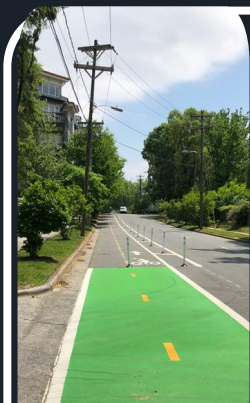




BUILD GRANT GARRISON LEARNS

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PROJECT DESCRIPTION

The City of Gastonia’s **Garrison LEARNS** (Library, Education, Arts, Recreation, Nature, & Science) Project is more than just a transportation project; it aims to transform the transportation infrastructure of the civic core of Gastonia to promote sustainable modes of transportation, enhance connectivity, improve multimodal safety and accessibility, and stimulate economic growth. This is achieved by prioritizing pedestrian-friendly designs and implementing bicycle infrastructure. Moreover, by prioritizing transportation choice, affordability, and environmental responsibility, **Garrison LEARNS** aims to significantly improve the quality of life for everyone in the community as well as serves as the cornerstone of a regional vision for a vibrant, sustainable, and accessible multimodal corridor.

Garrison Boulevard is home to the most significant concentration of civic anchors outside of Gastonia’s downtown core. Those civic anchors include the Schiele Museum of Natural History, Grier Middle School, Gaston County Library Main Branch, Lineberger Park, and the Avon/Catawba Creeks Greenway trailhead. **Garrison LEARNS** encompasses not just a stretch of pavement, but the hopes and aspirations of entire communities. In addition to the key civic anchors mentioned above, the Garrison LEARNS Corridor hosts other significant multimodal generators, including two large churches, several healthcare services, and a variety of local businesses. The corridor is a significant part of the City’s transportation network, providing east-to-west mobility south of the City’s downtown area, while acting as a parallel route to US 74 (Franklin Boulevard).

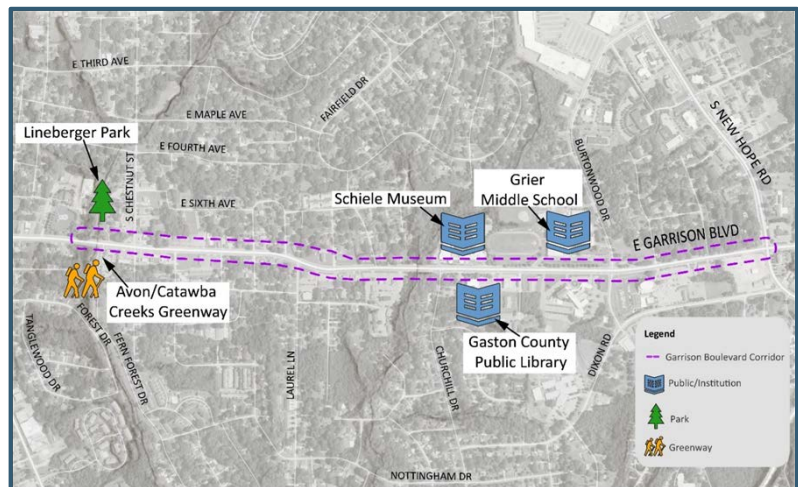


Figure 1. Garrison Blvd. Corridor

GARRISON LEARNS MULTIMODAL CORRIDOR

The Garrison Boulevard Corridor, as it exists today, is automobile centric and provides limited infrastructure and connectivity for people walking and biking. Currently, the study area is five-lane roadway with a center two-way-left-turn-lane that does not support its growing civic anchors and multimodal demand. There is no sidewalk for most of the south side of the corridor, and back-of-curb sidewalk of varying quality on the north side. The corridor has no bicycle facilities and lacks pedestrian crossing opportunities (average spacing between crossings = 1,700 linear feet), resulting in unsafe crossing conditions or significant out of direction travel for pedestrians and transit riders. Moreover, there is a greenway underpass that is continuously silted, wet, and impassable.

With the following improvements, **Garrison LEARNS** will prioritize accessibility for all and

transform the Garrison Boulevard corridor, creating an improved civic heart for the City of Gastonia.

Together, these improvements will increase safety and multimodal connectivity throughout these vital neighborhoods in Gastonia. Enhancements to mobility will result in more equitable transportation choices, facilitate new investment, reduce environmental impacts, increase real estate value, and support positive health outcomes for residents. Overreliance on cars hinders affordability and equity. While car culture remains strong, providing safe and diverse transportation options is essential.

Garrison LEARNS focuses on enhancing existing infrastructure within the civic core to create a safe, connected, accessible, and intuitive multimodal network.

This project will generate measurable benefits in key areas related to safety (pedestrian, bicycle, and vehicular expected crash reduction), reduced maintenance costs over time, decreased auto usage, improved health and quality of life outcomes, noise reduction, increased property values, and environmental sustainability. Using 2023 dollars and a 3.1% discount rate, the substantial positive impacts of the project are monetized at \$16.25 million in benefits, compared to a discounted project cost of \$15.97 million. The full Benefit-Cost Analysis is included as [Attachment 7](#) and [Attachment 8](#).

Garrison LEARNS is divided into **three (3) primary components consisting of a total of fifteen (15) primary improvements**. These seemingly individual improvements come together to create a powerful synergy -- a connected, convenient, and multimodal transportation system that unlocks the corridor's potential.

Component #1 - Safety Improvements

- Lowering Speed Limit by 10 Miles Per Hour (MPH)
- Reducing Travel Lane Width from 12-ft. to 11-ft.
- Replacing the Two-Way Left Turn Lane with a Raised, Planted Median
- Enhancing Roadway Lighting
- Installing a Traffic Signal at Laurel Lane
- Improving the Avon/Catawba Creeks Greenway Underpass
- Installing Radar Enabled Driver Feedback Signs

Component #2 - Active Transportation (Bike/Ped) Improvements

- Installation of Bike Lanes on Both Sides of Garrison Boulevard
- Construction of Sidewalk along Both Sides of Garrison Boulevard
- Installing High-Visibility Crosswalks at Signalized Intersections & Midblock Crossings
- Adding Pedestrian Countdown Timers at Signalized Intersections
- Installing a Pedestrian Hybrid Beacon Connecting the School and Museum to the Library

Component #3 – Environmental and Quality of Life Improvements

- Reconstruction of Curb Ramps
- Installing Green Space in the Medians and Buffer Spaces
- Installing EV Charging Stations (Level 3 – DCFC Fast Charging)

BROADER CONTEXT

Gastonia, whose history is steeped in entrepreneurial spirit, started as a mill town, but is transforming into one of the region’s best places to live, work and play. The City of Gastonia offers modern amenities typically found in big cities while retaining a hometown feel. Just minutes west of Charlotte, Gastonia is part of the Charlotte metropolitan area, which ranks 11th among the fastest-growing large metros in the US. Selected as an All-American City three times, Gastonia’s desirable quality of life is the result of its beautiful natural surroundings, friendly neighborhoods, responsive government and vibrant business environment.

Garrison LEARNS embodies the goals and objectives from various long range transportation plans and regional strategies, including: the Gaston-Cleveland-Lincoln Metropolitan Planning Organization’s (GCLMPO) 2050 Metropolitan Transportation Plan (MTP), the 2020 GCLMPO Comprehensive Transportation Plan (CTP), the One Gaston 2040 Vision Plan, the Gastonia 2025 Comprehensive Plan, the 2014 Gastonia Comprehensive Pedestrian Plan, the 2023 Gastonia Bicycle Plan, and the 2023 Gastonia Affordable Housing Plan.

This project champions diverse travel options and encourages smart, concentrated development within existing neighborhoods. It envisions a tapestry of pedestrian-friendly and bicycle-accessible communities effortlessly woven together by a network catering to various transportation needs. This network radiates outwards, drawing its lifeblood from a thriving civic core - a unifying thread that serves as an economic, recreational, and social hub.

Population Growth

With a growing population, congestion on roadways is becoming more pronounced. Introducing diverse travel options, such as bike lanes and pedestrian pathways can help alleviate congestion by providing alternative routes and modes of travel.

North Carolina, with over 11 million people, remains the 9th largest state in the nation and is one of the fastest-growing states in the United States. North Carolina’s growth rate as of July 1, 2023 was 1.3%, ranking it fifth amongst all states and the District of Columbia.

Gastonia, NC is the third largest city within the Greater Charlotte region with a population of approximately 84,000 residents. State estimates show Gastonia ranked as the 13th largest city by population in the state. Gastonia’s current annual growth rate is around 1.54%, which is notably higher than the national average of 0.5%.



PROJECT HISTORY

Garrison LEARNS was conceived from a series of community engagement workshops and stakeholder meetings convened in response to growing concerns about traffic congestion, air pollution, and lack of mobility options in Gastonia’s civic core. Recognizing the need for

transformative solutions, the Garrison Boulevard Corridor Study has been finalized and identifies key opportunities for improving safety and mobility while enhancing the urban environment.

To date, the project has achieved several significant milestones, including the following:

- Completion of a feasibility study,
- Development of conceptual designs,
- Development of a public engagement strategy,
- Completion of an existing conditions analysis,
- Completion of field reviews,
- Assessment of existing and future year traffic operations,
- Analysis of crash patterns,
- Analysis of projected traffic for “no-build scenario”,
- Review of best practices,
- Development of land use alignment and alternatives,
- Summary of safety benefits,
- Development of an implementation action plan, and
- Development of a benefit cost analysis.



PROJECT LOCATION

The **Garrison LEARNS** Project is strategically positioned to benefit not only individual neighborhoods but the entire city. It connects Lineberger Park and the Avon/Catawba Creeks Greenway to Grier Middle School, the Schiele Museum, and the Gaston County Library, all located within Census Tracts 327.03 and 327.04, which are designated as **Historically Disadvantaged Communities**. The project directly addresses the needs of those who have historically faced transportation barriers and exhibit unique socio-economic characteristics, providing an invaluable opportunity to address historical disadvantages while fostering community empowerment and resilience. These tracts represent not only a geographic location but also a focal point for transformative interventions aimed at uplifting marginalized communities and promoting equitable development.

The proposed project corridor extends from Fern Forest Drive at Lineberger Park to South New Hope Road (NC 279), directly serving 3,000 residents and 3,500 jobs. The corridor is known



throughout the greater metropolitan region for these recreational, cultural, and educational facilities. For example, the Schiele Museum of Natural History hosted over 100,000 visitors in 2024, including over 38,000+ students and teachers who participated in their educational programs and over 49,000 guests who enjoyed the James H. Lynn Planetarium & Science Theater.

Also of note, the Grier Middle School campus is in the midst of a transformation with the construction of a new 155,000 square foot, \$65M school facility that will house up to 1,200 students and become a showplace for learning in the heart of Gastonia. That cultural and educational identity is the foundation for designating this area the **Garrison LEARNS** Corridor and a motivator for the community’s alignment behind the proposed project.

The census tracts encompassing the **Garrison LEARNS** Project have long grappled with economic challenges, marked by sustained poverty rates and limited access to opportunities. Despite these adversities, the community has demonstrated remarkable resilience and a steadfast commitment to progress. By situating the project within this context, we acknowledge the importance of targeted interventions and inclusive strategies that address the unique needs and aspirations of residents.

Moreover, the historical disadvantage faced by these communities underscores the imperative for proactive and holistic approaches to urban planning and development. Through the **Garrison LEARNS** Project, we have the opportunity to not only alleviate immediate socio-economic disparities but also to catalyze long-term transformation by fostering economic mobility, social cohesion, and cultural vibrancy.

As shown below, the **Garrison LEARNS** Project is located in Census Tracts 327.03 and 327.04 in Gaston County, with both Census Tracts identified as a **Historically Disadvantaged Community**.

Census Tract	Urban Rural	Length of Project	Percentage of Project	Historically Disadvantaged Community
327.03	Rural	1.37 mi	50%	Yes
327.04	Rural	1.37 mi	50%	Yes

In summary, the census tracts encompassing the **Garrison LEARNS** Project represent more than just a geographic location; they embody the aspirations, struggles, and resilience of historically disadvantaged communities within a vibrant urban landscape. Through collaborative efforts and targeted investments, we aim to harness the potential of this unique context to create a more inclusive, equitable, and thriving community for all.

A Project Location File is included as **Attachment 3**. A detailed map of the project has also been included as **Attachment 12**.



Figure 2. Proposed Pedestrian Hybrid Beacon

MERIT CRITERIA

A. SAFETY

The City of Gastonia's transportation vision paints a clear picture: safety for all users, regardless of their chosen mode of travel. This commitment resonates in the North Carolina Strategic Highway Safety Plan (NC SHSP), Gaston-Cleveland-Lincoln MPO's 2050 Metropolitan Transportation Plan (MTP), the City of Gastonia's 2025 Comprehensive Plan, and the ambitious **Garrison LEARNS** Project.

According to the American Safety Council, property damage only (PDO) crashes account for over 71% of the total crashes that occurred along the Garrison Boulevard Corridor during a 5-year period. These crashes are less severe, but the economic losses due to these motor vehicle crashes are still felt. PDO crashes cost the nation approximately \$115 billion annually--that's an average of \$350 for every person living in the United States. The cost and crashworthiness (how well vehicles protect occupants in different types of crashes) as well as drivers' safety habits affect the cost of auto insurance. This is notable due to the location of this project, which is located in two historically disadvantaged census tracts and adjacent to multiple areas of persistent poverty. It's safe to assume that some of the most vulnerable residents within the community use this main arterial to reach employment destinations, health centers, and healthy food options.

Garrison LEARNS isn't just about one mode of travel; it's about creating a safe and inviting space for everyone. Whether you're walking, cycling, or using public transportation, the project's vision, goals, and meticulous design work together to reduce crashes, transform the civic core, and move the City of Gastonia closer to reducing fatalities and serious injuries by half by 2035, moving towards zero by 2050 as outlined in the North Carolina Safety Strategic Highway Plan (NC SHSP).

Through collaboration with local stakeholders, community organizations, and transportation agencies, Garrison LEARNS seeks to make significant strides in improving safety outcomes and fostering a safer, more resilient transportation network for all residents.

SAFETY STRATEGIES

Garrison LEARNS is committed to enhancing safety, accessibility, and connectivity within the community. Inspired by the principles outlined in the FHWA's Highway Safety Improvement Program (HSIP), and the North Carolina DOT's Strategic Highway Safety Plan, **Garrison LEARNS** is designed to incorporate a range of innovative safety strategies to address key challenges identified in the region. **Garrison LEARNS** will prioritize the implementation of evidence-based safety measures recommended by the NC SHSP and FHWA, such as traffic calming techniques, improved pedestrian and bicycle infrastructure, roadway design, and speed limit reduction. By aligning the project with the goals and strategies outlined in the plans identified above, the City of Gastonia is committed to proactively addressing traffic safety concerns and promoting a culture of safe and responsible transportation behavior.

Safety Strategy #1: Speed Limit Reduction

The safety countermeasure of lowering speed limits in residential neighborhoods is justified by the insights provided in the NC Strategic Highway Safety Plan (SHSP). The SHSP highlights that speed-related crashes, including fatalities and serious injuries, are more prevalent on State secondary routes in rural areas and local roads in urban areas, despite higher speed limits on Interstates. This indicates that simply reducing speed limits may not be sufficient to address safety concerns; instead, it emphasizes the importance of selecting appropriate speeds based on the specific context of the roadway and its users.

Garrison LEARNS aligns with this principle by acknowledging the need for tailored speed management strategies in an area with higher concentrations of vulnerable road users, such as pedestrians, bicyclists, and children.

Safety Strategy #2: Roadway Design

Garrison LEARNS includes design modifications such as narrower travel lanes, curb extensions, and median islands to effectively address safety concerns by narrowing the roadway and creating visual cues for drivers to reduce speed. Narrower lanes, in particular, can naturally encourage drivers to slow down, while curb extensions and median islands serve as physical measures to visually narrow the roadway and reinforce safe driving behavior. By incorporating these design elements, Gastonia can create safer streets, reduce the risk of speed-related crashes, and improve overall roadway safety for all users.

Safety Strategy #3: Pedestrian and Bicycle Facilities

Pedestrians, bicyclists, and individuals using personal mobility devices are integral parts of the transportation system, contributing to reduced congestion, promoting an active lifestyle, and being environmentally friendly and cost-effective. Within these populations, there are vulnerable users including children, older adults, and individuals with disabilities who face challenges in safely navigating the existing corridor. **Garrison LEARNS** will enhance pedestrian and bicycle facilities, creating safer environments for all users and encouraging active transportation modes that have numerous benefits for public health, the environment, and overall community well-being. To further address pedestrian safety, a Pedestrian Hybrid Beacon (PHB) will be installed to connect the Middle School and Museum to the Library. This addition will provide a controlled crossing point for students, families, and other pedestrians, significantly reducing the risks associated with crossing busy roadways.

Safety Strategy #4: Traffic Calming Techniques

Implementing median islands are effective in enhancing road safety and reducing traffic-related risks. Gateway features, including signage, landscaping, and public art, will serve as visual cues to drivers, making them aware of the transition into an area with reduced speed limits and heightened pedestrian activity, promoting safer driving behaviors. Additionally, dynamic speed feedback signs will be strategically placed to alert drivers of their current speed in real time, encouraging compliance with posted speed limits. These signs have been shown to reduce speeding, particularly in areas with increased pedestrian traffic, by providing immediate and actionable feedback to drivers.

Similarly, median islands will play a crucial role by physically dividing opposing traffic lanes and providing safe havens for pedestrians crossing in multiple stages. **Garrison LEARNS** will incorporate raised and landscaped sections of pavement to narrow the roadway, encouraging drivers to reduce speed and exercise caution. Additionally, the median will enhance pedestrian safety by offering much needed refuge areas.

SAFETY DATA AND ANALYSIS

Crash data along Garrison Boulevard for the five-year period of May 2018 to April 2023 was collected from NCDOT's Traffic Engineering Accident Analysis System (TEAAS) and reviewed within the project study limits. A total of 189 crashes occurred along the corridor during the review period. Of those crashes, 54 resulted in injury or possible injury and over 70% of the crashes were PDO with the predominant crash types being rear end crashes, frontal crashes (angle, left turn, or right turn), and sideswipe crashes. One crash involved a pedestrian. Additionally, 92 crashes took place at signalized intersections (i.e., within 150 feet of a signalized intersection), while 11 crashes related to unsignalized intersections.

Garrison LEARNS doesn't rely on theoretical solutions, it leverages Proven Safety Countermeasures (PSCs) and evidence-based safety improvements. The project's foundation lies in conflict reduction, transforming the Corridor by reducing the width of the lanes from 12-ft to 11-ft., installing bicycle and pedestrian infrastructure, incorporating crosswalk visibility requirements, constructing medians, and reducing the speed limit by 10 mph. This, according to the FHWA's PSC analysis, can translate to upwards of a 50% reduction in crashes. Enhancing lighting and installing a traffic signal at Laurel Lane will further enhance safety.

The rate of annual crashes was assumed to remain constant over time and consistent with the historical corridor performance. Based on these factors, over a 20-year operating period, the total safety benefits can be monetized at \$12.0 million, or \$7.6 million at a 3.1% discount over the full analysis period. The safety measures with **Garrison LEARNS** reduce the propensity and severity of crashes involving vehicles, bicyclists, and pedestrians

Garrison LEARNS isn't merely a traffic redesign; it transforms the corridor into a haven for pedestrians and cyclists. At its core lies the installation of continuous dedicated bike lanes and sidewalks along Garrison Boulevard, providing a vital escape from the hazards of mixed traffic. These dedicated lanes seamlessly integrate with existing facilities and the Avon/Catawba Creeks Greenway network, promising a safer, more comfortable, and convenient experience for cyclists. According to FHWA's PSCs, such infrastructure results in a significant reduction of bicycle crashes by 30% or more, and pedestrian-involved crashes plummet by 71%, further solidifying the project's commitment to safety.

B. ENVIRONMENTAL SUSTAINABILITY

Garrison LEARNS isn't just about traffic; it's about fighting climate change and protecting the City of Gastonia's environment. The 2050 Metropolitan Transportation Plan (MTP) and the Gastonia 2025 Comprehensive Plan share a critical goal: reducing car dependence and air pollution. **Garrison LEARNS** tackles this head-on, offering sustainable solutions for a greener future.

As the City embarks on the **Garrison LEARNS** project, the mission is to revolutionize transportation infrastructure while embracing environmental sustainability as a core principle. **Garrison LEARNS** integrates a suite of environmental sustainability strategies aimed at achieving the collective goals. Recognizing the intrinsic link between transportation and environmental health, the project adopts a holistic approach that prioritizes the reduction of carbon emissions, minimization of ecological impact, and promotion of sustainable mobility solutions.

The City of Gastonia, as part of the Charlotte Metrolina Area, has historically had issues with air quality, primarily from ground-level Ozone. In 2004, the EPA designated the Metrolina Area as moderate non-attainment for ozone NAAQS under the 1997 8-hour standard. With significant improvements, in 2013 the EPA redesignated the Metrolina Area as attainment for the 8-hour ozone standards. In May 2008, the EPA revised the ozone NAAQS to provide increased protection of public health and welfare, especially for children and “at risk” populations. With the new 2008 standards, the Metrolina Area was designated by the EPA as marginal nonattainment.

The City of Gastonia is committed to protecting and enhancing the environment, promoting energy conservation, and improving the quality of life for all, particularly those in the areas of disproportionate negative impacts who are living, working and visiting the area, while ensuring equity among all races, nationalities and incomes.

ENVIRONMENTAL SUSTAINABILITY STRATEGIES

In an endeavor to enhance transportation infrastructure and promote sustainable mobility, **Garrison LEARNS** integrates a comprehensive array of environmental sustainability strategies. The project recognizes the imperative need to balance economic growth and mobility with environmental preservation, ensuring that future generations inherit a healthy and vibrant ecosystem. Through collaborative efforts and a steadfast commitment to sustainability, **Garrison LEARNS** aims to create a transportation system that not only meets the needs of the community today, but also safeguards the natural environment for generations to come.

Environmental Sustainability Strategy #1: Expansion of Active Transportation

The 2050 MTP vows to enhance quality of life, protect the natural environment, and support the physical and mental health of communities by supporting projects and initiatives that reduce the need to travel using the single-occupancy vehicle, including options for public transportation modes and physically active modes, such as walking and bicycling.

Garrison LEARNS promotes active transportation by providing new dedicated bike lanes, new sidewalks, and new and enhanced crossings in the project area. This will result in an increase in mode split and induce users from the single-occupancy vehicle.

Environmental Sustainability Strategy #2: Integrating Land Use and Transportation Planning

As outlined in the 2050 MTP, integrating transportation planning with land use planning is key to reduce pollution, reduce stormwater impacts, conserve energy, preserve resources, and increase access to healthy options.

Garrison LEARNS encourages compact and mixed-use development patterns that reduce the need for long-distance travel and promotes walkability, cycling, and public transportation use.

Environmental Sustainability Strategy #3: Smart Growth

It is essential that smart growth principles are used to preserve and create compact, interconnected mixed-use neighborhoods that help to bring people together, creating a closer connection between neighborhoods, key shopping areas, and public gathering spaces.

Taking an aerial tour of Gastonia would reveal the City's clean air, flowing streams and lush tree canopy. While these natural amenities still dominate the landscape, sprawling growth patterns and increasing vehicle miles traveled (VMT) have put the environment at risk. To reduce emissions on a local level, we can promote carpooling, walking and bicycling. Encouraging new land use patterns can result in fewer vehicles miles traveled and better air quality. **Garrison LEARNS** promotes development patterns that prioritize active transportation and encourage mixed-use development to reduce sprawl, VMT, and associated environmental impacts.

Environmental Sustainability Strategy #4: Electric Vehicle Charging Infrastructure

Recognizing the growing need for sustainable transportation options, **Garrison LEARNS** will include the installation of Level 3 Electric Vehicle (EV) Charging Stations along the corridor. These fast-charging stations will provide critical support for EV users, encouraging the transition to low-emission vehicles and reducing greenhouse gas emissions in the community. By promoting the use of electric vehicles, the project aligns with broader sustainability goals, supports cleaner air, and demonstrates Gastonia's commitment to a greener future.

ENVIRONMENTAL SUSTAINABILITY DATA AND ANALYSIS

Analysis shows most trips to the civic core are under five miles, highlighting the potential for modal shift. **Garrison LEARNS** builds upon existing multimodal facilities like dedicated bike lanes and commuter trails, making sustainable travel easier and more accessible for all ages and abilities.

With an anticipated shift in some automobile trips to pedestrian and bicyclist trips, an overall reduction in the number of single-occupant vehicles on the corridor is expected to reduce emissions. Emissions reductions based on the reduction in the number of SOVs can be calculated based on the annual vehicle miles traveled (VMT) savings using VMT projections from the year 2026 through the year 2048. With the **Garrison LEARNS** Project, the increased network connectivity is expected to result in a total of approximately 1.8M fewer vehicle miles traveled over the analysis period.

Mileage-dependent emissions rates were obtained from the Environmental Protection Agency's (EPA) Idling Vehicle Emissions for Passenger Cars, Light-Duty Trucks, and Heavy-Duty Trucks for nitrogen oxides (NOx), particulate matter (PM2.5), and sulfur dioxide (SO2). Additional carbon dioxide (CO2) emissions rates for passenger vehicles and trucks were obtained and damage costs for pollutant emissions from USDOT guidance were used to calculate savings with the implementation of **Garrison LEARNS**.

The total benefit associated with the emissions reduction was monetized at \$226,962, or \$165,256 using a 3.1% discount rate, over the full analysis period.

Noise pollution is also an important aspect of environmental pollution that can have significant impacts on human health and well-being. In addition to air pollution and greenhouse gas emissions, addressing noise pollution is essential for creating healthier and more livable communities. **Garrison LEARNS** promotes the integration of land use and transportation planning by mitigating the effects of noise pollution, which occurs from high levels of environmental sound that may annoy, distract, or even harm people and animals. This project will lower levels of noise generated by current transportation activity by reducing roadway noise from a decrease in AADT and decreased speed limits.



Garrison LEARNS will improve noise and congestion by decreasing the annual auto trips and vehicles miles traveled. For vehicular trips, Garrison Boulevard is assumed to serve more cross-town trips (with vehicles traversing the entire corridor length) than local trips (with vehicles traversing just a portion of the corridor). Because of this, a trip distance of 1.1 miles, or roughly 80% of the project length, was assumed for a one-way trip, and 2.2 miles for a two-way trip. Over a 20-year operating period, the total noise and congestion reduction benefit was monetized at approximately \$545,490, or \$344,264 using a 3.1% discount rate, over the full analysis period.

C. QUALITY OF LIFE

Enhanced Quality of Life extends beyond mere roadway improvements. Envision seamless east-west travel between Gastonia's Civic Core and nearby Lineberger Park and the Avon/Catawba Creeks Greenway, facilitated by dedicated bike lanes. Picture smoother commutes along one of Gastonia's busiest arterials, courtesy of upgraded sidewalks. This is the transformative reality that **Garrison LEARNS** brings to life, intertwining people with businesses, amenities, and opportunities through a comprehensive multimodal network. Spanning across multiple neighborhoods, this project links residents to the city's vital civic anchors, ensuring equitable access to transportation investments and travel options.

Garrison LEARNS, as the Civic Core of Gastonia, serves as the focal point for economic, cultural, and educational activities. Notable resources, more accessible via **Garrison LEARNS**, include:

- [Schiele Museum of Natural History](#), which welcomed over 100,000 visitors in 2024, including 38,000+ students and teachers participating in educational programs, along with 49,000 guests enjoying the James H. Lynn Planetarium & Science Theater.
- [Grier Middle School](#), currently undergoing a transformative expansion with the construction of a new 155,000 square foot, \$65M school facility, set to accommodate up to 1,200 students and become a beacon of learning in Gastonia's heart.
- [Gaston County Library Main Branch](#), offering invaluable resources such as free computer and internet access, educational events, and hosting various non-profit organizations and community resources.
- [Lineberger Park](#), a regional centerpiece offering community event spaces, outdoor recreation opportunities, and green spaces for residents to enjoy.

- [Avon/Catawba Creeks Greenway](#), a paved 3-mile trail featuring numerous neighborhood entrances, small bridges crossing creeks, and informational stops showcasing local bird species as part of the 2-state, 15-county [Carolina Thread Trail](#).

Garrison LEARNS represents a transformative initiative aimed at enhancing the quality of life for residents in the community. This innovative project, rooted in smart growth principles and sustainable transportation strategies, will have far-reaching positive impacts on various facets of daily life. By improving transportation infrastructure and connectivity, **Garrison LEARNS** will provide residents with easier access to essential services, employment opportunities, educational institutions, and recreational amenities. Seamless travel options, including enhanced pedestrian and cycling infrastructure, will not only promote healthier and more active lifestyles, but also reduce commuting stress and congestion. Furthermore, by fostering mixed-use development, **Garrison LEARNS** will create vibrant, walkable neighborhoods that encourage social interaction, support local businesses, and cultivate a strong sense of community. Overall, **Garrison LEARNS** is not just about building transportation infrastructure; it's about building a better quality of life for all residents, where mobility is accessible, sustainable, and enriching.

QUALITY OF LIFE DATA AND ANALYSIS

Utilizing data from the USDOT Equitable Transportation Community Explorer, this corridor falls within two City of Gastonia census tracts, 327.03 and 327.04, both which are identified as **Historically Disadvantaged Communities**. Tract 327.03 houses a population of 2.3k and Tract 327.04 houses 3.7k residents, with residents in both tracts allocating significant portions of their budgets to transportation.

Improvements to pedestrian and cycling facilities often provide amenities that can improve the quality or comfort of journeys made by active transportation users.

- **Pedestrian Facilities** – the increased comfort of specific pedestrian infrastructure can be assessed as a valued benefit. New sidewalks, speed reduction, and the improved greenway underpass are key facilities that directly affect the comfort, convenience, and safety of the facility for pedestrian use.

The estimated value per projected pedestrian trip should be capped at 0.86 miles, the average length of a walking trip in the 2017 National Household Travel Survey. **Garrison LEARNS** provides 1.37 miles of new 5-ft. sidewalks, a 10 mph speed limit reduction, and an improved grade-separated crossing. These new facilities provide a \$1.2M value in pedestrian comfort over the study period.

- **Cycling Facilities** – Dedicated cycling facilities can improve journey quality and comfort for cyclists. The estimated value per projected cyclist on a proposed facility should be capped at 2.38 miles, the average length of a cycling trip in the 2017 National Household Travel Survey.

New bicycle facilities for **Garrison LEARNS** include 1.37 miles of bike lanes on both sides of Garrison Boulevard between Fern Forest Drive and South New Hope Road. These new facilities provide a \$3.6M value in cyclist comfort over the study period.

Over a 20-year operating period, the total pedestrian and bicycle benefits are monetized at \$4.8 million, or \$3.0 million using a 3.1% discount rate, over the full analysis period.

The use of active transportation can lead to positive health outcomes for users, such as improved cardiovascular health. A key health outcome is a reduction in mortality risk for users that are induced to active transportation modes, such as walking and biking, from inactive modes, such as driving. The USDOT guidance provides a recommended value for monetizing reduced mortality risks associated with increased walking and biking for included trips. Over a 20-year operating period, the total health benefit has been monetized at \$7.5 million, or \$4.7 million using a 3.1% discount rate, over the full analysis period.

D. MOBILITY AND COMMUNITY CONNECTIVITY

Garrison LEARNS isn't just a standard infrastructure project; it's the essential link that will unlock the City of Gastonia's full transportation potential. Picture it as the bridge connecting previously fragmented neighborhoods, businesses, and opportunities. From wide trails and dedicated bike lanes to safer walkways and improved car access, every element of this project serves to weave a truly multimodal city.

For years, the City of Gastonia has approached transportation improvements piecemeal. **Garrison LEARNS** marks a departure from that approach, representing the culmination of meticulous planning, robust public engagement, and data-driven decision-making. It's not merely about traversing from point A to point B; it's about reshaping Gastonia from a predominantly car-centric community into a genuinely multimodal city.

Consider the transformative impact on mobility. **Garrison LEARNS** promises to deliver seamless connectivity for all residents. Dedicated bike lanes along Garrison Boulevard will integrate with existing trails and neighborhoods, while wider, safer paths along the corridor will transform into vibrant hubs for cyclists and pedestrians alike, fostering a sense of community and vitality. Broken sidewalks will be transformed into accessible pathways, guiding residents to key destinations like Lineberger Park with enhanced crosswalks offering added protection.

As part of these improvements, a Pedestrian Hybrid Beacon (PHB) will be installed between the Schiele Museum and Grier Middle School to connect across Garrison Boulevard to the Library. This critical safety feature will provide a controlled crossing point for students, families, and other pedestrians navigating this busy roadway. By prioritizing the safety of students walking to and from school and ensuring families can safely access educational and cultural resources, the PHB underscores the project's commitment to protecting its most vulnerable users.

Garrison LEARNS isn't just about aesthetics or convenience; it's about fostering a safer, more inclusive space for everyone. By prioritizing safety, accessibility, and sustainability, the project lays the groundwork for a future where all residents can thrive, regardless of their preferred mode of transportation. It's the missing puzzle piece, the critical step towards realizing Gastonia's vision of a truly connected and vibrant community.

GARRISON LEARNS – ADVANCING MOBILITY AND CONNECTIVITY

- **Lowering Speed Limit by 10 Miles Per Hour (MPH):**
Lowering speed limits improves safety for all road users, reducing the risk of accidents and enhancing mobility by encouraging more people to walk and cycle.
- **Reducing Travel Lane Width from 12-ft. to 11-ft.:**
Narrowing travel lanes can help calm traffic, making streets safer for pedestrians and cyclists and enhancing community connectivity.
- **Replacing the Two-Way Left Turn Lane with a Raised, Planted Median:**
Installing a raised median improves safety by reducing the potential for head-on collisions and providing refuge for pedestrians crossing the street. It also enhances aesthetics and encourages slower speeds, contributing to a more pedestrian-friendly environment.
- **Enhancing Roadway Lighting:**
Improved roadway lighting enhances visibility and safety for pedestrians, cyclists, and motorists, particularly during nighttime hours, thereby improving mobility and connectivity within the community.
- **Installing a Traffic Signal at Laurel Lane:**
Traffic signals regulate traffic flow and provide safe crossing opportunities for pedestrians, enhancing safety and connectivity in the area.
- **Improving the Avon/Catawba Creeks Greenway Underpass:**
Enhancing the Greenway underpass improves connectivity for pedestrians and cyclists, providing a safe and convenient route for active transportation and promoting healthier lifestyles.
- **Reconstruction of Curb Ramps:**
Reconstructed curb ramps improve accessibility for individuals with disabilities, enhancing mobility and connectivity within the community.
- **Installing 1.37 Miles of Dedicated Bike Lanes:**
Installing dedicated bike lanes improves safety for cyclists and encourages more people to cycle as a mode of transportation, thereby enhancing community connectivity.
- **Installing 1.37 Miles of 5-ft Sidewalk:**
Installing sidewalks provides a dedicated space for walking, enhancing pedestrian safety and connectivity within the community.
- **Installing High-Visibility Crosswalks at Signalized Intersections & Midblock Crossings:**
High-visibility crosswalks increase pedestrian safety and encourage walking as a mode of transportation, improving community connectivity.
- **Adding Pedestrian Countdown Timers at Signalized Intersections:**
Pedestrian countdown timers provide pedestrians with information about the time remaining to cross the street safely, enhancing safety and encouraging walking within the community.



- **Installing a Pedestrian Hybrid Beacon (PHB):**
The PHB will create a controlled crossing point across Garrison Boulevard, connecting the Schiele Museum, Grier Middle School, and the Library. This vital safety feature will protect students, families, and pedestrians navigating this busy corridor, ensuring safe and accessible travel between these important community hubs.
- **Installing Green Space in the Medians and Buffer Spaces:**
Installing green space in medians and buffer spaces enhances aesthetics, promotes environmental sustainability, and improves community connectivity.

E. ECONOMIC COMPETITIVENESS AND OPPORTUNITY

The City of Gastonia isn't merely a bustling economic center; it's a treasure trove of untapped potential awaiting discovery. **Garrison LEARNS** transcends mere traffic solutions; it's the catalyst for unlocking this potential, forging a dynamic, accessible, and thriving civic nucleus for all.

Safe and equitable transportation options are essential to attracting new businesses and residents, which **Garrison LEARNS** delivers in abundance. It lays down infrastructure that supports both public and private housing endeavors, links job prospects, and harmonizes seamlessly with the Gaston-Cleveland-Lincoln Metropolitan Planning Organization's (GCLMPO) 2050 Metropolitan Transportation Plan (MTP) and the City of Gastonia's 2025 Comprehensive Plan. With the sustained upward trend in development reviews, **Garrison LEARNS** is poised to attract a significant influx of mixed-use development to its corridor.

Garrison LEARNS isn't solely focused on commerce; it also champions community equity and opportunity. Initiatives like the ADA Ramps and Avon/Catawba Creeks Greenway enhancements transcend mere accessibility; they serve as gateways for underserved communities, promote health equity, and open avenues for economic empowerment, particularly among low-to-moderate-income residents. These efforts foster inclusivity and draw individuals to vibrant community spaces like Lineberger Park, a bustling hub of events and markets.

Garrison LEARNS is more than a transportation solution; it's a blueprint for constructing a more prosperous, inclusive, and interconnected civic hub. It's an investment in a future where businesses thrive, communities unite, and opportunities abound. As studies predict its potential to catalyze substantial economic growth and community development, **Garrison LEARNS** emerges as a foundational element for future prosperity. Moreover, its focus on safe, equitable transportation options aligns seamlessly with the City's vision for comprehensive economic development, ensuring that businesses thrive and residents prosper.

ECONOMIC COMPETITIVENESS AND OPPORTUNITY DATA AND ANALYSIS

Exemplary initiatives across the nation highlight **Garrison LEARNS'** economic potential. The Garrison Boulevard Corridor Study demonstrates that enhancing pedestrian and cycling infrastructure while reducing speed limits fosters local business growth. Strategic enhancements, such as left-turn lanes, improve delivery access and position Garrison Boulevard as a premier civic destination, driving sustained economic development.

Multimodal improvement projects like this often spur economic growth through infill development and redevelopment of adjacent properties. These benefits extend to property owners, business owners, developers, and the future tax base, surpassing one-time increases in real estate values. Improved multimodal networks connecting key civic destinations in Gastonia are likely to raise adjacent property values. Proposed upgrades, including better walking and biking facilities, speed reductions, and safer crossings, will create a more livable environment, enhancing accessibility for pedestrians, cyclists, and public transportation users. Appraisal data from Gaston County shows that commercial properties near similar projects often experience rental rate increases, with values rising by as much as 10%.

Access to Jobs and Key Destinations

The **Garrison LEARNS** project will improve access to jobs and key destinations by linking Lineberger Park and the Avon/Catawba Creeks Greenway to Grier Middle School, the Schiele Museum, and the Gaston County Library. This corridor directly serves 3,000 residents and 3,500 jobs. Enhancements to this corridor will also strengthen connections to the City's microtransit system, **GoGastonia**, facilitating citywide access. Progress metrics include increased active transportation use, reduced travel times to key destinations, and improved public transportation access, aligning with DOT's goals of inclusive growth and enhanced mobility. Improved access to jobs and education is expected to raise household incomes for affected residents by an average of 5%, equating to an additional \$1,500 annually per household.

Economic Competitiveness

Garrison LEARNS represents a transformative initiative to unlock Gastonia's economic potential while adhering to DOT goals and the Complete Streets Design Model. By providing safe and equitable transportation options, the project supports housing initiatives, connects job opportunities, and integrates regional planning efforts.

Beyond economic growth, **Garrison LEARNS** promotes community equity and opportunity through features like ADA-compliant ramps and improvements to the Avon/Catawba Creeks Greenway. These upgrades increase accessibility, foster health equity, and empower underserved communities. Consistent with Gastonia's vision for sustainable development, the project prioritizes safe, accessible transportation options that encourage growth. Studies show that improved pedestrian and cycling infrastructure increases property values and attracts new businesses, generating significant economic benefits.

Projections show that increased access and infrastructure improvements could attract up to 25 new businesses within five years, creating approximately 300 new jobs. These developments are expected to increase annual local tax revenues by \$1.2 million, further solidifying **Garrison LEARNS** as a cornerstone for Gastonia's future prosperity.

F. STATE OF GOOD REPAIR

Garrison LEARNS isn't just about roads; it's about making the City of Gastonia's heart beat with renewed safety, accessibility, and efficiency. This project breathes new life into aging infrastructure, addressing longstanding vulnerabilities and transforming how residents navigate the civic core.

Garrison LEARNS directly tackles inequities faced by vulnerable populations in the area. Missing sidewalks, increased speeds, and multiple travel lanes pose dangerous hurdles. **Garrison LEARNS** tackles these head-on with Complete Streets principles, creating dedicated spaces for pedestrians and cyclists, improving infrastructure, and enhancing access to the beloved Avon/Catawba Creeks Greenway. This redistribution of limited space prioritizes diverse users, making the civic core truly accessible for all.

Garrison LEARNS utilizes existing infrastructure wherever possible. Curb lines, stormwater systems, and recent pavement improvements remain untouched. However, some elements have reached their functional lifespan. Deeply rutted pavements, cracked roads, and inefficient lighting demand replacement.

Reconstructing Garrison Boulevard will provide overall maintenance expenditure savings. The largest savings will come from needing one less mill and pave asphalt rehabilitation within the life of the project. The elimination of the center-turn lane also reduces asphalt and striping maintenance costs. Although there are increased maintenance costs with other aspects of the project, the increases are more than offset by the savings as noted above. Over a 20-year operating period, the total maintenance costs benefit was monetized at \$934,747, or \$860,730 using a 3.1% discount rate, over the full analysis period.

New traffic signals and hardware will replace outdated systems incapable of accommodating bicycles, adaptive controls, or connected vehicles. This project brings Garrison Boulevard's signal system into the 21st century, ensuring its functionality and longevity. Similarly, all non-compliant infrastructure gets upgraded, exceeding minimum standards for accessibility. Improvements to the Avon/Catawba Creeks underpass not only addresses deferred maintenance, but also ensures future durability and seamless integration with existing modernized sections.

With **Garrison LEARNS**, combining all of these highlighted improvements into one project amplifies their benefits while minimizing disruptions. By working within existing right-of-way, existing infrastructure is retained and new installations are optimized. This coordinated approach not only saves resources but also reduces construction impacts on businesses and residents. **Garrison LEARNS** builds upon past investments, creating a legacy of sustainable and inclusive infrastructure for future generations to enjoy.

For long-term maintenance of the project, it is important to note that Garrison Boulevard is owned and maintained by the North Carolina Department of Transportation (NCDOT). For the Garrison LEARNS project, the roadway pavement, including the bike lanes, would continue to be maintained by NCDOT. The sidewalks, planted median, and greenway underpass would all be maintained by the City of Gastonia.

G. PARTNERSHIP AND COLLABORATION

Garrison LEARNS has garnered support from a diverse array of stakeholders, including the region's elected officials, local businesses, non-profit organizations, advocacy groups, academic institutions, and governmental agencies, including: NCDOT, GCLMPO, Carolina Thread Trail,

Gaston County, Gaston County Economic Development Commission, Gaston Business Association, Schiele Museum, Gaston County Schools, and Keep Gastonia Beautiful Inc. Letters of support have also been or are in the process of being secured from U.S. Senators Ted Budd and Thom Tillis, U.S. Representative Tim Moore, and the local NC General Assembly delegation. Letters of support for this project are included as [Attachment 9](#) and are also provided on the [project website](#) as additional letters are received.



THE
SCHIELE

Community engagement and participation in decision-making is a fundamental principle of Environmental Justice (EJ), and is critical to achieving outcomes that reflect the needs of all affected stakeholders to the greatest extent possible. Low-income and minority communities have historically borne disproportionately high or adverse human health or environmental effects of infrastructure projects.

Community engagement has been a cornerstone of **Garrison LEARNS**, with numerous opportunities for public input and participation integrated into the planning process. City staff along with the consultant team, prepared a Public & Stakeholder Engagement Strategy as the playbook for clear and consistent communication to residents, elected leaders, the business community, major institutions, and other stakeholders. The Engagement Strategy included walking tours, focus groups, equity tracking, public meetings, interactive workshops, online surveys, and social media campaigns to facilitate meaningful dialogue and informed decision-making, ensuring that the project reflects the community's diverse needs and priorities.

The City of Gastonia and project partners must continue to advance **Garrison LEARNS** in a transparent manner and continue to build on this support, ensuring that there is robust and inclusive public engagement throughout the process, paying particular attention to how the project partners engage with underrepresented community members to not only inform and include adjacent residents in the study, but document their vision, ideas and concerns.

PUBLIC AND STAKEHOLDER ENGAGEMENT

The partnerships and collaboration for **Garrison LEARNS** is integral to its success, ensuring that the project meets the needs and aspirations of the community. A comprehensive public and stakeholder engagement process was conducted throughout the Garrison Boulevard Corridor Study planning process, fostering collaboration among various stakeholders and enhancing transparency throughout the project development.

Partnership and collaboration efforts have included:

- **Website Materials:**

Interactive and intuitive website and social media materials were developed to facilitate easy access to project information and updates for residents, stakeholders, and the broader community.

- **Walking Tours:**
Walking tours were conducted with residents and stakeholders along Garrison Blvd. These tours provided valuable opportunities to identify specific safety concerns, opportunities, and challenges, informing the existing conditions analysis and ensuring community input was integrated into the project.
- **Public Workshop:**
A public workshop was held at the beginning of the study, engaging residents in meaningful discussions about the project's goals. This workshop served as a platform for creativity and collaboration, fostering community understanding and support for ped/bike improvements and future greenway extensions.
- **Staff Workshops:**
Workshops were conducted with staff from various agencies at the City of Gastonia, including Transportation, Engineering, Public Works, Planning, and others. These workshops facilitated idea vetting and built ownership and support for the preferred alternative, ensuring alignment among key stakeholders.
- **Stakeholder Focus Groups:**
Focus groups were convened with key stakeholders, including advocacy groups, economic development organizations, neighborhood associations, and major employers. These focus groups provided valuable insights into challenges, opportunities, and alternatives, ensuring diverse perspectives were considered in the project development process.
- **Presentations to Elected Officials:**
Presentations were prepared and delivered to the Gastonia City Council, garnering support and endorsement from elected officials and key decision-makers.
- **Public Meeting**
A public meeting was held to present the findings of the draft study and the selected preferred alternative, incorporating feedback from the community into the final study document.

H. INNOVATION

The City of Gastonia, a rapidly growing mid-sized city, faces unique challenges such as geographic constraints, limited right-of-way, cultural considerations, and financial limitations that render traditional roadway expansion impractical. In response, Gastonia and its regional partners are leveraging cutting-edge strategies to optimize the transportation network. The **Garrison LEARNS** project represents a transformative approach to addressing these challenges by prioritizing multimodal integration, advanced technologies, community involvement, and adaptive design.

INNOVATIVE FEATURES OF GARRISON LEARNS

- **Multimodal Integration:**
Instead of focusing solely on vehicular traffic, **Garrison LEARNS** prioritizes multimodal integration by incorporating features such as dedicated bike lanes, widened sidewalks, and improved pedestrian crossings. A pedestrian hybrid beacon (PHB) will be installed to enhance safety and connectivity, enabling pedestrians to cross safely between the

Library, Museum, and Middle School, all key community assets. This holistic design fosters active transportation, reduces dependency on single-occupancy vehicles, and aligns with modern urban planning principles.

- **Technology-Driven Innovations:**

Leveraging technology, **Garrison LEARNS** incorporates innovative signal improvements to enhance traffic flow and optimize intersection efficiency. By deploying smart traffic management systems and adaptive signal controls*, the project maximizes transportation network efficiencies while minimizing congestion and emissions. The addition of strategically placed EV chargers along the corridor will enhance accessibility for EV users, aligning with broader sustainability goals. Radar-enabled driver feedback signs will also be installed to detect vehicle speeds and provide real-time feedback to drivers, encouraging safer driver behavior. This technology will be particularly effective near the pedestrian crossings and civic anchors.

**Please note that while adaptive signalization is not new, it is new to Gastonia.*

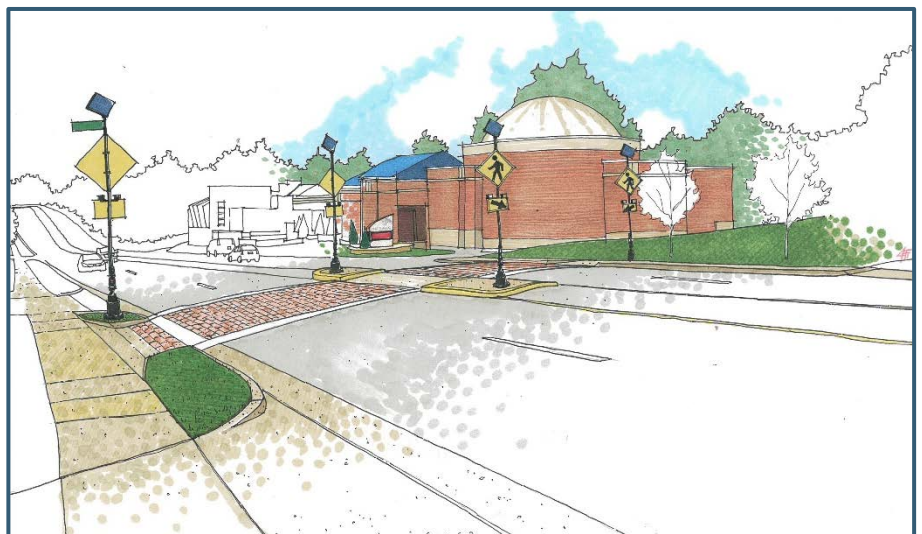
- **Community Engagement:**

The project's emphasis on robust public and stakeholder engagement sets it apart. Through walking tours, public workshops, staff workshops, and stakeholder focus groups, **Garrison LEARNS** ensures that the community's input and concerns are heard and integrated into the planning process. This inclusive approach fosters greater community buy-in and ownership of the project.

- **Adaptive Road Design:**

Garrison LEARNS demonstrates innovation through its adaptive road design, which allows for flexible lane configurations based on traffic patterns and community needs. By implementing lane diets and incorporating features like bike lanes and pedestrian refuge islands, the project adapts to changing transportation trends and fosters safer and more efficient mobility for all road users.

By integrating multimodal solutions, embracing cutting-edge technology, employing flexible and sustainable designs, and prioritizing community engagement, **Garrison LEARNS** sets a new standard for innovation in Gastonia's transportation infrastructure. This project not only addresses the city's immediate challenges but also lays the foundation for a more resilient and equitable future.



Proposed Pedestrian Hybrid Beacon

PROJECT BUDGET

Total project costs in expenditure year dollars for the **Garrison LEARNS** project are estimated at \$21,184,480. The project sponsors seek \$19,381,211 (91.5%) in RAISE grant funding to complete the project.

Funding Source	Funding Amount	% of Total Project Cost
BUILD Funds	\$19,381,211	91.5%
Other Federal Funds	\$0	0%
Non-Federal Funds	\$1,803,269	8.5%
TOTAL COST	\$21,184,480	100%

Table 1. Sources of Funding and Percentage of Total Project Cost

Census Tract	Urban/Rural	% of Project Length	Area of Persistent Poverty	Historically Disadvantaged Community	Project Costs per Census Tract
327.03	Rural	50%	No	Yes	\$10,592,240
327.04	Rural	50%	No	Yes	\$10,592,240
				TOTAL COST	\$21,184,480

Table 2. Project Costs Per Census Tract

Description	Cost
CONSTRUCTION	
Mobilization & Construction Staging	\$1,043,000
Traffic Control	\$350,000
Erosion Control	\$118,000
Obstruction Removal, Clearing/Grubbing, General Earthwork	\$1,568,500
Asphalt Roadway	\$1,874,082
Concrete – Curbs & Median	\$524,980
Concrete Walks	\$395,850
Pedestrian Crossings	\$608,000
Driveway Reconstruction	\$157,500
Underpass Upgrades	\$420,000
Storm Water Conveyance System	\$856,000
Landscaping & Lighting	\$1,284,533
Pavement Markings & Signage	\$199,000
Traffic Signal Modifications	\$1,100,000
Level 3 Electric Vehicle Charging Stations	\$350,000

RIGHT-OF-WAY	
Commercial ROW Acquisition	\$1,902,000
ENGINEERING SUPPORT	
Engineering & Construction Management	\$2,626,000
TOTAL PROJECT SUBTOTAL	\$15,030,445
CONTINGENCY (30%)	\$4,509,134
TOTAL EST. PROJECT COST IN 2025 (CURRENT YEAR) DOLLARS	\$19,539,579
TOTAL EST. PROJECT COST IN EXPENDITURE YEAR DOLLARS (Assumes PE and ROW acquisition in 2026, 50% CON in 2027, and 50% CON in 2028)	\$21,184,480
TOTAL EST. PROJECT COST IN 2023 (BASE YEAR) DOLLARS	\$18,065,439

Table 3. Project Budget Breakdown

Assumptions:

- The widened roadway section is 8 inches ACP over 12 inches of compacted aggregate base.
- Existing pavement will be milled and overlaid within the project limits.
- Improvements to the greenway underpass at Lineberger Park assume only minor modifications to the existing double box culvert to ensure the base flow of the creek does not impede the greenway surface.
- Right-of-way acquisition assumptions are based on preliminary ideas for the location of potential u-turn bulbs and sidewalk improvements. No survey or concept design has been completed to calibrate the right-of-way acquisition assumptions.
- Traffic signals within the project limits will be upgraded to mast arm poles.

Scope Accuracy: Project scope is a “vision” with limited detail.

Engineering Effort: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed.

Cost Assumption and Contingency Statement

The City of Gastonia is fully committed to the successful completion of this project and recognizes the inherent risks associated with potential cost overruns. To mitigate these risks, a 30% contingency has been included in the cost estimate to provide a buffer for unforeseen expenses.

In the event that costs exceed the budgeted amount, the City of Gastonia will assume full financial responsibility for any cost overruns. This commitment reflects the City's dedication to ensuring the project's completion without compromising quality or timelines. The City has a proven track record of managing public funds responsibly and implementing projects within compliance standards, and it will continue to exercise diligent oversight throughout the project lifecycle.

By assuming this responsibility, the City affirms its readiness to meet the financial demands of this initiative and achieve the outcomes anticipated by this grant opportunity.

PROJECT READINESS

PROJECT SCHEDULE

The City of Gastonia has a strong track record of collaboration with municipal, regional, state, federal, and community partners in project development. The completion of the Garrison Boulevard Corridor Study in January 2024 serves as a testament to this collaborative effort. With this groundwork laid, the City of Gastonia is poised to effectively execute the **Garrison LEARNS** project within the timeframe outlined by the 2025 BUILD Grant, while also meeting all necessary federal, state, and local approvals. The comprehensive planning and design work have provided a clear roadmap for swift project implementation upon funding approval. Furthermore, the City’s commitment to transparency and minimal community disruption underscores its dedication to delivering **Garrison LEARNS** efficiently and successfully. Through collective experience, meticulous planning, and collaborative ethos, the City is confident in achieving a positive outcome for all stakeholders involved.

A summarized project schedule is illustrated below, showing the start and completion dates for the Project. The schedule includes flexibility to allow for unforeseen delays, while meeting the September 30, 2029 deadline to obligate funds.

City of Gastonia – Garrison LEARNS	Start Date	End Date
Grant Review Process and Award	Feb-2025	Sep-2025
Grant Agreement	Sep-2025	Dec-2025
Engineering Consultant Procurement	Nov-2025	Feb-2026
Preliminary Engineering Phase	Jan-2026	Mar-2027
Public Involvement	Feb-2026	Dec-2028
Preliminary 30% Design	Feb-2026	Nov-2026
Environmental (NEPA) Document	Aug-2026	Mar-2027
Alternative Contracting Procurement*	Dec-2026	Mar-2027
Scope of Work Document Approved	Jan-2027	Mar-2027
Final Engineering Phase	Mar-2026	June-2027
60% Design	Mar-2026	Jul-2026
Limits of Construction Finalized	May-2026	Jul-2026
Right-of-Way Appraisals & Acquisitions (if necessary)**	Jul-2026	Dec-2026
90% Design	Jul-2026	Dec-2026
Project Permitting	Mar-2026	Dec-2026
100% Design and PS&E	Dec-2026	June-2027
Construction Phase	June-2027	June-2029
Construction Contract Solicitation*	Jul-2027	Dec-2027
Construction	June-2027	June-2029

*Activities marked with asterisks are optional and can be adjusted based on project needs and funding availability.

**Right-of-Way Appraisals & Acquisitions are included, but it is indicated that they are only necessary if required for the project. If not needed, this step can be skipped, allowing for a more efficient timeline.

Project Startup

Following notification of grant award, the City of Gastonia will initiate discussions with the Federal Highway Administration (FHWA) to expedite the finalization of the grant funding agreement. Once the grant agreement has been formalized, the City will promptly proceed to

solicit proposals from qualified consulting firms to oversee project delivery and engineering activities.

Anticipating a swift selection process, the City aims to identify a preferred consulting partner and issue a Notice-to-Proceed no later than February 2026. This will mark the official commencement of the **Garrison LEARNS** project, signaling the beginning of comprehensive planning, design, and implementation efforts aimed at realizing the project's objectives.

Preliminary Engineering and Design

The **Garrison LEARNS** project will benefit from the groundwork laid by existing planning and design efforts. Recognizing the importance of this project to the City, the delivery approach prioritizes robust public involvement at every stage, including construction. This comprehensive public involvement strategy will ensure that stakeholders are actively engaged in the decision-making process, guiding critical decisions, shaping the project's design, and providing invaluable support for the NEPA document. By incorporating diverse perspectives and fostering transparent communication, the City aims to enhance project outcomes and foster community ownership of the **Garrison LEARNS** initiative.

Final Engineering and Design

Following the conclusion of the NEPA process, the **Garrison LEARNS** project will transition seamlessly into the final engineering phase, which will also encompass any necessary right-of-way (ROW) activities. While the City does not anticipate the need for extensive ROW acquisition, securing temporary construction easements along the corridor will be essential. To achieve this, the City will engage in close coordination with adjacent businesses to minimize disruptions during the construction phase. This strategic decision aims to optimize construction logistics and minimize transportation-related disruptions in the project area.

Additionally, extensive traffic staging and phasing work are anticipated as part of the project planning efforts. Recognizing the importance of this aspect, the City will dedicate significant resources to traffic staging and phasing planning, ensuring that construction activities proceed smoothly while minimizing impacts on local traffic flow and accessibility. This meticulous planning will be an integral component of final engineering and design work, reflecting the City's commitment to delivering the **Garrison LEARNS** project with maximum efficiency and minimal disruption to the community.

Right-of-Way and Private Utility Coordination

All projects included in this application focus on improving existing transportation facilities along Garrison Boulevard, which presents unique challenges due to limited space. To mitigate potential impacts to adjacent properties, the City's approach centers on utilizing existing right-of-way and city-owned property to the maximum extent possible. By avoiding impacts to adjacent properties and focusing on existing infrastructure, risks associated with project delivery are reduced while safeguarding the distinctive character of the civic core.

The City anticipates that conflicts with private utilities will be minor and will be further assessed during the 30% design phase. Coordination and potential relocations of utilities will be addressed during the final design stage, with any necessary relocations planned for the second half of 2027. Alternatively, utility relocations may be strategically coordinated during the construction phase to minimize disruptions to the public and overall project impacts. This approach underscores the City's commitment to efficient project delivery while prioritizing public safety and minimizing inconveniences to the community.

Construction

Anticipating a two-year construction season spanning 2027 and 2028, the project will be strategically phased to mitigate disruptions and minimize impacts on businesses. Managing traffic flow for all modes of transportation, including vehicles, bicycles, and pedestrians, presents a significant construction challenge that the City will actively address.

With Garrison Boulevard being owned and maintained by the state, NCDOT will serve as the certified project administrator on behalf of the City of Gastonia to build the **Garrison LEARNS** project, meeting the FHWA certified entity requirement. NCDOT has a proven track record of working with its partners to deliver large scale transportation projects on time and under budget.

Public Involvement

Each element included in this grant application has undergone extensive outreach, engagement, and public input processes. Gastonia prides itself on being an engaged community, and our civic core benefits from the active involvement of organizations such as Keep Gastonia Beautiful and the Gaston Business Association, which work closely with the City to ensure the vibrancy and success of the City's civic core.

To maintain public support and ensure transparency throughout the project, the City proposes to initiate comprehensive public engagement activities as soon as funding and procurement processes are completed. This approach will enable the City to keep the community informed, address concerns, and gather valuable feedback to guide the project's implementation.

By actively involving stakeholders, fostering open communication, and implementing proactive measures to support local businesses and neighborhoods, the City is committed to ensuring that **Garrison LEARNS** progresses smoothly and delivers long-term benefits to the entire community.

REQUIRED APPROVALS

Environmental Permits and Reviews

Garrison LEARNS is anticipated to qualify for a Categorical Exclusion under the National Environmental Policy Act (NEPA) due to its characteristics and scope. While the formal NEPA process has not yet been conducted, preliminary assessments indicate that the project aligns with the criteria for a Categorical Exclusion, ensuring streamlined environmental review and expediting project implementation. This demonstrates the project's readiness by indicating that

environmental considerations have been addressed proactively, paving the way for efficient advancement through the regulatory process.

State and Local Approvals

All project elements reside within City and State rights-of-way, requiring careful consideration and collaboration. Garrison Boulevard is a State-maintained Secondary Route, necessitating consultation with the North Carolina Department of Transportation (NCDOT).

To expedite the project and foster seamless coordination, the City actively engaged with NCDOT throughout the planning stages. NCDOT staff actively participated in project steering committees and design meetings, ensuring alignment with state-level requirements and goals. This close collaboration resulted in NCDOT's confirmation that the proposed design, including specific signal and intersection improvements, satisfied all their criteria. A Letter of Support from NCDOT is included in [Attachment 9](#).

While the Avon/Catawba Creeks Greenway connections fall outside of NCDOT's direct purview, provisions for the ADA-compliant connection to Lineberger Park were thoughtfully incorporated during the recent Garrison Boulevard Corridor Study, demonstrating ongoing collaboration and foresight.

Federal Transportation Requirements Affecting State & Local Planning

Elements of **Garrison LEARNS** are included in the City of Gastonia's 2025 Comprehensive Plan as recommended for funding and should this 2025 BUILD Grant request be successful, the Gaston-Cleveland-Lincoln Metropolitan Planning Organization's (GCLMPO) Transportation Improvement Program (TIP) will be amended to include the project. The main elements of **Garrison LEARNS** are also included in two of the GCLMPO's current long-range transportation plans, the 2050 Metropolitan Transportation Plan (MTP) and NCDOT's mandated Comprehensive Transportation Plan (CTP).

Due to the region's air quality maintenance status, FHWA requires projects located in non-attainment and maintenance areas to adhere to regulations aimed at minimizing harmful emissions. Construction of the **Garrison LEARNS** project will not negatively affect the City of Gastonia's air quality standards and has significant opportunity to improve conditions based on anticipated mode shift and reduction in vehicle trips.

ASSESSMENT OF PROJECT RISKS AND MITIGATION STRATEGIES

Garrison LEARNS, while poised to deliver transformative benefits to the City of Gastonia, is not without its share of potential risks. To ensure the successful initiation and completion of this critical initiative, the City and its project partners have diligently identified key risks and developed comprehensive mitigation strategies.

Procurement Delays: One potential risk to **Garrison LEARNS** is the possibility of procurement delays during the selection of engineering consultants and construction contractors. To mitigate

this risk, the City will implement a proactive procurement process, including clear project specifications, rigorous evaluation criteria, and expedited review procedures.

Cost Inflation: This has been a significant concern in Gastonia’s recent bidding and construction environment, prompting the City to include substantial contingencies in the cost estimates for all project phases.

Construction Delays and Impacts: Constructing projects in developed areas presents inherent complexities and management challenges. However, effective staging, proactive measures to mitigate impacts on businesses and commuters, and close coordination with adjacent property owners are pivotal in achieving project objectives. The **Garrison LEARNS** project acknowledges the importance of adopting innovative project delivery methods to address these challenges.

TECHNICAL CAPACITY

The City of Gastonia possesses a robust technical capacity to successfully deliver the **Garrison LEARNS** project in compliance with all applicable Federal requirements. The City’s extensive experience in implementing federally funded transportation projects, coupled with a thorough understanding of Federal regulations and project delivery processes, positions the City as a competent steward of the BUILD Grant funding.

Federal Funding Experience: The City of Gastonia has a proven track record of effectively managing federally funded transportation projects. Over the years, the City has successfully secured and managed grants from various Federal agencies, including USDOT, FHWA, the FTA. These projects encompass a range of initiatives, from roadway improvements to transit enhancements, demonstrating the City’s ability to navigate complex federal funding processes.

Understanding of Federal Regulations: The City of Gastonia possesses a comprehensive understanding of Federal contract and procurement requirements, including Buy America provisions, the Americans with Disabilities Act (ADA), the Uniform Relocation Assistance and Real Property Acquisition Act, and the Davis-Bacon Act. The City is committed to upholding these regulations throughout all phases of the **Garrison LEARNS** project, ensuring compliance and accountability at every step.

Project Planning Expertise: **Garrison LEARNS** is seamlessly integrated into long-range development plans and transportation improvement programs. Once funding is secured, the City will work with the GCLMPO to incorporate the project into the Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP).

Project Delivery Success: The City’s portfolio includes numerous examples of successfully delivered projects that mirror the size, scope, and complexity of the **Garrison LEARNS** initiative. From major infrastructure upgrades to multimodal enhancements, the City has demonstrated its ability to execute projects on time and within budget while adhering to stringent quality standards. These past accomplishments underscore the City’s capacity to navigate the intricacies of project delivery and overcome potential challenges.