECT NAME	FACILITY TYPE	FROM	TO	TOTAL SCORE
11	Lyle Creek	Greenway	Section House Rd	Herman Sipe Rd	12
12	Lyle Creek	Greenway	Herman Sipe Rd	County Home Rd	12
16	Along creek	Greenway	Lyle Creek (proposed greenway)	Coventry Pl NW	12
33	Railroad ROW	Greenway	3rd Ave SW	4th St SW	11
41	Greenway (along section of Lyle Creek)	Greenway	Spencer Rd NE	Section House Rd	11
32	Innovation Alley	Greenway	5th Ave SE	3rd Ave SE	10
37	Along McLin Creek	Greenway	Conover Blvd E	E 22nd Street	9
58	Northern Dr NW	Greenway	Existing Northern Dr NW	Existing Northern Dr NW	9
27	Greenway (partially following Cline Creek)	Greenway	Fairgrove Church Rd	1st St W (at 10th St NW)	8
51	Greenway (behind Sigmon Dr)	Greenway	Old US 70	Lyle Creek (proposed greenway)	8
56	Mull Creek	Greenway	Thornburg Dr NE	McLin Creek Rd	8
141	Northern Dr NW	Greenway	County Home Rd (roundabout)	Roundabout at Wal-mart	8
13	Along creek	Greenway	Lee Cline Rd	NC 16	7
14	Village Blvd NW	Greenway	Edgewater Dr NW	Lyle Creek Greenway (proposed)	7
15	3rd Ave Dr NW	Greenway	Dead end	Lyle Creek Greenway (existing)	7
31	Landsdowne Dr	Greenway	Sedgefield Dr	County Home Rd	7
39	Lyle Creek	Greenway	Northern Dr NW	NC 16	7
40	Zelkoa Ct NW	Greenway	1st Ave N/NC 16	Lyle Creek Greenway (existing)	7

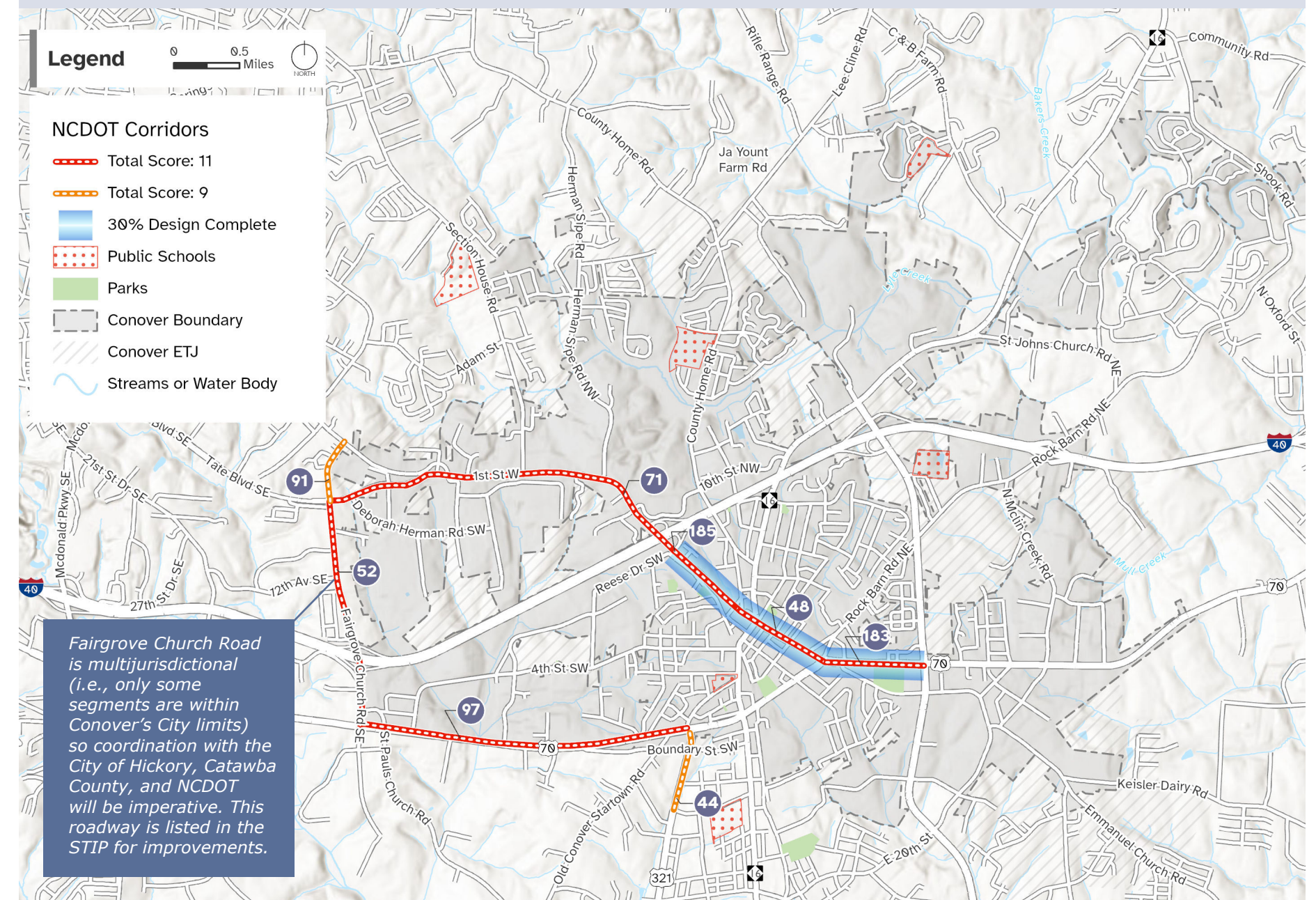
Table 5. Proposed Off-Road Greenways (Cont'd)

ID	ROADWAY/ PROJECT NAME	FACILITY TYPE	FROM	TO	TOTAL SCORE
57	Cline Village Connector	Greenway	Future Lyle Creek Greenway	Cline Village	<b>7</b>
21	Lyle Creek Connector	Greenway	NC 16	Lyle Creek Greenway (existing)	<b>6</b>
20	Along creek	Greenway	1st St W/4th Ave NW	10th St NW (at County Home Rd)	<b>6</b>
22	1st St W/10th St NW	Greenway	1st St W/10th St NW	Lyle Creek Greenway at County Home Rd	<b>5</b>
35	Behind 2nd Street Dr SW	Greenway	Majestic Park	Washington/Southwest Park	<b>5</b>
17	Behind Hillview Dr NE	Greenway	NC 16	St Johns Church Rd NE	<b>4</b>
54	Along creek	Greenway	4th St SW	Eastway Ln SW	<b>4</b>

Table 6. Proposed Corridor Studies (NCDOT)

ID	ROADWAY/ PROJECT NAME	FACILITY TYPE	FROM	TO	TOTAL SCORE
185	1st St E & W	Corridor Study	1-40 EB on-ramp	4th Ave SW	<b>11</b>
48	1st St E & W	Corridor Study	4th Ave SW	Rock Barn Road	<b>11</b>
183	1st St E	Corridor Study	Rock Barn Road	Thornburg Drive	<b>11</b>
52	Fairgrove Church Road	Corridor Study	Tate Blvd/1st St W	Conover Blvd W/US 70 SE	<b>11</b>
71	1st St W	Corridor Study	I-40EB on-ramp	Fairgrove Church Rd	<b>11</b>
97	Conover Blvd W	Corridor Study	Fairgrove Church Road	7th St Pl SW	<b>11</b>
44	Northwest Blvd	Corridor Study	Conover Blvd W	W 26th St	<b>9</b>
91	Fairgrove Church Road	Corridor Study	Highland Ave NE (US 70A W)	Tate Blvd/1st St W	<b>9</b>

Map 12. Proposed Corridor Studies (NCDOT)



Map 13. Proposed Multiuse Sidepaths (NCDOT)

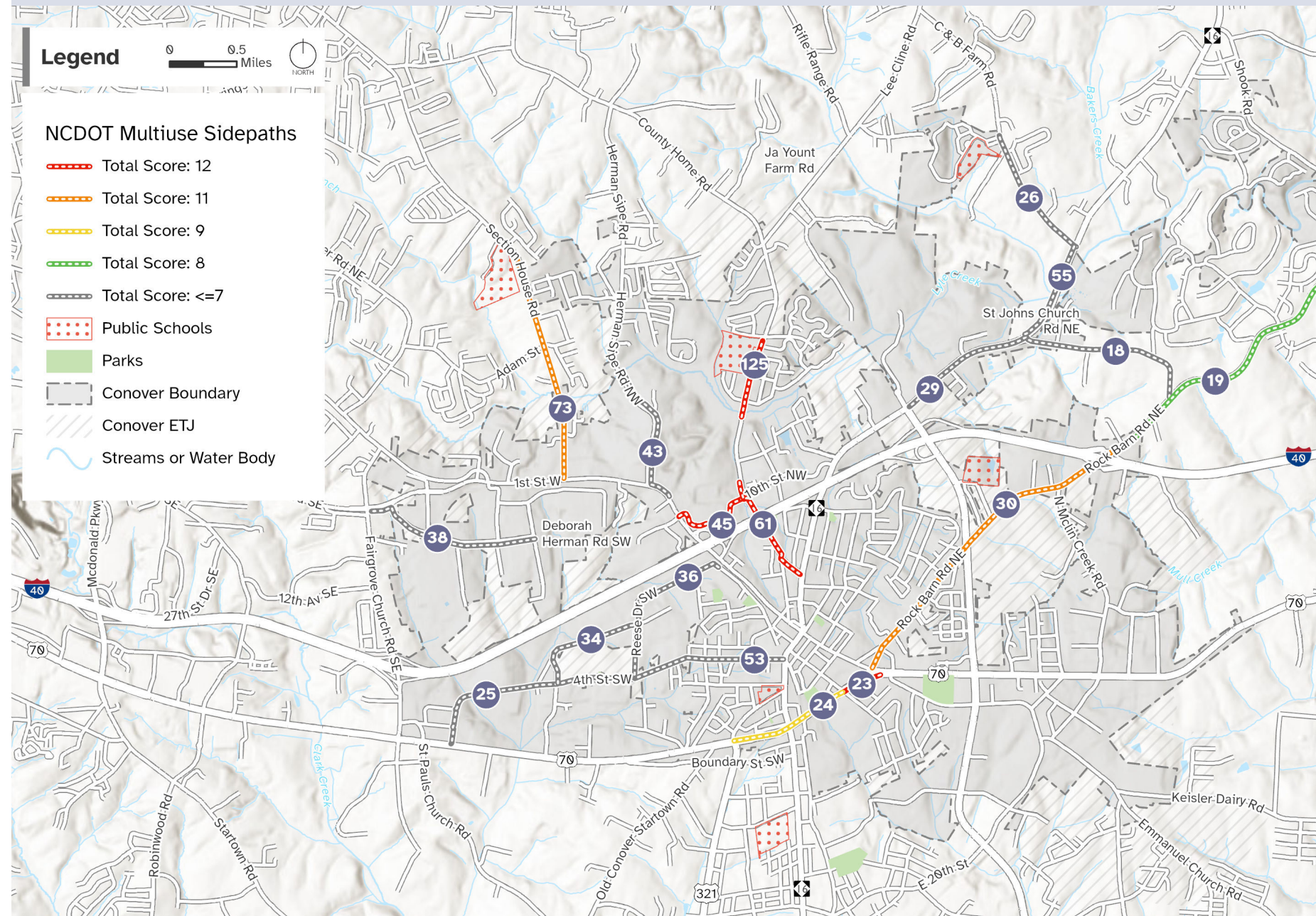


Table 7. Proposed Multiuse Sidepaths (NCDOT)

ID	ROADWAY/ PROJECT NAME	FACILITY TYPE	FROM	TO	TOTAL SCORE
23	Conover Blvd E	Multiuse Sidepath	3rd Street SE	Rock Barn Road/1st St E	12
45	10th St NW*	Multiuse Sidepath	1st St W	County Home Rd	12
61	County Home Road*	Multiuse Sidepath	1st Ave N	Lyle Creek Greenway (existing)	12
125	County Home Road*	Multiuse Sidepath	Lyle Creek Greenway (existing)	Northern Dr NW (roundabout)	12
30	Rock Barn Road NE	Multiuse Sidepath	Thornburg Dr NE	St Johns Church Rd NE	11
73	Section House Rd	Multiuse Sidepath	1st St W	Webb Murray Elementary School	11
24	Conover Blvd	Multiuse Sidepath	7th St Pl SW	3rd St SE	9
19	Rock Barn Road NE	Multiuse Sidepath	St Johns Church Rd NE	Shook Rd	8
29	NC 16 N	Multiuse Sidepath	Thornburg Dr NE	St Johns Church Rd NE	7
38	Deborah Herman Rd SW	Multiuse Sidepath	1st St W	Simpson St SW	7
43	Herman Sipe Road	Multiuse Sidepath	1st St W	Lyle Creek Greenway (proposed)	7
26	C and B Farm Rd	Multiuse Sidepath	Village Square NW	NC 16	6
55	NC 16 N	Multiuse Sidepath	St Johns Church Rd NE	C and B Farm Rd	6
36	Reese Dr SW and 4th St Pl SW	Multiuse Sidepath	Industrial Dr SW	4th Street SW	5
18	St Johns Church Rd NE	Multiuse Sidepath	NC 16	Rock Barn Rd NE	4
25	4th St W	Multiuse Sidepath	Conover Blvd W	Industrial Dr SW	4
34	Industrial Dr SW and 4th St SW and Reese Dr SW	Multiuse Sidepath	Reese Dr SW	Industrial Dr SW	4
53	4th St W	Multiuse Sidepath	Reese Dr SW	1st Ave S	4

\* Recommend combining projects.

Map 14. Proposed Sidewalks (NCDOT)

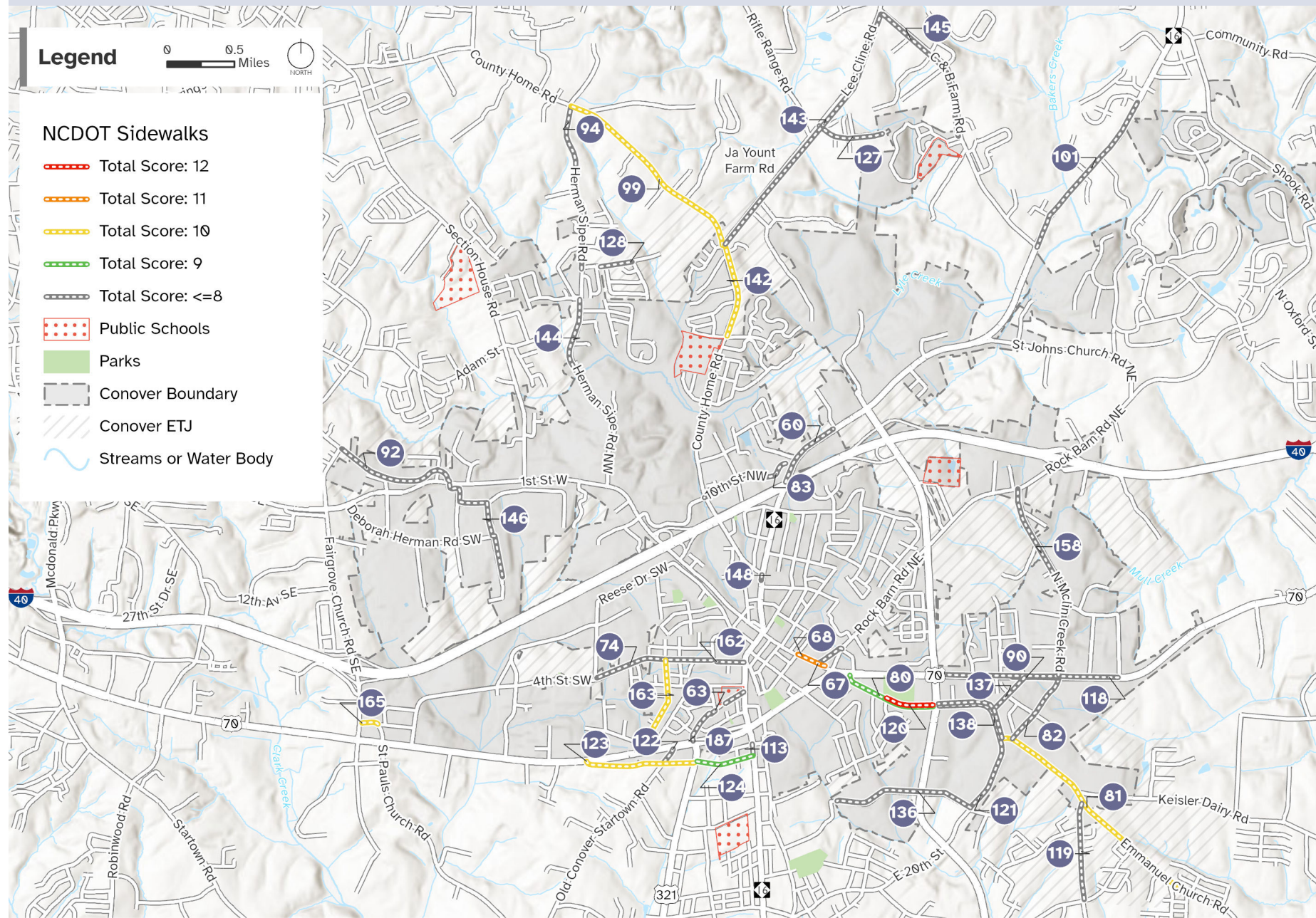


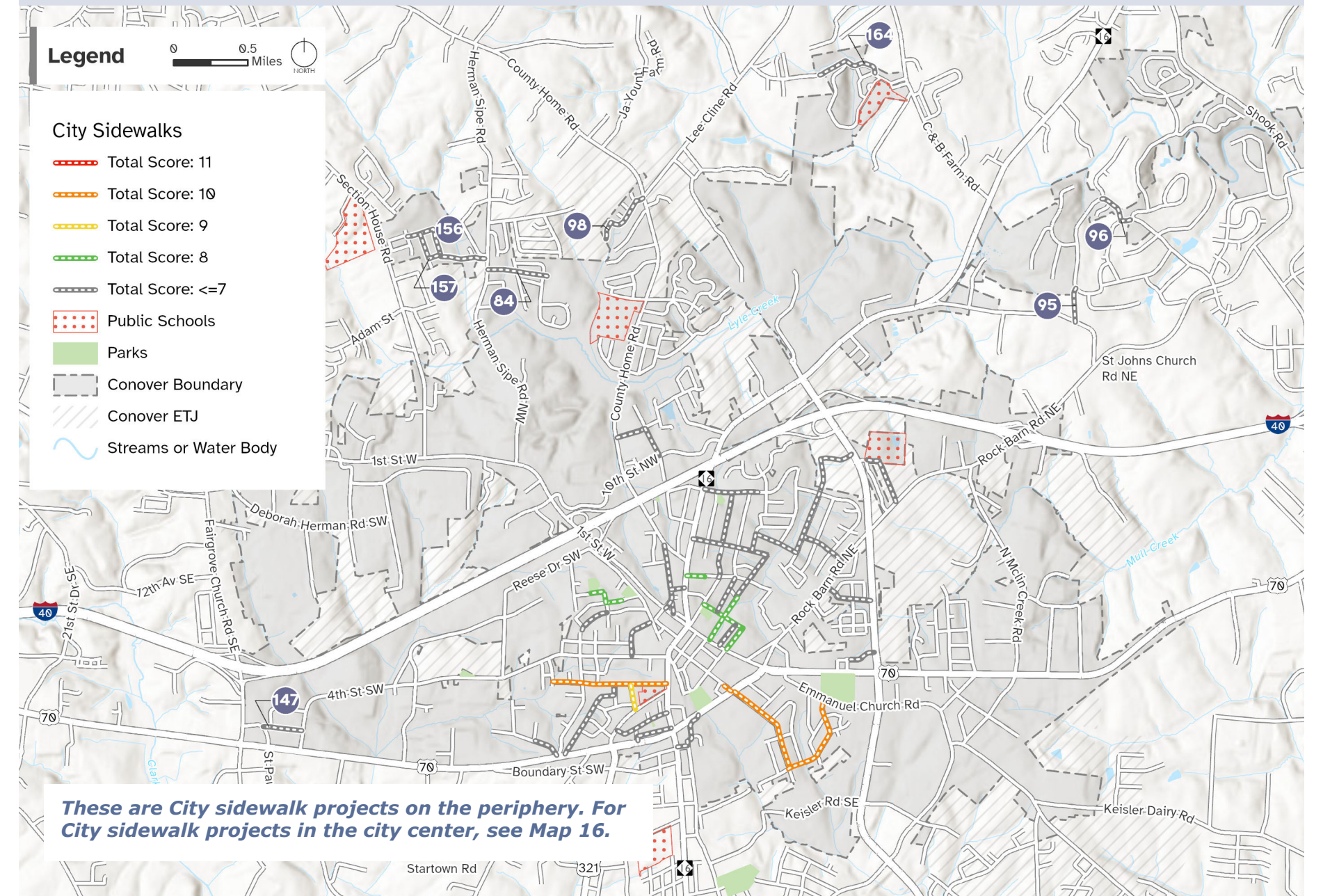
Table 8. Proposed Sidewalks (NCDOT)

ID	ROADWAY/ PROJECT NAME	FACILITY TYPE	FROM	TO	TOTAL SCORE
120	Emmanuel Church Road	Sidewalk	St Davids St SE (Existing sidewalk)	Thornburg Dr SE	<b>12</b>
68	1st St E	Sidewalk	5th Ave SE	Existing sidewalk (CVS)	<b>11</b>
81	Emmanuel Church Road	Sidewalk	McLin Creek Rd S	Cloninger St	<b>10</b>
99	County Home Road	Sidewalk	Lee Cline Rd	Herman Sipe Rd	<b>10</b>
123	Boundary St SW	Sidewalk	Conover Blvd W	Northwest Blvd	<b>10</b>
142	County Home Road	Sidewalk	Lee Cline Rd	Northern Dr NW (roundabout)	<b>10</b>
163	7th Ave SW	Sidewalk	4th St SW	Conover Blvd W/US 70 SE	<b>10</b>
165	Commerce St SW	Sidewalk	Fairgrove Church Rd	Old St Pauls Church Rd	<b>10</b>
80	Emmanuel Church Road	Sidewalk	Conover Blvd E	Thornburg Dr SE	<b>9</b>
124	Boundary St SW	Sidewalk	Northwest Blvd	1st Ave S	<b>9</b>
67	6th Ave NE	Sidewalk	1st St E	Rock Barn Rd	<b>8</b>
83	10th St NW	Sidewalk	County Home Rd	1st Ave N/NC 16	<b>8</b>
92	Highland Ave NE	Sidewalk	Fairgrove Church Road	1st St W	<b>8</b>
94	Herman Sipe Road	Sidewalk	County Home Rd	Landsdowne Dr	<b>8</b>
148	1st Ave N	Sidewalk	Existing sidewalk	County Home Rd	<b>8</b>
74	4th St W	Sidewalk	Reese Dr SW	4th Ave SW	<b>7</b>
90	Conover Blvd E	Sidewalk	Existing sidewalk	McLin Creek Rd S	<b>7</b>
118	Conover Blvd E	Sidewalk	Thornburg Dr NE	Comfort Dr NE	<b>7</b>
119	Travis Road	Sidewalk	Emmanuel Church Rd	Burris Road	<b>7</b>
138	Emmanuel Church Road	Sidewalk	Thornburg Dr SE	Keisler Rd SE	<b>7</b>

Table 8. Proposed Sidewalks (NCDOT) (Cont'd)

ID	ROADWAY/ PROJECT NAME	FACILITY TYPE	FROM	TO	TOTAL SCORE
122	Old Conover Startown Rd	Sidewalk	Boundary St SW	Conover Blvd W/US 70 SE	7
143	Lee Cline Road	Sidewalk	County Home Rd	C and B Farm Rd	7
144	Herman Sipe Road	Sidewalk	Eastover Dr NW	Lyle Creek Greenway (proposed)	7
145	C and B Farm Rd	Sidewalk	Lee Cline Rd	Village Square NW	7
60	1st Ave N/NC 16	Sidewalk	I-40 bridge sidewalk	Zelkova Ct NW	6
136	Keisler Road	Sidewalk	McLin Creek Greenway crossing (proposed)	McLin Creek Road S	6
137	Lineberger Road	Sidewalk	Conover Blvd E	Emmanuel Church Road	6
121	Emmanuel Church Road	Sidewalk	Thornburg Dr SE	McLin Creek Rd	6
146	Workman St/Farrington St/ Simposn St	Sidewalk	1st St W	Proposed greenway	6
158	McLin Creek Rd N	Sidewalk	Rock Barn Rd NE	Conover Blvd E	6
63	7th St PI SW	Sidewalk	Existing sidewalk	1st Ave S	5
82	McLin Creek Rd S	Sidewalk	Emmanuel Church Road	Conover Blvd E	5
101	NC 16 N	Sidewalk	C and B Farm Rd	Angle Dr	5
127	Stafford St/Edgewater Dr NW	Sidewalk	Lee Cline Rd	City Limits	5
128	Landsdowne Dr	Sidewalk	Existing sidewalk	Sedgefield Dr	5
113	1st Ave S	Sidewalk	Boundary St SW	11th St SE	4
63	7th St PI SW	Sidewalk	4th Ave SW/NW	Existing sidewalk	4
187	7th St PI SW	Sidewalk	Conover Blvd W	Existing sidewalk (near 4th Ave SW)	4
162	4th St W	Sidewalk	Existing sidewalk (near 4th Ave SW)	1st Ave S	4

Map 15. Proposed Sidewalks (City Periphery)



Map 16. Proposed Sidewalks (City Center)

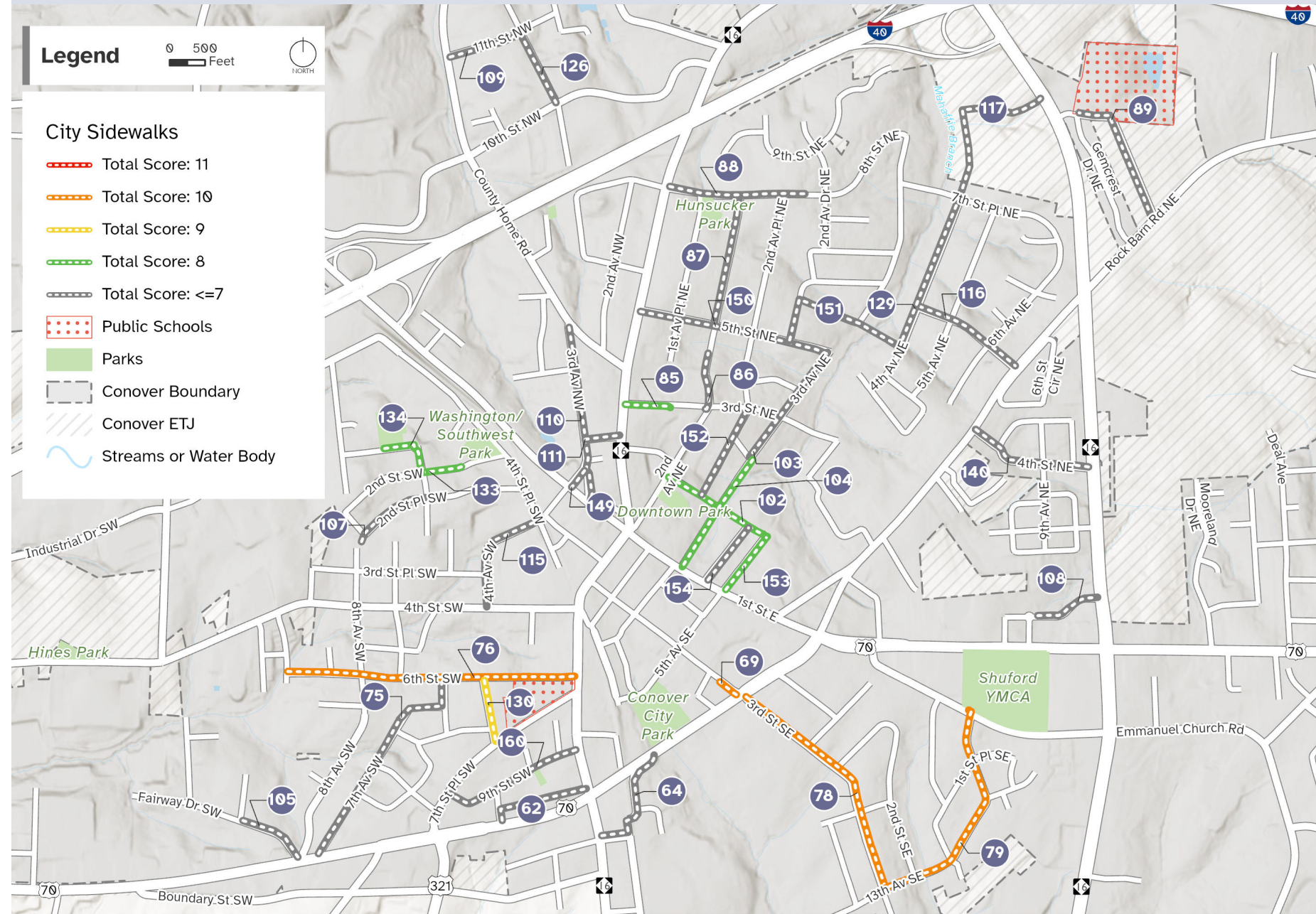


Table 9. Proposed Sidewalks (City)

ID	ROADWAY/ PROJECT NAME	FACILITY TYPE	FROM	TO	TOTAL SCORE
76	6th St SW	Sidewalk	Eastway Ln SW	1st Ave S	10
69	3rd St SE	Sidewalk	Existing sidewalk	Conover Blvd E	10
79	13th Ave SE, Fox Rd SE, St Davids St SE	Sidewalk	3rd St Dr SE	Emmanuel Church Road	10
78	3rd St SE, 3rd St Dr SE	Sidewalk	Conover Blvd E	13th Ave SE	10
130	4th Ave SW	Sidewalk	6th St SW	7th St Pl SW	9
102	2nd St NE	Sidewalk	2nd Ave NE	5th Ave NE	8
104	3rd Ave NE	Sidewalk	1st St E	2nd Ave Pl NE	8
85	3rd St NE	Sidewalk	1st Ave N	Existing sidewalk (church)	8
133	2nd St SW	Sidewalk	6th Ave Dr SW	Existing sidewalk	8
134	2nd St Dr SW and 6th Avenue Dr SW	Sidewalk	Majestic Park	2nd St SW	8
153	5th Ave NE	Sidewalk	1st St E	2nd St NE	8
64	4th St Pl SE, 11th St SE	Sidewalk	1st Ave S	Conover Blvd E	7
84	Northern Dr NW	Sidewalk	Herman Sipe Rd	County Home Rd	7
86	2nd Ave NE	Sidewalk	3rd St NE	Existing sidewalk	7
103	3rd Ave NE	Sidewalk	2nd Ave Pl NE	5th St NE	7
147	Commerce St SW and Old St Pauls Church Rd	Sidewalk	Old St Pauls Church Rd	4th St SW	7
150	5th St NE	Sidewalk	1st Ave NE	3rd Ave NE	7
62	10th St SW	Sidewalk	Conover Blvd W/4th Ave SW	1st Ave S	6

Table 9. Proposed Sidewalks (City) (Cont'd)

ID	ROADWAY/ PROJECT NAME	FACILITY TYPE	FROM	TO	TOTAL SCORE
116	6th St NE	Sidewalk	4th Ave NE	Rock Barn Rd NE	<b>6</b>
129	4th Ave NE	Sidewalk	5th St PI NE	7th St PI NE	<b>6</b>
140	4th St NE	Sidewalk	Rock Barn Rd NE	Thornburg Drive	<b>6</b>
149	4th Ave NW	Sidewalk	1st St W	3rd Ave NW	<b>6</b>
151	5th St PI NE and 2nd Ave Dr NE	Sidewalk	5th St NE	4th Ave NE	<b>6</b>
152	2nd Ave PI NE	Sidewalk	2nd St NE	3rd St NE	<b>6</b>
154	4th Ave NE	Sidewalk	1st St E	2nd St NE	<b>6</b>
157	Eastover Dr NW/ Windhaven Dr	Sidewalk	Hemingway Dr NW	Herman Sipe Rd	<b>6</b>
160	9th St SW	Sidewalk	7th St PI SW	1st Ave S	<b>6</b>
98	Coventry PI NW/ Atherstone St NW	Sidewalk	Dead end	County Home Rd	<b>5</b>
107	8th Ave SW and 2nd St PI SW	Sidewalk	4th St SW	6th Ave Dr SW	<b>5</b>
109	11th St NW	Sidewalk	County Home Rd	3rd Ave NW	<b>5</b>
110	3rd Ave NW	Sidewalk	1st St W	County Home Rd	<b>5</b>
126	3rd Ave NW	Sidewalk	11th St NW	10th St NW	<b>5</b>
164	Stafford St/Edgewater Dr NW	Sidewalk	City Limits	Library Lane NW	<b>5</b>
75	7th Ave SW	Sidewalk	Conover Blvd W	6th St SW	<b>4</b>
88	8th St NE	Sidewalk	1st Ave N	Existing sidewalk	<b>4</b>
105	Fairway Dr SW	Sidewalk	Eastway Ln SW	Conover Blvd W/US 70 SE	<b>4</b>

Table 9. Proposed Sidewalks (City) (Cont'd)

ID	ROADWAY/ PROJECT NAME	FACILITY TYPE	FROM	TO	TOTAL SCORE
111	2nd St NW	Sidewalk	3rd Ave NW	1st Ave N	<b>4</b>
117	Unopened ROW	Sidewalk	7th St PI NE	Thornburg Drive	<b>4</b>
157	Windhaven Dr NW	Sidewalk	Newhall Dr NW	Newhall Dr NW	<b>4</b>
150	2nd Ave NE	Sidewalk	5th St NE	8th St NE	<b>3</b>
89	Hunsucker Dr NE	Sidewalk	Rock Barn Rd NE	Shuford Elementary (existing sidewalk)	<b>3</b>
108	2nd St NE	Sidewalk	Existing sidewalk (roundabout)	Thornburg Drive	<b>3</b>
115	4th Ave SW	Sidewalk	4th St PI SW	4th St SW	<b>3</b>
95	Guy Hollar Dr	Sidewalk	St Johns Church Rd NE	Rock Bridge Dr NE	<b>2</b>
96	Ridge Rd NE	Sidewalk	Deer Run Dr NE	Golf Dr NE	<b>2</b>

Map 17. Proposed Downtown Bikeway Expansion

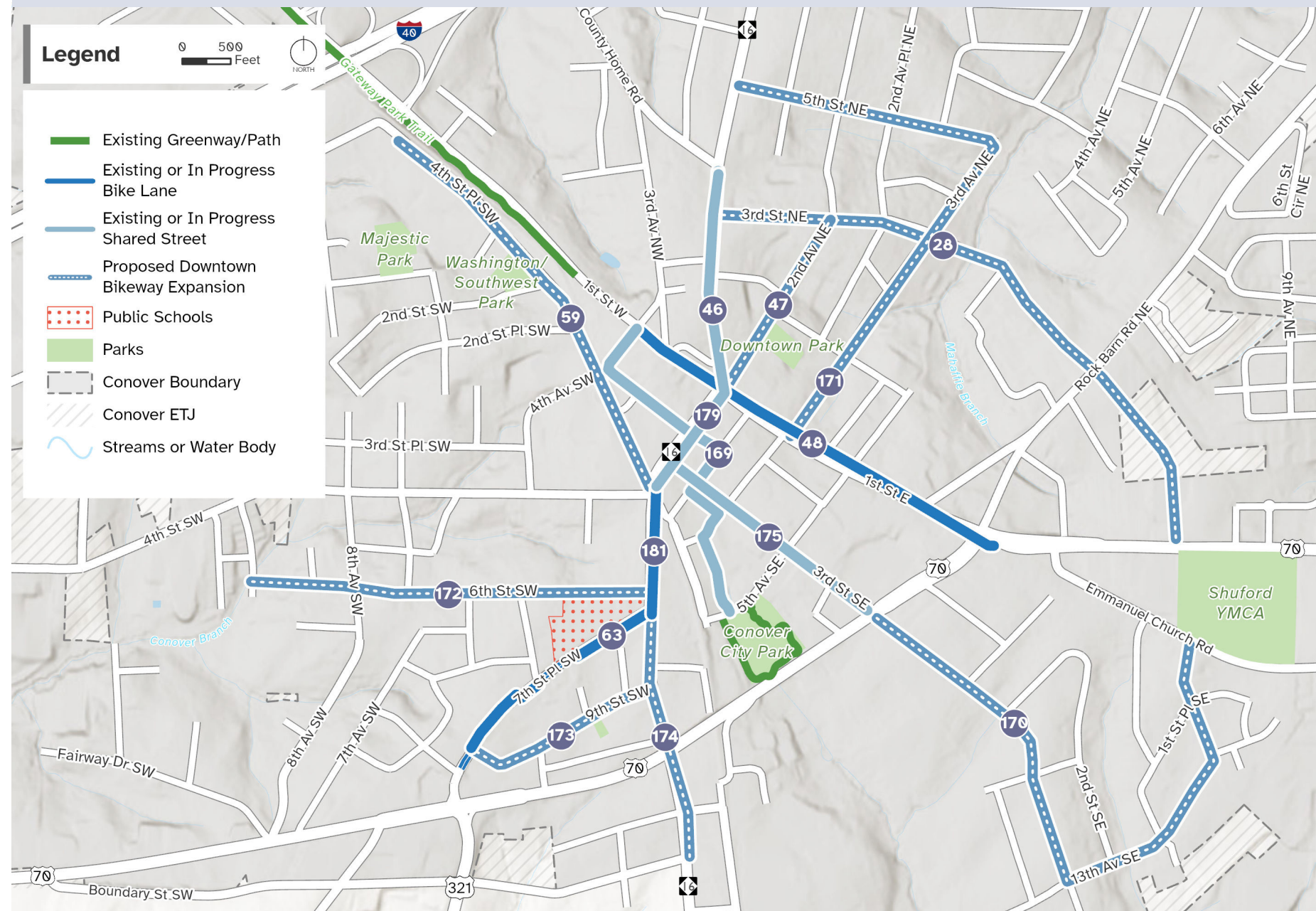
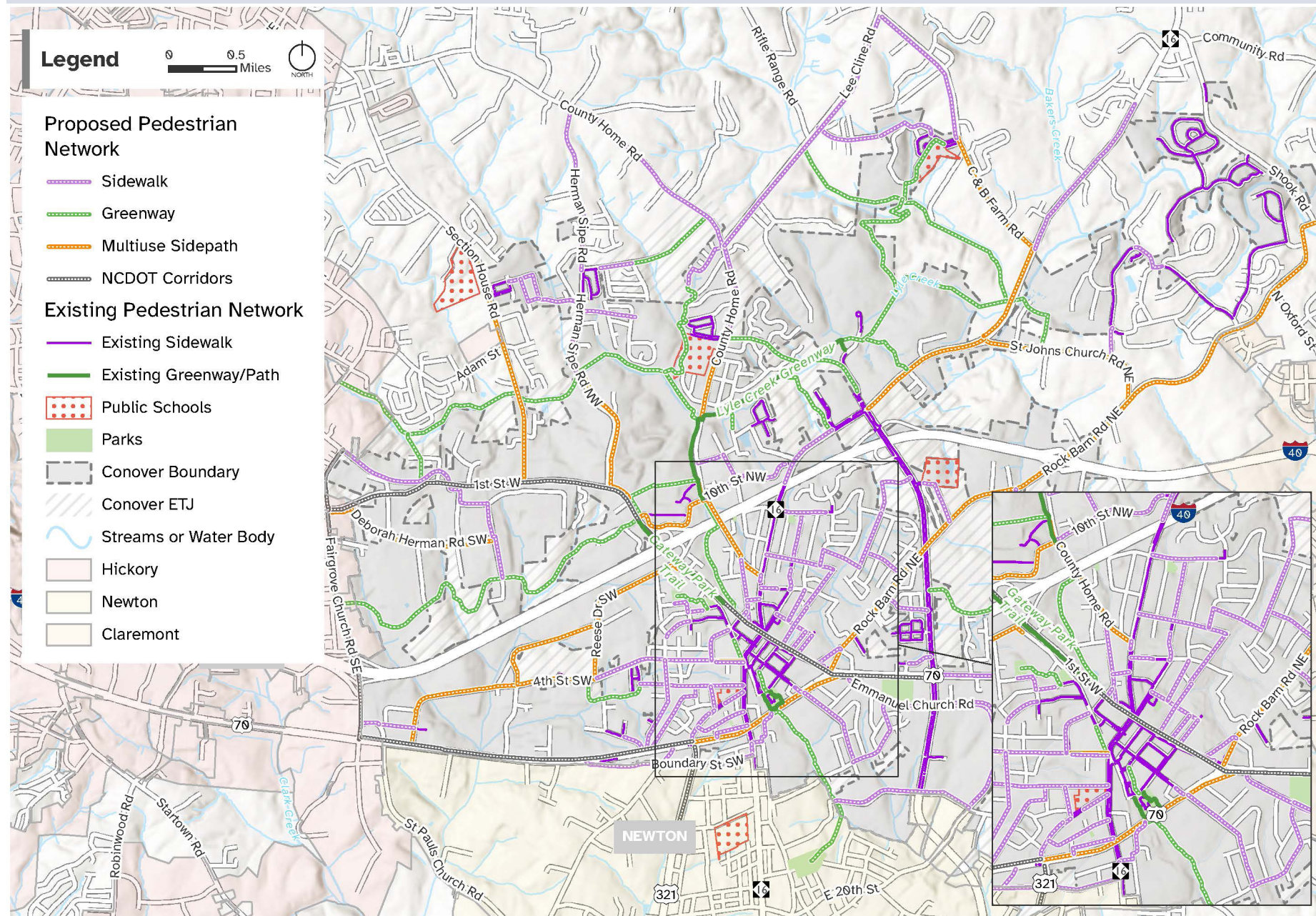


Table 10. Proposed Downtown Bikeway Expansion

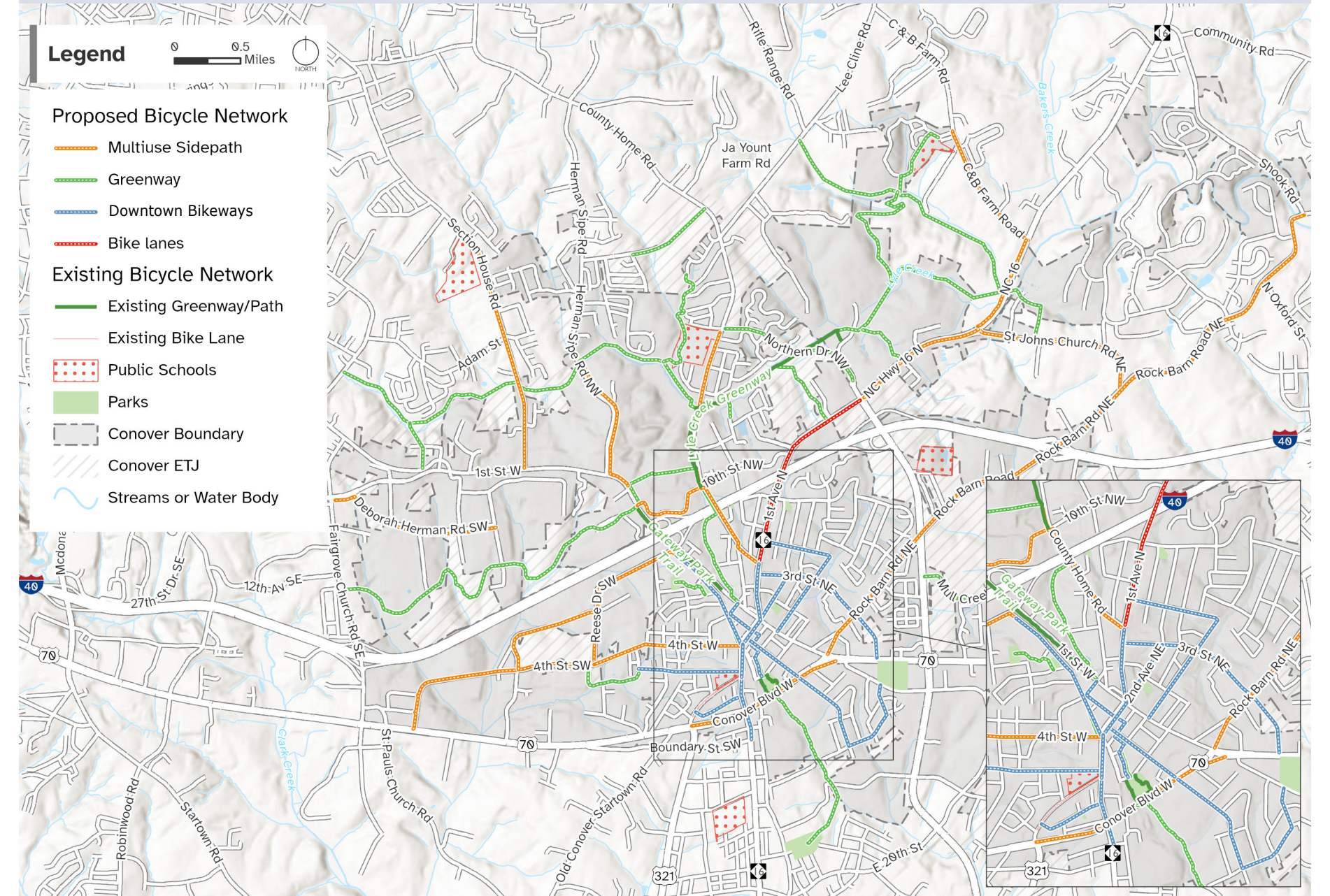
ID	ROADWAY/ PROJECT NAME	FACILITY TYPE	FROM	TO
28	3rd St NE	Bikeway (Proposed)	2nd Ave NE	5th Ave NE
46	1st Ave N	Shared Street (Existing)	1st St W	County Home Rd
47	2nd Ave NE	Bikeway (Proposed)	1st St E	3rd St NE
59	Reese Dr SW and 4th St PI SW	Bikeway (Proposed)	Industrial Dr SW	4th Ave SW
169	Trail to Trail Connector	Shared Street (In Progress)	Gateway Park Trail	City Park
170	3rd St SE/FoxRd SE/St Davids St SE	Bikeway (Proposed)	Conover Blvd	Emmanuel Church Rd
171	3rd Ave NE/5th St NE	Bikeway (Proposed)	1st St E	1st Ave N
172	6th St SW	Bikeway (Proposed)	1st Ave S	Eastway Ln SW
173	9th St SW	Bikeway (Proposed)	7th St PI SW	1st Ave S
48	1st St E	Bike Lanes (In Progress)	4th Ave SW	Rock Barn Road
46	3rd St SE	Shared Street (Existing)	1st Ave S	Conover Blvd
179	1st Ave S	Shared Street (Existing)	1st St E	4th St SW
181	1st Ave S	Bike Lanes (Existing)	4th St SW	7th St PI SW
174	1st Ave S	Bikeway (Proposed)	7th St PI SW	Boundary Street
63	7th St PI SW	Bike Lanes (Existing)	Conover Blvd	1st Ave S

NOTE: These projects were not scored, as these projects vary significantly in parameters and costs. Each project addresses different aspects of the transportation network, offering diverse benefits and challenges.

Map 18. Full Proposed Pedestrian Network



Map 19. Full Proposed Bicycle Network



### Project Cutsheets

Based on the prioritization of each category of projects, more details were developed for the top ranked projects as indicated in **Table 11 - Top Ranked Catalyst Projects**. These are some of the highest scoring projects and ones that would have meaningful, beneficial impact if implemented. They are catalysts for change in Conover.

The following cutsheets describe these projects in further detail including key elements, challenges/constraints, crossings, cross-sections, and cost estimates. The cost estimates include design, utilities, and construction costs per assumptions from the NCDOT Bicycle and Pedestrian Cost Estimating Tool. Details on the cost estimating process are provided in the Appendix.

Table 11. Top Ranked Catalyst Projects

	PROJECT NAME	FACILITY TYPE	PEDESTRIAN	BICYCLE
1	NCDOT Corridor Studies - Various	Undetermined	X	X
2	County Home Road Multiuse Sidepath	NCDOT Multiuse Sidepath	X	X
3	Conover Boulevard East Multiuse Sidepath	NCDOT Multiuse Sidepath	X	X
4	Emmanuel Church Road Sidewalk	NCDOT Sidewalk	X	
5	1st Street East Sidewalk	NCDOT Sidewalk	X	
6	6th Street SW Sidewalk	City Sidewalk	X	
7	Lyle Creek Greenway Phase 2 & Connector Spur Trail	Greenway	X	X
8	Majestic Park to Washington/Southwest Park Greenway	Greenway	X	X
9	4th Street Place SW Greenway	Greenway	X	X
10	Innovation Alley Greenway	Greenway	X	X

### NCDOT Corridors w/ Undetermined Facility Type

NCDOT roads with four or more lanes of traffic and high traffic volumes and speeds pose significant challenges for pedestrians and bicyclists traveling along and crossing the roadway. For these roads, identifying a multimodal facility type requires approval from NCDOT and a more comprehensive study of items such as traffic impacts, signal operations, access management, right-of-way availability, lane width parameters and implications of existing and future land use. Given the complexity and the need to balance impacts on all users along these NCDOT roadway corridors, studying these high-capacity roadways exceeds the scope of this project. As such, for these corridors we are recommending a high quality bicycle and pedestrian facility that will require a Corridor Study.

### NCDOT Corridor with Bicycle & Pedestrian Upgrade Needs

Through public engagement and initial network review, it became clear that certain NCDOT roads with high volumes and speeds pose significant challenges for pedestrians and cyclists and would require more in-depth, comprehensive analysis covering a range of issues. *Connect Conover* identifies several key roadways that serve numerous destinations such as restaurants, hospitals, medical facilities, and employment sectors, yet lack sidewalks, multiuse paths, or bike lanes. Some have bus stops but lack connections or safe crossings.

Given the complexity and the need to balance impacts on all users along these NCDOT roadway corridors, comprehensive solutions for vulnerable road users will require thorough analysis. Addressing the multitude of issues on these high-capacity roadways exceeds the scope of standalone sidewalk or bike lane projects. It necessitates a holistic approach that considers driveway access, right-of-way availability, lane width parameters, signal timing, and implications of existing and future land use. For *Connect Conover*, we propose conducting these studies in collaboration with NCDOT, the Greater Hickory MPO, and neighboring jurisdictions like Newton and Hickory.

These corridor studies are useful for prioritizing future roadway improvements, guiding private developers interested in community investment, and identifying opportunities for grant funding. The primary objective is to establish a comprehensive vision for specific transportation corridors, addressing both immediate needs and long-term goals. This involves analyzing traffic patterns, evaluating intersections, and exploring multimodal transportation options such as public transit, biking

infrastructure, and pedestrian pathways. By identifying potential improvements, the studies will optimize the movement of people and goods, supporting Conover's vision for a connected and sustainable transportation network.

In addition to the long-term vision, corridor studies identify immediate or short-term opportunities for improvement. These can include low-cost, high-impact interventions, operational changes, or phased improvements that can be implemented quickly. By addressing immediate needs, the study can deliver tangible benefits to the corridor while progress is made toward the long-term vision.

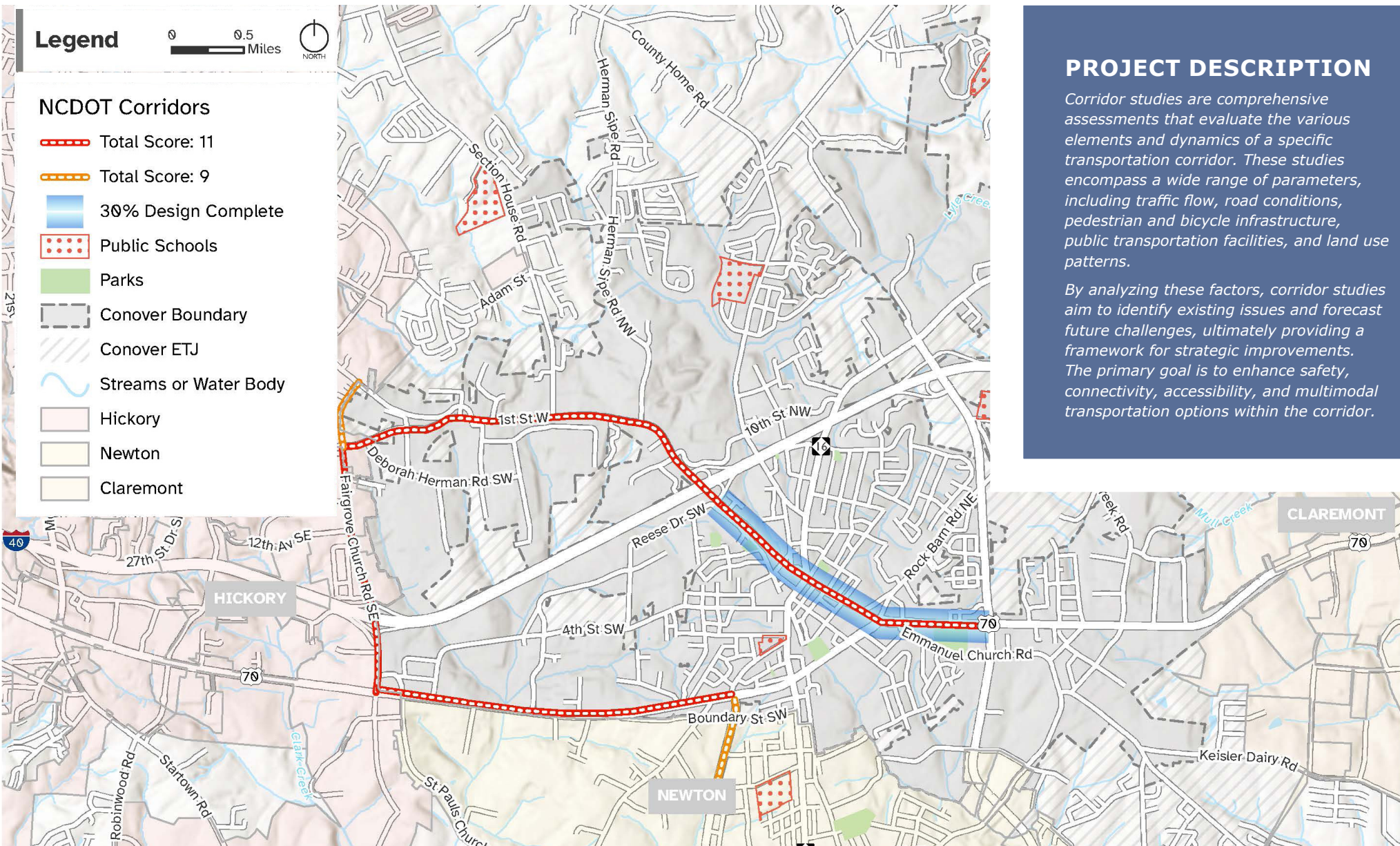
Image 56. Rendering from the 1st Street Bicycle & Pedestrian Project (Source: TPD)

A corridor study can establish a set of improvements holistically, including sidewalks and bike lanes as well as driveway access management, signal timing, wayfinding, lighting, landscaping design, and more.



# 1

## NCDOT CORRIDOR STUDIES



### PROJECT DESCRIPTION

Corridor studies are comprehensive assessments that evaluate the various elements and dynamics of a specific transportation corridor. These studies encompass a wide range of parameters, including traffic flow, road conditions, pedestrian and bicycle infrastructure, public transportation facilities, and land use patterns.

By analyzing these factors, corridor studies aim to identify existing issues and forecast future challenges, ultimately providing a framework for strategic improvements. The primary goal is to enhance safety, connectivity, accessibility, and multimodal transportation options within the corridor.

## KEY STEPS OF A CORRIDOR STUDY

### VISION & GOAL SETTING



The first step in the corridor planning process is to establish a clear vision and set specific goals for the study. This involves defining desired outcomes such as enhanced mobility, increased safety, improved accessibility, and better community integration. These guiding principles shape the entire planning effort.

### DATA COLLECTION



Collecting comprehensive data is crucial to understanding the current conditions and challenges within the corridor. This step involves gathering information on traffic patterns, land use, demographics, infrastructure, environmental factors, and input from the community. Analyzing this data helps identify trends, issues, and opportunities for improvement.

### INVENTORY & ANALYSIS



Once data is collected, a detailed inventory and analysis are conducted to evaluate the current state of the corridor. This includes assessing transportation infrastructure, land use patterns, safety concerns, access points, public transit options, and other relevant factors. This analysis highlights strengths, weaknesses, and areas needing improvement.

### DESIGN ALTERNATIVES



Based on the analysis, various design alternatives are developed. These alternatives suggest different configurations and improvements to address identified needs and achieve the study's goals. Options may include changes to road layouts, intersection designs, public transit enhancements, bike lanes, pedestrian facilities, and land use plans, aiming to balance the diverse needs of stakeholders.

### EVALUATION & SELECTION



The proposed design alternatives undergo thorough evaluation. This process considers feasibility, cost-effectiveness, environmental impact, social equity, community acceptance, and alignment with established goals. From this evaluation, the most promising alternatives are selected for recommendation.

### RECOMMENDATIONS & ADOPTION



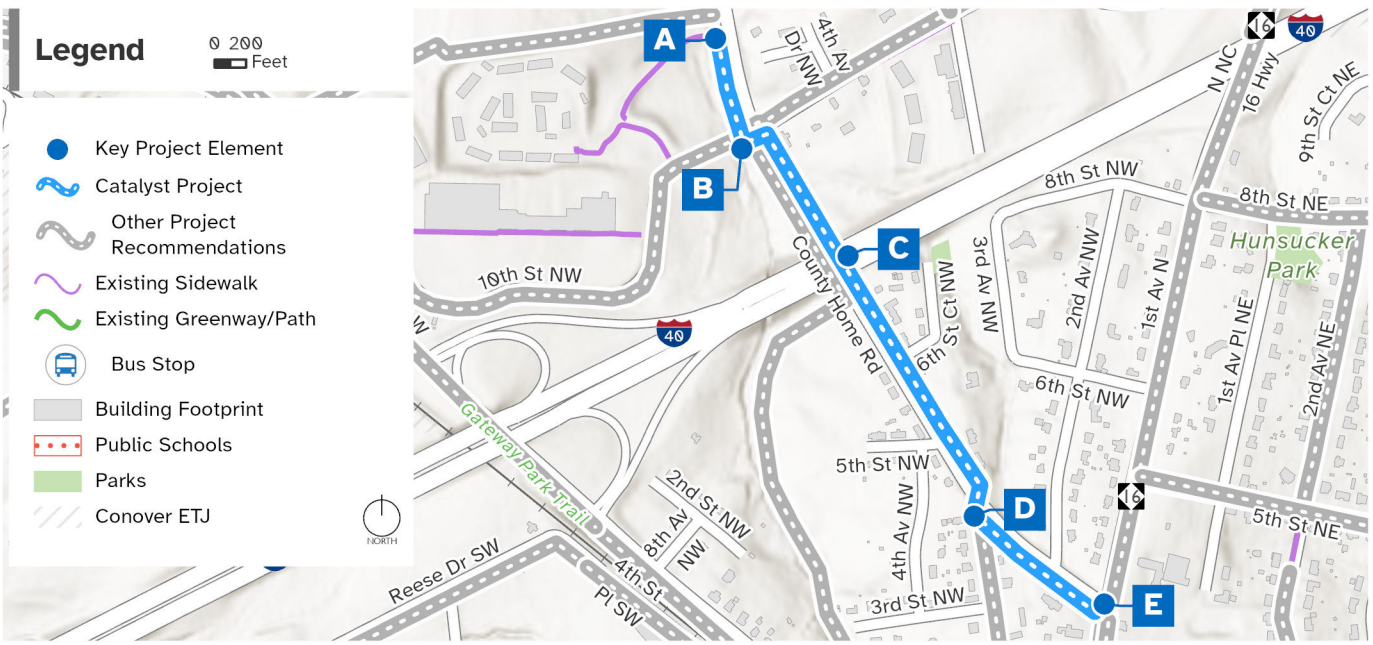
The selected alternatives are compiled into a final set of recommendations. These include a prioritized list of improvements, policies, and actions necessary for implementation. The corridor study, along with its recommendations, is then presented to the appropriate governing body, such as the City Council, for adoption and approval.

### IMPLEMENTATION



After adoption, the implementation phase begins. This may involve updating city policy documents, ordinances, and land use plans to reflect the study's findings. Securing funding for capital projects and initiating design and construction processes are also part of this phase. Additional studies or planning efforts may be required for specific aspects of the implementation.

# COUNTY HOME ROAD MULTIUSE SIDEPATH



**PLANNING LEVEL COST ESTIMATE**

**\$3,366,000**

*Includes Design, Utilities and Construction Per Assumptions from the NCDOT Bicycle and Pedestrian Cost Estimating Tool*

**PROJECT DESCRIPTION**

*A 10'-12' multiuse sidepath along the west side of County Home Road (from 1st Ave N to 3rd Ave NW) and along the east side of County Home Road (from 3rd Ave N to 10th St NW/Lyle Creek Greenway).*



CONNECTIONS
<ul style="list-style-type: none"> <li>○ New developments (Conover Walk, Canova Crossing), Lyle Creek Greenway, The Fields apartments, Canova Shopping Center</li> </ul>
CROSSINGS
<ul style="list-style-type: none"> <li>○ Crossings at 10th St NW, County Home Road (at 10th St NW), 6th St NW, County Home Road (at 3rd Ave NW), 2nd Ave NW, and 1st Ave N.</li> </ul>
KEY ELEMENTS
<p><i>*SEE LOCATION ON MAP BY CORRESPONDING LETTERS</i></p> <p><b>A.</b> Direct connection to the existing Lyle Creek Greenway.</p> <p><b>B.</b> Signalized pedestrian crossings.</p> <p><b>C.</b> Passage under I-40 may require temporary delineation (e.g., bollards) until bridge can be replaced.</p> <p><b>D.</b> The multiuse path crosses here to connect to recommended sidewalks on 3rd Avenue NW. Some reconfigurations of the intersection will be needed to maximize pedestrian and bicyclist safety.</p> <p><b>E.</b> A new pedestrian crossing is recommended here to connect to existing sidewalk on 1st Ave N. This intersection will require improvements, including signalization.</p>



Source: Google Imagery



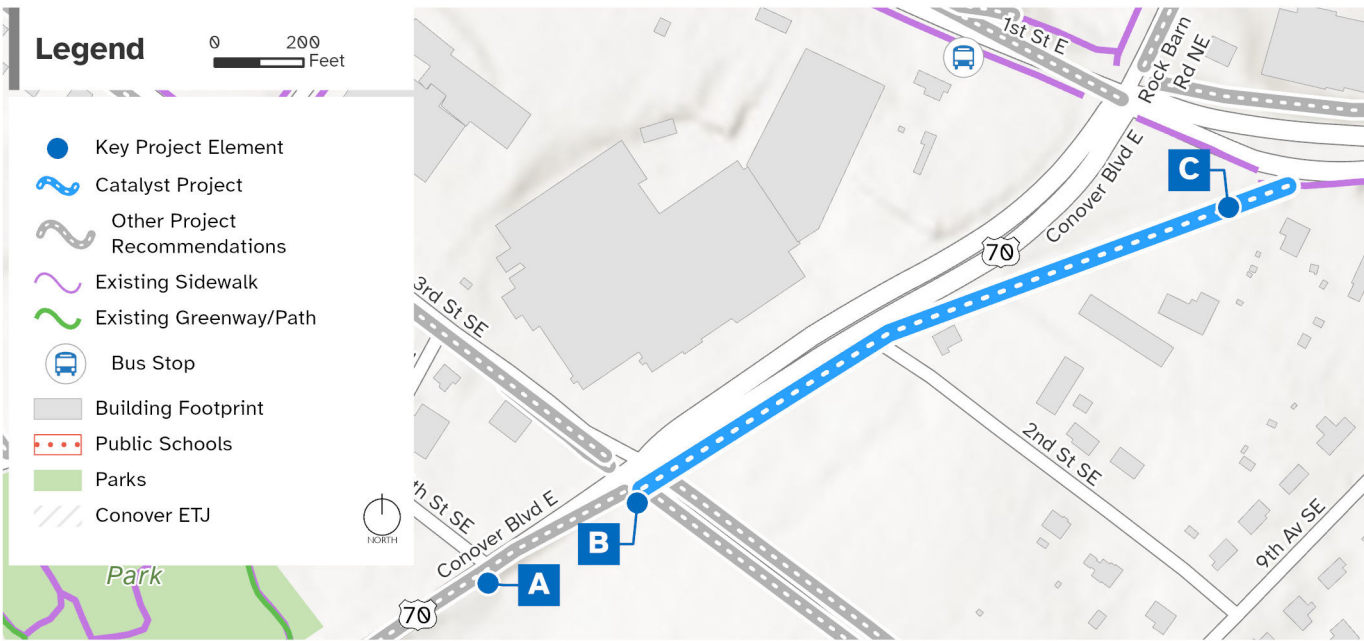
Source: Charter Oak Greenway

As the multiuse path travels underneath I-40, there appears to be room for a multiuse path under the existing bridge. However, the bridge could be rebuilt (in the future NCDOT STIP process) to accommodate a wider, more comfortable facility.

Many people in the online survey indicated a desire for a walking path along this roadway for recreation and fitness.

# 3

## CONOVER BOULEVARD EAST MULTIUSE SIDEPATH



**PLANNING LEVEL COST ESTIMATE**

**\$896,000**

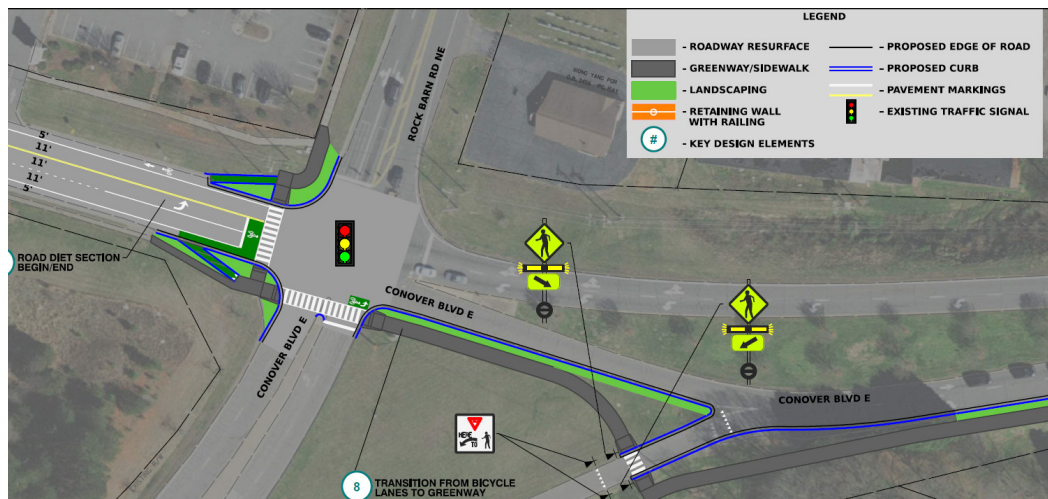
*Includes Design, Utilities and Construction Per Assumptions from the NCDOT Bicycle and Pedestrian Cost Estimating Tool*

**PROJECT DESCRIPTION**

*A 12' multiuse sidepath along the south side of Conover Boulevard E (from 3rd Street to the existing sidewalk on 1st Street). A signalized pedestrian crossing is needed at 3rd Street and at the Rock Barn Road intersection as a separate project. This project ties into the 1st Street East roadway reconfiguration project.*



CONNECTIONS
<ul style="list-style-type: none"> <li>o YMCA, City Park, Concordia Christian Day School, Conover City Cemetery, downtown, existing and planned residential neighborhoods.</li> </ul>
CROSSINGS
<ul style="list-style-type: none"> <li>o A signalized pedestrian crossing at 3rd Street, as well as a crossing at 2nd Street SE.</li> </ul>
KEY ELEMENTS
<p><i>*SEE LOCATION ON MAP BY CORRESPONDING LETTERS</i></p> <p>A. A multiuse sidepath is also recommended along Conover Boulevard farther west, connecting to bike lanes on 7th Street Pl SW and a crossing to connect to the City Park trail and a proposed greenway along McLin Creek to Northside/Broyhill park in Newton.</p> <p>B. A safe crossing here is one of the consistent priority needs highlighted by the community.</p> <p>C. Link directly to the planned multiuse sidepath on 1st Street East (NCDOT STIP Project C-5624).</p>



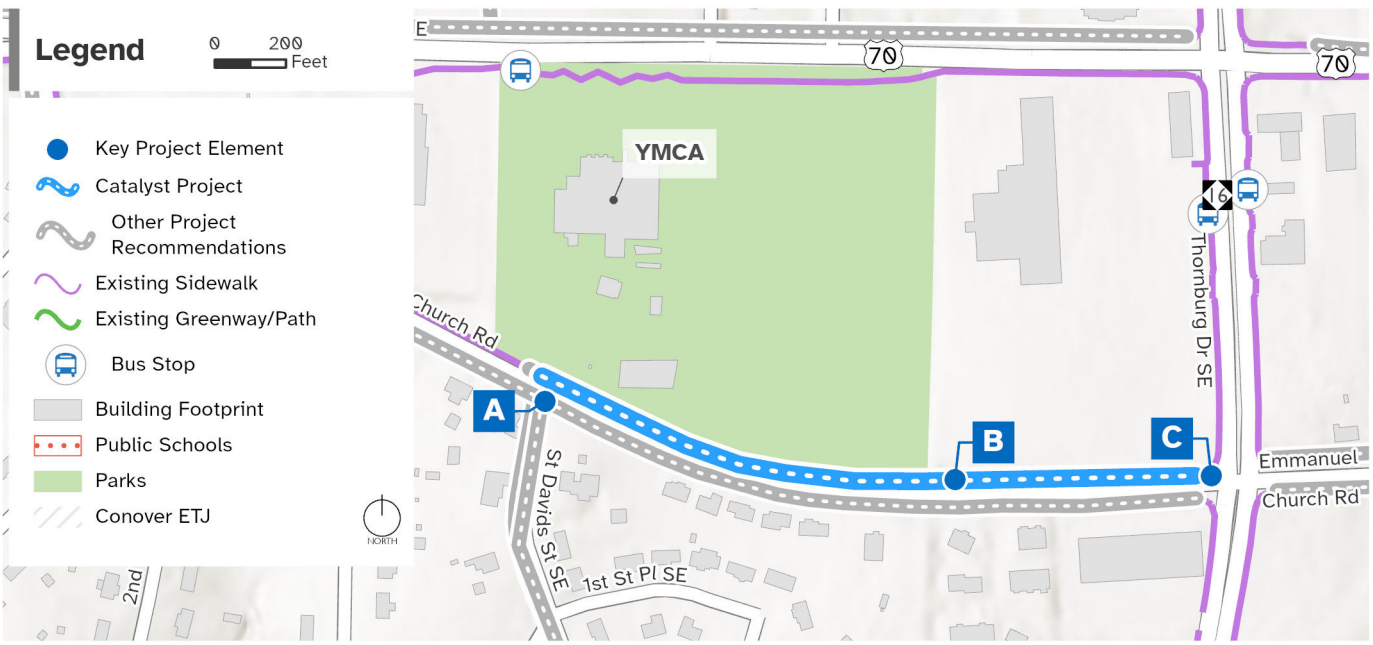
Source: City of Conover

*This project ties neatly into the planned 1st Street project (NCDOT STIP Project C-5624), which has bike lanes and a multiuse path as well as signalized crossings and visibility improvements.*

*This project is part of a broader revisioning of the Conover Boulevard corridor, with multimodal facilities along its entire length.*

# 4

## EMMANUEL CHURCH ROAD SIDEWALK (NCDOT)



**PLANNING LEVEL COST ESTIMATE**

**\$733,000**

*Includes Design, Utilities and Construction Per Assumptions from the NCDOT Bicycle and Pedestrian Cost Estimating Tool*

**PROJECT DESCRIPTION**

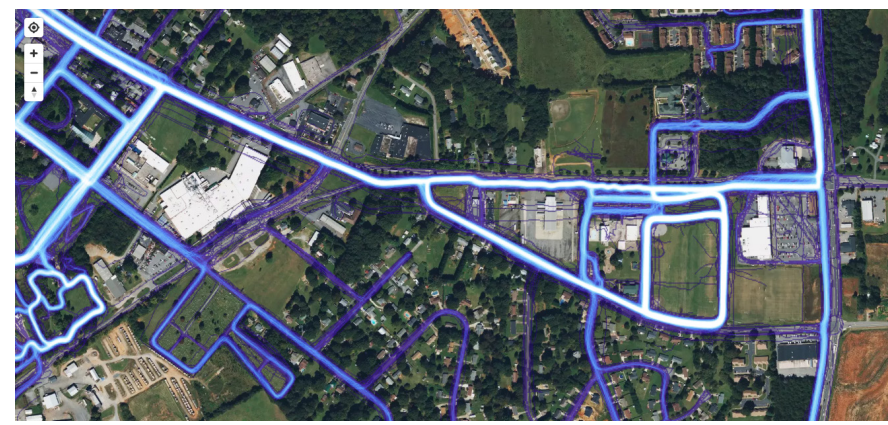
*A 5-foot sidewalk along the north side of Emmanuel Church Road from the existing sidewalk at YMCA to the existing sidewalk on Thornburg Drive provides a complete connection for residents in this neighborhood and solidifies this as a recreational/fitness trail with links to popular destinations.*



CONNECTIONS
<ul style="list-style-type: none"> <li>YMCA, Food Lion, Veterinary Hospital, bus stops on Thornburg Drive, Beacon Hill apartments</li> </ul>
CROSSINGS
<ul style="list-style-type: none"> <li>A crossing at St Davids Street SE to connect to neighborhood and proposed sidewalk on the south side of Emmanuel Church Road.</li> </ul>
KEY ELEMENTS
<p><i>*SEE LOCATION ON MAP BY CORRESPONDING LETTERS</i></p> <p>A. Crossing needed here to connect to Downtown Bikeway on St Davids Street SE.</p> <p>B. Possible direct connection here to the YMCA walking path. This could be a wider segment (10'-12' multiuse path) from the YMCA path to Thornburg Drive.</p> <p>C. Connection to the sidewalk on Thornburg Drive creates a complete loop around the recreation area.</p>



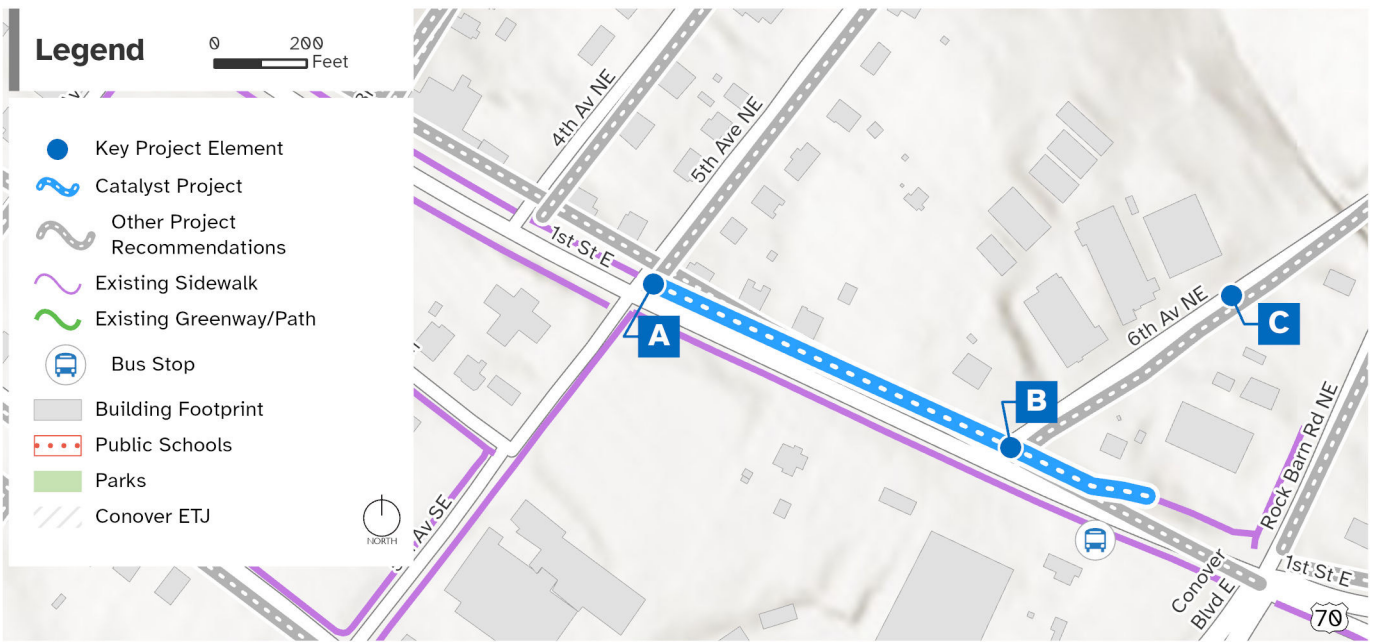
The YMCA track is surrounded by a chain link fence. Having an alternate walking path gives people the opportunity to make the full loop around the block.



This area is a key recreation and fitness destination for people walking and running. This missing gap would enable more people (including future residents in multifamily developments nearby like Fern Hill) to enjoy this walking route and access the YMCA.

Many people in the online survey indicated a desire for a walking path along this roadway for recreation and fitness.

# 1ST STREET EAST SIDEWALK (NCDOT)



**PLANNING LEVEL COST ESTIMATE**  
**\$700,000**  
*Includes Design, Utilities and Construction Per Assumptions from the NCDOT Bicycle and Pedestrian Cost Estimating Tool*

**PROJECT DESCRIPTION**  
*A 5-foot sidewalk along the north side of 1st Street East, filling the gap between two existing sidewalks. This project supplements the Downtown Bikeways and planned road diet along 1st Street East (NCDOT STIP Project C-5624) and connects directly to recommended sidewalks on 5th Ave NE and 6th Avenue NE, as well as the recommended multiuse sidepath along Rock Barn Road.*

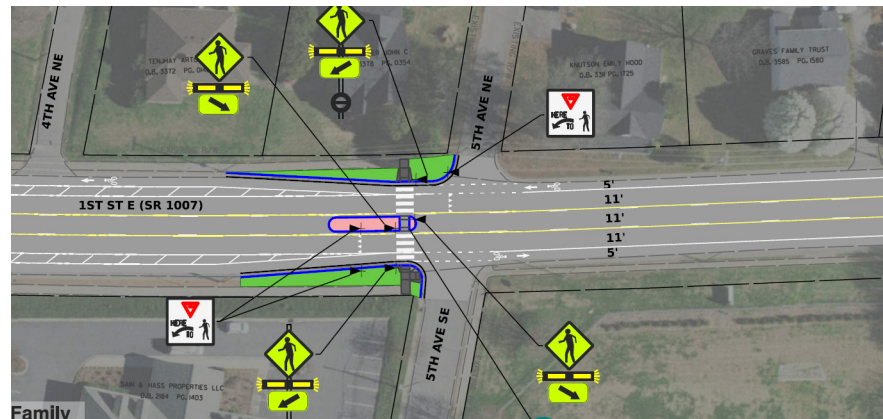


CONNECTIONS
<ul style="list-style-type: none"> <li>City Park, Conover Branch Library, Concordia Christian Day School, pharmacy, Conover Manor Townhomes, Kindercare Learning Center, Wye Station, Shuford Village.</li> </ul>
CROSSINGS
<ul style="list-style-type: none"> <li>A crossing at 6th Avenue NE and a crossing across 1st Street E at 5th Avenue.</li> </ul>
KEY ELEMENTS
<p><i>*SEE LOCATION ON MAP BY CORRESPONDING LETTERS</i></p> <p>A. A high visibility pedestrian crossing with refuge island at 5th Avenue would help connect neighborhoods and provide access to City Park.</p> <p>B. A pedestrian crossing over 6th Avenue NE could be complemented by narrowing the turning radius, thereby shortening the distance pedestrians need to cross.</p> <p>C. A recommended sidewalk along 6th Avenue NE would provide a key link to Rock Barn Road (with a recommended multiuse path).</p>



Source: Valley Transportation Authority

A pedestrian crossing with a refuge island enhances safety by increasing visibility to drivers and providing a safe midway point for pedestrians.

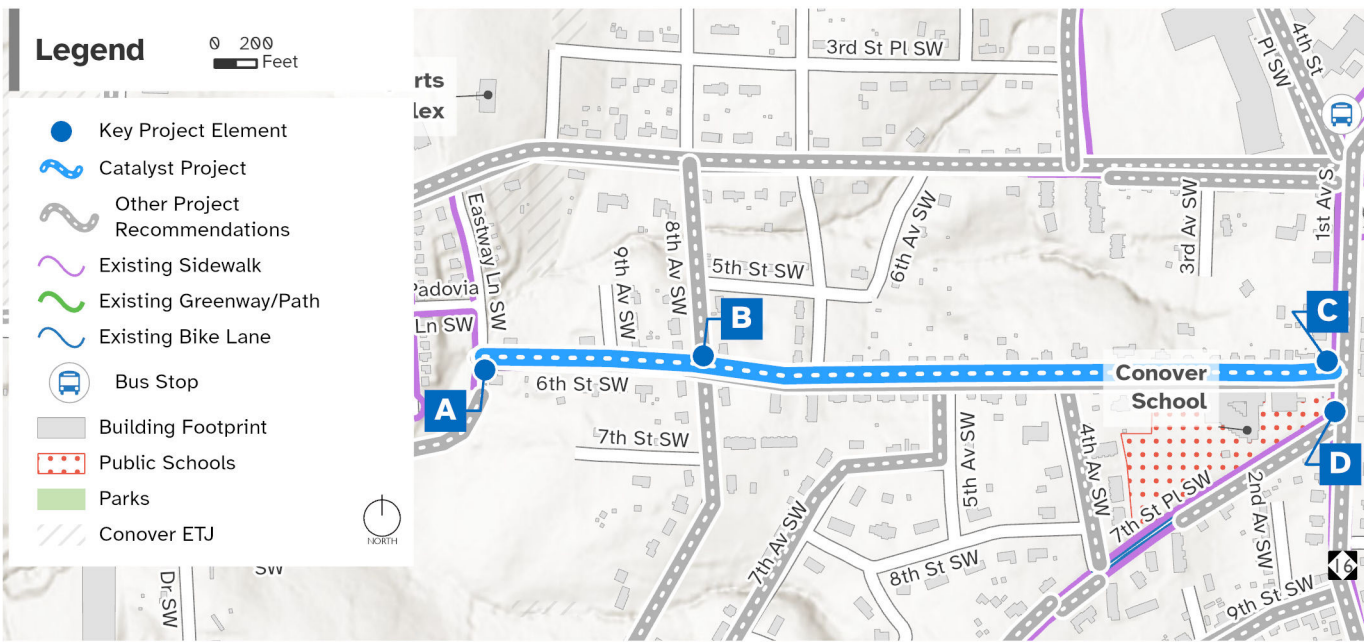


Source: City of Conover

This planned crossing is part of the 1st Street project to install bike lanes and a multiuse path along this corridor (NCDOT STIP Project C-5624). An RRFB (Rectangular Rapid Flashing Beacon) increases pedestrian safety by significantly enhancing visibility to drivers, thereby reducing the likelihood of crashes at crossings.

Sidewalk and crossings will help make 1st Street much more accessible.

## 6TH STREET SW SIDEWALK (CITY)



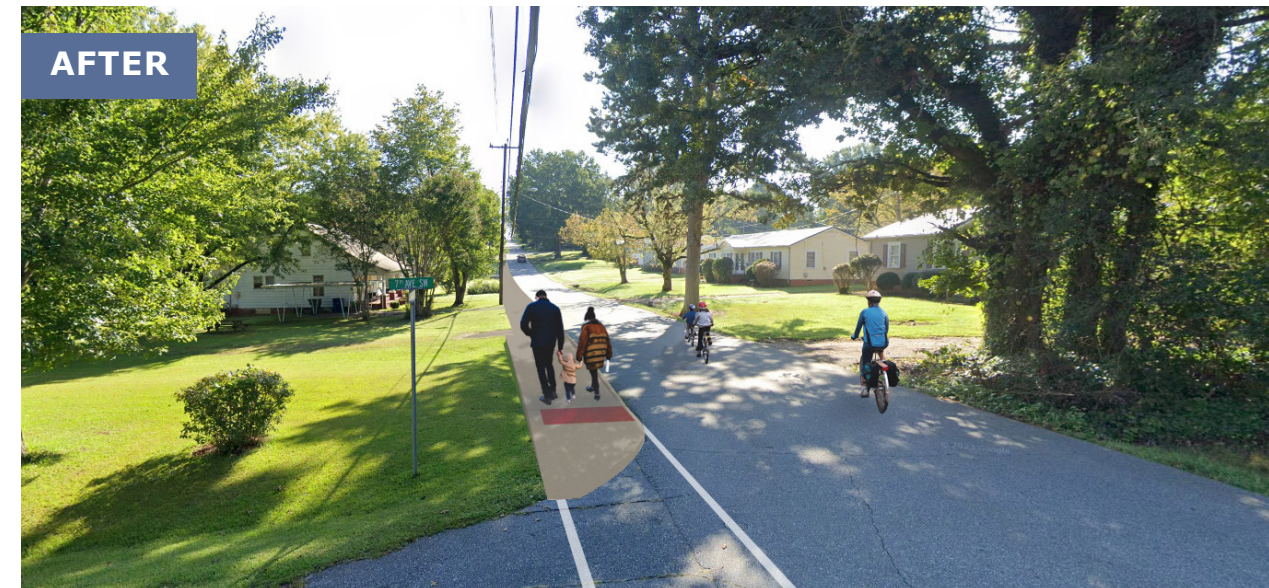
### PLANNING LEVEL COST ESTIMATE

**\$1,809,000**

*Includes Design, Utilities and Construction Per Assumptions from the NCDOT Bicycle and Pedestrian Cost Estimating Tool*

### PROJECT DESCRIPTION

*A 5-foot sidewalk along 6th Street SW from Eastway Lane SW to 1st Avenue South. This would connect the existing sidewalks at Magnolia Place to the city center, enabling residents to walk downtown, Conover Station, and City Park.*



### CONNECTIONS

- o Conover School, bus stop on 1st Ave S, Conover Nursing & Rehab Center, Long Grove subdivision.

### CROSSINGS

- o Crossings at 9th Avenue SW, 8th Avenue SW, 7th Avenue SW, 5th Avenue SW, and 4th Avenue SW.

### KEY ELEMENTS

*\*SEE LOCATION ON MAP BY CORRESPONDING LETTERS*

- A. Direct tie-in with recommended greenway along the creek and the Long Grove subdivision.
- B. Possible links to recommended sidewalks on 8th Ave SW and others.
- C. Bus stop location here makes it possible for many more residents to walk safely to a transit connection.
- D. Recommended signaled pedestrian crossing across 1st Avenue S.



Source: Google Imagery



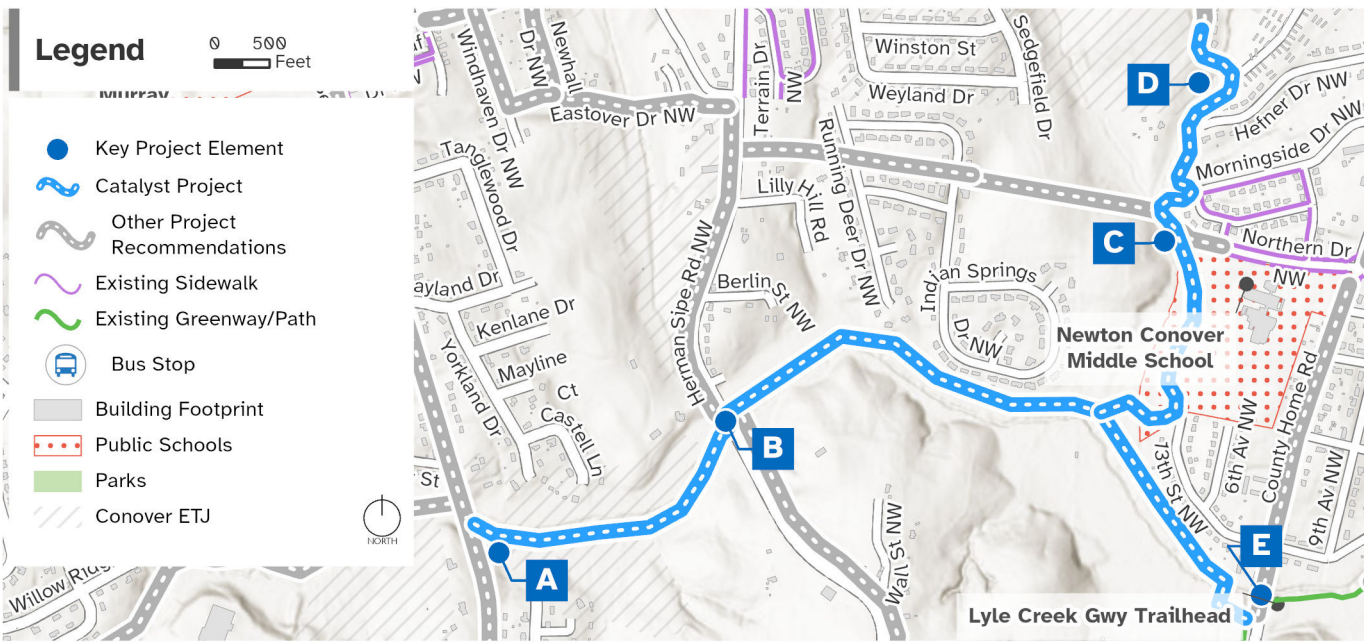
Source: Town of Cary NC

*The corner of 6th St SW and 1st Ave S is a good location for an enhanced bus stop for future transit service, with an ADA loading pad, a bench, shelter, lighting, and bicycle rack.*

*This area has seen a lot of residential growth. People need sidewalk connections to ensure residents have safe, convenient access to public transportation and essential services.*

*Creating a sidewalk along a narrow road enhances safety and comfort for pedestrians by providing a designated walking space separate from vehicle traffic.*

# LYLE CREEK GREENWAY PHASE 2 & CONNECTOR SPUR TRAIL



**PLANNING LEVEL COST ESTIMATE**  
**\$7,575,000**

*Includes Design, Utilities and Construction Per Assumptions from the NCDOT Bicycle and Pedestrian Cost Estimating Tool*

**PROJECT DESCRIPTION**

*Lyle Creek Greenway Phase 2: Greenway along Lyle Creek (from existing Lyle Creek Greenway at County Home Road to Section House Road) along sewer easement. Connector Spur: Greenway along creek (from Lyle Creek to Atherstone St NW, with access to cul-de-sacs at Lyle Haven Dr NW, Hefner Dr NW, and Morningside Dr). This project will need a feasibility study to determine the best alignment.*



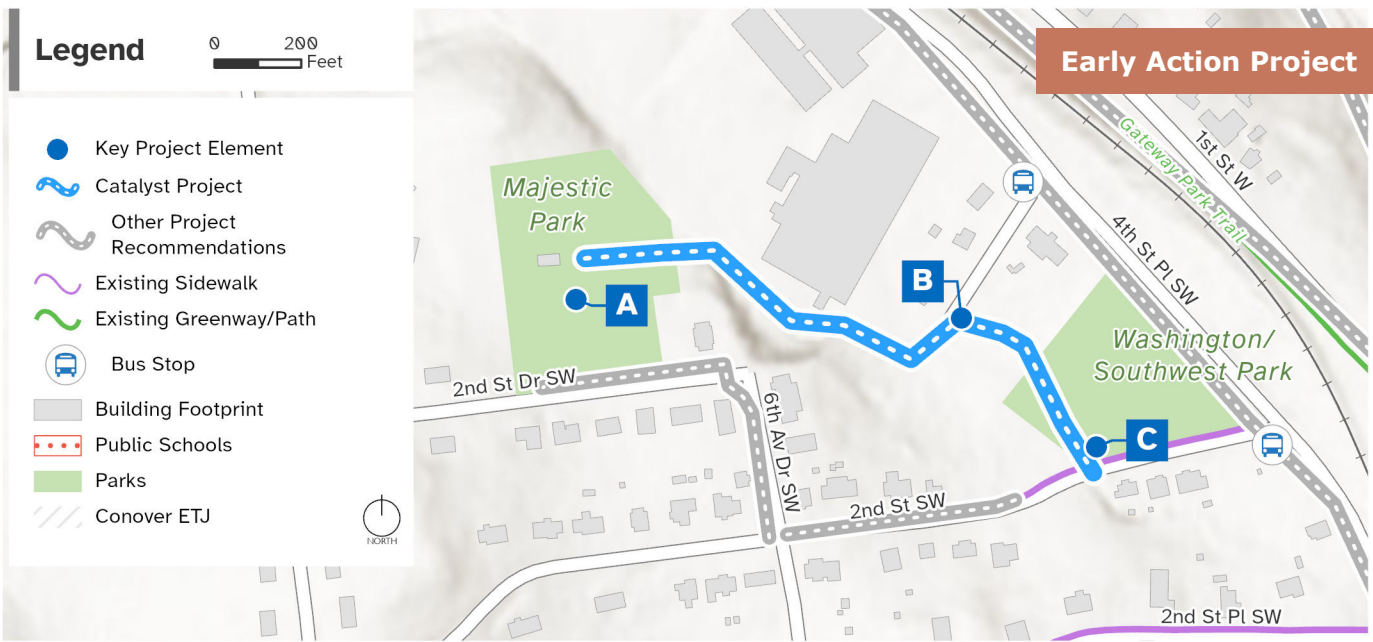
- CONNECTIONS**
- Newton-Conover Middle School, existing residential neighborhoods, new Wagner Glen development (137 units).
- CROSSINGS**
- A crossing at Herman Sipe Road (high visibility, RRFB) and future Northern Drive (planned as part of the Wagner Glen development. One or more creek crossing likely needed).
- KEY ELEMENTS**  
 \*SEE LOCATION ON MAP BY CORRESPONDING LETTERS
- A trailhead/parking area at Herman Sipe Road (Conover City limits) would be useful because there are currently no bike lanes or sidewalks to access the trail.
  - High visibility crossing needed here; potential trailhead/parking location.
  - Connector Spur alignment will depend on Wagner Glen development coordination.
  - Trail connections to each cul-de-sac provide multimodal access to existing neighborhoods.
  - Direct link to recommended multiuse sidepath along County Home Road.



*The existing sewer easement can expedite implementation by providing a pre-established, clear path for development. This reduces the need for additional land acquisition and simplifies the planning process, enabling quicker construction and public access.*

*Clearly marked crosswalks and signage are important for visibility at all crossings. These also provide good locations for parking/trailhead locations.*

# MAJESTIC PARK TO WASHINGTON/SOUTHWEST PARK GREENWAY



**PLANNING LEVEL COST ESTIMATE**

**\$902,800**

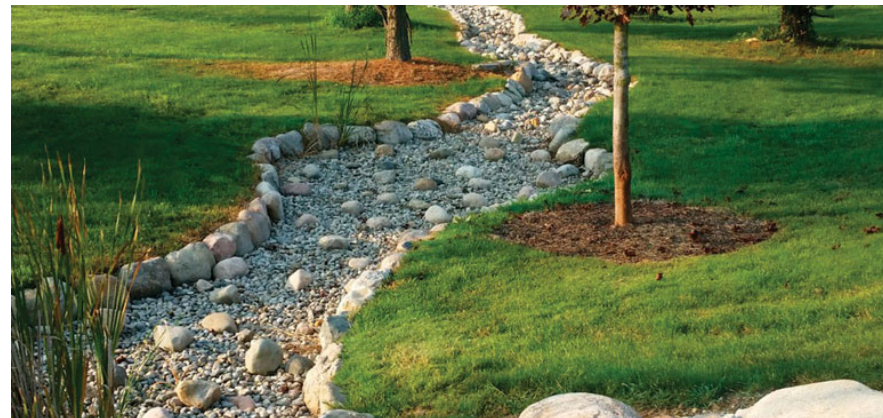
*Includes Design, Utilities and Construction Per Assumptions from the NCDOT Bicycle and Pedestrian Cost Estimating Tool*

**PROJECT DESCRIPTION**

*A 10-foot greenway between the existing recreational trails at Majestic Park and Washington Park, providing a connection between two City parks in this established neighborhood.*



*A recreational trail project can be a good opportunity to use grant funding for stormwater improvements, creating a more sustainable, aesthetically pleasing drainage basin at both of the parks.*



*This project could coincide with improvements at the parks, addressing stormwater, fencing, shade trees, and accessibility overall.*

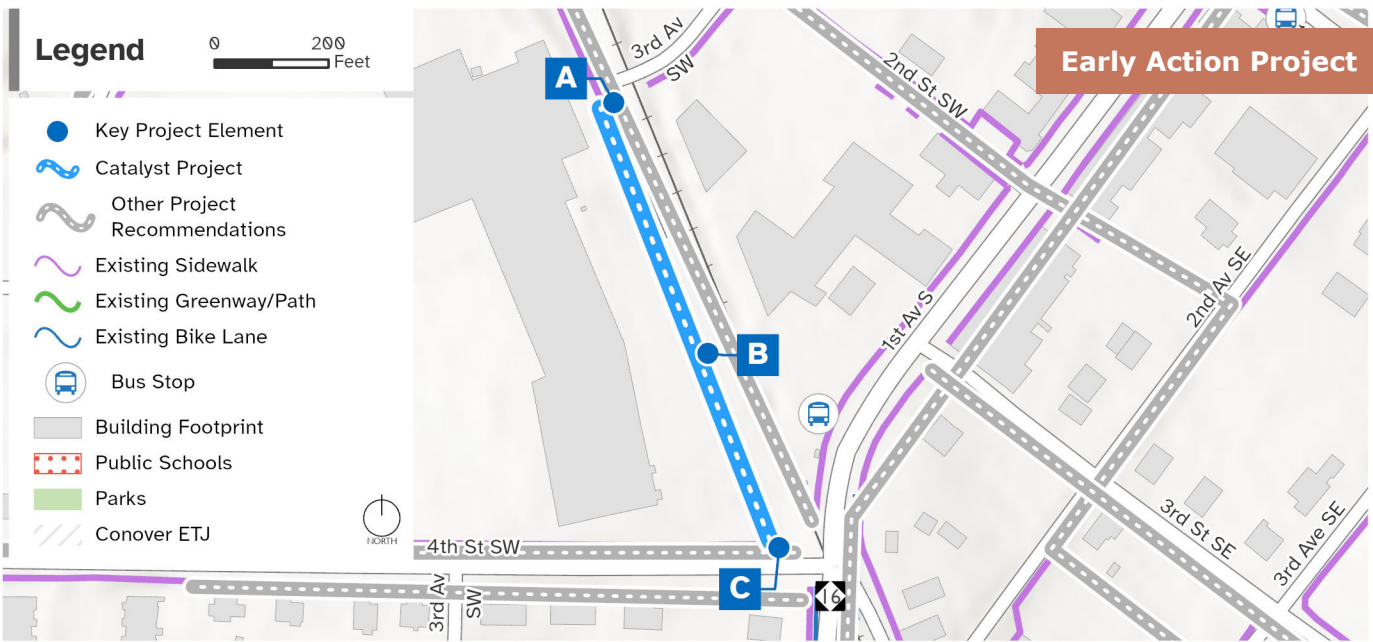


*This bus stop would greatly benefit from improvements such as an ADA-compliant pad, a shelter, and seating. For future transit service, these enhancements would provide better accessibility for individuals with disabilities, protection from the elements, and a more comfortable waiting area for all passengers.*

CONNECTIONS
<ul style="list-style-type: none"> <li>○ Majestic Park, Washington Park, bus stops on 4th St Pl SW.</li> </ul>
CROSSINGS
<ul style="list-style-type: none"> <li>○ A crossing at St Davids Street SE to connect to neighborhood and proposed sidewalk on the south side of Emmanuel Church Road.</li> </ul>
KEY ELEMENTS
<p><i>*SEE LOCATION ON MAP BY CORRESPONDING LETTERS</i></p> <ul style="list-style-type: none"> <li>A. Direct connection to existing walking trail at Majestic Park.</li> <li>B. Possible neighborhood connection at bend in the road.</li> <li>C. Access to Washington Park without affecting the cemetery.</li> </ul>



# 4TH STREET PLACE SW GREENWAY



**PLANNING LEVEL COST ESTIMATE**

**\$975,200**

*Includes Design, Utilities and Construction Per Assumptions from the NCDOT Bicycle and Pedestrian Cost Estimating Tool*

**PROJECT DESCRIPTION**

*A 10-foot greenway from the existing sidewalk at 4th Street Place SW/3rd Avenue SW along the rail line to the existing sidewalk at 4th Street SW/1st Avenue S. This greenway could be used by bicyclists as well, linking to existing bike lanes on 1st Avenue South and recommended Downtown Bikeway on 4th St Pl SW.*



CONNECTIONS
<ul style="list-style-type: none"> <li>Downtown, bus stop on 1st Ave S, major employer (Lee Industries), Washington Park, Conover Station.</li> </ul>
CROSSINGS
<ul style="list-style-type: none"> <li>Improved railroad crossings at each end and a recommended crosswalk at 4th Street SW.</li> </ul>
KEY ELEMENTS
<p><i>*SEE LOCATION ON MAP BY CORRESPONDING LETTERS</i></p> <p><b>A.</b> Improved railroad crossing (z-gate or at-grade crossing) for pedestrians.</p> <p><b>B.</b> Possible location for a railroad crossing to City parking lot.</p> <p><b>C.</b> Improved railroad crossing (z-gate or at-grade crossing) for pedestrians and new high visibility crosswalk.</p>



Source: LA Times



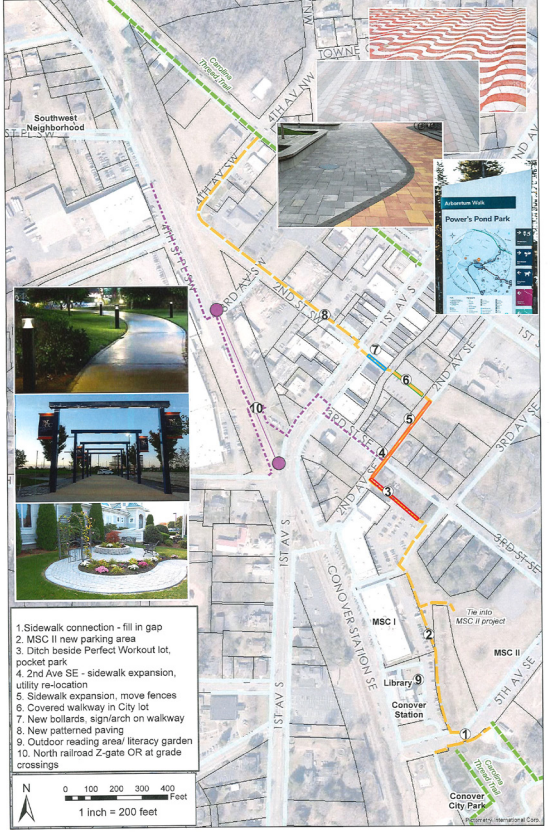
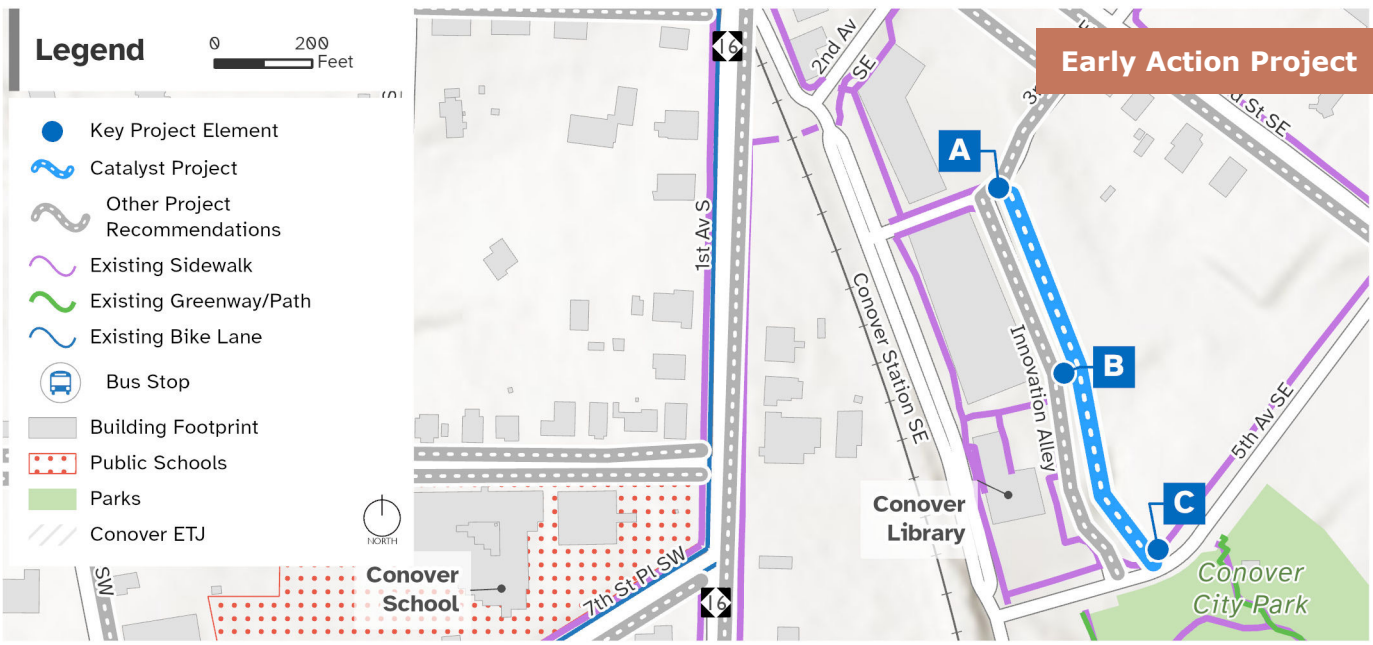
Source: Google Imagery

*Railroad crossing improvements must be coordinated with Norfolk Southern. They can have accessible sidewalk continuity, as well as features like gates, flashing lights, and audible signals.*

*This roadway connection was abandoned but is still an important link in the multimodal transportation network.*

*This project will need to be an appropriate distance from the rail line and have chain link fencing separation.*

# 10 INNOVATION ALLEY GREENWAY



Source: City of Conover



This would be an important recreational amenity and transportation facility.

CONNECTIONS
<ul style="list-style-type: none"> <li>Conover Station (Manufacturing Solutions Center, Conover Branch Library, restaurants), City Park, downtown.</li> </ul>
CROSSINGS
<ul style="list-style-type: none"> <li>A midblock crossing to connect the cut-through sidewalk to Conover Station SE.</li> </ul>
KEY ELEMENTS
<p>*SEE LOCATION ON MAP BY CORRESPONDING LETTERS</p> <ul style="list-style-type: none"> <li>A. Transition here to Downtown Bikeway on 3rd Ave SE.</li> <li>B. Improved crossing to link with Conover Station cut-through sidewalk.</li> <li>C. Pinch point likely will require retaining wall and a narrower cross-section (&lt;8').</li> </ul>

## PLANNING LEVEL COST ESTIMATE

### \$180,000

Includes Design, Utilities and Construction Per Assumptions from the NCDOT Bicycle and Pedestrian Cost Estimating Tool

## PROJECT DESCRIPTION

A 10-foot multiuse sidepath along Innovation Alley (from 3rd Ave SE to 5th Ave SE). This project would provide a bicycle and pedestrian connection through this growing neighborhood and create an extension of the City Park trail system. It would be part of the City's Downtown Bikeways program, along with 3rd Street SE and 3rd Avenue.

The City is exploring options to link the City Park trails to Gateway Park as part of the Carolina Thread Trail, weaving through downtown to make the connection. Connect Conover's Downtown Bikeways and project recommendations support this endeavor.

Map 20. Proposed Intersection Improvements

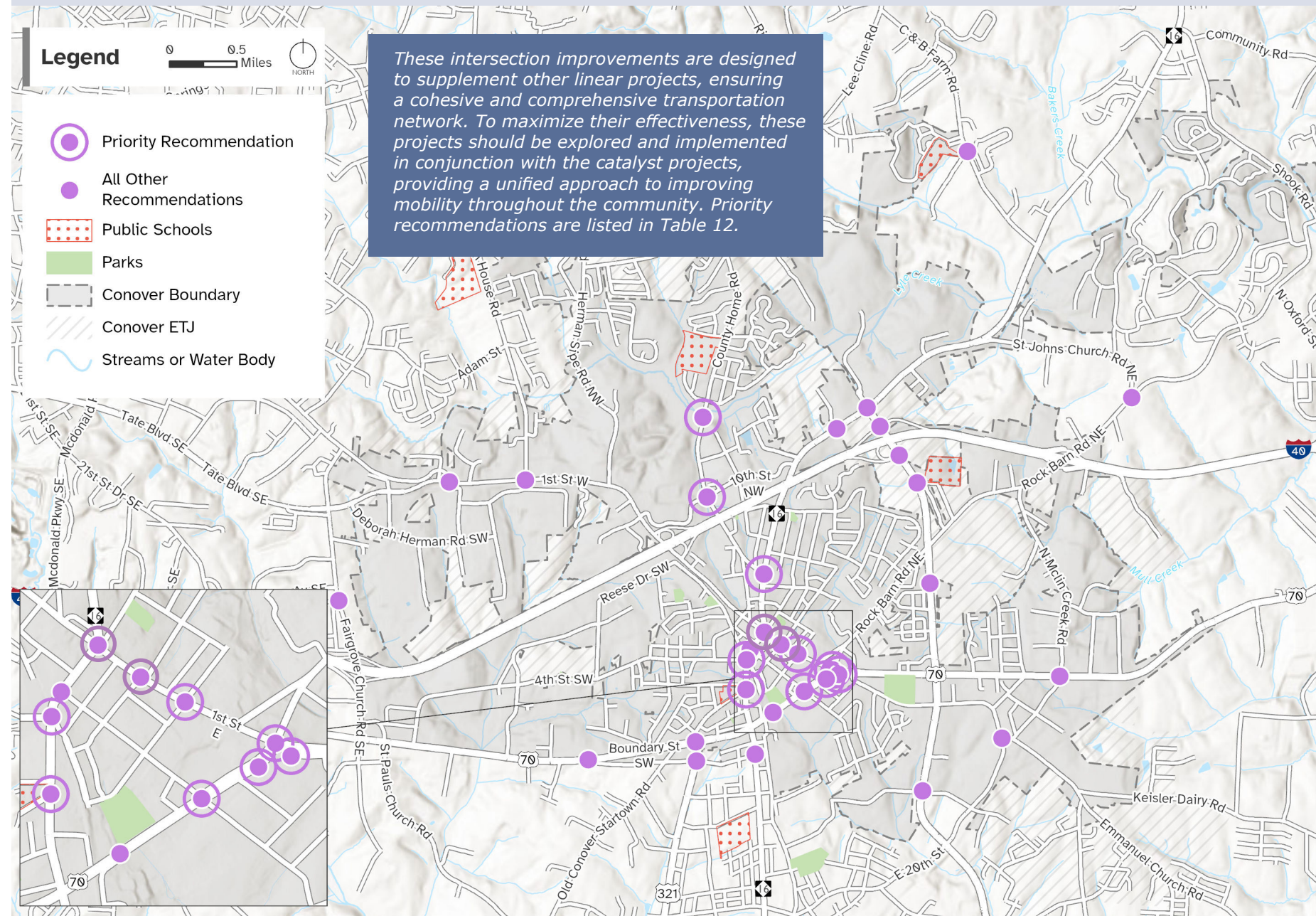


Table 12. Proposed Priority Intersection Improvements

INTERSECTION	FACILITY TYPE	NOTES
1st Ave S & 7th St PI SW	Signalized crosswalk with pedestrian countdown across 1st Ave S.	This would connect existing and proposed sidewalks. Included in the 2008 Pedestrian Plan.
1st Ave S & 4th St SW/Conover Station SE	Crosswalk across 4th St SW, with improved railroad crossing; Explore feasibility for a high visibility pedestrian crossing across 1st Ave S with refuge island (north of train tracks).	Would connect to proposed sidewalk and greenway projects and improve railroad crossing accessibility. Included in the 2008 Pedestrian Plan.
1st Ave S & 3rd St SE	Pedestrian signals across 1st Ave S with leading pedestrian interval.	This would improve visibility and help people cross comfortably. Included in the 2008 Pedestrian Plan.
1st Street & 1st Ave	Add pedestrian signals across all lengths (excluding 2nd Ave N) with leading pedestrian interval and countdown.	High need for overall connectivity. Included in the 2008 Pedestrian Plan.
1st St E & 3rd Ave SE/NE; 1st St E & 5th Ave SE/NE	Pedestrian crossing across 1st St E with refuge island and RRFBs (see 30% design concept for 1st St E).	The existing sidewalk ends at 5th Ave SE, so this would give people a place to cross. It would be an important addition to several proposed sidewalk projects. This is a good interim facility before the Five Points intersection can be improved and would connect two walkable/bikeable neighborhoods.
3rd St SE & Conover Boulevard	Signalized pedestrian crossing across Conover Boulevard.	This project is a key part of the catalyst project on Conover Boulevard, connecting neighborhoods to downtown and improving access to parks.
Conover Blvd & 1st St E	Pedestrian crosswalk and/or "trail crossing" signs across the slip lane; Signalized pedestrian crossing to Rock Barn Road.	This area can be greatly improved for pedestrian safety and overall access (between existing and proposed facilities).
1st Ave N & County Home Road	High visibility crosswalk across 1st Ave N.	This will be a key connection between existing sidewalk on 1st Ave N and proposed multiuse path on County Home Rd.
10th St NW & County Home Road	Signalized pedestrian crossing across County Home Rd; Crosswalk across 10th St NW.	Important connection between proposed projects on County Home Road and 10th St NW.
County Home Rd & Lyle Creek Greenway	Enhanced trail crossing at existing Lyle Creek Greenway access.	Improve visibility for people on the greenway crossing County Home Road. Will be even more important once proposed projects are completed in the vicinity.

NOTE: These projects were not scored, as these projects vary significantly in parameters and costs. Each project addresses different aspects of the transportation network, offering diverse benefits and challenges.

### Other Considerations for Walking & Biking

The work of pedestrian and bicycle system planning also includes finer details such as addressing pedestrian crossings along each project length, calming and slowing traffic in conflict zones, providing access to transit and meeting ADA (accessibility) standards. This section focuses on the nuanced, yet necessary, details that ensure that the network is well-designed and suitable for all.

### Roadway Crossing Treatments

Creating a fully accessible community for all transportation modes requires designing facilities that prioritize comfort, convenience, and safety. This includes not only corridors but also areas where pedestrians and cyclists interact with street crossings, trails, and driveways (access points). Therefore, selecting and designing crossing treatments is important, following standards and guidance from state and federal authorities. **Map 19 - Proposed Intersection Improvements** shows a number of intersections in Conover that could be upgraded, especially as adjacent bicycle and pedestrian projects are implemented. The Appendix details best practices for roadway crossing treatments based on state and national recommendations.

### Streetscaping

Communities across North Carolina have implemented streetscaping to control speeds, create a welcoming environment, and spur economic development. Enhanced streetscapes improve streets, sidewalks, and crossings, creating vibrant spaces with shade trees, seating, artwork, and lighting, which enhance appeal and safety. Studies show that greener, more aesthetically pleasing streetscapes increase foot traffic and boost retail sales, supporting vibrant commercial areas and inviting community spaces.

**Image 57 - Streetscape Elements** illustrates the benefits of streetscaping.

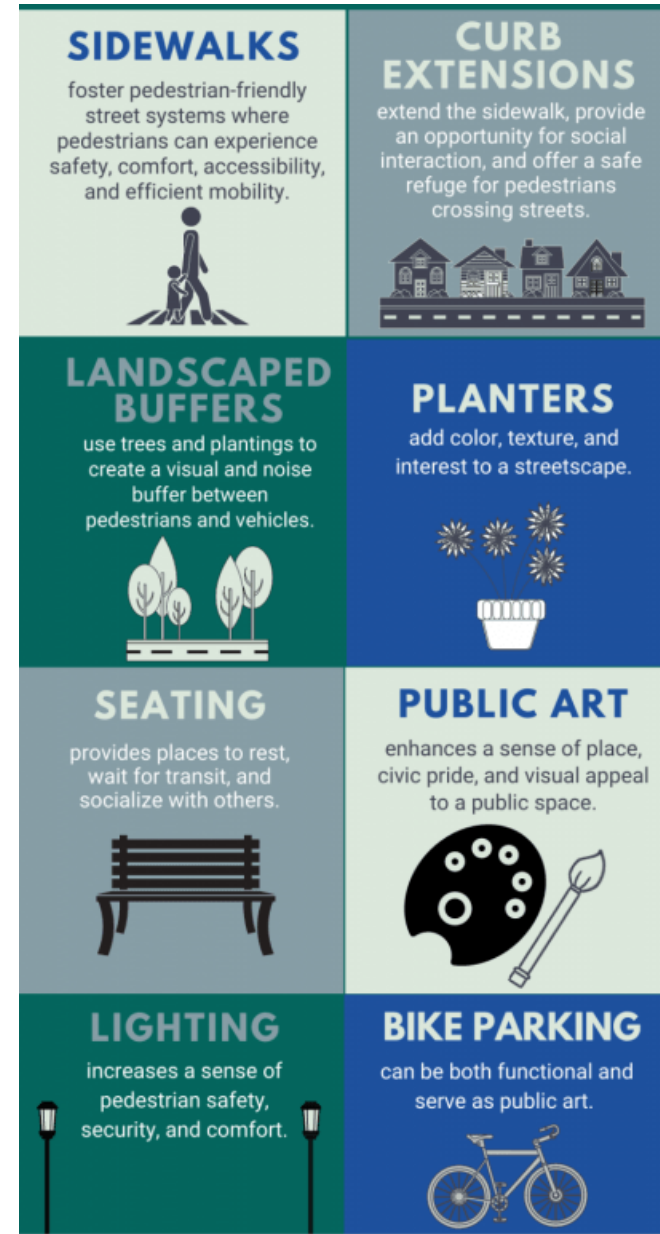


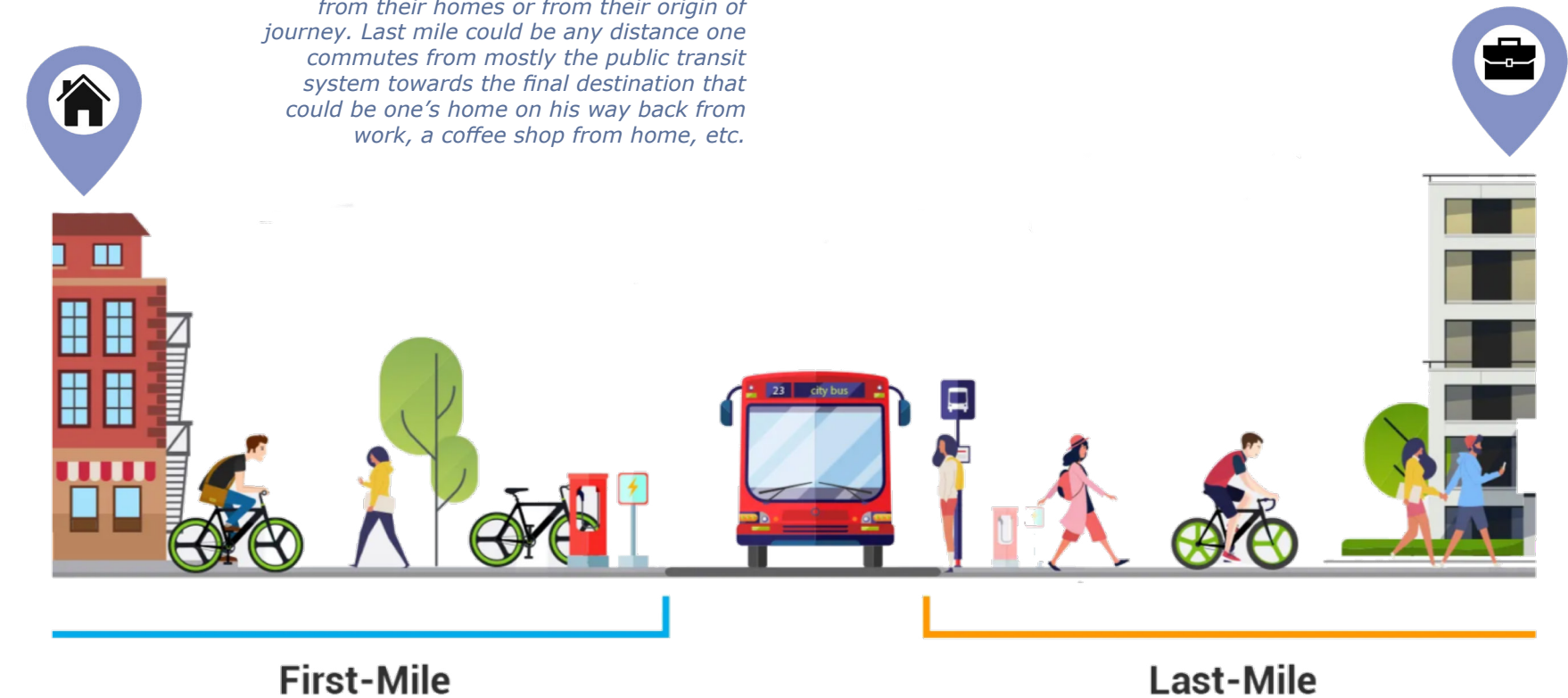
Image 57. Streetscape Elements (Source: Delaware DOT)

### Access to Transit

Ensuring easy access to bus stops is essential for a successful transit system, recognizing the synergy between transit, walking, and bicycling. Each mode complements the others, enhancing overall transportation effectiveness. Walking and bicycling play pivotal roles in the last mile concept, which focuses on bridging the gap between transit stops and final destinations. For future transit service, Conover can integrate sidewalks that lead directly to bus stops and ensure bike-friendly infrastructure such as racks and lanes near transit hubs. This approach not only improves access to public transit but also promotes active lifestyles and reduces reliance on personal vehicles, contributing to a more sustainable and interconnected mobility network for the community.

Image 58. First & Last Mile Concept (Source: Adapted from ONN Bikes)

*First mile could be any distance which one travels to reach to the public transit system from their homes or from their origin of journey. Last mile could be any distance one commutes from mostly the public transit system towards the final destination that could be one's home on his way back from work, a coffee shop from home, etc.*



### **Accessibility for All**

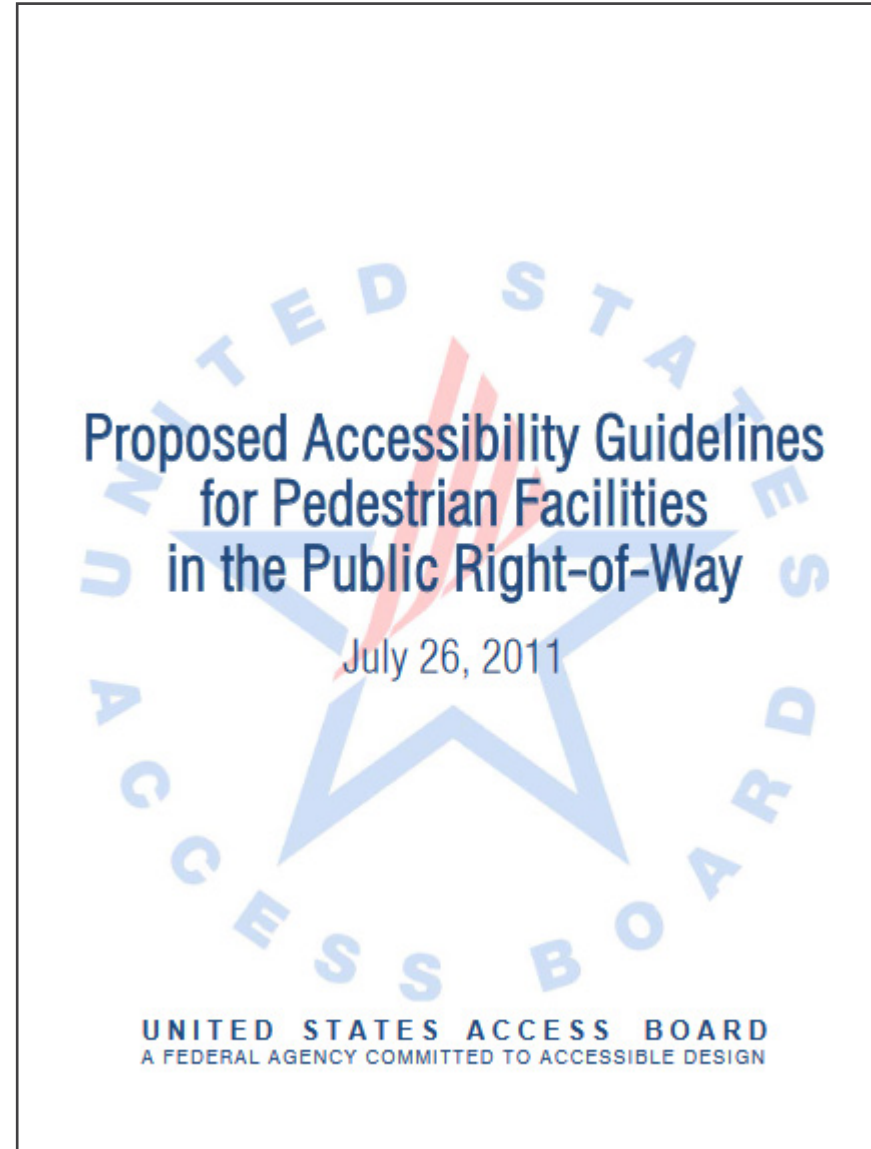
The Americans with Disabilities Act (ADA) of 1990 is a landmark civil rights law that prohibits discrimination based on disability. Under Title II of the Act, cities and towns are required to develop plans that ensure equal access and accommodations for all individuals, regardless of disability status.

Substandard sidewalks, street crossings, and other elements in the public right-of-way can present significant accessibility challenges. For many people with disabilities, the multimodal network serves as their primary or sole means of transportation. According to the American Community Survey, as of 2021, over 1 in 10 Conover residents (13%) reported having some form of disability<sup>23</sup>. Achieving an equitable transportation system necessitates ensuring that individuals with disabilities can navigate freely without encountering barriers.

The US Access Board has developed the Public Rights-of-Way Accessibility Guidelines (PROWAG) as a set of standards for transportation design. PROWAG specifically addresses access for individuals to sidewalks, streets, crosswalks, curb ramps, street furnishings, pedestrian signals, parking, bus stops, and other elements within public rights-of-way. The goal of these guidelines is to ensure that wherever pedestrian ways are newly constructed or modified, accessibility is provided for individuals with disabilities, offering them the same convenience, connectivity, and safety as the general public. As Conover upgrades and expands its sidewalk network, it is imperative that these facilities adhere to ADA standards to ensure accessibility for all residents.

Image 59. Public Rights-of-Way Accessibility Guidelines (Source: US Access Board)

*These Guidelines Propose Accessibility Guidance for the Design, Construction and Alteration of Pedestrian Facilities in the Public Right-of-Way*



### **Endnotes**

23 U.S. Census Bureau (2023). Disability characteristics, 2017-2021 American Community Survey 5-year estimates. [Data set]. <https://data.census.gov>



Source: Hickory Daily Record

# 05 Plan Implementation Strategies

# 05 Plan Implementation Strategies

**“Traffic signals need to be better coordinated (timed) to allow people to safely get across.”**

– Survey Respondent

## IMPLEMENTING THE PLAN

*Connect Conover* is an action-oriented plan built on community feedback. For the plan to be effective, it requires a clear implementation strategy that outlines the next steps for achieving its vision. This Implementation Plan specifies a timeframe for implementation, designates a lead agency, identifies key partners, and establishes performance measures to evaluate success. This approach enables the City to be strategic yet flexible as opportunities arise.



Image 60. Local Partnerships (Source: TPD)  
Local and regional stakeholders, including those who comprised the project steering committee, will play a key role in the implementation of *Connect Conover*.

### How to Use this Plan

It is important to note that this plan will not be led exclusively by the City of Conover; its success will require collaboration with volunteers, regional and state agencies, local partners, the private sector, and non-profit organizations. Many of these partners were instrumental in developing this plan and include the following groups and organizations.

#### Conover City Council

The City Council will adopt the plan document and oversee its implementation. They are responsible for amending the zoning code and making other policy-related decisions. Additionally, the City Council can make budget decisions related to the plan and guide collaboration with NCDOT and the Greater Hickory Metropolitan Planning Organization (GHMPO).

#### City Staff

City staff can coordinate with the GHMPO and NCDOT on funding and project implementation, work with the Council on project development, seek development regulations and opportunities to expand the walking and biking network, and develop programmatic activities within the community.

#### Greater Hickory Metropolitan Transportation Organization (GHMPO)

The GHMPO will be responsible for coordinating funding opportunities between the City, Catawba County, and NCDOT. This includes funding projects through the State Transportation Improvement Program (STIP) as well as other opportunities. The GHMPO will also assist NCDOT to incorporate *Connect Conover* projects into long-range transportation planning efforts for the region, helping to make sure that local needs are vocalized on a broader scale.



## WHAT IS AN MPO?

*Metropolitan Planning Organizations (MPOs) play an important role in local transportation planning in urbanized areas, as part of a federal mandate. These areas are required to establish a planning process that is Comprehensive, Continuing, and Cooperative (the three Cs of transportation planning). This process is mandatory for urbanized areas with populations over 50,000 to qualify for federal transportation funding.*

*The MPO process involves a partnership between local and state governments to make transportation planning decisions and fulfill federal requirements for transportation funding. The Greater Hickory Metropolitan Planning Organization is a part of the Western Piedmont Council of Governments and serves the transportation needs of all 28 local governments in Alexander, Burke, Caldwell, and Catawba Counties.*

**Community & Business Members**

Conover has a dedicated group of community and business members who volunteer their time to improve the city and advocate for needed changes and improvements. Much of the progress over the years in developing Conover Station, City Park, and the Lyle Creek Greenway would not have been possible without these people and their tenacity and passion. Friends, neighbors, and family members also generate public support for walking and biking by talking to others in the community and raising awareness with elected officials. Ultimately, this engagement and communication leads to better projects.

**Catawba County & Neighboring Municipalities**

Coordination with the County on pedestrian and bicycle projects is particularly critical as areas just outside of the city limits have important connectivity opportunities and may see future growth. It is critical that the City and County work together to achieve connections, develop maintenance agreements, and coordinate on policy decisions. Conover shares a border with Newton, Claremont, and Hickory, with important roadways along those borders. Communication with Newton and Hickory about transportation needs along these borders will help make sure that each community can agree on specific infrastructure recommendations.

**Carolina Thread Trail**

The Carolina Thread Trail will play a role in the implementation process for key greenway projects as they advance. Serving as a foundational network, the Thread Trail will connect various greenway segments, creating a seamless and extensive system of trails that enhance regional connectivity. Its established framework and resources will support the development of new greenways, ensuring they integrate smoothly into the broader trail network. By leveraging the Carolina Thread Trail, greenway projects can benefit from coordinated planning, funding opportunities, and community engagement, ultimately fostering a more interconnected and accessible outdoor recreational infrastructure.

**NCDOT Division 12**

There are ample opportunities to foster close coordination with Division 12 of NCDOT. These include projects in the STIP, resurfacing or roadway/bridge reconstruction projects, and other key funding opportunities.

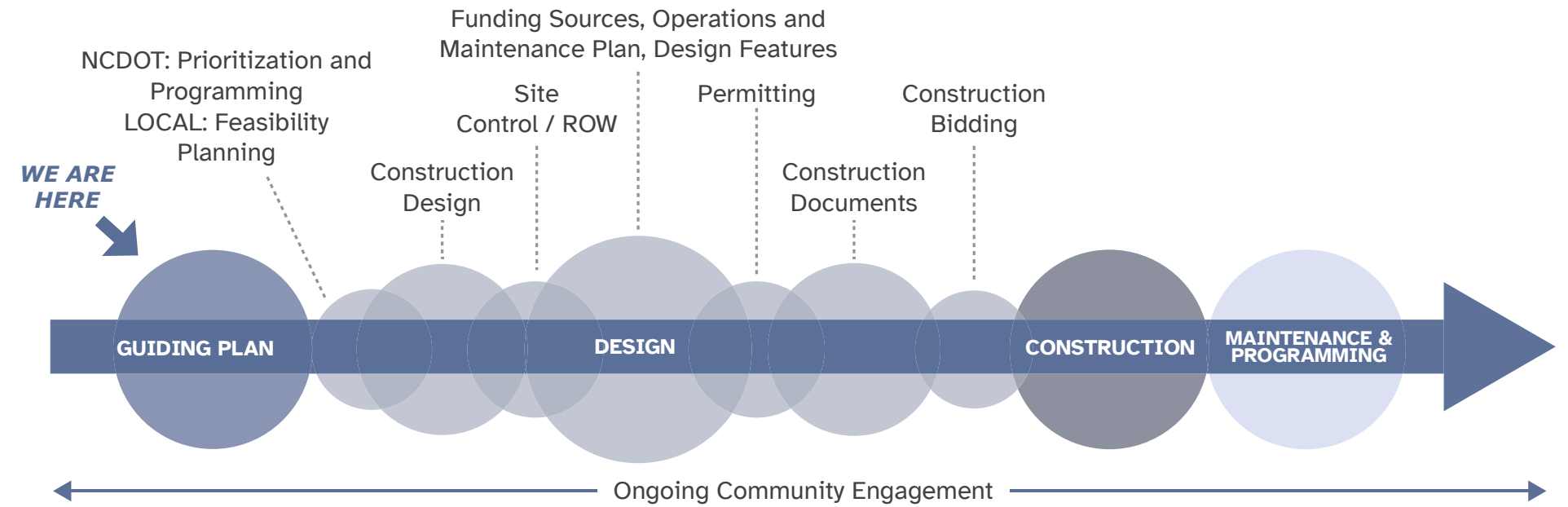
**NCDOT Integrated Mobility Division**

Based out of Raleigh, this division of NCDOT develops guidance on bicycle and pedestrian policy and complete streets, which is critical to project development, and maintains the Pedestrian and Bicycle Infrastructure Network (PBIN), a geodatabase that includes data on proposed multimodal facilities throughout the state of North Carolina. They also provide funding of future updates to *Connect Conover* and feasibility studies, which can include more detailed analysis of greenway alignments and help move a specific project closer to implementation.

**Developers**

Private developers can significantly contribute to Conover’s sidewalk, greenway, and bike lane development through ordinance requirements and fee-in-lieu programs. By adhering to ordinances that mandate the inclusion of these amenities in new construction projects, developers directly support a more connected and accessible community. While the City of Conover offers a fee-in-lieu program, which allows developers to contribute financially when on-site construction isn’t feasible, having developers build the sidewalks, greenways, and bike lanes as part of their projects tends to be quicker and can mitigate future cost increases. This proactive approach not only streamlines infrastructure development but also ensures timely enhancements to the city’s pedestrian and bicyclist network, improving mobility, safety, and quality of life for residents.

Figure 13. Life Cycle of a Transportation Project



Connect Conover serves as a guiding plan for future transportation projects, helpful for securing funding and support for subsequent phases. Investing in these preliminary planning efforts establishes a solid foundation and engages key partners to share in the challenges and opportunities of this work.

**Life Cycle of a Multimodal Project**

*Connect Conover* serves as the “Guiding Plan,” marking the initial phase in the lifecycle of a transportation project and aiding in securing funding and support for future stages. Before NCDOT initiates roadway construction, extensive planning, studies, and efforts are required. This comprehensive and phased process begins with developing long-term plans that identify the area’s transportation needs and priorities.

During the planning stage, these needs are assessed using a data-driven scoring process, helping to prioritize funding allocation and ultimately leading to the construction of

transportation projects. Each proposed project undergoes review, ranking, and scoring based on specific criteria such as safety, congestion relief, and cost-benefit analysis. NCDOT, in collaboration with the GHMPO, uses these scores and rankings, along with additional factors, to determine which projects will receive funding within the 10-year State Transportation Improvement Program (STIP).

Subsequently, projects are “programmed” for development, design, and construction according to available funding. The STIP is updated every two years to ensure it accurately reflects the state’s current financial situation and addresses local needs.

### Phasing Infrastructure Projects

As projects move forward, various planning and design phases may overlap and repeat, depending on the project type, number of partners, and complexity. Some things to consider as the City of Conover pursues implementation of the recommendations in this Plan include:

#### Partner Identification and Coordination

Foster strong relationships across various organizations and agencies. Early engagement with jurisdictional, permitting agencies, and key stakeholders is crucial for project advancement.

#### Develop a Design Concept

Creating a conceptual design can help guide project discussions, offering a visual reference for partners and stakeholders to review, aiding in funding efforts, and gathering community feedback. This plan includes several design concepts for key projects in an effort to aid in moving implementation forward.

#### Identify Funding Sources

Explore and identify various funding sources and revenue streams to cover construction and project costs. Money for transportation projects can come from state agencies, the federal government, grants from nonprofits, or City funds. Some of these possible sources are summarized in this chapter.

#### Pilot Projects

Implementing pilot projects or temporary pedestrian, bicycle, or transit facilities can be effective for testing ideas, gaining support, collecting data, and addressing urgent issues. Temporary installations can last from several weeks to years until permanent solutions are in place. It is a good idea for projects to remain for at least 30 days to allow for public adjustment. Evaluate these projects through data collection and feedback from the community and partner agencies. The findings can inform long-term project decisions and design elements.

### Data Collection

Gather data before and after project implementation to provide insights for future project phases and identify areas needing further improvement or similar projects elsewhere.

#### Detailed Design Development

Once funding is secured, develop detailed construction documents. These are essential for obtaining permits and guiding the construction process.

### The Action Plan

The Action Plan detailed in the following pages outlines the recommendations for action steps (administrative, infrastructure, policy, and programmatic) to advance the implementation of *Connect Conover*. Each action is categorized as immediate, near-term, mid-term, or long-term, depending on the ease of implementation, project sequencing, and level of need. The action items are not listed in any specific order of priority, as priorities may shift based on project partnerships and funding opportunities. Therefore, this action plan is designed to be a flexible and guiding resource, accommodating necessary adjustments as needed.

### USDOT'S SAFE STREETS & ROADS FOR ALL (SS4A) GRANT PROGRAM

<https://www.transportation.gov/grants/SS4A>

Table 13. Action Plan

RECOMMENDED ACTION	LEAD	PARTNER	TIME FRAME	HOW WILL SUCCESS BE MEASURED
<b>Immediate Term (0-1 Year)</b>				
Adopt <i>Connect Conover</i> as the City's Pedestrian and Bicycle Plan. This allows the Plan to become the official planning document for the city and shows intention to support implementation over time. The Plan should be shared with regional and state partners for inclusion in other planning documents.	City Council	City Staff, Steering Committee, NCDOT, MPO, Catawba County, Local Jurisdictions	2024	Adopted Plan.
Determine baseline data for the recommended performance measures.	City Staff	MPO, NCDOT, Catawba County	2024-2025	Baseline data codified.
Work with NCDOT Division 12 to review their 3- or 5-year resurfacing program to identify possible opportunities on the horizon for pedestrian and bicycle project implementation through restriping roadways that are on the HMIP.	Steering Committee, NCDOT, MPO	MPO	2025	Annual coordination meeting agenda and minutes.
Establish and adopt a Complete Streets policy and Vision Zero policy for the City of Conover. These can supplement <i>Connect Conover</i> and bolster decision-making for future roadway projects.	City Staff	City Council	2025	Policies adopted.
<b>Near Term (1-3 Years)</b>				
Incorporate recommendations from <i>Connect Conover</i> into concurrent local and regional plans, such as small area plans, the MTP, and passenger rail planning.	City Staff, County Staff, NCDOT, MPO	City Council	2025; Ongoing	Amendments to Plan documents and communication with partner agencies as needed.
Work with Greenway Transit to perform a bus stop inventory and assessment to evaluate and score the accessibility, comfort, and safety of each stop.	County Staff, City Staff	NCDOT, MPO	2025 or 2026	Inventory conducted.
Develop a plan for an annual analysis of walking and bicycling-related crashes.	City Staff	MPO, NCDOT, City of Newton	2025 or 2026	Established plan for examining and responding to persistent crash locations.

Table 13.. Action Plan (Continued)

RECOMMENDED ACTION	LEAD	PARTNER	TIME FRAME	HOW WILL SUCCESS BE MEASURED
Organize an Open Streets event (5th Avenue SE, 2nd Avenue NE, or other areas) for walking and rolling. Celebrate a car-free environment and support local businesses through these community-focused events.	City Staff	MPO	2025 or 2026; Annually (at least)	Open Streets event held.
Partner with neighboring municipalities to create a Catawba County Multimodal Transportation Advisory Committee. Work together to identify strategic walking, bicycling, and transit connections between municipalities.	City Staff, County Staff	MPO	2025-2026	Committee formed (by-laws established).
Partner with Greater Hickory MPO and NCDOT on Corridor Studies for key NCDOT roadways as described in Chapter 4.	City Staff	MPO, NCDOT	2025-2027	Corridor Study conducted.
Advance at least one project (crossing, sidewalk, Downtown Bikeways, or multiuse path segment) from the proposed multimodal network. Create a dedicated budget line item to fund multimodal facility projects and programs.	City Staff	NCDOT, MPO	2025-2026	At least one project in the design phase.
<b>Mid-Term (3-5 Years)</b>				
Begin setting the groundwork for the top-scoring projects. Develop a feasibility study for at least one project.	City Staff	City Council, MPO, NCDOT	2025-2027	Feasibility study for one of the project recommendations.
Establish the Downtown Bikeways program with branding sign and design standards for approved traffic calming elements	City Staff, Planning Board	City Council, NCDOT, Volunteers	2025-2027	Parameters finalized and adopted.
Establish a preferred walking loop around Conover. These routes should include comfortable neighborhood paths and key corridors, promoting pedestrian-friendly environments, and be expanded once new multimodal investments have been made.	City Staff	Volunteers	2025-2027	Walking loop mapped and made available online. Weekly or monthly walking group organized.

Table 13. Action Plan (Continued)

RECOMMENDED ACTION	LEAD	PARTNER	TIME FRAME	HOW WILL SUCCESS BE MEASURED
Identify a funding strategy for expanding the Lyle Creek Greenway system, working with Carolina Thread Trail.	City Staff, Carolina Thread Trail	MPO, NCDOT	2025-2026	At least one (1) grant applied for.
Based on the results from the bus stop inventory, upgrade bus stops with concrete pads, accessibility ramps, and shelters. Enhance these stops with art and amenities created by the community.	Greenway Transit, Catawba County	City Staff, City Council, Local Businesses	2026; Ongoing	At least one (1) bus stop upgraded to standard minimum.
Work with partners to install new bike racks at parks, schools, bus shelters, and key destinations (e.g., hospital, greenway trailheads, shopping)	Catawba County, City Staff	City Council; Local developers	2026; Ongoing	Bike parking installed.
Review City- and County-owned parcels, including unopened or excess rights-of-way for open space and trail purposes.	City Staff	Planning Board, Catawba County	2025-2028	Overview/map of parcels with potential for use as open space or trail connections.
Develop a plan to utilize utility corridors for greenway use, following best practices from the Rails-to-Trails Conservancy. ( <a href="https://www.railstotrails.org/build-trails/trail-building-toolbox/basics/utilities/">https://www.railstotrails.org/build-trails/trail-building-toolbox/basics/utilities/</a> )	City Staff	Duke Energy	2027	Draft plan created.
Pursue a Safe Streets and Roads for All (SS4A) grant. This can be a partnership with Hickory and Newton.	City Staff	MPO, NCDOT	2025-2028	Grant awarded.
<b>Long-Term (5+ Years)</b>				
Update <i>Connect Conover</i> in 5-10 years. If any projects or programs have been completed, a new set of priorities should be proposed.	City Staff, Steering Committee	City Council, NCDOT, MPO	2035	Initiated planning process.
Work with Catawba County to improve all bus stop locations in Conover (with ADA concrete pads, rain shelters, and benches).	Catawba County, City Staff	City Council; NCDOT; MPO	2030-2040	Bus shelter improved. Allocate funding on an annual basis until all stops are at a minimum standard.

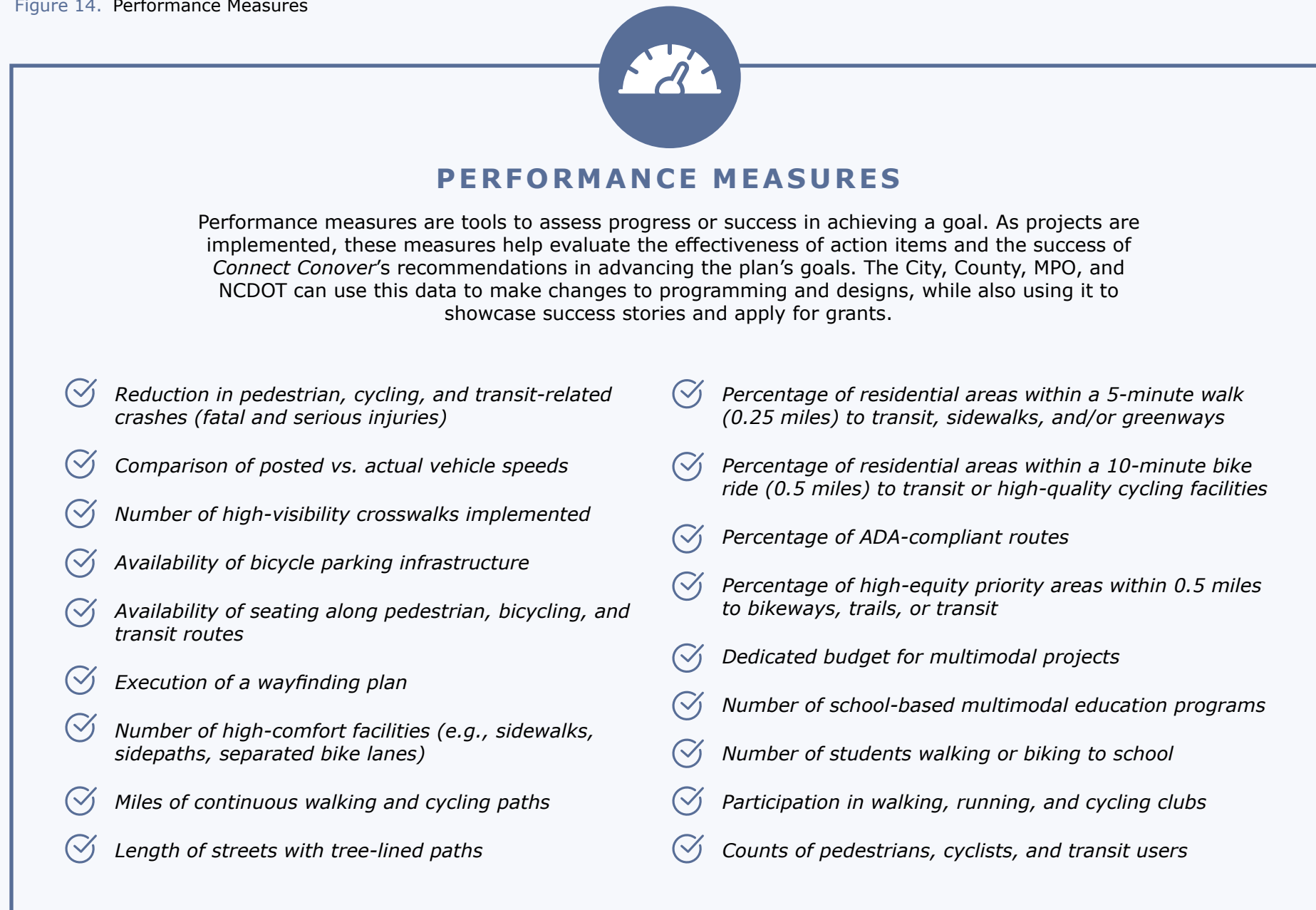
Table 13. Action Plan (Continued)

RECOMMENDED ACTION	LEAD	PARTNER	TIME FRAME	HOW WILL SUCCESS BE MEASURED
Install permanent pedestrian and bicyclist counters on key greenway access points to generate hourly data over multiple years. Some methods include inductive loop and infrared sensors.	City Staff	MPO	2035	Hourly data of users on the City's greenways.
As the City implements extensions to the Lyle Creek Greenway and other connections, plan for a pedestrian- and bicycle-scale wayfinding system to indicate destinations, distance, and direction. This can help people orient themselves to bus stops, trails, and destinations.	City Staff	City Council, MPO, Carolina Thread Trail	2028-2030	Draft wayfinding system.
Collaborate with Catawba County Schools, Newton-Conover City Schools, and private schools in Conover to conduct a safety audit in each school zone to identify improvements to crossings, drop-off/pick-up, bicycle amenities, ADA accessibility, and bus access.	Catawba County Schools, Newton-Conover City Schools	City Staff, NCDOT	2030	School zone safety audit completed.
Develop a park connectivity plan for nearby parks, including those managed by Catawba County, Newton, and Hickory, prioritizing greenway connections between parks (e.g., City Park to Northside/Broyhill Park).	City Staff, Catawba County	City of Hickory, City of Newton, City of Claremont	2030	Park Connectivity Plan drafted.
Follow guidance in Chapter 5 related to ordinances and City policy. Use recommendations as a guide to research, develop, and adopt policy changes.	City Council, City Staff	Planning Board	Annually	Ordinance updates as needed.
<b>Ongoing</b>				
Evaluate <i>Connect Conover</i> implementation progress by analyzing performance measures.	City Staff	NCDOT	Ongoing	Annual review of Action Plan implementation.
Collect data on the number of pedestrians and cyclists using the Lyle Creek Greenway. This can be done by enlisting volunteers or partnering with the MPO/NCDOT to obtain loaner equipment for counting purposes.	Steering Committee, Volunteers	MPO, NCDOT	Ongoing	Data collected annually (at the same time of year, preferably).

Table 13. Action Plan (Continued)

RECOMMENDED ACTION	LEAD	PARTNER	TIME FRAME	HOW WILL SUCCESS BE MEASURED
Continue to coordinate with the Carolina Thread Trail regarding extensions to the Lyle Creek Greenway and connection spurs to the City Park trail, as well as branding inclusion and fundraising support.	City Staff, Volunteers	Carolina Thread Trail, MPO	Ongoing	Attendance at annual Thread Trail Forum in Mooresville; attendance at workshops and meetings.
Continue to celebrate walking and biking with events like bicycle rodeos for kids and supportive programs like walk-to-school and bike-to-school events to help generate excitement about walking and bicycling to school.	City Council	Catawba County Schools, Newton-Conover City Schools, NCDOT, MPO	Ongoing; at least annually	Annual Walk- or Bike-to-School event.
Ensure that <i>Connect Conover</i> recommendations are implemented as a part of new development in the city, working with developers so they understand the need for specific facility types along adjacent roadways.	City Staff	City Council	Ongoing	New multimodal connections included in development process.
Promote local run, walk, and bike clubs or groups on the City's event calendar, newsletter, and social media pages.	City Staff		Ongoing	Promotional content posted.
Continue a relationship with Norfolk Southern Corporation and Amtrak to discuss walking and bicycling treatments across the tracks and reestablishing an Amtrak station in Hickory or Conover.	City Staff	City Council, Amtrak, Norfolk Southern, NCDOT	Ongoing	Representation on the Western North Carolina Rail Committee.
Improve regional multimodal connections to enhance overall accessibility and integration of various transportation options.	City Staff, MPO	NCDOT, City of Hickory, City of Newtown, Catawba County	Ongoing	New intercity links for bicycling and walking.

Figure 14. Performance Measures



**SUPPORTING ACTIVE TRANSPORTATION SUCCESS**



Figure 15. Supporting Active Transportation Success

**Supportive Programs & Policies**

Creating a pedestrian and cyclist-friendly community requires joint efforts from partners who share a common vision. A guiding document like *Connect Conover* helps translate this vision into actionable projects, but implementing physical infrastructure is only one part of achieving Conover's goals for safer and more connected roadways.

Beyond engineering solutions, maintaining a culture of multimodal transportation in Conover depends on various community programs and government policies. This often involves partnerships with local and regional organizations, governmental agencies, businesses, schools, and tourism entities, all of which play a role in their success. Additionally, adapting local policies to establish clear standards and streamlined processes is essential for advancing infrastructure projects in collaboration with developers and agencies like NCDOT. This ensures Conover is well-equipped to continue improving its transportation system.

## Education & Encouragement Programs

Educational and encouragement initiatives inspire people to walk or bike more often. Positive messaging and supportive programs can boost confidence and foster a culture that celebrates walking and bicycling in Conover. When people feel safe and appreciated while walking or biking, they are more likely to continue these activities. Messages for bicycle and pedestrian education and encouragement should be creative, relevant, memorable, and reflective of Conover's historic charm and local sensibilities. Partners like the Conover Police Department's bicycle patrol can play a vital role by fostering a visible sense of safety and engagement, reinforcing the community's commitment to active transportation. Their presence can serve as a reminder of the city's dedication to safety and support for cyclists. Here are some programs and efforts Conover can consider.

### Watch for Me NC

Watch for Me NC is a media campaign led by NCDOT in collaboration with local communities to reduce bicycle and pedestrian crashes with vehicles. The campaign includes educational messages on traffic laws and safety, along with high-visibility strategies for local law enforcement. These local programs are usually managed by municipal, county, or regional government staff with support from various stakeholders. During NCDOT's annual call for applications, Conover could apply for a grant to distribute educational materials at City Hall, the library, downtown shops, schools, parks, and local events. More information can be found [HERE](#).

Image 61. Children in Conover Ride Bicycles (top) (Source: TPD)

Image 62. E-Bikes Provide Mobility Options (bottom) (Source: TPD)

*Programming efforts should be prioritized for youth and senior populations to reach those at the margins of access and ability.*



Image 63. Helmet Giveaway Event (Source: Blue Ridge Conservancy)  
*Conover already shows support for bicycling through events like this NCDOT helmet giveaway. These types of programs help reduce barriers that prevent people from choosing to ride a bike and can make a difference for rider safety.*

## Giveaways

In addition to educational materials, NCDOT has a bicycle helmet initiative funded by proceeds from the "Share the Road" specialty license plate. This program distributes helmets to government and non-governmental organizations conducting bicycle safety events for children. The City of Conover has already participated, giving away dozens of free helmets at a bicycle rodeo event in 2023. Information and the application can be found [HERE](#).

Healthcare organizations are often sponsors of these types of active transportation giveaway items, and local businesses that benefit from bicycle and foot traffic may also be interested in promotional opportunities. A great program to support walking and bicycling in partnership with local health agencies could be a contest for number of steps recorded (since there are many smartphone apps available to track activity), with friendly competition between groups. Small lights and reflective gear – vests, ankle bracelets, stickers – can be particularly useful giveaways for people who walk home after dark and for biking and walking to or from school in the dark.

### Let's Go NC!

*Let's Go NC!* A Pedestrian and Bicycle Safety Skills Program for Healthy, Active Children offers an all-in-one package of lesson plans, materials, activities, and instructional videos designed to teach and encourage children to practice safe pedestrian and bicycle behaviors. This program promotes healthy transportation choices and active lifestyles that can be carried into adulthood. Developed by the North Carolina State University Institute for Transportation Research and Education (ITRE) for the Integrated Mobility Division and Safe Routes to School Program, *Let's Go NC!* aims to instill lifelong safe and healthy habits in children. Teachers and event organizers can access these materials for free [HERE](#).

### Walking and Bicycling to School

Walking and biking to school programs are excellent ways to encourage children to adopt healthy and active lifestyles. “Walking school bus” programs, where groups of students walk to school together with adult supervision, are a popular method. These programs can take place regularly, such as once a week, to maintain momentum without requiring a daily commitment. Events like Walk to School Day in October and Bike to School Day in May aim to promote more walking and biking to school, reduce childhood inactivity, and connect children with their environment. These events can also include walk audits to assess and improve infrastructure around schools. As more of Conover’s schools are connected by sidewalks and greenways with implementation of *Connect Conover*, the City should partner with the school districts to keep these types of programs active and recurrent. Grants for non-infrastructure projects are available through Safe Routes to School to encourage walking and biking to school and to support dedicated staff to coordinate and lead regular events. More information (including programs and other resources) on the NCDOT initiative can be found [HERE](#).

### Open Streets Events

Open Streets events are popular nationwide, encouraging residents to safely ride their bikes and walk around town together. These events involve closing a street to vehicular traffic, allowing it to be used exclusively for walking, bicycling, and other non-motorized activities. Organizers often enhance

Image 64. Walk to School Day (Powell Elementary School in Raleigh) (top) (Source: NCDOT)

*A “Walk to School” day for elementary students promotes physical activity, enhances safety awareness, and fosters a sense of community.*

Image 65. Open Streets Event Example (bottom) (Source: Troy Cooper Hull Photography, LLC)

*People often enjoy wandering freely on an empty street on a beautiful summer day, especially when there is music and other activities.*



Image 66. Pedestrian Wayfinding Signs (Left source: WalkRaleigh and Right source: Roger Wilson Glendale News-Press) Small, low-cost signs like these can highlight Conover’s numerous attractions and serve as reminders that they are within walking distance.

the experience with performers, interactive booths, and more. Open Streets events also provide a great opportunity to demonstrate potential bicycling or walking facilities by installing temporary versions of permanent projects. Conover frequently closes a portion of 5th Avenue SE for events at City Park but shutting down a street to motor vehicle traffic specifically to promote alternative transportation can have a significant impact.

While closing 1st Avenue or 1st Street may be challenging due to through traffic needs and coordination with NCDOT, temporarily closing portions of 2nd Avenue NW/NE, 3rd Street SE, or 5th Avenue SE could promote healthy behavior and support multimodal transportation networks. These events encourage innovative partnerships and can be funded through public and private sources. Health care providers, whose mission

includes promoting physical activity, often sponsor these events. Businesses might also support the event if it attracts customers. Often held on Sundays, partnerships with local churches in Conover could also be explored.

### Informational Signs

Given Conover’s pedestrian-friendly size, it could be practical to offer visitors guidance to key destinations such as the post office, City Park, YMCA, library, City Hall, and greenways. While robust metal signs on support systems are ideal for long-term use, they can be costly. In the interim, small, affordable wayfinding signs serve as effective guides for visitors and reminders for locals about nearby places accessible by walking or biking. These signs can indicate distances in approximate walking or biking times, or in blocks or miles.



Image 67. Walking Club Flyer (top)  
(Source: City of Cooper City FL)

This city-sponsored walking club is a collaboration between the Parks & Recreation department and a local hospital.

Such a system could be developed in collaboration with local health agencies, incorporating thematic elements. It could also involve area artists or students in designing sign templates that reflect specific aspects of Conover’s culture or history. Conover could supplement these with a map of attractions in Conover’s walkable downtown, with suggested walking loops and bike routes. These could be made available online and printed as needed to be actively distributed to residents and visitors. Revisions and regular updates could be created following completion of some of *Connect Conover’s* key projects.

#### Health & Wellness Events

In addition to regular community events, there are several ways to encourage the use of Conover’s downtown walkability, local bicycling appeal, and growing greenway network for recreation and health:

- Partner with healthcare facilities, like the County Health Department, and regional nonprofits to hold public health programs and promotions such as Bike-to-Work and Walk-to-Work Days.
- Plan running and bicycling events in downtown Conover. Events where participants dress in costumes or celebrate special holidays can build group camaraderie and encourage hesitant individuals to join. *Connect Conover* survey participants also highlighted a desire for regular walking groups in the community.
- Establish a community bicycle share or trade-in network through donations of new or recycled equipment. Partner with schools, as children often outgrow their bicycles, ensuring a steady supply of bikes for the program.
- Provide bicycle parking, maintenance workshops, and skills courses for children. These events aim to refine kids’ bicycle handling skills in a fun, non-competitive environment. Children learn to properly fit and wear safety equipment, fix their bicycles, and practice safe riding skills before negotiating an obstacle course to test their abilities.

## PLACEMAKING

A great public space is where people want to be — comfortable, inspired, safe, and engaged, with amenities like seating and playgrounds that invite lingering<sup>24</sup>. The following placemaking ideas can enhance Conover’s downtown revitalization and improve spaces for walking and biking.

Roadways are the largest supply of public space in a community, offering an opportunity to rethink their use and maximize benefits for all Conover residents. Greenways, sidewalks, and other transportation infrastructure not only ensure access to public places but can become destinations themselves. Towns of all sizes are reallocating public rights-of-way to accommodate a greater variety of users, creating functional, healthy, vibrant, and welcoming spaces. Placemaking amenities can make people feel welcome, prioritize safety, and offer fun, engaging designs.

For more ideas about placemaking and grants available through AARP’s Community Challenge, visit this link: [AARP Community Challenge](#)

### PLACEMAKING MUST-DOS:

1. Engage with the community to identify their needs and desires—they know best!
2. Pilot your ideas, collect feedback, and refine accordingly.
3. Make it fun!

“ Cultures and climates differ all over the world, but people are the same. They’ll gather in public if you give them a good place to do it. ”

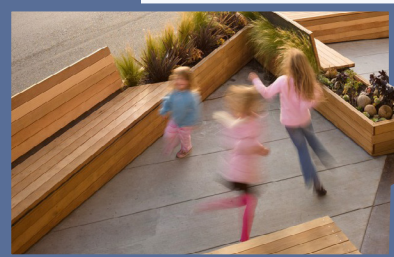
- Jan Gehl, Architect and Urban Designer





**ALLEY ACTIVATION**

(Source: Ed Balint)



**PARKLETS**

(Source: Devils Teeth Bakery)



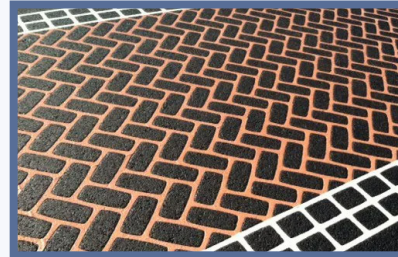
**INTERACTIVE INSTALLATIONS**

(Source: High Museum Atlanta)



**MURALS**

(Source: Salina Journal)



**COLORFULS OR DECORATIVE CROSSWALKS**

(Source: Alternative Parking Concepts)



**PUBLIC SEATING**

(Source: Furnitubes)



**OUTDOOR GAMES**

(Source: WGRD)



**LANDSCAPING**

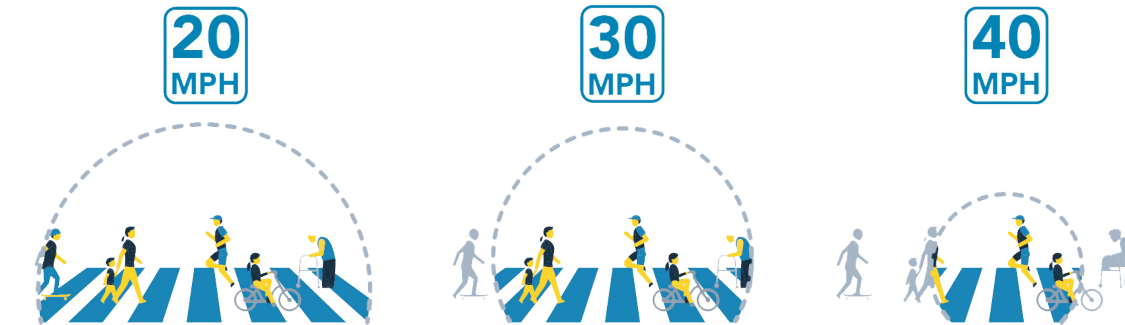
(Source: Wyss Associates)

Image 68. Driver Field of Vision at Different Speeds (top) (Source: NACTO)

Image 69. Driver Reaction and Braking Distance at Different Speeds (middle) (Source: NHTSA)

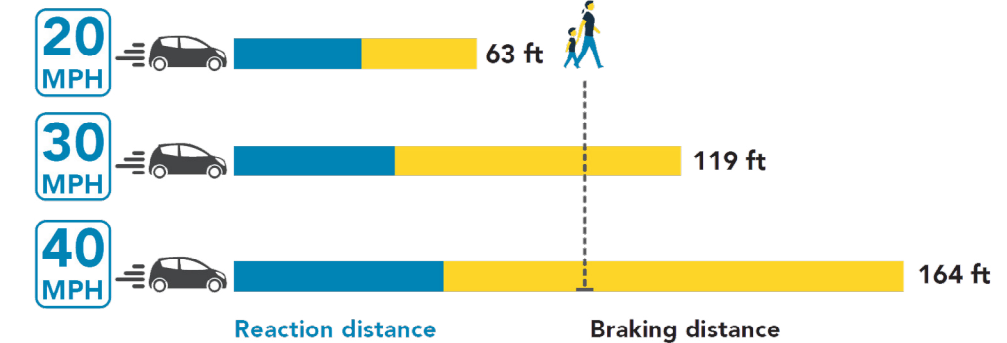
Image 70. Pedestrian Survival Rate by Impact Speed (bottom) (Source: Seattle DOT)

Caption: Higher vehicle speeds significantly increase the risk and severity of pedestrian injuries in the event of a collision. Reducing vehicle speeds in pedestrian-heavy areas can greatly enhance safety and reduce fatalities.

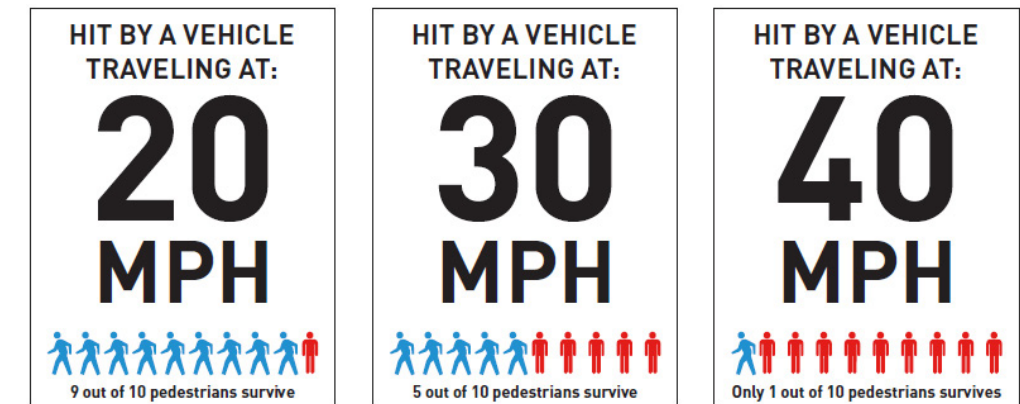


**Speed Management**

Most roadways have widely varying conditions. For example, 1st Street changes from a five-lane section at Tate Boulevard to a two-lane gateway into Conover, then expands to a four-lane roadway with sidewalks and pedestrian crossings through downtown. Each segment of this corridor has different priorities, affecting the desired speed in each section. The speed limit decreases from 45mph to 35mph and then to 20mph upon reaching downtown. While adjusting speed limits can enhance safety, opportunities exist to improve the design of intersections, crossings, shoulders, and sign placements to align with these priorities.



A safe speed study could be conducted for Conover’s primary streets to determine the safest maximum speed limits and address unsafe speeds. Conover might consider a town-wide speed limit reduction or traffic calming measures in specific areas. Chapter 4 outlines key “Downtown Bikeways” that should be prioritized as focus areas for speed management strategies. Downtown Bikeways remind drivers to be mindful of their speed and can physically alter the roadway to limit dangerous speeding. They offer numerous benefits for travelers and residents, including enhanced safety for pedestrians and cyclists through traffic calming measures and shared lane markings (sharrows). These streets promote a more pleasant and walkable environment, encouraging outdoor activities and community interaction, resulting in healthier, more sustainable neighborhoods.



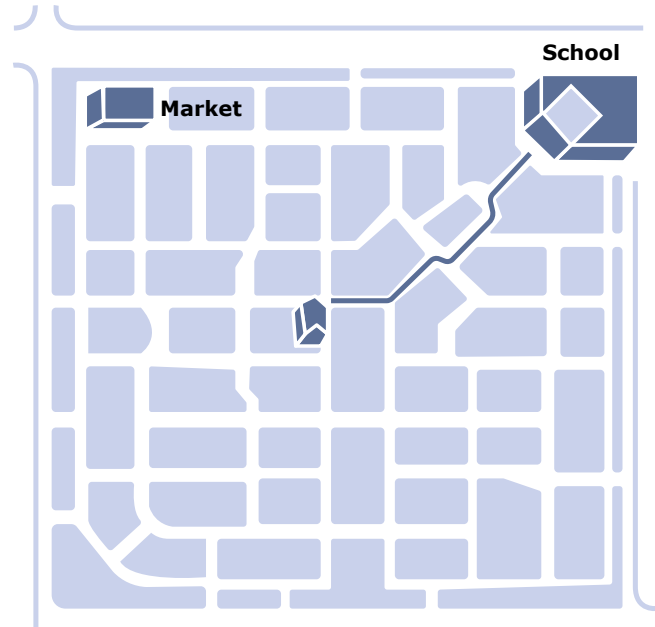
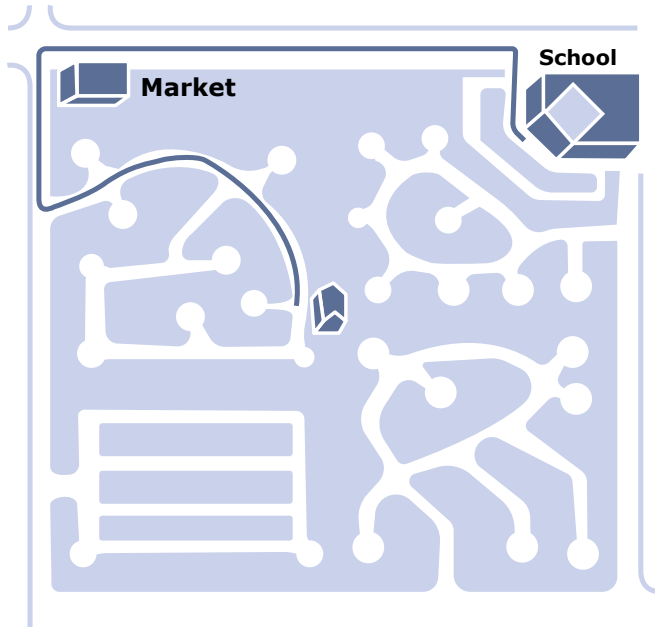
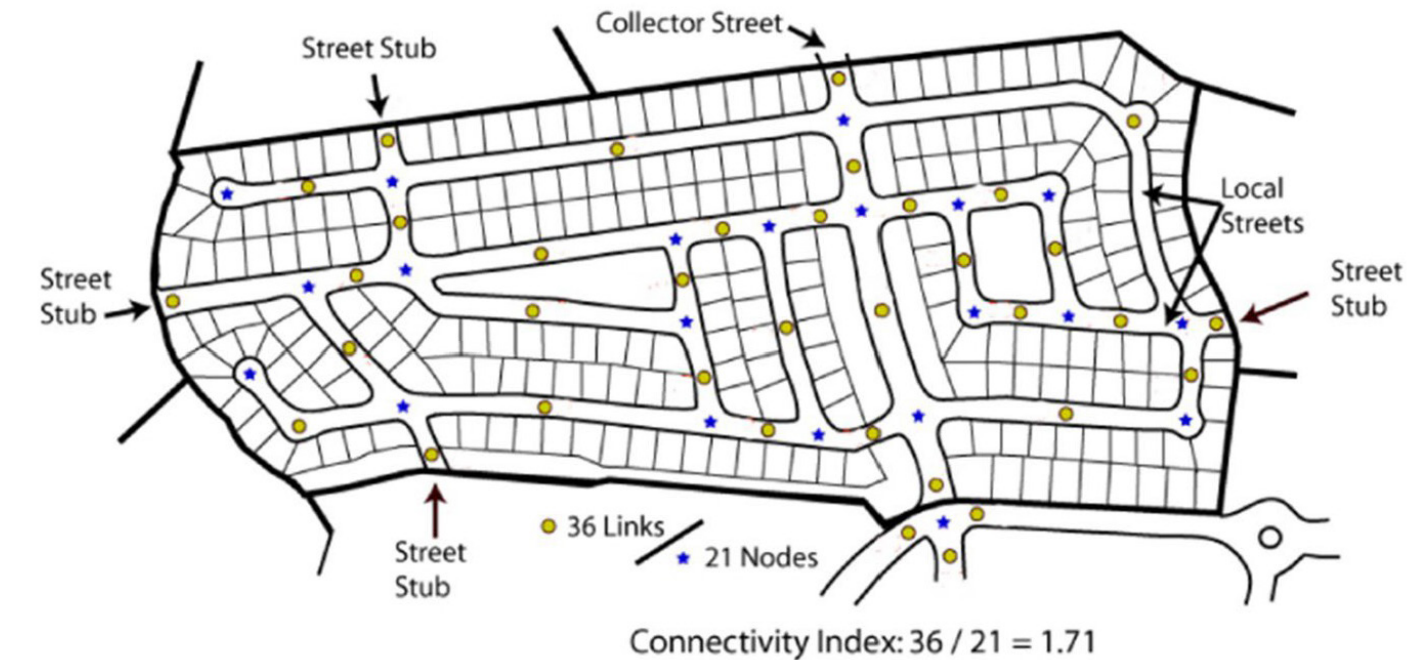


Image 71. Roadway Connectivity  
(Source: TPD)  
These images show how a poorly designed street network can limit options for getting around and make a walking and bicycling less viable.

Image 72. Street Connectivity Index Example  
(Source: City of Hendersonville)

Connectivity of an area can be measured using a connectivity index - commonly defined as the ratio of links to nodes. A subdivision ordinance can specify the optimal ratio for new developments.



## Code of Ordinance and Zoning Recommendations

The planning team reviewed the City of Conover's zoning ordinance and map to understand how they influence the planning of pedestrian and bicycle enhancements. Some possible approaches include zoning reforms that increase the number of residents living in areas where they could bike and walk. Multimodal systems thrive in dense residential and mixed-use areas connected by various facilities. The City of Conover is developing a small area plan, which is an opportunity to integrate land use and urban form policies with transportation policies. Conover's key corridors, along with dormant ex-industrial areas, are ideal locations for the City to evaluate standards related to residential density, mixed-use development, building height, urban form, and streamlined development approvals. By considering land use along the corridors, the City can explore strategies and incentives to encourage denser development in neighborhoods near these corridors, existing commercial areas, and transit routes.

Another good idea is to continue to revisit the city's future land use map, which envisions what Conover might look like with specific zoning revisions. While weighing future land use and policy options during the small area plan process, Conover can consider how to bolster bicycle and pedestrian elements within the regulatory codes. Some of the questions to explore include:

- Promote desired density and development patterns, with standards that support that incremental change, including dimensional requirements (reducing minimum lot sizes and setbacks), parking requirements (rethinking off-street parking minimums and encouraging installation of bike racks), and offering density bonuses for projects along a bus route.

- Consider adopting more comprehensive access and connectivity requirements through the subdivision ordinance, which would lay out more specific parameters for streets and sidewalks in new developments and expansions or alterations of existing developments. Connectivity is achieved by providing connections within individual developments, between developments and by having a well-planned multimodal collector road network to compliment the arterial highway network. Building subdivisions with many cul-de-sacs funnels all local traffic onto a single or very few collector streets, resulting in congestion and overcrowded roadways. Providing a strong connected network of roads and pedestrian facilities can help distribute traffic, reducing travel times, congestion, and walking/bicycling distances. Good connectivity also provides better routing opportunities

for emergency and delivery vehicles.

- Consider amending Article VIII, Section 86.2 of the Subdivision Ordinance to state that sidewalks are required on both sides of all public streets for residential subdivisions. This would help ensure connectivity throughout Conover and push infrastructure costs to developers. Also amend Chapter 19, Article V of the Conover Code of Ordinances to state that all development and new construction projects shall construct sidewalks along boulevards, avenues, and "town" streets.
- Sometimes bike lanes are not constructed to be wide enough, or they do not have a buffer to separate cyclists from motor vehicle traffic. Consider amending Article VIII, Section 82.8.b of the Subdivision Ordinance to state that

bikeways shall be a minimum of five (5) feet wide for directional lanes (per FHWA and NCDOT guidance). Also include that a minimum 2-foot buffer with vertical delineation is recommended for bike lanes, with a 3-foot buffer when adjacent to on-street parking. In constrained situations, narrower widths may be permitted.

- Also amend Article VIII of the Subdivision Ordinance to provide specific design standards for multiuse sidepaths and greenways. The minimum width for a sidepath should be ten (10) feet, with 12 feet preferred. In constrained situations, narrower widths may be necessary.
- Consider changes to Conover’s fee-in-lieu program in tandem with establishing new development infrastructure requirements, to accommodate site challenges (topography, right-of-way) while better supporting the City’s street maintenance fund. Possible changes could include basing the linear foot fee on more accurate construction costs (using recent as-built plans and City capital projects as metrics), adding a statement about proximity to bus stops and ADA accessibility overall.
- Develop a standards and specifications manual for Conover, offering clear direction about roadway design and active transportation criteria. The City’s standards can establish desired sidewalk widths and placement requirements beyond NCDOT’s minimum standards, while also enabling flexibility for exceptions and alternative design solutions. Having these standards in place will help developers understand their responsibilities and make sure that newly constructed streets that become part of the overall public street system are designed and constructed with multimodal connectivity in mind. The ordinance can refer to *Connect Conover* as a guiding document.

## MUNICIPAL STREET STANDARDS & SPECIFICATIONS EXAMPLES

### TOWN OF LELAND, NC

<https://townofleland.civicweb.net/document/28571/>

### TOWN OF HOLLY SPINGS, NC

<https://www.hollyspringsnc.us/DocumentCenter/View/830/Section-3--Street-Details?bidId=>

### TOWN OF SURF CITY, NC

<https://www.surfcitync.gov/DocumentCenter/View/1360/Surf-City-Street-Design-Standards?bidId=>

## ADDITIONAL GUIDANCE ON VISION ZERO & COMPLETE STREETS POLICIES

### NC VISION ZERO INITIATIVE

<https://ncvisionzero.org/>

### THE COMPLETE STREETS POLICY FRAMEWORK (SMART GROWTH AMERICA)

<https://smartgrowthamerica.org/resources/elements-complete-streets-policy/>



## IS THE FEE-IN-LIEU PROGRAM WORKING?

*A fee-in-lieu sidewalk program allows developers to pay a fee instead of constructing sidewalks if their project meets certain criteria defined in the City’s ordinances. When these criteria are met, the developer pays the fee, which is then allocated to a fund for future sidewalk construction in the area according to the standards defined in the ordinance. This program is generally approved as part of a new subdivision, site plan, or building permit.*

*However, Conover’s existing fee-in-lieu program is not generating sufficient funds to be a viable alternative to having developers construct the sidewalk themselves. To address this, the City may*

*need to increase the fee or retool the program. Here are some considerations for improving the fee-in-lieu sidewalk program:*

- *Limit when fee-in-lieu can be used.*
- *Refine the program’s use and approval process.*
- *Address how the program can be applied to other amenities (greenways/trails, bike lanes, etc.).*
- *Identify changes to the fee schedule or fee-in-lieu estimate.*
- *Maintain a record of how funds are used and conduct an assessment on cost/benefit.*



Image 73. Roadway Resurfacing Improvement Example  
(Source: City of Asheville)

Cities are collaborating with NCDOT on routine resurfacing projects to add bicycle and pedestrian system improvements. For example, the City of Asheville and NCDOT added bike lanes, midblock crossings, and vehicle turning lanes on Charlotte Street within the existing footprint of the roadway.

### Roadway Resurfacing Opportunities

Both the City of Conover and NCDOT regularly resurface the streets they manage. The City uses its annual allocation of State Street-Aid (Powell Bill) funds for street resurfacing projects. Meanwhile, NCDOT updates its five-year Highway Maintenance Improvement Program (HMIP), outlining planned preservation, resurfacing, or rehabilitation of roads under its jurisdiction.

Resurfacing projects, along with pavement marking plans, offer a strategic opportunity to enhance multimodal connections. This period allows for immediate improvements, such as installing high-visibility crosswalks or bike lanes, which improve safety by providing separation between pedestrians and vehicles. Additionally, more substantial changes like road diets, lane narrowing to reduce speeding, or reconfiguring parking arrangements can also be integrated into resurfacing initiatives. The City is already pursuing such a reimagining of the 1st Street corridor, making improvements within the existing roadway pavement width and right-of-way. Upcoming resurfacing projects present opportunities for the City of Conover to collaborate with NCDOT on enhancing accessibility and improving crossings along key corridors and bring existing curb ramps into compliance with the Americans with Disabilities Act (ADA).

The HMIP indicates NCDOT’s plan for maintenance to roadways, including preservation, resurfacing/repaving, and rehabilitation. Some HMIP projects on major roadways in Conover include:

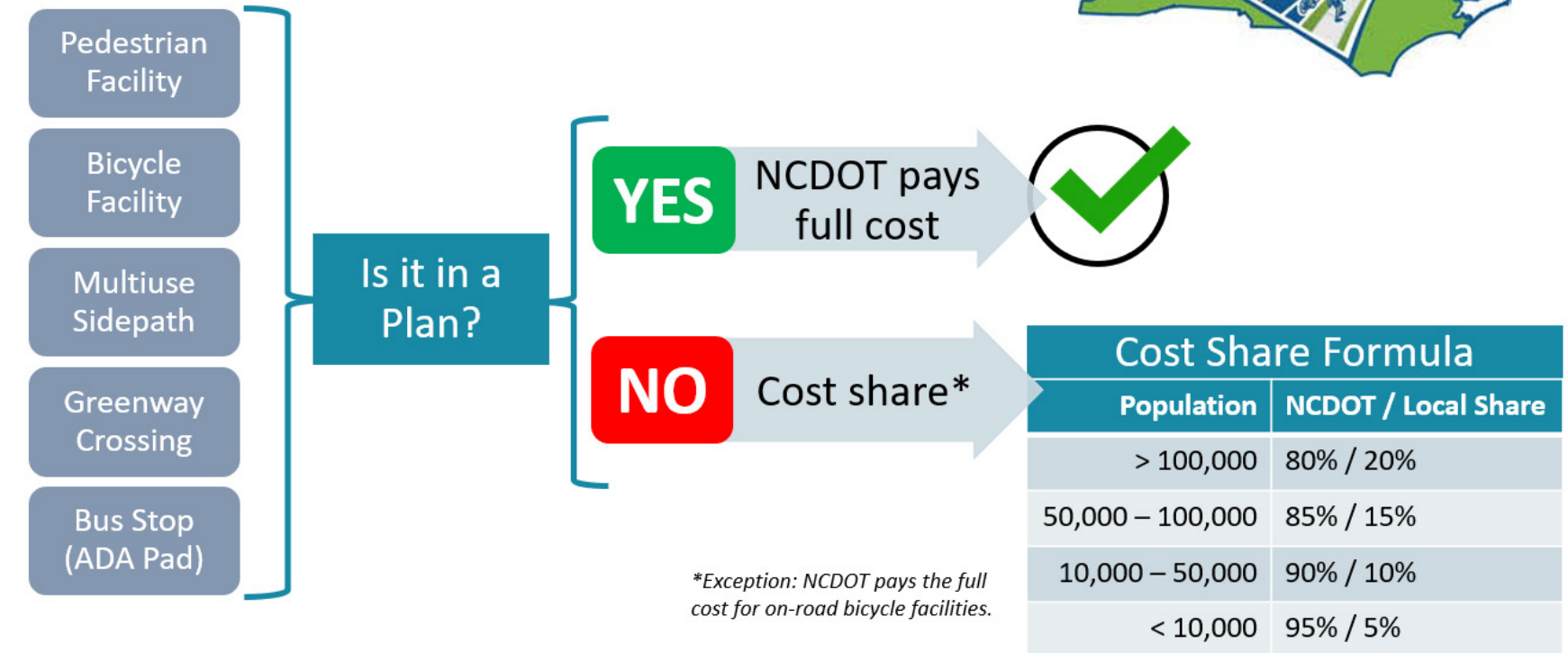
- 2024 resurfacing of 4th St SW (west of Industrial Dr SW)
- 2025 resurfacing of 1st Street W, Fairgrove Church Road, 10th Street NW, and St Johns Church Road NE
- 2026 resurfacing of Conover Boulevard (from 7th Street Pl SW to 1st St E)

Coordination with the HMIP offers opportunities for cost-savings and construction coordination to reduce construction impacts to the community. More information can be found [HERE](#).

### Funding Sources

The Appendix contains a detailed list of potential funding sources for pedestrian and bicycle projects in Conover, including standalone greenway projects through recreation funding grants. As the City begins implementing *Connect Conover*, this list provides key funding sources to consider.

Figure 16. NCDOT Cost Share Formula



(Source: NCDOT)

## Design Guideline Resources

Planners, engineers, and project designers need standards and guidance as they implement pedestrian and bicycle facilities to ensure safety, consistency, and predictability. Historically, the resources to design these multimodal facilities have been limited; while some guidance has existed, it has been limited in its scope to street or geographic contexts and has not offered the nuanced detail needed for certain conditions or applications. Over the last several decades, design guidance has improved, equipping practitioners with the resources to develop ideas and try out innovations seen in other communities and internationally. The result has been multimodal design that is more inclusive to people of all ages and abilities and that can be well-customized to local context, whether urban or rural.

Good pedestrian facility design is the function of many factors, including connectivity, comfort, continuity, and convenience. The following are state and national design guideline resources that collectively work to achieve these multimodal design goals. These resources provide the guidance that planners and designers in Conover need to ensure that the transportation system serves these multimodal users and thereby increases users shifting their mode of transportation.

Table 14. Pedestrian Design Guidance

PEDESTRIAN DESIGN GUIDANCE	
<b>North Carolina Department of Transportation</b>	
Complete Streets Policy A.09.0106	2019 (2022 update to methodology)
Evaluating Temporary Accommodations for Pedestrians	2018
Pedestrian Crossing Guidelines	2018
<b>American Association of State Highway and Transportation Officials (AASHTO)</b>	
Guide for the Planning, Design and Operation of Pedestrian Facilities	2004

Pedestrian and bicycle design is constantly evolving and innovating, so updates of the following resources should be sought out following the publication of this Plan. As designs are complex, it should be noted that treatments must be tailored to individual situations and contexts. Good engineering judgement should always be practiced, and decisions documented.

Table 14. Pedestrian Guidance (Continued)

PEDESTRIAN DESIGN GUIDANCE	
<b>Federal Highway Administration (FHWA)</b>	
Guide for Improving Pedestrian Safety at Uncontrolled Crossing Intersections	2018
<b>Manual on Uniform Traffic Control Devices (MUTCD)</b>	
2009 MUTCD Guidance and Supplemental Information (including NC Supplement)	2009
<b>US Access Board</b>	
Public Rights-of-Way Accessibility Guidelines (PROWAG)	2023
Guide to the Standards	2010
<b>USDOT/Department of Justice</b>	
USDOT ADA Standards for Transportation Facilities	2006
DOT/DOJ Joint Technical Assistance Memos	Varies
ADA Standards	2010

Table 15. Bicycle Design Guidance


BICYCLE DESIGN GUIDANCE	
<b>North Carolina Department of Transportation</b>	
Complete Streets Policy A.09.0106	2019 (2022 update to methodology)
<b>American Association of State Highway and Transportation Officials</b>	
Guide for the Development of Bicycle Facilities	2012
<b>Federal Highway Administration</b>	
Bikeway Selection Guide	2019
Incorporating On-Road Bicycle Networks into Resurfacing Projects	2016
Separated Bike Lane and Planning Design Guide	2015
<b>Manual on Uniform Traffic Control Devices</b>	
2009 MUTCD Guidance and Supplemental Information (including NC Supplement)	2009
<b>National Association of City Transportation Officials</b>	
Urban Bikeway Design Guide	2014

Table 16. Other Multimodal Design Guidance

OTHER MULTIMODAL DESIGN GUIDANCE	
<b>North Carolina Department of Transportation</b>	
Roadway Design Manual	2021
Complete Streets Policy A.09.0106	2019 (2022 update to methodology)
Greenway Accommodations Guidelines	2015
WalkBike NC: The Statewide Pedestrian and Bicycle Plan	2013
<b>Federal Highway Administration</b>	
Strategies for Accelerating Multimodal Project Delivery	2019
Small City and Rural Multimodal Networks Design Guide	2016
Achieving Multimodal Networks	2016
Achieving Multimodal Networks: Applying Design Flexibility and Reducing Conflicts	2016
Guidebook for Developing Pedestrian and Bicycle Performance Measures	2016
<b>National Association of City Transportation Officials (NACTO)</b>	
Transit Street Design Guide	2016
Urban Street Design Guide	2013

**Endnotes**

24 Kaplan, R., Kaplan, S., & Brown, T. (1989). Environmental preference: A comparison of four domains of predictors. *Environment and Behavior*,21(5).



In 2022, NCDOT’s Integrated Mobility Division (IMD) introduced the Project Evaluation Methodology (PEM), offering planners and designers guidance on facility selection and balancing needs within the public right-of-way. IMD’s PEM is focused on facility selection during NCDOT project development, which is especially beneficial for a community like Conover, ensuring projects align with NCDOT’s transportation process and funding mechanisms. The PEM considers pedestrian and bicycle demand, AADT, roadway configuration, and operating speed to assign suitable facility types. For more details on the PEM, see the Appendix and download the following guide [HERE](#).

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facilitate double-sided printing.*

