



COLUMBUS
ALTERNATIVE TRANSPORTATION STUDY

February 2014



URS



COLUMBUS

ALTERNATIVE TRANSPORTATION STUDY

February 2014

Prepared for:

Columbus Consolidated Government Planning Department
PO Box 1340
420 10th Street
Columbus, GA 31902
Phone: 706.653.4116
Fax: 706.653.4534
www.columbusga.org/planning/

Prepared by:

URS
400 Northpark Town Center
1000 Abernathy Road, NE
Suite 900
Atlanta, GA 30328
Phone: 678.808.8800
Fax: 678.808.8400
www.urs.com

TABLE OF CONTENTS

LIST OF SECTIONS

| | Section | Page |
|--|---|-----------|
| | CHAPTER ONE - INTRODUCTION | 1 |
| | Purpose | 2 |
| | Methods | 2 |
| | CHAPTER TWO - COMMUNITY ENGAGEMENT | 5 |
| | Round 1 Meetings | 6 |
| | Round 2 Meetings | 7 |
| | Round 3 Meetings | 10 |
| | Other Forms of Public Engagement | 10 |
| | CHAPTER THREE - DATA COLLECTION & EXISTING CONDITIONS | 11 |
| | Previous Plans and Studies | 12 |
| | Standard Guidance | 15 |
| | Socioeconomic Data | 15 |
| | Additional Data Reviewed | 24 |
| | Review of METRA System | 24 |
| | General Findings | 27 |
| | CHAPTER FOUR - ALTERNATIVE TRANSPORTATION NEEDS ANALYSIS | 29 |
| | Suitability Analysis | 30 |
| | Transit Needs | 36 |
| | General Thoughts on Needs | 36 |
| | CHAPTER FIVE - ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE | 37 |
| | CHAPTER SIX - CORRIDOR & POLICY RECOMMENDATIONS | 49 |
| | Policy Recommendations and Other Considerations | 50 |
| | Transit Considerations | 51 |
| | Corridor Recommendation Methodology | 52 |
| | Corridor Recommendations | 53 |
| | CHAPTER SEVEN - NEXT STEPS | 79 |

LIST OF FIGURES

| | Figure | Page |
|--|---|------|
| | 1 - Study Area | 3 |
| | 2 - Existing Alternative Transportation Network | 4 |
| | 3 - Existing Congestion and Traffic Volumes | 14 |
| | 4 - Planned Transportation Projects and Other Identified Improvements | 13 |
| | 5 - Population Density | 16 |
| | 6 - Percent Children Population | 17 |
| | 7 - Percent Elderly Population | 18 |
| | 8 - Percent Households With No Vehicle | 19 |
| | 9 - Percent Walk to Work | 20 |
| | 10 - Percent Taking Transit To Work | 21 |
| | 11 - Percent 'Other' To Work | 22 |
| | 12 - Employment Density | 23 |
| | 13 - Points of Interest | 25 |
| | 14 - Pedestrian Activity Suitability | 32 |
| | 15 - Bicycle Activity Suitability | 33 |
| | 16 - Transit Activity Suitability | 34 |
| | 17 - Overall Alternative Transportation Suitability | 35 |
| | 18 - Suburban Local Road Sidewalk Example | 39 |
| | 19 - Suburban Collector and Arterial Sidewalk Example | 40 |
| | 20 - Urban Core Sidewalk (Minimum Width Example) | 41 |
| | 21 - Urban Core Sidewalk (Maximum Width Example) | 42 |
| | 22 - Sharrow Application Example | 43 |
| | 23 - Bike Lane Application Example | 44 |
| | 24 - Two Way Cycle Track Application Example | 45 |
| | 25 - Raised Cycle Track Application Example | 46 |
| | 26 - Basic Multi-Use Trail Application Example | 47 |
| | 27 - Separated Multi-Use Trail Application Example | 48 |
| | 28 - Overall Alternative Transportation Corridor Recommendations | 54 |
| | 29 - Recommended Pedestrian Network | 55 |
| | 30 - Recommended Bicycle Network | 56 |

LIST OF TABLES

| | Table | Page |
|--|--|------|
| | 1 - Stakeholder Committee Meeting Schedule | 6 |
| | 2 - General Public Meeting Schedule | 6 |
| | 3 - General Public Voting Exercise | 6 |
| | 4 - Planned Transportation Projects | 15 |
| | 5 - METRA Peer Area Performance Comparison (Fixed Routes Only) | 24 |
| | 6 - METRA Peer Area Performance Comparison (Demand Response Buses Only) | 26 |
| | 7 - Goals and Objectives | 27 |
| | 8 - Household Demand Suitability Analysis Criteria and Points Allocation | 30 |
| | 9 - Points of Interest Demand Suitability Analysis Criteria and Points Allocation | 31 |
| | 10 - Character Density and Existing Alternative Transportation Suitability Analysis Criteria and Points Allocation | 31 |
| | 11 - Alternative Transportation Network | 52 |
| | 12 - Planning Level Construction Cost Assumptions | 52 |
| | 13 - Planning Level Right-of-Way Cost Assumptions | 52 |
| | 14 - Corridor Recommendations - Potential Short Term Implementation | 57 |
| | 14 - Corridor Recommendations - Potential Mid Term Implementation | 58 |
| | 14 - Corridor Recommendations - Potential Long Term Implementation | 60 |

LIST OF ACRONYMS & TERMS

AASHTO – The **American Association of State Highway and Transportation Officials** is an organization that represents highway and transportation departments in all 50 states, the District of Columbia, and Puerto Rico. www.transportation.org/Pages/default.aspx

ADA – The **American Disabilities Act** is one of America's most comprehensive pieces of civil rights legislation that prohibits discrimination and guarantees that people with disabilities have the same opportunities as everyone else to participate in the mainstream of American life. www.ada.gov

American Community Survey – An ongoing survey administered by the Census Bureau that samples a small part of the population every year. www.census.gov/acs/

Bicycle Lanes – Bicycle lanes are areas of the roadway dedicated for bicycle-only traffic. The bike lane is designated through pavement markings and signage. These lanes are typically 4 feet to 7 feet wide, located on the right side of the roadway, and are used in the same direction as vehicular traffic.

CCG – The **Columbus Consolidated Government** is the municipal government organization for the City of Columbus. www.columbusga.org/

Complete Streets is a transportation policy and design approach that requires streets to be planned, designed, operated, and maintained to enable safe, convenient, and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation.

Cycle Tracks – An area delineated for bicycle travel physically separated (through raised pavement or a large striped area) from the vehicular roadway

FHWA – The **Federal Highway Administration** is an agency within the United States Department of Transportation that supports State and municipal governments in the design, construction, and maintenance of the Nation's highway system.

FTA – The **Federal Transit Administration** is an agency within the United States Department of Transportation that provides financial and technical assistance to local public transit systems. www.fta.dot.gov

GDOT – The **Georgia Department of Transportation** is the organization in charge of maintaining all state and federal roadways in the state of Georgia. The Department also has a role in public transportation and aviation. www.dot.ga.gov

GPS – **Global Positioning System**

HAWK – **High-Intensity Activated Crosswalks** are traffic signals designed explicitly to allow pedestrians to cross vehicular roadways

ITS – **Intelligent Transportation Systems** are a variety of applications that aim to enhance the transportation system

L RTP – A **Long Range Transportation Plan** is a fiscally-constrained transportation plan for an MPO region. The plan typically anticipates transportation conditions, available transportation funding, and transportation projects over a period of 25 to 30 years into the future. The plan is updated every five years.

MAP-21 – The **Moving Ahead for Progress in the 21st Century** was signed into law by President Obama on July 6, 2012 and makes a variety of alternative transportation supporting changes from previous transportation funding bills including changes to the Transportation Alternatives Program

METRA is the public transportation agency serving Muscogee County, Georgia and the City of Columbus.

MPO – A **Metropolitan Planning Organization** is a federally funded and mandated organization composed of representatives from local government and transportation authorities in order to make regional transportation decisions. The Columbus area is represented by the Columbus-Phenix City Transportation Study MPO.

MUTCD – The **Manual of Uniform Traffic Control Devices** is a document issued by the United States Department of Transportation to specify the standards in which traffic control devices (traffic signals, road markings, signs, etc.) are designed, installed, and used. <http://mutcd.fhwa.dot.gov/>

Multi-Use Trails – Trails designated for use by both pedestrians and bicyclists

NTD – The **National Transit Database** is the Federal Transit Administration's national database for statistics in the transit industry.

PEX – The **Phenix City Express** operates a fixed route and paratransit service within the city limits of Phenix City, Alabama. The fixed route provides a connection into Columbus, GA. <http://www.lrcog.com/pex.html>

RTLA – The **Rivers, Trails, and Conservation Assistance** provides funding for planning assistance to establish and restore greenways, rivers, trails, watersheds, and open space. www.nps.gov/rtca/

RTP – The **Recreational Trail Program** provides funds to the States to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses. http://www.fhwa.dot.gov/environment/recreational_trails/

Road Diet – A process in which excess (not adequately used) vehicle capacity on a roadway is replaced by a variety of treatments including the provision of alternative transportation facilities.

SHSP – The **Strategic Highway Safety Plan** provides funding to bicycle and pedestrian projects through SHSP section 406 funds. <http://safety.fhwa.dot.gov/hsip/shsp/>

SRTS – The **Georgia Safe Routes to School** program provides funding through GDOT for improvements that reduce bicycle and pedestrian conflicts around schools. <http://www.saferoutesga.org/>

Sharrows – Street marking indicated a travel lane that is to be 'shared' by both bicycle and vehicular traffic

Sidewalk – A travel area delineated for pedestrian traffic typically parallel and separated from the vehicular roadway.

TAP – The **Transportation Alternatives Program** provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways. <http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm>

TAZ – A **Transportation Analysis Zone** is a geographical unit used in travel demand models.

TIA – Transportation Investment Act referendum was passed by Georgia voters in the regions of Central Savannah River Area, Heart of Georgia - Altamaha and River Valley. These three regions will implement a one percent regional sales tax over a ten year period to fund transportation improvements. <http://www.ga-tia.com/>

TIP – A **Transportation Improvement Program** is a short-term (typically five years) financial program that describes the schedule for obligating federal transportation funds to regional transportation projects.

Title VI – A component of the Americans Disabilities Act focusing on access to public transportation.

Travel Demand Models are a comprised series of computations used to predict travel behavior and pattern

URS – The consulting firm that assisted the Columbus Consolidated Government in producing this study.

US Census – A federal survey that takes place every ten years in order to tabulate population statistics across the country. www.census.gov

USDOT – The **United States Department of Transportation** is the federal department focused on transportation. www.dot.gov



CHAPTER ONE

INTRODUCTION



URS

I – INTRODUCTION

The City of Columbus, Georgia is located along the eastern banks of the Chattahoochee River separating Georgia from Alabama. With a U.S. Census-estimated 2012 population of 198,413 people (189,885 people in the 2010 Census), it is the second largest city in the state of Georgia. To the south of the city, Fort Benning is a major United States Army post and serves a major employer and economic generator for the surrounding region.

As can be seen in the study area map, provided in **Figure 1**, the City of Columbus is largely contained to the south and east by Fort Benning and to the west by the Chattahoochee River (the urban area stretches westward into Alabama beyond the river) and has sprawled northward where there is no geographical barrier to development. The city is connected to the surrounding region by several state roads and freeways, particularly notable of which is I-185 which connects to I-85 towards Atlanta; US 80 which connects Columbus east and west to regional centers such as Macon, Georgia and Montgomery, Alabama; and US 27 which connects southward to Albany, Georgia. Studying the roadway network, there is a clear change from the grid system based roadway network in the downtown (colloquially known as Uptown) Columbus area into a more suburbanized cul-de-sac pattern in the outer reaches of the urban area.

As with many other American cities, this is evidence of the significant growth and suburbanization that took place in the years following World War II and an over-reliance on automobile centric land use development. With the new patterns of development, the core areas of Columbus suffered economically and from disinvestment, and made traveling within the Columbus area challenging without a personal automobile.

Through strategic efforts with community partners, core areas of Columbus have revitalized in recent years by adding several civic amenities to the community (the National Infantry Museum, the RiverCenter for the Performing Arts, and the whitewater rafting on the Chattahoochee River). This has been coupled with two specific multi-use transportation investments (the Fall Line Trace and the Riverwalk) that have transformed the communities' attitude to alternative transportation, namely pedestrians, bicyclists, and transit users. The existing alternative transportation network is shown in **Figure 2**.

Purpose

The Columbus Alternative Transportation Study began in the summer of 2012 in response to the implementation of the majority of the projects proposed in the previous Alternative Transportation Study for the City, created in 1993. The study was developed to satisfy a number of functions including:

- Document the community's desire for continued investment in alternative transportation opportunities
- Prepare technical analyses to determine the areas where alternative transportation investment is most critical
- Consider policies that Columbus can pursue to encourage more use of alternative transportation
- Develop project recommendations that leverage and expand the existing alternative transportation system

As such, this study defines alternative transportation users as pedestrians, bicyclists, and transit riders.

On that last point, it should be noted that the focus of the previous 1993 Alternative Transportation Study recommendations were on large scale projects, namely the Fall Line Trace, Riverwalk, and the soon to be constructed South Lumpkin Trail. Recommendations were made for a variety of 'neighborhood connectors' across the community, but specific corridors and treatments were not developed at that time. Therefore, in addition to large scale projects, this 2013 study also focused on the types of 'neighborhood connectors' that can potentially be implemented.

Methods

Several different methods were utilized to develop the Alternative Transportation Study and are documented throughout this report.

Community Engagement: A variety of activities were developed to engage members of the community. Primarily, three rounds of public meetings were held at strategic points in the study's process to directly engage the community. Likewise, a stakeholder group representing a variety of community interests was established and met throughout the study to discuss the study's progress. Outside of these formal meetings, the study team (combinations of both Columbus Consolidated Government staff and URS) met with, presented to, and communicated (by phone, e-mail, etc.) with various members of the community on alternative transportation issues both specific and general.

Data Collection & Existing Conditions: A significant amount of data was collected to describe all elements related to alternative transportation. This included collecting everything from U.S. Census data to inventorying a variety of community assets to performing field visits and reviews throughout the Columbus in order to thoroughly understand the physical and geographical context to the transportation system.

Alternative Transportation Needs Analysis: Working hand in hand with the public engagement efforts, the study team developed a combination of both qualitative and quantitative (data-driven) assessments of where alternative transportation needs are most critical. This in turn was utilized to develop conceptual and abstract ideas about what a future alternative transportation network could look like.

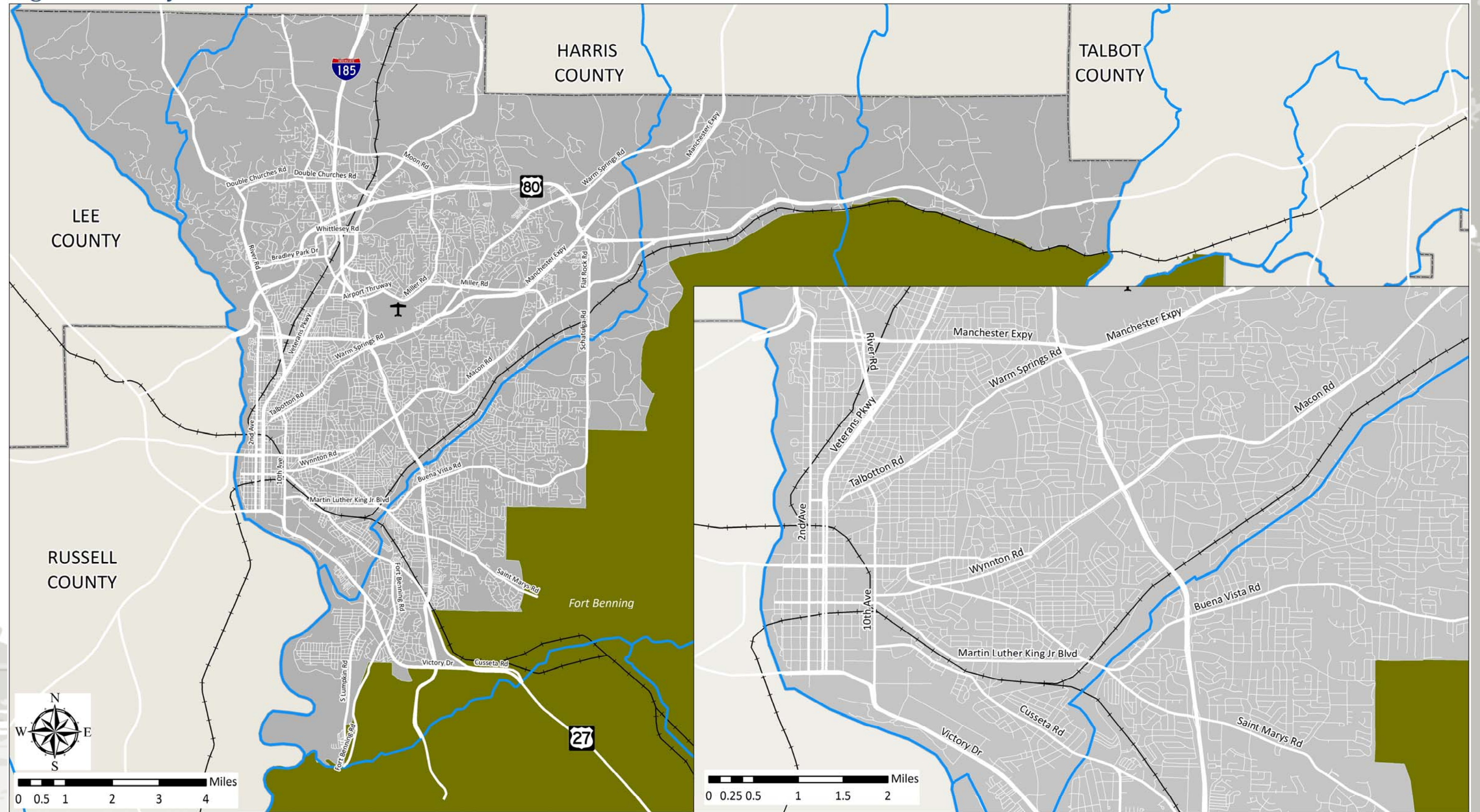
Alternative Transportation Facility & Design Guidance: A guide to different alternative transportation treatments and respective design elements was prepared.

Corridor & Policy Recommendations: Combining elements of the Existing Conditions Inventory with the conceptual and abstract alternative transportation ideas developed in the Needs Analysis, corridor and policy recommendations were developed and analyzed to determine their general level of feasibility and ability to meet the expressed alternative transportation goals of the community.



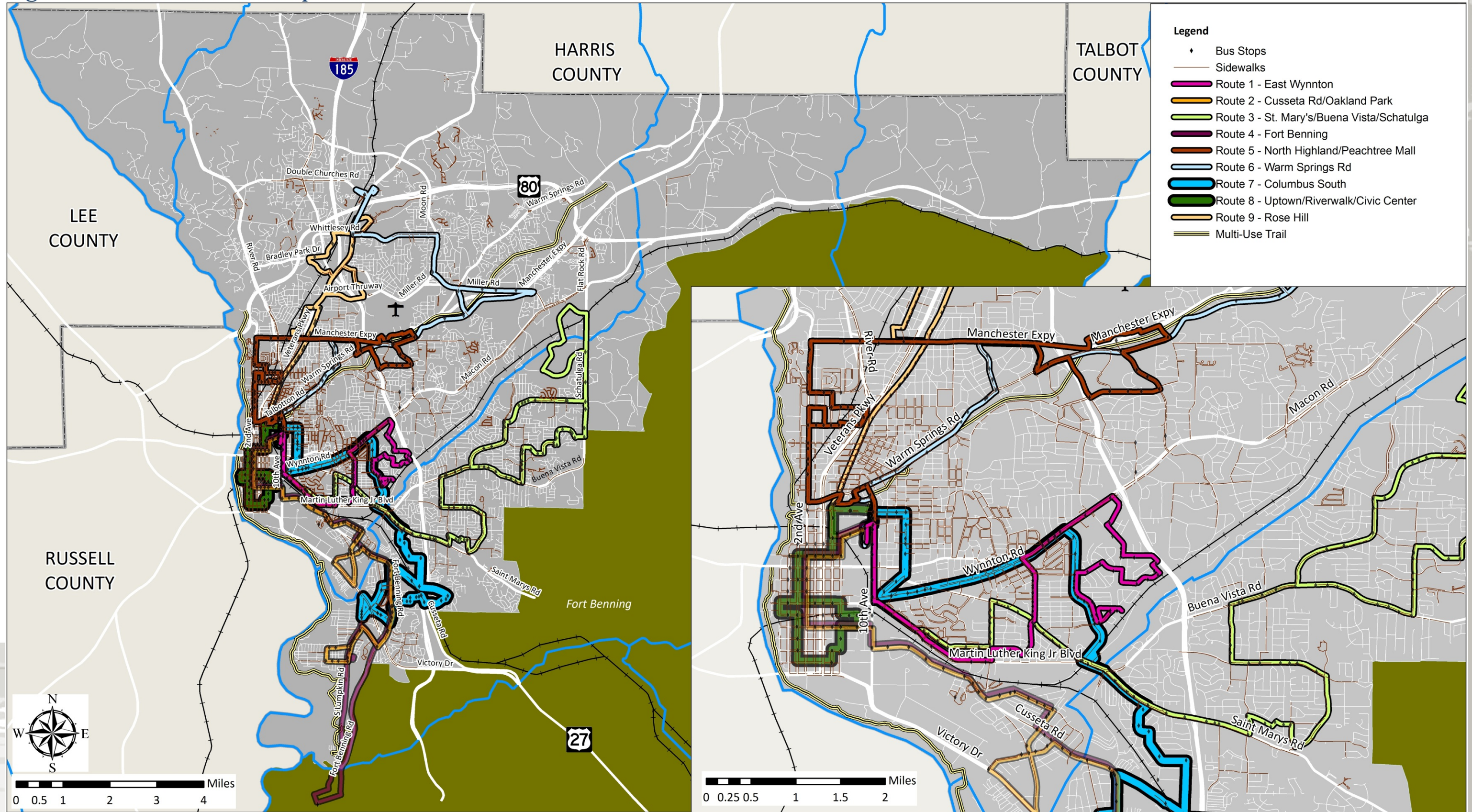
I - INTRODUCTION

Figure 1 - Study Area



I - INTRODUCTION

Figure 2 - Alternative Transportation Network





CHAPTER TWO
COMMUNITY ENGAGEMENT

II – COMMUNITY ENGAGEMENT

The community engagement process was a critical component to determine the communities' attitude towards alternative transportation as well as conception of project ideas.

With this in mind, a community engagement strategy was developed to ease the study team and community into the alternative transportation planning process through a first round of meetings. In a second round of meetings, topics moved into abstract discussions of what the alternative transportation network could become. In a third and final round of meetings, the discussion focused on actual plan recommendations. This structure also correlated with the general progress on the study so that the first round of meetings discussed information from and for the existing conditions analysis, the second round of meetings discussed information from and for the needs analysis, and the third and final round of meetings discussed information from the recommendations. The engagement process was also structured to include two separate groups as described below.

- **Stakeholder Committee:** This group was comprised of representation from governmental agencies responsible for developing and implementing transportation plans, private sector representation, and community organizations with specific interest in alternative transportation
- **General Public:** This group included citizens from throughout the community.

Public meetings were held at multiple locations throughout Columbus in order to be as convenient as possible to different members of the community. Each meeting was advertised in a multitude of ways, such as in the *Columbus Ledger-Enquirer*, use of the Planning Department's InTouch e-mailing lists, e-mails to known members of the community interested in alternative transportation, advertisements to METRA transit users, posts to social media, and portable message road side signs. The meeting schedule and locations are provided in **Tables 1 and 2**.

**Table 1
Stakeholder Committee Meeting Schedule**

| Round | Meeting Details |
|-------|---|
| 1 | Tuesday, October 30, 2012 Columbus Public Library 3000 Macon Road 3:00 – 4:30 PM |
| 2 | Monday, April 22, 2013 Columbus Public Library 3000 Macon Road 3:00-4:30 PM |
| 3 | Monday, November 18, 2013 Columbus Citizen's Service Center 3111 Citizens Way 3:00 – 4:30 PM |

**Table 2
General Public Meeting Schedule**

| Round | Meeting Details |
|-------|---|
| 1 | Tuesday, October 30, 2012 Carver High School 1215 Benning Drive 5:30 – 7:00 PM |
| | Thursday, November 1, 2012 Northside High School 2002 American Way 5:30-7:00 PM |
| 2 | Monday, April 22, 2013 Columbus Public Library 3000 Macon Road 5:30-7:00 PM |
| | Thursday, April 25, 2013 South Columbus Elementary 1964 Torch Hill Road 5:30-7:00 PM |
| 3 | Monday, November 18, 2013 Columbus Citizen's Service Center 3111 Citizens Way 5:30 – 7:00 PM |

Round 1 Meetings

The first round of meetings were held in the Fall of 2012 in late October and early November. At this stage of the project, the study team was collecting data and familiarizing themselves with the issues related directly to alternative transportation in Columbus. No analysis had taken place at this point in time, and as stated before, the project team utilized this to introduce the meeting participants into the study process.

The meeting consisted of a short presentation summarizing the purpose of the study and what outcomes could be expected from its completion and recommendations.

For the stakeholder group, the presentation was followed by a casual discussion related to alternative transportation with a specific focus on the types of improvements the group would like to see.

For the general public meetings, the presentation was followed by an open house format in which attendees could discuss their concerns and desires for alternative transportation one on one with study team members. These discussions were structured so that attendees could 'vote' on the types of improvements they would like to see for each alternative transportation mode as shown in the images on the following page. **Table 3** presents the results of this voting.

**Table 3
General Public Voting Exercise (Composite of Both Meetings)**

| Potential Needs | Today | Future | Total Votes | Percentage |
|------------------------------------|-------|--------|-------------|------------|
| <i>Pedestrian Facilities</i> | | | | |
| Residential Sidewalks | 17 | 7 | 24 | 25.0% |
| Trails | 11 | 13 | 24 | 25.0% |
| Safe Routes to School | 13 | 5 | 18 | 18.8% |
| Commercial Area Sidewalks | 10 | 2 | 12 | 12.5% |
| Intersection Improvements | 10 | 2 | 12 | 12.5% |
| Other | 5 | 1 | 6 | 6.3% |
| Safety | 0 | 0 | 0 | 0.0% |
| <i>METRA Transit Usage</i> | | | | |
| Bus Shelters | 16 | 4 | 20 | 25.3% |
| Cross Town Routes | 14 | 2 | 16 | 20.3% |
| Extend Service Area | 10 | 0 | 10 | 12.7% |
| Other | 9 | 1 | 10 | 12.7% |
| Service Frequency (increase in...) | 6 | 3 | 9 | 11.4% |
| Service Hours (increase in...) | 8 | 0 | 8 | 10.1% |
| Service Days (increase in...) | 6 | 0 | 6 | 7.6% |
| <i>Bicycle Facilities</i> | | | | |
| Bike Lanes | 19 | 2 | 21 | 30.0% |
| Bike Paths | 13 | 4 | 17 | 24.3% |
| Sharrows | 9 | 4 | 13 | 18.6% |
| Bike-Sharing | 3 | 6 | 9 | 12.9% |
| Bike Boulevards | 7 | 0 | 7 | 10.0% |
| Transit Interaction | 1 | 2 | 3 | 4.3% |
| Other | 0 | 0 | 0 | 0.0% |

II – COMMUNITY ENGAGEMENT

Attendee suggestions for other improvements, included need for more roundabouts, way-finding signs on trails and paths, increasing transit service specifically to high schools and Fort Benning, more marketing efforts by METRA (the local transit service), and a desire to see the use of smaller buses utilizing alternative fuels.

Overall, the respondents saw priority for more residential sidewalks, , dedicated bike lanes, dedicated bike paths, cross-town METRA routes, and bus shelters.

Meeting materials for the first round of meetings, including meeting notes and sign-in sheets are provided in **Appendix A**.

| COLUMBUS ALTERNATIVE TRANSPORTATION STUDY | | | |
|---|-------|--------|--|
| PEDESTRIAN FACILITIES | | | |
| What issues do you feel the Alternative Transportation Study should focus on? Please review the potential alternative transportation needs below. Please indicate your level of priority of each potential need by placing a dot in the corresponding box. Please indicate your level of priority as it is TODAY and as you anticipate the level of priority will be in the FUTURE. | | | |
| You may place up to 5 dots for TODAY and 5 dots for the FUTURE. | | | |
| POTENTIAL NEED | TODAY | FUTURE | |
| RESIDENTIAL SIDEWALKS | | | |
| COMMERCIAL AREA SIDEWALKS | | | |
| TRAILS | | | |
| INTERSECTION IMPROVEMENTS | | | |
| SAFE ROUTES TO SCHOOLS | | | |
| SAFETY | | | |
| OTHER? | | | |

| COLUMBUS ALTERNATIVE TRANSPORTATION STUDY | | | |
|---|-------|--------|--|
| BICYCLE FACILITIES | | | |
| What issues do you feel the Alternative Transportation Study should focus on? Please review the potential alternative transportation needs below. Please indicate your level of priority of each potential need by placing a dot in the corresponding box. Please indicate your level of priority as it is TODAY and as you anticipate the level of priority will be in the FUTURE. | | | |
| You may place up to 5 dots for TODAY and 5 dots for the FUTURE. | | | |
| POTENTIAL NEED | TODAY | FUTURE | |
| BIKE PATHS | | | |
| BIKE LANES | | | |
| SHARED ROUTES (SHARROWS) | | | |
| BICYCLE BOULEVARDS (NETWORK IMPROVEMENTS) | | | |
| BIKE-SHARING OPTIONS | | | |
| TRANSIT INTERACTION | | | |
| OTHER? | | | |

| COLUMBUS ALTERNATIVE TRANSPORTATION STUDY | | | |
|---|-------|--------|--|
| TRANSIT FACILITIES | | | |
| What issues do you feel the Alternative Transportation Study should focus on? Please review the potential alternative transportation needs below. Please indicate your level of priority of each potential need by placing a dot in the corresponding box. Please indicate your level of priority as it is TODAY and as you anticipate the level of priority will be in the FUTURE. | | | |
| You may place up to 5 dots for TODAY and 5 dots for the FUTURE. | | | |
| POTENTIAL NEED | TODAY | FUTURE | |
| SERVICE FREQUENCY | | | |
| SERVICE HOURS | | | |
| SERVICE DAYS | | | |
| EXTEND SERVICE AREA | | | |
| BUS SHELTERS | | | |
| CROSS TOWN ROUTES | | | |
| OTHER? | | | |

Round 2 Meetings

The second round of meetings was held the last week of April 2013 and related to analysis documented in the Alternative Transportation Needs Analysis section of this report (starting on page 29).

A short presentation was made at the beginning of the meeting to orient attendees to the overall purpose of the study and the reason for the meeting. Following this presentation, both the stakeholder and general public meetings broke into smaller groups in which study team members led an interactive discussion based on maps indicating study findings. The purpose of this discussion was twofold: (1) to communicate findings and ideas related to alternative transportation in Columbus and (2) determine if any commentary from the meetings should be incorporated as the study team began developing study recommendations. The discussion included four separate exercises designed to last approximately 15 minutes each and are summarized on the next two pages.

Overall, the meeting attendees were supportive and in general agreement with the ideas developed by the study team. The specific and composite results of these discussions as well as sign-in sheets, received comment forms, and other meeting materials are provided in **Appendix B**. Additionally, at the time of these meetings, study team members met with specific groups (Columbus City runners, disabled members of the community) to solicit their specific comment and insight. Information related to these meetings is also provided in **Appendix B**.



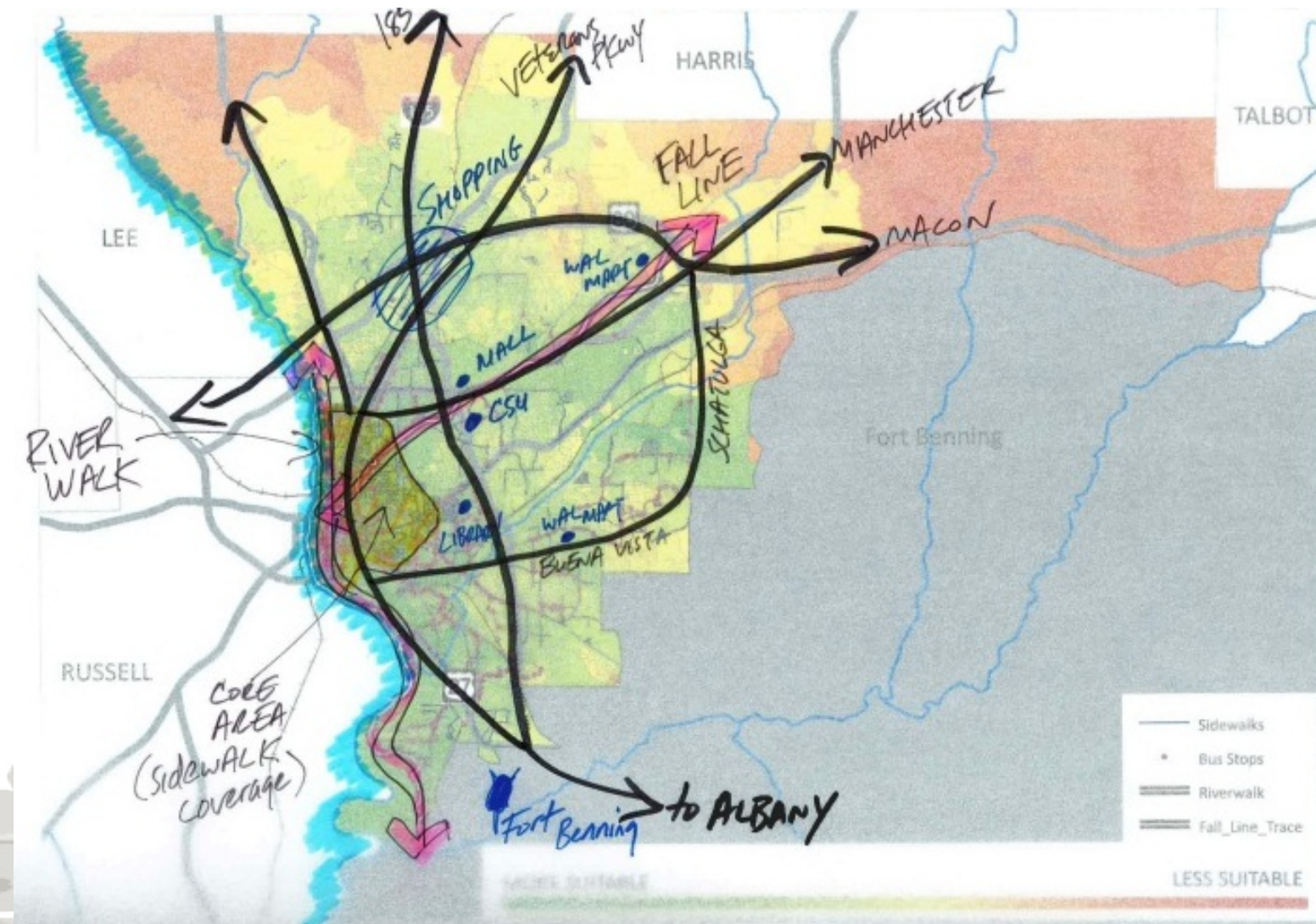
II – COMMUNITY ENGAGEMENT

Exercise 1: Establish Existing Transportation Conditions

The group facilitator drew on top of the suitability map to establish major corridors, destinations, and the existing alternative transportation system. Participants were asked a series of discussion questions such as those below to prompt interaction and where appropriate, participants were asked to draw (or use dots) their responses.

- What are the major transportation corridors now?
- In what areas are there significant sidewalk coverage currently?
- What are the key destinations that need to be connected?
- Where are the ideal places to bike and walk right now?

A sample finished product from this discussion is shown below.

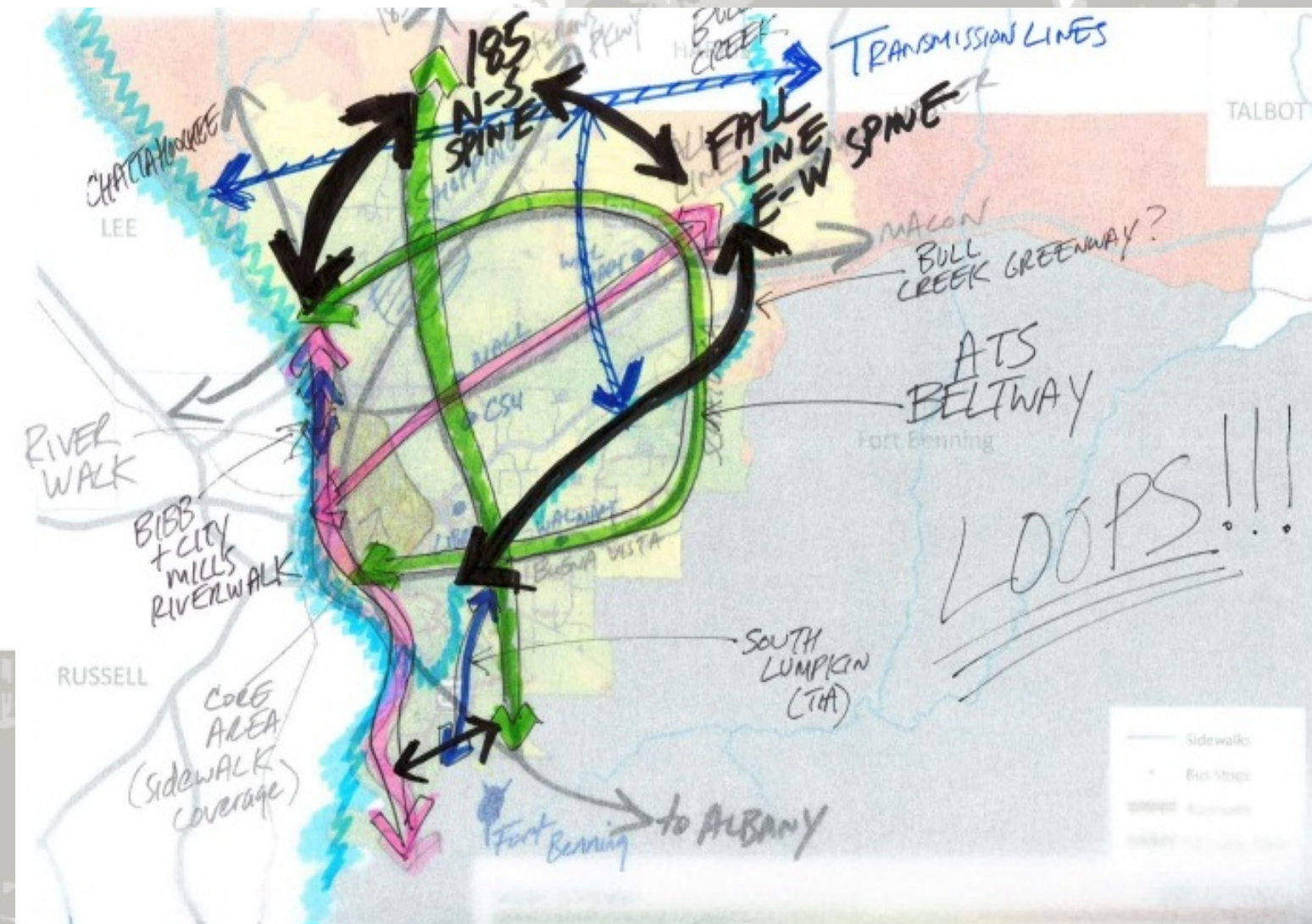


Exercise 2: Establishing an Overall Vision for Bicyclist and Pedestrians

This part of the exercise was utilized to convey some general ideas of how the corridors established by the Riverwalk and Fall Line Trace can be built upon. Drawing from these ideas, the participants were asked to draw or 'dot' their responses to questions such as:

- What projects or policies can be pursued now?
- Where are the gaps in the system?
- What are the low-hanging fruit?
- What are the barriers to people walking and biking?
- Where are the challenging intersections or corridors?

A sample finished product from this discussion is shown below.

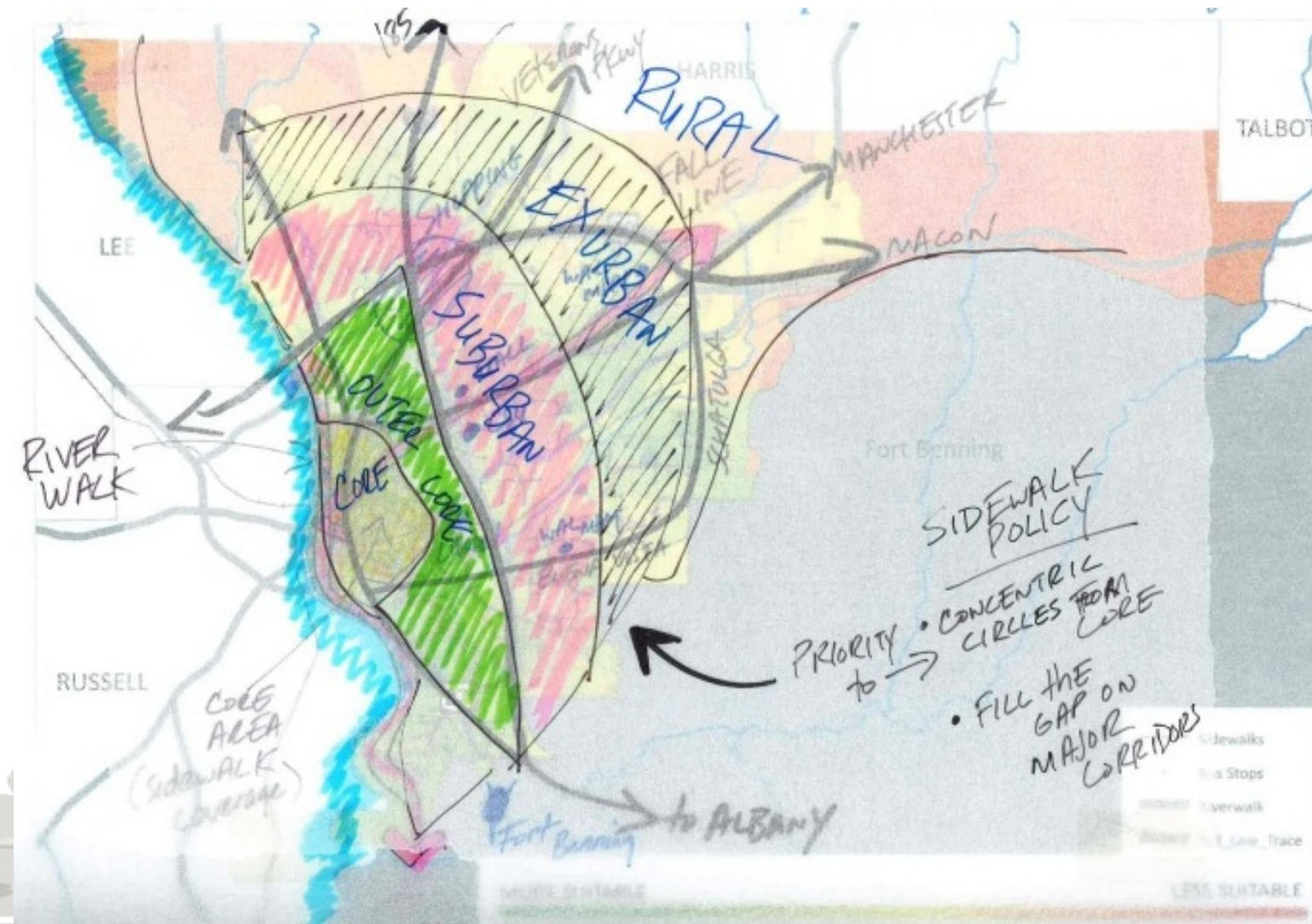


II – COMMUNITY ENGAGEMENT

Exercise 3: Establishing Character Areas

Building off the agreed establishment of existing conditions and corridor ideas, the facilitator used trace paper to establish 'character areas' with the group. The intent was to separate the Columbus area into something resembling an urban transect using classifications as CORE, OUTER CORE, SUBURBAN, and EXURBAN and to use this in the context of where general implementation could be prioritized.

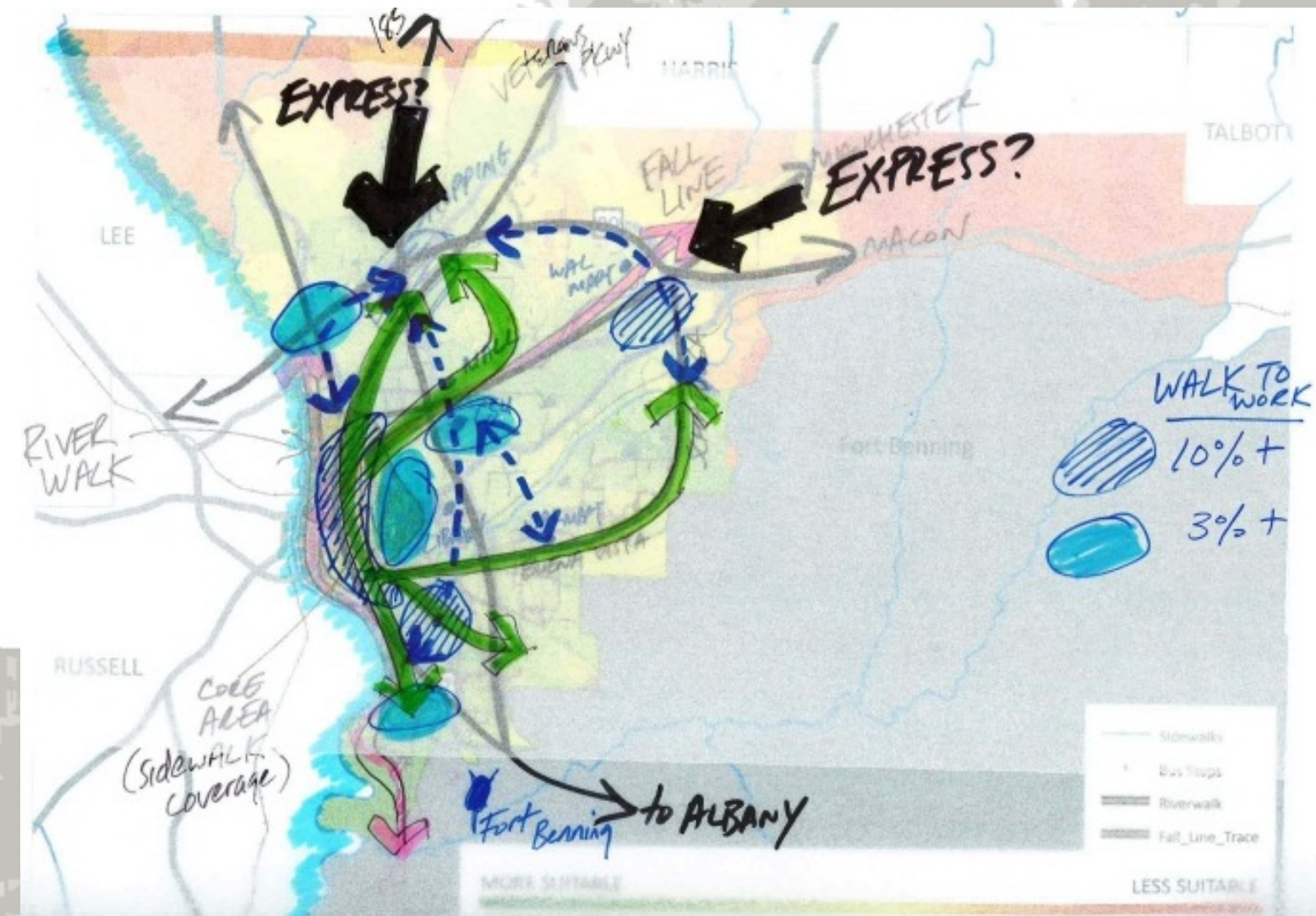
A sample finished product from this discussion is shown below.



Exercise 4: Transit Visioning

To incorporate transit and its interaction to biking and walking into the visioning exercise, the facilitator drew areas indicated to have some combination of transit dependency or high walk-to-work rates along with an abstract representation of the current METRA system. The nature of the system was emphasized (along with previous stakeholder and public comments) that cross-town routes, as well as extending the service area, should be considered in the future. Participants were then asked to help build an abstract system where crosstown corridors could be established. The intent was also to show how this builds off the broader bicycle and pedestrian vision established in the second exercise of the meeting.

A sample finished product from this discussion is shown below.



II – COMMUNITY ENGAGEMENT

Round 3 Meetings

The third and final rounds of meetings were held on November 18, 2013 to present to the community the draft recommendations of the study.

As with previous meetings, a short presentation was made (this time summarizing the entire study process and logic in some of the recommendations) before moving into a discussion based format. Several stations were set up throughout the meeting space where study team members could present and discuss the draft project recommendations to the meeting attendees. Based on these discussions, the proposed recommendations were refined into a final set of recommendations incorporating the meeting attendees' specific comments.

Meeting materials for the third round of meetings are provided in **Appendix C**.

Other Forms of Public Engagement

In addition to the formal meetings for public engagement, the study team had other interactions for soliciting comments and ideas from the community.

Over the course of the study, the study team made two presentations to the Columbus-Phenix City Transportation Study Metropolitan Planning Organization (MPO) Citizen Advisory Committee, made up of specific community members with an interest in the transportation decision making process. The first presentation took place in September 2012 and like the first round of meetings was intended to familiarize the participants with the then-upcoming study process. A second presentation took place in March 2013 to brief the committee on the progress thus far in the study and begin the advertisement process for the second round of meetings that occurred a month later.

Additionally, the study team project managers were contacted throughout the study and additional communication took place as appropriate via e-mail, letter, or phone. This additional documentation is provided in **Appendix D**.

Public Comments

Following the last set of meetings on November 18, 2013, a draft version of the plan was available at the four Columbus branches of the public library and online for viewing and comment. While a formal comment period isn't necessary for this type of plan (though they are required as part of the Long Range Transportation Plan process), the study team felt it would be appropriate to solicit citizen comments given the scope and ambition of the plan's recommendations. The comment period was extended to January 10, 2014 to allow a reasonable amount of time for interested citizens to review the plan without distraction from the holidays during December 2013. Likewise, throughout the study process, the study team solicited comments from interested members of the public.

By January 10, 2014, the study team had received fourteen individual public comments. Additionally, the study team received a letter of comments from the Bicycle Columbus organization and the Midtown, Inc. organization. These comments and letters, and the responses from the study team are included in **Appendix E**.



CHAPTER THREE

DATA COLLECTION & EXISTING CONDITIONS



III – DATA COLLECTION & EXISTING CONDITIONS

The first several months of the study consisted of a variety of forms of data collection. This section of the report documents the data collected and the findings determined.

Columbus Consolidated Government Previous Plans and Studies

2035 Long Range Transportation Plan

The Long Range Transportation Plan (LRTP) establishes existing traffic congestion in the region (**Figure 3**) and recommends a variety of funded transportation projects through the year 2035 as shown in **Figure 4** (on Page 14) and **Table 4** (on Page 15). Text within the LRTP is dedicated to requirements to incorporate bicycle and pedestrian infrastructure as part of road projects where possible. However, these requirements are fairly new and several recent projects have been or are being implemented (due to final design being completed prior to the requirements) without bicycle and/or pedestrian facilities. Moving forward, it is anticipated that projects in which design elements have not been completed yet will include bicycle and pedestrian facilities unless specific constraints such as funding or engineering issues make implementation impossible or unreasonable. As it is, the LRTP does include several projects with alternative transportation elements:

- Project 6: Warm Springs Rail Line Bike and Pedestrian Trail (Cooper Creek Park to Psalm Road) – since opened as the final phase of the Fall Line Trace
- Project 9: Streetscapes in Columbus Riverwalk (mostly complete)
- Project 10: 14th Street Pedestrian Bridge (near completion)
- Project 13: CSU Bike and Jogging Trail
- Project 16: South Lumpkin Road Trail in Columbus (design and construction imminent)
- Project 20: Old Cusseta Road widening from Fort Benning Road to Farr Road to incorporate bicycle and pedestrian access

Additionally, the LRTP establishes that traffic congestion in the region is relatively minimal, as shown in **Figure 4**.

1993 Alternative Transportation Plan

As mentioned earlier, the predecessor plan to this Alternative Transportation Study was completed in 1993 and its recommendations were largely

implemented as what is today known as the Fall Line Trace and Riverwalk. Recommendations were also made to implement what is now known as the South Lumpkin Trail, and design and construction is anticipated soon. A conceptual recommendation to construct a variety of neighborhood connectors was never refined to specific corridors. As a result, the existing alternative transportation system is composed of the METRA transit system, the Fall Line Trace and Riverwalk, and sidewalks as shown previously in **Figure 2**.

2028 Comprehensive Plan (City of Columbus)

The Comprehensive Plan establishes a vision for the future of the City of Columbus through a variety of goals and future land use expectations through the year 2028. The plan includes focus on transportation system's relationship to maintaining and improving overall quality of life. Insights from this plan are expressed citizen interest in expanding the sidewalk network (second in number of high priority responses regarding transportation issues).

2012-2016 METRA Transit Development Plan

This plan for the METRA transit system includes goals of:

- More frequent service on fixed routes
- Replace existing paratransit vehicles with low floor buses
- Continue to add bus shelters, benches, and other passenger amenities
- Continue community outreach efforts including involvement with the senior, disabled, and Hispanic communities.

Additionally, recurring themes appear throughout the plan:

- Improve frequency on the five routes that currently exceed 30 minute frequency
- Improve frequency on the Downtown Trolley
- Implement an Uptown focused loop circulator route (since implemented)
- Investigate regional service from surrounding counties to Columbus
- Expand service hours of METRA fixed route and paratransit services
- Provide additional paratransit service availability on Saturday

- Conduct detailed transit system study to identify most feasible approach to providing service to activity/retail areas
- Expand sidewalk network and curb cuts to promote access to transit services
- Establish a dedicated transit funding source as 25 percent of METRA's funding is derived from passenger fares and over 75 percent is received from Federal, State, and local agencies
- Utilize existing park and ride lot locations in north, south, and east areas to facilitate express services
- Link Fort Benning to Columbus activity centers with express or limited stop bus or van service
- Implement a street car or light rail system in Uptown Columbus
- Connect Columbus to Atlanta via a high speed rail corridor



Other Agencies' Plans and Studies

Columbus Uptown Riverfront Master Plan

This recently completed plan (November 2012) focuses on the Uptown Columbus area with an expressed goal of continuing the revitalization efforts downtown. A number of alternative transportation ideas are prepared including a transit circulator with connections into Phenix City, Alabama (on the other side of the river) and the conversion of 10th or 12th Street into a 'Festival Street' that would encourage multi-modal transportation. Other specific recommendations are shown in **Figure 4** (on Page 14) and **Table 4** (on Page 15).

River Valley Regional Commission Regional Bicycle and Pedestrian Plan

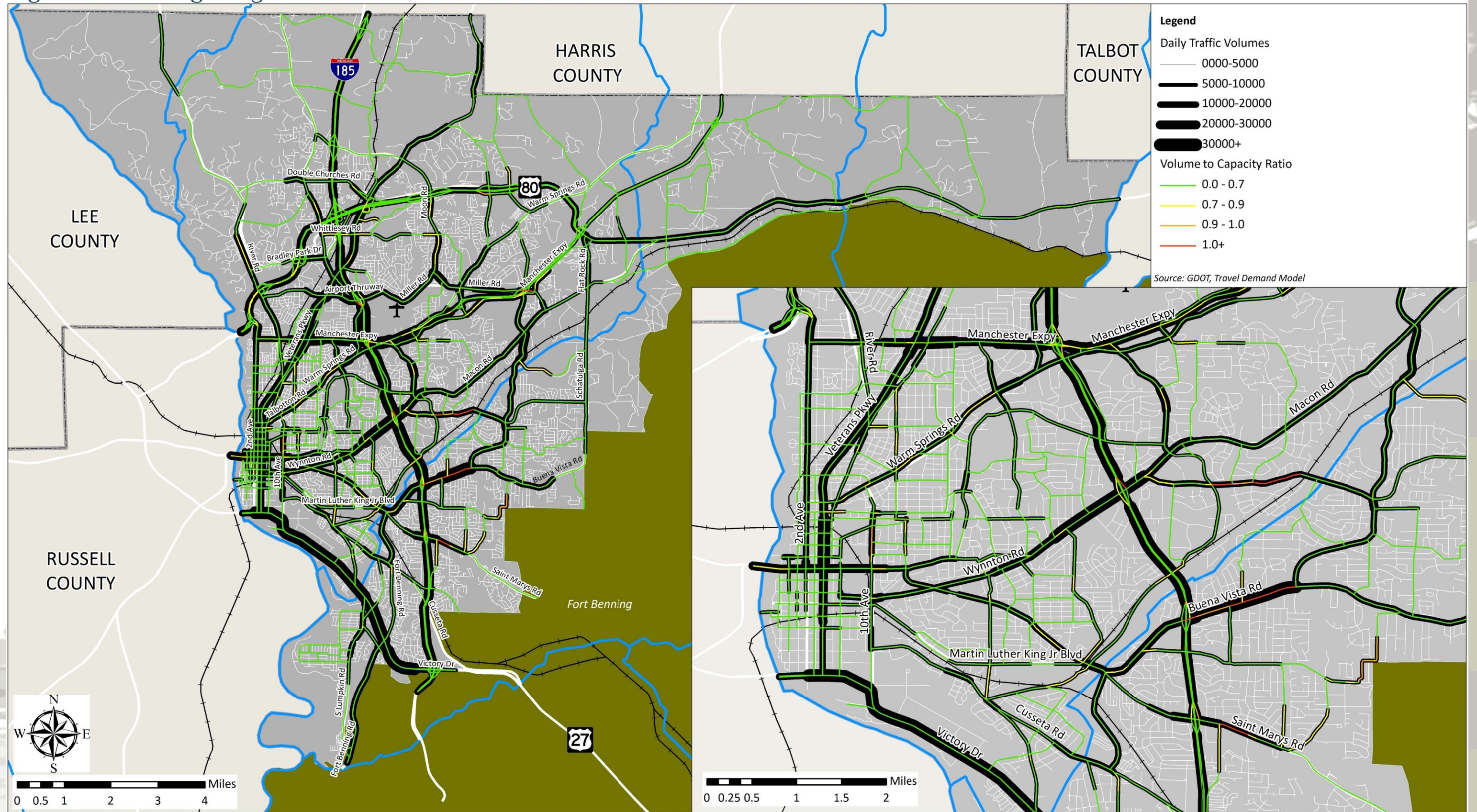
Encompassing a 16 county area in Georgia including Muscogee County (Columbus), this recent plan (2011) focused on developing a variety of goals and objectives for the region in support of alternative transportation.

Columbus Water Works

Additionally, Columbus Water Works has identified several sewer easements that can be utilized for right-of-way for multi-use trails. This identified right-of-way is shown in **Figure 4**.

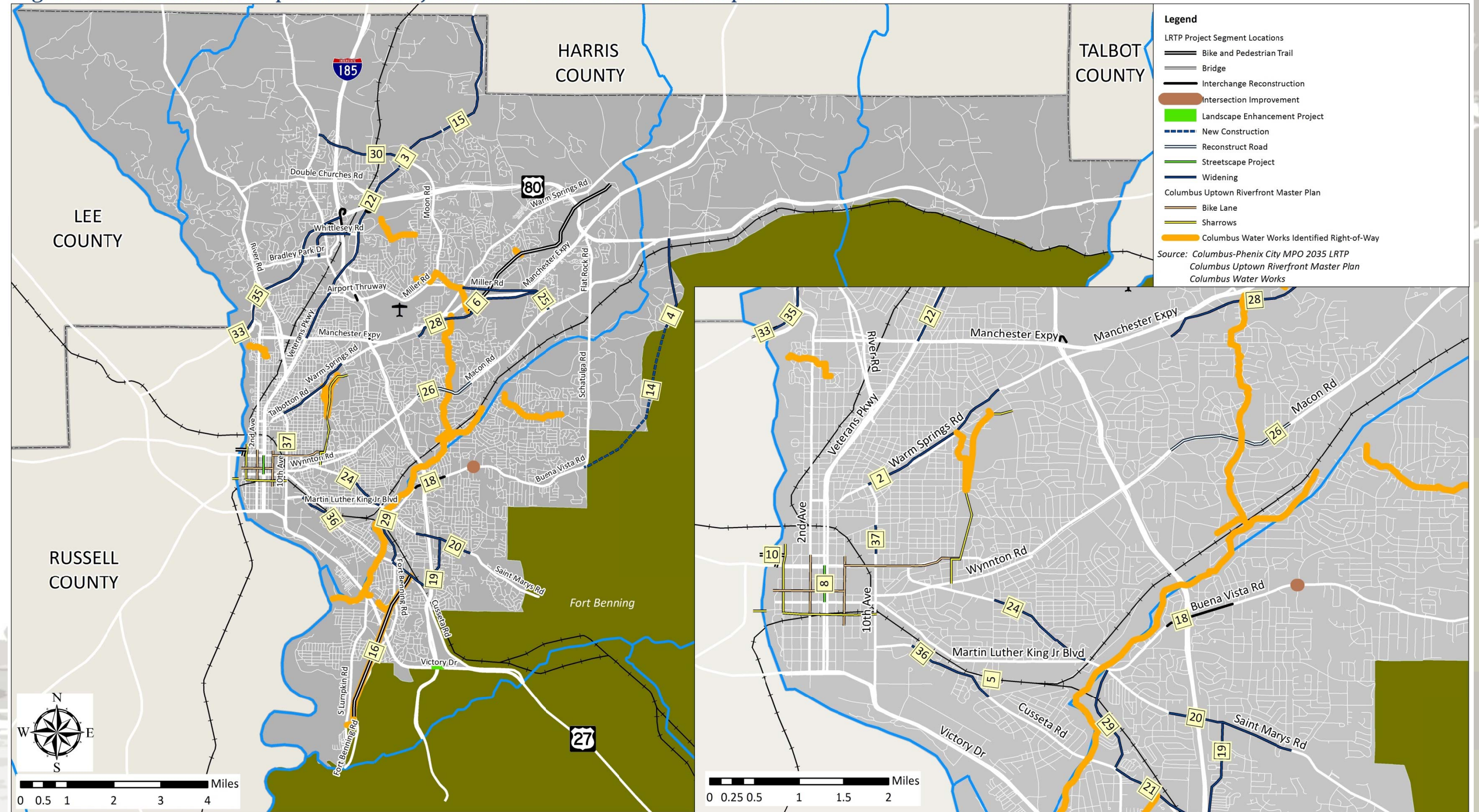
III – DATA COLLECTION & EXISTING CONDITIONS

Figure 3 - Existing Congestion and Traffic Volumes



III – DATA COLLECTION & EXISTING CONDITIONS

Figure 4 - Planned Transportation Projects and Other Identified Improvements



III – DATA COLLECTION & EXISTING CONDITIONS

**Table 4
Planned Transportation Projects**

| Priority | PI # | Roadway | From | To | Project Type |
|--|---------|--|-------------------------------------|----------------------------|----------------------------|
| 2035 Long Range Transportation Projects | | | | | |
| 1 ⁽¹⁾ | 351010 | Whittlesey Road | Rollins Way | Gepca Drive | Widening |
| 2 | 350730 | Talbotton Road | 7th Avenue | Woodruff Road | Widening |
| 3 | 3328280 | Veterans Parkway | Old Moon Road | Turnberry Lane | Widening |
| 4 ⁽¹⁾ | 0008635 | Eastern Connector | Chattsworth Road | Macon Road | Widening |
| 5 ⁽¹⁾ | 0004729 | Brown Avenue | South of MLK Jr. | | Bridge |
| 6 ⁽¹⁾ | 0009601 | Warm Springs Rail Line | Cooper Creek Park | Psalmound Road | Bike and Pedestrian Trail |
| 7 ⁽¹⁾ | 0009288 | Gateway Project @ I-185 and Victory Drive | I-185 and Victory Drive interchange | | Landscape Enhancement |
| 8 ⁽¹⁾ | 0008185 | Veterans Parkway Streetscape | 10th Street | 13th Street | Streetscape Project |
| 9 ⁽¹⁾ | 0007559 | Riverwalk Phase III | 13th Street | 14th Street | Bike and Pedestrian Trail |
| 10 ⁽¹⁾ | 0009401 | 14th Street Pedestrian Bridge | Broadway | 2nd Avenue | Bike and Pedestrian Trail |
| 13 ⁽¹⁾ | 0007562 | Columbus State University Bike and Jogging Trail | | | Bike and Pedestrian Trail |
| 14 ⁽¹⁾ | 350850 | Eastern Connector | Buena Vista Road | Chattsworth Road | New Construction |
| 15 | 0006446 | Veterans Parkway | Turnberry Lane | Gatlin Lane | Widening |
| 16 | 0007633 | South Lumpkin Trail | National Infranry Museum | Cusseta Road | Bike and Pedestrian Trail |
| 18 | 351190 | I-185 and Buena Vista Road | Brighton Road | Dogwood Drive | Interchange Reconstruction |
| 19 | 350860 | Farr Road | Old Cusseta Road | St. Mary's Road | Widening |
| 20 | 332780 | St. Mary's Road | Robin Road | Northstar Drive | Widening |
| 21 | 350890 | Old Cusseta Road | Fort Benning Road | Farr Road | Widening |
| 22 | 332250 | Veterans Parkway | Manchester Expressway | Old Moon Road | Widening |
| 23 | 0005749 | Whittlesey Road | Whitesville Road | Bradley Park Drive | Widening |
| 24 | 350796 | Buena Vista Road | Brown Avenue | Illges Road | Widening |
| 25 | 351200 | Miller Road | Warm Springs | Macon Road | Widening |
| 26 | 0000342 | Macon Road | University Avenue | Reese Road | Reconstruct Road |
| 27 | MPO19 | US 80 at US 27 | EB Off Ramp | EB Off Ramp | Interchange Reconstruction |
| 28 | MPO17 | Milgen Road | Reese Road | Woodruff Farm Road | Widening |
| 29 | MPO10 | Brennan Road | Buena Vista Road | Fort Benning Road | Widening |
| 30 | MPO1 | Williams Road | Veterans Parkway | Whitesville Road | Widening |
| 31 | MPO4 | I-185 and Manchester Expressway | NB Off Ramp | NB Off Ramp | Interchange Reconstruction |
| 32 | MPO5 | I-185 and US 80 | EB to SB and NB to WB ramp | EB to SB and NB to WB ramp | Interchange Reconstruction |
| 33 | MPO6 | US 80 | At Chattahoochee River | | Bridge |
| 35 | MPO21 | US 80 | Alabama State Line | I-185 | Widening |
| 36 | MPO11 | Cusseta Road | South Oakview | Brown Avenue | Widening |
| 37 | MPO14 | 10th Avenue | 14th Street | Linwood Boulevard | Widening |
| 38 | MPO18 | Buena Vista Road | McBride Road | Floyd Road | Intersection Improvement |
| 39 | MPO20 | I-185 and Airport Thruway | SB Ramp | SB Ramp | Interchange Reconstruction |
| Columbus Uptown Riverfront Master Plan | | | | | |
| NA | NA | Front Avenue | 14th Street | 9th Street | Sharrows |
| NA | NA | 2nd Avenue | 14th Street | 9th Street | Bike Lane |
| NA | NA | 6th Avenue | 14th Street | 8th Street | Bike Lane |
| NA | NA | 13th Street | 6th Avenue | Cherokee Avenue | Bike Lane |
| NA | NA | 9th Street | Front Avenue | 10th Avenue | Sharrows |
| NA | NA | Dillingham Street | unspecified | unspecified | Sharrows |
| NA | NA | 11th Street | Riverwalk | 6th Avenue | Bike Lane |
| NA | NA | Cherokee Avenue | unspecified | unspecified | Sharrows |
| NA | NA | 10th Avenue | Fall Line Trace | 9th Street | Bike Lane |
| NA | NA | 17th Street | Fall Line Trace | unspecified | Bike Lane |
| NA | NA | Macon Road | 6th Avenue | unspecified | Sidepath |

NA = not applicable
(1) Project either completed or under construction

Standard Guidance

In addition, reviews were made of local, national, and state level resource documents relating to alternative transportation to verify existing standards and practices.

City of Columbus Code of Ordinances (Enacted December 4, 2012)

Per Appendix A - Section 7.10.1, the City of Columbus Code of Ordinances requires sidewalks in all new residential, commercial, and industrial developments with exceptions given to streets without curb and gutter, residential subdivisions with large lots, short cul-de-sacs, and neighborhoods with trail connections.

United States Department of Transportation Policy

Signed on March 11, 2010, the United State Department of Transportation (USDOT) announced a policy statement on bicycle and pedestrian accommodation that re-emphasized a variety of points including:

- Consideration of walking and biking as equal to other transportation modes
- Ensuring transportation choices for people of all ages and abilities
- Designing walking and bicycling facilities beyond the minimum standards
- Integrated bicycle and pedestrian accommodation on bridge projects
- Narrowing the data gap of non-motorized transportation
- Setting mode share targets for walking and biking
- Improving nonmotorized facilities during maintenance projects such as resurfacing

MAP-21

The Moving Ahead for Progress in the 21st Century (MAP-21) was signed into law by President Barack Obama on July 6, 2012 and makes a variety of alternative transportation supporting changes from previous transportation funding bills including changes to the Transportation Alternatives Program.

GDOT Designs and Policy Manual

Chapter 9 of the GDOT Designs and Policy Manual is dedicated to the concept of 'Complete Streets' and asserts GDOT's policy to "routinely incorporate bicycle, pedestrian, and transit (user and transit vehicle) accommodations into transportation infrastructure projects.

Other Resources

Other resources utilized throughout the study include:

- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities (2004)
- GDOT Guidebooks for Pedestrian Planning
- GDOT Bicycle and Pedestrian Safety Action Plan
- GDOT Pedestrian and Streetscape Guide
- Manual of Uniform Traffic Control Devices (MUTCD)

Socioeconomic Data

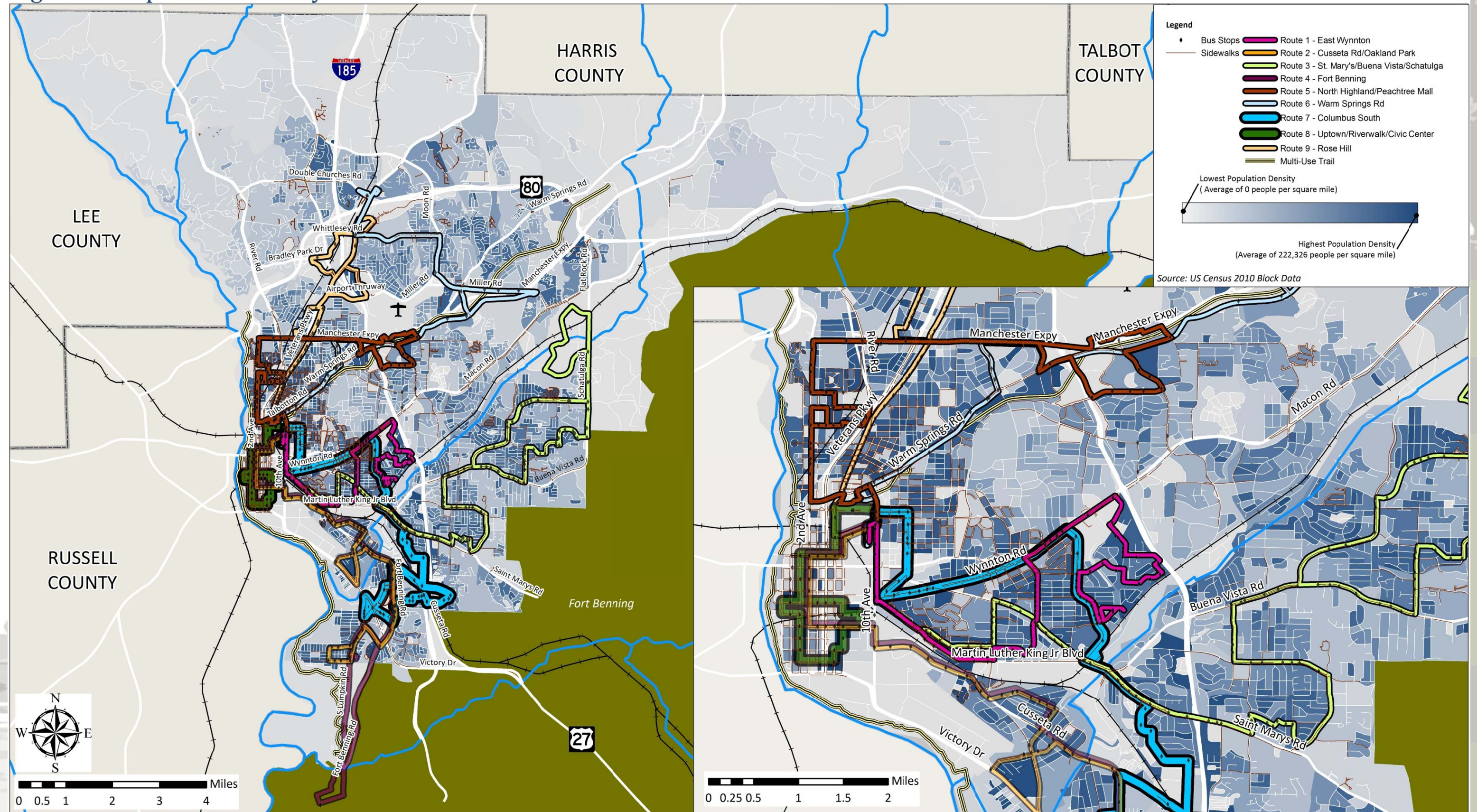
Additionally, a variety of socioeconomic data relating to where people live and work and how they travel was collected from the 2010 US Census, American Community Survey, and GDOT data.

This data was mapped with reference to the existing alternative transportation network as shown on the following figures:

- **Figure 5:** Population Density at the Census Block level indicating a fairly spread out population
- **Figure 6:** Percentage of Children (ages 0-19) at the Census Tract level indicating more children relative to total population in some of the areas on the outskirts of the urbanized area
- **Figure 7:** Percentage of Elderly Population (ages 55+) at the Census Tract level indicating elderly people spread throughout Columbus
- **Figure 8:** Percentages of Households with no vehicle at the Census Tract level indicating concentrations in Uptown and in the southern half of town
- **Figure 9:** Percentages of households indicating a member walks to work with the largest majority in Uptown and areas where sidewalks are currently present
- **Figure 10:** Percentages of households where a member uses transit to work with concentrations in Uptown and in the southern half of town
- **Figure 11:** Percentages of households where a member uses an unspecified form (not vehicular, walking, or transit based) of transportation to work with concentrations in Uptown and in the southern half of town
- **Figure 12:** Employment Density at the GDOT travel demand model Transportation Analysis Zone (TAZ) level indicating employment concentrations in Uptown and major shopping districts

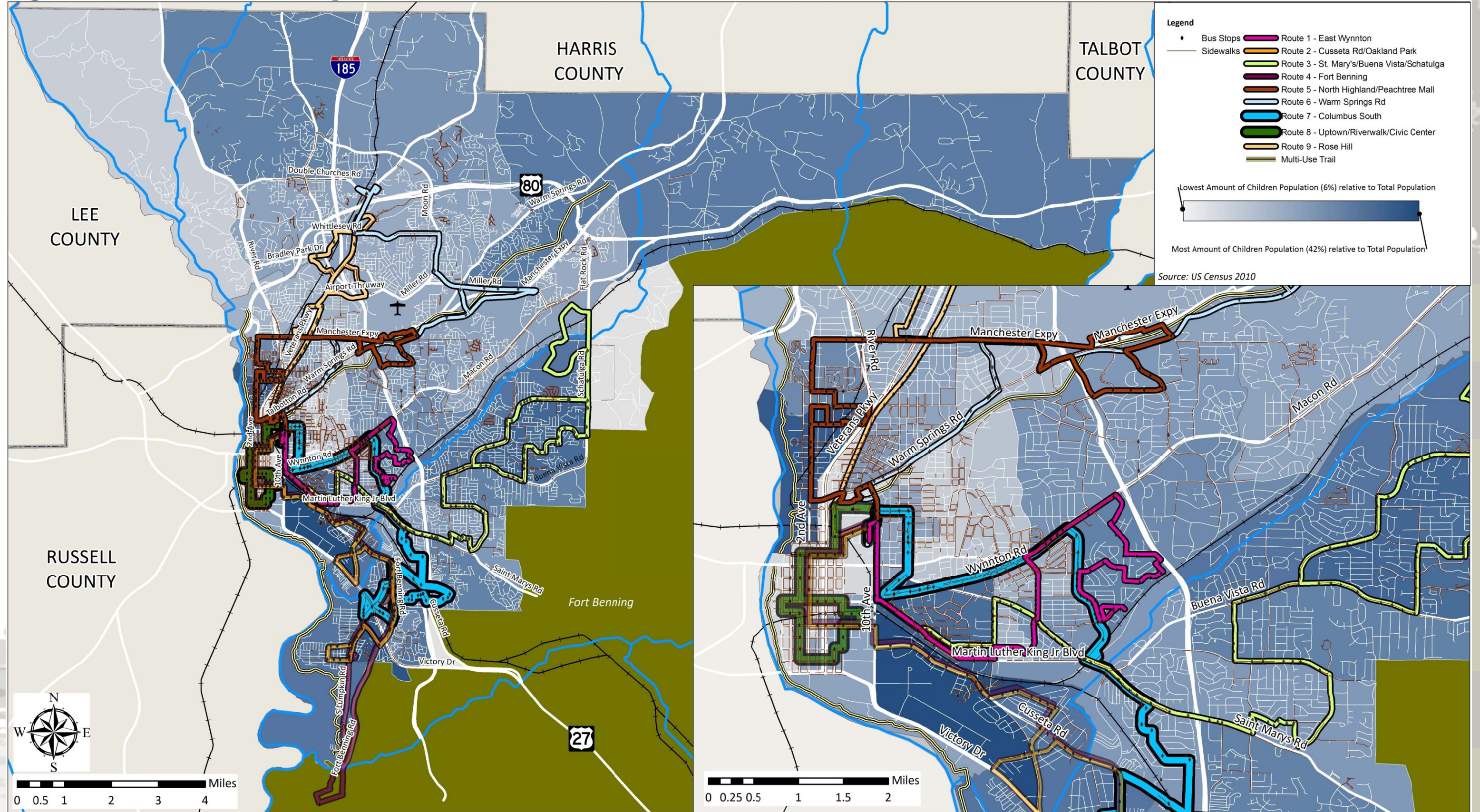
III – DATA COLLECTION & EXISTING CONDITIONS

Figure 5 - Population Density



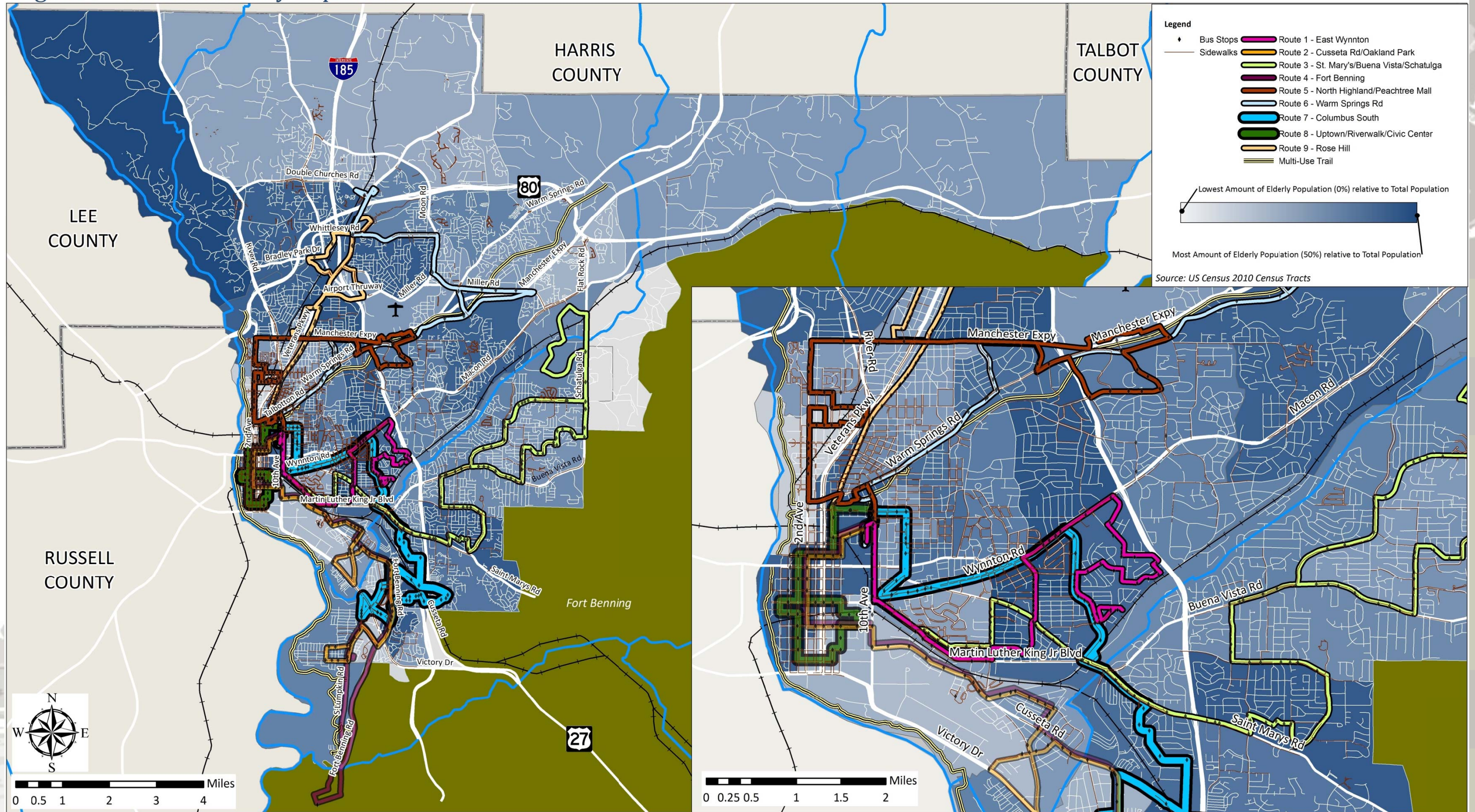
III – DATA COLLECTION & EXISTING CONDITIONS

Figure 6 - Percent Children Population



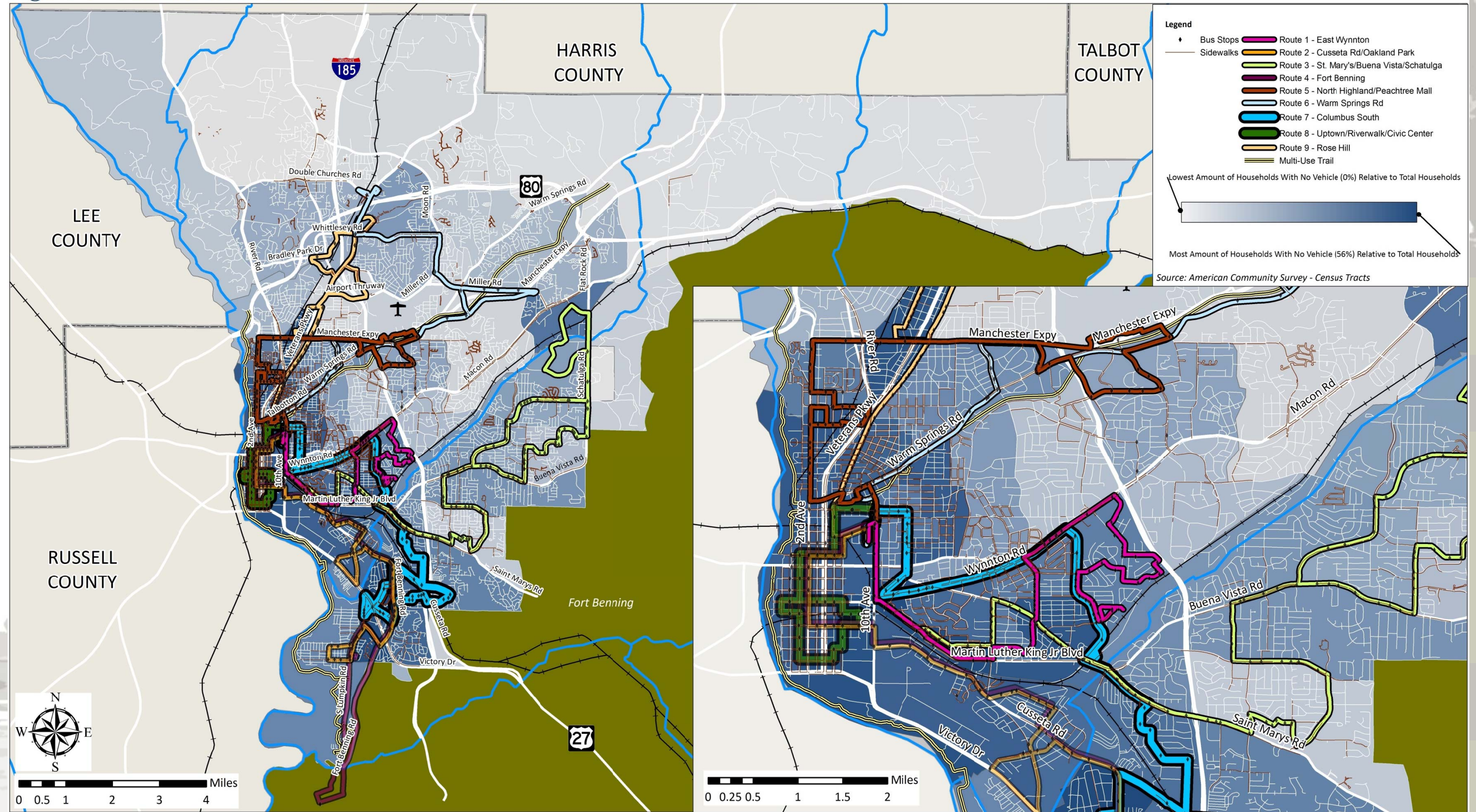
III – DATA COLLECTION & EXISTING CONDITIONS

Figure 7 - Percent Elderly Population



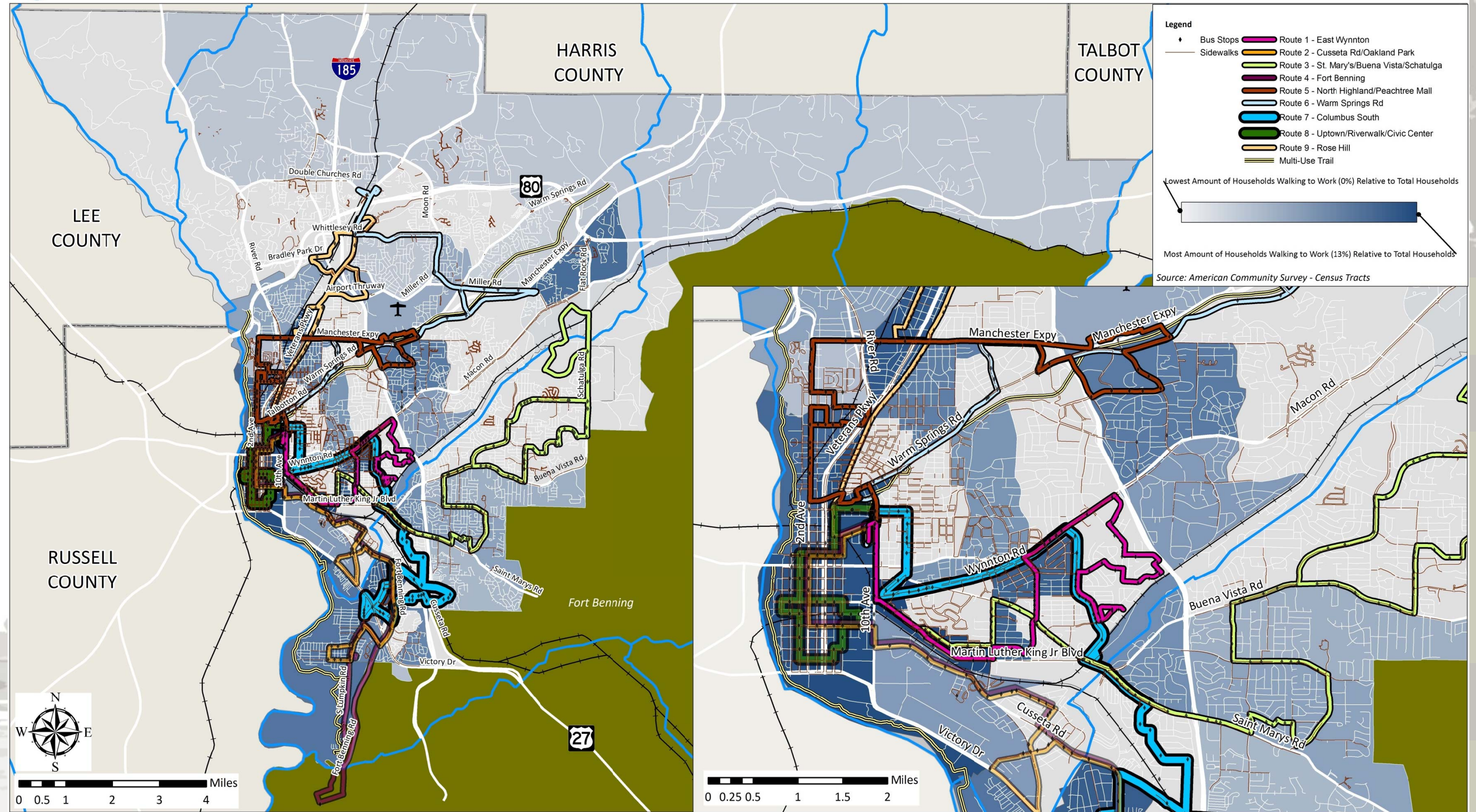
III – DATA COLLECTION & EXISTING CONDITIONS

Figure 8 - Percent Households With No Vehicle



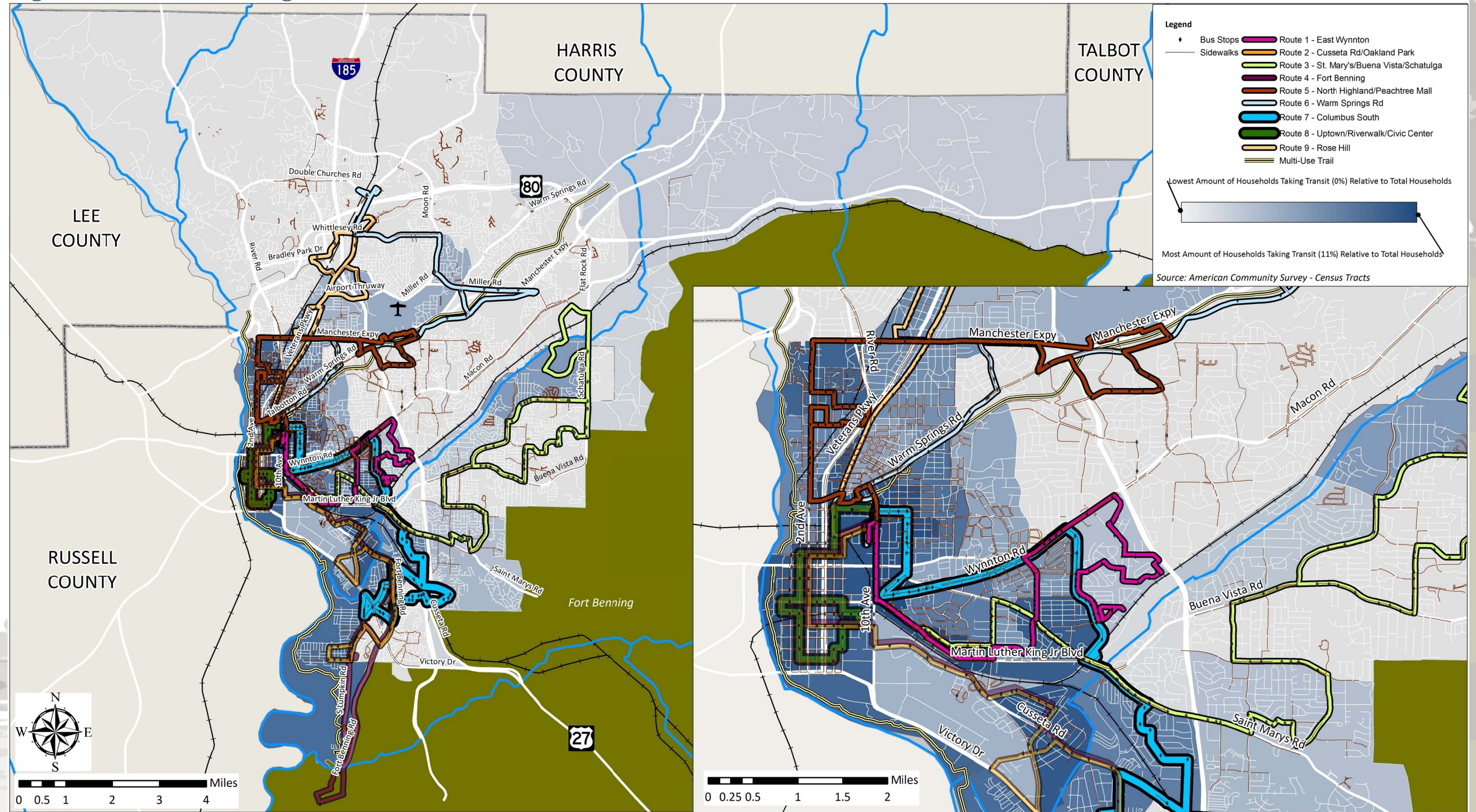
III – DATA COLLECTION & EXISTING CONDITIONS

Figure 9 - Percent Walk to Work



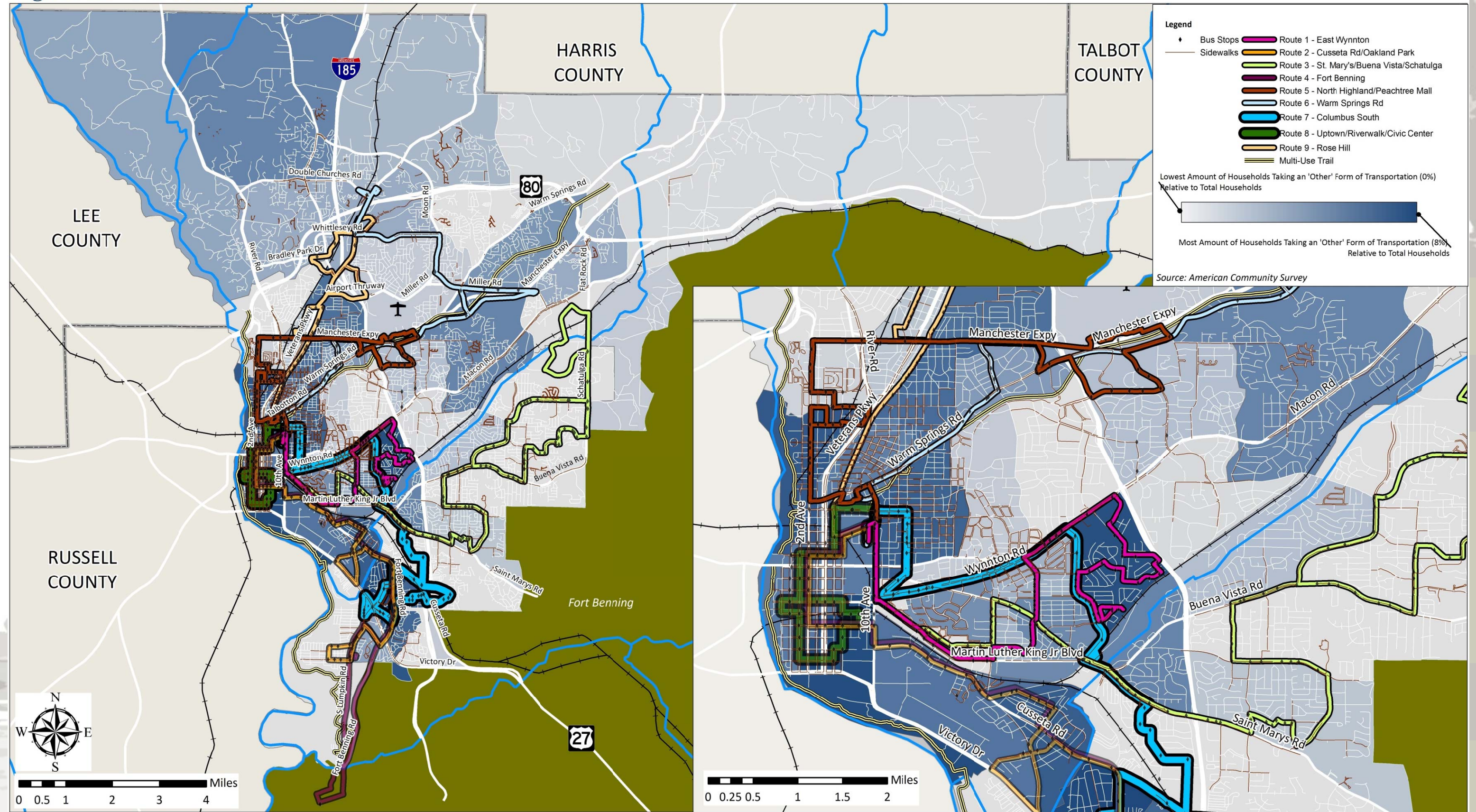
III – DATA COLLECTION & EXISTING CONDITIONS

Figure 10 - Percent Taking Transit to Work



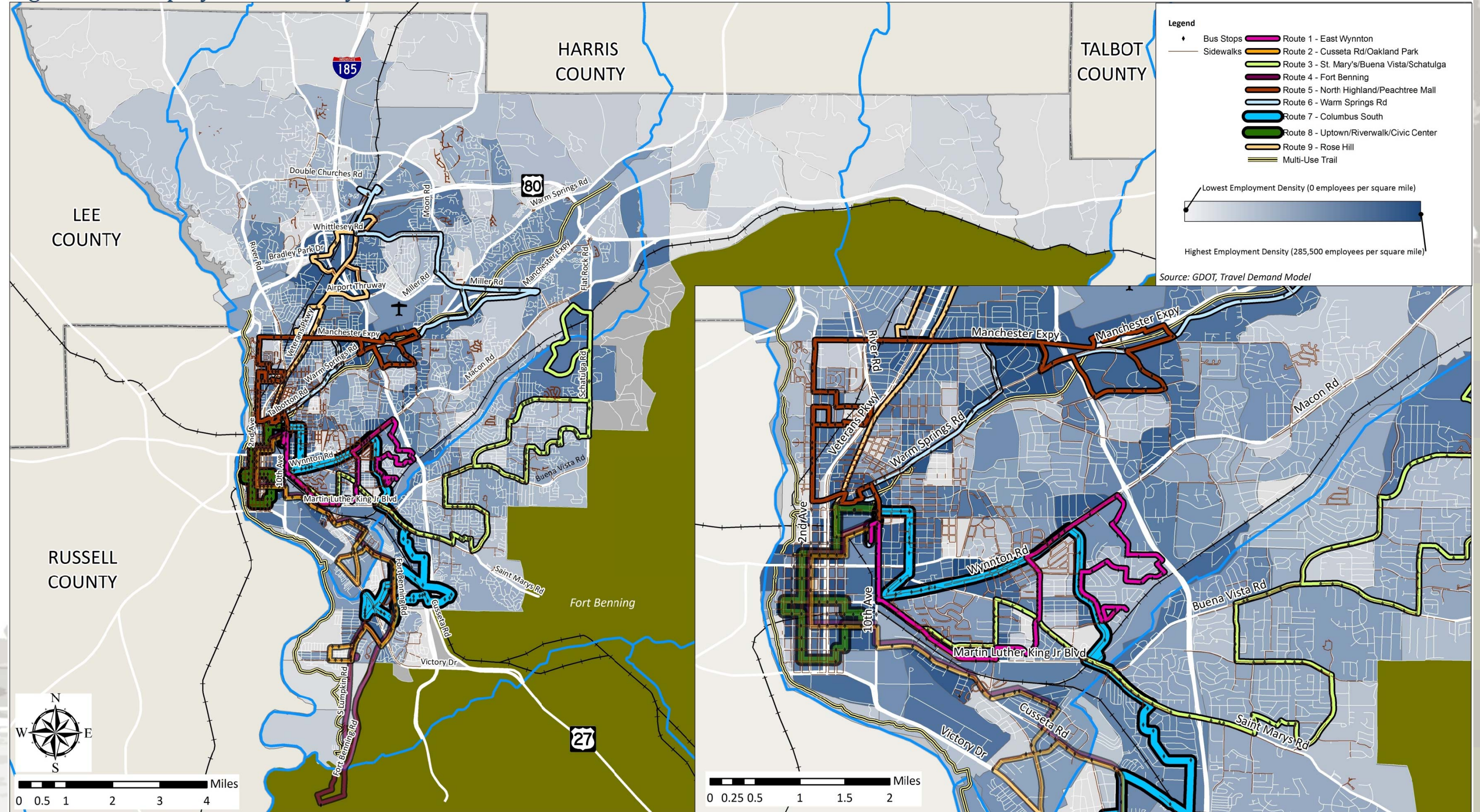
III – DATA COLLECTION & EXISTING CONDITIONS

Figure 11 - Percent 'Other' to Work



III – DATA COLLECTION & EXISTING CONDITIONS

Figure 12 - Employment Density



III – DATA COLLECTION & EXISTING CONDITIONS

Additional Data Reviewed

Additional data was also reviewed and included:

- GDOT traffic volumes at select locations within Columbus
- Mapping of points of interest such as shopping areas, civic amenities, and schools within the community (as shown in **Figure 13**)
- General reviews of right-of-way widths
- General reviews of elevation and grading data
- Field reviews used for a variety of reasons including:
 - To verify where and how alternative transportation currently operates within Columbus
 - Review corridors and locations where alternative transportation could potentially be implemented
 - To generally familiarize the study team with different aspects of the City

Review of METRA Transit System

The METRA Transit System consists of fixed route bus service and complementary Americans with Disabilities Act (ADA) demand response paratransit service.

Fixed Route System

METRA currently operates 16 buses serving 9 bus routes in the Columbus area, Monday through Friday and 10 buses on Saturday, excluding some holidays. The METRA fixed route transit service consists of the following routes:

1. East Wynnton
2. Cusseta Road/Oakland Park
3. St. Mary's Road/Buena Vista Road/Schatulga Road
4. Fort Benning
5. North Highland/Peachtree Mall
6. Warm Springs Road
7. Columbus South
8. Uptown/Riverwalk/Columbus Civic Center
9. Rosehill/Columbus Park Crossing

According to the 2011 National Transit Database (NTD), METRA's fixed route service expended almost \$4 million in operating expenses; operated over 60,000 vehicle revenue hours; and recorded over one million passenger boardings. These operating figures are often used to generate standard transit industry service

statistics. These statistics are Operating Expense per Vehicle Revenue Hour (Service Efficiency); Operating Expense per Unlinked Passengers Trip (Service Effectiveness); and Unlinked Passengers per Vehicle Revenue Hour (Service Productivity). **Table 5** shows a comparison of the fixed route bus service operations of the METRA transit system to other transit systems.

The METRA fixed route service operates efficiently in relation to the peer group. The 2011 METRA fixed route service cost per vehicle revenue hour of \$61.56 is well below the peer group average of \$69.51 and second only to the Athens, GA system.

The service effectiveness metric of cost per unlinked passenger trip also indicates that METRA is performing well relative to the peer systems. (Note: An unlinked passenger trip is defined as a passenger boarding a transit service. For example, a passenger using two different bus routes for the same journey would board two different buses and be counted as two unlinked passenger trips). Table 2-1 indicates that METRA's \$3.60 cost per passenger boarding is one of the lowest in the peer group and below the peer group average of \$4.15.

METRA's number of unlinked passenger boardings per vehicle revenue hour (service productivity) is about average for the peer group. METRA boarded 17.1 unlinked passenger trips per revenue hour in 2011. The peer group average was 19.35 unlinked passenger trips per revenue hour.

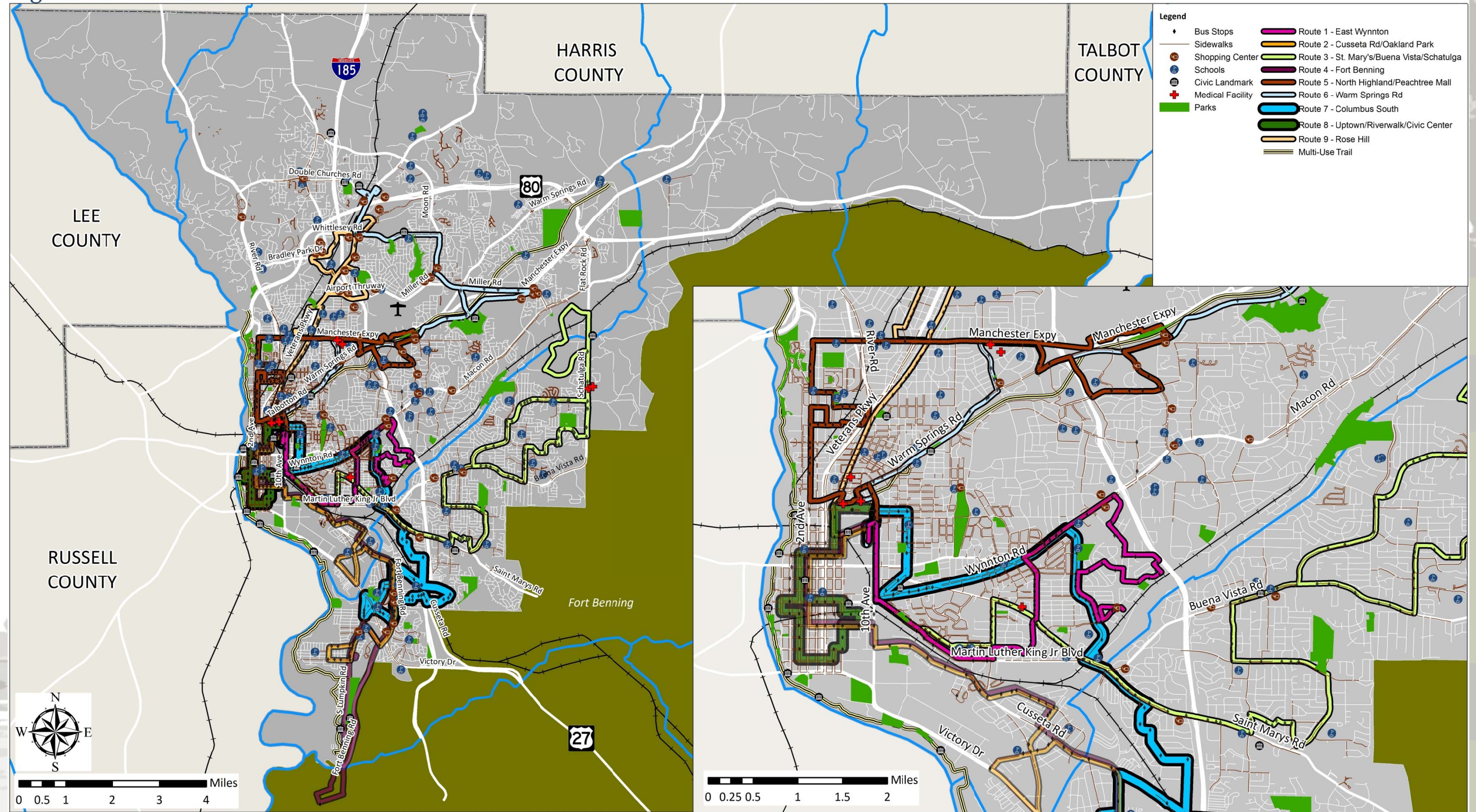
Table 5
METRA Peer Area Performance Comparison (Fixed Routes Only)

| Statistic (Bus Service) | METRA, Columbus, GA | Albany Transit System, Albany, GA | Athens Transit System, Athens, GA | Chatham Area Transit, Savannah, GA | Greenville Transit Authority, Greenville, SC | Macon-Bibb County Transit Authority, Macon, GA |
|---|---------------------|-----------------------------------|-----------------------------------|------------------------------------|--|--|
| Service Population | 230,208 | 452,091 | 388,542 | 265,128 | 393,826 | 554,354 |
| Annual Unlinked Trips | 1,081,512 | 1,044,344 | 1,857,311 | 3,537,086 | 497,337 | 799,461 |
| Annual Vehicle Revenue Hours | 63,204 | 31,914 | 69,849 | 206,002 | 36,142 | 73,127 |
| Operating Expenses | \$3,890,542 | \$2,033,082 | \$3,980,449 | \$13,247,684 | \$3,259,971 | \$5,209,003 |
| Operating Cost Per Revenue Hour | \$61.56 | \$63.71 | \$56.99 | \$64.31 | \$90.20 | \$71.23 |
| Cost Per Unlinked Passenger Trip | \$3.60 | \$1.95 | \$2.14 | \$3.75 | \$6.55 | \$6.52 |
| Unlinked Passenger Trips Per Revenue Hour | 17.1 | 32.7 | 26.6 | 17.2 | 13.8 | 10.9 |

Source: 2011 National Transit Database

III – DATA COLLECTION & EXISTING CONDITIONS

Figure 13 - Points of Interest



III – DATA COLLECTION & EXISTING CONDITIONS

Demand Response

Demand Response service, also known as paratransit service, was implemented in the United States following the Americans with Disabilities Act (ADA) of 1990 which required complementary paratransit service be provided alongside most fixed route transit services which receive funding from the Federal Transit Administration (FTA). ADA complementary paratransit service is for eligible persons who are unable to access the fixed route services due to a disabling condition.

The METRA Dial-A-Ride service is a specialized curb-to-curb transportation service that is available to persons with disabilities in the METRA service area that live within 3/4-mile of METRA fixed route bus service. As a shared-ride service, passengers share the vehicle with others traveling in the same direction at the same time. All METRA Dial-A-ride vehicles are wheelchair accessible either with lift equipment or low floor ramp. Curb-to-curb service connects those who meet the ADA Certification Requirements with their destinations.

In 2011, the Dial-A-Ride service consumed over \$250,000 in operating expenses; operated approximately 14,500 vehicle revenue hours; and recorded almost 30,000 passenger boardings. **Table 6** presents the peer analysis for demand response service. The METRA demand response service operating cost per revenue hour of \$17.85 is substantially lower than the peer group. The Savannah, GA system had the next lowest operating cost per revenue hour at \$30.17. The peer group average for the service efficiency measure was \$52.05.

Operating cost per unlinked passenger trip for the METRA Dial-A-Ride service was \$8.70. The peer group ranged from \$17.26 in Savannah, GA to \$51.04 in Greenville, SC.

The METRA paratransit system also scored well on the service productivity measure with 2.1 trips per revenue hour. The peer unlinked passenger trips per vehicle revenue hour ranged from 1.3 to 1.9.

Financial Information

The METRA annual budget cycle runs from July 1 through June 30 and consists of operating, planning, and capital elements. According to the 2011 NTD summary report, METRA had operating expenses of over \$4

million with the expenditures coming from the following funding sources:

- Fare Revenues - \$829,752 (20%)
- Local Funds - \$2,936,318 (71%)
- State Funds - \$277,319 (7%)
- Federal Funds - \$0 (0%)
- Other Funds - \$105,524 (3%)

METRA's capital expenditures were \$3.8 million. The Federal share was 80%.

Physical Assets

The METRA fleet consists of 45 (four of which will be auctioned in FY 2013) vehicles including:

- 35 fixed route buses
- 10 paratransit vehicles

The METRA Transit System facilities are located in a single campus on Linwood Boulevard near the central business district and adjacent to the regional medical complex and government offices. The campus includes:

- Administration Building
- Maintenance Facility
- Transfer Center
- Bus Parking Lot

METRA provides bus shelters, bus stops, benches, trash receptacles, and signage at strategic locations throughout the system.

Staff Resources, Governance, and Planning

The METRA Transit System is a department of the Columbus Consolidated Government and is managed by a Transportation Director. METRA has 77 total employees, most of which are bus and paratransit service operators and maintenance personnel. METRA management responsibilities include:

- Staffing, training, and managing bus operators and mechanics
- Customer service operations
- Repair and maintenance of fleet vehicles
- Bus and paratransit scheduling
- Marketing
- Service planning
- Grant management
- Contracts and procurement
- Placing/maintaining bus shelters and route signage

- Contracts and procurement
- Service enhancements to include routes, stops, shelters, and facilities
- Parking management and enforcement
- Management of four city garages and one surface parking lot

Table 6
METRA Peer Area Performance Comparison (Fixed Routes Only)

| Statistic (Demand Response) | METRA, Columbus, GA | Albany Transit System, Albany, GA | Athens Transit System, Athens, GA | Chatham Area Transit, Savannah, GA | Greenville Transit Authority, Greenville, SC | Macon-Bibb County Transit Authority, Macon, GA |
|---|---------------------|-----------------------------------|-----------------------------------|------------------------------------|--|--|
| Annual Unlinked Trips | 29,688 | 11,399 | 9,478 | 77,320 | 9,389 | 16,358 |
| Annual Vehicle Revenue Hours | 14,478 | 6,940 | 7,214 | 44,236 | 5,015 | 8,768 |
| Operating Expenses | \$258,371 | \$484,921 | \$379,180 | \$1,334,817 | \$479,251 | \$315,767 |
| Operating Cost Per Revenue Hour | \$17.85 | \$69.87 | \$52.56 | \$30.17 | \$95.56 | \$36.01 |
| Cost Per Unlinked Passenger Trip | \$8.70 | \$42.54 | \$40.01 | \$17.26 | \$51.04 | \$19.30 |
| Unlinked Passenger Trips Per Revenue Hour | 2.1 | 1.6 | 1.3 | 1.7 | 1.9 | 1.9 |

Source: 2011 National Transit Database

III – DATA COLLECTION & EXISTING CONDITIONS

General Findings

As suggested earlier, much of the development pattern and transportation system in Columbus is automobile oriented. Despite this, the study team found a significant amount of opportunity to invest in more alternative transportation in the Columbus area. Bolstered by the recent and ongoing alternative transportation investments in the area (the Fall Line Trace, Riverwalk, 14th Street Pedestrian Bridge) and the interest shown by the community, several transportation corridors could potentially be redesigned to incorporate alternative transportation and form a core network of bicycle and pedestrian corridors through and around the City.

Likewise, the study team found the METRA system to be performing very well when compared to similarly sized peers in the south east. With continued growth in the community, there may be opportunities to consider future cross-town and express routes.

Therefore, in order to establish a baseline for how the community can best proceed with additional alternative transportation investment, goals and objectives from several previous studies (the Long Range Transportation Plan, the previous alternative transportation study, etc.) were reviewed and combined with thoughts from the public engagement strategies as shown in **Table 7**.

Table 7
Goals and Objectives

| Goal | Objectives |
|---|--|
| Develop an alternative transportation system that links shopping, education, recreation, medical and governmental centers to the major transportation corridors | <ul style="list-style-type: none"> • Accommodate bicycles and pedestrians through infrastructure projects where pedestrians and bicyclists are permitted to travel • Prioritize projects and programs that facilitate access to points of interest within the community • Utilize a “complete streets” approach • Improve integration of the METRA system with bicycle and pedestrian facilities |
| Identify important focal hubs along the transportation corridors and routes | <ul style="list-style-type: none"> • Determine major points of interest within the community • Identify locations where multiple alternative transportation facilities can converge |
| Develop a comprehensive Alternative Transportation System linking existing residential areas to all major public and private points | <ul style="list-style-type: none"> • Identify alternative transportation corridors that offer redundancy • Identify corridors that can support alternative transportation throughout the urban areas of Columbus |
| Develop and implement policies that enhance and protect the information including further development of an alternative transportation system | <ul style="list-style-type: none"> • Utilize Congestion Management System strategies to monitor changes in travel characteristics that support alternative transportation • Utilize Intelligent Transportation Systems (ITS) strategies where applicable to enhance the alternative transportation system • Continue to monitor air quality in the region |

THIS PAGE LEFT INTENTIONALLY BLANK

CHAPTER FOUR ALTERNATIVE TRANSPORTATION NEEDS ANALYSIS



Columbus, GA

URS

IV – ALTERNATIVE TRANSPORTATION NEEDS ANALYSIS

Suitability Analysis

Utilizing a variety of the spatial data shown in the previous section, the study team derived a methodology to determine the relative suitability for different types of alternative transportation investment. This methodology was developed to consider the type, quantity, and quality of data available relative to general best practices for alternative transportation suitability analyses.

As part of the study process, suitability was defined by three major categories:

- Household Demand
- Points of Interest Demand
- Character Density and Existing Alternative Transportation

Household Demand

Household Demand was defined as travel demand based on trips likely to occur from the home, with sensitivity given to those who may rely more on alternative transportation than other members of society. Therefore, household demand incorporated the likelihood of children traveling, the likelihood of the elderly traveling, general population density, areas with relatively large numbers of households without an automobile, and areas where there is evidence of alternative transportation currently being used for trips from the home.

Points of Interest Demand

Relative to household demand, points of interest demand tended to focus on the 'attraction' side of trips (where people will travel to from their homes). Therefore, it included areas with high concentrations of employment as well as other points of interest such as shopping areas, places of worship, civic amenities, parks, schools, and medical facilities.

Character Density and Existing Alternative Transportation

This category attempted to define areas where the built environment was more likely to encourage alternative transportation use. Therefore it included areas with evidence of block size density and existing proximity to alternative transportation assets.

Using this logic, a spatial analysis was developed incorporating the components of all three categories.

The analysis incorporated a scoring mechanism that allocated more points where conditions suggested more propensity for alternative transportation and less points where conditions suggested less propensity for alternative transportation. As shown in **Tables 8 through 10**, the analysis varied slightly in order to incorporate different considerations for different modes of transportation.

The suitability analysis results shown in **Figures 14 through 16** show minor differences from one mode to the other (owing to the similarity of methodology utilized) so that the overall alternative transportation suitability shown in **Figure 17** captures the general nature of the results. As the suitability analysis shows, there is more propensity for alternative transportation in the core areas of Columbus but reveals that alternative transportation needs exist in the more suburban areas of the community in which there is currently limited amounts of alternative transportation.



Table 8
Household Demand Suitability Analysis Criteria and Points Allocation

| Attribute | Geography Level | Source | Pedestrian Suitability | | Bike Suitability | | Transit Suitability | |
|------------------------------------|-----------------|---------------------------|------------------------|--------|------------------|--------|---------------------|--------|
| | | | Criteria | Points | Criteria | Points | Criteria | Points |
| % Child (19 and Under) | Tract | 2010 Census SF 1 Tract | Below 20% | 1 | Below 20% | 1 | Below 20% | 1 |
| | | | 20% to 30% | 2 | 20% to 30% | 2 | 20% to 30% | 2 |
| | | | 30% to 40% | 3 | 30% to 40% | 3 | 30% to 40% | 3 |
| | | | 40%+ | 4 | 40%+ | 4 | 40%+ | 4 |
| % Elderly (55 and Over) | Tract | 2010 Census SF 1 Tract | Below 15% | 1 | Below 15% | 1 | Below 15% | 1 |
| | | | 15% to 25% | 2 | 15% to 25% | 2 | 15% to 25% | 2 |
| | | | 25% to 35% | 3 | 25% to 35% | 3 | 25% to 35% | 3 |
| | | | 35%+ | 4 | 35%+ | 4 | 35%+ | 4 |
| % Households With No Vehicle | Tract | American Community Survey | 10 to 20% | 1 | 10 to 20% | 1 | 10 to 20% | 1 |
| | | | 20 to 40% | 2 | 20 to 40% | 2 | 20 to 40% | 2 |
| | | | 40 to 99% | 3 | 40 to 99% | 3 | 40 to 99% | 3 |
| | | | 100% | 4 | 100% | 4 | 100% | 4 |
| % Walk To Work | Tract | American Community Survey | 0 to 1% | 1 | Not Used | | 0 to 1% | 1 |
| | | | 1 to 5% | 2 | | | 1 to 5% | 2 |
| | | | 5 to 10% | 3 | | | 5 to 10% | 3 |
| | | | 10%+ | 4 | | | 10%+ | 4 |
| % Transit To Work | Tract | American Community Survey | 0 to 1% | 1 | 0 to 1% | 1 | 0 to 1% | 1 |
| | | | 1 to 5% | 2 | 1 to 5% | 2 | 1 to 5% | 2 |
| | | | 5 to 10% | 3 | 5 to 10% | 3 | 5 to 10% | 3 |
| | | | 10%+ | 4 | 10%+ | 4 | 10%+ | 4 |
| % 'Other' To Work | Tract | American Community Survey | Not Used | | 0 to 1% | 1 | 0 to 1% | 1 |
| | | | | | 1 to 2% | 2 | 1 to 2% | 2 |
| | | | | | 2 to 6% | 3 | 2 to 6% | 3 |
| | | | | | 6%+ | 4 | 6%+ | 4 |
| Population Density Per Square Mile | Census Block | 2010 Census Block | 1 to 1500 | 1 | 1 to 1500 | 1 | 1 to 1500 | 1 |
| | | | 1500 - 5000 | 2 | 1500 - 5000 | 2 | 1500 - 5000 | 2 |
| | | | 5000 - 20000 | 3 | 5000 - 20000 | 3 | 5000 - 20000 | 3 |
| | | | 20000+ | 4 | 20000+ | 4 | 20000+ | 4 |

IV – ALTERNATIVE TRANSPORTATION NEEDS ANALYSIS

Table 9
Points of Interest Demand Suitability Analysis Criteria and Points Allocation

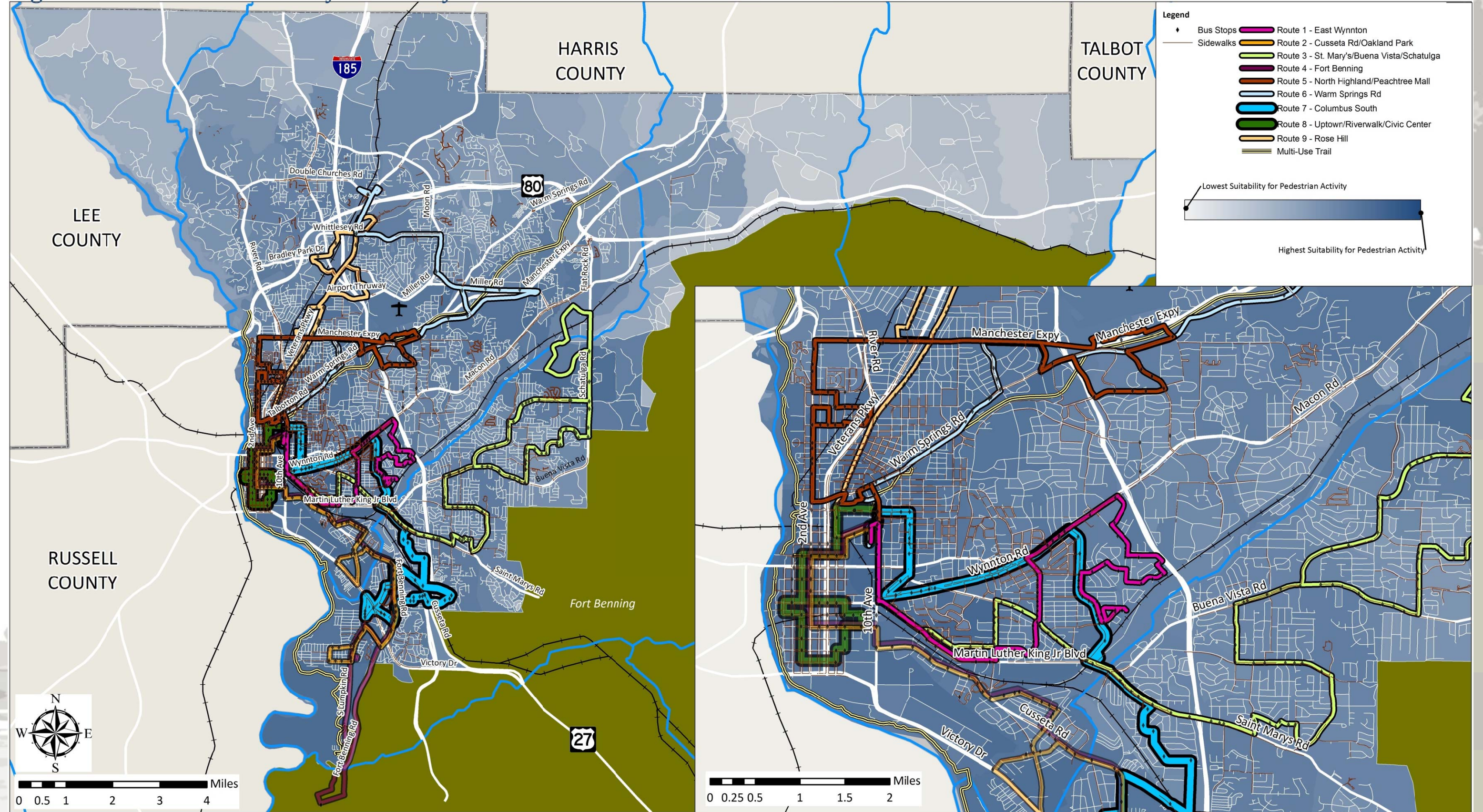
| Attribute | Geography Level | Source | Pedestrian Suitability | | Bike Suitability | | Transit Suitability | |
|------------------------------------|--------------------------------|--|------------------------|--------|------------------|--------|---------------------|--------|
| | | | Criteria | Points | Criteria | Points | Criteria | Points |
| Employment Density Per Square Mile | TAZ | 2006 Columbus Travel Demand Model (GDOT) | 0-100 | 1 | 0-100 | 1 | 0-100 | 1 |
| | | | 100 to 500 | 2 | 100 to 500 | 2 | 100 to 500 | 2 |
| | | | 500 to 5000 | 3 | 500 to 5000 | 3 | 500 to 5000 | 3 |
| | | | 5000+ | 4 | 5000+ | 4 | 5000+ | 4 |
| Shopping Center Proximity | Distance to Points of Interest | Columbus Points of Interest | Within 1 mile | 1 | Within 1 mile | 1 | Within 1 mile | 1 |
| | | | Within 3/4 mile | 2 | Within 3/4 mile | 2 | Within 3/4 mile | 2 |
| | | | Within 1/2 mile | 3 | Within 1/2 mile | 3 | Within 1/2 mile | 3 |
| | | | Within 1/4 mile | 4 | Within 1/4 mile | 4 | Within 1/4 mile | 4 |
| School Proximity | Distance to Points of Interest | Columbus Points of Interest | Within 1 mile | 1 | Within 1 mile | 1 | Within 1 mile | 1 |
| | | | Within 3/4 mile | 2 | Within 3/4 mile | 2 | Within 3/4 mile | 2 |
| | | | Within 1/2 mile | 3 | Within 1/2 mile | 3 | Within 1/2 mile | 3 |
| | | | Within 1/4 mile | 4 | Within 1/4 mile | 4 | Within 1/4 mile | 4 |
| Medical Facility Proximity | Distance to Points of Interest | Columbus Points of Interest | Within 1 mile | 1 | Within 1 mile | 1 | Within 1 mile | 1 |
| | | | Within 3/4 mile | 2 | Within 3/4 mile | 2 | Within 3/4 mile | 2 |
| | | | Within 1/2 mile | 3 | Within 1/2 mile | 3 | Within 1/2 mile | 3 |
| | | | Within 1/4 mile | 4 | Within 1/4 mile | 4 | Within 1/4 mile | 4 |
| Park Proximity | Distance to Points of Interest | Columbus Points of Interest | Within 1 mile | 1 | Within 1 mile | 1 | Within 1 mile | 1 |
| | | | Within 3/4 mile | 2 | Within 3/4 mile | 2 | Within 3/4 mile | 2 |
| | | | Within 1/2 mile | 3 | Within 1/2 mile | 3 | Within 1/2 mile | 3 |
| Landmark Proximity | Distance to Points of Interest | Columbus Points of Interest | Within 1 mile | 1 | Within 1 mile | 1 | Within 1 mile | 1 |
| | | | Within 3/4 mile | 2 | Within 3/4 mile | 2 | Within 3/4 mile | 2 |
| | | | Within 1/2 mile | 3 | Within 1/2 mile | 3 | Within 1/2 mile | 3 |
| | | | Within 1/4 mile | 4 | Within 1/4 mile | 4 | Within 1/4 mile | 4 |

Table 10
Character Density and Existing Alternative Transportation Suitability Analysis Criteria and Points Allocation

| Attribute | Geography Level | Source | Pedestrian Suitability | | Bike Suitability | | Transit Suitability | |
|-------------------------------|-----------------------------|--------------------|------------------------|--------|------------------|--------|---------------------|--------|
| | | | Criteria | Points | Criteria | Points | Criteria | Points |
| Block Size (Perimeter Length) | Census Block | 2010 Census Block | Over 0.8 miles | 0 | Not Used | | Over 0.8 miles | 0 |
| | | | 0.6 to 0.8 miles | 1 | | | 0.6 to 0.8 miles | 1 |
| | | | 0.4 to 0.6 miles | 2 | | | 0.4 to 0.6 miles | 2 |
| | | | 0.2 to 0.4 miles | 3 | | | 0.2 to 0.4 miles | 3 |
| | | | Under 0.2 Miles | 4 | | | Under 0.2 Miles | 4 |
| Sidewalk | Distance to Sidewalk | Columbus Sidewalks | Within 1 mile | 0 | Not Used | | Within 1 mile | 0 |
| | | | Within 3/4 mile | 0 | | | Within 3/4 mile | 0 |
| | | | Within 1/2 mile | 0 | | | Within 1/2 mile | 0 |
| | | | Within 1/4 mile | 4 | | | Within 1/4 mile | 4 |
| Bus Stop Proximity | Distance to Bus Stop | METRA Bus Stops | Within 1 mile | 1 | Within 1 mile | 1 | Within 1 mile | 1 |
| | | | Within 3/4 mile | 2 | Within 3/4 mile | 2 | Within 3/4 mile | 2 |
| | | | Within 1/2 mile | 3 | Within 1/2 mile | 3 | Within 1/2 mile | 3 |
| | | | Within 1/4 mile | 4 | Within 1/4 mile | 4 | Within 1/4 mile | 4 |
| Riverwalk Proximity | Distance to Riverwalk | Riverwalk | Within 1 mile | 1 | Within 1 mile | 1 | Not Used | |
| | | | Within 3/4 mile | 2 | Within 3/4 mile | 2 | | |
| | | | Within 1/2 mile | 3 | Within 1/2 mile | 3 | | |
| | | | Within 1/4 mile | 4 | Within 1/4 mile | 4 | | |
| Fall Line Trace Proximity | Distance to Fall Line Trace | Riverwalk | Within 1 mile | 1 | Within 1 mile | 1 | Not Used | |
| | | | Within 3/4 mile | 2 | Within 3/4 mile | 2 | | |
| | | | Within 1/2 mile | 3 | Within 1/2 mile | 3 | | |
| | | | Within 1/4 mile | 4 | Within 1/4 mile | 4 | | |

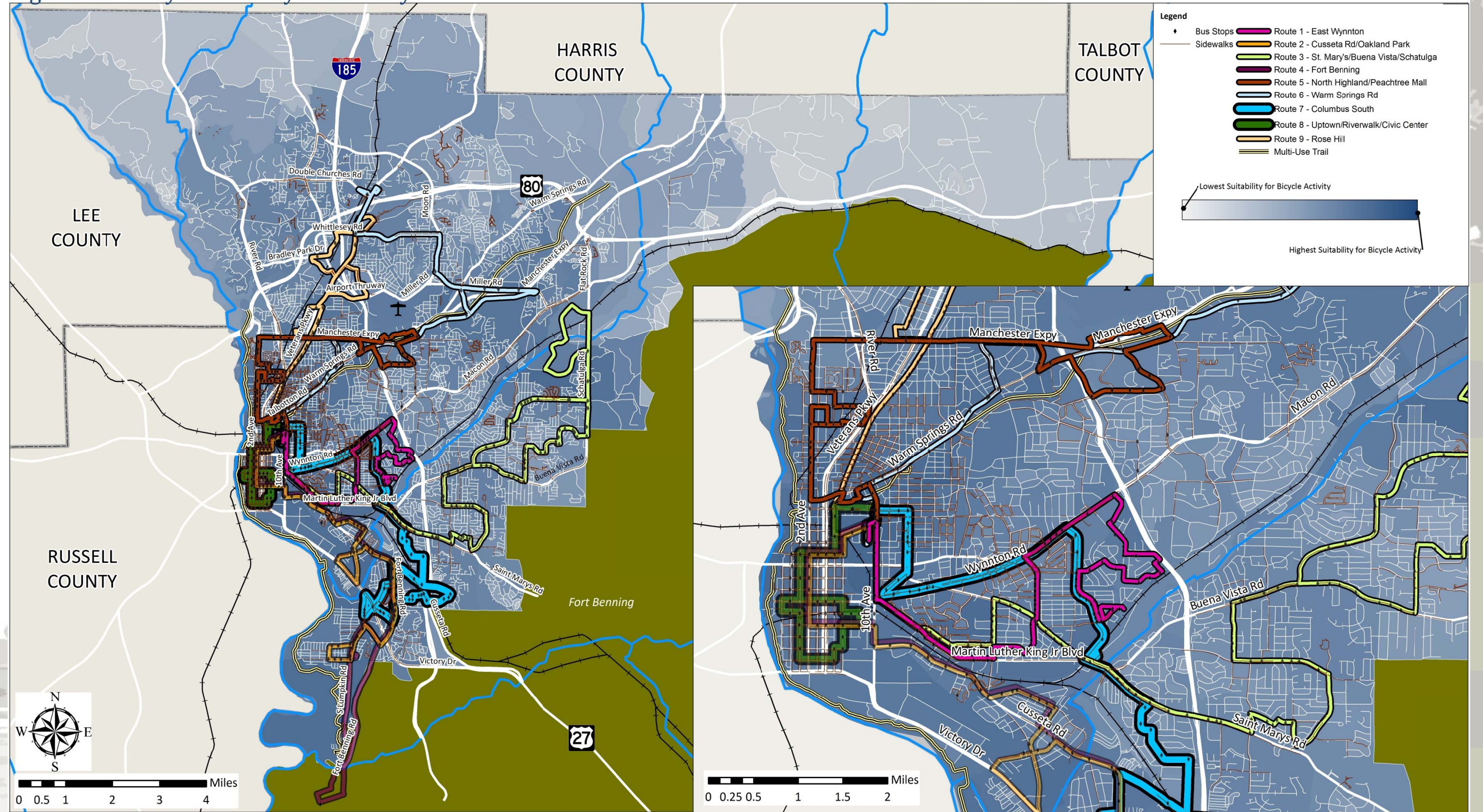
IV – ALTERNATIVE TRANSPORTATION NEEDS ANALYSIS

Figure 14 - Pedestrian Activity Suitability



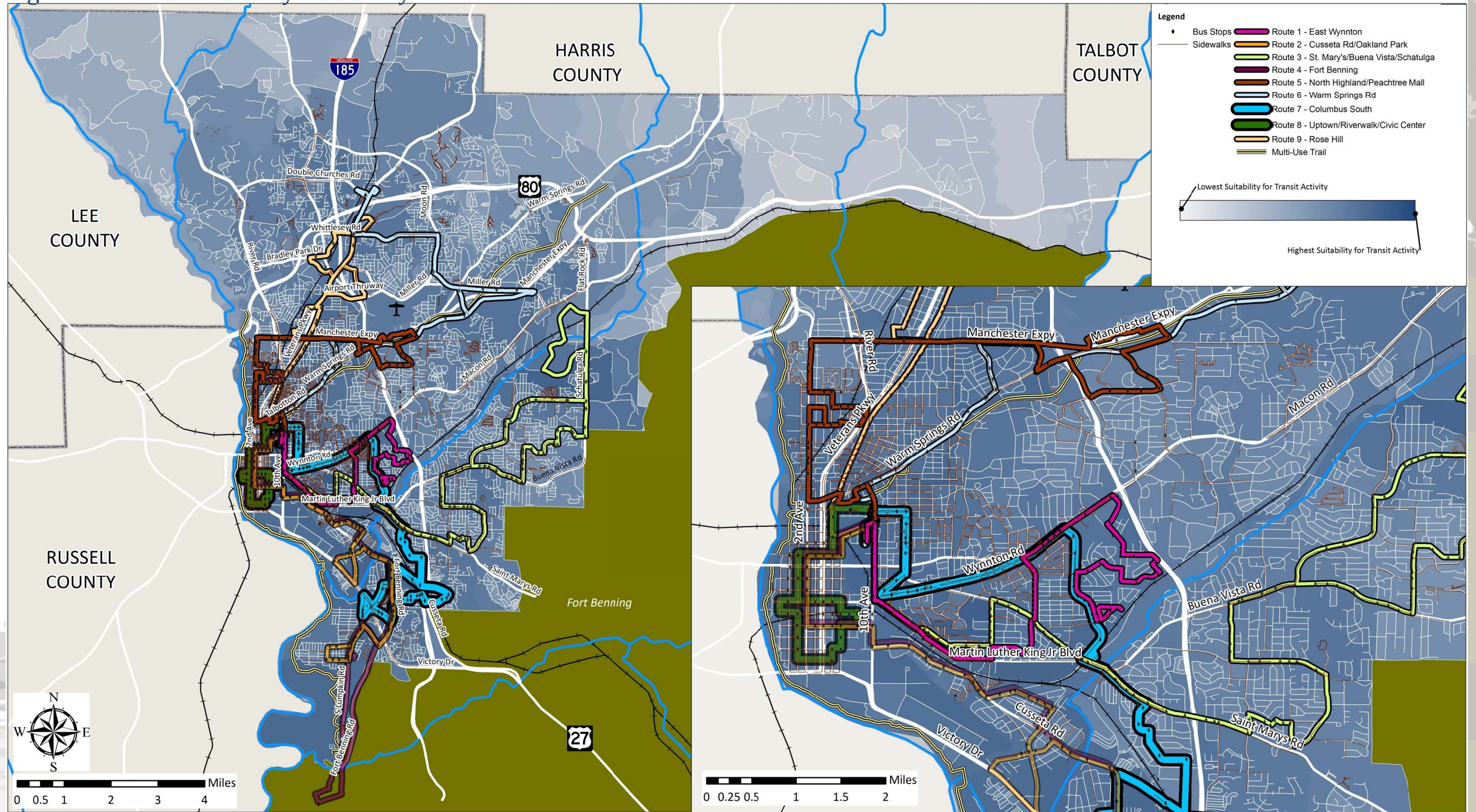
IV – ALTERNATIVE TRANSPORTATION NEEDS ANALYSIS

Figure 15 - Bicycle Activity Suitability



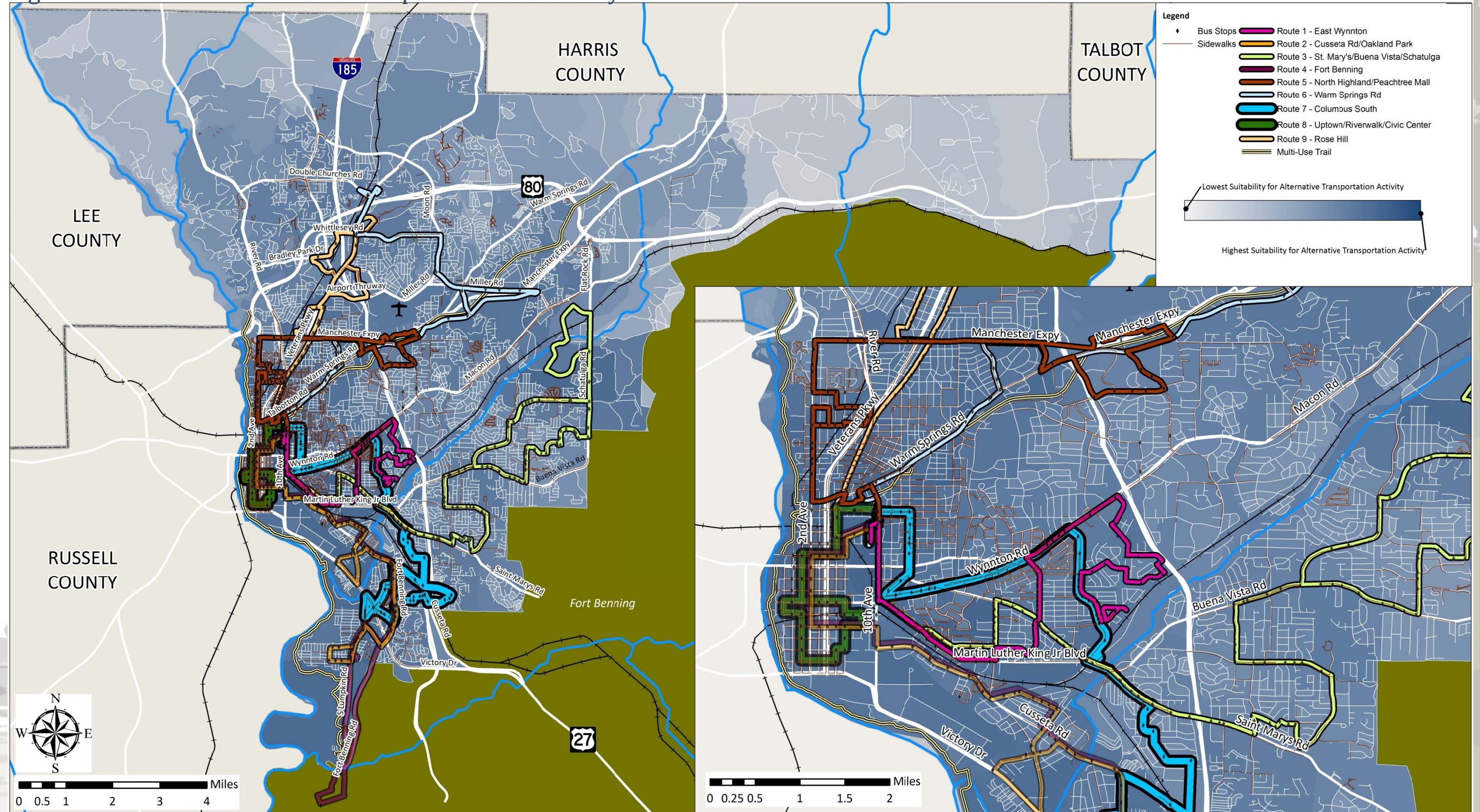
IV – ALTERNATIVE TRANSPORTATION NEEDS ANALYSIS

Figure 16 - Transit Activity Suitability



IV – ALTERNATIVE TRANSPORTATION NEEDS ANALYSIS

Figure 17 - Overall Alternative Transportation Suitability



IV – ALTERNATIVE TRANSPORTATION NEEDS ANALYSIS

Transit Needs

As established in the study team's review of existing conditions, Columbus is fortunate to have an established and well performing public transit system – METRA, however, as is typical in today's transit environment, the need for expanded and additional services is evident. In order to effectively identify transit needs, a number of sources were utilized:

- Previous study recommendations
- 2010 US Census Demographic Data
- Input from the Stakeholder Advisory Committee, public meetings, other community sources
- METRA user requests
- Overall Transit Suitability Map indicating target areas for additional services
- Area travel patterns
- Transportation Investment Act (TIA) project for designated express services
- National Transit Data Base (NTD) 2011 METRA Profile

A variety of transit potential needs were identified and include:

- Improve frequency on the five routes that currently exceed 30 minute frequencies
- Improve frequency on the Downtown Trolley
- Investigate potential for regional service from surrounding counties to Columbus
- Expand service hours of METRA fixed route and paratransit services
- Provide additional paratransit service availability on Saturday
- Conduct detailed transit system study to identify most feasible approach to providing service to activity/retail areas
- Expand sidewalk network and curb cuts to promote access to transit services
- Establish a dedicated transit funding source as 20 percent of METRA's funding is derived from passenger fares and over 70 percent is received from local government
- Construct or improve park and ride lots in north, south, and east areas to complement new express services
- Link Fort Benning to Columbus activity centers with express or limited stop bus or van service

- Implement a street car or light rail system in Uptown Columbus
- Connect Columbus to Atlanta via high speed rail

General Thoughts on Needs

Based on the suitability analyses, determination of METRA needs, and public engagement efforts during the second round of meetings, general needs for the future of alternative transportation were established:

- The need to establish an alternative transportation network and improved services throughout the urbanized portions of Columbus
- The opportunity to build off of the current alternative transportation system (particularly the Fall Line Trace) to conceptualize this alternative transportation network
- Despite public engagement expressed goals favoring dedicated bike lanes over sharrows, there are limited opportunities in Columbus to utilize excess pavement for bike lanes
- Despite this, there are a number of critical transportation corridors with multiple travel lanes in each direction in which the outside lane can be utilized as a shared lane using sharrow striping (the ideal setting for sharrow striping)
- A variety of corridors with excess vehicular capacity that could potentially be redirected towards alternative transportation facilities and general beautification and streetscaping
- The need to incorporate 'redundancy' of alternative transportation facilities (transit, bicycle based, and sidewalks) within the system so that multiple destination based or loop oriented trips can be made using alternative transportation

CHAPTER FIVE

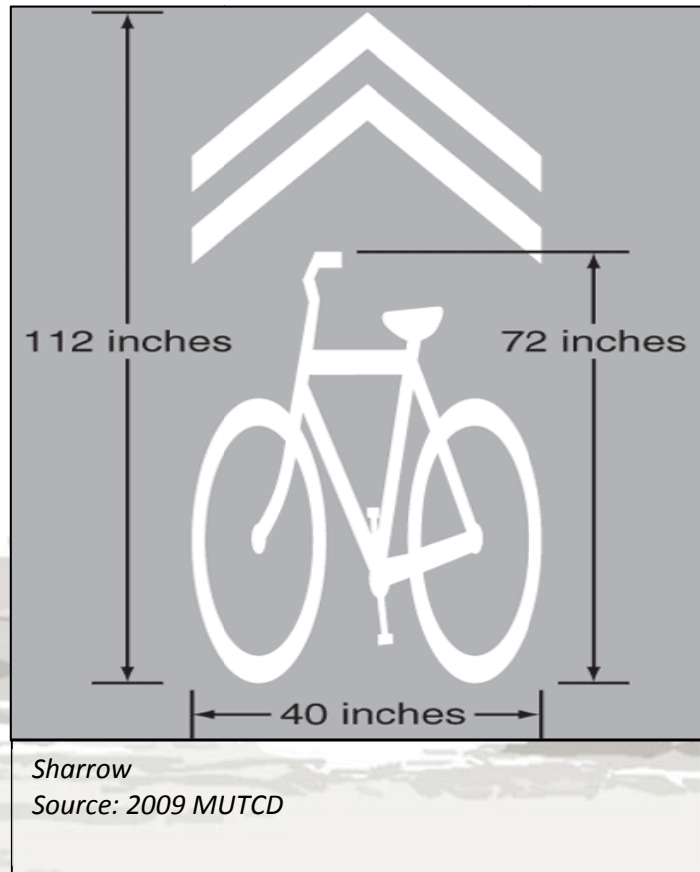
ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE



V – ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE

Before discussing some of the potential recommendations, it is necessary to address the potential types of alternative transportation investments that can be implemented.

Sidewalks – Sidewalks are typically constructed for pedestrians using concrete adjacent to vehicular roadways. Sidewalks are separated from the roadway through at least a curb or gutter but ideally through some type of landscape buffer or (in more urban settings) through an enhancement and/or furniture buffer. The width and design of sidewalks will vary depending on a number of factors including the type of adjacent street, pedestrian demand, and even the surrounding built environment. In all cases, it is critical to provide adequate sidewalk width so that at least two people can walk side-by-side with a third passing easily. At a minimum, the Americans with Disabilities Act (ADA) requires a four foot width with five foot wide passing zones every 200 feet. GDOT recommends a simple minimum sidewalk width of five feet. Sample design approaches for suburban and urban areas are provided in **Figures 18** through **21**.



Sharrows – Sharrows are street markings indicating that a travel lane is specifically intended to be a ‘shared-lane’ that can be both used by both automobiles and bicycles. When implementing, they should be installed immediately after any intersection and every 200 feet thereafter. The 2009 MUTCD states that sharrows:

- Assist bicyclists with lateral positioning in a shared lane with on-street parallel parking in order to reduce the chance of a bicyclist’s impacting the open door of a parked vehicle,
- Assist bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side by side within the same traffic lane,
- Alert road users of the lateral location bicyclists are likely to occupy within the traveled way,
- Encourage safe passing of bicyclists by motorists, and
- Reduce the incidence of wrong-way bicycling.

While not a standard, the MUTCD also advises guidance that sharrows not be installed on roadways with speed limits of more than 35 miles per hour.

An example of a sharrow application is provided in **Figure 22**.

Bicycle Lanes – Bicycle lanes are areas of the roadway dedicated for bicycle-only traffic. The bike lane is designated through pavement markings and signage, such as that shown in MUTCD sign R3-17. These lanes are typically 4 feet to 7 feet wide, located on the right side of the roadway, and are used in the same direction as vehicular traffic. At intersections and points of conflict, special care must be made in the design to maximize safety for the bicyclists – the MUTCD has several standards and guidelines relating to best practices. An example of a bike lane application is shown in **Figure 23**.



MUTCD sign R3-17

Cycle Tracks – Cycle tracks differ from bicycle lanes in that they are physically separated (either by striping or raised pavement) from the roadway. Cycle tracks vary widely in width depending on use and likelihood of passing bicyclists. They may also be constructed as two-way facilities in certain situations. As with bike lanes, at intersections and points of conflict, special care must be made in the design to maximize safety for the bicyclists. Example applications of cycle tracks are shown in **Figures 24** and **25**.

Multi-Use Trails – Multi-use trails are designated for both pedestrians and bicyclists. These modes may have separated pathways from each other depending on the intensity of anticipated use. Multi-use trails may be constructed along abandoned railways (as the Fall Line Trace was), adjacent to rivers (such as the Riverwalk) or streams, and along roadways. As with bike lanes and cycle tracks, at intersections and points of conflict, special care must be made in the design to maximize safety for the bicyclists. Multi-use trails should be at least 8 feet wide to allow for two-way bicycle traffic but are recommended to be at least 12 foot wide where heavy use is anticipated. Example applications of Multi-Use Trails are shown in **Figures 26** and **27**.

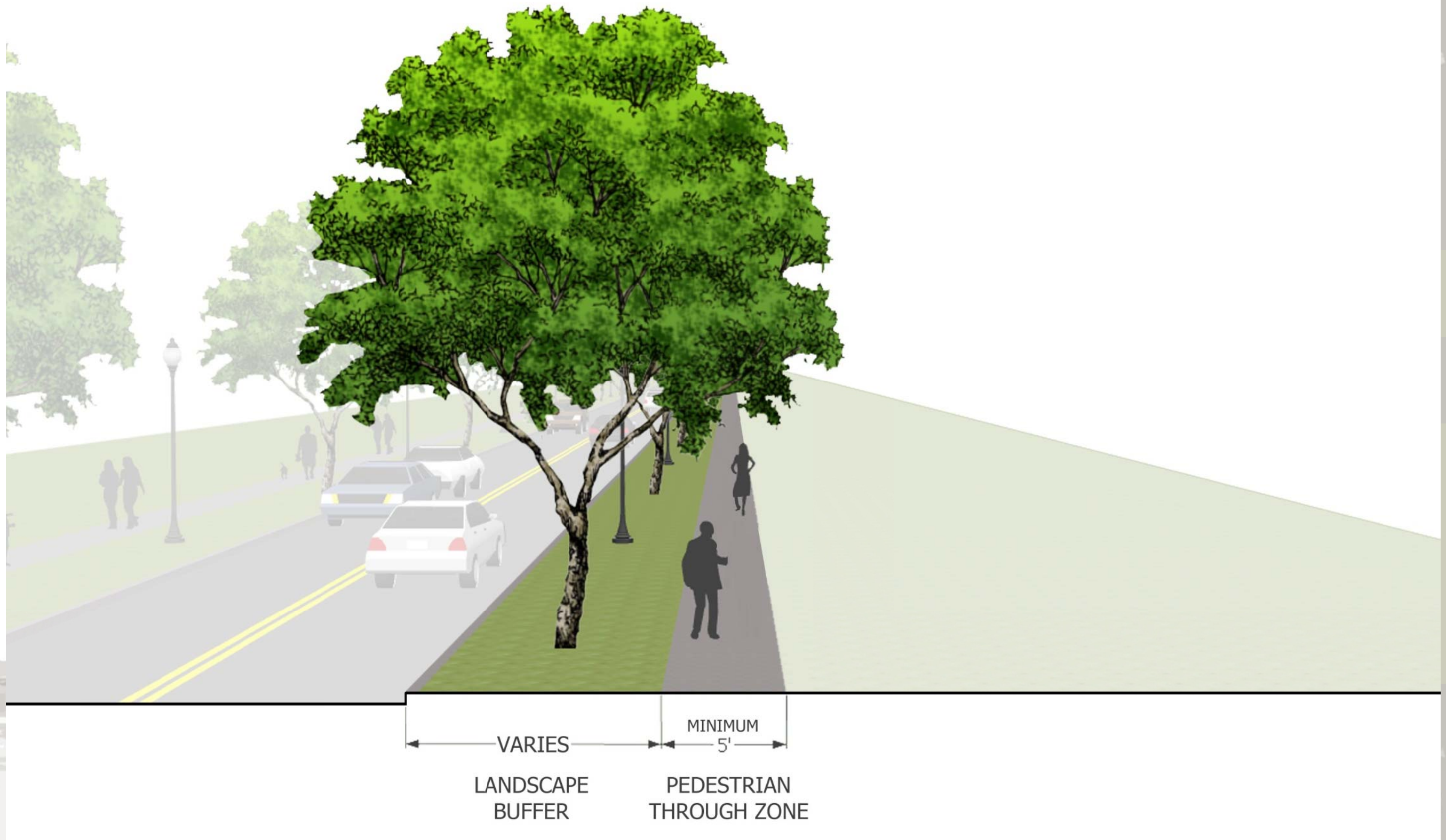
Road Diet – Road diets are projects in which vehicular capacity along the corridor is reduced and replaced by a variety of the previously discussed amenities. In order to minimize impacts to traffic flow, road diets are only appropriate when excess vehicular capacity is identified.

Additionally, design elements must be fully compliant with the design standards and guidelines associated with the **American Disabilities Act (ADA)** which can be accessed via the internet at http://www.ada.gov/2010ADASTandards_index.htm.

As it pertains to transportation, this federal law requires that disabled people are accommodated in the design of facilities including the provision of curb ramps at intersections.

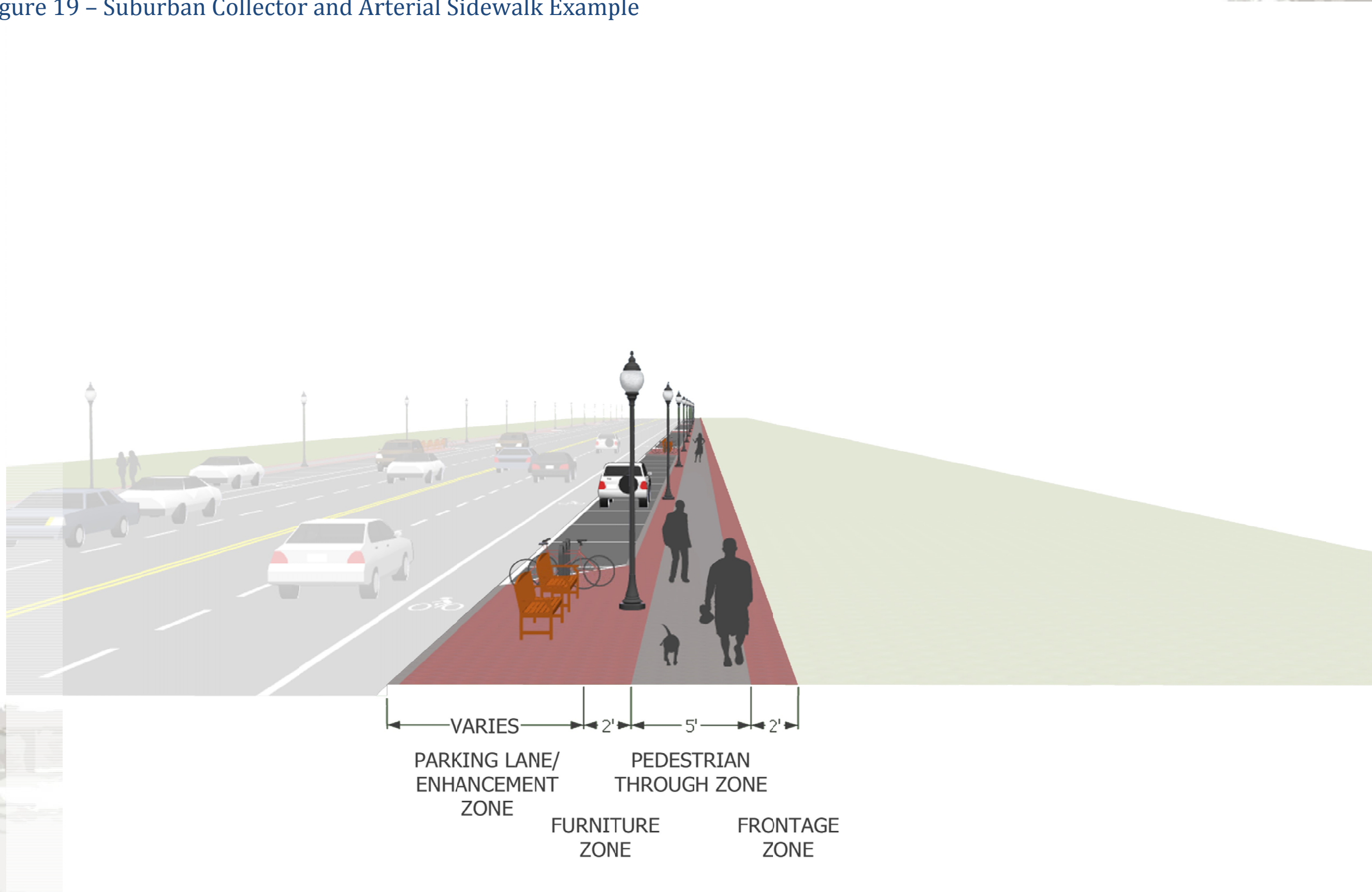
V – ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE

Figure 18 – Suburban Local Road Sidewalk Example



V – ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE

Figure 19 – Suburban Collector and Arterial Sidewalk Example



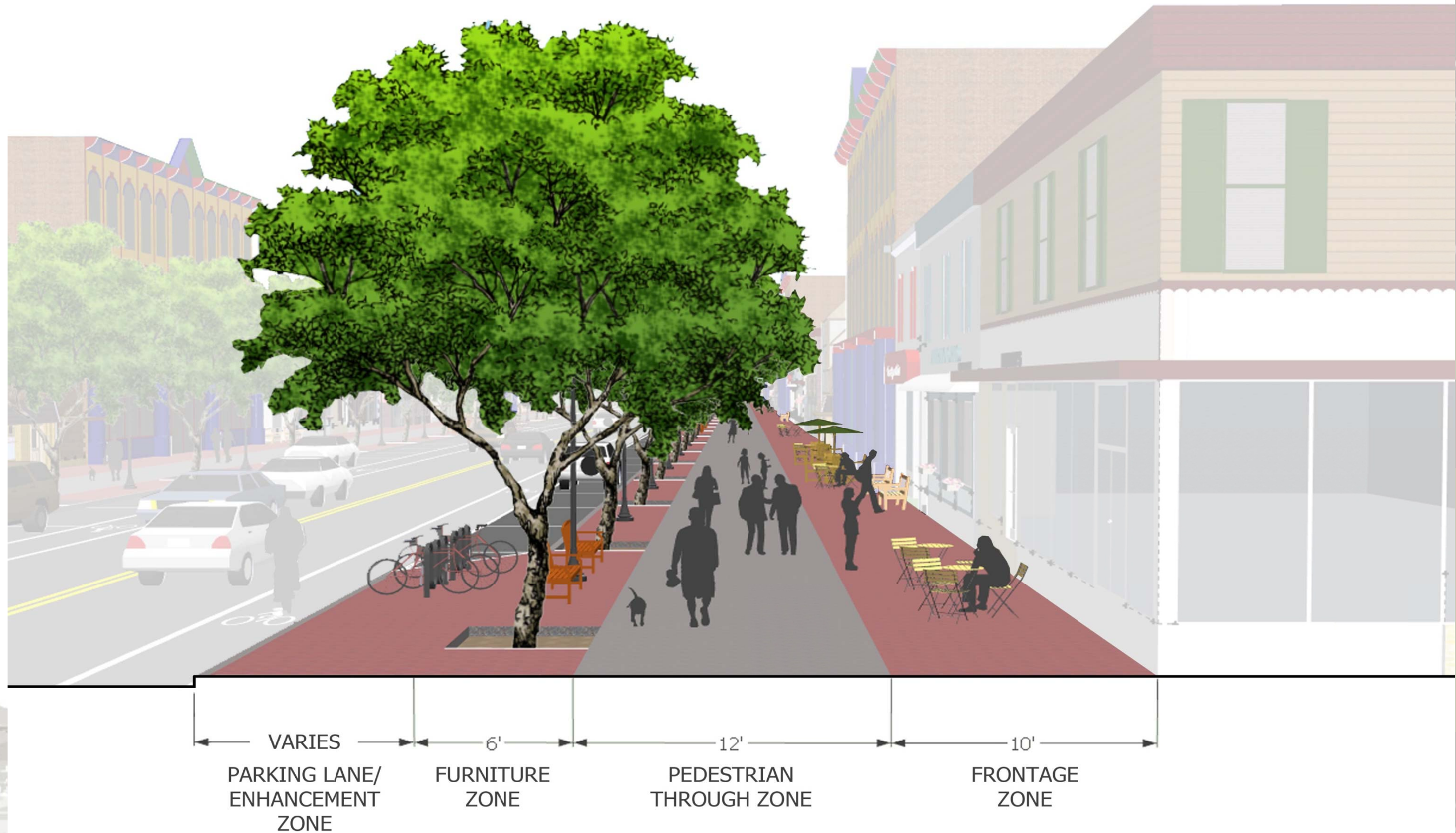
V – ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE

Figure 20 – Urban Core Sidewalk (Minimum Width Example)



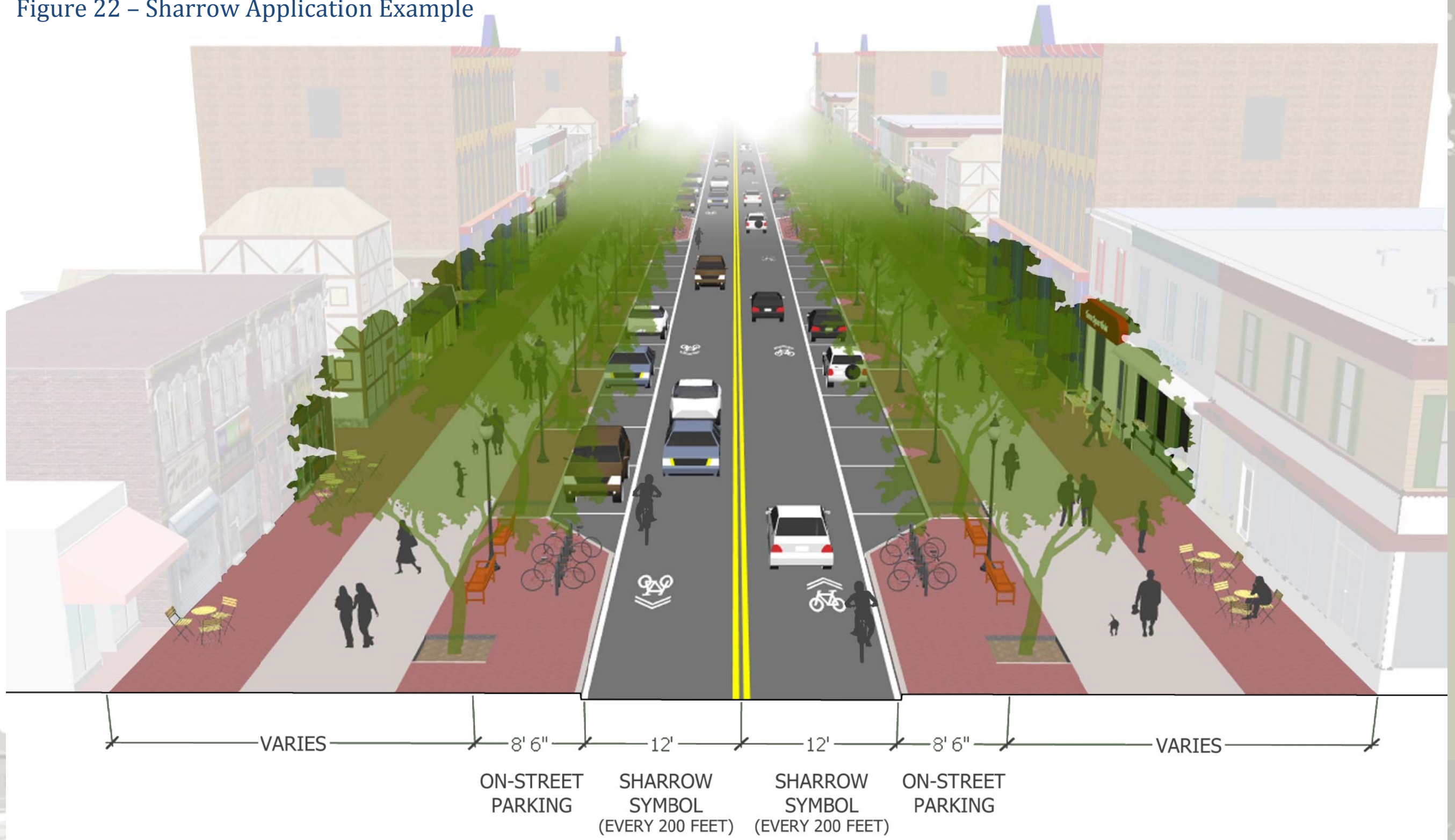
V – ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE

Figure 21 – Urban Core Sidewalk (Maximum Width Example)



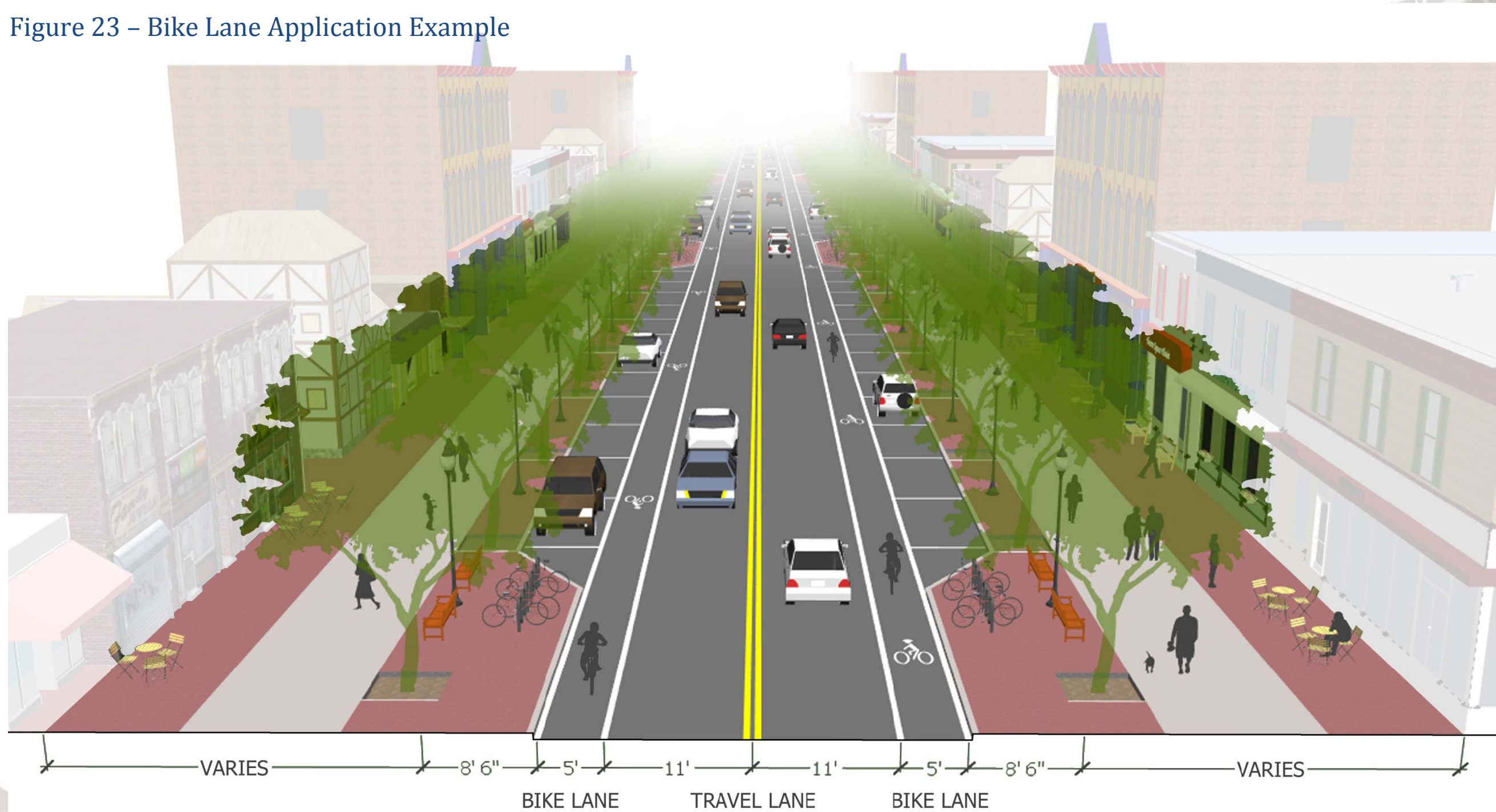
V – ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE

Figure 22 – Sharrow Application Example



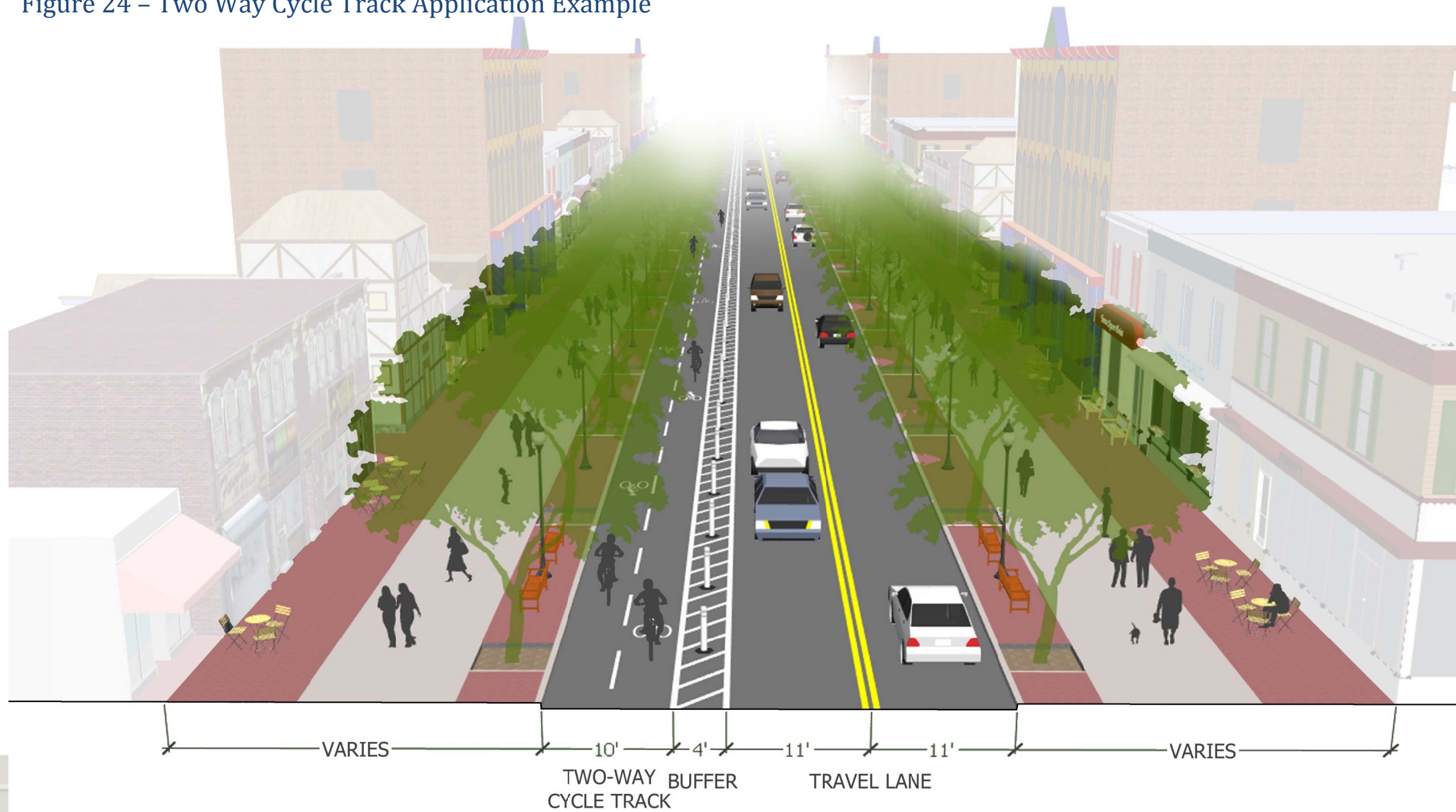
V – ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE

Figure 23 – Bike Lane Application Example



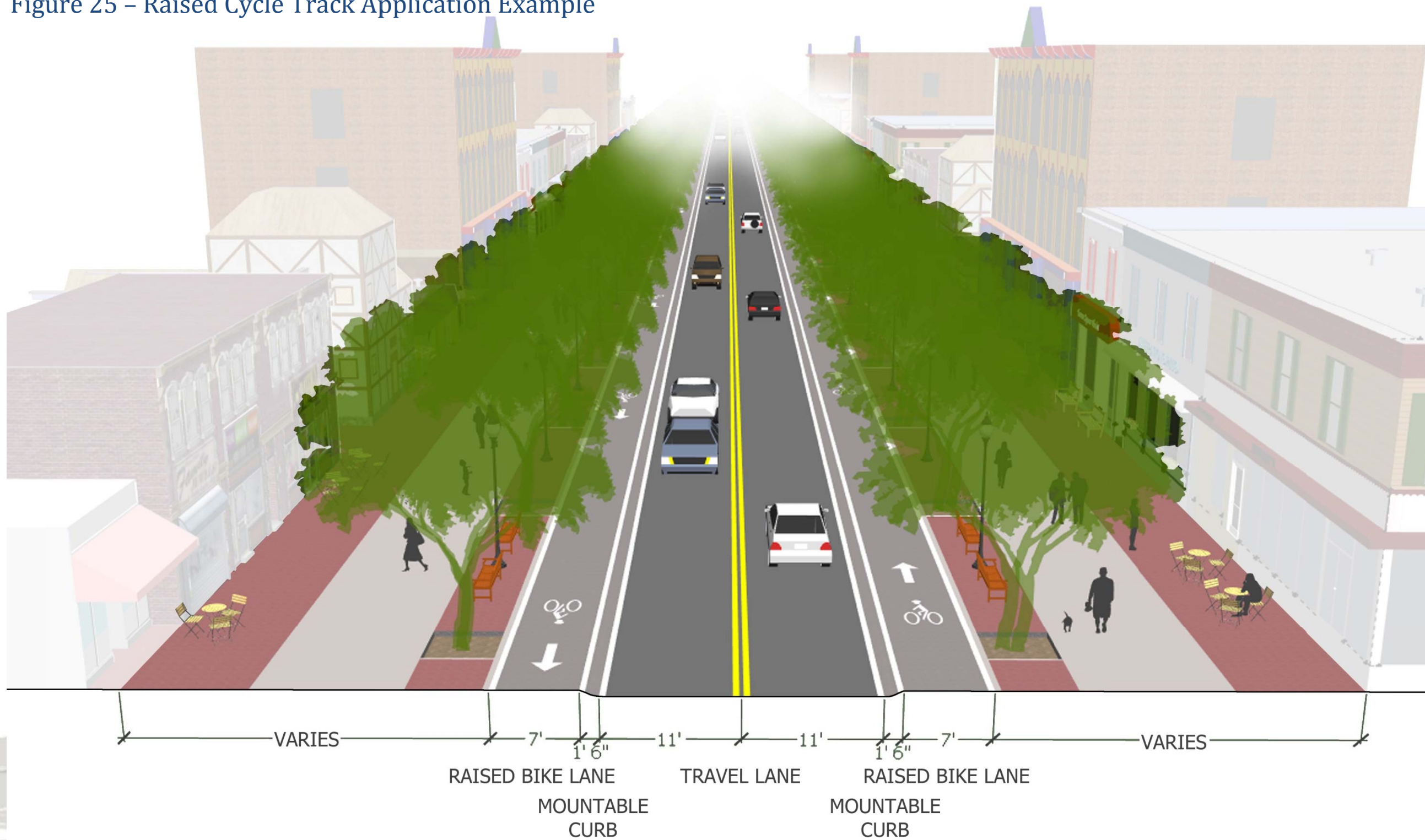
V – ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE

Figure 24 – Two Way Cycle Track Application Example



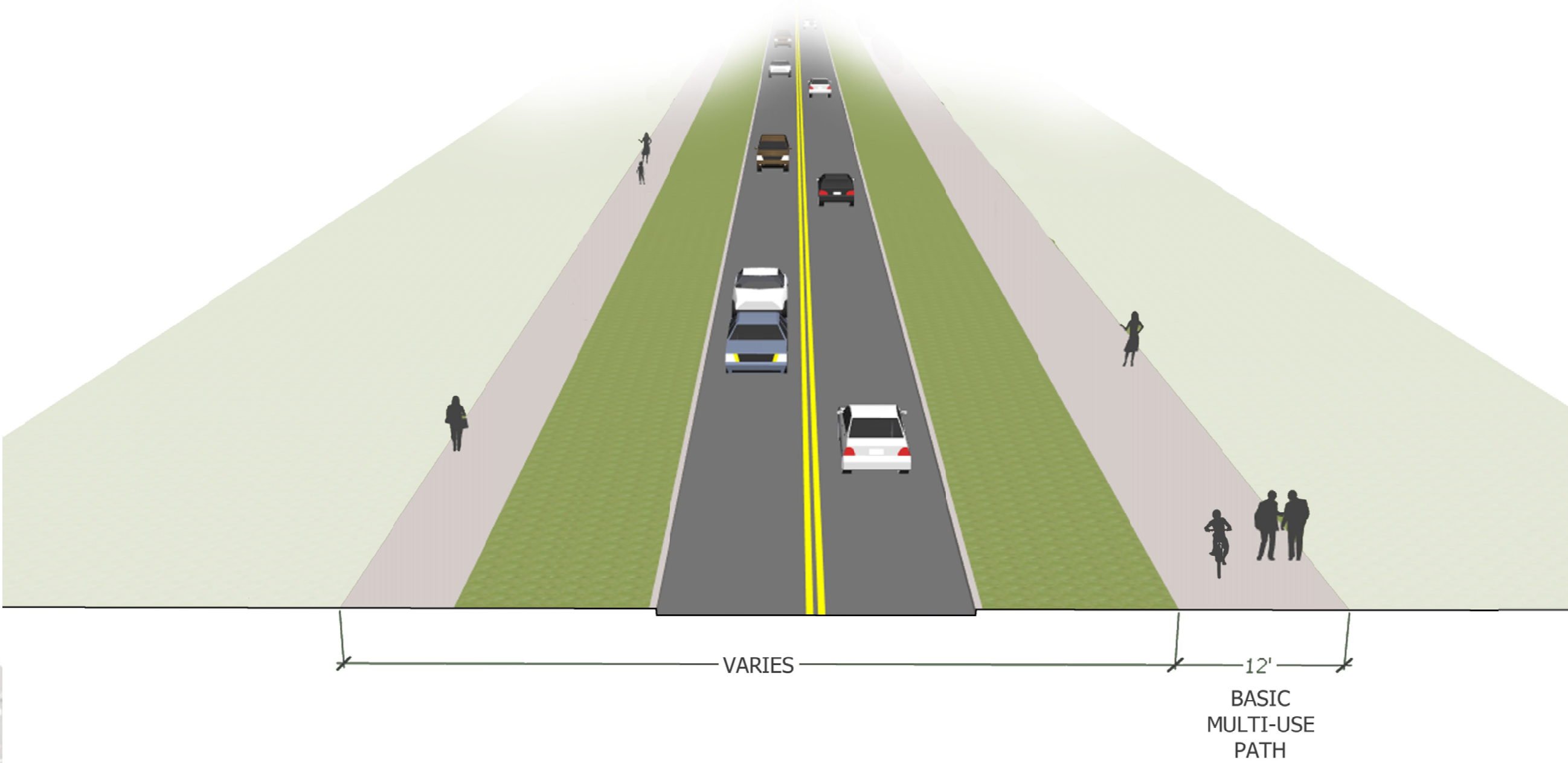
V – ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE

Figure 25 – Raised Cycle Track Application Example



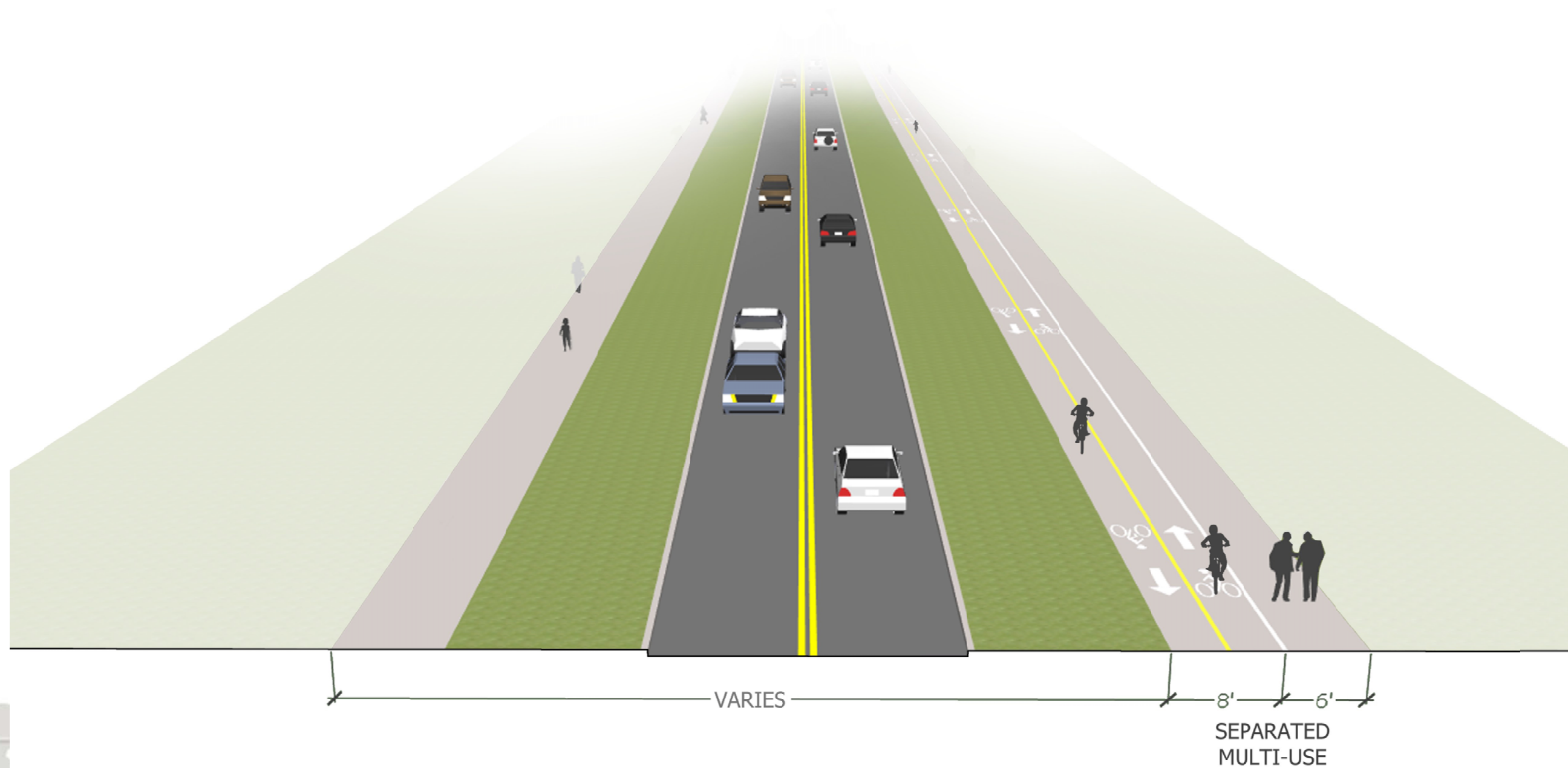
V – ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE

Figure 26 – Basic Multi-Use Trail Application Example



V – ALTERNATIVE TRANSPORTATION FACILITY & DESIGN GUIDANCE

Figure 27 – Separated Multi-Use Trail Application Example



CHAPTER SIX

CORRIDOR & POLICY RECOMMENDATIONS



VI –CORRIDOR & POLICY RECOMMENDATIONS

Policy Recommendations and General Considerations

To encourage alternative transportation use and complement the project recommendations identified, the City of Columbus should consider:

Develop a program in which sidewalks can be constructed based on the requests of existing residential neighborhoods. Such a program could prioritize multiple requests based on the presence of existing METRA bus stops, relative suitability (per the needs analysis contained within this report), and the general character areas (urban, suburban, etc.) described as part of the public engagement efforts. It should be noted that there are a handful of residential neighborhoods with METRA bus stops that do not have specific sidewalk recommendations as part of this study. This is not necessarily because sidewalks are not recommended at these locations but rather the plan was undertaken with a goal to not make recommendations on specific local residential streets unless part of a larger alternative transportation corridor.

The Columbus Consolidated Government is currently pursuing a Silver Certification as a **Bicycle Friendly Community** from The League of American Bicyclists. As the community pursues this certification, the 5 E's (Engineering, Education, Encouragement, Enforcement, and Evaluation & Planning) should be considered. The implementation of this plan would help significantly with the Engineering and Evaluation & Planning metrics, and the City should continue activities to support the Education, Encouragement, and Enforcement metrics.

As an ongoing effort to monitor alternative transportation use and further prioritize investment, the Columbus Consolidated Government should consider **taking advantage of various app and GPS derived technologies** that can 'map' the travel patterns of willing users.

The Columbus Consolidated Government should continue to **encourage private property access to and from any of the alternative transportation facilities** in the community. In particular, this includes access to and from the Riverwalk and Fall Line Trace.

Throughout the study process, a variety of comments were made about relatively **nuanced design issues, particularly related to the Fall Line Trace.** In particular, comments were heard on numerous occasions from multiple parties along two stretches of the corridor (the 'Buck Ice' location at 12th Avenue and the shared road portion between 10th Avenue and the Riverwalk). The Columbus Consolidated Government should continue to find ways to address strengthening these ties. While not explicitly recommended as a project recommendation, the overall findings of this study make it clear that where possible, the use of sidewalk, bike lane, and/or sharrow applications to help 'guide' Fall Line Trace users would help along these sections.

Likewise, the Columbus Consolidated Government should continue to consider best **way-finding practices** along existing and potential future alternative transportation corridors.

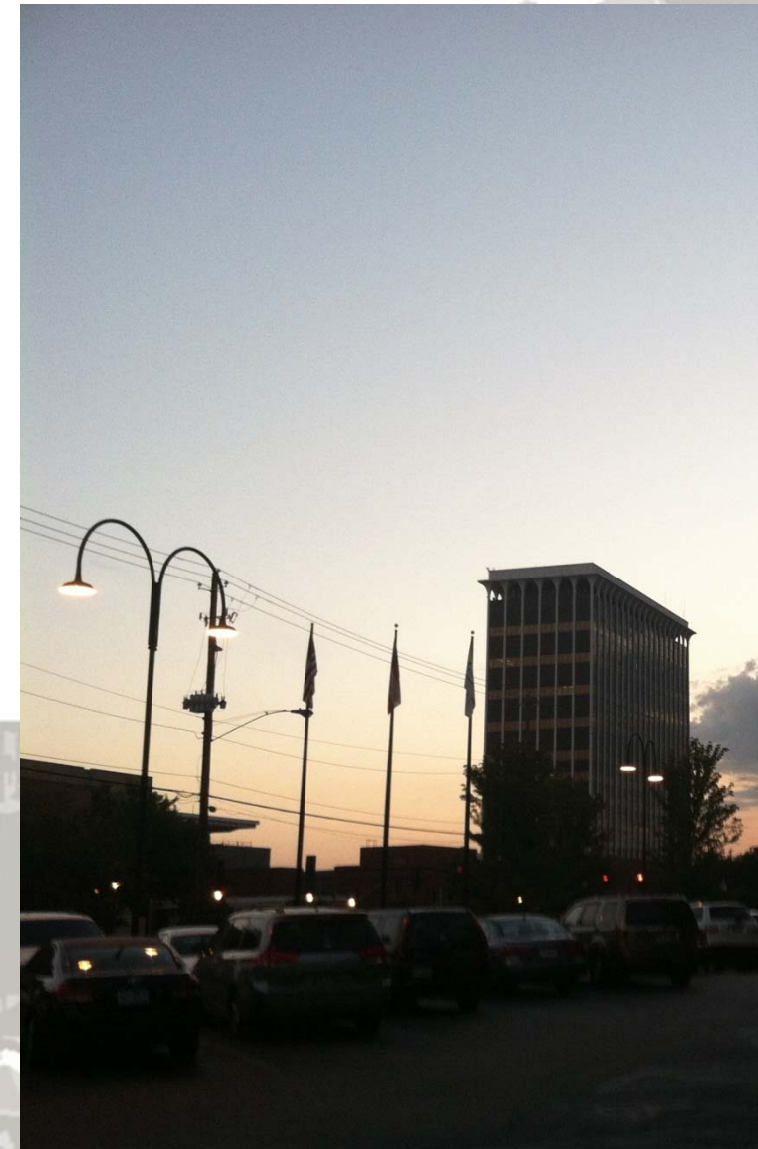
The Columbus Consolidated Government should continue to address general development growth and policies through comprehensive planning and appropriate updating of the Development Code. In particular, **connectivity between neighborhoods and points of interests should be encouraged** over 'cul-de-sac' type developments that minimize connectivity for all users of the transportation system.

With the ongoing reinvestment in the core areas of Columbus, the opening of the Columbus Whitewater Project, and ongoing efforts to brand Columbus as a tourist destination, the potential **for a bike sharing program should be explored** as the alternative transportation system becomes either more robust and/or community needs make it more of a priority.

In addition, the implementation of any alternative transportation projects needs to give **special consideration at conflict points to ensure safety for bicyclists and pedestrians.** The 2009 MUTCD should be consulted for a variety of these issues including best practices for lane striping and intersection treatments. At-grade crossings with both high alternative transportation and vehicular use can also utilize a variety of treatments to minimize conflict including HAWK signals (such as the one currently located at the Fall Line Trace and Hilton Avenue) and bicycle detection. Likewise, in areas where there is already

significant pedestrian and bicyclists, the Columbus Consolidated Government should continue to address infrastructure needs such as providing safe pedestrian and bicycle crossings. Corridors with limited crossings for pedestrians and bicyclists currently include 2nd Avenue and Cusseta Road, and such areas could benefit from possible mid-block HAWK installations.

The Columbus Consolidated Government should **investigate the implementation of a "complete streets" policy** that would encourage the construction of alternative transportation facilities on new location roadways.



The Columbus Consolidated Government should continue to **seek creative ways to fund alternative transportation projects** as the total estimated cost of the proposed corridor recommendations (documented on page 50) is \$108,440,738 in 2013 dollars. Additional funding projected from the Long Range Transportation Plan may offer some assistance in pursuing implementation. This is in addition to discretionary funds that the Columbus Consolidated Government may receive as part of the recent passage of the Transportation Investment Act (TIA) 1 cent sales tax. Some projects also overlap with other previously planned projects, which may offer additional assistance in implementation. Additional potential funding resources include the following:

- RTLA – The Rivers, Trails, and Conservation Assistance provides funding for planning assistance to establish and restore greenways, rivers, trails, watersheds, and open space. www.nps.gov/rtca/
- RTP – The Recreational Trail Program provides funds to the States to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses. http://www.fhwa.dot.gov/environment/recreational_trails/
- SHSP – The Strategic Highway Safety Plan provides funding to bicycle and pedestrian projects through SHSP section 406 funds. <http://safety.fhwa.dot.gov/rsip/shsp/>
- SRTS – The Georgia Safe Routes to School program provides funding through GDOT for improvements that reduce bicycle and pedestrian conflicts around schools. <http://www.saferoutesga.org/>
- TAP – The Transportation Alternatives Program provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways. <http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm>

VI –CORRIDOR & POLICY RECOMMENDATIONS

Finally, given the increased importance that the community is putting on alternative transportation investment, the external benefits to quality of life, and an aging population that will likely rely less and less on personal automobiles, the study team encourages the community to continue to **partner with interested parties** (be they individual, organization, or corporate based) to maximize the amount of additional alternative transportation infrastructure that can be invested into the city.

Transit Considerations

At the completion of this study, the Columbus Consolidated Government was initiating a detailed study to review the METRA system and make specific transit service recommendations for future system operations. Based on the expressed needs established throughout this study, it is recommended that the transit focused study keep the following in mind:

- Improve frequency on the five routes that currently exceed 30 minute frequencies
- Improve frequency on the Downtown Trolley
- Implement an Uptown focused loop circulator route
- Investigate potential for regional service from Harris County to Columbus and provide more convenient connection to Phenix City Express (PEX)
- Expand service hours of METRA fixed route and paratransit services
- Provide additional paratransit service availability on Saturday
- Conduct detailed transit system study to identify most feasible approach to providing service to activity/retail areas and “panhandle” sector
- Expand sidewalk network and curb cuts to promote access to transit services
- Establish a dedicated transit funding source as 20 percent of METRA’s funding is derived from passenger fares and over 70 percent is received from local government
- Construct or improve park and ride lots in north, south, and east areas to complement new express services
- Link Fort Benning to Columbus activity centers with express or limited stop bus or van service
- Implement a street car or light rail system in Uptown Columbus
- Connect Columbus to Atlanta via high speed rail

Additionally, a peer review of how other system initiated changes in service and operations that may address some of these needs was completed for further consideration. These peer transit areas to the METRA system were identified based on geographic location, service area population, and similar key operating statics. These peers were evaluated to examine recent major initiatives to improve their transit systems. The review of peer system initiatives was conducted to inform METRA of strategic undertakings other systems are performing. METRA may consider exploring these initiatives further through the pending Public Transit Needs Assessment study. The transit systems used for the review were Athens Transit System (Athens, GA); Fayetteville Area System of Transit (Fayetteville, NC); Greenville Transit Authority (Greenville, SC); and StarMetro Transit (Tallahassee, FL). Data from the 2011 National Transit Database (NTD) were gathered for each system and summarized. The comparison considered the following parameters: service area population, annual unlinked passenger trips, vehicle revenue hours, total operating funds expended, and key system initiatives.

Athens Transit System: In 2006, the Athens Transit System completed construction of a Multimodal Transfer Center for Athens-Clarke County buses, University of Georgia buses, and intercity buses. The cost of the facility was approximately \$4.5 million and the facility was constructed utilizing only local funds only. Athens-Clarke County approved a local referendum to pay a one cent “Special Purpose Local Option Sales Tax” (SPLOST) to fund the project. The special purpose tax also paid for an additional 2,200 feet of roadwork, infrastructure and an aerial pedestrian bridge to improve access to the facility. The project was designed to improve rideshare opportunities, enhance alternative modes of transportation, and plan for the possibility of commuter rail service. This project is complete.

Fayetteville Area System of Transit (FAST): In early 2013, FAST hired a consultant team to restructure their bus schedules and run assignments in order to reduce unscheduled overtime and optimize the number of operators required to operate the system. The project team worked with FAST management, dispatchers, supervisors, and other key personnel to develop an innovative and efficient scheduling solution for the system as well as conducted a “Train the Trainer” work

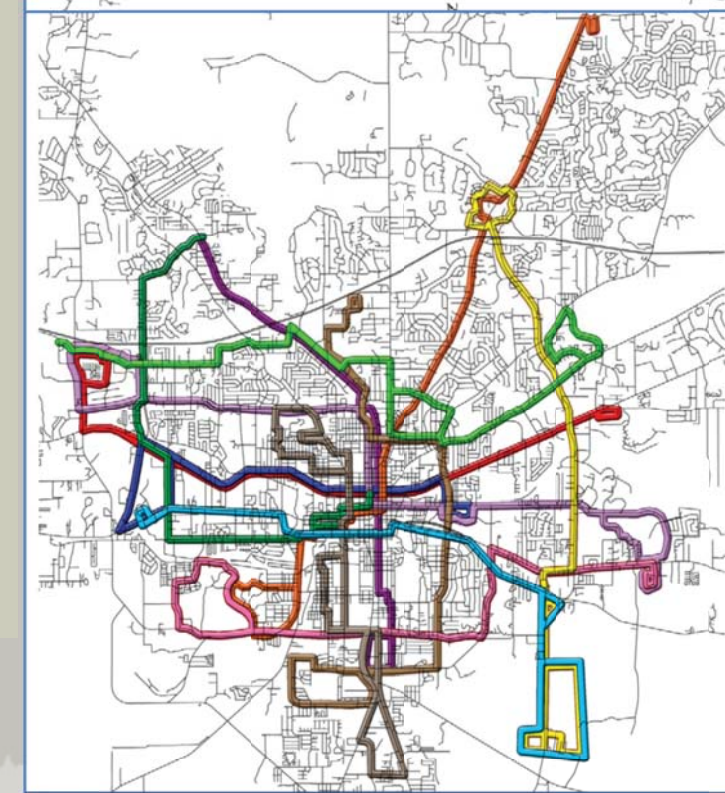
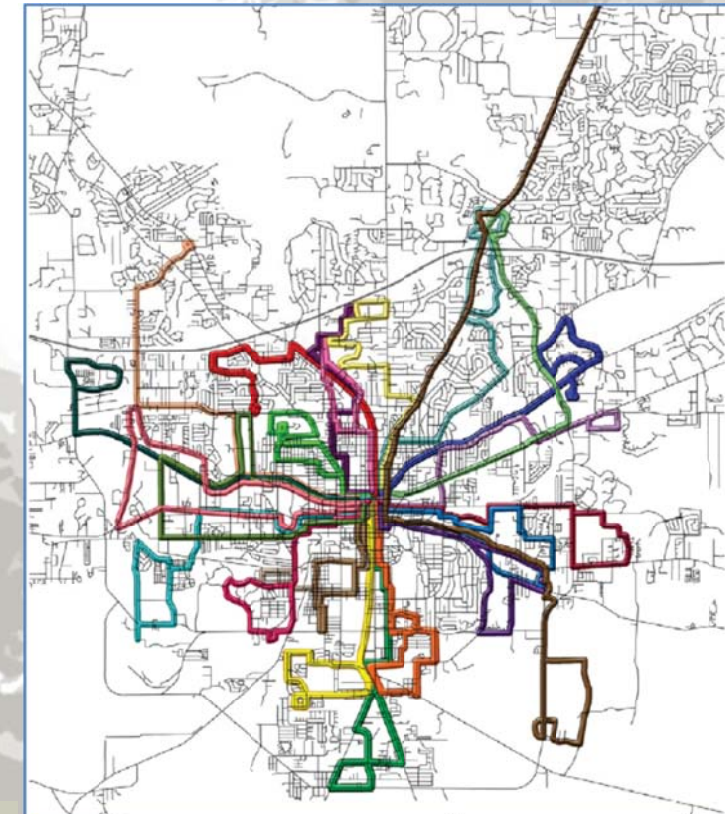
session for FAST staff members in basic scheduling principles and how to generate run assignments. FAST has implemented the new run assignments.

Greenville Transit Authority (Greenlink): In early 2009, Greenlink initiated a strategic planning process to establish the future direction for the system. The resulting Greenlink Transit Vision and Master Plan was developed to:

- Establish a long-term transit vision for the community
- Examine and assess Greenlink to develop specific operational recommendations for near-term, short/mid-term, and long-term implementation
 - Assist the GTA and its partners to establish transit policies and funding needed to develop a sustainable transit system that meets current needs and which can support future economic and community development

The Greenlink Transit Vision and Master Plan was divided into two phases. Phase I focused on establishing the system baseline, collecting and reviewing existing plans and studies, initiating development of the transit vision, and developing near-term service recommendations. Phase II refined the transit vision and system goals, developed short and long-term recommendations to fulfill the transit vision, and developed an implementation framework, including a funding plan to support implementation.

StarMetro (Tallahassee, FL): On July 11, 2011, StarMetro decentralized its transit network from its original downtown orientation to a more decentralized network designed to better connect the various decentralized employment centers. StarMetro undertook this service restructuring after research indicated that less than seven percent of transit trips terminated downtown, although most of its routes focused on a downtown transfer center. Local officials and agency leaders believed the new route structure would better serve the dispersed pattern of population and employment. The new, decentralized network is based on radial routes serving the major arterial roads and new crosstown routes linking the outer parts of Tallahassee, where population and employment numbers are increasing.



StarMetro original orientation (top) and decentralized orientation (bottom)
Source: StarMetro

VI –CORRIDOR & POLICY RECOMMENDATIONS



Corridor Recommendation Philosophy

In preparing project recommendations, the study team focused on corridors where alternative transportation can likely be implemented as derived from the abstract vision for bicyclists and pedestrians established in the second exercise of the second round of public meetings (documented on Page 7 and Appendix B). This corridor focus determined where investment could be possible given geography, expressed need, right-of-way, speed limits, traffic control, and the limitations and opportunities provided by the built environment. These initially conceived projects tended to focus more on long distance and multi-use trail settings to complement the Fall Line Trace and Riverwalk.

Using these larger scale projects as a framework, the study team then focused on corridors where the 'neighborhood connector' concept expressed in the previous Alternative Transportation System could be implemented. This generally tended to focus on transportation corridors that connected neighborhoods and various points of interest within the community. Many of these recommendations tried to focus on relatively low cost, high-impact improvements. For instance, many of these corridors have recommendations for bicycle sharrows which can be implemented with simple striping and signage when the roadway speed limit is 35 miles per hour or less. While this improvement type is not as effective as the construction of dedicated bike lanes, the majority of corridors do not have the physical room to accommodate bike lanes without the potentially expensive widening of the roadway width and possible need for right-of-way acquisition. Therefore, in many cases the 'low-hanging fruit' was identified as the recommendation in order to increase the likelihood of implementation.

As this suggests, the potential corridors were reviewed utilizing the variety of data described in the previous sections of this report and in some cases included the aforementioned field reviews for on-site verification. The purpose of this review was to determine the general feasibility of the recommendations with the limited data available in a planning review. Despite this, some project ideas initially conceived were not recommended due to obvious fatal-flaws that severely limit the opportunity for implementation. In other cases, some projects have potential implementation

challenges but may be surmountable through creative design and engineering. In all cases, the study team has documented any feasibility and implementation concerns identified through this planning review.

Additionally, some recommended projects may overlap or offer different potential recommendations than other study efforts. In the same way that the feasibility review was conducted at a planning level, the recommendations contained within are subject to change and specific ideas provided (such as striping, sharrows or constructing a multi-use trail) will need to be tested further during engineering analysis in which case other alternatives may be developed and ultimately chosen. Therefore, the point of these recommendations is less on the specific alternative transportation recommendation and more on the corridor identified for improvements. Therefore, it is anticipated that any inconsistencies or differences between the recommendations contained within and other study efforts or plans will be resolved during later phases of implementation and as the recommendations of this (or any other) planning based study are refined. Despite this, the study team has identified corridors and areas where such differences may occur and offered some suggestions on potential resolution.

VI –CORRIDOR & POLICY RECOMMENDATIONS

Corridor Recommendations

A map of the corridor recommendations is shown in **Figure 28**. Additionally, the resulting pedestrian and bicycle networks (including existing and other planned facilities) are shown in **Figures 29** and **30**.

If constructed in full and as conceived, the recommendations in this plan will increase the number of miles of the alternative transportation network in Columbus substantially as shown in **Table 11**. As suggested above, this is in addition to other proposed alternative transportation investments.

Table 11
Alternative Transportation Network

| Alternative Transportation Investment | Number of Additional Miles |
|---|----------------------------|
| <i>Pedestrian Amenities</i> | |
| Multi-Use Trail | 55.90 |
| Sidewalks | 65.24 |
| Sidewalks (as part of Road Diets) | 11.06 |
| Total Recommended Pedestrian Amenities | 132.20 |
| <i>Bicycle Amenities</i> | |
| Multi-Use Trail | 55.90 |
| Sharrows | 64.49 |
| Bike Lanes | 17.31 |
| Cycle Tracks (as part of Road Diets) | 11.06 |
| Total Recommended Bicycle Amenities | 148.76 |

Despite this, these plan recommendations are made with the understanding that funding constraints, changing priorities, changes in the built environment over time, and challenges in implementing particular projects make it unlikely that every project recommended will be built or built as suggested. It is for this very reason, that a large number of potential projects were identified so that the community may have several project options to pursue alternative transportation implementation in the future.

Corridor Prioritization

To help assist with future implementation, a prioritization scheme was developed in which projects were rated on their relative merits in six categories as described below. For each category, corridors were rated from 1 (worst) to 10 (best) which indicates the prioritization scheme for the recommendations. Please note that this only documents the relative prioritization of each corridor and is not necessarily the order in which projects should be implemented which will likely be based on logistics in phasing projects and available funding at any given time.

Anticipated Impacts: This criteria is based on some of the general information derived through the feasibility review and relates to the likelihood of the project impacting the community

System Connectivity: This criteria is based on the relative ability of each project to broadly serve the proposed alternative transportation network. While all projects are important in terms of connecting the network, this criteria attempts to ‘reward’ those projects that provide particularly critical links.

Attraction Connectivity: This criteria is based on the relative ability of each project to connect alternative transportation to the various points of interest in Columbus established in the Existing Conditions part of this report. Corridors connecting to multiple points of interest or to particularly attractive points of interest were rated higher.

Constructability: Similar to the ‘Anticipated Impacts’ criteria, this attempts to rate the relative ease in which a project can likely be designed and engineered.

Met Alternative Transportation System Goals: This criteria captures the ability of each project to fulfill the overall goals of the alternative transportation system. In this respect, projects that have an opportunity to connect transit users, pedestrians, and bicyclists will rate higher than projects that are geared towards only one mode. Likewise, projects that offer dedicated alternative transportation infrastructure (such as bike lanes or cycle tracks) rate higher than projects than offer shared use infrastructure (such as sharrows).

Public Support: This criteria attempts to quantify the support for each individual project (or the type of

project) expressed by the community. Ratings were assigned relatively by any public comments received indicative of support for any given project.

Cost Estimates

Additionally, planning level cost estimates were derived utilizing generalized unit costs for the different types of projects recommended. The assumptions utilized were developed in conjunction with design engineers and in referencing other planning level cost estimate assumptions. Please note that these assumptions could vary widely in their accuracy depending on actual project design elements and impacts determined through an engineered design. The assumptions utilized are indicated in **Tables 12 and 13**. Additionally, estimates assumed a preliminary engineering cost at 10 percent of the construction cost and an additional 10 percent contingency of the total cost. The total estimated cost of the proposed alternative transportation network is \$109,776,094 in 2013 dollars.

Table 12
Planning Level Construction Costs (2013 Dollars) Assumptions

| Unit | Cost per Mile |
|---------------------------|---------------|
| Multi-Use Trail | \$580,000 |
| Sidewalk | \$260,000 |
| Sharrows | \$10,000 |
| Bike Lane (Striping Only) | \$30,000 |
| Bike Lane (Construction) | \$580,000 |
| Road Diet | \$400,000 |

Table 13
Planning Level Right-of-Way Costs (2013 Dollars) Assumptions

| Unit | Cost per Acre |
|------------------|---------------|
| Commercial Area | \$800,000 |
| Residential Area | \$200,000 |
| Industrial Area | \$150,000 |

Corridor Documentation

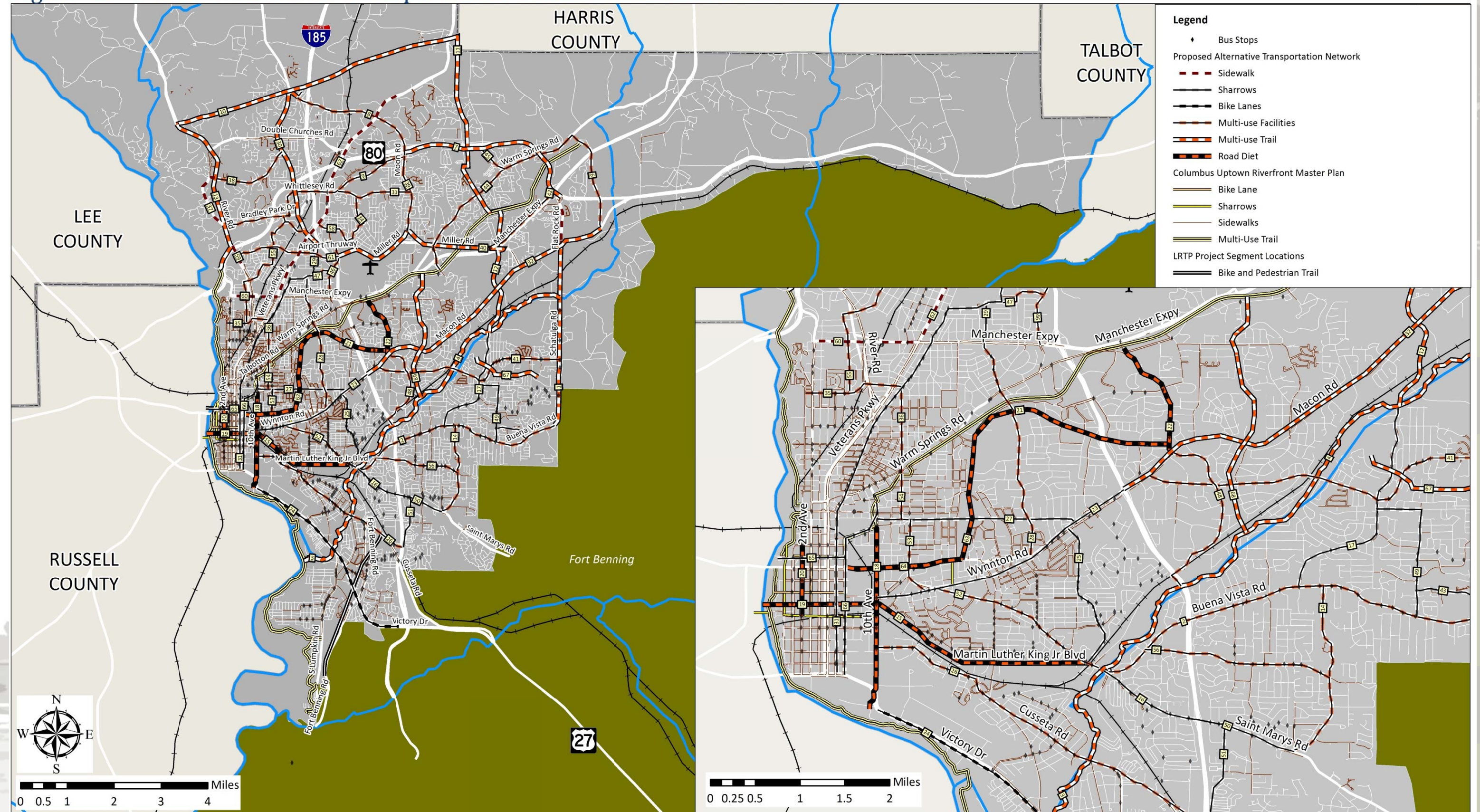
In addition to a relative prioritization and cost estimates, each project was assigned to be either a short-term, mid-term, or long-term project based on the general timeline in which the project could likely be implemented. In general, smaller and cheaper projects are suggested as short-term implementation while larger and more expensive projects are suggested as long-term implementation. While there is some overlap, the intention is that this can be coupled with the project prioritization and the cost estimates to help determine the general phasing in which projects can be considered for implementation.

Tables 14 through 16 (starting on page 57) indicates the resulting prioritization, planning level cost estimates (2013 dollars), and timeframe determined from this analysis for each of the recommended corridors. For convenience, the total planning level cost estimate for each project is also inflated into anticipated dollars for the years 2018 and 2023 (five and ten years respectively into the future). Additionally, a detailed discussion of each project corridor is provided along with supporting information such as the prioritization, likely implementation time frame, and cost estimates starting on page 61, organized by the timeframe and prioritization of the projects.

VI -CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor ID does not indicate the priority of the corridor

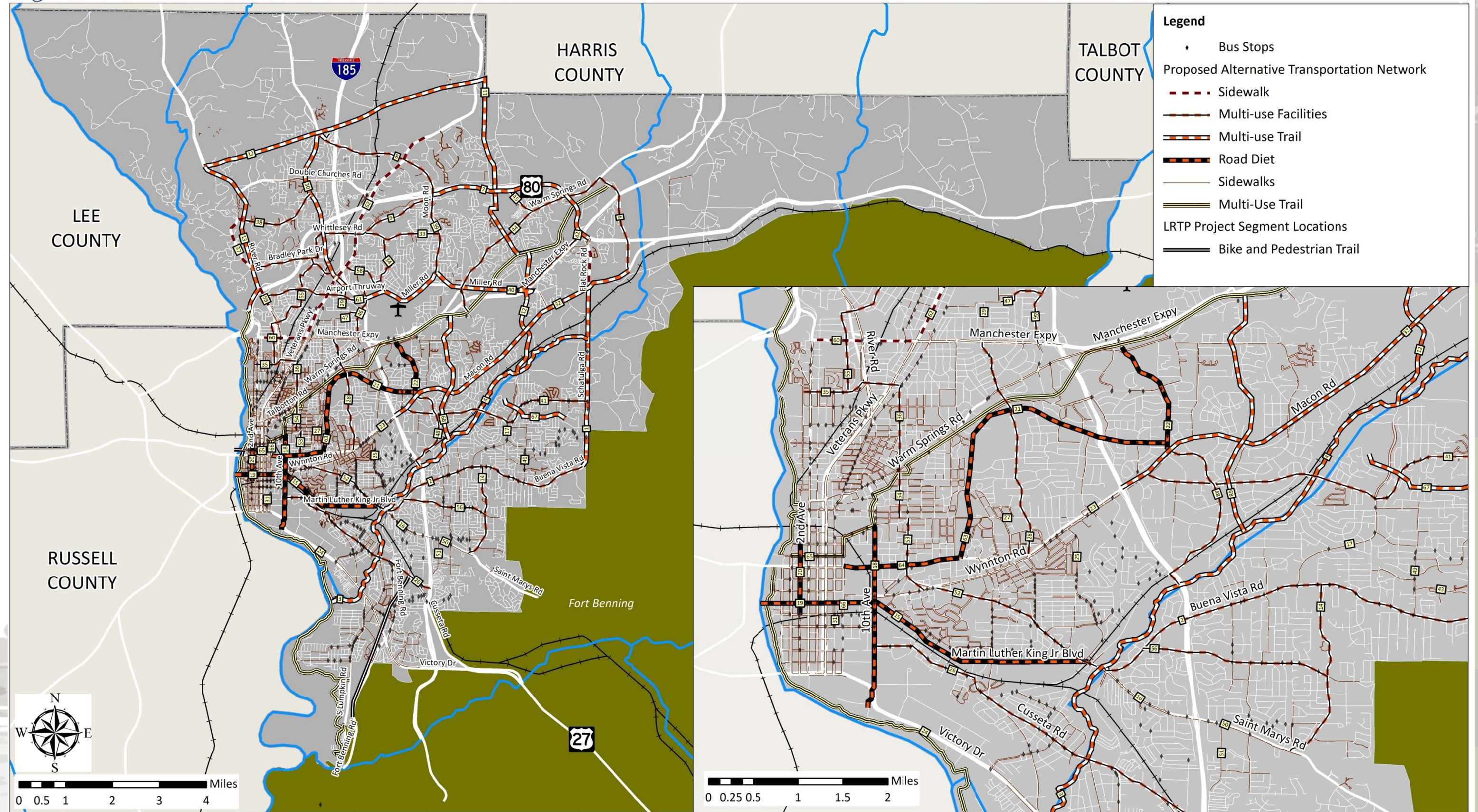
Figure 28 - Overall Alternative Transportation Corridor Recommendations



VI -CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor ID does not indicate the priority of the corridor

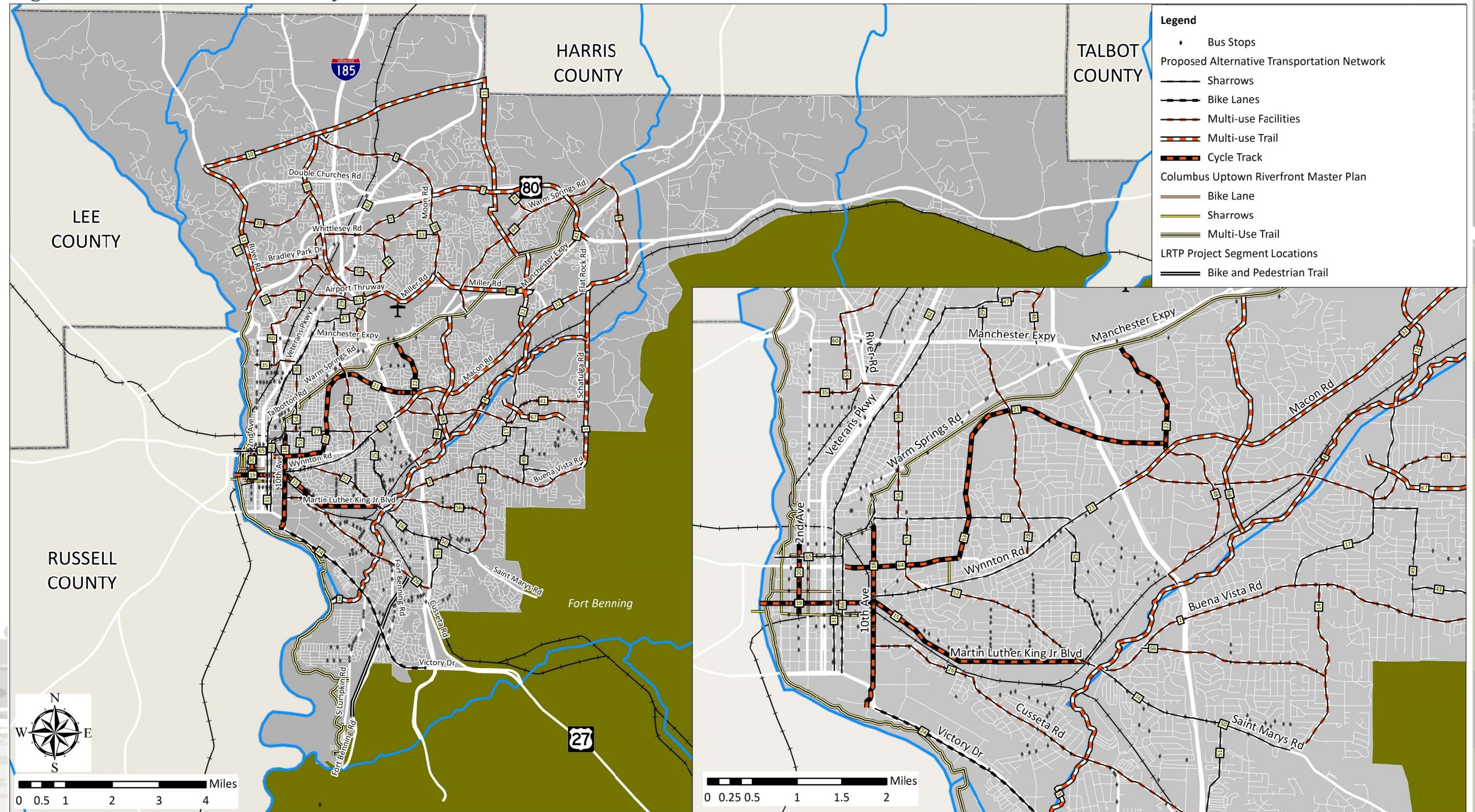
Figure 29 - Recommended Pedestrian Network



VI -CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor ID does not indicate the priority of the corridor

Figure 30 - Recommended Bicycle Network



VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor ID does not indicate the priority of the corridor

Table 14
Corridor Recommendations – Potential Short Term Implementation (Sorted by Priority)

| Corridor ID | Corridor Location | From | To | Project Type | Distance | Prioritization | | | | | | | Planning Level Cost Estimates (2013 Dollars) | | | | Planning Level Total Cost Estimate (2018 Dollars) | Planning Level Total Cost Estimate (2023 Dollars) | |
|-------------|--|-----------------------|-------------------|----------------------|----------|---------------------|---------------------|-------------------------|------------------|-----------------|----------------|----------------|--|-------------------|-------------------|-------------|---|---|------------|
| | | | | | | Anticipated Impacts | System Connectivity | Attraction Connectivity | Constructability | Meets ATS Goals | Public Support | Priority Score | Preliminary Engineering Cost | Construction Cost | Right-of-Way Cost | Contingency | | | Total Cost |
| ATS66 | 6th Avenue/Linwood Boulevard/10th Avenue | Victory Drive | Fall Line Trace | Sharrows | 2.13 | 9 | 9 | 8 | 9 | 7 | 7 | 49 | \$2,130 | \$21,300 | \$0 | \$2,343 | \$25,773 | \$27,088 | \$28,469 |
| ATS17 | Woodruff Farm Road | Bull Creek Greenway | Buena Vista Road | Sharrows | 2.54 | 9 | 8 | 6 | 10 | 9 | 4 | 46 | \$2,540 | \$25,400 | \$0 | \$2,794 | \$30,734 | \$32,302 | \$33,949 |
| ATS25 | Rigdon Road | Macon Road | Buena Vista Road | Sharrows | 1.63 | 8 | 8 | 9 | 8 | 6 | 7 | 46 | \$1,630 | \$16,300 | \$0 | \$1,793 | \$19,723 | \$20,729 | \$21,786 |
| ATS31 | Hamilton Road | Civic Center | Woodruff Road | Sharrows | 4.71 | 8 | 8 | 8 | 8 | 8 | 6 | 46 | \$4,710 | \$47,100 | \$0 | \$5,181 | \$56,991 | \$59,898 | \$62,954 |
| ATS65 | 14th Street | 6th Avenue | Pedestrian Bridge | Sharrows | 0.56 | 8 | 9 | 8 | 8 | 7 | 6 | 46 | \$560 | \$5,600 | \$0 | \$616 | \$6,776 | \$7,122 | \$7,485 |
| ATS29 | Woodruff Road | Manchester Expressway | Airport Thruway | Sharrows | 1.10 | 8 | 8 | 8 | 8 | 6 | 7 | 45 | \$1,100 | \$11,000 | \$0 | \$1,210 | \$13,310 | \$13,989 | \$14,703 |
| ATS27 | 17th Street | 10th Avenue | Macon Road | Sharrows | 1.91 | 7 | 7 | 8 | 8 | 6 | 8 | 44 | \$1,910 | \$19,100 | \$0 | \$2,101 | \$23,111 | \$24,290 | \$25,529 |
| ATS26 | Cusseta Road | 10th Avenue | I-185 | Multi-use Facilities | 3.75 | 8 | 7 | 7 | 8 | 7 | 6 | 43 | \$3,750 | \$37,500 | \$0 | \$4,125 | \$45,375 | \$47,690 | \$50,122 |
| ATS23 | Wynnton Road/Macon Road | 10th Avenue | I-185 | Sharrows | 2.64 | 7 | 8 | 7 | 7 | 8 | 5 | 42 | \$2,640 | \$26,400 | \$0 | \$2,904 | \$31,944 | \$33,573 | \$35,286 |
| ATS24 | Victory Drive | 10th Avenue | Border Drive | Bike Lanes | 4.25 | 7 | 8 | 6 | 7 | 8 | 6 | 42 | \$12,750 | \$127,500 | \$0 | \$14,025 | \$154,275 | \$162,145 | \$170,416 |
| ATS35 | 38th Street | 2nd Avenue | Hamilton Road | Multi-use Facilities | 0.91 | 7 | 7 | 8 | 7 | 7 | 6 | 42 | \$1,830 | \$18,300 | \$0 | \$2,013 | \$22,143 | \$23,273 | \$24,460 |
| ATS49 | Amber Drive | Floyd Road | Buena Vista Road | Sharrows | 1.60 | 8 | 7 | 7 | 8 | 6 | 6 | 42 | \$1,600 | \$16,000 | \$0 | \$1,760 | \$19,360 | \$20,348 | \$21,385 |
| ATS43 | Georgetown Drive | Amber Drive | Buena Vista Road | Sharrows | 0.71 | 8 | 8 | 8 | 8 | 7 | 2 | 41 | \$710 | \$7,100 | \$0 | \$781 | \$8,591 | \$9,029 | \$9,490 |
| ATS50 | St. Mary's Road | I-185 | Northstar Drive | Sharrows | 0.96 | 8 | 7 | 7 | 8 | 6 | 4 | 40 | \$960 | \$9,600 | \$0 | \$1,056 | \$11,616 | \$12,209 | \$12,831 |
| ATS51 | Farr Road | St. Mary's Road | Old Cusseta Road | Sharrows | 1.25 | 8 | 7 | 5 | 8 | 6 | 6 | 40 | \$1,250 | \$12,500 | \$0 | \$1,375 | \$15,125 | \$15,897 | \$16,707 |
| ATS16 | St. Mary's Road | Buena Vista Road | I-185 | Sharrows | 1.07 | 8 | 8 | 5 | 7 | 8 | 2 | 38 | \$1,070 | \$10,700 | \$0 | \$1,177 | \$12,947 | \$13,607 | \$14,302 |
| ATS05 | Flat Rock Road | Milgen Road | Macon Road | Sidewalk | 0.88 | 7 | 5 | 5 | 8 | 8 | 2 | 35 | \$22,880 | \$228,800 | \$0 | \$25,168 | \$276,848 | \$290,970 | \$305,812 |

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor ID does not indicate the priority of the corridor

Table 15
Corridor Recommendations – Potential Mid Term Implementation (Sorted by Priority)

| Corridor ID | Corridor Location | From | To | Project Type | Distance | Pricritization | | | | | | | Planning Level Cost Estimates (2013 Dollars) | | | | | Planning Level Total Cost Estimate (2018 Dollars) | Planning Level Total Cost Estimate (2023 Dollars) |
|-------------|--------------------------------------|------------------------------|-----------------------|----------------------|----------|---------------------|---------------------|-------------------------|------------------|-----------------|----------------|----------------|--|-------------------|-------------------|-------------|-------------|---|---|
| | | | | | | Anticipated Impacts | System Connectivity | Attraction Connectivity | Constructability | Meets ATS Goals | Public Support | Priority Score | Preliminary Engineering Cost | Construction Cost | Right-of-Way Cost | Contingency | Total Cost | | |
| ATS63 | Cherokee Avenue | Hilton Avenue | 13th Street | Road Diet | 1.88 | 7 | 9 | 8 | 7 | 10 | 10 | 51 | \$56,870 | \$568,700 | \$0 | \$62,557 | \$688,127 | \$723,228 | \$760,120 |
| ATS64 | 13th Street | Veterans Parkway | Cherokee Avenue | Road Diet | 1.27 | 5 | 9 | 8 | 6 | 10 | 10 | 48 | \$50,800 | \$508,000 | \$0 | \$55,880 | \$614,600 | \$645,951 | \$678,901 |
| ATS18 | 10th Avenue | Linwood Boulevard | Victory Drive | Road Diet | 2.10 | 8 | 8 | 9 | 7 | 8 | 7 | 47 | \$84,000 | \$840,000 | \$0 | \$92,400 | \$1,016,400 | \$1,068,247 | \$1,122,738 |
| ATS22 | University Avenue | Fall Line Trace | Macon Road | Road Diet | 1.39 | 8 | 7 | 9 | 6 | 7 | 10 | 47 | \$55,600 | \$556,000 | \$0 | \$61,160 | \$672,760 | \$707,078 | \$743,146 |
| ATS15 | Martin Luther King Jr. Boulevard | 10th Avenue | Buena Vista Road | Road Diet | 2.46 | 8 | 8 | 6 | 7 | 8 | 9 | 46 | \$98,400 | \$984,000 | \$0 | \$108,240 | \$1,190,640 | \$1,251,375 | \$1,315,207 |
| ATS57 | Miller Road | Armour Road | Moon Road | Multi-use Trail | 1.77 | 7 | 8 | 7 | 6 | 10 | 8 | 46 | \$148,680 | \$1,486,800 | \$631,634 | \$226,711 | \$2,493,825 | \$2,621,035 | \$2,754,734 |
| ATS19 | 10th Street | 10th Avenue | Riverwalk | Road Diet | 0.95 | 6 | 8 | 9 | 6 | 8 | 7 | 44 | \$38,000 | \$380,000 | \$0 | \$41,800 | \$459,800 | \$483,254 | \$507,905 |
| ATS67 | Woodruff Farm Complex to Carver | Woodruff Farm Soccer Complex | Carver Park | Multi-use Trail | 1.52 | 8 | 8 | 7 | 7 | 8 | 6 | 44 | \$88,160 | \$881,600 | \$0 | \$96,976 | \$1,066,736 | \$1,121,150 | \$1,178,340 |
| ATS68 | Cooper Creek to Bull Creek Connector | Fall Line Trace | Bull Creek Greenway | Multi-use Trail | 2.68 | 8 | 6 | 8 | 7 | 8 | 6 | 43 | \$155,440 | \$1,554,400 | \$0 | \$170,984 | \$1,880,824 | \$1,976,765 | \$2,077,600 |
| ATS21 | Edgewood Road | Hilton Avenue | University Avenue | Road Diet | 1.56 | 5 | 7 | 7 | 6 | 7 | 10 | 42 | \$34,650 | \$346,500 | \$0 | \$38,115 | \$419,265 | \$440,652 | \$463,129 |
| ATS28 | Woodruff Road | Manchester Expressway | Macon Road | Multi-use Facilities | 2.50 | 5 | 8 | 8 | 5 | 6 | 10 | 42 | \$67,500 | \$675,000 | \$0 | \$74,250 | \$816,750 | \$858,412 | \$902,200 |
| ATS46 | Armour Road | Sowega Drive | Manchester Expressway | Multi-use Facilities | 1.10 | 6 | 7 | 8 | 6 | 8 | 7 | 42 | \$29,700 | \$297,000 | \$801,103 | \$112,780 | \$1,240,584 | \$1,303,866 | \$1,370,376 |
| ATS54 | 12th Avenue | Fall Line Trace | 17th Street | Multi-use Facilities | 0.53 | 6 | 8 | 8 | 7 | 6 | 7 | 42 | \$14,310 | \$143,100 | \$385,986 | \$54,340 | \$597,736 | \$628,226 | \$660,272 |
| ATS60 | Manchester Expressway | 2nd Avenue | Veterans Parkway | Sidewalk | 1.00 | 6 | 8 | 8 | 7 | 8 | 5 | 42 | \$26,000 | \$260,000 | \$1,165,241 | \$145,124 | \$1,596,366 | \$1,677,796 | \$1,763,381 |
| ATS20 | 1st Avenue | 9th Street | 14th Street | Road Diet | 0.67 | 6 | 8 | 8 | 6 | 8 | 5 | 41 | \$26,800 | \$268,000 | \$0 | \$29,480 | \$324,280 | \$340,822 | \$358,207 |
| ATS56 | Steam Mill Road | Buena Vista Road | Northstar Drive | Multi-use Facilities | 1.80 | 7 | 7 | 7 | 7 | 7 | 6 | 41 | \$48,600 | \$486,000 | \$524,359 | \$105,896 | \$1,164,854 | \$1,224,274 | \$1,286,724 |
| ATS14 | Northstar Drive | Buena Vista Road | St. Mary's Road | Multi-use Facilities | 2.10 | 7 | 8 | 8 | 8 | 7 | 2 | 40 | \$61,950 | \$619,500 | \$382,345 | \$106,379 | \$1,170,174 | \$1,229,865 | \$1,292,600 |
| ATS40 | Miller Road | Moon Road | Billings Road | Multi-use Trail | 1.90 | 7 | 8 | 6 | 7 | 7 | 5 | 40 | \$110,200 | \$1,102,000 | \$968,607 | \$218,081 | \$2,398,888 | \$2,521,255 | \$2,649,864 |
| ATS36 | 12th Avenue | Hamilton Road | Fall Line Trace | Multi-use Facilities | 0.98 | 7 | 7 | 7 | 6 | 6 | 6 | 39 | \$26,460 | \$264,600 | \$285,484 | \$57,654 | \$634,199 | \$666,549 | \$700,550 |
| ATS41 | Forrest Road | Macon Road | Schatulga Road | Multi-use Facilities | 4.19 | 7 | 8 | 8 | 7 | 7 | 2 | 39 | \$113,130 | \$1,131,300 | \$1,586,767 | \$283,120 | \$3,114,317 | \$3,273,179 | \$3,440,144 |

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor ID does not indicate the priority of the corridor

Table 15
Corridor Recommendations – Potential Mid Term Implementation (Sorted by Priority)

| Corridor ID | Corridor Location | From | To | Project Type | Distance | Pricing | | | | | | | Planning Level Cost Estimates (2013 Dollars) | | | | | Planning Level Total Cost Estimate (2018 Dollars) | Planning Level Total Cost Estimate (2023 Dollars) |
|-------------|--|-----------------------|----------------------|----------------------|----------|---------------------|---------------------|-------------------------|------------------|-----------------|----------------|----------------|--|-------------------|-------------------|-------------|-------------|---|---|
| | | | | | | Anticipated Impacts | System Connectivity | Attraction Connectivity | Constructability | Meets ATS Goals | Public Support | Priority Score | Preliminary Engineering Cost | Construction Cost | Right-of-Way Cost | Contingency | Total Cost | | |
| ATS47 | 52nd Street | 23rd Avenue | Armour Road | Multi-use Facilities | 0.48 | 7 | 8 | 6 | 8 | 8 | 2 | 39 | \$12,960 | \$129,600 | \$559,316 | \$70,188 | \$772,063 | \$811,446 | \$852,838 |
| ATS48 | Elm Drive | Macon Road | Bull Creek Greenway | Multi-use Facilities | 2.00 | 5 | 8 | 7 | 6 | 7 | 6 | 39 | \$26,300 | \$263,000 | \$218,483 | \$50,778 | \$558,561 | \$587,053 | \$616,999 |
| ATS53 | 13th Avenue | Wynnton Road | 17th Street | Multi-use Facilities | 0.95 | 6 | 8 | 6 | 7 | 6 | 6 | 39 | \$25,650 | \$256,500 | \$691,862 | \$97,401 | \$1,071,413 | \$1,126,066 | \$1,183,507 |
| ATS42 | Gateway Road | US 80 | Billings Road | Multi-use Facilities | 1.69 | 7 | 7 | 8 | 7 | 7 | 2 | 38 | \$45,630 | \$456,300 | \$886,166 | \$138,810 | \$1,526,906 | \$1,604,793 | \$1,686,654 |
| ATS58 | Britt David Road | Airport Thruway | Veterans Parkway | Multi-use Facilities | 1.06 | 6 | 6 | 7 | 6 | 7 | 6 | 38 | \$14,060 | \$140,600 | \$145,655 | \$30,032 | \$330,347 | \$347,198 | \$364,908 |
| ATS39 | Moon Road | Miller Road | Whittlesey Boulevard | Multi-use Facilities | 1.61 | 7 | 7 | 6 | 7 | 7 | 3 | 37 | \$43,470 | \$434,700 | \$820,767 | \$129,894 | \$1,428,831 | \$1,501,715 | \$1,578,318 |
| ATS45 | Blackmon Road | US 80 | Warm Springs Road | Multi-use Trail | 0.68 | 7 | 7 | 7 | 7 | 7 | 2 | 37 | \$39,440 | \$394,400 | \$198,091 | \$63,193 | \$695,124 | \$730,582 | \$767,850 |
| ATS52 | Buena Vista Road | Wynnton Road | Illges Road | Multi-use Facilities | 1.69 | 6 | 7 | 6 | 7 | 7 | 4 | 37 | \$45,630 | \$456,300 | \$775,395 | \$127,733 | \$1,405,058 | \$1,476,730 | \$1,552,058 |
| ATS55 | Northwest Connector | 38th Street | Whitesville Road | Multi-use Facilities | 3.27 | 5 | 8 | 7 | 5 | 6 | 6 | 37 | \$88,290 | \$882,900 | \$1,738,467 | \$270,966 | \$2,980,623 | \$3,132,665 | \$3,292,462 |
| ATS61 | 54th Street/Airport Thruway | River Road | Armour Road | Multi-use Facilities | 2.26 | 6 | 8 | 8 | 6 | 7 | 2 | 37 | \$118,930 | \$1,189,300 | \$1,316,723 | \$262,495 | \$2,887,448 | \$3,034,737 | \$3,189,539 |
| ATS62 | Veterans Parkway | Manchester Expressway | Cooper Creek Road | Sidewalk | 5.14 | 6 | 8 | 7 | 5 | 8 | 3 | 37 | \$267,280 | \$2,672,800 | \$0 | \$294,008 | \$3,234,088 | \$3,399,059 | \$3,572,445 |
| ATS33 | Weems Road | Whittlesey Boulevard | Moon Road | Multi-use Facilities | 1.65 | 7 | 6 | 7 | 7 | 6 | 3 | 36 | \$44,550 | \$445,500 | \$480,662 | \$97,071 | \$1,067,783 | \$1,122,251 | \$1,179,497 |
| ATS34 | Weems Road Lake Neighborhood Connector | Armour Road | Weems Road | Multi-use Facilities | 1.45 | 7 | 9 | 5 | 5 | 7 | 3 | 36 | \$39,150 | \$391,500 | \$422,400 | \$85,305 | \$938,355 | \$986,221 | \$1,036,528 |
| ATS37 | Green Island Drive | River Road | Mobley Road | Sidewalk | 1.14 | 8 | 5 | 5 | 8 | 8 | 2 | 36 | \$29,640 | \$296,400 | \$0 | \$32,604 | \$358,644 | \$376,938 | \$396,166 |
| ATS59 | River Road | Marina | Heath Drive | Sidewalk | 0.63 | 7 | 7 | 6 | 7 | 7 | 2 | 36 | \$16,380 | \$163,800 | \$458,814 | \$63,899 | \$702,893 | \$738,748 | \$776,431 |
| ATS38 | Mobley Road | River Road | Whitesville Road | Multi-use Facilities | 1.75 | 5 | 6 | 6 | 5 | 6 | 7 | 35 | \$34,250 | \$342,500 | \$364,138 | \$74,089 | \$814,977 | \$856,549 | \$900,241 |

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor ID does not indicate the priority of the corridor

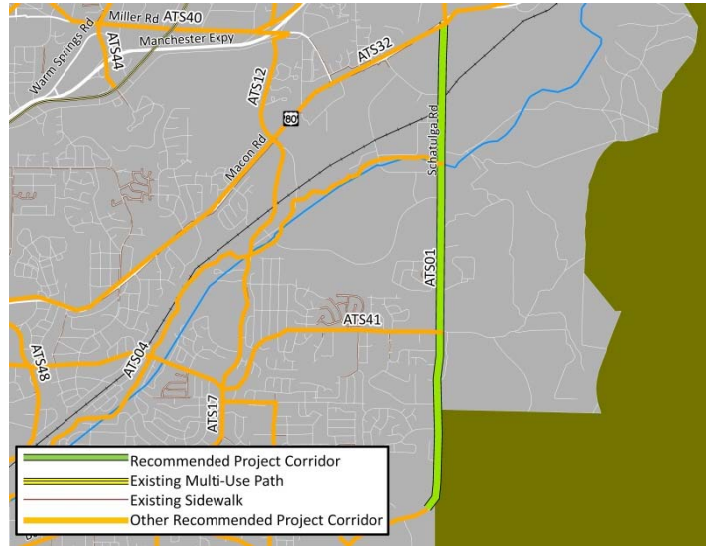
Table 16
Corridor Recommendations – Potential Long Term Implementation (Sorted by Priority)

| Corridor ID | Corridor Location | From | To | Project Type | Distance | Prioritization | | | | | | | Planning Level Cost Estimates (2013 Dollars) | | | | Planning Level Total Cost Estimate (2018 Dollars) | Planning Level Total Cost Estimate (2023 Dollars) | |
|-------------|---|------------------|-------------------|----------------------|----------|---------------------|---------------------|-------------------------|------------------|-----------------|----------------|----------------|--|-------------------|-------------------|-------------|---|---|-------------|
| | | | | | | Anticipated Impacts | System Connectivity | Attraction Connectivity | Constructability | Meets ATS Goals | Public Support | Priority Score | Preliminary Engineering Cost | Construction Cost | Right-of-Way Cost | Contingency | | | Total Cost |
| ATS04 | Bull Creek Greenway | Buena Vista Road | Schatulga Road | Multi-use Trail | 6.45 | 8 | 10 | 8 | 7 | 10 | 10 | 53 | \$374,100 | \$3,741,000 | \$2,201,897 | \$631,700 | \$6,948,696 | \$7,303,150 | \$7,675,684 |
| ATS03 | Bull Creek Greenway | Riverwalk | Buena Vista Road | Multi-use Trail | 3.10 | 5 | 10 | 9 | 7 | 10 | 10 | 51 | \$179,800 | \$1,798,000 | \$1,058,276 | \$303,608 | \$3,339,683 | \$3,510,041 | \$3,689,088 |
| ATS10 | East-West Trail | River Road | Veterans Parkway | Multi-use Trail | 6.13 | 8 | 9 | 4 | 8 | 8 | 9 | 46 | \$355,540 | \$3,555,400 | \$2,232,166 | \$614,311 | \$6,757,416 | \$7,102,112 | \$7,464,391 |
| ATS07 | US 80 | Moon Road | Flat Rock Road | Multi-use Trail | 4.11 | 8 | 8 | 6 | 8 | 10 | 4 | 44 | \$238,380 | \$2,383,800 | \$0 | \$262,218 | \$2,884,398 | \$3,031,531 | \$3,186,170 |
| ATS01 | Schatulga Road | Macon Road | Buena Vista Road | Multi-use Trail | 3.72 | 7 | 10 | 4 | 8 | 10 | 4 | 43 | \$215,760 | \$2,157,600 | \$0 | \$237,336 | \$2,610,696 | \$2,743,868 | \$2,883,833 |
| ATS06 | Psalmond Road | Macon Road | Warm Springs Road | Multi-use Facilities | 2.42 | 5 | 10 | 7 | 6 | 8 | 7 | 43 | \$119,590 | \$1,195,900 | \$881,214 | \$219,670 | \$2,416,374 | \$2,539,634 | \$2,669,180 |
| ATS08 | Williams Road | Visitor's Center | US 80 | Multi-use Facilities | 3.00 | 6 | 8 | 8 | 8 | 9 | 4 | 43 | \$330,000 | \$3,300,000 | \$946,759 | \$457,676 | \$5,034,434 | \$5,291,241 | \$5,561,148 |
| ATS11 | North-South Trail | Veterans Parkway | Fall Line Trace | Multi-use Trail | 4.26 | 6 | 9 | 6 | 7 | 8 | 7 | 43 | \$247,080 | \$2,470,800 | \$1,551,228 | \$426,911 | \$4,696,018 | \$4,935,562 | \$5,187,326 |
| ATS12 | Woodruff Farm Road | Fall Line Trace | Bull Creek | Multi-use Trail | 3.14 | 7 | 8 | 6 | 7 | 6 | 6 | 40 | \$182,120 | \$1,821,200 | \$1,333,959 | \$333,728 | \$3,671,006 | \$3,858,265 | \$4,055,075 |
| ATS13 | River Road | East-West Trail | Riverwalk | Multi-use Trail | 3.66 | 6 | 7 | 6 | 7 | 6 | 8 | 40 | \$212,280 | \$2,122,800 | \$444,248 | \$277,933 | \$3,057,261 | \$3,213,212 | \$3,377,118 |
| ATS32 | Macon Road | I-185 | Psalmond Road | Multi-use Trail | 6.10 | 5 | 8 | 7 | 6 | 8 | 6 | 40 | \$353,800 | \$3,538,000 | \$1,621,506 | \$551,331 | \$6,064,637 | \$6,373,994 | \$6,699,132 |
| ATS44 | Warm Springs Road | Fall Line Trace | Psalmond Road | Multi-use Facilities | 4.52 | 7 | 8 | 7 | 7 | 7 | 4 | 40 | \$351,750 | \$3,517,500 | \$658,361 | \$452,761 | \$4,980,373 | \$5,234,422 | \$5,501,430 |
| ATS02 | Buena Vista Road | St. Mary's Road | Schatulga Road | Multi-use Facilities | 4.82 | 3 | 10 | 7 | 7 | 8 | 4 | 39 | \$354,960 | \$3,549,600 | \$1,188,000 | \$509,256 | \$5,601,816 | \$5,887,565 | \$6,187,890 |
| ATS30 | Whitesville Road | Airport Thruway | Visitor's Center | Multi-use Trails | 3.73 | 5 | 8 | 8 | 5 | 6 | 6 | 38 | \$216,340 | \$2,163,400 | \$2,064,516 | \$444,426 | \$4,888,682 | \$5,138,054 | \$5,400,146 |
| ATS09 | Whittlesey Boulevard and Bradley Park Drive | River Road | Moon Road | Multi-use Facilities | 4.69 | 4 | 8 | 9 | 6 | 5 | 4 | 36 | \$126,630 | \$1,266,300 | \$2,846,345 | \$423,927 | \$4,663,202 | \$4,901,072 | \$5,151,076 |

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 1
 Schatulga Road
 (Buena Vista Road to Macon Road)
 Multi-use Trail
 3.72 miles
 Long-Term Implementation



| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 10 |
| Attraction Connectivity | 4 |
| Constructability | 8 |
| Meets ATS Goals | 10 |
| Community Support | 4 |
| Priority Score | 43 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$215,760 | \$226,766 | \$238,333 |
| Construction Estimated Cost | \$2,157,760 | \$2,267,827 | \$2,383,509 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$237,336 | \$249,443 | \$262,167 |
| Total Estimated Cost | \$2,610,696 | \$2,743,868 | \$2,883,833 |

This corridor would consist of a multi-use trail along Schatulga Road from Buena Vista Road to Macon Road. There are relatively few challenges to implementation due to generous right-of-way width and a limited number of existing driveways along the eastern side of the roadway. Along with various other planned multi-use facilities, this corridor is part of an intended alternative transportation beltway around Columbus.

Corridor 2
 Buena Vista Road
 (St. Mary's Road to Schatulga Road)
 Multi-use Facilities
 4.82 miles
 Long-Term Implementation

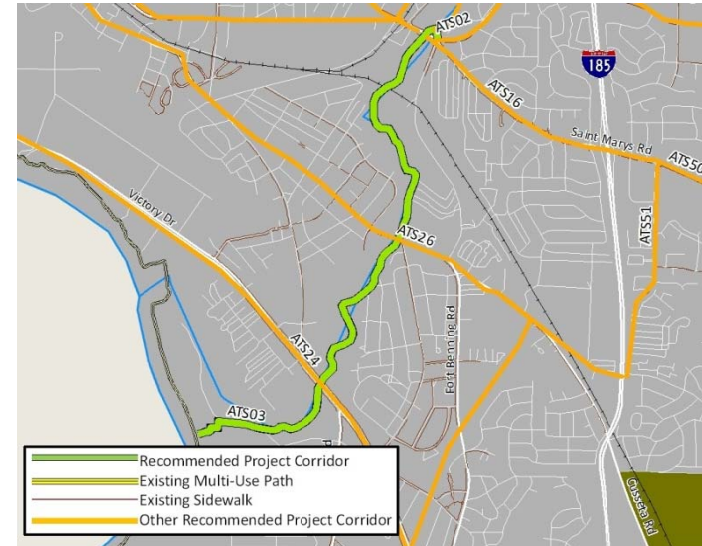


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 3 |
| System Connectivity | 10 |
| Attraction Connectivity | 7 |
| Constructability | 7 |
| Meets ATS Goals | 8 |
| Community Support | 4 |
| Priority Score | 39 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$354,960 | \$373,067 | \$392,097 |
| Construction Estimated Cost | \$3,549,600 | \$3,730,665 | \$3,920,967 |
| Right-of-Way Estimated Cost | \$1,188,000 | \$1,248,600 | \$1,312,291 |
| Estimated Contingency | \$609,256 | \$640,334 | \$672,998 |
| Total Estimated Cost | \$5,601,816 | \$5,887,565 | \$6,187,890 |

This corridor would consist of multi-use facilities along Buena Vista Road from St. Mary's Road to Schatulga Road to complement existing sidewalks along various parts of the corridor. For bicyclists, a dedicated bike lane would be constructed on each side of the road. Additionally, to complete usage to pedestrians, sidewalks would need to be constructed on the north side of the road from St. Mary's Road to Dogwood Drive (1.4 miles) -where there are numerous worn footpaths -, on the north side of the road from Amber Drive to Manley Drive (0.70 miles), and on the south side of the road from Manley Drive to Schatulga Road (0.80 miles). Challenges to implementation include the impacts and cost associated with incorporating the bike lane which will either require widening of the roadway and/or reducing the width of existing travel lanes. Sharrows are not recommended as the speed of the roadway is 45 miles per hour.

Corridor 3
 Bull Creek Greenway
 (Riverwalk to Buena Vista Road)
 Multi-use Trail
 3.1 miles
 Long-Term Implementation

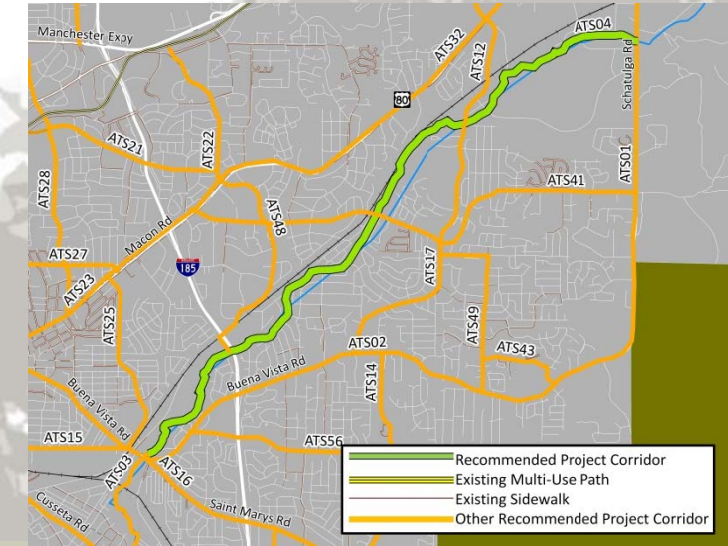


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 5 |
| System Connectivity | 10 |
| Attraction Connectivity | 9 |
| Constructability | 7 |
| Meets ATS Goals | 10 |
| Community Support | 10 |
| Priority Score | 51 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$179,800 | \$188,972 | \$198,611 |
| Construction Estimated Cost | \$1,798,000 | \$1,889,716 | \$1,986,111 |
| Right-of-Way Estimated Cost | \$1,058,276 | \$1,112,259 | \$1,168,995 |
| Estimated Contingency | \$303,608 | \$319,095 | \$335,372 |
| Total Estimated Cost | \$3,339,683 | \$3,510,040 | \$3,689,088 |

This corridor would consist of a multi-use trail following the path of Bull Creek from the Riverwalk (through Rigdon Park) to Buena Vista Road. To reinforce the greenway's use as a transportation facility, connections should be made as often as possible to surrounding neighborhoods and other transportation facilities, particularly Victory Drive, Cusseta Road, the planned South Lumpkin Trail, and at the corridor terminus at Buena Vista Road. When combined with Corridor 2 and others, this corridor is part of an intended alternative transportation beltway around Columbus. Please note that the Columbus Water Works has identified that a significant amount of this corridor is under sewer easement, which may help considerably with right-of-way costs. Despite this, it is assumed right-of-way acquisition will be necessary in order to provide connections to the neighborhoods and transportation corridors surrounding the corridor.

Corridor 4
 Bull Creek Greenway
 (Buena Vista Road to Schatulga Road)
 Multi-use Trail
 6.45 miles
 Long-Term Implementation



| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 10 |
| Attraction Connectivity | 8 |
| Constructability | 7 |
| Meets ATS Goals | 10 |
| Community Support | 10 |
| Priority Score | 53 |

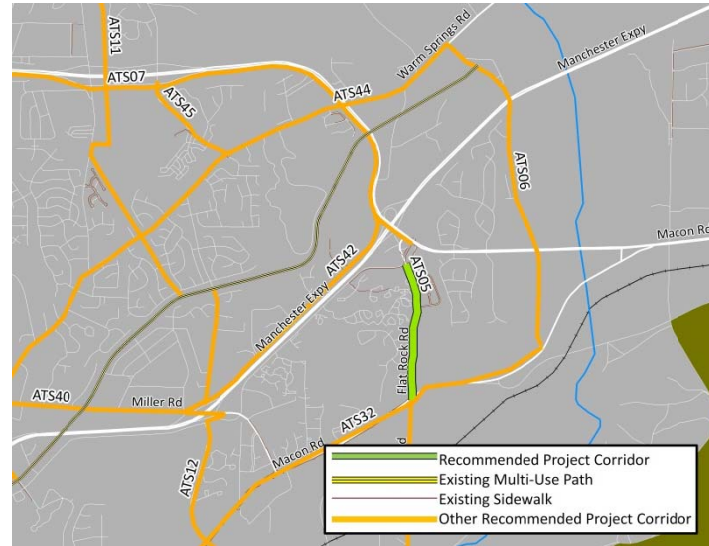
| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$374,100 | \$393,183 | \$413,239 |
| Construction Estimated Cost | \$3,741,000 | \$3,931,829 | \$4,132,391 |
| Right-of-Way Estimated Cost | \$2,201,897 | \$2,314,216 | \$2,432,264 |
| Estimated Contingency | \$691,700 | \$726,984 | \$764,067 |
| Total Estimated Cost | \$6,948,696 | \$7,303,149 | \$7,675,683 |

This corridor would consist of a multi-use trail following the path of Bull Creek from Buena Vista Road (the terminus of Corridor 3, another phase of the Bull Creek Greenway) to Schatulga Road. To reinforce the greenway's use as a transportation facility, connections should be made as often as possible to surrounding neighborhoods, areas of interest (the Woodruff Farm Soccer Complex, Corporate Ridge Business Park, etc.) and other transportation facilities, particularly Cargo Road, Forrest Road, Woodruff Farm Road, Langdon Street, and at the corridor terminus at Schatulga Road. Despite this, it is assumed right-of-way acquisition will be necessary in order to provide connections to the neighborhoods and transportation corridors surrounding the corridor.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 5
Flat Rock Road
(Milgen Road to Macon Road)
Sidewalk
0.88 miles
Short Term Implementation

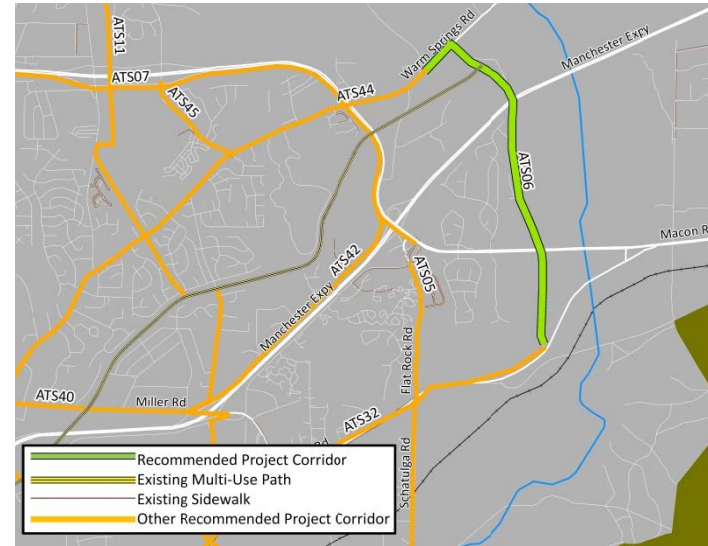


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 5 |
| Attraction Connectivity | 5 |
| Constructability | 8 |
| Meets ATS Goals | 8 |
| Community Support | 2 |
| Priority Score | 35 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$22,880 | \$24,047 | \$25,274 |
| Construction Estimated Cost | \$228,800 | \$240,471 | \$252,738 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$25,168 | \$26,452 | \$27,801 |
| Total Estimated Cost | \$276,848 | \$290,970 | \$305,812 |

This corridor would construct a sidewalk on the western side of Flat Rock Road from Milgen Road to Macon Road, connecting several residential neighborhoods. There is evidence of worn footpaths along this corridor as well as some indication from the American Community Survey that there are a relatively large number of residents walking to work in the neighborhood.

Corridor 6
Psalmond Road
(Macon Road to Warm Springs Road)
Multi-use Facility
2.42 miles
Long-Term Implementation

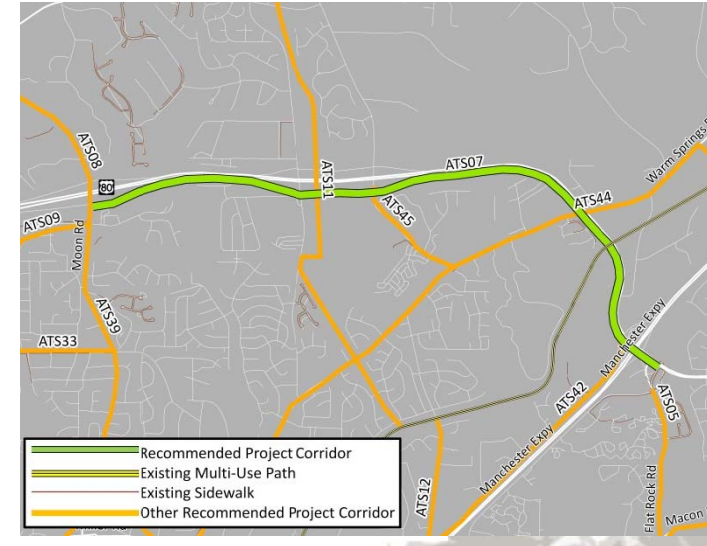


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 5 |
| System Connectivity | 10 |
| Attraction Connectivity | 7 |
| Constructability | 6 |
| Meets ATS Goals | 8 |
| Community Support | 7 |
| Priority Score | 43 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$119,590 | \$125,690 | \$132,102 |
| Construction Estimated Cost | \$1,195,900 | \$1,256,903 | \$1,321,018 |
| Right-of-Way Estimated Cost | \$881,214 | \$926,165 | \$973,408 |
| Estimated Contingency | \$219,670 | \$230,875 | \$242,652 |
| Total Estimated Cost | \$2,416,374 | \$2,539,633 | \$2,669,180 |

This corridor would consist of multi-use facilities (combination of sharrows, sidewalk, and possible multi-use trail) along 35 mile per hour Psalmond Road from Macon Road to Warm Springs Road. A multi-use path could likely be installed with relative ease along the east side of the roadway for the majority of the corridor's length but sidewalks and or sharrows may be necessary to continue the path at specific locations where right-of-way or other constraints exist. A potentially significant challenge to implementation will be continuing the corridor across Manchester Expressway, as the current bridge on Psalmond Road is too narrow to include any additional transportation infrastructure. The corridor would include connections to Midland Middle School and Midland Academy on Warm Springs Road, the terminus of the Fall Line Trace, and John Ridgon Park.

Corridor 7
US 80
(Moon Road to Flat Rock Road)
Multi-use Trail
4.11 miles
Long-Term Implementation



| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 8 |
| Attraction Connectivity | 6 |
| Constructability | 8 |
| Meets ATS Goals | 10 |
| Community Support | 4 |
| Priority Score | 44 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$238,380 | \$250,540 | \$263,320 |
| Construction Estimated Cost | \$2,383,800 | \$2,505,398 | \$2,633,198 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$262,218 | \$275,594 | \$289,652 |
| Total Estimated Cost | \$2,884,398 | \$3,031,531 | \$3,186,170 |

This corridor would consist of a multi-use trail from Moon Road to Gateway Road before converting to just sidewalks for the remaining length of the corridor to Flat Rock Road. The multi-use trail would likely be constructed on the south and west side of US 80, taking advantage of the right-of-way associated with the limited access parts of the corridor. As a result of the limited access nature of US 80, it will be necessary to construct the multi-use trail an appropriate distance away from the roadway and to carry the trail around the surface street interchanges. The major challenges to implementation are in the vicinity of the Manchester Expressway interchange where US 80 transitions to a controlled access facility, there is limited width along the bridge over Manchester Expressway, and there a free-flow movements at the interchange. Notably, this corridor would ideally include a direct connection to the Fall Line Trace.

Corridor 8
Williams Road
(Visitor's Center to US 80)
Multi-use Facilities
3.0 miles
Long-Term Implementation



| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 8 |
| Attraction Connectivity | 8 |
| Constructability | 8 |
| Meets ATS Goals | 9 |
| Community Support | 4 |
| Priority Score | 43 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$30,000 | \$34,833 | \$36,452 |
| Construction Estimated Cost | \$3,300,000 | \$3,468,333 | \$3,645,253 |
| Right-of-Way Estimated Cost | \$946,759 | \$995,053 | \$1,045,811 |
| Estimated Contingency | \$456,676 | \$479,971 | \$504,454 |
| Total Estimated Cost | \$5,134,434 | \$5,291,241 | \$5,561,147 |

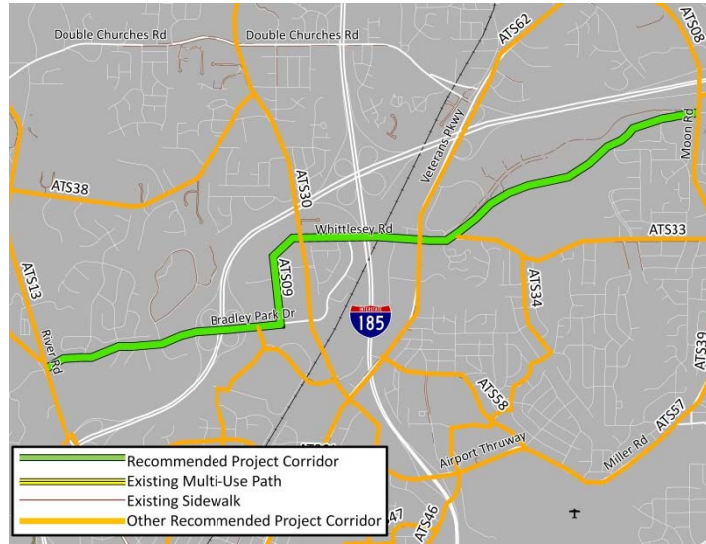
This corridor would consist of multi-use facilities along Williams Road to include dedicated bike lanes (sharrows are not recommended due to 45 mile per hour speed limit) and sidewalks. There are currently no sidewalks or bicycle facilities along the corridor to build from. However, the corridor would provide a critical link between Corridor 7 (and its various connections) and the Williams Road Visitor's Center off of I-185 which can also potentially be used as parking for recreational users as well as providing connections to potential future park-and-ride transit services. There may be opportunity to combine this corridor with the construction of project 31 (MPO-1) in the LRTP (widening of Williams Road from Veterans Parkway to Whitesville Road). Challenges to implementation include the impacts and costs associate with installing the bike lanes which will likely require widening the roadway width.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 9

Bradley Park Drive and Whittlesey Boulevard
(Moon Road to River Road)
Multi-use Facilities
4.69 miles
Long-Term Implementation



| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 4 |
| System Connectivity | 8 |
| Attraction Connectivity | 9 |
| Constructability | 6 |
| Meets ATS Goals | 5 |
| Community Support | 4 |
| Priority Score | 36 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$126,630 | \$133,089 | \$139,878 |
| Construction Estimated Cost | \$1,266,300 | \$1,330,894 | \$1,398,783 |
| Right-of-Way Estimated Cost | \$2,846,345 | \$2,991,537 | \$3,144,136 |
| Estimated Contingency | \$423,927 | \$445,552 | \$468,279 |
| Total Estimated Cost | \$4,663,202 | \$4,901,072 | \$5,151,076 |

This corridor would consist of multi-use facilities along both 35 mile per hour Bradley Park Drive and 35 mile per hour Whittlesey Boulevard. Sharrows would be installed for the length of the corridor and sidewalks would need to be constructed on at least one side of the road from River Road to Veterans Parkway. This corridor can be important as it links a considerable amount of the shopping centers in Columbus to several of the other planned alternative transportation corridors. However, it may also be a considerably complex corridor due to limitations in right-of-way, free-flow interchange movements at US 80 and Bradley Park Drive, and a major intersection with Veterans Parkway. There may also be some possibility to incorporate this corridor into planned LRTP projects 1 and 23 and available right-of-way identified by Columbus Water Works between this corridor and ATS 33 that could be used to construct a multi-use trail.

Corridor 10

East-West Easement
Multi-use Trail
6.13 miles
Long-Term Implementation



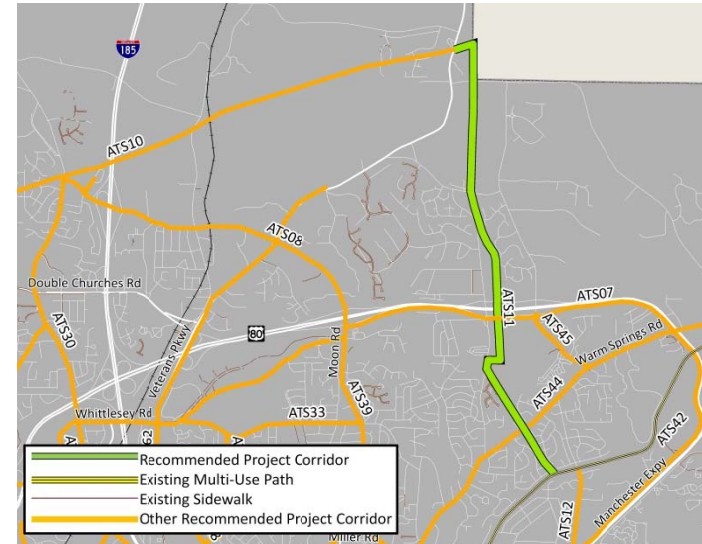
| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 9 |
| Attraction Connectivity | 4 |
| Constructability | 8 |
| Meets ATS Goals | 8 |
| Community Support | 9 |
| Priority Score | 46 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$355,540 | \$373,676 | \$392,737 |
| Construction Estimated Cost | \$3,555,400 | \$3,736,761 | \$3,927,374 |
| Right-of-Way Estimated Cost | \$2,232,166 | \$2,346,029 | \$2,465,700 |
| Estimated Contingency | \$614,311 | \$645,647 | \$678,582 |
| Total Estimated Cost | \$6,757,416 | \$7,102,112 | \$7,464,391 |

This corridor would consist of a multi-use trail from River Road to Veterans Parkway, taking advantage of an east-west easement in the northern part of Muscogee County and would provide a connection to the Williams Road Visitor's Center off of I-185 which can also potentially be used as parking for recreational users as well as providing connections to potential future park-and-ride transit services. Implementation of this corridor would likely require significant coordination with public utilities in the easement.

Corridor 11

North-South Easement
Multi-use Trail
4.26 miles
Long-Term Implementation



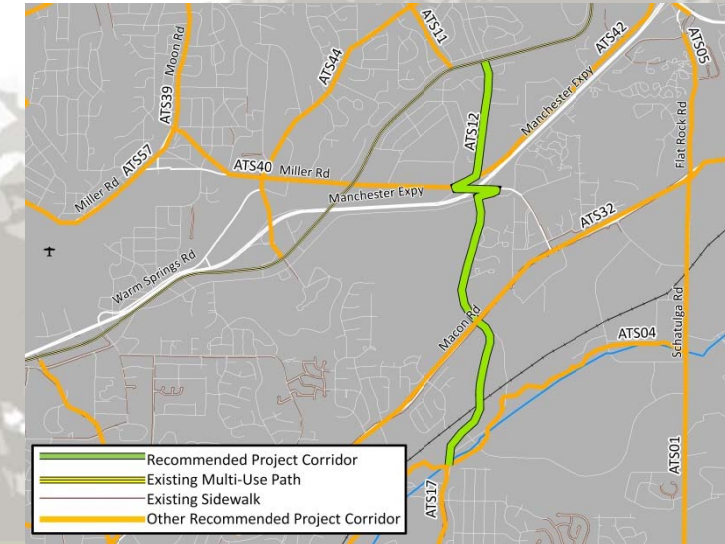
| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 9 |
| Attraction Connectivity | 6 |
| Constructability | 7 |
| Meets ATS Goals | 8 |
| Community Support | 7 |
| Priority Score | 43 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$247,080 | \$259,684 | \$272,930 |
| Construction Estimated Cost | \$2,470,800 | \$2,596,836 | \$2,729,300 |
| Right-of-Way Estimated Cost | \$1,551,228 | \$1,630,356 | \$1,713,521 |
| Estimated Contingency | \$426,911 | \$448,688 | \$471,575 |
| Total Estimated Cost | \$4,696,018 | \$4,935,562 | \$5,187,325 |

This corridor would consist of a multi-use trail from Veterans Parkway to the Fall Line Trace, taking advantage of a north-south power line easement in the northern part of Muscogee County. This would connect Corridor 10 to Corridor 7 and the Fall Line Trace. The most challenging component of implementation will likely be navigating a path around the Sugar Mill Apartment complex. Implementation of this corridor would likely require significant coordination with public utilities in the easement.

Corridor 12

Billings Road and Woodruff Farm Road
(from Fall Line Trace to Bull Creek)
Multi-use Trail
3.14 miles
Long-Term Implementation



| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 8 |
| Attraction Connectivity | 6 |
| Constructability | 7 |
| Meets ATS Goals | 6 |
| Community Support | 6 |
| Priority Score | 40 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$182,120 | \$191,410 | \$201,174 |
| Construction Estimated Cost | \$1,821,200 | \$1,914,100 | \$2,011,738 |
| Right-of-Way Estimated Cost | \$1,333,959 | \$1,402,004 | \$1,473,521 |
| Estimated Contingency | \$333,728 | \$350,751 | \$368,643 |
| Total Estimated Cost | \$3,671,006 | \$3,858,264 | \$4,055,074 |

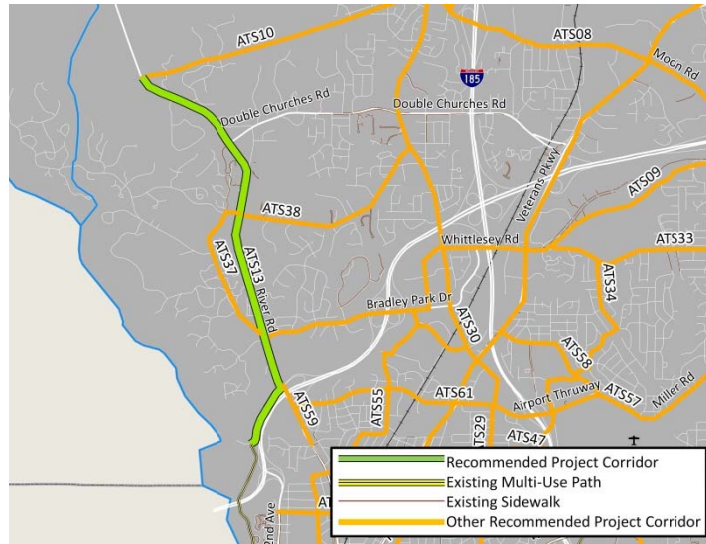
This corridor would consist of multi-use trail from the Fall Line Trace (the end of Corridor 11) to the Bull Creek Greenway (Corridor 4) utilizing the Billings Road and Woodruff Farm Road corridors, as well as - for a short distance - Milgen Road, Miller Road, and Gateway Road. Implementation is easiest along the segment adjacent to Woodruff Farm Road, where the same power line easement utilized for Corridor 11 runs adjacent to the roadway (a distance of 1.9 miles). Challenges are likely in the vicinity of the Miller Road interchange with the Manchester Expressway, and along the Billings Road segment of the corridor where it may be advisable where possible to utilize the same power line easement as other sections of the corridor. Due to speed limit on Billings Road (40 miles per hour), the use of sharrows for bicyclists is not recommended.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 13

River Road
(from Corridor 10 to the Riverwalk/54th Street)
Multi-use Trail
3.66 miles
Long-Term Implementation



Priority Scoring

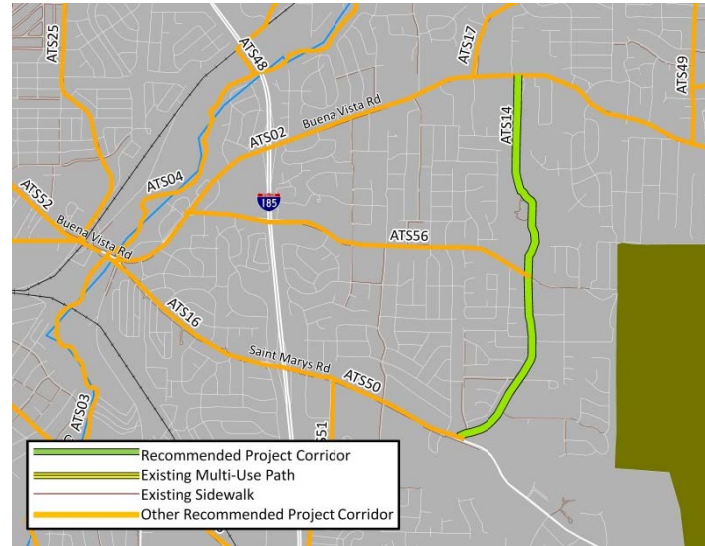
| | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 7 |
| Attraction Connectivity | 6 |
| Constructability | 7 |
| Meets ATS Goals | 6 |
| Community Support | 8 |
| Priority Score | 40 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$212,280 | \$223,108 | \$234,489 |
| Construction Estimated Cost | \$2,122,800 | \$2,231,084 | \$2,344,892 |
| Right-of-Way Estimated Cost | \$444,248 | \$466,909 | \$490,726 |
| Estimated Contingency | \$277,933 | \$292,110 | \$307,011 |
| Total Estimated Cost | \$3,057,261 | \$3,213,212 | \$3,377,118 |

This corridor would consist of a multi-use trail along the River Road corridor from Corridor 10 (the East-West easement based multi-use trail) to the Riverwalk. Implementation is based on indications of excess right-of-way adjacent to segments of River Road and seeks to take advantage of River Road's status as part of the state bikeway even though sharrows are not recommended due to the higher speed limit on the roadway. Amongst the largest barriers to implementation are a bridge just north of US 80 that limits room for alternative transportation facilities – however, there is a center two-way-left-turn lane through the bridge despite no driveways that could potentially be removed through striping in order to accommodate room for the corridor. Likewise, a direction connection to the Riverwalk south of the bridge is critical and should take advantage of the road to the Lake Oliver Marina. The multi-use trail would also extend southward under US 80 towards 54th Street.

Corridor 14

Northstar Drive and Shirley Winston Park
(from Buena Vista Road to St. Mary's Road)
Multi-use Facilities
2.1 miles
Mid-Term Implementation



Priority Scoring

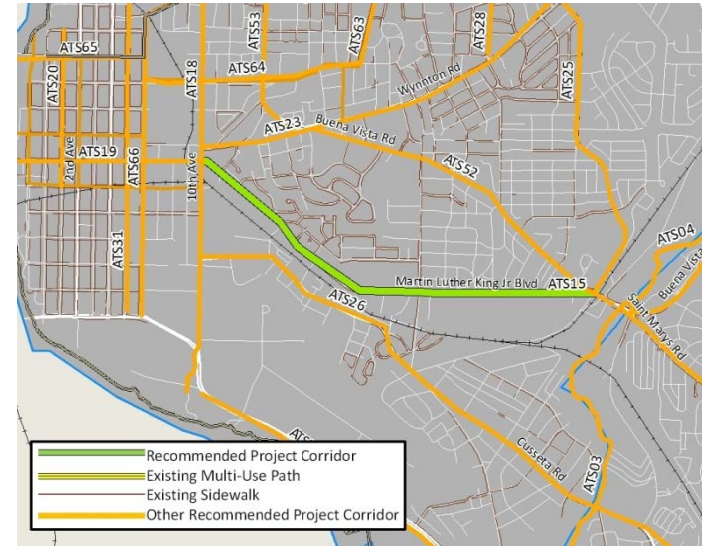
| | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 8 |
| Attraction Connectivity | 8 |
| Constructability | 8 |
| Meets ATS Goals | 7 |
| Community Support | 2 |
| Priority Score | 40 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$61,950 | \$65,110 | \$68,431 |
| Construction Estimated Cost | \$619,500 | \$651,101 | \$684,313 |
| Right-of-Way Estimated Cost | \$382,345 | \$401,848 | \$422,347 |
| Estimated Contingency | \$106,379 | \$111,805 | \$117,509 |
| Total Estimated Cost | \$1,170,174 | \$1,229,865 | \$1,292,600 |

This corridor would consist of a multi-use trail connecting Buena Vista Road to Shirley Winston Park (a distance of 1.05 miles) leading into sharrows along 35 mile per hour Northstar Drive south towards St. Mary's road (an additional 1.05 miles). There are currently sidewalks on at least one side of Northstar Drive from Shirley Winston Park to St. Mary's, but ideally this corridor would construct sidewalks on both sides of Northstar Drive.

Corridor 15

Martin Luther King Jr. Boulevard
(Buena Vista Road to 10th Avenue)
Road Diet
2.46 miles
Mid-Term Implementation



Priority Scoring

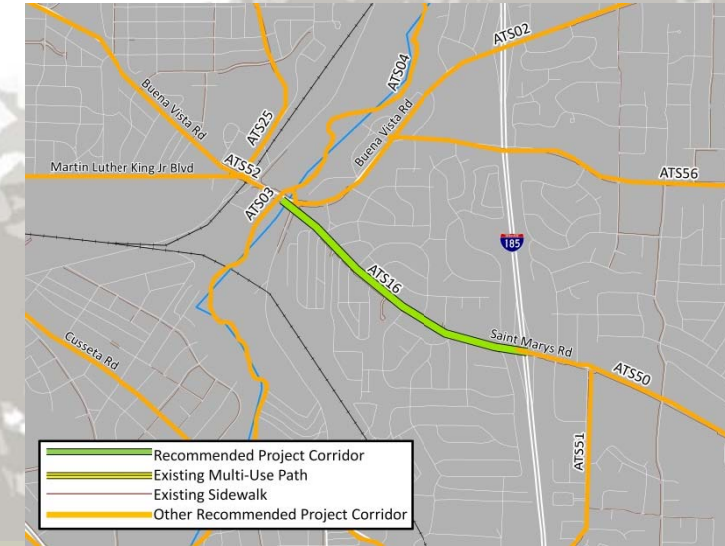
| | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 8 |
| Attraction Connectivity | 6 |
| Constructability | 7 |
| Meets ATS Goals | 8 |
| Community Support | 9 |
| Priority Score | 46 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$98,400 | \$103,419 | \$108,695 |
| Construction Estimated Cost | \$984,000 | \$1,034,194 | \$1,086,948 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$108,240 | \$113,761 | \$119,564 |
| Total Estimated Cost | \$1,190,640 | \$1,251,375 | \$1,315,207 |

This corridor would reduce vehicular capacity on Martin Luther King Jr. Boulevard (with an existing typical section of either 4 or 5 lanes). As there are already sidewalks along the majority of the corridor, the extra room could be used primarily to construct dedicated cycle tracks as well as on-street parking and general streetscaping improvements. GDOT traffic count data indicates a 2012 Annual Daily Traffic volume of up to 7,400 vehicles a day (count station 2150518), indicating a significant amount of surplus capacity on the four and five lane roadway (with a capacity of approximately 30,000). In addition to economic development and revitalization opportunities with the road diet, the multi-use components of the corridor would tie downtown Columbus via 10th Street to several other alternative transportation corridors (including Corridors 3 and 4 – the Bull Creek Greenway and Corridor 2 – multi-use facilities on Buena Vista Road).

Corridor 16

St. Mary's Road
(Buena Vista Road to I-185)
Sharrows
1.07 miles
Short-Term Implementation



Priority Scoring

| | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 8 |
| Attraction Connectivity | 5 |
| Constructability | 7 |
| Meets ATS Goals | 8 |
| Community Support | 2 |
| Priority Score | 38 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$1,070 | \$1,125 | \$1,182 |
| Construction Estimated Cost | \$10,700 | \$11,246 | \$11,819 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$1,177 | \$1,237 | \$1,300 |
| Total Estimated Cost | \$12,947 | \$13,607 | \$14,302 |

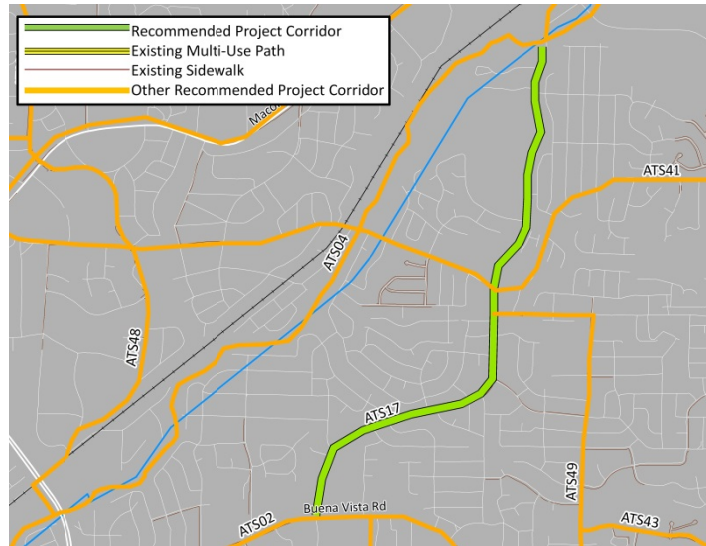
This corridor would stripe sharrows in the right lane of each travel direction along the corridor.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 17

Floyd Road and Woodruff Farm Road
(Bull Creek to Buena Vista Road)
Sharrows
2.54 miles
Short-Term Implementation



Priority Scoring

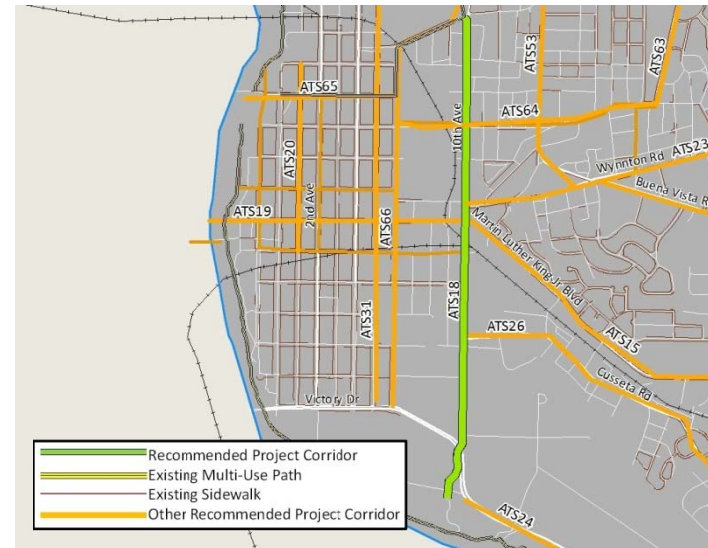
| | |
|-------------------------|-----------|
| Anticipated Impacts | 9 |
| System Connectivity | 8 |
| Attraction Connectivity | 6 |
| Constructability | 10 |
| Meets ATS Goals | 9 |
| Community Support | 4 |
| Priority Score | 46 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$2,540 | \$2,670 | \$2,806 |
| Construction Estimated Cost | \$25,400 | \$26,696 | \$28,057 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$2,794 | \$2,937 | \$3,086 |
| Total Estimated Cost | \$30,734 | \$32,302 | \$33,949 |

This corridor recommends striping sharrows in the outside lane of each travel direction on Floyd Road and Woodruff Farm Road (both 35 miles per hour) connecting bicycle travel from Corridor 2 (multi-use facilities on Buena Vista Road) with Corridors 3 and 4 (the Bull Creek Greenway). There are currently pedestrian facilities along the corridor.

Corridor 18

10th Avenue
(Linwood Boulevard to Victory Drive)
Road Diet
2.1 miles
Mid-Term Implementation



Priority Scoring

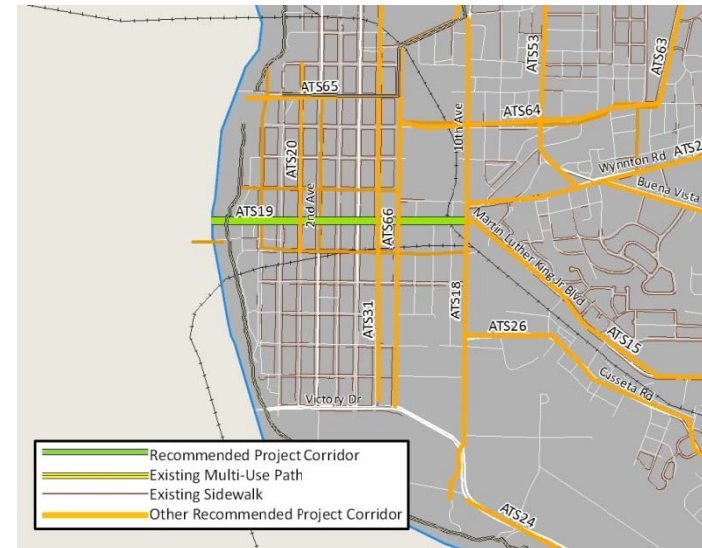
| | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 8 |
| Attraction Connectivity | 9 |
| Constructability | 7 |
| Meets ATS Goals | 8 |
| Community Support | 7 |
| Priority Score | 47 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$84,000 | \$88,285 | \$92,788 |
| Construction Estimated Cost | \$840,000 | \$882,848 | \$927,883 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$92,400 | \$97,113 | \$102,067 |
| Total Estimated Cost | \$1,016,400 | \$1,068,247 | \$1,122,738 |

This corridor would reduce vehicular capacity on 10th Avenue on the four lane section from 14th Street to Victory Drive. The additional room would be used primarily to construct dedicated cycle tracks and pedestrian facilities as well as general streetscaping improvements including specifically room for bike racks along the various employment locations along the corridor. GDOT traffic count data indicates a 2012 Annual Daily Traffic volume of up to 9,430 vehicles a day (count station 2150414), indicating a significant amount of surplus capacity on the four lane roadway (with a capacity of approximately 30,000). This corridor would also include extension of the multi-use facilities past Victory Drive and Lumpkin Boulevard (through the Memorial Stadium and National Civil War Naval Museum) and from 14th Street to Linwood Boulevard. Please note that the Columbus Uptown Riverfront Master Plan recommended a bike lane along this route –a final alternative should be selected through further engineering based analysis.

Corridor 19

10th Street
(10th Avenue to Riverwalk)
Road Diet
0.95 miles
Mid-Term Implementation



Priority Scoring

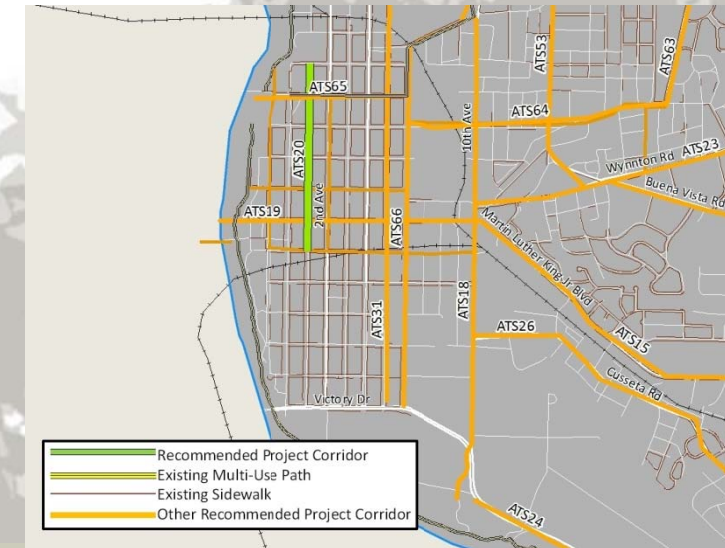
| | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 8 |
| Attraction Connectivity | 9 |
| Constructability | 6 |
| Meets ATS Goals | 8 |
| Community Support | 7 |
| Priority Score | 44 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$38,000 | \$39,938 | \$41,976 |
| Construction Estimated Cost | \$380,000 | \$399,384 | \$419,756 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$41,800 | \$43,932 | \$46,173 |
| Total Estimated Cost | \$459,800 | \$483,254 | \$507,905 |

This corridor would reduce one lane of vehicular capacity on 10th Street (with an existing typical section of 4 one-way lanes) in order to construct dedicated cycle tracks as well as general streetscaping improvements including specifically room for bike racks along the various employment and civic locations along the corridor. GDOT traffic count data indicates a 2012 Annual Daily Traffic volume of up to 1,970 vehicles a day (count station 2150507), indicating a significant amount of surplus capacity on the four lane roadway (with a capacity of approximately 45,000). As the corridor moves westward and closer to the Riverwalk there are already lane reductions, but still includes at least one vehicular travel lane that can be removed to construct the cycle track. On the east side of the corridor (east of 6th Avenue) the corridor has two-way vehicular operations, but could still likely serve vehicular traffic adequately even with a lane reduction.

Corridor 20

1st Avenue
(14th Street to 9th Street)
Road Diet
0.67 miles
Mid-Term Implementation



Priority Scoring

| | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 8 |
| Attraction Connectivity | 8 |
| Constructability | 6 |
| Meets ATS Goals | 8 |
| Community Support | 5 |
| Priority Score | 41 |

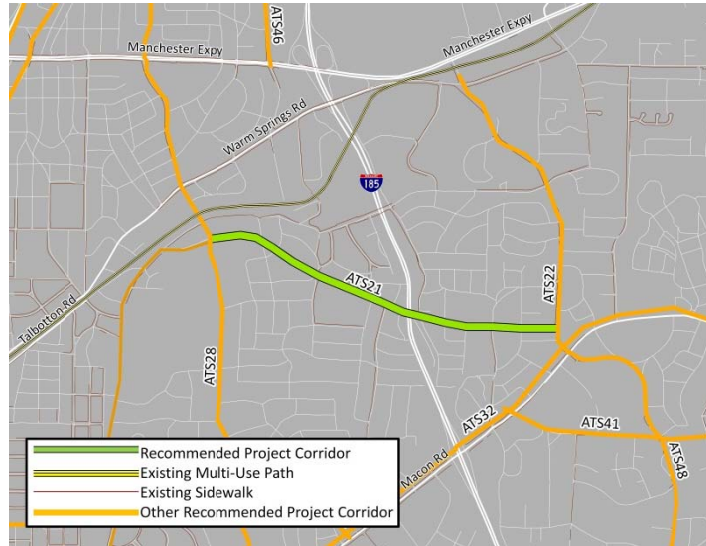
| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$26,800 | \$28,167 | \$29,604 |
| Construction Estimated Cost | \$268,000 | \$281,671 | \$296,039 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$29,480 | \$30,984 | \$32,564 |
| Total Estimated Cost | \$324,280 | \$340,822 | \$358,207 |

This corridor would reduce one lane of vehicular capacity on 1st Avenue (with an existing typical section of 4 lanes) in order to construct dedicated cycle tracks including specifically room for bike racks along the various employment and civic locations along the corridor. GDOT traffic count data indicates a 2012 Annual Daily Traffic volume of up to 4,090 vehicles a day (count station 2150434), indicating a significant amount of surplus capacity on the four lane roadway (with a capacity of approximately 30,000). This corridor would connect several other alternative transportation corridors, including existing infrastructure such as the Fall Line Trace and 14th Street pedestrian bridge through a major downtown corridor.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 21
Edgewood Road
(Hilton Avenue to University Avenue)
Road Diet
1.56 miles
Mid-Term Implementation

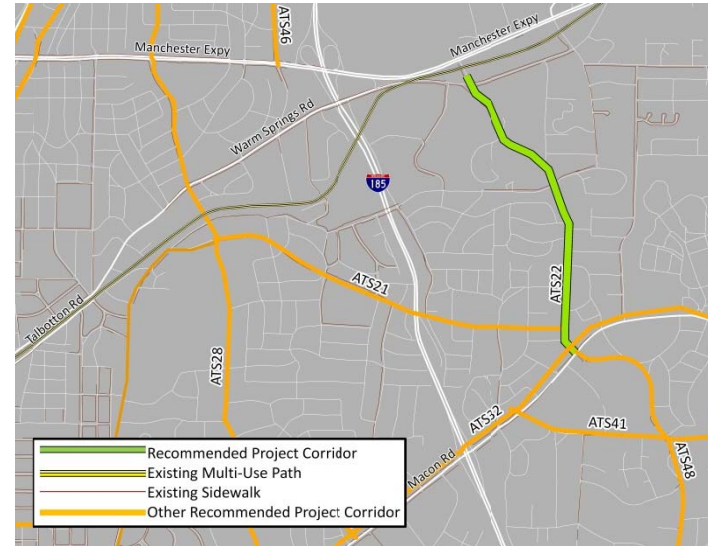


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 5 |
| System Connectivity | 7 |
| Attraction Connectivity | 7 |
| Constructability | 6 |
| Meets ATS Goals | 7 |
| Community Support | 10 |
| Priority Score | 42 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$34,650 | \$36,417 | \$38,275 |
| Construction Estimated Cost | \$346,500 | \$364,175 | \$382,752 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$38,115 | \$40,059 | \$42,103 |
| Total Estimated Cost | \$419,265 | \$440,652 | \$463,129 |

This corridor would include two changes to Edgewood Avenue to support alternative transportation, connecting near the Fall Line Trace, CSU campus, Clubview Elementary School, and Richards Middle School. From Hilton Avenue to Sue Mack Drive, excess pavement would be utilized to stripe bicycle lanes. From Sue Mack Drive to University Avenue (a distance of 0.81 miles), this corridor would reduce vehicular capacity (with a typical section of 4 lanes) in order to construct a multi-use trail. Along the road diet segment of the corridor, there are several residential driveways which may necessitate the use of a two-way left turn lane to minimize rear-end vehicular crashes. This could still be constructed and retain a single lane in each direction and a dedicated area for the proposed multi-use trail. GDOT traffic count data indicates a 2012 Annual Daily Traffic volume of up to 7,180 vehicles a day (count station 2150736), indicating a significant amount of surplus capacity on the four lane roadway (with a capacity of approximately 30,000).

Corridor 22
University Avenue
(Fall Line Trace to Macon Road)
Road Diet
1.39 miles
Mid-Term Implementation

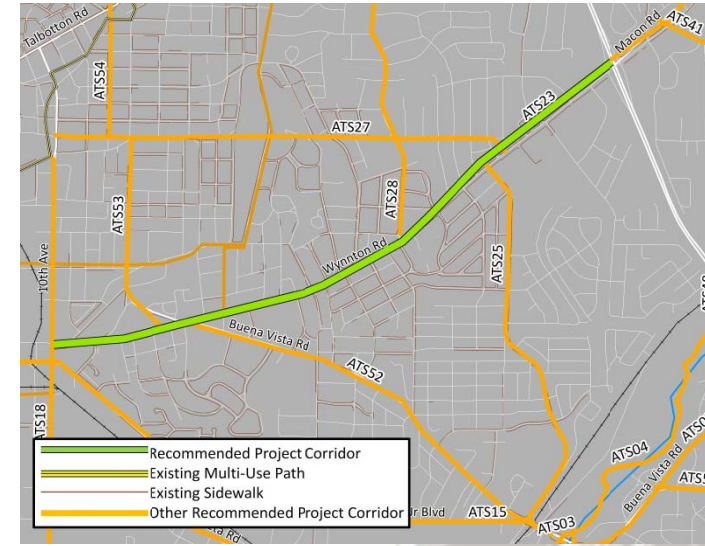


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 7 |
| Attraction Connectivity | 9 |
| Constructability | 6 |
| Meets ATS Goals | 7 |
| Community Support | 10 |
| Priority Score | 47 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$55,600 | \$58,436 | \$61,417 |
| Construction Estimated Cost | \$556,000 | \$584,362 | \$614,170 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$61,160 | \$64,280 | \$67,559 |
| Total Estimated Cost | \$672,760 | \$707,078 | \$743,146 |

This corridor would reduce vehicular capacity on University Avenue (with an existing typical section of 5 lanes) in order to construct dedicated cycle tracks as well as general streetscaping. GDOT traffic count data indicates a 2012 Annual Daily Traffic volume of up to 12,240 vehicles a day (count station 2150405), meaning that it does not have the same excess surplus capacity on the four lane roadway (with a capacity of approximately 30,000) as other recommended road diet corridors. However, the corridor is supported by CSU (the most affected land use on the corridor) and could provide various economic development benefits in addition to the alternative transportation connections to the Fall Line Trace and Corridor 21. Special attention would be needed in the design of the intersections at Gentian Boulevard and Macon Road in order to maximum the safety and travel benefits to alternative transportation users.

Corridor 23
Wynnton Road/Macon Road
(10th Avenue to I-185)
Sharrows
2.64 miles
Short-Term Implementation

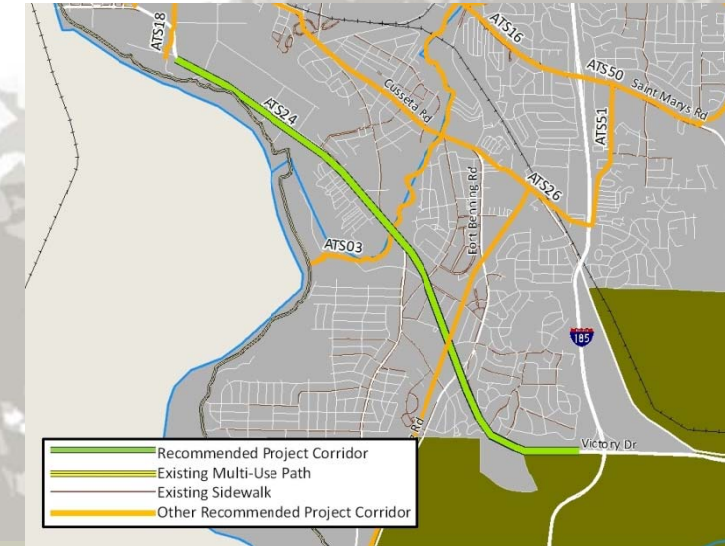


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 8 |
| Attraction Connectivity | 7 |
| Constructability | 7 |
| Meets ATS Goals | 8 |
| Community Support | 5 |
| Priority Score | 42 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$2,640 | \$2,775 | \$2,916 |
| Construction Estimated Cost | \$26,400 | \$27,747 | \$29,162 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$2,904 | \$3,052 | \$3,208 |
| Total Estimated Cost | \$31,944 | \$33,573 | \$35,286 |

This corridor would stripe sharrows along the Wynnton Road corridor (currently with 30 to 35 mile per hour speed limit). This corridor would serve several important connections to other proposed alternative transportation corridors and also connect several shopping areas, employment centers (such as the Aflac Headquarters), and civic amenities. Please note that the Columbus Uptown Riverfront Master Plan recommends a side path along this route – this study's proposes sharrows along this route due simply to limited roadway width but is in spirit with turning Wynnton Road into a bike route. A final alternative should be selected through further engineering based analysis.

Corridor 24
Victory Drive
(10th Avenue to Border Drive)
Bicycle Lanes
4.25 miles
Short-Term Implementation



| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 8 |
| Attraction Connectivity | 6 |
| Constructability | 7 |
| Meets ATS Goals | 8 |
| Community Support | 6 |
| Priority Score | 42 |

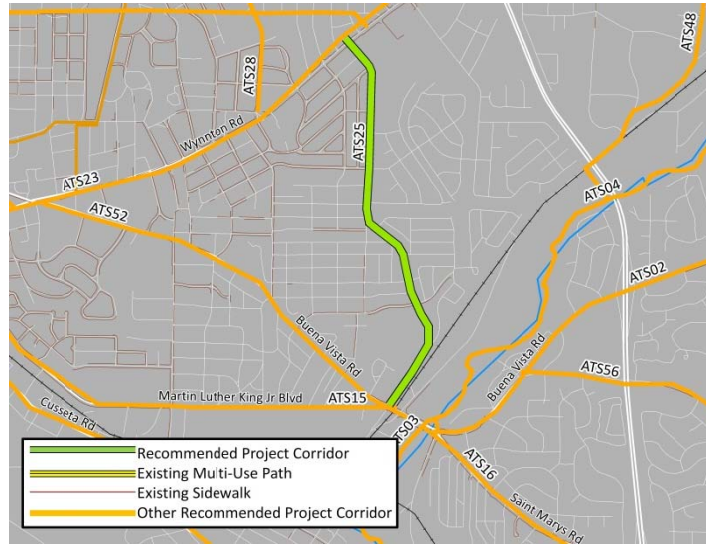
| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$12,750 | \$13,400 | \$14,084 |
| Construction Estimated Cost | \$127,500 | \$134,004 | \$140,839 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$14,025 | \$14,740 | \$15,492 |
| Total Estimated Cost | \$154,275 | \$162,145 | \$170,416 |

This corridor would stripe dedicated bike lanes in each direction in the existing shoulders areas along Victory Drive from 10th Avenue (connecting into Corridor 18 and the existing Riverwalk) and Border Road.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 25
Rigdon Road
(Macon Road to Buena Vista Road)
1.63 miles
Sharrows
Short-Term Implementation

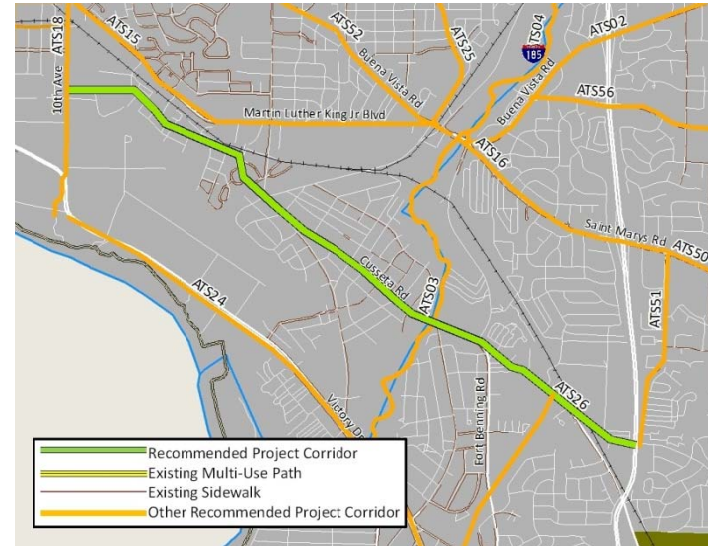


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 8 |
| Attraction Connectivity | 9 |
| Constructability | 8 |
| Meets ATS Goals | 6 |
| Community Support | 7 |
| Priority Score | 46 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$1,630 | \$1,713 | \$1,801 |
| Construction Estimated Cost | \$16,300 | \$17,131 | \$18,005 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$1,793 | \$1,884 | \$1,981 |
| Total Estimated Cost | \$19,723 | \$20,729 | \$21,786 |

This corridor would complement existing sidewalks along the corridor by striping sharrows for bicyclists. This corridor provides several important connections to other planned alternative transportation corridors (particularly several that converge near the southern terminus of the corridor), to the various civic uses that being constructed near Macon Road at the northern end of the corridor, Rigdon Road Elementary School, and Carver High School.

Corridor 26
Cusseta Road
(10th Avenue to I-185)
Multi-use Facilities
3.75 miles
Short-Term Implementation

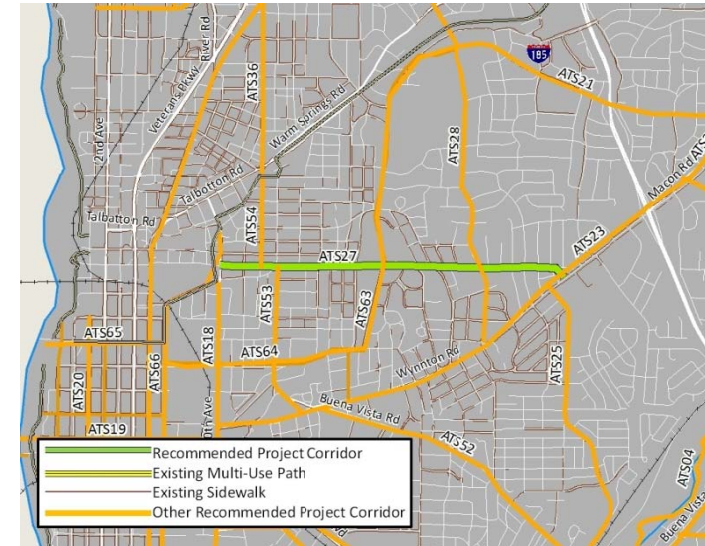


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 7 |
| Attraction Connectivity | 7 |
| Constructability | 8 |
| Meets ATS Goals | 7 |
| Community Support | 6 |
| Priority Score | 43 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$3,750 | \$3,941 | \$4,142 |
| Construction Estimated Cost | \$37,500 | \$39,413 | \$41,423 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$4,125 | \$4,335 | \$4,557 |
| Total Estimated Cost | \$45,375 | \$47,690 | \$50,122 |

This corridor would stripe sharrows in the outside lane of each travel direction along the four lane segment of 30 mile per hour Cusseta Road (from 23rd Avenue to Fort Benning Road) and provide consistent sidewalk coverage along the corridor (sidewalks currently existing intermittently). Along the existing two lane segments (from Fort Benning Road to I-185 and Oakview Avenue to 23rd Avenue) sharrows can be installed as an interim improvement, but it should be noted that there are two to four lane widening corridors proposed in the LRTP. LRTP project 22 (PI# 350890) from Fort Benning Road to I-185 anticipates including bicycle and pedestrian facilities. Where possible given funding, right-of-way, and constructability constraints, LRTP project 36 (MPO-11) from Oakview Avenue to Brown Avenue should include bicycle and pedestrian facilities as well.

Corridor 27
17th Street and Dell Drive
(10th Avenue to Macon Road)
Sharrows
1.91 miles
Short-Term Implementation

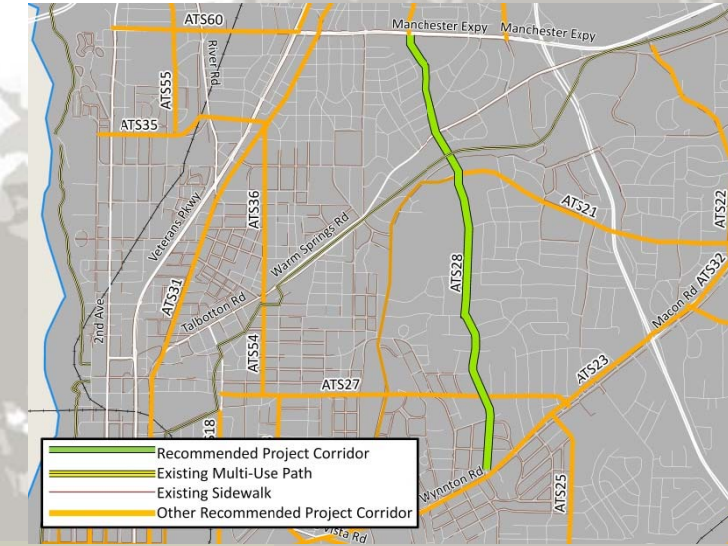


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 7 |
| Attraction Connectivity | 8 |
| Constructability | 8 |
| Meets ATS Goals | 6 |
| Community Support | 8 |
| Priority Score | 44 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$1,910 | \$2,007 | \$2,110 |
| Construction Estimated Cost | \$19,100 | \$20,074 | \$21,098 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$2,101 | \$2,208 | \$2,321 |
| Total Estimated Cost | \$23,111 | \$24,290 | \$25,529 |

This corridor would stripe sharrows along this 30 mile per hour corridor from 10th Avenue to Dell Drive, and continuing down Dell Drive to Macon Road, providing connections to several other alternative transportation corridors as well as Waracoba Park, Wildwood Park, Little Wildwood Park, and Columbus High School. Please note that the Columbus Uptown Riverfront Master Plan recommends a bike lane along this route - this study's proposes sharrows along this route due simply to limited roadway width but is in spirit with turning 17th Street into a bike route. A final alternative should be selected through further engineering based analysis.

Corridor 28
Woodruff Road and Hilton Avenue
(Manchester Expressway to Wynnton Road)
Multi-use Facilities
2.50 miles
Mid-Term Implementation



| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 5 |
| System Connectivity | 8 |
| Attraction Connectivity | 8 |
| Constructability | 5 |
| Meets ATS Goals | 6 |
| Community Support | 10 |
| Priority Score | 42 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$67,500 | \$70,943 | \$74,562 |
| Construction Estimated Cost | \$675,000 | \$709,432 | \$745,620 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$74,250 | \$78,037 | \$82,018 |
| Total Estimated Cost | \$816,750 | \$858,412 | \$902,200 |

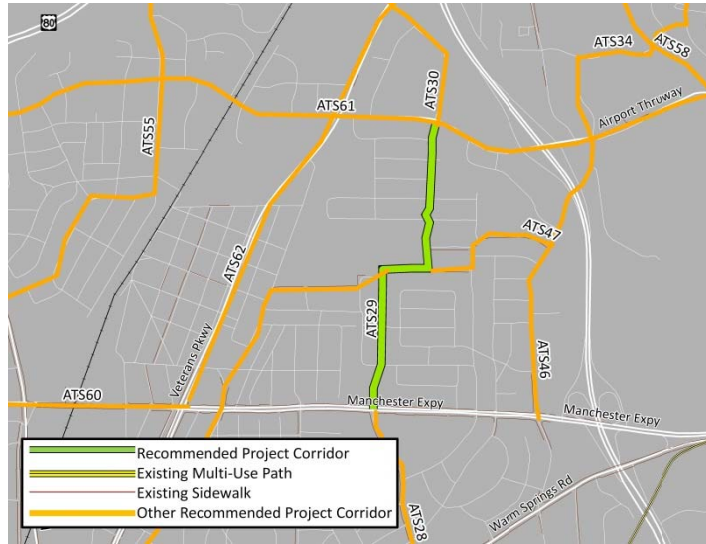
This corridor would stripe sharrows and provide sidewalks on at least one side of the roadway (this will likely require right-of-way acquisition) along this 35 mile per hour corridor from Manchester Expressway to Wynnton Road providing connections to several other alternative transportation corridors including the Fall Line Trace as well as providing a critical north-south link through to St. Francis Hospital. Along the four lane section of Woodruff Road, the sharrows should be striped in the outside lane of travel in each direction.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 29

Woodruff Road, 51st Street, and 23rd Avenue
(Manchester Expressway to Airport Thruway)
Sharrows
1.1 Miles
Short-Term Implementation



Priority Scoring

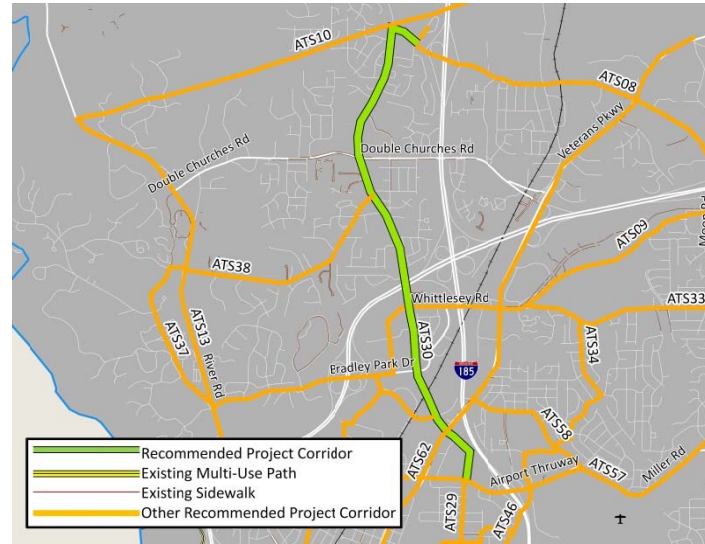
| | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 8 |
| Attraction Connectivity | 8 |
| Constructability | 8 |
| Meets ATS Goals | 6 |
| Community Support | 7 |
| Priority Score | 45 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$1,100 | \$1,156 | \$1,215 |
| Construction Estimated Cost | \$11,000 | \$11,561 | \$12,151 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$1,210 | \$1,272 | \$1,337 |
| Total Estimated Cost | \$13,310 | \$13,989 | \$14,703 |

This corridor would stripe sharrows and along this 35 mile per hour corridor from Manchester Expressway to Airport Thruway providing connections to several other alternative transportation corridors as well as providing a critical north-south link through to St. Francis Hospital and Allen Elementary School. There are currently sidewalks along this corridor on at least one side of the roadway.

Corridor 30

Whitesville Road
(Williams Road Welcome Center to Airport Thruway)
Multi-use Trail
3.73 miles
Long-Term Implementation



Priority Scoring

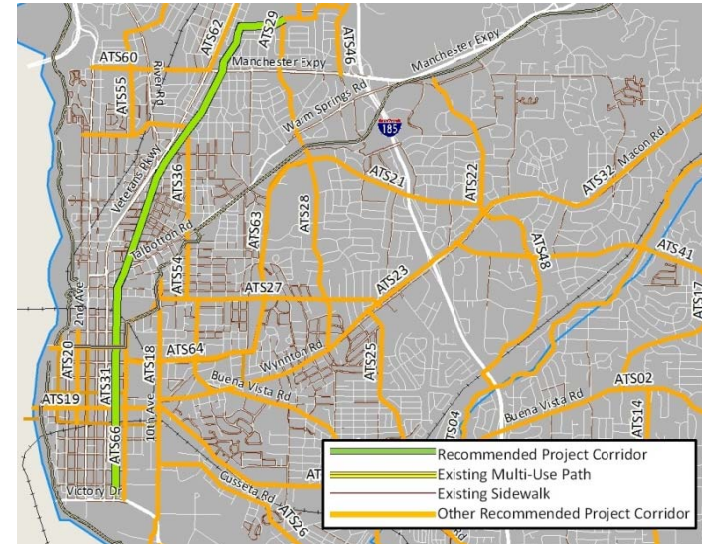
| | |
|-------------------------|-----------|
| Anticipated Impacts | 5 |
| System Connectivity | 8 |
| Attraction Connectivity | 8 |
| Constructability | 5 |
| Meets ATS Goals | 6 |
| Community Support | 6 |
| Priority Score | 38 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$216,340 | \$227,376 | \$238,974 |
| Construction Estimated Cost | \$2,163,400 | \$2,273,755 | \$2,389,740 |
| Right-of-Way Estimated Cost | \$2,064,516 | \$2,169,827 | \$2,280,510 |
| Estimated Contingency | \$444,426 | \$467,096 | \$490,923 |
| Total Estimated Cost | \$4,888,682 | \$5,138,054 | \$5,400,146 |

This corridor would construct a multi-use trail. Challenges to implementation include the numerous driveways in the commercial areas south of Whitesville Road (also an opportunity due to large amount of attraction to this area) and the drainage swale which would possibly require re-construction of the entire roadway section along the northern section, and a bridge over the railroad north of Veterans Parkway. However, the benefits to this corridor are numerous due to its multiple connections with other proposed corridors, Double Churches Elementary, and Double Churches Middle school, as well as serving the commercial areas south of I-185.

Corridor 31

5th Avenue/Hamilton Road/51st Street
(Civic Center to Woodruff Road)
Sharrows
4.71 miles
Short-Term Implementation



Priority Scoring

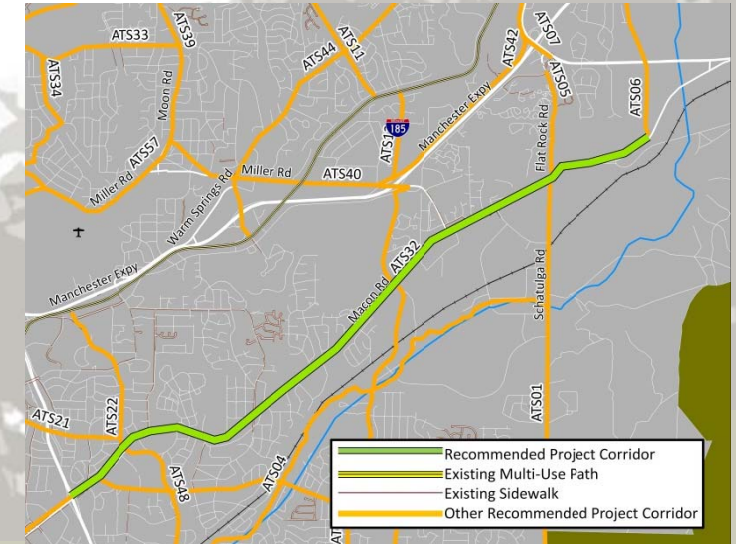
| | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 8 |
| Attraction Connectivity | 8 |
| Constructability | 8 |
| Meets ATS Goals | 8 |
| Community Support | 6 |
| Priority Score | 46 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$4,710 | \$4,950 | \$5,203 |
| Construction Estimated Cost | \$47,100 | \$49,503 | \$52,028 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$5,181 | \$5,445 | \$5,723 |
| Total Estimated Cost | \$56,991 | \$59,898 | \$62,954 |

This corridor would stripe sharrows and construct sidewalks along this corridor connecting into Corridor 29. This particular corridor was selected instead of adjacent Veterans Parkway due to its lower speeds (making sharrow installation more advisable with a speed limit of 30 miles per hour) and its use by METRA Route 9.

Corridor 32

Macon Road
(I-185 to Psalmnd Road)
Multi-use Trail
6.1 miles
Long-Term Implementation



Priority Scoring

| | |
|-------------------------|-----------|
| Anticipated Impacts | 5 |
| System Connectivity | 8 |
| Attraction Connectivity | 7 |
| Constructability | 6 |
| Meets ATS Goals | 8 |
| Community Support | 6 |
| Priority Score | 40 |

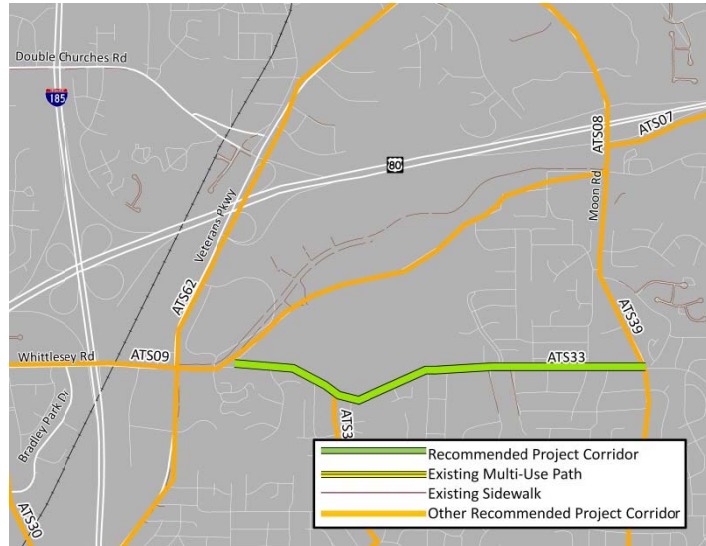
| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$353,800 | \$371,847 | \$390,815 |
| Construction Estimated Cost | \$3,538,000 | \$3,718,474 | \$3,908,153 |
| Right-of-Way Estimated Cost | \$1,621,506 | \$1,704,219 | \$1,791,151 |
| Estimated Contingency | \$551,331 | \$579,454 | \$609,012 |
| Total Estimated Cost | \$6,064,637 | \$6,373,994 | \$6,699,132 |

This corridor would construct a multi-use trail along Macon Road, hopefully utilizing parts of the existing sidewalk path. In particular, a specific part of this corridor (from Schatulga Road to Psalmnd Road) is critical in connecting other alternative transportation corridor recommendations.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 33
 Weems Road
 (Whittlesey Boulevard to Moon Road)
 1.65 miles
 Multi-use Facilities
 Mid-Term Implementation



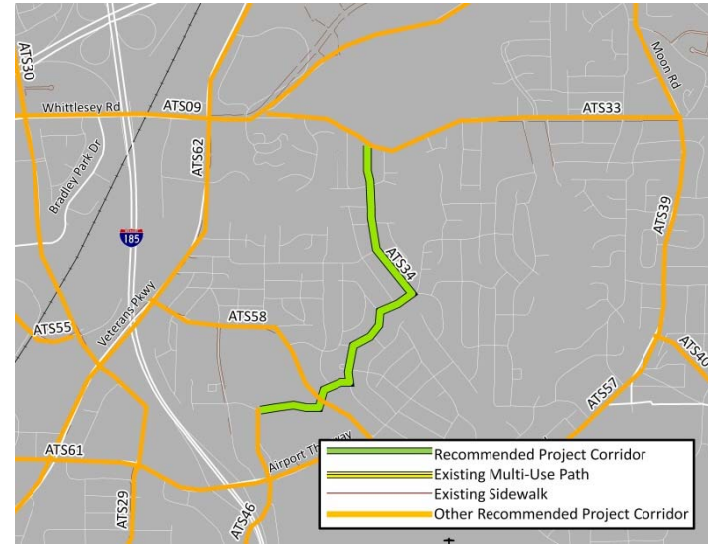
Priority Scoring

| | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 6 |
| Attraction Connectivity | 7 |
| Constructability | 7 |
| Meets ATS Goals | 6 |
| Community Support | 3 |
| Priority Score | 36 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$44,550 | \$46,822 | \$49,211 |
| Construction Estimated Cost | \$445,500 | \$468,225 | \$492,109 |
| Right-of-Way Estimated Cost | \$480,662 | \$505,181 | \$530,950 |
| Estimated Contingency | \$97,071 | \$102,023 | \$107,227 |
| Total Estimated Cost | \$1,067,783 | \$1,122,251 | \$1,179,497 |

This corridor would stripe sharrows and construct consistent sidewalk coverage with connections to Blanchard Elementary and the Columbus Botanical Garden along this 35 mile per hour corridor. Please note that the Columbus Water Works has identified available right-of-way between this corridor and ATS 9 that could be used to construct a multi-use trail.

Corridor 34
 Weems Road Lake Neighborhood Connector
 (Armour Road to Weems Road)
 1.45 miles
 Multi-use Facilities
 Mid-Term Implementation



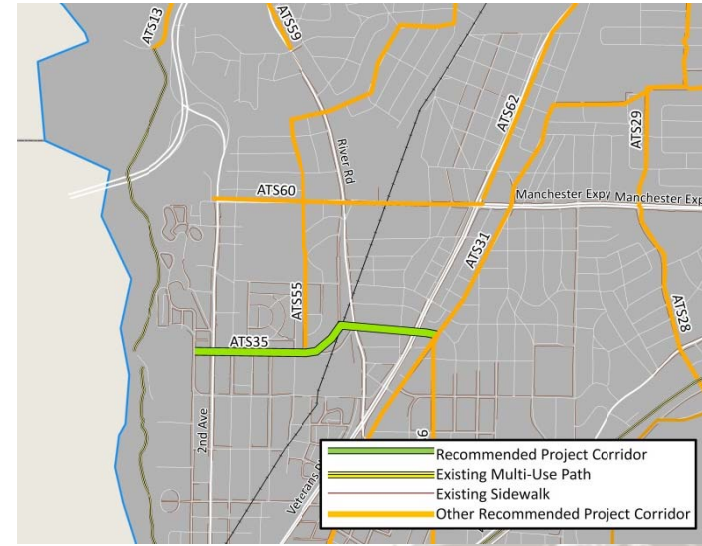
Priority Scoring

| | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 9 |
| Attraction Connectivity | 5 |
| Constructability | 5 |
| Meets ATS Goals | 7 |
| Community Support | 3 |
| Priority Score | 36 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$39,150 | \$41,147 | \$43,246 |
| Construction Estimated Cost | \$391,500 | \$411,470 | \$432,460 |
| Right-of-Way Estimated Cost | \$422,400 | \$443,947 | \$466,592 |
| Estimated Contingency | \$85,305 | \$89,656 | \$94,230 |
| Total Estimated Cost | \$938,355 | \$986,221 | \$1,036,528 |

This corridor would stripe sharrows and construct consistent sidewalk coverage along a residential corridor in northwest central Columbus that would otherwise be unserved by alternative transportation facilities.

Corridor 35
 38th and 39th Streets
 (2nd Avenue to Hamilton Road)
 0.91 miles
 Sharrows
 Short-Term Implementation



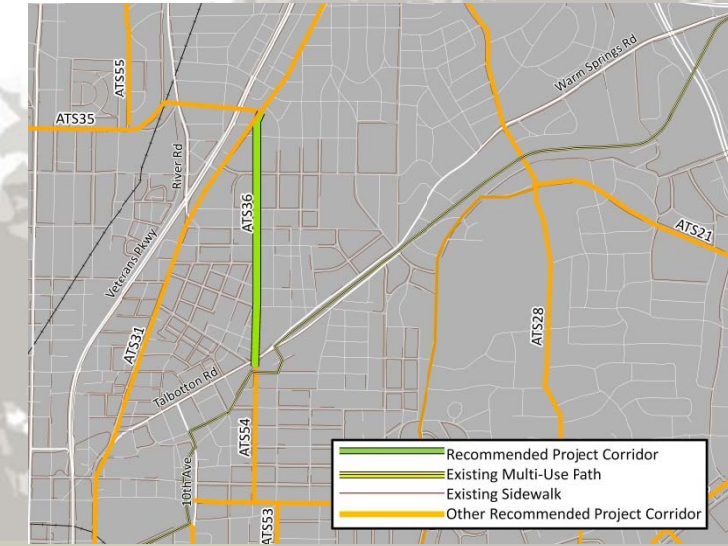
Priority Scoring

| | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 7 |
| Attraction Connectivity | 8 |
| Constructability | 7 |
| Meets ATS Goals | 7 |
| Community Support | 6 |
| Priority Score | 42 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$1,830 | \$1,923 | \$2,021 |
| Construction Estimated Cost | \$18,300 | \$19,233 | \$20,215 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$2,013 | \$2,116 | \$2,224 |
| Total Estimated Cost | \$22,143 | \$23,273 | \$24,460 |

This corridor would stripe sharrows along 38th and 39th Streets connecting 2nd Avenue to Hamilton Road. On the portion west of River Road, there may be opportunity to stripe dedicated bike lanes. This corridor would connect multiple other alternative transportation corridors as well as provide a connection to Fox Elementary School. Please note that a longer term concept identified by Columbus Water Works would connect this area through a multi-use trail from the Riverwalk to Anderson Village utilizing existing available right-of-way.

Corridor 36
 12th Avenue
 (Hamilton Road to Fall Line Trace)
 0.98 miles
 Multi-use Facilities
 Mid-Term Implementation



Priority Scoring

| | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 7 |
| Attraction Connectivity | 7 |
| Constructability | 6 |
| Meets ATS Goals | 6 |
| Community Support | 6 |
| Priority Score | 39 |

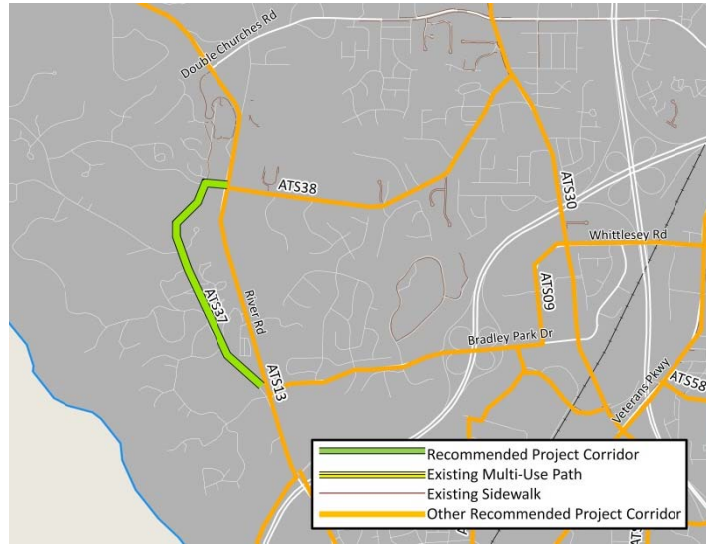
| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$26,460 | \$27,810 | \$29,228 |
| Construction Estimated Cost | \$264,600 | \$278,097 | \$292,283 |
| Right-of-Way Estimated Cost | \$285,484 | \$300,047 | \$315,352 |
| Estimated Contingency | \$57,654 | \$60,595 | \$63,686 |
| Total Estimated Cost | \$634,199 | \$666,550 | \$700,550 |

This corridor would stripe sharrows and consistent sidewalk coverage along 30 mile per hour 12th Avenue connecting to Corridor 35 at Hamilton Road and the Fall Line Trace. On the portion west of River Road, there may be opportunity to stripe dedicated bike lanes. This corridor would connect multiple other alternative transportation corridors as well as provide a connection to Fox Elementary School.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 37
Green Island Drive
(River Road to Mobley Road)
1.14
Sidewalks
Mid-Term Implementation

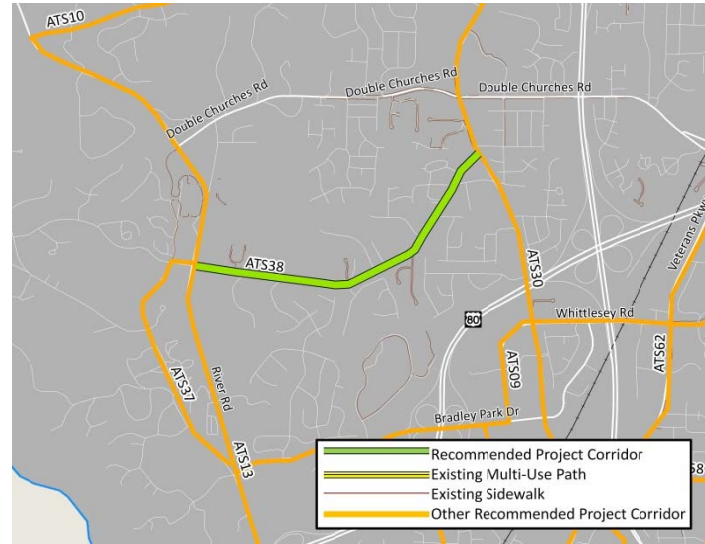


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 5 |
| Attraction Connectivity | 5 |
| Constructability | 8 |
| Meets ATS Goals | 8 |
| Community Support | 2 |
| Priority Score | 36 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$29,640 | \$31,152 | \$32,741 |
| Construction Estimated Cost | \$296,400 | \$311,519 | \$327,410 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$32,604 | \$34,267 | \$36,015 |
| Total Estimated Cost | \$358,644 | \$376,938 | \$396,166 |

This corridor would construct sidewalks on both sides of the road for the length of the corridor with a short connection on Mobley Road to River Road.

Corridor 38
Mobley Road
(Whitesville Road to River Road)
1.75 miles
Multi-use Facilities
Mid-Term Implementation

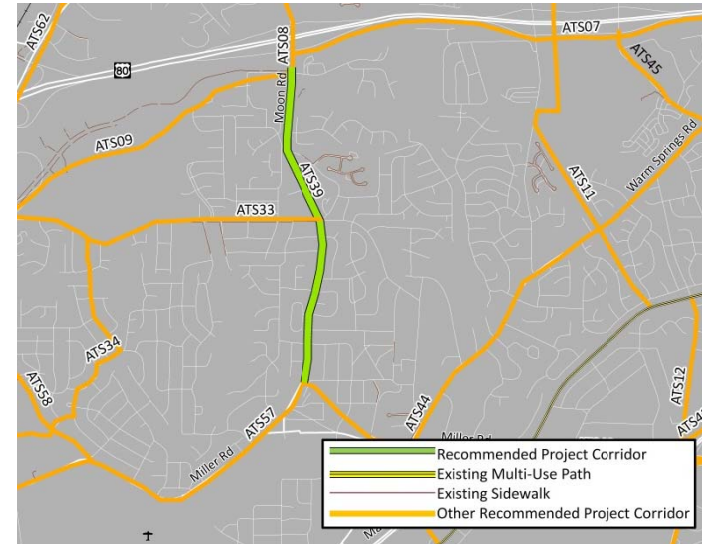


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 5 |
| System Connectivity | 6 |
| Attraction Connectivity | 6 |
| Constructability | 5 |
| Meets ATS Goals | 6 |
| Community Support | 7 |
| Priority Score | 35 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$34,250 | \$35,997 | \$37,833 |
| Construction Estimated Cost | \$342,500 | \$359,971 | \$378,333 |
| Right-of-Way Estimated Cost | \$364,138 | \$382,713 | \$402,235 |
| Estimated Contingency | \$74,089 | \$77,868 | \$81,840 |
| Total Estimated Cost | \$814,977 | \$856,549 | \$900,242 |

This corridor would stripe sharrows and construct an extension of the existing sidewalk along the western part of the 30 mile per hour corridor (from King Place Drive to River Road, a distance of 1.25 miles). There are multiple implementation challenges to this corridor due to the limited right-of-way but is included due to significant public comment and support and its ability to connect several residential neighborhoods to other alternative transportation corridors, including the Riverwalk indirectly.

Corridor 39
Moon Road
(Miller Road to Whittlesey Boulevard)
1.61 miles
Multi-use Facilities
Mid-Term Implementation

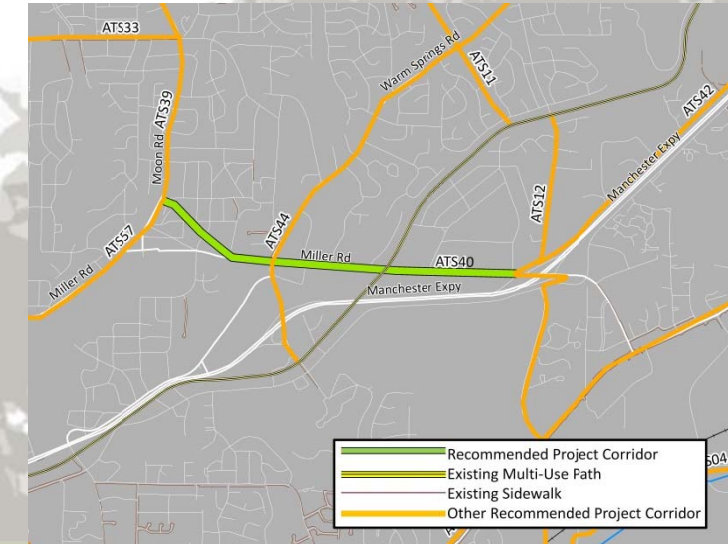


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 7 |
| Attraction Connectivity | 6 |
| Constructability | 7 |
| Meets ATS Goals | 7 |
| Community Support | 3 |
| Priority Score | 37 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$43,470 | \$45,687 | \$48,018 |
| Construction Estimated Cost | \$434,700 | \$456,874 | \$480,179 |
| Right-of-Way Estimated Cost | \$820,767 | \$862,634 | \$906,637 |
| Estimated Contingency | \$129,894 | \$136,520 | \$143,484 |
| Total Estimated Cost | \$1,428,831 | \$1,501,716 | \$1,578,318 |

This corridor would stripe sharrows and construct sidewalk along one side of the roadway along this 35 mile per hour corridor. Along the multi-lane segments, the sharrows should be striped in the outside lane of travel in each direction.

Corridor 40
Miller Road
(Moon Road to Billings Road)
1.9 miles
Multi-use Trail
Mid-Term Implementation



| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 8 |
| Attraction Connectivity | 6 |
| Constructability | 7 |
| Meets ATS Goals | 7 |
| Community Support | 5 |
| Priority Score | 40 |

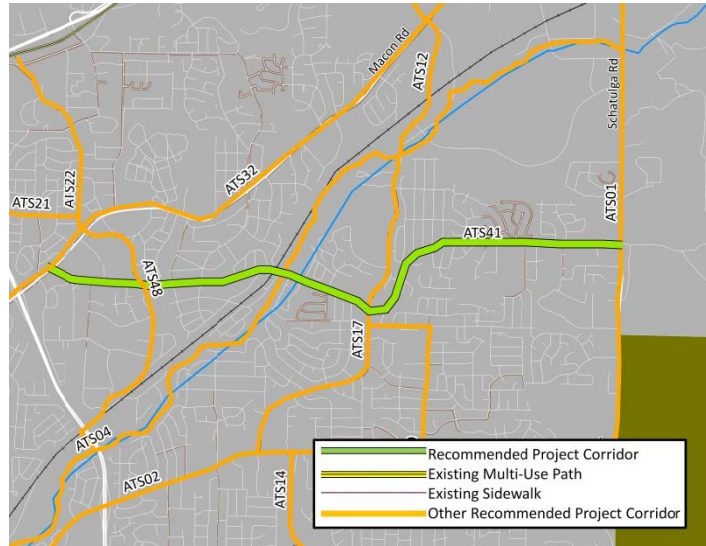
| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$110,200 | \$115,821 | \$121,729 |
| Construction Estimated Cost | \$1,102,000 | \$1,158,213 | \$1,217,294 |
| Right-of-Way Estimated Cost | \$968,607 | \$1,018,016 | \$1,069,945 |
| Estimated Contingency | \$218,081 | \$229,205 | \$240,897 |
| Total Estimated Cost | \$2,298,888 | \$2,521,255 | \$2,649,865 |

This corridor would stripe sharrows and construct a multi-use trail on the southern side of the roadway, providing connections to several other alternative transportation corridors including the existing Fall Line Trace. Please note that Columbus Water Works has identified available right-of-way along parts of this corridor that may minimize the amount of right-of-way acquisition needed. Likewise, the Columbus Water Works identifies that the available right-of-way could potentially connect past Moon Road to Lake Heath.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 41
Forrest Road
(Macon Road to Schatulga Road)
4.19 miles
Multi-use Facilities
Mid-Term Implementation

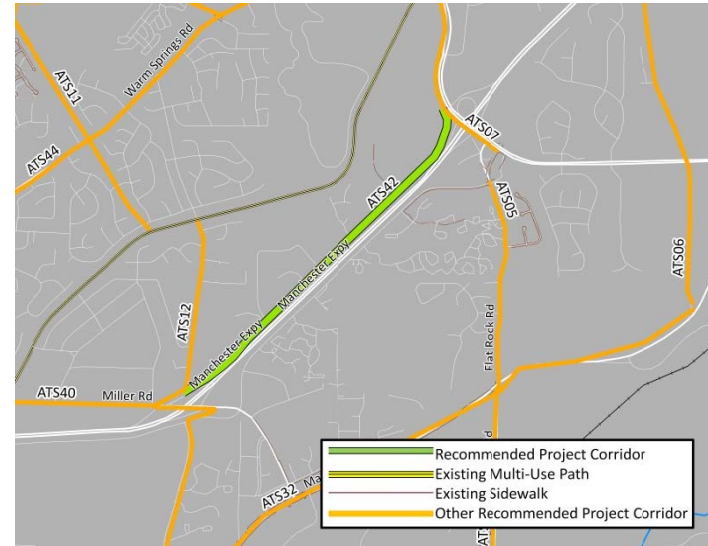


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 8 |
| Attraction Connectivity | 8 |
| Constructability | 7 |
| Meets ATS Goals | 7 |
| Community Support | 2 |
| Priority Score | 39 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$113,190 | \$118,964 | \$125,032 |
| Construction Estimated Cost | \$1,131,300 | \$1,189,008 | \$1,249,659 |
| Right-of-Way Estimated Cost | \$1,586,767 | \$1,667,708 | \$1,752,778 |
| Estimated Contingency | \$283,120 | \$297,562 | \$312,741 |
| Total Estimated Cost | \$3,114,317 | \$3,273,178 | \$3,440,143 |

This corridor would stripe sharrows and construct sidewalks along this 30 mile per hour corridor, providing connections to several other alternative transportation corridors. This corridor would serve a vital east-west link through eastern Columbus with direct connections to Edgewood Elementary School and Forrest Road Elementary School.

Corridor 42
Gateway Road
(US 80 to Billings Road)
1.69 miles
Multi-use Facilities
Mid-Term Implementation

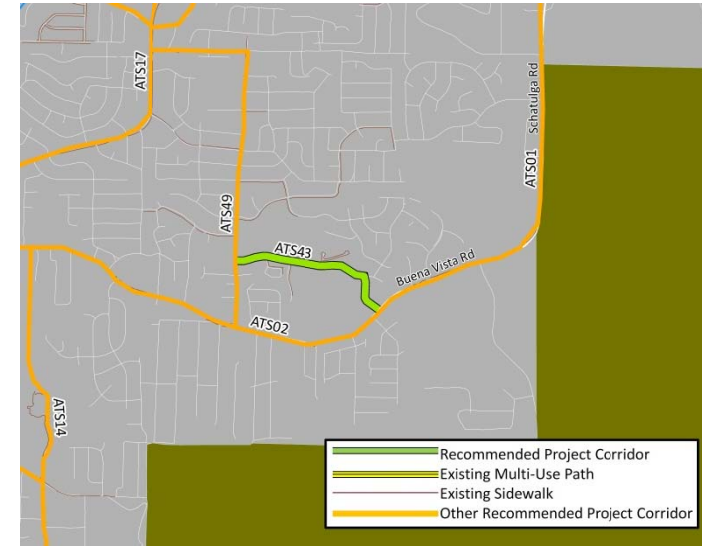


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 7 |
| Attraction Connectivity | 8 |
| Constructability | 7 |
| Meets ATS Goals | 7 |
| Community Support | 2 |
| Priority Score | 38 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$45,630 | \$47,958 | \$50,404 |
| Construction Estimated Cost | \$456,300 | \$479,576 | \$504,039 |
| Right-of-Way Estimated Cost | \$886,166 | \$931,369 | \$978,879 |
| Estimated Contingency | \$138,810 | \$145,891 | \$153,333 |
| Total Estimated Cost | \$1,526,906 | \$1,604,794 | \$1,686,654 |

This corridor would stripe sharrows and construct a sidewalk on the north side of the 35 mile per hour roadway (likely with limited right-of-way acquisition), providing connections to several other alternative transportation corridors and to the Wal-Mart anchored shopping destination on the north end of the corridor.

Corridor 43
Georgetown Drive and Manley Road
(Amber Drive to Buena Vista Road)
0.71 miles
Sharrows
Short-Term Implementation

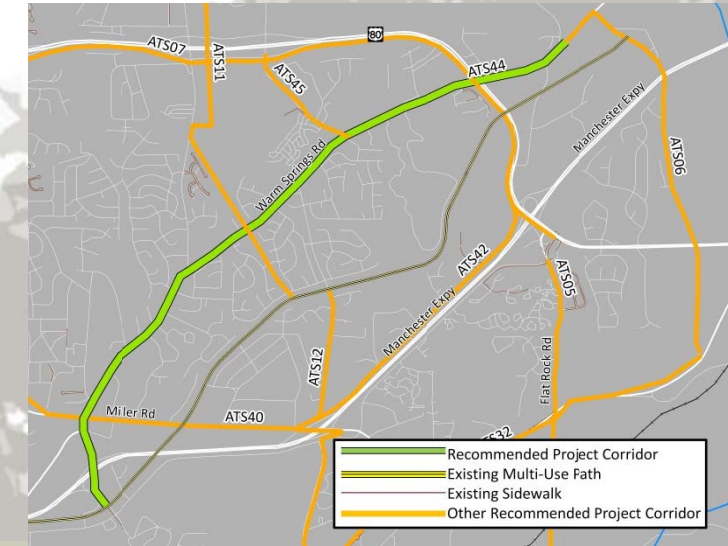


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 8 |
| Attraction Connectivity | 8 |
| Constructability | 8 |
| Meets ATS Goals | 7 |
| Community Support | 2 |
| Priority Score | 41 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|----------------|----------------|----------------|
| Preliminary Engineering Estimated Cost | \$710 | \$746 | \$784 |
| Construction Estimated Cost | \$7,100 | \$7,462 | \$7,843 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$781 | \$821 | \$863 |
| Total Estimated Cost | \$8,591 | \$9,029 | \$9,490 |

This corridor would complement existing pedestrian facilities through residential streets by striping sharrows connecting multiple schools along the route to Buena Vista Road and associated alternative transportation corridors.

Corridor 44
Warm Springs Road
(Fall Line Trace to Psalmord Road)
4.52 miles
Multi-use Facilities
Long-Term Implementation



| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 8 |
| Attraction Connectivity | 7 |
| Constructability | 7 |
| Meets ATS Goals | 7 |
| Community Support | 4 |
| Priority Score | 40 |

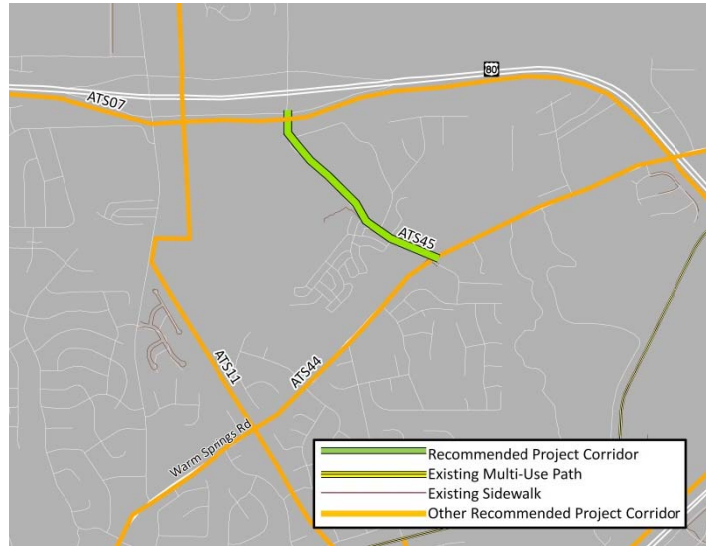
| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$351,750 | \$369,693 | \$388,551 |
| Construction Estimated Cost | \$3,517,500 | \$3,696,928 | \$3,885,508 |
| Right-of-Way Estimated Cost | \$658,361 | \$691,944 | \$727,240 |
| Estimated Contingency | \$452,761 | \$475,856 | \$500,130 |
| Total Estimated Cost | \$4,980,373 | \$5,234,422 | \$5,501,430 |

This corridor would stripe a combination of sharrows (from the Fall Line Trace to Miller Road where the roadway has a speed limit of 35 miles per hour – a distance of 0.49 miles) and bike lanes (from Miller Road through Psalmord Road) and construct sidewalks throughout the corridor connecting multiple residential neighborhoods with commercial attractions, schools, and other alternative transportation corridors including the existing Fall Line Trace. Construction of bike lanes may require widening of the roadway, but is advisable over sharrows due to a speed limit of 40 miles per hour from Miller Road through Psalmord Road. Please note that Columbus Water Works has identified available right-of-way along parts of this corridor that may minimize the amount of right-of-way acquisition needed.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 45
 Blackmon Road
 (US 80 to Warm Springs Road)
 0.68 miles
 Multi-use Trail
 Mid-Term Implementation

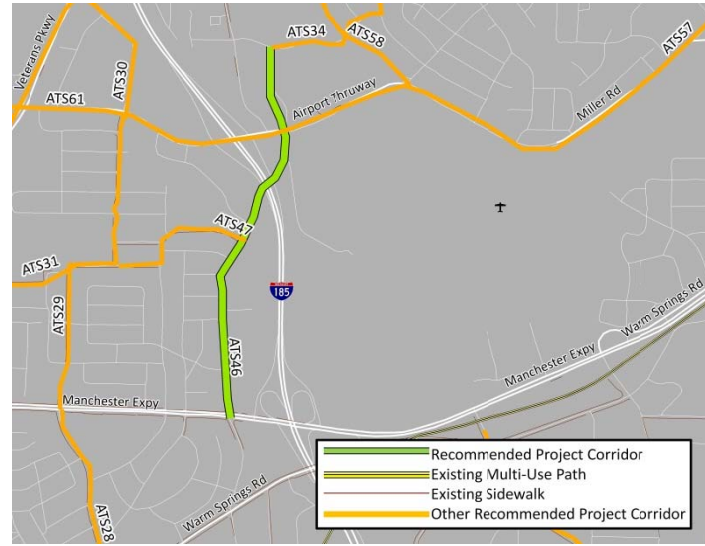


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 7 |
| Attraction Connectivity | 7 |
| Constructability | 7 |
| Meets ATS Goals | 7 |
| Community Support | 2 |
| Priority Score | 37 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$39,440 | \$41,452 | \$43,566 |
| Construction Estimated Cost | \$394,400 | \$414,518 | \$435,663 |
| Right-of-Way Estimated Cost | \$198,091 | \$208,196 | \$218,816 |
| Estimated Contingency | \$63,193 | \$66,416 | \$69,804 |
| Total Estimated Cost | \$695,124 | \$730,582 | \$767,849 |

This corridor would construct a short multi-use trail connecting multiple residential neighborhoods with Blackmon Road Middle School and other alternative transportation corridors including the multi-use trail proposed in Corridor 7 adjacent to US 80.

Corridor 46
 Armour Road
 (Sowega Drive to Manchester Expressway)
 1.1 miles
 Multi-use Facilities
 Mid-Term Implementation

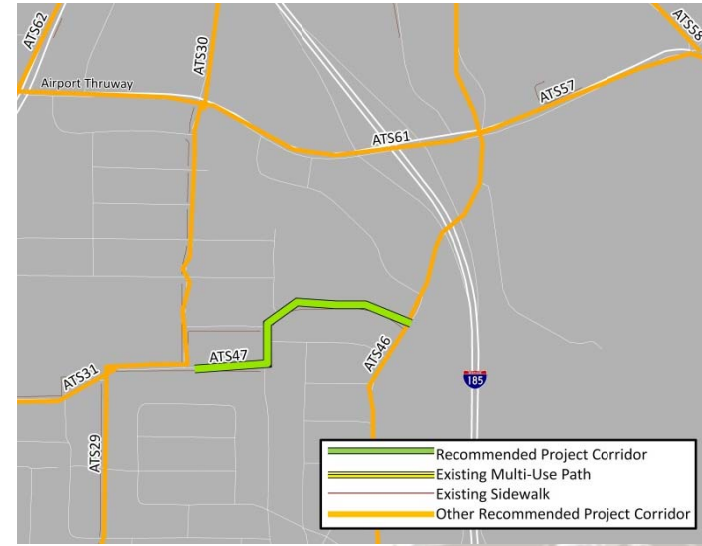


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 7 |
| Attraction Connectivity | 8 |
| Constructability | 6 |
| Meets ATS Goals | 8 |
| Community Support | 7 |
| Priority Score | 42 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$29,700 | \$31,215 | \$32,807 |
| Construction Estimated Cost | \$297,000 | \$312,150 | \$328,073 |
| Right-of-Way Estimated Cost | \$801,103 | \$841,967 | \$884,916 |
| Estimated Contingency | \$112,780 | \$118,533 | \$124,579 |
| Total Estimated Cost | \$1,240,584 | \$1,303,866 | \$1,370,377 |

This corridor would stripe sharrows and construct sidewalks throughout the 35 mile per hour corridor connecting residential neighborhoods and Britt David Park with major commercial areas and other alternative transportation corridors.

Corridor 47
 52nd Street
 (23rd Avenue to Armour Road)
 0.48 miles
 Multi-use Facilities
 Mid-Term Implementation

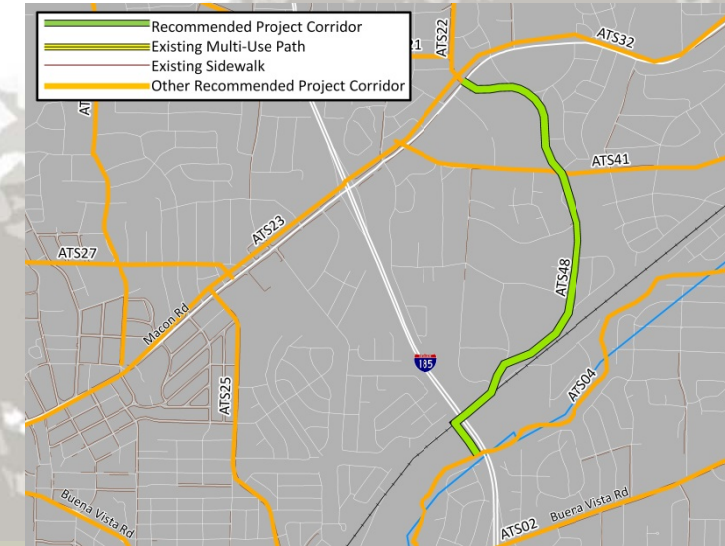


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 8 |
| Attraction Connectivity | 6 |
| Constructability | 8 |
| Meets ATS Goals | 8 |
| Community Support | 2 |
| Priority Score | 39 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$12,960 | \$13,621 | \$14,316 |
| Construction Estimated Cost | \$129,600 | \$136,211 | \$143,159 |
| Right-of-Way Estimated Cost | \$559,316 | \$587,847 | \$617,833 |
| Estimated Contingency | \$70,188 | \$73,768 | \$77,531 |
| Total Estimated Cost | \$772,063 | \$811,446 | \$852,838 |

This short corridor would stripe sharrows and construct sidewalks throughout a short residential segment connecting to other proposed corridors (Corridors 29, 31, and 46).

Corridor 48
 Elm Drive and Morris Road
 (Macon Road to Bull Creek Greenway)
 2.0 miles
 Multi-use Facilities
 Mid-Term Implementation



| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 5 |
| System Connectivity | 8 |
| Attraction Connectivity | 7 |
| Constructability | 6 |
| Meets ATS Goals | 7 |
| Community Support | 6 |
| Priority Score | 39 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$26,300 | \$27,642 | \$29,052 |
| Construction Estimated Cost | \$263,000 | \$276,416 | \$290,516 |
| Right-of-Way Estimated Cost | \$218,483 | \$229,628 | \$241,341 |
| Estimated Contingency | \$50,778 | \$53,368 | \$56,091 |
| Total Estimated Cost | \$558,561 | \$587,053 | \$616,999 |

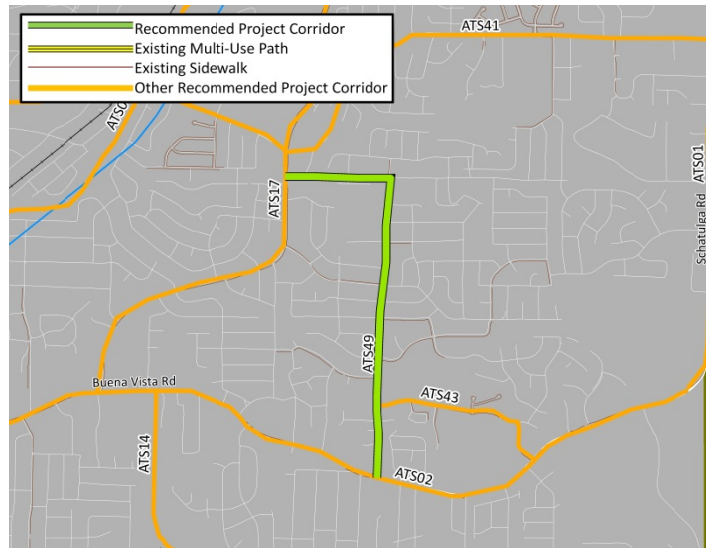
This corridor would stripe sharrows along Elm Drive and Morris Road (both with speed limits of 30 miles per hour) connecting several other alternative transportation corridors including the proposed University Avenue road diet and the Bull Creek Greenway to multiple points of interests including Edgewood Park and Edgewood Elementary School. On the south end of the corridor (once Morris Road crosses over the railroad tracks), a short multi-use trail of 0.15 miles would be constructed to connect to the proposed Corridor 4 (Bull Creek Greenway), utilizing ideally excess right-of-way along the I-185 corridor and possibly requiring a bridge over the Bull Creek Greenway. The corridor would also construct sidewalks along a 0.60 mile segment from the proposed multi-use trail component of the corridor to Edgewood Park.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 49

Hunter Road and Amber Drive
(Floyd Road to Buena Vista Road)
1.6 miles
Sharrows
Short-Term Implementation



Priority Scoring

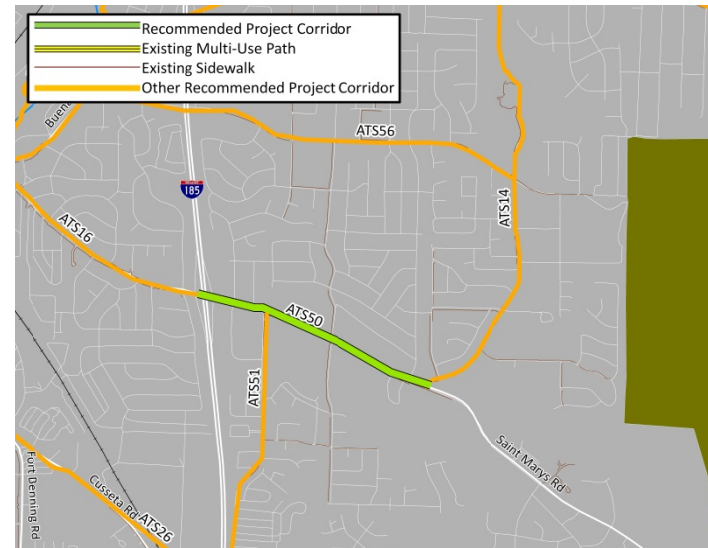
| | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 7 |
| Attraction Connectivity | 7 |
| Constructability | 8 |
| Meets ATS Goals | 6 |
| Community Support | 6 |
| Priority Score | 42 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$1,600 | \$1,682 | \$1,767 |
| Construction Estimated Cost | \$16,000 | \$16,816 | \$17,674 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$1,760 | \$1,850 | \$1,944 |
| Total Estimated Cost | \$19,360 | \$20,348 | \$21,385 |

This corridor would stripe sharrows along this residential corridor connecting to several other proposed alternative transportation corridors and Wesley Heights Elementary School. There are currently sidewalks along the corridor on at least one side of the roadway.

Corridor 50

St. Mary's Road
(I-185 to Northstar Drive)
0.96 miles
Sharrows
Short-Term Implementation



Priority Scoring

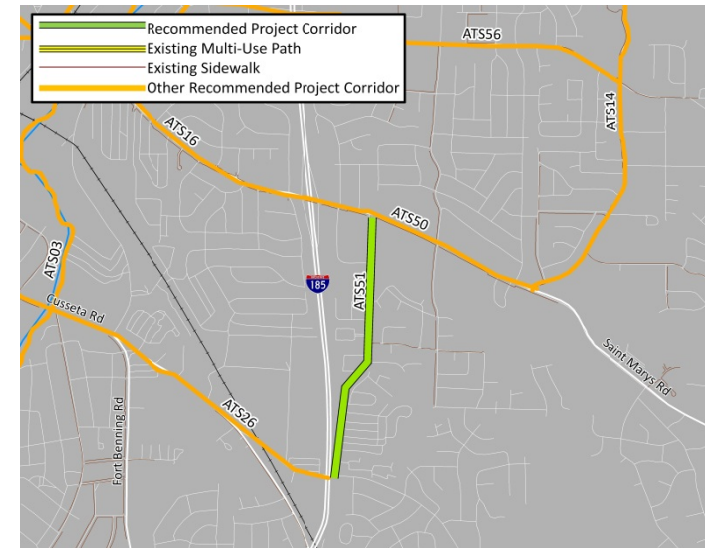
| | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 7 |
| Attraction Connectivity | 7 |
| Constructability | 8 |
| Meets ATS Goals | 6 |
| Community Support | 4 |
| Priority Score | 40 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$960 | \$1,009 | \$1,060 |
| Construction Estimated Cost | \$9,600 | \$10,090 | \$10,604 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$1,056 | \$1,110 | \$1,166 |
| Total Estimated Cost | \$11,616 | \$12,209 | \$12,831 |

This corridor would stripe sharrows along the corridor connecting to other alternative transportation corridors and St. Mary's Elementary School. Please note that this corridor overlaps with the LRTP recommending widening of St. Mary's Road from Robin Road (just west of I-185) to Northstar Drive (LRTP Project #20, PI#332780). In order to connect the multi-use components of the road diet proposed as Corridor 16 with multi-use recommendations on Northstar Drive (Corridor 14), it is recommended that this corridor be incorporated as an interim solution prior to the construction of the widening project, which would ideally also include bicycle facilities in addition to the existing sidewalks.

Corridor 51

Farr Road
(St. Mary's Road to Old Cusseta Road)
1.25 miles
Sharrows
Short-Term Implementation



Priority Scoring

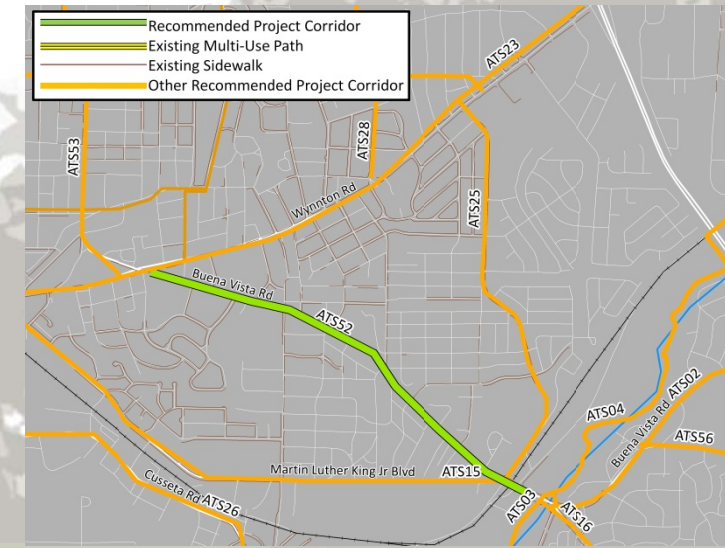
| | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 7 |
| Attraction Connectivity | 5 |
| Constructability | 8 |
| Meets ATS Goals | 6 |
| Community Support | 6 |
| Priority Score | 40 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$1,250 | \$1,314 | \$1,381 |
| Construction Estimated Cost | \$12,500 | \$13,138 | \$13,808 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$1,375 | \$1,445 | \$1,519 |
| Total Estimated Cost | \$15,125 | \$15,897 | \$16,707 |

This corridor would stripe sharrows along the 25 mile per hour corridor connecting to other alternative transportation projects. Please note that this corridor overlaps with the LRTP recommending widening of Farr Road (LRTP Project #19, PI#350860). It is recommended that this corridor be incorporated as an interim solution prior to the construction of the widening project, which would ideally also include bicycle facilities in addition to the existing sidewalks.

Corridor 52

Buena Vista Road
(Wynnton Road to Illges Road)
1.69 miles
Multi-use Facilities
Mid-Term Implementation



Priority Scoring

| | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 7 |
| Attraction Connectivity | 6 |
| Constructability | 7 |
| Meets ATS Goals | 7 |
| Community Support | 4 |
| Priority Score | 37 |

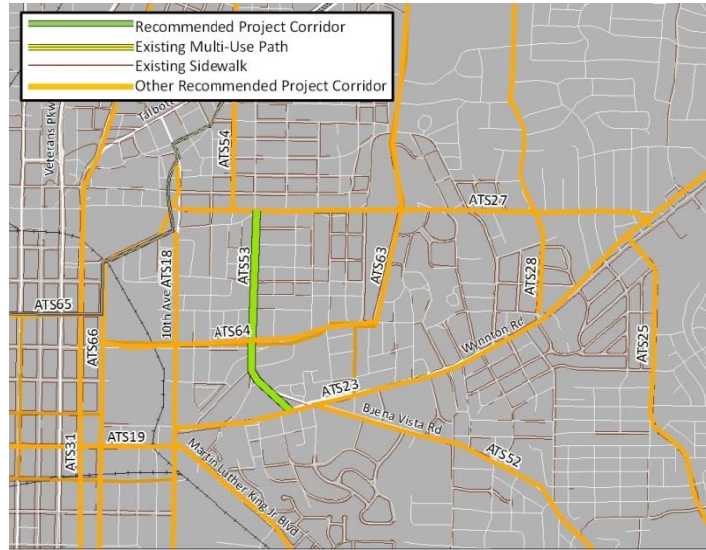
| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$45,630 | \$47,958 | \$50,404 |
| Construction Estimated Cost | \$456,300 | \$479,576 | \$504,039 |
| Right-of-Way Estimated Cost | \$775,395 | \$814,948 | \$856,518 |
| Estimated Contingency | \$12,733 | \$13,383 | \$14,065 |
| Total Estimated Cost | \$1,405,058 | \$1,476,730 | \$1,552,058 |

This corridor would stripe sharrows and construct consistent sidewalk coverage along the corridor connecting to other alternative transportation corridors. Please note that this corridor overlaps with the LRTP recommending widening of Buena Vista Road (LRTP Project #24, PI#350796). It is recommended that this project be incorporated as an interim solution prior to the construction of the widening project, which would ideally also include bicycle facilities in addition to the existing sidewalks.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 53
13th Avenue
(Wynnton Road to 17th Street)
0.95 miles
Multi-use Facilities
Mid-Term Implementation

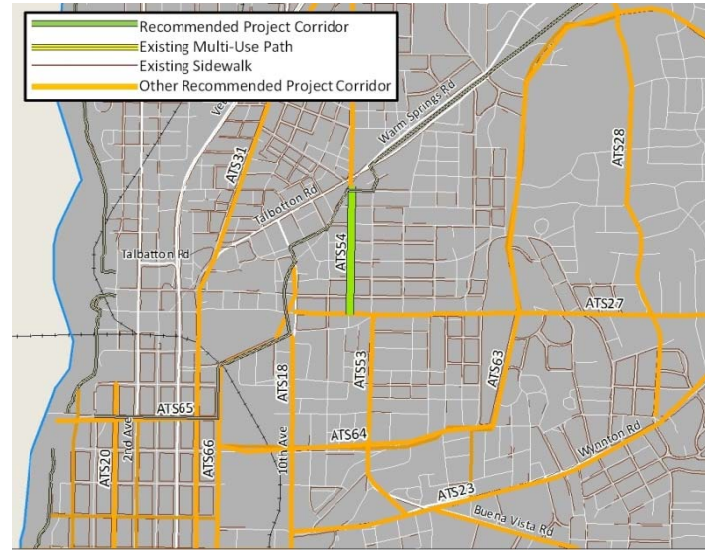


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 8 |
| Attraction Connectivity | 6 |
| Constructability | 7 |
| Meets ATS Goals | 6 |
| Community Support | 6 |
| Priority Score | 39 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$25,650 | \$26,958 | \$28,334 |
| Construction Estimated Cost | \$256,500 | \$269,584 | \$283,336 |
| Right-of-Way Estimated Cost | \$691,862 | \$727,154 | \$764,246 |
| Estimated Contingency | \$97,401 | \$102,369 | \$107,591 |
| Total Estimated Cost | \$1,071,413 | \$1,126,066 | \$1,183,507 |

This corridor would stripe sharrows and construct consistent sidewalk coverage along the 30 mile per hour corridor connecting to other alternative transportation corridors.

Corridor 54
12th Avenue
(Fall Line Trace to 17th Street)
0.53 miles
Multi-use Facilities
Mid-Term Implementation

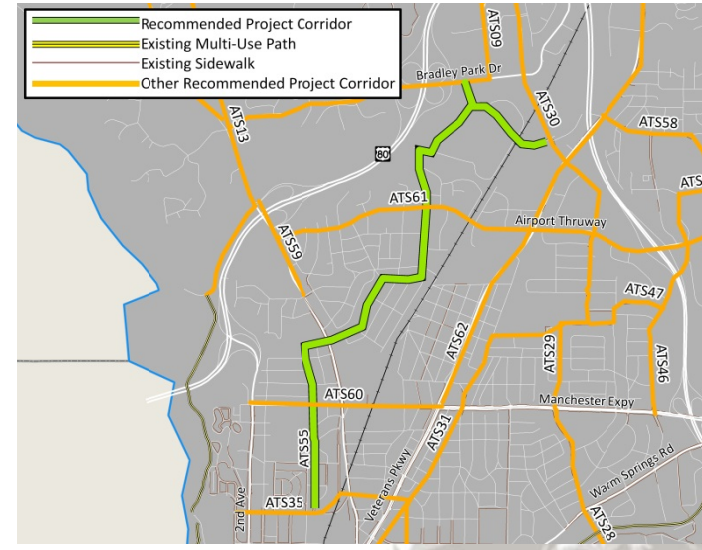


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 8 |
| Attraction Connectivity | 8 |
| Constructability | 7 |
| Meets ATS Goals | 6 |
| Community Support | 7 |
| Priority Score | 42 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$14,310 | \$15,040 | \$15,807 |
| Construction Estimated Cost | \$143,100 | \$150,400 | \$158,071 |
| Right-of-Way Estimated Cost | \$385,986 | \$405,675 | \$426,369 |
| Estimated Contingency | \$54,340 | \$57,112 | \$60,025 |
| Total Estimated Cost | \$597,736 | \$628,227 | \$660,272 |

This corridor would stripe sharrows and construct consistent sidewalk coverage along the corridor connecting to other alternative transportation corridors.

Corridor 55
Northwest Connector
(38th Street to Whitesville Road)
3.27 miles
Multi-use Facilities
Mid-Term Implementation

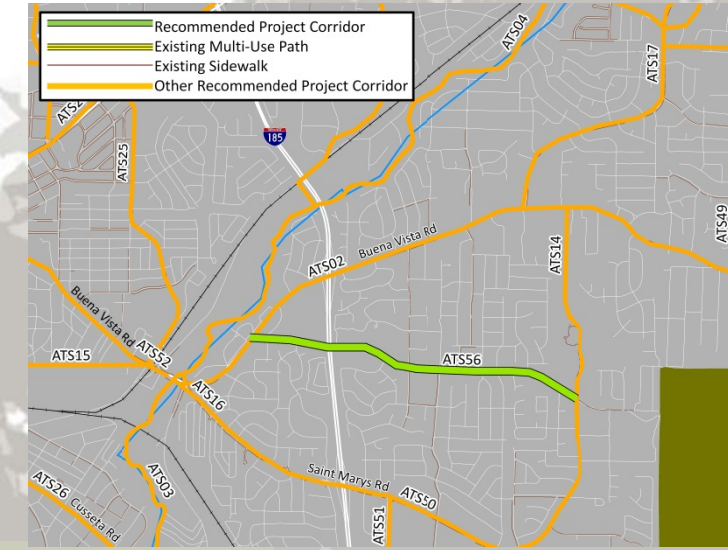


| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 5 |
| System Connectivity | 8 |
| Attraction Connectivity | 7 |
| Constructability | 5 |
| Meets ATS Goals | 6 |
| Community Support | 6 |
| Priority Score | 37 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$88,290 | \$92,794 | \$97,527 |
| Construction Estimated Cost | \$882,900 | \$927,937 | \$975,271 |
| Right-of-Way Estimated Cost | \$1,738,467 | \$1,827,146 | \$1,920,349 |
| Estimated Contingency | \$270,966 | \$284,788 | \$299,315 |
| Total Estimated Cost | \$2,980,623 | \$3,132,665 | \$3,292,462 |

This corridor would stripe sharrows and construct consistent sidewalk coverage along a residential corridor in northwest Columbus that would otherwise be unserved by alternative transportation facilities.

Corridor 56
Steam Mill Road
(Buena Vista Road to Northstar Drive)
1.8 miles
Multi-use Facilities
Mid-Term Implementation



| Priority Scoring | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 7 |
| Attraction Connectivity | 7 |
| Constructability | 7 |
| Meets ATS Goals | 7 |
| Community Support | 6 |
| Priority Score | 41 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$48,600 | \$51,079 | \$53,685 |
| Construction Estimated Cost | \$486,000 | \$510,791 | \$536,846 |
| Right-of-Way Estimated Cost | \$524,359 | \$551,107 | \$579,219 |
| Estimated Contingency | \$105,896 | \$111,298 | \$116,975 |
| Total Estimated Cost | \$1,164,854 | \$1,224,273 | \$1,286,724 |

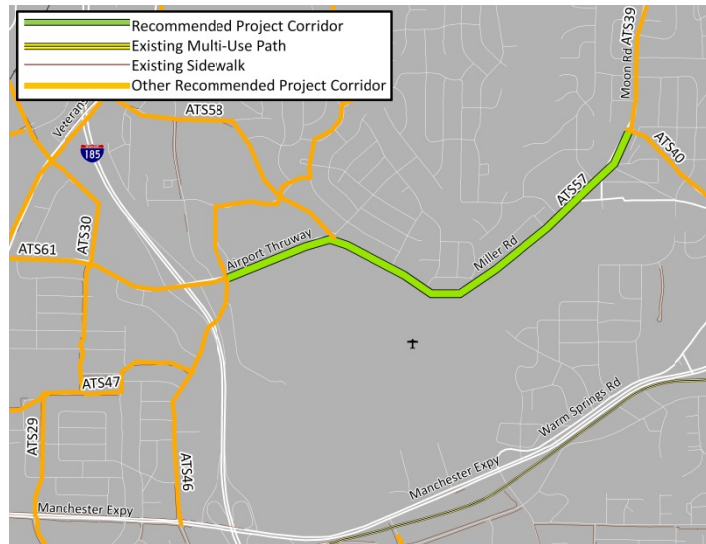
This corridor would stripe sharrows and construct consistent sidewalk coverage (from Buena Vista Road to the I-185 Bridge) along a residential corridor in eastern Columbus with connections to several other alternative transportation corridors and Dimon Elementary School.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 57

Airport Thruway/W. Britt David Road/Miller Road
(Armour Road to Moon Road)
1.77 miles
Multi-use Trail
Mid-Term Implementation



Priority Scoring

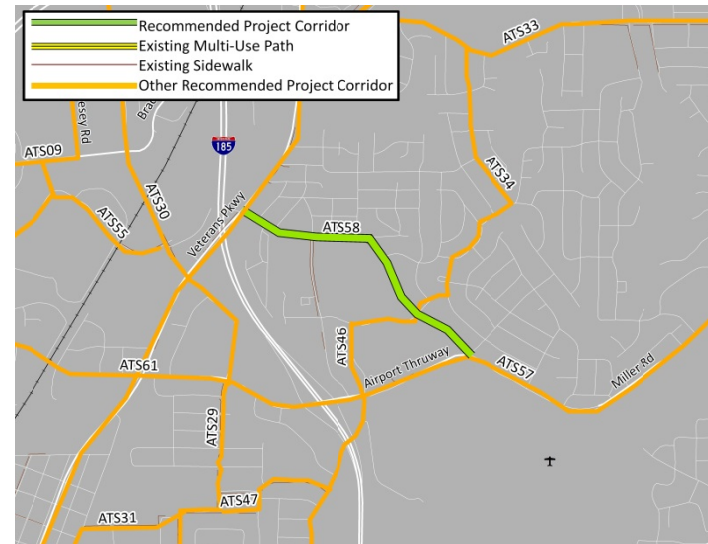
| | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 8 |
| Attraction Connectivity | 7 |
| Constructability | 6 |
| Meets ATS Goals | 10 |
| Community Support | 8 |
| Priority Score | 46 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$148,680 | \$156,264 | \$164,235 |
| Construction Estimated Cost | \$1,486,800 | \$1,562,642 | \$1,642,352 |
| Right-of-Way Estimated Cost | \$631,634 | \$663,854 | \$697,717 |
| Estimated Contingency | \$226,711 | \$238,276 | \$250,430 |
| Total Estimated Cost | \$2,493,825 | \$2,621,035 | \$2,754,734 |

This corridor would construct a multi-use trail on the south side of the roadway and a sidewalk on the north side of the roadway. It will connect to several other alternative transportation corridors.

Corridor 58

Britt David Road
(Airport Thruway to Veterans Parkway)
1.06 miles
Multi-use Facilities
Mid-Term Implementation



Priority Scoring

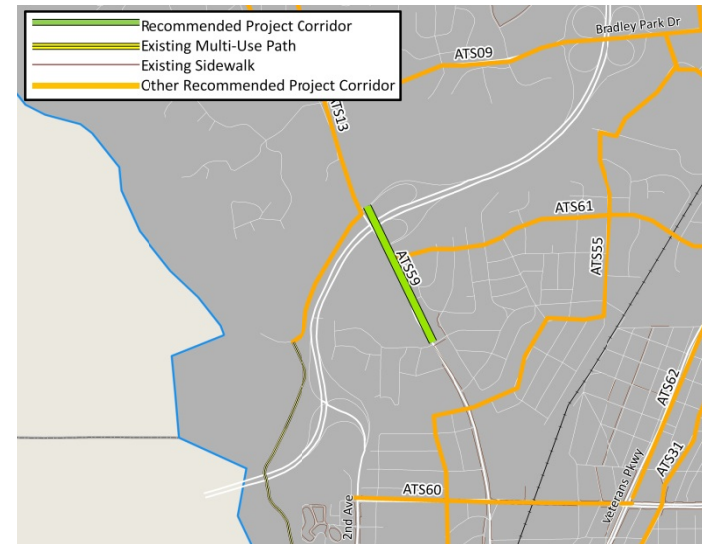
| | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 6 |
| Attraction Connectivity | 7 |
| Constructability | 6 |
| Meets ATS Goals | 7 |
| Community Support | 6 |
| Priority Score | 38 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$14,060 | \$14,777 | \$15,531 |
| Construction Estimated Cost | \$140,600 | \$147,772 | \$155,310 |
| Right-of-Way Estimated Cost | \$145,655 | \$153,085 | \$160,894 |
| Estimated Contingency | \$30,032 | \$31,564 | \$33,174 |
| Total Estimated Cost | \$330,347 | \$347,198 | \$364,909 |

This corridor would stripe sharrows and construct a sidewalk on the north side of the corridor, connecting to several other alternative transportation corridors as well as Britt David Park, a branch of the library, and Britt David Magnet Academy.

Corridor 59

River Road
(Marina to Heath Drive)
0.63 miles
Sidewalk
Mid-Term Implementation



Priority Scoring

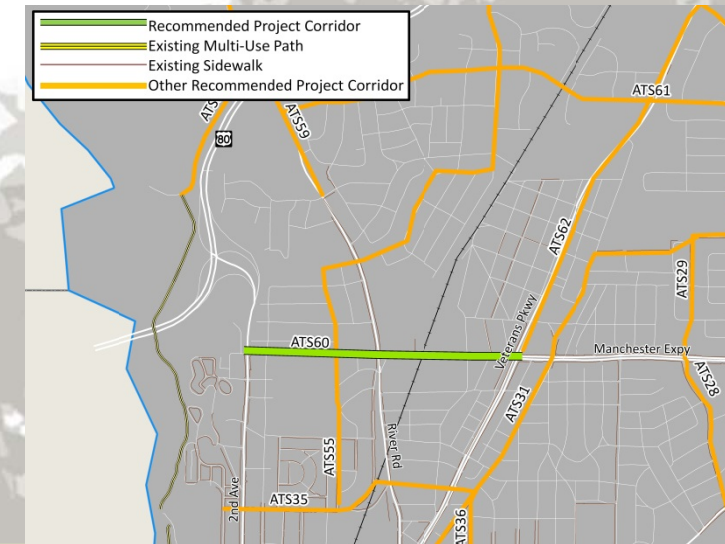
| | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 7 |
| Attraction Connectivity | 6 |
| Constructability | 7 |
| Meets ATS Goals | 7 |
| Community Support | 2 |
| Priority Score | 36 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$16,380 | \$17,216 | \$18,094 |
| Construction Estimated Cost | \$163,800 | \$172,155 | \$180,937 |
| Right-of-Way Estimated Cost | \$458,814 | \$482,218 | \$506,816 |
| Estimated Contingency | \$63,899 | \$67,158 | \$70,584 |
| Total Estimated Cost | \$702,893 | \$738,748 | \$776,431 |

This corridor would construct a sidewalk on the west side of the roadway for a short segment, connecting to other alternative transportation corridors.

Corridor 60

Manchester Expressway
(2nd Avenue to Veterans Parkway)
1.0 miles
Sidewalk
Mid-Term Implementation



Priority Scoring

| | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 8 |
| Attraction Connectivity | 8 |
| Constructability | 7 |
| Meets ATS Goals | 8 |
| Community Support | 5 |
| Priority Score | 42 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$26,000 | \$27,326 | \$28,720 |
| Construction Estimated Cost | \$260,000 | \$273,263 | \$287,202 |
| Right-of-Way Estimated Cost | \$1,165,241 | \$1,224,680 | \$1,287,151 |
| Estimated Contingency | \$145,124 | \$152,527 | \$160,307 |
| Total Estimated Cost | \$1,996,366 | \$1,677,797 | \$1,763,381 |

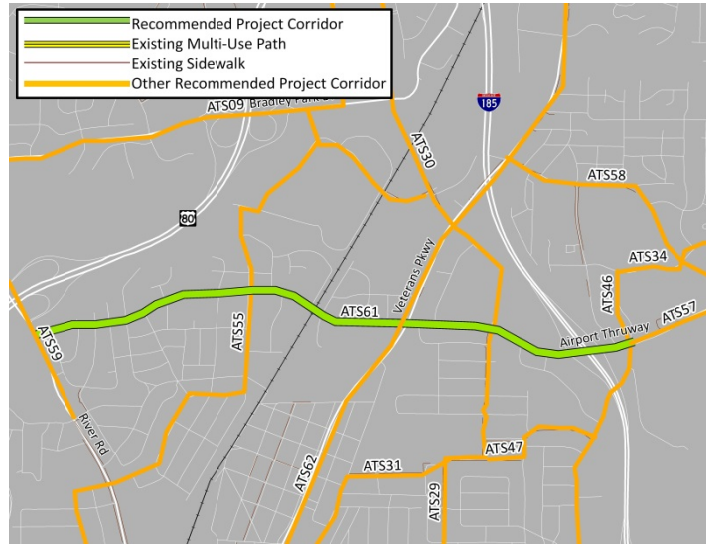
This corridor would construct a sidewalk on the south side of the roadway. It would connect to several other alternative transportation corridors as well as serving an important commercial corridor.

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 61

54th Street/Airport Thruway
(River Road to Armour Drive)
2.26 miles
Multi-use Facilities
Mid-Term Implementation



Priority Scoring

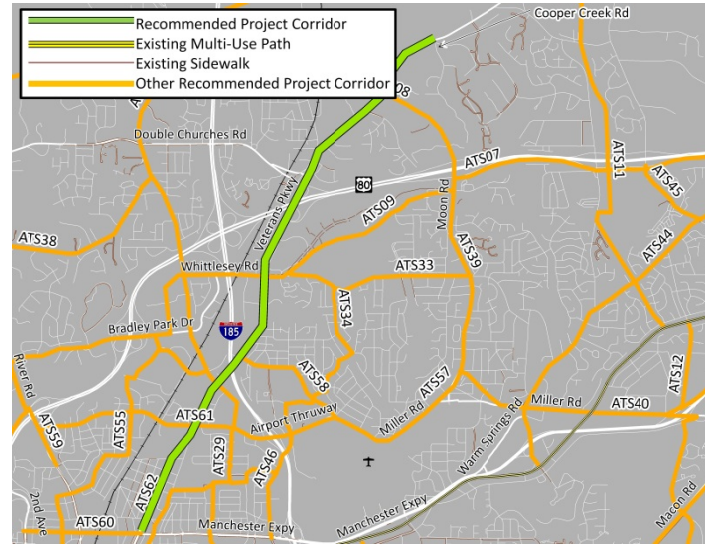
| | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 8 |
| Attraction Connectivity | 8 |
| Constructability | 6 |
| Meets ATS Goals | 7 |
| Community Support | 2 |
| Priority Score | 37 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$118,930 | \$124,997 | \$131,373 |
| Construction Estimated Cost | \$1,189,300 | \$1,249,966 | \$1,313,727 |
| Right-of-Way Estimated Cost | \$1,316,723 | \$1,383,889 | \$1,454,481 |
| Estimated Contingency | \$262,495 | \$275,885 | \$289,958 |
| Total Estimated Cost | \$2,887,448 | \$3,034,737 | \$3,189,539 |

This corridor would construct sidewalks on both sides of the road for the length of the corridor and install sharrows on the 54th Street segment (a distance of 1.41 miles) from River Road to Veterans Parkway.

Corridor 62

Veterans Parkway
(Manchester Expressway to Cooper Creek Road)
5.14 miles
Sidewalks
Mid-Term Implementation



Priority Scoring

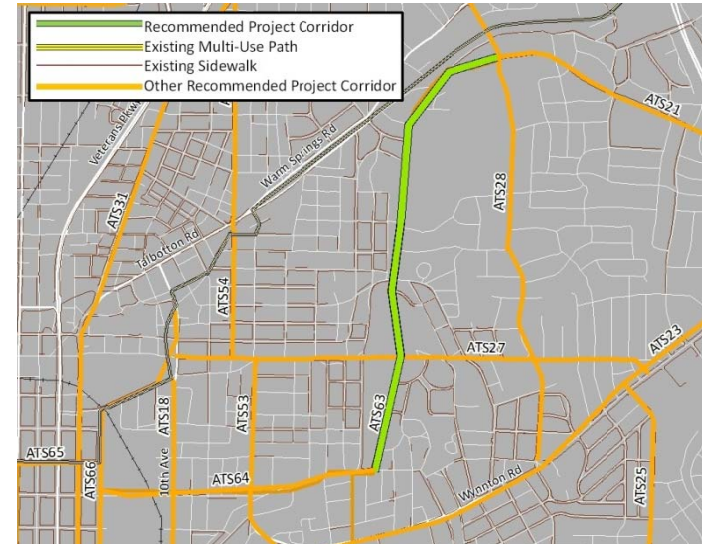
| | |
|-------------------------|-----------|
| Anticipated Impacts | 6 |
| System Connectivity | 8 |
| Attraction Connectivity | 7 |
| Constructability | 5 |
| Meets ATS Goals | 8 |
| Community Support | 3 |
| Priority Score | 37 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$267,280 | \$280,914 | \$295,243 |
| Construction Estimated Cost | \$2,672,800 | \$2,809,140 | \$2,952,434 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$294,008 | \$309,005 | \$324,768 |
| Total Estimated Cost | \$3,234,088 | \$3,399,059 | \$3,572,445 |

This corridor would construct sidewalks on both sides of the road for the length of the corridor. Implementation challenges include the bridge over US 80 which is not wide enough to accommodate sidewalks. However, this should not impede implementation of sidewalks to the corridor to the south and north of this bridge.

Corridor 63

Cherokee Avenue
(Hilton Avenue to 13th Avenue)
1.88 miles
Road Diet
Mid-Term Implementation



Priority Scoring

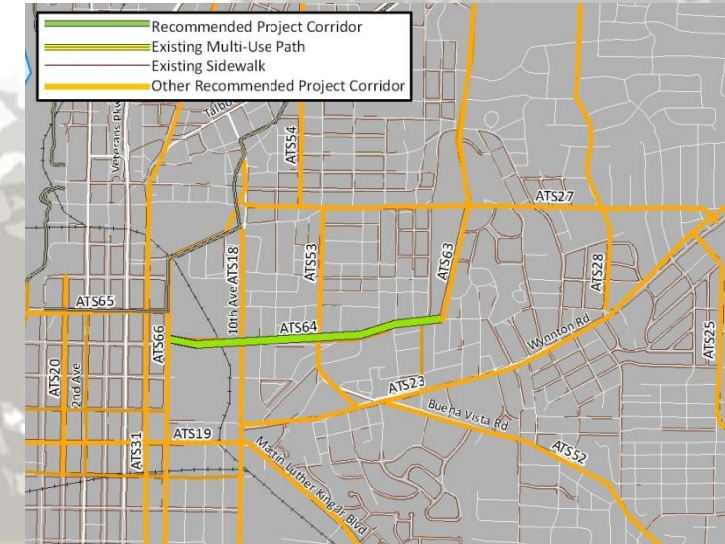
| | |
|-------------------------|-----------|
| Anticipated Impacts | 7 |
| System Connectivity | 9 |
| Attraction Connectivity | 8 |
| Constructability | 7 |
| Meets ATS Goals | 10 |
| Community Support | 10 |
| Priority Score | 51 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|------------------|------------------|------------------|
| Preliminary Engineering Estimated Cost | \$56,870 | \$59,771 | \$62,820 |
| Construction Estimated Cost | \$568,700 | \$597,709 | \$628,199 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$62,557 | \$65,748 | \$69,102 |
| Total Estimated Cost | \$688,127 | \$723,228 | \$760,120 |

This corridor would extend the road diet concept from Edgewood Avenue (ATS 21) connecting to another proposed road diet location on 13th Avenue (ATS 64). Through the road diet, several alternative transportation improvements could be made including cycle tracks and/or bicycle lanes and consistent sidewalk coverage. Additionally, it should be noted that the Columbus Water Works has identified additional right-of-way along this corridor for a potential trail project and the final design should incorporate, as appropriate, this additional advantage along the corridor.

Corridor 64

13th Street
(Veterans Parkway to Cherokee Avenue)
1.27 miles
Road Diet
Mid-Term Implementation



Priority Scoring

| | |
|-------------------------|-----------|
| Anticipated Impacts | 5 |
| System Connectivity | 9 |
| Attraction Connectivity | 8 |
| Constructability | 6 |
| Meets ATS Goals | 10 |
| Community Support | 10 |
| Priority Score | 48 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$50,800 | \$53,391 | \$56,115 |
| Construction Estimated Cost | \$508,000 | \$533,913 | \$561,148 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$55,800 | \$58,646 | \$61,638 |
| Total Estimated Cost | \$1,074,600 | \$1,146,950 | \$1,219,901 |

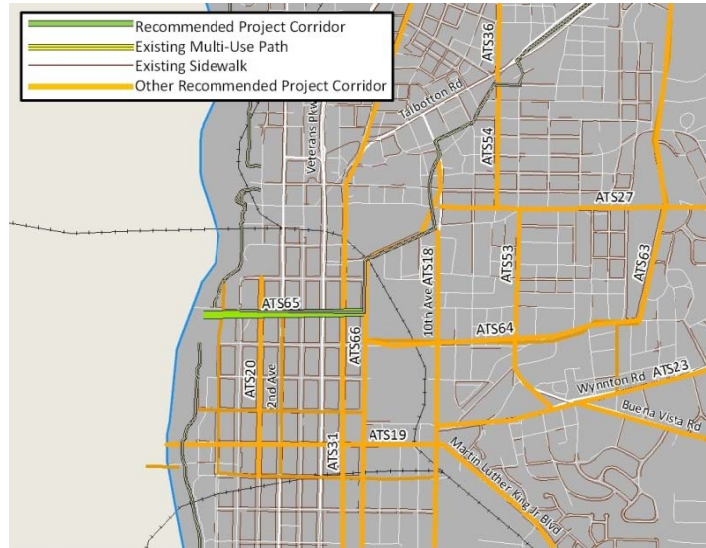
This corridor would extend the road diet concept from Cherokee Avenue (ATS 63) onto 13th Avenue over the rail yard. While this project has significant public support, there are also significant implementation challenges due to the mix of traffic on 13th Avenue. Particularly detailed further study will be needed to address how to construct safe alternative transportation infrastructure along the corridor while accommodating the various turning movements of vehicles along the corridor (particularly on the western half of the corridor).

VI –CORRIDOR & POLICY RECOMMENDATIONS

*Please note Corridor Number does not indicate the priority of the corridor

Corridor 65

14th Street
(6th Avenue to Pedestrian Bridge)
0.56 miles
Sharrows
Short-Term Implementation



Priority Scoring

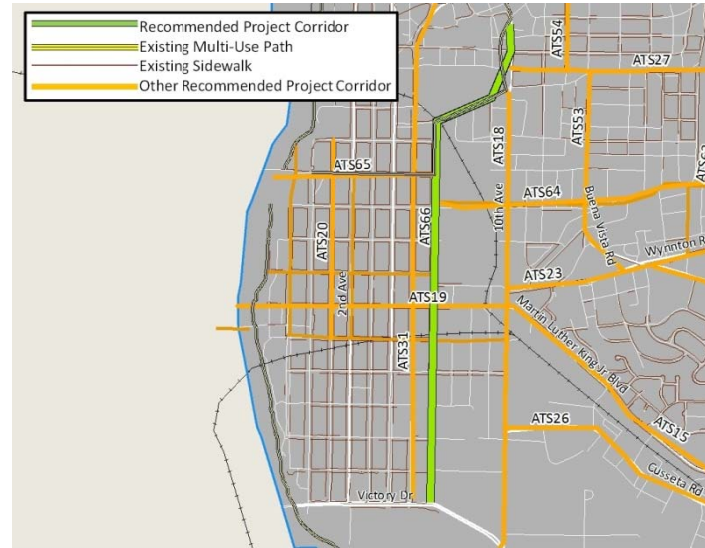
| | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 9 |
| Attraction Connectivity | 8 |
| Constructability | 8 |
| Meets ATS Goals | 7 |
| Community Support | 6 |
| Priority Score | 46 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|----------------|----------------|----------------|
| Preliminary Engineering Estimated Cost | \$560 | \$589 | \$619 |
| Construction Estimated Cost | \$5,600 | \$5,886 | \$6,186 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$616 | \$647 | \$680 |
| Total Estimated Cost | \$6,776 | \$7,122 | \$7,485 |

Constructing sharrows on this corridor is a short-term and cheap solution to addressing some of the challenges in connecting the separated trail portion of the Fall Line Trace to the Riverwalk. Other concepts along this corridor have been suggested by members of the community and include further infrastructure investment and should be investigated as appropriate.

Corridor 66

6th Avenue/Linwood Boulevard/10th Avenue
(Victory Drive to Fall Line Trace)
2.13 miles
Sharrows
Short-Term Implementation



Priority Scoring

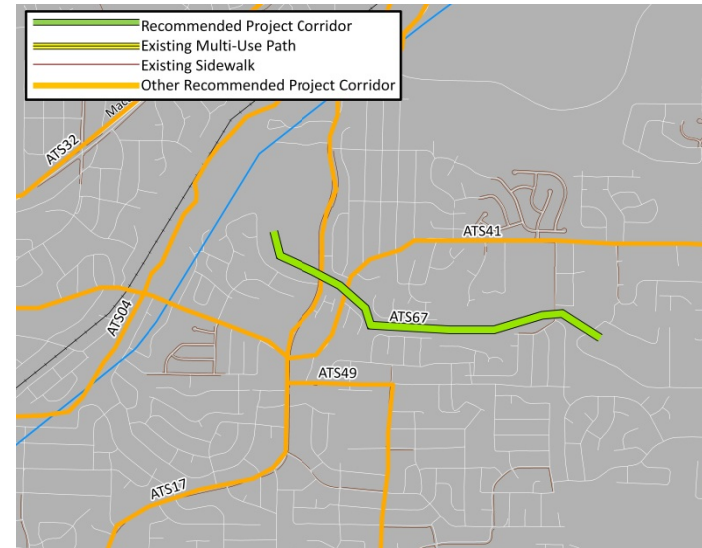
| | |
|-------------------------|-----------|
| Anticipated Impacts | 9 |
| System Connectivity | 9 |
| Attraction Connectivity | 8 |
| Constructability | 9 |
| Meets ATS Goals | 7 |
| Community Support | 7 |
| Priority Score | 49 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|-----------------|-----------------|-----------------|
| Preliminary Engineering Estimated Cost | \$2,130 | \$2,239 | \$2,353 |
| Construction Estimated Cost | \$21,300 | \$22,387 | \$23,528 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$2,343 | \$2,463 | \$2,588 |
| Total Estimated Cost | \$25,773 | \$27,088 | \$28,469 |

Constructing sharrows on this corridor is a short-term and cheap solution to addressing some of the challenges in connecting the separated trail portion of the Fall Line Trace to the Riverwalk. While there are currently sharrows long the Linwood Boulevard and 10th Avenue parts of this corridor, the markings are placed far apart and this project recommends specifically placing the sharrow markings every 200 feet. At the south end of the corridor, there are a variety of alternatives to connecting to the Riverwalk through public right-of-way, either along Victory Drive or through the park complexes to the south.

Corridor 67

Woodruff Farm to Carver Connector
(Woodruff Farm to Carver Park)
1.52 miles
Multi-use Trail
Mid-Term Implementation



Priority Scoring

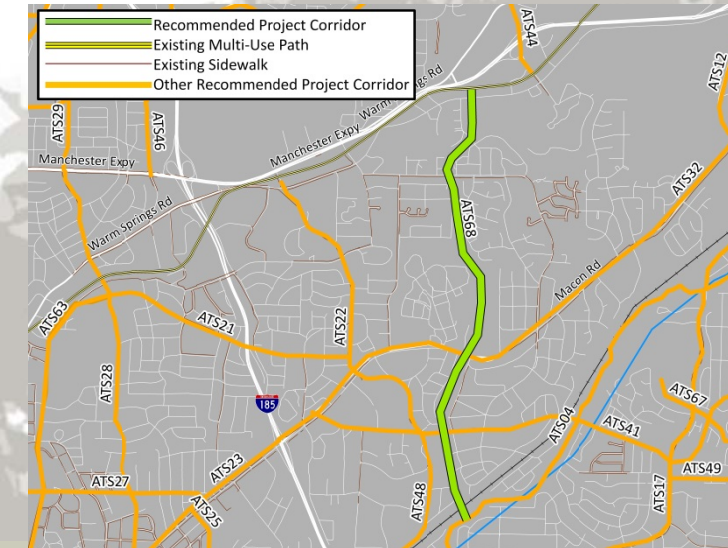
| | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 8 |
| Attraction Connectivity | 7 |
| Constructability | 7 |
| Meets ATS Goals | 8 |
| Community Support | 6 |
| Priority Score | 44 |

| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$92,657 | \$97,383 | \$92,657 |
| Construction Estimated Cost | \$926,570 | \$973,835 | \$926,570 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$101,923 | \$107,122 | \$101,923 |
| Total Estimated Cost | \$1,121,150 | \$1,178,340 | \$1,121,150 |

This corridor would construct a multi-use trail connecting the Woodruff Farm Soccer Complex to Carver Park utilizing right-of-way identified by the Columbus Water Works. Ideally, this trail system would be extended through the respective parks to provide direct connections to the Bull Creek Greenway concept (ATS 4) and the Schatulga Road multi-use trail concept (ATS 1).

Corridor 68

Cooper Creek to Bull Creek Connector
(Fall Line Trace to Bull Creek Greenway)
2.68 miles
Multi-use Trail
Mid-Term Implementation



Priority Scoring

| | |
|-------------------------|-----------|
| Anticipated Impacts | 8 |
| System Connectivity | 6 |
| Attraction Connectivity | 8 |
| Constructability | 7 |
| Meets ATS Goals | 8 |
| Community Support | 6 |
| Priority Score | 43 |

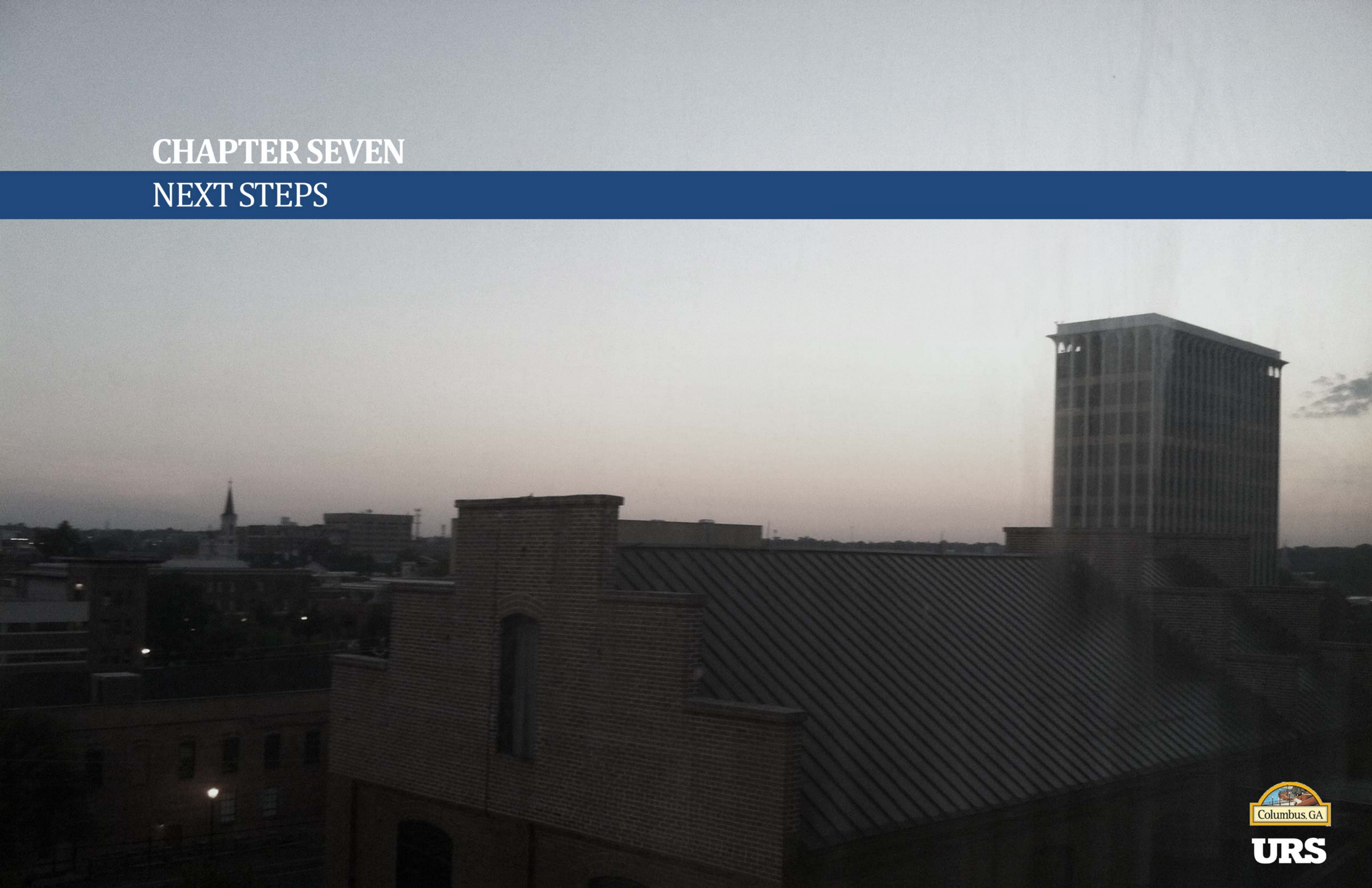
| Planning Level Cost Estimate | 2013 Dollars | 2018 Dollars | 2023 Dollars |
|--|--------------------|--------------------|--------------------|
| Preliminary Engineering Estimated Cost | \$155,440 | \$163,369 | \$171,702 |
| Construction Estimated Cost | \$1,554,400 | \$1,633,690 | \$1,717,025 |
| Right-of-Way Estimated Cost | \$0 | \$0 | \$0 |
| Estimated Contingency | \$170,984 | \$179,706 | \$188,873 |
| Total Estimated Cost | \$1,880,824 | \$1,976,765 | \$2,077,600 |

This corridor would serve an important north-south connection through a multi-use trail from Cooper Creek Park to Edgewood Park utilizing right-of-way identified by the Columbus Water Works. There may be some feasibility challenges on the immediate north and south ends of the corridor in connecting to the Fall Line Trace to the north and to Edgewood Park and the proposed Bull Creek Greenway (ATS 4) to the south.

VI –CORRIDOR & POLICY RECOMMENDATIONS

THIS PAGE LEFT INTENTIONALLY BLANK

CHAPTER SEVEN
NEXT STEPS



VII – NEXT STEPS

As suggested in the previous sections, the completion of this Alternative Transportation Study is just the first of many steps towards implementing the recommendations. The Columbus Consolidated Government has taken an increasingly progressive approach to alternative transportation such as Mayor Tomlinson's desire for Columbus to become the first Georgia community with a Silver Certification as a Bicycle Friendly Community from the League of American Bicyclists, and should consider the various policy and funding recommendations indicated on Page 50. In general, should they be pursued, the implementation challenges and timeframes for these recommendations vary. It should be understood that further study and development will be necessary to implement the recommendations. Similarly, with the passage of time and changing community priorities, the policy recommendations should be considered to be a snapshot of the time that this study was developed. Certain recommendations contained within may eventually become too ambitious or too modest given such changes in priority and should be reassessed and refined at regular intervals.

The transit considerations, included on page 51 will likely be refined and expanded in the near future as a public transit needs assessment study was commencing at the time this Alternative Transportation Study was being finalized. Likewise, the feasibility of high speed rail from Columbus to Atlanta was also being investigated at the conclusion of this study. A continued pursuit and eventual implementation of this type of service could have tremendous impact on the need for additional alternative transportation investments in Columbus. In general, the policy and corridor recommendations of this study were developed so they could complement implementation of other transportation projects but would not be totally reliant on them in order to be successful.

Finally, the corridor recommendations, summarized beginning on pages 53, are based on planning level analyses. Such planning level analyses are intended to establish a vision and identify locations where future investment can be made. This means that additional study will be required to verify the feasibility and refine/finalize design elements for the individual corridor recommendations. In general, the implementation of any given recommendation will require an engineering phase in which the corridor is

analyzed and designed using site-specific data and detailed methods that are not appropriate for use in a planning analysis. Likewise, the cost estimates developed for each corridor are planning level estimates and will need to be refined using more detailed methods as any given corridor moves closer to implementation.

It has been the study team's pleasure to work with the Columbus Consolidated Government staff and the community to develop this study. We believe that the recommendations contained within meets the community's stated goals and vision for alternative transportation and that the eventual full implementation of this study recommendations will make Columbus an even greater place!

