

## 3 | FINDINGS & RECOMMENDATIONS

The findings and recommendations that follow are based on the initial findings developed prior to the charrette, information and planning details discovered and developed during the charrette, and subsequent refinement of roadway design, traffic operations, and land use planning ideas.

### system improvements

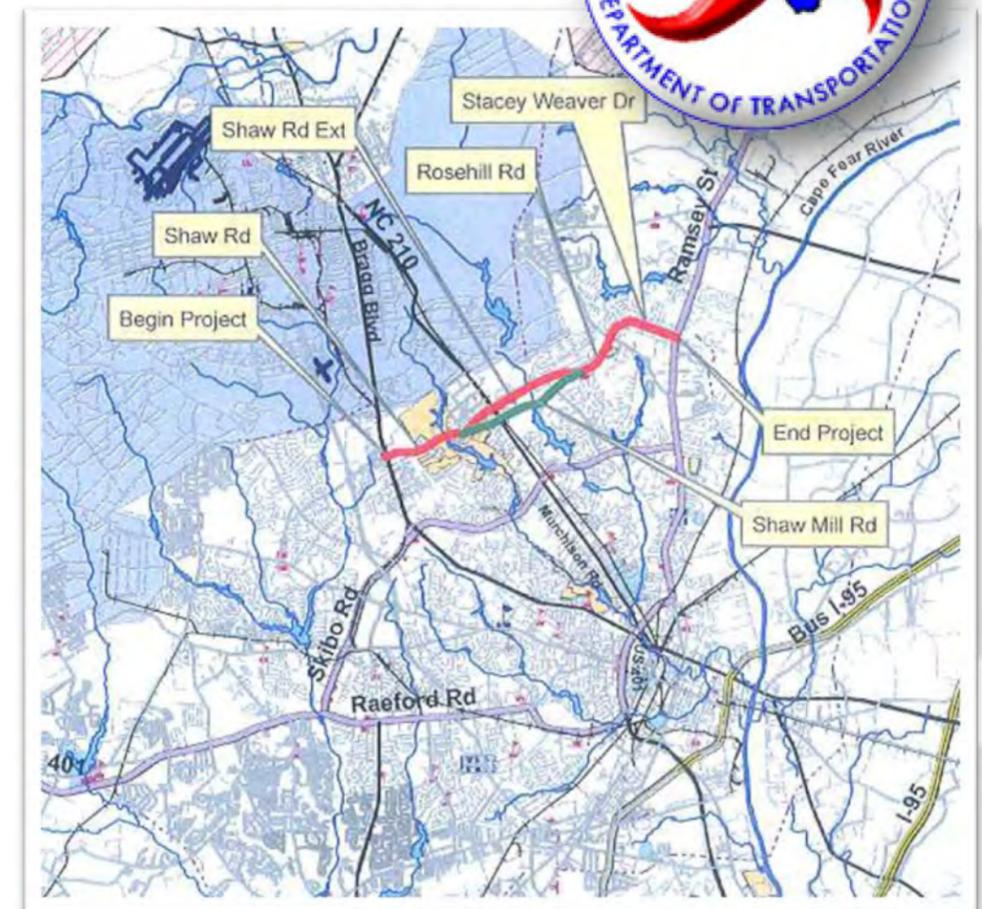
#### REGIONAL CONNECTIVITY

As described in the previous chapter, the lack of connectivity between Murchison Road and other north-south arterials in the City is problematic to Fayetteville residents and motorists. While the average spacing is near optimal for an arterial network on the east side of the corridor, the capacity of the two southern connector roads are lessened due to the combination of their size, location, and capacity restraints at their intersections with Ramsey Street. Shaw Mill and Shaw Roads are staggered in the northern segment of the corridor, and long queues stack up in the peak hours in the two-way left-turn lane that stretches between the intersections. Motorists are forced to navigate through the two intersections and along a typically congested segment of Murchison in a doglegged fashion, unable to continue their trips across north Fayetteville along a single corridor. Combined with the lack of effective collector or local streets across the two creeks bounding the study area, nearly all neighborhood traffic is forced to access Murchison Road to get to the east-west corridors that already carry near-capacity volumes of traffic everyday. This is exacerbated by the lack of employers and retailers, meaning most of the area's residents must go elsewhere for work, shopping, and entertainment opportunities. The closure of Bragg Boulevard will only magnify the traffic problems, as most non-military motorists will reroute to Murchison to get to and from Spring Lake, I-295, Country Club Drive, Pamalee Drive, and downtown Fayetteville.

Unfortunately, the cost and permitting needed to cross the lakes, ponds, creeks, or wetlands of the two boundary creeks combined with neighborhood opposition at certain locations will make any new connection unlikely. Therefore, other options are recommended to help improve the

corridor. First, connectivity between the neighborhoods and industrial areas and the east-west arterials must be improved to allow local trips better access to these corridors and reduce trips on Murchison Road. Two examples would be the extension of Commonwealth Avenue from Pamalee Drive south to Temple Avenue as parcels near Parks Chapel Church redevelop and the extension of Distribution Drive to Shaw Mill Road. In **Figure 9** on the following page, additional connections are shown in the area-wide map as dashed black lines indicating where new collector streets could benefit the flow of neighborhood traffic and pull some currently circuitous trips off Murchison Road.

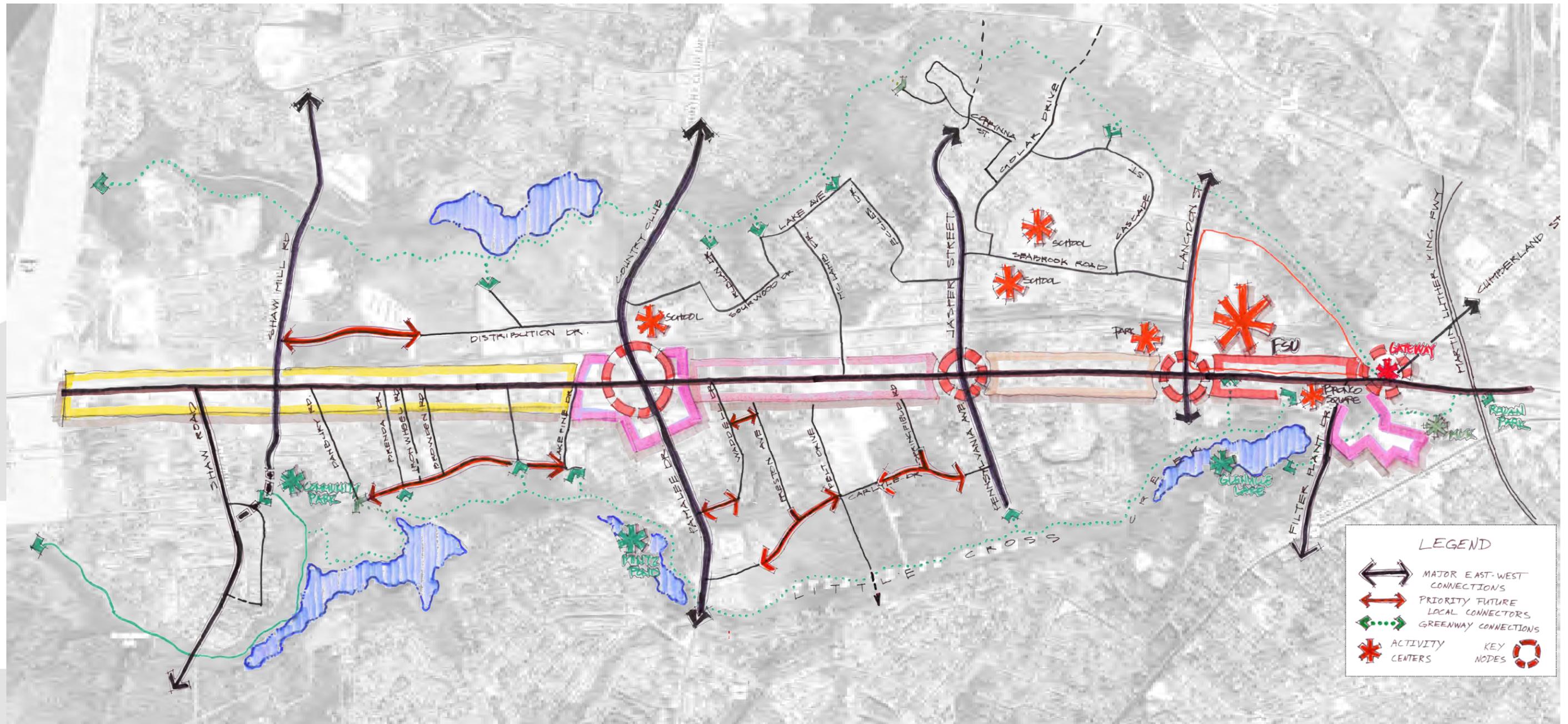
An additional measure will be to ensure the viability and capacity of each east-west corridor by 1) alleviating choke points and 2) planning for future widening of these streets when appropriate. Not just the addition of more turn lanes but new approaches and innovative intersection designs must be used when remedying congestion points in the system such as Langdon Street at Ramsey Street. Fayetteville and FAMPO should consider the realignment of Shaw Road or Shaw Mill Road as investigated in NCDOT Feasibility Study F-0206B. The realignment ensures that the two streets are no longer offset and can provide a contiguous connection to Murchison Road, as shown in the map to the right.



NCDOT feasibility study for the Shaw Road Connector shows two proposed alignments (shown in red and green) ►



Figure 9. Connectivity Recommendations



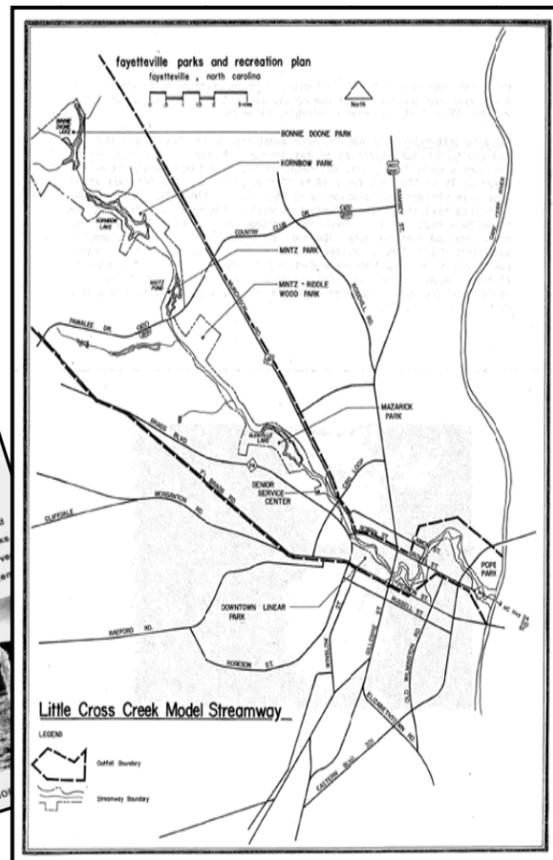
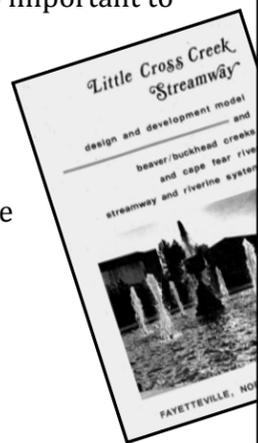
# CHAPTER 3

## GREENWAY CONNECTIVITY

Connectivity extends beyond just roadways and vehicular traffic. Planning a comprehensive pedestrian and bicycle network also is critical to developing livable and successful communities. The roadway improvements discussed later in this chapter include appropriate sidewalk and bike facility recommendations based on demand and public input. In addition, the presence of two distinct tributaries to the Cape Fear River present, opportunities for facilities off Murchison Road.

The City-owned land along Little Cross Creek and Cross Creek streamways provides a corridor for what could be two attractive greenways. Anchored by Martin Luther King, Jr., Park and the development of NC Veterans Park at the south end of the Murchison Road corridor, these two greenways could parallel the creeks and provide the residential neighborhoods of north Fayetteville with a green and recreational corridor to downtown.

The greenway trail could create a linkage between downtown parks like Veterans Memorial, Cross Creek, and Downtown Linear Parks to outlying parks such as Rowan, Seabrook, and College Lakes Parks. It is also important to identify neighborhood connections to provide access to the facilities outside of major trailheads.



## future traffic

With the extension of I-295 westward to Bragg Boulevard, the widening of Murchison Road north of I-295, and the access restrictions into the Fort Bragg at Bragg Boulevard, traffic patterns will change dramatically in north Fayetteville and Murchison Road. Project traffic engineers reviewed the 2030 Fayetteville Area Travel Demand Model and developed a traffic forecast (see Appendix I) for the study area based on historic AADT counts and model projections for 2005 and 2030. The forecast accounted for traffic diversions caused by planned projects and other factors not included in the model. The forecast volumes for 2020 (**Table 7**) show high volumes with significant traffic growth on the northern half of the study corridor. There is also significant traffic growth on the southern segment of Murchison Road with trip diversions between Downtown Fayetteville and areas north of NC 210.

Based on these forecasts, the LOS for each of the cross-section alternatives was reported to inform residents at the charrette of traffic conditions to be expected based on specific design decisions. Those measures are reported in the next section.

In addition to looking at the segment LOS, the project team conducted a traffic capacity analysis along Murchison Road for existing (2008), no build (2020), and build-out (2020) traffic conditions during the AM, PM, and Saturday mid-day peak hours. Turning movement counts were conducted along Murchison Road in April and May 2008 for the following intersection and included passenger cars, trucks, and pedestrians:

- Charmain Street
- Shaw Road
- Shaw Mill Road / Hogan Street
- Country Club Drive / Pamalee Drive
- McLamb Drive / Church Driveway
- Jasper Street / Pennsylvania Avenue
- Langdon Street
- WT Brown Street / Currie Street
- Filter Plant Road
- Edgecombe Avenue / Washington Drive
- Cumberland Street
- Blue Street

**Table 7. Traffic Growth and Operations, 2005-2020**

Murchison Road Segment	2005		2020		
	AADT	LOS	AADT	LOS	% Increase
I-295 to Shaw Mill	23,000	C	<b>36,000</b>	<b>F</b>	57%
Shaw Mill to Country Club	20,000	C	<b>33,500</b>	<b>F</b>	68%
Country Club to Jasper	23,000	D	30,800	D/F	34%
Jasper to Langdon	15,000	C	<b>27,900</b>	<b>F</b>	86%
Langdon to MLK	12,000	C	<b>29,300</b>	<b>F</b>	144%



Synchro Version 7 software was used to determine the operating characteristics of the surrounding road network and the impacts of the proposed project. Only the intersections from Country Club Drive/Pamalee Drive north were counted on the Saturday peak hour. This decision was based on observations by City staff and residents on the MRCTF that only the northern segment is significantly impacted by weekend travel. For other low-volume streets not counted, the project team developed future year turning movement forecasts based on land use projection, trip generation rates found in the *ITE Trip Generation* (7th edition), and engineering judgment.

The existing intersection levels-of-service are reported in the *Transportation* section of **Chapter 2**. As displayed in **Table 8**, the projected increases in traffic by 2020 along Murchison will cause considerable congestion if no widening or intersection improvements are made. Motorists at the unsignalized intersections in the analysis network will experience long delays as they attempt to enter heavy traffic on Murchison Road during the morning and evening rush hours. In addition, the signalized intersections from Country Club Drive/Pamalee Drive and north will be inefficient in handling the increased traffic resulting from I-295 and the Bragg Boulevard access closure. In addition, this intersection will operate at or above capacity under LOS E and F conditions – causing long queues and corridor congestion – particularly in the PM peak hour. However, all intersections south of Pamalee Drive will be able to accommodate future traffic with minor improvements to signal timings and phasing.

Based on this traffic analysis, it is evident that the current cross-section north of the US 401 Bypass will not adequately handle additional traffic demand, and therefore widening the corridor will need to be considered. South of this area, four-lane segments should allow for adequate service during future peak hour traffic at the intersections. The focus of the southern segment will need to be improving segment operations by expanding the cross-sections to include medians and left-turn lanes. These types of improvements can help increase corridor capacity by nearly 25% over undivided roadway segments. The important compromise is to make these types of improvements while minimizing impacts to homes, businesses, and institutions fronting the corridor.

**Table 8 Level-of-Service Summary (No Build)**

Murchison Road Intersection	Peak-Hour LOS (Delay)		
	AM	PM	Saturday
<i>Charmain Street</i>	<i>C (22.3)</i>	<b>E (37.9)</b>	<i>B (13.1)</i>
Shaw Road	C (35.9)	<b>E (71.2)</b>	C (20.2)
Shaw Mill Road /Hogan Street	<b>F (86.2)</b>	<b>F (85.7)</b>	C (20.1)
Country Club Drive / Pamalee Drive	<b>F (102.8)</b>	<b>F (115.6)</b>	<b>E (79.6)</b>
<i>McLamb Drive</i>	<b>F (776.1)</b>	<b>F (832.4)</b>	
Jasper Street / Pennsylvania Avenue	B (13.3)	B (11.4)	
Langdon Street	C (21.3)	B (18.8)	
Currie Street / WT Brown Street	B (13.3)	B (15.0)	
Filter Plant Drive	C (24.9)	C (34.1)	
<i>Edgcombe Avenue / Washington Drive</i>	<b>F (281.8)</b>	<b>F (393.1)</b>	
<i>Cumberland Road</i>	<b>F (506.0)</b>	<b>F (507.0)</b>	
<i>Blue Street</i>	<b>F (206.0)</b>	<b>F (417.9)</b>	

*Unsignalized intersections* are shown in italics; the LOS and delay represent that of the most congested minor street approach.

**LOS and delay** shown in bold represent intersections operating at unacceptable LOS E or F.

# CHAPTER 3

## corridor improvements

### I-295 TO PAMALEE DRIVE

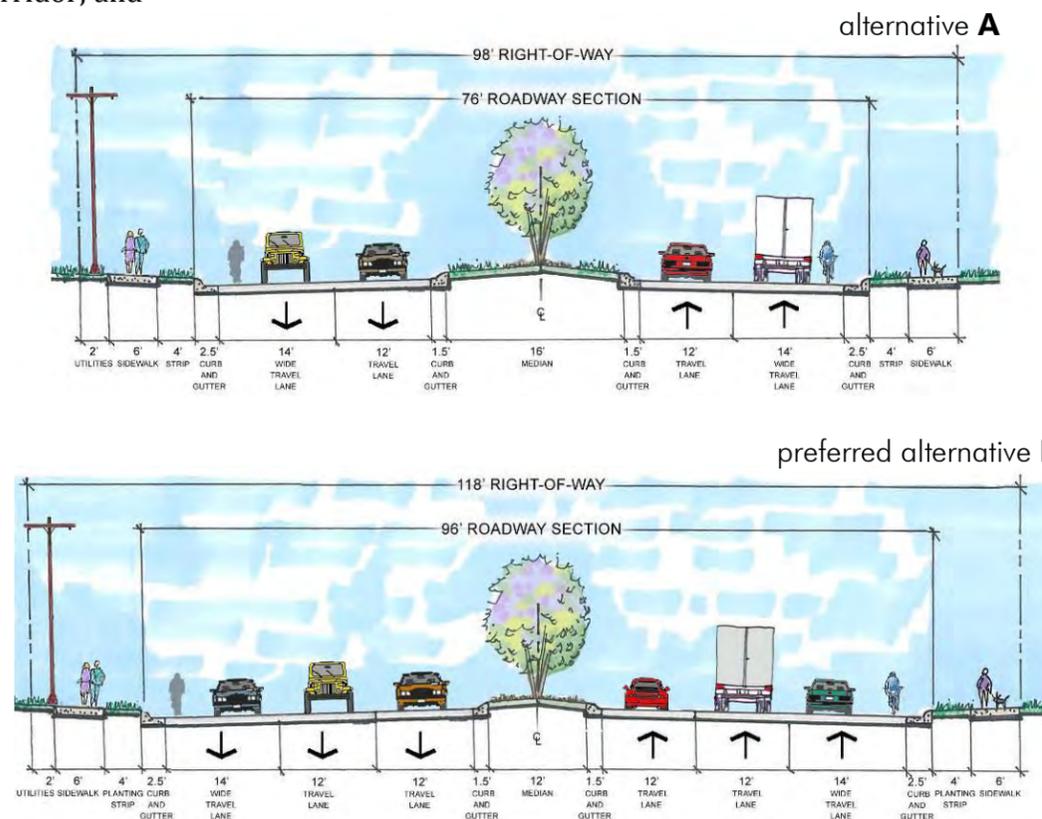
Currently, Murchison Road north of US 401 Bypass (Country Club Drive/ Pamalee Drive) is a five-lane, undivided major thoroughfare with a 60-foot roadway section on 100-foot of right-of-way (ROW). Near the north end of the corridor, the roadway lies in part within the rail line's ROW as it enters Fort Bragg.

In considering the options for this segment, the project team and task force identified the following primary issues for the northern segment:

- Provide the capacity for future projected traffic;
- Provide access management techniques to improve traffic safety;
- Minimize impacts to properties fronting the corridor; and
- Identify solutions to improve the intersection of Murchison Road at Pamalee Drive and Country Club Drive.

The charrette participants were presented with the choice of two typical cross-section alternatives for this segment of the corridor:

- **Alternative A:** a four-lane, divided major thoroughfare with a 16-foot wide planted median, 14-foot wide outside lanes, and sidewalks on both sides with a 76-foot roadway section and 98-foot ROW.
- **Alternative B:** a six-lane, divided major thoroughfare with a 12-foot wide planted median, 14-foot wide outside lanes, and sidewalks on both sides with a 96-foot roadway section and 118-foot ROW.



**Table 9. Level of Service Summary (2020) – I-295 to Pamalee Drive**

Murchison Road Segment	2020 AADT	LOS		
		No Build	Alt A	Alt B
Gigi to Shaw Mill	36,000	F	F	C
Shaw Mill to Country Club	33,500	F	E	C

**Intersection Level-of Service (2020) – Preferred Alternative B**

Murchison Road Intersection	Peak Hour LOS (Delay)		
	AM	PM	Saturday
<i>Charmain Street</i>	<i>F (56.2)</i>	<i>F (148.2)</i>	<i>C (17.4)</i>
Shaw Road	C (27.8)	D (39.8)	C (23.8)
Shaw Mill Road/ Hogan Street	D (41.2)	<b>E (58.3)</b>	C (24.1)
Lake Pine Drive	C (20.4)	C (34.8)	C (22.3)
Country Club Drive/ Pamalee Drive	<b>E (61.6)</b>	D (49.2)	C (32.1)
Rosemary Street	C (24.6)	C (24.9)	C (24.7)
Lake Pine Drive @ Country Club Drive	B (18.1)	B (19.1)	B (19.0)
Rosemary Connection @ Pamalee Drive	B (13.3)	B (11.5)	A (7.5)

*Unsignalized intersections* are shown in *italics* and the LOS and delay represent that of the most congested minor street approach.

**LOS and delay** shown in **bold** represent intersections operating at unacceptable LOS E or F.



Alternative A has certain advantages, including a narrow cross-section with less impacts than Alternative B, shorter and therefore safer pedestrian crossings, and planted medians dispersed with dedicated left turn lanes at median breaks. The medians not only improve aesthetics but also safety and capacity. The capacity improvement, however, is nominal. Alternative B on the other hand greatly improves traffic capacity with similar roadway design features. This cross-section will result in greater impacts by expanding the ROW by 18 feet.

At the charrette, the attendees were asked to use dot stickers to identify their preferences between these two alternatives. The results indicated a 10 to 2 preference for the six-lane alternative. Votes submitted on the comment sheets provided that evening were split 3-3. After extensive discussion with key business owners on the corridor and with the MRCTF, **Alternative B** was selected as the preferred alternative and carried forward in the design process.

The six-lane major thoroughfare within a 118-foot wide right-of-way will provide capacity for the anticipated traffic movements at LOS C in the year 2020. It also will provide the following additional benefits:

- **Safety:** Traffic operations will become safer with the replacement of the center left-turn (“suicide”) lane with a plantable median and consistent left-turn lanes at key intersections.
- **Pedestrian/Bicycle:** Facilities for non-motorized transportation will include improved pedestrian crossings at signalized intersections and side streets, 14-foot wide outside lanes for shared use by cyclists, and 6-foot sidewalks on both sides of the street.
- **Transit:** All existing bus stops will remain on the corridor. A bus pull-out will be added to the bus shelter at Shaw Road but will need to be moved to the north side of the intersection to avoid impacts to nearby businesses.
- **Utilities:** The current design considers consolidating and relocating all above-ground utilities onto single, tall utility poles on the west side of the corridor beyond the sidewalk.
- **Aesthetics:** Enhancements will include small street trees, shrubbery, and landscaping in the median and along the sidewalks where appropriate.

Detailed conceptual design plans for this segment are provided in the maps following **Chapter 4** of this report.

#### **Intersection Improvements**

Outside of the widening of Murchison Road, no improvements are needed for the side street approaches for all intersections except Murchison Road at Country Club Drive/Pamalee Drive.

**Murchison Road at Country Club Drive/Pamalee Drive:** The traffic analysis for this intersection showed the future projected volumes will preclude a conventional intersection from providing acceptable LOS and operations in 2020. Understanding this, the project team investigated innovative intersection options to determine whether the crossroads could operate without the construction of an interchange. An interchange was discussed in preliminary meetings and during the charrette. However, the project team, staff, and residents disliked the option due to the level of impact that a bridge structure would have on the neighborhood and corridor character of Murchison Road. A bridge of this size would create a physical barrier between the northern and southern segments. In addition, the interchange ramps could significantly impact two of the four quadrants in an area identified as a catalyst site and primed for redevelopment.

Since the need to accommodate high volumes of left turns at the intersection causes the future intersection operations to fail, the idea of developing a “quadrant intersection” was tested (**Figure 10**). This type of intersection redirects left turns at the main intersection to offset intersections. The solution proved successful – by diverting the left turns from Murchison Road to quadrant roadways created by extending Lake Pine Drive and Rosemary Street, the main intersection improves to LOS E in the AM peak, D in the PM peak, and C midday Saturday. Motorists will still be allowed to turn left from Country Club and Pamalee.

The creation of the quadrant roadways also helps define redevelopment opportunities in each of the four quadrants. While the northeast and southwest roadways will handle considerable left-turning traffic from Murchison Road, the remaining two quadrants will help provide traffic flow around potential retail sites. For more discussion on the catalyst sites, refer to page 3-15.

# CHAPTER 3

**Figure 10.**  
Murchison/Country Club/  
Pamalee Quadrant  
Intersection Concept



Left turns from Murchison will be directed to turn onto quadrant roadways ahead of the main intersection. ▼





## PAMALEE DRIVE TO LANGDON STREET

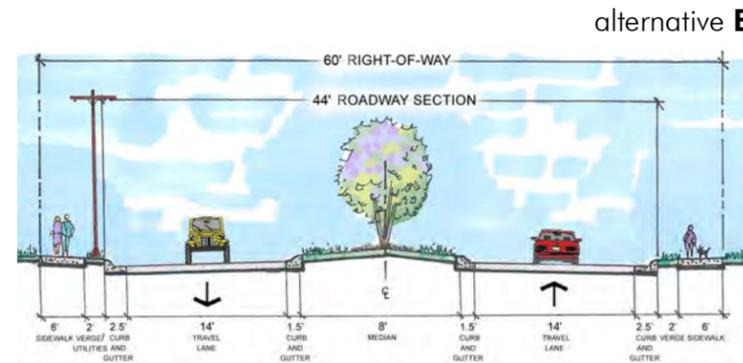
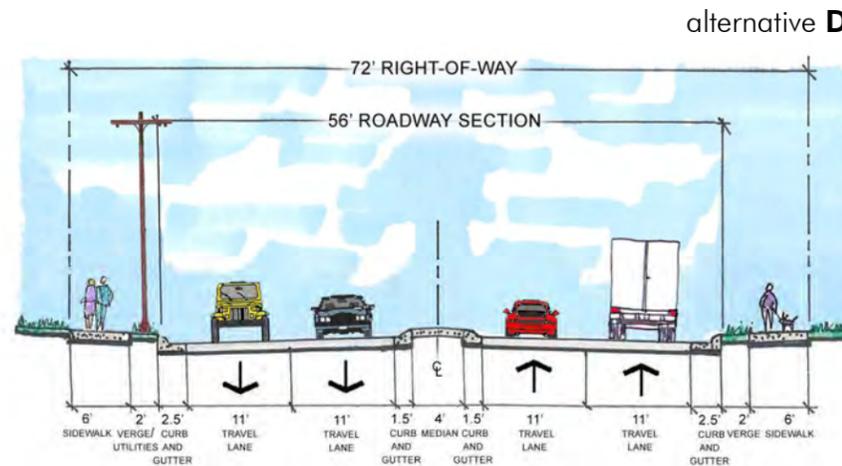
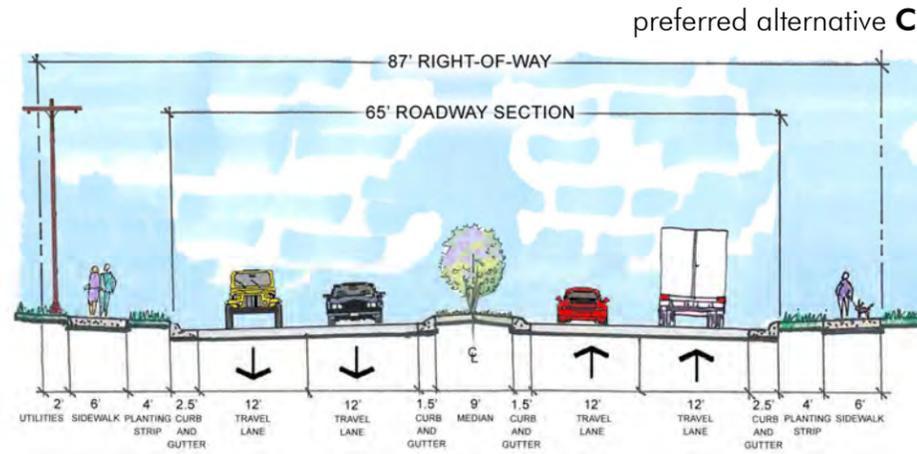
Currently, Murchison Road from US 401 Bypass (Country Club Drive/ Pamalee Drive) to Langdon Street transitions from a five-lane, undivided cross-section to a four-lane, undivided major thoroughfare with a 44-foot roadway section on 60- to 85-foot of right-of-way (ROW).

With this segment acting as the crucial transition segment between the commercial and university/residential context zones, several important considerations needed to be addressed:

- Provide additional capacity for future projected traffic with an expectation of a higher level of congestion;
- Provide access management techniques to improve traffic safety by facilitating left- and U-turns from Murchison Road; and
- Minimize impacts to properties fronting the corridor.

The charrette participants were presented with the choice of three alternative cross-sections for this segment of the corridor:

- **Alternative C:** a four-lane, divided major thoroughfare with a 9-foot wide planted median, 12-foot lanes, and sidewalks on both sides with a 65-foot roadway section and 87-foot ROW.
- **Alternative D:** a four-lane, divided major thoroughfare with a 4-foot wide hardscape median, 11-foot lanes, and sidewalks on both sides with a 56-foot roadway section and 72-foot ROW.
- **Alternative E:** a two-lane, divided minor thoroughfare with a 8-foot wide planted median, 14-foot wide lanes, and sidewalks on both sides with a 44-foot roadway section contained within the existing 60-foot ROW.



**Table 10. Level of Service Summary (2020) – Pamalee Drive to Langdon Street**

Murchison Road Segment	2020 AADT	2020 LOS			
		No Build	Alt C	Alt D	Alt E
Country Club to Jasper	30,800	D/F	D	F	F
Jasper to Langdon	27,900	F	D	F	F

Intersection Level-of Service (2020) – Preferred Alternative C		
Murchison Road Intersection	Peak Hour LOS (Delay)	
	AM	PM
Country Club Drive/ Pamalee Drive	<b>E (61.6)</b>	D (49.2)
Rosemary Street	C (24.6)	C (24.9)
<i>McLamb Drive</i>	<b><i>F (Over Capacity)*</i></b>	<b><i>F (Over Capacity)*</i></b>
Jasper Street/ Pennsylvania Avenue	A (9.4)	B (10.1)
Langdon Street	B (13.5)	B (13.4)

*Unsignalized intersections* are shown in *italics* and the LOS and delay represent that of the most congested minor street approach.

**LOS** and **delay** shown in **bold** represent intersections operating at unacceptable LOS E or F.

\* LOS analysis reports over capacity, failing conditions, but repeated simulations show relatively short queues and moderate to long delay on occasions. Observation of the simulations suggest acceptable traffic operations in the design year.

# CHAPTER 3

Alternative C provides a median and regularly spaced left-turn lanes at median breaks as requested by community members at the charrette. The medians help to improve the traffic capacity for the segment by 25%, provide refuges for safer pedestrian crossings, and create space for landscaping to improve aesthetics. The design maintains sidewalks on both sides, but will require approximate 27 feet of additional right-of-way, impacting some homes and properties. Alternative D reduces the corridor footprint to 72 feet of ROW by reducing the width of travel lanes, the median, and the sidewalk buffers. The cross-section will not allow for left-turn lanes at median breaks nor will a four-foot median be sustainable for landscaping. Alternative E reduces the corridor width to the existing 60-foot ROW, but at the expense of two travel lanes and reducing traffic capacity, contrary to the projected traffic increases.

At the charrette, a majority of attendees on the first night agreed that a four-lane median divided segment was appropriate for the section between Country Club/Pamalee Drives to Jasper Street. They also indicated that the corridor is constrained on the east side, while vacant properties and building with deep setbacks are found on the west side. For this reason, **Alternative C** was the only alternative shown for this segment and an asymmetric widening to the west was used from McLamb Drive to Jasper Street to ultimately reduce property takings. This cross-section is recommended to continue to Langdon Street in order to provide left-turn lanes and median breaks from Jasper Street to Langdon Street. However, the cross-section was reduced by four feet by limiting the lane widths to 11 feet, the current lane width on that section today.

The four-lane divided major thoroughfare will provide capacity for traffic movements at a vehicular LOS D or better in the year 2020. It also will provide the following additional benefits:

- **Safety:** Traffic operations will become safer with the addition of a plantable median and consistent left-turn lanes at key intersections.
- **Pedestrian/Bicycle:** Accommodations for non-motorized transportation will include improved pedestrian crossings at signalized intersections and side streets and 6-foot sidewalks on both sides of the street.
- **Transit:** All existing bus stops will remain on the corridor. A bus pull-out will be added to the bus shelters at Rosemary Street, Jasper

Street, and Pennsylvania Avenue. A new bus shelter with a pull-out will be added on the north side of Langdon Street for northbound routes.

- **Utilities:** The current design considers consolidating and relocating all above-ground utilities onto single, tall utility poles on the west side of the corridor located beyond the sidewalk.
- **Aesthetics:** Enhancements will include small street trees, shrubbery, and landscaping in the median and along the sidewalks where appropriate.

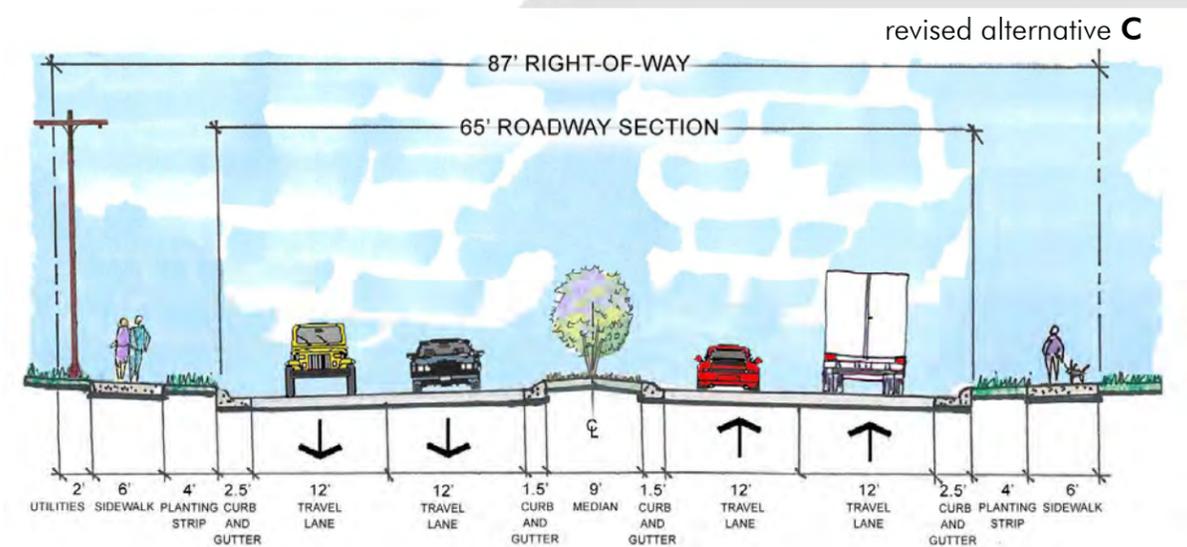
Detailed conceptual design plans for this segment are provided in the maps following **Chapter 4** of this report.

### Intersection Improvements

Outside of the widening of Murchison Road, the only improvements needed for the side street approaches occur on McLamb Drive and Langdon Street.

**Murchison Road at McLamb Drive:** A short right-turn pocket has been designed for the westbound McLamb approach.

**Murchison Road at Langdon Street:** A left-turn lane has been designed for the southbound Murchison approach.



*Right-of-way impacts with Alternative C were reduced by 4 feet by narrowing the lane widths to 11 feet, their current width*



## LANGDON STREET TO MLK FREEWAY

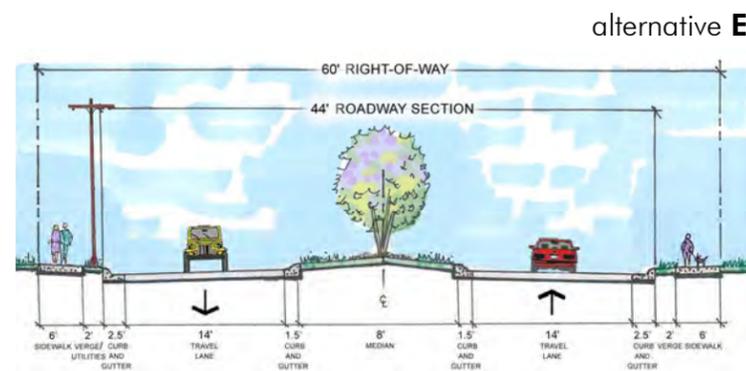
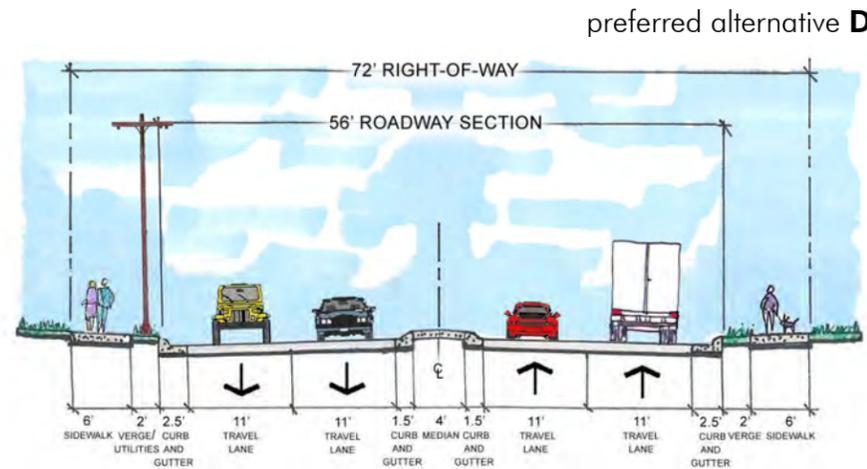
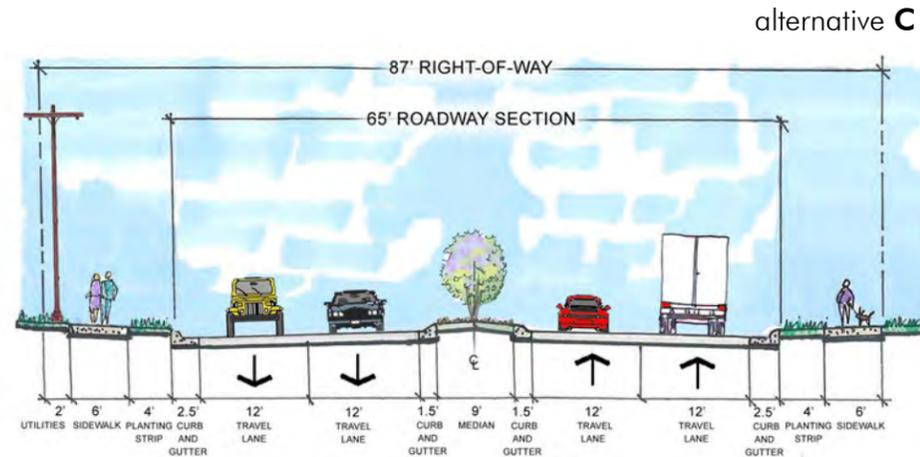
Currently, Murchison Road from Langdon Street to the underpass of the US 401 Martin Luther King, Jr., Freeway is a four-lane, undivided major thoroughfare with a 44-foot roadway section on 60-foot of right-of-way (ROW). Sidewalks are present on both sides of the street and signed pedestrian crosswalks are present at several location.

The segment is dominated by the presence of Fayetteville State University and the associated commercial and residential developments around the institution. Therefore, it is important to consider the following issues:

- Provide additional capacity for future projected traffic with an expectation of a higher level of congestion;
- Provide a safe, pedestrian-friendly environment for the local residents and students; and
- Minimize impacts to properties fronting the corridor.

The charrette participants were presented with the same three alternative cross-sections as the previous segment:

- **Alternative C:** a four-lane, divided major thoroughfare with a 9-foot wide planted median, 12-foot lanes, and sidewalks on both sides with a 65-foot roadway section and 87-foot ROW.
- **Alternative D:** a four-lane, divided major thoroughfare with a 4-foot wide hardscape median, 11-foot lanes, and sidewalks on both sides with a 56-foot roadway section and 72-foot ROW.
- **Alternative E:** a two-lane, divided minor thoroughfare with a 8-foot wide planted median, 14-foot wide lanes, and sidewalks on both sides with a 44-foot roadway section contained within the existing 60-foot ROW.



**Table 11. Level of Service Summary (2020) – Langdon Street to MLK Expressway**

Murchison Road Segment	2020 AADT	LOS			
		No Build	Alt C	Alt D	Alt E
Langdon to MLK	29,300	<b>F</b>	D	D	<b>F</b>

**Intersection Level-of Service (2020) – Preferred Alternative D**

Murchison Road Intersection	Peak Hour LOS (Delay)	
	AM	PM
Langdon Street	B (13.5)	B (13.4)
Currie Street / WT Brown Street	B (11.6)	B (11.5)
Filter Plant Drive	C (20.6)	C (33.5)
<i>Edgecombe Avenue/ Washington Drive</i>	<i>D (28.7)</i>	<i>E (41.4)</i>
<i>Cumberland Road</i>	<i>C (19.6)</i>	<i>D (27.4)</i>
<i>Blue Street</i>	<i>F (206.1)</i>	<i>F (417.9)</i>

*Unsignalized intersections* are shown in *italics* and the LOS and delay represent that of the most congested minor street approach.

**LOS and delay** shown in **bold** represent intersections operating at unacceptable LOS E or F.

# CHAPTER 3

Charrette participants paid close attention to the pros and cons for this segment of the corridor. They voted in favor of Alternative D with 14 votes compared to 7 for C and 3 for E. This vote, in addition to the consideration of the pedestrian context around the university, guided the MRCTF in choosing **Alternative D** as the preferred alternative for this segment.

A close look at the full design shows that the four-foot median prohibits left-turns except at intersections, all of which have left-turn lanes provided. Hence, the segment actually will operate more like a four-lane divided segment than undivided. Alternative D, a four-lane minor thoroughfare within a 72-foot wide right-of-way, is recommended to achieve the recommended right-of-way width that will provide continuous 6-foot wide sidewalks on both sides that are separated from the curb-and-gutter by a two-foot wide buffer strip. A raised brick median that is four-feet wide is recommended as a way to focus left-turn movements at intersections, which will also be designed to accommodate U-turns. A wider median would accommodate plants, shrubs and trees but would create significant impacts on adjacent property owners including acquisition of numerous homes and structures.

**Focus Segment: Filter Plant Road to Langdon Street**

The one-half mile long segment, adjacent to the campus of Fayetteville State University (FSU), was selected as a special segment in order to identify public improvements designed to create a high quality of service for pedestrians, bicyclists, and transit riders conducive to a university environment. The design shown in the illustrations in this section include the following elements developed to create a complete street for Murchison Road:

- **Sidewalks:** Narrow sidewalks should be widened to six feet unless adjacent to retail buildings in which case ten feet is recommended. Gaps in sidewalks should be eliminated using public funds to provide a continuous walkway on both sides of Murchison Road. All sidewalks should conform to the latest version of the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Sidewalk surfaces should be selected to safely accommodate all users, including those with low vision and those needing a smooth surface. Driveways serving private property on Murchison Road between Filter Plant Road and Langdon Street should be consolidated to the maximum extent practical.

- **Plazas:** Acting as gathering places for the community, two or more plazas are recommended at specific street corners on Murchison Road: on the southeastern corner of its intersection with Langdon Street and on the east side at Currie Street. Special design studies for each of these plazas should include space for public art.
- **Street trees:** The city should pursue easements from private property owners and FSU to plant large shade trees behind the sidewalk where possible.
- **Street lighting:** Lighting should be added at a pedestrian scale to supplement streetlights that typically are designed for vehicular travel. Lighting intensities should be increased in the pedestrian district to enhance safety and contribute to pedestrian comfort and desire to walk during evening and night hours.



▲ Before  
Looking north on Murchison Road just south of FSU's Jerald's Stadium  
◀ After

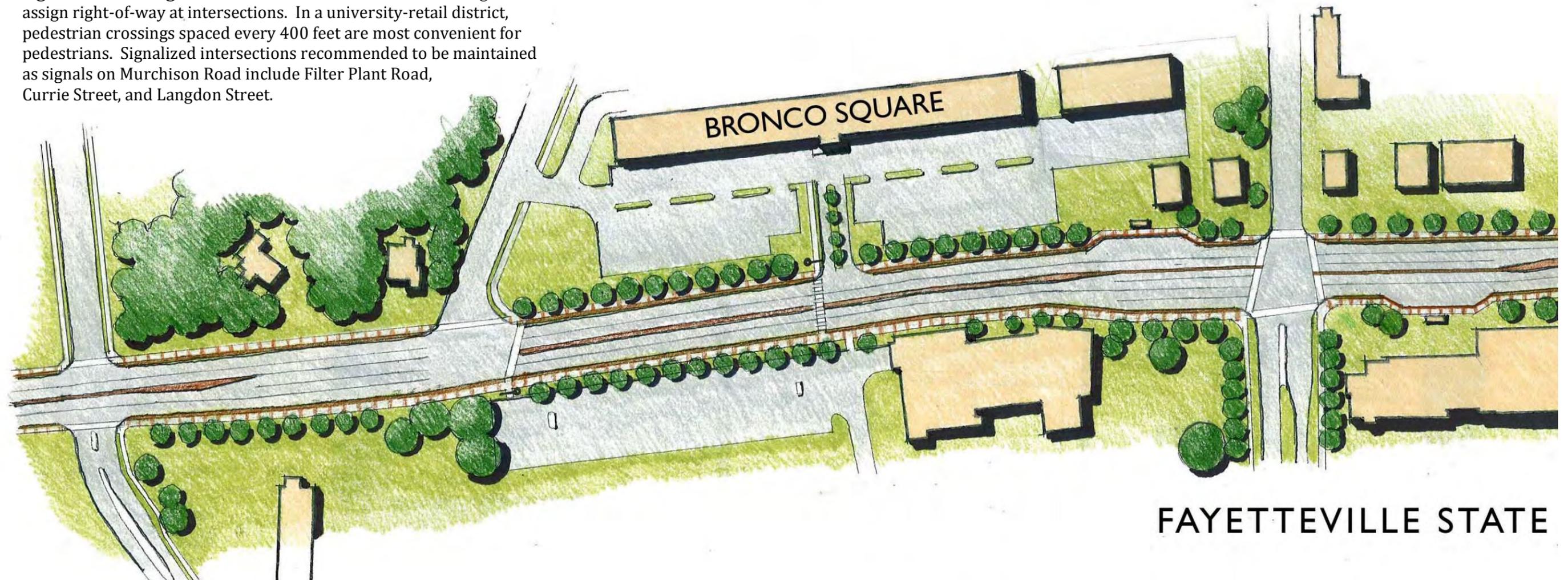


- **Buffers:** A two-foot wide buffer is recommended between the sidewalk and back-of-curb. Adjacent to retail buildings the buffer should be paved with periodic tree wells. Elsewhere, this area should be planted with grass. Curbs separating Murchison Road from the buffer areas should be vertical rather than mountable.
- **Median:** Landscaping is not recommended in the median, given the narrow four-feet of width that is insufficient to support healthy plant life. Brick pavers or stamped, colored concrete should be used to reflect the architectural style of FSU and the adjacent neighborhoods.
- **Signalized crossings:** Pedestrians benefit from well-timed signals to assign right-of-way at intersections. In a university-retail district, pedestrian crossings spaced every 400 feet are most convenient for pedestrians. Signalized intersections recommended to be maintained as signals on Murchison Road include Filter Plant Road, Currie Street, and Langdon Street.

**Crosswalks:** To achieve the best design for pedestrian safety that does not contribute to a false sense of pedestrian security, it is recommended that the following Murchison Road intersections be treated with high-visibility ladder-style crosswalk markings:

- Edgcombe Avenue (unsignalized)
- Filter Plant Road (signalized)
- Currie Street (signalized)
- Matthews Street (unsignalized)
- Council Street (unsignalized)
- Langdon Street (signalized)

*Figure 11. Fayetteville State Streetscape Concept for Murchison Road*



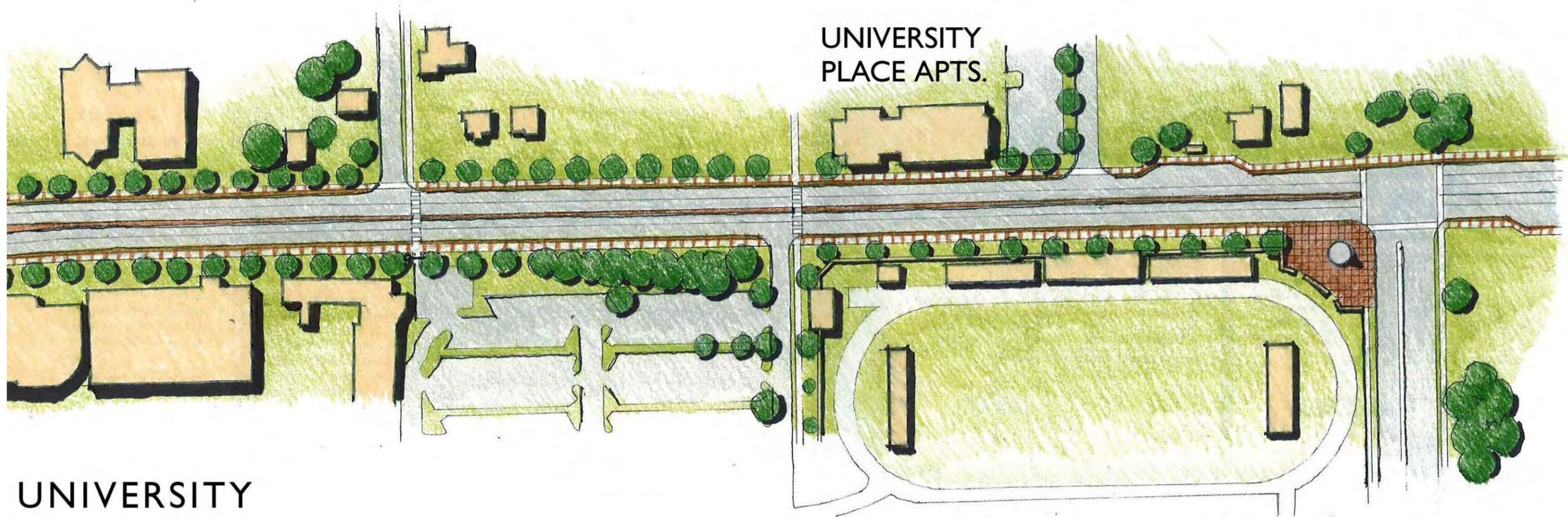
# CHAPTER 3

Mid-block crossings, unprotected by traffic signals, on four-lane streets must be designed to provide optimal safety for pedestrians to minimize situations where one vehicle stops for a pedestrian while a vehicle in an adjacent lane does not see the pedestrian in time to stop. Raised crosswalks on Murchison Road are not recommended.

Four-foot wide pedestrian refuge islands are recommended in the median of Murchison Road at each crosswalk including those that are unsignalized. The area should be unobstructed by signs in the median island. Yellow, in-pavement pedestrian crosswalk paddle-type signs are recommended at the unsignalized crosswalks on Murchison Road.

- **Bus stops:** The street design should allow for buses to safely load and discharge passengers at the far side of signalized intersections and provide easy maneuvering back into the traffic flow. On a four-lane street, this objective is best achieved through the implementation of a bus pull-out to allow bus drivers to pull to the curb and avoid blocking the travel lane. When the bus driver is ready to roll again, maneuvering back into the right-hand travel lane is smooth.

City bus stops should be systematically improved so each one provides shelter from the weather, a shade tree, appropriate seating, updated bus route schedules and information, and adequate pedestrian access leading to the sidewalk and nearest intersection.



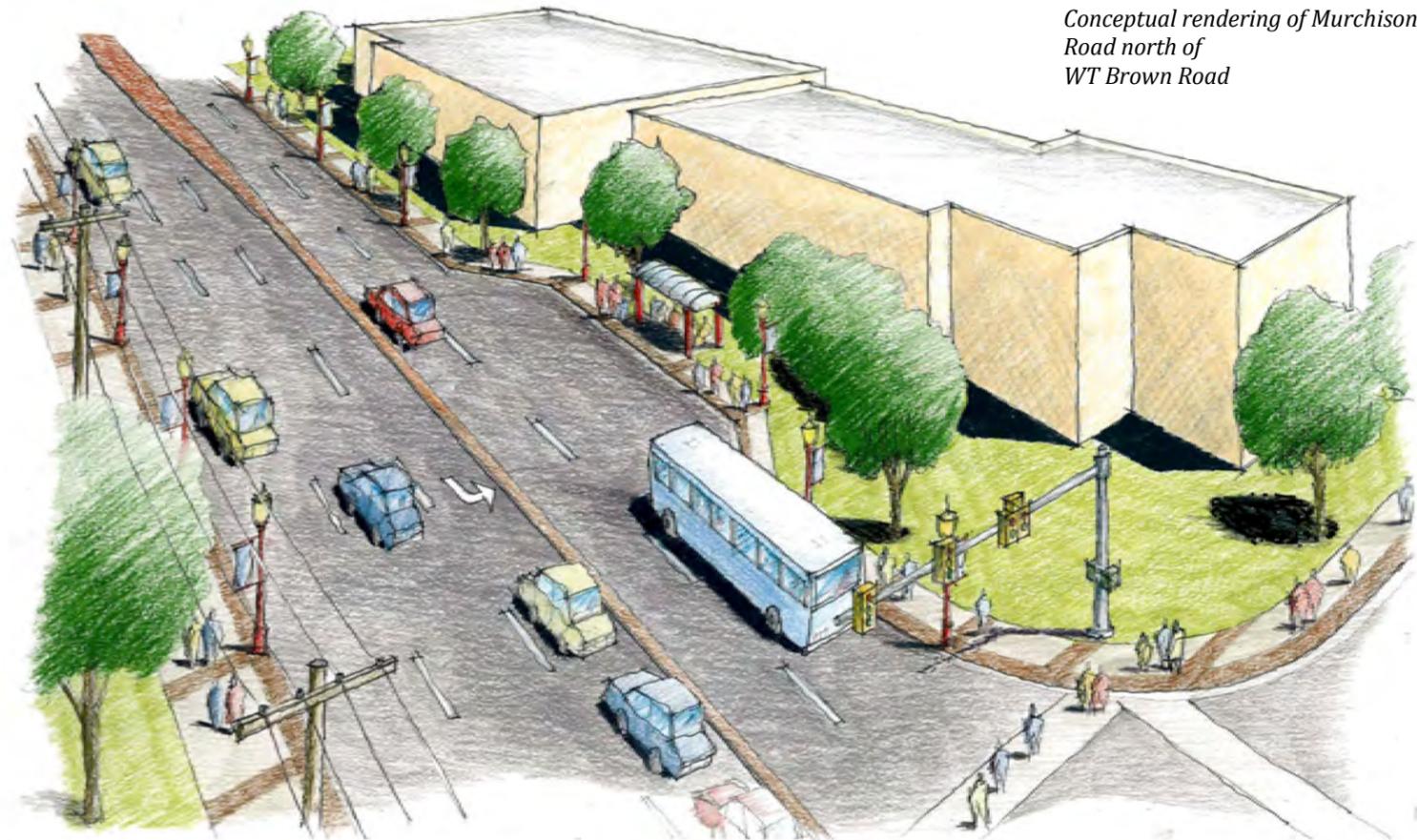


- **Bicycle Provisions:** The community elected to minimize the right-of-way takings and, in lieu of on-street bicycle lanes, allow more experienced bicycle users on Murchison Road and less experienced riders on the wide sidewalks. Bicycle route signage guiding cyclists from Murchison Road to the greenway system recommended along Little Cross and Cross Creeks should be included along the street. Bicycle racks should be installed throughout the district including in the public ROW, at retail centers, and multi-family housing developments.
- **Roadway width:** While pedestrian crossings for two-lane streets are safer, Murchison Road will need four travel lanes to accommodate the projected 26,000 to-29,000 vpd in the year 2020.
- **Lane width:** A design exception should be requested from NCDOT to permit striping 11-foot wide travel lanes instead of the standard 12-foot wide lanes. There is a slight horizontal curve on Murchison Road near Bronco Square, otherwise this segment is on a tangent (straight) alignment. The slightly narrower lane width will contribute to overall objectives to slow traffic to the recommended 30 mph speed limit and avoid an additional four feet of right-of-way width.
- **Vehicular speed:** The current posted speed limit of 35 mph should be reduced to 30 mph between Edgecombe Street and Langdon Street with advance warning signs. Consideration should be given to establishing “rest on red” signal timing that would detect oncoming vehicles exceeding the speed limit and would change traffic signals to red.
- **Building form:** To the extent practical, new buildings on Murchison Road between Edgecombe Avenue and just north of Langdon Street should be built up to the back-of-sidewalk and rise at least two stories. The façade treatments of all new buildings should be reviewed by city planning staff. In so doing, it should enhance the pedestrian experience by creating a sense of enclosure as well as contribute to driver interest so vehicular speeds can be maintained at the posted speed limit.  

Also, a corridor overlay ordinance should be developed to help “guide” the design features of new development as well as provide access management guidelines for use during the development review process.
- **Gateway treatments:** Motorists benefit from visual cues in addition to signs to reduce speed ahead. At the speed transition areas, gateways can take the form of buildings, public art, wood or metal structures in

the public right-of-way, water features, or well-designed “welcome” signs. Pedestrian and bicycle activity also contribute to visual cues. A narrowing of the street, or at least lane widths, also forms a cue.

- **Parking:** To create a catalyst for redevelopment that does not rely on driveways, a centralized municipal- or university-owned parking lot serving public parking could be built. The lot could be funded with in-lieu variances permitted for new developments that are within 1,000 feet (five minute walk) of the municipal parking lot.
- **Overhead Utility Wires and Poles:** Currently, there are utility poles on both edges of Murchison Road with overhead wires strung along and across the road. To enhance the visual experience, consolidation of the poles and wires to the west side of Murchison Road is recommended, while consolidation in underground duct banks is optimal.



*Conceptual rendering of Murchison Road north of WT Brown Road*

# CHAPTER 3

## catalyst projects

### PROPOSED DEVELOPMENT

Several new development projects are being initiated along the northern portion of the Murchison corridor. In addition, two projects currently have submitted site plans for development on Murchison Road:

- a multi-family residential development by Parks Chapel Freedom Baptist Church on Commonwealth Avenue near Pamalee Drive
- a gas station and convenience store redevelopment, with two rental spaces (6,000 sq. ft.), on the northeast corner of Jasper Street and Murchison Road

Over the course of the four-day charrette, the design team heard of numerous developers working toward submitting site plans for new businesses and residences within the study area. The cumulative total already is approaching the levels projected for the short-term market analysis described in the Phase I report. The enthusiasm and commitment of these developers will aid in the reinvestment in Murchison Road and the catalyst sites presented here in the Phase II report.

### PAMALEE CROSSROADS

**Background:** The area around the intersection of Country Club Drive and Pamalee Drive is another catalyst site identified in the City of Fayetteville Land Use and Economic Development Plan: Murchison Road Corridor. This site is at the heart of the corridor and presents an opportunity to redevelop the four quadrants of the intersection into an activity center that serves the needs of the surrounding neighborhoods. Unlike the northern and southern ends of the corridor, which are expected to redevelop with an orientation toward Fort Bragg/I-295 and FSU respectively, this area will be inwardly focused. The northwestern quadrant has the potential to accommodate commercial uses projected for the corridor, particularly those that meet current and near future demand. With the appropriate density and mixture of uses, this area could more successfully support the existing transit system that already has high ridership in this part of Fayetteville.

**Development Potential:** While the entire area around the intersection has the potential to redevelop in a wide range of uses, the northwestern quadrant has the greatest potential for redeveloping early and stimulating

additional investment in the other three quadrants. As indicated in the in the Land Use and Economic Development Plan, there is an immediate need for four types of retail uses as well as a few service uses:

- Grocery
- Specialty food
- Health and personal care
- Restaurants (fast food and sit down)
- Bank / ATM

By bringing these uses together through redevelopment of the Winn-Dixie shopping center and maintaining some of the existing uses, the site could become a vibrant and safe hub along Murchison Road. The conceptual illustration depicts the uses that the economic study identified as suitable for the corridor. It also indicates general pattern of development for the other three quadrants. The uses identified for these three quadrants are reflective of the Phase I report as well as the desires of the community as expressed in the public meetings conducted during the planning process.



*Pamalee Crossroads shows potential to support future office, commercial, and mixed use development*



## WASHINGTON DRIVE/HIGH SCHOOL

**Background:** The Old Washington High School Area, a site that is situated at the southern end of the corridor, is one of the nine catalyst sites identified in the City of Fayetteville Land Use and Economic Development Plan: Murchison Road Corridor. According to the plan, this site presents a redevelopment opportunity that not only takes advantage of its surroundings but also the anticipated growth in the area in connection with the pending expansions of Fort Bragg (8,156 military personnel relocating to the metropolitan area) and FSU (nursing and business schools). Through redevelopment, the site may serve as an extension of the FSU campus. At the very least, the site could accommodate a coordinated mixture of uses that would complement the FSU campus.

**Development Potential:** With access from both Murchison Road and Bragg Boulevard and proximity to the FSU campus and Fayetteville’s revitalized downtown, this site has the potential to support a range of new uses while maintaining—and complementing—some of the existing uses. The conceptual illustration depicts the existing uses that are likely to remain, including the church and residential uses along Murchison, the cemetery, and possibly the senior center. It also depicts potential new, complementary uses, which are described below. (Note: This concept does not anticipate the reuse of the existing high school building, though it has historic significance to the community, because its condition and configuration may make it unsuitable for uses that are needed in the corridor. Further evaluation of the structure is required to determine feasibility of reuse and potential reuse options.)

- **Housing:** This site could support additional multi-family housing units, expanding the corridor’s supply of “off-campus” housing leased to FSU students. Privately-owned apartment complexes, such as University Place Apartments, increase student housing choices and lessen the burden on the university to provide additional dormitory capacity to meet the campus master planning efforts and growing housing demands associated with increasing enrollment.

- **Commercial:** Taking advantage of the visibility from Bragg Boulevard, retail along with some office uses could be developed on the site near the intersection of Blue Street and Bragg Boulevard. Some of the projected 24,100 to 34,300 square feet of retail needed prior to 2012 may locate here.

Institutional uses also may be located in this portion of the site. If it serves as an extension of FSU, this site may be ideal for additional academic facilities (i.e. classroom space and/or faculty offices). Used in this manner, the site has the potential to serve as a new entrance into the FSU campus from Bragg Boulevard.



*The Martin Luther King, Jr., Memorial Park and the proposed greenway trail could help anchor residential and recreational development collocated with office or university/institutional uses.*



- **Lodging/Hospitality:** The Land Use and Economic Development Plan calls for a hotel in this corridor, but indicates that the demand for it is low to moderate in the long-term. This hotel, if warranted, is likely to be located near the planned interchange of Murchison Road and future I-295. However, the Old Washington High School Area may lend itself to this use.
- **Park and Recreation Facilities:** A key element of this site is the existing Martin Luther King Park with the MLK Memorial. This park can serve as a focal point, reinforced by the organization and orientation of existing and new development around it. Integrated well with new development, this piece of open space with a segment of the Cross Creek Greenway can link the variety of uses while serving as an amenity accessible to residents within and in the vicinity of this site.

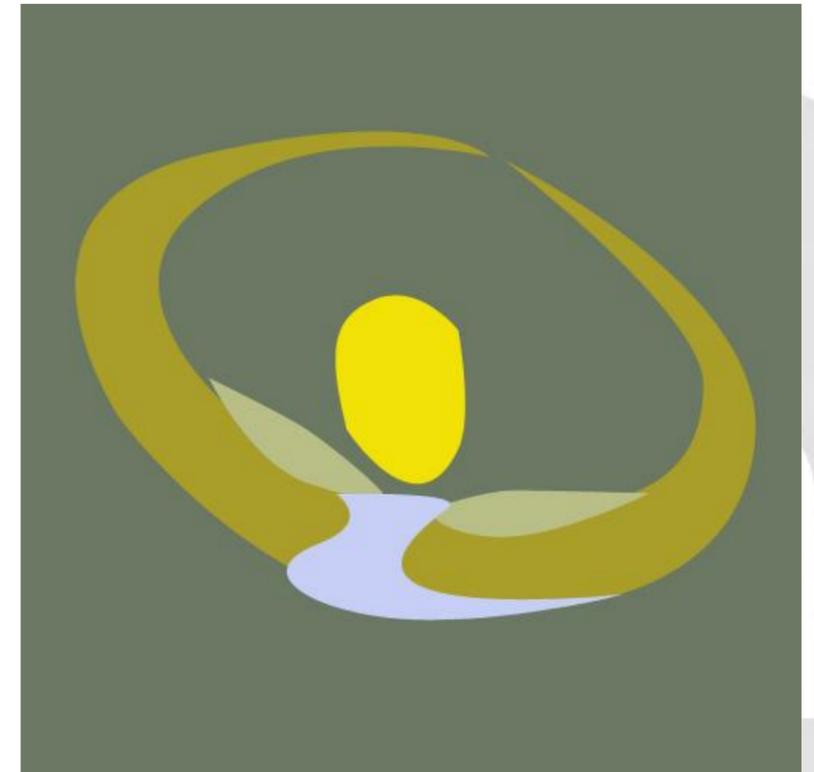
Little Cross Creek passes through the park, and much of the park is comprised of floodplain. The floodplain, which also lies outside the boundaries of the park in the northeastern portion of the site, affects the development potential; therefore, this portion of the site is best suited for recreation facilities (i.e., ballfields) that could serve as an extension of the park and expand the range of community amenities. Alternatively, this may remain separate from the park but still accommodate ballfields constructed by FSU to meet a demand for additional athletic practice facilities.

## branding

**Monument and Sign Structures:** In order to help build neighborhood identity, the proposed designs for corridor signage, gateways, business signage, greenway signage and bus shelters make use of a common palette of materials and architectural treatments, that reflect local architectural heritage. Recommended pillars and pedestals recall the stone facing/masonry that appears locally (downtown along Person Street) as a complement to the more common brick buildings that predominate in the FSU campus and along the Corridor. Limestone or other lighter toned stone material is recommended in order to stand out visually in front of a background of brick structures and under a shady canopy of dark-green Southern Pines, which are common in the corridor. Shelter designs (for kiosks and bus stops) proposed at the charrette made a direct reference to the shelters of the downtown Fayetteville passenger train station, which is a historic depot on the same rail line passing through the Murchison Road Corridor. For a time, this rail corridor served as a vital life-line of the community.

**Logo Design:** To aid in place-making and branding of the community, a logo design is recommended to be developed. The logo will be incorporated into a signage program for the corridor, including wayfinding, businesses, street name and gateway signage, and used in banners and other streetscape elements. The logo design should:

- Consist of a simplified or abstract design, legible from far distances.
- Highlight recognizable features of the community or consist of symbols bearing with the desired character and aspirations of the community.
- Represent and celebrate the community of the corridor.





Typically, a community logo is a symbol that makes reference to the history of that community. Sometimes it is merely a stylized motif or symbol (such as a flower, acorn, etc) that references a neighborhood's charm and character. The logo may or may not contain the name of the community itself within the symbol, but a common practice for logo design is to incorporate the first letter of the community name, in this case "M" for Murchison Road.

The Murchison Road branding strategy recommends advocating a distinctive, figural design. The design shown on the previous page represents a sunrise over Little Cross Creek, but it could also be interpreted as a person with arms stretched overhead in a celebratory pose as a symbol of community aspiration. Exact coloration of the design and its field can be flexible and adapted by future designers as they see fit.

**Community Feedback:** We proposed an "M" logo design as one of the logo design options at the final Charette public meeting. However, the community feedback appeared ambivalent about highlighting the word "Murchison" in such a way. Some residents complained that the name carries associations that are largely negative, both within and outside of the community. They suggested residents of the neighborhoods along the corridor prefer to use their neighborhood names and not "Murchison Road" to refer to their area. There does not seem to be a strong sense of pride in "Murchison Road".

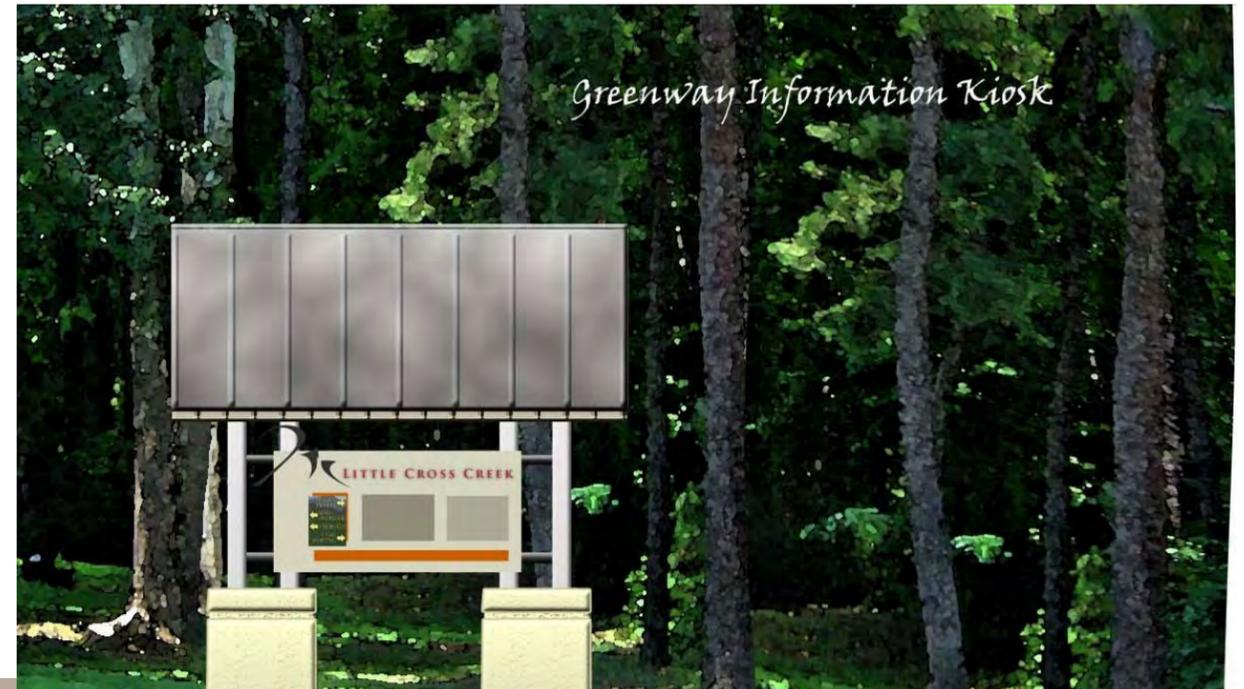


Examples of gateway treatments to acknowledge the arrival at Murchison neighborhood

# CHAPTER 3



*Bus Shelter*



*Greenway Information Kiosk*



*Bus Shelter*



*Examples of unique design and branding opportunities for shelters and signing along the corridor*



Figure 12. Wayfinding Recommendations

