
PLAN FRAMEWORKS

INTRODUCTION

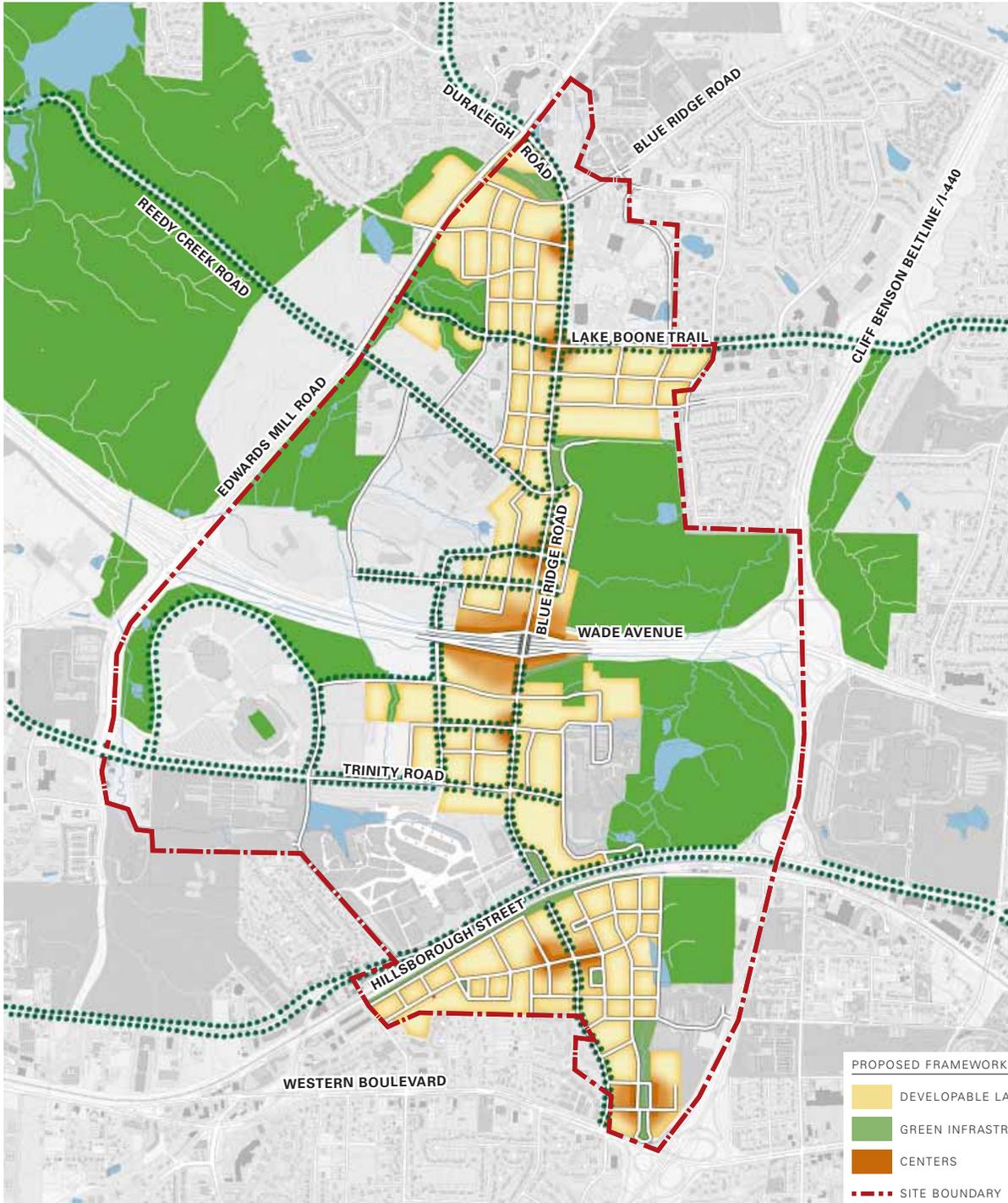
The goal of this study was to provide a coordinated blueprint to guide future development in the Blue Ridge Road corridor. Given the scope of this undertaking and the size of the study area, these ideas are, to some extent, conceptual, however, the recommendations attempted to focus on realistic and actionable recommendations.

The public process involved identifying what the current challenges were, and, subsequently, identifying key issues to address. These discussions revealed a set of priorities for the District, elaborated in the following Design Themes:

- » Provide local connections to improve safety and circulation while providing a framework for future development.
- » Transform Blue Ridge Road's character while improving its function.
- » Overcome the "gap" in transit to complete the north/south connection.
- » Connect existing natural resources and attractions with an improved network of sidewalks and multi-use trails.
- » Target uses and development patterns to reinforce the idea of distinct districts and character areas.

These themes reinforce the early visioning work that foresaw a beautifully landscaped Blue Ridge Road, a walkable district that supports mixed-use development, and a vibrant, transit-oriented, 24/7 community. The framework approach that follows identifies key district-wide design moves that will support the vision, while providing enough flexibility to allow development to respond to market fluctuation and changing needs over time.

FRAMEWORK PLAN



TRANSPORTATION RECOMMENDATIONS

TRANSPORTATION RECOMMENDATIONS SUMMARY

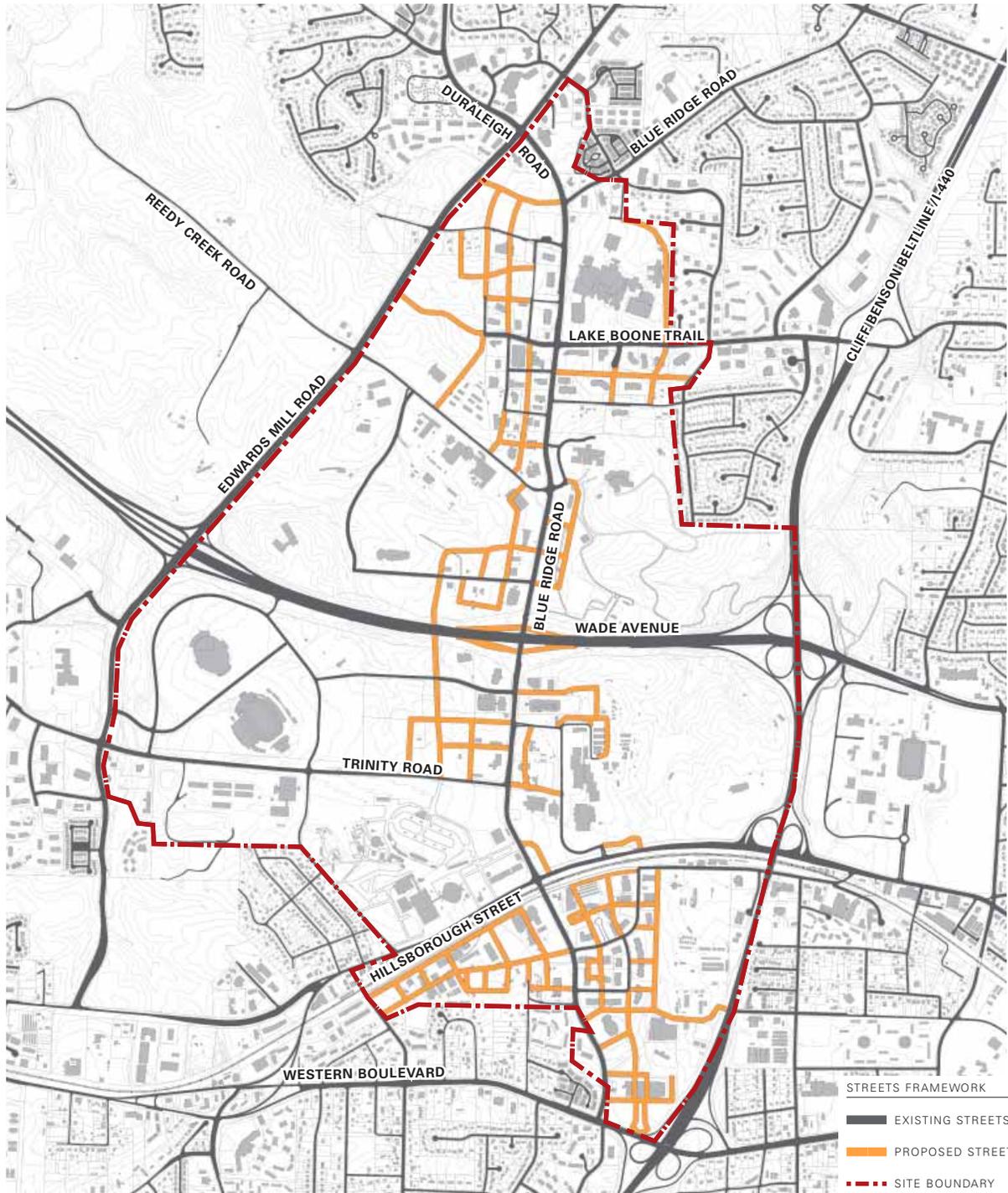
- » Implement Complete Street (CT) principles along Blue Ridge Road
- » Reduce the speed limit on Blue Ridge Road to a speed limit more appropriate to the character or the function of the street
- » Desired items already included in DOT's Complete Streets Guidelines:
 - › Add parking on Blue Ridge Road north of Wade Avenue
 - › Upgrade or replace the Wade Avenue bridge to include bike lanes and sidewalks
 - › Plant trees or tall grasses in the Edwards Mill Road median that are consistent with its rural character
- » Redesign the bridge as a landmark for the district
- » Upgrade existing or design new secondary roads to CT guidelines
- » Identify opportunities to add bike lanes on Lake Boone Trail
- » Add a sidewalk to the north side of Hillsborough Street
- » Assess the feasibility of greenway connections to the Centennial Biomedical Campus in the long term
- » Run a District circulator service along Blue Ridge Road from the Crabtree Valley Mall transit hub to Western Boulevard
- » Extend Lake Boone Trail to Edwards Mill Road

The success of this District relies largely in addressing the character and connectivity of the existing street framework. It is clear that today this corridor is largely auto-dependent, yet it is envisioned to be a pedestrian friendly street with a unique character. The public process and analysis of the District revealed the following key initiatives to address:

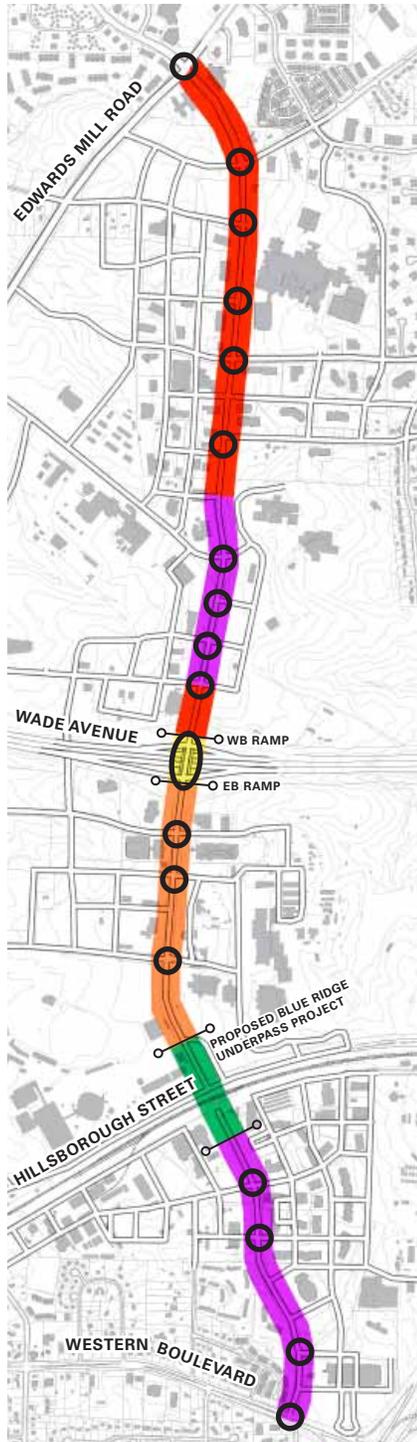
- » Address the character and function of Blue Ridge Road.
- » Enhance north/south transit connectivity.
- » Study the Wade Avenue bridge to accommodate pedestrians.
- » Consider a secondary street network to enhance connectivity and relieve congestion on Blue Ridge Road.

The pages that follow describe each of these initiatives in greater detail. The streets framework diagram (shown on the right) illustrates the existing network and the potential future secondary network that can enhance mobility through this area.

STREETS FRAMEWORK



TRANSPORTATION RECOMMENDATIONS



○ Signalized intersections

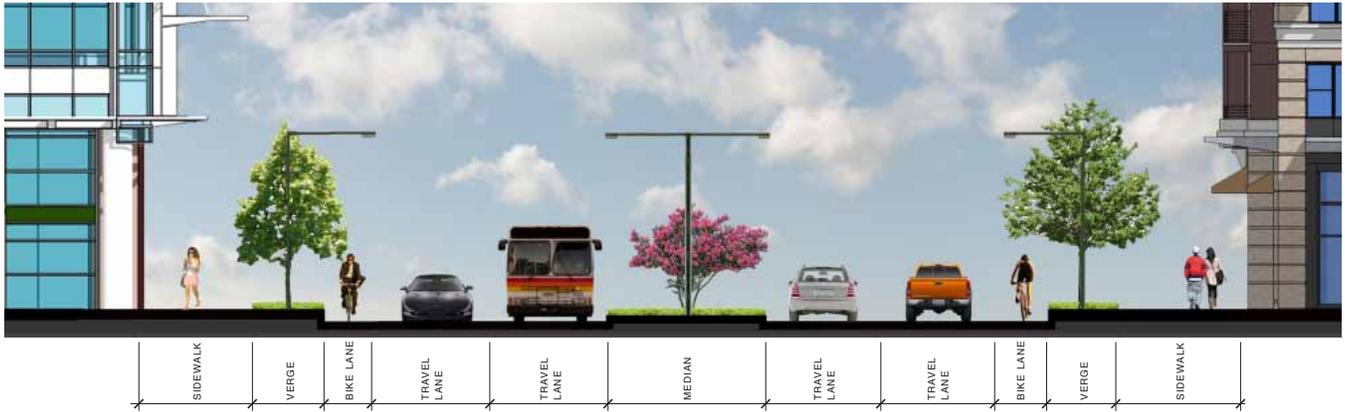
BLUE RIDGE ROAD

Blue Ridge Road will continue to be the primary transportation spine through the District. The design of Blue Ridge Road will adhere to Complete Street principles to vastly improve conditions for pedestrian and cyclists.

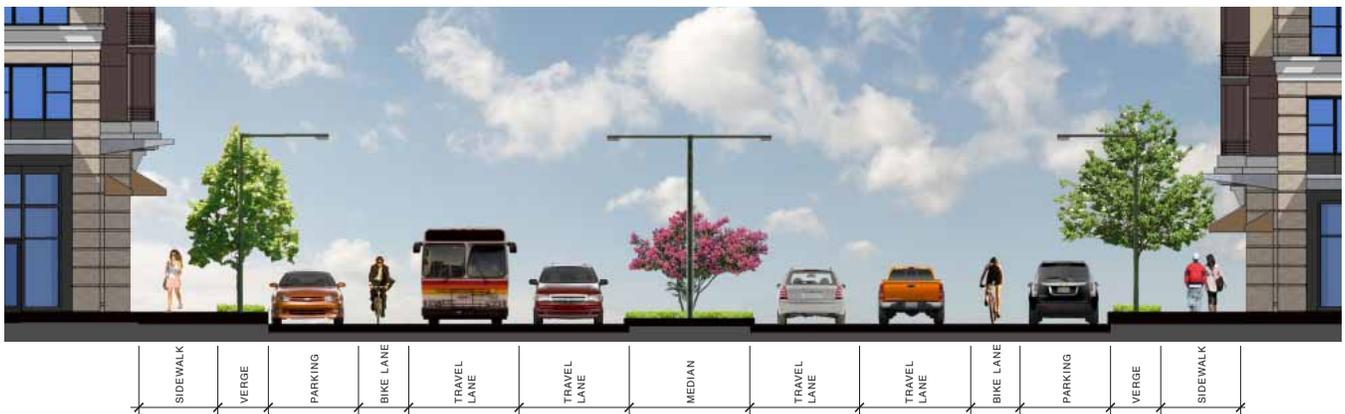
- » The proposed roadway cross-section is generally a 4-lane divided facility with a landscaped median, 11- to 12-foot travel lanes (ideally 11 feet), and 5-foot bicycle lanes.
- » Sidewalks are proposed to be 8- to 12- feet wide (as practical) along the entire corridor.
- » On-street parking is proposed for portions of Blue Ridge Road near the NCMA and Rex Health Care. Intersections will be designed to safely continue the on-road bicycle lanes for all movements.
- » Signalized intersections are spaced between 450 to 900 feet to allow safe pedestrian crossings and moderate traffic flow and speed.
- » Instead of a landscaped median, the center (5th) lane is retained between Wade Avenue and Hillsborough Street to accommodate special event traffic if necessary (to be determined by future, more detailed studies). However, it may be feasible to install a landscaped median in some locations. Regardless the option of using specially-treated pavement where the center lane must be retained is recommended for consideration. One potential treatment is stamped and painted pavement, which is occasionally used at intersections.

| BLUE RIDGE ROAD PROPOSED CROSS SECTIONS | | | | |
|---|---|-------------------|---------------|---------|
| SECTION | # OF LANES | MEDIAN | BICYCLE LANES | PARKING |
| █ | 4 | Vegetative Median | Yes | No |
| █ | 4 | Vegetative Median | Yes | Yes |
| █ | 5 | Turn Lane | Yes | No |
| █ | 5 | Turn Lane | Yes | No |
| █ | Subject to Hillsborough Street Underpass Design | | | |

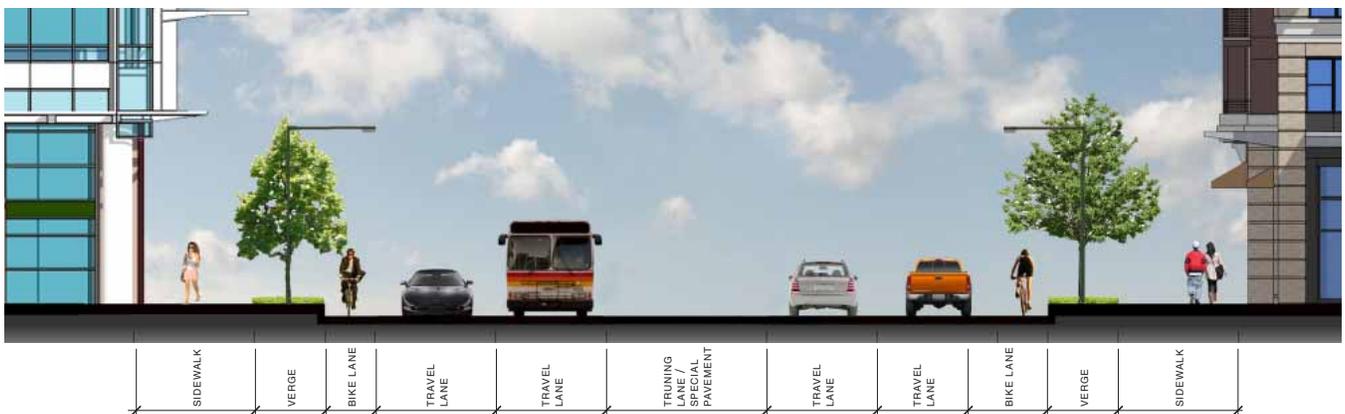
PROPOSED BLUE RIDGE ROAD SECTIONS



Section between Duraleigh Road and the NCMA (parking on 2 sides)



Section between the NCMA and Wade Avenue, and Beryl Road and Western Boulevard



Section between Wade Avenue and Hillsborough Street

TRANSPORTATION RECOMMENDATIONS

WADE AVENUE BRIDGE

The Blue Ridge Road Bridge over Wade Avenue represents the geographical center as well as the primary gateway to the District. An attractive and boldly redesigned, or new bridge (potentially arched) can present a strong visual element for the District. Functionally the future bridge will feature on-road bicycle lanes as well as raised pedestrian sidewalks along both sides, in addition to four travel lanes and a center turn lane to carry the high volumes of traffic turning onto Wade Avenue.

The proposed future bridge will include:

- » On-road bicycle lanes.
- » Raised pedestrian sidewalks along both sides and that tie into the buildings along Blue Ridge Road.
- » Pedestrian-oriented details such as ornamental railings and human-scaled street lighting.

*To the right: Existing Wade Avenue Bridge
Below: Proposed Wade Avenue Bridge*



The future bridge cross-section would therefore be expanded (or replaced) to meet a 96-foot minimum width. The existing 70-foot width can be restriped to provide four 11- to 12-foot travel lanes, a 11- to 12-foot center turn lane, and 5-foot bike lanes. This would roughly match Blue Ridge Road on either side of the bridge (the 12-foot lanes on the bridge would ideally be reduced to 11 feet). The bridge would still need widening to add sidewalks.

It is also possible to consider redesigning the Wade Avenue intersection in order to shorten the crossing and redevelop the underutilized land at the edges of the bridge.

NEW STREET CONNECTIONS

The plan shows several additional interconnected local streets in three sub areas on the west side of Blue Ridge Road. These break up the large land parcels into a finer grid to accommodate a more human scale and walkable development. As illustrated by the typical street section, these streets also will be designed according to Complete Street principles with a greater emphasis on pedestrian, bicycle, and transit travel. The extension of Lake Boone Trail will provide a new access from Edwards Mill Road, thereby relieving Blue Ridge Road of some traffic in that area.

A new crossing of Wade Avenue is proposed between Blue Ridge Road and Edwards Mill Road to improve local circulation and provide an alternative to the Blue Ridge Road bridge. A preliminary analysis suggests that while an underpass would be more feasible, an overpass would be preferable for pedestrian comfort and safety.

**WADE AVENUE -
POTENTIAL CROSSING
LOCATIONS**

PROS FOR "A"

- » Development opportunities on both sides of Wade Avenue
- » Topography supports underpass
- » Direct connection to crowd generating uses

CONS FOR "A"

- » Proximity to National Guard

PROS FOR "B"

- » None

CONS FOR "B"

- » Remote from development
- » Adjacent to recreation facilities
- » Adjacent to sensitive uses at NCSU
- » Constrained by 440 Interchange



Wade Avenue - Potential Crossing Locations

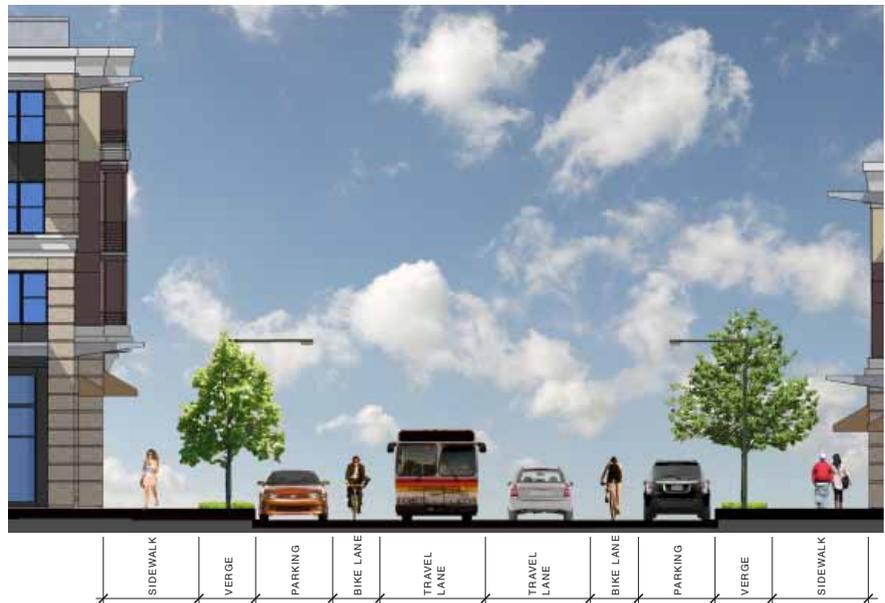
TRANSPORTATION RECOMMENDATIONS

OTHER MAJOR ROADS

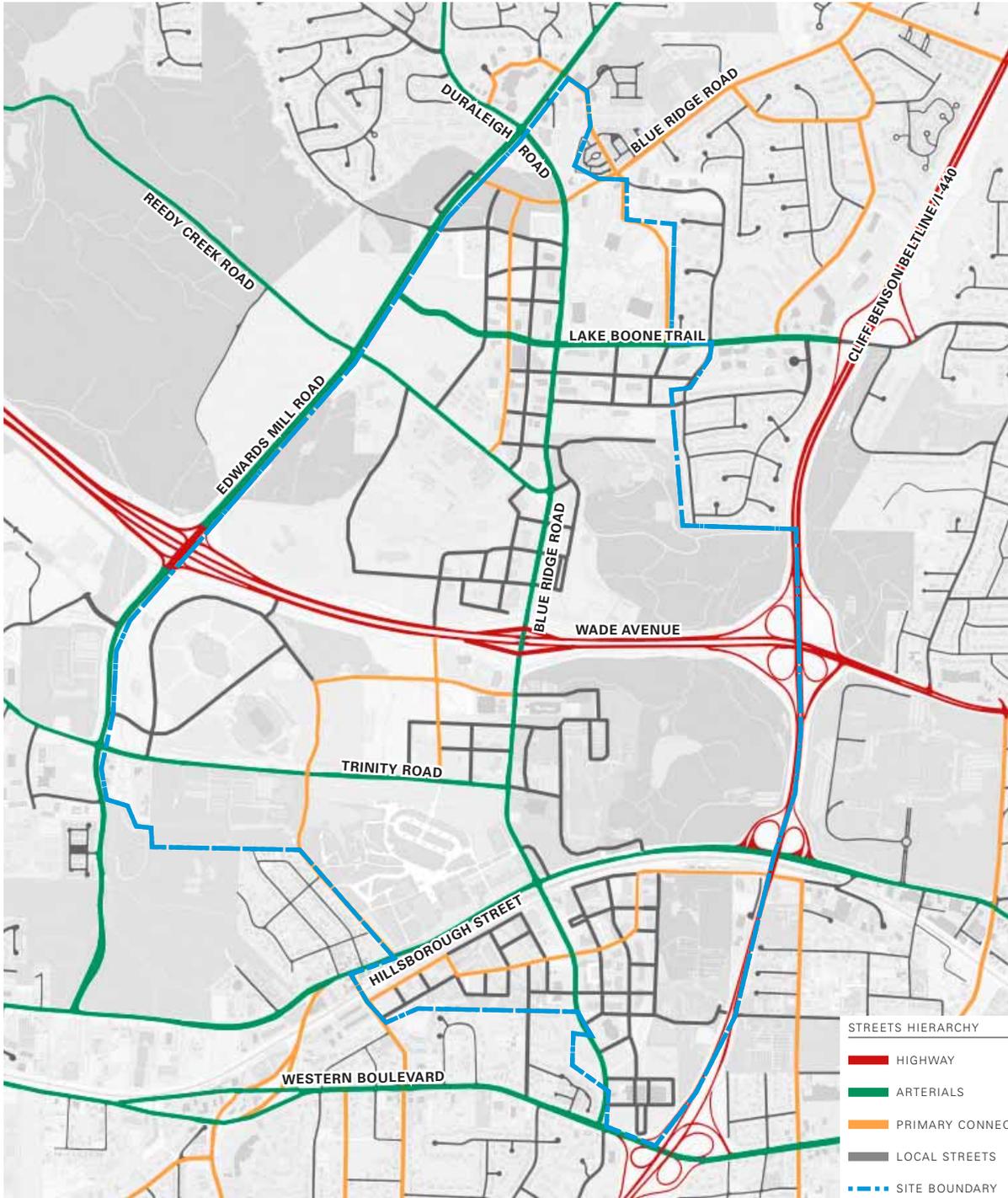
Improvements that should be considered for other major roads in the District include:

- » A preliminary review suggests it may be feasible to narrow the traffic lanes on Lake Boone Trail to accommodate bike lanes. This option, as well as/or introducing a median in select places, should be assessed in future studies.
- » The wide median on Edwards Mill Road should be planted with trees or tall grasses that reinforce the rural character of that area.
- » Future improvements to Hillsborough Street should include the addition of a sidewalk on the north side of the road.

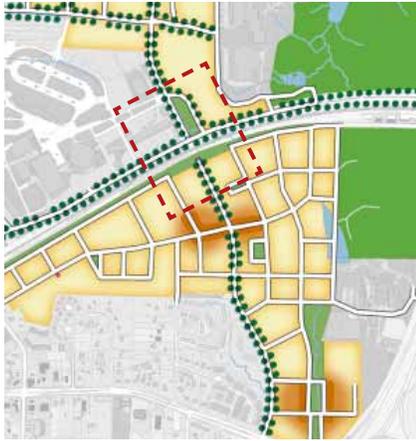
Proposed Local Connector



PROPOSED STREET HIERARCHY



TRANSPORTATION RECOMMENDATIONS



Future NCDOT Underpass Project Location

FUTURE NCDOT UNDERPASS PROJECT

The North Carolina Department of Transportation (NCDOT) is proposing a Blue Ridge Road underpass of Hillsborough Street/NC-54 and railroad tracks. This crossing is just east of the planned light rail station. Visualizations of the proposed project are displayed below. The purpose of the project is to:

- » Reduce traffic congestion at the intersection,
- » Reduce train-related conflicts, and
- » Improve future pedestrian crossing conditions.

The proposed design would include a 4-lane median divided roadway facility, with sidewalks along both sides of Blue Ridge Road. A connector street would also be constructed (north-east of the existing intersection) to provide vehicular access to Hillsborough Street/NC-54.

The project (U-4437) is currently scheduled for right-of-way acquisition in 2015, and construction beginning in 2018 pending any future re-prioritization.



U-4437 Alternate 12 South



U-4437 Alternate 12 West



U-4437 Alternate 12 East



U-4437 Alternate 12 North

TRANSIT

As the District grows there will be a need for both increased transit service for people traveling to the District, as well as high-quality service for travel within the area. Higher density, mixed-use development in conjunction with transit-oriented design as proposed in the plan will enhance the cost-effectiveness of both types of services. Improved transit has the potential to provide a convenient alternative to driving to popular places such as Downtown Raleigh (less than five miles away), the NCSU campus, and the Crabtree Valley Mall area. Located on the west side of Raleigh, the District also is easily accessed by existing and planned regional transit services from the western side of the Triangle (including Durham, Chapel Hill, and the Research Triangle Park). Recommended services are shown in the diagram on the next page.

Rail Transit

A significant transit enhancement in the corridor is a long-term proposal to install light rail and commuter rail service in the North Carolina Railroad (NCRR) corridor that parallels Hillsborough Street in the southern portion of the corridor. Feasibility studies recently completed by Triangle Transit for several corridors in the region (referred to as Alternatives Analyses) recommended the following rail projects for Wake County:

- » Light rail transit operating between Morrisville and North Raleigh via Raleigh. The plans include a station at the intersection of Blue Ridge Road and Hillsborough Street/NCRR corridor. Service would operate all day.
- » Commuter rail running between (east of) Garner on the eastern side of Wake County to Durham. This is being proposed as a peak period service for commuters. Current plans do not include a stop at Hillsborough Street, however this could be considered once demand in the Blue Ridge Road District warranted a stop.

Both services must be supported by shuttle (feeder) buses from areas surrounding the station, including the District. Implementation and the timing of the two services are dependent on approval by local governments and funding.

TRANSPORTATION RECOMMENDATIONS

Regional Bus Transit

Triangle Transit buses will continue to provide the current regional connections. Within the Blue Ridge Road District routes follow Wade Avenue, Hillsborough Street, and Western Boulevard. Service frequency can be expected to increase as the region grows.

Local Bus Service

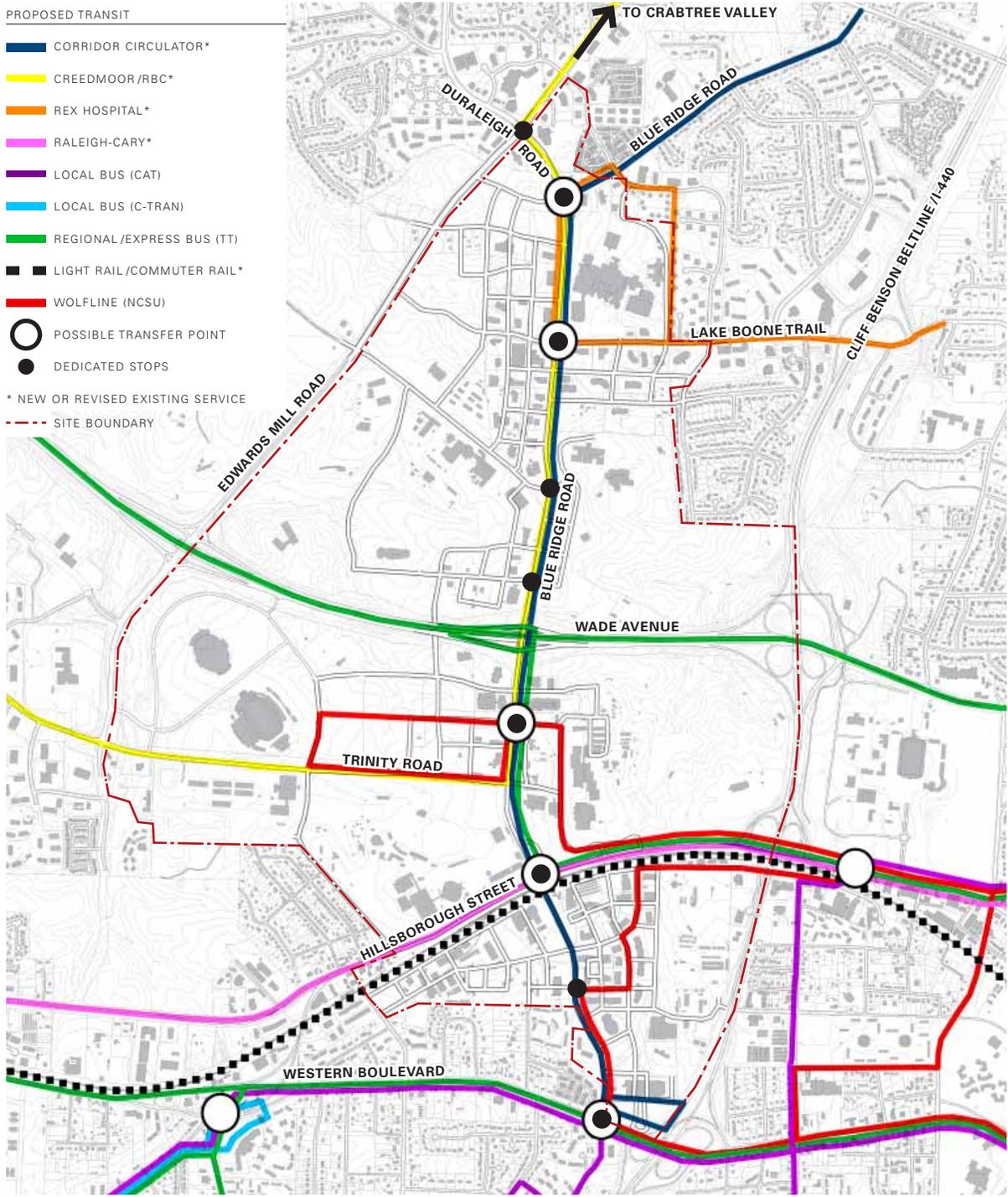
Local bus service addresses locations primarily within the City of Raleigh. The Wake County Transit Plan (Draft, November 2011) provides long term recommendations for the District. This consists of slight modifications to two routes currently focused on Rex Hospital, including extending one route further south along Blue Ridge Road and Trinity Road to serve the PNC Center and locations southwest of the District. A new Raleigh-Cary connection service is proposed along Hillsborough Street/Chapel Hill Road/NC-54.

While service is provided to much of the District, the Wake County Transit Plan did not specifically anticipate major growth in this area. Ideally a single bus route from the transit hub in Downtown Raleigh would (over time) serve the entire length of Blue Ridge Road, thus avoiding transfers within the corridor. Alternatively, or in addition, a high frequency service (similar to the free R-Line Downtown Raleigh Circulator) is recommended to run the entire length of Blue Ridge Road from Crabtree Valley Mall to Western Boulevard. The District circulator, shown on the right, should run every 10 minutes so that riders would, on average, have to wait only five minutes. This all-day service would connect the various activities within the corridor, enabling employees, residents, and visitors to conduct business, go dining or shopping, or visit educational and entertainment venues without the need to drive between places. The service can also facilitate transfers from local or regional services at key intersect points, particularly the future rail station at Hillsborough Street and the transfer hub at Crabtree Valley Mall.

NC State Wolfline

It is anticipated that Wolfline will continue the current Biomedical Campus park-and-ride services between the District and main campus.

PROPOSED TRANSIT



GREEN INFRASTRUCTURE RECOMMENDATIONS



Schenck Forest

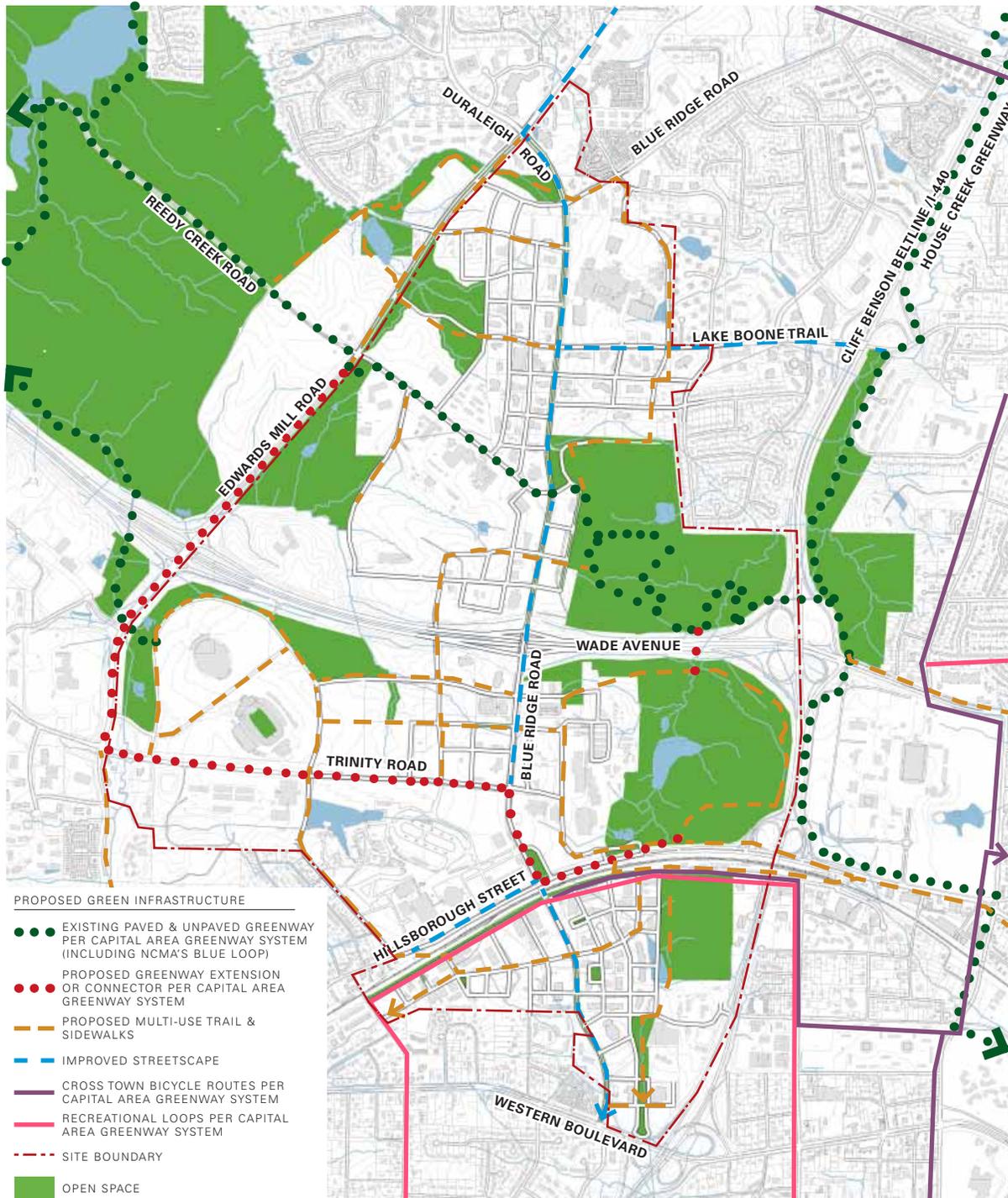
The District possesses a strong open space system anchored by Umstead State Park and Carl Alwin Schenck Memorial Forest (Schenck Forest) and supported by passive and active institutional open space exemplified by NCMA, College of Veterinary Medicine, and JC Raulston Arboretum. The broad scope of state government properties, much of which is undeveloped forest or pasture land, establishes much of the District’s west side with a rural suburban character. The plan recommends the conservation of existing public open space and the creation of new passive and active open space amenities throughout the District. A strengthened and enhanced district-wide pedestrian and bike system will serve to link these open space amenities. Once resident density and population numbers are significant, additional park facilities within the District should be provided for residents, employees, and visitors. Park and public spaces will be complemented by small-scale, private public greens, recreational space, and other spaces associated with private commercial and residential development as the District grows.

CONNECTING EXISTING AMENITIES

The District supports major destination attractions and employment centers. These District amenities are readily accessible by automobile through a strong regional transportation system. Each attraction is adequately served by a strong internal pedestrian circulation system. However, many of the facilities, particularly those which generate peak event pedestrian flow such as the State Fairgrounds, PNC Arena, and Carter-Finley Stadium must rely on a very weak surrounding system of sidewalks. As a result, safe and effective pedestrian linkages between the existing amenities are currently very limited, preventing quality pedestrian access between the major destinations. With the prospect of a light rail stop and a transit-oriented development (TOD) district, the demand for a quality district-wide system will be amplified and critical to the District’s long-term success.

The District currently enjoys an exceptional regional greenway trail network which provides an excellent framework in which to build a more complete District wide pedestrian and bike network supportive of the major assets and future development. Two regional greenways, Reedy Creek Greenway and House Creek Greenway, provide strong regional bike and pedestrian accessibility to the District and also provide access between Downtown, NCSU campus, Crabtree Valley Mall, and Cary.

PROPOSED GREEN INFRASTRUCTURE



GREEN INFRASTRUCTURE RECOMMENDATIONS

This plan envisions the development of an integrated multi-use trail network and circulation strategy. The network will include two components:

1. An enhanced sidewalk and bikeway system developed along the primary and secondary district streets.
2. An independent greenway/trail system.

Initiative 1: Sidewalks and multi-use paths

The sidewalk and multi-use path system will focus on Blue Ridge Road enhanced by implementation of NCDOT's Complete Street principles with future roadway improvements. Establishment of a strong north/south pedestrian/bike corridor along Blue Ridge Road will provide the backbone or framework to build connections between the major district destinations and adjacent city areas. This system will also serve to strengthen the implementation of a strong public realm along Blue Ridge Road supportive of the desired urban street form. An internal trail loop that links NCMA, NCSU, PNC Arena and Carter Finley Stadium will provide connectivity throughout the District.

Initiative 2: Greenway/Trails

The greenway/trail system will complement the street oriented pedestrian and bike network by providing regional greenway access to and through the District. Much of the planned Capitol City Greenway Trail System has been constructed within the District, including the Reedy Creek and House Creek Greenway trails. The City plans to implement, over time, a series of key greenway trail connector facilities.

This plan also envisions the development of a strong street network and a transit circulator, both of which when combined with the pedestrian and bicycle system, will provide enhanced travel options between the major destinations.

NEW INTERNAL MULTI-USE LOOP

The District will benefit from a new internal loop providing access to employment centers, services, open spaces, and major amenities for visitors, employees, and residents. The open space plan recommends building upon the existing regional greenway/trail system to develop a district-oriented multi-use loop, mostly independent of the District roadway system.

Elements of a new loop include:

- » This pedestrian/bike loop would be anchored by the existing Reedy Creek Greenway Trail from Meredith College via the NCMA campus to Edwards Mill Road.
- » The existing Edwards Mill greenway/trail would form a strong north/south connection to the Arena District.
- » To complete the loop, the plan recommends that a dedicated multi-use trail linkage be developed between Edwards Mill Road and Blue Ridge Road. One facility could be routed through the PNC Arena and Carter-Finley Stadium and extend west along Westchase Boulevard. The second connection would be a greatly enhanced and amenitized multi-use trail along both sides of Trinity Road (The Trinity Road Connector). Both connectors would link to a wide sidewalk on the west side of Blue Ridge Road and south to the Hillsborough Street/Blue Ridge Road intersection. A newly formed linear park would be developed along the full length of Beryl Road and continue east to Faircloth Road where it would terminate at the intersection of the Gorman Street Greenway Connector.

Furthermore, the plan calls for an additional linkage between NCMA and NCSU either over or under Wade Avenue in order to complete this district-wide, multi-use trail system. This has incredible potential to tie, way-finding and programming for residents, employees and visitors into the District.



DEVELOPMENT PATTERNS

A key goal of the visioning process was to determine the character of Blue Ridge Road and thereby establish a distinct district. After evaluating the character and the uses in the area, it became clear that the length of the corridor lends itself to treating it as a series of connected, yet distinct districts. Unlike other redevelopment areas, the study area already has a series of well established anchors which can drive redevelopment. Therefore, the notion is to build on those anchors and use them as centers for each district. The districts proposed can be defined as follows:

- » **The Health & Wellness District:** This zone extends from the Dura-leigh Road and Blue Ridge Road split down to the NCMA. It is anchored by Rex Health Care and includes support office, medical services, and some potential residential. Blue Ridge Road and Reedy Creek Road are calmed through this area to ensure safe crossings and encourage connectivity to existing trails.
- » **The Arts & Research District:** This district is anchored by the NCMA. It extends from the NCMA south to Wade Avenue. Mixed-use development is encouraged along Blue Ridge Road, along with some potential development on the NCMA property that complements its current mission.
- » **The Entertainment & Education District:** The blocks between NCSU and Carter-Finley Stadium offer the opportunity to establish a vibrant, mixed-use district with commercial uses that thrive on event traffic and visitors to the Fairgrounds.
- » **South of Hillsborough:** The properties south of Hillsborough Street offer huge potential for transit oriented development given the proposals for light rail and regional rail. This District may be primarily residential in nature with some small mixed-use development at key intersections.

DISTRICTS

