funded by:

East Innes Street and Long Street Complete Streets Study

Salisbury, North Carolina
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DESIGNWORKSHOP

VHB Vanasse Hangen Brustlin, Inc.

How to Use this Document

This document captures the process and outcomes of the planning effort by Design Workshop undertaken from August 2013 through April 2014. The City of Salisbury in cooperation with the Cabarrus-Rowan Municipal Planning Organization and North Carolina Department of Transportation commissioned this study. The objective of this study is to examine East Innes Street and North and South Long Streets and create a plan that improves pedestrian safety and results in a street that takes into consideration all modes of transportation.

Design Workshop's Legacy Design process emphasizes a deliberate approach to sustainable design solutions that is comprehensive of four Legacy categories: environment, community, art and economics. All aspects of the design process and foundational thinking for a project are captured in this document. *Issues* associated with the project and Salisbury's priorities are defined at the outset. The design team and steering committee defined a project *Vision* and a set of *Critical Success Factors* for the project. These steps are intended to build a strong foundational story for the project that aligns the design team and city to the same *Principles* and *Goals*.

This document provides a visual and textual story of the design analysis, definition and discoveries that led to planning solutions and conclusions. It is intended for client use in presenting the planning vision to municipal officials for approvals and to serve as the foundation for the next phases of the design process in which the plan will evolve.

Acknowledgements

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DESIGNWORKSHOP

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INTRODUCTION

The process to create a Complete Street Plan for Innes and Long Streets includes an open dialogue with the citizens to determine the most appropriate design solutions for Salisbury's sense of place, community, and economy.

Purpose

The City of Salisbury, in partnership with the Cabarrus-Rowan Municipal Planning Organization (CRMPO) and North Carolina Department of Transportation (NCDOT) is creating a Complete Streets Study to improve safety, multi-modal capacity and the aesthetics of the Innes and Long Street Corridors (Corridors) in Salisbury. The plan for the Corridors utilizes the Complete Streets Policy created by NCDOT in 2009, the purpose of which is to plan and design for interdependent, multi-modal transportation networks that safely accommodate access and travel for all users.

Innes Street and Long Street are two important corridors that intersect a quarter mile east of Salisbury's downtown. Innes Street is one of the main travel routes through downtown that connects the city with I-85 and the surrounding region. Long Street is an important north to south connection east of downtown, ultimately connecting the city to East Spencer. Both corridors currently accommodate acceptable levels of service and traffic volumes and provide necessary access and support to the downtown retail environment and other key retail businesses. Both Corridors are wide streets that separate several neighborhoods and Salisbury's downtown core, making safe and comfortable connections for pedestrians and bicyclists difficult. There have been several pedestrian fatalities along these corridors, and the public feels uncomfortable and unsafe to walk or bike along these roads.

The issues that are the focus of this study include: providing safe and visible crosswalks at all intersections; addressing specific safety issues at specific intersection locations; promoting a more attractive pedestrian environment and bicycle environment; connecting the city's bicycle network per the established bicycle plan; stitching the city and neighborhoods back together across the Corridors; reducing lane widths and number of lanes where appropriate; providing higher levels of access management; and creating a more enhanced sense of gateway into downtown.

The process to create a Complete Street Plan for Innes Street and Long Street includes an open dialogue with the citizens to determine the most appropriate design solutions for Salisbury's sense of place, community, and economy. Ultimately, the Complete Streets Plan will enhance public safety, increase multi-modal travel, and create a more attractive gateway into downtown. The Plan will consider existing infrastructure to ensure its recommendations are affordable and can be implemented over time.

East Innes Street Looking West

East Innes Street Looking West at the Square

Complete Streets Defined

Complete Streets are defined by the National Complete Streets Coalition as follows:

“Complete Streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across streets.”

Complete streets emphasize safety, mobility and accessibility for those using a variety of travel modes. They include the provision for crosswalks, bulb-out intersections, traffic calming, sidewalks, bus lanes, bike lanes, bus shelters, street trees and tree lawns, and other landscaping, lighting and signal systems. They are a complete expression of a safe, functional street that are comfortable for all to use. They enhance the public realm and provide a sense of place and community livability and connectivity.

Information Gathering

The first step in the design process involves gathering and assembling the facts at hand in order to understand the issues and opportunities surrounding the project. During this step the design team walked, biked and drove through the corridors during different times of the day to experience the corridor in high and low automobile usage times. The team also experienced the corridor at dusk and at dark to understand any issues related to lighting. The transportation engineer also assembled information by gathering all previous traffic data collected in the area from previous studies. Then with feedback from city staff on problem intersections the traffic engineer collected traffic data on-site at peak times and also collected quantity counts on side streets adjacent to the corridor. These methods are discussed in more detail on page 11.

Vision

By using NCDOT’s Complete Streets policy as a catalyst and by focusing public investment appropriately, the Corridors will become Complete Streets that adequately accommodate automobile, pedestrian, bicycle and public transportation travel that is safe for all users within and along attractive streets that enhances Salisbury’s image, economy and livability.

Critical Success Factor #1 - Identify implementable strategies to immediately address pedestrian safety issues.

Critical Success Factors

The City and the project’s Steering Committee determined several critical items that must be accomplished within the study in order for it to be deemed a success:

1. Identify implementable strategies to immediately address pedestrian safety issues.

2. Accommodate pedestrians, bicyclists, motorists and transit riders of all ages and abilities to safely move along and across the street.

3. Create an aesthetic for the Corridors that fit with the neighborhoods they pass through and elevate the City’s image and appearance overall.

4. Conduct a public engagement process that involves citizens and stakeholders and achieves consensus on the preferred approaches.

5. Create a plan that ideally supports the existing framework of curbs, intersections, travel ways, curb cuts, etc.

6. Identify and address impediments to implementation such as existing zoning and access to infrastructure.

7. Develop a design and phasing strategy that is implementable and fundable.

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INVENTORY AND ANALYSIS

Corridor Segments

Innes and Long Streets carry different roles and responsibilities from each other within the city. They are each surrounded by different land uses and are designed for different levels of transportation service. In actuality, within each of these streets, there are unique qualities along their length that further define different characters and functions. In order to respond to the unique aspects of each Corridor and to design appropriate alternatives that were context sensitive, the Planning team divided them into four distinct segments based on image, character, function, neighborhood context, land use, and geography and characterized each:

Segment 1: South Long - Martin Luther King (MLK) to Innes

Segment 2: North Long - Innes to Bringle Ferry

Segment 3: East Innes - Interstate 85 (I-85) to Depot

Segment 4: Downtown - to Depot to Church

Summary Analysis of Corridor Segments and Configuration

In addition to documenting the existing conditions above, the planning team, as part of its site investigation, summarized some of the unique qualities of each corridor segment. The unique qualities analyzed for each segment include the generalized nature of the current land use context, the pedestrian environment, broad landscape patterns, the architecture and building forms, parking, multi-modal quality, and specific items described by the community in the public engagement process that are important to reconcile within the design.

Segment 1

South Long is generally characterized by having residential neighborhoods, civic spaces, churches, Lincoln Community Pool and the historic African American Dixonville Cemetery. South Long was originally designed as a residential street and then was later expanded to 4 lanes to promote commercial development. The development never happened, but the expansion resulted a very wide street that disconnected neighborhoods, wide difficult to cross intersections and a roadway that encourages drivers to drive above the posted limit. In this segment there are no dedicated bike lanes and no parking along the street except on Sundays. Due to the limited space between the sidewalk and curb there are very few street oriented trees.

Segment 2

North Long has some commercial use, residential use and Rowan Helping Ministries. At the time of this study Rowan Helping Ministries were undergoing an expansion that could increase the quantity of pedestrians crossing the street at the Liberty Street intersection. Past Liberty Street, North Long transitions into light industrial on the west side of the road that borders the railroad, which creates high semi-truck volume and lots of noise. The sidewalks directly border the roadway, giving the pedestrian no shelter from semi-truck traffic on the road. In many places, utility poles share the already undersized sidewalk space which makes it difficult for carts, strollers or wheelchairs to pass safely. There is no landscape associated with the street and at times it can be a hostile environment for pedestrians. The configuration of North Long is reduced to two lanes with few dedicated turn lanes.

Segment 3

East Innes is generally characterized by highway oriented businesses and the large freeway interchange that provides access to I-85. The large number of curb cuts to access businesses along the roadway interrupt the pedestrian infrastructure. The sidewalks are generally located off of the curb, but the above ground power lines prevent an organized landscape or street tree pattern. Three intersections have crosswalks,East Innes and Arlington, East Innes and MLK, Jr. and East Innes and Long. Crossing at the unmarked intersections is awkward and undesirable. I-85 creates a difficult pedestrian and bicycling environment. This segment of East Innes Street has a five lane cross section with two travel lanes in each direction and a center two-way left turn lane between Arlington-street and Long Street. There are landscaped medians from the I-85 ramps to Arlington and again from Long Street to Depot Street.

Segment 4

Downtown is characterized by uses including residential, governmental/institutional, commercial, retail, and office. The landscape, building form and architecture respond to this land use transition and more charming street-oriented buildings and street landscaping occur closer to downtown. The area around the bridge is very attractive and provides a gateway treatment into downtown. The posted speed limit decreases from 25 mph to 20 mph at Long Street signifying the entrance to the central downtown business district. Pedestrian signals are located at all downtown intersections. At Lee Street there is only one side that is signalized, and at Depot there are none at all. The streets and intersections seem large downtown, which hinders a feeling of safety and comfort for pedestrians. There is also considerable through traffic, especially at peak times, further diminishing the downtown pedestrian quality. Between Depot Street and Church Street, East Innes is generally a four-lane undivided roadway.

East Innes Looking East From Clay Intersection

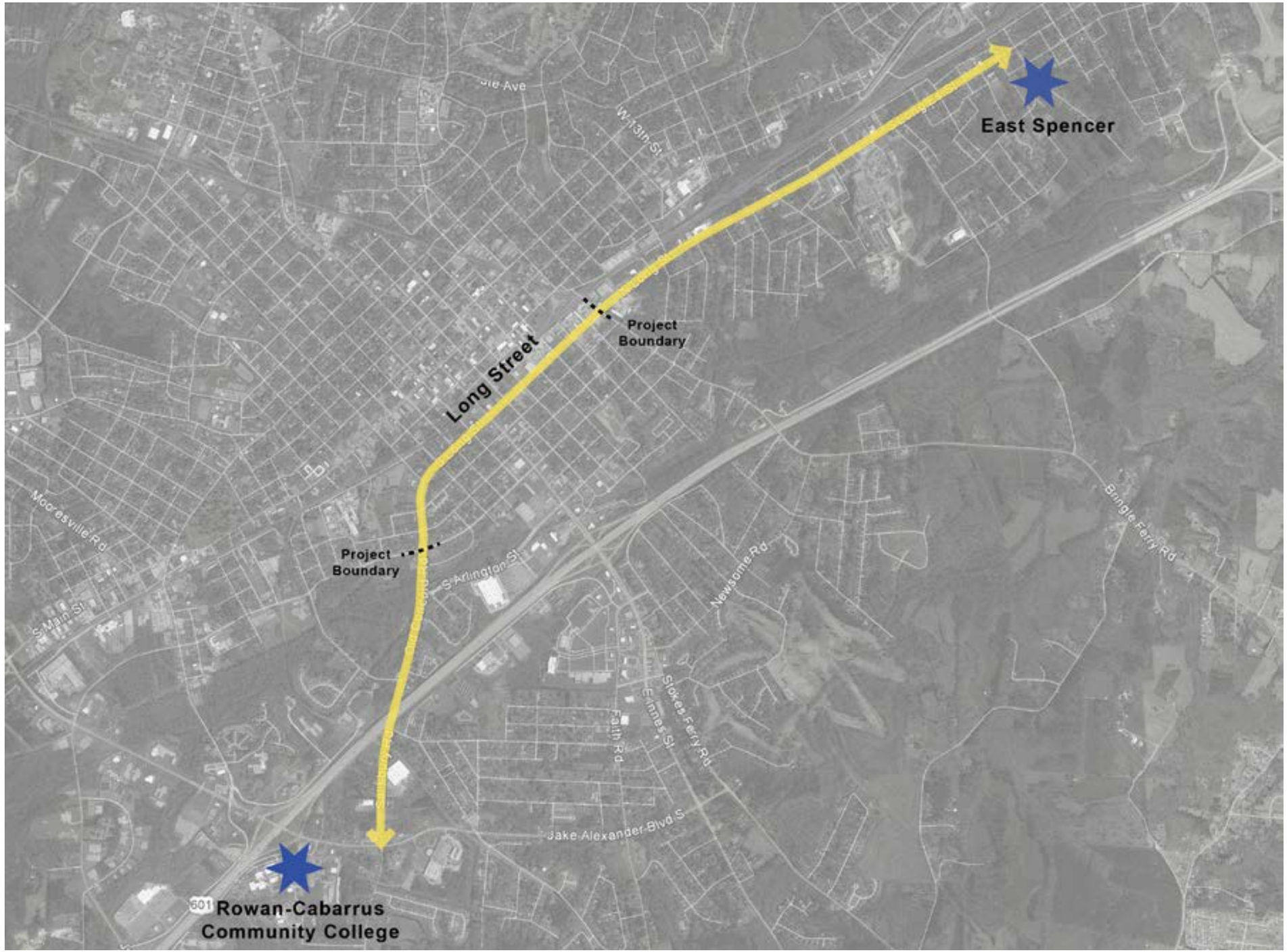
North Long Looking North From Kerr St. Intersection

Connection Opportunities

In our inventory of the site, we looked for broad opportunities outside of our project boundaries that might influence our recommendations. While speaking to the public and interested parties two opportunities surfaced regarding North and South Long Street.

First, we met with the leadership of East Spencer and it was pointed out that North Long is an important connection back to Salisbury. North Long is one of East Spencer's main streets in the community. This connection is often used by bicyclists, pedestrians and buses to connect the two communities. North Long is challenged by a narrow right of way and sections that currently do not have sidewalks. It is our recommendation that there be future study of sidewalk expansion and extension of bicycle facilities.

A related opportunity that was discussed throughout the project, is how the connection from the site to Rowan-Cabarrus Community College could be further strengthened. It was voiced by the community multiple times that the section of Old Concord Road from Martin Luther King Jr. Avenue to Jake Alexander Boulevard has many issues related to pedestrian and bicycle safety. Although this section was outside of the scope of work, It is recommended that in the future this section of road be studied. The public recommended upgrading and installing new sidewalks, extending the proposed bicycle lanes, reviewing facilities at the Jake Alexander intersection and reviewing current posted speed limits.



Existing Conditions Analysis

The process to create the plan includes an analysis of key existing conditions to determine deficiencies that could be addressed to enable Innes and Long to function adequately as Complete Streets. These are:

- Block Sizes and Spacing
- Right of Way Width
- Traffic Speed
- Traffic Volume and Level of Service (LOS)
- Crashes and Pedestrian Safety
- Access Management and Curb Cuts
- Pedestrian Facilities
- Bicycle Facilities
- Public Transportation Facilities

Block Sizing and Spacing

PRINCIPLES

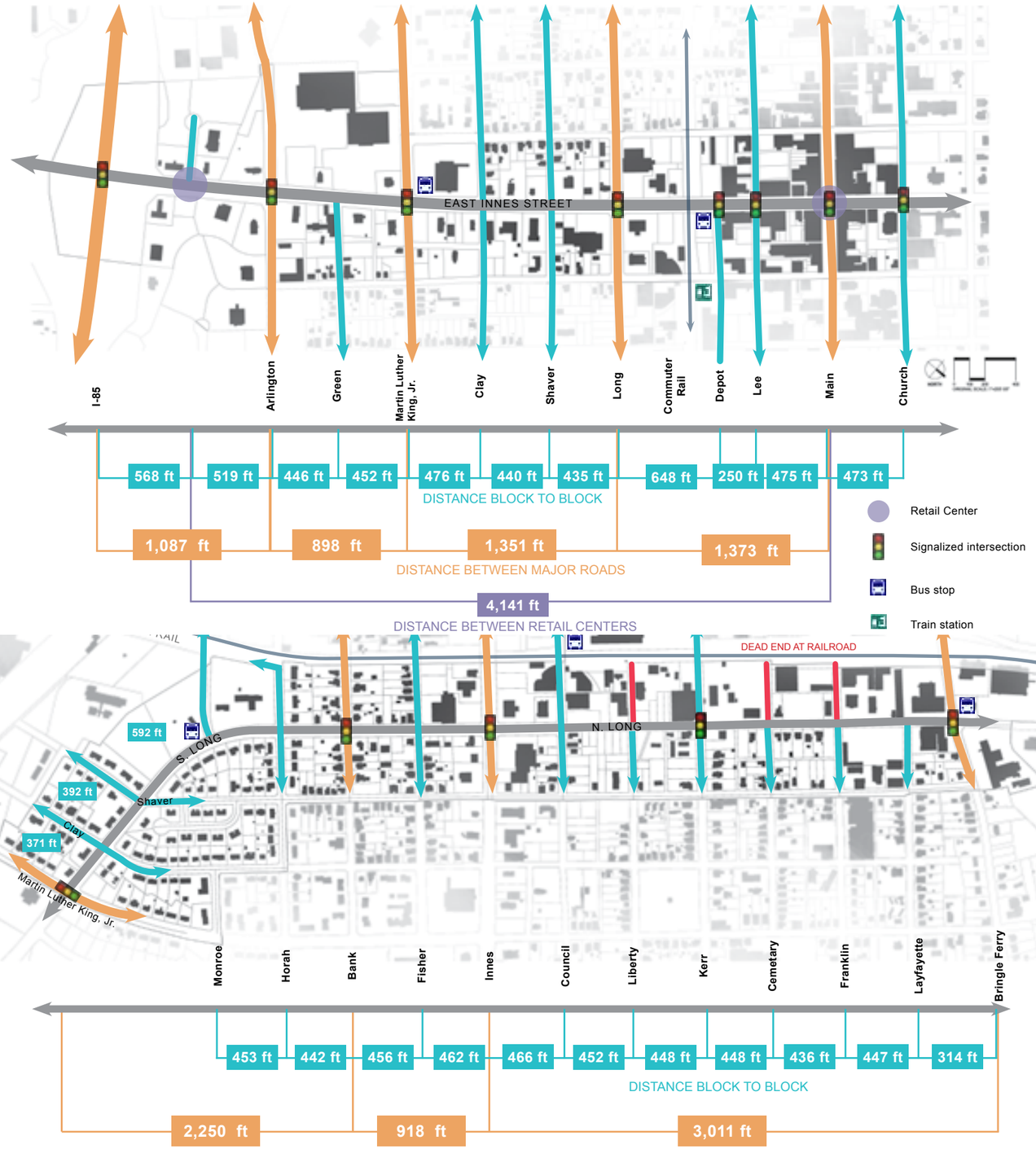
The connectivity afforded by even block spacing and a grid pattern provides more opportunities for multi-modal transportation: cars, bicyclists and pedestrians alike can find the most logical route to their destination.

Block spacing along both East Innes and Long follows a grid system of varying block lengths. From the interstate to Arlington, the blocks are longer measuring between five and six hundred feet.

Long Street distance from block to block is approximately 450 feet along the corridor. Major road spacing from Martin Luther King, Jr. to Bank Street measures at 2,250 feet, from Bank to Innes measures at 913 feet, and then from Innes to Bringle Ferry, 3,011 feet.

CONCLUSIONS

The existing grid pattern and block spacing in Salisbury provide the opportunity to create a well-connected network of multi-modal transportation alternatives.



East Innes Looking West From Clay Intersection

South Long Street at Fisher Intersection

Right of Way Width

PRINCIPLES

The width of the right of way allows for flexibility in how the space is used for multi-modal facilities and landscape. Consistent ROW widths enable consistent design treatments and building setbacks along their length.

The right of way width along East Innes and Long Streets varies considerably. Moving from I-85 up to West Church Street, East Innes right of way narrows from 124 feet at the I-85 interchange down to 80 feet 4 blocks later between Clay and Shaver Streets, then widens again to a consistent 100 feet once past Long Street. South Long Street is a consistent 80 feet from MLK through Innes to Council, then drops 2 travel lanes and a turn lane and measures in at 43 feet. The right of way increases slightly heading toward Bringle Ferry Road to 49 feet.

CONCLUSIONS

Generally, the ROW width combined with the generous lane widths allow for improvements to be made that will enhance their function as Complete Streets.

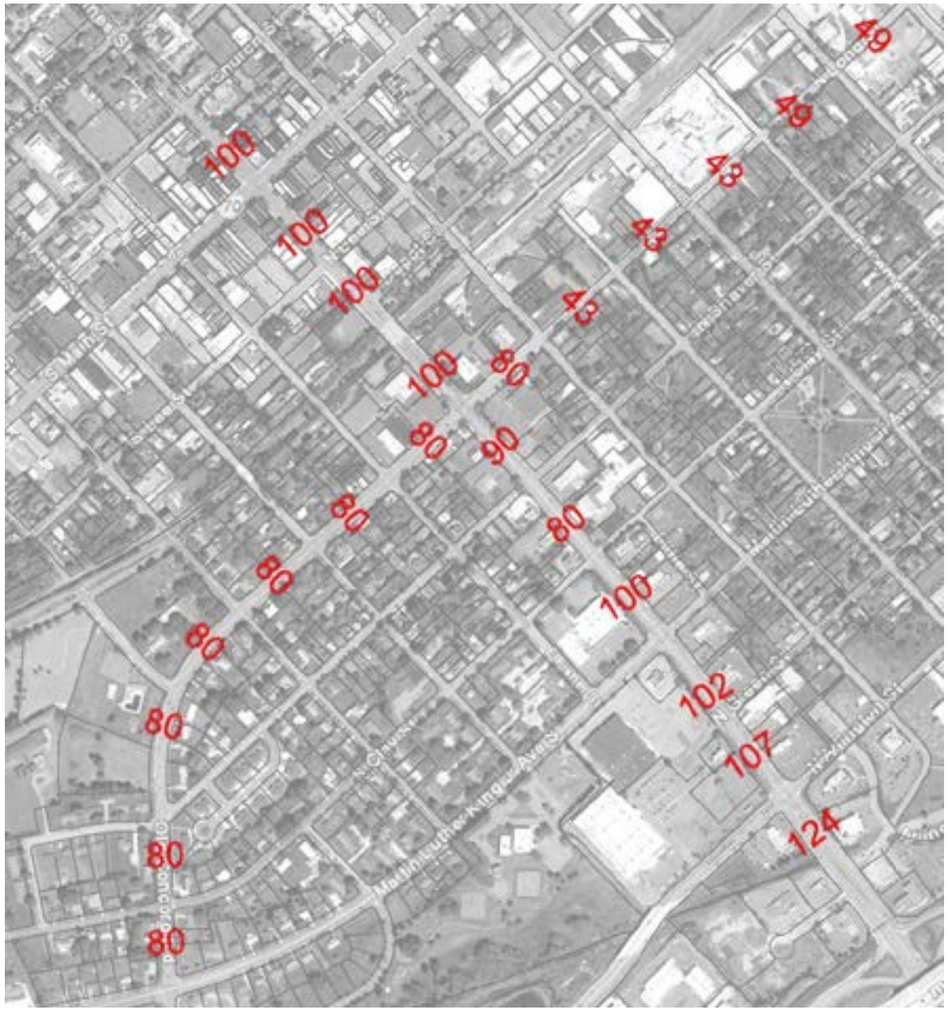


Exhibit showing right of way widths through the study area

South Long Street looking at Monroe Intersection

Example of street condition on East Innes in downtown Salisbury

South Long at Monroe Intersection

Traffic Speed

PRINCIPLES

Incidents of auto, bike and pedestrian conflict and noise impacts rise with faster speeds. Reducing the posted and actual speed limits also reduces noise impacts and creates a safer roadway.

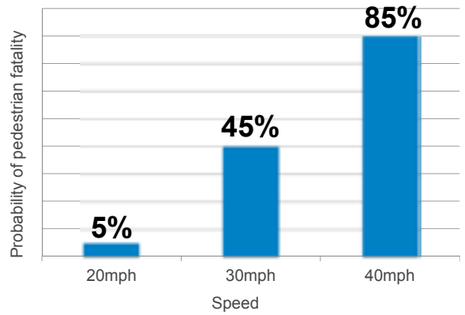
Posted speed limits range from 20 mph to 35 mph. Along South Long, average speeds were less than posted, although recorded high speeds in the top 15%. On North Long, speeds were less than posted traveling westbound and at the posted limited traveling eastbound. Along East Innes from I-85 to Long, traffic generally traveled the speed limit in both directions. On East Innes from Long to Church, speed data was not collected through tube counts but observations indicate that speeds were higher than the posted 20 mph.

CONCLUSIONS

Although the posted speed limits seem reasonable, the size and design of the roadways enable faster movement than is desirable in pedestrian oriented environments.

SPEED LIMITS AND SIGNALS

- Current posted speed limit
- Signalized intersection
- Bus stop
- Train station



Graph demonstrating increased probability of pedestrian fatalities as average speed increases

South Long Street looking towards MLK Avenue

North Long Street looking towards Liberty Street

Traffic Volume and Level of Service (LOS)

PRINCIPLES

Level of service is defined by how easily cars can move through a corridor. Downtown areas typically have to balance ease of traffic flow with enabling a safe and attractive pedestrian environment and urban design.

Average Daily Traffic (ADT) volumes along East Innes generally decrease as the road narrows from four traffic lanes with multiple dedicated turn lanes at the I-85 intersection down to four lanes with some turn restrictions in downtown. The speed limit decreases from 35 mph at the I-85 heading into downtown to 20 mph past Long Street. Along the East Innes business corridor, the ADT is approximately 23,100 (Martin Luther King, Jr., to Green) while downtown the number is slightly less at approximately 17,300 (Jackson to Main). Hourly characteristics along East Innes show the heaviest traffic volumes and lowest auto level of service (LOS) either at noon or in the afternoon. The intersections at Innes and Arlington, Long and Main have the have their peak PM period while the intersection at East Innes and Martin Luther King sees its heaviest volumes at noon.

For Long Street the traffic volumes were fairly consistent along both South and North Long. South Long ADT measured at approximately 7,300 vehicles while North Long was 8,600 ADT. Auto LOS was the lowest during afternoon (PM) peak, both at Long and East Innes and North Long and Kerr by 0.2 seconds for both intersections. The speed limit along both South and North Long is set at 35 mph. Actual speed were 35 mph or less, with traffic moving the fastest heading from Council to Kerr where the road changes from 4 lanes to 2. Traffic moved well below the speed limit between Monroe and East Innes, with the average speed measuring 31 mph.

CONCLUSIONS

Level of service at each intersection are all classified at C or above, indicating a nearly free flow traffic situation at all times. It may be possible and desirable to reduce Auto LOS to improve pedestrian and bike facilities while also keeping these LOS ratings in the desired ranges.

Auto LOS Legend

- A — Free-flow operations
- B — Reasonable free-flow operations
- C — Near free-flow operations
- D — Moderate to heavy delays
- E — Operations at capacity
- F — Breakdown in vehicular flow

10,000 — Average Daily Traffic

Circulation restrictions and speed limits

- One way street
- Restricted left turn
- Current posted speed limit

Traffic Volume and LOS

Transportation

Crashes and Pedestrian Safety

PRINCIPLES

The primary goal of complete streets is to provide a safe environment for users of all abilities and modes.

Pedestrian involved crashes have occurred on both Innes and Long Street, including three fatalities. The length between dedicated crossings along with the large width of the road make it difficult for pedestrians to cross easily. Of the of the eleven intersections along the corridors that do have crosswalks only four have pedestrian signals indicating when it is safe to cross the intersection.

Innes Street was the site of fourteen pedestrian and cyclist involved crashes. 6 were mid-block pedestrian crossings, with 5 of the 6 mid-block crossings occurring between Clay and Long. In addition to pedestrian and cyclist involved crashes, East Innes from the interstate to Church Street reported 1,141 crashes over a 10 year period. The crash rate index on East Innes is 1067.81, this is nearly three times the statewide average of 389.82. Of all 1,141 crashes, the only pedestrian fatalities involved mid-block crossings. Of the 1,141 collisions, 251 were injury collisions, over 20%, or 1 in 5 accidents. The remaining 888 crashes were property damage only. The most common accident type on East Innes was a rear end collision at 43%, followed by angle crashes at 26% and finally sideswipes at 14%. Rear end collisions are traffic accidents where a vehicle crashes into the vehicle in front of it.

Angle collisions occur when vehicles approaching from non-opposing angular directions collide, typically resulting as one vehicle failed to either stop or yield right of way from a stop or yield sign, ran a red light, or was not cleared from the intersection upon the onset of the conflicting movement's green signal, and finally sideswipe collisions are characterized by prolonged sliding contact, often with very little structural deformation.

Long Street was the site of 259 collisions. The only fatality was again a pedestrian involved crash. Of the crashes 84 were injury collisions, nearly 33% or 1 in 3, with the remaining 67% property damage only. The most common accident type on Long Street was an angle crash at 43% followed by rear-end collisions at 22% and finally sideswipes at 11%.

CONCLUSIONS

The fatalities along Innes Street are concerning and require a design response in the Plan. Pedestrian signals at key intersections may create more awareness for drivers that pedestrians are crossing the street.

Crashes

- 1 Pedestrian crash
- 1 Cyclist crash
- 1 Pedestrian fatality crash

Access Management and Curb Cuts

PRINCIPLES

It is important to provide access to the businesses that front a transportation corridor for deliveries and customers. Too many curb cuts along a corridor, accessing each business separately, create interruptions in the pedestrian infrastructure and create conflicts with automobiles.

Preliminary estimates revealed there are approximately 39 curb cuts along East Innes along the 0.98 miles included in the corridor study. Initial estimates on Long Street identified 55 curb cuts over the 1.16 miles included in the study. The segments with the highest number of curb cuts per mile were South Long with 34 curb cuts and East Innes between I-85 and Long with 23 curb cuts.

Access spacing and management has become an important part of corridor planning. Implementing access management plans can help to improve roadway safety. Access spacing - increasing the space between access points and providing greater separation of potential conflicts - helps reduce the number and type of events a driver may come across. This in turn results in fewer accidents, potentially shorter travel times, and maintains traffic capacity. Multiple studies have demonstrated that the greater the frequency of driveways and streets, the greater number of accidents. Currently engineering best practices would have curb cuts setback a minimum of 100’ from an intersection and a minimum of 100’ apart.

CONCLUSIONS

The pedestrian environment and appearance of Innes Street would be benefitted by an access control plan.

East Innes showing multiple curbs accessing road

Pedestrian Facilities

PRINCIPLES

Pedestrian crosswalks are inconsistent along the corridors. On Innes Street between Arlington-street and Church Street there are seven marked pedestrian crosswalks, four of which have pedestrian signals indicating it is safe to walk.

The distance between crosswalks along Innes is notable. From the light at Martin Luther King, Jr. to the light at Long Street, a pedestrian travels 1,351 feet. Between these two intersections, there are no traffic lights and there are no crosswalks. Between these two intersections were 10 of the 14 pedestrian and cyclist involved crashes.

On Long Street, there are four pedestrian crosswalks spanning the entire corridor. Each crosswalk is at an intersection and none has a pedestrian signal indicating it is safe to cross the street.

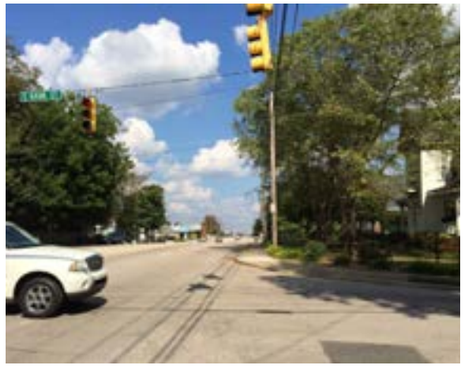
Long Street also had a number of pedestrian involved crashes. Out of the 7 accidents, 4 were mid-block crossings.

CONCLUSIONS

The lack of crosswalks and signals makes it difficult for pedestrians to know when it is safe to cross the street. Pedestrians may cross mid-block to avoid traveling the long distance between marked crosswalks. Marked crosswalks used in combination with other measures can help get pedestrians across the road safely.

Pedestrian Facilities Legend

- Existing Sidewalk
- Existing Crosswalks
- Existing Pedestrian Signals



South Long Street looking North

View of East Innes from Martin Luther King Jr. Avenue

Bicycle Facilities

PRINCIPLES

The design of a complete street includes provision for bicycles. This can be accomplished with dedicated lanes within the ROW, dedicated lanes within the street, sharrows, and signage.

There are no bike facilities in the corridor, although bicyclists use the corridors as their route. There have been instances of bicycle and car conflicts and it is generally accepted from the public process that the corridors do not feel safe to ride bikes. Given the grid network of streets, it is possible to also consider routing bicycles on adjacent streets.

CONCLUSIONS

Bicycles need to be provided for within or adjacent to the Corridors in accordance with the bicycle plan with sharrows, bike lanes and additional bike racks

Public Transportation Facilities

PRINCIPLES

A fundamental principle of Complete Streets is to provide access for all. This includes public transportation. Public transportation has the potential to reduce automobile travel which enables less congestion and less consumption of fossil fuels.

Along the corridor many bus stops were noted. Bus routes were initially identified through city transit maps and an inventory taken along the corridors identified more. Shelters were present at the Depot Street main transfer stop and the stop at Shaver and South Long providing refuge from inclement weather. Out of the 14 stops identified on Long Street, 1 had a shelter. Trash receptacles were noted at stops with shelters, the Depot Street transfer stop and the Shaver and Long stop. Bus service runs from 6:00 am to 7:10 p.m. Monday through Friday for all routes and 9:30 am to 3:20 p.m. on Saturdays for Routes 2 and 3. Frequency of routes are every 1:20 for weekdays and 1:40 for weekends. Train service includes stops along the Carolianian/Piedmont route (New York - Raleigh - Charlotte) and the Crescent route (New York - Atlanta - New Orleans). Trips not requiring connections include: 4 trips per day to Charlotte; 3 trips per day to Raleigh;2 trips per day to New York; 1 trip per day to New Orleans

CONCLUSIONS

Adding additional frequency of service and quality shelters along the routes will provide transit customers a more comfortable experience and may promote more ridership.

Bus stop

Train station

Bus Route 1 South Main/Spencer/ Rowan-Carrabus Community College

Bus Route 2 Salisbury Mall/Innes Street Market

Bus Route 3 East Spencer/ VA Medical Center

South Long looking south at recently installed bus stop

3

PUBLIC ENGAGEMENT

Public Engagement

The planning process for Innes and Long included three public meetings to engage the public in the development of the plan and to review plan alternatives as they evolved. The public meetings included a variety of techniques and formats including General Q&A, SWOT, and using keypad polling. The City also modeled one of the planning concepts using traffic cones within Long Street so that people in the community could experience suggested road diets and comment on them. In addition to the community meetings, the project utilized a Steering Committee to provide input and to help 'steer' the project forward toward completion and public acceptance.

Picture of Design Team meeting with a public engagement focus group

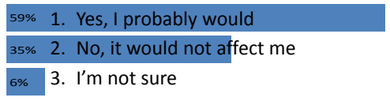
Walking the corridor with the Steering Committee

Public Meeting #1

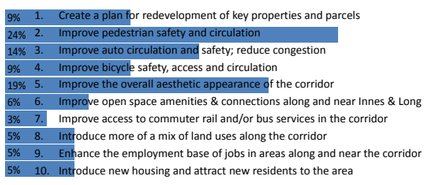
This meeting functioned as a kick-off meeting and as an opportunity to share the project scope with the community. At this meeting the planning team shared concepts and definitions related to what "complete streets" are. Questions were asked of the attendees about their preferences for various components of the complete streets ideal and how it could or should be applied to the Innes and Long Street Corridors (the keypad polling questions and responses are shown below). In addition to the keypad polling questions, general questions were asked of the attendees related to the project's overall vision, its critical success factors, and its strengths, weaknesses, opportunities and strengths (SWOT).

Steering Committee and Stakeholder meetings
The planning team conducted two days of meetings in Salisbury to obtain feedback from various interest groups. These meetings provided the planning team insight that enabled the drafting of plan concepts that could then be evaluated by the community at large. The meetings included property owners, business owners, city staff, NCDOT staff, and others that had a specific interest in the Corridors. At the end of the two days of meetings, plan concepts were presented for review and feedback. The plans were generally supported.

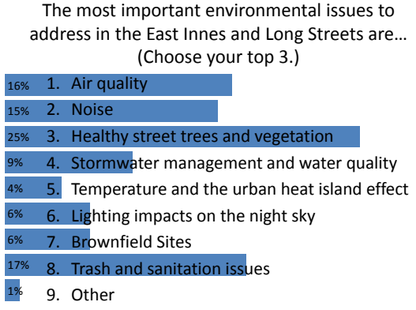
If East Innes and Long Street improved pedestrian facilities and bicycle facilities would you walk and bike more often?



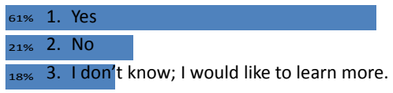
Which of the following objectives would you consider the most important for the East Innes and Long Complete Streets Study as a whole? (Choose your top 3.)



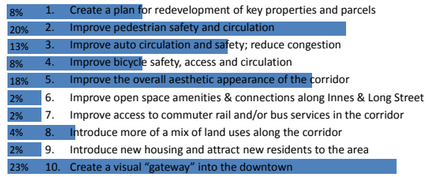
The most important environmental issues to address in the East Innes and Long Streets are… (Choose your top 3.)



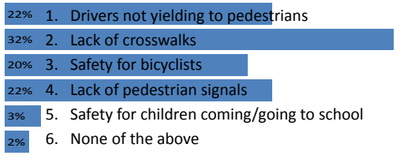
I am interested in exploring green (or sustainable) stormwater elements (i.e., rain gardens, pervious pavement) installed along the corridor?



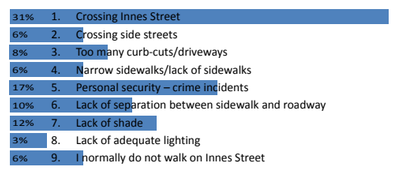
Which of the following objectives would you consider the most important for Innes Street? (Choose your top 3.)



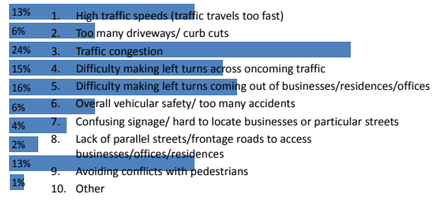
What safety issues concern you the most along East Innes Street? (Select all that apply.)



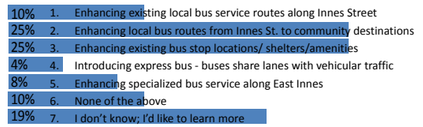
When you are walking along East Innes Street, what concerns you most? (Choose your top 3.)



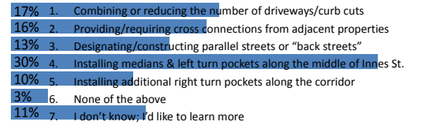
Which vehicular transportation issues concern you most along East Innes Street? (Chose your top 3.)



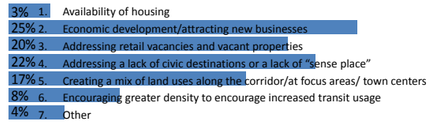
I would be most in favor of the following transit strategies along East Innes Street… (Select your top 2.)



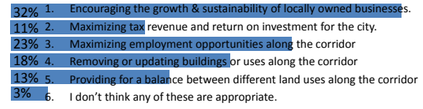
Which of the following access management strategies would you favor implementing along various segments of East Innes Street? (Choose all that apply.)



The most important land use issues to address along East Innes Street are… (Choose your top 3.)

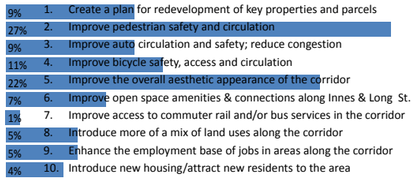


I believe the most important goals to pursue with regards to economic development along the corridor are as follows (choose your top 2.)

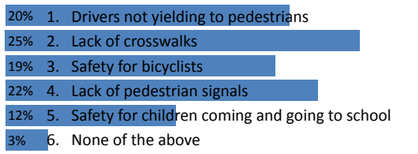


On Street Parking Test on Long Street

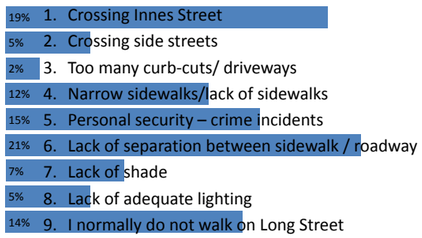
Which of the following objectives would you consider the most important for South Long Street? (Choose your top 3.)



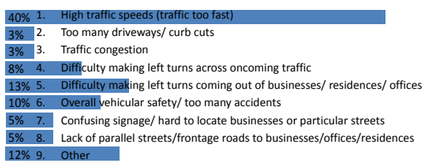
What safety issues concern you the most along South Long Street? (Select all that apply.)



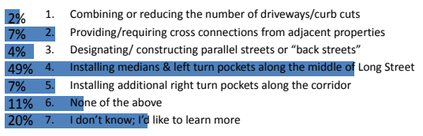
When you are walking along South Long Street, what concerns you most? (Chose your top 3.)



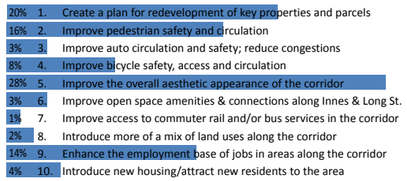
Which vehicular transportation issues concern you most along South Long Street? (Choose your top 3.)



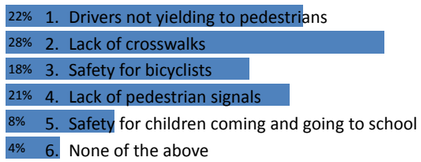
Which of the following access management strategies would you favor implementing along various segments of South Long Street? (Choose all that apply.)



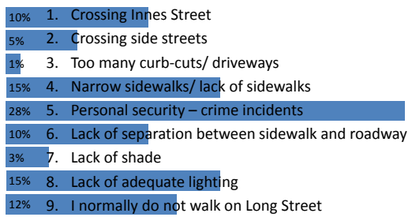
Which of the following objectives would you consider the most important for North Long Street? (Choose your top 3.)



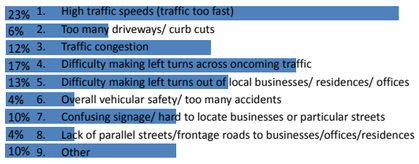
What safety issues concern you the most along North Long Street? (Select all that apply.)



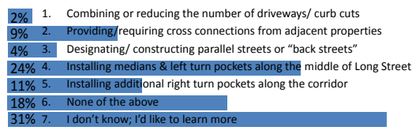
When you are walking along North Long Street, what concerns you most (Choose your top 3.)



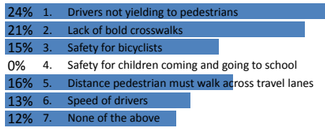
Which vehicular transportation issues concern you most along North Long Street (Choose your top 3.)



Which of the following access management strategies would you favor implementing along various segments of North Long Street? (Choose all that apply.)



What safety issues concern you the most at the Square? (choose your top 3.)



Public Meeting #2

The second public meeting focused on sharing design concepts with the community for both Innes and Long Streets. Each part of the plan was shared and each planning element and recommendation was presented. The plans were generally supported. However, a portion of the Long Street Plan, from MLK to Horah Street, was not supported as well as the rest. It was determined that a third meeting would be necessary to better explain the proposed improvements and to obtain direct feedback.

Public Meeting #3

The third public meeting focused on Long Street between MLK and Horah Streets. The purpose of this meeting was to come to an agreement with the community interested in this portion of the corridor study as to the appropriate level of improvements. In essence, all previous plans were removed from this portion of the corridor and through a question and answer session, using show of hands, we rebuilt the corridor plan for this portion of the corridor. Items that were strongly supported included:

- Designated crosswalks at all intersections,
- Pedestrian signals at intersection,
- Using "bulb-outs" at intersections to shorten the distance that pedestrians needed to travel
- Improving the sidewalks,
- Improving street landscape,
- Reducing travel lane widths and numbers of travel lanes to right size them for current and expected level of service.

Items that were less strongly supported included:

- Locating parallel parking on both sides of the street,
- Adding bike lanes to both sides of the street,
- Creating a landscaped center median

Outcomes

The public engagement process enabled the creation of key objectives and strategies that were used to create and evaluate design alternatives. These key objectives and strategies are:

Overall Objectives

1. Create a safe multi-modal corridor.
2. Create a comfortable street that encourages people to walk, bike or take the bus more often.
3. Create a more attractive gateway into downtown
4. Maintain ease and clarify vehicular movement.
5. Create implementable designs that adhere to NCDOT standards.
6. Create a plan that maximizes the value through dollars invested in improvements.
7. Create a plan that is implementable, scalable and able to be phased.
8. Create highly visible crosswalks at all intersections
9. Create pedestrian refuge islands where possible

Specific Design Strategies

1. Add pedestrian walk signals at intersections that have traffic signals
2. Propose access management controls to make turning movements more clear
3. Provide pedestrian signal if possible at Shaver Street for safe crossing
4. Set up corridor dimensions to comply with the gateway plan and any future development
5. Bump outs at intersections to decrease crossing distances
6. Include bike lanes where possible
7. Include on-street parking where possible
8. Create highly visible crosswalks at all intersections
9. Add pedestrian walk signals at intersections with traffic signals
10. Provide rapid flashing pedestrian signal at the pool
11. Narrow the lanes on North Long to create separation of sidewalk from the new curb
12. Provide pedestrian signal at Rowan Helping Ministries shelter
13. Bump outs at intersections to decrease crossing distances

Below are some of the comments the public shared throughout the process:

"We need more sidewalks, more pedestrian lights at the intersections... and crosswalk markings at the intersections."

"I would love to feel safer biking, walking with small children and walking with my dog."

"South Long resident in favor . I love the bike lanes, trees and PARKING!"

"We are a large company on North Long and have 40' long trucks that travel and turn at intersection. I like the new ideas...I do not have a problem with my large trucks making these turns OR even going a different route."

4

COMPLETE STREET PLAN

East Innes Street & Shaver Street
View West

1. Lanes dimensioned to 11’ wide
2. Brick color and pattern added to center lane
3. Crosswalks with bold stripes and colors
4. Motion activated rapid flashing beacon to alert motorists that there are pedestrians in the crosswalk
5. Pedestrian refuge in crosswalk at center median
6. Median planted with drought resistant perennial and shrubs
7. Edge planted with drought resistant perennials and shrub plantings
8. Monument in center median, which could be lighting, hanging planted baskets, signage, sculpture or other
9. Fencing between the roadway and sidewalk to create separation and encourage crossings at intersections

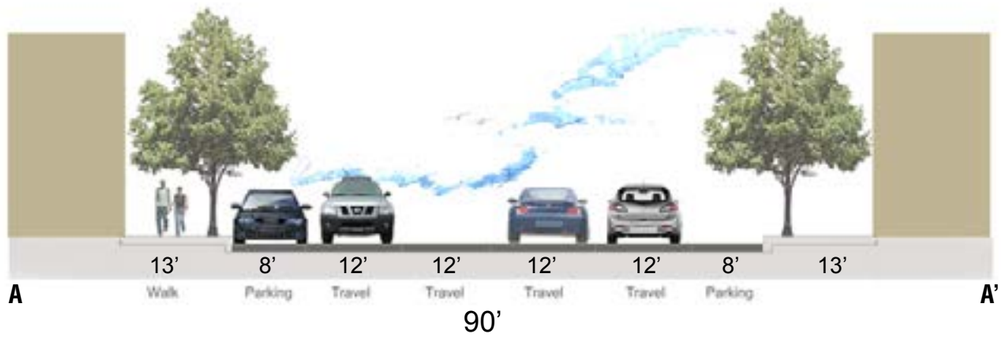
Innes Street & Main Street
View West

1. Curb “bulb-outs” at intersection to reduce pedestrian crossing distance by 16’ and provide traffic calming through the intersection
2. Special paving within the intersection
3. Bold crosswalk paving
4. Planters to allow for seasonal planting and seating on the square
5. Expanded area at the intersection to allow space for outdoor dining
6. Existing on-street parking retained

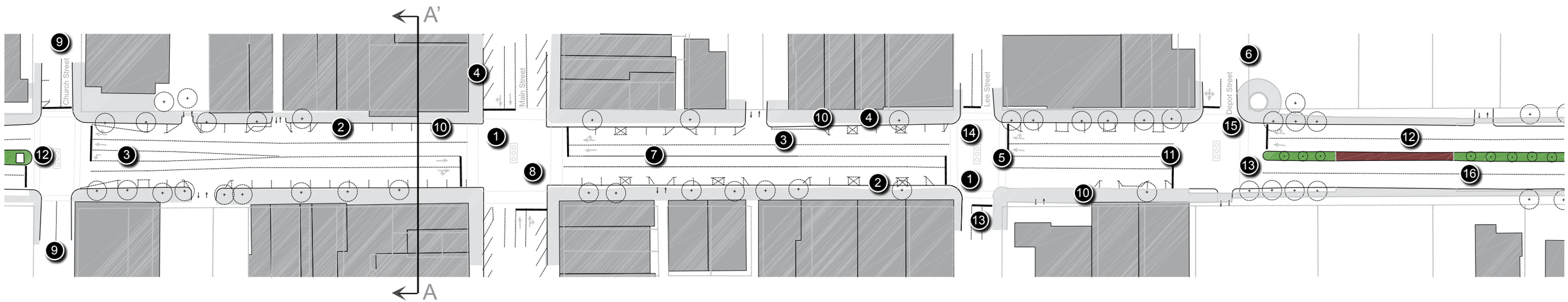
Innes Street

Church Street to Depot Street - Existing

1. Long crossing dimension for pedestrians
2. Opportunity for additional parking
3. Inadequate parking signage
4. Sidewalks are 14’ wide, optimum distance for outdoor dining is 17-19’
5. No dedicated left turn creates stacking conflicts in lane
6. Bus stop
7. Travel lanes have excess width, currently measure 12-13’ wide.
8. Currently no left hand turns at key intersection which reduces pedestrian conflicts but increases average speed through the intersection
9. Key route to parking and downtown, few signs distinguish this
10. Downtown street tree plantings are irregularly spaced
11. Inconsistent crosswalk
12. Lower speed limit, 20 mph
13. Cracked and worn crosswalks
14. Pedestrian signal at only one of four crosswalks
15. No pedestrian crossing signals at the intersection crosswalks
16. Planted medians combined with decorative paving, lighting and fencing



Existing Section A : Innes at Main

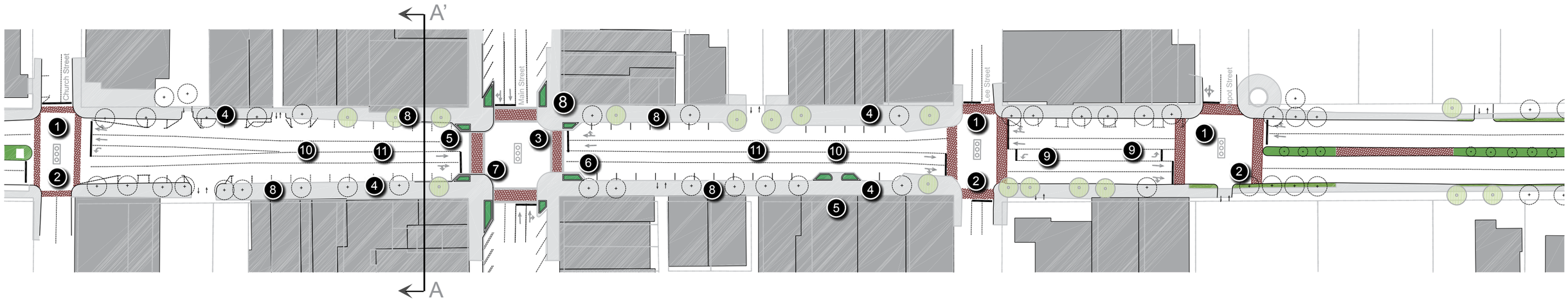


Innes Street

Church Street to Depot Street - Proposed

1. Add high visibility crosswalks
2. Pedestrian countdown signals installation in progress
3. 8-12’ wide high visibility crosswalks
4. Add colorful and seasonal hanging flower baskets to existing decorative lights
5. Curb ‘bulb-outs’, reduce crossing distance and provide traffic calming
6. Planter seat walls in bulb-outs with seasonal plantings
7. Reduced vehicle turn radius
8. Cafe space
9. 12’ dedicated turn lane
10. 12’ travel lanes
11. Additional street trees create rhythm through the downtown district

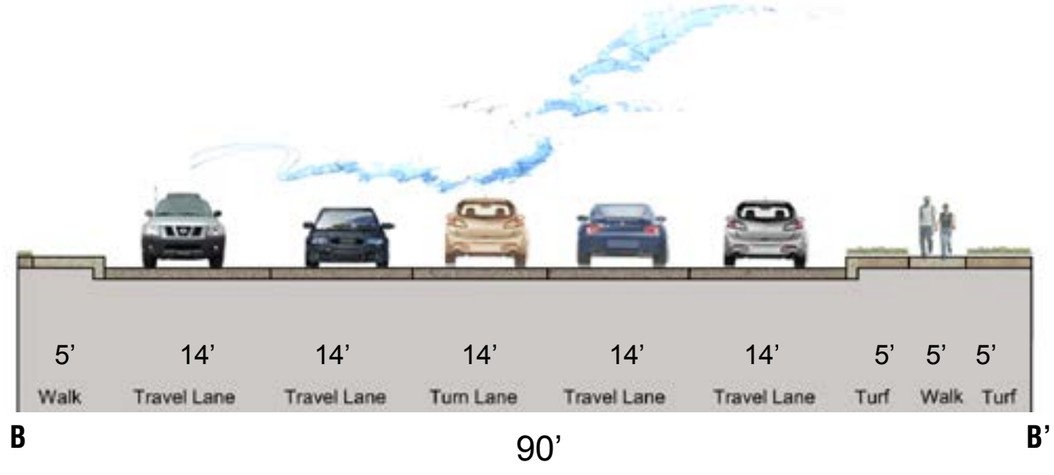
Proposed Section A : Innes at Main



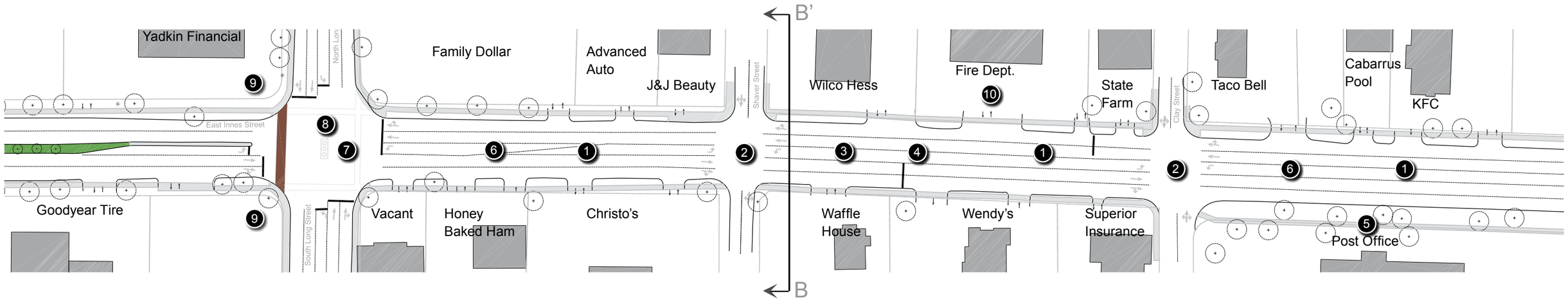
Innes Street

Long Street to Clay Street - Existing

1. Multiple driveways and curb cuts, many that are very close to intersection
2. No crosswalks
3. Popular pedestrian mid-block crossing
4. Long distance to a controlled intersection
5. Large tree lawn
6. Excess lane width, lanes measure 12-13’
7. Long distances for pedestrians to cross
8. No pedestrian crossing signals at the intersection crosswalks
9. Wide, sweeping curbs that are dangerous for pedestrians
10. Fire station and emergency signal



Existing Section B : Innes at Shaver

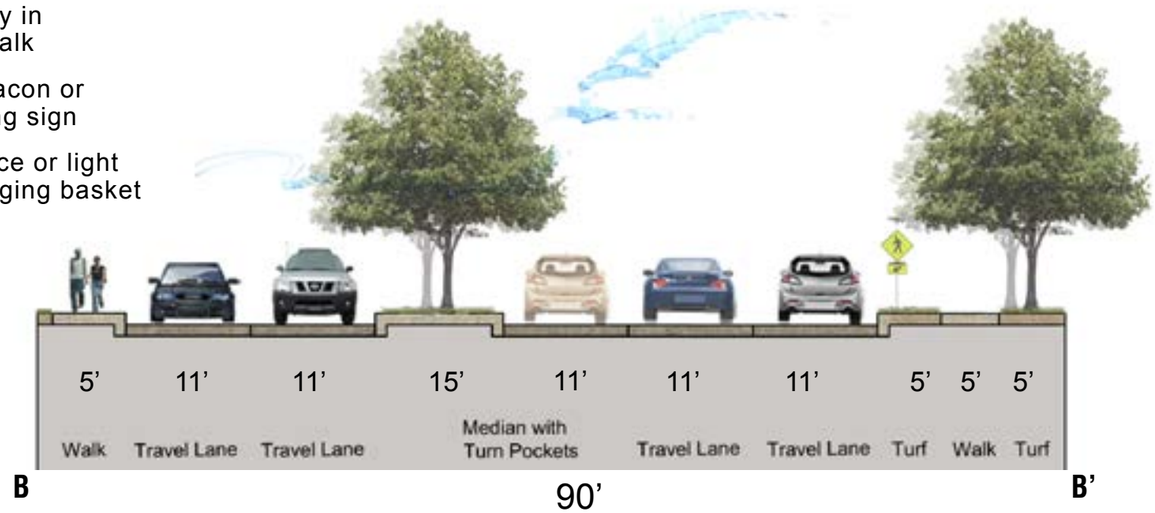


Innes Street

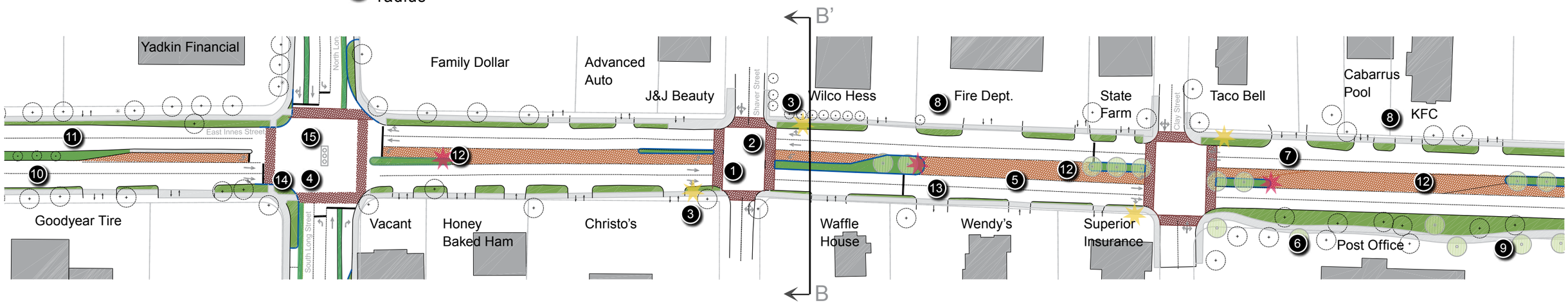
Long Street to Clay Street - Proposed

1. Add high visibility crosswalks
2. Rapid flashing beacon pedestrian crossing signal for unsignalized intersection
3. Stop bars indicate crosswalk ahead
4. Add pedestrian countdown signals
5. Monument in center median, which could be lighting, hanging planted baskets, signage, sculpture or other
6. Landscaped tree lawn with small and flowering street trees, shrubs and perennial plantings for seasonal interest
7. Landscaped median with shrubs and perennial plantings for seasonal interest
8. Landscaped borders with ground cover, shrubs, perennial plantings for seasonal interest, and or and/or decorative fencing to discourage mid-block crossings by pedestrians
9. Pedestrian priority sidewalk and landscape
10. Continue the palette of decorative fencing, lighting along with planting throughout corridor for cohesive design
11. Use color and texture combinations of plantings as inspiration for proposed future planted medians
12. Decorative paving in turn lanes
13. Standardized lane widths provide space for planted medians
14. Reduced vehicle turning radius
15. Create consistency in intersection sidewalk

- Rapid flashing beacon or pedestrian crossing sign
- Decorative art piece or light with seasonal hanging basket



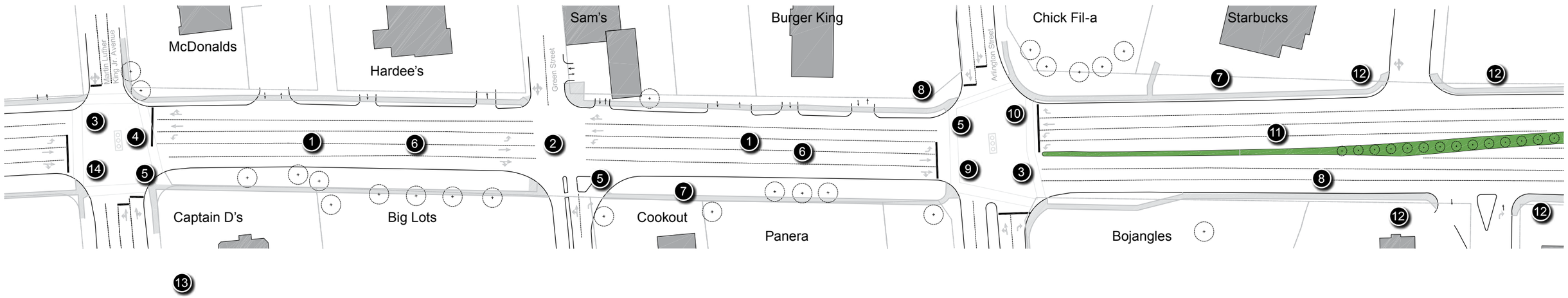
Proposed Section B : Innes at Shaver



Innes Street

Martin Luther King Jr. Avenue to Arlington-street - Existing

1. Multiple driveway curb cuts
2. No crosswalk
3. Long distances for pedestrians to cross
4. No pedestrian crossing signals at the intersection crosswalks
5. Sweeping curve, dangerous to pedestrians
6. Excess lane width, lanes 12-13’ wide
7. Large tree lawn
8. Narrow sidewalk section on curb and bordered by fence
9. Pedestrian signals at the intersection crosswalks do not have countdown timers
10. Stop bars are close to crosswalks
11. Planted median
12. Sidewalks with decorative lighting and fencing bordered by landscaping that provides seasonal interest
13. Bus stop
14. Crosswalk markings cracked and faded

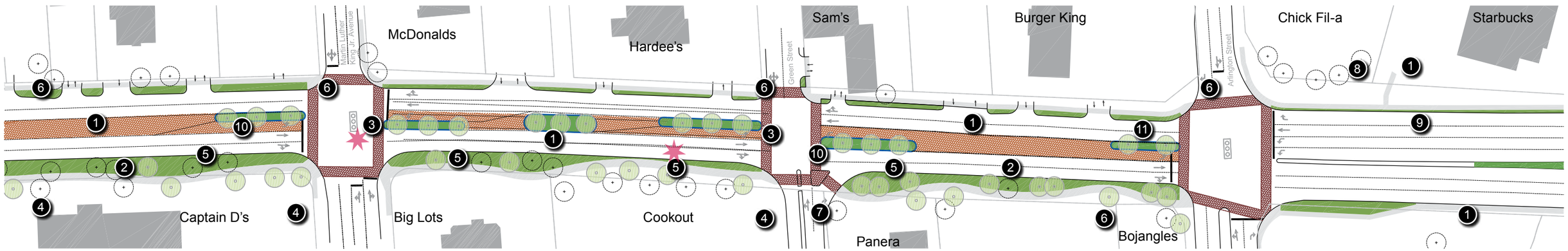


Innes Street

Martin Luther King Jr. Avenue to Arlington-street - Proposed

1. Add high visibility crosswalks
2. Add pedestrian countdown signals
3. Monument in center median, which could be lighting, hanging planted baskets, signage, sculpture or other
4. Landscaped tree lawn with small and flowering street trees, shrubs and perennial plantings for seasonal interest
5. Landscaped median with shrubs and perennial plantings for seasonal interest
6. Landscaped borders with ground cover, shrubs, perennial plantings for seasonal interest, and/ or decorative fencing to discourage mid-block crossings by pedestrians
7. Pedestrian priority sidewalk and landscape
8. Continue the palette of lighting along with planting throughout corridor for cohesive design
9. Use color and texture combinations of plantings as inspiration for proposed future planted medians
10. Decorative paving in turn lanes
11. Standardized lane widths provide space for planted medians

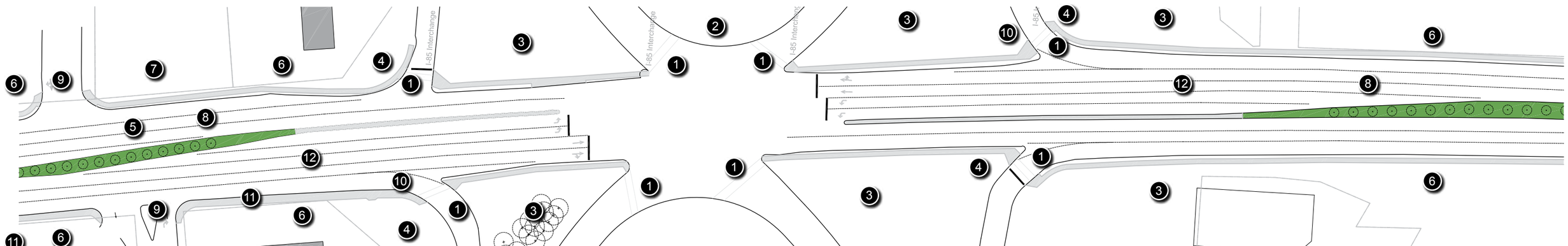
✸ Decorative art piece or light with seasonal hanging basket



Innes Street

I-85 Interchange - Existing

1. No pedestrian signals
2. Attractive lighting under bridge
3. Interchange planting with seasonal interest
4. Sweeping on and off ramps dangerous for pedestrians
5. Signage to downtown inadequate
6. Sidewalks with decorative lighting and fencing
7. Vacant lot
8. Planted median
9. No crosswalk
10. Crosswalk markings very faded
11. Sidewalk against curb
12. Excess lane widths, lanes 12-13’

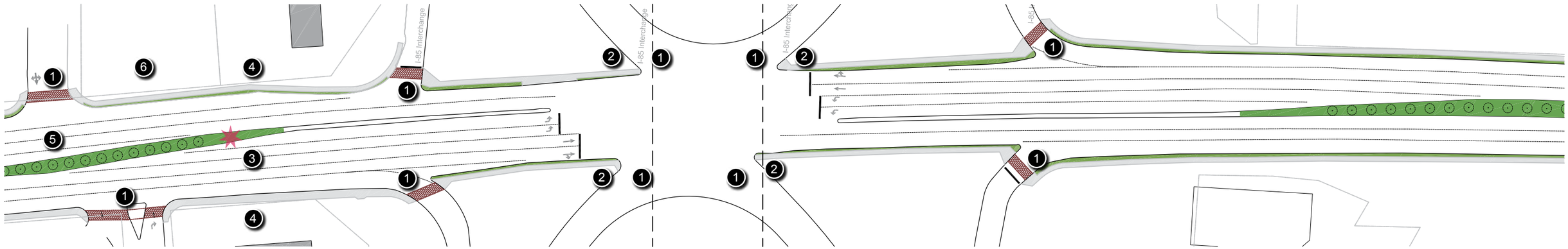


Innes Street

I-85 Interchange - Proposed

1. Add high visibility crosswalks
2. Add pedestrian countdown signals
3. Welcome sign or art piece
4. Continue the palette of decorative fencing, lighting along with planting throughout corridor for cohesive design
5. Use color and texture combinations of plantings as inspiration for proposed future planted medians
6. Potential site for future development and/or decorative fencing to discourage mid-block crossings by pedestrians

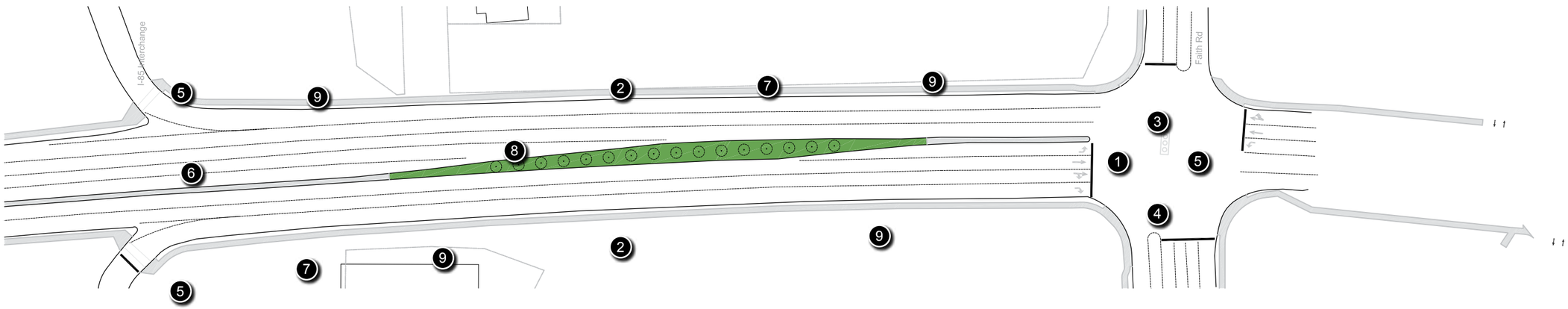
Decorative art piece or light with seasonal hanging basket



Innes Street

I-85 To Faith Road - Existing

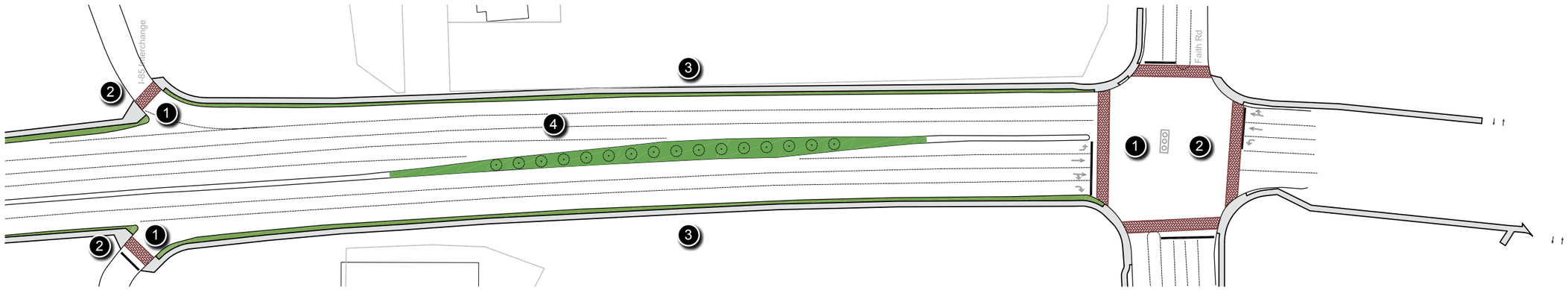
1. No crosswalk
2. Long distance between intersections for pedestrian crossing
3. Long distances for pedestrians to cross the intersection
4. No pedestrian crossing signals at the intersection
5. Sweeping curve, dangerous to pedestrians
6. Excess lane width, lanes 12-13’ wide
7. Large tree lawn
8. Planted median
9. Sidewalks with decorative lighting and fencing bordered by landscaping that provides seasonal interest



Innes Street

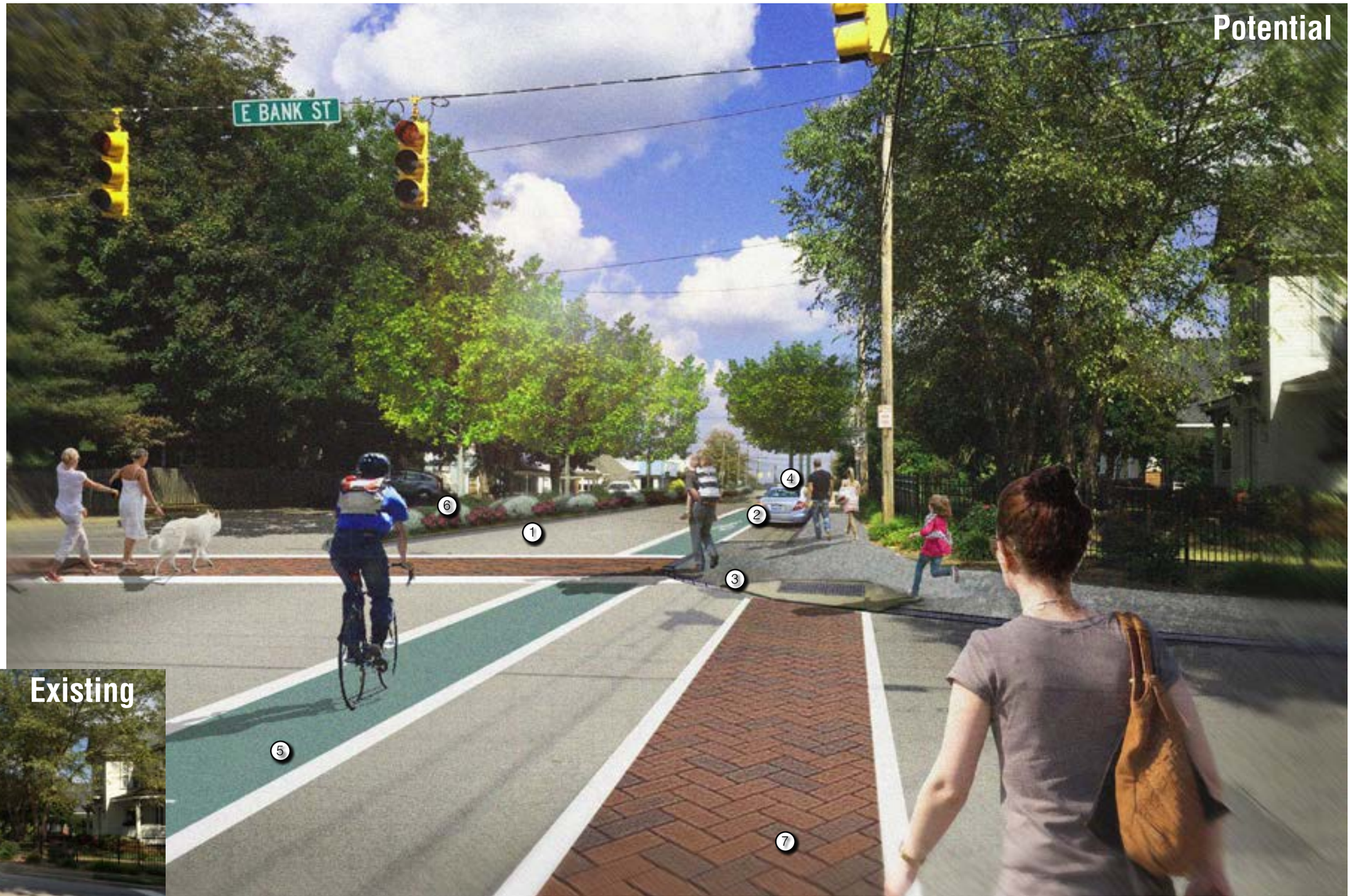
I-85 To Faith Road - Proposed

1. Add high visibility crosswalks
2. Add pedestrian signals with countdown timers
3. Continue the palette of decorative fencing, lighting along with planting throughout corridor for cohesive design
4. Use color and texture combinations of plantings as inspiration for proposed future planted medians



South Long Street & Bank Street
View North

1. Lanes dimensioned to 11’ wide and travelway reduced from 5 lanes to 3 lanes
2. On-street parking
3. Bulb-outs at intersection to reduce crossing distance by 16’ and provide space for additional street tree plantings
4. Bulb-outs at mid-block to allow for additional street trees and to break up long expanses of on-street parking
5. Dedicated bike lane for bikes to travel
6. Center median has traffic calming effect and provides space for street trees and drought tolerant perennials and shrubs
7. Bold crosswalk patterns on all cross streets to allow for safer walking access to downtown



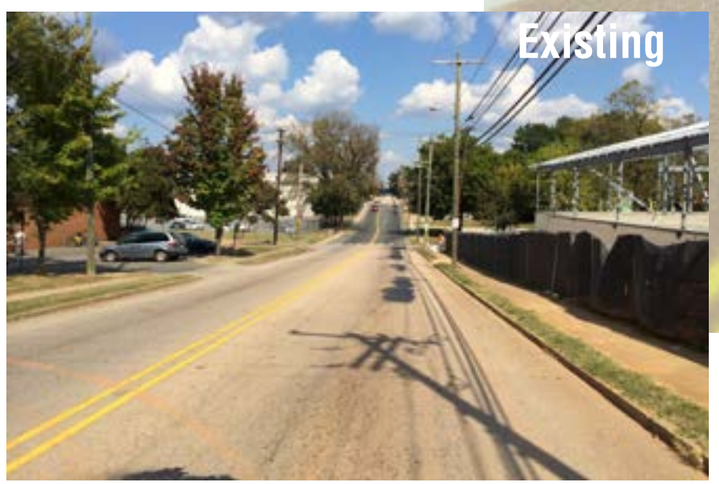
South Long Street & Monroe Street

View of Lincoln Pool and Monroe Intersection

1. Lanes compressed to 11’ wide and reduced from 5 lanes to 3 lanes
2. Added on-street parking
3. Bulb-outs at intersection reduce crossing distance by 16’ and provide space for additional street tree plantings
4. Center median has traffic calming effect and provides space for street trees and drought tolerant perennials and shrubs
5. Bold crossing on all cross streets allow for safer walking access to downtown

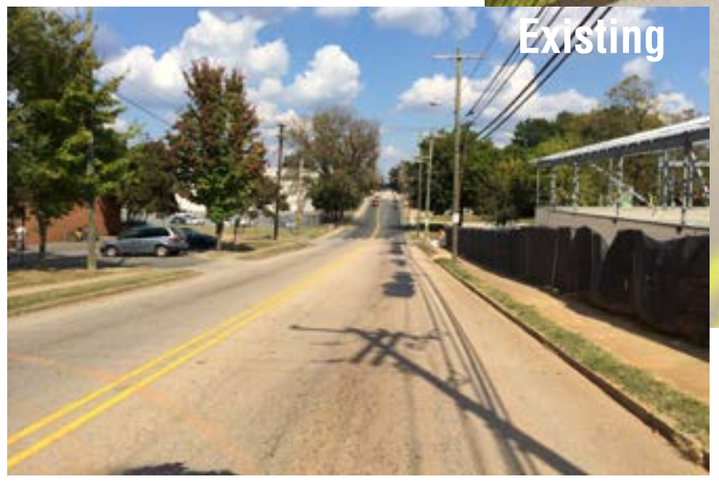
North Long and Liberty Street - Option 1
View North

1. Lanes reduced to 11’ wide
2. Bike lanes provided create more typical lane width and give additional separation between motorist and sidewalk
3. Bold crosswalks
4. Pedestrian signs or rapid flashing beacon motion activated by pedestrians to alert motorists that pedestrians are in the crosswalk
5. Landscape enhanced on private property to create consistent tree canopy
6. Bus stops moved to North side of intersection to avoid conflicts with bike lanes



North Long and Liberty Street - Option 2
View North

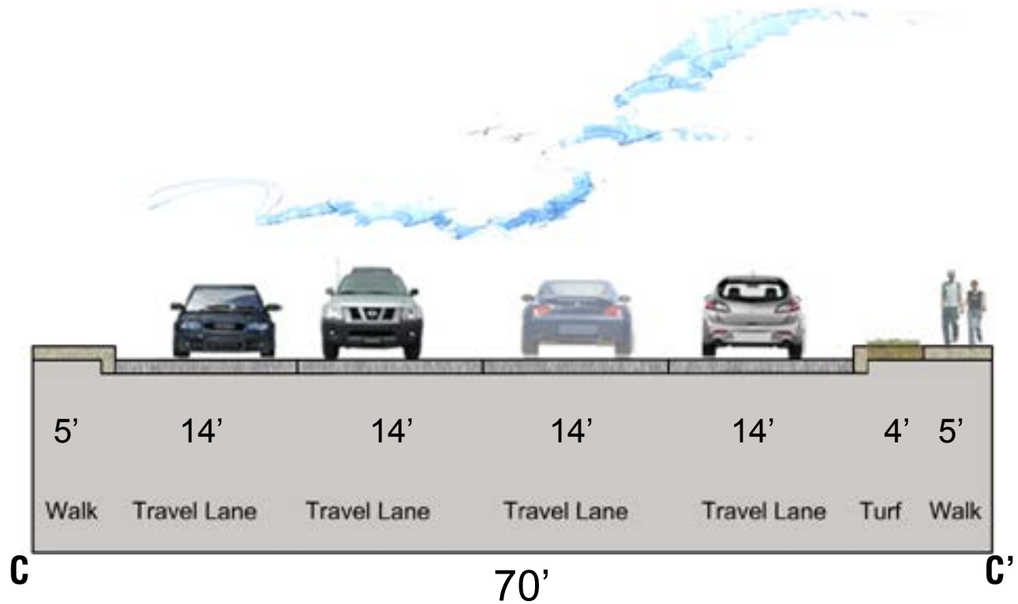
1. Lanes reduced to 11’ by moving in the curbs, this will have a traffic calming effect reducing overall speeds
2. Bold crosswalk paving
3. Expanded planted tree lawn, provides separation between sidewalk and motorist, planted with drought tolerant perennials and shrubs
4. Street trees planted to create consistent canopy over street
5. Bus stops moved to North side of intersection to avoid conflicts with bike lanes



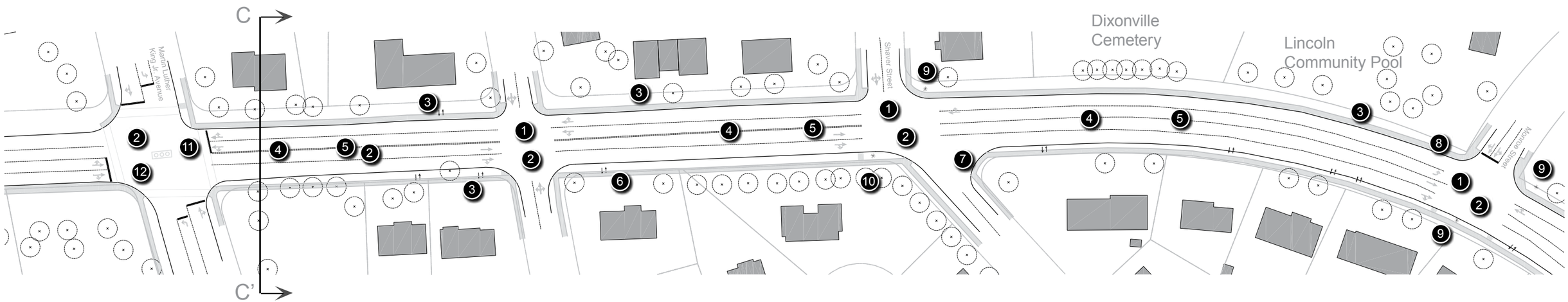
South Long Street

Martin Luther King Jr. Avenue to Monroe Street - Existing

1. No crosswalks
2. Wide crossing distances for pedestrians
3. No planting space between curb and sidewalk
4. No on-street parking
5. More travel lanes than needed
6. Adequate space for street trees
7. Angled intersection creates wide pavement area
8. Highly traveled pedestrian area
9. Bus stop
10. Bus stop with shelter
11. No pedestrian crossing signal at signalized intersection
12. Crosswalk in faded and cracked condition



Existing Section C : Long at MLK

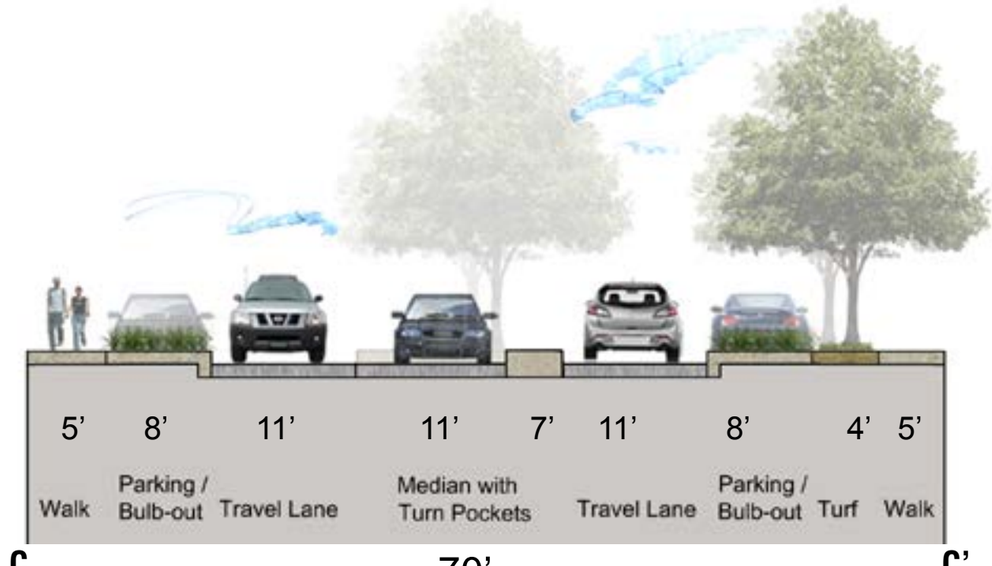


South Long Street

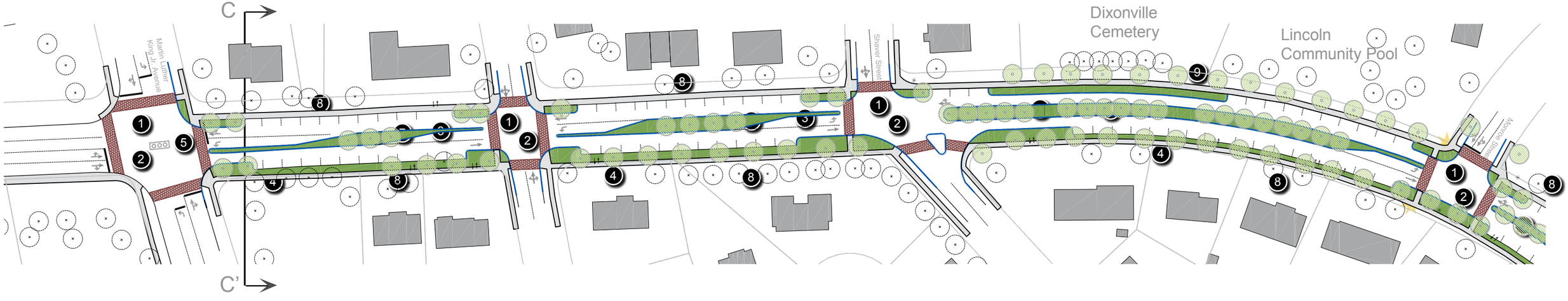
Martin Luther King Jr. Avenue to Monroe Street - Proposed

1. Add high visibility crosswalks
2. Intersection curb bulb-outs
3. Landscaped median with small flowering trees, shrubs, and perennial plantings for seasonal interest
4. Landscaped tree lawn with small flowering street trees along with shrubs, and perennial plantings for seasonal interest
5. Add pedestrian signals with countdown timers at signalized intersection
6. Mid-block bulb-out
7. Planted island
8. On-street parking
9. Bulb-out plantings inspired from memorial park design and plantings

Rapid flashing beacon or pedestrian crossing sign



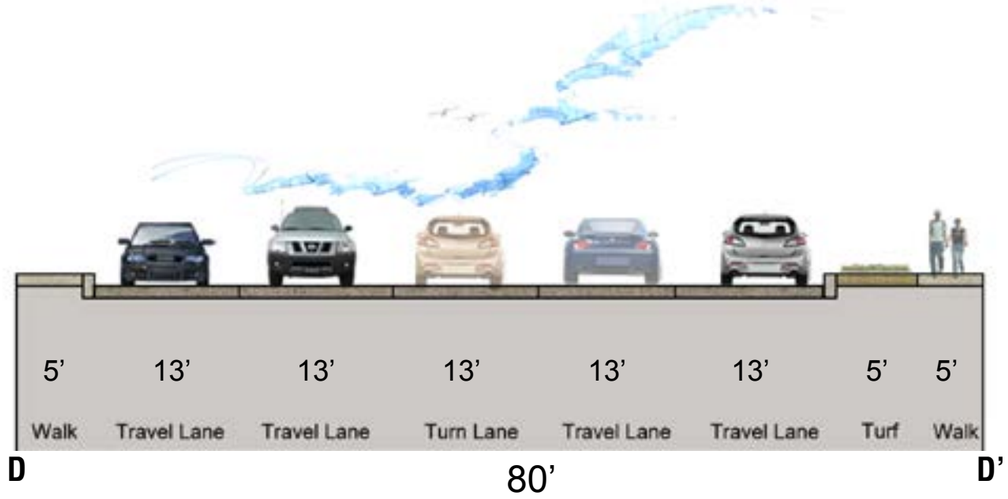
Proposed Section C: Long at MLK



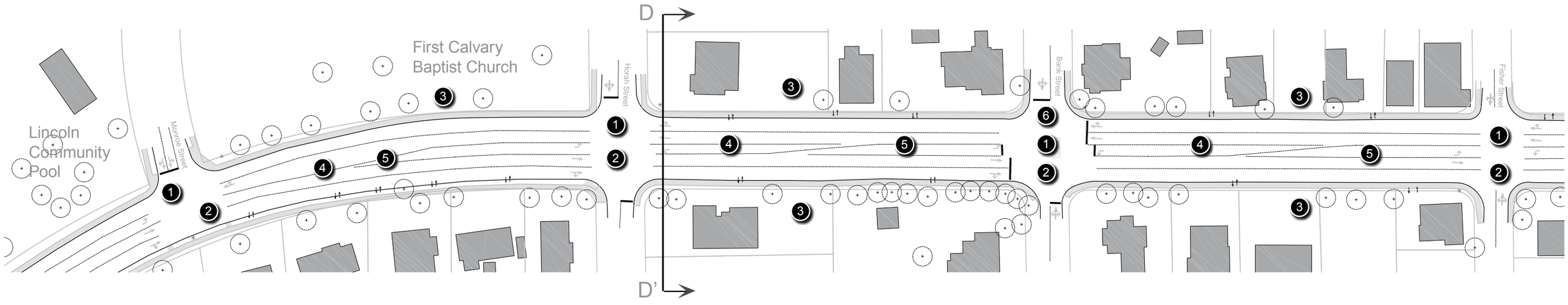
South Long Street

Monroe Street to Fisher Street - Existing

1. No crosswalks
2. Wide crossing distances for pedestrians
3. No planting space between curb and sidewalk
4. No on-street parking
5. More travel lanes than needed
6. No pedestrian crossing signal at signalized intersection



Existing Section D : Long at Horah

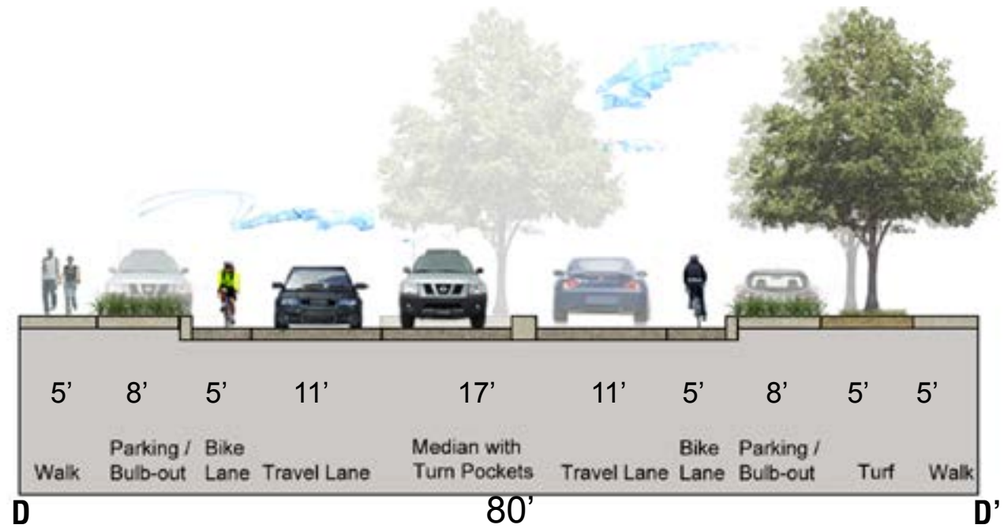


South Long Street

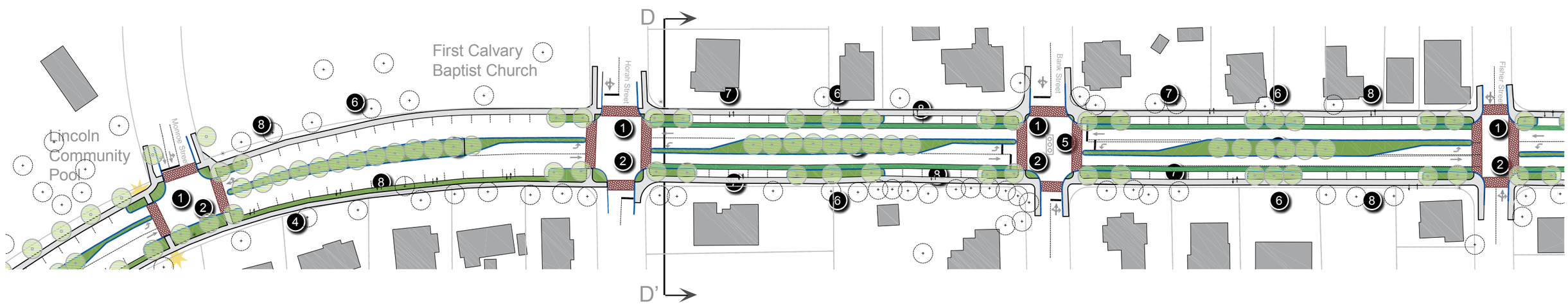
Monroe Street to Fisher Street - Proposed

1. Add high visibility crosswalks
2. Intersection curb bulb-outs
3. Landscaped median with small flowering trees, shrubs, and perennial plantings for seasonal interest
4. Landscaped tree lawn with small flowering street trees, shrubs, and perennial plantings for seasonal interest
5. Add pedestrian signals with countdown timers at signalized intersection
6. Mid-block bulb-out
7. Bike lane
8. On-street parking

Rapid flashing beacon or pedestrian crossing sign



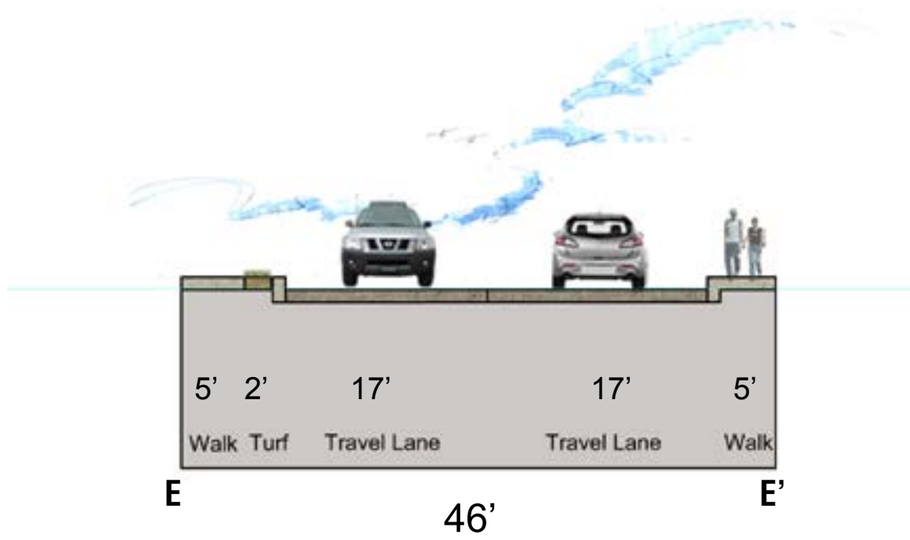
Existing Section D : Long at Horah



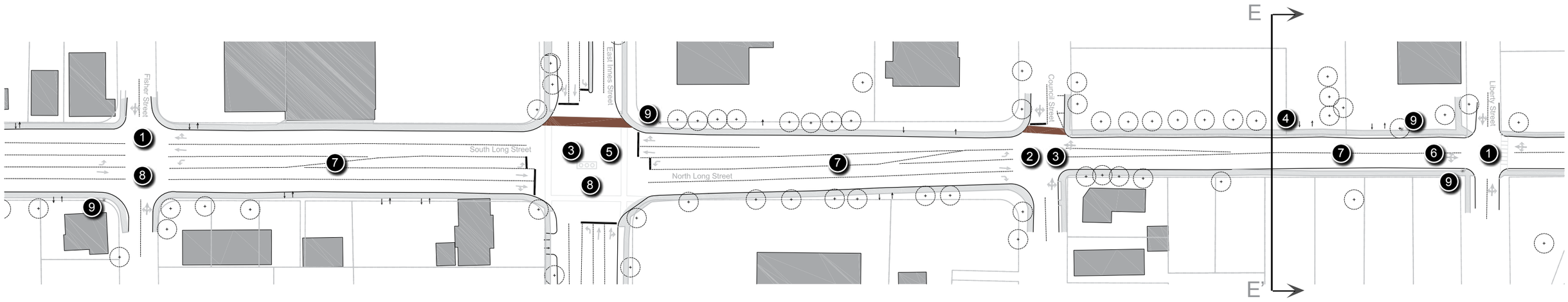
South and North Long Street

Fisher Street to Liberty Street - Existing

1. No crosswalks
2. No crosswalks for majority of intersection crossings
3. Decorative brick-patterned crosswalk on one section of intersection
4. Narrow right of way
5. No pedestrian walk signal at signalized intersection
6. High pedestrian use area
7. Travel lanes have excess width, 12’-14’ wide
8. Long distances for pedestrians to cross
9. Bus stop



Existing Section E: North Long

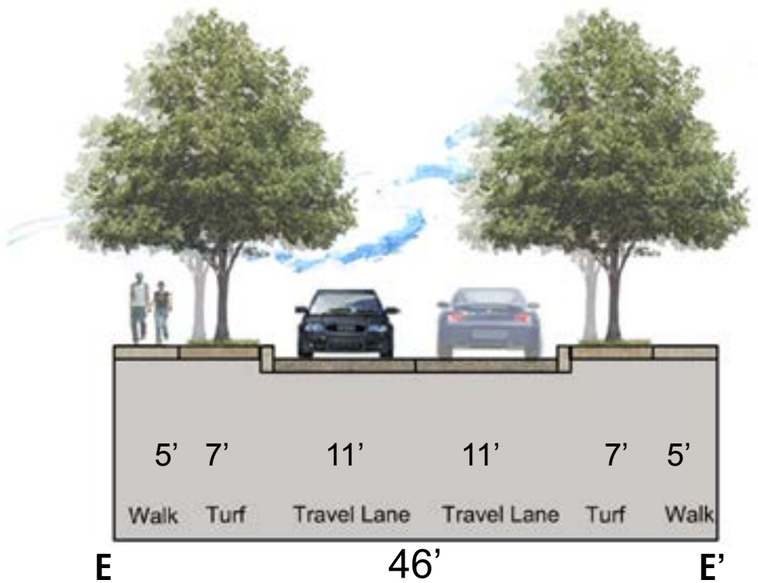


South and North Long Street

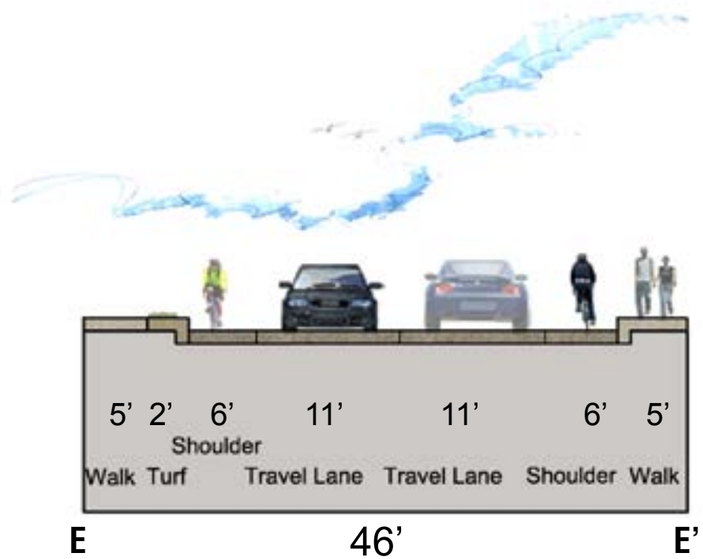
Fisher Street to Liberty Street - Proposed

1. Add high visibility crosswalks
2. Intersection curb bulb-outs
3. Landscaped median with small flowering trees, shrubs, and perennial plantings for seasonal interest
4. Landscaped tree lawn with small flowering street trees, shrubs, and perennial plantings for seasonal interest
5. Add pedestrian signals with countdown timers at signalized intersection
6. Mid-block bulb-out
7. Bike lane
8. On-street parking

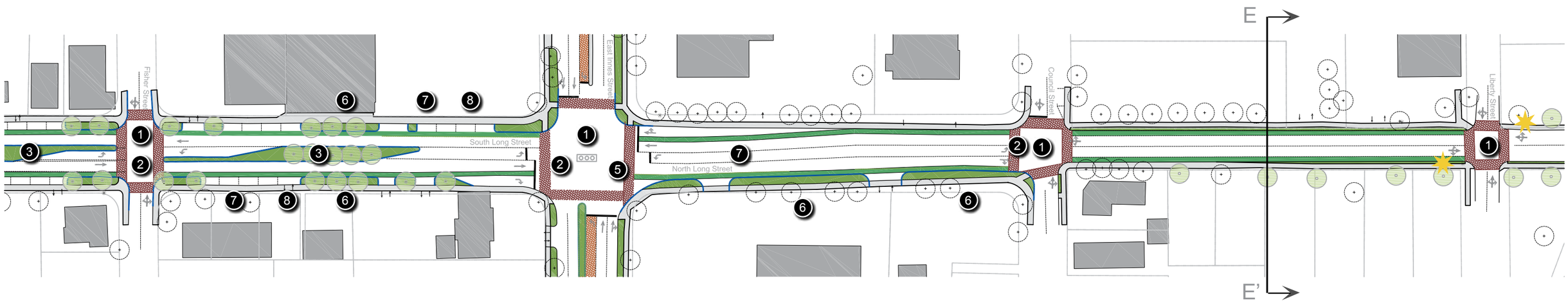
Pedestrian crossing signs or possible rapid flashing beacon



Proposed Section E: North Long Option 1, Move Curbs



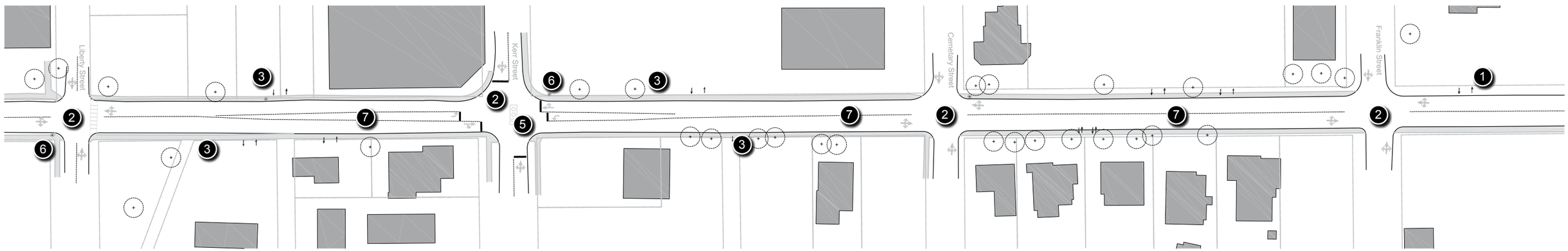
Proposed Section E: North Long Option 2, Bike Lanes



North Long Street

Liberty Street to Franklin Street - Existing

1. No sidewalk
2. No crosswalks
3. Sidewalk on back of curb
4. Narrow right of way
5. No pedestrian walk signal at signalized intersection
6. High pedestrian use area
7. Travel lanes have excess width, 12’-14’ wide

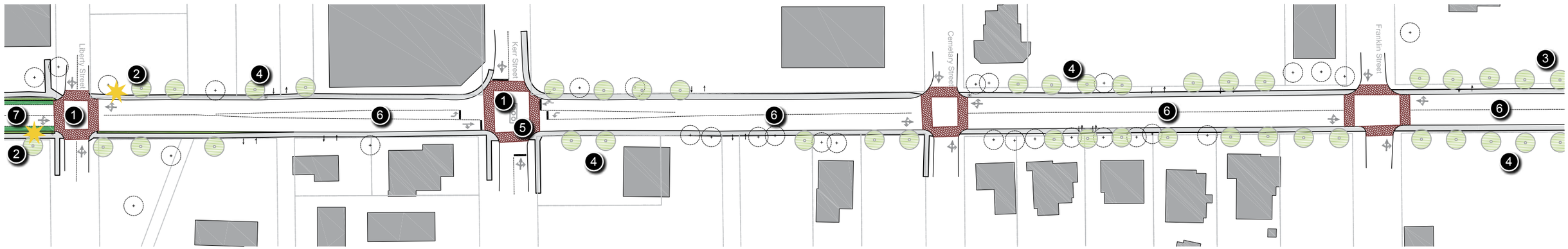


North Long Street

Liberty Street to Franklin Street - Proposed

1. Add high visibility crosswalks
2. Rapid flashing beacon or pedestrian crossing sign
3. Add sidewalk
4. Landscaped tree lawn with small flowering street trees
5. Add pedestrian signals with countdown timers at signalized intersection
6. Sharrow
7. Bike lane

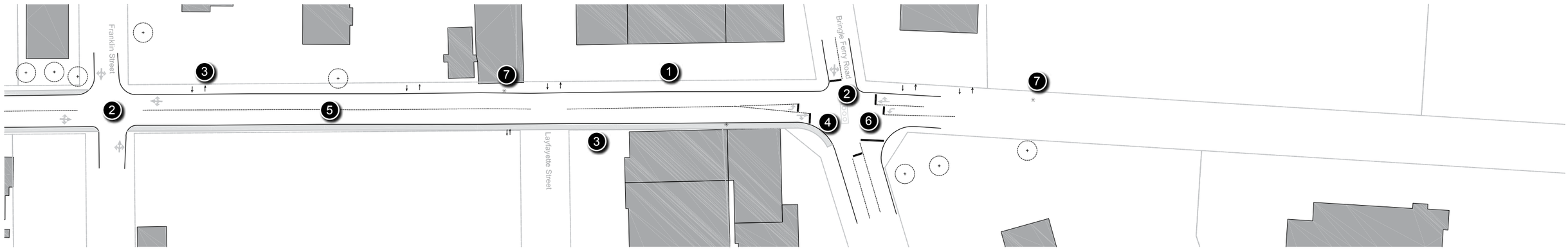
✸ Rapid Flashing Beacon or Pedestrian Signage



North Long Street

Franklin Street to Bringle Ferry Road - Existing

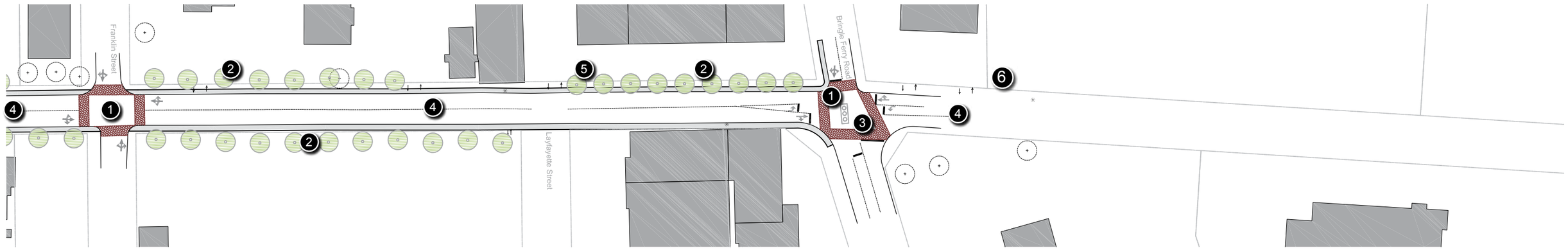
1. No sidewalk
2. No crosswalks
3. Sidewalk on back of curb
4. No pedestrian walk signal at signalized intersection
5. Travel lanes have excess width, 12’-14’ wide
6. Long distances for pedestrians to cross
7. Bus stop



North Long Street

Franklin Street to Bringle Ferry Road - Proposed

1. Add high visibility crosswalks
2. Landscaped tree lawn with small flowering street trees
3. Add pedestrian signals with countdown timers at signalized intersection
4. Sharrow
5. Add sidewalk
6. Bus Stop



5

IMPLEMENTATION

Short Term Implementation

Throughout the design process we have looked for opportunities to make short term improvements that coincided with the long term strategies and plans. In addition it was clear from the feedback received at the public workshops that finding solutions to make crossing East Innes Street and Long Street safer is a top priority and should be acted on in a timely manner. Specific crossings to be addressed were identified:

- Crossing East Innes Street at Shaver Street
- Crossing South Long Street at Monroe Street
- Crossing North Long at Liberty Street

While other intersections were also identified as trouble areas these three continued to surface as the most challenging and dangerous areas. This was confirmed through research into incident reports where automobile accidents involved a pedestrian or bike. The following exhibits show plans for short term improvements that would integrate into the long term plans in the previous chapter. It should also be noted that these are short term solutions that will add safety, but the only way to fully address the safety of these corridors is with wholistic design that considers the entire street length and street cross-section.

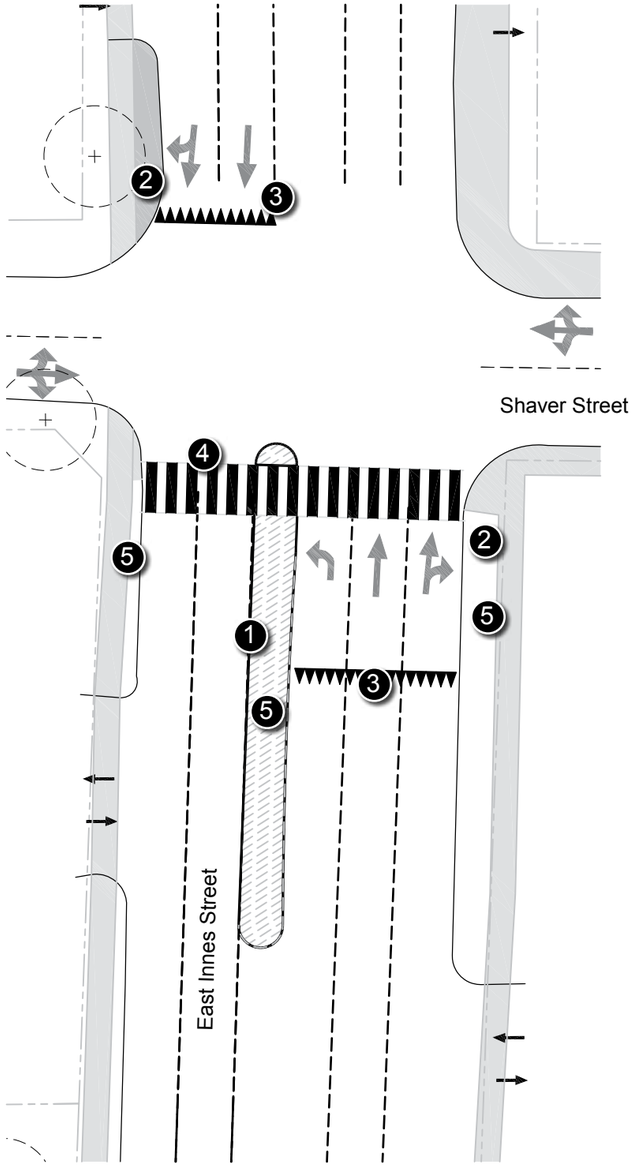
East Innes Street and Shaver Street Intersection

This intersection was cited by the NCDOT, City of Salisbury and the public as being a dangerous spot that pedestrians attempt to cross at all hours of the day and night. The main reason for this conflict is that the nearest signalized intersection is 750 feet away, much further then any typical pedestrian is willing to walk to have a protected crossing from a traffic light.

In our investigations we were unable to make a case to add a traffic signal in this location. Our first recommendation is to re-stripe the East Innes from Long Street to Clay street creating 11’ travel lanes. This allows enough space to fit an 8’ median as a pedestrian refuge island. Ideally this island would have raised median on either side of the crosswalk, shown to the right as the grey hatched area. Painting is also an option in this area if the budget does not allow for a true median. Secondly we recommend that a rapid flashing beacon installed at this intersection. This rapid flashing beacon should have the accompanied standard signage and should be motion activated wen someone approaches the crosswalk. Stop bars should be painted on the road surface indicating the proper place for motorists to stop to yield to a pedestrian in the crosswalk. Third a high visibly crosswalk should be installed at the crossing. Lastly, on the edges of the road and in the median adding planting to the plan will make the crossing attractive, contribute to traffic calming and give the improvements permanence.

Recommended Improvements

1. Median created from re-striping lanes
2. Rapid flashing beacon
3. Stop bar for motorists
4. High visibility crosswalk
5. Areas for improved landscape



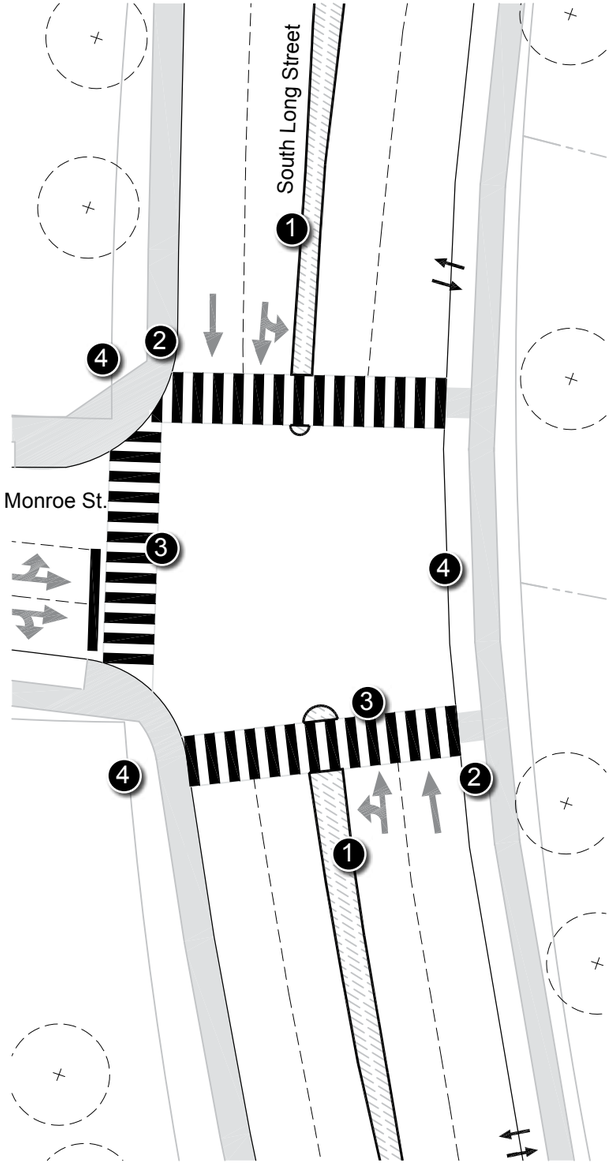
South Long Street and Monroe Intersection

This intersection was brought up by the community as a dangerous place for children and families because of the expansive crossing distance across South Long Street and because of the community pool adjacent to this intersection. The need for a traffic light in this location to enable a protected crossing for pedestrians does not yet meet warrent requirements.

It is recommended that this section of road is re-striped from Horah street and 600 feet past the Monroe intersection to create a 4'-8' pedestrian refuge island in the middle of the street. These island would preferably be raised islands with landscape although painted islands would also be adequate for a short term treatment. In addition it is recommended that this intersection get high visibility crosswalks in all directions to clearly indicate crossing area, rapid flashing beacons, or pedestrian crossing signage. Lastly, on the edges of the road and in the median adding planting to the plan will make the crossing attractive, contribute to traffic calming and give the improvements permanence.

Recommended Improvements

1. Median created from re-striping lanes
2. Rapid flashing beacon or Pedestrian crossing signage
3. High visibility crosswalk
4. Areas for improved landscape



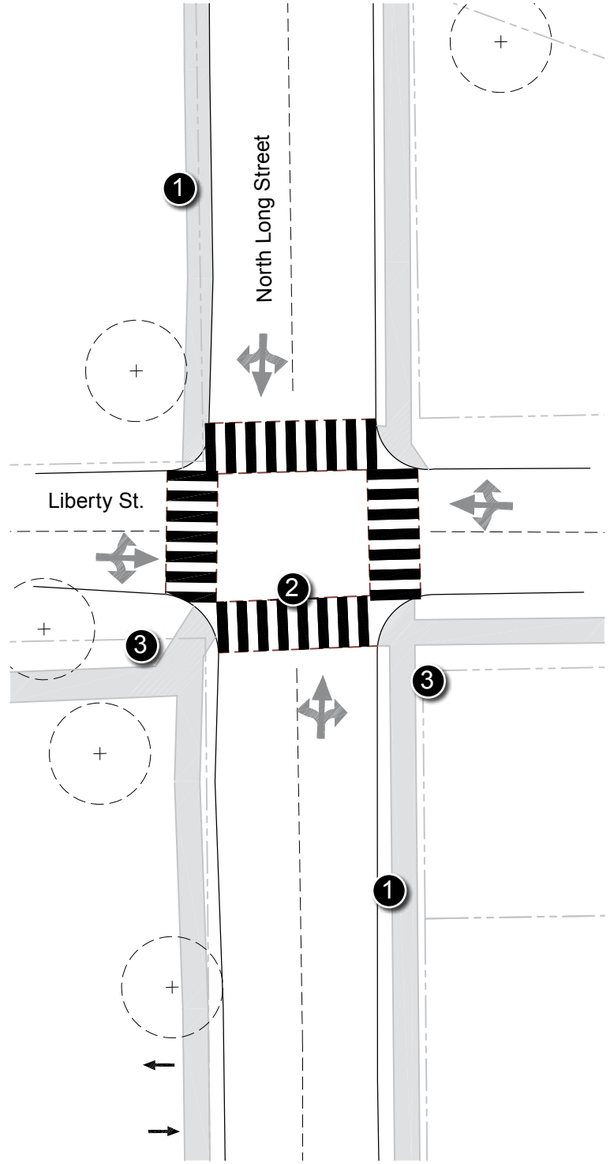
North Long Street and Liberty Intersection

This intersection was brought up by the community as a place of high pedestrian activity. Adjacent to this intersection on both the east and west side of North Long Street is the Rowan Helping Ministries shelter. At this facility they also provide numerous other community services. Inevitably there is need for people to walk from building to building crossing the street. Many of the people that they serve are without a vehicle and often use waking as their main mode of transport. As the Rowan Helping Ministries grows and helps more people need for improved pedestrian and bike facilities will also grow.

It is recommended that high visibility crosswalks be installed at this intersection. The study was unable to prove the need for a traffic light or a pedestrian signal at this intersection. It is recommended that a rapid flashing beacon and/or pedestrian crossing signage to be installed. In addition landscaping should be installed to enhance the intersection and should be designed in conjunction with new improvements to the new facility.

Recommended Improvements

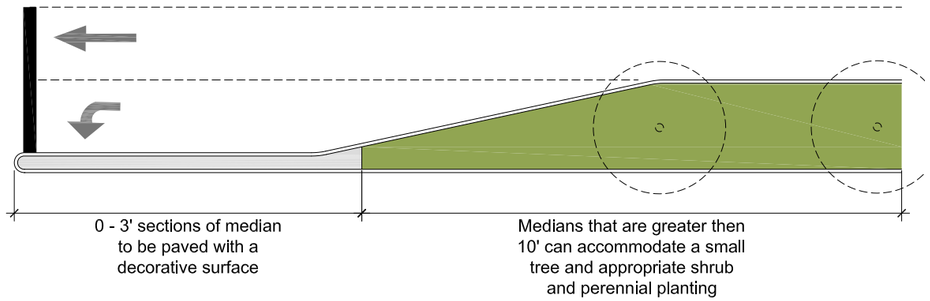
1. Pedestrian crossing signage
2. High visibility crosswalk
3. Areas for improved landscape

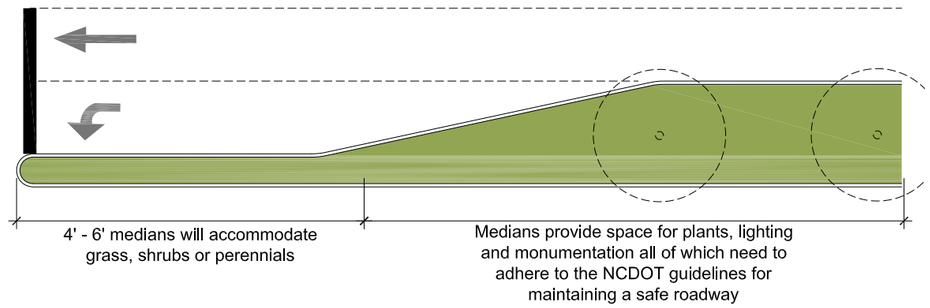


Corridor Elements, Materials and Options

Medians:

Visually dividing the street with a planted median can help to calm traffic dramatically and change the aesthetics of a street. Medians can also offer refuge to pedestrians to intersections with long crossings or intersections without traffic signals. Typically for intersections with traffic lights and pedestrian signals, we want to encourage pedestrians to cross the whole street and not to stop halfway.





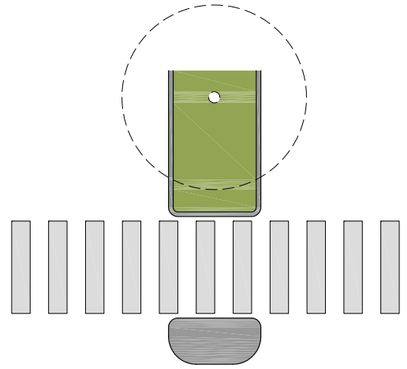
Example of median planting with small trees

Example of planting with grasses on a narrow median

Pedestrian Refuge:

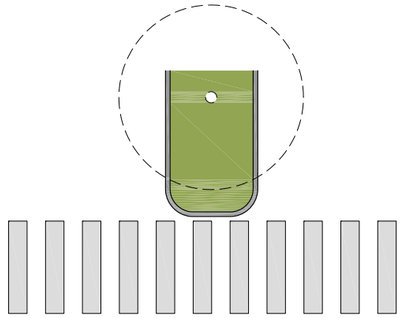
Providing pedestrians a mid-way place to stop can make crossing large streets less intimidating and more safe in certain situations

Non-signalized intersection with pedestrian refuge median



At intersections where the traffic counts do not warrant a traffic signal, crosswalks should extend through the median. This creates a space to allow a pedestrian to stop half way across the road until the traffic is clear.

Signalized intersection with abutting center median



At intersections that are signalized, the median stops short of the crosswalk encouraging the pedestrian to complete the journey across the street during the time interval of the count-down clock.

Median planting pallets:

Our region has a multitude of plant choices and opinions vary greatly on which are the most appropriate. When determining street planting palettes it needs to be acknowledged that these are very harsh environments and plants need to withstand heat, drought light to heavy foot traffic. Below are several favorites, but this is not a complete list.

Perennials

- Crocus - Crocus
- Daffodil - Narcissus
- Daylilly - Hemerocallis
- Black eyed Susan - Rudbeckia hirta

Shrubs

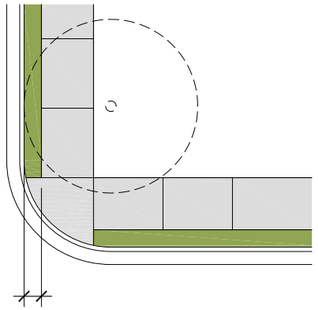
- Yaupon holly - Ilex vomitoria ‘Bordeaux’
- Helleri holly (3-5’) - Ilex crenata ‘Helleri’
- Sweetspire - Itea virginica
- Fringe Flower - Loropetalum ‘Snowmound’
- Dwarf Yeddo Hawthorn - Rhaphiolepis x ‘Minor’

Trees

- Prunus subhirtella ‘Autumnalis’ - autumn flowering cherry
- Cercis canadensis - multi-stemmed redbud
- Vitex agnus-castus - chaste tree
- Sweat Bay Magnolia - Magnolia virginiana ‘Tensaw’
- American Hornbeam - Carpinus caroliniana

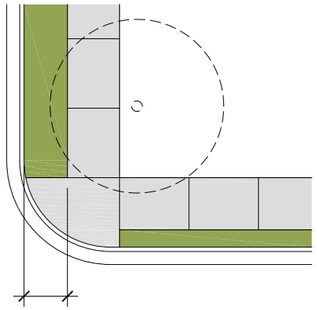
Tree Lawn:

The widths of trees lawns vary through each of the corridors and the treatment of this space, to separate motorists from pedestrians, should adapt to the spacial conditions.



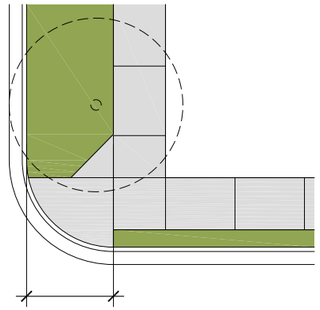
0 - 2'

Narrow tree lawns should be planted with grasses or drought tolerant perennials. Street trees should be planted on the outside of the sidewalk if the width of the right of way allows it.



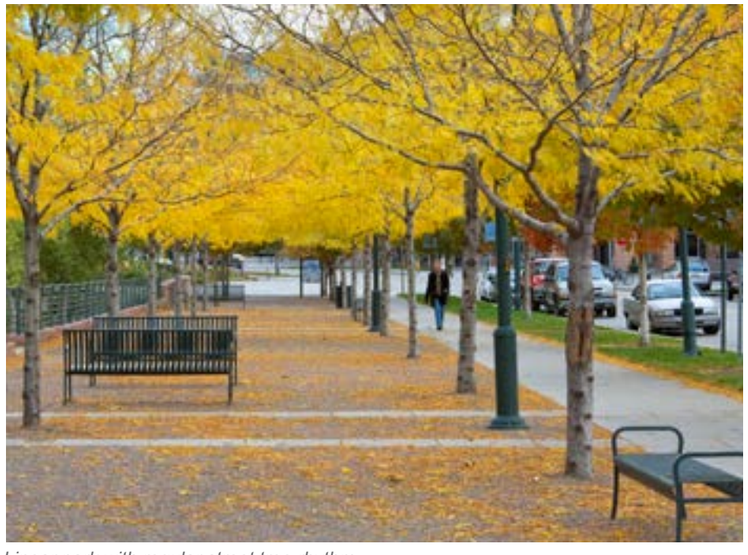
2' - 7'

Slightly wider tree lawns can also accommodate low fencing as a way to encourage pedestrians to cross at the intersections and not at mid - block. Street trees should be planted on the outside of the sidewalk if the right of way allows for it.



7' - Greater

Large tree lawns allow for the addition of street trees as well as benches and other linear park elements.



Linear park with regular street tree rhythm

Tree lawn planting pallets:

Our region has a multitude of plant choices and opinions vary greatly on which are the most appropriate. When determining street planting palettes it needs to be acknowledged that these are very harsh environments and plants need to withstand heat, drought light to heavy foot traffic. Below are several favorites, but this is not a complete list.

Perennials

- Hyacinth - early spring
- Veronica officinalis - Speedwell
- May Knight salvia - Salvia 'May Knight'
- Sage - Leucophyllum frutescens
- Cosmos - Cosmos bipinnatus

Shrubs

- Yaupon holly - Ilex vomitoria 'Bordeaux'
- Helleri holly (3-5') - Ilex crenata 'Helleri'
- Sweetspire - Itea virginica
- Fringe Flower - Loropetalum 'Snowmound'
- Dwarf Yeddo Hawthorn - Rhaphiolepis x 'Minor'

Trees

- Prunus subhirtella 'Autumnalis' - autumn flowering cherry
- Cercis canadensis - multi-stemmed redbud
- Vitex agnus-castus - chaste tree
- Sweat Bay Magnolia - Magnolia virginiana 'Tensaw'
- American Hornbeam - Carpinus caroliniana

Crosswalks:

Bold crosswalks delineate the safest place to cross the street and make the motorists aware that pedestrians could be crossing at that location. Claiming this space makes the street more walkable and pedestrian friendly. Medians, which can be made from a variety of materials and patterns, also enhance the visual character of a street.

Typical High Visibility Crosswalk

Stamped Asphalt Crosswalk

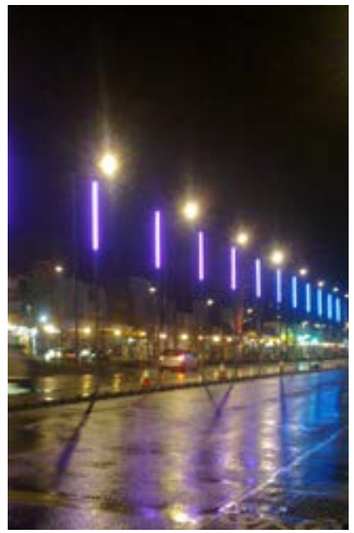
Brick Crosswalk

Center Monuments:

East Innes Street serves as a major gateway into historic downtown Salisbury. Given the many varying conditions on East Innes Street, it is difficult to create consistent elements that extend all the way to the Square. The center medians provide an opportunity for vertical elements or monumentation to create a rhythm of visual elements that extend into downtown.

Center Median Iconic Art:

Lighting and Seasonal Flowers:



Paint

Using paint to mark important routes or linear systems like the center turn lane or bike lane can make a big impact to the streets safety and aesthetics.

Different Applications of Paint:

Signage

Decorative banners and signage can also be used to mark important routes and provide color and life to the streetscape. A cohesive collection of banners can be used to promote cultural events, holidays or other activities unique to Salisbury.

Different Applications banners and signage:

Comprehensive Study Area Cost Estimate:

We have looked at the cost for these corridors two ways, block by block and by type of improvement.

There are many different approaches to implementing a plan of this magnitude. In the previous section the plan outlined the most critical areas and alternatives for immediate implementation. When developing the implementation plan many of the items in the cost estimate can be absorbed if the project is properly timed with scheduled improvements, for example, coordinating some implementation efforts with scheduled restriping of the road or NCDOT's resurfacing schedule. Adjusting the scope or limits of the improvements is also a possibly to scale the project with the available improvement funds. This may not always be a feasible solution since some improvements should be implemented along the whole corridor where one block sets up the next.

Material Alternates

Some of the solutions presented can use different materials based on the available funds for improvement. While some of these choices are less aesthetically pleasing they will still accomplish the main goal of proving a safer environment for bicycles and pedestrians.

Crosswalks
$1.50 /SF - High Visibility Crosswalk
$12.00 /SF - Heat Stamped and Colored
$15.00 /SF - Real Brick

Bike Lanes
$1.87 /LF - Color Optional

Medians
$5.00 /SF - Heat Stamped and Colored

Planting
$8.00 /SF - Perennials, Mulch and Bed Prep.
$2.50 /SF - Grass seed and Bed Prep

Cost Estimate by Type of Improvement

	QTY	Unit	Unit Cost	Estimate	
Crossings					
Crosswalks	51,530	SF	$12.00	$618,360.00	16%
Pedestrian count down beacons	22	EA	$10,000.00	$220,000.00	6%
Pedestrian rapid flashing beacons	6	EA	$20,000.00	$120,000.00	3%
Restriping	6,134	LF	$9.00	$55,206.00	1%
			Subtotal	**$1,013,566.00**	**25%**
Edges					
Curb - Bump outs/Edges	4,735	LF	$25.00	$118,375.00	3%
Curb - Demolition	4,735	LF	$6.50	$30,777.50	1%
Sidewalk - Complete	23,400	SF	$7.00	$163,800.00	4%
Bike Lane Color	3,484	LF	$1.87	$6,515.08	0%
Trash Cans	44	EA	$1,500.00	$66,000.00	2%
Benches	23	EA	$2,000.00	$46,000.00	1%
Planting - Edge	71,010	LF	$8.00	$568,080.00	14%
Street Trees	281	EA	$450.00	$126,450.00	3%
			Subtotal	**$1,125,997.58**	**28%**
Gateway/Square Enhancements					
Intersection special paving	4,200	EA	$5.00	$21,000.00	1%
Special pavement - Turn lane	19,070	SF	$5.00	$95,350.00	2%
Center Gateway Art	8	EA	$14,000.00	$112,000.00	3%
Planter wall	506	LF	$10.00	$5,060.00	0%
Planter wall Face - Brick	759	LF	$10.00	$7,590.00	0%
Planter wall Cap - Precast Conc	506	LF	$8.50	$4,301.00	0%
Planter amendment	42	CY	$52.00	$2,158.00	0%
Planter plants	750	SF	$8.00	$6,000.00	0%
			Subtotal	**$253,459.00**	**6%**
Center					
Curb - Median	7,310	SF	$25.00	$182,750.00	5%
Demolition - Median	40,905	EA	$2.50	$102,262.50	3%
Planting - Median	41,220	EA	$8.00	$329,760.00	8%
			Subtotal	**$614,772.50**	**15%**

Mobilization	**$200,000.00**
Traffic Control	**$200,000.00**
Corridors Subtotal	**$3,407,795.08**
5% Contingency	**$170,389.75**
12% Design/Engineering Fees	**$408,935.41**
Grand Total	**$3,987,120.24**