



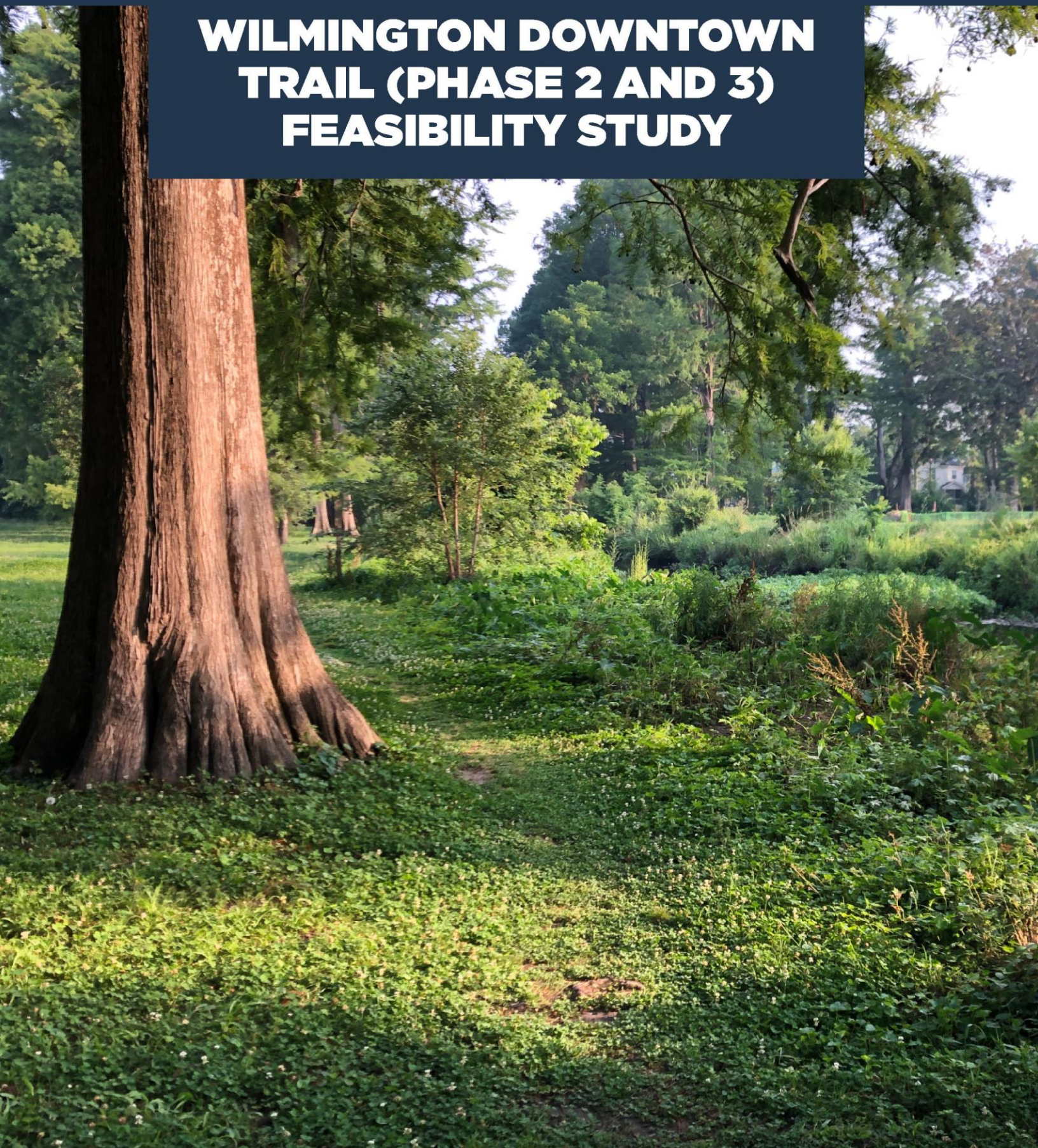
Integrated Mobility Division
N.C. DEPARTMENT OF TRANSPORTATION



WILMINGTON URBAN AREA
METROPOLITAN PLANNING ORGANIZATION



WILMINGTON DOWNTOWN TRAIL (PHASE 2 AND 3) FEASIBILITY STUDY



Inside front cover

Page Intentionally blank

Wilmington Downtown Trail

Wilmington, NC

Prepared for:
Wilmington Urban Area Metropolitan Planning Organization
and **North Carolina Department of Transportation**
Integrated Mobility Division

Prepared by:
Kittelson & Associates, Inc.

In association with:
Smart Moves Consulting and Whitman, Requardt, and Associates

May 5, 2025



CONTENTS

- Executive Summary 1
- Introduction 8
 - Wilmington Downtown Trail..... 8
 - Feasibility Study Planning Process 9
 - Project Goals 10
- Community Engagement..... 12
 - Engagement Goals and Outreach Strategies..... 12
- Existing Conditions 16
 - Existing Conditions Mapping..... 16
 - Environmental Feasibility Assessment..... 19
 - Field Review 20
 - Round 1 Engagement feedback 21
- Alignment Assessment 23
 - Alignment Development 23
 - Alignment Assessment 25
 - Round 2 Public Feedback..... 27
- Preferred Alignment 30
 - Typical Cross Sections 30
 - Trail Crossings 31
 - Trail Access Points..... 32
 - Trail Amenities..... 32
- Project Prioritization and Implementation 35
 - Cost Estimation..... 35
 - Project Prioritization 35
 - Implementation Phasing..... 37
 - Key Partners and Funding Sources 37

LIST OF FIGURES

- Figure 1. Proposed Wilmington Downtown Trail.....1
- Figure 2. Project Goals.....2
- Figure 3. Engagement by the Numbers3
- Figure 4. Focus Areas for Analysis.....4
- Figure 5. Recommended Alignment.....4
- Figure 6. Photos Along the Proposed Trail5
- Figure 7. Final Alignment and Implementation Recommendation.....6
- Figure 8. Project Study Area.....8
- Figure 9. Trail Project Timeline9
- Figure 10. Project Goals.....10
- Figure 11. Photos Along the Proposed Trail10
- Figure 12. Trail Website Page.....12
- Figure 13. Issues and Constraints17
- Figure 14. Context and Opportunities.....17
- Figure 15. Publicly Owned Parcels18
- Figure 16. Pedestrian and Bicyclist Crashes18
- Figure 17. Photos Along the Proposed Trail20
- Figure 18. Additional Round 1 Feedback.....21
- Figure 19. Focus Area Overview23
- Figure 20. Focus Area 1.....23
- Figure 21. Focus Area 224
- Figure 22. Focus Area 324
- Figure 23. Focus Area 425
- Figure 24. Additional Round 2 Feedback.....28
- Figure 25. Preferred Trail Alignment30
- Figure 26. Trail on East Side of Burnt Mill Creek.....30
- Figure 27. Multimodal Bridge Over Burnt Mill Creek30
- Figure 28. Trail on West Side of Burnt Mill Creek31
- Figure 29. Shared Street31
- Figure 30. Shared Street.....31
- Figure 31. Princess Place Drive Crossing31
- Figure 32. Market Street Crossing31
- Figure 33. Chesnut Street Crossing32
- Figure 34. Metts Avenue Crossing32
- Figure 35. Potential Trail Access Points.....32
- Figure 36. Photos Along the Proposed Trail.....33
- Figure 37. Implementation Recommendations.....37
- Figure 38. Alligator Warning Sign Along the Proposed Trail43

LIST OF TABLES

- Table 1. Steering Committee Meetings 13
- Table 2. Existing Conditions Summary 16
- Table 3. Existing Conditions of Proposed Trail Crossings..... 19
- Table 4. Alignment Assessment 26
- Table 5. Crossing Treatment Countermeasures 27
- Table 6. Trail Amenity Recommendations 33
- Table 7. Estimated Project Costs 35
- Table 8. Project Prioritization 36
- Table 9. Potential Funding Sources 39
- Table 10. Design Resources 43

APPENDICES

- Appendix A - Community Engagement Summary
- Appendix B - Existing Conditions Maps
- Appendix C - Alignment Evaluation
- Appendix D - Project Cut Sheets

Executive Summary

Executive Summary

The Wilmington Urban Area Metropolitan Planning Organization (WMPO) partnered with the North Carolina Department of Transportation Integrated Mobility Division (NCDOT IMD) to conduct a feasibility study for the Wilmington Downtown Trail: Phase 2 and Phase 3 in Wilmington, North Carolina.

This feasibility study builds on past work by local government and community partners for the larger Wilmington Downtown Trail Project. The project was identified in the 2013 Wilmington/ New Hanover County Greenway Plan as the number one project recommendation, connecting several neighborhoods between Forest Hills and Downtown.

The trail was divided into three future phases (Figure 1):

- **Phase 1:** Downtown to the Love Grove Bridge
- **Phase 2:** Love Grove Neighborhood to Market St
- **Phase 3:** Market St to Forest Hills Dr

Phase 1 of the Wilmington Downtown Trail is a proposed connection from 3rd Street to the Love Grove Memorial Bridge, with the first 0.5-mile of the trail corridor running along the former Atlantic Coast Railway. The Phase 1 project is currently being designed, and efforts are ongoing to identify future funding for construction.

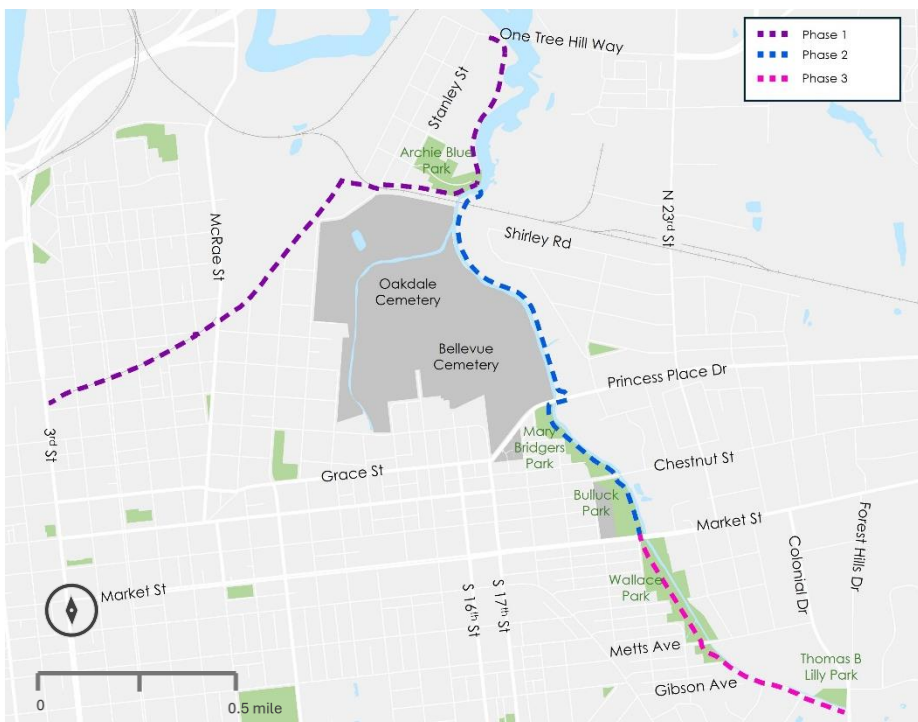


FIGURE 1. PROPOSED WILMINGTON DOWNTOWN TRAIL

PHOTOS ALONG THE PROPOSED TRAIL

The purpose of this study was to identify a recommended alignment for Phase 2 and Phase 3. The team provided a recommended alignment for the shared use path that will connect the Love Grove Neighborhood to Forest Hills Dr. The study team carried out an extensive planning-level analysis to assist decision-makers in determining the best course of action for advancing the trail and transitioning it into the design and engineering phase.

The study team used the documented base alignment in the 2013 Wilmington/New Hanover County Greenway Plan to begin the study. The base alignment has an approximate total length of three miles, and key road crossings along the trail include Princess Place Drive, Chestnut Street, Market Street, and Metts Avenue. The base alignment was originally proposed through parks, including Wallace Park and Bulluck Park, as well as along the creek.

The feasibility study consisted of technical analysis, agency coordination, and community feedback to develop a recommended alignment. This report consists of the following sections:

1. Introduction
2. Community Engagement
3. Existing Conditions
4. Alignment Development and Assessment
5. Preferred Alignment
6. Project Prioritization and Implementation

The study team formed a Wilmington Downtown Trail Steering Committee to support establishing project vision and goals as well as provide feedback throughout the entire study. Members included local, regional, and state agencies as well as local community organizations focused on bicycle and pedestrian safety and connectivity.

The project team and steering committee identified several goals that focus on creating a community-driven alignment for the trail that can be widely supported through implementation (Figure 2).

Community feedback was essential to the study process. The study team collected feedback in two rounds. The first round focused on existing conditions to gather more feedback on area issues and opportunities. The second round focused on collecting trail alignment preferences from the community to inform the plan's final recommendations.

PROJECT GOALS



FIGURE 2. PROJECT GOALS

In both rounds, the study team offered ways to collect data in multiple ways, including online surveys and map comments, in-person conversations, and in-person voting exercises. Two touchpoints were conducted during each round of engagement, including one public outreach event. The team documented high-level results from both rounds (Figure 3).



FIGURE 3. ENGAGEMENT BY THE NUMBERS

After launching the project with an in-depth review of recent local and regional multimodal plans, the project team documented the current transportation and land use conditions within the study area. An analysis of existing conditions is a vital part of a trail feasibility study, as it offers a thorough understanding of the area's present state. The team assessed various factors, including existing and planned multimodal infrastructure,

pedestrian and cyclist crash data, roadway characteristics, land use patterns, conservation areas, habitats, and environmental constraints. This assessment enabled the identification of potential challenges and opportunities that could influence the trail's development. Beyond aiding brainstorming trail alignment options, the existing conditions analysis also helped the team anticipate regulatory requirements and necessary permits. It highlighted sensitive areas and contributed to designing a trail that integrates seamlessly with both the natural and built environments. Key areas of analysis from the existing conditions analysis, along with initial community engagement.

Following the completion of the existing conditions analysis and the collection of public feedback on the initial base alignment, the trail was divided into four focus areas for the development and evaluation of alignments. Segmenting the study area allowed the project team to have more nuanced evaluation of opportunities and constraints as well as the ability to create distinct projects, enabling agencies to advance sections of the trail toward design and implementation. These focus areas were defined based on major roadways and key infrastructure elements.

The study team developed approximately two potential alignments per focus area. The following considerations from the existing conditions analysis were used to develop alternatives:

- Right of way
- Park resources, aesthetics, and access
- Environmental Feasibility
- Connectivity

In general, proposed alignments followed the creek and traversed existing parks. Four focus areas were developed, and in general, two alignment options were identified per focus area

- **Focus Area 1:** Love Grove Memorial Bridge to Shirley RD/Railroad Bridge
- **Focus Area 2:** Shirley Rd/Railroad Bridge to Market St
- **Focus Area 3:** Market St to Metts Ave

- **Focus Area 4:** Metts Avenue to Forest Hills Drive

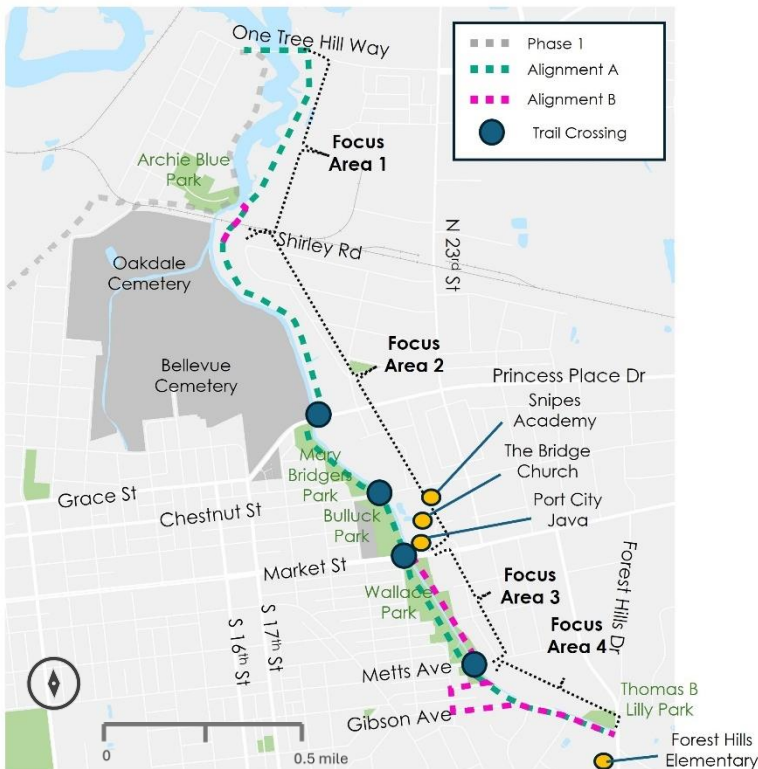


FIGURE 4. FOCUS AREAS FOR ANALYSIS

The project team then assessed each alignment within each segment based on the following performance measures:

- Right of Way Impacts
- Environmental Constraints & Agency Permitting
- Roadway Crossings/Connectivity
- Cost

These performance measures were chosen to highlight the goals and objectives of the feasibility study. The evaluation criteria consisted of a combination of quantitative and qualitative measures, which were identified by the project team and reviewed with the Steering Committee for input.

The project team evaluated each alignment using performance measures and input from Round 2 of public engagement to assess constraints and opportunities along the trail. Following the assessment and a second round of public

engagement, a preferred alignment was recommended for Phase 2 and Phase 3 of the Wilmington Downtown Trail (○). The project team created detailed cut sheets and information on each of the four proposed trail segments with high-level cost estimates, constraints and considerations, and visuals. In addition to the

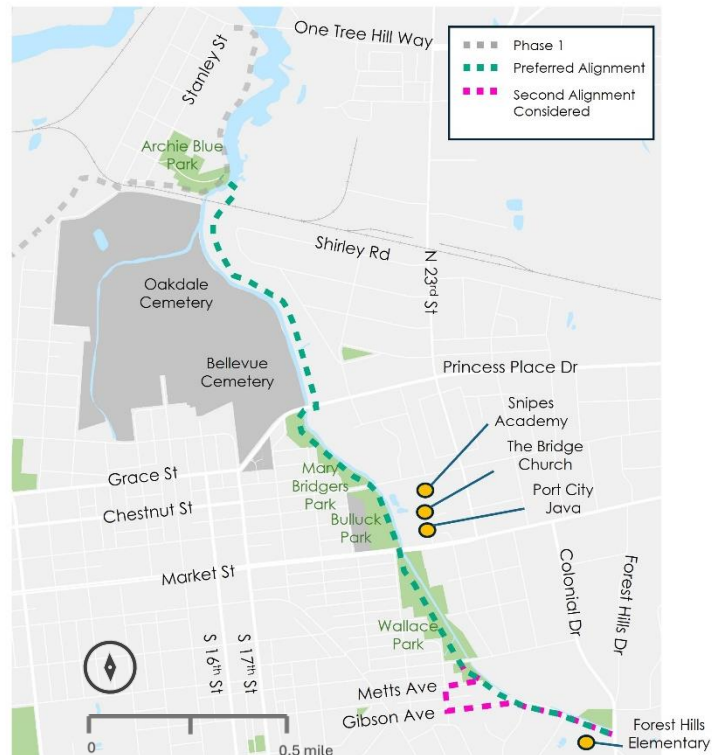


FIGURE 5. RECOMMENDED ALIGNMENT

preferred alignment, several trail amenities were recommended to be incorporated into various segments of the trail, including benches, trail wayfinding, lighting, trash and recycling bins, and access points.

The project team also prioritized the recommended projects to inform next steps and implementation. Insights from existing conditions, alignment evaluation, and public engagement were utilized:

- Connectivity
- Overall Feasibility
- Transportation Equity
- Community Support
- Cost

The final phase of the feasibility study involved transitioning from recommendations to actual

implementation. The project team created an implementation plan guided by the prioritization outcomes, cost estimates, constraints, and potential overlaps with private development or public transportation enhancements. This plan aims to establish realistic timelines for project development and to identify appropriate funding sources. Each segment was categorized for implementation as short-term (0-10 years) or medium-term (10-15 years) (see Figure 7 for where projects are located based on corresponding numbers).

Short-Term:

- Princess Place Drive to Market Street (1)
- Market Street to Metts Avenue (2)

Medium-term

- Shirley Road to Princess Place Drive (3)
- Creekside OR 22nd Street Route (4)
- Archie Blue Park to Shirley Road (5)

Lastly, the project team documented community partners, funding sources, and design resources that can be considered when moving the recommended trail projects through to design and implementation. Key funding sources include federal, state, and local opportunities as well partnerships with developers developing along the alignment. Key design resources include North Carolina Complete Streets Guide and the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide.



RAILROAD BRIDGE NORTH OF SHIRLEY RD



BRIDGE IN MARY BIRDGERS PARK

FIGURE 6. PHOTOS ALONG THE PROPOSED TRAIL

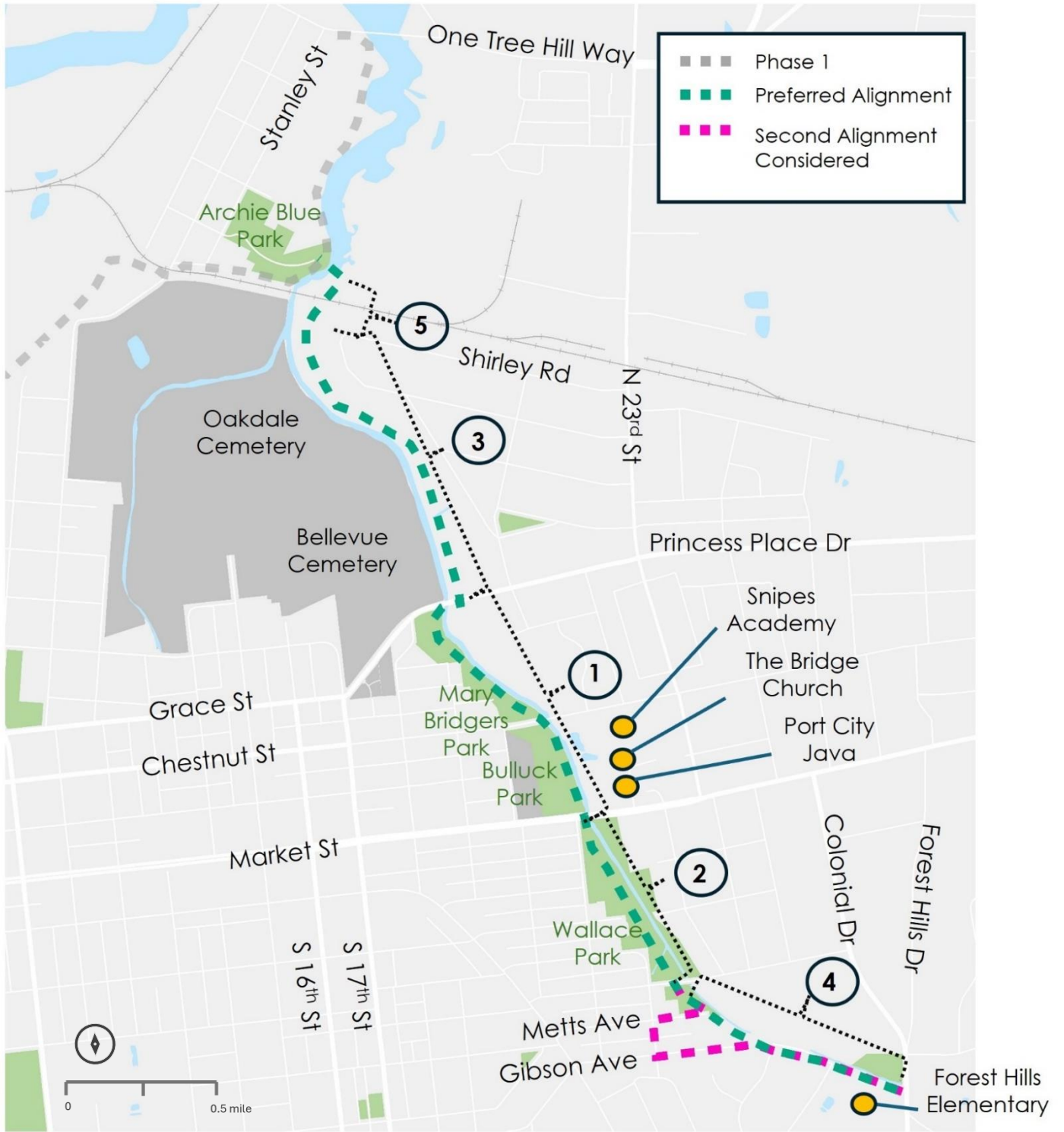


FIGURE 7. FINAL ALIGNMENT AND IMPLEMENTATION RECOMMENDATION

Section 1

Introduction

Introduction

Shared use paths and greenway trails are corridors of protected open space that are primarily designed for walking and bicycling. Shared use paths often help meet community goals of recreation, conservation, and transportation.

The Wilmington Urban Area Metropolitan Planning Organization (WMPO) partnered with the North Carolina Department of Transportation Integrated Mobility Division (NCDOT IMD) to conduct a feasibility study for the Wilmington Downtown Trail: Phase 2 and Phase 3 in Wilmington, North Carolina. This feasibility study builds on past work by local government and community partners from the 2013 Wilmington/New Hanover County Greenway Plan.

WILMINGTON DOWNTOWN TRAIL

The Wilmington Downtown Trail project was identified in the 2013 Wilmington/New Hanover County Greenway Plan as the number one project recommendation, connecting several neighborhoods between Forest Hills and the Downtown area. The project will benefit residents, workers, the broader Wilmington community, and visitors, while also driving sustainable economic growth in the area. The proposed trail connects parks, cultural features, and historic sites, and follows natural features such as Burnt Mill Creek as well as the former Atlantic Coast Railway (see Figure 8 for original alignment). By connecting to existing or planned trail and bikeway projects, this trail will address gaps in the network, serve lower-income neighborhoods with low car ownership, and enhance safety in an area that currently experiences a high incidence of bike and pedestrian accidents.

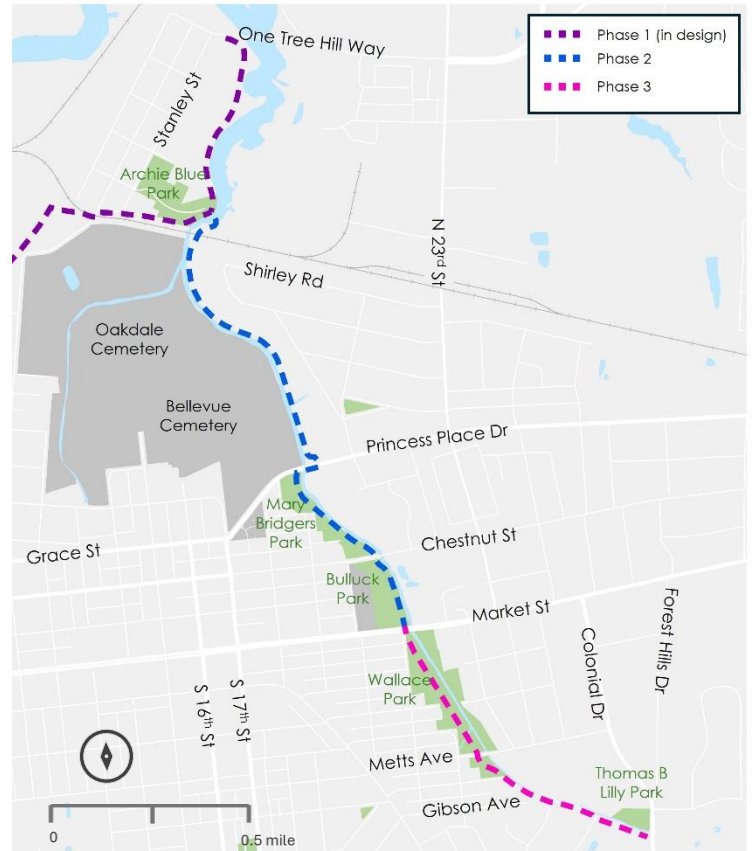


FIGURE 8. PROJECT STUDY AREA

The trail was split into three phases in the Greenway Plan:

- **Phase 1:** Downtown to Love Grove
- **Phase 2:** Love Grove to Market Street
- **Phase 3:** Market Street to Forest Hills Elementary School

Phase 1 of the Wilmington Downtown Trail is a proposed connection from 3rd Street to the Love Grove Memorial Bridge, with the first 0.5-mile of the trail corridor running along the former Atlantic Coast Railway. The Phase 1 project is currently being designed, and efforts are ongoing to identify future funding for construction.

Phase 2 of the trail connects the Love Grove neighborhood to Market Street, with the potential to connect parks including Archie Blue Park, Mary Bridgers Park, and Bulluck Park as well as commercial, historical, and residential areas.

Phase 3 of the trail runs from Market Street to Forest Hills Elementary School and Colonial Drive. This section has the potential to connect Wallace Park, residential, and an elementary school to the trail. This section also brings the Downtown Trail within 0.5 miles of the River to Sea Bikeway.

FEASIBILITY STUDY PLANNING PROCESS

The Wilmington Downtown Trail Phase 2 and 3 Feasibility Study was developed in a series of seven tasks, led by the project team, which included the consultant team, NCDOT, and the WMPO:

1. Project Management
2. Existing Conditions Assessment
3. Public and Stakeholder Engagement
4. Alignment Development and Assessment
5. Project Recommendations
6. Project Prioritization and Implementation
7. Plan Preparation

The project took place from June 2023 to November 2024 (Figure 9). The team evaluated issues and opportunities to implement the trail, documenting elements such as environmental constraints, property ownership, pedestrian and bicyclist crashes, and existing and proposed multimodal infrastructure. Feedback was collected from agency and community partners as well as residents to ensure the plan aligned with community needs. The team analyzed various alignments, options and solutions, analyzing their feasibility and impact. Based on these findings, the team crafted prioritized project recommendations, and the Study is a culmination of a detailed, actionable plan ready for execution. Together, these steps ensured a holistic, well-informed approach to improving Wilmington’s downtown trail system.



FIGURE 9. TRAIL PROJECT TIMELINE

PROJECT GOALS

The project team evaluated the feasibility of Phase 2 and 3 of the Wilmington Downtown Trail for advancement to the design phase. Major goals of the project include building on previous greenway and multimodal transportation work, connecting parks, residential, and commercial areas, and preserving and promoting access to the natural environment (Figure 10). The trail also traverses areas rich in natural environments and habitats (Figure 11 displays photos from along the trail).

PROJECT GOALS

	Establish a vision for the trail alignment.
	Connect the trail to the existing and proposed multimodal network.
	Preserve and enhance neighborhood character and history
	Build on previous planning efforts.
	Support public health and safety.
	Provide guidance and requirements for design.
	Encourage economic development along the corridor.
	Enhance environmental stewardship and preserve natural assets.

FIGURE 10. PROJECT GOALS



TRAIL THROUGH BULLUCK PARK



CROSSING AT MARKET ST (BEFORE HAWK SIGNAL)



SOUTH OF MARKET ST

FIGURE 11. PHOTOS ALONG THE PROPOSED TRAIL

Section 2

Community Engagement

Community Engagement

The project team created a Community Engagement Plan (Appendix A) to document the engagement goals, strategy, and timeline. Community engagement is a critical element of the Wilmington Downtown trail feasibility study planning process, and the project team engaged local community members throughout the study to brainstorm potential trail alignments and provide open-ended feedback on potential alignments.

ENGAGEMENT GOALS AND OUTREACH STRATEGIES

The Wilmington Downtown Trail Phase 2 and Phase 3 Feasibility Study had two rounds of engagement:

- Round 1: Issues and Opportunities
- Round 2: Alignment Evaluation

Community engagement included a range of methods, including in-person events, online surveys, and both digital and printed materials. A Wilmington Downtown Trail Phase 2 and Phase 3 Steering Committee was formed to provide opportunities to review draft findings and recommendations, plan public engagement touchpoints, and ensure the planning process aligned with agency and partner goals and initiatives.

WMPO staff maintained a project website throughout the planning process. The website

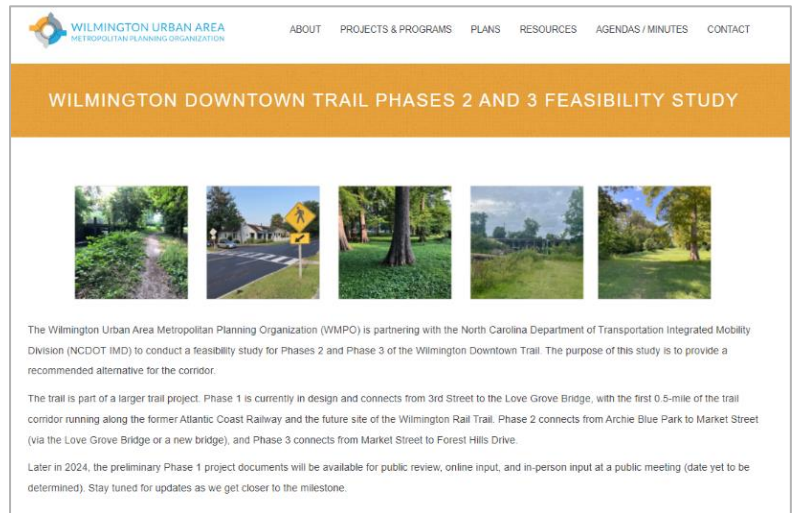


FIGURE 12. TRAIL WEBSITE PAGE

provided information about the plan, a timeline of engagement activities, interim and final deliverables, and links to online comment maps and surveys (Figure 12).

Wilmington Downtown Trail Phase 2 and Phase 3 Steering Committee Meetings

The Steering Committee was established to help shape the vision for the trail feasibility study, review public-facing materials, and evaluate draft deliverables. It included representatives from local, regional, and state public agencies, as well as advocates for multimodal safety. Alongside the core project team from NCDOT and the WMPO, Steering Committee members included the following groups:

- City of Wilmington
- New Hanover County
- Wave Transit
- WMPO Bicycle and Pedestrian Advisory Committee
- University of North Carolina Wilmington
- Wilmington Downtown Inc.
- Cape Fear Cyclists

A total of three steering committee meetings were held (Table 1):

TABLE 1. STEERING COMMITTEE MEETINGS

Meeting	Date	Goals
Meeting #1: Existing Conditions	October 17, 2023	<ul style="list-style-type: none"> ■ Outlining steering committee roles ■ Refine projects ■ Gather feedback on existing conditions
Meeting #2: Draft Alignments	May 8, 2024	<ul style="list-style-type: none"> ■ Refine alignments for public feedback based on environmental feasibility, public input, and agency considerations
Meeting #3: Preferred Alignment	October 9, 2024	<ul style="list-style-type: none"> ■ Finalize recommended alignment for final report

Public Engagement Touchpoints

The project team conducted two rounds of public engagement at key milestones, each with two touchpoints to gather cohesive community feedback. The first round, held in winter 2023, focused on trail priorities, existing conditions, and challenges, while the second round in spring 2024 gathered input on trail alignment preferences and amenities. Both rounds used online surveys to reach more participants and encouraged community dialogue with the study team.

ROUND 1 ENGAGEMENT

The first round of public engagement had both in-person and online survey for the community to review and provide input on trail goals and existing conditions analysis. This was used to supplement mapping done for the trail to understand nuances of key challenges and opportunities the community sees for the trail (see Section 3. Existing Conditions for more information).

Two touchpoints were held in Round 1. Both meetings held had the same information presented at the following locations:

- **Open House- Nir Family YMCA, 12/5/2023**

Approximately 33 members of the public engaged with the boards and project team. There was an overall excitement about the trail, but many were concerned about the trail’s environmental impact to existing resources, including birds, trees, and flooding.

- **Outreach Event- Frankie’s Outdoor Market, 12/9/2023**

Approximately 26 members of the public engaged with the boards and project team. There was an overall excitement about the trail, as well as several comments about connections to schools. A total of 486 completed surveys, over 59 in-person conversations, and 352 online map comments were received during the first round of public engagement. Key findings from round one engagement will be described further in the Existing Conditions Assessment.



ENGAGEMENT AT PORTIA HINES PARK



ENGAGEMENT AT PORTIA HINES PARK

ROUND 2 ENGAGEMENT

The second round of public engagement had both in-person and online survey for the community to review and provide input on alignment preferences for each of the four focus areas and trail crossing enhancements. This was used to supplement the technical alignment assessment and cost estimates to understand community preferences (see Section 5. Alternatives Development and Assessment for more information).

Two touchpoints were held in Round 2. All meetings held had the same information presented at the following locations:

- **Outreach Event- Frankie's Outdoor Market/Juneteenth Community Day, 6/15/2027**

Approximately 33 members of the public engaged with the boards and project team. There was strong support and excitement for the project, with many questions raised about how the trail would connect to the Cross City Trail and the broader network. Feedback also focused on Phase 1 environmental and sustainability considerations, as well as

support for connecting the trail to the Love Grove neighborhood.

- **Open House- Nir Family YMCA, 6/18/2024**

Approximately 25 meaningful conversations were had. There was general support for the project, though concerns were raised about the safety of roadway crossings. Participants emphasized the importance of preserving environmental assets, particularly the cypress trees, and suggested exploring additional alternatives on the east side of the creek to enhance the trail's design.



ENGAGEMENT AT NIR FAMILY YMCA

Section 3

Existing Conditions

Existing Conditions

The project team gathered existing data along the Wilmington Downtown Trail Phase 2 and Phase 3 base alignment provided by the WMPO to help develop preliminary alternatives for the trail. Data collection consisted of existing conditions mapping and field reviews. Key information included environmental constraints, community demographics, existing and planned multimodal infrastructure.

EXISTING CONDITIONS MAPPING

Key findings from the analysis are summarized in Table 2. Key maps are also shown in Figures 13 through 16 (see Appendix B for the full existing conditions analysis mapping).

TABLE 2. EXISTING CONDITIONS SUMMARY

Category	Key Findings
Community Assets and Context	Several parks would be connected by the trail. Much of the proposed alignment offers direct connections to residential areas, with opportunities to connect schools, cemeteries, churches, and commercial areas
Historical Areas	The proposed trail must cross under the Atlantic Coastline Railroad. The trail also runs through several Wilmington historical neighborhoods and adjacent to cemeteries.
Environmental Constraints	The proposed trail runs parallel to Burnt Mill Creek, home to wildlife habitats and several tree species, including cypress trees. The proposed trail runs through the floodway south of the railroad bridge, with the entire trail within the 100-year floodplain. Wetlands are present on the northern and southern proposed sections of the trail.
Infrastructure	A Cape Fear Public Utility Authority sanitary sewer system runs along the trail with crossings in several places.
Multimodal Connectivity	Existing bicycle facilities are on Love Grove Bridge and Princess Place Dr, and connections to proposed facilities are on Market St and Colonial Dr. The area has extensive existing and planned sidewalks as well as transit stops on Princess Place Drive and Market Street. A High Intensity Activated Crosswalk (HAWK) signal was recently installed at the Market Street trail crossing.
Pedestrian and Bicyclist Safety	Crash data was analyzed from 2007-2021. The highest density of crashes within the study area is Market Street. Four bicyclist crashes are present at the location the trail would cross.
Publicly Owned Parcels	A significant portion of the proposed trail is within publicly owned land, including several parks. Portions of privately owned parcels are seen on the northern and southern sections.
Transportation Disadvantaged Populations	The trail has connections to areas with higher amounts Black, Indigenous, and People of Color, zero-car households, and low-income communities, particularly on the northern and western portions of the study area.

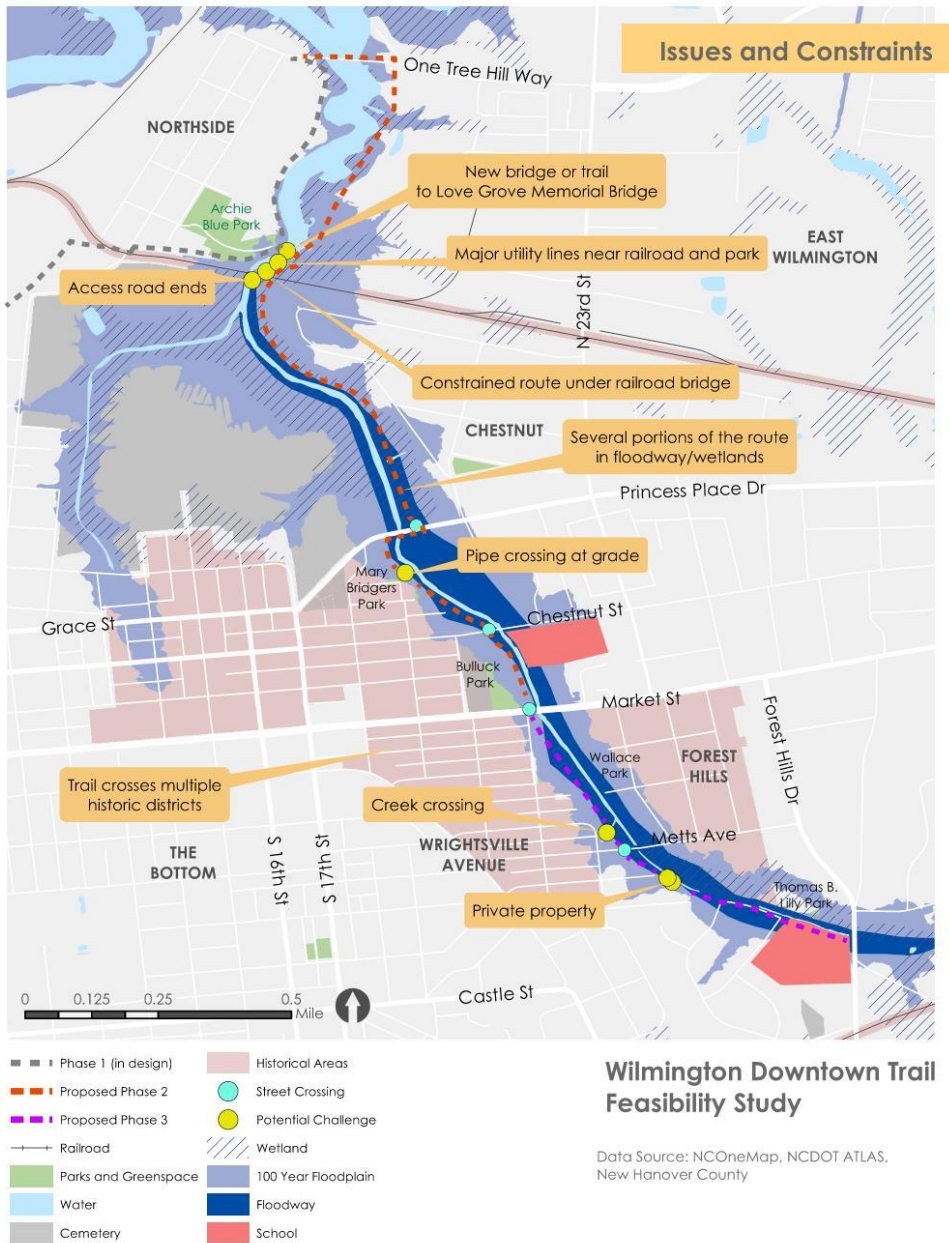


FIGURE 13. ISSUES AND CONSTRAINTS

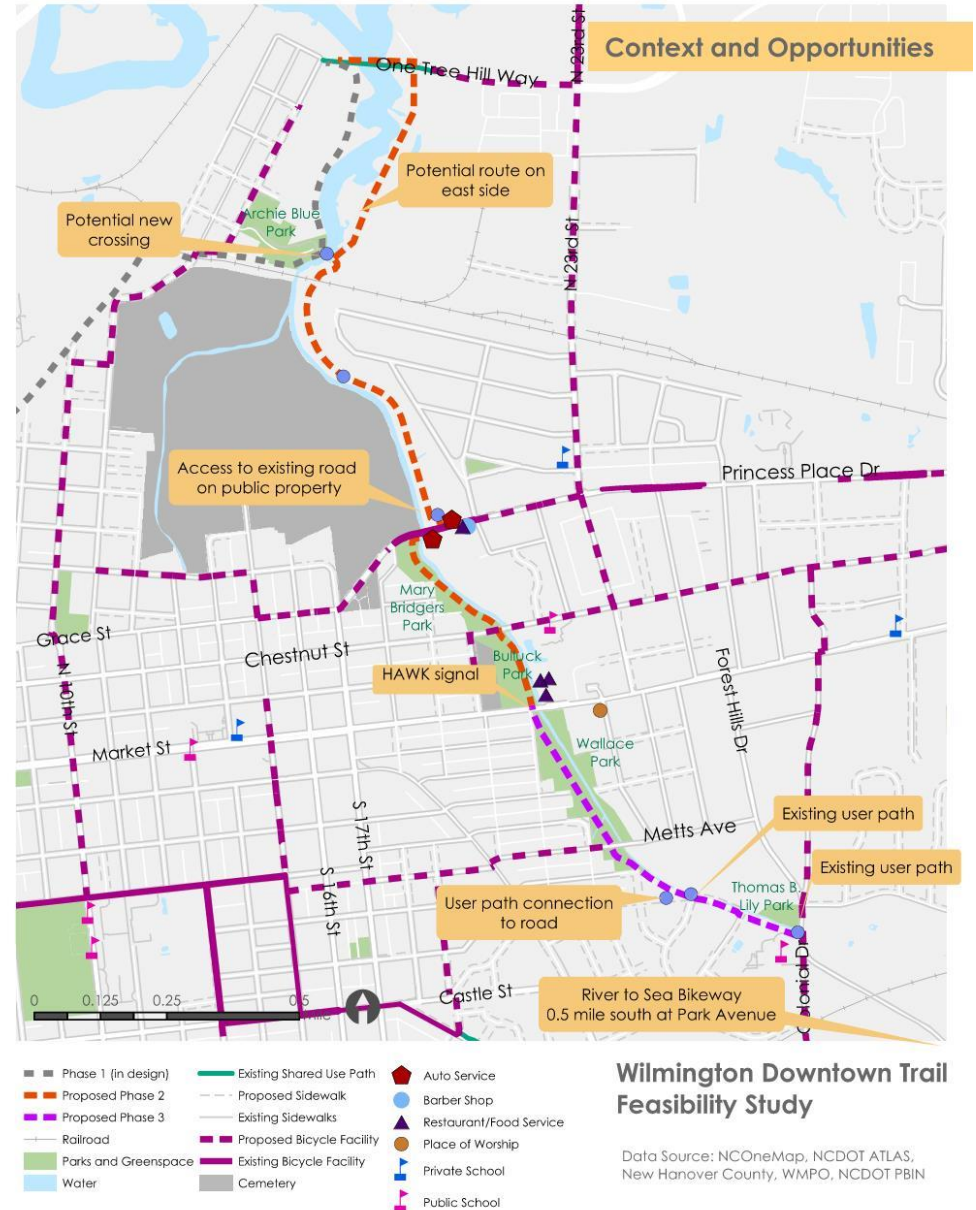
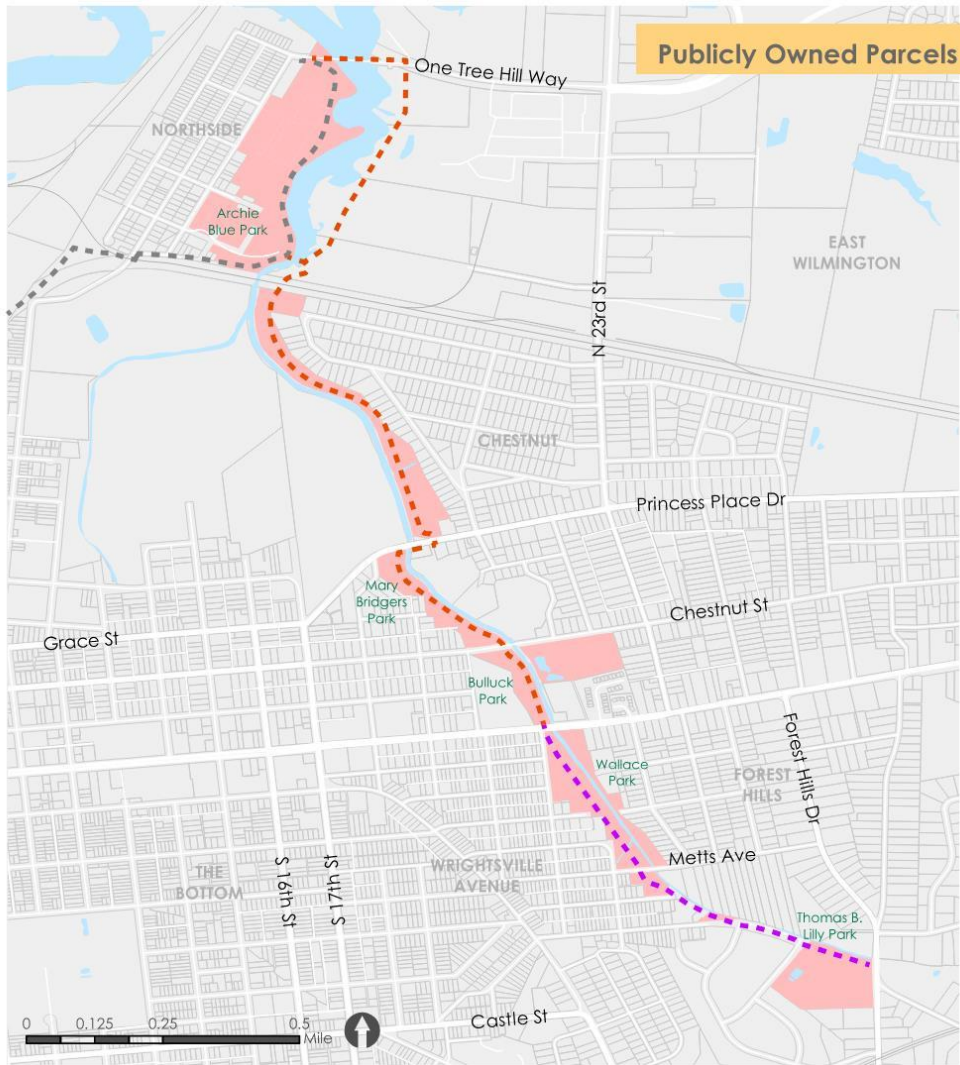


FIGURE 14. CONTEXT AND OPPORTUNITIES



- Phase 1 (in design)
- Proposed Phase 2
- Proposed Phase 3
- Railroad
- Water
- Publicly Owned Parcel

Wilmington Downtown Trail Feasibility Study

Data Source: New Hanover County



- Phase 1 (in design)
- Proposed Phase 2
- Proposed Phase 3
- Railroad
- Parks and Greenspace
- Water
- Bicyclist Crash
- Pedestrian Crash

Wilmington Downtown Trail Feasibility Study

Data Source: NCDOT Bicyclist and Pedestrian Crashes (2007-2021)

FIGURE 15. PUBLICLY OWNED PARCELS

FIGURE 16. PEDESTRIAN AND BICYCLIST CRASHES

Another essential component of existing conditions analysis was understanding current conditions of proposed trail crossings. There are four road crossing locations for the trail (Table 3).

TABLE 3. EXISTING CONDITIONS OF PROPOSED TRAIL

Crossing	Posted Speed Limit*	Average Annual Daily Traffic*	Lane Count	Existing Facilities
Princess Place Drive	35 mph	10,000-20,000	2	Sidewalk
Chestnut Street	25 mph	Low (exact counts not available)	2	Sidewalk
Market Street	35 mph	20,000-35,000	4	Sidewalk, crosswalk, High Intensity Activated Crosswalk (HAWK) Signal
Metts Avenue	25 mph	Low (exact counts not available)	2	Sidewalk

* Data source: NCDOT GIS

ENVIRONMENTAL FEASIBILITY ASSESSMENT

The major environmental constraints identified along the trail include:

- **Wetlands:** Several phases cross wetlands, necessitating special environmental considerations.
- **Permitting and Regulatory Needs:** Multiple sections require various permits, including:
 - Section 401/404 Permits for wetland impacts.
 - NCDEQ CAMA (Coastal Area Management Act) and Coastal Stormwater permits.
 - New Hanover County Stormwater permits.
 - Floodplain Development Permits due to proximity to flood-prone areas.

- **Historic Resource Coordination:** Some segments require coordination with historical districts (e.g., proximity to Wilmington National Cemetery and Brookwood Historic District).
- **Riparian Buffers:** Compliance with local riparian buffer practices to protect water quality along waterways.
- **Utility Infrastructure:** Coordination with Cape Fear Public Utility Authority is needed for areas where sanitary sewers cross the trail path, and potential utility relocation for sidewalks

Essential considerations for the trail from both the west and east sides of Burnt Mill Creek were summarized to inform alignments.

FIELD REVIEW

The team conducted a field review along the potential trail alignment to assess conditions firsthand and to verify and fill in gaps in the mapping and environmental feasibility assessment. Key findings from the field review include the following:

- A sanitary sewer system that crosses Burnt Mill Creek and passes underneath the existing railroad bridge
- Much of the proposed trail has existing user paths, particularly through existing parks. Several pedestrians were also seen along the proposed alignment
- Several cemeteries are present alongside the potential alignment, including Bellevue and Oakdale Cemeteries
- There are several existing foot bridges that cross Burnt Mill Creek
- Cypress trees, among other species, traverse the proposed alignment, particularly throughout existing parks
- An at-grade pipe crossing is observed across the creek south of Princess Place Drive

Trail crossings were also evaluated during the field review. Driver yielding was observed to be lower at Princess Place Drive and Market Street given existing conditions, posted speed limit, and lane count. Higher driver yielding was observed at Chestnut Street and Metts Avenue.



EXISTING BRIDGE



WMPO STAFF ON FIELD VISIT



A CEMETERY ALONG THE TRAIL CORRIDOR

FIGURE 17. PHOTOS ALONG THE PROPOSED TRAIL

ROUND 1 ENGAGEMENT FEEDBACK

The project team collected feedback on the study area analysis, locations of key constraints and opportunities, and ideas for potential trail alignments. Feedback was collected at in-person meetings as well as through an online survey. Key findings from the feedback are highlighted in this section as well as Figure 18. Appendix A includes the detailed comments and survey results.

Trail Priorities

The project team collected feedback on trail priorities to understand how the trail will benefit the community. Feedback from the community highlighted preserving natural resources, access to parks and recreation, enhancing the transportation network, and providing access to neighborhoods. This feedback helped inform the development of the trail alignments as well as trail amenities.

Future Trail Usage

Feedback on future usage was collected to understand how the community wanted to use the trail. Key uses include exercise/recreation, spending time with my family/friends/kids/dogs, and access to parks. This feedback helped inform the development of the trail alignments as well as trail amenities.

Trail Access Points

The project team collected feedback on trail access points to understand where the community wanted to access the trail and what would be convenient and effective. Responses varied for this question given feedback from several communities, but the top access points are provided:

- Forest Hills Drive/Forest Hills Global Academy
- Market Street
- Princess Place

TRAIL CHALLENGES

- Environmental impacts of the trail to the existing natural environment and wildlife
- Crossing Market St and Princess Place Dr with speeding, lack of drivers yielding for pedestrians, and lack of existing crossing treatments
- Personal safety and security along the trail
- Tree removal from trail construction
- ADA accessibility and safety of the trail

TRAIL OPPORTUNITIES

- Preserve and enhance the natural environment, particularly trees and water ways
- Connect to parks
- Can enhance multimodal safety and provide an alternative route to current network
- Enhanced crossing infrastructure at all trail crossings
- New access points and places for the trail to connect to in neighborhoods and parks
- Rest areas and places to pause along the trail
- Lighting along the trail
- Trash and recycling cans along the trail

FIGURE 18. ADDITIONAL ROUND 1 FEEDBACK

Section 4

Alignment Assessment

Alignment Assessment

After assessing existing conditions, the project team divided the trail into four focus areas based on key intersections and natural breaks. This segmentation enables easier development of specific project recommendations, allowing local agencies to advance sections toward design and implementation. This section details the focus areas and key trail crossings within them (Figure 19). The extents of each focus area are as follows:

- **Focus Area 1:** Love Grove Bridge to Shirley Road
- **Focus Area 2:** Shirley Road to Market Street
- **Focus Areas 3:** Market Street to Metts Avenue
- **Focus Area 4:** Metts Avenue to Forest Hills Drive

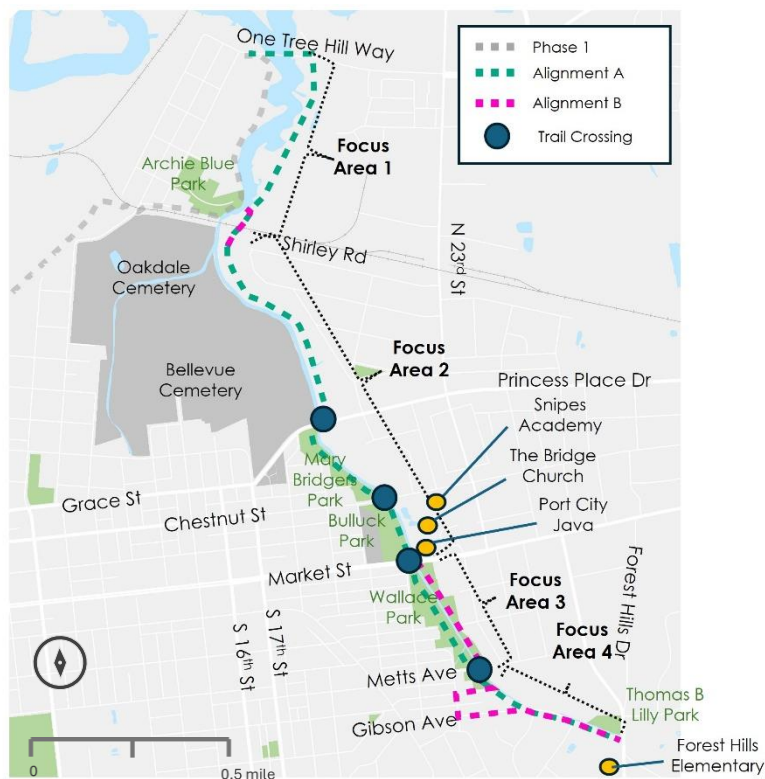


FIGURE 19. FOCUS AREA OVERVIEW

ALIGNMENT DEVELOPMENT

In general, each Focus Area had two alignment options. Alignments were chosen based on Steering Committee feedback, the existing conditions analysis and environmental feasibility, and public feedback.

Focus Area 1: Love Grove Memorial Bridge to Shirley Road/Railroad Bridge

Alignment 1A (Creek) is a path under the railroad bridge along east side of creek to Love Grove Bridge (green dotted line). **Alignment 1B (Bridge)** is a path under railroad bridge to new bridge to Archie Blue Park (pink dotted line) (see Figure 20).

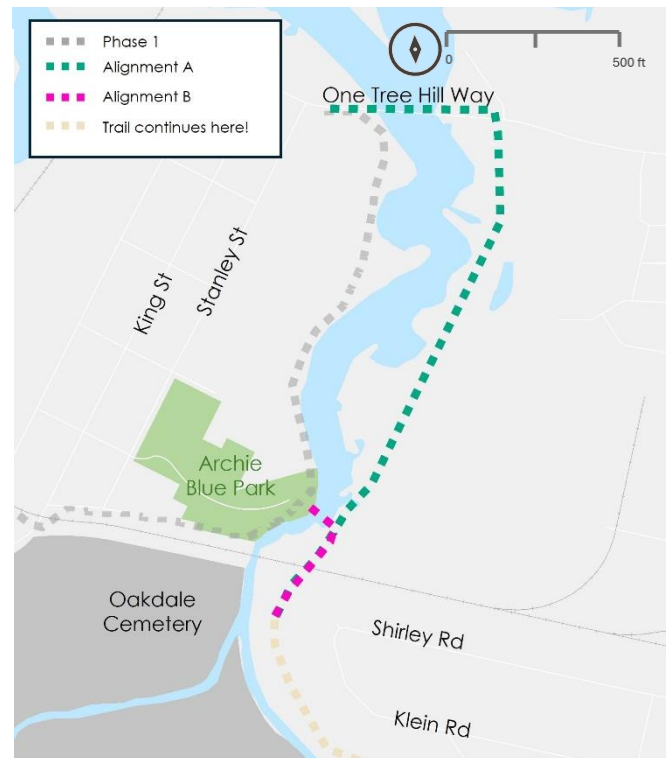


FIGURE 20. FOCUS AREA 1

Focus Area 2: Shirley Road/Railroad Bridge to Market Street

Alignment 2A consists of a path on the east side of the creek from Shirley Drive to Princess Place Drive using existing access road (green dotted line). It crosses to the west side of creek at Princess Place Drive to Market St on park property. Due to constraints such as the historical cemeteries to the west and private and school property along the creek to the east, the 2A alignment represents the most feasible alignment at this time (Figure 21).

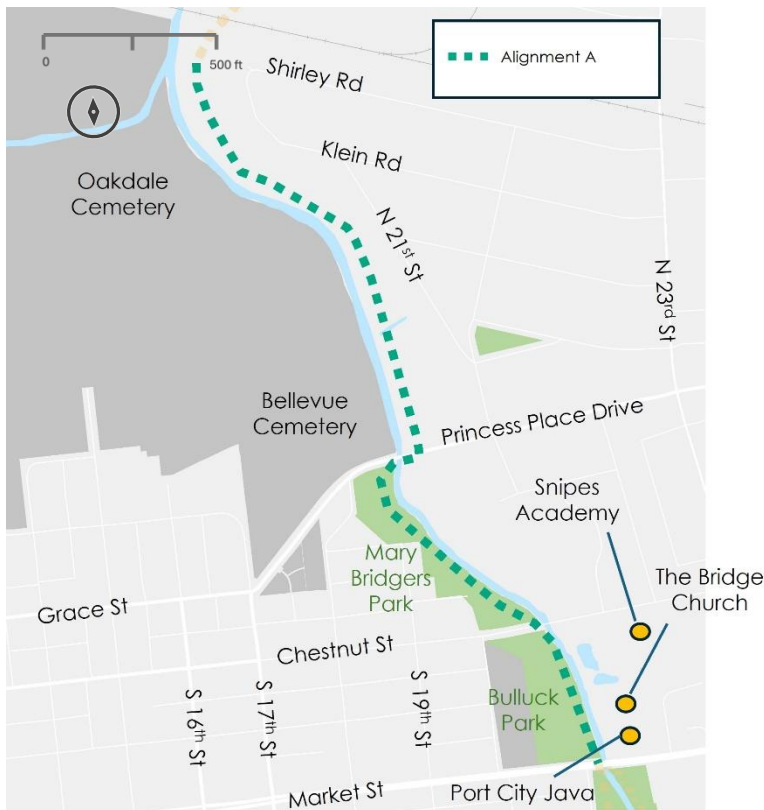


FIGURE 21. FOCUS AREA 2

Focus Area 3: Market Street to Metts Avenue

Alignment 3A is a path along the west side of creek (green dotted line). Alignment 3B is a path on east side of creek with smaller connecting segments on Market Street and Metts Avenue (pink dotted line) (Figure 22).

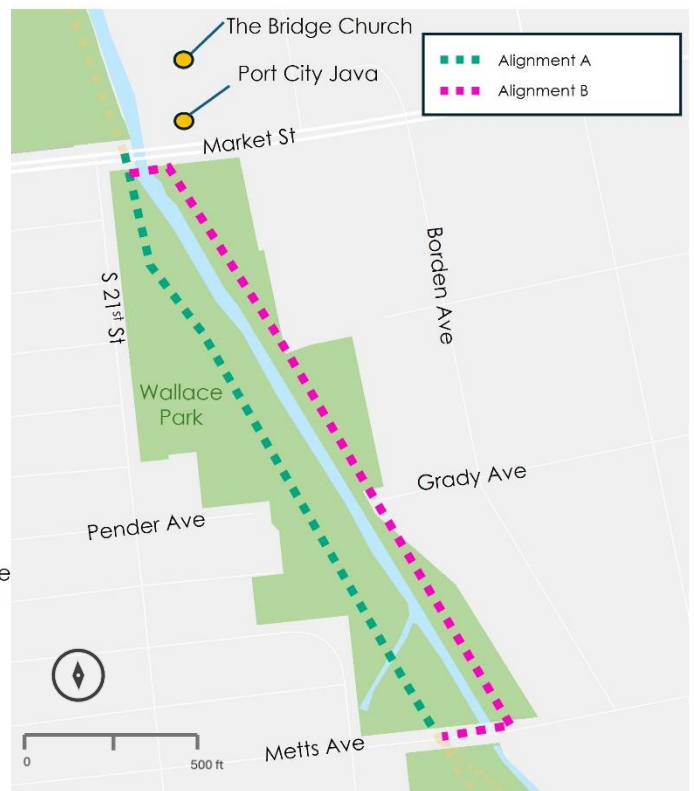


FIGURE 22. FOCUS AREA 3

Focus Area 4: Metts Avenue to Forest Hills Drive

Alignment 4A is a path along the west side of the creek that may need property easements (green dotted line). **Alignment 4B** is a shared street along Barnett Avenue, 22nd Street, and Gibson Avenue followed by a section along the creek to Forest Hills Drive (pink dotted line). On the shared street portion, sidewalks will accommodate pedestrians and shared roadway treatments on the low traffic volume streets will create a shared space for bicyclists (Figure 23).

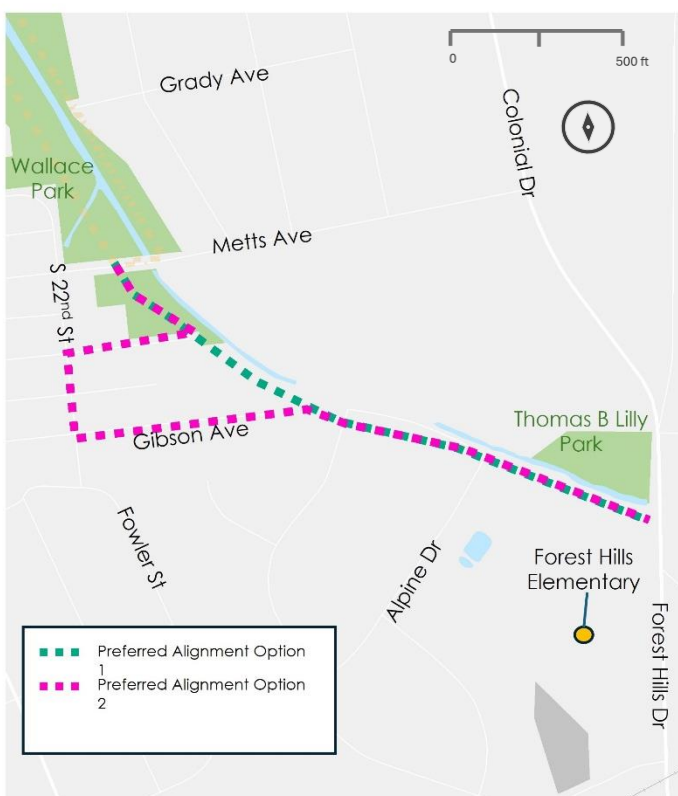


FIGURE 23. FOCUS AREA 4

ALIGNMENT ASSESSMENT

Alignments were assessed through technical analysis that was supplemented by the project Steering Committee and community feedback in round 2 of engagement. The technical analysis focused on the feasibility of the trail as well as the effectiveness compared to community priorities identified in round 1 engagement. For the full Alignment Assessment, please see Appendix C. The following criteria were used in the technical assessment:

Property Impacts

The project team assessed whether the proposed trail alignment would run through public or private property. Crossing railroad right of way was also documented.

Environmental Constraints

The project team measured trail alignment potential impacts given publicly available data on the area surrounding the trail such as wetlands, trees, flood plains and floodways, and historic resources.

Connectivity

The project team documented proposed alignment directness and connections to existing and proposed multimodal facilities, parks, schools, and areas with higher amount of population or employment densities.

Transportation Equity

The project team measured who would be likely served by the trail segment to understand equitable access of the trail. Consideration was given to whether the trail served areas with higher amounts of Black, Indigenous, and People of Color (BIPOC) communities, low-income communities, and zero-car households.

Table 4 summarizes high-level findings for each segment. Evaluating all segments allowed the project team to understand how individual pairs of alignments (A to B) as well as how segments along the trail compare to each other.

TABLE 4. ALIGNMENT ASSESSMENT

Focus Area	Property Impacts	Environmental Constraints	Connectivity	Transportation Equity
Focus Area 1: Alignment A				
Focus Area 1: Alignment B				
Focus Area 2				
Focus Area 3: Alignment A				
Focus Area 3: Alignment B				
Focus Area 4: Alignment A				
Focus Area 4: Alignment B				

LEGEND

- Better
- Moderate
- Worse
- Neutral

Trail crossings within the focus areas were also documented for evaluation (see Existing Conditions Assessment for road inventory). Key trail crossings include the following:

- Princess Place Drive
- Chestnut Street
- Market Street
- Metts Avenue

Trail crossings were also assessed based on the following data:

- AADT
- Potential Pedestrian Demand¹
- Roadway centerlines/center turn lanes
- Number of lanes
- Speed
- Lines of sight
- Lanes with raised median
- Level of Service

Crossing treatments were identified from the various national crossing guidance selection frameworks. The following crossing treatments were considered (Table 5):

TABLE 5. CROSSING TREATMENT COUNTERMEASURES

Treatment	Countermeasure Objective
High visibility crosswalk markings	<ul style="list-style-type: none"> ■ Visibility ■ Driver yielding
Raised crosswalk	<ul style="list-style-type: none"> ■ Driver speed ■ Driver yielding
Advance “Stop for Pedestrians” and stop line	<ul style="list-style-type: none"> ■ Visibility ■ Driver yielding
In-street pedestrian crossing sign	<ul style="list-style-type: none"> ■ Visibility ■ Driver yielding
Pedestrian refuge island	<ul style="list-style-type: none"> ■ Separation from traffic
Rectangular Rapid-Flashing Beacon (RRFB)	<ul style="list-style-type: none"> ■ Driver yielding ■ Visibility
Pedestrian Hybrid Beacon (PHB)	<ul style="list-style-type: none"> ■ Driver yielding ■ Visibility
Road diet	<ul style="list-style-type: none"> ■ Driver speed

ROUND 2 PUBLIC FEEDBACK

Round 2 of engagement focused on collecting feedback on the draft trail alignments and trail crossings. The project team utilized this feedback to select a preferred alignment for the trail. Highlights of community feedback alignments from engagement are documented in this section as well as Figure 24. Detailed comments and survey results from the second round of public engagement are provided in Appendix A.

Focus Area 1: Love Grove Memorial Bridge to Shirley Rd/Railroad Bridge

Community feedback on this segment was overwhelmingly for alignment 1B that proposes a bridge to Archie Blue Park. This alignment offers more opportunities to connect to the Love Grove Neighborhood, offers more efficient connectivity to Phase 1, and has less impacts to private property.

Focus Area 2: Shirley Rd/Railroad Bridge to Market St

The study team provided an open response for feedback on the proposed alignment. Feedback mainly focused on concerns about environmental impacts and wildlife. Feedback also included excitement for park connections.

Focus Area 3: Market St to Metts Ave

Community feedback was more split on alignment preferences, but ultimately the public selected the alignment on the western side of the creek. This direct route does not require additional right of way and a shared use path on Market Street.

Focus Area 4: Metts Ave to Forest Hills Dr

Community feedback on this segment was overwhelmingly for alignment 4B that follows the creek to Forest Hills Dr. This offers a more direct

¹ Data from [Walk Wilmington Plan](#)

route and is a fully separate multimodal facility. However, this route has a greater impact on private property.

Additional feedback was collected to synthesis community sentiment toward the trail:

Trail Crossings

Feedback was collected on perceived crossing safety and comfort at the four trail crossings. Overall, users reported feeling the least comfortable crossing Market St and Princess Place Dr and found Chestnut St and Metts Ave to be more comfortable (Figure 24). *This feedback was collected prior to the installation of the Market Street HAWK signal.*

- Excitement to have an official trail and enhanced walking and biking connectivity
- Environmental and habitat preservation concerns
- Concerns about flooding and maintenance following construction
- Trail enhances multimodal safety and trail crossings
- Concerns about ensuring full accessibility of the trail when it comes to access and use
- Lighting may help public safety in the evenings, but it may also impact wildlife habitats

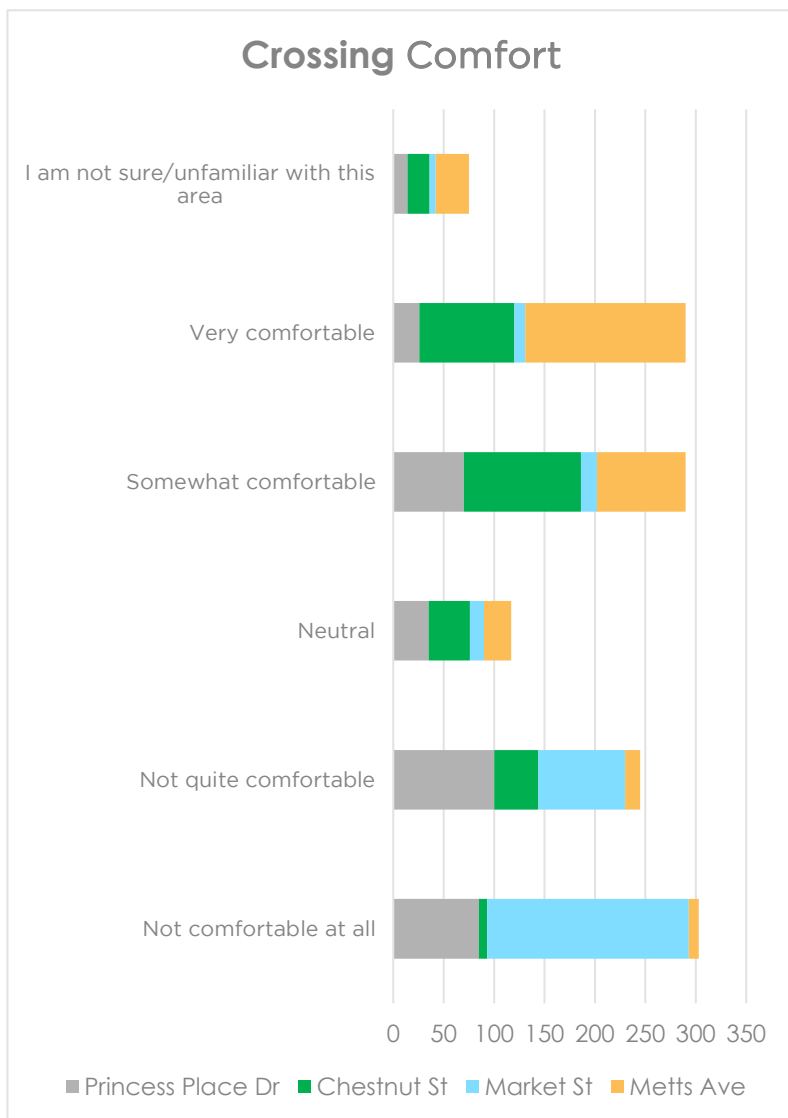


FIGURE 24. ADDITIONAL ROUND 2 FEEDBACK

Additional Round 2 Feedback

Section 5 Preferred Alignment

Preferred Alignment

Following the evaluation of the alignments and the incorporation of Steering Committee and public feedback, the project team selected a preferred alignment for the trail. This section explores the chosen alignments and prioritization of the segments.

The following alignment from each of the four focus areas were chosen Wilmington Downtown Trail Phase 2 and Phase 2 Study alignment (Figure 25).

- Focus Area 1B
- Focus Area 2
- Focus Areas 3A
- Focus Area 4A or 4B

TYPICAL CROSS SECTIONS

The project team developed simple visualizations for the trail to help support public engagement during Round 2. Generally, the typical section will consist of a 10-foot paved shared-use path. Further information on alignment cost, prioritization and implementation are explored in Section 7: Project Prioritization and Implementation. Appendix D provides detailed cut sheets and information on each of the five proposed trail segments with high-level cost estimates, constraints and considerations, and visuals.

Focus Areas 1, 2, and 3

In general, segments traverse a natural environment through parks or publicly owned parcels (Figure 26). A new multimodal bridge is also proposed over Burnt Mill Creek (Figure 27). Some sections of the trail may be elevated on a boardwalk-style crossing over wetland or floodplain areas or spanning tree roots.

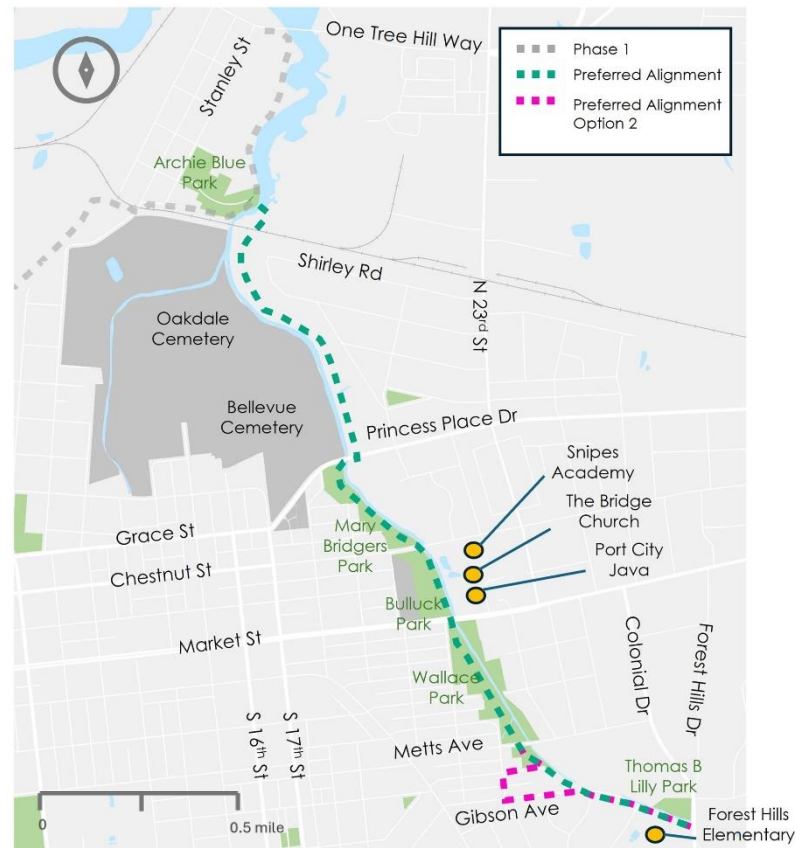


FIGURE 25. PREFERRED TRAIL ALIGNMENT



FIGURE 26. TRAIL ON EAST SIDE OF BURNT MILL CREEK



FIGURE 27. MULTIMODAL BRIDGE OVER BURNT MILL CREEK

Focus Area 4

Focus Area 4 has two proposed alignments documented in this study for further analysis. One alignment follows the creek (Figure 28), while the other incorporates shared streets into the alignment to navigate private property (Figures 29 and 30).



FIGURE 28. TRAIL ON WEST SIDE OF BURNT MILL CREEK



FIGURE 29. SHARED STREET



FIGURE 30. SHARED STREET

TRAIL CROSSINGS

Each new trail crossing has proposed treatments to enhance safety and overall crossing comfort.

Princess Place Drive

Recommended treatments include a rectangular rapid flashing beacon (RRFB), curb extensions, high visibility crosswalk, and trail signage (Figure 31).



FIGURE 31. PRINCESS PLACE DRIVE CROSSING

Market Street

Market St has a new High Intensity Activated Crosswalk (HAWK) Signal to facilitate crossings. The project team recommends trail alignment with currently funded crossing enhancements (Figure 32).

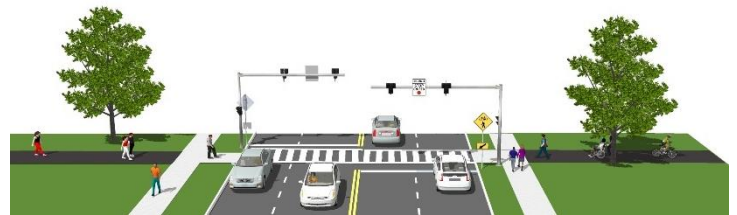


FIGURE 32. MARKET STREET CROSSING

Chestnut Street

Chestnut Street has recommended treatments of a raised crosswalk, curb extensions, and trail signage (Figure 33).



FIGURE 33. CHESNUT STREET CROSSING

Metts Avenue

Metts Avenue has recommended treatments of a raised crosswalk, curb extensions, and trail signage (Figure 34).



FIGURE 34. METTS AVENUE CROSSING

TRAIL ACCESS POINTS

Trail access points are designated locations where users can enter or exit a trail. These points can be connections to existing sidewalk connections or can be at parks or trailheads with amenities such as parking areas, signage, restrooms, water fountains, and sometimes maps or informational kiosks. Trail access points are essential for providing convenient and safe entry to the trail system and improving overall accessibility for a diverse range of users. Recommended access

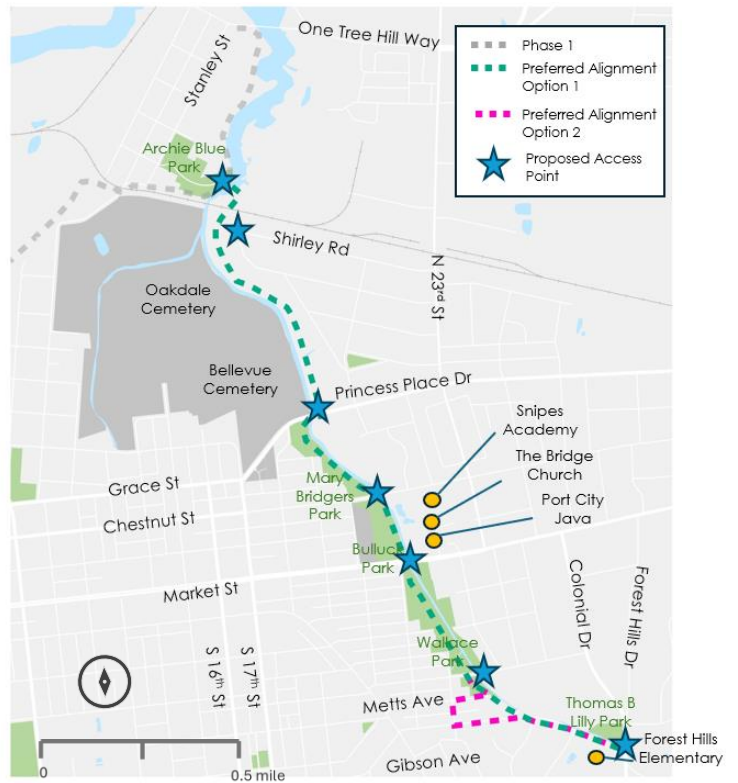


FIGURE 35. POTENTIAL TRAIL ACCESS POINTS

points generally align with street crossings and parks (Figure 35):

- Archie Blue Park
- Shirley Rd (pave existing access road)
- Princess Place Dr
- Chestnut St
- Market St
- Metts Ave
- Forest Hills Dr

TRAIL AMENITIES

Trail amenities enhance trail experiences and offer social and comfort benefits outside of the paved trail itself. The following trail amenities are recommended along the trail:

- Trail wayfinding
- Benches
- Environment and habitat education
- Landscaping and gardening
- Trash/recycling cans
- Bike parking and repair stations

Pedestrian level street lighting is also recommended at trail crossings. Further studies on impacts of lighting along the trail for public safety, trail visibility, and impacts on habitats are also recommended. Lighting would also enhance the usefulness of the trail for transportation use in the dark winter months. Table 6 lists recommended amenities along the trail.

TABLE 6. TRAIL AMENITY RECOMMENDATIONS

Focus Area	Recommended Amenities
Archie Blue to Shirley Rd	<ul style="list-style-type: none"> • Trail wayfinding • Trash/recycling cans • Bike parking and repair stations
Shirley Rd to Princess Place Dr	<ul style="list-style-type: none"> • Trail wayfinding • Benches • Trash/recycling cans
Princess Place Dr to Market St	<ul style="list-style-type: none"> • Trail wayfinding • Benches • Environment and habitat education • Landscaping and gardening • Trash/recycling cans
Market St to Metts Ave	<ul style="list-style-type: none"> • Trail wayfinding • Benches • Environment and habitat education • Landscaping and gardening • Trash/recycling cans
Metts Ave to Forest Hills Dr	<ul style="list-style-type: none"> • Trail wayfinding • Trash/recycling cans • Bike parking and repair stations



ALLIGATOR SPOTTED IN CREEK



NORTHERN END OF STUDY AREA



CURRENT EDUCATIONAL CONTENT

FIGURE 36. PHOTOS ALONG THE PROPOSED TRAIL

Section 6

Project Prioritization and Implementation

Project Prioritization and Implementation

Project prioritization in this feasibility study helps local decision-makers focus on projects that provide the greatest benefits to communities, maximize return on investment, and support long-term strategic goals.

COST ESTIMATION

High-level cost estimates were completed as a part of this study to contextualize the estimated cost of each segment of trail (Table 7). The following considerations were used in development of the cost estimates:

- Planning-level cost estimates were developed based on concept design/assumed 10' trail cross section (where applicable).
- Estimates considered construction, labor, utilities, design/engineering, and right-of-way costs.
- Right-of-way cost was taken at typical area market value.
- No cost of inflation was considered.
- A 30% contingency factor was applied to the estimate (i.e. the initial estimate was multiplied by a factor of 1.3) to account for unknown variables.
- The estimates did not include additional amenities such as parking lots.
- The estimates did not account for overlap with planned trails/development.

TABLE 7. ESTIMATED PROJECT COSTS

Project	Cost
Archie Blue Park to Shirley Road	\$1,750,000
Shirley Road to Princess Place Drive	\$1,320,000
Princess Place Drive to Market Street	\$470,000
Market Street to Metts Avenue	\$648,000
Southern Burnt Mill Creek: Creekside OR 22nd Street Route	4A: \$1,340,000 4B: \$1,160,000

PROJECT PRIORITIZATION

Project prioritization involves assessing and ranking potential trail projects based on various criteria to determine which projects should be pursued first or receive higher priority. This process helps allocate resources efficiently and effectively. The same technical performance measures and evaluation criteria from the initial scoring performed for the individual trail alignments were utilized to compare the individual segments for the preferred alignment, and these were supplemented by feedback from the public and steering committee:

- Connectivity
- Overall Feasibility
- Transportation Equity
- Public Support
- Cost

Table 8 summarize project prioritization breakdowns by project.

Connectivity

Connectivity was assessed through connections to existing and proposed multimodal facilities,

parks, schools, as well as neighborhoods and commercial areas.

TABLE 8. PROJECT PRIORITIZATION

Phase	Project	Connectivity	Transportation Equity	Overall Feasibility	Public Support	Cost
Phase 2	A: Archie Blue Bridge	●	●	○	●	○
	B: Northern Burnt Mill Creek	◐	◐	◐	●	○
	C: Mary Bridgers & Bulluck Park	◐	◐	◐	●	●
Phase 3	A: Wallace Park	◐	◐	◐	●	◐
	B: Southern Burnt Mill Creek: OPTION 1	●	●	○	●	○
	B: Southern Burnt Mill Creek: OPTION 2	●	●	◐	◐	○

Transportation Equity

Transportation equity focused on what neighborhoods/trail users would be likely served by the trail and equitable access to the trail. Consideration was given to whether the trail served areas with higher amounts of Black, Indigenous, and People of Color (BIPOC) communities, low-income communities, and zero-car households. In general, alignments going through higher amounts of these communities received a positive score.

Overall Feasibility

Overall feasibility considered environmental and historical permitting, property impacts, and environmental constraints. Elements evaluated included private versus public property ownership, wetlands and flooding, historic neighborhood designations, and adjacent land uses.

Public Support

Public support measures the level of community backing for the trail project through surveys, public meetings, steering committee meetings. High public support can significantly influence funding opportunities and the likelihood of successful project implementation.

Cost

The estimated costs of the alignment were considered in prioritization for implementation considerations.

IMPLEMENTATION PHASING

The project team used project prioritization as well as information provided from the high-level cost estimate to make recommendations for implementation phasing. Implementation phasing divides the design and construction of a trail project into distinct phases or stages (Figure 37).

Short-Term (0-10 years): Projects that have moderate cost but more minimal property or environmental impacts

- Princess Place Drive to Market Street (1)
- Market Street to Metts Avenue (2)

Medium-Term (11-15 years): Projects with moderate to high cost and potential environmental impacts but low property impacts

- Shirley Road to Princess Place Drive (3)
- Southern Burnt Mill Creek: Creekside OR 22nd Street Route (4)
- Archie Blue Park to Shirley Road (5)

KEY PARTNERS AND FUNDING SOURCES

Following the completion of this study, project partners should establish public, private, and non-profit agency partnerships to assist with the implementation of phases 2 and 3 of the Wilmington Downtown Trail. These partnerships can be leveraged to secure project funding through grants, sponsorships, fundraising, and public-private partnerships. Table 9 as well as the following section describe specific examples of funding sources to consider. Government

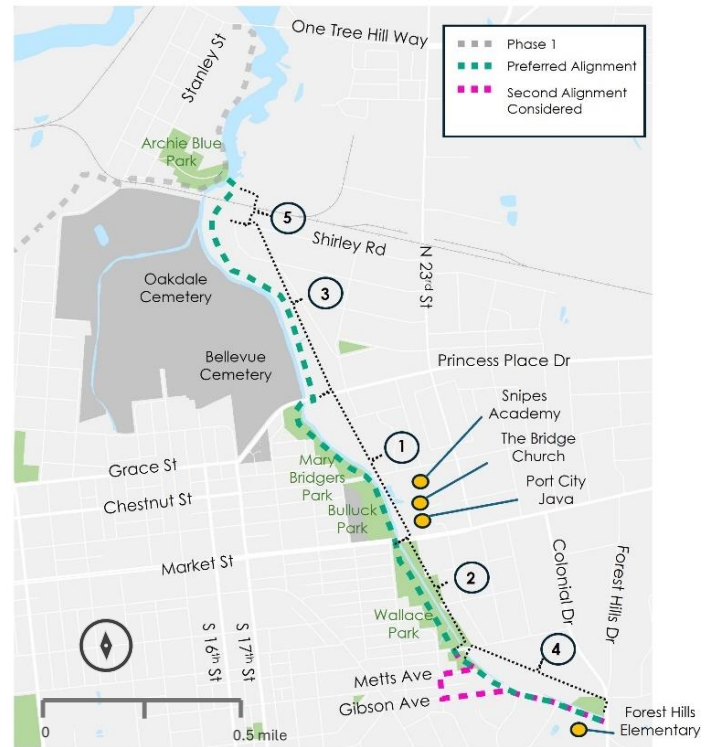


FIGURE 37. IMPLEMENTATION RECOMMENDATIONS

Agencies. Local, regional, state, and federal government agencies play a significant role in funding and supporting trail projects. This may include departments of transportation, parks and recreation departments, environmental agencies, and economic development agencies. Continued involvement of agency leadership City of Wilmington, WMPO, NCDOT, and CSX will be crucial.

Grants and Funding Programs

There are a variety of local, state, and federal grant programs that specifically fund trail development, historical and environmental preservation projects, and recreational opportunities, all of which apply to the Wilmington Downtown Trail. While Table 9 provides a preliminary list of grant funding opportunities, additional grant opportunities may be available through foundations and nonprofit organizations.

Nonprofit Organizations

Nonprofits and community organizations dedicated to outdoor recreation, conservation, or community development may provide funding or technical assistance for trail design studies. These organizations often have a vested interest in supporting trail projects that align with their missions. This study recommends continued partnership with organizations including Cape Fear Cyclists and the Cape Fear River Watch.

Corporate Sponsorship

Collaborating with private sector entities can provide additional funding and project support. These partnerships can reflect a variety of involvement, ranging from trail sponsorships, resource sharing, and donations. Local businesses such as print companies, breweries, or bicycle repair shops can help raise awareness for the trail through branding, advertisements, and sponsorships.

Businesses and corporations with a presence in the community or with interests in outdoor recreation and tourism may be interested in sponsoring trail projects. This sponsorship can take the form of financial support, in-kind contributions, or volunteer engagement.

Private Foundations

The Wilmington Downtown Trail project blends the opportunity for historical and environmental education and the creation of healthier and more active communities. Private foundations that focus on areas such as health and wellness, environmental conservation, or community development may offer grants or funding opportunities for trail branding and design components.

Community Fundraising

Engaging the local community through fundraising campaigns, events, and crowdfunding platforms can help raise funds for trail design studies. Community members, businesses, and organizations may be eager to contribute to a

project that enhances quality of life and recreation opportunities in their area.

Specific Funding Sources

Overall, funding the trail will require a strategic, multi-source approach. Different segments may qualify for specific grants—such as parks funding for the Burnt Mill Creek segment and transportation funding for road crossings. The trail can be developed in phases based on available funding and priorities (see next several pages for recommended funding sources).

FEDERAL FUNDING

Source	Eligible projects, purpose, timeline, and background information	Match	Award Amount	Eligible Applicants
Surface Transportation Block Grant Program (STBGP) Direct Attributable (DA), Transportation Alternatives (TA), and Carbon Reduction Efforts (CR) funding sources	<p>Under the current transportation reauthorization bill (IIJA), the WMPO directly receives funds and typically holds a project call each summer. For FY25, approximately \$4.5 million is available in DA funding, \$567,000 in TA funding, and \$543,000 in CR funding.</p> <ul style="list-style-type: none"> • DA Funds: For projects to improve conditions on Federal-aid highways, public roads, pedestrian/bicycle infrastructure, and transit capital projects. • TA Funds: For pedestrian/bicycle facilities, community enhancements, environmental mitigation, recreational trails, safe routes to school, and vulnerable road user safety assessments. • CR Funds: For reducing transportation emissions through state carbon strategies and emission-reducing projects. <p>Applications are the same for each program, and local jurisdictions can apply through the WMPO, though project administration—including design, right-of-way, and construction—is managed by the local government agency.</p>	20% local match	None specified	WMPO local government, transit agencies, and NCDOT
Active Transportation Infrastructure Investment Program (ATTIP)	The ATIIP, created by the Bipartisan Infrastructure Law, is a competitive grant program funding projects to build safe, connected active transportation networks (e.g., sidewalks, bikeways, trails) linking key destinations within communities. For FY24, \$44.55 million is available nationwide, with applications due annually in June.	20% match unless poverty rate is over 40%	Awards between \$100,000 - \$2 million for planning; \$7.5 million- \$15 million for construction	State DOTs, local government, MPOs
Better Utilizing Investments to Leverage Development (BUILD)	These grants are for surface transportation infrastructure projects with significant local or regional impact. The BUILD program, previously known as the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) and Transportation Investment Generating Economic Recovery (TIGER) discretionary grants, was established under the American Recovery and Reinvestment Act of 2009 and operated under annual appropriations acts until authorized in November 2021.	20% local match	Max. \$25 million.	State DOTs, MPOs, local government, transit agencies

STATE FUNDING

Source	Eligible projects, purpose, timeline, and background information	Match	Award Amount	Eligible Applicants
NC Department of Natural and Cultural Resources (DNCR) Division of Parks and Recreation's Recreational Trails Program (RTP)	The Recreational Trails Program provides funding for construction of new trails, maintenance and repair of existing trails, land acquisition, purchase of trail tools and planning, legal, environmental and permitting costs. It is a federal grant reviewed by the NC Trails Committee and recommendations are made to the Secretary of the NC Department of Natural and Cultural Resources who makes the final determination. In 2024, applications were due early September.	25% local match	Min. award is \$10,000; Max. award is \$100,000	State, federal, or local government agency or qualified nonprofit organization
DNCR Division of Parks and Recreation's Parks and Recreation Trust Fund Grant (PARTF)	The North Carolina Parks and Recreation Trust Fund (PARTF) provides matching grants to local governments to assist with public park and recreation projects, including greenways. In 2024, applications were due in early May. The project must be on a single site.	50% local match	Max. award is \$500,000	NC counties and municipalities
Land and Water Conservation fund (LWCF)	The Land and Water Conservation Fund is split into the 'federal side' with money allocated to the National Parks Service and the 'state side' which allocates 40% of the funds as matching grants to states and local governments. In NC, LWCF can fund riparian greenway projects. These projects can include land and easements along streams, and often feature paved or natural surface trails for recreational, educational, and environmental uses. Greenway corridors funded by the NCLWF can connect schools, neighborhoods, and community parks in urban areas. The project must be on a single site.	50% local match	Max. award is \$500,000	NC counties and municipalities
NCDOT/ State Transportation Improvement Program (STIP)	Passed in 2013, the Strategic Transportation Investments (STI) law equips the N.C. Department of Transportation to use funding efficiently and effectively to enhance infrastructure while supporting economic growth, job creation and a higher quality of life. The STI law establishes the Strategic Mobility Formula, which allocates available revenues based on data-driven scoring and local input. It is used to develop the State Transportation Improvement Program (STIP), which identifies the projects that will receive funding during a 10-year period. The WMPO and NCDOT facilitate the STIP process. Local government agencies should work with the WMPO to ensure the Wilmington Downtown Trail is incorporated in the STIP (and the long-range transportation plan).	Varies	N/A	Local governments in partnership with the WMPO and NCDOT
NCDOT's Safe Routes to School (SRTS) Program	This is a non-infrastructure, reimbursable grant. Non-infrastructure projects consist of programs and activities that, when implemented, aim to build a culture for active travel through education, encouragement and evaluation that increase the safety and convenience of children to walking and/or bicycling to and from school. Communities should also consider the role of law enforcement officers within their plans. Projects must address all three categories (education, encouragement, and evaluation).	NCDOT will fund as many projects as possible at 100% (no match)	Awards range from \$50,000 - \$500,000	Local government, MPOs, school districts, non-profit organizations
NCDOT's Complete Streets Policy	This policy requires incorporating multimodal facilities in NCDOT roadway projects. If the bicycle/pedestrian project is included in the adopted Metropolitan Transportation Plan (MTP) or Comprehensive Transportation Plan (CPT), it will be no cost to the jurisdiction.	N/A	N/A	N/A

STATE FUNDING

Source	Eligible projects, purpose, timeline, and background information	Match	Award Amount	Eligible Applicants
NCDOT Small Construction Funds	Established 1985 to fund small projects in and around cities and towns which could not be funded in the Statewide Transportation Improvement Program (STIP). Budget Bill provisions currently allow for use on variety of transportation projects for municipalities, counties, businesses, schools and industries throughout the State. An equal amount of funds are allocated to each NCDOT Division. Division engineer performs field inspection, forwards information to Chief Engineer, who sends along to the Project Review Committee that will approve or deny.	Unknown	Max. \$250,000 per project per year.	Municipalities, counties, businesses, schools and industrial entities, and NCDOT staff
NCDOT's Complete Streets Policy	This policy requires incorporating multimodal facilities in NCDOT roadway projects. If the bicycle/pedestrian project is included in the adopted Metropolitan Transportation Plan (MTP) or Comprehensive Transportation Plan (CPT), it will be no cost to the jurisdiction.	N/A	N/A	N/A

LOCAL FUNDING

Source	Details/Opportunities
City of Wilmington's Capital Improvement Plan (CIP)	The City of Wilmington's CIP is the city's balanced budget. In FY25, the \$298 million CIP is guided by the city's strategic plan, which focuses resources on public priorities including transportation, public safety, economic vitality, affordable neighborhoods, and high-performing city operations. The FY23 budget also provides funding to begin a new five-year capital improvement plan, which will invest over \$100 million in streets, bridges, sidewalks, trails, stormwater management, and other capital projects. These funds can be used as the local match for other grant funding opportunities.
Transportation and/or Parks Bond	In 2014, the City of Wilmington voters approved a \$44 million referendum to support citywide transportation projects. This includes several trails including the Greenville Loop Trail, the Masonboro Loop Trail, and the Kerr Avenue Trail. In 2016, Wilmington voters approved a \$30.4 million bond to invest in parks and recreation capital projects, including a concert venue, more multipurpose fields, and upgrades to current parks and safety improvements. As those projects near completion, if/when the City ads another bond referendum to the voting ballot in the future, the Wilmington Downtown Trail could be considered for inclusion on the project list.
Tax Incremental Financing (TIF)	TIF leverages future tax gains to finance current improvements that will create those gains. It dedicates increased tax revenues to finance the debt created by the project. TIFs are authorized by state law in nearly all 50 states and begin with the designation of a geographic area as a TIF district. Plans for specific improvements within the TIF district are developed. The TIF creates funding for public or private projects by borrowing against the future increase in these property-tax revenues. The intent is for the improvement to enhance the value of existing properties and encourage new development in the district.
Partnerships	Local communities in the region may be able to partner with the private sector to fund or sponsor some aspects of a project. For example, Blue Cross Blue Shield provided a \$500,000 donation and sponsored a portion of the Gary Shell Cross City Trail in Wilmington. The Greenville Health System sponsors a portion of the Swamp Rabbit Trail in Greenville. Banks, local businesses, law firms, healthcare companies, and breweries are all potential sponsorship opportunities.
Developer Contributions	Bicycle and pedestrian facilities can be funded through developer contributions when the local ordinance language requires developers to construct bicycle or pedestrian facilities that are included in locally adopted plans, such as this feasibility study.
Municipal Service District (MSD)	Designates a district with a property tax in addition to the town-wide property tax. Within the MSD, revitalization projects are one of the eligible uses and can include street, sidewalk, or bikeway improvements within the downtown taxing district.

PRIVATE/NON-PROFIT FUNDING

Source	Eligibility/Requirements/Purpose
Robert Wood Johnson Foundation	Largest U.S. foundation devoted to improving the health and healthcare of all Americans. Grant making is concentrated in four areas: (1) To ensure that all Americans have access to basic health care at a reasonable cost, (2) To improve care and support for people with chronic health conditions, (3) To promote healthy communities and lifestyles, and (4) To reduce the personal, social, and economic harm caused by abuse of tobacco, alcohol, and illicit drugs.
Blue Cross Blue Shield Of North Carolina Foundation (BCBS)—Healthy Place Grant	Program focuses on outcome approach to improve the health and well-being of residents. Eligible projects for grants concentrate on increased physical activity and active play through support of built environment improvements like sidewalks and safe places to bicycle.



MARKET STREET SIDEWALKS



SOUTHERN PORTION OF TRAIL

Design Guidelines and Resources

Creating a safe and comfortable trail facility for people walking and biking is a critical step for Wilmington Downtown Trail. The following sections provide best practices for walking and biking facility design. Key sources for detailed design guidance for bicycle and pedestrian facility selection and design include the following:

- NCDOT Complete Streets guidelines
- FHWA Bikeway Selection Guide
- AASHTO Guide for the Development of Bicycle Facilities
- NACTO Urban Bikeway Design Guide
- NCHRP Reports 562, 834, 948

Table 9 shows a full list of planning and design resources for several topics for trail and trail crossing design.



FIGURE 38. ALLIGATOR WARNING SIGN ALONG THE PROPOSED TRAIL

TABLE 10. DESIGN RESOURCES

Report Title	Type of Guidance Provided
NCDOT Complete Streets guidelines	Multimodal Design
FHWA Small Town and Rural (STAR) Multimodal Networks Guide	Multimodal Design
NCHRP Report 562: <i>Improving Pedestrian Safety at Unsignalized Crossings</i>	Crossing Selection
NCHRP Report 834: <i>Crossings Solutions at Roundabouts and Channelized Turn Lanes for Pedestrians With Vision Disabilities: A Guidebook</i>	Crossing Design at Roundabouts and Channelized Turn Lanes
NCHRP Report 948: <i>Guide for Pedestrian and Bicyclist Safety at Alternative and Other Intersections and Interchanges</i>	Multimodal Design
FHWA Guide to Improving Pedestrian Safety of Uncontrolled Crossing Locations	Crossing Design
Americans with Disabilities Act Accessibility Guidelines (ADAAG)	ADA Design Requirements
Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)	ADA Design Guidelines
AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities	Pedestrian Planning and Design
USDOT and FHWA Small Town and Rural Multimodal Design Guide	Pedestrian and Bikeway Design
FHWA Bikeway Selection Guide	Bikeway Planning
AASHTO Guide for the Development of Bicycle Facilities	Bikeway Planning and Design
NACTO Urban Bikeway Design Guide, Urban Street Design Guide, Global Street Design Guide, and Bike Share Station Siting Guide	Multimodal Design



APPENDIX A: COMMUNITY ENGAGEMENT SUMMARY

Wilmington Downtown Trail Feasibility Study – Public Engagement Plan

Overview

In Spring 2023, the Wilmington Urban Area Metropolitan Planning Organization (WMPO) was awarded a grant to complete a trails feasibility study for the Wilmington Downtown Trail: Phases 2 and 3. This project is funded by NC Department of Transportation's (NCDOT) Integrated Mobility Division (IMD) Paved Trails and Sidewalks Feasibility Study Grant Program. Feasibility studies bridge the gap between conceptual planning and programming of projects. They build upon higher-level planning efforts and take a comprehensive approach to identify possible route alternatives of multimodal corridors. The purpose of this type of study is to evaluate technical feasibility of a project from a design, permitting, and constructability perspective. A critical component to identifying possible route alternatives is public input, comments, and suggestions. The purpose of this Public Engagement Plan (PEP) is to describe the strategy to connect with the public through in person meetings, online surveys, and both digital and hard copy content.

A virtual kickoff meeting for the Wilmington Downtown Trail Feasibility Study took place on June 22, 2023. Meeting attendees included representatives from the WMPO, NCDOT, and three consulting firms (Kittelson & Associates, Smart Moves Consulting, and Whitman, Requardt & Associates). At this meeting, draft goals for the project were established. Draft goals include:

- Establish a vision for the trail alignment and identify barriers and opportunities.
- Provide guidance and requirements for safe and practical design of the trail.
- Connect the trail with existing and planned bicycle and pedestrian facilities and parks.
- Encourage economic development and investment in areas around the trail.
- Support public health by encouraging active transportation.
- Preserve history and context of the area by serving the local community needs.
- Coordinate and build on previous planning efforts.

Kick off meeting attendees identified several indicators of a successful project, including strong community support; high prioritization scoring; funding; outreach/inclusion; ownership opportunities; and implementable options with connectivity, environmental/ cultural context sensitivity.

Outreach Strategy

To achieve the goals of the project and ensure the success of the Wilmington Downtown Trail Feasibility Study, the following tasks and public outreach activities will take place, and are described further in this PEP:

- Establish a Steering Committee
- Release a public input survey

Wilmington Downtown Trail Feasibility Study

- Design printed and digital materials such as handouts and fliers
- Develop a basic project website and online comment map
- Schedule two rounds of public engagement touchpoint meetings
- Synthesize input from the Steering Committee and the public throughout the planning process and incorporate that information into proposed alignment options

Project Development Team

The Project Development Team consists of the Project Partners, Steering Committee, and Project Support groups. For a list of members and their contact information, please visit the Google Sheet located here -

https://docs.google.com/spreadsheets/d/1sIbFP25Ku7VFUfFnG7hGYS_pSJKxVF3t/edit?usp=sharing&ouid=109880548115594074552&rtopof=true&sd=true

Project Partners

The Gullah Geechee Heritage Corridor Feasibility Study will be developed by the Project Partners, who are primarily responsible for creating the Feasibility Study. The Project Partners consist of representatives from NCDOT; Wilmington MPO; Kittelson & Associates; Whitman, Requardt & Associates; and Smart Moves Consulting. Smart Moves Consulting will take the lead on implementing this Public Engagement Plan. Specifically, Project Partners include the following:

Gullah Geechee Heritage Corridor Feasibility Study – Project Partners		
Name	Agency	Email
Andrew Ooms	Kittelson & Associates	aooms@kittelson.com
Nick Cannon	Kittelson & Associates	ncannon@kittelson.com
Sarah Brown	Kittelson & Associates	sbrown@kittelson.com
Zachary Bugg	Kittelson & Associates	zbugg@kittelson.com
Hart Evans	NCDOT Integrated Mobility Division	jhevens1@ncdot.gov
Kim Nguyen	NCDOT Integrated Mobility Division	kpnguyen1@ncdot.gov
Adrienne Harrington	Smart Moves Consulting	adrienne@smartmovesconsulting.net
Mark Reep	Whitman, Requardt & Associates	mreep@wrallp.com
Abby Lorenzo	Wilmington MPO	abigail.lorenzo@wilmingtonnc.gov
Emma Stogner	Wilmington MPO	emma.stogner@wilmingtonnc.gov
Vanessa Lacer	Wilmington MPO	vanessa.lacer@wilmingtonnc.gov

Steering Committee

The Steering Committee will be established to guide the development of the feasibility study, including a matrix for weighing trail alignment alternatives. The Steering Committee meetings will be held virtually:

- Meeting #1: Project Kickoff Call with Steering Committee
- Meeting #2: Existing Conditions, Preliminary Alternatives, and Upcoming Public Meetings/Input (1/3 of the way through project)
- Meeting #3: Draft Recommendations and Upcoming Public Meetings/Input (2/3 way through project)
- Meeting #4: Draft Deliverables and Final Comments (end of project)

Potential Steering Committee members include representatives from the following:

- City of Wilmington (Parks, Streets/Engineering, Planning, Public Services, Communications)
- Schools (Forest Hills Elementary, New Hanover High, Snipes Academy)
- Advocacy – Cape Fear Cyclists/Terry Benjey Bicycling Foundation
- Wilmington MPO BPAC
- NCDOT Division 3
- Wilmington Downtown, Inc.
- WAVE Transit
- UNCW
- New Hanover County – Long Range Planning
- Maybes: Chamber of Commerce, Wilmington Police Department

The Google Sheet will include specific names and contact information for the Steering Committee.

Project Support Group

The Project Partners and Steering Committee will work together to establish the Project Support group. The purpose of the Project Support group is to help promote the public events and survey. A list of potential Project Support members is in the Google Sheet. Members can include news outlets, the Chamber of Commerce, neighborhood homeowners associations, civic clubs, the police departments, and local businesses. The Project Support Group will work to identify ambassadors – community leaders with close ties to the residents and unique connections – to help promote public involvement with the plan. The Project Partners will work with the Project Support team to provide information to be shared with the public – pop up event dates/times, public survey information, and project information. They will be asked to post project information on social media, send emails to their contacts, and help notify the public about the project and how to get involved.

Public Input Survey

A survey will be developed to be strategically deployed among people who live and work in the project area. The survey will consist of questions that will determine the public's intended use and benefits of the Wilmington Downtown Trail. An interactive map will also be available to gather feedback about difficult crossings, desired neighborhood connections, destinations, and proposed alternatives. There will be both online and hard copies of the survey made available. The Project Partners group will be instrumental in distributing the survey to the public. The Steering Committee and Project Team will help

distribute and collect paper copies of the survey. The Project Partners team and the Steering Committee will work to identify potential ambassadors to help promote the survey and pop up meetings. The survey will be open for comment until approximately two weeks after the last public meeting is held within each touchpoint.

Materials for Distribution

A variety of digital and hard copy materials will be available to help guide the public to information about the project, the public input survey, and the public engagement meetings.

Digital Materials

Digital materials include:

- Website with project mapping, project status, draft recommendations, final deliverables, and public engagement announcements
- Online comment map
- Public input survey
- Social media information
- Email blast templates
- Public engagement meeting information
- Press releases

Hard Copy Materials

Hard copy materials include:

- Quarter page fliers about upcoming public meetings
- One page fliers about the project with QR code to website and survey
- Handouts for public meetings

Public Engagement Touchpoints

There will be two rounds of public engagement touchpoints. Each round will consist of two events, one public meeting and one pop up event. The first round of meetings could possibly align with the Phase 1 study public outreach. The Project Team will be responsible for reserving the meeting space, purchasing supplies and materials, and setting up the meeting stations. The layout for the public meetings can include:

1. Welcome table – sign in sheet and project information handouts.
2. Project Information – approximately four boards will be displayed that includes the project area with existing conditions and preliminary alternatives (touchpoint #1) or alternatives analysis and draft recommendations (touchpoint #2). A meeting packet containing maps, photos, and other project notes will also be provided.
3. Public Input Statements – the public will be asked to provide information about strengths/weaknesses/opportunities/threats of the trail alignments; how they anticipate using the trails; indicators of success; and other open-ended questions designed to gather statements from the public.
4. Mapping Activity – maps with trail alternatives will be displayed; the public will be invited to draw or leave sticky notes and add information in a geographical sense.

Wilmington Downtown Trail Feasibility Study

5. Thank you table – people will be thanked for dropping into the meeting; paper and digital surveys will be distributed; additional project information will be provided including a timeline of the next steps.

Potential Meeting Locations:

Below are options for public engagement locations. These include a mix of indoor and outdoor facilities. *Note that the number of boards and other meeting materials may be limited to available space, particularly if the meeting is held outdoors. Outdoor meetings may need to be weather-permitting depending upon available back-up space.*

- The Ormond Center at St. Paul's Episcopal Church
- Wallace Park – outdoor only
- Snipes Academy of Arts & Design
- Archie Blue Community Park – covered picnic shelters

The City of Wilmington owns Archie Blue Community Park and Wallace Park; each park is located on opposite ends of the Wilmington Downtown Trail.

Potential Dates for Round 1 of Public Touchpoints

The first round of outreach will be in coordination with the Downtown Trail Phase 1 outreach if possible. This timeline has not yet been established.

During the first round of public engagement touchpoint meetings, the Project Partners will describe the planning process. The public will be asked to describe their vision for the Wilmington Downtown Trail and will be presented with existing conditions and preliminary alternatives. They will be invited to provide comments, suggestions, issues, and concerns via information gathering activities. The structure of the meeting will encourage the public to engage in conversations with the Project Partners, ask questions about the project, and meet other community members to collaborate on ideas. The public input survey will also be promoted during the first round of meetings.

Round 2 of Public Engagement Touchpoints

The second round of public engagement touchpoint meetings will provide information about the results of the public survey and public comments, alternatives analysis, trail alignment recommendations, and proposed cross-sections.

It is anticipated that the second round of public engagement touchpoint meetings will take place during February 2024. Details for the second round will be solidified after the first round and closer to that date.

Responsibilities and Next Steps

The table on the following page identifies a series of tasks that will need to be completed prior to the first round of public engagement. The responsible party is identified for each task.

Task	Responsible Agency
Finalize list of Steering Committee members	Project Partners
Send email to potential Steering Committee members inviting them to join	WMPO
Coordinate schedules and send meeting invite for 1 st Steering Committee meeting	Smart Moves
Create agenda and presentation for the 1 st Steering Committee meeting (virtual); lead the meeting	Smart Moves, Kittelson
Finalize inventory of outreach opportunities from Steering Committee (town websites, automated call services, newsletters, etc.)	Project Partners, Steering Committee
Finalize questions for public survey	Project Partners
Create online and hard copy surveys	Smart Moves, Kittelson
Set up project website with online comment map	Kittelson
Schedule and reserve space for pop-up events; confirm availability of tables, chairs, and easels	WMPO
Finalize list of Project Support group members	Project Partners, Steering Committee
Develop social media content/images to share with Steering Committee and Project Support group about upcoming pop-up events	Smart Moves
Draft template emails for email blasts, newsletters, etc.; share with Steering Committee and Project Support groups for them to share	Smart Moves
Design ¼ page handouts, one-page fliers, rolling presentation and printed handouts of the presentation	Smart Moves
Design four boards and maps for mapping activity at pop-up events	Kittelson
Staff the pop-up events (minimum 2 consultant staff)	Smart Moves, Kittelson
Draft press release for events	Smart Moves
Distribute announcement materials	WMPO, Project Partners, Steering Committee

MEMORANDUM

January 31, 2024

Project #: 257710.012

To: Emma Stogner,
Wilmington Urban Area MPO

CC: Grady McCollum, Hart Evans, Kim Nguyen, Vanessa Lacer, and Abby Lorenzo

From: Sarah Brown; Andrew Ooms, PE; Adrienne Harington, MPA

RE: Wilmington Downtown Trail Phase 2 and 3 Feasibility Study – Public Engagement
Summary #1

EXECUTIVE SUMMARY

Engagement for the Wilmington Downtown Trail Phase 2 and Phase 3 Feasibility Study took place through October-December 2023. A steering committee meeting for the study was held on October 17, 2023. Public engagement consisted of in-person events and an online survey that included an online comment map. Highlights from public engagement are summarized in Figure 1.



Figure 1. Engagement summary by the numbers

Online Survey Summary

The online comment map received 486 total responses. When asked about using the trail, respondents saw themselves using the trail for exercise/recreation (34.4%), to spend time with my family/friends/kids/dogs (22.2%), and to get to parks (21.8%). For mode use, respondents saw themselves casually walking (35.8%), riding bicycles (not electric) (32.2%), and running/jogging (17.7%). When asked about accessing the trail, respondents said they would prefer accessing near Forest Hills Drive/Forest Hills Global Academy (18.7%), near Market Street (16.8%), and near Princess Place (12.1%).

Online Comment Map Summary

The online comment map asked for feedback by mode as well as challenges and opportunities. There were 352 written comments. Challenges included the concerns about pedestrian safety at the crossing at Market Street, feasibility and accessibility of the trail crossing under the railroad, road safety for all users at crossings, personal safety using the trail, and existing trash and dumping along the trail. Opportunities included connecting to neighborhoods and access points, connecting to existing multimodal infrastructure, providing lighting, and preserving/enhancing the natural environment.

In-Person Engagement Summary

Two in-person engagement events were held, and approximately 60 conversations were held with community members. A top theme of feedback received was environmental preservation, especially around water, bird and animal life, and trees. Concerns were also shared about crossings and road safety, particularly at Market Street and Princess Place Drive. Comments about opportunities to connect to schools, parks, and food distribution were also mentioned.

IN-PERSON ENGAGEMENT TOUCHPOINTS

The Wilmington Downtown Trail Phase 2 and Phase 3 Feasibility Study held an initial round of in-person public engagement in December 2023. Below is a summary of the public comments received.

OPEN HOUSE – NIR FAMILY YMCA, 12/5/2023

An outreach event was held in Wilmington at the Nir Family YMCA. Approximately 33 members of the public engaged with the boards and project team. There was an overall

excitement about the trail, but many were concerned about the trail's environmental impact to existing resources, including birds, trees, and flooding. The following are specific key takeaways and comments from the open house:

- *Opportunities*
 - Ideas around the potential to bypass the railroad bridge and connect to Phase 1 to west through Oakdale Cemetery
 - Vacant buildings near the trail may be opportunities to purchase buildings to become an educational center
 - Flooding fluctuates and is only present at certain times or areas after flooding
 - Wayfinding and signage about bird species
- *Concerns*
 - ADA accessibility under the railroad bridge, particularly slopes for wheelchairs and walkers
 - Crossing Market Street is a concern without adequate safety measures
 - Trail has potential to disrupt bird ecosystem and bird watching in the area
 - Concerns about erosion and damage to the creek from the trail
 - Concerns about tree removal from trail construction
 - Princess Place Drive has high speeds and needs a safe crossing
- *Other*
 - There is an existing floodgate near Archie Blue Park

OUTREACH EVENT – FRANKIE'S OUTDOOR MARKET, 12/9/2023

An outreach event was held in Wilmington at Frankie's Outdoor Market in Portia Hines Park. Approximately 26 members of the public engaged with the boards and project team. There was an overall excitement about the trail, as well as several comments about connections to schools. The following are specific key takeaways and comments from the event:

- *Opportunities*
 - Connect to schools to provide more walking and biking to school
 - Consider greater connections to food access resources
 - Excitement over connections that Phase 1 will bring to the Wilson Center; consider more opportunities partnering with them to promote the trail
- *Concerns*
 - Crossing Market Street is a concern without adequate safety measures

SURVEY DATA SUMMARY

There were 486 surveys submitted over the survey period.

DEMOGRAPHICS

The demographics of survey participants were evaluated:

- Residence
- Age
- Gender identify
- Race and ethnicity
- Household income

Highlights from survey demographics are summarized in Figure 2.



Figure 2. Survey demographic summary

Analyzing demographics of a survey can provide insights into how identity is distributed across the sample, and how this sample compares to the rest of the study area and region. In general, this survey had more responses from those who identified as white and not Hispanic/Latino, have a higher income, and are between 35-64. Figures 3-8 show the results of all survey participants.

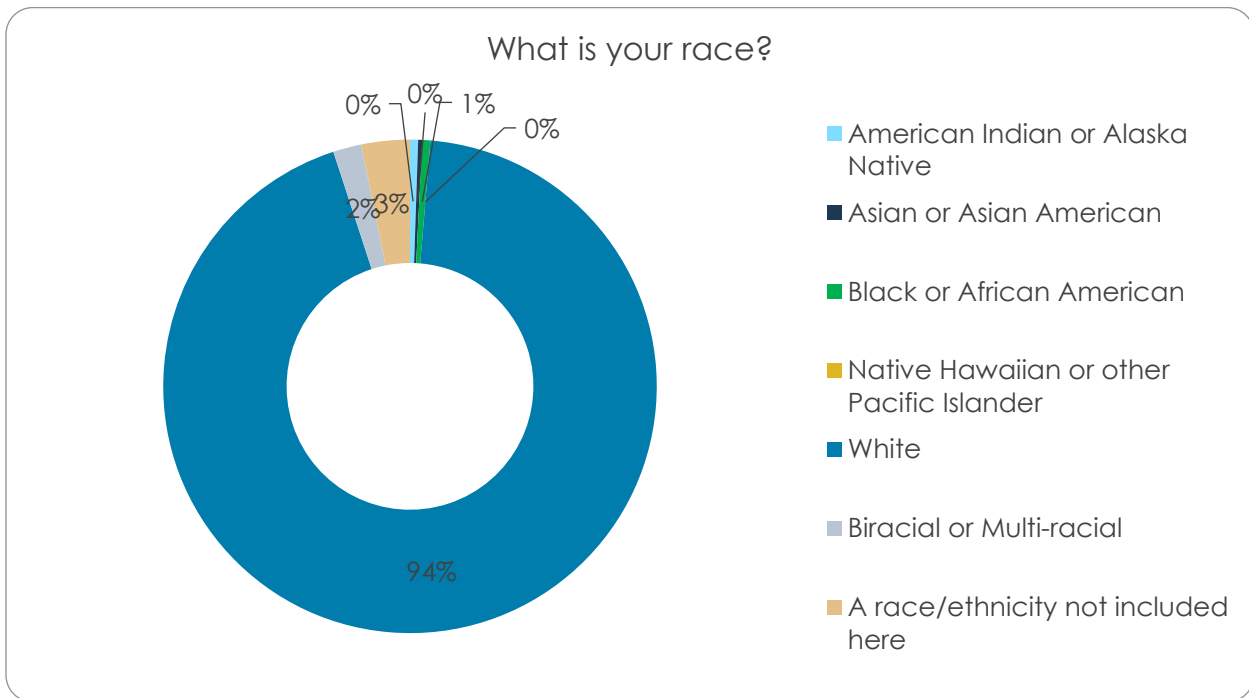


Figure 3. Responses for race

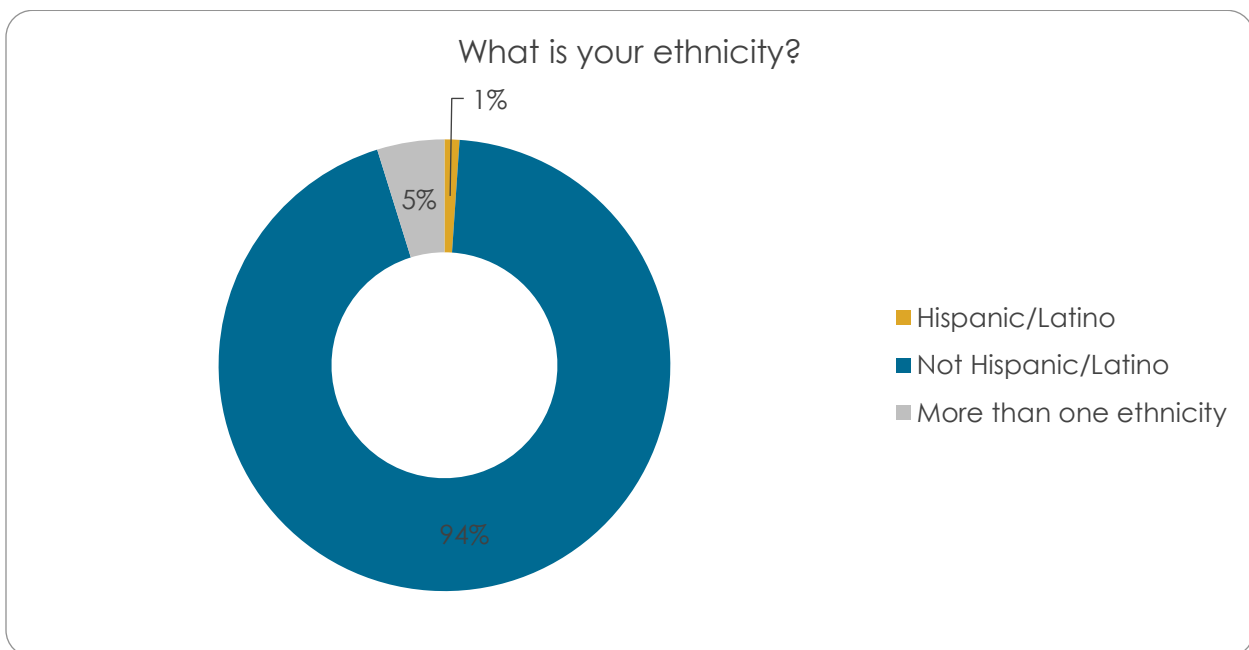


Figure 4. Responses for ethnicity

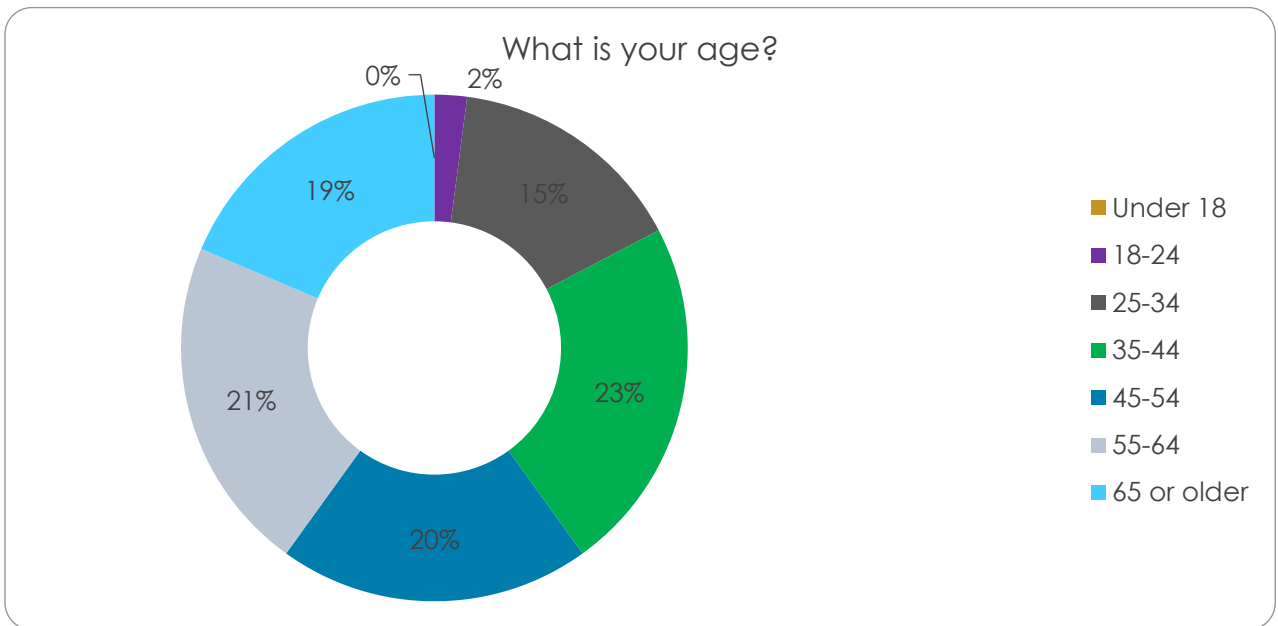


Figure 5. Responses for age range

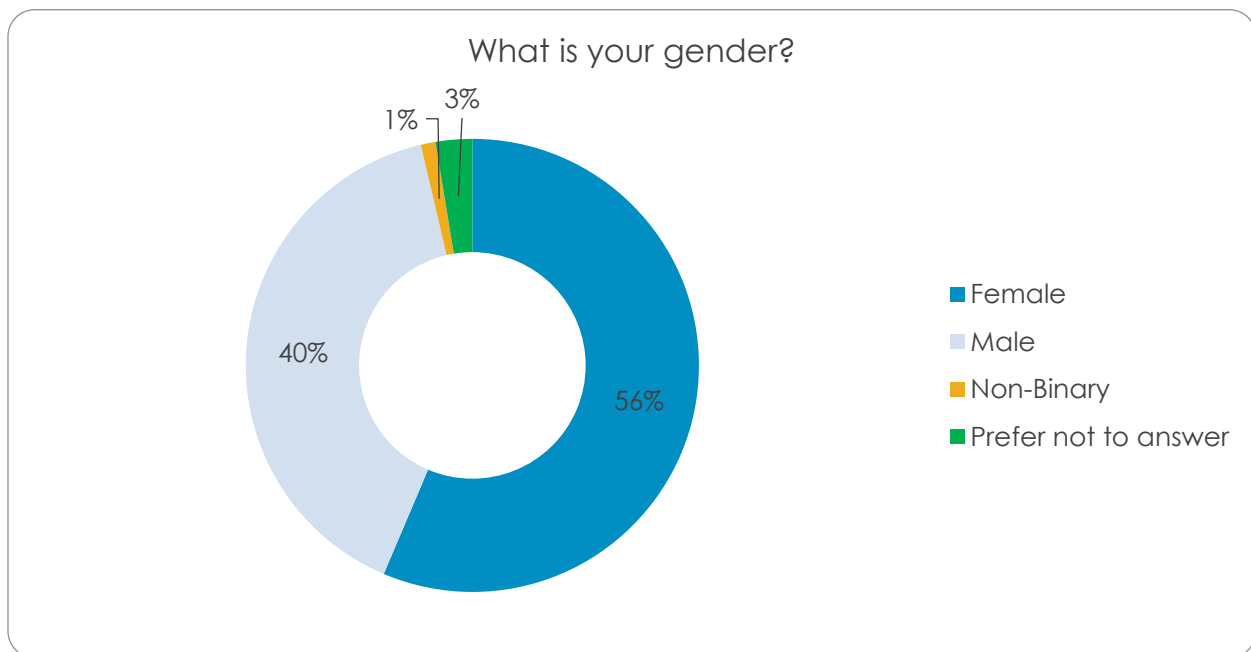


Figure 6. Responses for gender identity

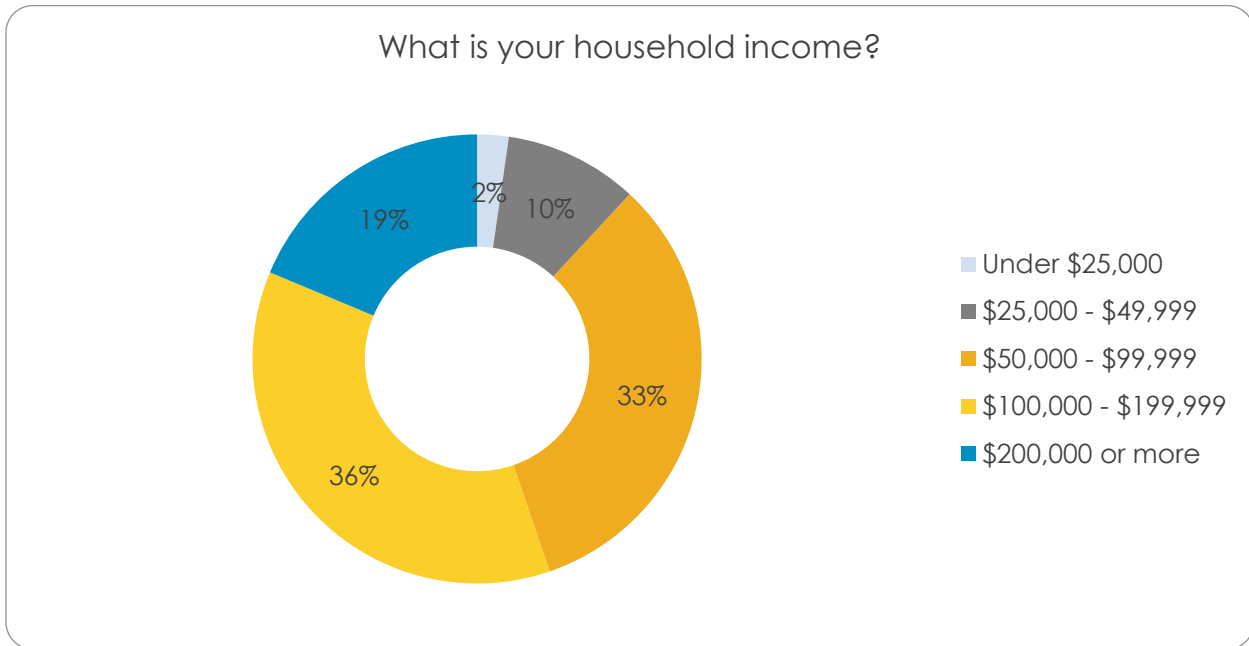


Figure 7. Responses for household income

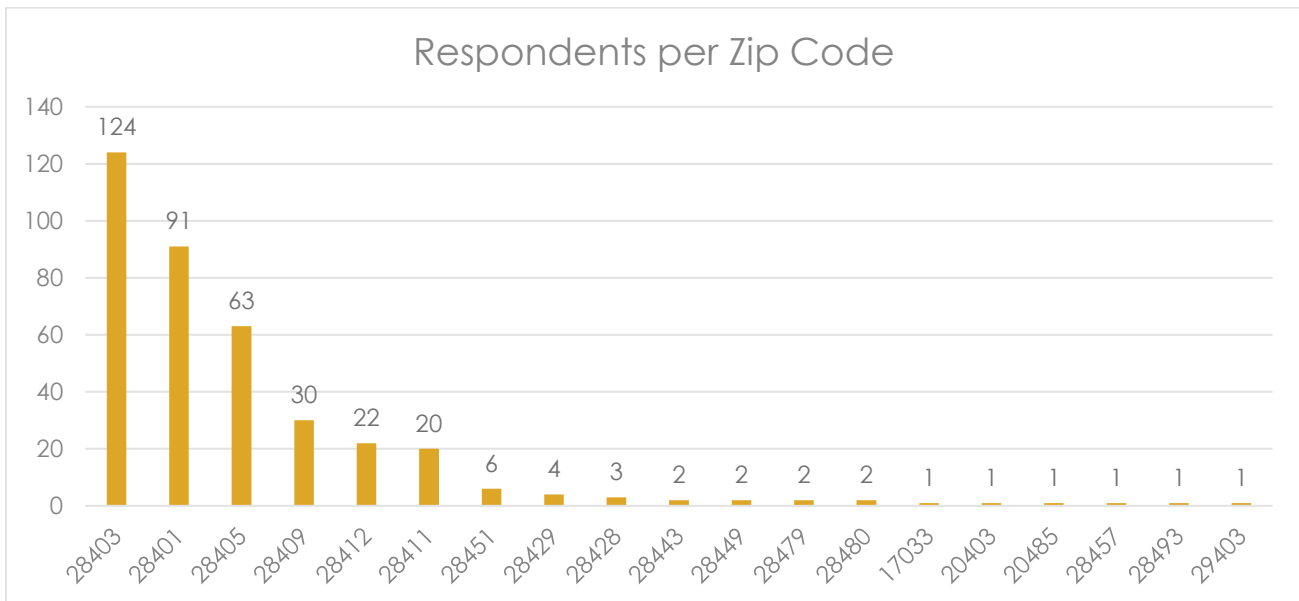


Figure 8. Respondent zip code summary

CURRENT TRAVEL BEHAVIOR

Respondents were asked about their primary mode of transportation (Figure 9). There were 479 responses to this question, and 83.9% said car/truck/motorcycle (drive alone), 5.2% said walking, and 5% said bicycle (not electric).

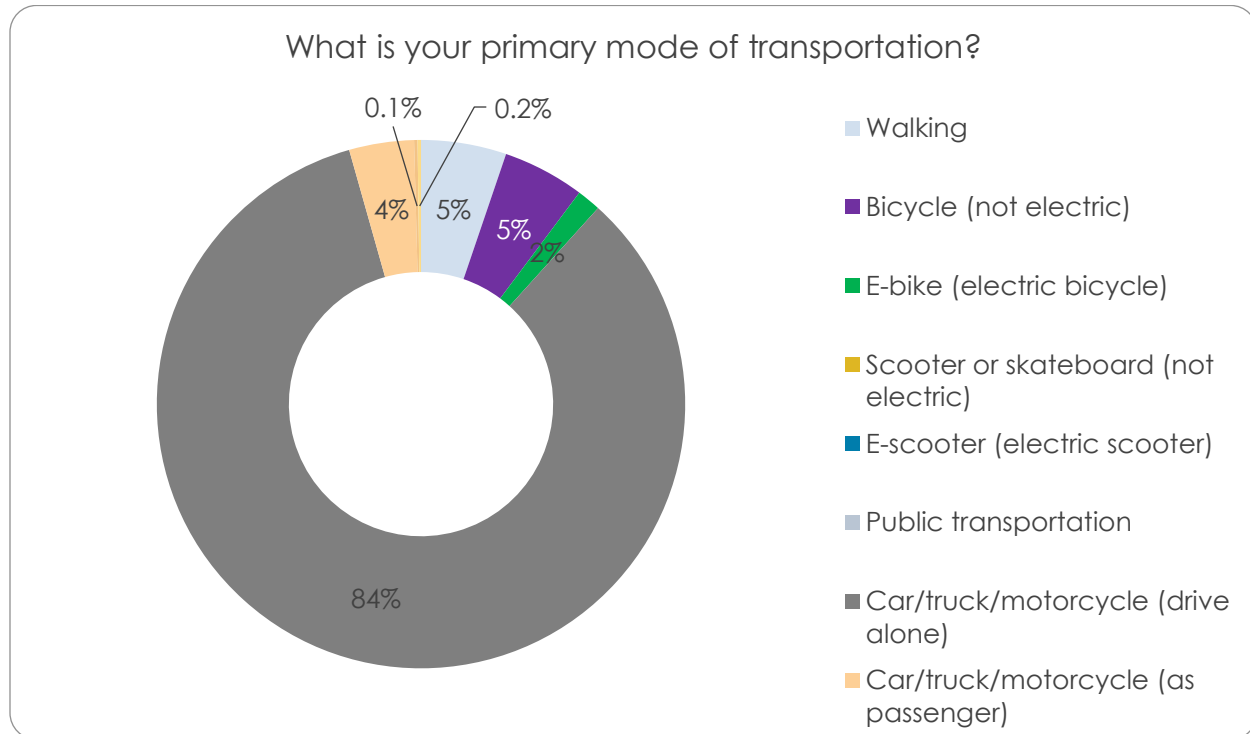


Figure 9. Responses for primary mode of transportation

Respondents were also asked about how often they use a form of active transportation (Figure 10). There were 475 responses to this question, and 32.8% said a few times per week, 25.3% said daily, and 20.2% said a few times per month.

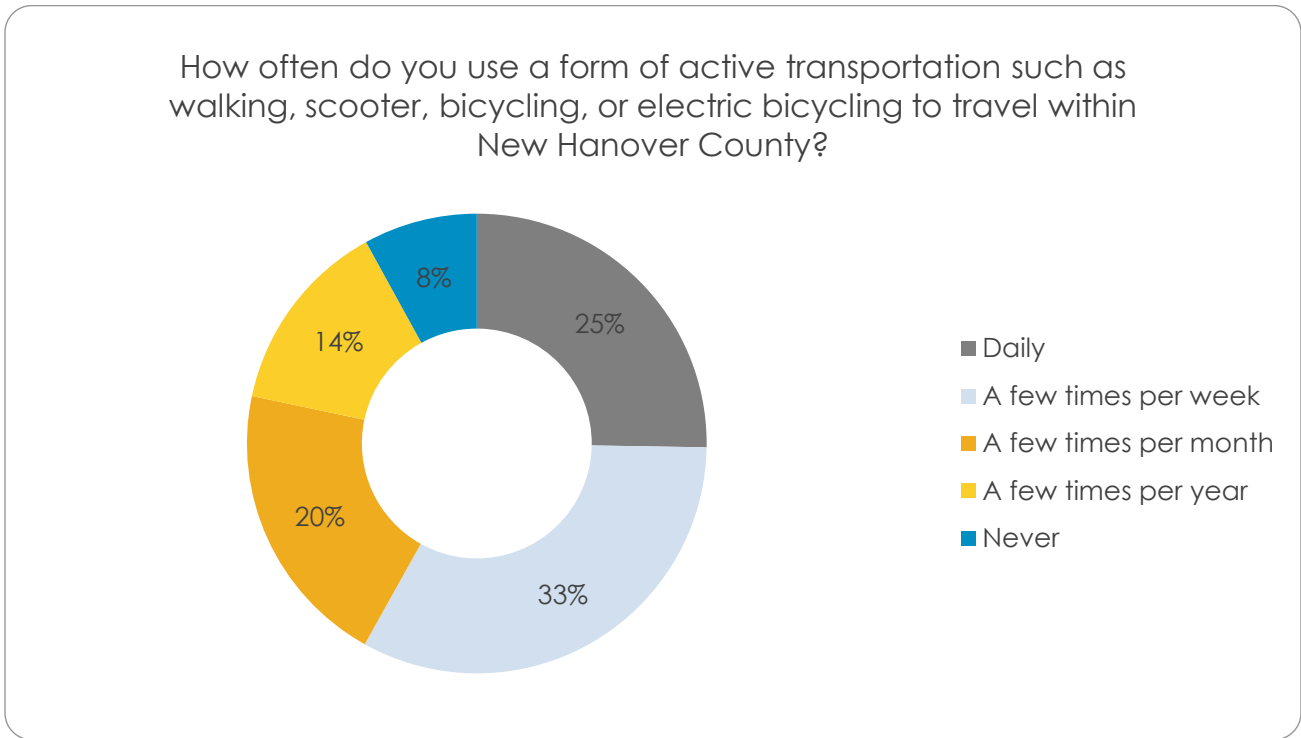


Figure 10. Responses for how often one uses active transportaiton

FUTURE TRAIL USE

Respondents were asked about their future purpose for using the trail (select all that apply) (Figure 11). There were 1,266 responses. Respondents selected they would use the trail for exercise/recreation (34.4%), to spend time with my family/friends/kids/dogs (22.2%, and to get to parks (21.8%).

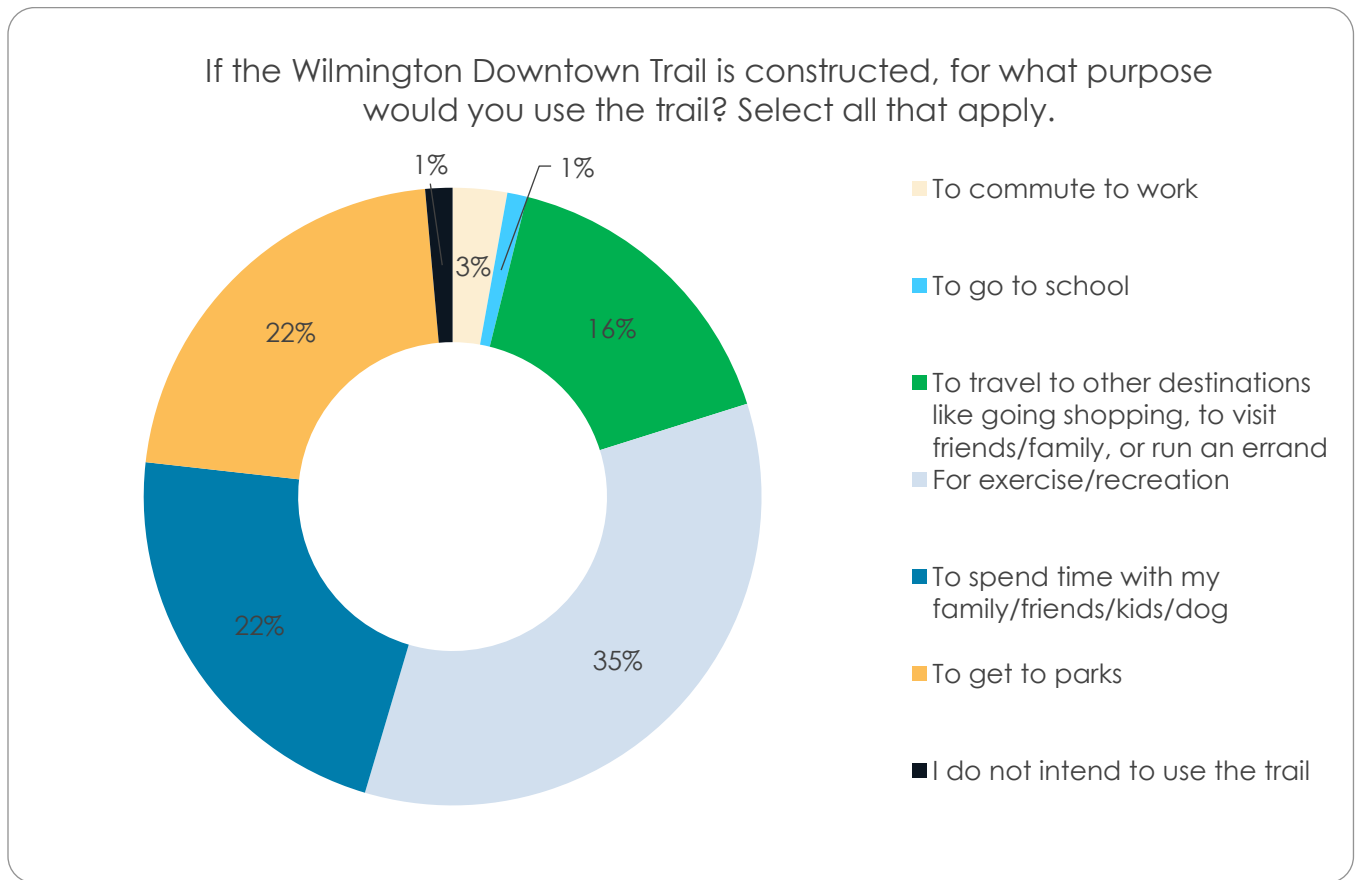


Figure 11. Responses for future trail purposes

Respondents were asked what active transportation they would use on the trail (select all that apply) (Figure 12). There were 1,060 responses to this question. Casual walking received a vote from 35.8% of respondents, riding bicycles (not electric) received a vote from 32.2% of respondents, and running/jogging received a vote from 17.7% of respondents.

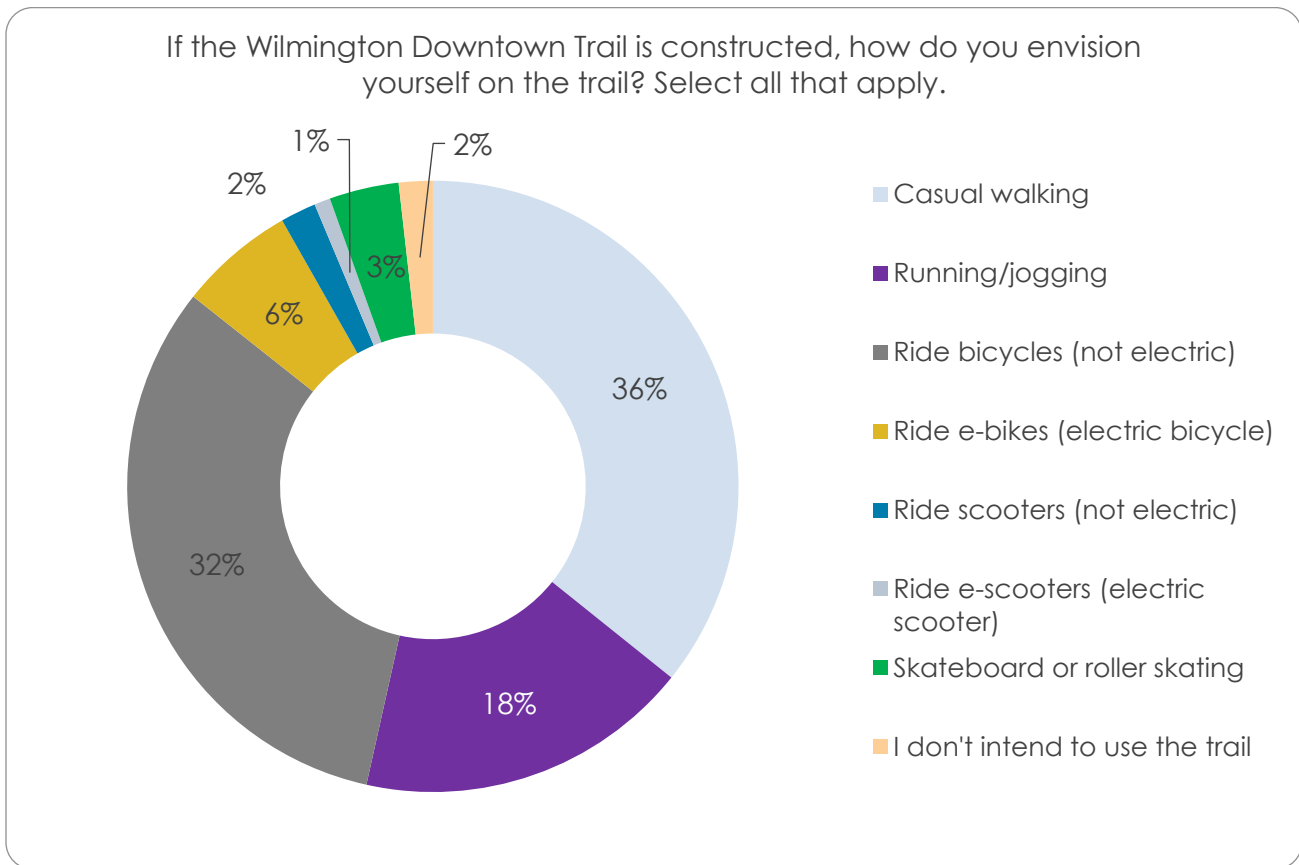


Figure 12. Responses for future trail mode

Respondents were also asked how often they would anticipate using the trail (Figure 13). This question received 462 responses with 38.7% of respondents selecting a few times per week, 34.8% of respondents selecting a few times per month, and 12.3% of respondents selecting a few times per year.

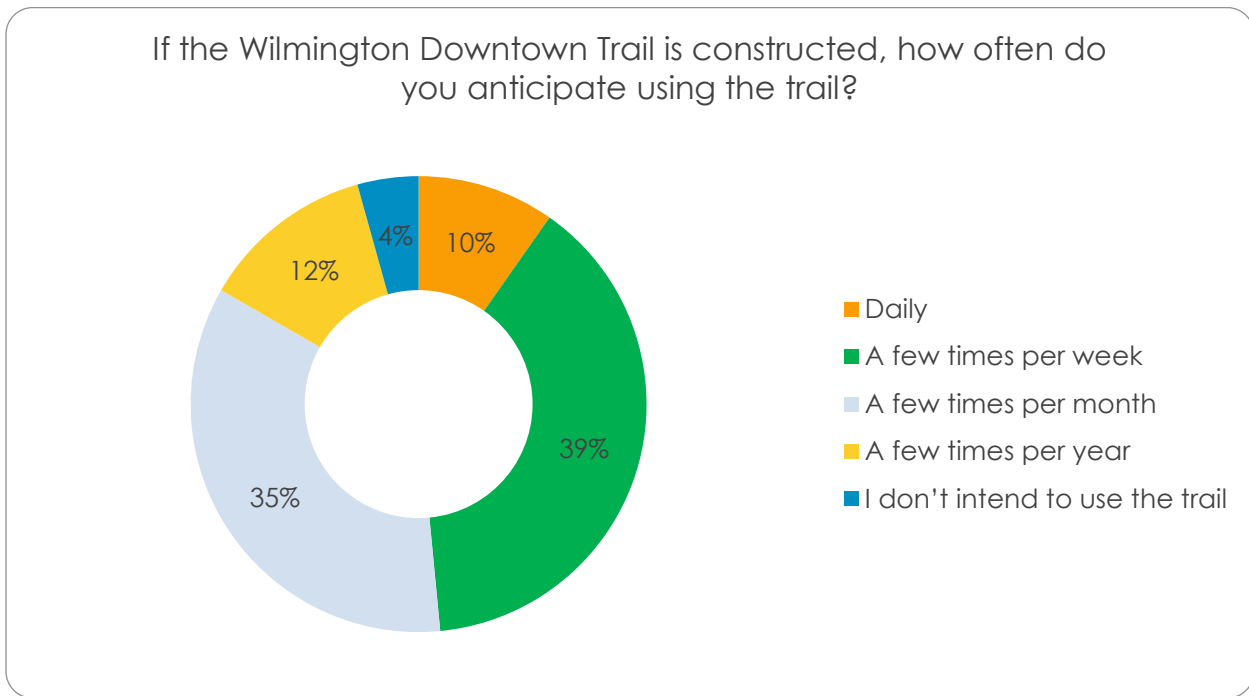


Figure 13. Responses for how often one would use the trail

FUTURE TRAIL ACCESS

Respondents were asked where they would anticipate accessing the trail (select all that apply) (Figure 14). There were 981 responses to this question. Near Forest Hills Drive/Forest Hills Global Academy received a vote from 18.7% of respondents, near Market Street received a vote from 16.8% of respondents, and near Princess Place received a vote from 12.1% of respondents.

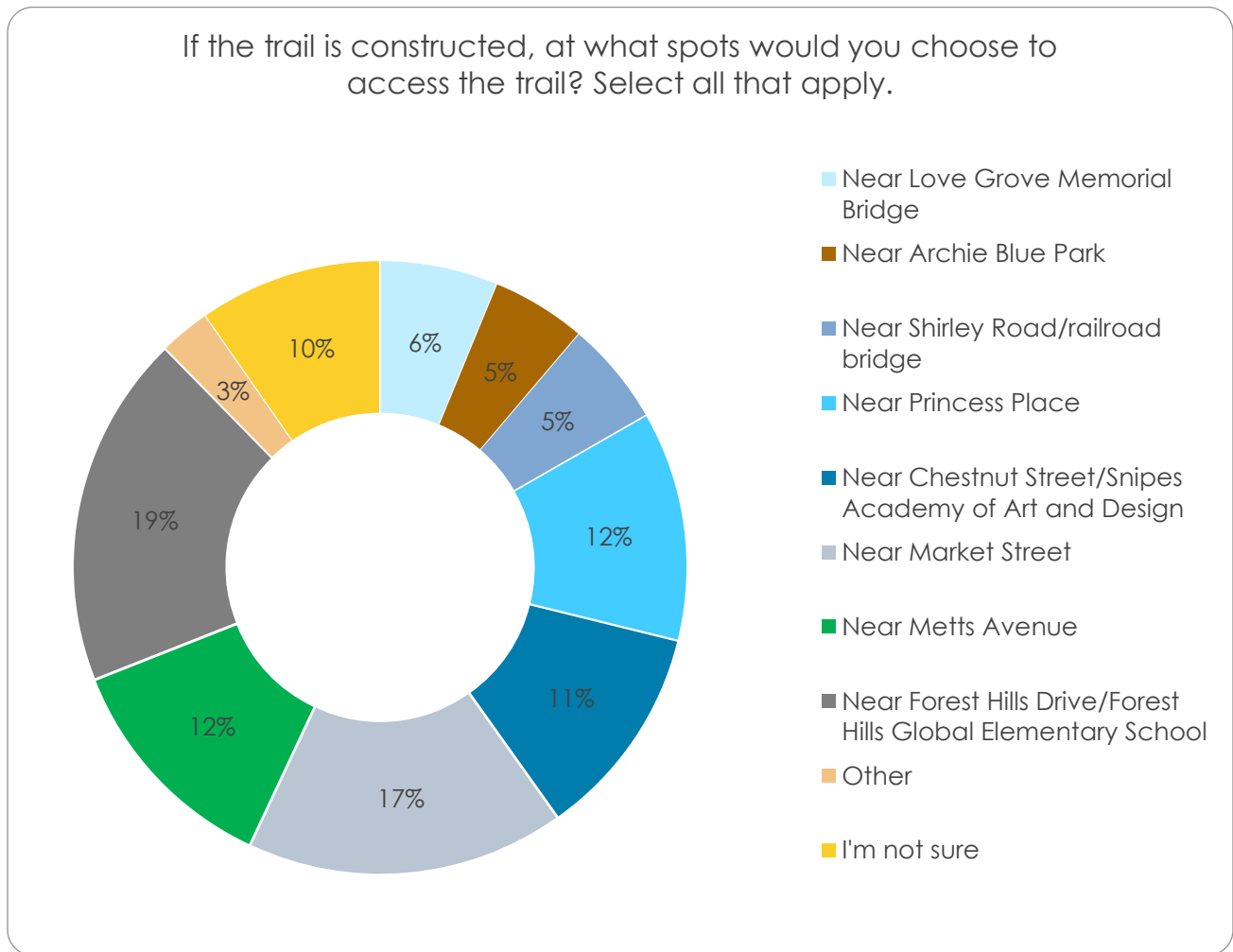


Figure 14. Responses for primary mode of transportation

TRAIL PRIORITIES

Survey respondents were asked to rank the following priorities based on their importance:

- Enhance the transportation network
- Access to parks and recreation
- Access to schools
- Access to shopping/service centers
- Access to employment centers/jobs
- Encourage economic development
- Access to neighborhoods
- Reserve natural resources
- Other priority

Figure 15 displays priority in order of importance from highest to lowest.

Trail Priorities	1. Preserve natural resources
	2. Access to parks and recreation
	3. Enhance the transportation network
	4. Access to neighborhoods
	5. Access to employment centers/jobs
	6. Encourage economic development
	7. Access to schools
	8. Other priority
	9. Access to shopping/service centers

Figure 15. Responses for top trail priorities

For those who identified "Other priority" and left a comment, respondents mentioned persevering trees and bird populations, building community, improving access for community members without access to a vehicle, exercise, and personal safety.

ONLINE COMMENT MAP

Survey respondents were given an opportunity to drag icons for various modes of transportation onto a map and provide a comment related to that mode of transportation, specific to a location. Icons were placed 584 times, and there were 352 written map comments.

- The walking icon was placed on the map 234 times, and 134 comments were provided.
- The cycling or rolling icon was placed on the map 176 times, and 100 comments were provided.
- The other icon was placed on the map 73 times, and 68 comments were provided.
- The driving icon was placed on the map 50 times, and 29 comments were provided.
- The transit icon was placed on the map 26 times, and 14 comments were provided.

- The accessibility icon was placed on the map 25 times, and 7 comments were provided.

Map comments were further analyzed to understand challenges and opportunities residents see for the Gullah Geechee Heritage Trail.

CHALLENGES

Participants left the following feedback on challenges for the corridor (see Figure 16):

- Highest concentration of concerns at the road crossing on Market Street. Comments included concerns about speeding, lack of drivers yielding for pedestrians, and concerns about the crossing without a significant infrastructure investment
- Lack of current infrastructure at the trail crossing at Princess Place Drive
- Personal safety and security along the trail
- Environmental impacts of the trail to the existing natural environment
- Concerns about public health and safety for existing trash and dumping along the trail alignment
- Questions about the ability to cross the railroad and implications for ADA accessibility and safety

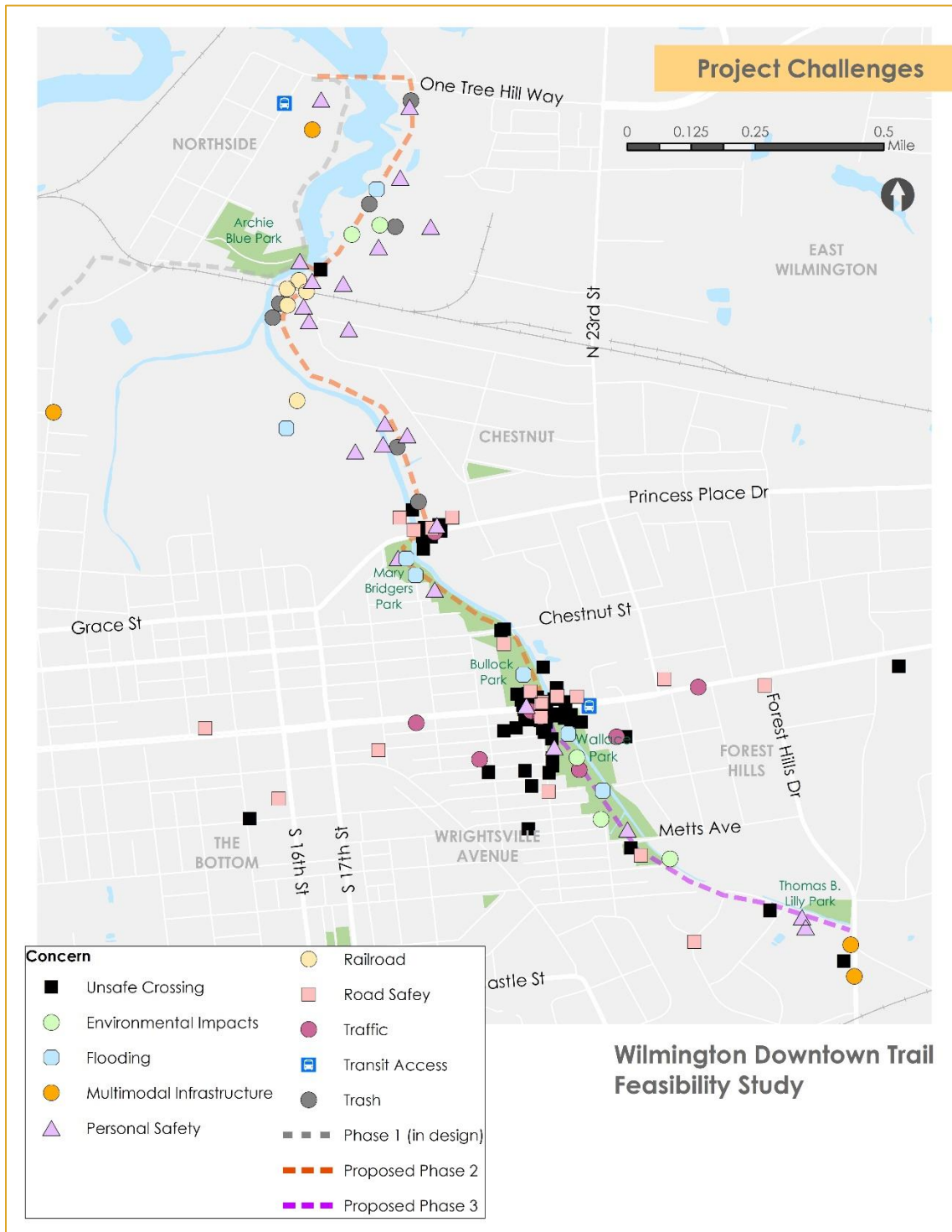


Figure 16. Challenge categories identified

OPPORTUNITIES

Participants left the following feedback on opportunities along the corridor (see Figure 17):

- The trail can enhance multimodal safety and provide an alternative route to current network
- Provided input on access points and places for the trail to connect to in neighborhoods and parks
- Ensuring the trail is ADA accessible and provides recreational opportunities for all ages and abilities
- Providing a signal at the trail crossing at Market Street
- Providing raised crosswalks at key crossings, such as Princess Place Drive, Chestnut Street, and Forest Hills Drive
- Providing lighting along the trail for road safety as well as personal security
- Providing rest areas and places to pause along the trail
- Continue opportunities to connect the trail to existing and proposed infrastructure, particularly the Cross City Trail
- Preserve and enhance the natural environment, particularly trees and water ways
- Provide trash cans along the trail

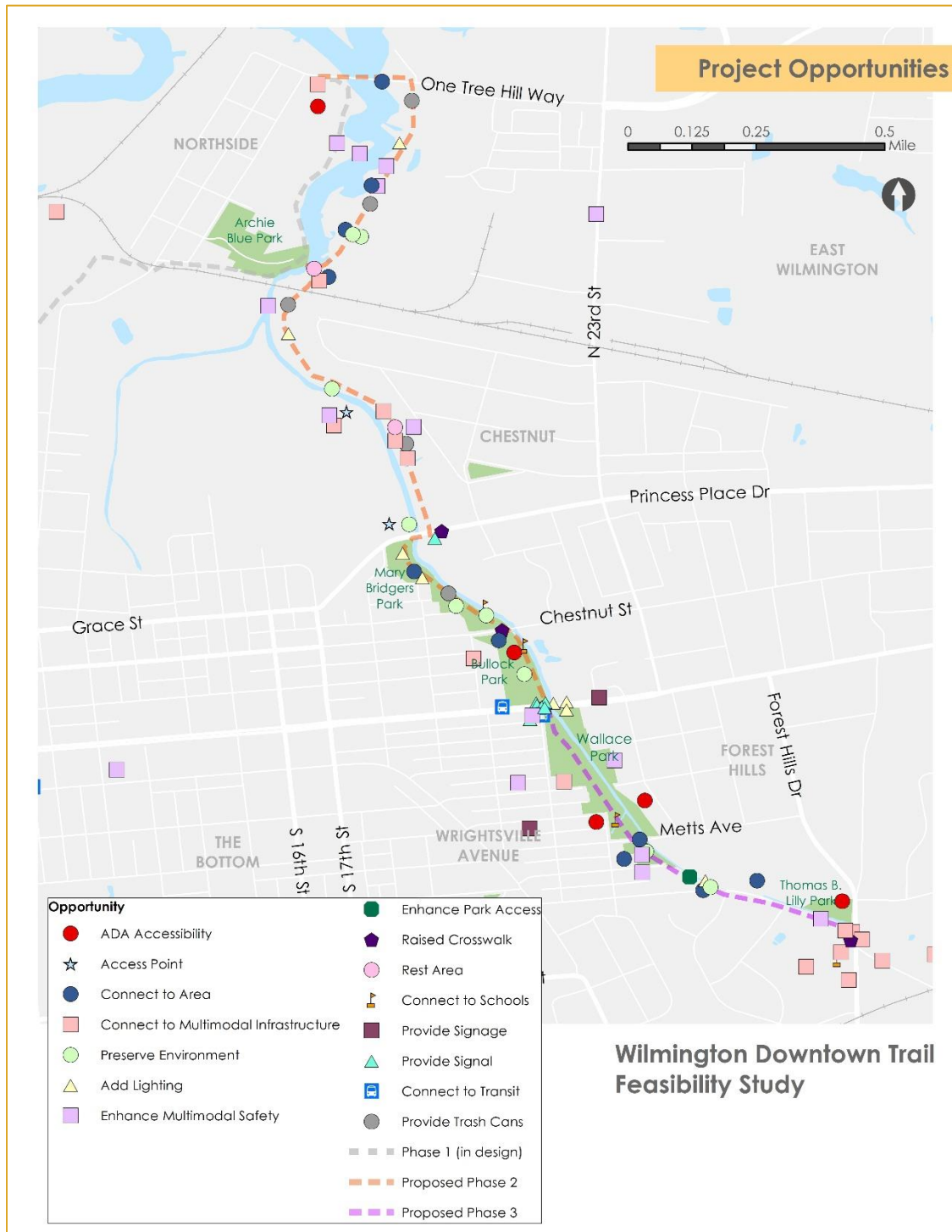


Figure 17. Opportunity categories identified

July, 2024

Project #: 257710.012

To: Caroyn Caggia,
Wilmington Urban Area MPO

CC: Grady McCollum, Hart Evans, Kim Nguyen, and Abby Lorenzo

From: Sarah Brown; Andrew Ooms, PE; Adrienne Harington, MPA

RE: Wilmington Downtown Trail Phase 2 and 3 Feasibility Study – Public Engagement Summary
#2

ENGAGEMENT TOTALS

Engagement for the Wilmington Downtown Trail Phase 2 and Phase 3 Feasibility Study took place through June-July 2024. A steering committee meeting for the study was held on May 8, 2024. Public engagement consisted of in-person events and an online survey that included open ended comments. Highlights from public engagement are summarized in Figure 1.



Figure 1. Engagement summary by the numbers

SURVEY SUMMARY

The study team provided a survey to gather feedback on trail preferences and more insight on trail crossing concerns. The online comment map received 500 total responses. Feedback collected is summarized in this section.

Demographics

The demographics of survey participants were evaluated:

- Residence
- Age
- Gender identify
- Race and ethnicity
- Household income

Figures 2- 6 show the results of all survey participants.

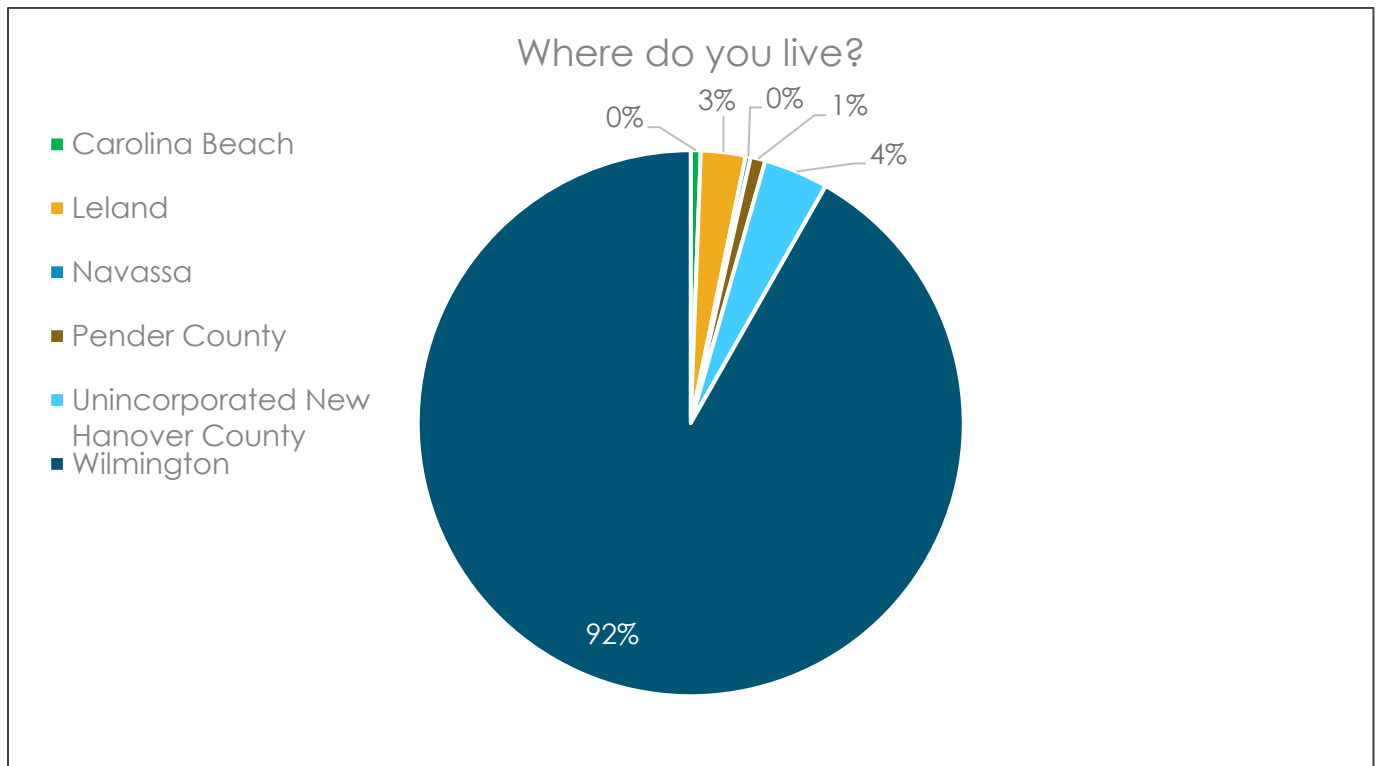


Figure 2. Residence of survey respondents

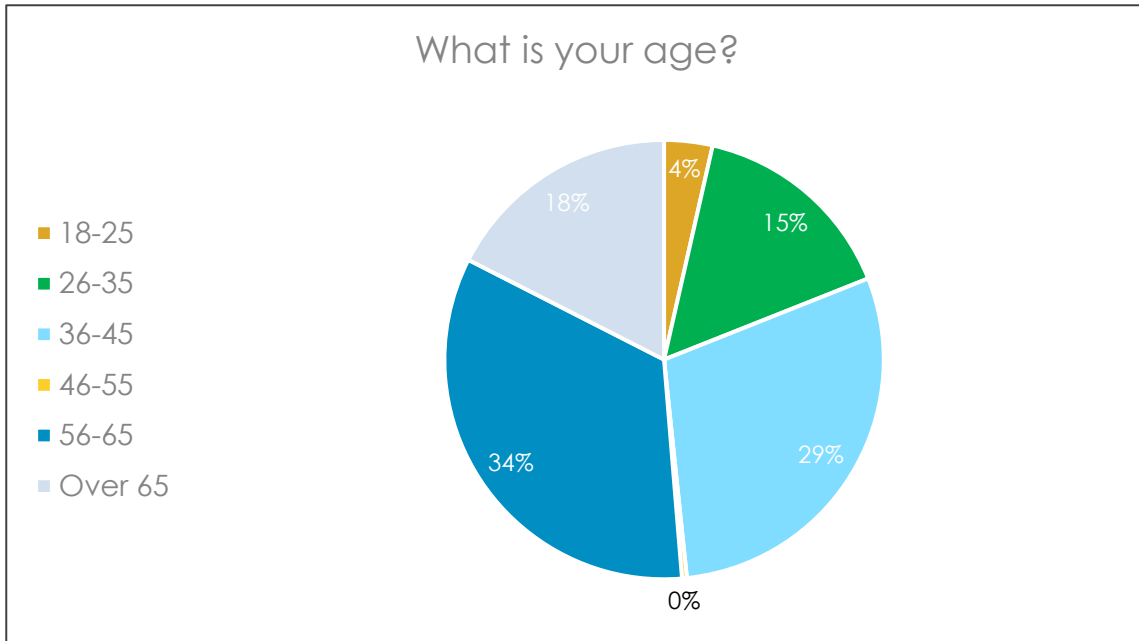


Figure 3. Age of survey respondents

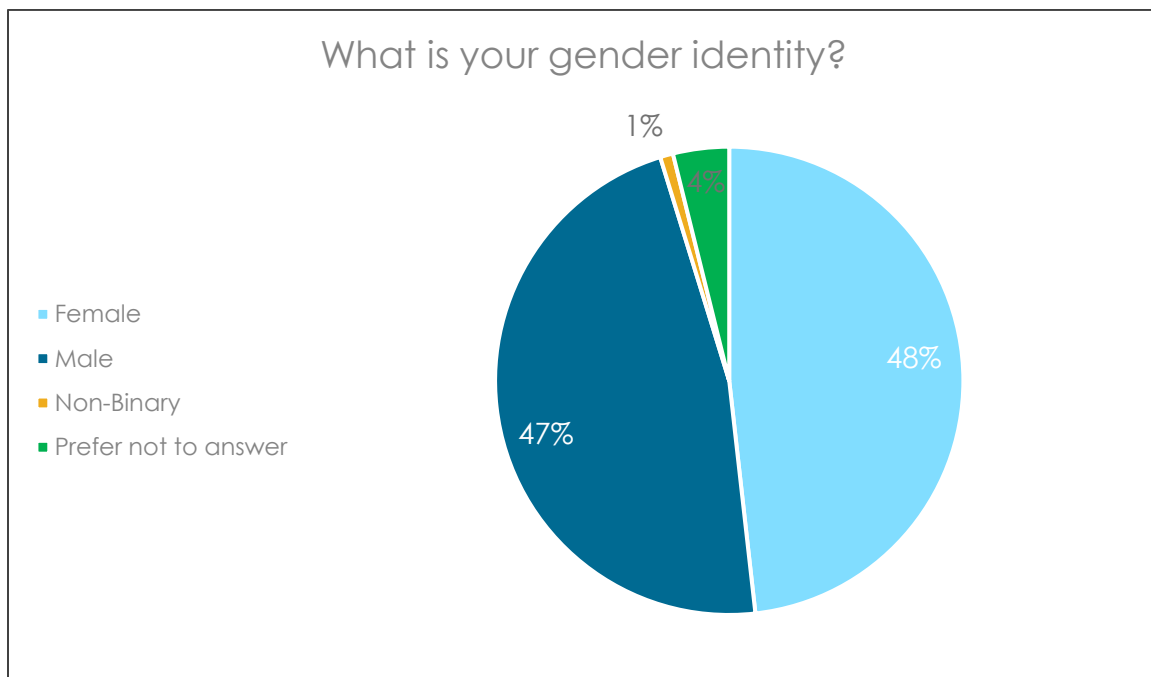


Figure 4. Gender identity of survey respondents

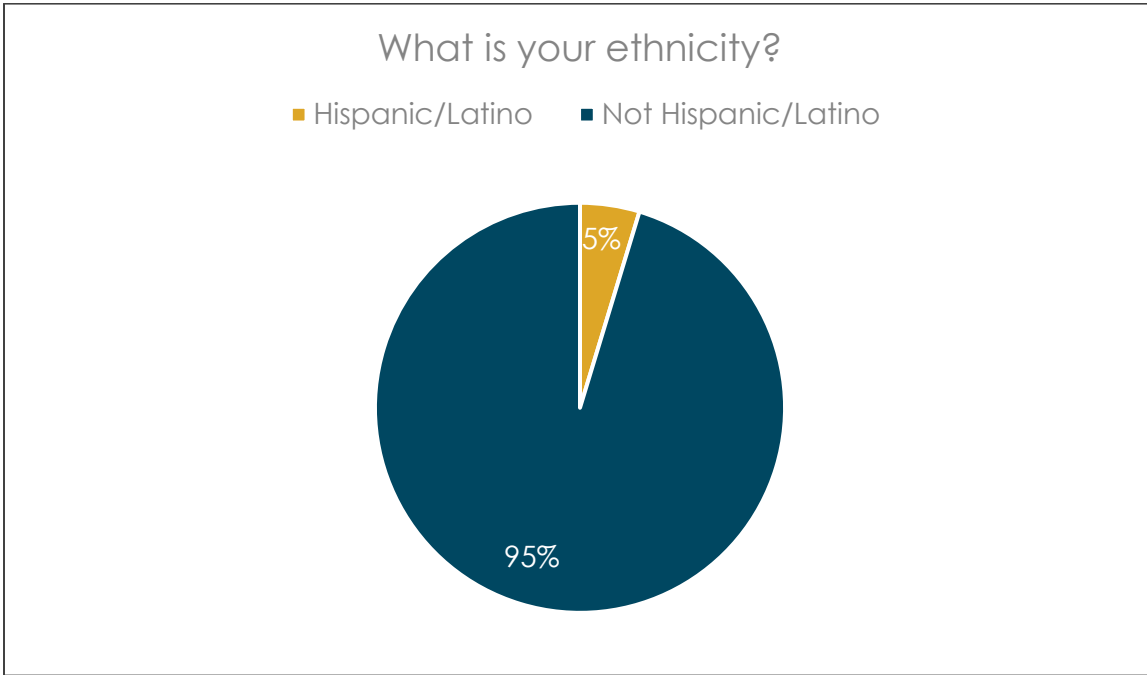


Figure 5. Ethnicity of survey respondents

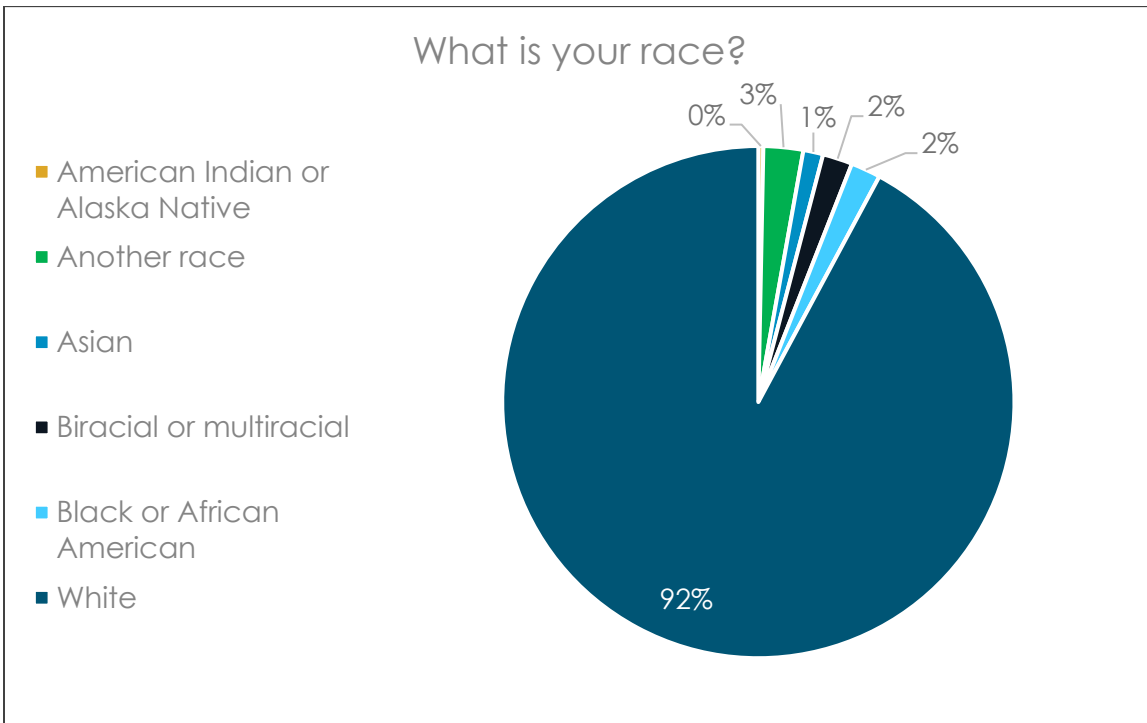


Figure 6. Race of survey respondents

Trail Segment Preferences

The following section explores how participants responded to trail segment preferences.

FOCUS AREA 1

Figure 7 shows Focus Area 1 trail options (**Extents: Wilmington Downtown Trail Phase 1 to Shirley Rd/railroad**) Alignment A (green line) is a path under the railroad bridge and along east side of creek to Love Grove Bridge. Alignment B (pink line) is a path under railroad bridge to new bridge to Archie Blue Park.

There were 443 responses to this question; **74% prefer Alignment B**, and 26% preferred Alignment A (see Figure 8).

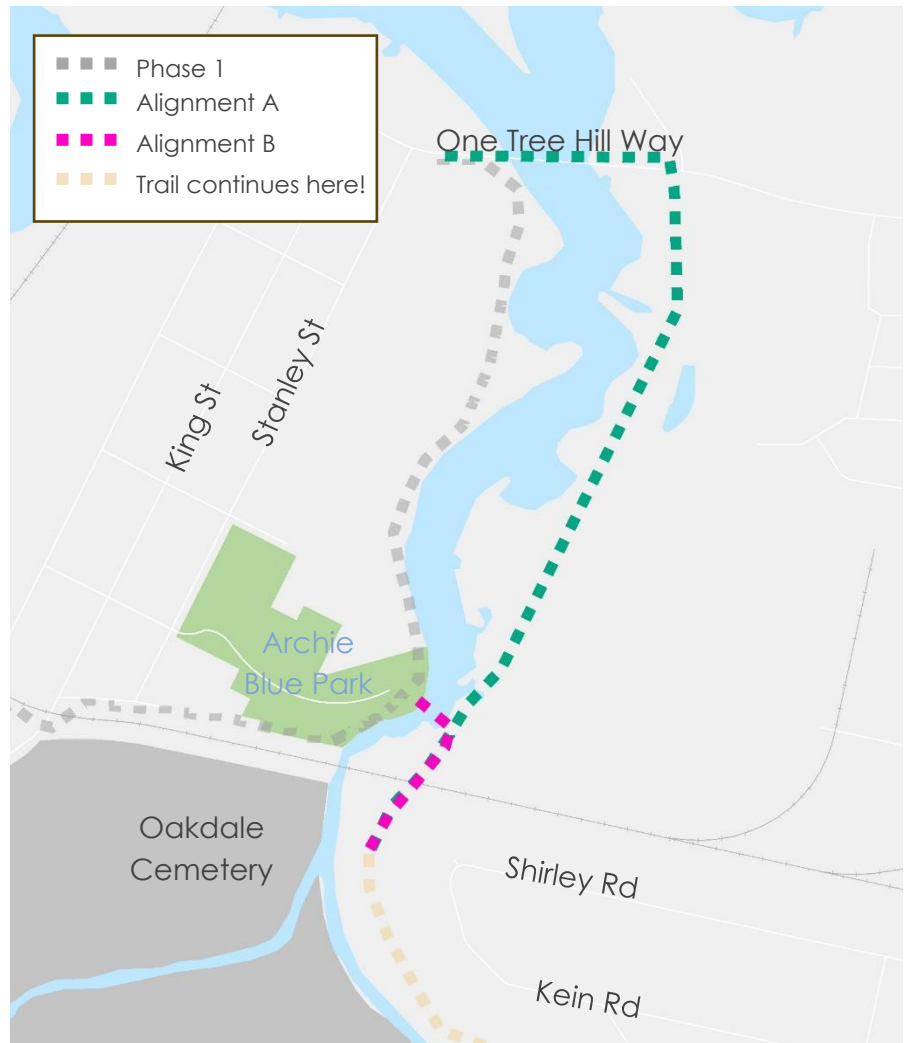


Figure 7: Focus Area 1 Alignment Options

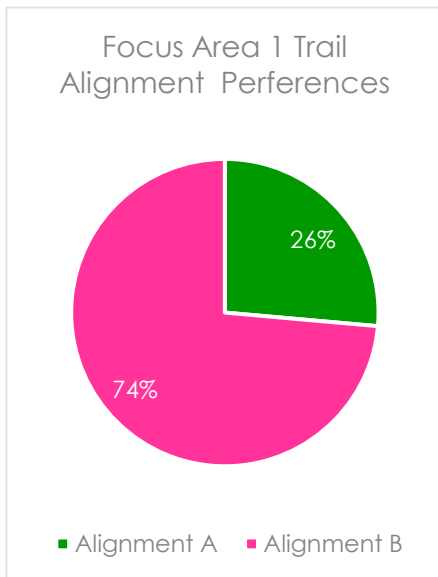


Figure 8: Focus Area 1 Alignment Preferences

FOCUS AREA 2

Figure 9 shows Focus Area 2 trail options (**Extents: Shirley Rd/railroad to Chestnut St**). Alignment A (green line) would be a path on the east side of the creek from Shirley Dr to Princess Place Dr using existing access road. It crosses to the west side of creek from Princess Place Dr to Market St on park property. The trail runs on the east side of the creek north of Princess Place Drive due to the cemetery alongside the west side of the creek. The trail is running along the west side south of Princess Place drive to Market St to connect through existing parks. would the creek north to Love Grove Bridge to connect to Phase 1.

The study team provided an open response for feedback on the proposed alignment. The survey is formatted in a way that allows other survey respondents to 'like' or 'upvote' comments from others. An inventory of responses with the number of upvotes received for each comment can be found in Appendix A.

There were 137 comments provided. Several key themes emerged:

- The trail needs to have low impact to the natural environment
- Concerns about damage to the natural ecosystem, wetlands, and wildlife. Concerns were seen from construction of the trail as well as an increase in foot traffic
- Many concerns were expressed for protecting the Cypress trees in the existing parks.
- Consider working with Cape Fear River Watch
- Concerns about flooding and impacts of the trail on the floodplain as well as maintenance and stability of the trail. Comments included suggestions for permeable trail surfaces
- A safe crossing at Princess Place Dr, Chestnut St, and Market St are essential. Consider raised crosswalks, speed bumps, pedestrian bridges, and red light signals



Figure 9: Focus Area 2 Alignment Options

- Comments both for and against trail lighting were seen. Future work should be done to ensure minimal impacts of lighting on wildlife
- Several comments expressed disinterest in the paved trail through Wallace and Bulluck Park and would rather preserve the existing environment and greenspace
- Comments on excitement for greater connectivity for walking and biking in Wilmington
- Continuing trash and dumping clean up efforts for public safety
- Include amenities such as benches and rain shelters

FOCUS AREA 3

Figure 10 shows Focus Area 3 trail options (**Extents: Market Street to Metts Avenue**). Alignment A (green line) is a path along west side of creek. Alignment B (pink line) is a path on east side of creek with bridge crossings at Market St and Metts Ave.

There were 373 responses to this question; **60% prefer Alignment A** and 40% prefer Alignment B (see Figure 11).



Figure 10: Focus Area 3 Alignment Options

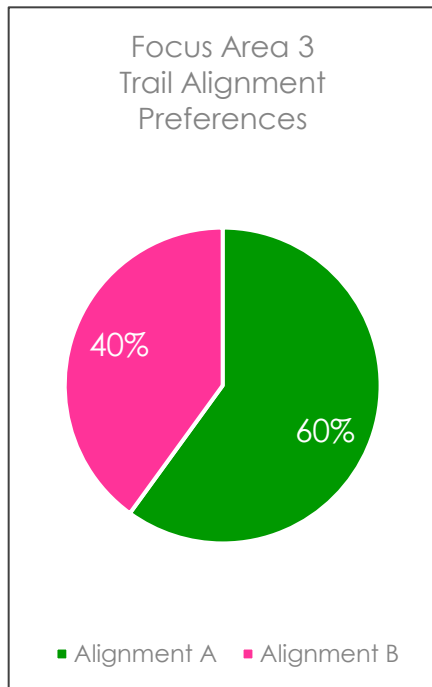


Figure 11: Focus Area 3 Alignment Preferences

FOCUS AREA 4

Figure 12 shows Focus Area 4 trail options (**Extents: Metts Avenue to Forest Hills Drive**). Alignment A is a path along the west side of the creek that may need property easements. Alignment B are sidewalks and a shared street on Barnett Ave, 22nd St, and Gibson Ave. Unlike the other alignment options, this will not be a paved trail separated from the road. Sidewalks will accommodate pedestrians and shared roadway treatments on the low traffic volume streets will create a shared space for bicyclists.

There were 342 responses to this question; 67% prefer Alignment A, and 33% prefer Alignment B (see Figure 13).

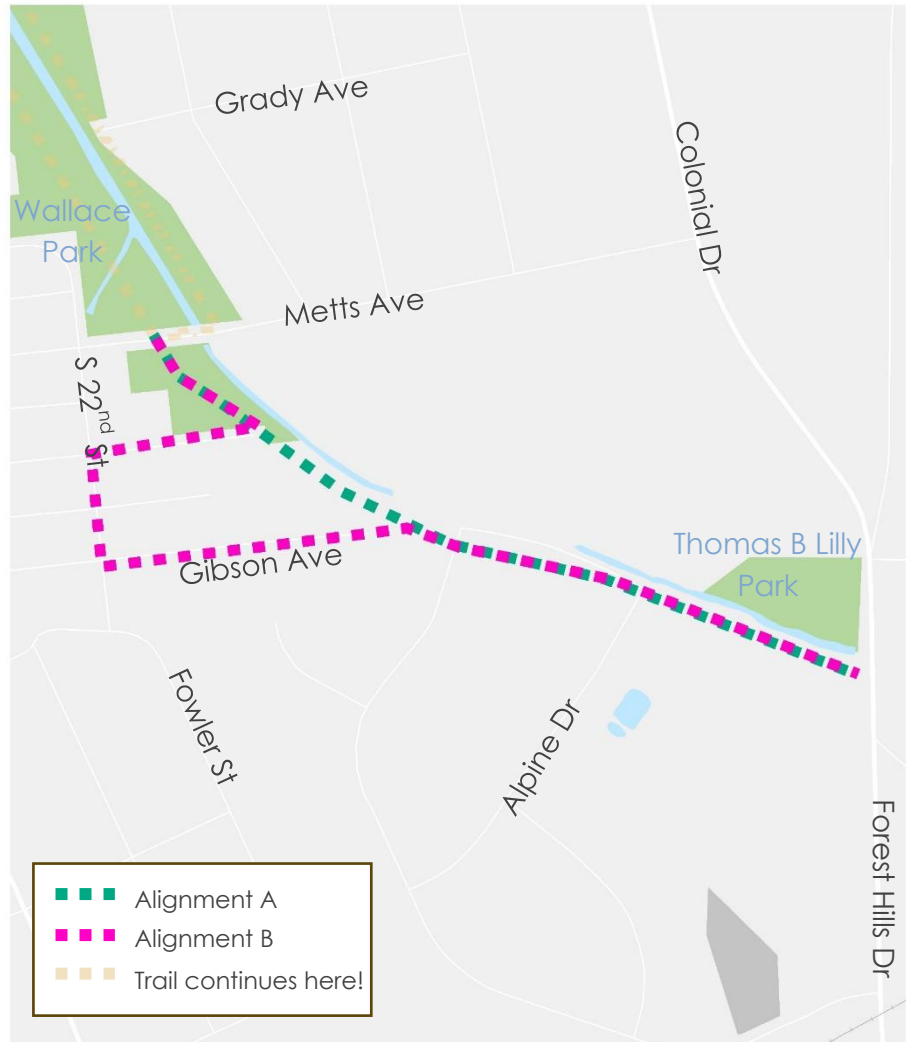


Figure 12: Focus Area 4 Alignment Options

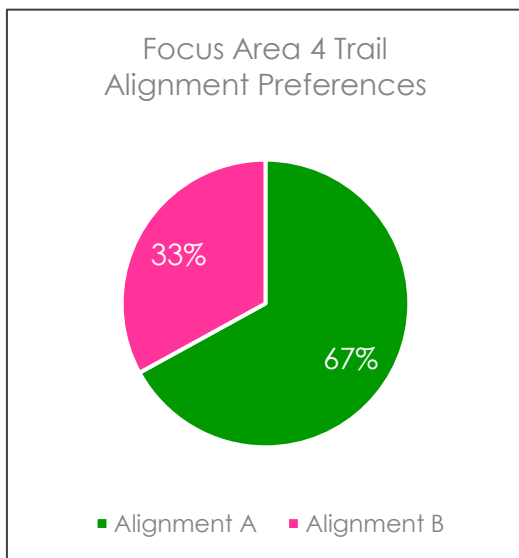


Figure 13: Focus Area 4 Alignment Preferences

Trail Crossings

Several questions were asked about the trail crossings. Participants were asked how they would use the trail and who they would anticipate using the trail as well as how comfortable they felt at specific trail crossings.

USER MODE

Survey respondents were asked how they would be traveling along the trail with a select all that apply option. A total of 338 people answered this question with 79% saying they will travel on a bicycle; 76% saying they will be walking (see Figure 14 for full responses).

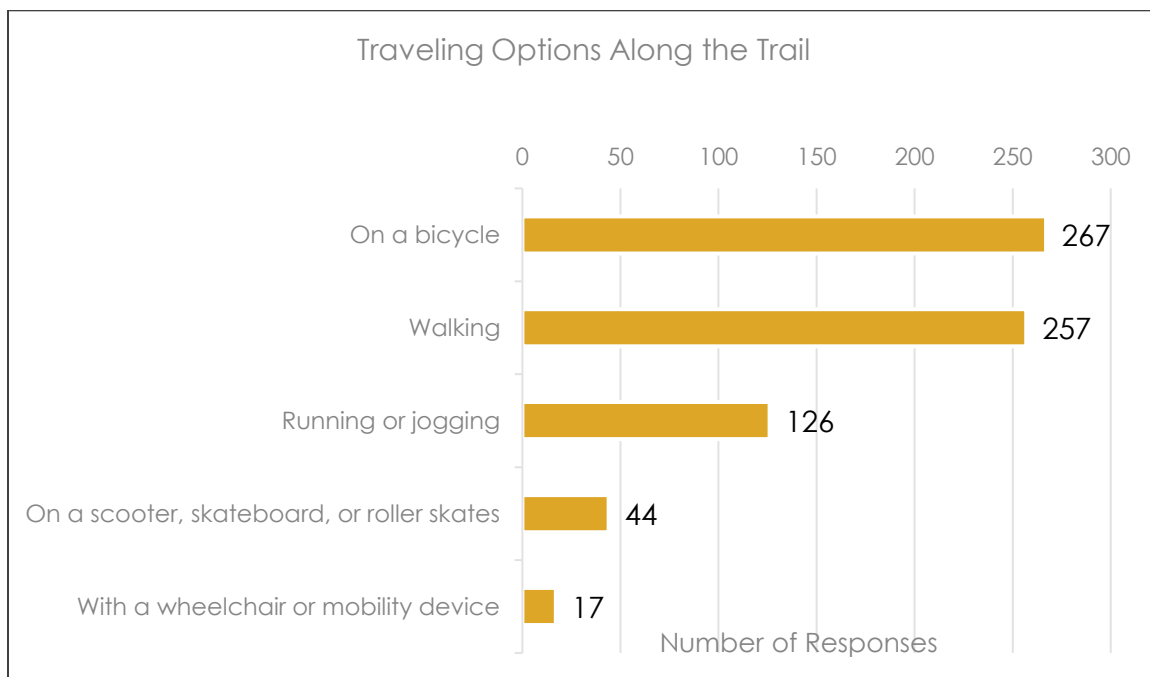


Figure 14. Mode options

TRAIL USERS

Survey respondents were asked who they envision sharing the trail with, such as friends and family, with a select all that apply option. Of the 330 people that responded, 92% envision sharing the trail with able bodied people; 80% said with people with dogs. Additionally, 45% of respondents expected to use the trail with someone with physical disabilities (see Figure 15 for full responses).



Figure 15. People on the trail

PRINCESS PLACE DRIVE

A crossing on Princess Place Drive will be needed between 18th Street and 21st Street. This is a road with 35 mph posted speed limit and a vehicle passing about every 3 seconds on average during peak periods. Survey respondents were asked how comfortable they are crossing Princess Place Drive in the current conditions. Of the 330 people that responded, 30% said they are not quite comfortable; 26% are not comfortable at all (see Figure 16 for full responses).

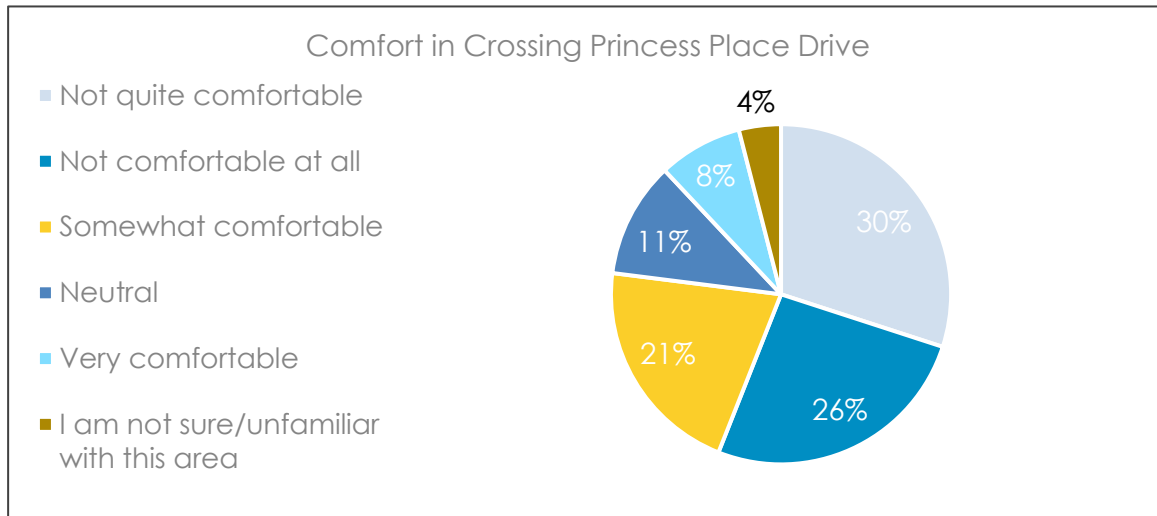


Figure 16. Comfort in crossing Princess Place Dr

CHESTNUT STREET

A crossing on Chestnut Street will be needed between 20th Street and Lake Drive. This is a road with 25 mph posted speed limit and a vehicle passing about every 10 seconds on average during peak periods. Of the 325 people that responded, 36% said they are somewhat comfortable; 29% are very comfortable.

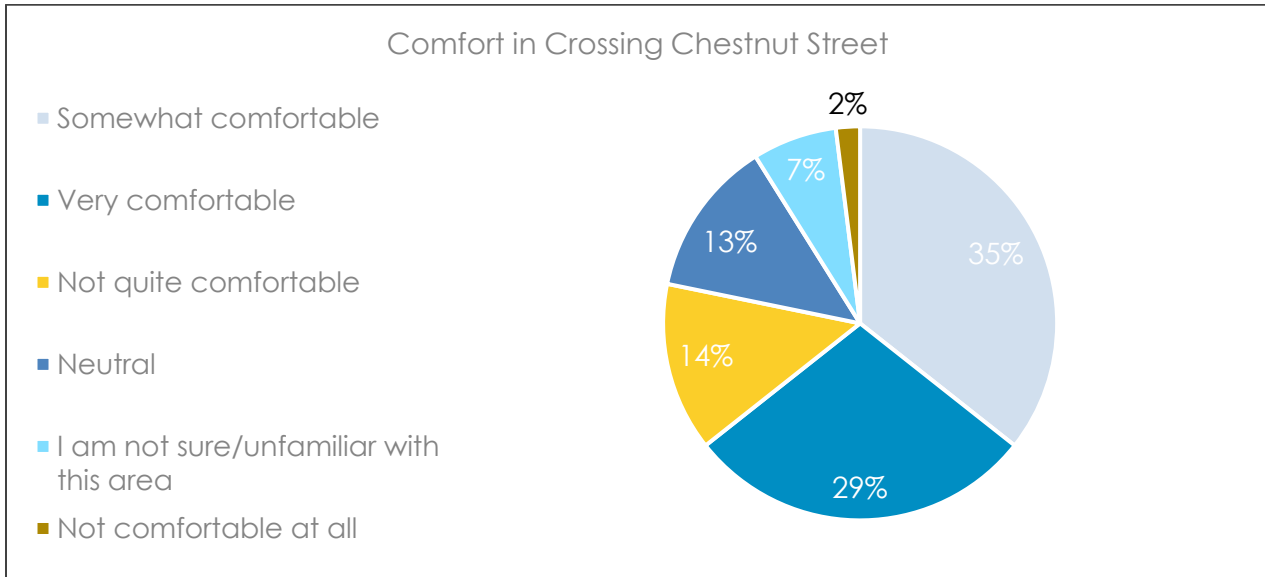


Figure 17. Comfort in crossing Chestnut St

MARKET STREET

A crossing on Market Street will be needed between 21st Street and Port City Java. This is a 35 mph posted speed limit and a vehicle passing about every 1.5 seconds on average during peak periods. Survey respondents were asked how comfortable they are crossing Market Street in the current conditions. Of the 333 people that responded, 60% said they are not comfortable at all; 26% are not quite comfortable (see Figure 18 for full responses).

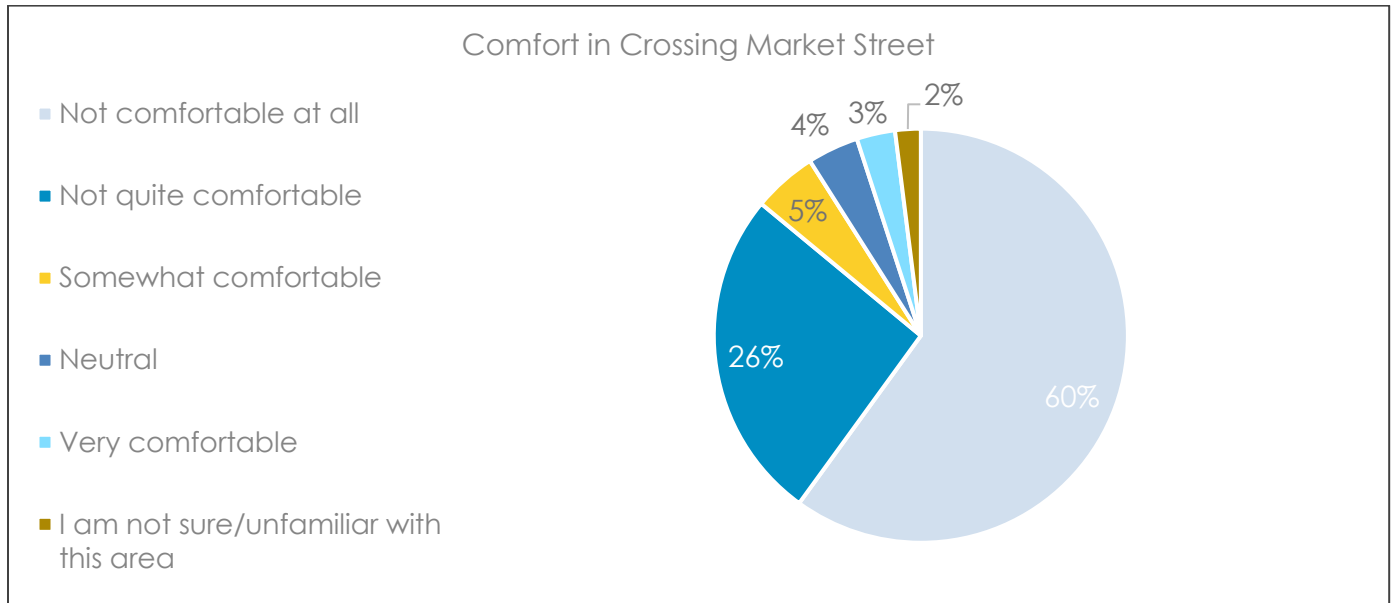


Figure 18. Comfort in crossing Market St

METTS AVENUE

A crossing on Metts Avenue will be needed between 22nd Street and Borden Avenue. This is a 25 mph posted speed limit and a vehicle passing about every 30 seconds on average during peak periods. Of the 332 people that responded, 48% said they are very comfortable; 27% are somewhat comfortable (see Figure 19 for full responses).

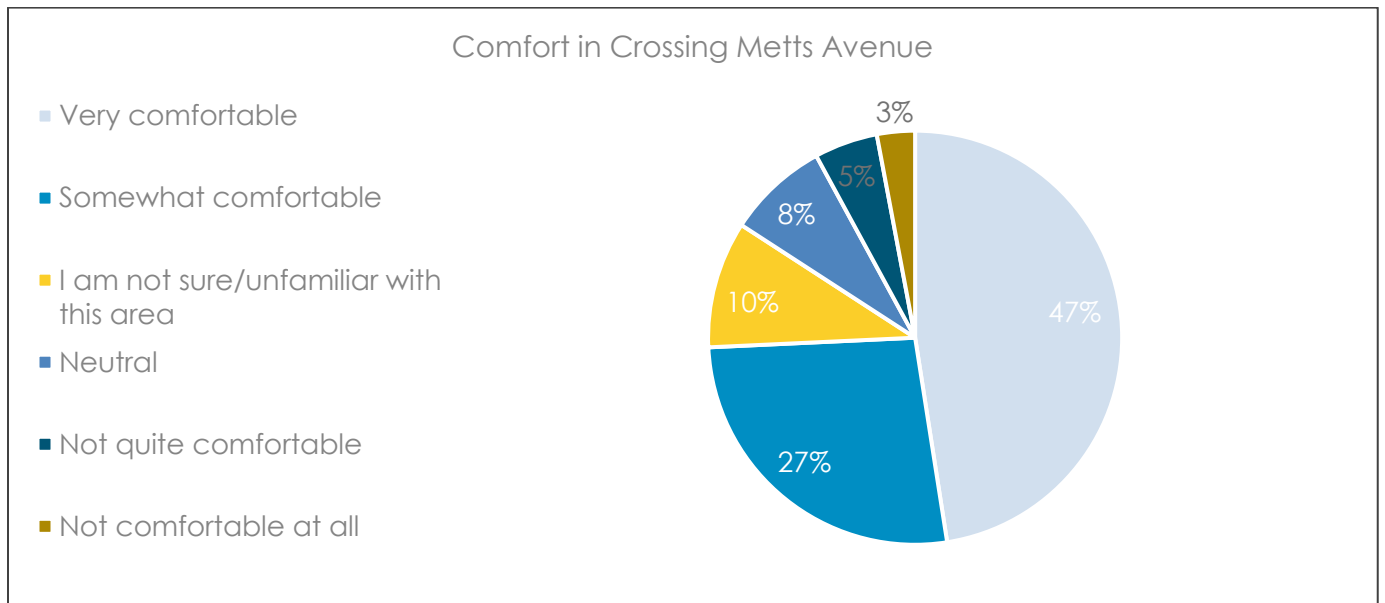


Figure 19. Comfort in crossing Metts Ave

IN-PERSON ENGAGEMENT

Pop-up style events were held at two locations in Round 2 of public engagement for the Wilmington Downtown Trail Phase 2 and Phase 3. Each event had the same materials and content. The two events were held at the following locations:

- Frankie’s Outdoor Market/Juneteenth Community Day at Portia Hines Park (6/15/2027) from 10 am – 1pm
- Nir Family YMCA (6/18/2024) 4pm- 6pm

People were provided with information about the survey and those that gave their email address received an email with a link to the survey and information to share with their neighbors. The pop-up events were used to collect feedback to complement survey feedback as well as part of equitable engagement efforts to have diverse representation in project feedback.

Frankie’s Outdoor Market/ Juneteenth Community Day at Portia Hines Park

Approximately 33 meaningful conversations were had. Key themes from the conversations emerged:

- Support and excitement for the project
- Questions on how the trail will connect to the Cross City Trail and network
- Feedback on Phase 1 environmental and sustainability considerations
- Support for connections to the Love Grove neighborhood
- Traffic calming needs in Love Grove and current speeding that could impact future trail users
- Information on possible Gibson Ave connection/ROW abandonment



Nir Family YMCA

Approximately 25 meaningful conversations were had. Key themes from the conversations emerged:

- General support for the project
- Concern about roadway crossings
- Emphasis on preserving in the environmental assets and cypress trees
- Suggestions of further alternatives on east side of creek



APPENDIX A

# of upvotes	Comments
43	This space is a wildlife corridor for SO MANY species. Please minimize impact on the environment of Mary Bridgers and Bullock park and to the iconic cypress trees that make this space a beautiful destination on its own. The section running parallel to Bellvue Cemetery is not simply a byway to an end, but a beautiful, mostly natural space that can support multiple species, something that is fleeting in Wilmington. The proposed route through the trees behind Screen Gems would be far more environmentally disruptive. This is a beloved part of Wilmington for everyone in the neighborhood and home to owls, coyotes, alligators, woodpeckers, finches, herons, turtles, pollinators, and many other important critters. The space is a gem as overdevelopment claims more and more of our natural places. Do not overdevelop this space. A light touch is essential.
27	Can a wide and raised crosswalk be used where the trail crosses Princess Place drive to establish the trail as primacy, and reduce the risk that someone will be hit and killed by a speeding motor vehicle here? Nice alignment. This is a great place making opportunity! A bridge over the creek connecting the trail to the PCJ, with seating would be an amazing place to handout while using the trail.
27	Safe crossing at Princess Place, too much traffic to cross without risks, especially with children, strollers, etc.
27	This is a critical undeveloped wetlands and wildlife habitat area. I remain concerned about the impact of a trail and increased foot traffic in this area on the integrity of the wetlands and wildlife. Please provide information regarding whether you have looked into this. Are you working with Cape Fear Riverwatch, The Nature Conservancy, NC Conservation Network, etc. on ways to lessen the impact on the wetlands and wildlife?? I sure hope so. If you are, please let us know. Otherwise, we assume that you are not, as this seems to be the local trend
27	I second all comments that express concern for assuring that minimizing wildlife and environmental impacts are taken into consideration. Also safe passage crossing Princess Place is a major concern. This could be a beautiful trail if handled carefully.
9	Please spare the cypress trees and natural spaces in Bullock and Wallace parks. It is one of the few natural spaces left in the city. My family has been going there for over a decade to just be in nature. If the trail must be built, keep it minimal and low impact. I also would push for route B for area 3 to avoid losing the cypress trees or meadow in Wallace Park.
8	I am concerned with the disruption to one of only large green areas left in this part of the city. I also do not see many people truly using this trail to justify the full cost (\$, resources and permanent disruption to nature). Plus, this area always floods so I can see constant \$ and repair work be required.
8	I am so devastated that so much greenspace is being mowed down in this town and I can't believe they are now going after what little we have left. Wallace park is our favorite breath of fresh air from the grime of the city, and now they want to cut through the playground and cypress trees? That's what option A would be doing. Can we just leave Wallace park alone?? Leave it untouched please!
8	In Focus Area 3 (Wallace Park), I strongly favor Alignment B over Alignment A. Alignment B (east bank of Burnt Mill Creek at Wallace Park) would accommodate trail implantation with no need for tree removal. Generally, Alignment B seems better suited to accommodate a multi-use trail with minimum disruption to existing uses of Wallace Park abutting the creek's western bank. Alignment A would unnecessarily divide usable open field space, commonly used and appreciated by residents of the Carolina Place neighborhood and occasionally used by area schools and other organizations for athletic / social events.
7	Safety (for people and wildlife) should be the number one priority. Please plan for wildlife corridors when appropriate and consider adding speed bumps before every crosswalk. Thanks!!!
7	Minimal tree / vegetative clearing is preferred to maintain habitat, aesthetic continuity, and shade for the recreating public. If necessary, I suggest adjusting Focus Area 2 alignment to gently weave around existing cypress trees in lieu of tree removal.
6	Please make sure lighting is a top priority.
6	These are incredibly busy streets. I'm concerned about traffic and pedestrian safety. What are impacts on wildlife already so disturbed by Wilmington's rapid growth?

6	I think this is fine unless the city chooses not to make a safe crossing for cyclists/pedestrians across Princess and Market. There needs to be a pedestrian crosswalk with a RED LIGHT not a flashing yellow or just paint. No one here ever stops for that.
6	Please keep the trees where they are!
5	This will impact such a wide range of wildlife and I don't believe it will outweigh the benefits. The land currently behind 21st street along the creek is already poorly maintained and with more traffic we will see more pollution to our wildlife. Additionally many houses back up to this area and privacy is now a concern. Those that already live here use this space and I don't see the benefit to cost ration for "improving" it without effecting other areas.
5	Please consider building the path in a way to save the beautiful cypress trees in the parks!
5	Please leave the wetlands and cypress trees alone! The city is eliminating green spaces at an alarming rate, ruining what used to be the best parts of this town.
5	Please minimize impact to existing trees and natural areas! I think it's obvious from the comments this is a top priority for our community. The trail will be great, but a baking hot trail with no shade won't be used as much and will ruin some of best parts of that area.
5	Please consider all or as much permeable surface as possible. A packed fine gravel and/or crushed clamshell and similar materials preferred for environmental issues. I rode a raised rail to trail near Farmville, Virginia (High Bridge State Park) recently that had such a surface and it was excellent for walking and biking.
4	Wheelchair accessibility should be considered along the pathways
4	Crossing many downtown Wilmington intersections is dangerous for pedestrians. So I hope that the intersections in this proposal, especially the Market Street crossing, will be designed with pedestrian safety as the highest priority.
4	We need greater connectivity within Wilmington so this is a great opportunity.
4	If the proposal is to pave this strip of land (indicated by the green dotted line) i would question the materials choice for this project as this area floods FREQUENTLY in heavy rains. Permeability will be crucial to the sustainability of the walk way and the surrounding ecology. Additionally this project cuts into the understory of some very old, very large trees. If the project sought to harm any of the trees in any way i would be DEEPLY out of favor with the implementation of this project and would so all I could to advocate against it and block this project. Not only are the trees present crucial to the stability of these shores, but more hydrophilic trees ought to be planted in this greenway.
4	The problem with this survey is that there isn't a "don't do it option". I've lived in this town my whole life (as did my dad, grandfather, great grandfather etc). I grew up on that creek. I've spent countless hours watching wildlife, throwing rocks from the trestle, canoeing etc, and not one time has it occurred to me that what the creek is missing is a whole bunch of pavement. This is a crazy idea! Are we trying to make this city nicer, and for whom. Maybe we should think about the animals that will be run out of their homes. Maybe we should think of the citizens who will be losing a lovely and serene part of their rapidly changing town. I would suggest that if people in this town want to enjoy outdoor space so much, then let them try it as it is before changing into another paved area. This project is aimed at serving people who haven't even been to the creek, people who use the term "train bridge", people who want hot concrete instead of cool grass under their feet. Come on people, do the right thing! I'll bet you won't!
4	None of these options have zero impact on wildlife/wetlands therefore I do not agree with any of the options presented. Please consider working closely with area conservation groups, specifically Cape Fear River Watch, as they understand and protect the fragile and diverse ecosystems in our area. The ever shrinking green space in and around the proposed areas should be avoided. Walk along the waterways and you'll see, even with just grass cut walking pathways there are huge amounts of litter being thrown into the creek. Consider spending money treating our storm water runoff. (No, the water that runs down the street and into the storm drains is not filtered or treated before it hits the creeks/watershed. Only a couple of litter catchments are installed around Wilmington. Most all storm drains do not have one. Spend money there first)
4	The idea of cutting down yet more trees and paving over a significant swath of existing creekside green space astonishes me. How would that 'enhance environmental stewardship and preserve natural assets?' -- which is one of the stated goals of this project. Instead, a minor upgrade and regular maintenance of the existing dirt and grass walkway would make the space alongside Burnt Mill Creek perfectly suited for residents and visitors to enjoy. Putting a 10' wide asphalt 'trail' in the middle of this green space would be devastating to flora and fauna, as others have pointed out. Moreover, the crossing solutions offered are totally inadequate, most importantly at Princess Place. Cars traveling east come around a nearly blind curve just a few dozen yards before reaching the creek bridge. Even those drivers

	observing the speed limit (which many ignore) would have little time to stop safely even with a flashing light. Others, as experience shows, would ignore it. How would this 'support public health and safety?' -- another stated goal of this project. Safe crossings at Princess Place and also at Market St. would require the installation of pedestrian bridges -- which, for reasons not at all clear, are not included as one of the options in this proposal.
4	This creek path extending from Shirley to Princess is one of the few natural wildlife habitats left in our downtown area. As a resident who lives directly on the creek, I can tell you that the people who value this green space have a better understanding of the negative impacts a development like this would cause. On Our daily morning and evening walks we see foxes, rabbits, alligators, turtles, and countless waterbirds. This wildlife is the reason we bought this downtown property. We are already forced to tolerate the low flying military jets that have been given unreasonable access to our airport and the surrounding residential areas. Do we need to destroy what little bit of natural habitat is left? For the folks requesting better lighting and a "safer" space, is the lack of lighting really what's preventing you from enjoying this beautiful creek? I highly doubt that anyone from the midtown to WB area is chomping at the bit to visit this beautiful little stretch of green space or waiting for security lighting to spend countless hours bird watching. Wilmington, stop trying to sanitize this town by laying down asphalt and security lighting. If it ain't broke, don't fix it. The people who live here LOVE it as is.
3	DISAGREE. Minimal disruption to the natural areas this trail is meant to showcase is top priority. Lighting would require additional infrastructure and associated maintenance. In many areas, Phases 2 and 3 will not be "new" trails at all; rather, proposed trail construction would formalize corridors already safely used by the recreating public during daylight hours. Additionally, portions of Phases 2 and 3 abut private property. Installation of artificial lighting would be disruptive to homeowners and their quality of life during evening hours.
3	Lighting and safe passage across Princess Place is a must. Thi
3	I grew up off Shirley and that portion of Burnt Mill Creek has massive amounts of trash that piles up by the sewer lines and rail road track bridge. I highly suggest fixing that area so the trash doesn't build up and become an eye sore. Also the sewer lines can be crossed over and they lead into the back of Oakdale. Crossed those many times on foot, might be a liability issue if it becomes a park. Also highly recommend reopening the old trail access along 21st street. After the house on stilts was built next to it. The homeowner made it apart of his yard and fenced that portion in. I'm not sure that's even a part of that houses property line. I just remember the owner putting in a fence that blocked off that access. I'm not sure they obtained permission to do so. It was done years ago. Prior to that house being built there was a vehicle access to the creek midway down, that the city used to maintain to gain access to the trail. You'll see it on the left after coming down N 21st heading towards Shirley. If that path were to reopen people could walk along the trail and it would also could connect people to Kennedy park from the access point at either princess place or Shirley. Highly suggest you reopen that path so people from that neighborhood can access the trail and people from the trail can access the park. Kennedy Park should be connected to the trail somehow. Its right there, and would be a wonderful bonus stop should folks with families and children utilize the trail.
3	As a homeowner that backs up to, enjoys this wildlife area wetland, and frequently walks this portion of potential trail. I feel that the current route proposed North of Princess place will add foot traffic and some potential environmental impact and this portion of the trail is already moderately trafficked, there is already an access road that is mowed/maintained every 21 days, and the environmental impacts of that are being felt. The current state of the water way on any given day is such that, trash pollution is collecting in the areas where path is proposed. I feel that the current state of burnt mill creek would actually environmentally improve, due to the needed management and the attention that would come with an appropriately planned walking path. Thus, potentially negating the minor impacts foot traffic and concrete or asphalt. All that said, I think that a path would positively impact the community connectiveness and well as have minimal or even a natural impact on the environment with more potential education and awareness coming from the path.
3	I am located in this area and there are so many birds and wildlife, please minimize the impact to the environment. What about the acres they are tearing down in lovegrove for the RV park?? No one asked us about that
3	Please make the trail have bridges over busy intersections to protect pedestrians and make it more family friendly
3	I would like to preserve as many trees as possible in a city that has lost so many of its beautiful trees already.
3	Minimize environmental impact and try to save as many trees as possible
3	Try and be as low impact on the trees and natural spaces as possible.

3	Really hoping the parks naturally beauty or ecosystem is not compromised with this. If this has to happen I also hope something natural like gravel will be used instead of concrete or pavement. I feel like this will only bring in more traffic and scare away animals. I walk the path everyday and love the natural grass. What's wrong with keeping it how it is?
2	Please look at the congestion and collisions happening on Atlanta's beltline and strongly consider separate "bikes/wheels" lane and pedestrian lane.
2	This would be incredible for the Princess Place neighborhood!
2	Safe crossing of Princess Place and Market St
2	Will there be any cameras or a way to monitor safety? Will this be a safe trail for a single female to ride/run/walk?
2	The connectivity to Love Grove Bridge and down the east side of the river would provide an additional mile of trail and a move cohesive trail experience. It would be highly preferred as a way to maintain the preservation and habitat appreciation in along that corridor.
2	Raised walkway over the street crossing?
2	Great to have a raised walkway over the street crossing.
2	It would be great if a footbridge were possible across Princess Place. But improved signaling would be great here --
2	A bridge over road to avoid traffic would be ideal. Morning and afternoon traffic is heavy at this juncture.
2	Raised crosswalk over busy intersections that allow for pedestrian crossing while not disrupting traffic. Consideration could also be considered to the height of semi-trucks that may need to pass. If this kind of option is considered accessibility will be a primary action to take into account to allow for proper lighting and wheel chair access.
2	less environmental impact and safer crossing is the way to go
2	The odds are good that Alignment B will be the favored route, meaning the path will be on the east side of the creek. We can't complain about traffic and carbon emissions if we are not willing to accommodate the slivers of land needed to encourage more pedestrians and cyclists. We should be heartened that the city is putting a lot of energy into community outreach to obtain our feedback. This additional path will potentially be a great and easy way to cycle downtown without worrying about vehicles.
2	Are both A and B options not feasible for focus area 1? Not sure why it has to be one or the other.
2	There is already too much development and clearing of green space in this town. We have tons of dead animals on the streets that are fleeing development. We additionally have huge shortfalls in our budget. I am opposed to these projects.
2	Please dont cut dont the cypress trees!
2	Leave the cypress trees alone.
2	Consider using the Cape Fear Rugby properties on west side of creek as an option for the path.
2	I hope we can take note how there are a lot of greenways in the Raleigh triangle area that connect parks and are a good way to get around. As well as healthy outlet for the area
2	Don't put it through wallace park. Put it where there isn't high level of children playing, people walking dogs (high level of pedestrians) and flooding.
2	I'd like to echo the need to keep the trail as natural as possible to minimize the environmental impact for the numerous species who call this land home and have nowhere else to go. It's a truly magical spot and should stay that way.
2	Agreed that safely crossing Princess Place Dr. is an issue here. Could we at least get a crosswalk with flashing yellowlights like we have on Market cross 3rd? (southside of downtown)
2	Please ensure the area is well lit — it can get very dark in that area, especially around the parks. Also, Princess Place gets quite backed up with cars in that area. Please make the crosswalk with either stop lights when a button is pushed or flashing yield signs — those on the trail should have right of way, or else it'd be challenging to find a safe time to cross.
2	I am shocked by the next question, "please share the various people you envision using this trail." Disabled people, seniors, children, and our most vulnerable populations *must* be prioritized when creating this trail. If people can't "envision" vulnerable folks using the trail, that's *more* reason to create it with them in mind — the trail will be better when more people are able to use it, and we have a moral imperative to make it so.

2	I don't prefer any of these options as they do not appear to have 0 impact on the environment and wildlife. The trail is already useable and, if anything could be improved, it would just be more frequent management to ensure continued ease of navigation. There is absolutely no reason to spend more money, remove more trees, and pave more surfaces. Also, as someone mentioned above, I see no indication that the city is working with Cape Fear River Watch or any other trusted local authority and that definitely says a lot. This is a critical wetland and habitat and the city appears intent on ruining it and every similar area in our town.
2	I've read many of the comments and agree about environmental sensitivity and safe traffic crossing. Regarding the crossing at Market; you might as well put a true traffic light (car sensing?) at the Port City Java plaza.
2	Same as many here. I'm concerned about wildlife impact.
2	This survey does not allow for a third option of voting no for any trail development, therefore this is inherently skewed and will not allow feedback from the public who are against this. Please consider revising your survey to allow for all opinions to be shared. Clearly many have already responded they are not a proponent for developing a trail along the creek, and neither am I. The city historically makes development decisions that are turning Wilmington into a concrete jungle. Soon this entire town will have no shade, green space, or wildness, and will look like northern Market St/Ogden in no time.
2	I am in favor of nether A nor B but leaving this area undeveloped. Stop disturbing the little bits of natural landscape and wildlife habitat left in NHC. Some of us still enjoy nature and support efforts to preserve it.
2	Perhaps a light at Market and S. 21st Street allowing easy and safe crossing of Market.
2	It appears that this is the only block where you can leave general comments in this Phase 2 survey. While I am generally very excited about the project I have a few comments... I am shocked by the question that includes "please share the various people you envision using this trail with"... In response I say please make this trail ADA compliant and accessible for ALL Wilmington residents, ESPECIALLY our most vulnerable neighbors (if that is not me today, it will be me tomorrow). That is who I want to share this trail with. Also, please be aware that there is some discussion at the city level happening regarding Gibson Ave. and opening up S. 23rd St. to allow more access (and therefore more traffic) which may affect this study.
2	We can't afford to lose more wildlife/marsh/wetlands. Just because there are more people moving here doesn't mean we have to develop every inch of the city. We will eventually destroy the natural charm that brings people here in the first place. Especially if they plan to develop on the other side of the river by the ship. There are living things that are detrimental in all those areas.
2	Will require strong, reliable means of halting Market St. car traffic where Bulluck Park meets Wallace Park to allow trail users to cross safely.
2	Habitat, wildlife, permeability issues, runoff, etc. are true, legitimate concerns here. Just as important: pay heed to those who live along this corridor, have generational roots in this region, or simply embrace the importance of a delicate ecosystem. I'm a short-timer here (only 30yrs+). Allow a balance of local wisdom, as green a footprint as possible, and a careful, wary nod to progress as the order of the day.
1	Agree regarding safe passage but DISAGREE regarding lighting. Minimal disruption to the natural areas this trail is meant to showcase is top priority. Lighting would require additional infrastructure and associated maintenance. In many areas, Phases 2 and 3 will not be "new" trails at all; rather, proposed trail construction would formalize corridors already safely used by the recreating public during daylight hours. Additionally, portions of Phases 2 and 3 abut private property. Installation of artificial lighting would be disruptive to homeowners and their quality of life during evening hours.
1	Please include bmx bike concrete ramp features along the way. Include transitions and pump track features so the trails are usable for all wheels down action sports.
1	Agree
1	This looks great.
1	Looks like a very realistic approach
1	I like it!
1	Wildlife will adjust to pedestrian traffic. It's not like the trail will be used by hunters. A gravel bike trail works too - it doesn't have to be asphalt to provide walking and biking access.
1	Please minimize the effects on wildlife and wetlands- if you have to do it, maybe a raised boardwalk with no bikes allowed

1	Do Both! Two great options depending on how much time and energy people have. Right now, I would choose the shorter option but any normal day I would choose the longer, more scenic option. They are both great options so try a better way of thinking and choose both :)
1	Would love to see all of this completed to have a meaningful length of trail for family, kids, seniors, etc to safely ride, walk and run. Long overdue, potentially wonderful asset for Wilmington.
1	Hey Charlie You mean the East side of the Creek. While that side looks environmental its history is that the creek spoilage was piled up on the East side of the Burnt Mill Creek and the resulting green comes from no management of that spoilage deposit along the creek. I am opposed to burdening the West Bank with its Cypress Trees and tendency to flood with a path as shown on the only option presented in this plan.
1	I agree. It's been fine the way it is (referring to Wallace and Bulluck parks). The undisturbed nature is what is appealing. Not a 10 ft wide thoroughfare.
1	The pedestrian light on Market St. Is a dangerous idea and I feel it will be have unintended consequences.
1	I like it
1	Please do not restrict the use of e-bikes. We seniors depend on a little help. My observation is speed limits are usually exceeded by street racing bikes, not e-bikes.
1	I think these trails are great for exercising, please include benches for seniors and a rain shelter every mile or two.
1	I feel it is important to provide access to nature for the community - however not at the expense of destroying natural spaces. If Alignment A is used in focus area 1 it is very important that disruption of existing trees and other habitat be very minimal. For focus area 2, I feel it is very important that the Princess Place crossing have safety features to protect pedestrians.
1	I do not understand what this trail is aiming at accomplishing- people already use these exact areas for walking and fishing. There are sidewalks and other paved access to either end of where this trail ends... this project feels like it would unjustifiable in its environmental impact; this trail does not connect parts of town that are not already connected by foot to anything that is specifically resourcing (port city java and those businesses are, again, already accessible by paved walk way). These proposed trails are already recreational areas valued as they currently exist! People use these areas as nice (and rare) open areas to walk dogs, this area is also currently aimed at being a little wetland haven and natural corridor for wildlife. Any construction for a path would disturb that.
1	"Given the constraints within Focus Area 2, Alignment A represents the most feasible and effective alignment at this time"????? What?? Explain please? When the majority 73% opt for Alignment B...
1	Please consider existing and future flooding along the alignment so that the trail would not inhibit or would align with future flood mitigation projects. Budget for alot of native trees!
1	No one stops for pedestrians at the already established crosswalk across market street. Speed bumps, raised platform or an actual traffic signal there will reduce car-person collisions.
1	While I love the idea y'all know my concerns about it going over the bridge and down thru Love Grove, we have other issues that need to be addressed first. Most of my concerns are wetlands and the habitats near where this would go, and the amount of change that would need to be made to make it work.
0	Pedestrian safety at Princess Place Drive will be paramount! Especially since Princess's Place Drive doesn't have any stop signs between 17th and 23rd. The crossing may need to be elevated and HAWK crossing installed. Traffic travels 35-45mph along this route regularly. Please preserve as many trees as possible. Both Mary Bridges and Wallace Park are special because of the canopy cover. We invite more trees to be planted along the trail route. If possible make the trail cross over the existing speed bump on Chestnut Street. This will make the crosswalk elevated, improve pedestrian safety, and utilize existing traffic control systems/signage, etc. Thank you for the opportunity to provide feedback and for the entire team effort to create this trail in our community.
0	N/A
0	Agree, nice

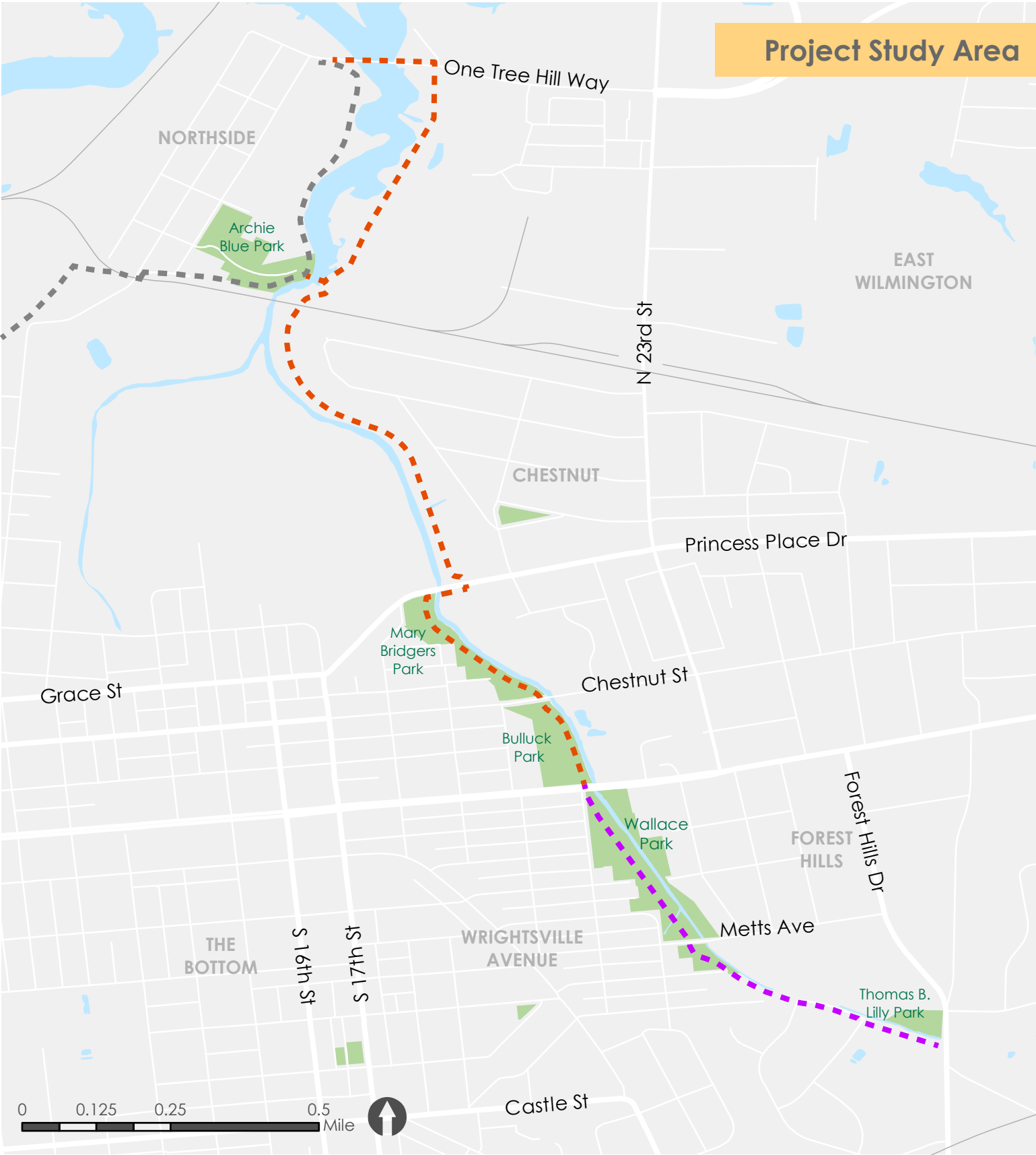
0	These additions will bring amazing community benefits. Thank you!
0	This makes sense to keep it along burnt mill creek. But when I ride my bike, I go east thru the low traffic neighborhood streets
0	I think added this and more trails and sidewalks will be a great benefit for the people of Wilmington. Carolina Beach Rd really needs sidewalks.
0	consideration should be given to a "blue trail" on Burnt Mill Creek starting at Thomas B. Lilly Park.
0	Environment
0	I would agree to minimize impact on wildlife. Perhaps a greenway for our road-side friends could be built as well.
0	The floodway concerns are legit; I would like to learn more about the impacts of storms on paths near the watershed areas...that said, we already have paths near FH School that would suffer same impacts, and I don't remember if those paths required replacement after hurricanes. 😞
0	Connectivity is a priority for all.
0	RV PARK?? Where did you hear about this? I live in the love grove neighborhood and I've never heard of this?? Can you please link out a resource or at least let me know where they plan to even put an RV park?
0	https://www.wect.com/2023/08/16/city-council-approves-first-ever-rv-campground-off-one-tree-hill-way/
0	Lighting for safe crossing on Princess, pervious surface impact on already wet area, tree conservation, wildlife conservation, privacy for residents, degree of long term maintenance, are all concerns.
0	A
0	Mulched trail on top of a heavy duty (permeable) landscaping fabric bordered by old railroad ties would be better than a paved trail and less costly. The city is reclaiming/repurposing old rail tracks/ROW. This would provide an option to reuse railroad ties instead of having to use more costly disposal options. Also, a mulched trail would complement the natural setting better.
0	Save money
0	Please consider low impact measures for trees, natural spaces, and wildlife habitats as possible
0	none
0	Please minimize destroying or changing this important nature habitat. Wilmington is slowly losing it's green space, which is a tremendous disappointment.
0	Please leave this area alone. It is just right for those of us that want a natural environment to escape the city from. If you want to help leave it alone and save the wildlife habitat there.
0	I do not choose either option. The S
0	Please look for an option that has minimal environmental impact. Walking and biking options are important for access and reducing reliance on vehicles but they should not be built at the expense of wetlands.
0	The trail Focus Area 2, alignment A is a false choice. The path alignment on the west bank of Burnt Mill Creek thru the Mary Bridgers Park does not consider that the east bank is a dredging spoil deposit and is populated with few if any cypress trees unlike the west bank of the Burnt Mill Creek. The planners have failed to identify the Rugby Field which is non-profit use for a great extent of the stretch from Princess Place Drive to Chestnut Street. Crossing Chestnut Street the east bank already has right of way that goes over the Snipes Elementary School Property (NHPS) for a great part of the east bank opposite Bullock Park where the majority of the majestic cypress trees stand. The remainder of the east bank crosses over the shopping center behind west of Port City Java and during the 2018 Florence Hurricane 500 year flood the shopping center flooded to a great extent indicating that the owner of the center should have no objection to the trail crossing his property and the river bank elevated rebuilt to keep the flood water off his property. There could be some FEMA funds to pay this cost. Newly cleared easement for the sanitary sewage line begins to show the feasibility of using the east bank without disturbing commercial buildings in the flood plane along Princess Place Drive. I object to the failure to segment segments of Focus Area 2 so that comments for the three flood plain parks Mary Bridgers Park Bullock Park and Wallace Park can be considered separately. There are separate populations that use those parks. Charles Blanton submitted a comment to which I have replied about the non-profit recreational site used for Rugby on many weekends, accommodating the location of the trail on the east bank of Burnt Mill Creek opposite Mary Bridgers Park.
0	I second the concerns already voiced pertaining to traffic safety and environmental impacts. An additional environmental concern is whether lighting would be included. Adding lighting along the trail would have a disastrous

	affect on the Bard owls, and other nocturnal creatures living in this area. When lighting was added to Wallace park, the Bard owls left. Soon there will be no downtown options for them.
0	For focus area 1, Alignment B has less negative impact, costs less, and the benefit is basically the same. Why is Alignment A even being considered? Please read Bri's comment below.
0	Alignment B makes the trail much shorter, and the view isn't as good as Alignment A. Additionally, alignment B is much closer to the wetlands than Alignment A is. Therefore making Alignment A more environmentally friendly than Alignment B.
0	I believe the trail crossing the railroad brings too many complications. I think the trail should be placed on the southern side of the RRoW with a bridge across the Creek. Also, the Atkinson Building offers many opportunities to the City--senior center, environmental education, etc.
0	Worthwhile investment.
0	That should be beautiful- care will need to be taken to minimize environmental impact and trash build-up along the creek.
0	This trail is much needed.
0	Keep up the hard work
0	So happy to see more off road trails being developed!!
0	Choose the one that gets built fastest
0	<p>Re: focus area 1. Alignment A is the only option that provides a "loop" effect for the walker. If B is the most cost effective option, then will phase 1 of this with the path going to Shirley Rd be re-evaluated? Why incur an expense to extend the path if there is nothing to connect it to? IMO, we continue the verbalized "promise" of these paths when they are continuous and connected, hence my strong favor for alignment A.</p> <p>Re: focus area 2. The continued usage of alignment A language is confusing. As someone that holds multiple pieces of paper to my name, I re-read the ask multiple times. A cursory review of comments solidly my thoughts. If the intent is to get citizen feedback, I strongly suggest getting a focus group to provide feedback on the wording of the request. That said - I urgently agree with the feedback regarding safety of crossing. I ask the planners to walk the "greenway" between empire park, heading to college road along Park Ave. Particularly the bridge that is along Park Ave. The wooden design of that bridge is visually appealing and natural, but is already very bumpy for strollers and not conducive for skateboards or low scooters. Bridges should be designed for their durability and longevity in these phases, as well as the multiple types of wheels (eg wheelchairs) that will use them. Also, listen closely when on that greenway. Because of all of the nearby construction it will be hard to hear anything. But even on days they're not working, you can't hear much wildlife. Strong support for the comments requesting partnership with appropriate agencies to ensure minimal disruption to wildlife.</p>
0	In regards to the focus area 1 trail - Alignment A, I think this trail should be built. As I live in the neighborhood where the Love Grove memorial bridge is located. It is a beautiful view and would give members in our neighborhood the opportunity to have a close place to walk with their families or run/jog. We currently have people who park their vehicles on the bridge and fish. I would like if this were for walking only, as the people who fish leave hooks, old bait, trash, and other dangerous objects on the bridge. If this became a trail, I'm positive the city of Wilmington would enforce that nobody shall fish nor park their vehicles on the bridge. Please really consider making this trail. Thanks.
0	I am not familiar with the wetland concerns, but overall, I like the plan of the project with alignment B.
0	Looks good
0	I support the development of trails, but like many others, I am concerned about the impact of the trail on wildlife, their habitat and native trees. Every effort should be made to protect and enhance these wildlife habitats. Considering the trail is in a floodplain, I hope the material used for trail construction will be a natural product as in pine straw, gravel, wood. Also, that funds and staff will be allocated to maintain the trail.
0	A path along the East Bank of Burnt Miller Creek would appear to be a better option but unfortunately it is not listed as an option. Definitely would not want to see the West Bank of Burnt Mill Creek through Bulluck Park disrupted and/or denuded of the native Cypress trees.
0	Please keep Wallace park untouched and if you must, put the trail on the other side of the river (Alignment B on focus area 3).
0	There needs to be a dedicated crosswalk with a light to allow you to be able to safely cross Market Street.

0	I second Bri's comments: This space is a wildlife corridor for SO MANY species. Please minimize impact on the environment of Mary Bridgers and Bullock park and to the iconic cypress trees that make this space a beautiful destination on its own. The section running parallel to Bellvue Cemetery is not simply a byway to an end, but a beautiful, mostly natural space that can support multiple species, something that is fleeting in Wilmington. The proposed route through the trees behind Screen Gems would be far more environmentally disruptive. This is a beloved part of Wilmington for everyone in the neighborhood and home to owls, coyotes, alligators, woodpeckers, finches, herons, turtles, pollinators, and many other important critters. The space is a gem as overdevelopment claims more and more of our natural places. Do not overdevelop this space. A light touch is essential.
0	Why doesn't the city demand bike/pedestrian paths be a part of every new development project? Wilmington is small and flat enough that it would be feasible to ride your bike everywhere if only there were sidewalks/paths. Don't make the mistake of so many other cities who have experienced rapid growth -- do the right thing NOW!
0	I hope this will present an opportunity for planting lots of native plants and turning at least part of the big "lawn" into a meadow with wildflowers to feed pollinators and birds. Please do not cut down the native plants growing along the creek. It may look messy to some it is a diverse habitat for many creatures!
0	I think this needs to be done with as little environmental impact as possible, the overdevelopment here is disgustingly out of control, and this could end up another cog in that wheel. That area is so beautiful and natural , and I worry about how the parks are going to change with this. I'm a cyclist, and it would be nice to be able to get from market to the other side of princess place safely, but dang y'all know it's gonna be nothing but e-bikes ruining the terrain and causing accidents if you're not careful.

APPENDIX B: EXISTING CONDITIONS MAPS

Project Study Area



- Phase 1 (in design)
- Proposed Phase 2
- Proposed Phase 3
- Railroad
- Parks and Greenspace
- Water

Wilmington Downtown Trail Feasibility Study

Population Density



Phase 1 (in design)

Proposed Phase 2

Proposed Phase 3

Railroad

Parks and Greenspace

Water

People per Square Mile

0 - 1,000

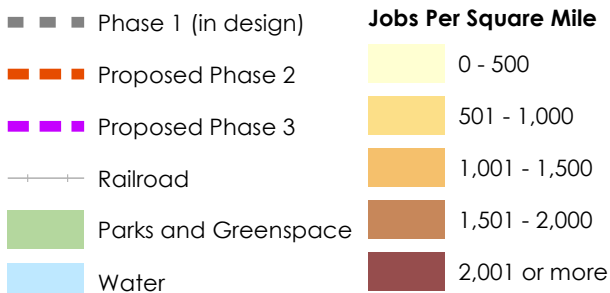
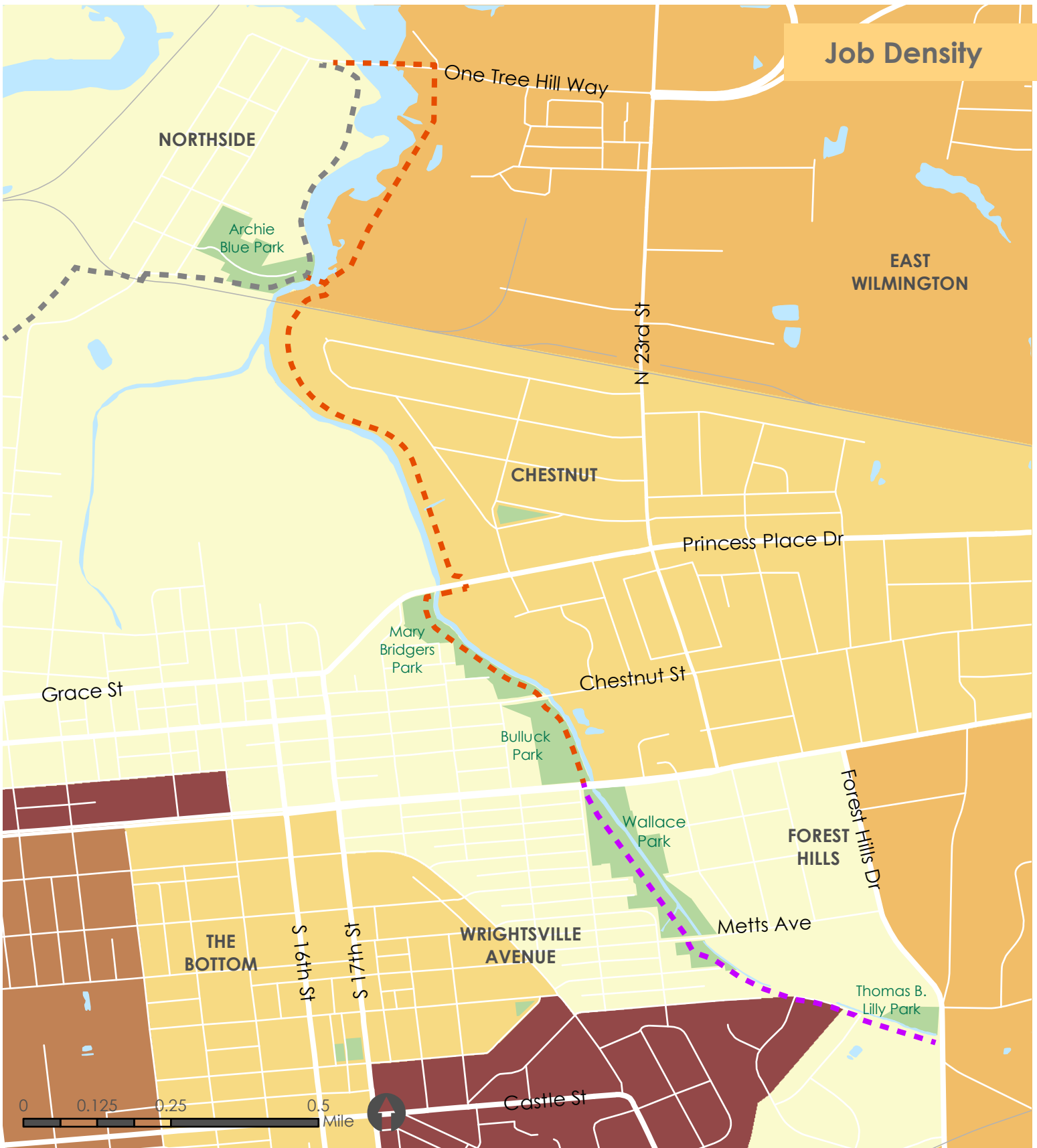
1,001 - 5,000

5,001 or more

Wilmington Downtown Trail Feasibility Study

Data Source: American Community Survey 5 Year Survey (2017-2021)

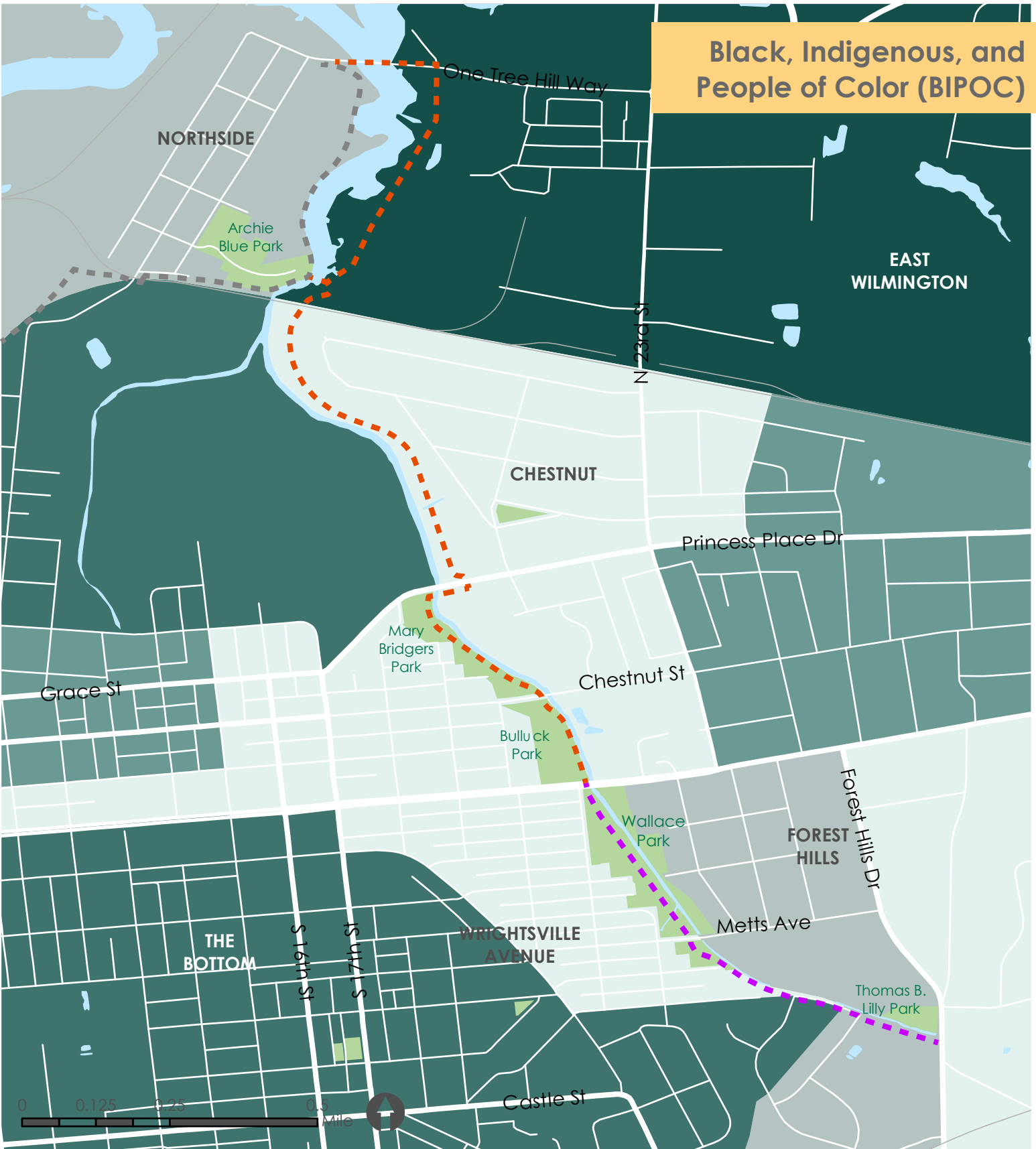
Job Density



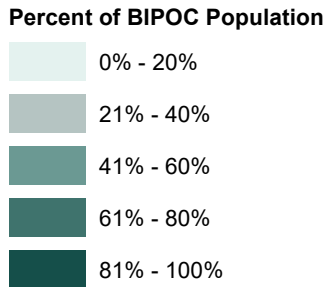
Wilmington Downtown Trail Feasibility Study

Data Source: US Census Longitudinal Employer-Household Dynamics

Black, Indigenous, and People of Color (BIPOC)



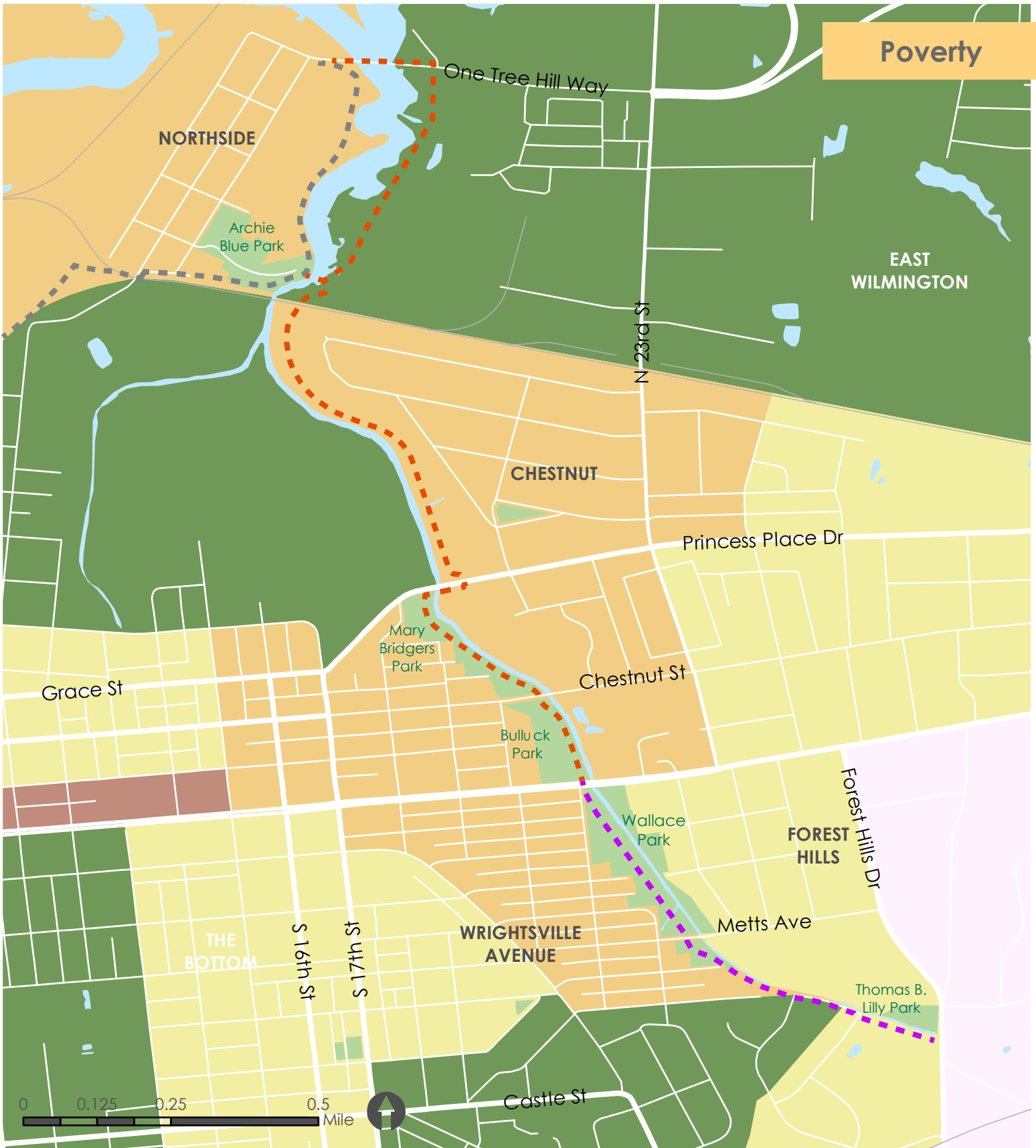
- Phase 1 (in design)
- Proposed Phase 2
- Proposed Phase 3
- Railroad
- Parks and Greenspace
- Water



Wilmington Downtown Trail Feasibility Study

Data Source: NCDOT Road Characteristics

Poverty



Phase 1 (in design)

Proposed Phase 2

Proposed Phase 3

Railroad

Parks and Greenspace

Water

Percent of Population in Poverty

0% - 5%

6% - 15%

16% - 25%

26% - 50%

51% - 75%

Wilmington Downtown Trail Feasibility Study

Data Source: NCDOT Transportation Disadvantaged Index

Zero Car Households



■ ■ ■ Phase 1 (in design)

— — — Proposed Phase 2

— — — Proposed Phase 3

—+— Railroad

■ Parks and Greenspace

■ Water

Percent of Zero Car Households

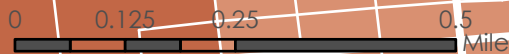
■ 0% - 5%

■ 6% - 15%

■ 16% - 25%

■ 26% - 35%

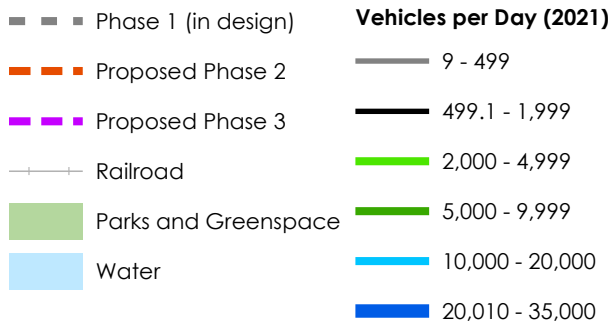
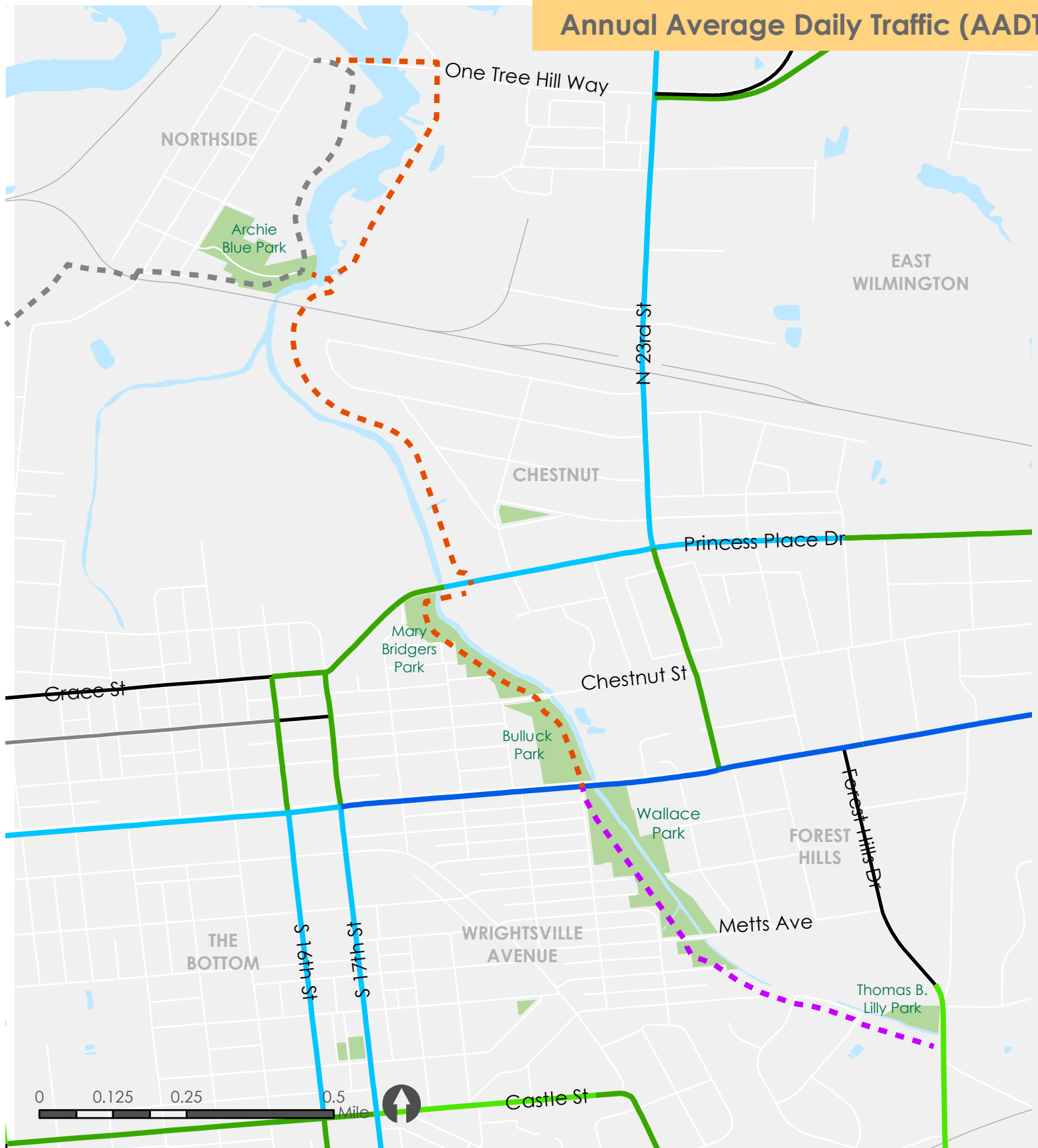
■ 36% - 45%



Wilmington Downtown Trail Feasibility Study

Data Source: NCDOT Transportation Disadvantaged Index

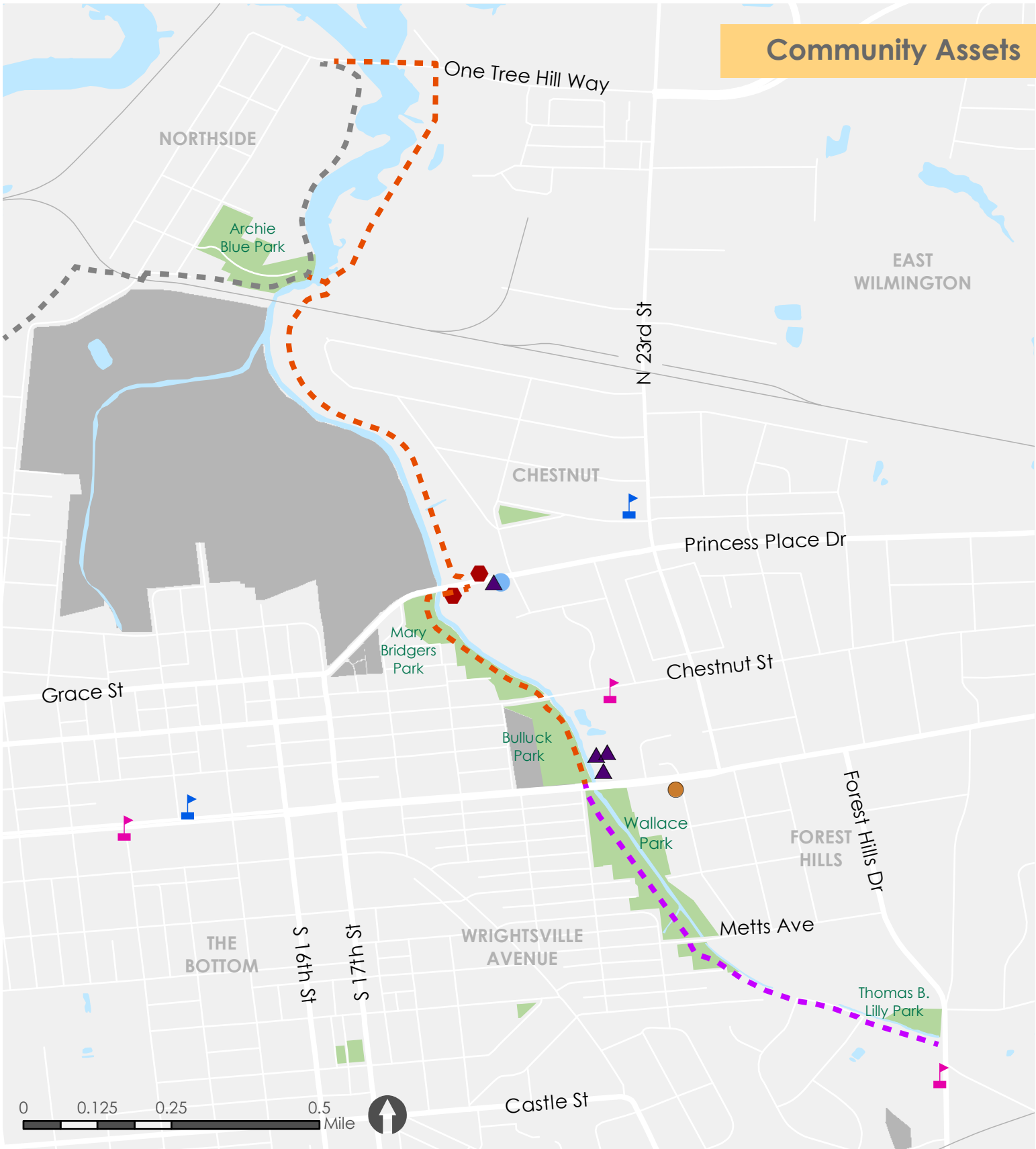
Annual Average Daily Traffic (AADT)



Wilmington Downtown Trail Feasibility Study

Data Source: NCDOT Road Characteristics

Community Assets

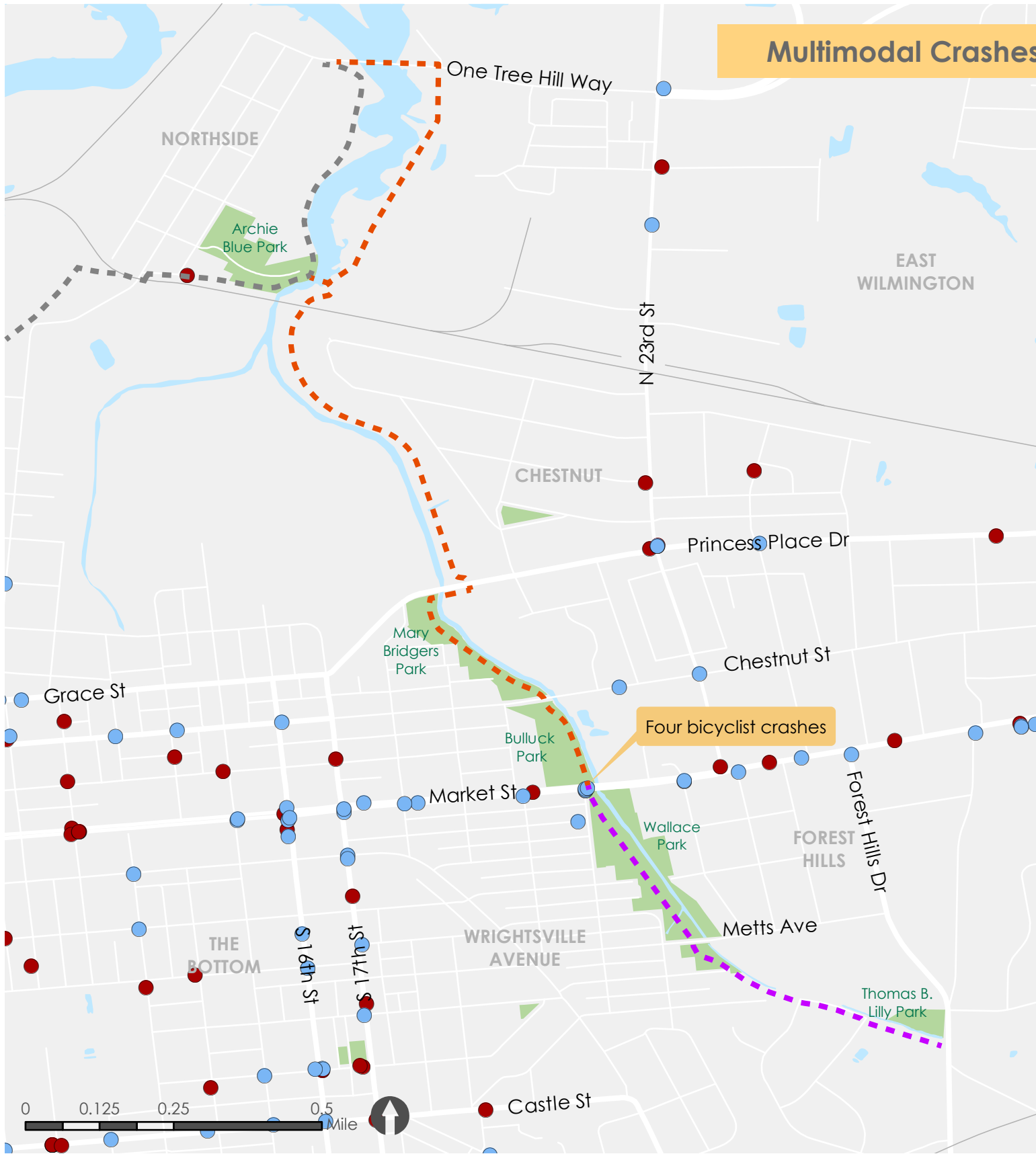


- Phase 1 (in design)
- Proposed Phase 2
- Proposed Phase 3
- Parks and Greenspace
- Water
- Railroad
- Auto Service
- Barber Shop
- Restaurant/Food Service
- Place of Worship
- Public School
- Private School
- Cemetery

Wilmington Downtown Trail Feasibility Study

Data Source: NC OneMap, WMPO, New Hanover County

Multimodal Crashes

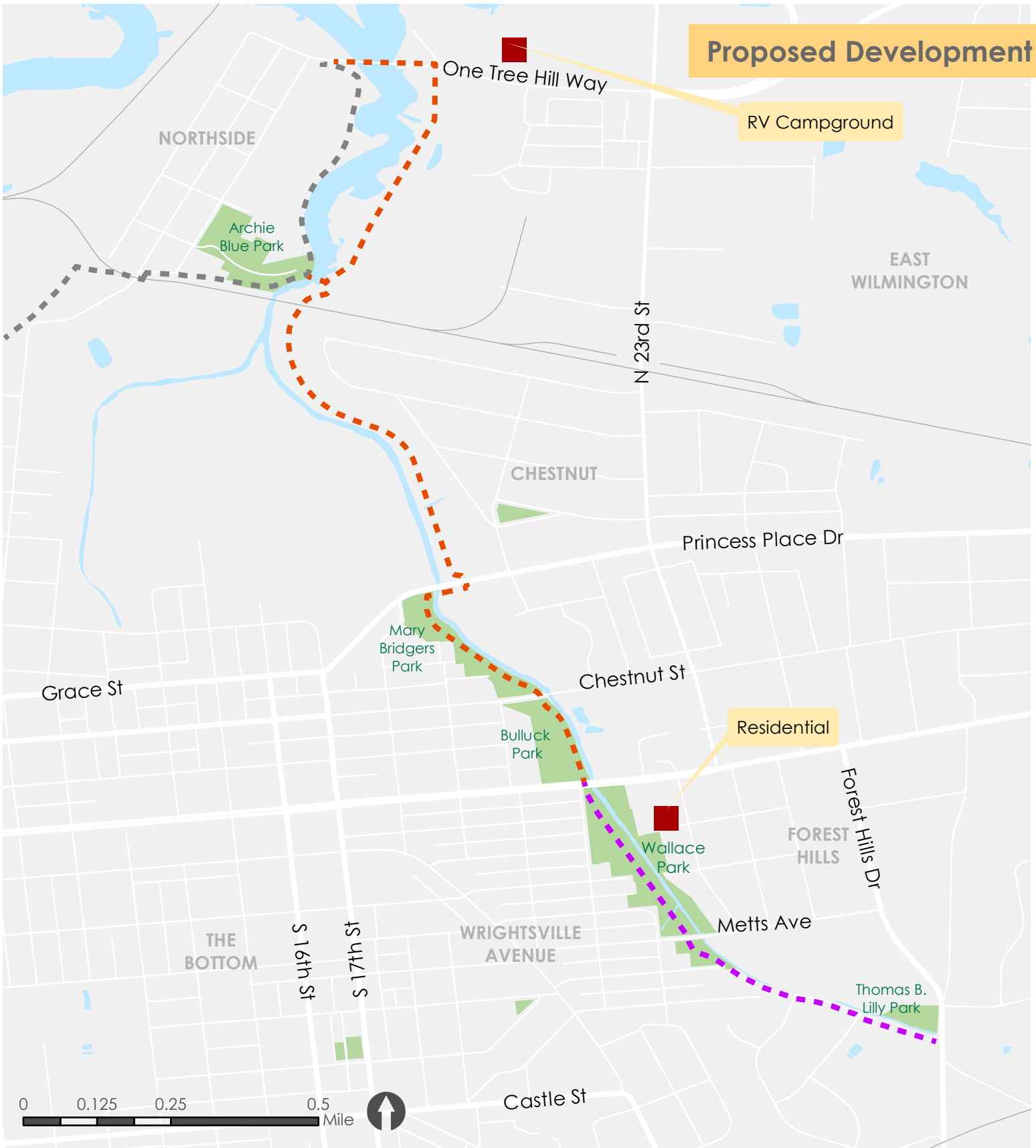


- Phase 1 (in design) —+— Railroad
- Proposed Phase 2 ■ Parks and Greenspace
- Proposed Phase 3 ■ Water

- NCDOT Crash Data (2007-2021)**
- Bicyclist Crash
 - Pedestrian Crash

Wilmington Downtown Trail Feasibility Study

Data Source: NCDOT Bicyclist and Pedestrian Crashes (2007-2021)

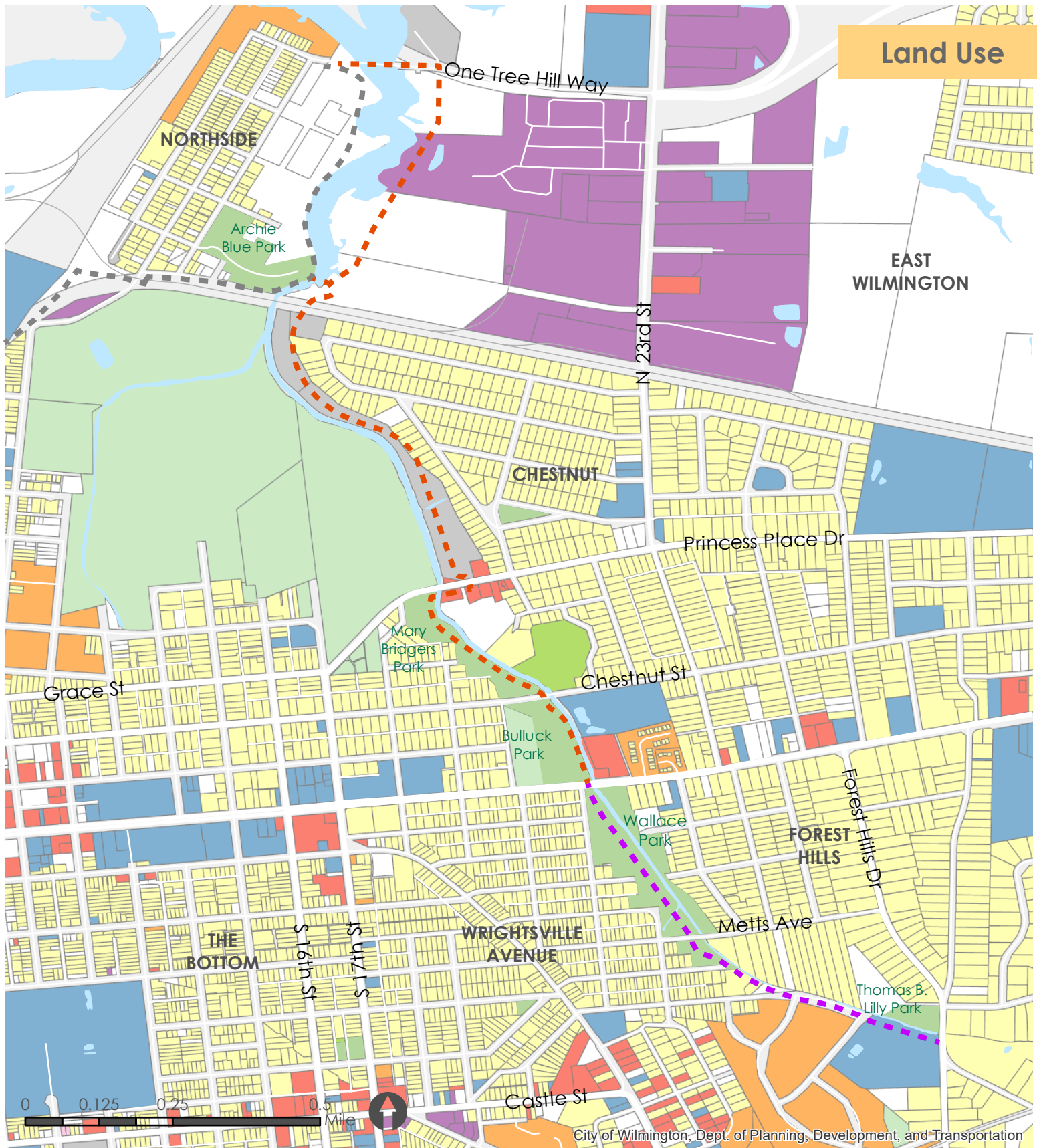


- Phase 1 (in design)
- Proposed Phase 2
- Proposed Phase 3
- Railroad
- Parks and Greenspace
- Water
- Proposed Development

Wilmington Downtown Trail Feasibility Study

Data Source: City of Wilmington

Land Use

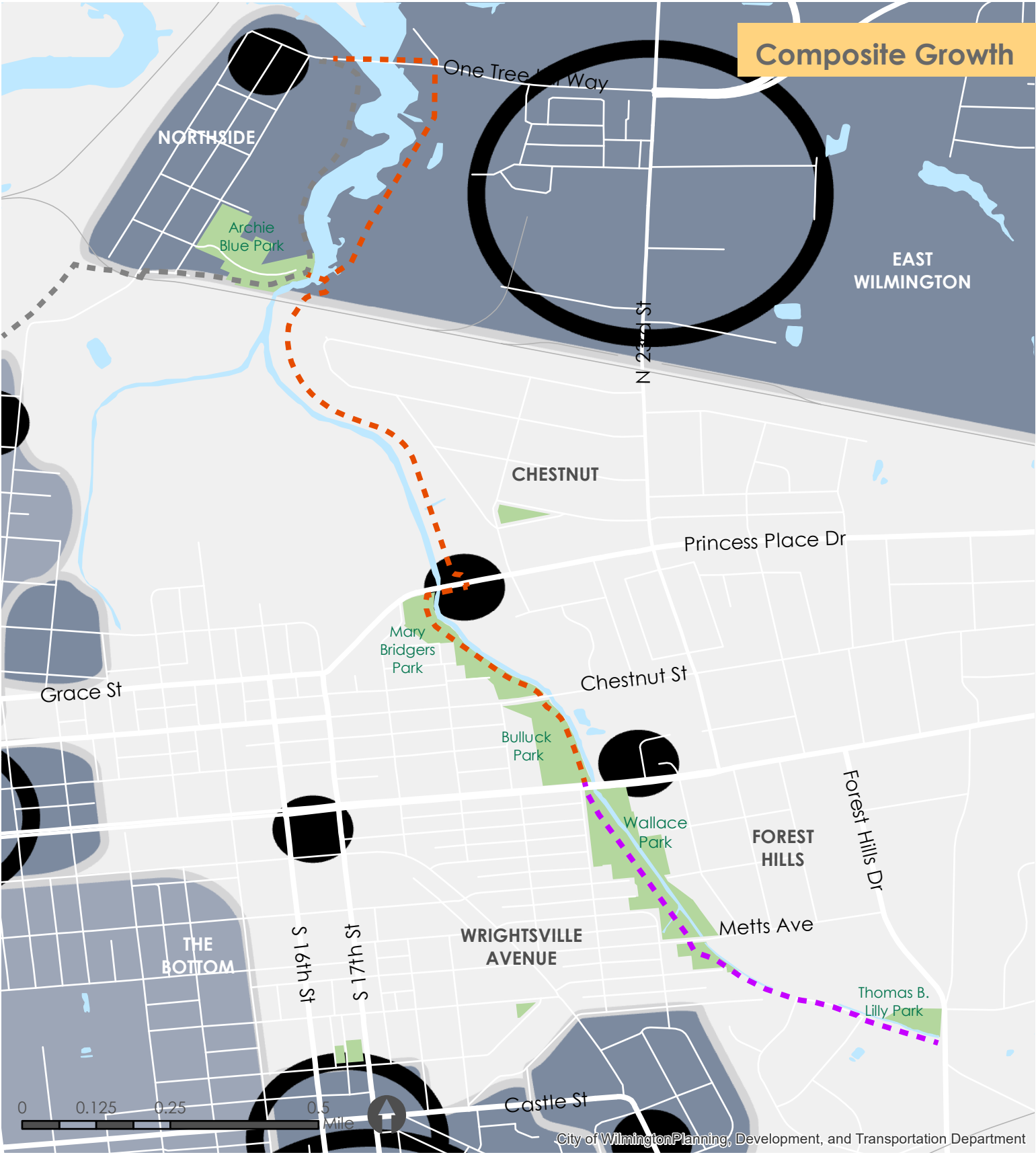


<ul style="list-style-type: none"> Phase 1 (in design) Proposed Phase 2 Proposed Phase 3 Railroad Parks and Greenspace Water 	<p>Land Use</p> <ul style="list-style-type: none"> Single Family Multi Family Mobile Home/Park Agricultural Industrial Utilities 	<ul style="list-style-type: none"> Office & Institutional Commercial Mixed Use Conservation Park Cemetery Vacant
--	---	---

Wilmington Downtown Trail Feasibility Study

Data Source: City of Wilmington

Composite Growth

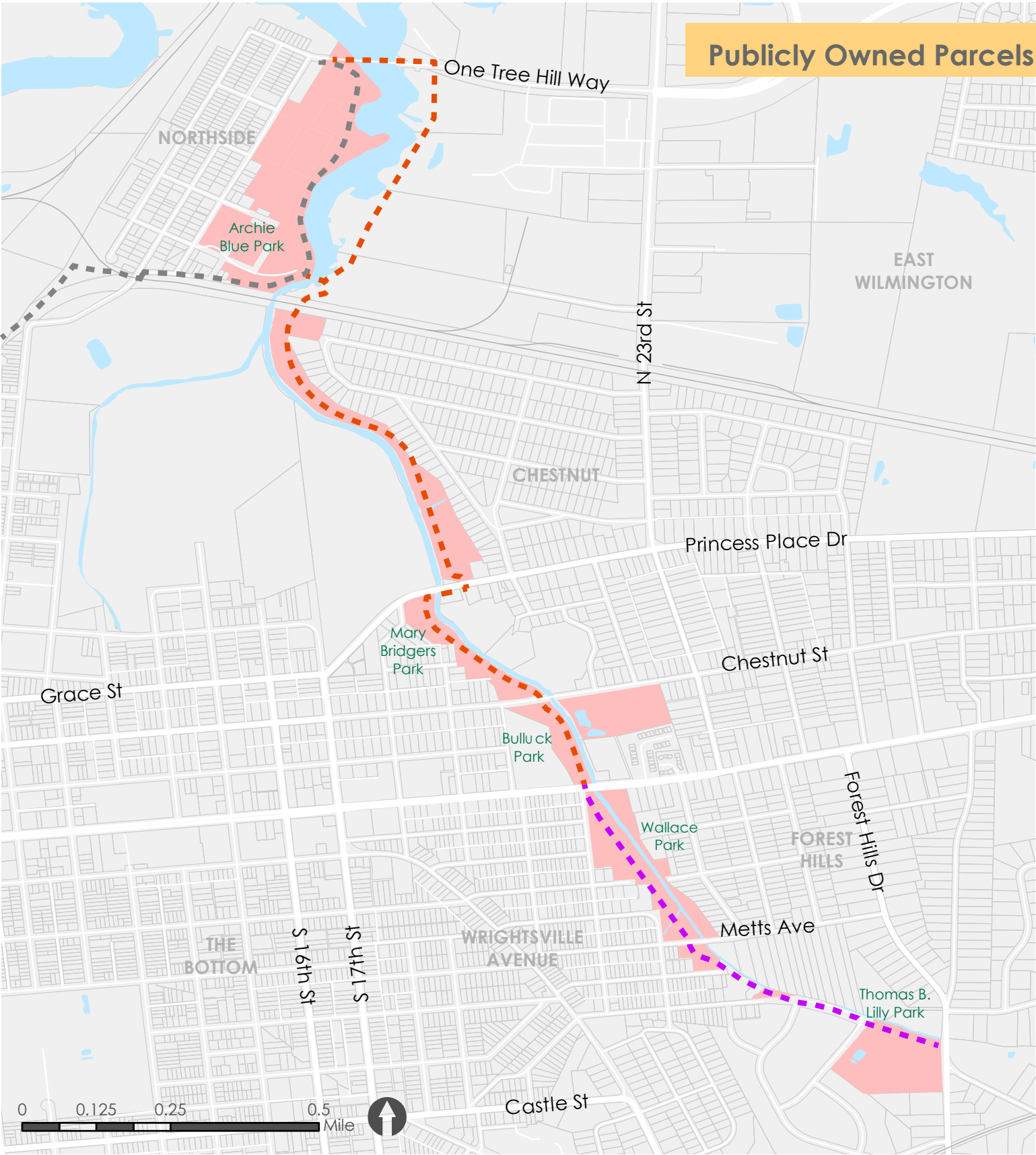


- ■ ■ Phase 1 (in design)
- ■ ■ Proposed Phase 2
- ■ ■ Proposed Phase 3
- Railroad
- Parks and Greenspace
- Water
- Neighborhood Nodes
- Mixed-use Centers
- Higher Intensity
- Lower Intensity

Wilmington Downtown Trail Feasibility Study

Data Source: City of Wilmington

Publicly Owned Parcels

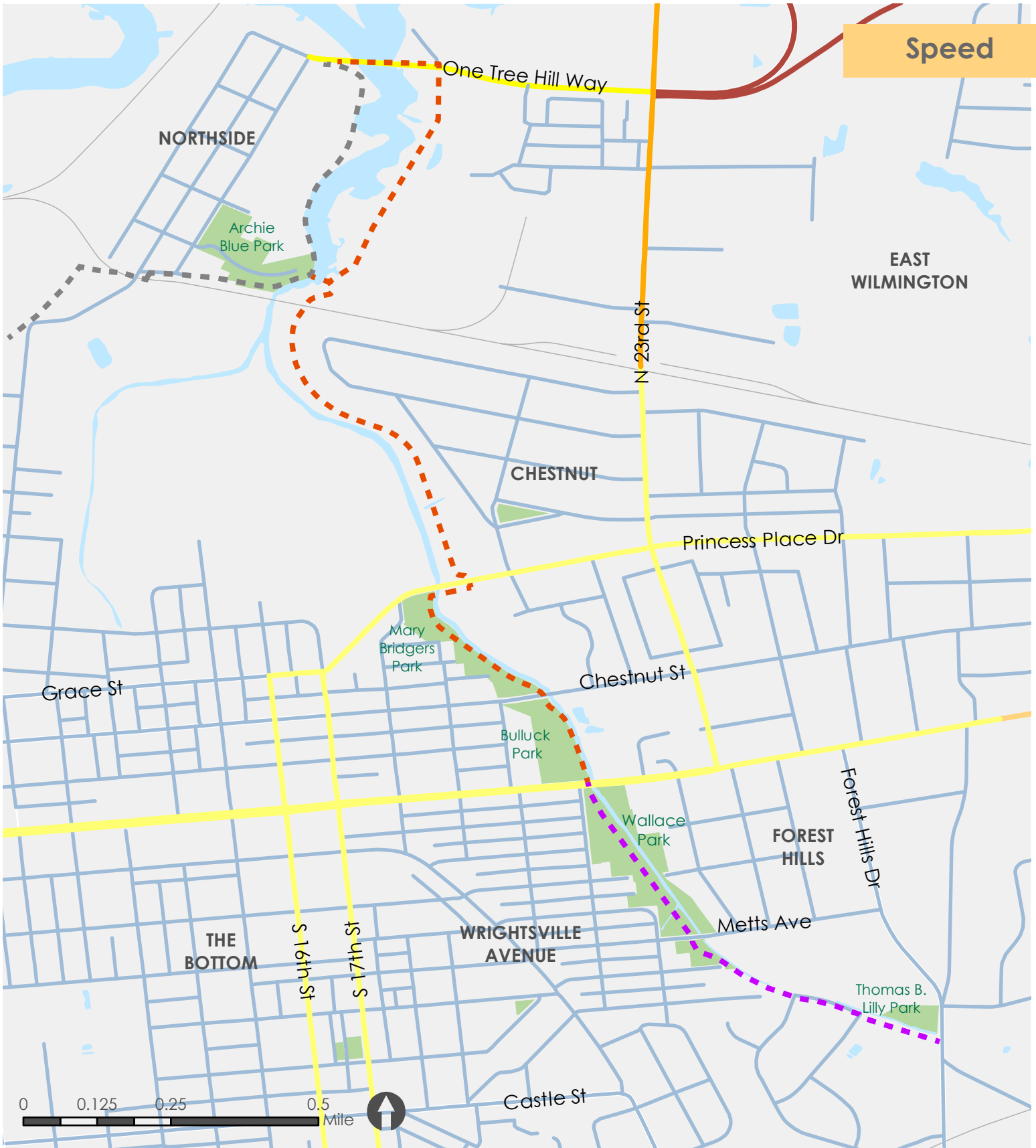


- Phase 1 (in design)
- Proposed Phase 2
- Proposed Phase 3
- Railroad
- Water
- Publicly Owned Parcel

Wilmington Downtown Trail Feasibility Study

Data Source: New Hanover County

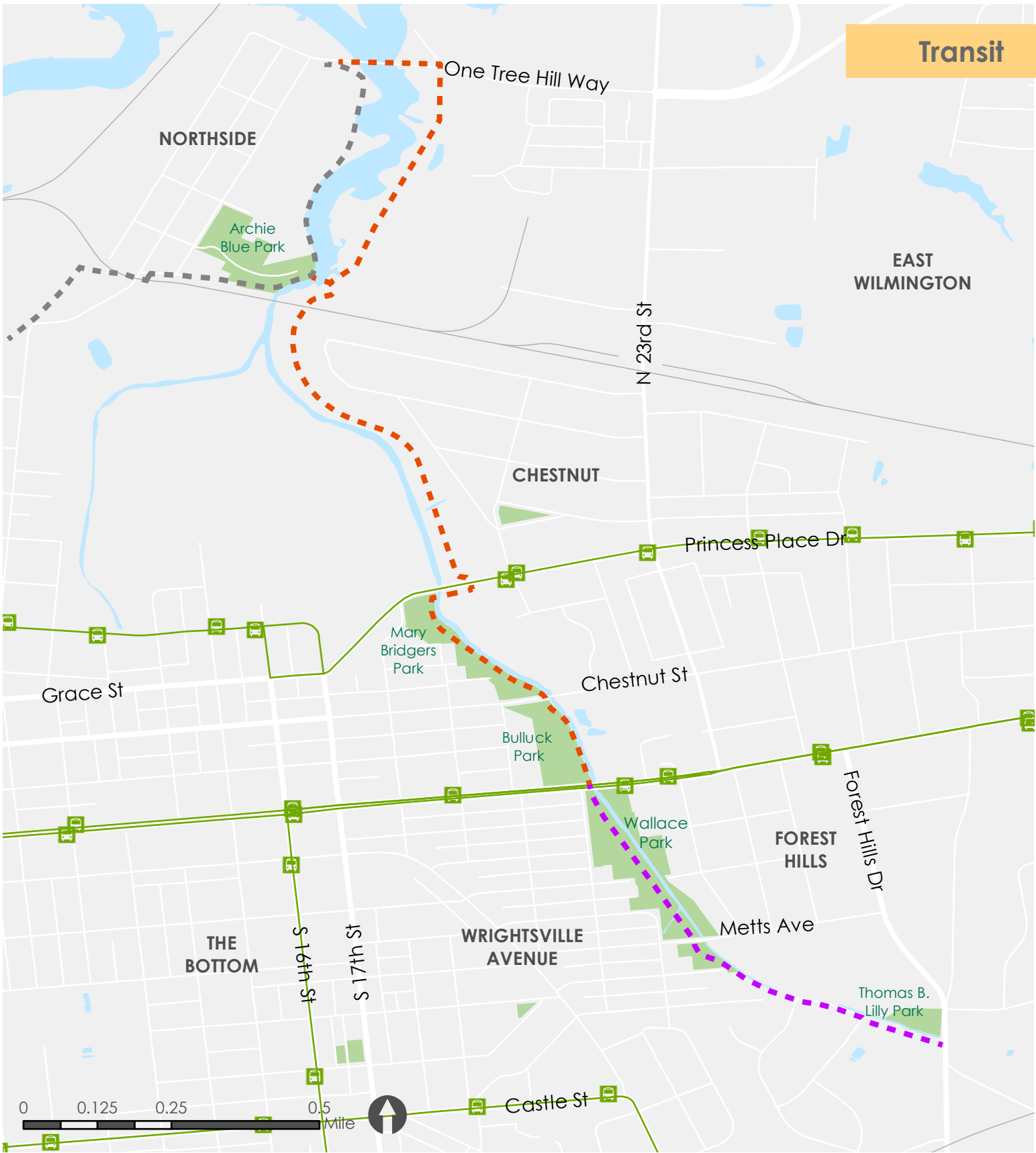
Speed



- | | |
|----------------------------|---------------------------|
| ■ ■ ■ Phase 1 (in design) | Posted Speed Limit |
| ■ ■ ■ Proposed Phase 2 | — 25 mph |
| ■ ■ ■ Proposed Phase 3 | — 35 mph |
| —+— Railroad | — 40 mph |
| ■ ■ ■ Parks and Greenspace | — 45 mph |
| ■ ■ ■ Water | — 50 mph |

Wilmington Downtown Trail Feasibility Study

Data Source: NCDOT Road Characteristics

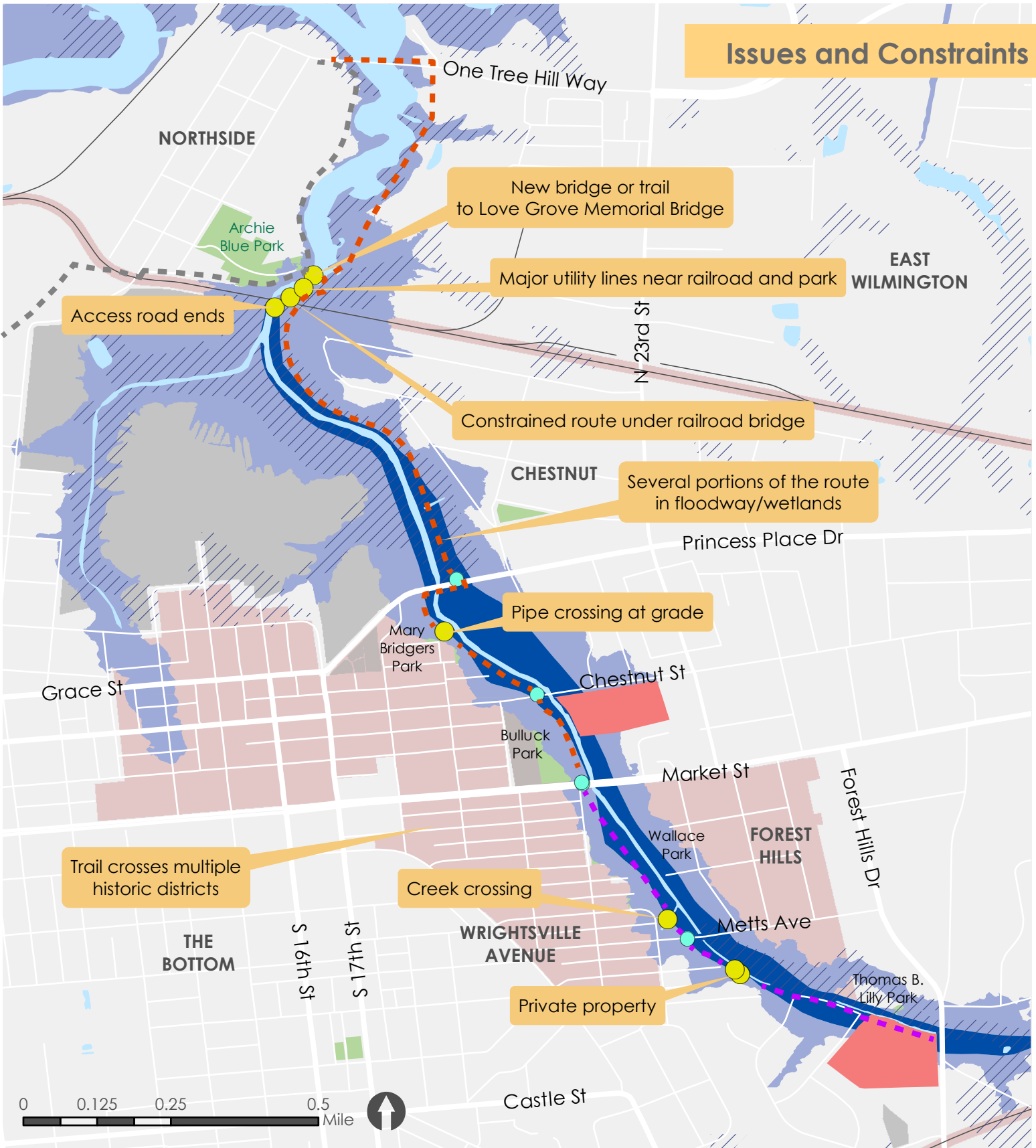


- Phase 1 (in design)
- Proposed Phase 2
- Proposed Phase 3
- Railroad
- Parks and Greenspace
- Water
- Bus Stop
- Transit Route

Wilmington Downtown Trail Feasibility Study

Data Source: WMPO

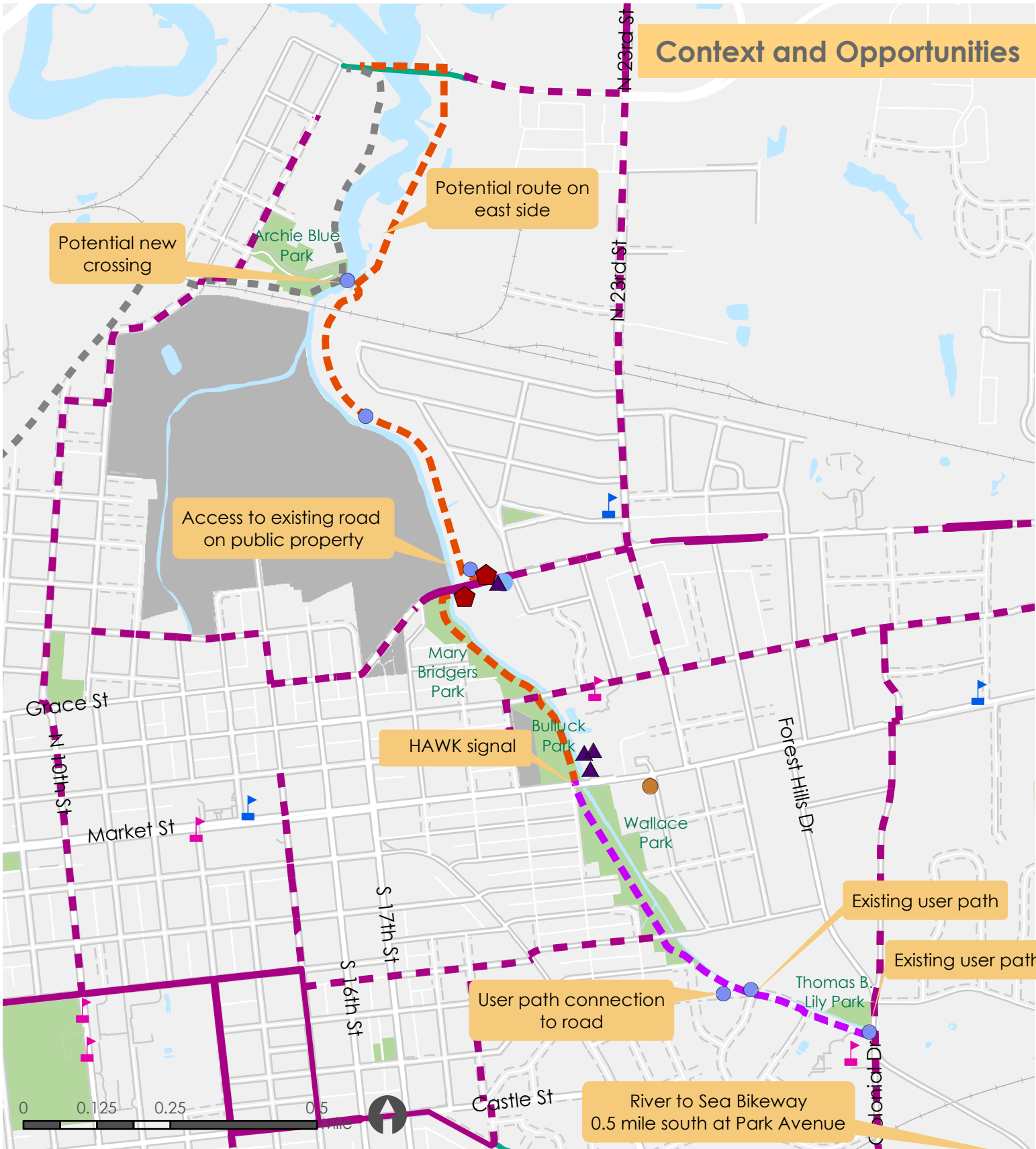
Issues and Constraints



Wilmington Downtown Trail Feasibility Study

Data Source: NCOneMap, NCDOT ATLAS, New Hanover County

Context and Opportunities



Potential new crossing

Potential route on east side

Access to existing road on public property

HAWK signal

Existing user path

Existing user path

User path connection to road

River to Sea Bikeway
0.5 mile south at Park Avenue

- Phase 1 (in design)
- Proposed Phase 2
- Proposed Phase 3
- Railroad
- Parks and Greenspace
- Water
- Existing Shared Use Path
- Proposed Sidewalk
- Existing Sidewalks
- Proposed Bicycle Facility
- Existing Bicycle Facility
- Cemetery
- Auto Service
- Barber Shop
- Restaurant/Food Service
- Place of Worship
- Private School
- Public School

Wilmington Downtown Trail Feasibility Study

Data Source: NCOneMap, NCDOT ATLAS, New Hanover County, WMPO, NCDOT PBIN

APPENDIX C: ALIGNMENT EVALUATION

Category	Criteria	Measure	Focus Area 1		Focus Area 2		Focus Area 3		Focus Area 4			
			North of Shirley Road		Shirley Road to Market Street		Market Street to Metts Avenue		Metts Avenue to Gibson Ave			
			Alignment A (Creek)	Alignment B (Bridge)	Alignment A	Alignment B (East from Princess Place Dr to Market St)	Alignment A (West)	Alignment B (East)	Alignment A (Creek-West)	Alignment B (Street)	Alignment (Creek-East)	
Overview	Total Length	Feet	3850	700	5200	5,400	1600	1650	2150	3250	2000	
	Facility Type	Description	SUP	SUP	SUP	SUP	SUP	SUP	SUP	Bike Boulevard, Sidewalks, SUP	SUP	
Permits and Coordination	CSX/NCDOT Rail Coordination	Yes/No	Yes	Yes	No	No	No	No	No	No	No	
	Local and State Historic Preservation Coordination	Yes/No	Yes	Yes	Yes	Potential (local)	Yes	Yes	Yes	Yes	Yes	
	USACE and NCDEQ Coordination	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
ROW Impacts	Structures Required	Description	no bridge 750 ft boardwalk	100 ft bridge, 250 ft boardwalk	no bridge Potential for 2,000+ ft boardwalk	no bridge potential for 4,000+ ft boardwalk	no bridge 70 ft boardwalk	no bridge no boardwalk	no bridge no boardwalk	no bridge no boardwalk	300 ft bridge, no boardwalk	
	Private property impacts	High/Medium/Low	High	Low	Low	High	Low	Low	Medium	Low	Medium	
	Impacts to Railroad ROW	Yes/No	Yes	Yes	No	No	No	No	No	No	No	
Environmental Constraints	New Creek Crossings	Count	0	1	Potential	Potential	0	Potential	0	Potential	1	
	Wetlands	Yes/No	Yes	Yes	Yes	Yes	No	No	No	No	Yes	
	100-yr Flood Plain	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Connectivity	Floodway	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	NR / DOE Historic Resource	Yes/No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	
	Cemetery	Yes/No	No	No	No	No	No	No	No	No	No	
Transportation Equity	Connections to existing bike facilities	Count	1	0	1	1	0	0	0	0	0	
	Connections to proposed bike facilities	Count	1	1	1	1	1	1	1	1	1	
	Connections to existing sidewalk	None/Partial/Good	Partial	Partial	Good	Good	Good	Good	Partial	Partial	Partial	
Public Health and Safety	Connects to existing/proposed park	Count	0	0	3	0	2	2	2	2	2	
	Connects to school	Count	0	0	1	1	No	No	1	1	1	
	Goes through high employment density (1000+ jobs)	Yes/No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	
Public Health and Safety	Goes through high population density (500+ people)	Yes/No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	
	TDI Score Higher than State Avg (10.4)	Yes/No		Yes	No	No	No	Yes	Yes	Yes	Yes	
	High density of BIPOC residents (40%+)	Yes/No		Yes	No	No	No	No	Yes	Yes	Yes	
Public Health and Safety	High density of zero-car households (16%+)	Yes/No	No	No	No	No	No	No	No	No	No	
	High density of low-income residents (26%+)	Yes/No		Yes	No	No	No	Yes	Yes	Yes	Yes	
	Along segment with high ped/bike crash density	High/Medium/Low	Low	Low	High	High	High	High	Low	Low	Low	
Public Health and Safety	Street crossing speed	Description	NA	NA		35	35	35	35	25	25	26
	Street crossing volume	Description	NA	NA	10,000-20,000; 20,000-35,000	10,000-20,000; 20,000-35,000	20,000-35,000	20,000-35,000	2,000-4,9999	2,000-4,9999	2,000-4,10000	
	Major Street Crossings	Description	0	0	2	2	1	1	0	0	1	

APPENDIX D: PROJECT CUT SHEETS

Project: Archie Blue Park to Shirley Road

Description

This project focuses on constructing a bridge from Archie Blue Park across Burnt Mill Creek. This bridge will connect Phase 1 to Phases 2 and 3 of the Wilmington Downtown Trail.

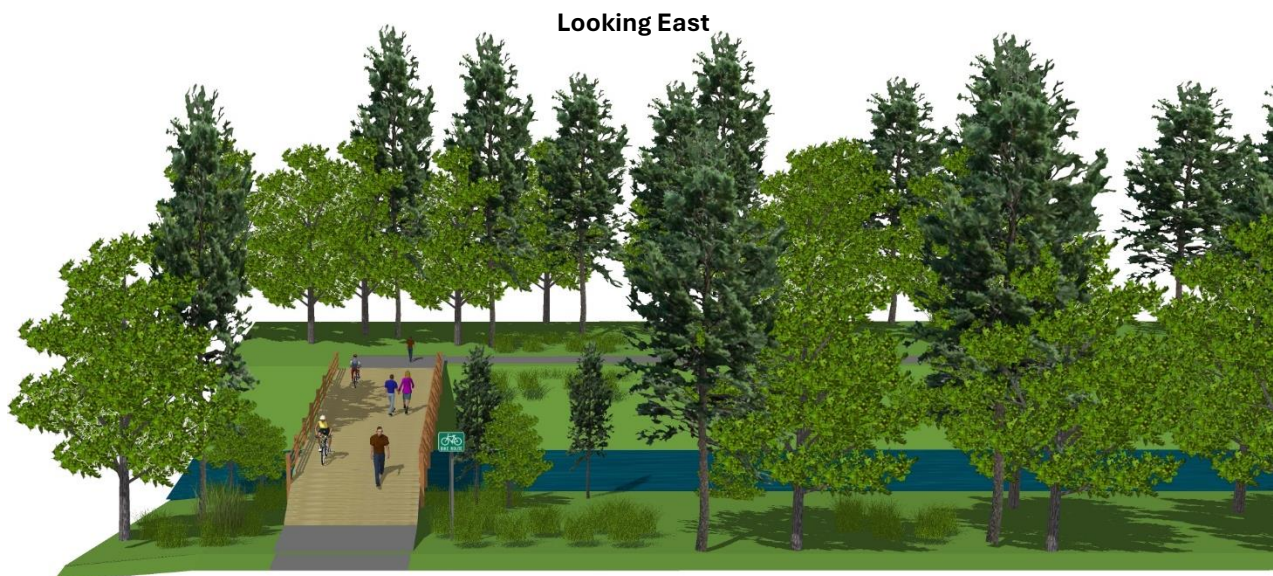
Considerations

The project includes the construction of a 100-foot pedestrian bridge across Burnt Mill Creek at Archie Blue Park, as well as a 275-foot boardwalk that spans wetlands. Key coordination efforts are required with CSX Railroad to facilitate a grade-separated crossing under the railroad, and with the Cape Fear Public Utility Authority to address the sanitary sewer system that crosses Burnt Mill Creek and runs beneath the existing railroad bridge. The project may also require several permits and regulatory approvals, including Section 401/404 Permits, an NCDEQ CAMA Permit, a New Hanover County Stormwater Permit, and an NCDEQ Coastal Stormwater Permit. A floodplain development permit is also anticipated, along with coordination for historic resources due to the proximity to the Seaboard Air Line Railway/Atlantic Coast Railroad District.

Estimated Cost

\$1,750,000

Conceptual Rendering



Project: Shirley Road to Princess Place Drive

Description

This project will construct a shared use path on the eastern side of Burnt Mill Creek with the limits of Shirley Road to Princess Place Dr. This project also includes enhancements to the proposed trail crossing at Princess Place Dr.

Considerations

The project involves the construction of a 250-foot boardwalk across wetlands. To facilitate this development, several permitting and regulatory approvals may be required, including Section 401/404 Permits, an NCDEQ CAMA Permit, a New Hanover County Stormwater Permit, and an NCDEQ Coastal Stormwater Permit. Additionally, a floodplain development permit may be necessary, along with adherence to local riparian buffer practices to ensure environmental compliance.

Estimated Cost

\$1,320,00

Conceptual Rendering

Looking North



Princess Place Dr Looking East



Project: Princess Place Drive to Market Street

Description

This project will construct a shared use path on the western side of Burnt Mill Creek with the limits of Princess Place Dr to Market St. This project crossing will align with the addition of the HAWK signal at Market St between S 21st St and Borden Ave. This project will add several hundred feet of official shared use path to Mary Bridgers Park and Bulluck Park.

Considerations

The project requires coordination with the Cape Fear Public Utility Authority regarding a sanitary sewer easement that runs along the west side of Burnt Mill Creek. Additionally, coordination with the City of Wilmington is needed to assess potential conservation protections related to the Mary Bridgers Wetland, which was created in 2007 and restored in 2022. The development may also require several permits and regulatory approvals, including an NCDEQ CAMA Permit, a New Hanover County Stormwater Permit, and an NCDEQ Coastal Stormwater Permit. A floodplain development permit is anticipated, along with historic resource coordination due to the project's proximity to the Wilmington National Cemetery. The project must also comply with local riparian buffer practices to ensure environmental protection.

Estimated Cost

\$470,000

Conceptual Rendering

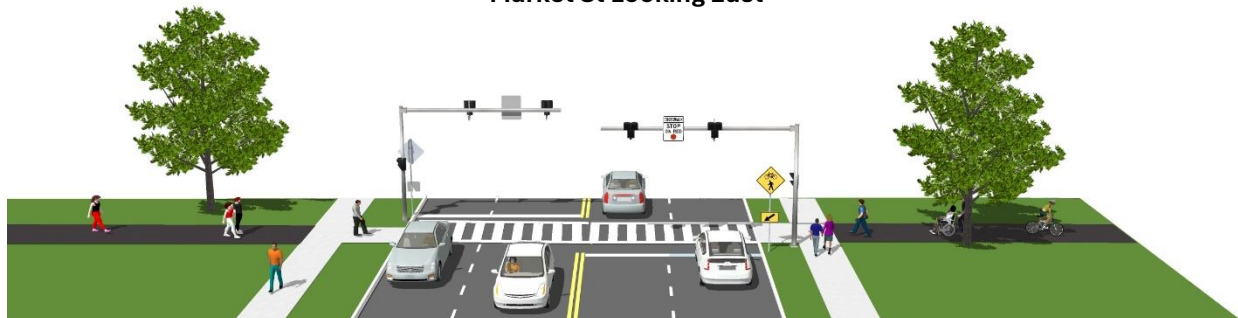
Looking North



Chestnut St Looking East



Market St Looking East



Project: Market Street to Metts Avenue

Description

This project will construct a shared use path on the western side of Burnt Mill Creek with the limits of Market St to Metts Ave. This project also includes enhancements to the proposed trail crossing at Metts Ave. This project will add several feet of official shared use path to Wallace Park.

Considerations

The project involves the construction of a 100-foot boardwalk across a drainage ditch. To support the development, several permitting and regulatory approvals may be required, including an NCDEQ CAMA Permit, a New Hanover County Stormwater Permit, and an NCDEQ Coastal Stormwater Permit. Additionally, a floodplain development permit may be necessary, along with historic resource coordination due to the project's proximity to the Brookwood Historic District. Additionally, the preservation of cypress trees and the existing meadow is a top community priority.

Estimated Cost

\$648,000

Conceptual Rendering

Looking North



Metts Ave Looking East



Project: Southern Burnt Mill Creek- Creekside

Description

This project will construct a shared use path on the western side of Burnt Mill Creek with the limits of Metts Ave to Forest Hills Dr. This project will also designate Gibson Ave from Confederate D to Alpine Dr as a shared street to be used as a portion of the trail.

Considerations

The project requires securing easements from private property owners and coordinating with Cape Fear River Watch to address potential impacts on enhancement activities along Burnt Mill Creek, particularly in relation to the 3-year North Carolina Environmental Enhancement Grant awarded in 2022. This grant funded a recent stream bank restoration project between Confederate Drive and Alpine Drive. The development may also necessitate several permits and regulatory approvals, including an NCDEQ CAMA Permit, a New Hanover County Stormwater Permit, an NCDEQ Coastal Stormwater Permit, and a Floodplain Development Permit. Additionally, the project will need to comply with local riparian buffer practices to protect the surrounding environment.

Estimated Cost

\$1,340,000

Conceptual Rendering

Looking North



Gibson Ave (from Confederate Dr to Alpine Dr) Looking East



Project: Southern Burnt Mill Creek- 22nd Street Route

Description

This project will incorporate a shared street to avoid the western bank of Burnt Mill Creek. A shared street will be designated on 22nd St, Barnett Ave, and Gibson Ave. This project will also designate Gibson Ave from Confederate D to Alpine Dr as a shared street to be used as a portion of the trail.

Considerations

The project involves right-of-way acquisition and potential utility relocation to accommodate the construction of sidewalks. Several permitting and regulatory approvals may be required, including an NCDEQ CAMA Permit, a New Hanover County Stormwater Permit, an NCDEQ Coastal Stormwater Permit, and a Floodplain Development Permit. Additionally, the project will need to comply with local riparian buffer practices to protect the surrounding environment. Historic resource coordination will also be necessary due to the project's proximity to the Brookwood and Carolina Place Historic Districts.

Estimated Cost

\$1,160,000

Conceptual Rendering

Gibson Ave (from 22nd St to cul-de-sac) , Looking East



Gibson Ave (from Confederate Dr to Alpine Dr) Looking East

